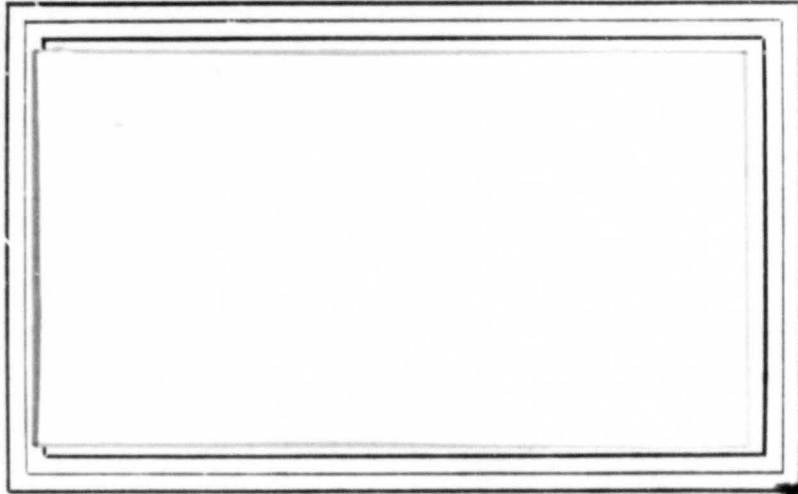


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March 1967

BLACK BODY FUNCTIONS FOR  
PYROTECHNICISTS

✓ R. M. BLUNT  
Denver Research Institute

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Released

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## ABSTRACT

Planck's black body data is tabulated. The data is presented from 0.35 microns to 12.0 microns in increments of 0.005 microns and at temperatures from 1500 °K through 4050 °K in 50 °K increments. Hemispherical power, power normalized to peak, spectral brightness, temperature exponent  $N$ , and cumulative and percentage of power between zero and the listed wavelength. In addition, graphs of the temperature exponent vs temperature and vs wavelength are included.

## Table of Contents

	Page
INTRODUCTION . . . . .	7
Temperature Exponent (M) . . . . .	9
Tables at 1500 °K . . . . .	11
Tables are repeated in 50 °K increments	
Tables at 2000 °K . . . . .	51
Tables at 2500 °K . . . . .	91
Tables at 3000 °K . . . . .	131
Tables at 3500 °K . . . . .	171
Tables at 4000 °K . . . . .	211
Graph: Exponent M vs Temperature . . . . .	219
Graphs: Exponent M vs Wavelength . . . . .	221
Computer Program Printout . . . . .	245

## Black Body Functions for Pyrotechnicists

Robert M. Blunt<sup>1</sup>

The data presented in the following tabulation is derived from Planck's radiation law. The values used for the first and second radiation constant are  $C_1 = 3.7405 \times 10^{-12}$  watts  $\text{cm}^2$  and  $C_2 = 14385$  micron  $^\circ\text{K}$ . The value of the Stefan-Boltzmann constant is  $\sigma = 5.6697 \times 10^{-12}$  watts  $\text{cm}^{-2}$   $\text{deg}^{-4}$ . The conversion factor from watts/ $\text{cm}^2$  in the visible region to lumens/ $\text{cm}^2$  is 680 lumens watt<sup>-1</sup> at 0.555 micron.

In general, the values are hemispherical values and should be divided by  $\pi$  if values of the component normal to the surface are required.

The wavelength at which the power peaks is calculated from  $\lambda_{\text{max}} = 2898$  micron  $^\circ\text{K}/T$ . The wavelength produced most efficiently is computed from  $\lambda_e = 3652/T$   $^\circ\text{K}$ . This relation is derived by Benford\* by setting the derivative of the quotient of Planck's law divided by  $\sigma T^4$ , with respect to  $T$ , equal to zero and solving this equation.

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\*Benford, Frank, Journal of the Optical Society of America, Vol. 29, Feb. 1939, page 92-96.

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Temperature Exponent M in  $W = KT^M$ 

M is tabulated for each wavelength at a given temperature. The value of M denotes the rate at which the radiance (W) is changing at a specific wavelength. For example: The Stefan-Boltzmann equation  $W = \sigma T^4$  gives radiance (W) over the entire electromagnetic spectrum as a function of temperature (T) to the fourth power ( $T^4$ ). This then says that  $T^4$  represents the composite change of the radiance (W) over the whole spectrum. On the other hand, the equation  $W = KT^M$  which is in the same form as the Stefan-Boltzmann equation is used in these tables to show the rate at which the radiance (W) is changing at a given wavelength and at a specific temperature. Thus, from the table at 1500 °K and at 0.50000 microns wavelength, M is given as 19.1800. This then means that at 1500 °K the spectral radiance at 0.5 microns is changing as a function of T to the 19.1800 power whereas the total radiance is changing as T to the 4 power.

A family of graphs are included near the end of the tables. These graphs show the temperature exponent (M) plotted against temperature and against wavelength.

## ACKNOWLEDGMENT

The programming assistance received from Mrs. Anita West of the Denver Research Institute is greatly appreciated.

VISIBILITY AND OTHER DATA FOR PLANCH RADIATOR, MECHANICS DIVISION, D.R.T., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1224.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1900.0  
DEGREES FAHRENHEIT = 2240.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.03 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 2.81 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 0.77 CANDELLA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.001.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 73.621 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.095 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.9390 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.4387 MICRONS.  
I.E. WHICH MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 26.70 WATT/CM<sup>2</sup> OR 2.87020E+08 FNG/SEC/CM<sup>2</sup> OR 6.84019E+03 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 9.78 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, ARG LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = K/T<sup>4</sup>.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1224.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1900.0  
DEGREES FAHRENHEIT = 2240.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR K/T <sup>4</sup>	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.97265E-04	9.1774E-07	0.0000	27.6000	1.2816E-07	0.000
0.35500	0.00001	1.2575E-06	0.0000	27.0141	1.8095E-07	0.000
0.36000	0.00002	1.7064E-06	0.0000	26.6389	2.5292E-07	0.000
0.36500	0.00002	2.2942E-06	0.0000	26.2740	3.5009E-07	0.000
0.37000	0.00003	3.0549E-06	0.0000	25.9189	4.8012E-07	0.000
0.37500	0.00004	4.0384E-06	0.0000	25.5733	6.5259E-07	0.000
0.38000	0.00005	5.2914E-06	0.0000	25.2368	8.7946E-07	0.000
0.38500	0.00007	6.9793E-06	0.0000	24.9091	1.1755E-06	0.000
0.39000	0.00009	9.1760E-06	0.0000	24.5907	1.5588E-06	0.000
0.39500	0.00011	1.1969E-05	0.0000	24.2784	2.0515E-06	0.000
0.40000	0.00014	1.5462E-05	3.8458E-05	23.9750	2.6803E-06	0.000
0.40500	0.00018	1.9722E-05	9.7183E-05	23.6760	3.4749E-06	0.000
0.41000	0.00022	2.4938E-05	0.0002	23.3802	4.4410E-06	0.000
0.41500	0.00024	2.8617E-05	0.0004	23.1044	5.7368E-06	0.000
0.42000	0.00034	3.4899E-05	0.0009	22.8333	7.2877E-06	0.000
0.42500	0.00043	4.3754E-05	0.0021	22.5647	9.2247E-06	0.000
0.43000	0.00052	5.3655E-05	0.0041	22.3023	1.1604E-05	0.000
0.43500	0.00061	6.4639E-05	0.0073	22.0460	1.4507E-05	0.000
0.44000	0.00074	7.6800E-05	0.0121	21.7955	1.8038E-05	0.000
0.44500	0.00094	9.4860E-05	0.0185	21.5504	2.2311E-05	0.000
0.45000	0.00113	0.0001	0.0291	21.3111	2.7459E-05	0.000
0.45500	0.00135	0.0001	0.0440	21.0769	3.3626E-05	0.000
0.46000	0.00160	0.0002	0.0654	20.8478	4.0986E-05	0.000
0.46500	0.00190	0.0002	0.0956	20.6237	4.9729E-05	0.000
0.47000	0.02274	0.0002	0.1388	20.4041	6.0071E-05	0.000
0.47500	0.02264	0.0003	0.2009	20.1885	7.2254E-05	0.000
0.48000	0.00309	0.0003	0.2820	19.9792	8.6549E-05	0.000
0.48500	0.00360	0.0004	0.4142	19.7737	0.0001	0.000
0.49000	0.00419	0.0004	0.5926	19.5714	0.0001	0.000
0.49500	0.00485	0.0005	0.8314	19.3737	0.0001	0.001
0.50000	0.00547	0.0006	1.1303	19.1800	0.0002	0.001
0.50500	0.00644	0.0007	1.5035	18.9901	0.0002	0.002
0.51000	0.00739	0.0009	2.0276	18.8039	0.0002	0.001
0.51500	0.00845	0.0009	2.8226	18.6214	0.0003	0.001
0.52000	0.00961	0.0010	3.8487	18.4423	0.0003	0.001
0.52500	0.01094	0.0011	5.0993	18.2667	0.0004	0.001
0.53000	0.01240	0.0013	7.2660	18.0943	0.0004	0.001
0.53500	0.01401	0.0014	9.7149	17.9252	0.0005	0.002
0.54000	0.01577	0.0016	12.7393	17.7593	0.0006	0.002
0.54500	0.01774	0.0018	16.8221	17.5963	0.0007	0.002
0.55000	0.01989	0.0020	22.4545	17.4364	0.0007	0.003
0.55500	0.02224	0.0023	29.7293	17.2793	0.0009	0.003
0.56000	0.02481	0.0025	38.7891	17.1250	0.0010	0.003
0.56500	0.02762	0.0028	49.3967	16.9734	0.0011	0.004
0.57000	0.03067	0.0031	61.8558	16.8246	0.0012	0.004

0.57500	0.03399	0.0035	21.1468	1A.47A3	0.0014	0.005
0.58000	0.03754	0.003A	22.2327	1A.47A4	0.001A	0.006
0.58500	0.04117	0.0042	23.0348	1A.47A5	0.001A	0.006
0.59000	0.0448A	0.0047	23.8444	1A.47A6	0.0020	0.007
0.59500	0.04851	0.0051	24.6614	1A.47A7	0.0022	0.008
0.60000	0.05214	0.005A	25.4857	1A.47A8	0.0025	0.009
0.60500	0.05578	0.0062	26.3174	1A.47A9	0.002A	0.010
0.61000	0.0594A	0.0067	27.1564	1A.47B0	0.0031	0.011
0.61500	0.0630A	0.0073	27.9927	1A.47B1	0.0035	0.012
0.62000	0.0665A	0.0078	28.8364	1A.47B2	0.003A	0.013
0.62500	0.0701A	0.008A	29.6874	1A.47B3	0.0042	0.015
0.63000	0.0737A	0.0087	30.5457	1A.47B4	0.0047	0.01A
0.63500	0.0773A	0.0092	31.4114	1A.47B5	0.0052	0.01A
0.64000	0.0809A	0.0097	32.2844	1A.47B6	0.0057	0.020
0.64500	0.0845A	0.0102	33.1647	1A.47B7	0.0062	0.022
0.65000	0.0881A	0.0107	34.0524	1A.47B8	0.0067	0.024
0.65500	0.0917A	0.0112	34.9474	1A.47B9	0.0072	0.026
0.66000	0.0953A	0.0117	35.8497	1A.47C0	0.0077	0.028
0.66500	0.0989A	0.0122	36.7594	1A.47C1	0.0082	0.031
0.67000	0.1025A	0.0127	37.6764	1A.47C2	0.0087	0.033
0.67500	0.1061A	0.0132	38.5997	1A.47C3	0.0092	0.036
0.68000	0.1097A	0.0137	39.5294	1A.47C4	0.0097	0.038
0.68500	0.1133A	0.0142	40.4657	1A.47C5	0.0102	0.041
0.69000	0.1169A	0.0147	41.4084	1A.47C6	0.0107	0.044
0.69500	0.1205A	0.0152	42.3574	1A.47C7	0.0112	0.046
0.70000	0.1241A	0.0157	43.3127	1A.47C8	0.0117	0.049
0.70500	0.1277A	0.0162	44.2744	1A.47C9	0.0122	0.052
0.71000	0.1313A	0.0167	45.2427	1A.47D0	0.0127	0.054
0.71500	0.1349A	0.0172	46.2174	1A.47D1	0.0132	0.057
0.72000	0.1385A	0.0177	47.1984	1A.47D2	0.0137	0.060
0.72500	0.1421A	0.0182	48.1857	1A.47D3	0.0142	0.063
0.73000	0.1457A	0.0187	49.1794	1A.47D4	0.0147	0.066
0.73500	0.1493A	0.0192	50.1794	1A.47D5	0.0152	0.069
0.74000	0.1529A	0.0197	51.1857	1A.47D6	0.0157	0.072
0.74500	0.1565A	0.0202	52.1984	1A.47D7	0.0162	0.075
0.75000	0.1601A	0.0207	53.2174	1A.47D8	0.0167	0.078
0.75500	0.1637A	0.0212	54.2427	1A.47D9	0.0172	0.081
0.76000	0.1673A	0.0217	55.2744	1A.47E0	0.0177	0.084
0.76500	0.1709A	0.0222	56.3127	1A.47E1	0.0182	0.087
0.77000	0.1745A	0.0227	57.3574	1A.47E2	0.0187	0.090
0.77500	0.1781A	0.0232	58.4084	1A.47E3	0.0192	0.093
0.78000	0.1817A	0.0237	59.4657	1A.47E4	0.0197	0.096
0.78500	0.1853A	0.0242	60.5294	1A.47E5	0.0202	0.099
0.79000	0.1889A	0.0247	61.5994	1A.47E6	0.0207	0.102
0.79500	0.1925A	0.0252	62.6757	1A.47E7	0.0212	0.105
0.80000	0.1961A	0.0257	63.7584	1A.47E8	0.0217	0.108
0.80500	0.1997A	0.0262	64.8474	1A.47E9	0.0222	0.111
0.81000	0.2033A	0.0267	65.9427	1A.47F0	0.0227	0.114
0.81500	0.2069A	0.0272	67.0444	1A.47F1	0.0232	0.117
0.82000	0.2105A	0.0277	68.1527	1A.47F2	0.0237	0.120
0.82500	0.2141A	0.0282	69.2674	1A.47F3	0.0242	0.123
0.83000	0.2177A	0.0287	70.3884	1A.47F4	0.0247	0.126
0.83500	0.2213A	0.0292	71.5157	1A.47F5	0.0252	0.129
0.84000	0.2249A	0.0297	72.6494	1A.47F6	0.0257	0.132
0.84500	0.2285A	0.0302	73.7894	1A.47F7	0.0262	0.135
0.85000	0.2321A	0.0307	74.9357	1A.47F8	0.0267	0.138
0.85500	0.2357A	0.0312	76.0884	1A.47F9	0.0272	0.141
0.86000	0.2393A	0.0317	77.2474	1A.47G0	0.0277	0.144
0.86500	0.2429A	0.0322	78.4127	1A.47G1	0.0282	0.147
0.87000	0.2465A	0.0327	79.5844	1A.47G2	0.0287	0.150
0.87500	0.2501A	0.0332	80.7627	1A.47G3	0.0292	0.153
0.88000	0.2537A	0.0337	81.9474	1A.47G4	0.0297	0.156
0.88500	0.2573A	0.0342	83.1384	1A.47G5	0.0302	0.159
0.89000	0.2609A	0.0347	84.3357	1A.47G6	0.0307	0.162
0.89500	0.2645A	0.0352	85.5394	1A.47G7	0.0312	0.165
0.90000	0.2681A	0.0357	86.7494	1A.47G8	0.0317	0.168
0.90500	0.2717A	0.0362	87.9657	1A.47G9	0.0322	0.171
0.91000	0.2753A	0.0367	89.1884	1A.47H0	0.0327	0.174
0.91500	0.2789A	0.0372	90.4174	1A.47H1	0.0332	0.177
0.92000	0.2825A	0.0377	91.6527	1A.47H2	0.0337	0.180
0.92500	0.2861A	0.0382	92.8944	1A.47H3	0.0342	0.183
0.93000	0.2897A	0.0387	94.1427	1A.47H4	0.0347	0.186
0.93500	0.2933A	0.0392	95.3974	1A.47H5	0.0352	0.189
0.94000	0.2969A	0.0397	96.6584	1A.47H6	0.0357	0.192
0.94500	0.3005A	0.0402	97.9257	1A.47H7	0.0362	0.195
0.95000	0.3041A	0.0407	99.1994	1A.47H8	0.0367	0.198
0.95500	0.3077A	0.0412	100.4794	1A.47H9	0.0372	0.201
0.96000	0.3113A	0.0417	101.7657	1A.47I0	0.0377	0.204
0.96500	0.3149A	0.0422	103.0584	1A.47I1	0.0382	0.207
0.97000	0.3185A	0.0427	104.3574	1A.47I2	0.0387	0.210
0.97500	0.3221A	0.0432	105.6627	1A.47I3	0.0392	0.213
0.98000	0.3257A	0.0437	106.9744	1A.47I4	0.0397	0.216
0.98500	0.3293A	0.0442	108.2927	1A.47I5	0.0402	0.219
0.99000	0.3329A	0.0447	109.6174	1A.47I6	0.0407	0.222
0.99500	0.3365A	0.0452	110.9484	1A.47I7	0.0412	0.225
1.00000	0.3401A	0.0457	112.2857	1A.47I8	0.0417	0.228

0.95000	1.09637	0.2049	0.0000	10.0952	0.2559	0.001
0.96000	2.10441	0.2153	0.0000	0.9900	0.2764	0.003
0.97000	2.21512	0.2260	0.0000	0.4871	0.2980	1.038
0.98000	2.3277A	0.2381	0.0000	0.7863	0.3207	1.117
0.99000	2.4422A	0.249A	0.0000	0.4875	0.3445	1.200
1.00000	2.55901	0.2617	0.0000	0.9907	0.3685	1.287
1.01000	2.67717	0.273A	0.0000	0.489A	0.3927	1.379
1.02000	2.79734	0.284A	0.0000	0.4027	0.4171	1.474
1.03000	2.91881	0.2965	0.0000	0.3114	0.4417	1.574
1.04000	3.04165	0.3111	0.0000	0.7271	0.4665	1.677
1.05000	3.16573	0.3238	0.0000	0.1343	0.4915	1.784
1.06000	3.29091	0.336A	0.0000	0.7442	0.5164	1.894
1.07000	3.41705	0.3495	0.0000	0.4838	0.5413	2.015
1.08000	3.54401	0.3625	0.0000	0.8800	0.5661	2.136
1.09000	3.67171	0.3755	0.0000	0.7995	0.5909	2.262
1.10000	3.79994	0.3887	0.0000	0.7196	0.6156	2.397
1.11000	3.9288A	0.401A	0.0000	0.4842	0.6402	2.537
1.12000	4.0576A	0.4150	0.0000	0.5441	0.6647	2.684
1.13000	4.1868A	0.4282	0.0000	0.4885	0.6891	2.839
1.14000	4.31611	0.4415	0.0000	0.4141	0.7134	2.997
1.15000	4.44535	0.4547	0.0000	0.3411	0.7376	3.159
1.16000	4.57460	0.4679	0.0000	0.749A	0.7617	3.327
1.17000	4.7031A	0.4810	0.0000	0.198A	0.7857	3.499
1.18000	4.8315A	0.4942	0.0000	0.1295	1.031A	3.675
1.19000	4.95941	0.5073	0.0000	0.6614	1.080A	3.856
1.20000	5.08667	0.5203	0.0000	0.994A	1.1310	4.042
1.21000	5.21323	0.5332	0.0000	0.9285	1.1825	4.234
1.22000	5.3398A	0.5461	0.0000	0.8637	1.2351	4.434
1.23000	5.4664A	0.5589	0.0000	0.8000	1.2883	4.642
1.24000	5.59271	0.5715	0.0000	0.7373	1.3424	4.858
1.25000	5.71851	0.5841	0.0000	0.6756	1.4011	5.081
1.26000	5.84325	0.596A	0.0000	0.6149	1.4608	5.312
1.27000	5.9675A	0.6088	0.0000	0.5552	1.5217	5.554
1.28000	6.0916A	0.6210	0.0000	0.496A	1.5837	5.807
1.29000	6.2153A	0.6331	0.0000	0.4385	1.6461	6.071
1.30000	6.3389A	0.6449	0.0000	0.3815	1.7091	6.346
1.31000	6.46203	0.6567	0.0000	0.3255	1.7727	6.634
1.32000	6.5853A	0.6683	0.0000	0.2707	1.8369	6.934
1.33000	6.70809	0.6797	0.0000	0.2159	1.9017	7.247
1.34000	6.83095	0.6909	0.0000	0.1623	1.9671	7.574
1.35000	6.95307	0.7020	0.0000	0.109A	2.0330	7.917
1.36000	7.07442	0.7128	0.0000	0.0576	2.1002	8.277
1.37000	7.1959A	0.7235	0.0000	0.006A	2.1684	8.654
1.38000	7.31761	0.7340	0.0000	0.9559	2.2376	9.048
1.39000	7.43837	0.7443	0.0000	0.9062	2.3079	9.459
1.40000	7.55820	0.7545	0.0000	0.8573	2.3792	9.887
1.41000	7.67707	0.7644	0.0000	0.8095	2.4516	10.334
1.42000	7.79595	0.7741	0.0000	0.762A	2.5251	10.799
1.43000	7.91481	0.7836	0.0000	0.715A	2.6007	11.284
1.44000	8.0336A	0.7929	0.0000	0.6683	2.6784	11.789
1.45000	8.15241	0.8020	0.0000	0.6227	2.7582	12.314
1.46000	8.27123	0.810A	0.0000	0.5777	2.8401	12.860
1.47000	8.39017	0.8195	0.0000	0.533A	2.9241	13.427
1.48000	8.5092A	0.8279	0.0000	0.4897	3.0102	14.017
1.49000	8.6284A	0.8361	0.0000	0.4466	3.0982	14.630



1.50000	8.25204	0.4441	0.0000	6.4940	3.1703	11.045
1.60000	8.41998	0.4123	0.0000	6.0287	4.0307	10.041
1.70000	9.10704	0.4954	0.0000	5.4811	4.9475	17.237
1.80000	9.65731	0.5876	0.0000	5.3534	5.9009	20.559
1.90000	9.77051	0.6903	0.0000	5.0900	6.9735	23.947
2.00000	9.74863	0.8041	0.0000	4.8350	7.4905	27.351
2.10000	9.41814	0.9288	0.0000	4.6144	8.4107	30.777
2.20000	8.40374	0.9618	0.0000	4.4154	9.7713	34.041
2.30000	6.19310	0.9333	0.0000	4.2350	10.6942	37.272
2.40000	4.80171	0.9003	0.0000	4.0707	11.5949	40.394
2.50000	4.44793	0.8641	0.0000	3.9204	12.4575	43.402
2.60000	4.07574	0.8260	0.0000	3.7831	13.2938	46.281
2.70000	3.69474	0.7870	0.0000	3.6547	14.0724	49.028
2.80000	3.31227	0.7479	0.0000	3.5402	14.7927	51.642
2.90000	2.93391	0.7082	0.0000	3.4326	15.4550	54.124
3.00000	2.56393	0.6681	0.0000	3.3330	16.0698	56.475
3.10000	2.20529	0.6274	0.0000	3.2405	16.6482	58.699
3.20000	1.86007	0.5864	0.0000	3.1544	17.1813	60.800
3.30000	1.52964	0.5456	0.0000	3.0742	17.6707	62.784
3.40000	1.21487	0.5054	0.0000	2.9993	18.1178	64.655
3.50000	0.91590	0.4658	0.0000	2.9291	18.5242	66.410
3.60000	0.63309	0.4279	0.0000	2.8634	18.8915	68.052
3.70000	0.36494	0.3924	0.0000	2.8017	19.2201	69.589
3.80000	0.11414	0.3590	0.0000	2.7436	19.5117	71.124
3.90000	3.07717	0.3266	0.0000	2.6889	20.1646	72.514
4.00000	3.45447	0.3138	0.0000	2.6374	21.1911	73.899
4.10000	3.44524	0.3323	0.0000	2.5884	21.5440	75.064
4.20000	3.24893	0.3323	0.0000	2.5425	21.8606	76.231
4.30000	3.06481	0.3335	0.0000	2.4989	22.1447	77.331
4.40000	2.89217	0.3354	0.0000	2.4575	22.4039	78.368
4.50000	2.73034	0.3383	0.0000	2.4182	22.7750	79.349
4.60000	2.57864	0.3427	0.0000	2.3809	23.0403	80.272
4.70000	2.43644	0.3482	0.0000	2.3457	23.2910	81.145
4.80000	2.30371	0.3546	0.0000	2.3114	23.5279	81.971
4.90000	2.17827	0.3619	0.0000	2.2791	23.7519	82.751
5.00000	2.06112	0.3704	0.0000	2.2481	23.9638	83.480
5.10000	1.95124	0.3794	0.0000	2.2184	24.1644	84.168
5.20000	1.84815	0.3889	0.0000	2.1907	24.3543	84.809
5.30000	1.75147	0.3989	0.0000	2.1637	24.5347	85.407
5.40000	1.66054	0.4094	0.0000	2.1379	24.7048	86.071
5.50000	1.57525	0.4211	0.0000	2.1137	24.8645	86.704
5.60000	1.49508	0.4339	0.0000	2.0905	25.0140	87.309
5.70000	1.41973	0.4472	0.0000	2.0687	25.1547	87.877
5.80000	1.34884	0.4610	0.0000	2.0484	25.2861	88.410
5.90000	1.28214	0.4751	0.0000	2.0294	25.4085	88.917
6.00000	1.21941	0.4894	0.0000	2.0115	25.5227	89.407
6.10000	1.16030	0.5040	0.0000	1.9940	25.6289	89.879
6.20000	1.10440	0.5189	0.0000	1.9767	25.7272	90.332
6.30000	1.05209	0.5340	0.0000	1.9607	25.8179	90.767
6.40000	1.00257	0.5494	0.0000	1.9457	25.9014	91.185
0	0.95584	0.5651	0.0000	1.9317	25.9779	91.586
0	0.91172	0.5811	0.0000	1.9178	26.0471	91.936
0	0.87004	0.5973	0.0000	1.9044	26.1096	92.221
0	0.83044	0.6138	0.0000	1.8914	26.1657	92.442
0.90000	0.79387	0.6307	0.0000	1.8789	26.2154	92.591

7.00000	0.75810	0.6475	0.0000	1.8667	26.2574	92.679
7.10000	0.72445	0.6741	0.0000	1.8550	26.2919	92.679
7.20000	0.69124	0.7009	0.0000	1.8434	26.3175	92.679
7.30000	0.65834	0.7279	0.0000	1.8320	26.3443	92.679
7.40000	0.62581	0.7550	0.0000	1.8207	26.3722	92.679
7.50000	0.59365	0.7822	0.0000	1.8097	26.4011	92.679
7.60000	0.56184	0.8094	0.0000	1.7987	26.4310	92.679
7.70000	0.53037	0.8367	0.0000	1.7880	26.4619	92.679
7.80000	0.49924	0.8641	0.0000	1.7774	26.4938	92.679
7.90000	0.46845	0.8916	0.0000	1.7670	26.5267	92.679
8.00000	0.43800	0.9192	0.0000	1.7567	26.5607	92.679
8.10000	0.40789	0.9469	0.0000	1.7466	26.5957	92.679
8.20000	0.37812	0.9747	0.0000	1.7366	26.6317	92.679
8.30000	0.34869	1.0026	0.0000	1.7267	26.6687	92.679
8.40000	0.31960	1.0306	0.0000	1.7169	26.7067	92.679
8.50000	0.29085	1.0587	0.0000	1.7072	26.7457	92.679
8.60000	0.26254	1.0869	0.0000	1.6977	26.7857	92.679
8.70000	0.23467	1.1152	0.0000	1.6882	26.8267	92.679
8.80000	0.20724	1.1437	0.0000	1.6789	26.8687	92.679
8.90000	0.18025	1.1724	0.0000	1.6697	26.9117	92.679
9.00000	0.15370	1.2012	0.0000	1.6607	26.9557	92.679
9.10000	0.12759	1.2302	0.0000	1.6517	27.0007	92.679
9.20000	0.10192	1.2594	0.0000	1.6429	27.0467	92.679
9.30000	0.07669	1.2887	0.0000	1.6342	27.0937	92.679
9.40000	0.05190	1.3182	0.0000	1.6257	27.1417	92.679
9.50000	0.02755	1.3479	0.0000	1.6172	27.1907	92.679
9.60000	0.00374	1.3778	0.0000	1.6089	27.2407	92.679
9.70000	0.00000	1.4079	0.0000	1.6007	27.2917	92.679
9.80000	0.00000	1.4382	0.0000	1.5927	27.3437	92.679
9.90000	0.00000	1.4687	0.0000	1.5847	27.3967	92.679
10.00000	0.00000	1.4994	0.0000	1.5769	27.4507	92.679
10.10000	0.00000	1.5302	0.0000	1.5692	27.5057	92.679
10.20000	0.00000	1.5612	0.0000	1.5617	27.5617	92.679
10.30000	0.00000	1.5924	0.0000	1.5542	27.6187	92.679
10.40000	0.00000	1.6238	0.0000	1.5469	27.6767	92.679
10.50000	0.00000	1.6554	0.0000	1.5397	27.7357	92.679
10.60000	0.00000	1.6872	0.0000	1.5327	27.7957	92.679
10.70000	0.00000	1.7192	0.0000	1.5257	27.8567	92.679
10.80000	0.00000	1.7514	0.0000	1.5189	27.9187	92.679
10.90000	0.00000	1.7838	0.0000	1.5122	27.9817	92.679
11.00000	0.00000	1.8164	0.0000	1.5057	28.0457	92.679
11.10000	0.00000	1.8492	0.0000	1.4992	28.1107	92.679
11.20000	0.00000	1.8822	0.0000	1.4929	28.1767	92.679
11.30000	0.00000	1.9154	0.0000	1.4867	28.2437	92.679
11.40000	0.00000	1.9488	0.0000	1.4807	28.3117	92.679
11.50000	0.00000	1.9824	0.0000	1.4747	28.3807	92.679
11.60000	0.00000	2.0162	0.0000	1.4689	28.4507	92.679
11.70000	0.00000	2.0502	0.0000	1.4632	28.5217	92.679
11.80000	0.00000	2.0844	0.0000	1.4577	28.5937	92.679
11.90000	0.00000	2.1188	0.0000	1.4522	28.6667	92.679
12.00000	0.00000	2.1534	0.0000	1.4469	28.7407	92.679

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, U.S. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1776.7 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1550.0  
DEGREES FAHRENHEIT = 3220.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.61 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 4.10 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 1.10 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.002.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 70.972 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.125 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.6697 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.1541 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 39.73 WATT/CM<sup>2</sup> OR 1.27253E+08 ERG/SEC/CM<sup>2</sup> OR 7.42159E+07 CAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1.2 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT OF LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER (ONE CENT) METER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (%) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA:  $\Delta E/E = n \Delta T/T$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 17 6.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1550.0  
DEGREES FAHRENHEIT = 3220.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PFA	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT N FOR RAYON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00002	1.8853E-04	0.0000	26.5161	3.2172E-07	0.000
0.35500	0.00003	2.5513E-04	0.0000	26.1427	4.4865E-07	0.000
0.36000	0.00004	3.4205E-04	0.0000	25.7794	6.1957E-07	0.000
0.36500	0.00005	4.5447E-04	0.0000	25.4264	8.4762E-07	0.000
0.37000	0.00007	5.9867E-04	0.0000	25.0828	1.1422E-06	0.000
0.37500	0.00009	7.8213E-04	0.0000	24.7484	1.5640E-06	0.000
0.38000	0.00012	1.0134E-03	0.0000	24.4228	2.0596E-06	0.000
0.38500	0.00015	1.3041E-03	0.0000	24.1054	2.7241E-06	0.000
0.39000	0.00019	1.6653E-03	0.0000	23.7954	3.5745E-06	0.000
0.39500	0.00024	2.1114E-03	0.0000	23.4931	4.6591E-06	0.000
0.40000	0.00031	2.6607E-03	0.3192E-05	23.2014	6.0201E-06	0.000
0.40500	0.00038	3.3240E-03	0.0002	22.9132	7.7477E-06	0.000
0.41000	0.00044	4.1148E-03	0.0004	22.6357	9.8806E-06	0.000
0.41500	0.00049	5.0197E-03	0.0009	22.3630	1.2540E-05	0.000
0.42000	0.00052	6.0218E-03	0.0002	22.0944	1.5725E-05	0.000
0.42500	0.00059	7.1808E-03	0.0004	21.8368	1.9400E-05	0.000
0.43000	0.00064	8.4907E-03	0.0005	21.5829	2.3715E-05	0.000
0.43500	0.00069	9.9507E-03	0.0004	21.3348	2.8670E-05	0.000
0.44000	0.00072	1.1550E-02	0.0005	21.0921	3.4230E-05	0.000
0.44500	0.00074	1.3270E-02	0.0003	20.8554	4.0427E-05	0.000
0.45000	0.00074	1.5090E-02	0.0004	20.6237	4.7270E-05	0.000
0.45500	0.00074	1.6980E-02	0.0003	20.3970	5.4761E-05	0.000
0.46000	0.00071	1.8900E-02	0.0002	20.1753	6.2890E-05	0.000
0.46500	0.00068	2.0820E-02	0.0000	19.9584	7.1650E-05	0.000
0.47000	0.00063	2.2720E-02	0.0000	19.7461	8.0950E-05	0.000
0.47500	0.00058	2.4580E-02	0.0000	19.5389	9.0790E-05	0.000
0.48000	0.00052	2.6380E-02	0.0000	19.3347	1.0102E-04	0.000
0.48500	0.00046	2.8100E-02	0.0000	19.1334	1.1222E-04	0.000
0.49000	0.00040	2.9720E-02	0.0000	18.9354	1.2430E-04	0.000
0.49500	0.00034	3.1220E-02	0.0000	18.7401	1.3720E-04	0.000
0.50000	0.00028	3.2580E-02	0.0000	18.5484	1.5080E-04	0.000
0.50500	0.00022	3.3780E-02	0.0000	18.3601	1.6500E-04	0.000
0.51000	0.00016	3.4820E-02	0.0000	18.1754	1.7980E-04	0.000
0.51500	0.00010	3.5700E-02	0.0000	17.9941	1.9520E-04	0.000
0.52000	0.00004	3.6420E-02	0.0000	17.8164	2.1120E-04	0.000
0.52500	0.00000	3.6980E-02	0.0000	17.6424	2.2780E-04	0.000
0.53000	0.00000	3.7380E-02	0.0000	17.4721	2.4500E-04	0.000
0.53500	0.00000	3.7620E-02	0.0000	17.3054	2.6280E-04	0.000
0.54000	0.00000	3.7700E-02	0.0000	17.1424	2.8120E-04	0.000
0.54500	0.00000	3.7620E-02	0.0000	16.9831	2.9920E-04	0.000
0.55000	0.00000	3.7380E-02	0.0000	16.8274	3.1680E-04	0.000
0.55500	0.00000	3.6980E-02	0.0000	16.6754	3.3400E-04	0.000
0.56000	0.00000	3.6420E-02	0.0000	16.5274	3.5080E-04	0.000
0.56500	0.00000	3.5700E-02	0.0000	16.3834	3.6720E-04	0.000
0.57000	0.00000	3.4820E-02	0.0000	16.2434	3.8320E-04	0.000

0.37000	0.44271	0.40931	10.21154	14.14013	0.00925	0.004
0.38000	0.44271	0.40931	17.8004	14.1011	0.00925	0.009
0.39000	0.47710	0.40931	19.4010	14.4044	0.0012	0.010
0.40000	0.47710	0.40931	19.7046	15.7299	0.0015	0.011
0.41000	0.47710	0.40931	19.8872	15.4977	0.0010	0.011
0.42000	0.47710	0.40931	19.9509	15.4477	0.0044	0.017
0.43000	0.10049	0.40931	14.7402	15.1399	0.0048	0.017
0.44000	0.10049	0.40931	17.4047	15.2142	0.0054	0.014
0.45000	0.11001	0.4103	15.6770	15.0905	0.0059	0.018
0.46000	0.17004	0.4112	13.1066	14.8008	0.0064	0.020
0.47000	0.17004	0.4121	10.4373	14.4490	0.0072	0.022
0.48000	0.17004	0.4131	27.1030	14.7112	0.0080	0.024
0.49000	0.10204	0.4141	24.0740	14.4152	0.0087	0.027
0.50000	0.17552	0.4152	20.0047	14.4010	0.0094	0.029
0.51000	0.10000	0.4160	17.7248	14.1844	0.0105	0.032
0.52000	0.20002	0.4170	14.7710	14.2770	0.0115	0.035
0.53000	0.21700	0.4180	19.0010	14.1800	0.0125	0.034
0.54000	0.23553	0.4203	7.0000	14.0014	0.0137	0.032
0.55000	0.24004	0.4217	7.0000	13.9550	0.0140	0.045
0.56000	0.26770	0.4232	9.1013	13.9517	0.0142	0.049
0.57000	0.26937	0.4240	4.0014	13.7401	0.0175	0.058
0.58000	0.10010	0.4260	3.5103	13.6000	0.0190	0.058
0.59000	0.12350	0.4281	7.0015	13.5004	0.0206	0.063
0.60000	0.14001	0.4299	1.9216	13.4502	0.0223	0.068
0.61000	0.16017	0.4318	1.1101	13.3535	0.0247	0.071
0.62000	0.18000	0.4337	1.0035	13.2501	0.0259	0.070
0.63000	0.21202	0.4358	0.9125	13.1041	0.0270	0.085
0.64000	0.23615	0.4379	0.8231	13.0714	0.0300	0.092
0.65000	0.26103	0.4401	0.7400	12.8000	0.0323	0.099
0.66000	0.28707	0.4426	0.6600	12.8000	0.0347	0.104
0.67000	0.31500	0.4452	0.5852	12.4000	0.0372	0.114
0.68000	0.34337	0.4477	0.5147	12.7133	0.0398	0.122
0.69000	0.37200	0.4502	0.4457	12.4200	0.0426	0.130
0.70000	0.40071	0.4527	0.3780	12.5415	0.0455	0.137
0.71000	0.42937	0.4551	0.3120	12.0571	0.0484	0.140
0.72000	0.45800	0.4575	0.2480	12.1747	0.0519	0.150
0.73000	0.48667	0.4600	0.1800	12.7114	0.0549	0.160
0.74000	0.51537	0.4626	0.1100	12.4529	0.0580	0.203
0.75000	0.54400	0.4652	0.0400	11.4901	0.0750	0.229
0.76000	0.57267	0.4678	0.0000	11.7477	0.0842	0.257
0.77000	0.60137	0.4704	0.0000	11.4000	0.0942	0.280
0.78000	0.63000	0.4730	0.0000	11.4577	0.1051	0.321
0.79000	1.04940	0.4756	0.0000	11.4100	0.1149	0.357
0.80000	1.13309	0.4781	0.0000	11.1517	0.1297	0.396
0.81000	1.22074	0.4806	0.0000	11.4000	0.1414	0.434
0.82000	1.31234	0.4831	0.0000	11.0000	0.1501	0.483
0.83000	1.40797	0.4856	0.0000	10.0100	0.1740	0.532
0.84000	1.50760	0.4881	0.0000	10.4677	0.1909	0.581
0.85000	1.61123	0.4906	0.0000	10.4405	0.2080	0.634
0.86000	1.71886	0.4931	0.0000	10.4200	0.2267	0.697
0.87000	1.83049	0.4956	0.0000	10.1122	0.2480	0.760
0.88000	1.94612	0.4981	0.0000	10.1900	0.2703	0.820
0.89000	2.06575	0.5006	0.0000	10.0001	0.2937	0.884
0.90000	2.18938	0.5031	0.0000	0.0797	0.3175	0.970
0.91000	2.31701	0.5056	0.0000	0.4735	0.3431	1.044

0.92000	2.44864	0.5081	0.0000	0.7407	0.3701	1.131
0.93000	2.58240	0.5106	0.0000	0.4400	0.3900	1.217
0.94000	2.72070	0.5131	0.0000	0.4003	0.4202	1.300
0.95000	2.86354	0.5156	0.0000	0.4700	0.4594	1.404
0.96000	3.01090	0.5181	0.0000	0.3752	0.4920	1.503
0.97000	3.16270	0.5206	0.0000	0.2915	0.5201	1.608
0.98000	3.31900	0.5231	0.0000	0.1897	0.5618	1.717
0.99000	3.48080	0.5256	0.0000	0.0997	0.5900	1.830
1.00000	3.64820	0.5281	0.0000	0.0114	0.6375	1.940
1.01000	3.82130	0.5306	0.0000	0.0249	0.6777	2.071
1.02000	4.00010	0.5331	0.0000	0.4400	0.7104	2.190
1.03000	4.18470	0.5356	0.0000	0.7567	0.7457	2.331
1.04000	4.37510	0.5381	0.0000	0.4750	0.8076	2.464
1.05000	4.57130	0.5406	0.0000	0.4940	0.8540	2.610
1.06000	4.77340	0.5431	0.0000	0.5101	0.9020	2.754
1.07000	4.98150	0.5456	0.0000	0.4300	0.9515	2.900
1.08000	5.19560	0.5481	0.0000	0.1929	1.0027	3.044
1.09000	5.41570	0.5506	0.0000	0.2004	1.0554	3.225
1.10000	5.64180	0.5531	0.0000	0.2152	1.1096	3.391
1.11000	5.87390	0.5556	0.0000	0.1433	1.1655	3.541
1.12000	6.11200	0.5581	0.0000	0.0727	1.2229	3.737
1.13000	6.35610	0.5606	0.0000	0.0032	1.2816	3.917
1.14000	6.60620	0.5631	0.0000	0.0000	1.3423	4.102
1.15000	6.86230	0.5656	0.0000	0.0000	1.4044	4.291
1.16000	7.12440	0.5681	0.0000	0.0000	1.4679	4.484
1.17000	7.39250	0.5706	0.0000	0.0000	1.5330	4.684
1.18000	7.66660	0.5731	0.0000	0.0000	1.5996	4.880
1.19000	7.94670	0.5756	0.0000	0.0000	1.6677	5.094
1.20000	8.23280	0.5781	0.0000	0.0000	1.7372	5.300
1.21000	8.52490	0.5806	0.0000	0.0000	1.8082	5.525
1.22000	8.82300	0.5831	0.0000	0.0000	1.8806	5.747
1.23000	9.12710	0.5856	0.0000	0.0000	1.9545	5.979
1.24000	9.43720	0.5881	0.0000	0.0000	2.0297	6.202
1.25000	9.75330	0.5906	0.0000	0.0000	2.1064	6.437
1.26000	10.07540	0.5931	0.0000	0.0000	2.1844	6.675
1.27000	10.40350	0.5956	0.0000	0.0000	2.2637	6.917
1.28000	10.73760	0.5981	0.0000	0.0000	2.3444	7.160
1.29000	11.07770	0.6006	0.0000	0.0000	2.4264	7.410
1.30000	11.42380	0.6031	0.0000	0.0000	2.5096	7.669
1.31000	11.77590	0.6056	0.0000	0.0000	2.5941	7.927
1.32000	12.13400	0.6081	0.0000	0.0000	2.6799	8.184
1.33000	12.49810	0.6106	0.0000	0.0000	2.7667	8.454
1.34000	12.86820	0.6131	0.0000	0.0000	2.8544	8.724
1.35000	13.24430	0.6156	0.0000	0.0000	2.9430	8.990
1.36000	13.62640	0.6181	0.0000	0.0000	3.0335	9.277
1.37000	14.01450	0.6206	0.0000	0.0000	3.1250	9.552
1.38000	14.40860	0.6231	0.0000	0.0000	3.2185	9.835
1.39000	14.80870	0.6256	0.0000	0.0000	3.3121	10.121
1.40000	15.21480	0.6281	0.0000	0.0000	3.4068	10.410
1.41000	15.62690	0.6306	0.0000	0.0000	3.5024	10.702
1.42000	16.04500	0.6331	0.0000	0.0000	3.5990	10.998
1.43000	16.46910	0.6356	0.0000	0.0000	3.6965	11.294
1.44000	16.90020	0.6381	0.0000	0.0000	3.7940	11.594
1.45000	17.33730	0.6406	0.0000	0.0000	3.8924	11.890
1.46000	17.78040	0.6431	0.0000	0.0000	3.9918	12.204

1.50000	10.14717	0.44009	0.00000	4.14994	4.0047	12.515
1.60000	10.24237	0.44001	0.00000	5.41440	5.1444	15.727
1.70000	11.24251	0.44000	0.00000	5.4425	6.2531	19.108
1.80000	11.47871	0.44000	0.00000	5.1854	7.3918	22.587
1.90000	11.51131	0.44004	0.00000	4.4214	8.5427	26.104
2.00000	11.39532	0.44003	0.00000	4.4454	9.6991	29.667
2.10000	11.16332	0.44001	0.00000	4.4732	10.8179	33.284
2.20000	10.84414	0.44014	0.00000	4.5115	11.9149	36.951
2.30000	10.44244	0.44013	0.00000	4.1077	12.9847	39.671
2.40000	10.03847	0.44115	0.00000	1.4444	14.0110	42.011
2.50000	9.54859	0.44224	0.00000	1.4052	14.9915	43.910
2.60000	9.12574	0.44323	0.00000	1.4729	15.9273	45.369
2.70000	8.45092	0.44414	0.00000	1.4515	16.8165	46.669
2.80000	8.14070	0.44414	0.00000	1.4304	17.6504	47.587
2.90000	7.74764	0.44224	0.00000	1.3342	18.4294	48.069
3.00000	7.31079	0.44009	0.00000	1.2405	19.2704	48.399
3.10000	6.89082	0.43822	0.00000	1.1517	19.973	48.669
3.20000	6.48951	0.43634	0.00000	1.0669	20.5842	48.886
3.30000	6.10784	0.43443	0.00000	2.0929	21.1179	49.051
3.40000	5.74624	0.43250	0.00000	2.9201	21.5814	49.174
3.50000	5.40474	0.43057	0.00000	2.4528	22.1474	49.257
3.60000	5.08299	0.42863	0.00000	2.7444	22.4821	49.302
3.70000	4.78041	0.42670	0.00000	2.7304	23.1851	49.327
3.80000	4.49631	0.42477	0.00000	2.4742	23.8488	49.337
3.90000	4.22994	0.42284	0.00000	2.4724	24.2849	49.327
4.00000	3.98024	0.42091	0.00000	2.5730	24.4953	49.297
4.10000	3.74654	0.41898	0.00000	2.5242	25.0415	49.247
4.20000	3.52784	0.41705	0.00000	2.4820	25.4451	49.174
4.30000	3.32324	0.41512	0.00000	2.4402	25.7876	49.086
4.40000	3.13192	0.41319	0.00000	2.4000	26.1102	48.986
4.50000	2.95294	0.41126	0.00000	2.3624	26.4143	48.874
4.60000	2.78555	0.40933	0.00000	2.3270	26.7012	48.751
4.70000	2.62894	0.40740	0.00000	2.2929	26.9714	48.618
4.80000	2.48244	0.40547	0.00000	2.2604	27.2273	48.474
4.90000	2.34537	0.40354	0.00000	2.2294	27.4694	48.319
5.00000	2.21704	0.40161	0.00000	2.1999	27.6947	48.153
5.10000	2.09644	0.39968	0.00000	2.1717	27.9123	47.977
5.20000	1.98244	0.39775	0.00000	2.1447	28.1143	47.791
5.30000	1.87474	0.39582	0.00000	2.1189	28.3004	47.595
5.40000	1.77244	0.39389	0.00000	2.0941	28.4623	47.389
5.50000	1.67555	0.39196	0.00000	2.0704	28.6004	47.174
5.60000	1.58404	0.39003	0.00000	2.0477	28.7259	46.949
5.70000	1.51825	0.38810	0.00000	2.0254	28.8394	46.714
5.80000	1.44414	0.38617	0.00000	2.0044	28.9414	46.469
5.90000	1.38024	0.38424	0.00000	1.9847	29.0323	46.214
6.00000	1.31139	0.38231	0.00000	1.9652	29.1123	45.949
6.10000	1.23751	0.38038	0.00000	1.9464	29.1814	45.674
6.20000	1.17741	0.37845	0.00000	1.9284	29.2404	45.389
6.30000	1.12079	0.37652	0.00000	1.9112	29.2894	45.094
6.40000	1.06741	0.37459	0.00000	1.8944	29.3284	44.789
6.50000	1.01713	0.37266	0.00000	1.8781	29.3574	44.474
6.60000	0.96947	0.37073	0.00000	1.8627	29.3764	44.149
6.70000	0.92484	0.36880	0.00000	1.8476	29.3854	43.814
6.80000	0.88254	0.36687	0.00000	1.8330	29.3844	43.469
6.90000	0.84224	0.36494	0.00000	1.8189	29.3734	43.114

7.00000	0.80444	0.36301	0.00000	1.8053	29.3524	42.749
7.10000	0.76811	0.36108	0.00000	1.7921	29.3214	42.374
7.20000	0.73530	0.35915	0.00000	1.7791	29.2804	41.989
7.30000	0.70329	0.35722	0.00000	1.7664	29.2294	41.594
7.40000	0.67297	0.35529	0.00000	1.7544	29.1684	41.189
7.50000	0.64421	0.35336	0.00000	1.7432	29.0974	40.774
7.60000	0.61694	0.35143	0.00000	1.7319	29.0164	40.349
7.70000	0.59114	0.34950	0.00000	1.7209	28.9254	39.914
7.80000	0.56661	0.34757	0.00000	1.7102	28.8244	39.469
7.90000	0.54332	0.34564	0.00000	1.6994	28.7134	39.014
8.00000	0.52119	0.34371	0.00000	1.6889	28.5924	38.549
8.10000	0.50014	0.34178	0.00000	1.6784	28.4614	38.074
8.20000	0.48017	0.33985	0.00000	1.6677	28.3204	37.589
8.30000	0.46115	0.33792	0.00000	1.6571	28.1694	37.094
8.40000	0.44305	0.33600	0.00000	1.6464	28.0084	36.589
8.50000	0.42592	0.33407	0.00000	1.6357	27.8374	36.074
8.60000	0.40984	0.33214	0.00000	1.6249	27.6564	35.549
8.70000	0.39374	0.33021	0.00000	1.6141	27.4654	35.014
8.80000	0.37864	0.32828	0.00000	1.6032	27.2644	34.469
8.90000	0.36441	0.32635	0.00000	1.5924	27.0534	33.914
9.00000	0.35107	0.32442	0.00000	1.5817	26.8324	33.349
9.10000	0.33812	0.32249	0.00000	1.5709	26.6014	32.774
9.20000	0.32575	0.32056	0.00000	1.5602	26.3604	32.189
9.30000	0.31394	0.31863	0.00000	1.5494	26.1094	31.594
9.40000	0.30244	0.31670	0.00000	1.5387	25.8484	30.989
9.50000	0.29117	0.31477	0.00000	1.5279	25.5774	30.374
9.60000	0.28015	0.31284	0.00000	1.5171	25.2964	29.749
9.70000	0.27164	0.31091	0.00000	1.5064	25.0054	29.104
9.80000	0.26424	0.30898	0.00000	1.4956	24.7044	28.449
9.90000	0.25784	0.30705	0.00000	1.4849	24.3934	27.774
10.00000	0.25244	0.30512	0.00000	1.4741	24.0724	27.089
10.10000	0.24704	0.30319	0.00000	1.4634	23.7414	26.384
10.20000	0.24224	0.30126	0.00000	1.4526	23.3904	25.669
10.30000	0.23794	0.29933	0.00000	1.4419	23.0294	24.944
10.40000	0.23417	0.29740	0.00000	1.4311	22.6584	24.209
10.50000	0.23084	0.29547	0.00000	1.4204	22.2774	23.464
10.60000	0.22794	0.29354	0.00000	1.4096	21.8864	22.709
10.70000	0.22544	0.29161	0.00000	1.4000	21.4854	21.944
10.80000	0.22324	0.28968	0.00000	1.3902	21.0744	21.169
10.90000	0.22139	0.28775	0.00000	1.3804	20.6534	20.384
11.00000	0.21974	0.28582	0.00000	1.3709	20.2224	19.589
11.10000	0.21824	0.28389	0.00000	1.3611	19.7814	18.774
11.20000	0.21684	0.28196	0.00000	1.3514	19.3304	17.949
11.30000	0.21544	0.28003	0.00000	1.3419	18.8694	17.104
11.40000	0.21417	0.27810	0.00000	1.3321	18.4084	16.249
11.50000	0.21304	0.27617	0.00000	1.3224	17.9374	15.374
11.60000	0.21204	0.27424	0.00000	1.3129	17.4564	14.489
11.70000	0.21117	0.27231	0.00000	1.3031	16.9654	13.584
11.80000	0.21044	0.27038	0.00000	1.2934	16.4644	12.659
11.90000	0.20984	0.26845	0.00000	1.2839	15.9534	11.714
12.00000	0.20944	0.26652	0.00000	1.2741	15.4324	10.749

VISIBILITY AND OTHER DATA FOR PLANK RADIATION, MECHANICS DIVISION, D.R.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1326.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1600.0  
DEGREES FAHRENHEIT = 2420.0

THE POWER RADIATED FROM 0.40 TO 0.7 MICRON IS 0.08 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 6.70 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 2.13 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.002 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 84.309 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.180 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.8116 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.2825 MICRONS.  
I.E., THIS WAVELENGTH MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 37.16 WATT/CM<sup>2</sup> OR 3.715000E+01 ENW/SEC/CM<sup>2</sup> OR 4.440720E+03 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 13.50 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 6 ) IS THE PRODUCT, WATT LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (E) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta E = E \cdot M \cdot \Delta T$

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1326.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1600.0  
DEGREES FAHRENHEIT = 2420.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOINENT M FOR RAYON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00005	3.48390E-04	0.0000	25.4875	7.83470E-07	0.000
0.35500	0.00007	4.92750E-04	0.0000	25.3257	1.04230E-06	0.000
0.36000	0.00009	6.53160E-04	0.0000	24.9740	1.43600E-06	0.000
0.36500	0.00012	8.54310E-04	0.0000	24.4318	1.98880E-06	0.000
0.37000	0.00015	1.11880E-03	0.0000	24.2990	2.60830E-06	0.000
0.37500	0.00020	1.48690E-03	0.0000	23.9750	3.48900E-06	0.000
0.38000	0.00025	1.85590E-03	0.0000	23.4595	4.57980E-06	0.000
0.38500	0.00032	2.36330E-03	0.0000	23.1523	5.98750E-06	0.000
0.39000	0.00041	2.94900E-03	0.0000	23.0529	7.70700E-06	0.000
0.39500	0.00051	3.74480E-03	0.0000	22.7811	1.00450E-05	0.000
0.40000	0.00061	4.67680E-03	0.0000	22.4788	1.29080E-05	0.000
0.40500	0.00074	5.81280E-03	0.0000	22.1991	1.64360E-05	0.000
0.41000	0.00087	7.16680E-03	0.0000	21.9286	2.08080E-05	0.000
0.41500	0.00119	8.78880E-03	0.0018	21.6682	2.41720E-05	0.000
0.42000	0.00145	0.0001	0.0039	21.4063	2.72380E-05	0.000
0.42500	0.00175	0.0001	0.0087	21.1544	3.07000E-05	0.000
0.43000	0.00211	0.0002	0.0167	20.9088	3.45980E-05	0.000
0.43500	0.00254	0.0002	0.0290	20.6881	3.89580E-05	0.000
0.44000	0.00303	0.0002	0.0474	20.4832	4.38500E-05	0.000
0.44500	0.00360	0.0003	0.0711	20.2937	4.92050E-05	0.000
0.45000	0.00427	0.0003	0.1102	19.9792	0.0001	0.000
0.45500	0.00501	0.0004	0.1641	19.7598	0.0001	0.000
0.46000	0.00590	0.0004	0.2408	19.5488	0.0002	0.000
0.46500	0.00690	0.0005	0.3471	19.3387	0.0002	0.001
0.47000	0.00803	0.0006	0.4970	19.1290	0.0002	0.001
0.47500	0.00932	0.0007	0.7096	18.9278	0.0003	0.001
0.48000	0.11077	0.0009	1.0179	18.7303	0.0003	0.001
0.48500	0.13240	0.0009	1.4254	18.5374	0.0004	0.001
0.49000	0.14824	0.0011	2.0137	18.3482	0.0004	0.001
0.49500	0.16829	0.0012	2.8576	18.1629	0.0005	0.001
0.50000	0.18487	0.0014	4.0797	17.9811	0.0006	0.001
0.50500	0.20712	0.0016	5.8444	17.8032	0.0007	0.002
0.51000	0.23590	0.0018	8.1949	17.6287	0.0008	0.002
0.51500	0.27205	0.0020	11.1841	17.4575	0.0010	0.003
0.52000	0.30849	0.0023	14.7189	17.2897	0.0011	0.003
0.52500	0.34824	0.0025	18.4766	17.1250	0.0013	0.003
0.53000	0.38861	0.0028	22.4132	16.9638	0.0014	0.004
0.53500	0.44294	0.0032	26.7185	16.8049	0.0016	0.004
0.54000	0.48789	0.0035	31.0682	16.6493	0.0019	0.004
0.54500	0.53328	0.0039	35.9073	16.4964	0.0021	0.004
0.55000	0.57916	0.0044	40.0142	16.3466	0.0024	0.006
0.55500	0.62540	0.0049	44.5183	16.1993	0.0027	0.007
0.56000	0.67236	0.0054	48.9870	16.0547	0.0031	0.008
0.56500	0.72009	0.0059	53.1154	15.9124	0.0034	0.009
0.57000	0.76774	0.0065	56.8281	15.7730	0.0039	0.010

0.97500	0.09630	0.0071	59.9720	14.4159	0.0043	0.017
0.50000	0.10567	0.0074	47.4844	15.2011	0.0044	0.011
0.50000	0.11577	0.0084	44.1783	15.3684	0.0054	0.014
0.50000	0.12411	0.0091	44.0180	15.2384	0.0060	0.016
0.50000	0.13741	0.0102	44.9813	15.1103	0.0064	0.018
0.60000	0.14947	0.0111	44.1328	14.9844	0.0074	0.020
0.60000	0.16220	0.0120	42.5742	14.8485	0.0081	0.022
0.61000	0.17591	0.0130	40.1740	14.7187	0.0088	0.024
0.61500	0.19039	0.0141	37.0943	14.4140	0.0094	0.027
0.62000	0.20571	0.0152	33.2964	14.5010	0.0109	0.029
0.62500	0.22192	0.0164	28.8415	14.1850	0.0120	0.032
0.63000	0.23905	0.0177	23.7062	14.2704	0.0131	0.035
0.63500	0.25711	0.0190	17.9391	14.1545	0.0143	0.039
0.64000	0.27614	0.0204	12.4604	14.0489	0.0157	0.043
0.64500	0.29614	0.0219	7.2793	13.9160	0.0171	0.046
0.65000	0.31719	0.0235	23.0747	13.4317	0.0184	0.050
0.65500	0.33924	0.0251	18.4685	13.7242	0.0203	0.055
0.66000	0.36239	0.0268	15.0321	13.6372	0.0220	0.059
0.66500	0.38661	0.0284	11.4303	13.4594	0.0239	0.064
0.67000	0.41191	0.0305	8.9637	13.2119	0.0259	0.070
0.67500	0.43834	0.0325	6.8593	13.1195	0.0280	0.075
0.68000	0.46497	0.0344	5.1664	13.2214	0.0303	0.080
0.68500	0.49472	0.0366	4.0031	13.1250	0.0327	0.088
0.69000	0.52864	0.0389	2.9255	13.0298	0.0352	0.095
0.69500	0.55579	0.0412	2.1582	12.9364	0.0379	0.102
0.70000	0.58811	0.0436	1.4397	12.8434	0.0408	0.110
0.70500	0.62162	0.0441	1.2200	12.7527	0.0419	0.118
0.71000	0.65450	0.0454	0.9175	12.6670	0.0470	0.127
0.71500	0.68955	0.0513	0.7084	12.5741	0.0504	0.134
0.72000	0.72987	0.0541	0.5459	12.4470	0.0519	0.143
0.72500	0.76845	0.0549	0.3854	12.4009	0.0577	0.153
0.73000	0.80831	0.0599	0.2744	12.3180	0.0616	0.160
0.73500	0.84945	0.0629	0.2111	12.2322	0.0648	0.177
0.74000	0.89190	0.0661	0.1419	12.1494	0.0701	0.189
0.74500	0.93561	0.0693	0.1272	12.0640	0.0747	0.201
0.75000	0.98067	0.0726	0.0647	11.9474	0.0795	0.214
0.75500	1.02444	0.0796	0.0000	11.8299	0.0894	0.242
0.76000	1.07341	0.0849	0.0000	11.6762	0.1010	0.272
0.76500	1.12714	0.0947	0.0000	11.5264	0.1133	0.305
0.77000	1.18770	0.1074	0.0000	11.3407	0.1246	0.341
0.77500	1.25232	0.0000	0.0000	11.2384	0.1410	0.380
0.78000	1.32197	0.1201	0.0000	11.0997	0.1546	0.422
0.78500	1.38657	0.0000	0.0000	10.9644	0.1715	0.467
0.79000	1.47401	0.1390	0.0000	10.8323	0.1914	0.516
0.79500	1.51014	0.1449	0.0000	10.7034	0.2110	0.560
0.80000	1.54894	0.1592	0.0000	10.5774	0.2318	0.624
0.80500	1.59214	0.1694	0.0000	10.4544	0.2540	0.644
0.81000	1.63964	0.1807	0.0000	10.3344	0.2777	0.747
0.81500	1.69124	0.1919	0.0000	10.2170	0.3024	0.815
0.82000	1.74687	0.2035	0.0000	10.1022	0.3295	0.887
0.82500	1.80614	0.2153	0.0000	9.9900	0.3578	0.963
0.83000	1.86901	0.2273	0.0000	9.8801	0.3876	1.043
0.83500	1.93525	0.2394	0.0000	9.7730	0.4192	1.128
0.84000	1.99464	0.2522	0.0000	9.6684	0.4524	1.217
0.84500	1.97494	0.2650	0.0000	9.5652	0.4873	1.311

0.95000	3.75204	0.2770	0.0000	0.4444	0.9230	1.410
0.96000	3.22953	0.2411	0.0000	0.3460	0.5623	1.513
0.97000	3.10935	0.1988	0.0000	0.2494	0.4025	1.621
0.98000	4.29121	0.3179	0.0000	0.1751	0.4445	1.735
0.99000	4.47401	0.3314	0.0000	0.0825	0.6843	1.852
1.00000	4.66020	0.3452	0.0000	0.0917	0.7340	1.975
1.01000	4.84444	0.3590	0.0000	0.0928	0.7815	2.103
1.02000	5.03471	0.3729	0.0000	0.1154	0.8108	2.234
1.03000	5.22349	0.3869	0.0000	0.1302	0.8822	2.374
1.04000	5.41264	0.4010	0.0000	0.1464	0.9344	2.517
1.05000	5.60299	0.4150	0.0000	0.1541	0.9995	2.666
1.06000	5.79329	0.4291	0.0000	0.1634	1.0675	2.810
1.07000	5.98369	0.4432	0.0000	0.1641	1.1044	2.978
1.08000	6.17394	0.4573	0.0000	0.1672	1.1672	3.141
1.09000	6.36397	0.4714	0.0000	0.1704	1.2294	3.310
1.10000	6.55367	0.4854	0.0000	0.1754	1.2944	3.484
1.11000	6.74230	0.4994	0.0000	0.1821	1.3609	3.663
1.12000	6.93027	0.5133	0.0000	0.1900	1.4293	3.847
1.13000	7.11722	0.5272	0.0000	0.1991	1.4995	4.034
1.14000	7.30227	0.5400	0.0000	0.1994	1.5716	4.230
1.15000	7.48737	0.5546	0.0000	0.2111	1.6454	4.429
1.16000	7.67207	0.5682	0.0000	0.2239	1.7214	4.633
1.17000	7.85151	0.5814	0.0000	0.2374	1.7997	4.842
1.18000	8.03097	0.5944	0.0000	0.2429	1.8744	5.055
1.19000	8.21040	0.6074	0.0000	0.2591	1.9556	5.274
1.20000	8.38977	0.6210	0.0000	0.2664	2.0425	5.497
1.21000	8.56924	0.6339	0.0000	0.2747	2.1273	5.725
1.22000	8.74830	0.6465	0.0000	0.2840	2.2117	5.958
1.23000	8.92694	0.6590	0.0000	0.3143	2.3014	6.195
1.24000	9.10630	0.6713	0.0000	0.2952	2.3916	6.437
1.25000	9.28643	0.6834	0.0000	0.1979	2.4831	6.683
1.26000	9.46742	0.6954	0.0000	0.1411	2.5741	6.933
1.27000	9.64945	0.7071	0.0000	0.1452	2.6708	7.188
1.28000	9.83249	0.7186	0.0000	0.1302	2.7670	7.447
1.29000	9.99314	0.7299	0.0000	0.0760	2.8644	7.710
1.30000	10.15220	0.7409	0.0000	0.0222	2.9641	7.977
1.31000	10.31097	0.7518	0.0000	0.8703	3.0649	8.248
1.32000	10.46954	0.7624	0.0000	0.8186	3.1671	8.523
1.33000	10.62782	0.7728	0.0000	0.7677	3.2707	8.802
1.34000	10.78590	0.7829	0.0000	0.7174	3.3757	9.085
1.35000	10.94374	0.7929	0.0000	0.6683	3.4821	9.371
1.36000	11.10141	0.8025	0.0000	0.6197	3.5894	9.661
1.37000	11.25881	0.8120	0.0000	0.5714	3.6984	9.954
1.38000	11.41595	0.8212	0.0000	0.5244	3.8090	10.251
1.39000	11.57287	0.8301	0.0000	0.4781	3.9205	10.552
1.40000	11.72920	0.8388	0.0000	0.4321	4.0331	10.854
1.41000	11.88489	0.8473	0.0000	0.3872	4.1469	11.161
1.42000	11.99034	0.8555	0.0000	0.3427	4.2619	11.476
1.43000	12.09560	0.8635	0.0000	0.2989	4.3779	11.792
1.44000	12.20072	0.8712	0.0000	0.2554	4.4950	12.109
1.45000	12.30567	0.8786	0.0000	0.2130	4.6131	12.415
1.46000	12.41049	0.8859	0.0000	0.1710	4.7322	12.726
1.47000	12.51518	0.8929	0.0000	0.1294	4.8523	13.034
1.48000	12.61984	0.8994	0.0000	0.0884	4.9733	13.345
1.49000	12.72454	0.9061	0.0000	0.0484	5.0952	13.713

1.90000	12.11701	0.9123	0.0000	6.0087	5.2181	14.043
1.00000	12.04112	0.9421	0.0000	5.4186	6.4888	17.455
1.70000	11.16814	0.9007	0.0000	4.1154	7.8049	21.004
1.80000	11.40921	0.9099	0.0000	5.0280	9.1511	24.629
1.90000	11.42441	0.9045	0.0000	4.7740	10.4080	28.254
2.00000	11.19344	0.9773	0.0000	4.5441	11.8311	31.881
2.10000	12.03074	0.9511	0.0000	4.3111	13.1334	35.346
2.20000	12.30815	0.9184	0.0000	4.1565	14.3941	38.744
2.30000	11.49710	0.8813	0.0000	3.9900	15.6113	42.014
2.40000	11.35904	0.8814	0.0000	3.8167	16.7743	45.145
2.50000	10.40129	0.8001	0.0000	3.6497	17.8875	48.127
2.60000	10.23764	0.7593	0.0000	3.5704	18.9384	50.954
2.70000	9.67834	0.7100	0.0000	3.4535	19.9301	53.638
2.80000	9.13104	0.6764	0.0000	3.3484	20.8705	56.168
2.90000	8.60094	0.6371	0.0000	3.2464	21.7540	58.554
3.00000	8.09184	0.5994	0.0000	3.1544	22.5814	60.800
3.10000	7.60594	0.5634	0.0000	3.0690	23.3741	62.912
3.20000	7.14440	0.5292	0.0000	2.9894	24.1114	64.894
3.30000	6.70832	0.4964	0.0000	2.9157	24.8054	66.740
3.40000	6.29704	0.4644	0.0000	2.8466	25.4559	68.450
3.50000	5.91045	0.4374	0.0000	2.7819	26.0661	70.151
3.60000	5.54767	0.4109	0.0000	2.7214	26.6384	71.843
3.70000	5.20781	0.3854	0.0000	2.6645	27.1744	73.529
3.80000	4.88984	0.3622	0.0000	2.6110	27.6811	75.211
3.90000	4.59261	0.3402	0.0000	2.5607	28.1550	76.891
4.00000	4.31494	0.3194	0.0000	2.5132	28.6002	78.567
4.10000	4.05570	0.3004	0.0000	2.4683	29.0186	80.239
4.20000	3.81370	0.2825	0.0000	2.4259	29.4120	81.907
4.30000	3.58784	0.2654	0.0000	2.3857	29.7819	83.571
4.40000	3.37704	0.2501	0.0000	2.3474	30.1300	85.231
4.50000	3.18034	0.2354	0.0000	2.3114	30.4578	86.887
4.60000	2.99874	0.2220	0.0000	2.2770	30.7665	88.540
4.70000	2.83254	0.2093	0.0000	2.2443	31.0575	90.191
4.80000	2.68115	0.1974	0.0000	2.2131	31.3320	91.840
4.90000	2.54355	0.1863	0.0000	2.1834	31.5900	93.487
5.00000	2.41971	0.1760	0.0000	2.1550	31.8354	95.131
5.10000	2.30971	0.1663	0.0000	2.1279	32.0684	96.771
5.20000	2.21244	0.1572	0.0000	2.1020	32.2887	98.407
5.30000	2.12684	0.1484	0.0000	2.0772	32.4912	100.040
5.40000	2.05264	0.1404	0.0000	2.0535	32.6866	101.671
5.50000	1.98969	0.1334	0.0000	2.0307	32.8716	103.300
5.60000	1.93764	0.1264	0.0000	2.0084	33.0469	104.927
5.70000	1.89612	0.1199	0.0000	1.9879	33.2131	106.551
5.80000	1.86497	0.1137	0.0000	1.9677	33.3707	108.171
5.90000	1.84357	0.1078	0.0000	1.9483	33.5203	109.787
6.00000	1.83164	0.1025	0.0000	1.9297	33.6623	111.400
6.10000	1.82910	0.9975	0.0000	1.9117	33.7973	113.011
6.20000	1.83564	0.9975	0.0000	1.8944	33.9256	114.619
6.30000	1.85107	0.9922	0.0000	1.8778	34.0477	116.224
6.40000	1.86624	0.9864	0.0000	1.8617	34.1634	117.827
6.50000	1.88112	0.9800	0.0000	1.8462	34.2744	119.427
6.60000	1.89571	0.9732	0.0000	1.8312	34.3797	121.024
6.70000	1.91001	0.9659	0.0000	1.8167	34.4801	122.618
6.80000	1.92401	0.9583	0.0000	1.8027	34.5759	124.209
6.90000	1.93771	0.9504	0.0000	1.7891	34.6672	125.797

7.00000	0.95102	0.9431	0.0000	1.7760	34.7544	127.384
7.10000	0.941374	0.9360	0.0000	1.7633	34.8377	129.000
7.20000	0.93174	0.9294	0.0000	1.7510	34.9172	130.611
7.30000	0.92214	0.9231	0.0000	1.7391	34.9933	132.218
7.40000	0.91251	0.9172	0.0000	1.7274	35.0660	133.821
7.50000	0.90284	0.9116	0.0000	1.7164	35.1356	135.421
7.60000	0.89314	0.9063	0.0000	1.7055	35.2021	137.018
7.70000	0.88344	0.9013	0.0000	1.6946	35.2659	138.611
7.80000	0.87374	0.8964	0.0000	1.6840	35.3270	140.200
7.90000	0.86404	0.8917	0.0000	1.6737	35.3856	141.787
8.00000	0.85434	0.8872	0.0000	1.6637	35.4417	143.371
8.10000	0.84464	0.8829	0.0000	1.6539	35.4955	144.951
8.20000	0.83494	0.8787	0.0000	1.6444	35.5472	146.527
8.30000	0.82524	0.8746	0.0000	1.6351	35.5968	148.100
8.40000	0.81554	0.8706	0.0000	1.6260	35.6444	149.671
8.50000	0.80584	0.8667	0.0000	1.6172	35.6902	151.240
8.60000	0.79614	0.8629	0.0000	1.6087	35.7341	152.807
8.70000	0.78644	0.8592	0.0000	1.6004	35.7764	154.371
8.80000	0.77674	0.8556	0.0000	1.5923	35.8171	155.931
8.90000	0.76704	0.8521	0.0000	1.5844	35.8562	157.487
9.00000	0.75734	0.8487	0.0000	1.5767	35.8935	159.040
9.10000	0.74764	0.8454	0.0000	1.5691	35.9290	160.587
9.20000	0.73794	0.8422	0.0000	1.5617	35.9628	162.131
9.30000	0.72824	0.8391	0.0000	1.5544	35.9948	163.671
9.40000	0.71854	0.8361	0.0000	1.5473	36.0251	165.207
9.50000	0.70884	0.8331	0.0000	1.5403	36.0538	166.740
9.60000	0.69914	0.8302	0.0000	1.5334	36.0811	168.271
9.70000	0.68944	0.8274	0.0000	1.5266	36.1070	169.800
9.80000	0.67974	0.8246	0.0000	1.5199	36.1316	171.327
9.90000	0.67004	0.8219	0.0000	1.5133	36.1549	172.851
10.00000	0.66034	0.8193	0.0000	1.5068	36.1770	174.371
10.10000	0.65064	0.8167	0.0000	1.5004	36.1978	175.887
10.20000	0.64094	0.8142	0.0000	1.4941	36.2174	177.400
10.30000	0.63124	0.8117	0.0000	1.4879	36.2357	178.911
10.40000	0.62154	0.8093	0.0000	1.4818	36.2528	180.418
10.50000	0.61184	0.8069	0.0000	1.4758	36.2687	181.921
10.60000	0.60214	0.8046	0.0000	1.4699	36.2834	183.421
10.70000	0.59244	0.8023	0.0000	1.4641	36.2968	184.918
10.80000	0.58274	0.8001	0.0000	1.4584	36.3090	186.411
10.90000	0.57304	0.7979	0.0000	1.4528	36.3200	187.900
11.00000	0.56334	0.7958	0.0000	1.4473	36.3298	189.387
11.10000	0.55364	0.7937	0.0000	1.4419	36.3384	190.871
11.20000	0.54394	0.7917	0.0000	1.4366	36.3458	192.351
11.30000	0.53424	0.7897	0.0000	1.4314	36.3520	193.827
11.40000	0.52454	0.7877	0.0000	1.4263	36.3570	195.300
11.50000	0.51484	0.7857	0.0000	1.4213	36.3608	196.771
11.60000	0.50514	0.7837	0.0000	1.4164	36.3644	198.240
11.70000	0.49544	0.7817	0.0000	1.4116	36.3678	199.707
11.80000	0.48574	0.7797	0.0000	1.4069	36.3709	201.171
11.90000	0.47604	0.7777	0.0000	1.4023	36.3737	202.631
12.00000	0.46634	0.7757	0.0000	1.3978	36.3762	204.087

VISIBILITY AND OTHER DATA FOR PLANCH RADIATION, MECHANICS DIVISION, U.S.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1376.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1650.0  
DEGREES FAHRENHEIT = 2510.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.12 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 10.65 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 3.39 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.003 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 89.614 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.243 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.7564 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.2133 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 42.07 WATT/CM<sup>2</sup> OR 4.202300E+08 ERG/SEC/CM<sup>2</sup> OR 1.004300E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 15.75 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = W/TAM .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1376.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1650.0  
DEGREES FAHRENHEIT = 2510.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR W/TAM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00011	6.8793E-06	0.0000	24.0001	1.7211E-06	0.000
0.35500	0.00014	9.1018E-06	0.0000	24.5383	2.3449E-06	0.000
0.36000	0.00019	1.1936E-05	0.0000	24.2172	3.1706E-06	0.000
0.36500	0.00024	1.5528E-05	0.0000	23.8854	4.2443E-06	0.000
0.37000	0.00032	2.0027E-05	0.0000	23.5527	5.6396E-06	0.000
0.37500	0.00040	2.5640E-05	0.0000	23.2445	7.4295E-06	0.000
0.38000	0.00051	3.2584E-05	0.0000	22.9126	9.7123E-06	0.000
0.38500	0.00064	4.1117E-05	0.0000	22.6444	1.2403E-05	0.000
0.39000	0.00081	5.1533E-05	0.0000	22.3541	1.6237E-05	0.000
0.39500	0.00101	6.4167E-05	0.0000	22.0713	2.0776E-05	0.000
0.40000	0.00125	7.9400E-05	0.0003	21.7954	2.6100E-05	0.000
0.40500	0.00154	9.7457E-05	0.0008	21.5264	3.3350E-05	0.000
0.41000	0.00188	0.0001	0.0015	21.2639	4.1681E-05	0.000
0.41500	0.00229	0.0001	0.0034	21.0077	5.2271E-05	0.000
0.42000	0.00277	0.0002	0.0075	20.7574	6.4670E-05	0.000
0.42500	0.00333	0.0002	0.0145	20.5134	8.0070E-05	0.000
0.43000	0.00398	0.0003	0.0314	20.2748	9.8307E-05	0.000
0.43500	0.00475	0.0003	0.0582	20.0414	0.0001	0.000
0.44000	0.00563	0.0004	0.0881	19.8140	0.0001	0.000
0.44500	0.00665	0.0004	0.1311	19.5914	0.0002	0.000
0.45000	0.00782	0.0005	0.2020	19.3737	0.0002	0.001
0.45500	0.00915	0.0006	0.2987	19.1608	0.0003	0.001
0.46000	0.01067	0.0007	0.4353	18.9524	0.0003	0.001
0.46500	0.01239	0.0008	0.6236	18.7488	0.0004	0.001
0.47000	0.01434	0.0009	0.8874	18.5493	0.0004	0.001
0.47500	0.01653	0.0011	1.2593	18.3541	0.0005	0.001
0.48000	0.01900	0.0012	1.7956	18.1629	0.0006	0.001
0.48500	0.02175	0.0014	2.4998	17.9756	0.0007	0.002
0.49000	0.02481	0.0016	3.5113	17.7922	0.0008	0.002
0.49500	0.02824	0.0018	4.9548	17.6125	0.0009	0.002
0.50000	0.03203	0.0020	7.0352	17.4368	0.0011	0.003
0.50500	0.03622	0.0023	10.0239	17.2637	0.0013	0.003
0.51000	0.04084	0.0026	13.9475	17.0945	0.0015	0.003
0.51500	0.04591	0.0029	18.9823	16.9285	0.0017	0.004
0.52000	0.05144	0.0033	24.7850	16.7657	0.0019	0.005
0.52500	0.05747	0.0037	31.0452	16.6061	0.0022	0.005
0.53000	0.06402	0.0041	37.6429	16.4494	0.0025	0.006
0.53500	0.07114	0.0045	44.4803	16.2957	0.0028	0.007
0.54000	0.07882	0.0050	51.4551	16.1444	0.0032	0.008
0.54500	0.08704	0.0054	58.5355	15.9947	0.0036	0.009
0.55000	0.09579	0.0062	65.6843	15.8462	0.0041	0.010
0.55500	0.10500	0.0068	72.7590	15.7008	0.0046	0.011
0.56000	0.11471	0.0074	79.6427	15.5682	0.0052	0.012
0.56500	0.12492	0.0082	86.0275	15.4386	0.0058	0.014
0.57000	0.13554	0.0090	91.6522	15.3051	0.0065	0.015



0.37500	0.15481	0.0098	94.3216	19.1921	0.0072	0.017
0.38000	0.16004	0.0107	99.9509	19.0314	0.0080	0.019
0.38500	0.16528	0.0117	107.2837	18.9020	0.0088	0.021
0.39000	0.17052	0.0127	115.0120	18.7744	0.0096	0.023
0.39500	0.17576	0.0137	122.6549	18.6478	0.0104	0.026
0.40000	0.18100	0.0146	130.2977	18.5231	0.0112	0.029
0.40500	0.18624	0.0155	137.9405	18.4002	0.0120	0.032
0.41000	0.19148	0.0164	145.5833	18.2791	0.0128	0.035
0.41500	0.19672	0.0173	153.2261	18.1599	0.0136	0.038
0.42000	0.20196	0.0182	160.8689	18.0426	0.0144	0.042
0.42500	0.20720	0.0191	168.5117	17.9271	0.0152	0.046
0.43000	0.21244	0.0200	176.1545	17.8134	0.0160	0.050
0.43500	0.21768	0.0209	183.7973	17.7014	0.0168	0.054
0.44000	0.22292	0.0218	191.4401	17.5911	0.0176	0.058
0.44500	0.22816	0.0227	199.0829	17.4824	0.0184	0.062
0.45000	0.23340	0.0236	206.7257	17.3753	0.0192	0.066
0.45500	0.23864	0.0245	214.3685	17.2707	0.0200	0.070
0.46000	0.24388	0.0254	222.0113	17.1686	0.0208	0.074
0.46500	0.24912	0.0263	229.6541	17.0689	0.0216	0.078
0.47000	0.25436	0.0272	237.2969	16.9716	0.0224	0.082
0.47500	0.25960	0.0281	244.9397	16.8767	0.0232	0.086
0.48000	0.26484	0.0290	252.5825	16.7841	0.0240	0.090
0.48500	0.27008	0.0299	260.2253	16.6937	0.0248	0.094
0.49000	0.27532	0.0308	267.8681	16.6054	0.0256	0.098
0.49500	0.28056	0.0317	275.5109	16.5191	0.0264	0.102
0.50000	0.28580	0.0326	283.1537	16.4347	0.0272	0.106
0.50500	0.29104	0.0335	290.7965	16.3522	0.0280	0.110
0.51000	0.29628	0.0344	298.4393	16.2715	0.0288	0.114
0.51500	0.30152	0.0353	306.0821	16.1926	0.0296	0.118
0.52000	0.30676	0.0362	313.7249	16.1154	0.0304	0.122
0.52500	0.31200	0.0371	321.3677	16.0407	0.0312	0.126
0.53000	0.31724	0.0380	329.0105	15.9684	0.0320	0.130
0.53500	0.32248	0.0389	336.6533	15.8984	0.0328	0.134
0.54000	0.32772	0.0398	344.2961	15.8306	0.0336	0.138
0.54500	0.33296	0.0407	351.9389	15.7649	0.0344	0.142
0.55000	0.33820	0.0416	359.5817	15.7013	0.0352	0.146
0.55500	0.34344	0.0425	367.2245	15.6397	0.0360	0.150
0.56000	0.34868	0.0434	374.8673	15.5801	0.0368	0.154
0.56500	0.35392	0.0443	382.5101	15.5224	0.0376	0.158
0.57000	0.35916	0.0452	390.1529	15.4666	0.0384	0.162
0.57500	0.36440	0.0461	397.7957	15.4127	0.0392	0.166
0.58000	0.36964	0.0470	405.4385	15.3607	0.0400	0.170
0.58500	0.37488	0.0479	413.0813	15.3105	0.0408	0.174
0.59000	0.38012	0.0488	420.7241	15.2621	0.0416	0.178
0.59500	0.38536	0.0497	428.3669	15.2154	0.0424	0.182
0.60000	0.39060	0.0506	436.0097	15.1704	0.0432	0.186
0.60500	0.39584	0.0515	443.6525	15.1271	0.0440	0.190
0.61000	0.40108	0.0524	451.2953	15.0854	0.0448	0.194
0.61500	0.40632	0.0533	458.9381	15.0453	0.0456	0.198
0.62000	0.41156	0.0542	466.5809	15.0067	0.0464	0.202
0.62500	0.41680	0.0551	474.2237	14.9696	0.0472	0.206
0.63000	0.42204	0.0560	481.8665	14.9340	0.0480	0.210
0.63500	0.42728	0.0569	489.5093	14.9007	0.0488	0.214
0.64000	0.43252	0.0578	497.1521	14.8688	0.0496	0.218
0.64500	0.43776	0.0587	504.7949	14.8383	0.0504	0.222
0.65000	0.44300	0.0596	512.4377	14.8092	0.0512	0.226
0.65500	0.44824	0.0605	520.0805	14.7815	0.0520	0.230
0.66000	0.45348	0.0614	527.7233	14.7552	0.0528	0.234
0.66500	0.45872	0.0623	535.3661	14.7303	0.0536	0.238
0.67000	0.46396	0.0632	543.0089	14.7067	0.0544	0.242
0.67500	0.46920	0.0641	550.6517	14.6844	0.0552	0.246
0.68000	0.47444	0.0650	558.2945	14.6633	0.0560	0.250
0.68500	0.47968	0.0659	565.9373	14.6434	0.0568	0.254
0.69000	0.48492	0.0668	573.5801	14.6246	0.0576	0.258
0.69500	0.49016	0.0677	581.2229	14.6070	0.0584	0.262
0.70000	0.49540	0.0686	588.8657	14.5905	0.0592	0.266
0.70500	0.50064	0.0695	596.5085	14.5751	0.0600	0.270
0.71000	0.50588	0.0704	604.1513	14.5607	0.0608	0.274
0.71500	0.51112	0.0713	611.7941	14.5474	0.0616	0.278
0.72000	0.51636	0.0722	619.4369	14.5351	0.0624	0.282
0.72500	0.52160	0.0731	627.0797	14.5238	0.0632	0.286
0.73000	0.52684	0.0740	634.7225	14.5134	0.0640	0.290
0.73500	0.53208	0.0749	642.3653	14.5040	0.0648	0.294
0.74000	0.53732	0.0758	650.0081	14.4955	0.0656	0.298
0.74500	0.54256	0.0767	657.6509	14.4879	0.0664	0.302
0.75000	0.54780	0.0776	665.2937	14.4812	0.0672	0.306
0.75500	0.55304	0.0785	672.9365	14.4754	0.0680	0.310
0.76000	0.55828	0.0794	680.5793	14.4705	0.0688	0.314
0.76500	0.56352	0.0803	688.2221	14.4664	0.0696	0.318
0.77000	0.56876	0.0812	695.8649	14.4631	0.0704	0.322
0.77500	0.57400	0.0821	703.5077	14.4606	0.0712	0.326
0.78000	0.57924	0.0830	711.1505	14.4589	0.0720	0.330
0.78500	0.58448	0.0839	718.7933	14.4579	0.0728	0.334
0.79000	0.58972	0.0848	726.4361	14.4576	0.0736	0.338
0.79500	0.59496	0.0857	734.0789	14.4579	0.0744	0.342
0.80000	0.60020	0.0866	741.7217	14.4588	0.0752	0.346
0.80500	0.60544	0.0875	749.3645	14.4602	0.0760	0.350
0.81000	0.61068	0.0884	757.0073	14.4621	0.0768	0.354
0.81500	0.61592	0.0893	764.6501	14.4645	0.0776	0.358
0.82000	0.62116	0.0902	772.2929	14.4673	0.0784	0.362
0.82500	0.62640	0.0911	780.0357	14.4706	0.0792	0.366
0.83000	0.63164	0.0920	787.7785	14.4743	0.0800	0.370
0.83500	0.63688	0.0929	795.5213	14.4784	0.0808	0.374
0.84000	0.64212	0.0938	803.2641	14.4829	0.0816	0.378
0.84500	0.64736	0.0947	811.0069	14.4877	0.0824	0.382
0.85000	0.65260	0.0956	818.7497	14.4928	0.0832	0.386
0.85500	0.65784	0.0965	826.4925	14.4982	0.0840	0.390
0.86000	0.66308	0.0974	834.2353	14.5039	0.0848	0.394
0.86500	0.66832	0.0983	841.9781	14.5098	0.0856	0.398
0.87000	0.67356	0.0992	849.7209	14.5159	0.0864	0.402
0.87500	0.67880	0.1001	857.4637	14.5222	0.0872	0.406
0.88000	0.68404	0.1010	865.2065	14.5287	0.0880	0.410
0.88500	0.68928	0.1019	872.9493	14.5354	0.0888	0.414
0.89000	0.69452	0.1028	880.6921	14.5422	0.0896	0.418
0.89500	0.69976	0.1037	888.4349	14.5491	0.0904	0.422
0.90000	0.70500	0.1046	896.1777	14.5561	0.0912	0.426
0.90500	0.71024	0.1055	903.9205	14.5632	0.0920	0.430
0.91000	0.71548	0.1064	911.6633	14.5704	0.0928	0.434
0.91500	0.72072	0.1073	919.4061	14.5777	0.0936	0.438
0.92000	0.72596	0.1082	927.1489	14.5851	0.0944	0.442
0.92500	0.73120	0.1091	934.8917	14.5926	0.0952	0.446
0.93000	0.73644	0.1100	942.6345	14.6002	0.0960	0.450
0.93500	0.74168	0.1109	950.3773	14.6079	0.0968	0.454
0.94000	0.74692	0.1118	958.1201	14.6157	0.0976	0.458
0.94500	0.75216	0.1127	965.8629	14.6236	0.0984	0.462
0.95000	0.75740	0.1136	973.6057	14.6316	0.0992	0.466
0.95500	0.76264	0.1145	981.3485	14.6397	0.1000	0.470
0.96000	0.76788	0.1154	989.0913	14.6479	0.1008	0.474
0.96500	0.77312	0.1163	996.8341	14.6562	0.1016	0.478
0.97000	0.77836	0.1172	1004.5769	14.6646	0.1024	0.482
0.97500	0.78360	0.1181	1012.3197	14.6731	0.1032	0.486
0.98000	0.78884	0.1190	1020.0625	14.6817	0.1040	0.490
0.98500	0.79408	0.1199	1027.8053	14.6904	0.1048	0.494
0.99000	0.79932	0.1208	1035.5481	14.6992	0.1056	0.498
0.99500	0.80456	0.1217	1043.2909	14.7081	0.1064	0.502
1.00000	0.80980	0.1226	1051.0337	14.7171	0.1072	0.506

0.95000	0.80984	0.1235	0.0000	0.1740	0.7274	1.731
0.96000	0.81508	0.1244	0.0000	0.2424	0.7745	1.859
0.97000	0.82032	0.1253	0.0000	0.3104	0.8318	1.979
0.98000	0.82556	0.1262	0.0000	0.3784	0.8891	2.112
0.99000	0.83080	0.1271	0.0000	0.4464	0.9464	2.249
1.00000	0.83604	0.1280	0.0000	0.5144	1.0037	2.392
1.01000	0.84128	0.1289	0.0000	0.5824	1.0610	2.540
1.02000	0.84652	0.1298	0.0000	0.6504	1.1183	2.694
1.03000	0.85176	0.1307	0.0000	0.7184	1.1756	2.853
1.04000	0.85700	0.1316	0.0000	0.7864	1.2329	3.014
1.05000	0.86224	0.1325	0.0000	0.8544	1.2902	3.180
1.06000	0.86748	0.1334	0.0000	0.9224	1.3475	3.344
1.07000	0.87272	0.1343	0.0000	0.9904	1.4048	3.515
1.08000	0.87796	0.1352	0.0000	1.0584	1.4621	3.691
1.09000	0.88320	0.1361	0.0000	1.1264	1.5194	3.871
1.10000	0.88844	0.1370	0.0000	1.1944	1.5767	4.054
1.11000	0.89368	0.1379	0.0000	1.2624	1.6340	4.241
1.12000	0.89892	0.1388	0.0000	1.330		



VISIBILITY AND OTHER DATA FOR PLANCK RADIATOR, MECHANICS DIVISION, D.O.E., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000 AND THE TEMPERATURE IS 1424.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE, DEGREES K = 1700.0  
DEGREES FAHRENHEIT = 2600.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.17 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 16.60 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 5.25 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.004 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 90.000 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.300 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.7007 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.1402 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 47.35 WATT/CM<sup>2</sup> OR 4.735100E+08 ENG/SEC/CM<sup>2</sup> OR 1.131700E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 10.20 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (E) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta E = M \Delta T$ .

THE EMISSIVITY IS 1.000 AND THE TEMPERATURE IS 1424.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE, DEGREES K = 1700.0  
DEGREES FAHRENHEIT = 2600.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WATT/M	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00073	1.2328E-05	0.0000	24.1765	3.7033E-06	0.000
0.35500	0.00070	1.4144E-05	0.0000	23.4360	4.9078E-06	0.000
0.36000	0.00068	2.0059E-05	0.0000	23.5029	6.6854E-06	0.000
0.36500	0.00066	2.6994E-05	0.0000	23.1829	8.4671E-06	0.000
0.37000	0.00064	3.4848E-05	0.0000	22.8498	1.1064E-05	0.000
0.37500	0.00062	4.3748E-05	0.0000	22.5447	1.3228E-05	0.000
0.38000	0.00060	5.3711E-05	0.0000	22.2678	1.5730E-05	0.000
0.38500	0.00058	6.4836E-05	0.0000	22.0188	1.8537E-05	0.000
0.39000	0.00056	7.8236E-05	0.0000	21.7968	2.1629E-05	0.000
0.39500	0.00054	9.4011E-05	0.0000	21.6000	2.5072E-05	0.000
0.40000	0.00052	0.0000	0.0000	21.4284	2.8920E-05	0.000
0.40500	0.00050	0.0001	0.0004	21.2810	3.3228E-05	0.000
0.41000	0.00048	0.0001	0.0016	21.1478	3.8040E-05	0.000
0.41500	0.00046	0.0002	0.0079	21.0288	4.3400E-05	0.000
0.42000	0.00044	0.0002	0.0349	20.9230	4.9360E-05	0.000
0.42500	0.00042	0.0003	0.0810	20.8304	5.5960E-05	0.000
0.43000	0.00040	0.0003	0.1300	20.7500	6.3240E-05	0.000
0.43500	0.00038	0.0004	0.1810	20.6800	7.1240E-05	0.000
0.44000	0.00036	0.0004	0.2350	20.6200	7.9920E-05	0.000
0.44500	0.00034	0.0004	0.2920	20.5700	8.9320E-05	0.000
0.45000	0.00032	0.0004	0.3520	20.5300	9.9400E-05	0.000
0.45500	0.00030	0.0004	0.4150	20.5000	1.1020E-04	0.000
0.46000	0.00028	0.0004	0.4800	20.4800	1.2180E-04	0.000
0.46500	0.00026	0.0004	0.5470	20.4700	1.3420E-04	0.000
0.47000	0.00024	0.0004	0.6170	20.4700	1.4740E-04	0.000
0.47500	0.00022	0.0004	0.6900	20.4800	1.6140E-04	0.000
0.48000	0.00020	0.0004	0.7660	20.5000	1.7620E-04	0.000
0.48500	0.00018	0.0004	0.8450	20.5300	1.9180E-04	0.000
0.49000	0.00016	0.0004	0.9270	20.5700	2.0820E-04	0.000
0.49500	0.00014	0.0004	1.0120	20.6200	2.2540E-04	0.000
0.50000	0.00012	0.0004	1.1000	20.6800	2.4340E-04	0.000
0.50500	0.00010	0.0004	1.1910	20.7500	2.6220E-04	0.000
0.51000	0.00008	0.0004	1.2840	20.8300	2.8180E-04	0.000
0.51500	0.00006	0.0004	1.3800	20.9200	3.0220E-04	0.000
0.52000	0.00004	0.0004	1.4780	21.0200	3.2340E-04	0.000
0.52500	0.00002	0.0004	1.5780	21.1300	3.4540E-04	0.000
0.53000	0.00000	0.0004	1.6800	21.2500	3.6820E-04	0.000
0.53500	0.00000	0.0004	1.7840	21.3800	3.9180E-04	0.000
0.54000	0.00000	0.0004	1.8900	21.5200	4.1620E-04	0.000
0.54500	0.00000	0.0004	2.0000	21.6700	4.4140E-04	0.000
0.55000	0.00000	0.0004	2.1120	21.8300	4.6740E-04	0.000
0.55500	0.00000	0.0004	2.2260	22.0000	4.9420E-04	0.000
0.56000	0.00000	0.0004	2.3420	22.1800	5.2180E-04	0.000
0.56500	0.00000	0.0004	2.4600	22.3700	5.5020E-04	0.000
0.57000	0.00000	0.0004	2.5800	22.5700	5.7940E-04	0.000

0.57500	0.24180	0.0137	150.4507	14.7161	0.0117	0.029
0.58000	0.24284	0.0144	145.4205	14.5493	0.0129	0.027
0.58500	0.24390	0.0154	139.4917	14.4044	0.0143	0.030
0.59000	0.24500	0.0169	133.0649	14.2820	0.0159	0.031
0.59500	0.24613	0.0183	126.0395	14.1815	0.0178	0.037
0.60000	0.24734	0.0197	119.0146	14.1030	0.0199	0.040
0.60500	0.24864	0.0213	112.0002	13.9466	0.0210	0.044
0.61000	0.25000	0.0229	105.0074	13.8118	0.0230	0.049
0.61500	0.25144	0.0246	98.0365	13.7000	0.0252	0.051
0.62000	0.25294	0.0264	91.0894	13.6140	0.0275	0.056
0.62500	0.25450	0.0283	84.1674	13.5500	0.0300	0.063
0.63000	0.25613	0.0303	77.2707	13.5034	0.0327	0.069
0.63500	0.25784	0.0323	70.4004	13.4720	0.0355	0.075
0.64000	0.25964	0.0345	63.5574	13.4515	0.0384	0.082
0.64500	0.26150	0.0369	56.7429	13.4400	0.0414	0.088
0.65000	0.26344	0.0394	50.0000	13.4380	0.0445	0.094
0.65500	0.26544	0.0420	43.3307	13.4450	0.0477	0.100
0.66000	0.26750	0.0448	36.7354	13.4600	0.0510	0.106
0.66500	0.26964	0.0478	30.2154	13.4830	0.0545	0.112
0.67000	0.27184	0.0510	23.7707	13.5140	0.0582	0.118
0.67500	0.27410	0.0544	17.4029	13.5600	0.0620	0.124
0.68000	0.27644	0.0580	11.1129	13.6200	0.0660	0.130
0.68500	0.27884	0.0618	4.9000	13.6950	0.0702	0.136
0.69000	0.28130	0.0658	0.0000	13.7850	0.0746	0.142
0.69500	0.28384	0.0700	0.0000	13.8900	0.0792	0.148
0.70000	0.28644	0.0744	0.0000	14.0100	0.0840	0.154
0.70500	0.28910	0.0790	0.0000	14.1450	0.0890	0.160
0.71000	0.29184	0.0838	0.0000	14.2950	0.0942	0.166
0.71500	0.29464	0.0888	0.0000	14.4600	0.0996	0.172
0.72000	0.29750	0.0940	0.0000	14.6400	0.1052	0.178
0.72500	0.30044	0.0994	0.0000	14.8350	0.1110	0.184
0.73000	0.30344	0.1050	0.0000	15.0450	0.1170	0.190
0.73500	0.30650	0.1108	0.0000	15.2700	0.1232	0.196
0.74000	0.30964	0.1168	0.0000	15.5100	0.1296	0.202
0.74500	0.31284	0.1230	0.0000	15.7650	0.1362	0.208
0.75000	0.31610	0.1294	0.0000	16.0350	0.1430	0.214
0.75500	0.31944	0.1360	0.0000	16.3200	0.1500	0.220
0.76000	0.32284	0.1428	0.0000	16.6200	0.1572	0.226
0.76500	0.32630	0.1498	0.0000	16.9350	0.1646	0.232
0.77000	0.32984	0.1570	0.0000	17.2650	0.1722	0.238
0.77500	0.33344	0.1644	0.0000	17.6100	0.1800	0.244
0.78000	0.33710	0.1720	0.0000	17.9700	0.1880	0.250
0.78500	0.34084	0.1798	0.0000	18.3450	0.1962	0.256
0.79000	0.34464	0.1878	0.0000	18.7350	0.2046	0.262
0.79500	0.34850	0.1960	0.0000	19.1400	0.2132	0.268
0.80000	0.35244	0.2044	0.0000	19.5600	0.2220	0.274
0.80500	0.35644	0.2130	0.0000	20.0000	0.2310	0.280
0.81000	0.36050	0.2218	0.0000	20.4500	0.2402	0.286
0.81500	0.36464	0.2308	0.0000	20.9100	0.2496	0.292
0.82000	0.36884	0.2400	0.0000	21.3800	0.2592	0.298
0.82500	0.37310	0.2494	0.0000	21.8600	0.2690	0.304
0.83000	0.37744	0.2590	0.0000	22.3500	0.2790	0.310
0.83500	0.38184	0.2688	0.0000	22.8500	0.2892	0.316
0.84000	0.38630	0.2788	0.0000	23.3600	0.2996	0.322
0.84500	0.39084	0.2890	0.0000	23.8800	0.3102	0.328
0.85000	0.39544	0.2994	0.0000	24.4100	0.3210	0.334
0.85500	0.40010	0.3100	0.0000	24.9500	0.3320	0.340
0.86000	0.40484	0.3208	0.0000	25.5000	0.3432	0.346
0.86500	0.40964	0.3318	0.0000	26.0600	0.3546	0.352
0.87000	0.41450	0.3430	0.0000	26.6300	0.3662	0.358
0.87500	0.41944	0.3544	0.0000	27.2100	0.3780	0.364
0.88000	0.42444	0.3660	0.0000	27.8000	0.3900	0.370
0.88500	0.42950	0.3778	0.0000	28.4000	0.4022	0.376
0.89000	0.43464	0.3898	0.0000	29.0100	0.4146	0.382
0.89500	0.43984	0.4020	0.0000	29.6300	0.4272	0.388
0.90000	0.44510	0.4144	0.0000	30.2600	0.4400	0.394
0.90500	0.45044	0.4270	0.0000	30.9000	0.4530	0.400
0.91000	0.45584	0.4398	0.0000	31.5500	0.4662	0.406
0.91500	0.46130	0.4528	0.0000	32.2100	0.4796	0.412
0.92000	0.46684	0.4660	0.0000	32.8800	0.4932	0.418
0.92500	0.47244	0.4794	0.0000	33.5600	0.5070	0.424
0.93000	0.47810	0.4930	0.0000	34.2500	0.5210	0.430
0.93500	0.48384	0.5068	0.0000	34.9500	0.5352	0.436
0.94000	0.48964	0.5208	0.0000	35.6600	0.5496	0.442
0.94500	0.49550	0.5350	0.0000	36.3800	0.5642	0.448
0.95000	0.50144	0.5494	0.0000	37.1100	0.5790	0.454
0.95500	0.50744	0.5640	0.0000	37.8500	0.5940	0.460
0.96000	0.51350	0.5788	0.0000	38.6000	0.6092	0.466
0.96500	0.51964	0.5938	0.0000	39.3600	0.6246	0.472
0.97000	0.52584	0.6090	0.0000	40.1300	0.6402	0.478
0.97500	0.53210	0.6244	0.0000	40.9100	0.6560	0.484
0.98000	0.53844	0.6400	0.0000	41.7000	0.6720	0.490
0.98500	0.54484	0.6558	0.0000	42.5000	0.6882	0.496
0.99000	0.55130	0.6718	0.0000	43.3100	0.7046	0.502
0.99500	0.55784	0.6880	0.0000	44.1300	0.7212	0.508
1.00000	0.56444	0.7044	0.0000	44.9600	0.7380	0.514

0.95000	4.54727	0.3587	0.0000	4.6043	0.6922	2.895
0.95500	4.51741	0.3729	0.0000	4.4154	1.0590	2.238
0.96000	4.48904	0.3874	0.0000	4.2249	1.1245	2.303
0.96500	4.46125	0.4027	0.0000	4.0330	1.2008	2.534
0.97000	4.43510	0.4177	0.0000	3.8409	1.2794	2.694
0.97500	4.40954	0.4324	0.0000	3.6484	1.3535	2.858
0.98000	4.38456	0.4476	0.0000	3.4559	1.4239	3.028
0.98500	4.36017	0.4624	0.0000	3.2637	1.4911	3.204
0.99000	4.33638	0.4775	0.0000	3.0714	1.5551	3.385
0.99500	4.31319	0.4924	0.0000	2.8794	1.6161	3.573
1.00000	4.29060	0.5071	0.0000	2.6879	1.6741	3.765
1.00500	4.26861	0.5220	0.0000	2.4969	1.7291	3.964
1.01000	4.24722	0.5367	0.0000	2.3064	1.7811	4.168
1.01500	4.22643	0.5517	0.0000	2.1164	1.8311	4.378
1.02000	4.20624	0.5664	0.0000	1.9269	1.8791	4.594
1.02500	4.18665	0.5809	0.0000	1.7379	1.9251	4.815
1.03000	4.16766	0.5954	0.0000	1.5494	1.9691	5.042
1.03500	4.14927	0.6099	0.0000	1.3614	2.0111	5.274
1.04000	4.13148	0.6244	0.0000	1.1739	2.0521	5.512
1.04500	4.11429	0.6389	0.0000	0.9869	2.0921	5.756
1.05000	4.09770	0.6534	0.0000	0.7999	2.1311	6.004
1.05500	4.08171	0.6679	0.0000	0.6129	2.1691	6.256
1.06000	4.06632	0.6824	0.0000	0.4259	2.2061	6.512
1.06500	4.05153	0.6969	0.0000	0.2389	2.2421	6.772
1.07000	4.03734	0.7114	0.0000	0.0519	2.2771	7.036
1.07500	4.02375	0.7259	0.0000	0.0000	2.3111	7.304
1.08000	4.01076	0.7404	0.0000	0.0000	2.3441	7.576
1.08500	4.00000	0.7549	0.0000	0.0000	2.3761	7.852
1.09000	3.99044	0.7694	0.0000	0.0000	2.4071	8.132
1.09500	3.98207	0.7839	0.0000	0.0000	2.4371	8.416
1.10000	3.97480	0.7984	0.0000	0.0000	2.4661	8.704
1.10500	3.96863	0.8129	0.0000	0.0000	2.4941	8.996
1.11000	3.96256	0.8274	0.0000	0.0000	2.5211	9.292
1.11500	3.95659	0.8419	0.0000	0.0000	2.5471	9.592
1.12000	3.95072	0.8564	0.0000	0.0000	2.5721	9.896
1.12500	3.94495	0.8709	0.0000	0.0000	2.5961	10.204
1.13000	3.93928	0.8854	0.0000	0.0000	2.6191	10.516
1.13500	3.93371	0.8999	0.0000	0.0000	2.6411	10.832
1.14000	3.92824	0.9144	0.0000	0.0000	2.6621	11.152
1.14500	3.92287	0.9289	0.0000	0.0000	2.6821	11.476
1.15000	3.91760	0.9434	0.0000	0.0000	2.7011	11.804
1.15500	3.91243	0.9579	0.0000	0.0000	2.7191	12.136
1.16000	3.90736	0.9724	0.0000	0.0000	2.7361	12.472
1.16500	3.90239	0.9869	0.0000	0.0000	2.7521	12.812
1.17000	3.89752	0.9999	0.0000	0.0000	2.7671	13.156
1.17500	3.89275	1.0129	0.0000	0.0000	2.7811	13.504
1.18000	3.88808	1.0259	0.0000	0.0000	2.7941	13.856
1.18500	3.88351	1.0389	0.0000	0.0000	2.8071	14.212
1.19000	3.87904	1.0519	0.0000	0.0000	2.8191	14.572
1.19500	3.87467	1.0649	0.0000	0.0000	2.8301	14.936
1.20000	3.87040	1.0779	0.0000	0.0000	2.8401	15.304
1.20500	3.86623	1.0909	0.0000	0.0000	2.8491	15.676
1.21000	3.86216	1.1039	0.0000	0.0000	2.8571	16.052
1.21500	3.85819	1.1169	0.0000	0.0000	2.8641	16.432
1.22000	3.85432	1.1299	0.0000	0.0000	2.8701	16.816
1.22500	3.85055	1.1429	0.0000	0.0000	2.8751	17.204
1.23000	3.84688	1.1559	0.0000	0.0000	2.8791	17.596
1.23500	3.84331	1.1689	0.0000	0.0000	2.8821	17.992
1.24000	3.83984	1.1819	0.0000	0.0000	2.8851	18.392
1.24500	3.83647	1.1949	0.0000	0.0000	2.8871	18.796
1.25000	3.83320	1.2079	0.0000			

1.30000	17.94224	0.9594	0.0000	5.4613	8.1494	17.237
1.40000	18.10160	0.9402	0.0000	5.1154	9.9440	21.004
1.50000	18.28032	1.0000	0.0000	5.0120	11.7700	24.855
1.60000	18.15187	0.9930	0.0000	4.7441	13.5818	28.707
1.70000	17.74642	0.9730	0.0000	4.5040	15.3898	32.505
1.80000	17.26613	0.9434	0.0000	4.2933	17.1953	36.281
1.90000	16.56344	0.9072	0.0000	4.1024	18.9374	39.781
2.00000	15.64101	0.8644	0.0000	3.9307	20.6594	43.205
2.10000	15.05270	0.8234	0.0000	3.7743	22.3403	46.444
2.20000	14.24494	0.7742	0.0000	3.6326	23.9892	49.341
2.30000	13.43516	0.7340	0.0000	3.5038	25.6131	52.488
2.40000	12.63948	0.6914	0.0000	3.3852	27.1947	55.237
2.50000	11.84784	0.6492	0.0000	3.2747	28.73819	57.674
2.60000	11.17451	0.6087	0.0000	3.1744	29.53113	60.251
2.70000	10.41904	0.5700	0.0000	3.0844	30.60043	62.324
2.80000	9.75060	0.5334	0.0000	2.9993	31.61646	64.454
2.90000	9.11053	0.4980	0.0000	2.9231	32.48117	66.549
3.00000	8.52674	0.4644	0.0000	2.8464	32.48117	68.590
3.10000	7.97149	0.4314	0.0000	2.7740	33.79443	70.250
3.20000	7.45281	0.4077	0.0000	2.7141	34.0373	71.878
3.30000	6.96884	0.3812	0.0000	2.6542	34.7541	73.401
3.40000	6.51804	0.3544	0.0000	2.5942	35.4321	74.824
3.50000	6.09840	0.3334	0.0000	2.5455	36.0827	76.154
3.60000	5.70831	0.3123	0.0000	2.4940	36.6578	77.402
3.70000	5.34540	0.2924	0.0000	2.4494	37.2051	78.349
3.80000	5.00851	0.2740	0.0000	2.4055	37.7294	79.061
3.90000	4.69529	0.2568	0.0000	2.3640	38.2076	80.486
4.00000	4.40422	0.2400	0.0000	2.3247	38.6426	81.444
4.10000	4.13370	0.2241	0.0000	2.2876	39.0393	82.344
4.20000	3.88222	0.2124	0.0000	2.2523	39.4000	83.193
4.30000	3.64837	0.1994	0.0000	2.2184	39.8664	84.104
4.40000	3.43081	0.1877	0.0000	2.1870	40.2272	84.935
4.50000	3.22837	0.1764	0.0000	2.1548	40.5530	85.630
4.60000	3.03987	0.1643	0.0000	2.1279	40.8443	86.300
4.70000	2.86424	0.1547	0.0000	2.1004	41.1614	86.923
4.80000	2.70057	0.1477	0.0000	2.0742	41.4396	87.510
4.90000	2.54791	0.1394	0.0000	2.0491	41.7019	88.064
5.00000	2.40544	0.1314	0.0000	2.0251	41.9495	88.581
5.10000	2.27244	0.1243	0.0000	2.0022	42.1833	89.081
5.20000	2.14814	0.1175	0.0000	1.9802	42.4043	89.548
5.30000	2.03194	0.1117	0.0000	1.9591	42.6132	89.980
5.40000	1.92324	0.1059	0.0000	1.9389	42.8109	90.406
5.50000	1.82154	0.0994	0.0000	1.9195	42.9981	90.807
5.60000	1.72624	0.0944	0.0000	1.9004	43.1754	91.174
5.70000	1.63691	0.0895	0.0000	1.8829	43.3436	91.531
5.80000	1.55314	0.0850	0.0000	1.8656	43.5030	91.864
5.90000	1.47457	0.0807	0.0000	1.8489	43.6544	92.187
6.00000	1.40049	0.0764	0.0000	1.8333	43.7981	92.491
6.10000	1.33131	0.0728	0.0000	1.8174	43.9344	92.779
6.20000	1.26609	0.0693	0.0000	1.8027	44.0645	93.054
6.30000	1.20472	0.0659	0.0000	1.7883	44.1880	93.314
6.40000	1.14695	0.0627	0.0000	1.7744	44.3055	93.561
6.50000	1.09253	0.0598	0.0000	1.7610	44.4175	93.799
6.60000	1.04124	0.0570	0.0000	1.7480	44.5242	94.024
6.70000	0.99247	0.0543	0.0000	1.7354	44.6258	94.239

7.00000	0.94723	0.0514	0.0000	1.7233	44.7224	94.444
7.10000	0.90414	0.0489	0.0000	1.7114	44.8154	94.630
7.20000	0.86414	0.0467	0.0000	1.7002	44.9037	94.826
7.30000	0.82740	0.0441	0.0000	1.6891	44.9881	95.004
7.40000	0.79384	0.0411	0.0000	1.6784	45.0684	95.174
7.50000	0.76111	0.0383	0.0000	1.6680	45.1459	95.337
7.60000	0.72911	0.0359	0.0000	1.6579	45.2197	95.493
7.70000	0.69802	0.0334	0.0000	1.6481	45.2903	95.642
7.80000	0.66784	0.0312	0.0000	1.6384	45.3578	95.785
7.90000	0.63859	0.0292	0.0000	1.6294	45.4226	95.922
8.00000	0.61022	0.0272	0.0000	1.6204	45.4844	96.053
8.10000	0.58272	0.0254	0.0000	1.6117	45.5441	96.178
8.20000	0.55611	0.0236	0.0000	1.6032	45.6011	96.299
8.30000	0.53044	0.0219	0.0000	1.5949	45.6558	96.414
8.40000	0.50571	0.0204	0.0000	1.5864	45.7083	96.525
8.50000	0.48192	0.0190	0.0000	1.5780	45.7584	96.631
8.60000	0.45907	0.0174	0.0000	1.5714	45.8072	96.734
8.70000	0.43714	0.0160	0.0000	1.5656	45.8537	96.837
8.80000	0.41614	0.0148	0.0000	1.5597	45.8985	96.924
8.90000	0.39609	0.0137	0.0000	1.5544	45.9415	97.017
9.00000	0.37694	0.0127	0.0000	1.5487	45.9829	97.105
9.10000	0.35869	0.0118	0.0000	1.5436	46.0227	97.189
9.20000	0.34134	0.0110	0.0000	1.5384	46.0610	97.270
9.30000	0.32489	0.0104	0.0000	1.5330	46.0984	97.344
9.40000	0.30934	0.0099	0.0000	1.5274	46.1355	97.421
9.50000	0.29469	0.0094	0.0000	1.5214	46.1714	97.495
9.60000	0.28094	0.0089	0.0000	1.5156	46.2068	97.565
9.70000	0.26809	0.0085	0.0000	1.5097	46.2417	97.632
9.80000	0.25614	0.0081	0.0000	1.5037	46.2761	97.697
9.90000	0.24509	0.0077	0.0000	1.4974	46.3100	97.760
10.00000	0.23494	0.0074	0.0000	1.4909	46.3434	97.820
10.10000	0.22569	0.0071	0.0000	1.4844	46.3764	97.879
10.20000	0.21734	0.0068	0.0000	1.4774	46.4090	97.935
10.30000	0.20989	0.0065	0.0000	1.4704	46.4417	97.989
10.40000	0.20334	0.0063	0.0000	1.4634	46.4746	98.042
10.50000	0.19769	0.0061	0.0000	1.4564	46.5072	98.093
10.60000	0.19294	0.0059	0.0000	1.4494	46.5397	98.149
10.70000	0.18909	0.0057	0.0000	1.4424	46.5720	98.199
10.80000	0.18614	0.0056	0.0000	1.4354	46.6045	98.235
10.90000	0.18409	0.0055	0.0000	1.4284	46.6370	98.280
11.00000	0.18294	0.0054	0.0000	1.4214	46.6697	98.323
11.10000	0.18269	0.0054	0.0000	1.4144	46.7020	98.364
11.20000	0.18334	0.0054	0.0000	1.4074	46.7346	98.405
11.30000	0.18489	0.0054	0.0000	1.4004	46.7674	98.444
11.40000	0.18734	0.0054	0.0000	1.3934	46.8000	98.489
11.50000	0.19069	0.0054	0.0000	1.3864	46.8327	98.531
11.60000	0.19494	0.0054	0.0000	1.3794	46.8652	98.554
11.70000	0.19909	0.0054	0.0000	1.3724	46.8977	98.580
11.80000	0.20314	0.0054	0.0000	1.3654	46.9303	98.622
11.90000	0.20709	0.0054	0.0000	1.3584	46.9630	98.664
12.00000	0.21094	0.0054	0.0000	1.3514	46.9958	98.688

VISIBILITY AND OTHER DATA FOR PLANK RADIATOR, MECHANICS DIVISION, D.O.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1750.0  
DEGREES FAHRENHEIT = 2600.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.29 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 24.01 LUMENS/CM<sup>2</sup>

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 7.93 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.005 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 100.050 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.440 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.6560 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.0860 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 53.18 WATT/CM<sup>2</sup> OR 5.31756000 FRG/SEC/CM<sup>2</sup> OR 1.27003000 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 21.13 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 400 LUMENS PER WATT = RADIANT EMITTANCE = VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE ( W ) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W = M \* TON

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1750.0  
DEGREES FAHRENHEIT = 2600.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WATT	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00045	2.12780E-05	0.0000	23.4857	7.63400E-06	0.000
0.35500	0.00054	2.75030E-05	0.0000	23.1549	1.07050E-05	0.000
0.36000	0.00075	3.44890E-05	0.0000	22.8333	1.34220E-05	0.000
0.36500	0.00094	4.32880E-05	0.0000	22.5205	1.77720E-05	0.000
0.37000	0.00121	5.73590E-05	0.0000	22.2167	2.31740E-05	0.000
0.37500	0.00152	7.21780E-05	0.0000	21.9200	2.99980E-05	0.000
0.38000	0.00190	9.08740E-05	0.0000	21.6314	3.85300E-05	0.000
0.38500	0.00234	0.0001	0.0000	21.3504	4.91580E-05	0.000
0.39000	0.00291	0.0001	0.0000	21.0769	6.29990E-05	0.000
0.39500	0.00357	0.0002	0.0000	20.8101	7.94640E-05	0.000
0.40000	0.00434	0.0002	0.0012	20.5500	9.91700E-05	0.000
0.40500	0.00524	0.0002	0.0029	20.2963	0.0001	0.000
0.41000	0.00634	0.0003	0.0052	20.0488	0.0002	0.000
0.41500	0.00759	0.0004	0.0114	19.8072	0.0002	0.000
0.42000	0.00906	0.0004	0.0244	19.5714	0.0002	0.000
0.42500	0.01074	0.0005	0.0533	19.3412	0.0003	0.000
0.43000	0.01260	0.0006	0.1001	19.1163	0.0003	0.001
0.43500	0.01462	0.0007	0.1705	18.8964	0.0004	0.001
0.44000	0.01747	0.0008	0.2732	18.6818	0.0005	0.001
0.44500	0.02034	0.0010	0.4016	18.4719	0.0006	0.001
0.45000	0.02364	0.0011	0.6110	18.2667	0.0007	0.001
0.45500	0.02734	0.0013	0.8927	18.0659	0.0008	0.002
0.46000	0.03151	0.0015	1.2657	17.8694	0.0010	0.002
0.46500	0.03614	0.0017	1.7205	17.6774	0.0011	0.002
0.47000	0.04139	0.0020	2.3613	17.4894	0.0013	0.002
0.47500	0.04719	0.0022	3.1942	17.3053	0.0015	0.003
0.48000	0.05363	0.0025	4.0694	17.1250	0.0018	0.003
0.48500	0.06074	0.0029	5.0973	16.9485	0.0021	0.004
0.49000	0.06862	0.0032	6.3953	16.7754	0.0024	0.005
0.49500	0.07727	0.0037	7.9554	16.6061	0.0029	0.005
0.50000	0.08675	0.0041	9.7942	16.4400	0.0032	0.006
0.50500	0.09713	0.0044	11.9223	16.2772	0.0036	0.007
0.51000	0.10846	0.0051	14.3600	16.1174	0.0042	0.008
0.51500	0.12079	0.0057	17.1113	15.9612	0.0047	0.009
0.52000	0.13419	0.0064	20.1964	15.8077	0.0054	0.010
0.52500	0.14870	0.0070	24.6371	15.6571	0.0061	0.011
0.53000	0.16440	0.0078	30.4314	15.5094	0.0069	0.013
0.53500	0.18132	0.0086	37.6803	15.3644	0.0077	0.015
0.54000	0.19954	0.0094	46.3947	15.2222	0.0087	0.016
0.54500	0.21911	0.0104	56.6817	15.0824	0.0097	0.018
0.55000	0.24010	0.0114	68.6501	14.9455	0.0109	0.020
0.55500	0.26254	0.0124	82.4130	14.8110	0.0121	0.021
0.56000	0.28643	0.0134	98.0649	14.6784	0.0135	0.023
0.56500	0.31279	0.0146	115.6443	14.5487	0.0150	0.024
0.57000	0.33974	0.0161	135.2433	14.4211	0.0166	0.031

0.01000	0.10010	0.0170	0.0000	10.0000	0.0100	0.010
0.02000	0.20020	0.0340	0.0000	20.0000	0.0200	0.020
0.03000	0.30030	0.0510	0.0000	30.0000	0.0300	0.030
0.04000	0.40040	0.0680	0.0000	40.0000	0.0400	0.040
0.05000	0.50050	0.0850	0.0000	50.0000	0.0500	0.050
0.06000	0.60060	0.1020	0.0000	60.0000	0.0600	0.060
0.07000	0.70070	0.1190	0.0000	70.0000	0.0700	0.070
0.08000	0.80080	0.1360	0.0000	80.0000	0.0800	0.080
0.09000	0.90090	0.1530	0.0000	90.0000	0.0900	0.090
0.10000	1.00100	0.1700	0.0000	100.0000	0.1000	0.100
0.11000	1.10110	0.1870	0.0000	110.0000	0.1100	0.110
0.12000	1.20120	0.2040	0.0000	120.0000	0.1200	0.120
0.13000	1.30130	0.2210	0.0000	130.0000	0.1300	0.130
0.14000	1.40140	0.2380	0.0000	140.0000	0.1400	0.140
0.15000	1.50150	0.2550	0.0000	150.0000	0.1500	0.150
0.16000	1.60160	0.2720	0.0000	160.0000	0.1600	0.160
0.17000	1.70170	0.2890	0.0000	170.0000	0.1700	0.170
0.18000	1.80180	0.3060	0.0000	180.0000	0.1800	0.180
0.19000	1.90190	0.3230	0.0000	190.0000	0.1900	0.190
0.20000	2.00200	0.3400	0.0000	200.0000	0.2000	0.200
0.21000	2.10210	0.3570	0.0000	210.0000	0.2100	0.210
0.22000	2.20220	0.3740	0.0000	220.0000	0.2200	0.220
0.23000	2.30230	0.3910	0.0000	230.0000	0.2300	0.230
0.24000	2.40240	0.4080	0.0000	240.0000	0.2400	0.240
0.25000	2.50250	0.4250	0.0000	250.0000	0.2500	0.250
0.26000	2.60260	0.4420	0.0000	260.0000	0.2600	0.260
0.27000	2.70270	0.4590	0.0000	270.0000	0.2700	0.270
0.28000	2.80280	0.4760	0.0000	280.0000	0.2800	0.280
0.29000	2.90290	0.4930	0.0000	290.0000	0.2900	0.290
0.30000	3.00300	0.5100	0.0000	300.0000	0.3000	0.300
0.31000	3.10310	0.5270	0.0000	310.0000	0.3100	0.310
0.32000	3.20320	0.5440	0.0000	320.0000	0.3200	0.320
0.33000	3.30330	0.5610	0.0000	330.0000	0.3300	0.330
0.34000	3.40340	0.5780	0.0000	340.0000	0.3400	0.340
0.35000	3.50350	0.5950	0.0000	350.0000	0.3500	0.350
0.36000	3.60360	0.6120	0.0000	360.0000	0.3600	0.360
0.37000	3.70370	0.6290	0.0000	370.0000	0.3700	0.370
0.38000	3.80380	0.6460	0.0000	380.0000	0.3800	0.380
0.39000	3.90390	0.6630	0.0000	390.0000	0.3900	0.390
0.40000	4.00400	0.6800	0.0000	400.0000	0.4000	0.400
0.41000	4.10410	0.6970	0.0000	410.0000	0.4100	0.410
0.42000	4.20420	0.7140	0.0000	420.0000	0.4200	0.420
0.43000	4.30430	0.7310	0.0000	430.0000	0.4300	0.430
0.44000	4.40440	0.7480	0.0000	440.0000	0.4400	0.440
0.45000	4.50450	0.7650	0.0000	450.0000	0.4500	0.450
0.46000	4.60460	0.7820	0.0000	460.0000	0.4600	0.460
0.47000	4.70470	0.7990	0.0000	470.0000	0.4700	0.470
0.48000	4.80480	0.8160	0.0000	480.0000	0.4800	0.480
0.49000	4.90490	0.8330	0.0000	490.0000	0.4900	0.490
0.50000	5.00500	0.8500	0.0000	500.0000	0.5000	0.500

0.51000	5.10510	0.8670	0.0000	510.0000	0.5100	0.510
0.52000	5.20520	0.8840	0.0000	520.0000	0.5200	0.520
0.53000	5.30530	0.9010	0.0000	530.0000	0.5300	0.530
0.54000	5.40540	0.9180	0.0000	540.0000	0.5400	0.540
0.55000	5.50550	0.9350	0.0000	550.0000	0.5500	0.550
0.56000	5.60560	0.9520	0.0000	560.0000	0.5600	0.560
0.57000	5.70570	0.9690	0.0000	570.0000	0.5700	0.570
0.58000	5.80580	0.9860	0.0000	580.0000	0.5800	0.580
0.59000	5.90590	1.0030	0.0000	590.0000	0.5900	0.590
0.60000	6.00600	1.0200	0.0000	600.0000	0.6000	0.600
0.61000	6.10610	1.0370	0.0000	610.0000	0.6100	0.610
0.62000	6.20620	1.0540	0.0000	620.0000	0.6200	0.620
0.63000	6.30630	1.0710	0.0000	630.0000	0.6300	0.630
0.64000	6.40640	1.0880	0.0000	640.0000	0.6400	0.640
0.65000	6.50650	1.1050	0.0000	650.0000	0.6500	0.650
0.66000	6.60660	1.1220	0.0000	660.0000	0.6600	0.660
0.67000	6.70670	1.1390	0.0000	670.0000	0.6700	0.670
0.68000	6.80680	1.1560	0.0000	680.0000	0.6800	0.680
0.69000	6.90690	1.1730	0.0000	690.0000	0.6900	0.690
0.70000	7.00700	1.1900	0.0000	700.0000	0.7000	0.700
0.71000	7.10710	1.2070	0.0000	710.0000	0.7100	0.710
0.72000	7.20720	1.2240	0.0000	720.0000	0.7200	0.720
0.73000	7.30730	1.2410	0.0000	730.0000	0.7300	0.730
0.74000	7.40740	1.2580	0.0000	740.0000	0.7400	0.740
0.75000	7.50750	1.2750	0.0000	750.0000	0.7500	0.750
0.76000	7.60760	1.2920	0.0000	760.0000	0.7600	0.760
0.77000	7.70770	1.3090	0.0000	770.0000	0.7700	0.770
0.78000	7.80780	1.3260	0.0000	780.0000	0.7800	0.780
0.79000	7.90790	1.3430	0.0000	790.0000	0.7900	0.790
0.80000	8.00800	1.3600	0.0000	800.0000	0.8000	0.800
0.81000	8.10810	1.3770	0.0000	810.0000	0.8100	0.810
0.82000	8.20820	1.3940	0.0000	820.0000	0.8200	0.820
0.83000	8.30830	1.4110	0.0000	830.0000	0.8300	0.830
0.84000	8.40840	1.4280	0.0000	840.0000	0.8400	0.840
0.85000	8.50850	1.4450	0.0000	850.0000	0.8500	0.850
0.86000	8.60860	1.4620	0.0000	860.0000	0.8600	0.860
0.87000	8.70870	1.4790	0.0000	870.0000	0.8700	0.870
0.88000	8.80880	1.4960	0.0000	880.0000	0.8800	0.880
0.89000	8.90890	1.5130	0.0000	890.0000	0.8900	0.890
0.90000	9.00900	1.5300	0.0000	900.0000	0.9000	0.900
0.91000	9.10910	1.5470	0.0000	910.0000	0.9100	0.910
0.92000	9.20920	1.5640	0.0000	920.0000	0.9200	0.920
0.93000	9.30930	1.5810	0.0000	930.0000	0.9300	0.930
0.94000	9.40940	1.5980	0.0000	940.0000	0.9400	0.940
0.95000	9.50950	1.6150	0.0000	950.0000	0.9500	0.950
0.96000	9.60960	1.6320	0.0000	960.0000	0.9600	0.960
0.97000	9.70970	1.6490	0.0000	970.0000	0.9700	0.970
0.98000	9.80980	1.6660	0.0000	980.0000	0.9800	0.980
0.99000	9.90990	1.6830	0.0000	990.0000	0.9900	0.990
1.00000	10.01000	1.7000	0.0000	1000.0000	1.0000	1.000

1.50000	20.42311	0.9750	0.0000	9.4020	10.0020	10.0000
1.60000	21.07171	0.9472	0.0000	9.1474	12.1313	22.014
1.70000	21.09616	0.9043	0.0000	8.8700	14.2620	26.765
1.80000	20.78804	0.8830	0.0000	8.4144	16.3305	30.727
1.90000	20.23227	0.9574	0.0000	8.7941	18.1921	34.500
2.00000	19.40900	0.9227	0.0000	8.1700	20.3001	38.370
2.10000	18.64400	0.8825	0.0000	8.0900	22.2009	41.014
2.20000	17.72411	0.8360	0.0000	8.0270	24.1073	45.335
2.30000	16.76924	0.7934	0.0000	8.0770	25.8323	48.370
2.40000	15.90660	0.7470	0.0000	8.002	27.4609	51.647
2.50000	14.95221	0.7020	0.0000	8.4151	28.9916	54.524
2.60000	13.92504	0.6500	0.0000	8.1014	30.4323	57.230
2.70000	13.03514	0.6160	0.0000	8.1907	31.7800	59.744
2.80000	12.18614	0.5747	0.0000	8.1003	33.0407	62.135
2.90000	11.38240	0.5386	0.0000	8.0114	34.2147	64.350
3.00000	10.62500	0.5020	0.0000	8.0220	35.3187	66.010
3.10000	9.91536	0.4692	0.0000	8.0520	36.3494	68.350
3.20000	9.25147	0.4370	0.0000	8.2810	37.3033	70.151
3.30000	8.63225	0.4085	0.0000	8.7150	38.1972	71.833
3.40000	8.05500	0.3812	0.0000	8.6542	39.0317	73.001
3.50000	7.51900	0.3550	0.0000	8.0906	39.8097	74.065
3.60000	7.02227	0.3323	0.0000	8.5425	40.5345	74.231
3.70000	6.56030	0.3105	0.0000	8.0910	41.2153	77.500
3.80000	6.13900	0.2902	0.0000	8.4441	41.8607	78.701
3.90000	5.73875	0.2714	0.0000	8.1992	42.4820	79.010
4.00000	5.34642	0.2540	0.0000	8.3560	42.9974	80.040
4.10000	5.02007	0.2370	0.0000	8.3160	43.5160	81.034
4.20000	4.70010	0.2220	0.0000	8.2791	44.0034	82.751
4.30000	4.41425	0.2080	0.0000	8.2433	44.4593	83.600
4.40000	4.14154	0.1940	0.0000	8.2093	44.8849	84.413
4.50000	3.88037	0.1800	0.0000	8.1771	45.2803	85.167
4.60000	3.65321	0.1720	0.0000	8.1464	45.6452	85.876
4.70000	3.43067	0.1625	0.0000	8.1173	46.0105	86.562
4.80000	3.23147	0.1520	0.0000	8.0905	46.3527	87.160
4.90000	3.04241	0.1440	0.0000	8.0630	46.6642	87.750
5.00000	2.86640	0.1350	0.0000	8.0377	46.9616	88.316
5.10000	2.70200	0.1270	0.0000	8.0135	47.2390	88.830
5.20000	2.54060	0.1207	0.0000	1.0900	47.5094	89.331
5.30000	2.40705	0.1139	0.0000	1.0683	47.7502	89.707
5.40000	2.27390	0.1074	0.0000	1.0471	47.9842	90.237
5.50000	2.14070	0.1017	0.0000	1.0268	48.2053	90.653
5.60000	2.03354	0.0942	0.0000	1.0073	48.4144	91.046
5.70000	1.92400	0.0911	0.0000	1.0080	48.6192	91.410
5.80000	1.82322	0.0863	0.0000	1.0007	48.7906	91.771
5.90000	1.72700	0.0814	0.0000	1.0530	48.9771	92.104
6.00000	1.63675	0.0775	0.0000	1.0107	49.1454	92.421
6.10000	1.55500	0.0734	0.0000	1.0207	49.3050	92.721
6.20000	1.47453	0.0690	0.0000	1.0053	49.4566	93.006
6.30000	1.40274	0.0644	0.0000	1.7900	49.6005	93.277
6.40000	1.33360	0.0631	0.0000	1.7760	49.7373	93.536
6.50000	1.26833	0.0600	0.0000	1.7522	49.8673	93.770
6.60000	1.20700	0.0571	0.0000	1.7400	49.9911	94.011
6.70000	1.14933	0.0544	0.0000	1.7350	50.1098	94.233
6.80000	1.09407	0.0510	0.0000	1.7233	50.2210	94.446
6.90000	1.04373	0.0490	0.0000	1.7119	50.3270	94.645

7.00000	0.99941	0.0471	0.0000	1.6995	50.4200	94.837
7.10000	0.94000	0.0440	0.0000	1.6802	50.5271	95.010
7.20000	0.90074	0.0420	0.0000	1.6772	50.6190	95.104
7.30000	0.86000	0.0410	0.0000	1.6965	50.7045	95.301
7.40000	0.82760	0.0392	0.0000	1.6562	50.7932	95.520
7.50000	0.79122	0.0374	0.0000	1.6062	50.8741	95.672
7.60000	0.75070	0.0350	0.0000	1.6364	50.9515	95.810
7.70000	0.72410	0.0343	0.0000	1.6270	51.0256	95.957
7.80000	0.69331	0.0320	0.0000	1.6170	51.0964	96.000
7.90000	0.66403	0.0314	0.0000	1.6009	51.1643	96.210
8.00000	0.63627	0.0301	0.0000	1.6002	51.2293	96.300
8.10000	0.60902	0.0280	0.0000	1.5910	51.2916	96.457
8.20000	0.58491	0.0277	0.0000	1.5834	51.3513	96.540
8.30000	0.56114	0.0266	0.0000	1.5756	51.4086	96.677
8.40000	0.53850	0.0255	0.0000	1.5670	51.4636	96.700
8.50000	0.51712	0.0245	0.0000	1.5603	51.5163	96.800
8.60000	0.49671	0.0235	0.0000	1.5520	51.5670	96.875
8.70000	0.47720	0.0224	0.0000	1.5457	51.6157	97.067
8.80000	0.45870	0.0217	0.0000	1.5387	51.6625	97.155
8.90000	0.44114	0.0209	0.0000	1.5310	51.7075	97.239
9.00000	0.42430	0.0201	0.0000	1.5252	51.7500	97.321
9.10000	0.40830	0.0193	0.0000	1.5187	51.7924	97.390
9.20000	0.39313	0.0186	0.0000	1.5124	51.8325	97.474
9.30000	0.37745	0.0179	0.0000	1.5062	51.8711	97.547
9.40000	0.36400	0.0173	0.0000	1.5002	51.9082	97.617
9.50000	0.35141	0.0166	0.0000	1.4943	51.9440	97.684
9.60000	0.33873	0.0160	0.0000	1.4885	51.9785	97.749
9.70000	0.32667	0.0155	0.0000	1.4820	52.0116	97.811
9.80000	0.31501	0.0149	0.0000	1.4773	52.0439	97.872
9.90000	0.30300	0.0144	0.0000	1.4720	52.0748	97.930
10.00000	0.29334	0.0139	0.0000	1.4667	52.1047	97.986
10.10000	0.28322	0.0134	0.0000	1.4615	52.1335	98.040
10.20000	0.27351	0.0129	0.0000	1.4565	52.1613	98.093
10.30000	0.26421	0.0125	0.0000	1.4515	52.1882	98.143
10.40000	0.25530	0.0121	0.0000	1.4467	52.2142	98.190
10.50000	0.24674	0.0117	0.0000	1.4420	52.2393	98.239
10.60000	0.23857	0.0113	0.0000	1.4374	52.2635	98.285
10.70000	0.23072	0.0109	0.0000	1.4320	52.2870	98.329
10.80000	0.22310	0.0106	0.0000	1.4290	52.3097	98.372
10.90000	0.21590	0.0102	0.0000	1.4240	52.3317	98.413
11.00000	0.20901	0.0099	0.0000	1.4197	52.3520	98.453
11.10000	0.20234	0.0096	0.0000	1.4156	52.3715	98.492
11.20000	0.19591	0.0093	0.0000	1.4115	52.3904	98.520
11.30000	0.18970	0.0090	0.0000	1.4074	52.4097	98.545
11.40000	0.18360	0.0087	0.0000	1.4035	52.4283	98.600
11.50000	0.17770	0.0084	0.0000	1.3996	52.4464	98.636
11.60000	0.17200	0.0082	0.0000	1.3950	52.4640	98.667
11.70000	0.16744	0.0079	0.0000	1.3921	52.4800	98.690
11.80000	0.16237	0.0077	0.0000	1.3884	52.5005	98.730
11.90000	0.15750	0.0075	0.0000	1.3844	52.5165	98.760
12.00000	0.15280	0.0072	0.0000	1.3810	52.5320	98.790



VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, D. C. L., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1426.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1800.0  
DEGREES FAHRENHEIT = 2780.2

- THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.35 WATT/CM<sup>2</sup>.
- THE TOTAL VISIBLE FLUX IS 16.82 LUMENS/CM<sup>2</sup>.
- THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 11.72 CANDELA/CM<sup>2</sup>.
- THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.008.
- THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 105.187 LUMENS/WATT.
- THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.619 LUMEN/WATT.
- THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.4100 MICRONS.
- THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 2.9249 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.
- THE TOTAL POWER RADIATED IS 59.52 WATT/CM<sup>2</sup> OR 5.95128E+04 ERG/SEC/CM<sup>2</sup> OR 1.42252E+02 KCAL/SEC/CM<sup>2</sup>.
- THE POWER RADIATED AT THE PEAK WAVELENGTH IS 24.33 WATT/CM<sup>2</sup> PER MICRON.
- THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 680 LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.
- WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta W = KW \Delta T^M$ .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1426.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1800.0  
DEGREES FAHRENHEIT = 2780.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT = FOR W/TOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00084	3.54499E-05	0.0000	22.4133	1.5136E-05	0.000
0.35500	0.00111	4.55999E-05	0.0000	22.5117	2.0046E-05	0.000
0.36000	0.00141	5.6126E-05	0.0000	22.6191	2.6126E-05	0.000
0.36500	0.00174	7.0334E-05	0.0000	21.8950	3.4306E-05	0.000
0.37000	0.00225	9.2351E-05	0.0000	21.5991	4.4359E-05	0.000
0.37500	0.00280	0.0001	0.0000	21.3111	5.6939E-05	0.000
0.38000	0.00347	0.0001	0.0000	21.0407	7.2573E-05	0.000
0.38500	0.00427	0.0002	0.0000	20.7876	9.1477E-05	0.000
0.39000	0.00521	0.0002	0.0000	20.5495	0.0001	0.000
0.39500	0.00630	0.0003	0.0000	20.3271	0.0001	0.000
0.40000	0.00769	0.0003	0.0021	19.9742	0.0002	0.000
0.40500	0.00925	0.0004	0.0050	19.7325	0.0002	0.000
0.41000	0.01105	0.0005	0.0080	19.4919	0.0003	0.000
0.41500	0.01317	0.0005	0.0197	19.2570	0.0003	0.001
0.42000	0.01560	0.0006	0.0424	19.0274	0.0004	0.001
0.42500	0.01839	0.0008	0.0913	18.8039	0.0005	0.001
0.43000	0.02154	0.0009	0.1702	18.5853	0.0006	0.001
0.43500	0.02522	0.0010	0.2881	18.3716	0.0007	0.001
0.44000	0.02935	0.0012	0.4591	18.1629	0.0008	0.001
0.44500	0.03402	0.0014	0.6709	17.9588	0.0010	0.002
0.45000	0.03924	0.0014	1.0149	17.7593	0.0012	0.002
0.45500	0.04517	0.0019	1.4744	17.5641	0.0014	0.002
0.46000	0.05177	0.0021	2.1121	17.3732	0.0016	0.003
0.46500	0.05912	0.0024	2.9744	17.1864	0.0019	0.003
0.47000	0.06724	0.0028	4.1634	17.0035	0.0022	0.004
0.47500	0.07632	0.0031	5.6127	16.8244	0.0026	0.004
0.48000	0.08640	0.0034	7.4571	16.6493	0.0030	0.005
0.48500	0.09779	0.0040	11.1804	16.4777	0.0035	0.006
0.49000	0.11035	0.0045	15.4443	16.3095	0.0040	0.007
0.49500	0.12425	0.0050	21.5002	16.1444	0.0045	0.008
0.50000	0.13894	0.0056	30.0828	15.9833	0.0052	0.009
0.50500	0.15264	0.0063	42.2503	15.8251	0.0059	0.010
0.51000	0.16671	0.0070	58.0481	15.6699	0.0067	0.011
0.51500	0.18119	0.0077	77.8057	15.5174	0.0076	0.013
0.52000	0.20017	0.0084	100.5047	15.3664	0.0086	0.014
0.52500	0.22292	0.0094	123.4671	15.2222	0.0097	0.016
0.53000	0.25292	0.0104	148.2541	15.0784	0.0109	0.017
0.53500	0.27784	0.0114	172.8751	14.9377	0.0122	0.021
0.54000	0.30444	0.0125	197.5732	14.7994	0.0137	0.023
0.54500	0.33114	0.0137	222.8028	14.6636	0.0153	0.026
0.55000	0.35865	0.0149	248.0470	14.5303	0.0170	0.029
0.55500	0.38617	0.0161	269.1970	14.3984	0.0189	0.032
0.56000	0.41377	0.0177	291.4591	14.2709	0.0210	0.035
0.56500	0.44151	0.0192	311.7307	14.1444	0.0232	0.039
0.57000	0.46844	0.0208	327.4610	14.0205	0.0257	0.043

0.57500	0.54764	0.0225	140.7445	11.4944	0.0243	0.044
0.58000	0.59124	0.0243	149.7746	11.7747	0.0312	0.052
0.58500	0.63719	0.0267	151.0961	11.8610	0.0342	0.057
0.59000	0.68459	0.0291	152.9152	11.9052	0.0374	0.061
0.59500	0.73344	0.0303	154.0711	11.9114	0.0411	0.066
0.60000	0.78097	0.0325	155.0621	11.9194	0.0449	0.071
0.60500	0.82604	0.0348	156.2090	11.9294	0.0490	0.077
0.61000	0.86879	0.0372	157.4152	11.9411	0.0534	0.083
0.61500	0.90621	0.0397	158.7832	11.9544	0.0580	0.090
0.62000	1.00301	0.0424	160.3945	11.9694	0.0630	0.104
0.62500	1.09737	0.0451	162.2533	11.9867	0.0683	0.115
0.63000	1.18714	0.0480	164.3143	11.9952	0.0740	0.124
0.63500	1.23974	0.0510	166.5380	11.9953	0.0800	0.134
0.64000	1.31424	0.0541	168.9137	11.9870	0.0864	0.145
0.64500	1.38362	0.0573	170.7777	11.9702	0.0932	0.157
0.65000	1.47492	0.0606	172.1155	11.9449	0.1003	0.169
0.65500	1.55914	0.0641	173.0485	11.9211	0.1079	0.181
0.66000	1.64434	0.0677	173.5903	11.9087	0.1159	0.195
0.66500	1.73049	0.0714	173.1144	11.9017	0.1244	0.209
0.67000	1.82949	0.0752	172.4119	11.8927	0.1333	0.224
0.67500	1.92567	0.0792	171.1175	11.8819	0.1427	0.240
0.68000	2.02472	0.0832	169.4057	11.8725	0.1526	0.254
0.68500	2.12474	0.0874	167.2045	11.8644	0.1630	0.274
0.69000	2.23170	0.0917	164.4939	11.8572	0.1739	0.299
0.69500	2.33961	0.0962	161.0681	11.8509	0.1851	0.311
0.70000	2.45047	0.1007	156.8319	11.8416	0.1973	0.331
0.70500	2.56424	0.1054	151.9567	11.8354	0.2098	0.352
0.71000	2.68091	0.1102	146.2281	11.8260	0.2259	0.375
0.71500	2.80044	0.1151	139.8465	11.8171	0.2366	0.398
0.72000	2.92284	0.1201	132.8443	11.8097	0.2509	0.422
0.72500	3.04804	0.1251	125.2009	11.8032	0.2658	0.447
0.73000	3.17606	0.1306	116.9299	10.8247	0.2814	0.473
0.73500	3.30682	0.1359	108.0995	10.8732	0.2976	0.500
0.74000	3.44029	0.1414	98.7016	10.9999	0.3145	0.528
0.74500	3.57644	0.1470	88.8644	10.7271	0.3320	0.558
0.75000	3.71522	0.1527	78.5924	10.4754	0.3502	0.588
0.75500	4.00050	0.1644	68.0000	10.5154	0.3688	0.613
0.76000	4.29374	0.1764	58.0000	10.3791	0.4303	0.723
0.76500	4.60045	0.1891	48.0000	10.2441	0.4748	0.798
0.77000	4.91444	0.2020	38.0000	10.1104	0.5221	0.874
0.77500	5.23695	0.2151	28.0000	9.9800	0.5731	0.963
0.78000	5.56759	0.2289	18.0000	9.8464	0.6271	1.054
0.78500	5.90542	0.2428	8.0000	9.7065	0.6844	1.150
0.79000	6.25111	0.2570	0.0000	9.6291	0.7442	1.252
0.79500	6.60292	0.2714	0.0000	9.6146	0.8095	1.360
0.80000	6.96067	0.2861	0.0000	9.6027	0.8773	1.474
0.80500	7.32381	0.3010	0.0000	9.5934	0.9487	1.594
0.81000	7.69174	0.3162	0.0000	9.5848	1.0238	1.720
0.81500	8.06393	0.3315	0.0000	9.5825	1.1026	1.852
0.82000	8.43974	0.3469	0.0000	9.5805	1.1841	1.991
0.82500	8.81844	0.3625	0.0000	9.5800	1.2714	2.136
0.83000	9.20011	0.3782	0.0000	9.5836	1.3615	2.287
0.83500	9.58350	0.3939	0.0000	9.5881	1.4554	2.445
0.84000	9.96874	0.4097	0.0000	9.5948	1.5531	2.610
0.84500	10.35594	0.4254	0.0000	9.6035	1.6548	2.780

0.85000	11.49877	0.4489	0.0000	9.61571	2.0000	3.528
0.85500	12.27704	0.4704	0.0000	9.6249	2.2264	3.731
0.86000	12.85724	0.4921	0.0000	9.6344	2.3453	3.940
0.86500	14.03491	0.5154	0.0000	9.7154	2.4718	4.154
0.87000	14.40964	0.5312	0.0000	9.8381	2.6040	4.374
0.87500	15.78101	0.5464	0.0000	9.7422	2.7419	4.607
0.88000	16.14864	0.5614	0.0000	9.6878	2.8816	4.862
0.88500	16.51224	0.5765	0.0000	9.6149	3.0249	5.082
0.89000	16.87139	0.5911	0.0000	9.5433	3.1718	5.329
0.89500	17.22574	0.6059	0.0000	9.4731	3.3223	5.587
0.90000	17.57512	0.6202	0.0000	9.4042	3.4763	5.841
0.90500	17.91911	0.6344	0.0000	9.3364	3.6336	6.103
0.91000	18.25754	0.6484	0.0000	9.2707	3.7947	6.374
0.91500	18.59011	0.6621	0.0000	9.2051	3.9599	6.657
0.92000	18.91642	0.6754	0.0000	9.1411	4.1285	6.933
0.92500	17.23644	0.7085	0.0000	9.0783	4.2972	7.220
0.93000	17.55059	0.7214	0.0000	9.0166	4.4712	7.512
0.93500	17.85749	0.7340	0.0000	8.9559	4.6484	7.810
0.94000	18.15709	0.7464	0.0000	8.8968	4.8283	8.119
0.94500	18.45134	0.7584	0.0000	8.8378	5.0114	8.429
0.95000	18.74101	0.7702	0.0000	8.7804	5.1973	8.732
0.95500	19.02673	0.7817	0.0000	8.7238	5.3861	9.049
0.96000	19.29854	0.7929	0.0000	8.6681	5.5776	9.371
0.96500	19.55302	0.8037	0.0000	8.6136	5.7718	9.699
0.97000	19.80004	0.8143	0.0000	8.5599	5.9687	10.028
0.97500	20.03949	0.8245	0.0000	8.5071	6.1680	10.361
0.98000	20.28161	0.8345	0.0000	8.4551	6.3698	10.702
0.98500	20.51607	0.8441	0.0000	8.4040	6.5740	11.045
0.99000	20.74294	0.8535	0.0000	8.3534	6.7805	11.397
0.99500	20.96223	0.8625	0.0000	8.3043	6.9893	11.743
1.00000	21.18391	0.8712	0.0000	8.2556	7.2001	12.097
1.00500	21.39805	0.8796	0.0000	8.2078	7.4131	12.459
1.01000	21.59461	0.8876	0.0000	8.1606	7.6281	12.814
1.01500	21.77344	0.8954	0.0000	8.1142	7.8450	13.161
1.02000	21.94514	0.9029	0.0000	8.0685	8.0637	13.508
1.02500	22.11027	0.9100	0.0000	8.0236	8.2843	13.919
1.03000	22.26997	0.9169	0.0000	7.9793	8.5065	14.292
1.03500	22.42451	0.9234	0.0000	7.9357	8.7304	14.666
1.04000	22.57414	0.9297	0.0000	7.8924	8.9558	15.047
1.04500	22.71829	0.9356	0.0000	7.8505	9.1827	15.428
1.05000	22.85604	0.9413	0.0000	7.8098	9.4110	15.812
1.05500	22.98804	0.9467	0.0000	7.7706	9.6407	16.194
1.06000	23.11449	0.9518	0.0000	7.7327	9.8714	16.588
1.06500	23.23537	0.9566	0.0000	7.6960	10.1037	16.978
1.07000	23.35164	0.9611	0.0000	7.6604	10.3370	17.364
1.07500	23.46344	0.9653	0.0000	7.6258	10.5713	17.761
1.08000	23.57071	0.9693	0.0000	7.5924	10.8067	18.157
1.08500	23.67344	0.9730	0.0000	7.5599	11.0429	18.554
1.09000	23.77160	0.9765	0.0000	7.5284	11.2801	18.959
1.09500	23.86537	0.9797	0.0000	7.4978	11.5180	19.352
1.10000	23.95464	0.9826	0.0000	7.4681	11.7567	19.733
1.10500	23.97088	0.9853	0.0000	7.4394	11.9961	20.115

1.50000	24.03048	0.9878	0.0000	5.1534	12.2311	20.550
1.60000	24.32601	0.9890	0.0000	5.0780	14.4583	24.620
1.70000	24.15680	0.9910	0.0000	4.7441	17.0850	28.707
1.80000	23.43385	0.9715	0.0000	4.4998	19.4779	32.726
1.90000	22.45481	0.9398	0.0000	4.2808	21.4001	36.634
2.00000	21.90187	0.9003	0.0000	4.0707	24.0411	40.308
2.10000	20.93077	0.8566	0.0000	3.8721	26.1808	43.988
2.20000	19.71739	0.8105	0.0000	3.7111	28.7080	47.395
2.30000	18.57542	0.7635	0.0000	3.5857	30.1216	50.612
2.40000	17.46075	0.7160	0.0000	3.4515	31.9242	53.630
2.50000	16.33316	0.6514	0.0000	3.3330	33.6124	56.475
2.60000	15.26618	0.6275	0.0000	3.2228	35.1922	59.128
2.70000	14.24035	0.5857	0.0000	3.1217	36.6675	61.607
2.80000	13.24444	0.5461	0.0000	3.0284	38.0437	63.910
2.90000	12.37812	0.5088	0.0000	2.9424	39.3268	66.074
3.00000	11.52062	0.4739	0.0000	2.8634	40.5212	68.007
3.10000	10.77553	0.4411	0.0000	2.7898	41.6340	69.952
3.20000	9.99708	0.4109	0.0000	2.7214	42.6702	71.693
3.30000	9.31093	0.3827	0.0000	2.6574	43.6341	73.314
3.40000	8.67438	0.3564	0.0000	2.5982	44.5340	74.824
3.50000	8.08834	0.3323	0.0000	2.5425	45.3716	76.231
3.60000	7.53807	0.3109	0.0000	2.4904	46.1523	77.545
3.70000	7.03243	0.2901	0.0000	2.4414	46.8875	78.767
3.80000	6.56456	0.2698	0.0000	2.3954	47.5801	79.908
3.90000	6.13147	0.2502	0.0000	2.3522	48.2448	80.975
4.00000	5.73112	0.2354	0.0000	2.3114	48.8875	81.971
4.10000	5.36043	0.2203	0.0000	2.2728	49.5148	82.902
4.20000	5.01724	0.2042	0.0000	2.2363	49.6605	83.771
4.30000	4.69984	0.1932	0.0000	2.2018	50.3441	84.589
4.40000	4.40484	0.1811	0.0000	2.1680	50.8012	85.354
4.50000	4.13202	0.1698	0.0000	2.1370	51.2278	86.071
4.60000	3.87883	0.1594	0.0000	2.1084	51.6292	86.748
4.70000	3.64385	0.1498	0.0000	2.0802	52.0082	87.375
4.80000	3.42544	0.1408	0.0000	2.0535	52.3576	87.949
4.90000	3.22284	0.1325	0.0000	2.0279	52.6809	88.527
5.00000	3.03629	0.1247	0.0000	2.0035	52.9806	89.053
5.10000	2.85581	0.1175	0.0000	1.9802	53.2592	89.544
5.20000	2.69441	0.1108	0.0000	1.9579	53.5178	90.014
5.30000	2.54314	0.1045	0.0000	1.9364	53.7664	90.454
5.40000	2.40114	0.0987	0.0000	1.9154	54.0057	90.869
5.50000	2.26864	0.0933	0.0000	1.8946	54.2372	91.261
5.60000	2.14480	0.0882	0.0000	1.8744	54.4537	91.632
5.70000	2.02925	0.0834	0.0000	1.8547	54.6464	91.983
5.80000	1.92111	0.0789	0.0000	1.8354	54.8269	92.314
5.90000	1.81909	0.0744	0.0000	1.8165	55.1309	92.624
6.00000	1.72511	0.0700	0.0000	1.7984	55.3081	92.926
6.10000	1.63629	0.0647	0.0000	1.7842	55.4741	93.209
6.20000	1.55299	0.0638	0.0000	1.7741	55.6355	93.474
6.30000	1.47481	0.0604	0.0000	1.7640	55.7848	93.731
6.40000	1.40140	0.0574	0.0000	1.7510	55.9306	93.972
6.50000	1.33282	0.0548	0.0000	1.7376	56.0637	94.202
6.60000	1.26756	0.0521	0.0000	1.7247	56.1872	94.428
6.70000	1.20652	0.0494	0.0000	1.7122	56.3029	94.628
6.80000	1.14904	0.0472	0.0000	1.7002	56.4137	94.826
6.90000	1.09493	0.0450	0.0000	1.6885	56.5598	95.014

7.00000	1.04380	0.0420	0.0000	1.6772	56.6577	95.198
7.10000	0.99575	0.0400	0.0000	1.6662	56.7507	95.365
7.20000	0.95037	0.0381	0.0000	1.6555	56.8370	95.520
7.30000	0.90741	0.0373	0.0000	1.6451	56.9199	95.665
7.40000	0.86687	0.0356	0.0000	1.6351	57.0386	95.804
7.50000	0.82853	0.0341	0.0000	1.6257	57.1233	95.974
7.60000	0.79227	0.0326	0.0000	1.6161	57.2043	96.112
7.70000	0.75798	0.0312	0.0000	1.6071	57.2818	96.282
7.80000	0.72463	0.0298	0.0000	1.5981	57.3560	96.387
7.90000	0.69241	0.0286	0.0000	1.5897	57.4270	96.484
8.00000	0.66145	0.0274	0.0000	1.5813	57.4950	96.601
8.10000	0.63173	0.0262	0.0000	1.5731	57.5601	96.710
8.20000	0.60314	0.0251	0.0000	1.5652	57.6225	96.815
8.30000	0.57464	0.0241	0.0000	1.5575	57.6824	96.916
8.40000	0.54627	0.0231	0.0000	1.5500	57.7399	97.012
8.50000	0.51802	0.0222	0.0000	1.5427	57.7950	97.105
8.60000	0.49081	0.0213	0.0000	1.5354	57.8480	97.198
8.70000	0.46461	0.0205	0.0000	1.5284	57.8998	97.279
8.80000	0.43900	0.0197	0.0000	1.5219	57.9477	97.361
8.90000	0.41400	0.0189	0.0000	1.5153	57.9987	97.440
9.00000	0.44202	0.0182	0.0000	1.5088	58.0398	97.514
9.10000	0.42614	0.0175	0.0000	1.5024	58.0831	97.588
9.20000	0.41015	0.0168	0.0000	1.4964	58.1251	97.659
9.30000	0.39400	0.0162	0.0000	1.4905	58.1663	97.727
9.40000	0.37833	0.0156	0.0000	1.4844	58.2061	97.792
9.50000	0.36341	0.0151	0.0000	1.4789	58.2414	97.855
9.60000	0.34914	0.0145	0.0000	1.4731	58.2774	97.915
9.70000	0.33484	0.0140	0.0000	1.4679	58.3121	97.971
9.80000	0.32035	0.0135	0.0000	1.4626	58.3455	98.030
9.90000	0.31164	0.0130	0.0000	1.4571	58.3777	98.084
10.00000	0.10547	0.0126	0.0000	1.4522	58.4088	98.136
10.10000	0.24904	0.0121	0.0000	1.4473	58.4389	98.187
10.20000	0.27441	0.0117	0.0000	1.4424	58.4679	98.235
10.30000	0.27518	0.0113	0.0000	1.4374	58.4959	98.282
10.40000	0.26547	0.0109	0.0000	1.4329	58.5229	98.328
10.50000	0.25694	0.0104	0.0000	1.4284	58.5491	98.372
10.60000	0.24834	0.0102	0.0000	1.4239	58.5743	98.414
10.70000	0.24017	0.0099	0.0000	1.4195	58.5988	98.455
10.80000	0.23230	0.0095	0.0000	1.4152	58.6224	98.495
10.90000	0.22475	0.0092	0.0000	1.4110	58.6452	98.533
11.00000	0.21750	0.0088	0.0000	1.4069	58.6673	98.570
11.10000	0.21051	0.0087	0.0000	1.4028	58.6887	98.604
11.20000	0.20384	0.0084	0.0000	1.3988	58.7095	98.641
11.30000	0.19742	0.0081	0.0000	1.3950	58.7295	98.675
11.40000	0.19124	0.0079	0.0000	1.3911	58.7490	98.707
11.50000	0.18531	0.0076	0.0000	1.3874	58.7678	98.739
11.60000	0.17940	0.0074	0.0000	1.3837	58.7860	98.770
11.70000	0.17411	0.0072	0.0000	1.3801	58.8037	98.799
11.80000	0.16882	0.0069	0.0000	1.3766	58.8209	98.828
11.90000	0.16374	0.0067	0.0000	1.3731	58.8375	98.856
12.00000	0.15884	0.0065	0.0000	1.3697	58.8536	98.883

VISIBILITY AND OTHER DATA FOR PLASMA RADIATION, MECHANICS DIVISION, U.D.C., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1576.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1850.0  
DEGREES FAHRENHEIT = 2876.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.48 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 93.37 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 16.97 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.007 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 110.100 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.903 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.5005 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.9701 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT INTENSITY TO TOTAL RADIANT INTENSITY.

THE TOTAL POWER RADIATED IS 66.41 WATT/CM<sup>2</sup> OR 6.66121E+04 ERG/SEC/CM<sup>2</sup> OR 1.58729E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 27.90 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT INTENSITY \* VISIBILITY FACTOR,  
WHERE RADIANT INTENSITY IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT INTENSITY (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W = W(10)M .

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 1576.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1850.0  
DEGREES FAHRENHEIT = 2876.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR W(10)	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.20160	5.7359E-05	0.0000	22.2162	7.0003E-05	0.000
0.35500	0.20204	7.3063E-05	0.0000	21.0031	1.0000E-04	0.000
0.36000	0.20254	9.2151E-05	0.0000	21.4991	4.9000E-05	0.000
0.36500	0.20321	0.0001	0.0000	21.3032	6.3070E-05	0.000
0.37000	0.20401	0.0001	0.0000	21.0111	8.2063E-05	0.000
0.37500	0.20494	0.0002	0.0000	20.7351	0.0001	0.000
0.38000	0.20611	0.0002	0.0000	20.4821	0.0001	0.000
0.38500	0.20749	0.0003	0.0000	20.1964	0.0002	0.000
0.39000	0.20919	0.0003	0.0000	19.8376	0.0002	0.000
0.39500	0.21094	0.0004	0.0000	19.4891	0.0003	0.000
0.40000	0.21319	0.0005	0.0000	19.1499	0.0003	0.000
0.40500	0.21576	0.0006	0.0000	18.7992	0.0004	0.001
0.41000	0.21871	0.0007	0.0153	18.4551	0.0005	0.001
0.41500	0.22214	0.0008	0.0331	18.1364	0.0006	0.001
0.42000	0.22608	0.0009	0.0709	17.8135	0.0007	0.001
0.42500	0.23057	0.0011	0.1517	17.4957	0.0008	0.001
0.43000	0.23567	0.0013	0.2813	17.1930	0.0010	0.002
0.43500	0.24144	0.0015	0.4734	16.8751	0.0012	0.002
0.44000	0.24795	0.0017	0.7500	16.5420	0.0014	0.002
0.44500	0.25527	0.0020	1.0900	16.1734	0.0017	0.003
0.45000	0.26347	0.0023	1.6401	15.7793	0.0020	0.003
0.45500	0.27269	0.0026	2.3702	15.3694	0.0023	0.004
0.46000	0.28279	0.0030	3.3779	14.9434	0.0027	0.004
0.46500	0.29387	0.0034	4.7335	14.5019	0.0031	0.005
0.47000	0.30651	0.0038	6.5971	14.0440	0.0036	0.005
0.47500	0.32024	0.0043	9.1592	13.5694	0.0042	0.006
0.48000	0.33535	0.0049	12.7929	13.0761	0.0049	0.007
0.48500	0.35187	0.0056	17.4599	12.5632	0.0056	0.008
0.49000	0.36992	0.0061	24.0337	12.0307	0.0064	0.010
0.49500	0.38959	0.0068	33.2618	11.4784	0.0073	0.011
0.50000	0.41097	0.0076	46.3367	10.9051	0.0083	0.012
0.50500	0.43414	0.0084	64.8006	10.3094	0.0094	0.014
0.51000	0.45920	0.0093	88.9981	9.6904	0.0104	0.016
0.51500	0.48625	0.0103	118.3463	9.0484	0.0120	0.018
0.52000	0.51536	0.0113	152.2574	8.3832	0.0135	0.020
0.52500	0.54644	0.0124	190.8227	7.6940	0.0151	0.023
0.53000	0.58017	0.0136	222.0409	6.9811	0.0170	0.024
0.53500	0.61660	0.0149	258.0610	6.2440	0.0189	0.029
0.54000	0.65634	0.0163	298.7397	5.4824	0.0211	0.032
0.54500	0.69915	0.0177	329.0704	4.7073	0.0235	0.035
0.55000	0.74597	0.0193	364.3397	3.9176	0.0261	0.039
0.55500	0.79644	0.0210	397.5667	3.1109	0.0289	0.043
0.56000	0.85151	0.0227	470.6318	2.2851	0.0319	0.048
0.56500	0.91220	0.0246	456.1491	1.5702	0.0352	0.053
0.57000	0.73980	0.0265	478.0143	1.0416	0.0386	0.058

0.97500	0.70730	0.0286	89A.12A1	13.4229	0.062A	0.066
0.98000	0.448A1	0.030A	907.98A1	13.4064	U.066A	0.070
0.98500	0.0210	0.0310	912.00A7	13.241A	0.0412	0.077
0.99000	0.08A4A	0.035A	908.0322	13.1791	0.05A0	0.084
0.99500	1.05081	0.03A0	970.4051	13.0A8A	0.0611	0.092
0.00000	1.1322A	0.0400	445.837A	12.959A	0.06A0	0.100
0.00500	1.2000A	0.0433	444.1430	12.852A	0.072A	0.108
0.01000	1.28022	0.0462	440.4637	12.747A	0.07A7	0.116
0.01500	1.3720A	0.0487	411.475A	12.643A	0.08A3	0.124
0.02000	1.4590A	0.0523	37A.316A	12.5415	U.082A	0.130
0.02500	1.5503A	0.055A	33A.4172	12.4411	0.0900	0.138
0.03000	1.4446A	0.05A0	29A.327A	12.3422	0.1070	0.146
0.03500	1.7420A	0.062A	257.0555	12.2452	0.115A	0.154
0.04000	1.84321	0.0661	219.3617	12.149A	0.1253	0.160
0.04500	1.94705	0.069A	182.7890	12.055A	0.134A	0.168
0.05000	2.05622	0.0737	149.415A	11.9627	0.144A	0.201
0.05500	2.18827	0.0777	119.4255	11.8713	0.154A	0.21A
0.06000	2.28375	0.0819	94.729A	11.781A	0.164A	0.23A
0.06500	2.40287	0.0861	73.527A	11.692A	0.16A5	0.251
0.07000	2.5255A	0.0905	46.05A4	11.605A	0.17A7	0.260
0.07500	2.6510A	0.0950	41.4753	11.519A	0.1906	0.287
0.08000	2.78171	0.0997	32.136A	11.434A	0.2035	0.308
0.08500	2.91509	0.1045	23.5A00	11.351A	0.2171	0.327
0.09000	3.0520A	0.1094	17.0170	11.269A	0.2313	0.34A
0.09500	3.1923A	0.1144	12.3737	11.188A	0.2442	0.371
0.70000	3.3367A	0.119A	9.301A	11.10A3	0.2578	0.39A
0.70500	3.48340	0.1240	6.449A	11.020A	0.27A7	0.410
0.71000	3.6313	0.1291	4.149A	10.941A	0.2857	0.425
0.71500	3.7804	0.134A	3.843A	10.863A	0.3110	0.471
0.72000	3.9307	0.141A	2.9512	10.787A	0.3316	0.49A
0.72500	4.0822	0.147A	1.956A	10.712A	0.3500	0.52A
0.73000	4.2447	0.1530	1.4817	10.638A	0.3710	0.55A
0.73500	4.4364	0.1590	1.2067	10.565A	0.3920	0.590
0.74000	4.6063A	0.1651	0.9197	10.493A	0.4137	0.623
0.74500	4.77931	0.1713	U.4500	10.423A	0.43A3	0.657
0.75000	4.9551A	0.177A	2.3170	10.354A	0.45A8	0.692
0.75500	5.1359A	0.184A	0.0000	10.285A	0.4841	0.729
0.76000	5.4067A	0.190A	0.0000	10.216A	0.5155	0.806
0.76500	4.0662	0.203A	0.0000	10.147A	0.5905	0.889
0.77000	4.45979	0.217A	0.0000	9.9A3	0.4492	0.978
0.00000	4.8402A	0.231A	0.0000	9.8432	0.7119	1.079
0.01000	7.26917	0.245A	0.0000	9.7725	0.77A5	1.179
0.02000	7.4A56A	0.259A	0.0000	9.7011	0.4A01	1.279
0.03000	8.1092A	0.275A	0.0000	9.6293	0.9230	1.391
0.04000	8.5391A	0.3061	0.0000	9.5591	1.002A	1.510
0.05000	8.974A	0.3217	0.0000	9.491A	1.0861	1.635
0.06000	9.4150A	0.3375	0.0000	9.42A	1.1736	1.767
0.07000	9.859A	0.353A	0.0000	9.35A7	1.265A	1.906
0.08000	10.30755	0.369A	0.0000	9.2817	1.3620	2.051
0.09000	10.75827	0.385A	0.0000	9.2131	1.4620	2.203
0.00000	11.21105	0.401A	0.0000	9.1441	1.56A1	2.361
0.01000	11.6651A	0.41A1	0.0000	9.075A	1.67A0	2.527
0.02000	12.12001	0.428A	0.0000	9.006A	1.7823	2.699
0.03000	12.57493	0.4467	0.0000	8.937A	1.9113	2.878
0.04000	13.0298A	0.4670	0.0000	8.867A	2.03A7	3.06A
0.05000	13.4847	0.4832	0.0000	8.7979	2.1628	3.257

0.05000	13.9397	0.499A	0.0000	8.7281	2.2951	3.45A
0.06000	14.3946	0.515A	0.0000	8.658A	2.432A	3.663
0.07000	14.8495	0.5315	0.0000	8.588A	2.570A	3.87A
0.08000	15.3044	0.5479	0.0000	8.518A	2.7081	4.09A
0.09000	15.7593	0.5643	0.0000	8.448A	2.846A	4.329
1.00000	16.2142	0.5807	0.0000	8.378A	2.984A	4.55A
1.01000	16.6691	0.5971	0.0000	8.308A	3.122A	4.795
1.02000	17.1240	0.6135	0.0000	8.238A	3.260A	5.042
1.03000	17.5789	0.6300	0.0000	8.168A	3.398A	5.290
1.04000	18.0338	0.6464	0.0000	8.098A	3.536A	5.53A
1.05000	18.4887	0.6628	0.0000	8.028A	3.674A	5.810
1.06000	18.9436	0.6792	0.0000	7.958A	3.812A	6.091
1.07000	19.3985	0.6956	0.0000	7.888A	3.950A	6.36A
1.08000	19.8534	0.7120	0.0000	7.818A	4.088A	6.652
1.09000	20.3083	0.7284	0.0000	7.748A	4.226A	6.941
1.10000	20.7632	0.7448	0.0000	7.678A	4.364A	7.236
1.11000	21.2181	0.7612	0.0000	7.608A	4.502A	7.537
1.12000	21.6730	0.7776	0.0000	7.538A	4.640A	7.833
1.13000	22.1279	0.7940	0.0000	7.468A	4.778A	8.135
1.14000	22.5828	0.8104	0.0000	7.398A	4.916A	8.437
1.15000	23.0377	0.8268	0.0000	7.328A	5.054A	8.79A
1.16000	23.4926	0.8432	0.0000	7.258A	5.192A	9.121
1.17000	23.9475	0.8596	0.0000	7.188A	5.330A	9.49A
1.18000	24.4024	0.8760	0.0000	7.118A	5.468A	9.7A9
1.19000	24.8573	0.8924	0.0000	7.048A	5.606A	10.130
1.20000	25.3122	0.9088	0.0000	6.978A	5.744A	10.47A
1.21000	25.7671	0.9252	0.0000	6.908A	5.882A	10.82A
1.22000	26.2220	0.9416	0.0000	6.838A	6.020A	11.180
1.23000	26.6769	0.9580	0.0000	6.768A	6.158A	11.53A
1.24000	27.1318	0.9744	0.0000	6.698A	6.296A	11.900
1.25000	27.5867	0.9908	0.0000	6.628A	6.434A	12.26A
1.26000	28.0416	1.0072	0.0000	6.558A	6.572A	12.635
1.27000	28.4965	1.0236	0.0000	6.488A	6.710A	13.000
1.28000	28.9514	1.0400	0.0000	6.418A	6.848A	13.385
1.29000	29.4063	1.0564	0.0000	6.348A	6.986A	13.76A
1.30000	29.8612	1.0728	0.0000	6.278A	7.124A	14.147
1.31000	30.3161	1.0892	0.0000	6.208A	7.262A	14.532
1.32000	30.7710	1.1056	0.0000	6.138A	7.400A	14.921
1.33000	31.2259	1.1220	0.0000	6.068A	7.538A	15.312
1.34000	31.6808	1.1384	0.0000	5.998A	7.676A	15.70A
1.35000	32.1357	1.1548	0.0000	5.928A	7.814A	16.101
1.36000	32.5906	1.1712	0.0000	5.858A	7.952A	16.490
1.37000	33.0455	1.1876	0.0000	5.788A	8.090A	16.900
1.38000	33.5004	1.2040	0.0000	5.718A	8.228A	17.309
1.39000	33.9553	1.2204	0.0000	5.648A	8.366A	17.707
1.40000	34.4102	1.2368	0.0000	5.578A	8.504A	18.113
1.41000	34.8651	1.2532	0.0000	5.508A	8.642A	18.521
1.42000	35.3200	1.2696	0.0000	5.438A	8.780A	18.930
1.43000	35.7749	1.2860	0.0000	5.368A	8.918A	19.341
1.44000	36.2298	1.3024	0.0000	5.298A	9.056A	19.753
1.45000	36.6847	1.3188	0.0000	5.228A	9.194A	20.167
1.46000	37.1396	1.3352	0.0000	5.158A	9.332A	20.581
1.47000	37.5945	1.3516	0.0000	5.088A	9.470A	20.997
1.48000	38.0494	1.3680	0.0000	5.018A	9.608A	21.413
1.49000	38.5043	1.3844	0.0000	4.948A	9.746A	21.830

1.50000	27.77324	0.9955	0.0000	5.2130	19.7754	22.744
1.60000	27.44612	0.9949	0.0000	4.4474	17.5423	24.444
1.70000	27.44163	0.9944	0.0000	4.4214	20.3355	30.414
1.80000	26.44757	0.9945	0.0000	4.1781	23.0427	36.607
1.90000	25.45120	0.9195	0.0000	4.1427	25.6615	38.640
2.00000	24.45142	0.8744	0.0000	1.0692	24.1679	42.414
2.10000	23.15327	0.8299	0.0000	3.7961	30.5686	45.999
2.20000	21.81124	0.7818	0.0000	1.4404	32.7070	49.388
2.30000	20.44877	0.7316	0.0000	1.4994	34.9110	52.567
2.40000	19.15010	0.6844	0.0000	1.3719	36.4914	55.550
2.50000	17.97543	0.6407	0.0000	3.2554	38.7255	54.337
2.60000	16.85849	0.5971	0.0000	3.1449	40.4687	60.936
2.70000	15.50554	0.5558	0.0000	1.0712	42.0743	63.356
2.80000	14.42040	0.5169	0.0000	2.0413	43.5721	65.689
2.90000	13.40546	0.4808	0.0000	2.4744	44.9628	67.703
3.00000	12.45891	0.4464	0.0000	2.7017	46.2555	69.449
3.10000	11.57445	0.4150	0.0000	2.7304	47.4548	71.454
3.20000	10.74995	0.3858	0.0000	2.6845	48.5716	73.139
3.30000	10.00667	0.3587	0.0000	2.4030	49.6114	74.707
3.40000	9.30759	0.3334	0.0000	2.4455	50.5744	76.156
3.50000	8.64159	0.3105	0.0000	2.4414	51.4744	77.504
3.60000	8.00849	0.2891	0.0000	2.4415	52.3104	78.767
3.70000	7.51404	0.2699	0.0000	2.3941	53.0807	79.936
3.80000	7.05947	0.2511	0.0000	2.3499	53.8144	81.037
3.90000	6.53588	0.2343	0.0000	2.3081	54.4914	82.051
4.00000	6.10227	0.2187	0.0000	2.2687	55.1212	83.007
4.10000	5.70154	0.2044	0.0000	2.2314	55.7111	83.899
4.20000	5.31114	0.1911	0.0000	2.1962	56.2645	84.720
4.30000	4.94900	0.1784	0.0000	2.1629	56.7843	85.497
4.40000	4.67727	0.1675	0.0000	2.1312	57.2632	86.228
4.50000	4.41979	0.1579	0.0000	2.1012	57.7155	86.905
4.60000	4.17744	0.1492	0.0000	2.0727	58.1397	87.544
4.70000	3.95573	0.1412	0.0000	2.0455	58.5377	88.143
4.80000	3.72721	0.1334	0.0000	2.0194	58.9114	88.704
4.90000	3.50544	0.1221	0.0000	1.9959	59.2627	89.235
5.00000	3.29409	0.1148	0.0000	1.9714	59.5910	89.732
5.10000	3.01449	0.1081	0.0000	1.9449	59.8944	90.200
5.20000	2.74274	0.1019	0.0000	1.9274	60.1949	90.641
5.30000	2.48044	0.0961	0.0000	1.9084	60.4929	91.057
5.40000	2.22954	0.0907	0.0000	1.8871	60.7734	91.444
5.50000	2.04471	0.0854	0.0000	1.8641	60.9707	91.819
5.60000	1.87577	0.0809	0.0000	1.8391	61.2114	92.169
5.70000	1.71451	0.0764	0.0000	1.8124	61.4304	92.500
5.80000	1.56191	0.0724	0.0000	1.8154	61.6384	92.812
5.90000	1.41754	0.0684	0.0000	1.7947	61.8351	93.108
6.00000	1.28127	0.0650	0.0000	1.7842	62.0213	93.389
6.10000	1.171814	0.0614	0.0000	1.7692	62.1976	93.654
6.20000	1.08002	0.0584	0.0000	1.7548	62.3652	93.904
6.30000	1.04737	0.0555	0.0000	1.7414	62.5240	94.144
6.40 00	1.04694	0.0527	0.0000	1.7274	62.6748	94.371
6.500 0	1.04694	0.0501	0.0000	1.7144	62.8181	94.588
6.60000	1.04244	0.0474	0.0000	1.7021	62.9543	94.794
6.70000	1.04409	0.0453	0.0000	1.6901	63.0839	94.989
6.80000	1.04349	0.0431	0.0000	1.6784	63.2073	95.174
6.90000	1.04441	0.0411	0.0000	1.6671	63.3247	95.351

7.00000	1.02944	0.0392	0.0000	1.6562	63.4347	95.528
7.10000	1.04107	0.0373	0.0000	1.6454	63.5334	95.688
7.20000	0.99414	0.0354	0.0000	1.6351	63.6442	95.834
7.30000	0.94899	0.0340	0.0000	1.6254	63.7423	95.980
7.40000	0.90635	0.0325	0.0000	1.6157	63.8350	96.128
7.50000	0.84604	0.0310	0.0000	1.6064	63.9236	96.253
7.60000	0.82791	0.0297	0.0000	1.5973	64.0083	96.361
7.70000	0.79144	0.0284	0.0000	1.5884	64.0883	96.509
7.80000	0.75777	0.0272	0.0000	1.5799	64.1648	96.619
7.90000	0.72517	0.0260	0.0000	1.5716	64.2409	96.731
8.00000	0.69472	0.0249	0.0000	1.5634	64.3119	96.838
8.10000	0.66544	0.0239	0.0000	1.5554	64.3799	96.940
8.20000	0.63804	0.0229	0.0000	1.5474	64.4441	97.034
8.30000	0.61199	0.0219	0.0000	1.5404	64.5076	97.132
8.40000	0.58704	0.0210	0.0000	1.5332	64.5675	97.223
8.50000	0.56347	0.0202	0.0000	1.5262	64.6250	97.309
8.60000	0.54097	0.0194	0.0000	1.5193	64.6802	97.392
8.70000	0.51941	0.0184	0.0000	1.5124	64.7332	97.472
8.80000	0.49829	0.0179	0.0000	1.5064	64.7842	97.549
8.90000	0.47994	0.0172	0.0000	1.4994	64.8331	97.623
9.00000	0.46142	0.0164	0.0000	1.4934	64.8802	97.693
9.10000	0.44394	0.0159	0.0000	1.4874	64.9255	97.762
9.20000	0.42721	0.0153	0.0000	1.4814	64.9690	97.827
9.30000	0.41127	0.0147	0.0000	1.4754	65.0109	97.890
9.40000	0.39644	0.0142	0.0000	1.4700	65.0513	97.951
9.50000	0.38151	0.0137	0.0000	1.4644	65.0902	98.010
9.60000	0.36744	0.0132	0.0000	1.4591	65.1276	98.064
9.70000	0.35434	0.0127	0.0000	1.4538	65.1637	98.120
9.80000	0.34171	0.0122	0.0000	1.4484	65.1985	98.173
9.90000	0.32949	0.0118	0.0000	1.4436	65.2321	98.223
10.00000	0.31807	0.0114	0.0000	1.4387	65.2645	98.272
10.10000	0.30694	0.0110	0.0000	1.4338	65.2957	98.319
10.20000	0.29634	0.0104	0.0000	1.4291	65.3259	98.364
10.30000	0.28619	0.0103	0.0000	1.4245	65.3550	98.404
10.40000	0.27644	0.0099	0.0000	1.4200	65.3831	98.451
10.50000	0.26715	0.0094	0.0000	1.4156	65.4103	98.499
10.60000	0.25827	0.0093	0.0000	1.4112	65.4366	98.539
10.70000	0.24964	0.0088	0.0000	1.4070	65.4619	98.569
10.80000	0.24144	0.0087	0.0000	1.4028	65.4863	98.606
10.90000	0.23357	0.0084	0.0000	1.3987	65.5102	98.642
11.00000	0.22601	0.0081	0.0000	1.3947	65.5337	98.677
11.10000	0.21874	0.0074	0.0000	1.3904	65.5555	98.716
11.20000	0.21174	0.0074	0.0000	1.3870	65.5770	98.743
11.30000	0.20504	0.0074	0.0000	1.3832	65.5978	98.774
11.40000	0.19864	0.0071	0.0000	1.3794	65.6144	98.804
11.50000	0.19244	0.0069	0.0000	1.3759	65.6374	98.834
11.60000	0.18651	0.0067	0.0000	1.3723	65.6565	98.862
11.70000	0.18079	0.0065	0.0000	1.3684	65.6744	98.890
11.80000	0.17524	0.0063	0.0000	1.3644	65.6927	98.917
11.90000	0.16999	0.0061	0.0000	1.3604	65.7099	98.943
12.00000	0.16489	0.0059	0.0000	1.3567	65.7247	98.968

VISIBILITY AND OTHER DATA FOR PLANCH RADIATION, MECHANICS DIVISION, U.S.I.C., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1226.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1900.0  
DEGREES FAHRENHEIT = 2960.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.66 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 75.74 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 24.11 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.009 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 315.009 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 1.025 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.9251 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.9221 MICRONS.  
I.E., THIS WAVELENGTH MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 73.09 WATT/CM<sup>2</sup> OR 7.3099E+08 ERG/SEC/CM<sup>2</sup> OR 1.74509E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 35.08 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA W = B \* T<sup>N</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1226.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1900.0  
DEGREES FAHRENHEIT = 2960.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOONENT N FOR WATTOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00287	0.0078905	0.0000	21.4314	5.3540E-05	0.000
0.35500	0.00313	0.00861	0.0000	21.3269	6.9227E-05	0.000
0.36000	0.00345	0.00951	0.0000	21.2037	9.0047E-05	0.000
0.36500	0.00384	0.01062	0.0000	21.0724	0.0001	0.000
0.37000	0.00431	0.01197	0.0000	20.9223	0.0001	0.000
0.37500	0.00486	0.01358	0.0000	20.7545	0.0002	0.000
0.38000	0.00550	0.01547	0.0000	20.5693	0.0002	0.000
0.38500	0.012274	0.03404	0.0000	19.3651	0.0003	0.000
0.39000	0.015137	0.04305	0.0000	19.1437	0.0004	0.000
0.39500	0.018844	0.05304	0.0000	18.9172	0.0004	0.001
0.40000	0.022200	0.06507	0.0000	18.6974	0.0005	0.001
0.40500	0.02612	0.07904	0.0142	18.4840	0.0007	0.001
0.41000	0.03044	0.09513	0.0292	18.2760	0.0008	0.001
0.41500	0.03518	0.11351	0.0543	18.0735	0.0010	0.001
0.42000	0.04024	0.13441	0.1155	17.8763	0.0012	0.002
0.42500	0.04567	0.15804	0.2454	17.6842	0.0014	0.002
0.43000	0.05147	0.18461	0.4471	17.4971	0.0017	0.002
0.43500	0.05764	0.21421	0.7574	17.3147	0.0020	0.003
0.44000	0.07615	0.20724	1.1981	17.1369	0.0023	0.003
0.44500	0.08744	0.20277	1.7263	16.9634	0.0027	0.004
0.45000	0.11001	0.20031	2.3561	16.7944	0.0032	0.004
0.45500	0.13384	0.20034	3.1162	16.6297	0.0037	0.005
0.46000	0.15917	0.2041	4.0702	16.4688	0.0044	0.006
0.46500	0.18607	0.2084	5.3501	16.3114	0.0050	0.007
0.47000	0.21465	0.2052	7.0184	16.1574	0.0057	0.008
0.47500	0.24492	0.2044	9.0311	16.0061	0.0067	0.009
0.48000	0.27722	0.2065	11.4034	15.8573	0.0077	0.010
0.48500	0.31184	0.2073	14.1613	15.7114	0.0088	0.012
0.49000	0.34900	0.2081	17.3407	15.5681	0.0100	0.014
0.49500	0.38844	0.2090	20.9891	15.4271	0.0114	0.015
0.50000	0.43044	0.2100	25.1421	15.2881	0.0129	0.017
0.50500	0.47512	0.2110	29.8404	15.1511	0.0145	0.020
0.51000	0.52264	0.2121	35.1240	15.0162	0.0162	0.022
0.51500	0.57300	0.2134	41.0405	14.8834	0.0180	0.025
0.52000	0.62622	0.2147	47.6410	14.7527	0.0200	0.028
0.52500	0.68344	0.2161	54.9845	14.6241	0.0221	0.031
0.53000	0.74484	0.2174	63.1245	14.4974	0.0245	0.035
0.53500	0.81044	0.2188	72.1145	14.3727	0.0271	0.039
0.54000	0.88044	0.2204	81.9945	14.2501	0.0299	0.043
0.54500	0.95484	0.2220	92.8145	14.1294	0.0329	0.048
0.55000	1.03384	0.2236	104.6245	14.0107	0.0361	0.053
0.55500	1.11744	0.2253	117.4845	13.8941	0.0395	0.058
0.56000	1.20584	0.2269	131.4445	13.7794	0.0431	0.064
0.56500	1.29924	0.2286	146.5645	13.6667	0.0469	0.071
0.57000	1.39764	0.2302	162.8845	13.5559	0.0509	0.078

0.57500	1.11819	0.0397	708.1821	11.1571	0.0629	0.055
0.58000	1.22099	0.0383	722.3353	11.0511	0.0644	0.091
0.58500	1.10774	0.0410	736.5382	12.0420	1.0051	0.107
0.59000	1.19855	0.0430	749.9158	12.4323	0.0619	0.111
0.59500	1.48311	0.0448	765.7838	12.7245	0.0611	0.121
0.60000	1.59284	0.0500	801.2859	12.6185	0.0688	0.131
0.60500	1.49564	0.0532	813.7716	12.5142	0.1050	0.142
0.61000	1.40304	0.0568	816.7177	12.6114	0.1114	0.154
0.61500	1.91473	0.0601	874.1880	12.1107	0.1211	0.167
0.62000	2.01064	0.0637	876.1074	12.2114	0.1329	0.180
0.62500	2.15093	0.0675	888.5044	12.1114	0.1414	0.194
0.63000	2.27557	0.0714	810.0448	12.1174	0.1544	0.209
0.63500	2.40447	0.0754	854.7932	11.9230	0.1641	0.225
0.64000	2.53744	0.0794	871.9786	11.4299	0.1745	0.242
0.64500	2.67521	0.0834	891.0413	11.2442	0.1815	0.258
0.65000	2.81717	0.0884	904.8725	11.6474	0.2052	0.274
0.65500	2.96132	0.0933	913.2187	11.5590	0.2187	0.297
0.66000	3.11184	0.0977	929.1619	11.4714	0.2149	0.314
0.66500	3.26841	0.1025	940.0201	11.3852	0.2504	0.339
0.67000	3.42747	0.1075	94.5861	11.3002	0.2676	0.362
0.67500	3.59003	0.1126	94.1622	11.2165	0.2811	0.384
0.68000	3.75837	0.1179	83.8444	11.1341	0.3014	0.411
0.68500	3.92994	0.1233	31.8011	11.0528	0.3227	0.437
0.69000	4.10581	0.1288	22.8929	10.9727	0.3424	0.464
0.69500	4.28532	0.1344	14.8099	10.8944	0.3614	0.492
0.70000	4.46900	0.1402	12.4594	10.8170	0.3857	0.529
0.70500	4.65661	0.1461	9.1328	10.7411	0.4054	0.553
0.71000	4.84807	0.1521	6.9210	10.6667	0.4322	0.585
0.71500	5.04332	0.1582	5.1442	10.5949	0.4570	0.614
0.72000	5.24224	0.1644	3.8212	10.5254	0.4827	0.651
0.72500	5.44484	0.1708	2.9518	10.4581	0.5084	0.688
0.73000	5.65104	0.1773	1.9214	10.3934	0.5371	0.727
0.73500	5.86084	0.1838	1.5241	10.3311	0.5689	0.766
0.74000	6.07371	0.1905	1.2390	10.2715	0.5987	0.804
0.74500	6.29004	0.1973	0.8554	10.2149	0.6267	0.844
0.75000	6.50954	0.2042	0.6427	10.1612	0.6547	0.891
0.75500	6.73291	0.2111	0.0000	0.9424	0.7240	0.983
0.76000	7.41794	0.2181	0.0000	0.4421	0.7978	1.060
0.76500	7.54444	0.2255	0.0000	0.2371	0.4744	1.183
0.77000	4.14979	0.2325	0.0000	0.5441	0.9557	1.293
0.77500	8.45903	0.2399	0.0000	0.4464	1.0418	1.410
0.78000	9.35819	0.2473	0.0000	0.3474	1.1129	1.533
0.78500	9.46429	0.1084	0.0000	0.2339	1.2200	1.643
0.79000	10.17674	0.1255	0.0000	0.1227	1.3102	1.800
0.79500	10.89484	0.1417	0.0000	0.0141	1.4344	1.944
0.80000	11.41775	0.1582	0.0000	0.0000	1.5841	2.095
0.80500	11.94455	0.1747	0.0000	0.0000	1.6649	2.251
0.81000	12.47434	0.1913	0.0000	0.0000	1.7034	2.419
0.81500	13.00639	0.4080	0.0000	0.0000	1.9144	2.591
0.82000	13.53875	0.4247	0.0000	0.0000	2.0471	2.771
0.82500	14.07344	0.4415	0.0000	0.0000	2.1852	2.957
0.83000	14.60724	0.4582	0.0000	0.0000	2.3246	3.159
0.83500	15.13984	0.4749	0.0000	0.0000	2.4773	3.351
0.84000	15.67062	0.4914	0.0000	0.0000	2.6314	3.561
0.84500	16.19890	0.5081	0.0000	0.0000	2.7869	3.777

0.85000	16.72397	0.5244	0.0000	7.9721	2.9554	4.000
0.85500	17.24517	0.5409	0.0000	7.8445	3.1257	4.230
0.86000	17.76184	0.5572	0.0000	7.6984	3.3003	4.467
0.86500	18.27314	0.5732	0.0000	7.5220	3.4844	4.710
0.87000	18.77940	0.5891	0.0000	7.3512	3.6647	4.967
0.87500	19.27911	0.6047	0.0000	7.1750	3.8540	5.219
0.88000	19.77210	0.6202	0.0000	7.0003	4.0513	5.481
0.88500	20.25784	0.6354	0.0000	6.8277	4.2514	5.754
0.89000	20.73610	0.6504	0.0000	6.6553	4.4544	6.031
0.89500	21.20667	0.6652	0.0000	6.4849	4.6641	6.315
0.90000	21.66768	0.6797	0.0000	6.3159	4.8805	6.605
0.90500	22.12048	0.6939	0.0000	6.1482	5.0994	6.902
0.91000	22.56414	0.7078	0.0000	5.9817	5.3229	7.204
0.91500	22.99897	0.7214	0.0000	5.8164	5.5517	7.519
0.92000	23.42229	0.7347	0.0000	5.6524	5.7826	7.826
0.92500	23.83374	0.7477	0.0000	5.4894	6.0191	8.146
0.93000	24.24191	0.7604	0.0000	5.3282	6.2595	8.479
0.93500	24.64594	0.7728	0.0000	5.1687	6.5039	8.802
0.94000	25.04591	0.7848	0.0000	5.0111	6.7522	9.130
0.94500	25.44191	0.7965	0.0000	4.8550	7.0041	9.480
0.95000	25.83451	0.8070	0.0000	4.7004	7.2600	9.824
0.95500	26.22373	0.8189	0.0000	4.5471	7.5193	10.177
0.96000	26.60959	0.8294	0.0000	4.4040	7.7821	10.532
0.96500	26.99224	0.8399	0.0000	4.2627	8.0482	10.899
0.97000	27.36932	0.8499	0.0000	4.1232	8.3176	11.257
0.97500	27.74093	0.8595	0.0000	3.9850	8.5900	11.625
0.98000	27.99654	0.8684	0.0000	3.8481	8.8655	11.990
0.98500	27.98142	0.8777	0.0000	3.7124	9.1419	12.375
0.99000	28.25544	0.8863	0.0000	3.5784	9.4251	12.756
0.99500	28.51835	0.8946	0.0000	3.4451	9.7090	13.140
1.00000	28.77012	0.9025	0.0000	3.3111	9.9955	13.524
1.00500	29.01141	0.9100	0.0000	3.1764	10.2844	13.919
1.01000	29.24170	0.9171	0.0000	3.0409	10.5757	14.311
1.01500	29.46124	0.9241	0.0000	2.9039	10.8692	14.710
1.02000	29.67024	0.9307	0.0000	2.7657	11.1644	15.119
1.02500	29.86873	0.9369	0.0000	2.6267	11.4625	15.513
1.03000	30.05682	0.9428	0.0000	2.4871	11.7622	15.919
1.03500	30.23444	0.9484	0.0000	2.3472	12.0616	16.327
1.04000	30.40234	0.9537	0.0000	2.2071	12.3644	16.737
1.04500	30.56012	0.9586	0.0000	2.0670	12.6717	17.150
1.05000	30.70801	0.9632	0.0000	1.9264	12.9740	17.564
1.05500	30.84625	0.9674	0.0000	1.7854	13.2858	17.981
1.06000	30.97484	0.9714	0.0000	1.6444	13.5949	18.399
1.06500	31.09422	0.9754	0.0000	1.5034	13.9053	18.819
1.07000	31.20442	0.9794	0.0000	1.3624	14.2144	19.241
1.07500	31.30553	0.9829	0.0000	1.2214	14.5293	19.664
1.08000	31.39779	0.9869	0.0000	1.0804	14.8428	20.088
1.08500	31.48134	0.9905	0.0000	0.9394	15.1572	20.514
1.09000	31.55662	0.9939	0.0000	0.7984	15.4724	20.940
1.09500	31.62314	0.9970	0.0000	0.6574	15.7883	21.360
1.10000	31.68174	0.9994	0.0000	0.5164	16.1049	21.794
1.10500	31.73234	0.9954	0.0000	0.3754	16.4229	22.224
1.11000	31.77519	0.9967	0.0000	0.2344	16.7395	22.654
1.11500	31.81041	0.9978	0.0000	0.0934	17.0574	23.085
1.12000	31.83821	0.9987	0.0000	0.0000	17.3777	23.514



1.40000	11.45877	0.8993	0.0000	5.2800	17.6882	21.887
1.40000	11.70925	0.7945	0.0000	5.2760	17.8774	24.254
1.70000	11.01777	0.8730	0.0000	4.5360	24.0174	32.505
1.80000	20.94814	0.8198	0.0000	4.2594	27.0684	34.834
1.90000	20.47511	0.8797	0.0000	4.0601	29.8948	40.609
2.00000	27.14471	0.8515	0.0000	3.8734	32.7844	44.376
2.10000	25.58910	0.8027	0.0000	3.7200	35.4254	47.925
2.20000	28.70902	0.7531	0.0000	3.5552	37.8055	51.301
2.30000	27.44681	0.7041	0.0000	3.4140	40.2287	54.444
2.40000	20.93040	0.6545	0.0000	3.2952	42.1844	57.370
2.50000	19.37803	0.6110	0.0000	3.1824	44.4142	60.113
2.60000	18.10092	0.5678	0.0000	3.0794	46.2945	62.654
2.70000	16.90504	0.5271	0.0000	2.9840	48.1191	65.014
2.80000	15.59268	0.4891	0.0000	2.8970	49.4583	67.207
2.90000	14.46339	0.4537	0.0000	2.8174	51.1694	69.240
3.00000	13.41900	0.4200	0.0000	2.7434	52.5517	71.174
3.10000	12.44418	0.3893	0.0000	2.6740	53.8440	72.875
3.20000	11.54465	0.3622	0.0000	2.6110	55.0849	74.499
3.30000	10.71844	0.3367	0.0000	2.5515	56.1577	76.004
3.40000	9.95477	0.3121	0.0000	2.4940	57.1094	77.407
3.50000	9.25081	0.2892	0.0000	2.4384	57.9506	78.701
3.60000	8.60221	0.2684	0.0000	2.3855	58.6827	79.904
3.70000	8.00671	0.2511	0.0000	2.3340	59.3127	81.032
3.80000	7.45824	0.2334	0.0000	2.2870	60.0443	82.077
3.90000	6.94684	0.2170	0.0000	2.2424	61.3640	83.051
4.00000	6.47931	0.2032	0.0000	2.2000	62.0340	84.007
4.10000	6.04803	0.1897	0.0000	2.1595	62.7427	85.004
4.20000	5.65004	0.1772	0.0000	2.1224	63.2847	86.334
4.30000	5.28241	0.1657	0.0000	2.1263	63.7931	87.020
4.40000	4.94314	0.1551	0.0000	2.0957	64.1047	87.677
4.50000	4.62932	0.1452	0.0000	2.0647	64.2824	88.294
4.60000	4.33894	0.1361	0.0000	2.0321	65.2303	88.852
4.70000	4.07012	0.1277	0.0000	2.0124	65.6511	89.384
4.80000	3.82101	0.1190	0.0000	1.9970	66.0455	89.887
4.90000	3.59004	0.1126	0.0000	1.9640	66.4149	90.354
5.00000	3.37544	0.1059	0.0000	1.9413	66.7681	90.802
5.10000	3.17440	0.0997	0.0000	1.9195	67.0991	91.210
5.20000	2.99154	0.0938	0.0000	1.8987	67.3999	91.610
5.30000	2.81940	0.0884	0.0000	1.8788	67.6693	91.981
5.40000	2.65014	0.0834	0.0000	1.8597	67.9087	92.332
5.50000	2.49081	0.0787	0.0000	1.8414	68.2225	92.662
5.60000	2.33704	0.0744	0.0000	1.8230	68.4645	92.974
5.70000	2.24047	0.0703	0.0000	1.8070	68.6970	93.269
5.80000	2.11938	0.0665	0.0000	1.7924	68.9140	93.548
5.90000	2.00591	0.0629	0.0000	1.7782	69.1211	93.813
6.00000	1.89987	0.0594	0.0000	1.7642	69.3143	94.063
6.10000	1.80040	0.0564	0.0000	1.7504	69.5013	94.300
6.20000	1.70749	0.0534	0.0000	1.7370	69.6744	94.525
6.30000	1.62082	0.0504	0.0000	1.7244	69.8440	94.739
6.40000	1.53944	0.0483	0.0000	1.7045	70.0099	94.942
6.50000	1.46184	0.0460	0.0000	1.6930	70.1549	95.135
6.60000	1.38874	0.0436	0.0000	1.6800	70.2914	95.314
6.70000	1.32204	0.0415	0.0000	1.6692	70.4290	95.493
6.80000	1.25944	0.0395	0.0000	1.6570	70.5540	95.659
6.90000	1.19821	0.0374	0.0000	1.6470	70.6804	

7.00000	1.14170	0.0358	0.0000	1.6344	70.7977	95.814
7.10000	1.08843	0.0341	0.0000	1.6242	70.9002	95.968
7.20000	1.03812	0.0326	0.0000	1.6143	71.0155	96.112
7.30000	0.99074	0.0311	0.0000	1.6044	71.1144	96.250
7.40000	0.94607	0.0297	0.0000	1.5943	71.2134	96.381
7.50000	0.90371	0.0283	0.0000	1.5840	71.3047	96.504
7.60000	0.86375	0.0271	0.0000	1.5735	71.3946	96.625
7.70000	0.82493	0.0259	0.0000	1.5620	71.4791	96.740
7.80000	0.78794	0.0248	0.0000	1.5524	71.5594	96.849
7.90000	0.75267	0.0237	0.0000	1.5444	71.6371	96.954
8.00000	0.72214	0.0227	0.0000	1.5367	71.7111	97.054
8.10000	0.69370	0.0218	0.0000	1.5291	71.7820	97.150
8.20000	0.66681	0.0209	0.0000	1.5217	71.8499	97.242
8.30000	0.64141	0.0200	0.0000	1.5144	71.9144	97.330
8.40000	0.61741	0.0192	0.0000	1.5074	71.9775	97.414
8.50000	0.59477	0.0184	0.0000	1.5006	72.0374	97.495
8.60000	0.57342	0.0177	0.0000	1.4939	72.0949	97.573
8.70000	0.55309	0.0170	0.0000	1.4874	72.1501	97.644
8.80000	0.53365	0.0163	0.0000	1.4811	72.2031	97.710
8.90000	0.51494	0.0157	0.0000	1.4749	72.2540	97.774
9.00000	0.49694	0.0151	0.0000	1.4689	72.3030	97.835
9.10000	0.47944	0.0145	0.0000	1.4630	72.3501	97.894
9.20000	0.46244	0.0139	0.0000	1.4573	72.3954	97.944
9.30000	0.44570	0.0134	0.0000	1.4517	72.4370	98.030
9.40000	0.42920	0.0129	0.0000	1.4462	72.4809	98.094
9.50000	0.41343	0.0124	0.0000	1.4409	72.5214	98.150
9.60000	0.39824	0.0120	0.0000	1.4354	72.5601	98.203
9.70000	0.38342	0.0116	0.0000	1.4305	72.5978	98.254
9.80000	0.36891	0.0111	0.0000	1.4255	72.6340	98.303
9.90000	0.35464	0.0107	0.0000	1.4204	72.6689	98.350
10.00000	0.34041	0.0104	0.0000	1.4152	72.7025	98.395
10.10000	0.32644	0.0100	0.0000	1.4102	72.7350	98.430
10.20000	0.31270	0.0097	0.0000	1.4054	72.7664	98.489
10.30000	0.29922	0.0093	0.0000	1.4012	72.7965	98.524
10.40000	0.28590	0.0090	0.0000	1.3974	72.8257	98.569
10.50000	0.27274	0.0087	0.0000	1.3935	72.8540	98.600
10.60000	0.25974	0.0084	0.0000	1.3893	72.8812	98.637
10.70000	0.24694	0.0081	0.0000	1.3852	72.9076	98.671
10.80000	0.23431	0.0079	0.0000	1.3811	72.9331	98.707
10.90000	0.22241	0.0076	0.0000	1.3772	72.9577	98.741
11.00000	0.21044	0.0074	0.0000	1.3733	72.9814	98.773
11.10000	0.20264	0.0071	0.0000	1.3694	73.0044	98.804
11.20000	0.19092	0.0069	0.0000	1.3654	73.0270	98.835
11.30000	0.17924	0.0067	0.0000	1.3612	73.0484	98.864
11.40000	0.16764	0.0065	0.0000	1.3574	73.0694	98.892
11.50000	0.15614	0.0063	0.0000	1.3530	73.0899	98.920
11.60000	0.14474	0.0061	0.0000	1.3491	73.1095	98.944
11.70000	0.13344	0.0059	0.0000	1.3450	73.1285	98.972
11.80000	0.12224	0.0057	0.0000	1.3410	73.1470	98.997
11.90000	0.11124	0.0055	0.0000	1.3374	73.1649	99.021
12.00000	0.10044	0.0054	0.0000	1.3344	73.1822	99.045

VISIBILITY AND OTHER DATA FOR PLANCH RADIATION, MECHANICS DIVISION, D.U.C., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1674.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1950.0  
DEGREE FAHRENHEIT = 3598.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.48 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 105.78 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 33.07 CANDLEA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.011.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 119.001 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 1.200 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.0869 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0729 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 41.98 WATT/CM<sup>2</sup> OR 8.107720E+08 ERG/SEC/CM<sup>2</sup> OR 1.949310E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 34.30 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 680 LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = K/T<sup>4</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1674.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 1950.0  
DEGREE FAHRENHEIT = 3598.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR K/T <sup>4</sup>	POWER FROM ZERO TO L	% TOTAL POWER % FROM TO L
0.35000	0.00500	0.0001	0.0000	21.0769	9.60879E-05	0.000
0.35500	0.00627	0.0002	0.0000	20.7201	0.0001	0.000
0.36000	0.00780	0.0002	0.0000	20.4415	0.0002	0.000
0.36500	0.00944	0.0003	0.0000	20.2107	0.0002	0.000
0.37000	0.01143	0.0003	0.0000	19.9374	0.0003	0.000
0.37500	0.01384	0.0004	0.0000	19.6718	0.0003	0.000
0.38000	0.01750	0.0005	0.0000	19.4130	0.0004	0.000
0.38500	0.02109	0.0006	0.0000	19.1608	0.0005	0.001
0.39000	0.02529	0.0007	0.0000	18.9152	0.0006	0.001
0.39500	0.03014	0.0008	0.0000	18.6758	0.0008	0.001
0.40000	0.03575	0.0010	0.0007	18.4427	0.0009	0.001
0.40500	0.04218	0.0012	0.0229	18.2146	0.0011	0.001
0.41000	0.04954	0.0014	0.0404	17.9925	0.0013	0.002
0.41500	0.05792	0.0016	0.0684	17.7757	0.0016	0.002
0.42000	0.06740	0.0019	0.1033	17.5641	0.0019	0.002
0.42500	0.07811	0.0022	0.1478	17.3575	0.0023	0.003
0.43000	0.09015	0.0025	0.2111	17.1556	0.0027	0.003
0.43500	0.10344	0.0029	1.1840	16.9584	0.0032	0.004
0.44000	0.11809	0.0033	1.8563	16.7657	0.0037	0.005
0.44500	0.13427	0.0037	2.8704	16.5774	0.0044	0.005
0.45000	0.15304	0.0042	3.9783	16.3932	0.0051	0.006
0.45500	0.17444	0.0048	5.6938	16.2130	0.0059	0.007
0.46000	0.19869	0.0056	8.0373	16.0368	0.0068	0.008
0.46500	0.22617	0.0061	11.1585	15.8644	0.0079	0.010
0.47000	0.24865	0.0069	15.1988	15.6954	0.0091	0.011
0.47500	0.27043	0.0077	21.2049	15.5308	0.0104	0.013
0.48000	0.31047	0.0086	29.3598	15.3686	0.0119	0.014
0.48500	0.34557	0.0095	39.7130	15.2102	0.0135	0.016
0.49000	0.38342	0.0106	54.2303	15.0549	0.0153	0.019
0.49500	0.42429	0.0117	74.4382	14.9029	0.0173	0.021
0.50000	0.46834	0.0129	102.8673	14.7539	0.0196	0.024
0.50500	0.51570	0.0142	142.7260	14.6074	0.0220	0.027
0.51000	0.56650	0.0154	193.7668	14.4644	0.0247	0.030
0.51500	0.62088	0.0171	256.6959	14.3241	0.0277	0.034
0.52000	0.67894	0.0187	327.8003	14.1864	0.0309	0.038
0.52500	0.74067	0.0204	399.5042	14.0513	0.0345	0.042
0.53000	0.80613	0.0221	472.8707	13.9187	0.0384	0.047
0.53500	0.87446	0.0241	545.4548	13.7887	0.0426	0.052
0.54000	0.94507	0.0262	618.7872	13.6610	0.0471	0.057
0.54500	1.02019	0.0284	695.4506	13.5357	0.0521	0.064
0.55000	1.10000	0.0306	752.3741	13.4124	0.0574	0.070
0.55500	1.18431	0.0330	815.5248	13.2914	0.0632	0.077
0.56000	1.27121	0.0356	873.8104	13.1731	0.0694	0.085
0.56500	1.36174	0.0382	923.4758	13.0565	0.0761	0.093
0.57000	1.45602	0.0410	963.9977	12.9420	0.0833	0.102

0.97000	1.59929	0.0410	989.9010	12.8205	0.0010	0.111
0.98000	1.70637	0.0420	1000.8890	12.7180	0.0001	0.121
0.99000	1.82290	0.0430	1013.8510	12.6102	0.1001	0.131
0.99500	1.90184	0.0435	1020.8130	12.5011	0.1175	0.141
0.99800	2.00007	0.0440	1028.8000	12.3902	0.1375	0.150
0.99900	2.10000	0.0445	1036.8100	12.2766	0.1592	0.159
0.99950	2.21214	0.0450	1044.8411	12.1603	0.1829	0.162
0.99980	2.33714	0.0455	1052.8911	12.0412	0.2088	0.167
0.99990	2.47460	0.0460	1060.9511	11.9194	0.2370	0.174
0.99995	2.62460	0.0465	1069.0200	11.7949	0.2675	0.181
0.99998	2.78731	0.0470	1077.0900	11.6677	0.3002	0.189
0.99999	2.96262	0.0475	1085.1600	11.5378	0.3350	0.197
0.99999	3.15043	0.0480	1093.2300	11.4052	0.3719	0.205
0.99999	3.35074	0.0485	1101.3000	11.2699	0.4108	0.213
0.99999	3.56355	0.0490	1109.3700	11.1319	0.4517	0.220
0.99999	3.78886	0.0495	1117.4400	10.9912	0.4945	0.228
0.99999	4.02667	0.0500	1125.5100	10.8478	0.5392	0.235
0.99999	4.27698	0.0505	1133.5800	10.7017	0.5857	0.242
0.99999	4.53979	0.0510	1141.6500	10.5528	0.6340	0.249
0.99999	4.81510	0.0515	1149.7200	10.4011	0.6841	0.256
0.99999	5.10291	0.0520	1157.7900	10.2466	0.7360	0.263
0.99999	5.40322	0.0525	1165.8600	10.0892	0.7897	0.270
0.99999	5.71603	0.0530	1173.9300	9.9289	0.8452	0.277
0.99999	6.04234	0.0535	1182.0000	9.7657	0.9025	0.284
0.99999	6.38315	0.0540	1190.0700	9.5995	0.9616	0.291
0.99999	6.73846	0.0545	1198.1400	9.4303	1.0225	0.298
0.99999	7.10927	0.0550	1206.2100	9.2581	1.0852	0.305
0.99999	7.49558	0.0555	1214.2800	9.0829	1.1497	0.312
0.99999	7.89739	0.0560	1222.3500	8.9047	1.2160	0.319
0.99999	8.31470	0.0565	1230.4200	8.7225	1.2841	0.326
0.99999	8.74751	0.0570	1238.4900	8.5363	1.3540	0.333
0.99999	9.19582	0.0575	1246.5600	8.3461	1.4257	0.340
0.99999	9.65963	0.0580	1254.6300	8.1519	1.4992	0.347
0.99999	10.13894	0.0585	1262.7000	7.9537	1.5745	0.354
0.99999	10.63375	0.0590	1270.7700	7.7515	1.6516	0.361
0.99999	11.14406	0.0595	1278.8400	7.5453	1.7305	0.368
0.99999	11.66987	0.0600	1286.9100	7.3351	1.8112	0.375
0.99999	12.21118	0.0605	1294.9800	7.1209	1.8937	0.382
0.99999	12.76809	0.0610	1303.0500	6.9027	1.9780	0.389
0.99999	13.34050	0.0615	1311.1200	6.6805	2.0641	0.396
0.99999	13.92841	0.0620	1319.1900	6.4543	2.1520	0.403
0.99999	14.53182	0.0625	1327.2600	6.2241	2.2417	0.410
0.99999	15.15073	0.0630	1335.3300	5.9899	2.3332	0.417
0.99999	15.78514	0.0635	1343.4000	5.7517	2.4265	0.424
0.99999	16.43505	0.0640	1351.4700	5.5095	2.5216	0.431
0.99999	17.10046	0.0645	1359.5400	5.2633	2.6185	0.438
0.99999	17.78137	0.0650	1367.6100	5.0131	2.7172	0.445
0.99999	18.47778	0.0655	1375.6800	4.7589	2.8177	0.452
0.99999	19.18969	0.0660	1383.7500	4.5007	2.9199	0.459
0.99999	19.91710	0.0665	1391.8200	4.2385	3.0238	0.466
0.99999	20.66001	0.0670	1400.0000	3.9723	3.1293	0.473
0.99999	21.41842	0.0675	1408.1700	3.7021	3.2364	0.480
0.99999	22.19233	0.0680	1416.3400	3.4279	3.3451	0.487
0.99999	22.98174	0.0685	1424.5100	3.1507	3.4554	0.494
0.99999	23.78665	0.0690	1432.6800	2.8705	3.5673	0.501
0.99999	24.60706	0.0695	1440.8500	2.5873	3.6808	0.508
0.99999	25.44297	0.0700	1449.0200	2.3011	3.7959	0.515
0.99999	26.29438	0.0705	1457.1900	2.0119	3.9126	0.522
0.99999	27.16129	0.0710	1465.3600	1.7197	4.0309	0.529
0.99999	28.04370	0.0715	1473.5300	1.4245	4.1508	0.536
0.99999	28.94161	0.0720	1481.7000	1.1263	4.2723	0.543
0.99999	29.85502	0.0725	1489.8700	0.8251	4.3954	0.550
0.99999	30.78393	0.0730	1498.0400	0.5209	4.5201	0.557
0.99999	31.72834	0.0735	1506.2100	0.2137	4.6464	0.564
0.99999	32.68825	0.0740	1514.3800	0.0035	4.7743	0.571
0.99999	33.66366	0.0745	1522.5500	0.0000	4.9038	0.578
0.99999	34.65457	0.0750	1530.7200	0.0000	5.0349	0.585
0.99999	35.66098	0.0755	1538.8900	0.0000	5.1676	0.592
0.99999	36.68289	0.0760	1547.0600	0.0000	5.3019	0.599
0.99999	37.72030	0.0765	1555.2300	0.0000	5.4378	0.606
0.99999	38.77321	0.0770	1563.4000	0.0000	5.5753	0.613
0.99999	39.84162	0.0775	1571.5700	0.0000	5.7144	0.620
0.99999	40.92553	0.0780	1579.7400	0.0000	5.8551	0.627
0.99999	42.02494	0.0785	1587.9100	0.0000	5.9974	0.634
0.99999	43.13985	0.0790	1596.0800	0.0000	6.1413	0.641
0.99999	44.27026	0.0795	1604.2500	0.0000	6.2868	0.648
0.99999	45.41617	0.0800	1612.4200	0.0000	6.4339	0.655
0.99999	46.57758	0.0805	1620.5900	0.0000	6.5826	0.662
0.99999	47.75449	0.0810	1628.7600	0.0000	6.7329	0.669
0.99999	48.94690	0.0815	1636.9300	0.0000	6.8848	0.676
0.99999	50.15481	0.0820	1645.1000	0.0000	7.0383	0.683
0.99999	51.37822	0.0825	1653.2700	0.0000	7.1934	0.690
0.99999	52.61713	0.0830	1661.4400	0.0000	7.3501	0.697
0.99999	53.87154	0.0835	1669.6100	0.0000	7.5084	0.704
0.99999	55.14145	0.0840	1677.7800	0.0000	7.6683	0.711
0.99999	56.42686	0.0845	1685.9500	0.0000	7.8298	0.718
0.99999	57.72777	0.0850	1694.1200	0.0000	7.9929	0.725
0.99999	59.04418	0.0855	1702.2900	0.0000	8.1576	0.732
0.99999	60.37609	0.0860	1710.4600	0.0000	8.3239	0.739
0.99999	61.72350	0.0865	1718.6300	0.0000	8.4918	0.746
0.99999	63.08641	0.0870	1726.8000	0.0000	8.6613	0.753
0.99999	64.46482	0.0875	1734.9700	0.0000	8.8324	0.760
0.99999	65.85873	0.0880	1743.1400	0.0000	9.0051	0.767
0.99999	67.26914	0.0885	1751.3100	0.0000	9.1794	0.774
0.99999	68.69605	0.0890	1759.4800	0.0000	9.3553	0.781
0.99999	70.13946	0.0895	1767.6500	0.0000	9.5328	0.788
0.99999	71.59937	0.0900	1775.8200	0.0000	9.7119	0.795
0.99999	73.07578	0.0905	1783.9900	0.0000	9.8926	0.802
0.99999	74.56869	0.0910	1792.1600	0.0000	10.0749	0.809
0.99999	76.07810	0.0915	1800.3300	0.0000	10.2588	0.816
0.99999	77.60401	0.0920	1808.5000	0.0000	10.4443	0.823
0.99999	79.14642	0.0925	1816.6700	0.0000	10.6314	0.830
0.99999	80.70533	0.0930	1824.8400	0.0000	10.8201	0.837
0.99999	82.28074	0.0935	1833.0100	0.0000	11.0104	0.844
0.99999	83.87265	0.0940	1841.1800	0.0000	11.2023	0.851
0.99999	85.48106	0.0945	1849.3500	0.0000	11.3958	0.858
0.99999	87.10697	0.0950	1857.5200	0.0000	11.5909	0.865
0.99999	88.75038	0.0955	1865.6900	0.0000	11.7876	0.872
0.99999	90.41129	0.0960	1873.8600	0.0000	11.9859	0.879
0.99999	92.08970	0.0965	1882.0300	0.0000	12.1858	0.886
0.99999	93.78561	0.0970	1890.2000	0.0000	12.3873	0.893
0.99999	95.49902	0.0975	1898.3700	0.0000	12.5904	0.900
0.99999	97.22993	0.0980	1906.5400	0.0000	12.7951	0.907
0.99999	98.97834	0.0985	1914.7100	0.0000	13.0014	0.914
0.99999	100.74425	0.0990	1922.8800	0.0000	13.2093	0.921
0.99999	102.52766	0.0995	1931.0500	0.0000	13.4188	0.928
0.99999	104.32857	0.1000	1939.2200	0.0000	13.6299	0.935
0.99999	106.14698	0.1005	1947.3900	0.0000	13.8426	0.942
0.99999	107.98289	0.1010	1955.5600	0.0000	14.0569	0.949
0.99999	109.83630	0.1015	1963.7300	0.0000	14.2728	0.956
0.99999	111.70721	0.1020	1971.9000	0.0000	14.4903	0.963
0.99999	113.59562	0.1025	1980.0700	0.0000	14.7094	0.970
0.99999	115.50153	0.1030	1988.2400	0.0000	14.9301	0.977
0.99999	117.42494	0.1035	1996.4100	0.0000	15.1524	0.984
0.99999	119.36585	0.1040	2004.5800	0.0000	15.3763	0.991
0.99999	121.32426	0.1045	2012.7500	0.0000	15.6018	0.998
0.99999	123.30017	0.1050	2020.9200	0.0000	15.8289	1.005
0.99999	125.29358	0.1055	2029.0900	0.0000	16.0576	1.012
0.99999	127.30449	0.1060	2037.2600	0.0000	16.2879	1.019
0.99999	129.33290	0.1065	2045.4300	0.0000	16.5198	1.026
0.99999	131.37881	0.1070	2053.6000	0.0000	16.7533	1.033
0.99999	133.44222	0.1075	2061.7700	0.0000	16.9884	1.040
0.99999	135.52313	0.1080	2069.9400	0.0000	17.2251	1.047
0.99999	137.62154	0.1085	2078.1100	0.0000	17.4634	1.054
0.99999	139.73745	0.1090	2086.2800	0.0000	17.7033	1.061
0.99999	141.87086	0.1095	2094.4500	0.0000	17.9448	1.068
0.99999	144.02177	0.1100	2102.6200	0.0000	18.1879	1.075
0.99999	146.19018	0.1105	2110.7900	0.0000	18.4326	1.082
0.99999	148.37609	0.1110	2118.9600	0.0000	18.6789	1.089
0.99999	150.57950	0.1115	2127.1300	0.0000	18.9268	1.096
0.99999	152.79941	0.1120	2135.3000	0.0000	19.1763	1.103
0.99999	155.035					

1.50000	36.29304	0.9998	0.0000	8.9543	71.0275	75.650
1.60000	35.41627	0.9997	0.0000	8.45849	70.6194	30.054
1.70000	34.51967	0.9995	0.0000	7.9467	70.1741	14.370
1.80000	33.61734	0.9992	0.0000	7.4175	11.5604	38.535
1.90000	32.70964	0.9987	0.0000	6.9822	14.9515	42.511
2.00000	29.98490	0.9980	0.0000	6.6200	17.9399	46.281
2.10000	28.14354	0.9973	0.0000	6.3200	20.8664	49.824
2.20000	26.30414	0.9965	0.0000	6.0747	23.5447	53.147
2.30000	24.50705	0.9957	0.0000	5.8726	26.1004	56.245
2.40000	22.77024	0.9947	0.0000	5.7024	28.4725	59.128
2.50000	21.13740	0.9937	0.0000	5.5514	30.6675	61.806
2.60000	19.59149	0.9927	0.0000	5.4134	32.7012	64.289
2.70000	18.14504	0.9917	0.0000	5.2824	34.5802	66.590
2.80000	16.79844	0.9907	0.0000	5.1561	36.3155	68.720
2.90000	15.55011	0.9897	0.0000	5.0347	37.9422	70.682
3.00000	14.39565	0.9887	0.0000	4.9174	39.4647	72.514
3.10000	13.33043	0.9877	0.0000	4.8042	40.8883	74.204
3.20000	12.34901	0.9867	0.0000	4.6947	42.2174	75.773
3.30000	11.44542	0.9857	0.0000	4.5883	43.4492	77.224
3.40000	10.61511	0.9847	0.0000	4.4844	44.5892	78.560
3.50000	9.85139	0.9837	0.0000	4.3822	45.6419	79.814
3.60000	9.14913	0.9827	0.0000	4.2817	46.6015	80.975
3.70000	8.50391	0.9817	0.0000	4.1824	47.4637	82.051
3.80000	7.91042	0.9807	0.0000	4.0844	48.2340	83.051
3.90000	7.36444	0.9797	0.0000	4.0874	48.9174	83.982
4.00000	6.86205	0.9787	0.0000	4.0919	49.5193	84.850
4.10000	6.39941	0.9777	0.0000	4.0974	50.0454	85.658
4.20000	5.97313	0.9767	0.0000	4.1034	50.4914	86.419
4.30000	5.58009	0.9757	0.0000	4.1094	50.8534	87.117
4.40000	5.21743	0.9747	0.0000	4.1154	51.1264	87.775
4.50000	4.88255	0.9737	0.0000	4.1214	51.3054	88.391
4.60000	4.57104	0.9727	0.0000	4.1274	51.3854	88.967
4.70000	4.27647	0.9717	0.0000	4.1324	51.3614	89.507
4.80000	4.00194	0.9707	0.0000	4.1374	51.2294	90.014
4.90000	3.74651	0.9697	0.0000	4.1414	51.0844	90.489
5.00000	3.50895	0.9687	0.0000	4.1454	50.9214	90.934
5.10000	3.28779	0.9677	0.0000	4.1494	50.7354	91.354
5.20000	3.08144	0.9667	0.0000	4.1524	50.5214	91.751
5.30000	2.88919	0.9657	0.0000	4.1554	50.2844	92.123
5.40000	2.70981	0.9647	0.0000	4.1584	50.0214	92.474
5.50000	2.54181	0.9637	0.0000	4.1614	49.7294	92.804
5.60000	2.38461	0.9627	0.0000	4.1644	49.4144	93.114
5.70000	2.23761	0.9617	0.0000	4.1674	49.0744	93.411
5.80000	2.10057	0.9607	0.0000	4.1704	48.7144	93.689
5.90000	1.97294	0.9597	0.0000	4.1734	48.3294	93.951
6.00000	1.85414	0.9587	0.0000	4.1764	47.9244	94.202
6.10000	1.74357	0.9577	0.0000	4.1794	47.4944	94.438
6.20000	1.64064	0.9567	0.0000	4.1824	47.0344	94.662
6.30000	1.54389	0.9557	0.0000	4.1854	46.5494	94.874
6.40000	1.45269	0.9547	0.0000	4.1884	46.0344	95.075
6.50000	1.36642	0.9537	0.0000	4.1914	45.4844	95.264
6.60000	1.28457	0.9527	0.0000	4.1944	44.9044	95.444
6.70000	1.20672	0.9517	0.0000	4.1974	44.2944	95.621
6.80000	1.13324	0.9507	0.0000	4.1994	43.6544	95.785
6.90000	1.06429	0.9497	0.0000	4.2014	42.9844	95.941

7.00000	1.00000	0.9487	0.0000	4.2034	42.2844	96.090
7.10000	0.93152	0.9477	0.0000	4.2054	41.5444	96.237
7.20000	0.86245	0.9467	0.0000	4.2074	40.7744	96.367
7.30000	0.79277	0.9457	0.0000	4.2094	39.9794	96.486
7.40000	0.72249	0.9447	0.0000	4.2114	39.1544	96.619
7.50000	0.65154	0.9437	0.0000	4.2134	38.2944	96.737
7.60000	0.57992	0.9427	0.0000	4.2154	37.4044	96.849
7.70000	0.50764	0.9417	0.0000	4.2174	36.4844	96.954
7.80000	0.43481	0.9407	0.0000	4.2194	35.5344	97.059
7.90000	0.36144	0.9397	0.0000	4.2214	34.5544	97.157
8.00000	0.28767	0.9387	0.0000	4.2234	33.5444	97.251
8.10000	0.21352	0.9377	0.0000	4.2254	32.5044	97.341
8.20000	0.13901	0.9367	0.0000	4.2274	31.4344	97.427
8.30000	0.06414	0.9357	0.0000	4.2294	30.3344	97.510
8.40000	0.00000	0.9347	0.0000	4.2314	29.2044	97.589
8.50000	0.00000	0.9337	0.0000	4.2334	28.0444	97.665
8.60000	0.00000	0.9327	0.0000	4.2354	26.8544	97.738
8.70000	0.00000	0.9317	0.0000	4.2374	25.6344	97.808
8.80000	0.00000	0.9307	0.0000	4.2394	24.3844	97.875
8.90000	0.00000	0.9297	0.0000	4.2414	23.1044	97.940
9.00000	0.00000	0.9287	0.0000	4.2434	21.7944	98.002
9.10000	0.00000	0.9277	0.0000	4.2454	20.4544	98.061
9.20000	0.00000	0.9267	0.0000	4.2474	19.0844	98.119
9.30000	0.00000	0.9257	0.0000	4.2494	17.6844	98.174
9.40000	0.00000	0.9247	0.0000	4.2514	16.2544	98.227
9.50000	0.00000	0.9237	0.0000	4.2534	14.7944	98.274
9.60000	0.00000	0.9227	0.0000	4.2554	13.3044	98.320
9.70000	0.00000	0.9217	0.0000	4.2574	11.7844	98.375
9.80000	0.00000	0.9207	0.0000	4.2594	10.2344	98.421
9.90000	0.00000	0.9197	0.0000	4.2614	8.6544	98.465
10.00000	0.00000	0.9187	0.0000	4.2634	7.0444	98.504
10.10000	0.00000	0.9177	0.0000	4.2654	5.4044	98.547
10.20000	0.00000	0.9167	0.0000	4.2674	3.7344	98.588
10.30000	0.00000	0.9157	0.0000	4.2694	2.0344	98.627
10.40000	0.00000	0.9147	0.0000	4.2714	0.3044	98.664
10.50000	0.00000	0.9137	0.0000	4.2734	-1.3544	98.699
10.60000	0.00000	0.9127	0.0000	4.2754	-3.0044	98.734
10.70000	0.00000	0.9117	0.0000	4.2774	-4.6444	98.767
10.80000	0.00000	0.9107	0.0000	4.2794	-6.2744	98.799
10.90000	0.00000	0.9097	0.0000	4.2814	-7.8944	98.831
11.00000	0.00000	0.9087	0.0000	4.2834	-9.5044	98.861
11.10000	0.00000	0.9077	0.0000	4.2854	-11.1044	98.890
11.20000	0.00000	0.9067	0.0000	4.2874	-12.6944	98.914
11.30000	0.00000	0.9057	0.0000	4.2894	-14.2744	98.946
11.40000	0.00000	0.9047	0.0000	4.2914	-15.8444	98.979
11.50000	0.00000	0.9037	0.0000	4.2934	-17.4044	98.999
11.60000	0.00000	0.9027	0.0000	4.2954	-18.9544	99.022
11.70000	0.00000	0.9017	0.0000	4.2974	-20.4944	99.047
11.80000	0.00000	0.9007	0.0000	4.2994	-22.1244	99.070
11.90000	0.00000	0.8997	0.0000	4.3014	-23.7444	99.092
12.00000	0.00000	0.8987	0.0000	4.3034	-25.3544	99.114

VISIBILITY AND OTHER DATA FOR PLANCH RADIATION, MECHANICS DIVISION, DARTMOUTH UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1726.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2000.0  
DEGREES FAHRENHEIT = 3140.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 1.17 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 145.33 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 46.26 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.011 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 124,586 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 1,002 LUMENS/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.4400 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4240 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 90.72 WATT/CM<sup>2</sup> OR 9.07152E+08 ERG/SEC/CM<sup>2</sup> OR 2.1415E+02 HCB/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 41.20 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 490 LUMENS PER WATT X RADIANT EMITTANCE X VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = 8.740M .

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1726.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2000.0  
DEGREES FAHRENHEIT = 3140.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPO. M FOR WNTOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.00067	0.0002	0.0000	20.45500	0.0002	0.000
0.35500	0.00104	0.0003	0.0000	20.29000	0.0002	0.000
0.36000	0.00130	0.0003	0.0000	19.97472	0.0003	0.000
0.36500	0.00150	0.0004	0.0000	19.77555	0.0003	0.000
0.37000	0.00164	0.0005	0.0000	19.41492	0.0004	0.000
0.37500	0.00181	0.0005	0.0000	19.14000	0.0005	0.001
0.38000	0.00194	0.0007	0.0000	18.92780	0.0007	0.001
0.38500	0.00204	0.0008	0.0000	18.48110	0.0008	0.001
0.39000	0.00205	0.0010	0.0000	18.44231	0.0010	0.001
0.39500	0.00208	0.0012	0.0000	18.20089	0.0012	0.001
0.40000	0.00206	0.0014	0.0154	17.98113	0.0015	0.002
0.40500	0.00205	0.0016	0.0362	17.75591	0.0018	0.002
0.41000	0.00207	0.0019	0.0634	17.54227	0.0022	0.002
0.41500	0.00203	0.0022	0.1151	17.33111	0.0025	0.003
0.42000	0.00204	0.0025	0.2044	17.12250	0.0031	0.003
0.42500	0.00205	0.0029	0.5984	16.92315	0.0036	0.004
0.43000	0.00204	0.0034	1.0020	16.72767	0.0043	0.005
0.43500	0.00203	0.0039	1.8091	16.53485	0.0050	0.006
0.44000	0.00204	0.0044	2.8227	16.34666	0.0059	0.006
0.44500	0.00204	0.0050	4.0417	16.16220	0.0068	0.008
0.45000	0.00203	0.0056	5.9336	15.98131	0.0079	0.009
0.45500	0.00204	0.0064	8.5304	15.80277	0.0092	0.010
0.46000	0.00204	0.0071	12.0013	15.62550	0.0105	0.012
0.46500	0.00203	0.0080	16.4602	15.44977	0.0121	0.013
0.47000	0.00204	0.0089	22.7941	15.27532	0.0138	0.015
0.47500	0.00203	0.0100	31.7648	15.10221	0.0158	0.017
0.48000	0.00204	0.0111	43.1139	14.93044	0.0180	0.020
0.48500	0.00203	0.0123	58.0864	14.75999	0.0204	0.022
0.49000	0.00204	0.0136	79.0131	14.59168	0.0230	0.025
0.49500	0.00203	0.0149	108.0444	14.42503	0.0259	0.029
0.50000	0.00204	0.0164	148.7528	14.26000	0.0292	0.033
0.50500	0.00203	0.0180	205.6180	14.09624	0.0327	0.034
0.51000	0.00204	0.0197	278.1104	14.03300	0.0364	0.040
0.51500	0.00203	0.0216	367.2326	13.97060	0.0409	0.045
0.52000	0.00204	0.0235	487.1876	13.90917	0.0455	0.050
0.52500	0.00203	0.0254	662.4500	13.84800	0.0504	0.056
0.53000	0.00204	0.0277	889.6734	13.78700	0.0556	0.062
0.53500	0.00203	0.0300	1189.9612	13.72600	0.0610	0.068
0.54000	0.00204	0.0325	1607.8759	13.66500	0.0668	0.074
0.54500	0.00203	0.0350	2124.3559	13.60400	0.0729	0.081
0.55000	0.00204	0.0377	2852.1114	13.54300	0.0793	0.089
0.55500	0.00203	0.0404	3813.9803	13.48200	0.0860	0.100
0.56000	0.00204	0.0431	5014.1753	13.42100	0.0930	0.110
0.56500	0.00203	0.0458	6562.4810	13.36000	0.1004	0.120
0.57000	0.00204	0.0486	8512.2698	13.29900	0.1081	0.131

0.57500	2.19854	0.0536	1367.9321	12.4007	0.1295	0.143
0.58000	2.34512	0.0569	1387.3788	12.4009	0.1408	0.155
0.58500	2.48760	0.0606	1387.6787	12.2940	0.1429	0.165
0.59000	2.65441	0.0645	1347.9100	12.1907	0.1450	0.183
0.59500	2.82159	0.0685	1331.8818	12.0943	0.1475	0.198
0.60000	2.99275	0.0728	1284.1308	11.9978	0.1498	0.214
0.60500	3.17012	0.0774	1222.2732	11.8985	0.2005	0.231
0.61000	3.35370	0.0814	1187.1007	11.7911	0.2258	0.249
0.61500	3.54349	0.0860	1042.6707	11.6752	0.2810	0.268
0.62000	3.73948	0.0908	968.8195	11.5508	0.2817	0.288
0.62500	3.94160	0.0957	860.3738	11.4181	0.2804	0.309
0.63000	4.14989	0.1007	787.8094	11.2789	0.3016	0.355
0.63500	4.36427	0.1059	743.8820	11.1348	0.3219	0.388
0.64000	4.58471	0.1113	685.5806	11.0153	0.3478	0.405
0.64500	4.81115	0.1168	651.4783	11.0654	0.3674	0.433
0.65000	5.04351	0.1224	368.9869	10.9811	0.3974	0.461
0.65500	5.28177	0.1282	290.8198	10.9079	0.4187	0.489
0.66000	5.52580	0.1341	229.2102	10.8400	0.4452	0.529
0.66500	5.77554	0.1402	178.7315	10.7753	0.4735	0.554
0.67000	6.03089	0.1464	131.2322	10.7153	0.5030	0.588
0.67500	6.29174	0.1527	98.4041	10.6598	0.5338	0.624
0.68000	6.55804	0.1592	75.8109	10.6075	0.5659	0.661
0.68500	6.82982	0.1658	55.2653	10.5583	0.5998	0.699
0.69000	7.10639	0.1725	39.4252	10.5124	0.6352	0.738
0.69500	7.38793	0.1793	28.6188	10.4697	0.6704	0.780
0.70000	7.67500	0.1861	21.3979	10.4254	0.7041	0.824
0.70500	7.96659	0.1934	15.7101	10.3802	0.7472	0.869
0.71000	8.26285	0.2006	11.7993	10.3347	0.7899	0.915
0.71500	8.56384	0.2079	8.7389	10.2890	0.8325	0.961
0.72000	8.86881	0.2153	6.6339	10.2432	0.8752	1.013
0.72500	9.17824	0.2228	4.9889	10.1975	0.9182	1.064
0.73000	9.49178	0.2304	3.2272	10.1518	0.9627	1.117
0.73500	9.80925	0.2381	2.0884	10.1062	1.0083	1.172
0.74000	10.13050	0.2459	1.4219	10.0607	1.0544	1.229
0.74500	10.45534	0.2538	1.0219	10.0154	1.1014	1.287
0.75000	10.78373	0.2617	0.7333	9.9698	1.1479	1.346
0.75500	11.11401	0.2700	0.0000	9.9248	1.2291	1.406
0.76000	12.12855	0.2784	0.0000	9.8804	1.3949	1.467
0.76500	12.81750	0.3111	0.0000	9.7271	1.5217	1.825
0.77000	11.91570	0.3281	0.0000	9.5154	1.6533	1.875
0.77500	14.22181	0.3452	0.0000	9.0217	1.7890	2.136
0.78000	14.93451	0.3625	0.0000	8.8809	1.9378	2.305
0.78500	15.85246	0.3799	0.0000	8.7727	2.0907	2.481
0.79000	16.37437	0.3974	0.0000	8.6872	2.2508	2.664
0.79500	17.09894	0.4150	0.0000	8.5841	2.4182	2.858
0.80000	17.82499	0.4326	0.0000	8.4834	2.5828	3.059
0.80500	18.55122	0.4503	0.0000	8.3853	2.7767	3.267
0.81000	19.27864	0.4679	0.0000	8.2898	2.9636	3.484
0.81500	19.99842	0.4854	0.0000	8.1756	3.1807	3.708
0.82000	20.71954	0.5029	0.0000	8.0880	3.3638	3.940
0.82500	21.43319	0.5203	0.0000	7.9948	3.5745	4.181
0.83000	22.14858	0.5375	0.0000	7.9068	3.7925	4.429
0.83500	22.86494	0.5546	0.0000	7.8211	4.0175	4.684
0.84000	23.58247	0.5715	0.0000	7.7373	4.2404	4.948
0.84500	24.29545	0.5882	0.0000	7.6552	4.4884	5.219

0.95000	24.91547	0.6047	0.0000	7.5750	4.7382	5.497
0.95500	25.58884	0.6210	0.0000	7.4964	4.9847	5.897
0.96000	26.24907	0.6370	0.0000	7.4194	5.2454	5.783
0.96500	26.89491	0.6528	0.0000	7.3441	5.5114	6.074
0.97000	27.53229	0.6683	0.0000	7.2702	5.7837	6.376
0.97500	28.15768	0.6834	0.0000	7.1978	6.0622	6.683
1.00000	28.77988	0.6981	0.0000	7.1270	6.3468	6.994
1.01000	29.39904	0.7128	0.0000	7.0574	6.6375	7.317
1.02000	29.95881	0.7271	0.0000	6.9895	6.9341	7.644
1.03000	30.55813	0.7409	0.0000	6.9227	7.2366	7.977
1.04000	31.09324	0.7545	0.0000	6.8573	7.5446	8.312
1.05000	31.67565	0.7678	0.0000	6.7931	7.8582	8.669
1.06000	32.15302	0.7808	0.0000	6.7311	8.1771	9.014
1.07000	32.63534	0.7929	0.0000	6.6703	8.5012	9.371
1.08000	32.98519	0.8049	0.0000	6.6107	8.8305	9.734
1.09000	33.18219	0.8166	0.0000	6.5521	9.1644	10.102
1.10000	33.43380	0.8279	0.0000	6.4947	9.5032	10.474
1.11000	34.10914	0.8388	0.0000	6.4383	9.8465	10.854
1.12000	34.59901	0.8493	0.0000	6.3767	10.1943	11.238
1.13000	34.99385	0.8595	0.0000	6.3168	10.5443	11.628
1.14000	35.41121	0.8693	0.0000	6.2584	10.9075	12.018
1.15000	35.85354	0.8788	0.0000	6.2110	11.2745	12.415
1.16000	36.20000	0.8874	0.0000	6.1648	11.6464	12.814
1.17000	36.57044	0.8964	0.0000	6.1198	12.0230	13.221
1.18000	36.92577	0.9045	0.0000	6.0758	12.4049	13.630
1.19000	37.26881	0.9123	0.0000	6.0327	12.7931	14.041
1.20000	37.59843	0.9198	0.0000	6.0598	13.1866	14.459
1.21000	37.89683	0.9268	0.0000	6.0114	13.5870	14.878
1.22000	38.18881	0.9337	0.0000	5.9684	13.9883	15.301
1.23000	38.46770	0.9401	0.0000	5.9180	14.3943	15.727
1.24000	38.73042	0.9461	0.0000	5.8723	14.8059	16.155
1.25000	38.97877	0.9518	0.0000	5.8273	15.2259	16.584
1.26000	39.21234	0.9571	0.0000	5.7831	15.6491	17.019
1.27000	39.43154	0.9621	0.0000	5.7396	16.0764	17.455
1.28000	39.63660	0.9667	0.0000	5.6968	16.5078	17.893
1.29000	39.82774	0.9710	0.0000	5.6547	16.9330	18.333
1.30000	40.00519	0.9750	0.0000	5.6132	17.3534	18.774
1.31000	40.16820	0.9788	0.0000	5.5724	17.7683	19.219
1.32000	40.32001	0.9820	0.0000	5.5322	18.1783	19.664
1.33000	40.46578	0.9850	0.0000	5.4927	18.5834	20.111
1.34000	40.59804	0.9878	0.0000	5.4538	18.9848	20.559
1.35000	40.70881	0.9902	0.0000	5.4154	19.3823	21.008
1.36000	40.79844	0.9924	0.0000	5.3777	19.7759	21.458
1.37000	40.86817	0.9942	0.0000	5.3405	20.1649	21.909
1.38000	40.92224	0.9958	0.0000	5.3039	20.5495	22.341
1.39000	41.02884	0.9972	0.0000	5.2678	20.9295	22.814
1.40000	41.08274	0.9978	0.0000	5.2323	21.3045	23.247
1.41000	41.12844	0.9982	0.0000	5.1971	21.6740	23.729
1.42000	41.16002	0.9986	0.0000	5.1622	22.0379	24.174
1.43000	41.18315	0.9989	0.0000	5.1276	22.3961	24.628
1.44000	41.19631	0.9991	0.0000	5.0934	22.7493	25.082
1.45000	41.19974	0.9992	0.0000	5.0596	23.0984	25.537
1.46000	41.19374	0.9993	0.0000	5.0262	23.4434	25.991
1.47000	41.17840	0.9995	0.0000	4.9932	23.7841	26.444
1.48000	41.15484	0.9998	0.0000	4.9606	24.1205	26.898
1.49000	41.12181	0.9991	0.0000	4.9284		

1.90000	41.08074	0.9971	0.0000	4.4150	24.8115	27.351
1.80000	40.26181	0.9773	0.0000	4.4461	24.8845	31.861
1.70000	39.44287	0.9574	0.0000	4.4773	24.9575	36.207
1.60000	38.62393	0.9375	0.0000	4.5084	25.0305	40.394
1.50000	37.80499	0.9176	0.0000	4.5396	25.1035	44.376
1.40000	36.98605	0.8977	0.0000	4.5707	25.1765	48.127
2.00000	36.16711	0.8778	0.0000	4.6019	25.2495	51.662
2.10000	35.34817	0.8579	0.0000	4.6330	25.3225	54.922
2.20000	34.52923	0.8380	0.0000	4.6642	25.3955	57.971
2.30000	33.71029	0.8181	0.0000	4.6953	25.4685	60.800
2.40000	32.89135	0.7982	0.0000	4.7265	25.5415	63.419
2.50000	32.07241	0.7783	0.0000	4.7576	25.6145	65.863
2.60000	31.25347	0.7584	0.0000	4.7888	25.6875	68.082
2.70000	30.43453	0.7385	0.0000	4.8199	25.7605	70.151
2.80000	29.61559	0.7186	0.0000	4.8511	25.8335	72.063
2.90000	28.79665	0.6987	0.0000	4.8822	25.9065	73.829
3.00000	27.97771	0.6788	0.0000	4.9134	25.9795	75.462
3.10000	27.15877	0.6589	0.0000	4.9445	26.0525	76.971
3.20000	26.33983	0.6390	0.0000	4.9757	26.1255	78.368
3.30000	25.52089	0.6191	0.0000	5.0068	26.1985	79.661
3.40000	24.70195	0.5992	0.0000	5.0380	26.2715	80.860
3.50000	23.88301	0.5793	0.0000	5.0691	26.3445	81.971
3.60000	23.06407	0.5594	0.0000	5.1003	26.4175	83.002
3.70000	22.24513	0.5395	0.0000	5.1314	26.4905	83.959
3.80000	21.42619	0.5196	0.0000	5.1626	26.5635	84.850
3.90000	20.60725	0.4997	0.0000	5.1937	26.6365	85.674
4.00000	19.78831	0.4798	0.0000	5.2249	26.7095	86.450
4.10000	18.96937	0.4599	0.0000	5.2560	26.7825	87.169
4.20000	18.15043	0.4400	0.0000	5.2872	26.8555	87.840
4.30000	17.33149	0.4201	0.0000	5.3184	26.9285	88.467
4.40000	16.51255	0.4002	0.0000	5.3495	27.0015	89.053
4.50000	15.69361	0.3803	0.0000	5.3807	27.0745	89.601
4.60000	14.87467	0.3604	0.0000	5.4118	27.1475	90.114
4.70000	14.05573	0.3405	0.0000	5.4430	27.2205	90.595
4.80000	13.23679	0.3206	0.0000	5.4741	27.2935	91.046
4.90000	12.41785	0.3007	0.0000	5.5053	27.3665	91.470
5.00000	11.59891	0.2808	0.0000	5.5364	27.4395	91.868
5.10000	10.77997	0.2609	0.0000	5.5676	27.5125	92.242
5.20000	9.96103	0.2410	0.0000	5.5987	27.5855	92.594
5.30000	9.14209	0.2211	0.0000	5.6299	27.6585	92.926
5.40000	8.32315	0.2012	0.0000	5.6610	27.7315	93.239
5.50000	7.50421	0.1813	0.0000	5.6922	27.8045	93.534
5.60000	6.68527	0.1614	0.0000	5.7233	27.8775	93.813
5.70000	5.86633	0.1415	0.0000	5.7545	27.9505	94.074
5.80000	5.04739	0.1216	0.0000	5.7856	28.0235	94.324
5.90000	4.22845	0.1017	0.0000	5.8168	28.0965	94.560
6.00000	3.40951	0.0818	0.0000	5.8479	28.1695	94.783
6.10000	2.59057	0.0619	0.0000	5.8791	28.2425	94.994
6.20000	1.77163	0.0420	0.0000	5.9102	28.3155	95.194
6.30000	0.95269	0.0221	0.0000	5.9414	28.3885	95.388
6.40000	0.13375	0.0022	0.0000	5.9725	28.4615	95.564
6.50000	1.59287	0.0087	0.0000	6.0037	28.5345	95.735
6.60000	1.51339	0.0067	0.0000	6.0348	28.6075	95.894
6.70000	1.43391	0.0047	0.0000	6.0660	28.6805	96.053
6.80000	1.35443	0.0027	0.0000	6.0971	28.7535	96.200
6.90000	1.27495	0.0007	0.0000	6.1283	28.8265	

7.00000	1.24551	0.0311	0.0000	1.4002	47.3949	96.340
7.10000	1.16207	0.0287	0.0000	1.4406	47.5160	96.473
7.20000	1.12491	0.0274	0.0000	1.4811	47.6314	96.601
7.30000	1.07494	0.0261	0.0000	1.5215	47.7415	96.722
7.40000	1.02549	0.0249	0.0000	1.5619	47.8465	96.838
7.50000	0.97654	0.0238	0.0000	1.6023	47.9467	96.948
7.60000	0.92809	0.0227	0.0000	1.6427	48.0425	97.054
7.70000	0.88014	0.0217	0.0000	1.6831	48.1340	97.155
7.80000	0.83269	0.0208	0.0000	1.7235	48.2215	97.251
7.90000	0.78574	0.0199	0.0000	1.7639	48.3051	97.341
8.00000	0.73929	0.0190	0.0000	1.8043	48.3852	97.432
8.10000	0.69334	0.0182	0.0000	1.8447	48.4618	97.514
8.20000	0.64789	0.0174	0.0000	1.8851	48.5353	97.597
8.30000	0.60294	0.0167	0.0000	1.9255	48.6054	97.675
8.40000	0.55849	0.0160	0.0000	1.9659	48.6731	97.749
8.50000	0.51454	0.0153	0.0000	2.0063	48.7378	97.820
8.60000	0.47109	0.0146	0.0000	2.0467	48.7994	97.889
8.70000	0.42814	0.0140	0.0000	2.0871	48.8584	97.954
8.80000	0.38569	0.0134	0.0000	2.1275	48.9146	98.017
8.90000	0.34374	0.0128	0.0000	2.1679	48.9675	98.078
9.00000	0.30229	0.0122	0.0000	2.2083	49.0174	98.136
9.10000	0.26134	0.0117	0.0000	2.2487	49.0645	98.192
9.20000	0.22089	0.0112	0.0000	2.2891	49.1085	98.246
9.30000	0.18094	0.0107	0.0000	2.3295	49.1495	98.298
9.40000	0.14149	0.0102	0.0000	2.3700	49.1875	98.347
9.50000	0.10254	0.0100	0.0000	2.4104	49.2225	98.395
9.60000	0.06409	0.0100	0.0000	2.4508	49.2545	98.442
9.70000	0.02614	0.0100	0.0000	2.4913	49.2835	98.484
9.80000	0.00000	0.0100	0.0000	2.5317	49.3095	98.529
9.90000	0.00000	0.0100	0.0000	2.5721	49.3325	98.570
10.00000	0.00000	0.0100	0.0000	2.6126	49.3525	98.610
10.10000	0.00000	0.0094	0.0000	2.6530	49.3695	98.649
10.20000	0.00000	0.0088	0.0000	2.6934	49.3835	98.686
10.30000	0.00000	0.0083	0.0000	2.7338	49.3945	98.722
10.40000	0.00000	0.0078	0.0000	2.7742	49.4025	98.754
10.50000	0.00000	0.0073	0.0000	2.8146	49.4075	98.780
10.60000	0.00000	0.0068	0.0000	2.8550	49.4095	98.802
10.70000	0.00000	0.0063	0.0000	2.8954	49.4085	98.822
10.80000	0.00000	0.0058	0.0000	2.9358	49.4045	98.843
10.90000	0.00000	0.0053	0.0000	2.9762	49.3975	98.863
11.00000	0.00000	0.0048	0.0000	3.0166	49.3875	98.883
11.10000	0.00000	0.0043	0.0000	3.0570	49.3745	98.912
11.20000	0.00000	0.0038	0.0000	3.0974	49.3585	98.941
11.30000	0.00000	0.0033	0.0000	3.1378	49.3395	98.966
11.40000	0.00000	0.0028	0.0000	3.1782	49.3175	98.994
11.50000	0.00000	0.0023	0.0000	3.2186	49.2925	99.020
11.60000	0.00000	0.0018	0.0000	3.2590	49.2645	99.045
11.70000	0.00000	0.0013	0.0000	3.2994	49.2335	99.069
11.80000	0.00000	0.0008	0.0000	3.3398	49.1995	99.092
11.90000	0.00000	0.0003	0.0000	3.3802	49.1625	99.114
12.00000	0.00000	0.0000	0.0000	3.4206	49.1225	99.136
12.10000	0.00000	0.0000	0.0000	3.4610	49.0795	99.157
12.20000	0.00000	0.0000	0.0000	3.5014	49.0335	99.178

VISIBILITY AND OTHER DATA FOR PLASMA RADIATION, MECHANICS DIVISION, U.S.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 177A.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2050.0  
DEGREES FAHRENHEIT = 3730.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 1.52 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 194.69 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 62.01 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.015 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 129.142 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 1.944 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.4137 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.7015 MICRONS.  
I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 100.13 WATT/CM<sup>2</sup> OR 1.001339E+09 FNG/SEC/CM<sup>2</sup> OR 2.303210E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 84.61 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 680 LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (E) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta E = KE^M \Delta T$  .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 177A.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2050.0  
DEGREES FAHRENHEIT = 3730.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR K/T <sup>M</sup>	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.01308	0.0003	0.0000	20.0484	0.0003	0.000
0.35500	0.01727	0.0004	0.0000	19.7664	0.0004	0.000
0.36000	0.02119	0.0005	0.0000	19.4919	0.0005	0.000
0.36500	0.02588	0.0006	0.0000	19.2249	0.0006	0.001
0.37000	0.03119	0.0007	0.0000	18.9651	0.0007	0.001
0.37500	0.03709	0.0008	0.0000	18.7122	0.0009	0.001
0.38000	0.04352	0.0010	0.0000	18.4660	0.0011	0.001
0.38500	0.05032	0.0012	0.0000	18.2262	0.0013	0.001
0.39000	0.05762	0.0014	0.0000	17.9925	0.0016	0.001
0.39500	0.06549	0.0016	0.0000	17.7647	0.0020	0.002
0.40000	0.07389	0.0018	0.0000	17.5427	0.0024	0.002
0.40500	0.08287	0.0022	0.0558	17.3261	0.0029	0.003
0.41000	0.11914	0.0024	0.0972	17.1144	0.0034	0.003
0.41500	0.13708	0.0030	0.2062	16.9076	0.0041	0.004
0.42000	0.15878	0.0034	0.4319	16.7073	0.0049	0.005
0.42500	0.18214	0.0039	0.9042	16.5104	0.0057	0.006
0.43000	0.20818	0.0045	1.6421	16.3168	0.0066	0.007
0.43500	0.23702	0.0051	2.7078	16.1312	0.0077	0.008
0.44000	0.26890	0.0058	4.2055	15.9479	0.0090	0.009
0.44500	0.30400	0.0064	5.9948	15.7667	0.0104	0.010
0.45000	0.34255	0.0073	8.5510	15.5875	0.0120	0.012
0.45500	0.38470	0.0083	12.4568	15.4221	0.0139	0.014
0.46000	0.43072	0.0092	17.4733	15.2645	0.0159	0.014
0.46500	0.48070	0.0103	24.1932	15.0905	0.0182	0.014
0.47000	0.53512	0.0115	33.1130	14.9299	0.0207	0.021
0.47500	0.59301	0.0127	45.2328	14.7728	0.0235	0.024
0.48000	0.65318	0.0141	62.1353	14.6189	0.0267	0.027
0.48500	0.72571	0.0156	83.3990	14.4687	0.0301	0.030
0.49000	0.79917	0.0171	113.0271	14.3206	0.0339	0.033
0.49500	0.87778	0.0188	153.0980	14.1750	0.0381	0.038
0.50000	0.96190	0.0206	211.2706	14.0324	0.0427	0.043
0.50500	1.05164	0.0224	291.0518	13.8927	0.0477	0.044
0.51000	1.14719	0.0244	397.3853	13.7550	0.0532	0.051
0.51500	1.24862	0.0268	516.2702	13.6204	0.0592	0.059
0.52000	1.35638	0.0291	654.8619	13.4884	0.0657	0.066
0.52500	1.47014	0.0315	792.8653	13.3599	0.0728	0.071
0.53000	1.59071	0.0341	932.4214	13.2339	0.0805	0.080
0.53500	1.71769	0.0368	1080.7460	13.1101	0.0887	0.089
0.54000	1.85135	0.0397	1201.0049	12.9886	0.0974	0.098
0.54500	1.99181	0.0427	1397.3652	12.8704	0.1072	0.107
0.55000	2.13920	0.0459	1487.3838	12.7554	0.1176	0.117
0.55500	2.29360	0.0492	1559.8496	12.6434	0.1287	0.128
0.56000	2.45510	0.0527	1661.1214	12.5335	0.1405	0.140
0.56500	2.62377	0.0563	1745.6978	12.4256	0.1532	0.153
0.57000	2.79964	0.0601	1812.3989	12.3197	0.1668	0.167



0.57500	2,94247	0,0040	1095,9007	12,20117	0,1012	0,101
0.58000	1,17110	0,0041	1077,1741	12,0045	0,1006	0,100
0.58500	1,17124	0,0723	1077,9104	11,9051	0,1010	0,101
0.59000	1,17640	0,0747	1041,0011	11,0030	0,1013	0,101
0.59500	1,17011	0,0811	1790,7006	11,7000	0,1017	0,101
0.60000	4,00011	0,0060	1720,2171	11,4052	0,1020	0,102
0.60500	4,27040	0,0000	1613,4200	11,4000	0,1024	0,102
0.61000	4,47114	0,0000	1520,1210	11,4038	0,1028	0,102
0.61500	4,71117	0,1011	1413,1000	11,0100	0,1032	0,103
0.62000	4,90201	0,1005	1205,6600	11,1100	0,1036	0,103
0.62500	5,21000	0,1120	1110,1071	11,2274	0,1040	0,104
0.63000	5,46234	0,1174	987,0257	11,1100	0,1044	0,104
0.63500	5,75200	0,1230	880,0000	11,0507	0,1048	0,104
0.64000	6,03001	0,1294	717,4134	10,9400	0,1052	0,105
0.64500	6,31000	0,1355	597,5051	10,8790	0,1056	0,105
0.65000	6,60011	0,1417	480,0010	10,7907	0,1060	0,106
0.65500	6,90300	0,1481	380,2000	10,7131	0,1064	0,106
0.66000	7,20000	0,1548	290,0000	10,6322	0,1068	0,106
0.66500	7,51001	0,1611	210,0000	10,5521	0,1072	0,107
0.67000	7,83001	0,1681	170,0170	10,4735	0,1076	0,107
0.67500	8,16014	0,1750	127,0000	10,3960	0,1080	0,108
0.68000	8,48022	0,1821	90,1239	10,3190	0,1084	0,108
0.68500	8,82317	0,1891	71,3000	10,2400	0,1088	0,108
0.69000	9,16300	0,1960	51,0000	10,1701	0,1092	0,109
0.69500	9,50000	0,2000	30,0000	10,0900	0,1096	0,109
0.70000	9,80101	0,2115	27,0020	10,0200	0,1100	0,110
0.70500	10,21707	0,2192	20,1000	9,9530	0,1104	0,110
0.71000	10,57000	0,2269	15,1007	9,8937	0,1108	0,110
0.71500	10,90500	0,2300	11,1000	9,8400	0,1112	0,111
0.72000	11,31500	0,2320	8,0000	9,7900	0,1116	0,111
0.72500	11,70000	0,2300	5,0000	9,7400	0,1120	0,112
0.73000	12,07000	0,2200	4,1010	9,6931	0,1124	0,112
0.73500	12,45300	0,2072	3,1070	9,6477	0,1128	0,112
0.74000	12,80000	0,2755	2,0100	9,6033	0,1132	0,113
0.74500	13,23107	0,2000	1,7000	9,5600	0,1136	0,113
0.75000	13,62572	0,2023	0,9200	9,5180	0,1140	0,114
0.75500	14,02330	0,1000	0,0000	9,4770	0,1144	0,114
0.76000	14,23220	0,1200	0,0000	9,4370	0,1148	0,114
0.76500	14,75000	0,1000	0,0000	9,3970	0,1152	0,115
0.77000	15,07000	0,1000	0,0000	9,3570	0,1156	0,115
0.77500	15,40000	0,1000	0,0000	9,3170	0,1160	0,116
0.78000	15,70000	0,1000	0,0000	9,2770	0,1164	0,116
0.78500	16,07000	0,1000	0,0000	9,2370	0,1168	0,116
0.79000	16,40000	0,1000	0,0000	9,1970	0,1172	0,117
0.79500	16,70000	0,1000	0,0000	9,1570	0,1176	0,117
0.80000	17,00000	0,1000	0,0000	9,1170	0,1180	0,118
0.80500	17,30000	0,1000	0,0000	9,0770	0,1184	0,118
0.81000	17,60000	0,1000	0,0000	9,0370	0,1188	0,118
0.81500	17,90000	0,1000	0,0000	8,9970	0,1192	0,119
0.82000	18,20000	0,1000	0,0000	8,9570	0,1196	0,119
0.82500	18,50000	0,1000	0,0000	8,9170	0,1200	0,120
0.83000	18,80000	0,1000	0,0000	8,8770	0,1204	0,120
0.83500	19,10000	0,1000	0,0000	8,8370	0,1208	0,120
0.84000	19,40000	0,1000	0,0000	8,7970	0,1212	0,121
0.84500	19,70000	0,1000	0,0000	8,7570	0,1216	0,121
0.85000	20,00000	0,1000	0,0000	8,7170	0,1220	0,122
0.85500	20,30000	0,1000	0,0000	8,6770	0,1224	0,122
0.86000	20,60000	0,1000	0,0000	8,6370	0,1228	0,122
0.86500	20,90000	0,1000	0,0000	8,5970	0,1232	0,123
0.87000	21,20000	0,1000	0,0000	8,5570	0,1236	0,123
0.87500	21,50000	0,1000	0,0000	8,5170	0,1240	0,124
0.88000	21,80000	0,1000	0,0000	8,4770	0,1244	0,124
0.88500	22,10000	0,1000	0,0000	8,4370	0,1248	0,124
0.89000	22,40000	0,1000	0,0000	8,3970	0,1252	0,125
0.89500	22,70000	0,1000	0,0000	8,3570	0,1256	0,125
0.90000	23,00000	0,1000	0,0000	8,3170	0,1260	0,126
0.90500	23,30000	0,1000	0,0000	8,2770	0,1264	0,126
0.91000	23,60000	0,1000	0,0000	8,2370	0,1268	0,126
0.91500	23,90000	0,1000	0,0000	8,1970	0,1272	0,127
0.92000	24,20000	0,1000	0,0000	8,1570	0,1276	0,127
0.92500	24,50000	0,1000	0,0000	8,1170	0,1280	0,128
0.93000	24,80000	0,1000	0,0000	8,0770	0,1284	0,128
0.93500	25,10000	0,1000	0,0000	8,0370	0,1288	0,128
0.94000	25,40000	0,1000	0,0000	7,9970	0,1292	0,129
0.94500	25,70000	0,1000	0,0000	7,9570	0,1296	0,129
0.95000	26,00000	0,1000	0,0000	7,9170	0,1300	0,130
0.95500	26,30000	0,1000	0,0000	7,8770	0,1304	0,130
0.96000	26,60000	0,1000	0,0000	7,8370	0,1308	0,130
0.96500	26,90000	0,1000	0,0000	7,7970	0,1312	0,131
0.97000	27,20000	0,1000	0,0000	7,7570	0,1316	0,131
0.97500	27,50000	0,1000	0,0000	7,7170	0,1320	0,132
0.98000	27,80000	0,1000	0,0000	7,6770	0,1324	0,132
0.98500	28,10000	0,1000	0,0000	7,6370	0,1328	0,132
0.99000	28,40000	0,1000	0,0000	7,5970	0,1332	0,133
0.99500	28,70000	0,1000	0,0000	7,5570	0,1336	0,133
1.00000	29,00000	0,1000	0,0000	7,5170	0,1340	0,134

0.99500	29,97100	0,4030	0,0000	7,1910	5,0000	5,000
0.99000	30,21000	0,4500	0,0000	7,1143	6,2010	6,100
0.98500	31,45200	0,4707	0,0000	7,2103	6,5110	6,500
0.98000	32,17100	0,4900	0,0000	7,1000	6,8120	6,800
0.97500	32,97000	0,7052	0,0000	7,0000	7,1000	7,100
1.00000	33,50101	0,7000	0,0000	7,0230	7,0000	7,000
1.01000	34,21000	0,7000	0,0000	6,9500	7,0000	7,000
1.02000	34,80000	0,7000	0,0000	6,8800	7,0000	7,000
1.03000	35,52270	0,7021	0,0000	6,8100	7,0000	7,000
1.04000	36,10100	0,7050	0,0000	6,7400	7,0000	7,000
1.05000	36,70000	0,7000	0,0000	6,6700	7,0000	7,000
1.06000	37,30000	0,7000	0,0000	6,6000	7,0000	7,000
1.07000	37,80000	0,7000	0,0000	6,5300	7,0000	7,000
1.08000	38,40000	0,7000	0,0000	6,4600	7,0000	7,000
1.09000	39,00000	0,7000	0,0000	6,3900	7,0000	7,000
1.10000	39,60000	0,7000	0,0000	6,3200	7,0000	7,000
1.11000	40,20000	0,7000	0,0000	6,2500	7,0000	7,000
1.12000	40,80000	0,7000	0,0000	6,1800	7,0000	7,000
1.13000	41,40000	0,7000	0,0000	6,1100	7,0000	7,000
1.14000	42,00000	0,7000	0,0000	6,0400	7,0000	7,000
1.15000	42,60000	0,7000	0,0000	5,9700	7,0000	7,000
1.16000	43,20000	0,7000	0,0000	5,9000	7,0000	7,000
1.17000	43,80000	0,7000	0,0000	5,8300	7,0000	7,000
1.18000	44,40000	0,7000	0,0000	5,7600	7,0000	7,000
1.19000	45,00000	0,7000	0,0000	5,6900	7,0000	7,000
1.20000	45,60000	0,7000	0,0000	5,6200	7,0000	7,000
1.21000	46,20000	0,7000	0,0000	5,5500	7,0000	7,000
1.22000	46,80000	0,7000	0,0000	5,4800	7,0000	7,000
1.23000	47,40000	0,7000	0,0000	5,4100	7,0000	7,000
1.24000	48,00000	0,7000	0,0000	5,3400	7,0000	7,000
1.25000	48,60000	0,7000	0,0000	5,2700	7,0000	7,000
1.26000	49,20000	0,7000	0,0000	5,2000	7,0000	7,000
1.27000	49,80000	0,7000	0,0000	5,1300	7,0000	7,000
1.28000	50,40000	0,7000	0,0000	5,0600	7,0000	7,000
1.29000	51,00000	0,7000	0,0000	4,9900	7,0000	7,000
1.30000	51,60000	0,7000	0,0000	4,9200	7,0000	7,000
1.31000	52,20000	0,7000	0,0000	4,8500	7,0000	7,000
1.32000	52,80000	0,7000	0,0000	4,7800	7,0000	7,000
1.33000	53,40000	0,7000	0,0000	4,7100	7,0000	7,000
1.34000	54,00000	0,7000	0,0000	4,6400	7,0000	7,000
1.35000	54,60000	0,7000	0,0000	4,5700	7,0000	7,000
1.36000	55,20000	0,7000	0,0000	4,5000	7,0000	7,000
1.37000	55,80000	0,7000	0,0000	4,4300	7,0000	7,000
1.38000	56,40000	0,7000	0,0000	4,3600	7,0000	7,000
1.39000	57,00000	0,7000	0,0000	4,2900	7,0000	7,000
1.40000	57,60000	0,7000	0,0000	4,2200	7,0000	7,000
1.41000	58,20000	0,7000	0,0000	4,1500	7,0000	7,000
1.42000	58,80000	0,7000	0,0000	4,0800	7,0000	7,000
1.43000	59,40000	0,7000	0,0000	4,0100	7,0000	7,000
1.44000	60,00000	0,7000	0,0000	3,9400	7,0000	7,000
1.45000	60,60000	0,7000	0,0000	3,8700	7,0000	7,000
1.46000	61,20000	0,7000	0,0000	3,8000	7,0000	7,000
1.47000	61,80000	0,7000	0,0000	3,7300	7,0000	7,000
1.48000	62,40000	0,7000	0,0000	3,6600	7,0000	7,000
1.49000	63,00000	0,7000	0,0000	3,5900	7,0000	7,000

1.30000	46.22524	0.9417	0.0000	4.7710	29.0836	29.045
1.40000	46.24845	0.9451	0.0000	4.4410	11.4501	11.404
1.50000	43.14283	0.9200	0.0000	4.1953	16.0615	16.011
1.60000	40.94572	0.8788	0.0000	3.9709	42.2703	42.214
1.70000	38.56331	0.8273	0.0000	3.7675	46.2479	46.187
1.80000	36.07807	0.7740	0.0000	3.5814	49.9003	49.814
1.90000	33.59697	0.7204	0.0000	3.4140	43.4437	43.393
2.00000	31.11794	0.6680	0.0000	3.2644	46.7018	46.627
2.10000	28.64311	0.6189	0.0000	3.1302	49.7010	49.624
2.20000	26.17330	0.5722	0.0000	3.0098	42.4747	42.396
2.30000	24.62034	0.5282	0.0000	2.8972	45.0622	44.954
2.40000	22.70842	0.4872	0.0000	2.7934	47.4075	47.314
2.50000	20.91071	0.4492	0.0000	2.6977	49.5444	49.497
2.60000	19.30744	0.4147	0.0000	2.6097	71.4000	71.305
2.70000	17.86507	0.3820	0.0000	2.5299	73.4566	73.357
2.80000	16.42601	0.3524	0.0000	2.4544	75.1652	75.044
2.90000	15.16163	0.3253	0.0000	2.3822	76.7416	76.662
3.00000	14.00348	0.3004	0.0000	2.3143	78.2010	78.097
3.10000	12.94310	0.2777	0.0000	2.2503	79.5476	79.442
3.20000	11.87255	0.2568	0.0000	2.1900	80.8844	80.844
3.30000	11.07218	0.2378	0.0000	2.1340	81.9444	81.834
3.40000	10.27084	0.2203	0.0000	2.0772	83.0120	82.902
3.50000	9.52507	0.2044	0.0000	2.0214	84.0811	83.880
3.60000	8.84331	0.1897	0.0000	2.1925	84.9192	84.807
3.70000	8.21783	0.1763	0.0000	2.1559	85.7714	85.654
3.80000	7.64316	0.1640	0.0000	2.1211	86.5444	86.450
3.90000	7.11545	0.1527	0.0000	2.0874	87.3020	87.184
4.00000	6.63124	0.1423	0.0000	2.0574	87.9800	87.873
4.10000	6.18557	0.1327	0.0000	2.0284	88.4294	88.512
4.20000	5.77524	0.1239	0.0000	2.0000	89.2273	89.100
4.30000	5.39724	0.1154	0.0000	1.9745	89.7457	89.667
4.40000	5.04844	0.1081	0.0000	1.9505	90.3074	90.188
4.50000	4.72684	0.1014	0.0000	1.9257	90.7943	90.674
4.60000	4.42952	0.0950	0.0000	1.9030	91.2519	91.133
4.70000	4.15447	0.0889	0.0000	1.8814	91.6810	91.567
4.80000	3.90007	0.0837	0.0000	1.8607	92.0855	91.964
4.90000	3.66424	0.0786	0.0000	1.8400	92.4636	92.341
5.00000	3.44543	0.0739	0.0000	1.8201	92.8190	92.698
5.10000	3.24267	0.0696	0.0000	1.8010	93.1533	93.030
5.20000	3.05413	0.0655	0.0000	1.7824	93.4680	93.344
5.30000	2.87982	0.0614	0.0000	1.7641	93.7645	93.640
5.40000	2.71966	0.0573	0.0000	1.7461	94.0441	93.926
5.50000	2.56349	0.0535	0.0000	1.7287	94.3080	94.183
5.60000	2.42202	0.0500	0.0000	1.7120	94.5572	94.437
5.70000	2.28463	0.0469	0.0000	1.6960	94.7927	94.667
5.80000	2.16640	0.0440	0.0000	1.6802	95.0155	94.880
5.90000	2.05184	0.0417	0.0000	1.6641	95.2263	95.108
6.00000	1.94315	0.0395	0.0000	1.6470	95.4250	95.304
6.10000	1.84214	0.0375	0.0000	1.6302	95.6152	95.488
6.20000	1.74754	0.0356	0.0000	1.6144	95.7944	95.664
6.30000	1.65844	0.0336	0.0000	1.5981	95.9644	95.834
6.40000	1.57564	0.0318	0.0000	1.5824	96.1245	95.998
6.50000	1.49745	0.0301	0.0000	1.5674	96.2802	96.153
6.60000	1.42414	0.0286	0.0000	1.5532	96.4262	96.299
6.70000	1.35514	0.0281	0.0000	1.5402	96.5651	96.437

7.00000	1.29074	0.0277	0.0000	1.5284	96.6974	96.569
7.10000	1.22912	0.0264	0.0000	1.5174	96.8213	96.695
7.20000	1.17155	0.0251	0.0000	1.5052	96.9433	96.818
7.30000	1.11727	0.0240	0.0000	1.4955	97.0647	96.929
7.40000	1.06607	0.0229	0.0000	1.4880	97.1849	97.034
7.50000	1.01774	0.0218	0.0000	1.4807	97.2710	97.142
7.60000	0.97210	0.0209	0.0000	1.4737	97.3705	97.242
7.70000	0.92824	0.0199	0.0000	1.4670	97.4455	97.334
7.80000	0.88617	0.0191	0.0000	1.4604	97.5444	97.427
7.90000	0.84594	0.0182	0.0000	1.4540	97.6433	97.514
8.00000	0.80734	0.0174	0.0000	1.4478	97.7264	97.597
8.10000	0.77043	0.0167	0.0000	1.4418	97.8049	97.674
8.20000	0.73510	0.0160	0.0000	1.4360	97.8821	97.752
8.30000	0.70133	0.0153	0.0000	1.4304	97.9551	97.829
8.40000	0.66902	0.0147	0.0000	1.4252	98.0251	97.899
8.50000	0.63807	0.0141	0.0000	1.4200	98.0922	97.967
8.60000	0.60841	0.0135	0.0000	1.4148	98.1545	98.027
8.70000	0.58013	0.0130	0.0000	1.4098	98.2121	98.084
8.80000	0.55310	0.0124	0.0000	1.4041	98.2774	98.147
8.90000	0.52727	0.0120	0.0000	1.4005	98.3365	98.204
9.00000	0.50264	0.0115	0.0000	1.4000	98.3903	98.259
9.10000	0.47917	0.0111	0.0000	1.4004	98.4419	98.312
9.20000	0.45680	0.0106	0.0000	1.4294	98.4875	98.362
9.30000	0.43547	0.0102	0.0000	1.4241	98.5411	98.411
9.40000	0.41513	0.0099	0.0000	1.4193	98.5879	98.457
9.50000	0.39574	0.0095	0.0000	1.4144	98.6310	98.502
9.60000	0.37724	0.0091	0.0000	1.4094	98.6744	98.544
9.70000	0.35950	0.0088	0.0000	1.4044	98.7142	98.587
9.80000	0.34254	0.0085	0.0000	1.4004	98.7545	98.628
9.90000	0.32630	0.0082	0.0000	1.3954	98.7973	98.667
10.00000	0.31073	0.0079	0.0000	1.3916	98.8344	98.706
10.10000	0.29575	0.0076	0.0000	1.3873	98.8709	98.740
10.20000	0.28134	0.0073	0.0000	1.3831	98.9054	98.774
10.30000	0.26744	0.0071	0.0000	1.3790	98.9394	98.808
10.40000	0.25404	0.0068	0.0000	1.3750	98.9719	98.841
10.50000	0.24107	0.0066	0.0000	1.3711	99.0032	98.872
10.60000	0.22874	0.0064	0.0000	1.3672	99.0335	98.902
10.70000	0.21707	0.0062	0.0000	1.3635	99.0628	98.932
10.80000	0.20603	0.0060	0.0000	1.3594	99.0911	98.960
10.90000	0.20560	0.0054	0.0000	1.3562	99.1145	98.987
11.00000	0.20422	0.0054	0.0000	1.3526	99.1444	99.014
11.10000	0.20277	0.0054	0.0000	1.3492	99.1705	99.039
11.20000	0.20126	0.0052	0.0000	1.3458	99.1943	99.064
11.30000	0.20004	0.0051	0.0000	1.3424	99.2193	99.088
11.40000	0.20004	0.0047	0.0000	1.3391	99.2425	99.111
11.50000	0.20004	0.0047	0.0000	1.3359	99.2649	99.133
11.60000	0.20004	0.0046	0.0000	1.3328	99.2867	99.155
11.70000	0.20004	0.0045	0.0000	1.3297	99.3078	99.174
11.80000	0.20004	0.0043	0.0000	1.3266	99.3242	99.197
11.90000	0.19910	0.0042	0.0000	1.3236	99.3441	99.216
12.00000	0.19819	0.0041	0.0000	1.3207	99.3673	99.236

VISIBILITY AND  $\rho_{v}$  - DATA FOR PLANK RADIATOR, MECHANICS DEVISION, U.S. AIR FORCE, UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000 AND THE TEMPERATURE IS 1424.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2100.0  
DEGREES FAHRENHEIT = 3120.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 1.07 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 242.50 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 41.50 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.018.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 133.570 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 2.341 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1400 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.7300 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 110.24 WATT/CM<sup>2</sup> OR 1.10268E+09 ERG/SEC/CM<sup>2</sup> OR 2.44510E+02 KCAL/SEC/CM<sup>2</sup>.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 52.54 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR, WHEN RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE ( $\rho$ ) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT  $n$  IN THE FOLLOWING FORMULA:  $\rho = \rho_{ref} * (1 + n * \Delta T / T_{ref})$ .

THE EMISSIVITY IS 1.000 AND THE TEMPERATURE IS 1424.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2100.0  
DEGREES FAHRENHEIT = 3120.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPO-NENT $n$ FOR WATTS	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.02253	0.0004	0.0000	10.5714	0.0005	0.000
0.35500	0.02265	0.0004	0.0000	10.5954	0.0006	0.001
0.36000	0.02371	0.0004	0.0000	10.6274	0.0007	0.001
0.36500	0.02481	0.0004	0.0000	10.6671	0.0009	0.001
0.37000	0.026014	0.0004	0.0000	10.7135	0.0012	0.001
0.37500	0.02724	0.0011	0.0000	10.7667	0.0016	0.001
0.38000	0.02851	0.0013	0.0000	10.8263	0.0021	0.002
0.38500	0.02981	0.0016	0.0000	10.8922	0.0027	0.002
0.39000	0.03114	0.0019	0.0000	10.9641	0.0034	0.003
0.39500	0.03251	0.0022	0.0000	11.0419	0.0042	0.004
0.40000	0.03391	0.0025	0.0000	11.1256	0.0051	0.005
0.40500	0.03534	0.0029	0.0003	11.2151	0.0061	0.006
0.41000	0.03681	0.0034	0.0004	11.3103	0.0072	0.007
0.41500	0.03831	0.0039	0.0004	11.4113	0.0084	0.008
0.42000	0.03984	0.0045	0.0004	11.5181	0.0097	0.009
0.42500	0.04141	0.0051	1.3197	11.6307	0.0111	0.009
0.43000	0.04301	0.0058	2.4218	11.7491	0.0127	0.011
0.43500	0.04464	0.0065	3.8757	11.8731	0.0144	0.012
0.44000	0.04631	0.0073	5.7429	12.0034	0.0162	0.013
0.44500	0.04801	0.0081	8.0723	12.1401	0.0181	0.014
0.45000	0.04974	0.0089	10.9202	12.2831	0.0201	0.015
0.45500	0.05151	0.0106	14.3377	12.4324	0.0222	0.016
0.46000	0.05331	0.0124	18.3701	12.5881	0.0244	0.017
0.46500	0.05514	0.0142	23.0691	12.7501	0.0267	0.018
0.47000	0.05701	0.0161	28.4825	12.9181	0.0291	0.019
0.47500	0.05891	0.0180	34.6621	13.0921	0.0316	0.020
0.48000	0.06084	0.0200	41.6601	13.2721	0.0342	0.021
0.48500	0.06281	0.0220	49.5301	13.4581	0.0369	0.022
0.49000	0.06481	0.0240	58.3201	13.6501	0.0397	0.023
0.49500	0.06684	0.0260	68.0901	13.8481	0.0426	0.024
0.50000	0.06891	0.0280	78.8001	14.0521	0.0456	0.025
0.50500	0.07101	0.0300	90.4101	14.2621	0.0487	0.026
0.51000	0.07314	0.0320	102.8801	14.4781	0.0519	0.027
0.51500	0.07531	0.0340	116.1701	14.6991	0.0552	0.028
0.52000	0.07751	0.0360	130.3401	14.9261	0.0586	0.029
0.52500	0.07974	0.0380	145.4401	15.1591	0.0621	0.030
0.53000	0.08201	0.0400	161.5301	15.3981	0.0657	0.031
0.53500	0.08431	0.0420	178.6701	15.6431	0.0694	0.032
0.54000	0.08664	0.0440	196.9201	15.8941	0.0732	0.033
0.54500	0.08901	0.0460	216.3401	16.1511	0.0771	0.034
0.55000	0.09141	0.0480	236.9901	16.4141	0.0811	0.035
0.55500	0.09384	0.0500	258.9401	16.6831	0.0852	0.036
0.56000	0.09631	0.0520	282.2401	16.9581	0.0894	0.037
0.56500	0.09881	0.0540	306.9401	17.2391	0.0937	0.038
0.57000	0.10134	0.0560	333.0001	17.5261	0.0981	0.039
0.57500	0.10391	0.0580	360.4801	17.8191	0.1026	0.040
0.58000	0.10651	0.0600	389.3401	18.1181	0.1072	0.041
0.58500	0.10914	0.0620	419.6401	18.4231	0.1119	0.042
0.59000	0.11181	0.0640	451.4401	18.7341	0.1167	0.043
0.59500	0.11451	0.0660	484.7001	19.0511	0.1216	0.044
0.60000	0.11724	0.0680	519.4801	19.3741	0.1266	0.045
0.60500	0.12001	0.0700	555.8401	19.7031	0.1317	0.046
0.61000	0.12281	0.0720	593.8401	20.0381	0.1369	0.047
0.61500	0.12564	0.0740	633.5401	20.3791	0.1422	0.048
0.62000	0.12851	0.0760	674.9001	20.7261	0.1476	0.049
0.62500	0.13141	0.0780	717.9801	21.0791	0.1531	0.050
0.63000	0.13434	0.0800	762.7401	21.4381	0.1587	0.051
0.63500	0.13731	0.0820	809.2401	21.8031	0.1644	0.052
0.64000	0.14031	0.0840	857.5401	22.1741	0.1702	0.053
0.64500	0.14334	0.0860	907.6001	22.5511	0.1761	0.054
0.65000	0.14641	0.0880	959.3801	22.9341	0.1821	0.055
0.65500	0.14951	0.0900	1012.8401	23.3231	0.1882	0.056
0.66000	0.15264	0.0920	1068.0401	23.7181	0.1944	0.057
0.66500	0.15581	0.0940	1124.9401	24.1191	0.2007	0.058
0.67000	0.15901	0.0960	1183.6001	24.5261	0.2071	0.059
0.67500	0.16224	0.0980	1244.0001	24.9391	0.2136	0.060
0.68000	0.16551	0.1000	1306.1001	25.3581	0.2202	0.061
0.68500	0.16881	0.1020	1370.0001	25.7831	0.2269	0.062
0.69000	0.17214	0.1040	1435.6001	26.2141	0.2337	0.063
0.69500	0.17551	0.1060	1502.9001	26.6511	0.2406	0.064
0.70000	0.17891	0.1080	1571.9001	27.0941	0.2476	0.065



1.50000	51.72874	0.49338	0.00000	4.61644	13.48114	10.777
1.60000	53.00952	0.49311	0.00000	4.14113	14.9744	15.344
1.70000	54.70094	0.49272	0.00000	4.14124	16.14414	19.741
1.80000	56.80000	0.49224	0.00000	4.4221	17.4511	24.988
1.90000	59.20000	0.49177	0.00000	4.70000	18.9000	31.000
2.00000	61.92711	0.49130	0.00000	5.0000	20.5000	37.945
2.10000	64.98000	0.49083	0.00000	5.3410	22.2112	45.642
2.20000	68.35101	0.49036	0.00000	5.7244	24.0244	54.070
2.30000	72.04000	0.48989	0.00000	6.1510	25.9400	63.204
2.40000	76.04000	0.48942	0.00000	6.6244	27.9600	73.000
2.50000	80.35101	0.48895	0.00000	7.1410	29.0900	83.419
2.60000	84.98000	0.48848	0.00000	7.7000	30.3300	94.419
2.70000	90.00000	0.48801	0.00000	8.3000	31.6800	106.000
2.80000	95.42000	0.48754	0.00000	8.9400	33.1400	118.200
2.90000	101.24000	0.48707	0.00000	9.6200	34.7100	131.000
3.00000	107.46000	0.48660	0.00000	10.3400	36.3900	144.400
3.10000	114.09000	0.48613	0.00000	11.1000	38.1800	158.400
3.20000	121.13000	0.48566	0.00000	11.9000	39.9800	173.000
3.30000	128.58000	0.48519	0.00000	12.7400	41.8900	188.200
3.40000	136.44000	0.48472	0.00000	13.6200	43.9100	204.000
3.50000	144.71000	0.48425	0.00000	14.5400	46.0400	220.400
3.60000	153.39000	0.48378	0.00000	15.5000	48.2800	237.400
3.70000	162.48000	0.48331	0.00000	16.5000	50.6300	255.000
3.80000	171.98000	0.48284	0.00000	17.5400	53.0900	273.200
3.90000	181.89000	0.48237	0.00000	18.6200	55.6600	292.000
4.00000	192.21000	0.48190	0.00000	19.7400	58.3400	311.400
4.10000	202.94000	0.48143	0.00000	20.9000	61.1300	331.400
4.20000	214.08000	0.48096	0.00000	22.1000	64.0300	352.000
4.30000	225.63000	0.48049	0.00000	23.3400	67.0400	373.200
4.40000	237.59000	0.47999	0.00000	24.6200	70.1600	395.000
4.50000	249.96000	0.47952	0.00000	25.9400	73.3900	417.400
4.60000	262.74000	0.47905	0.00000	27.3000	76.7300	440.400
4.70000	275.93000	0.47858	0.00000	28.7000	80.1800	464.000
4.80000	289.53000	0.47811	0.00000	30.1400	83.7400	488.200
4.90000	303.54000	0.47764	0.00000	31.6200	87.4100	513.000
5.00000	317.96000	0.47717	0.00000	33.1400	91.1900	538.400
5.10000	332.79000	0.47670	0.00000	34.7000	95.0800	564.400
5.20000	348.03000	0.47623	0.00000	36.3000	99.0800	591.000
5.30000	363.68000	0.47576	0.00000	37.9400	103.1900	618.200
5.40000	379.74000	0.47529	0.00000	39.6200	107.4100	646.000
5.50000	396.21000	0.47482	0.00000	41.3400	111.7400	674.400
5.60000	413.09000	0.47435	0.00000	43.1000	116.1800	703.400
5.70000	430.38000	0.47388	0.00000	44.9000	120.7300	733.000
5.80000	448.08000	0.47341	0.00000	46.7400	125.3900	763.200
5.90000	466.19000	0.47294	0.00000	48.6200	130.1600	794.000
6.00000	484.71000	0.47247	0.00000	50.5400	135.0400	825.400
6.10000	503.64000	0.47200	0.00000	52.5000	140.0300	857.400
6.20000	522.98000	0.47153	0.00000	54.5000	145.1300	890.000
6.30000	542.73000	0.47106	0.00000	56.5400	150.3400	923.200
6.40000	562.89000	0.47059	0.00000	58.6200	155.6600	957.000
6.50000	583.46000	0.47012	0.00000	60.7400	161.0900	991.400
6.60000	604.44000	0.46965	0.00000	62.9000	166.6300	1026.400
6.70000	625.83000	0.46918	0.00000	65.1000	172.2800	1062.000
6.80000	647.63000	0.46871	0.00000	67.3400	178.0400	1098.200
6.90000	669.84000	0.46824	0.00000	69.6200	183.9100	1135.000
7.00000	692.46000	0.46777	0.00000	71.9400	189.8900	1172.400
7.10000	715.49000	0.46730	0.00000	74.3000	195.9800	1210.400
7.20000	738.93000	0.46683	0.00000	76.7000	202.1800	1249.000
7.30000	762.78000	0.46636	0.00000	79.1400	208.4900	1288.200
7.40000	787.04000	0.46589	0.00000	81.6200	214.9100	1328.000
7.50000	811.71000	0.46542	0.00000	84.1400	221.4400	1368.400
7.60000	836.79000	0.46495	0.00000	86.7000	228.0800	1409.400
7.70000	862.28000	0.46448	0.00000	89.3000	234.8300	1451.000
7.80000	888.18000	0.46401	0.00000	91.9400	241.6900	1493.200
7.90000	914.49000	0.46354	0.00000	94.6200	248.6600	1536.000
8.00000	941.21000	0.46307	0.00000	97.3400	255.7400	1579.400
8.10000	968.34000	0.46260	0.00000	100.1000	262.9300	1623.400
8.20000	995.88000	0.46213	0.00000	102.9000	270.2300	1668.000
8.30000	1023.83000	0.46166	0.00000	105.7400	277.6400	1713.200
8.40000	1052.19000	0.46119	0.00000	108.6200	285.1600	1759.000
8.50000	1080.96000	0.46072	0.00000	111.5400	292.7900	1805.400
8.60000	1110.14000	0.46025	0.00000	114.5000	300.5300	1852.400
8.70000	1139.73000	0.45978	0.00000	117.5000	308.3800	1900.000
8.80000	1169.73000	0.45931	0.00000	120.5400	316.3400	1948.200
8.90000	1200.14000	0.45884	0.00000	123.6200	324.4100	1997.000
9.00000	1230.96000	0.45837	0.00000	126.7400	332.5900	2046.400
9.10000	1262.19000	0.45790	0.00000	129.9000	340.8800	2096.400
9.20000	1293.83000	0.45743	0.00000	133.1000	349.2800	2147.000
9.30000	1325.88000	0.45696	0.00000	136.3400	357.7900	2198.200
9.40000	1358.34000	0.45649	0.00000	139.6200	366.4100	2250.000
9.50000	1391.21000	0.45602	0.00000	142.9400	375.1400	2302.400
9.60000	1424.49000	0.45555	0.00000	146.3000	383.9800	2355.400
9.70000	1458.18000	0.45508	0.00000	149.7000	392.9300	2409.000
9.80000	1492.28000	0.45461	0.00000	153.1400	401.9900	2463.200
9.90000	1526.79000	0.45414	0.00000	156.6200	411.1600	2518.000
10.00000	1561.71000	0.45367	0.00000	160.1400	420.4400	2573.400
10.10000	1597.04000	0.45320	0.00000	163.7000	429.8300	2629.400
10.20000	1632.78000	0.45273	0.00000	167.3000	439.3300	2686.000
10.30000	1668.93000	0.45226	0.00000	170.9400	448.9400	2743.200
10.40000	1705.49000	0.45179	0.00000	174.6200	458.6600	2801.000
10.50000	1742.46000	0.45132	0.00000	178.3400	468.4900	2859.400
10.60000	1779.84000	0.45085	0.00000	182.1000	478.4300	2918.400
10.70000	1817.63000	0.45038	0.00000	185.9000	488.4800	2978.000
10.80000	1855.83000	0.44991	0.00000	189.7400	498.6400	3038.200
10.90000	1894.44000	0.44944	0.00000	193.6200	508.9100	3099.000
11.00000	1933.46000	0.44897	0.00000	197.5400	519.2900	3160.400
11.10000	1972.89000	0.44850	0.00000	201.5000	529.7800	3222.400
11.20000	2012.73000	0.44803	0.00000	205.5000	540.3800	3285.000
11.30000	2052.98000	0.44756	0.00000	209.5400	551.0900	3348.200
11.40000	2093.64000	0.44709	0.00000	213.6200	561.9100	3412.000
11.50000	2134.71000	0.44662	0.00000	217.7400	572.8400	3476.400
11.60000	2176.19000	0.44615	0.00000	221.9000	583.8800	3541.400
11.70000	2218.08000	0.44568	0.00000	226.1000	595.0300	3607.000
11.80000	2260.38000	0.44521	0.00000	230.3400	606.2900	3673.200
11.90000	2303.09000	0.44474	0.00000	234.6200	617.6600	3740.000
12.00000	2346.21000	0.44427	0.00000	238.9400	629.1400	3807.400

7.00000	1.34017	0.4255	0.0000	1.4474	106.7149	96.780
7.10000	1.27441	0.4243	0.0000	1.4588	108.4457	96.809
7.20000	1.21834	0.4231	0.0000	1.4700	109.9703	97.012
7.30000	1.16197	0.4221	0.0000	1.4814	107.0460	97.124
7.40000	1.10530	0.4210	0.0000	1.4932	107.2073	97.229
7.50000	1.04833	0.4201	0.0000	1.5052	107.3104	97.321
7.60000	1.00000	0.4192	0.0000	1.5175	107.4134	97.414
7.70000	0.96035	0.4183	0.0000	1.5300	107.5122	97.504
7.80000	0.92107	0.4175	0.0000	1.5424	107.6064	97.589
7.90000	0.88207	0.4164	0.0000	1.5544	107.6965	97.671
8.00000	0.84327	0.4150	0.0000	1.5665	107.7827	97.749
8.10000	0.80464	0.4143	0.0000	1.5787	107.8651	97.824
8.20000	0.76627	0.4137	0.0000	1.5912	107.9441	97.895
8.30000	0.72817	0.4131	0.0000	1.6034	108.0197	97.964
8.40000	0.69030	0.4125	0.0000	1.6156	108.0922	98.030
8.50000	0.65264	0.4120	0.0000	1.6275	108.1617	98.093
8.60000	0.61527	0.4114	0.0000	1.6394	108.2284	98.153
8.70000	0.57817	0.4108	0.0000	1.6514	108.2924	98.211
8.80000	0.54130	0.4102	0.0000	1.6632	108.3534	98.267
8.90000	0.50464	0.4096	0.0000	1.6750	108.4117	98.320
9.00000	0.46827	0.4090	0.0000	1.6868	108.4694	98.372
9.10000	0.43210	0.4084	0.0000	1.6984	108.5234	98.421
9.20000	0.39613	0.4078	0.0000	1.7100	108.5767	98.469
9.30000	0.36030	0.4072	0.0000	1.7214	108.6266	98.514
9.40000	0.32464	0.4066	0.0000	1.7328	108.6740	98.558
9.50000	0.28917	0.4060	0.0000	1.7440	108.7216	98.600
9.60000	0.25387	0.4054	0.0000	1.7552	108.7664	98.641
9.70000	0.21870	0.4048	0.0000	1.7662	108.8098	98.680
9.80000	0.18364	0.4042	0.0000	1.7770	108.8	

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, D.R.T., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1274.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2150.0  
DEGREES FAHRENHEIT = 3810.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 2.51 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 345.79 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 110.07 CAND/EL/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.021 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 137.063 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 2.654 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1470 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4484 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 121.15 WATT/CM<sup>2</sup> OR 1.2115 \* 10<sup>10</sup> ERG/SEC/CM<sup>2</sup> OR 2.812800 \* 10<sup>10</sup> KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 59.15 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = 1.4484 / T

THE EMISSIVITY IS 1.000% AND THE TEMPERATURE IS 1274.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2150.0  
DEGREES FAHRENHEIT = 3810.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WYTON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.03552	0.0006	0.0000	19.1163	0.0006	0.001
0.35500	0.04331	0.0007	0.0000	18.8470	0.0010	0.001
0.36000	0.05207	0.0009	0.0000	18.5953	0.0012	0.001
0.37500	0.06319	0.0011	0.0000	18.3307	0.0015	0.001
0.37000	0.07561	0.0013	0.0000	18.0830	0.0018	0.002
0.37500	0.08990	0.0015	0.0000	17.8419	0.0022	0.002
0.38000	0.10450	0.0018	0.0000	17.6071	0.0027	0.002
0.38500	0.12039	0.0021	0.0000	17.3784	0.0033	0.003
0.39000	0.14695	0.0025	0.0000	17.1554	0.0040	0.003
0.39500	0.17126	0.0029	0.0000	16.9385	0.0048	0.004
0.40000	0.19874	0.0034	0.0541	16.7267	0.0057	0.005
0.40500	0.22962	0.0039	0.1249	16.5202	0.0068	0.006
0.41000	0.26415	0.0045	0.2155	16.3184	0.0080	0.007
0.41500	0.30264	0.0051	0.4227	16.1222	0.0094	0.008
0.42000	0.34518	0.0058	0.9394	15.9302	0.0110	0.009
0.42500	0.39261	0.0066	1.9489	15.7424	0.0129	0.011
0.43000	0.44470	0.0075	3.5078	15.5598	0.0150	0.012
0.43500	0.50192	0.0085	5.7347	15.3809	0.0173	0.014
0.44000	0.56454	0.0095	8.8101	15.2061	0.0200	0.017
0.44500	0.63294	0.0107	12.8024	15.0353	0.0230	0.019
0.45000	0.70743	0.0120	18.2800	14.8682	0.0264	0.022
0.45500	0.78822	0.0133	25.7274	14.7048	0.0301	0.023
0.46000	0.87564	0.0148	35.7264	14.5450	0.0342	0.026
0.46500	0.97001	0.0164	48.8110	14.3884	0.0389	0.032
0.47000	1.07159	0.0181	66.3102	14.2355	0.0440	0.036
0.47500	1.18067	0.0200	89.9200	14.0857	0.0496	0.041
0.48000	1.29752	0.0219	122.6414	13.9390	0.0558	0.046
0.48500	1.42239	0.0240	163.4612	13.7953	0.0626	0.052
0.49000	1.55554	0.0263	220.0161	13.6545	0.0700	0.058
0.49500	1.69721	0.0287	297.7591	13.5166	0.0781	0.065
0.50000	1.84763	0.0312	405.6127	13.3814	0.0870	0.072
0.50500	2.00700	0.0339	555.4564	13.2486	0.0966	0.080
0.51000	2.17552	0.0368	744.1161	13.1190	0.1071	0.088
0.51500	2.35339	0.0398	972.9864	12.9917	0.1184	0.096
0.52000	2.54077	0.0430	1224.4851	12.8668	0.1306	0.104
0.52500	2.73782	0.0463	1676.3415	12.7442	0.1438	0.119
0.53000	2.94467	0.0498	2226.0472	12.6240	0.1580	0.130
0.53500	3.16144	0.0535	2967.0508	12.5060	0.1733	0.143
0.54000	3.38825	0.0573	3998.0257	12.3902	0.1897	0.157
0.54500	3.62517	0.0613	5419.8159	12.2764	0.2072	0.171
0.55000	3.87229	0.0655	7219.9887	12.1650	0.2259	0.186
0.55500	4.12944	0.0698	9608.1550	12.0554	0.2459	0.203
0.56000	4.39727	0.0743	12775.1938	11.9476	0.2672	0.221
0.56500	4.67520	0.0790	16912.1737	11.8420	0.2899	0.239
0.57000	4.96343	0.0839	22113.1232	11.7382	0.3140	0.259

0.97400	9.20101	0.0000	1771.0747	11.4161	0.1396	0.200
0.98000	9.17069	0.0000	1799.4227	11.5194	0.1667	0.303
0.98600	9.14044	0.0000	1772.0472	11.6172	0.1993	0.324
0.99000	9.11074	0.0000	1701.1641	11.7103	0.2296	0.351
0.99500	9.05791	0.0000	1099.2688	11.2450	0.2575	0.374
0.99800	9.00701	0.0000	2963.4473	11.1513	0.2812	0.405
0.99900	7.20590	0.0000	2901.4766	11.0502	0.2946	0.435
0.99950	7.01644	0.0000	2411.3474	10.9405	0.3038	0.468
0.99980	6.81204	0.0000	2402.0267	10.8704	0.3080	0.498
0.99990	6.60267	0.0000	2176.4454	10.7917	0.3080	0.532
0.99995	6.40744	0.0000	1920.1697	10.7054	0.3070	0.567
0.99998	6.20371	0.0000	159.5080	10.6208	0.2730	0.604
0.99999	6.01867	0.0000	1419.3107	10.5368	0.2700	0.643
0.99999	5.84231	0.0000	1195.0369	10.4545	0.2692	0.684
0.99999	5.67467	0.0000	982.0244	10.3735	0.2695	0.726
0.99999	5.51464	0.0000	794.1667	10.2937	0.2699	0.770
0.99999	5.36132	0.0000	625.4918	10.2152	0.2696	0.816
0.99999	5.21464	0.0000	490.2753	10.1374	0.2686	0.864
0.99999	5.07362	0.0000	375.8703	10.0611	0.2681	0.914
0.99999	4.93742	0.0000	277.5161	9.9864	0.2684	0.965
0.99999	4.80592	0.0000	200.0566	9.9124	0.2684	1.019
0.99999	4.67812	0.0000	154.5710	9.8394	0.2684	1.075
0.99999	4.55402	0.0000	114.0771	9.7680	0.2684	1.132
0.99999	4.43362	0.0000	82.0024	9.6971	0.2684	1.192
0.99999	4.31682	0.0000	58.0532	9.6275	0.2684	1.254
0.99999	4.20362	0.0000	43.0244	9.5594	0.2684	1.317
0.99999	4.09392	0.0000	32.0123	9.4911	0.2684	1.383
0.99999	3.98772	0.0000	21.0212	9.4243	0.2684	1.451
0.99999	3.88492	0.0000	17.0228	9.3594	0.2684	1.522
0.99999	3.78542	0.0000	13.0149	9.2964	0.2684	1.594
0.99999	3.68912	0.0000	9.0071	9.2354	0.2684	1.668
0.99999	3.59592	0.0000	5.0000	9.1764	0.2684	1.744
0.99999	3.50582	0.0000	0.0000	9.1194	0.2684	1.822
0.99999	3.41882	0.0000	0.0000	9.0644	0.2684	1.902
0.99999	3.33482	0.0000	0.0000	9.0114	0.2684	1.984
0.99999	3.25382	0.0000	0.0000	8.9604	0.2684	2.068
0.99999	3.17582	0.0000	0.0000	8.9114	0.2684	2.154
0.99999	3.09982	0.0000	0.0000	8.8644	0.2684	2.242
0.99999	3.02582	0.0000	0.0000	8.8194	0.2684	2.332
0.99999	2.95382	0.0000	0.0000	8.7764	0.2684	2.424
0.99999	2.88382	0.0000	0.0000	8.7354	0.2684	2.518
0.99999	2.81582	0.0000	0.0000	8.6964	0.2684	2.614
0.99999	2.74982	0.0000	0.0000	8.6594	0.2684	2.712
0.99999	2.68582	0.0000	0.0000	8.6244	0.2684	2.812
0.99999	2.62382	0.0000	0.0000	8.5914	0.2684	2.914
0.99999	2.56382	0.0000	0.0000	8.5604	0.2684	3.018
0.99999	2.50582	0.0000	0.0000	8.5314	0.2684	3.124
0.99999	2.44982	0.0000	0.0000	8.5044	0.2684	3.232
0.99999	2.39582	0.0000	0.0000	8.4794	0.2684	3.342
0.99999	2.34382	0.0000	0.0000	8.4564	0.2684	3.454
0.99999	2.29382	0.0000	0.0000	8.4354	0.2684	3.568
0.99999	2.24582	0.0000	0.0000	8.4164	0.2684	3.684
0.99999	2.19982	0.0000	0.0000	8.3994	0.2684	3.802
0.99999	2.15582	0.0000	0.0000	8.3844	0.2684	3.922
0.99999	2.11382	0.0000	0.0000	8.3714	0.2684	4.044
0.99999	2.07382	0.0000	0.0000	8.3604	0.2684	4.168
0.99999	2.03582	0.0000	0.0000	8.3514	0.2684	4.294
0.99999	2.00000	0.0000	0.0000	8.3444	0.2684	4.422
0.99999	1.96582	0.0000	0.0000	8.3394	0.2684	4.552
0.99999	1.93382	0.0000	0.0000	8.3364	0.2684	4.684
0.99999	1.90382	0.0000	0.0000	8.3354	0.2684	4.818
0.99999	1.87582	0.0000	0.0000	8.3364	0.2684	4.954
0.99999	1.84982	0.0000	0.0000	8.3394	0.2684	5.092
0.99999	1.82582	0.0000	0.0000	8.3444	0.2684	5.232
0.99999	1.80382	0.0000	0.0000	8.3514	0.2684	5.374
0.99999	1.78382	0.0000	0.0000	8.3604	0.2684	5.518
0.99999	1.76582	0.0000	0.0000	8.3714	0.2684	5.664
0.99999	1.74982	0.0000	0.0000	8.3844	0.2684	5.812
0.99999	1.73582	0.0000	0.0000	8.3994	0.2684	5.962
0.99999	1.72382	0.0000	0.0000	8.4164	0.2684	6.114
0.99999	1.71382	0.0000	0.0000	8.4354	0.2684	6.268
0.99999	1.70582	0.0000	0.0000	8.4564	0.2684	6.424
0.99999	1.69982	0.0000	0.0000	8.4794	0.2684	6.582
0.99999	1.69582	0.0000	0.0000	8.5044	0.2684	6.742
0.99999	1.69382	0.0000	0.0000	8.5314	0.2684	6.904
0.99999	1.69382	0.0000	0.0000	8.5604	0.2684	7.068
0.99999	1.69582	0.0000	0.0000	8.5914	0.2684	7.234
0.99999	1.69982	0.0000	0.0000	8.6244	0.2684	7.402
0.99999	1.70582	0.0000	0.0000	8.6594	0.2684	7.572
0.99999	1.71382	0.0000	0.0000	8.6964	0.2684	7.744
0.99999	1.72382	0.0000	0.0000	8.7354	0.2684	7.918
0.99999	1.73582	0.0000	0.0000	8.7764	0.2684	8.094
0.99999	1.74982	0.0000	0.0000	8.8194	0.2684	8.272
0.99999	1.76582	0.0000	0.0000	8.8644	0.2684	8.452
0.99999	1.78382	0.0000	0.0000	8.9114	0.2684	8.634
0.99999	1.80382	0.0000	0.0000	8.9604	0.2684	8.818
0.99999	1.82582	0.0000	0.0000	9.0114	0.2684	9.004
0.99999	1.84982	0.0000	0.0000	9.0644	0.2684	9.192
0.99999	1.87582	0.0000	0.0000	9.1194	0.2684	9.382
0.99999	1.90382	0.0000	0.0000	9.1764	0.2684	9.574
0.99999	1.93382	0.0000	0.0000	9.2354	0.2684	9.768
0.99999	1.96582	0.0000	0.0000	9.2964	0.2684	9.964
0.99999	1.99982	0.0000	0.0000	9.3594	0.2684	10.162
0.99999	2.03582	0.0000	0.0000	9.4244	0.2684	10.362
0.99999	2.07382	0.0000	0.0000	9.4914	0.2684	10.564
0.99999	2.11382	0.0000	0.0000	9.5604	0.2684	10.768
0.99999	2.15582	0.0000	0.0000	9.6314	0.2684	10.974
0.99999	2.19982	0.0000	0.0000	9.7044	0.2684	11.182
0.99999	2.24582	0.0000	0.0000	9.7794	0.2684	11.392
0.99999	2.29382	0.0000	0.0000	9.8564	0.2684	11.604
0.99999	2.34382	0.0000	0.0000	9.9354	0.2684	11.818
0.99999	2.39582	0.0000	0.0000	10.0164	0.2684	12.034
0.99999	2.44982	0.0000	0.0000	10.0994	0.2684	12.252
0.99999	2.50582	0.0000	0.0000	10.1844	0.2684	12.472
0.99999	2.56382	0.0000	0.0000	10.2714	0.2684	12.694
0.99999	2.62382	0.0000	0.0000	10.3604	0.2684	12.918
0.99999	2.68582	0.0000	0.0000	10.4514	0.2684	13.144
0.99999	2.74982	0.0000	0.0000	10.5444	0.2684	13.372
0.99999	2.81582	0.0000	0.0000	10.6394	0.2684	13.602
0.99999	2.88382	0.0000	0.0000	10.7364	0.2684	13.834
0.99999	2.95382	0.0000	0.0000	10.8354	0.2684	14.068
0.99999	3.02582	0.0000	0.0000	10.9364	0.2684	14.304
0.99999	3.09982	0.0000	0.0000	11.0394	0.2684	14.542
0.99999	3.17582	0.0000	0.0000	11.1444	0.2684	14.782
0.99999	3.25382	0.0000	0.0000	11.2514	0.2684	15.024
0.99999	3.33482	0.0000	0.0000	11.3604	0.2684	15.268
0.99999	3.41882	0.0000	0.0000	11.4714	0.2684	15.514
0.99999	3.50582	0.0000	0.0000	11.5844	0.2684	15.762
0.99999	3.59582	0.0000	0.0000	11.7004	0.2684	16.012
0.99999	3.68982	0.0000	0.0000	11.8194	0.2684	16.264
0.99999	3.78782	0.0000	0.0000	11.9414	0.2684	16.518
0.99999	3.88982	0.0000	0.0000	12.0664	0.2684	16.774
0.99999	3.99582	0.0000	0.0000	12.1944	0.2684	17.032
0.99999	4.10582	0.0000	0.0000	12.3254	0.2684	17.292
0.99999	4.21982	0.0000	0.0000	12.4594	0.2684	17.554
0.99999	4.33782	0.0000	0.0000	12.5964	0.2684	17.818
0.99999	4.45982	0.0000	0.0000	12.7364	0.2684	18.084
0.99999	4.58582	0.0000	0.0000	12.8794	0.2684	18.352
0.99999	4.71582	0.0000	0.0000	13.0254	0.2684	18.622
0.99999	4.84982	0.0000	0.0000	13.1744	0.2684	18.894
0.99999	4.98782	0.0000	0.0000	13.3264	0.2684	19.168
0.99999	5.12982	0.0000	0.0000	13.4814	0.2684	19.444
0.99999	5.27582	0.0000	0.0000	13.6394	0.2684	19.722
0.99999	5.42582	0.0000	0.0000	13.8004	0.2684	20.002
0.99999	5.57982	0.0000	0.0000	13.9644	0.2684	20.284
0.99999	5.73782	0.0000	0.0000	14.1314	0.2684	20.568
0.99999	5.89982	0.0000	0.0000	14.3014	0.2684	20.854
0.99999	6.06582	0.0000	0.0000	14.4744	0.2684	21.142
0.99999	6.23582	0.0000	0.0000	14.6504	0.2684	21.432
0.99999	6.40982	0.0000	0.0000	14.8294	0.2684	21.724
0.99999	6.58782	0.0000	0.0000	15.0114	0.2684	22.018
0.99999	6.76982	0.0000	0.0000	15.1964	0.2684	22.314
0.99999	6.95582	0.0000	0.0000	15.3844	0.2684	22.612
0.99999	7.14582	0.0000	0.0000	15.5754	0.2684	22.912
0.99999	7.33982	0.0000	0.0000	15.7694	0.2684	23.214
0.99999	7.53782	0.0000	0.0000	15.9664	0.2684	23.518
0.99999	7.73982	0.0000	0.0000	16.1664	0.2684	23.824
0.99999	7.94582	0.0000	0.0000	16.3694	0.2684	24.132
0.99999	8.15582	0				

1.50000	37.59255	0.0737	0.0000	4.5124	39.2453	32.395
1.60000	55.32617	0.0354	0.0000	4.2465	44.8073	37.060
1.70000	52.48036	0.2073	0.0000	4.0141	50.2013	41.512
1.80000	49.31251	0.1137	0.0000	3.8096	55.3827	45.715
1.90000	46.01060	0.7779	0.0000	3.6247	60.1494	49.650
2.00000	42.70684	0.7220	0.0000	3.4676	64.5048	53.311
2.10000	39.48979	0.6676	0.0000	3.3236	68.4937	56.789
2.20000	36.41577	0.6157	0.0000	3.1938	72.1476	59.834
2.30000	33.51820	0.5667	0.0000	3.0768	75.5827	62.710
2.40000	30.7307	0.5210	0.0000	2.9707	79.1077	65.379
2.50000	28.13754	0.4786	0.0000	2.8741	82.1521	67.818
2.60000	25.79759	0.4395	0.0000	2.7858	84.8657	70.059
2.70000	23.67670	0.4037	0.0000	2.7050	87.3579	72.109
2.80000	21.83487	0.3704	0.0000	2.6307	89.6470	73.998
2.90000	20.16049	0.3409	0.0000	2.5622	91.7504	75.735
3.00000	18.74124	0.3135	0.0000	2.4980	93.6843	77.331
3.10000	17.64480	0.2885	0.0000	2.4402	95.4635	78.799
3.20000	16.71909	0.2654	0.0000	2.3857	97.1016	80.152
3.30000	14.99244	0.2450	0.0000	2.3349	98.6113	81.368
3.40000	13.37477	0.2261	0.0000	2.2876	100.0038	82.547
3.50000	12.35545	0.2096	0.0000	2.2433	101.7895	83.600
3.60000	11.42553	0.1937	0.0000	2.2018	102.4778	84.589
3.70000	10.57642	0.1788	0.0000	2.1629	103.5773	85.497
3.80000	9.80109	0.1657	0.0000	2.1263	104.5966	86.330
3.90000	9.09201	0.1537	0.0000	2.0918	105.5387	87.117
4.00000	8.44313	0.1427	0.0000	2.0591	106.4160	87.840
4.10000	7.84879	0.1327	0.0000	2.0286	107.2302	88.512
4.20000	7.30384	0.1235	0.0000	1.9994	107.9874	89.137
4.30000	6.80377	0.1150	0.0000	1.9720	108.6924	89.719
4.40000	6.34414	0.1073	0.0000	1.9460	109.3495	90.269
4.50000	5.92186	0.1001	0.0000	1.9212	109.9625	90.760
4.60000	5.53225	0.0935	0.0000	1.8976	110.5350	91.240
4.70000	5.17449	0.0875	0.0000	1.8752	111.0701	91.682
4.80000	4.84432	0.0819	0.0000	1.8534	111.5709	92.095
4.90000	4.53880	0.0767	0.0000	1.8325	112.0398	92.482
5.00000	4.25670	0.0720	0.0000	1.8114	112.4794	92.845
5.10000	3.99570	0.0676	0.0000	1.7906	112.8818	93.186
5.20000	3.75398	0.0635	0.0000	1.7706	113.2792	93.506
5.30000	3.52992	0.0597	0.0000	1.7506	113.6632	93.806
5.40000	3.32201	0.0562	0.0000	1.7314	113.9947	94.084
5.50000	3.12992	0.0529	0.0000	1.7128	114.3001	94.335
5.60000	2.95291	0.0499	0.0000	1.6946	114.5819	94.565
5.70000	2.78239	0.0470	0.0000	1.6769	114.8404	94.769
5.80000	2.62684	0.0444	0.0000	1.6595	115.0868	94.945
5.90000	2.48485	0.0420	0.0000	1.6424	115.3241	95.094
6.00000	2.34584	0.0397	0.0000	1.6256	115.5555	95.219
6.10000	2.22028	0.0375	0.0000	1.6091	115.7818	95.323
6.20000	2.10724	0.0355	0.0000	1.5928	116.0038	95.408
6.30000	1.99617	0.0337	0.0000	1.5768	116.2214	95.471
6.40000	1.88655	0.0319	0.0000	1.5612	116.4354	95.515
6.50000	1.77876	0.0303	0.0000	1.5458	116.6457	95.542
6.60000	1.67210	0.0288	0.0000	1.5307	116.8524	95.557
6.70000	1.56698	0.0273	0.0000	1.5157	117.0553	95.553
6.80000	1.46359	0.0260	0.0000	1.5010	117.2543	95.534
6.90000	1.36099	0.0247	0.0000	1.4867	117.3801	95.507

7.00000	1.26029	0.0235	0.0000	1.4729	117.4827	95.475
7.10000	1.16134	0.0224	0.0000	1.4581	117.6143	95.407
7.20000	1.06137	0.0211	0.0000	1.4435	117.7476	95.319
7.30000	1.02020	0.0203	0.0000	1.4291	117.8707	95.295
7.40000	1.14684	0.0194	0.0000	1.4149	117.9842	95.302
7.50000	1.09444	0.0185	0.0000	1.4011	118.1002	95.485
7.60000	1.04697	0.0177	0.0000	1.3876	118.2071	95.573
7.70000	0.99924	0.0169	0.0000	1.3744	118.3093	95.657
7.80000	0.95407	0.0161	0.0000	1.3615	118.4069	95.734
7.90000	0.91233	0.0154	0.0000	1.3487	118.5002	95.815
8.00000	0.87279	0.0148	0.0000	1.3361	118.5894	95.889
8.10000	0.83514	0.0141	0.0000	1.3238	118.6748	95.959
8.20000	0.79991	0.0135	0.0000	1.3118	118.7565	96.027
8.30000	0.76631	0.0130	0.0000	1.2999	118.8348	96.091
8.40000	0.73444	0.0124	0.0000	1.2882	118.9099	96.153
8.50000	0.70421	0.0119	0.0000	1.2767	118.9818	96.212
8.60000	0.67550	0.0114	0.0000	1.2654	119.0508	96.269
8.70000	0.64824	0.0110	0.0000	1.2543	119.1149	96.324
8.80000	0.62231	0.0105	0.0000	1.2434	119.1805	96.376
8.90000	0.59742	0.0101	0.0000	1.2327	119.2414	96.427
9.00000	0.57425	0.0097	0.0000	1.2221	119.3000	96.475
9.10000	0.55195	0.0093	0.0000	1.2117	119.3543	96.522
9.20000	0.53071	0.0090	0.0000	1.2014	119.4105	96.566
9.30000	0.51044	0.0086	0.0000	1.1912	119.4625	96.609
9.40000	0.49120	0.0083	0.0000	1.1811	119.5124	96.651
9.50000	0.47282	0.0080	0.0000	1.1711	119.5608	96.690
9.60000	0.45524	0.0077	0.0000	1.1611	119.6072	96.729
9.70000	0.43845	0.0074	0.0000	1.1512	119.6519	96.766
9.80000	0.42227	0.0071	0.0000	1.1414	119.6949	96.801
9.90000	0.40669	0.0069	0.0000	1.1317	119.7344	96.835
10.00000	0.39274	0.0066	0.0000	1.1221	119.7744	96.868
10.10000	0.37940	0.0064	0.0000	1.1126	119.8150	96.900
10.20000	0.36544	0.0062	0.0000	1.1031	119.8522	96.931
10.30000	0.35271	0.0060	0.0000	1.0937	119.8881	96.961
10.40000	0.34054	0.0058	0.0000	1.0844	119.9227	96.989
10.50000	0.32884	0.0056	0.0000	1.0752	119.9527	96.991
10.60000	0.31764	0.0054	0.0000	1.0661	119.9805	96.993
10.70000	0.30694	0.0052	0.0000	1.0570	120.0098	96.999
10.80000	0.29670	0.0050	0.0000	1.0480	120.0409	96.996
10.90000	0.28684	0.0048	0.0000	1.0391	120.0701	96.991
11.00000	0.27742	0.0047	0.0000	1.0304	120.1073	96.982
11.10000	0.26834	0.0045	0.0000	1.0218	120.1344	96.964
11.20000	0.25967	0.0044	0.0000	1.0133	120.1610	96.946
11.30000	0.25133	0.0042	0.0000	1.0049	120.1844	96.927
11.40000	0.24332	0.0041	0.0000	0.9966	120.2113	96.927
11.50000	0.23561	0.0040	0.0000	0.9884	120.2357	96.927
11.60000	0.22821	0.0039	0.0000	0.9803	120.2544	96.924
11.70000	0.22112	0.0037	0.0000	0.9723	120.2809	96.928
11.80000	0.21429	0.0036	0.0000	0.9644	120.3027	96.930
11.90000	0.20772	0.0035	0.0000	0.9565	120.3214	96.930
12.00000	0.20140	0.0034	0.0000	0.9487	120.3442	96.937



VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, CU, 1952, UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1024.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2200.0  
DEGREES FAHRENHEIT = 3500.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 3.17 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 450.00 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 143.24 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.024.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 142.019 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 1.388 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1173 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.6600 MICRONS.  
I.E., THIS WAVELENGTH MAXIMIZES THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE.

THE TOTAL POWER RADIATED IS 132.82 WATT/CM<sup>2</sup> OR 1.3282E+09 (W/SEC)/CM<sup>2</sup> OR 1.3282E+22 CAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 66.35 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT AND LUMENS PER CM<sup>2</sup> X RADIANT EXITANCE X VISIBILITY FACTOR.  
WHERE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENT.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W = K X T<sup>M</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1024.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2200.0  
DEGREES FAHRENHEIT = 3500.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR W/TOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.05485	0.0004	0.0000	14.4818	0.0012	0.001
0.35400	0.05447	0.0010	0.0000	14.4147	0.0015	0.001
0.35800	0.05409	0.0012	0.0000	14.3429	0.0019	0.001
0.36200	0.05371	0.0014	0.0000	14.2714	0.0023	0.002
0.36600	0.05334	0.0017	0.0000	14.2020	0.0028	0.002
0.37000	0.05297	0.0020	0.0000	14.1344	0.0035	0.003
0.37400	0.05260	0.0024	0.0000	14.0689	0.0042	0.003
0.37800	0.05223	0.0028	0.0000	14.0034	0.0051	0.004
0.38200	0.05186	0.0033	0.0000	13.9379	0.0061	0.005
0.38600	0.05149	0.0037	0.0000	13.8724	0.0072	0.005
0.39000	0.05112	0.0044	0.0000	13.8069	0.0084	0.006
0.39400	0.05075	0.0050	0.0000	13.7414	0.0101	0.006
0.39800	0.05038	0.0058	0.0000	13.6759	0.0119	0.009
0.40200	0.05001	0.0066	0.0000	13.6104	0.0140	0.011
0.40600	0.04964	0.0075	1.1492	13.5449	0.0163	0.012
0.41000	0.04927	0.0085	2.7873	13.4794	0.0190	0.014
0.41400	0.04890	0.0095	4.8959	13.4139	0.0219	0.017
0.41800	0.04853	0.0107	8.1334	13.3484	0.0253	0.019
0.42200	0.04816	0.0120	12.4754	13.2829	0.0291	0.022
0.42600	0.04779	0.0134	17.8672	13.2174	0.0333	0.025
0.43000	0.04742	0.0149	25.4289	13.1519	0.0380	0.029
0.43400	0.04705	0.0166	35.8367	13.0864	0.0432	0.031
0.43800	0.04668	0.0184	49.7226	13.0209	0.0489	0.037
0.44200	0.04631	0.0203	67.4921	12.9554	0.0554	0.042
0.44600	0.04594	0.0223	91.4410	12.8899	0.0625	0.047
0.45000	0.04557	0.0245	123.8473	12.8244	0.0702	0.053
0.45400	0.04520	0.0268	168.3524	12.7589	0.0786	0.059
0.45800	0.04483	0.0293	228.6550	12.6934	0.0881	0.066
0.46200	0.04446	0.0320	309.0149	12.6279	0.0987	0.074
0.46600	0.04409	0.0348	404.8391	12.5624	0.1093	0.082
0.47000	0.04372	0.0377	520.8531	12.4969	0.1213	0.091
0.47400	0.04335	0.0409	650.6220	12.4314	0.1344	0.101
0.47800	0.04298	0.0442	800.0053	12.3659	0.1485	0.112
0.48200	0.04261	0.0477	970.1909	12.3004	0.1637	0.123
0.48600	0.04224	0.0513	1163.3504	12.2349	0.1801	0.136
0.49000	0.04187	0.0551	1382.8143	12.1694	0.1978	0.149
0.49400	0.04150	0.0591	1630.6104	12.1039	0.2167	0.163
0.49800	0.04113	0.0633	1910.6908	12.0384	0.2370	0.178
0.50200	0.04076	0.0677	2227.1197	11.9729	0.2587	0.195
0.50600	0.04039	0.0722	2683.2849	11.9074	0.2819	0.212
0.51000	0.04002	0.0769	3283.3930	11.8419	0.3077	0.231
0.51400	0.03965	0.0819	3943.2760	11.7764	0.3350	0.251
0.51800	0.03928	0.0868	4668.1050	11.7109	0.3630	0.272
0.52200	0.03891	0.0922	5463.5831	11.6454	0.3927	0.294
0.52600	0.03854	0.0977	6335.5317	11.5799	0.4222	0.318

0.47500	6.45485	0.1033	4249.0853	11.3717	0.455A	0.343
0.50000	7.24055	0.1091	4249.5028	11.2717	0.490A	0.370
0.52500	7.43709	0.1151	4249.1828	11.1773	0.520A	0.398
0.55000	8.14704	0.1213	4142.2940	11.0828	0.5672	0.427
0.57500	8.46755	0.1278	4001.7837	10.9895	0.6085	0.458
0.60000	8.89914	0.1341	3918.5360	10.9079	0.6519	0.491
0.62500	9.34228	0.1408	3807.0104	10.8279	0.6975	0.529
0.65000	9.79613	0.1478	3500.6882	10.7493	0.7453	0.561
0.67500	10.26069	0.1548	3078.9784	10.6722	0.7955	0.599
0.70000	10.73571	0.1618	2781.4125	10.5965	0.8480	0.638
0.72500	11.22101	0.1691	2480.3229	10.5221	0.9028	0.680
0.75000	11.71629	0.1766	2111.2754	10.4491	0.9592	0.723
0.77500	12.22129	0.1842	1803.3738	10.3774	1.0200	0.768
0.80000	12.73574	0.1919	1515.5534	10.3070	1.0828	0.815
0.82500	13.25935	0.1998	1244.2579	10.2378	1.1474	0.864
0.85000	13.79183	0.2079	1001.4574	10.1699	1.2150	0.915
0.87500	14.33284	0.2160	780.4542	10.1031	1.2853	0.968
0.90000	14.88214	0.2243	617.3112	10.0375	1.3584	1.021
0.92500	15.43914	0.2327	472.4437	9.9731	1.4342	1.080
0.95000	16.00413	0.2412	348.2494	9.9097	1.5128	1.139
0.97500	16.57617	0.2498	250.2513	9.8475	1.5942	1.200
1.00000	17.15513	0.2585	182.3131	9.7863	1.6785	1.264
0.02500	17.74065	0.2674	141.5574	9.7261	1.7658	1.329
0.05000	18.33240	0.2763	107.2215	9.6670	1.8540	1.397
0.07500	18.93072	0.2854	77.3728	9.6089	1.9441	1.468
0.10000	19.53315	0.2944	54.4544	9.5517	2.0363	1.540
0.12500	20.14144	0.3036	39.2109	9.4955	2.1304	1.615
0.15000	20.75453	0.3128	29.6175	9.4403	2.2267	1.692
0.17500	21.37205	0.3221	21.7995	9.3869	2.3240	1.771
0.20000	21.99368	0.3315	16.4513	9.3352	2.4224	1.852
0.22500	22.61900	0.3409	10.7466	9.2850	2.5219	1.934
0.25000	23.24770	0.3504	8.0547	9.2362	2.6224	2.023
0.27500	23.87941	0.3599	6.4952	9.1887	2.7240	2.112
0.30000	24.51374	0.3694	5.0004	9.1423	2.8264	2.203
0.32500	25.15044	0.3790	3.6205	9.0970	2.9304	2.298
0.35000	25.78910	0.3887	2.3537	9.0528	3.0359	2.397
0.37500	27.07088	0.4000	0.0000	9.0096	3.1428	2.501
0.40000	28.35641	0.4110	0.0000	8.9675	3.2513	2.600
0.42500	29.64304	0.4220	0.0000	8.9264	3.3613	2.704
0.45000	30.92828	0.4331	0.0000	8.8863	3.4728	2.811
0.47500	32.20959	0.4441	0.0000	8.8471	3.5858	2.924
0.50000	33.48442	0.4554	0.0000	8.8088	3.7004	3.040
0.52500	34.75113	0.4667	0.0000	8.7713	3.8164	3.160
0.55000	36.00693	0.4782	0.0000	8.7347	3.9338	3.284
0.57500	37.25001	0.4898	0.0000	8.6989	4.0526	3.412
0.60000	38.47841	0.5015	0.0000	8.6639	4.1728	3.544
0.62500	39.69933	0.5132	0.0000	8.6297	4.2944	3.680
0.65000	40.91404	0.5250	0.0000	8.5963	4.4174	3.820
0.67500	42.09806	0.5369	0.0000	8.5637	4.5418	3.964
0.70000	43.21083	0.5488	0.0000	8.5318	4.6676	4.112
0.72500	44.34103	0.5608	0.0000	8.5006	4.7948	4.264
0.75000	45.48741	0.5728	0.0000	8.4700	4.9234	4.420
0.77500	46.52891	0.5849	0.0000	8.4400	5.0534	4.580
0.80000	47.56845	0.5971	0.0000	8.4106	5.1848	4.744
0.82500	48.60134	0.7324	0.0000	8.3818	5.3174	4.912

0.95000	49.61819	0.7477	0.0000	8.3536	5.4512	5.090
0.96000	50.56684	0.7628	0.0000	8.3260	5.5852	5.244
0.97000	51.53000	0.7788	0.0000	8.2989	5.7204	5.400
0.98000	52.49483	0.7944	0.0000	8.2723	5.8568	5.558
0.99000	53.42915	0.8037	0.0000	8.2461	5.9944	5.718
1.00000	54.34320	0.8161	0.0000	8.2203	6.1332	5.880
1.01000	55.20670	0.8290	0.0000	8.1949	6.2732	6.044
1.02000	56.09947	0.8410	0.0000	8.1699	6.4144	6.210
1.03000	56.95138	0.8524	0.0000	8.1453	6.5568	6.378
1.04000	57.79237	0.8635	0.0000	8.1210	6.7004	6.548
1.05000	58.62925	0.8741	0.0000	8.0970	6.8452	6.720
1.06000	59.46164	0.8844	0.0000	8.0733	6.9912	6.894
1.07000	59.29014	0.8937	0.0000	8.0499	7.1384	7.070
1.08000	59.90812	0.9029	0.0000	8.0268	7.2868	7.248
1.09000	60.48571	0.9114	0.0000	8.0040	7.4364	7.428
1.10000	61.03322	0.9198	0.0000	7.9815	7.5872	7.610
1.11000	61.55004	0.9278	0.0000	7.9593	7.7392	7.794
1.12000	62.03922	0.9350	0.0000	7.9374	7.8924	7.980
1.13000	62.49881	0.9419	0.0000	7.9158	8.0468	8.168
1.14000	62.92804	0.9484	0.0000	7.8945	8.2024	8.358
1.15000	63.33125	0.9545	0.0000	7.8734	8.3592	8.550
1.16000	63.70874	0.9601	0.0000	7.8526	8.5172	8.744
1.17000	64.05294	0.9653	0.0000	7.8320	8.6764	8.940
1.18000	64.37335	0.9702	0.0000	7.8117	8.8368	9.138
1.19000	64.66744	0.9746	0.0000	7.7916	8.9984	9.338
1.20000	64.93578	0.9786	0.0000	7.7717	9.1612	9.540
1.21000	65.17889	0.9823	0.0000	7.7520	9.3252	9.744
1.22000	65.39734	0.9855	0.0000	7.7326	9.4904	9.950
1.23000	65.59169	0.9885	0.0000	7.7134	9.6568	10.158
1.24000	65.76250	0.9911	0.0000	7.6944	9.8244	10.368
1.25000	65.91037	0.9933	0.0000	7.6756	9.9932	10.580
1.26000	66.03589	0.9952	0.0000	7.6570	10.1632	10.794
1.27000	66.13959	0.9968	0.0000	7.6386	10.3344	11.010
1.28000	66.22210	0.9980	0.0000	7.6204	10.5068	11.228
1.29000	66.28404	0.9990	0.0000	7.6024	10.6804	11.448
1.30000	66.32588	0.9996	0.0000	7.5846	10.8552	11.670
1.31000	66.34831	0.9999	0.0000	7.5670	11.0312	11.894
1.32000	66.35189	1.0000	0.0000	7.5496	11.2084	12.120
1.33000	66.33717	0.9998	0.0000	7.5324	11.3868	12.348
1.34000	66.30474	0.9993	0.0000	7.5154	11.5664	12.578
1.35000	66.25517	0.9985	0.0000	7.4986	11.7472	12.810
1.36000	66.18901	0.9975	0.0000	7.4820	11.9292	13.044
1.37000	66.10682	0.9963	0.0000	7.4656	12.1124	13.280
1.38000	66.00915	0.9948	0.0000	7.4494	12.2968	13.518
1.39000	65.89653	0.9931	0.0000	7.4334	12.4824	13.758
1.40000	65.76949	0.9912	0.0000	7.4176	12.6692	13.998
1.41000	65.62857	0.9891	0.0000	7.4020	12.8572	14.240
1.42000	65.47427	0.9868	0.0000	7.3866	13.0464	14.484
1.43000	65.30709	0.9842	0.0000	7.3714	13.2368	14.730
1.44000	65.12753	0.9815	0.0000	7.3564	13.4284	14.978
1.45000	64.93609	0.9786	0.0000	7.3416	13.6212	15.228
1.46000	64.73322	0.9756	0.0000	7.3270	13.8152	15.480
1.47000	64.51941	0.9724	0.0000	7.3126	14.0104	15.734
1.48000	64.29500	0.9690	0.0000	7.2984	14.2068	15.990
1.49000	64.06073	0.9655	0.0000	7.2844	14.4044	16.248

1.50000	43.41675	0.9618	0.0000	4.4154	45.7167	34.061
1.60000	40.91667	0.9188	0.0000	4.1545	51.4544	38.768
1.70000	57.49814	0.8664	0.0000	1.9102	47.3815	41.205
1.80000	51.77747	0.8105	0.0000	1.7111	47.9687	47.395
1.90000	49.97127	0.7531	0.0000	1.5552	48.1162	51.301
2.00000	46.21387	0.6965	0.0000	1.4086	47.9888	54.922
2.10000	42.59314	0.6419	0.0000	1.2788	47.3836	58.264
2.20000	39.14282	0.5902	0.0000	1.1325	41.4698	61.380
2.30000	35.85082	0.5418	0.0000	1.0187	45.2218	64.146
2.40000	32.97081	0.4968	0.0000	2.0157	44.6675	66.780
2.50000	30.22265	0.4555	0.0000	2.8218	91.8253	69.137
2.60000	27.70117	0.4175	0.0000	2.7161	94.7196	71.314
2.70000	25.39475	0.3827	0.0000	2.6576	97.3727	73.314
2.80000	23.29023	0.3517	0.0000	2.5455	99.8053	75.145
2.90000	21.37361	0.3221	0.0000	2.5199	102.0370	76.824
3.00000	19.62821	0.2948	0.0000	2.4574	104.0457	78.368
3.10000	18.04129	0.2719	0.0000	2.4005	105.9679	79.785
3.20000	16.59798	0.2501	0.0000	2.3478	107.6997	81.089
3.30000	15.27548	0.2293	0.0000	2.2993	109.2918	82.288
3.40000	14.05917	0.2124	0.0000	2.2551	110.7597	83.391
3.50000	13.00824	0.1968	0.0000	2.2093	112.1136	84.411
3.60000	12.01421	0.1811	0.0000	2.1590	113.3638	85.358
3.70000	11.11175	0.1675	0.0000	2.1112	114.5198	86.224
3.80000	10.28885	0.1551	0.0000	2.0657	115.5888	87.029
3.90000	9.53667	0.1437	0.0000	2.0222	116.5795	87.775
4.00000	8.84959	0.1334	0.0000	2.0357	117.4993	88.467
4.10000	8.22084	0.1239	0.0000	2.0002	118.3513	89.109
4.20000	7.64407	0.1152	0.0000	1.9727	119.1432	89.704
4.30000	7.11718	0.1073	0.0000	1.9448	119.8819	90.267
4.40000	6.63267	0.1000	0.0000	1.9208	120.5691	90.779
4.50000	6.18751	0.0933	0.0000	1.8968	121.2098	91.261
4.60000	5.77808	0.0871	0.0000	1.8737	121.8078	91.712
4.70000	5.40109	0.0814	0.0000	1.8519	122.3665	92.137
4.80000	5.05361	0.0762	0.0000	1.8312	122.8890	92.528
4.90000	4.73300	0.0713	0.0000	1.8118	123.3781	92.884
5.00000	4.43687	0.0669	0.0000	1.7925	123.8368	93.230
5.10000	4.16384	0.0627	0.0000	1.7744	124.2682	93.563
5.20000	3.91096	0.0589	0.0000	1.7571	124.6697	93.886
5.30000	3.67887	0.0554	0.0000	1.7406	125.0488	94.197
5.40000	3.45715	0.0521	0.0000	1.7247	125.4052	94.473
5.50000	3.25505	0.0491	0.0000	1.7095	125.7407	94.673
5.60000	3.06878	0.0462	0.0000	1.6949	126.0567	94.911
5.70000	2.89262	0.0438	0.0000	1.6809	126.3546	95.135
5.80000	2.73005	0.0411	0.0000	1.6674	126.6356	95.347
5.90000	2.57898	0.0389	0.0000	1.6544	126.9010	95.546
6.00000	2.43733	0.0367	0.0000	1.6416	127.1517	95.735
6.10000	2.30457	0.0347	0.0000	1.6299	127.3888	95.914
6.20000	2.18235	0.0329	0.0000	1.6183	127.6131	96.083
6.30000	2.06722	0.0312	0.0000	1.6071	127.8255	96.242
6.40000	1.95959	0.0295	0.0000	1.5963	128.0268	96.394
6.50000	1.85882	0.0280	0.0000	1.5859	128.2176	96.538
6.60000	1.76409	0.0266	0.0000	1.5758	128.3987	96.674
6.70000	1.67581	0.0253	0.0000	1.5661	128.5706	96.803
6.80000	1.59221	0.0240	0.0000	1.5567	128.7340	96.926
6.90000	1.51405	0.0228	0.0000	1.5476	128.8893	97.043

7.00000	1.44089	0.0217	0.0000	1.5387	129.0370	97.155
7.10000	1.37148	0.0207	0.0000	1.5302	129.1775	97.260
7.20000	1.30688	0.0197	0.0000	1.5219	129.3114	97.361
7.30000	1.24517	0.0188	0.0000	1.5138	129.4389	97.457
7.40000	1.18743	0.0179	0.0000	1.5060	129.5605	97.549
7.50000	1.13297	0.0171	0.0000	1.4985	129.6765	97.636
7.60000	1.08157	0.0163	0.0000	1.4911	129.7872	97.719
7.70000	1.03333	0.0156	0.0000	1.4840	129.8929	97.799
7.80000	0.98817	0.0149	0.0000	1.4770	129.9939	97.875
7.90000	0.94638	0.0142	0.0000	1.4703	130.0905	97.948
8.00000	0.90728	0.0136	0.0000	1.4637	130.1828	98.017
8.10000	0.87094	0.0130	0.0000	1.4573	130.2711	98.084
8.20000	0.83734	0.0125	0.0000	1.4511	130.3556	98.147
8.30000	0.80627	0.0119	0.0000	1.4451	130.4366	98.208
8.40000	0.77752	0.0114	0.0000	1.4392	130.5141	98.267
8.50000	0.75099	0.0110	0.0000	1.4335	130.5885	98.323
8.60000	0.72658	0.0105	0.0000	1.4279	130.6598	98.378
8.70000	0.70420	0.0101	0.0000	1.4224	130.7282	98.428
8.80000	0.68381	0.0097	0.0000	1.4171	130.7938	98.477
8.90000	0.66544	0.0093	0.0000	1.4119	130.8568	98.525
9.00000	0.64909	0.0089	0.0000	1.4069	130.9173	98.570
9.10000	0.63470	0.0086	0.0000	1.4019	130.9755	98.614
9.20000	0.62118	0.0083	0.0000	1.3971	131.0314	98.656
9.30000	0.60845	0.0079	0.0000	1.3924	131.0851	98.697
9.40000	0.59645	0.0076	0.0000	1.3878	131.1369	98.736
9.50000	0.58515	0.0074	0.0000	1.3833	131.1866	98.773
9.60000	0.57450	0.0071	0.0000	1.3789	131.2345	98.809
9.70000	0.56448	0.0068	0.0000	1.3746	131.2806	98.844
9.80000	0.55504	0.0066	0.0000	1.3704	131.3251	98.877
9.90000	0.54623	0.0063	0.0000	1.3663	131.3679	98.910
10.00000	0.53802	0.0061	0.0000	1.3623	131.4092	98.941
10.10000	0.53038	0.0059	0.0000	1.3584	131.4490	98.971
10.20000	0.52328	0.0057	0.0000	1.3545	131.4874	99.000
10.30000	0.51669	0.0055	0.0000	1.3508	131.5244	99.027
10.40000	0.51059	0.0053	0.0000	1.3471	131.5602	99.054
10.50000	0.50495	0.0051	0.0000	1.3435	131.5947	99.080
10.60000	0.49975	0.0049	0.0000	1.3399	131.6280	99.105
10.70000	0.49497	0.0048	0.0000	1.3365	131.6602	99.130
10.80000	0.49060	0.0046	0.0000	1.3331	131.6914	99.153
10.90000	0.48664	0.0045	0.0000	1.3297	131.7218	99.174
11.00000	0.48308	0.0043	0.0000	1.3265	131.7505	99.198
11.10000	0.47992	0.0042	0.0000	1.3233	131.7787	99.219
11.20000	0.47715	0.0040	0.0000	1.3201	131.8059	99.239
11.30000	0.47477	0.0039	0.0000	1.3171	131.8322	99.259
11.40000	0.47278	0.0038	0.0000	1.3140	131.8577	99.278
11.50000	0.47118	0.0037	0.0000	1.3111	131.8824	99.297
11.60000	0.46997	0.0035	0.0000	1.3082	131.9063	99.315
11.70000	0.46915	0.0034	0.0000	1.3053	131.9294	99.332
11.80000	0.46872	0.0033	0.0000	1.3025	131.9519	99.348
11.90000	0.46868	0.0032	0.0000	1.2998	131.9736	99.364
12.00000	0.46903	0.0031	0.0000	1.2971	131.9947	99.382

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, D.U.C., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1974.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2250.0  
DEGREES FAHRENHEIT = 3500.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 3.90 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 578.08 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 184.29 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.027 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 186.036 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 3.084 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.2680 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4231 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 145.31 WATT/CM<sup>2</sup> OR 1.45300E+00 ERG/SEC/CM<sup>2</sup> OR 3.47795E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 70.24 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 480 LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE PLANCK FORMULA M = K/T<sup>4</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1974.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2250.0  
DEGREES FAHRENHEIT = 3500.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR K/T <sup>4</sup>	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.08398	0.0011	0.0000	14.2867	0.0019	0.001
0.35500	0.10000	0.0013	0.0000	14.0000	0.0023	0.002
0.36000	0.11946	0.0016	0.0000	13.7533	0.0039	0.002
0.36500	0.14288	0.0019	0.0000	13.5360	0.0063	0.003
0.37000	0.16880	0.0023	0.0000	13.3493	0.0103	0.003
0.37500	0.19885	0.0027	0.0000	13.1880	0.0162	0.004
0.38000	0.23292	0.0031	0.0000	13.0480	0.0243	0.004
0.38500	0.27188	0.0037	0.0000	12.9241	0.0358	0.005
0.39000	0.31488	0.0042	0.0000	12.8132	0.0509	0.006
0.39500	0.36188	0.0049	0.0000	12.7137	0.0700	0.007
0.40000	0.41294	0.0056	0.1137	12.6233	0.0937	0.009
0.40500	0.46800	0.0064	0.2403	12.5400	0.1220	0.010
0.41000	0.52854	0.0073	0.4452	12.4639	0.1550	0.012
0.41500	0.59480	0.0083	0.9769	12.3944	0.1930	0.014
0.42000	0.70104	0.0094	1.9069	12.3322	0.2370	0.016
0.42500	0.79038	0.0106	3.4234	12.2761	0.2770	0.019
0.43000	0.86798	0.0120	7.0044	12.2252	0.3130	0.022
0.43500	0.93480	0.0134	11.3589	12.1797	0.3360	0.025
0.44000	1.10978	0.0149	17.3369	12.1391	0.3460	0.028
0.44500	1.23482	0.0166	24.3504	12.1027	0.3430	0.033
0.45000	1.36984	0.0185	35.3968	12.0704	0.3270	0.037
0.45500	1.51521	0.0204	49.4571	12.0413	0.2811	0.042
0.46000	1.67119	0.0225	68.1928	12.0154	0.2091	0.048
0.46500	1.83888	0.0248	92.5227	12.0000	0.1770	0.054
0.47000	2.01788	0.0272	124.8401	12.0000	0.1480	0.060
0.47500	2.20804	0.0297	168.1659	12.0000	0.1230	0.067
0.48000	2.41081	0.0325	227.8497	12.0000	0.1020	0.074
0.48500	2.62600	0.0354	301.7803	12.0000	0.0850	0.081
0.49000	2.85392	0.0384	403.6579	12.0000	0.0720	0.088
0.49500	3.09480	0.0417	542.9525	12.0000	0.0620	0.094
0.50000	3.34880	0.0451	735.9522	12.0000	0.0540	0.100
0.50500	3.61681	0.0487	1000.8749	12.0000	0.0480	0.107
0.51000	3.89951	0.0525	1333.1049	12.0000	0.0430	0.114
0.51500	4.19827	0.0565	1733.2933	12.0000	0.0390	0.120
0.52000	4.50111	0.0606	2173.1375	12.0000	0.0360	0.126
0.52500	4.80835	0.0650	2601.2127	12.0000	0.0330	0.132
0.53000	5.12008	0.0694	3078.9702	12.0000	0.0310	0.137
0.53500	5.43639	0.0740	3629.3109	12.0000	0.0290	0.142
0.54000	5.75688	0.0787	4188.3177	12.0000	0.0270	0.147
0.54500	6.08185	0.0833	4798.9853	12.0000	0.0260	0.151
0.55000	6.41180	0.0880	5498.9146	12.0000	0.0250	0.155
0.55500	6.74664	0.0930	6298.5962	12.0000	0.0240	0.159
0.56000	7.08623	0.1007	7248.7722	12.0000	0.0230	0.163
0.56500	7.43037	0.1086	8298.2551	12.0000	0.0220	0.167
0.57000	7.77880	0.1124	9413.7430	12.0000	0.0210	0.170

0.57500	8.82561	0.1109	5691.3076	11.1190	0.4017	0.415
0.58000	9.30194	0.1251	5503.0290	11.2237	0.4400	0.447
0.58500	9.79155	0.1110	5410.7918	10.2297	0.4807	0.470
0.59000	10.29027	0.1307	5299.0444	10.2464	0.5207	0.514
0.59500	10.80070	0.1456	5188.7085	10.2753	0.5607	0.550
0.60000	11.33704	0.1527	4844.0890	10.2958	0.5951	0.580
0.60500	11.87844	0.1600	4579.0578	10.3078	0.6131	0.627
0.61000	12.4310	0.1674	4251.0043	10.3122	0.6230	0.678
0.61500	12.99515	0.1750	3897.0445	10.3190	1.0174	0.714
0.62000	13.57112	0.1824	3516.0056	10.3247	1.1030	0.760
0.62500	14.15801	0.1907	3090.4105	10.2497	1.1717	0.807
0.63000	14.75544	0.1987	2654.9732	10.1465	1.2454	0.857
0.63500	15.3637	0.2069	2207.0774	10.0687	1.3207	0.909
0.64000	15.9819	0.2151	1801.8474	0.9900	1.3991	0.961
0.64500	16.6097	0.2237	1358.4581	0.9124	1.4806	1.019
0.65000	17.2464	0.2321	1254.8418	0.8364	1.5657	1.077
0.65500	17.8928	0.2410	985.5403	0.7714	1.6541	1.134
0.66000	18.54761	0.2498	749.3467	0.6975	1.7462	1.200
0.66500	19.21001	0.2587	527.8269	0.6147	1.8385	1.265
0.67000	19.89031	0.2674	432.5950	0.5430	1.9363	1.333
0.67500	20.59789	0.2760	371.5254	0.4723	2.0372	1.402
0.68000	21.34229	0.2841	295.5608	0.4027	2.1419	1.474
0.68500	21.93310	0.2954	177.4027	0.3382	2.2498	1.548
0.69000	22.47990	0.3044	124.1842	0.2866	2.3612	1.625
0.69500	23.13227	0.3143	90.4359	0.2900	2.4761	1.704
0.70000	24.03974	0.3234	67.0224	0.1383	2.5945	1.786
0.70500	24.75195	0.3334	48.8108	0.0944	2.7165	1.869
0.71000	25.46884	0.3410	36.3488	0.0054	2.8421	1.954
0.71500	26.18873	0.3527	26.7125	0.2429	2.9712	2.045
0.72000	26.91247	0.3625	20.1305	0.8809	3.1040	2.134
0.72500	27.64024	0.3721	13.1543	0.8197	3.2403	2.230
0.73000	28.36851	0.3821	9.6443	0.7584	3.3804	2.324
0.73500	29.09990	0.3920	7.0142	0.6999	3.5240	2.425
0.74000	29.83327	0.4018	4.8848	0.6412	3.6714	2.527
0.74500	30.56740	0.4117	4.1572	0.5811	3.8224	2.631
0.75000	31.30332	0.4214	2.1244	0.5201	3.9770	2.737
0.75500	32.04151	0.4314	0.0000	0.4614	4.2974	2.857
0.76000	34.24707	0.4411	0.0000	0.4051	4.6125	3.184
0.76500	35.71864	0.4507	0.0000	0.3488	4.9224	3.429
0.77000	37.17551	0.5007	0.0000	0.2951	5.2254	3.680
0.77500	38.62671	0.5201	0.0000	0.2444	5.5207	3.940
0.78000	40.06674	0.5397	0.0000	0.1980	6.1103	4.211
0.78500	41.50104	0.5589	0.0000	0.1563	6.5271	4.492
0.79000	42.93074	0.5774	0.0000	0.1149	6.9801	4.783
0.79500	44.35744	0.5965	0.0000	0.0784	7.3850	5.089
0.80000	45.78544	0.6148	0.0000	0.0464	7.8344	5.392
0.80500	47.00047	0.6331	0.0000	0.0184	8.2991	5.711
0.81000	48.32044	0.6504	0.0000	0.0000	8.7747	6.039
0.81500	49.64104	0.6681	0.0000	0.0000	9.2584	6.374
0.82000	50.97047	0.6851	0.0000	0.0000	9.7449	6.721
0.82500	52.11647	0.7020	0.0000	0.0000	10.2819	7.074
0.83000	53.32245	0.7182	0.0000	0.0000	10.8091	7.439
0.83500	54.49735	0.7340	0.0000	0.0000	11.3682	7.810
0.84000	55.63967	0.7498	0.0000	0.0000	11.9597	8.189
0.84500	56.74867	0.7654	0.0000	0.0000	12.4879	8.574

0.85000	57.82360	0.7788	0.0000	0.7179	11.0339	8.970
0.85500	58.88400	0.7929	0.0000	0.6681	12.4171	9.371
0.86000	59.94914	0.8044	0.0000	0.6201	14.2110	9.780
0.86500	60.93911	0.8194	0.0000	0.5734	14.8164	10.195
0.87000	61.77311	0.8320	0.0000	0.4881	15.4276	10.619
1.00000	62.47110	0.8441	0.0000	0.4040	16.0489	11.045
1.01000	63.13294	0.8557	0.0000	0.3411	16.6800	11.480
1.02000	64.15640	0.8669	0.0000	0.2799	17.3204	11.920
1.03000	65.14409	0.8775	0.0000	0.2197	17.9680	12.364
1.04000	66.30152	0.8874	0.0000	0.1604	18.6233	12.816
1.05000	66.61904	0.8971	0.0000	0.1027	19.2859	13.278
1.06000	67.30089	0.9045	0.0000	0.0460	19.9555	13.753
1.07000	67.94735	0.9152	0.0000	0.0000	20.6318	14.190
1.08000	68.55874	0.9234	0.0000	0.0000	21.3143	14.648
1.09000	69.13545	0.9317	0.0000	0.0000	22.0028	15.142
1.10000	69.47789	0.9385	0.0000	0.0000	22.6964	15.620
1.11000	70.14645	0.9454	0.0000	0.0000	23.3943	16.101
1.12000	70.66191	0.9518	0.0000	0.0000	24.1006	16.584
1.13000	71.10409	0.9577	0.0000	0.0000	24.8064	17.074
1.14000	71.51889	0.9632	0.0000	0.0000	25.5225	17.564
1.15000	71.89388	0.9684	0.0000	0.0000	26.2396	18.058
1.16000	72.24143	0.9730	0.0000	0.0000	26.9603	18.554
1.17000	72.55801	0.9773	0.0000	0.0000	27.6843	19.052
1.18000	72.84644	0.9812	0.0000	0.0000	28.4114	19.552
1.19000	73.10500	0.9847	0.0000	0.0000	29.1417	20.059
1.20000	73.33520	0.9874	0.0000	0.0000	29.8734	20.559
1.21000	73.53764	0.9905	0.0000	0.0000	30.6074	21.064
1.22000	73.71304	0.9929	0.0000	0.0000	31.3441	21.571
1.23000	73.86214	0.9949	0.0000	0.0000	32.0820	22.079
1.24000	73.98541	0.9965	0.0000	0.0000	32.8217	22.587
1.25000	74.08811	0.9978	0.0000	0.0000	33.5616	23.097
1.26000	74.15881	0.9989	0.0000	0.0000	34.3026	23.607
1.27000	74.20914	0.9995	0.0000	0.0000	35.0447	24.117
1.28000	74.23704	0.9999	0.0000	0.0000	35.7889	24.628
1.29000	74.24284	1.0000	0.0000	0.0000	36.5293	25.139
1.30000	74.22720	0.9998	0.0000	0.0000	37.2717	25.650
1.31000	74.19077	0.9993	0.0000	0.0000	38.0138	26.161
1.32000	74.13426	0.9985	0.0000	0.0000	38.7555	26.671
1.33000	74.05834	0.9974	0.0000	0.0000	39.4966	27.181
1.34000	73.96367	0.9962	0.0000	0.0000	40.2366	27.690
1.35000	73.85091	0.9947	0.0000	0.0000	40.9756	28.199
1.36000	73.72070	0.9930	0.0000	0.0000	41.7135	28.707
1.37000	73.57364	0.9910	0.0000	0.0000	42.4500	29.214
1.38000	73.41044	0.9888	0.0000	0.0000	43.1849	29.720
1.39000	73.23192	0.9864	0.0000	0.0000	43.9182	30.229
1.40000	73.03792	0.9838	0.0000	0.0000	44.6485	30.737
1.41000	72.82977	0.9810	0.0000	0.0000	45.3768	31.249
1.42000	72.60744	0.9780	0.0000	0.0000	46.1061	31.750
1.43000	72.37244	0.9748	0.0000	0.0000	46.8310	32.252
1.44000	72.12677	0.9715	0.0000	0.0000	47.5515	32.754
1.45000	71.87174	0.9680	0.0000	0.0000	48.2734	33.251
1.46000	71.60431	0.9643	0.0000	0.0000	48.9907	33.745
1.47000	71.31003	0.9605	0.0000	0.0000	49.7053	34.237
1.48000	71.01171	0.9564	0.0000	0.0000	50.4149	34.697
1.49000	70.71171	0.9524	0.0000	0.0000	51.1254	35.184

1.00000	71.80049	0.4882	0.0000	2.1741	51.4312	35.470
1.00000	AA.81794	0.3001	0.0000	2.0707	50.4094	40.104
1.00000	62.75100	0.8452	0.0000	1.8504	45.1414	44.857
1.00000	58.43204	0.7870	0.0000	1.8567	71.2415	40.024
1.00000	56.08487	0.7288	0.0000	1.4854	76.8844	52.889
2.00000	49.84485	0.4714	0.0000	1.3310	82.0621	54.475
2.10000	45.79714	0.4169	0.0000	1.1267	86.8424	50.744
2.20000	41.90100	0.3654	0.0000	1.0742	91.2294	42.788
2.30000	38.45041	0.3179	0.0000	2.0634	95.2494	45.550
2.40000	35.18255	0.2714	0.0000	2.4434	98.0248	48.082
2.50000	32.18344	0.2335	0.0000	2.7722	102.2842	70.100
2.60000	29.44225	0.1944	0.0000	2.6889	105.3741	72.514
2.70000	26.94194	0.1629	0.0000	2.4124	108.1815	74.447
2.80000	24.67154	0.1323	0.0000	2.5424	110.7704	76.231
2.90000	22.60711	0.1045	0.0000	2.6779	113.1327	77.857
3.00000	20.71344	0.0793	0.0000	2.4142	115.2842	79.147
3.10000	19.03304	0.2544	0.0000	2.3674	117.2442	80.719
3.20000	17.48899	0.2354	0.0000	2.4114	119.1101	81.971
3.30000	16.10020	0.2167	0.0000	2.2435	120.7829	83.125
3.40000	14.81721	0.1996	0.0000	2.2144	122.4332	84.184
3.50000	13.64121	0.1840	0.0000	2.1771	123.7553	85.147
3.60000	12.60991	0.1698	0.0000	2.1429	125.0440	86.071
3.70000	11.75295	0.1579	0.0000	2.1012	126.2944	86.905
3.80000	10.78104	0.1452	0.0000	2.0667	127.4014	87.677
3.90000	9.98584	0.1345	0.0000	2.0442	128.4191	88.391
4.00000	9.25990	0.1247	0.0000	2.0314	129.4099	89.053
4.10000	8.59619	0.1154	0.0000	1.9744	130.2832	89.667
4.20000	7.98811	0.1074	0.0000	1.9471	131.1220	90.237
4.30000	7.43325	1.0001	0.0000	1.9212	131.8924	90.764
4.40000	6.92334	0.7233	0.0000	1.8964	132.6102	91.261
4.50000	6.45521	0.6849	0.0000	1.8732	133.2744	91.721
4.60000	6.02902	0.6512	0.0000	1.8509	133.9024	92.151
4.70000	5.62921	0.6218	0.0000	1.8294	134.4840	92.552
4.80000	5.24441	0.5959	0.0000	1.8094	135.0294	92.926
4.90000	4.87847	0.5664	0.0000	1.7904	135.5349	93.277
5.00000	4.51817	0.5427	0.0000	1.7727	136.0140	93.605
5.10000	4.23144	0.5253	0.0000	1.7544	136.4613	93.913
5.20000	4.06621	0.5144	0.0000	1.7374	136.8815	94.202
5.30000	3.92045	0.5015	0.0000	1.7214	137.2772	94.473
5.40000	3.79302	0.4844	0.0000	1.7041	137.6477	94.724
5.50000	3.68144	0.4654	0.0000	1.6874	137.9943	94.964
5.60000	3.58571	0.4429	0.0000	1.6722	138.3246	95.194
5.70000	3.50134	0.4265	0.0000	1.6584	138.6419	95.407
5.80000	3.42374	0.4122	0.0000	1.6454	138.9457	95.604
5.90000	3.35175	0.4000	0.0000	1.6324	139.2361	95.797
6.00000	3.28444	0.3884	0.0000	1.6257	139.5112	95.976
6.10000	3.22100	0.3782	0.0000	1.6140	139.7701	96.145
6.20000	3.16274	0.3695	0.0000	1.6027	139.9937	96.305
6.30000	3.10844	0.3629	0.0000	1.5914	140.1599	96.457
6.40000	3.05771	0.3574	0.0000	1.5813	140.3645	96.601
6.50000	3.00924	0.3529	0.0000	1.5711	140.5663	96.737
6.60000	2.96274	0.3484	0.0000	1.5613	140.7539	96.864
6.70000	2.91817	0.3438	0.0000	1.5519	140.9320	96.984
6.80000	2.87444	0.3392	0.0000	1.5427	141.1011	97.105
6.90000	2.83144	0.3341	0.0000	1.5334	141.2619	97.219

7.00000	1.49104	0.0201	0.0000	1.5252	141.4144	97.321
7.10000	1.44925	0.0191	0.0000	1.5169	141.5603	97.421
7.20000	1.41169	0.0182	0.0000	1.5084	141.6994	97.514
7.30000	1.37804	0.0173	0.0000	1.5001	141.8307	97.607
7.40000	1.34811	0.0165	0.0000	1.4914	141.9545	97.693
7.50000	1.32140	0.0158	0.0000	1.4841	142.0745	97.776
7.60000	1.29777	0.0151	0.0000	1.4769	142.1909	97.855
7.70000	1.27692	0.0144	0.0000	1.4720	142.3052	97.930
7.80000	1.25835	0.0137	0.0000	1.4652	142.4144	98.009
7.90000	1.24154	0.0131	0.0000	1.4584	142.5044	98.070
8.00000	0.93244	0.0124	0.0000	1.4522	142.5906	98.134
8.10000	0.92249	0.0120	0.0000	1.4460	142.6910	98.199
8.20000	0.91447	0.0115	0.0000	1.4400	142.7744	98.259
8.30000	0.90815	0.0110	0.0000	1.4341	142.8620	98.317
8.40000	0.90241	0.0105	0.0000	1.4284	142.9421	98.372
8.50000	0.89714	0.0101	0.0000	1.4228	143.0140	98.424
8.60000	0.89224	0.0097	0.0000	1.4173	143.0825	98.474
8.70000	0.88755	0.0093	0.0000	1.4120	143.1481	98.524
8.80000	0.88304	0.0089	0.0000	1.4069	143.2104	98.570
8.90000	0.87871	0.0084	0.0000	1.4018	143.2699	98.619
9.00000	0.87451	0.0082	0.0000	1.3964	143.3263	98.664
9.10000	0.87044	0.0079	0.0000	1.3921	143.3814	98.709
9.20000	0.86642	0.0076	0.0000	1.3874	143.4340	98.750
9.30000	0.86244	0.0074	0.0000	1.3824	143.4841	98.777
9.40000	1.35219	0.0070	0.0000	1.3781	143.5344	98.814
9.50000	1.34811	0.0068	0.0000	1.3740	143.5844	98.849
9.60000	1.34404	0.0064	0.0000	1.3697	143.6344	98.884
9.70000	1.34004	0.0063	0.0000	1.3654	143.6841	98.916
9.80000	1.33604	0.0061	0.0000	1.3614	143.7340	98.944
9.90000	1.33204	0.0058	0.0000	1.3574	143.7841	98.974
10.00000	1.32804	0.0054	0.0000	1.3535	143.8347	99.007
10.10000	1.32404	0.0054	0.0000	1.3497	143.8847	99.035
10.20000	1.32004	0.0052	0.0000	1.3459	143.9344	99.063
10.30000	1.31604	0.0051	0.0000	1.3423	143.9845	99.089
10.40000	1.31204	0.0049	0.0000	1.3387	144.0341	99.114
10.50000	1.30804	0.0047	0.0000	1.3352	144.0849	99.139
10.60000	1.30404	0.0045	0.0000	1.3317	144.1347	99.169
10.70000	1.30004	0.0044	0.0000	1.3283	144.1844	99.185
10.80000	1.29604	0.0042	0.0000	1.3250	144.2345	99.207
10.90000	1.29204	0.0041	0.0000	1.3218	144.2841	99.229
11.00000	1.28804	0.0040	0.0000	1.3184	144.3341	99.249
11.10000	1.28404	0.0038	0.0000	1.3154	144.3844	99.269
11.20000	1.28004	0.0037	0.0000	1.3124	144.4345	99.289
11.30000	1.27604	0.0036	0.0000	1.3094	144.4841	99.309
11.40000	1.27204	0.0035	0.0000	1.3064	144.5341	99.325
11.50000	1.26804	0.0034	0.0000	1.3034	144.5841	99.343
11.60000	1.26404	0.0033	0.0000	1.3004	144.6341	99.364
11.70000	1.26004	0.0032	0.0000	1.2980	144.6841	99.374
11.80000	1.25604	0.0031	0.0000	1.2952	144.7341	99.392
11.90000	1.25204	0.0030	0.0000	1.2924	144.7841	99.407
12.00000	1.24804	0.0029	0.0000	1.2899	144.8341	99.422



0.57500	11.21887	0.115A	4892.2714	17.4773	0.7909	0.464
0.58000	11.22077	0.1162A	4991.1882	17.4781A	0.8485	0.515
0.58500	12.4175	0.1169A	4994.465A	17.4785	0.9091	0.571
0.59000	13.02475	0.1172	4706.4811	17.4789	0.9727	0.611
0.59500	13.63205	0.1180A	4452.975A	17.4791A	1.0374	0.655
0.60000	14.23939	0.1172A	4131.0521	17.4742	1.1031	0.699
0.60500	14.84669	0.1180A	3762.4403	17.47481	1.1696	0.743
0.61000	15.45399	0.1188A	3390.0883	17.47546	1.2354	0.791
0.61500	16.06129	0.1196A	4485.7423	17.47611	1.3115	0.844
0.62000	16.66859	0.2000	4199.5580	17.47676	1.4217	0.894
0.62500	17.27589	0.213A	3888.0771	17.47741	1.5094	0.951
0.63000	18.19814	0.2220	3315.1447	17.47807	1.5799	1.004
0.63500	19.12037	0.240A	2821.4051	17.4849	1.6924	1.067
0.64000	19.85863	0.249A	2181.1652	17.4917	1.7804	1.124
0.64500	20.46593	0.268A	1913.4764	17.4974	1.8917	1.182
0.65000	21.15887	0.2577	1556.0711	17.4227	1.8959	1.254
0.65500	22.12280	0.2670	1218.4214	17.4491	2.108A	1.324
0.66000	22.89534	0.2761	947.4945	17.4756	2.2171	1.387
0.66500	23.67549	0.2857	724.762	17.4758	2.3155	1.471
0.67000	24.44165	0.2952	541.3290	17.4357	2.4133	1.567
0.67500	25.25583	0.310A	397.2445	17.4284	2.5092	1.625
0.68000	26.10804	0.3185	301.2545	17.4245	2.6045	1.704
0.68500	26.98745	0.3342	217.4314	17.4311	2.6988	1.789
0.69000	27.89017	0.3480	154.1854	17.4384	2.7924	1.874
0.69500	28.82614	0.3619	117.4588A	17.4452	2.8854	1.964
0.70000	29.80000	0.3538A	81.7453	17.4527	2.9782	2.059
0.70500	30.81360	0.3619	59.4421	17.4607	3.0709	2.164
0.71000	30.97621	0.3714	44.2381	17.4691	3.1634	2.264
0.71500	31.80872	0.3819	31.4487	17.4787	3.2554	2.364
0.72000	32.46179	0.3919	24.6176	17.4881	3.3477	2.464
0.72500	33.08071	0.4014	19.9188	17.4974	3.4392	2.569
0.73000	34.11914	0.4111	13.2885	17.5067	3.5309	2.664
0.73500	35.15887	0.4211	9.5811	17.5160	3.6224	2.766
0.74000	35.90870	0.4314	7.1417	17.5254	3.7134	2.874
0.74500	36.81820	0.4415	5.1235	17.5357	3.7887	2.991
0.75000	37.47808	0.4517	3.8421	17.5411	3.8655	3.117
0.75500	39.15411	0.4619	0.0000	17.5464	3.9197	3.351
0.76000	41.02373	0.4751	0.0000	17.5520	3.9716	3.606
0.76500	42.48312	0.4851	0.0000	17.5571	4.0211	3.879
0.77000	44.13004	0.5140	0.0000	17.5618	4.0682	4.144
0.77500	45.95879	0.5534	0.0000	17.5661	4.1134	4.429
0.78000	47.58067	0.5740	0.0000	17.5704	4.1564	4.723
0.78500	49.15881	0.5412	0.0000	17.5747	4.1979	5.025
0.79000	50.72317	0.4121	0.0000	17.5784	4.2374	5.341
0.79500	52.28183	0.4107	0.0000	17.5810	4.2751	5.664
0.80000	53.77138	0.4899	0.0000	17.5827	4.3104	6.009
0.80500	55.25014	0.4887	0.0000	17.5874	10.6876	6.345
0.81000	56.49691	0.6842	0.0000	17.5943	10.6276	6.689
0.81500	58.10070	0.6720	0.0000	17.5133	11.2018	7.069
0.82000	59.48700	0.7170	0.0000	17.5134	11.7805	7.431
0.82500	60.82734	0.7380	0.0000	17.5270	12.3591	7.819
0.83000	62.13085	0.7498	0.0000	17.5800	13.0059	8.197
0.83500	63.39484	0.7854	0.0000	17.6054	13.4336	8.551
0.84000	64.61974	0.7748	0.0000	17.6332	14.2737	8.994
0.84500	65.81301	0.7811	0.0000	17.6422	14.4248	9.407

0.95000	66.78524	0.5079	0.0000	17.5424	15.589A	9.824
0.95500	68.02752	0.4212	0.0000	17.5744	16.2684	10.251
0.96000	69.10734	0.4110	0.0000	17.5280	16.9874	10.689
0.96500	70.12484	0.4842	0.0000	17.4724	17.4484	11.122
0.97000	71.10800	0.4847	0.0000	17.4280	18.1858	11.589
1.00000	72.13162	0.4891	0.0000	17.3844	19.0485	12.011
1.01000	73.42499	0.6800	0.0000	17.3351	19.7933	12.475
1.02000	74.77814	0.4407	0.0000	17.3451	20.5244	12.938
1.03000	76.18147	0.3007	0.0000	17.3020	21.2684	13.405
1.04000	75.14729	0.4092	0.0000	17.2570	22.0181	13.874
1.05000	76.47193	0.4180	0.0000	17.2145	22.7744	14.355
1.06000	76.75483	0.2427	0.0000	17.2145	21.5396	14.836
1.07000	77.14941	0.3140	0.0000	17.2145	24.3104	15.322
1.08000	78.10320	0.4113	0.0000	17.2145	25.0875	15.812
1.09000	78.46797	0.4411	0.0000	17.2145	25.8704	16.302
1.10000	79.09405	0.4545	0.0000	17.2145	26.6887	16.802
1.11000	79.58222	0.4604	0.0000	17.2145	27.5421	17.302
1.12000	80.71113	0.4654	0.0000	17.2145	28.4287	17.802
1.13000	80.42753	0.4704	0.0000	17.2145	29.3527	18.311
1.14000	80.12812	0.4754	0.0000	17.2145	29.4561	18.819
1.15000	81.16944	0.4754	0.0000	17.2145	30.6681	19.335
1.16000	81.47892	0.4812	0.0000	17.2145	31.4881	19.862
1.17000	81.75884	0.4884	0.0000	17.2145	32.2684	20.357
1.18000	81.90804	0.4905	0.0000	17.2145	33.1173	20.871
1.19000	82.21081	0.4921	0.0000	17.2145	33.9364	21.399
1.20000	82.38977	0.4942	0.0000	17.2145	34.7814	21.909
1.21000	82.41944	0.4945	0.0000	17.2145	35.5841	22.428
1.22000	82.66082	0.4975	0.0000	17.2145	36.4271	22.957
1.23000	82.75117	0.4984	0.0000	17.2145	37.2302	23.471
1.24000	83.41784	0.4994	0.0000	17.2145	38.0871	23.991
1.25000	82.45572	0.9990	0.0000	17.2145	38.4054	24.515
1.26000	82.88744	1.0000	0.0000	17.2145	38.7281	25.037
1.27000	82.85424	0.9998	0.0000	17.2145	40.5527	25.559
1.28000	82.41661	0.9994	0.0000	17.2145	41.3811	26.081
1.29000	82.75540	0.9984	0.0000	17.2145	42.2090	26.603
1.30000	82.47185	0.9974	0.0000	17.2145	43.0341	27.125
1.31000	82.56554	0.9964	0.0000	17.2145	43.8521	27.649
1.32000	82.43886	0.9944	0.0000	17.2145	44.6874	28.168
1.33000	82.70009	0.9910	0.0000	17.2145	45.5110	28.688
1.34000	82.12387	0.9910	0.0000	17.2145	46.3311	29.201
1.35000	81.93784	0.9884	0.0000	17.2145	47.1784	29.724
1.36000	81.73367	0.9863	0.0000	17.2145	47.9711	30.235
1.37000	81.51204	0.9834	0.0000	17.2145	48.7881	30.759
1.38000	81.27364	0.9808	0.0000	17.2145	49.6030	31.263
1.39000	81.11921	0.9777	0.0000	17.2145	50.4133	31.774
1.40000	80.74942	0.9744	0.0000	17.2145	51.2223	32.284
1.41000	80.44884	0.9710	0.0000	17.2145	52.0244	32.792
1.42000	80.16427	0.9674	0.0000	17.2145	52.8114	33.298
1.43000	79.85421	0.9634	0.0000	17.2145	53.6317	33.801
1.44000	79.52932	0.9597	0.0000	17.2145	54.4284	34.305
1.45000	79.14219	0.9554	0.0000	17.2145	55.2223	34.809
1.46000	78.84361	0.9514	0.0000	17.2145	56.0124	35.309
1.47000	78.48354	0.9471	0.0000	17.2145	56.7901	35.799
1.48000	78.11315	0.9424	0.0000	17.2145	57.5884	36.282
1.49000	77.73274	0.9380	0.0000	17.2145	58.3814	36.764



1.50000	77.16280	0.9313	0.0000	4.2350	59.1147	37.277
1.60000	73.02771	0.8813	0.0000	3.9900	56.6874	42.016
1.70000	68.23510	0.8230	0.0000	3.7461	53.7265	46.468
1.80000	63.27255	0.7635	0.0000	3.4937	50.3073	50.617
1.90000	58.36003	0.7041	0.0000	3.2429	46.3873	54.464
2.00000	53.49835	0.6468	0.0000	3.0000	41.9777	57.971
2.10000	48.69874	0.5925	0.0000	2.7617	37.1101	61.204
2.20000	44.06077	0.5414	0.0000	2.5287	31.8074	64.166
2.30000	41.01457	0.4940	0.0000	2.3012	26.1004	66.872
2.40000	37.46734	0.4510	0.0000	2.0813	19.0204	69.363
2.50000	34.10757	0.4126	0.0000	1.8700	11.4602	71.599
2.60000	31.21924	0.3787	0.0000	1.6684	4.4181	73.659
2.70000	28.52204	0.3492	0.0000	1.4769	-1.9931	75.540
2.80000	26.07777	0.3241	0.0000	1.2957	-4.5811	77.262
2.90000	23.84240	0.3030	0.0000	1.1250	-7.3274	78.832
3.00000	21.85624	0.2857	0.0000	0.9650	-10.2266	80.259
3.10000	20.05949	0.2720	0.0000	0.8157	-13.2739	81.551
3.20000	18.49444	0.2610	0.0000	0.6770	-16.4646	82.702
3.30000	17.10380	0.2520	0.0000	0.5487	-19.7946	83.713
3.40000	15.83227	0.2450	0.0000	0.4307	-23.2599	84.595
3.50000	14.72594	0.2390	0.0000	0.3227	-26.8566	85.374
3.60000	13.71227	0.2340	0.0000	0.2247	-30.5706	86.064
3.70000	12.83989	0.2300	0.0000	0.1367	-34.3986	86.680
3.80000	12.05843	0.2270	0.0000	0.0587	-38.3376	87.237
3.90000	11.43039	0.2250	0.0000	0.0000	-42.3846	87.750
4.00000	10.91801	0.2240	0.0000	0.0000	-46.5366	88.224
4.10000	10.48570	0.2240	0.0000	0.0000	-50.7906	88.664
4.20000	10.11444	0.2250	0.0000	0.0000	-55.1446	89.074
4.30000	9.79517	0.2270	0.0000	0.0000	-59.5966	89.459
4.40000	9.52089	0.2300	0.0000	0.0000	-64.1446	89.814
4.50000	9.28560	0.2340	0.0000	0.0000	-68.7846	90.144
4.60000	9.08427	0.2390	0.0000	0.0000	-73.5126	90.454
4.70000	8.91289	0.2450	0.0000	0.0000	-78.3246	90.744
4.80000	8.76746	0.2520	0.0000	0.0000	-83.2166	91.019
4.90000	8.64509	0.2600	0.0000	0.0000	-88.1866	91.274
5.00000	8.54387	0.2690	0.0000	0.0000	-93.2306	91.514
5.10000	8.46180	0.2790	0.0000	0.0000	-98.3446	91.734
5.20000	8.39789	0.2900	0.0000	0.0000	-103.5246	91.939
5.30000	8.35034	0.3020	0.0000	0.0000	-108.7666	92.124
5.40000	8.31847	0.3150	0.0000	0.0000	-114.0666	92.294
5.50000	8.29160	0.3290	0.0000	0.0000	-119.4206	92.444
5.60000	8.26923	0.3440	0.0000	0.0000	-124.8246	92.579
5.70000	8.25106	0.3600	0.0000	0.0000	-130.2746	92.699
5.80000	8.23689	0.3770	0.0000	0.0000	-135.7666	92.804
5.90000	8.22642	0.3950	0.0000	0.0000	-141.2966	92.899
6.00000	8.21945	0.4140	0.0000	0.0000	-146.8606	92.979
6.10000	8.21588	0.4340	0.0000	0.0000	-152.4546	93.049
6.20000	8.21551	0.4550	0.0000	0.0000	-158.0746	93.109
6.30000	8.21814	0.4770	0.0000	0.0000	-163.7166	93.159
6.40000	8.22367	0.5000	0.0000	0.0000	-169.3766	93.199
6.50000	8.23190	0.5240	0.0000	0.0000	-175.0506	93.229
6.60000	8.24273	0.5490	0.0000	0.0000	-180.7346	93.254
6.70000	8.25606	0.5750	0.0000	0.0000	-186.4246	93.269
6.80000	8.27189	0.6020	0.0000	0.0000	-192.1246	93.274
6.90000	8.28912	0.6300	0.0000	0.0000	-197.8306	93.274
7.00000	8.30775	0.6590	0.0000	0.0000	-203.5406	93.269

7.00000	1.54164	0.0186	0.0000	1.9124	154.4540	97.676
7.10000	1.46718	0.0177	0.0000	1.9043	154.4046	97.569
7.20000	1.39768	0.0169	0.0000	1.8964	154.3678	97.659
7.30000	1.33110	0.0161	0.0000	1.8888	154.3400	97.745
7.40000	1.26804	0.0153	0.0000	1.8814	154.3139	97.827
7.50000	1.21034	0.0144	0.0000	1.8742	154.2890	97.905
7.60000	1.15807	0.0139	0.0000	1.8673	154.2641	97.980
7.70000	1.11090	0.0133	0.0000	1.8605	154.2400	98.052
7.80000	1.06831	0.0127	0.0000	1.8539	154.2168	98.119
7.90000	1.02974	0.0122	0.0000	1.8475	154.1944	98.180
8.00000	0.99629	0.0116	0.0000	1.8413	154.1728	98.236
8.10000	0.96731	0.0111	0.0000	1.8353	154.1519	98.287
8.20000	0.94244	0.0106	0.0000	1.8294	154.1316	98.334
8.30000	0.92109	0.0102	0.0000	1.8236	154.1119	98.376
8.40000	0.90280	0.0098	0.0000	1.8181	154.0926	98.414
8.50000	0.88704	0.0094	0.0000	1.8127	154.0736	98.448
8.60000	0.87334	0.0090	0.0000	1.8075	154.0549	98.478
8.70000	0.86127	0.0086	0.0000	1.8024	154.0365	98.504
8.80000	0.85042	0.0083	0.0000	1.7974	154.0184	98.526
8.90000	0.84057	0.0080	0.0000	1.7925	154.0006	98.544
9.00000	0.83152	0.0077	0.0000	1.7877	153.9831	98.559
9.10000	0.82309	0.0074	0.0000	1.7830	153.9659	98.570
9.20000	0.81527	0.0071	0.0000	1.7784	153.9490	98.578
9.30000	0.80797	0.0068	0.0000	1.7739	153.9324	98.582
9.40000	0.80110	0.0065	0.0000	1.7694	153.9161	98.584
9.50000	0.79467	0.0063	0.0000	1.7650	153.9001	98.582
9.60000	0.78860	0.0060	0.0000	1.7607	153.8844	98.576
9.70000	0.78289	0.0058	0.0000	1.7564	153.8690	98.567
9.80000	0.77754	0.0056	0.0000	1.7522	153.8539	98.554
9.90000	0.77254	0.0054	0.0000	1.7481	153.8391	98.538
10.00000	0.76789	0.0052	0.0000	1.7441	153.8246	98.519
10.10000	0.76350	0.0050	0.0000	1.7401	153.8104	98.497
10.20000	0.75937	0.0048	0.0000	1.7361	153.7964	98.472
10.30000	0.75549	0.0047	0.0000	1.7321	153.7827	98.444
10.40000	0.75186	0.0045	0.0000	1.7281	153.7692	98.414
10.50000	0.74847	0.0043	0.0000	1.7241	153.7560	98.381
10.60000	0.74532	0.0042	0.0000	1.7201	153.7431	98.346
10.70000	0.74240	0.0041	0.0000	1.7161	153.7304	98.309
10.80000	0.73971	0.0040	0.0000	1.7121	153.7180	98.270
10.90000	0.73724	0.0039	0.0000	1.7081	153.7058	98.229
11.00000	0.73499	0.0038	0.0000	1.7041	153.6939	98.186
11.10000	0.73294	0.0037	0.0000	1.7001	153.6822	98.141
11.20000	0.73109	0.0036	0.0000	1.6961	153.6708	98.094
11.30000	0.72944	0.0035	0.0000	1.6921	153.6596	98.045
11.40000	0.72798	0.0034	0.0000	1.6881	153.6486	97.994
11.50000	0.72671	0.0033	0.0000	1.6841	153.6378	97.941
11.60000	0.72562	0.0032	0.0000	1.6801	153.6272	97.886
11.70000	0.72471	0.0031	0.0000	1.6761	153.6168	97.829
11.80000	0.72397	0.0030	0.0000	1.6721	153.6066	97.770
11.90000	0.72339	0.0029	0.0000	1.6681	153.5966	97.709
12.00000	0.72296	0.0028	0.0000	1.6641	153.5868	97.646
12.10000	0.72257	0.0027	0.0000	1.6601	153.5772	97.581

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2074.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2350.0  
DEGREES FAHRENHEIT = 3770.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 0.00 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 0.00 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 205.00 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.035 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 194.400 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 5.372 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.2532 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.5560 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 172.01 WATT/CM<sup>2</sup> OR 1.7201E+09 ERG/SEC/CM<sup>2</sup> OR 4.1272E+02 FLUX/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 02.28 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT: WATTS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (%) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta M = \frac{M}{T} \Delta T$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2074.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2350.0  
DEGREES FAHRENHEIT = 3770.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR W/TOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.18074	0.0020	0.0000	17.4894	0.0043	0.002
0.35500	0.21510	0.0021	0.0000	17.2430	0.0053	0.003
0.36000	0.25510	0.0024	0.0000	17.0038	0.0064	0.004
0.36500	0.30004	0.0033	0.0000	16.7706	0.0079	0.005
0.37000	0.35234	0.0048	0.0000	16.5440	0.0095	0.006
0.37500	0.41074	0.0065	0.0000	16.3238	0.0114	0.007
0.38000	0.47457	0.0092	0.0000	16.1086	0.0136	0.008
0.38500	0.54300	0.0128	0.0000	15.8986	0.0162	0.009
0.39000	0.61624	0.0175	0.0000	15.6936	0.0191	0.011
0.39500	0.69434	0.0234	0.0000	15.4936	0.0225	0.013
0.40000	0.77724	0.0306	0.0000	15.3032	0.0264	0.015
0.40500	0.86494	0.0392	0.0000	15.1164	0.0308	0.018
0.41000	0.95734	0.0495	0.0000	14.9340	0.0356	0.021
0.41500	1.05434	0.0618	1.7855	14.7501	0.0408	0.024
0.42000	1.15584	0.0765	3.4445	14.5745	0.0467	0.028
0.42500	1.26184	0.0938	7.4417	14.4030	0.0534	0.032
0.43000	1.37234	0.1140	13.1069	14.2355	0.0607	0.036
0.43500	1.48734	0.1375	21.2302	14.0710	0.0684	0.041
0.44000	1.60684	0.1645	37.2104	13.9120	0.0764	0.047
0.44500	1.73084	0.1952	44.8760	13.7557	0.0847	0.053
0.45000	1.85934	0.2298	44.7023	13.6020	0.1041	0.060
0.45500	1.99234	0.2685	80.9302	13.4534	0.1173	0.068
0.46000	2.12984	0.3115	123.1945	13.3071	0.1317	0.074
0.46500	2.27184	0.3590	166.0000	13.1641	0.1475	0.080
0.47000	2.41834	0.4110	222.7110	13.0240	0.1640	0.085
0.47500	2.56934	0.4684	298.1814	12.8869	0.1815	0.100
0.48000	2.72484	0.5312	401.6417	12.7527	0.2000	0.110
0.48500	2.88484	0.6000	528.4169	12.6212	0.2201	0.121
0.49000	3.04934	0.6750	703.3024	12.4924	0.2500	0.131
0.49500	3.21834	0.7560	940.7005	12.3661	0.2750	0.140
0.50000	3.39184	0.8430	1247.4140	12.2424	0.3030	0.150
0.50500	3.56984	0.9360	1715.3292	12.1214	0.3335	0.163
0.51000	3.75234	0.1070	2272.6757	12.0024	0.3660	0.211
0.51500	3.93934	0.1171	2930.4531	11.8841	0.4000	0.231
0.52000	4.13084	0.1283	3664.0534	11.7710	0.4360	0.253
0.52500	4.32684	0.1405	4367.4721	11.6637	0.4740	0.275
0.53000	4.52734	0.1534	5054.2006	11.5617	0.5170	0.299
0.53500	4.73234	0.1670	5722.1641	11.4641	0.5620	0.325
0.54000	4.94184	0.1814	6379.4645	11.3710	0.6095	0.352
0.54500	5.15584	0.1965	7027.0760	11.2814	0.6596	0.381
0.55000	5.37434	0.2124	7667.9100	11.1940	0.7120	0.412
0.55500	5.59734	0.2290	8294.0893	11.1089	0.7660	0.445
0.56000	5.82484	0.2465	8907.7175	10.9310	0.8220	0.479
0.56500	6.05684	0.2648	9500.8744	10.8543	0.8800	0.515
0.57000	6.29334	0.2840	10125.4275	10.7789	0.9540	0.551















0.00000	21,07074	0.10725	1900,0000	0.10725	1,0725	0.010	0.010
0.00000	21,07157	0.20113	1900,0000	0.20113	1,0725	0.010	0.010
0.00000	21,07241	0.29501	1900,0000	0.29501	1,0725	0.010	0.010
0.00000	21,07324	0.38889	1900,0000	0.38889	1,0725	0.010	0.010
0.00000	21,07407	0.48277	1900,0000	0.48277	1,0725	0.010	0.010
0.00000	21,07490	0.57665	1900,0000	0.57665	1,0725	0.010	0.010
0.00000	21,07573	0.67053	1900,0000	0.67053	1,0725	0.010	0.010
0.00000	21,07656	0.76441	1900,0000	0.76441	1,0725	0.010	0.010
0.00000	21,07739	0.85829	1900,0000	0.85829	1,0725	0.010	0.010
0.00000	21,07822	0.95217	1900,0000	0.95217	1,0725	0.010	0.010
0.00000	21,07905	1.04605	1900,0000	1.04605	1,0725	0.010	0.010
0.00000	21,07988	1.13993	1900,0000	1.13993	1,0725	0.010	0.010
0.00000	21,08071	1.23381	1900,0000	1.23381	1,0725	0.010	0.010
0.00000	21,08154	1.32769	1900,0000	1.32769	1,0725	0.010	0.010
0.00000	21,08237	1.42157	1900,0000	1.42157	1,0725	0.010	0.010
0.00000	21,08320	1.51545	1900,0000	1.51545	1,0725	0.010	0.010
0.00000	21,08403	1.60933	1900,0000	1.60933	1,0725	0.010	0.010
0.00000	21,08486	1.70321	1900,0000	1.70321	1,0725	0.010	0.010
0.00000	21,08569	1.79709	1900,0000	1.79709	1,0725	0.010	0.010
0.00000	21,08652	1.89097	1900,0000	1.89097	1,0725	0.010	0.010
0.00000	21,08735	1.98485	1900,0000	1.98485	1,0725	0.010	0.010
0.00000	21,08818	2.07873	1900,0000	2.07873	1,0725	0.010	0.010
0.00000	21,08901	2.17261	1900,0000	2.17261	1,0725	0.010	0.010
0.00000	21,08984	2.26649	1900,0000	2.26649	1,0725	0.010	0.010
0.00000	21,09067	2.36037	1900,0000	2.36037	1,0725	0.010	0.010
0.00000	21,09150	2.45425	1900,0000	2.45425	1,0725	0.010	0.010
0.00000	21,09233	2.54813	1900,0000	2.54813	1,0725	0.010	0.010
0.00000	21,09316	2.64201	1900,0000	2.64201	1,0725	0.010	0.010
0.00000	21,09399	2.73589	1900,0000	2.73589	1,0725	0.010	0.010
0.00000	21,09482	2.82977	1900,0000	2.82977	1,0725	0.010	0.010
0.00000	21,09565	2.92365	1900,0000	2.92365	1,0725	0.010	0.010
0.00000	21,09648	3.01753	1900,0000	3.01753	1,0725	0.010	0.010
0.00000	21,09731	3.11141	1900,0000	3.11141	1,0725	0.010	0.010
0.00000	21,09814	3.20529	1900,0000	3.20529	1,0725	0.010	0.010
0.00000	21,09897	3.29917	1900,0000	3.29917	1,0725	0.010	0.010
0.00000	21,09980	3.39305	1900,0000	3.39305	1,0725	0.010	0.010
0.00000	21,10063	3.48693	1900,0000	3.48693	1,0725	0.010	0.010
0.00000	21,10146	3.58081	1900,0000	3.58081	1,0725	0.010	0.010
0.00000	21,10229	3.67469	1900,0000	3.67469	1,0725	0.010	0.010
0.00000	21,10312	3.76857	1900,0000	3.76857	1,0725	0.010	0.010
0.00000	21,10395	3.86245	1900,0000	3.86245	1,0725	0.010	0.010
0.00000	21,10478	3.95633	1900,0000	3.95633	1,0725	0.010	0.010
0.00000	21,10561	4.05021	1900,0000	4.05021	1,0725	0.010	0.010
0.00000	21,10644	4.14409	1900,0000	4.14409	1,0725	0.010	0.010
0.00000	21,10727	4.23797	1900,0000	4.23797	1,0725	0.010	0.010
0.00000	21,10810	4.33185	1900,0000	4.33185	1,0725	0.010	0.010
0.00000	21,10893	4.42573	1900,0000	4.42573	1,0725	0.010	0.010
0.00000	21,10976	4.51961	1900,0000	4.51961	1,0725	0.010	0.010
0.00000	21,11059	4.61349	1900,0000	4.61349	1,0725	0.010	0.010
0.00000	21,11142	4.70737	1900,0000	4.70737	1,0725	0.010	0.010
0.00000	21,11225	4.80125	1900,0000	4.80125	1,0725	0.010	0.010
0.00000	21,11308	4.89513	1900,0000	4.89513	1,0725	0.010	0.010
0.00000	21,11391	4.98901	1900,0000	4.98901	1,0725	0.010	0.010
0.00000	21,11474	5.08289	1900,0000	5.08289	1,0725	0.010	0.010
0.00000	21,11557	5.17677	1900,0000	5.17677	1,0725	0.010	0.010
0.00000	21,11640	5.27065	1900,0000	5.27065	1,0725	0.010	0.010
0.00000	21,11723	5.36453	1900,0000	5.36453	1,0725	0.010	0.010
0.00000	21,11806	5.45841	1900,0000	5.45841	1,0725	0.010	0.010
0.00000	21,11889	5.55229	1900,0000	5.55229	1,0725	0.010	0.010
0.00000	21,11972	5.64617	1900,0000	5.64617	1,0725	0.010	0.010
0.00000	21,12055	5.74005	1900,0000	5.74005	1,0725	0.010	0.010
0.00000	21,12138	5.83393	1900,0000	5.83393	1,0725	0.010	0.010
0.00000	21,12221	5.92781	1900,0000	5.92781	1,0725	0.010	0.010
0.00000	21,12304	6.02169	1900,0000	6.02169	1,0725	0.010	0.010
0.00000	21,12387	6.11557	1900,0000	6.11557	1,0725	0.010	0.010
0.00000	21,12470	6.20945	1900,0000	6.20945	1,0725	0.010	0.010
0.00000	21,12553	6.30333	1900,0000	6.30333	1,0725	0.010	0.010
0.00000	21,12636	6.39721	1900,0000	6.39721	1,0725	0.010	0.010
0.00000	21,12719	6.49109	1900,0000	6.49109	1,0725	0.010	0.010
0.00000	21,12802	6.58497	1900,0000	6.58497	1,0725	0.010	0.010
0.00000	21,12885	6.67885	1900,0000	6.67885	1,0725	0.010	0.010
0.00000	21,12968	6.77273	1900,0000	6.77273	1,0725	0.010	0.010
0.00000	21,13051	6.86661	1900,0000	6.86661	1,0725	0.010	0.010
0.00000	21,13134	6.96049	1900,0000	6.96049	1,0725	0.010	0.010
0.00000	21,13217	7.05437	1900,0000	7.05437	1,0725	0.010	0.010
0.00000	21,13300	7.14825	1900,0000	7.14825	1,0725	0.010	0.010
0.00000	21,13383	7.24213	1900,0000	7.24213	1,0725	0.010	0.010
0.00000	21,13466	7.33601	1900,0000	7.33601	1,0725	0.010	0.010
0.00000	21,13549	7.42989	1900,0000	7.42989	1,0725	0.010	0.010
0.00000	21,13632	7.52377	1900,0000	7.52377	1,0725	0.010	0.010
0.00000	21,13715	7.61765	1900,0000	7.61765	1,0725	0.010	0.010
0.00000	21,13798	7.71153	1900,0000	7.71153	1,0725	0.010	0.010
0.00000	21,13881	7.80541	1900,0000	7.80541	1,0725	0.010	0.010
0.00000	21,13964	7.89929	1900,0000	7.89929	1,0725	0.010	0.010
0.00000	21,14047	7.99317	1900,0000	7.99317	1,0725	0.010	0.010
0.00000	21,14130	8.08705	1900,0000	8.08705	1,0725	0.010	0.010
0.00000	21,14213	8.18093	1900,0000	8.18093	1,0725	0.010	0.010
0.00000	21,14296	8.27481	1900,0000	8.27481	1,0725	0.010	0.010
0.00000	21,14379	8.36869	1900,0000	8.36869	1,0725	0.010	0.010
0.00000	21,14462	8.46257	1900,0000	8.46257	1,0725	0.010	0.010
0.00000	21,14545	8.55645	1900,0000	8.55645	1,0725	0.010	0.010
0.00000	21,14628	8.65033	1900,0000	8.65033	1,0725	0.010	0.010
0.00000	21,14711	8.74421	1900,0000	8.74421	1,0725	0.010	0.010
0.00000	21,14794	8.83809	1900,0000	8.83809	1,0725	0.010	0.010
0.00000	21,14877	8.93197	1900,0000	8.93197	1,0725	0.010	0.010
0.00000	21,14960	9.02585	1900,0000	9.02585	1,0725	0.010	0.010
0.00000	21,15043	9.11973	1900,0000	9.11973	1,0725	0.010	0.010
0.00000	21,15126	9.21361	1900,0000	9.21361	1,0725	0.010	0.010
0.00000	21,15209	9.30749	1900,0000	9.30749	1,0725	0.010	0.010
0.00000	21,15292	9.40137	1900,0000	9.40137	1,0725	0.010	0.010
0.00000	21,15375	9.49525	1900,0000	9.49525	1,0725	0.010	0.010
0.00000	21,15458	9.58913	1900,0000	9.58913	1,0725	0.010	0.010
0.00000	21,15541	9.68301	1900,0000	9.68301	1,0725	0.010	0.010
0.00000	21,15624	9.77689	1900,0000	9.77689	1,0725	0.010	0.010
0.00000	21,15707	9.87077	1900,0000	9.87077	1,0725	0.010	0.010
0.00000	21,15790	9.96465	1900,0000	9.96465	1,0725	0.010	0.010
0.00000	21,15873	10.05853	1900,0000	10.05853	1,0725	0.010	0.010
0.00000	21,15956	10.15241	1900,0000	10.15241	1,0725	0.010	0.010
0.00000	21,16039	10.24629	1900,0000	10.24629	1,0725	0.010	0.010
0.00000	21,16122	10.34017	1900,0000	10.34017	1,0725	0.010	0.010
0.00000	21,16205	10.43405	1900,0000	10.43405	1,0725	0.010	0.010
0.00000	21,16288	10.52793	1900,0000	10.52793	1,0725	0.010	0.010
0.00000	21,16371	10.62181	1900,0000	10.62181	1,0725	0.010	0.010
0.00000	21,16454	10.71569	1900,0000	10.71569	1,0725	0.010	0.010
0.00000	21,16537	10.80957	1900,0000	10.80957	1,0725	0.010	0.010
0.00000	21,16620	10.90345	1900,0000	10.90345	1,0725	0.010	0.010
0.00000	21,16703	11.00000	1900,0000	11.00000	1,0725	0.010	0.010

0.00000	100,20705	0.00221	0.00000	0.00000	0.00331	25,0000	12,5000
0.00000	100,20752	0.00442	0.00000	0.00000	0.00662	26,0000	13,0000
0.00000	100,20799	0.00663	0.00000	0.00000	0.00993	27,0000	13,5000
0.00000	100,20846	0.00884	0.00000	0.00000	0.01324	28,0000	14,0000
0.00000	100,20893	0.01105	0.00000	0.00000	0.01655	29,0000	14,5000
0.00000	100,20940	0.01326	0.00000	0.00000	0.01986	30,0000	15,0000
0.00000	100,20987	0.01547	0.00000	0.00000	0.02317	31,00	



ILLUMINATION AND VISIBILITY FOR A PAVEMENT OF 100% REFLECTANCE DESIGNATED AS TYPE 1

THE SENSITIVITY IS 1.000% AND THE TEMPERATURE IS 2224.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2900.0  
DEGREES FAHRENHEIT = 4045.2

THE POWER RADIATED FROM ONE FOOT OF PAVEMENT IS 10.74 WATT/FOOT.

THE TOTAL VISIBLE FLUX IS 1.97076 LUMENS/FOOT.

THE LUMINANCE (TYPE OF TOTAL VISIBLE FLUX) IS 1.97076 CANDLE/FOOT.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.187.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 1.00000 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.1746 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1100 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1400 MICRONS  
1.1400 MICRONS THE RATIO OF SPECIFIC RADIANT INTENSITY TO TOTAL RADIANT INTENSITY.

THE TOTAL POWER RADIATED IS 122.607 WATT/FOOT (1.00000 WATT/FOOT) (0.1746 WATT/FOOT) (0.18700 WATT/FOOT)

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 125.71 WATT/FOOT PER MICRON.

THE SPECTRAL BRIGHTNESS (CANDLES) IS THE PRODUCT, AREA LUMENS PER WATT \* RADIANT INTENSITY \* VISIBILITY FACTOR.  
WHERE RADIANT INTENSITY IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED THE CHANGE IN RADIANT INTENSITY CAN BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\frac{\Delta I}{I} = \frac{m \Delta T}{T}$

THE SENSITIVITY IS 1.000% AND THE TEMPERATURE IS 2224.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2900.0  
DEGREES FAHRENHEIT = 4045.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATT/FOOT-CENTIMETER	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR WATTON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.14000	0.11414	0.0041	0.0000	14.4400	0.0133	0.006
0.14500	0.10617	0.1048	0.0000	14.2044	0.0161	0.007
0.15000	0.10244	0.1056	0.0000	15.0443	0.0193	0.009
0.15500	0.10224	0.1065	0.0000	15.7444	0.0232	0.010
0.16000	0.105073	0.1076	0.0000	16.4514	0.0276	0.012
0.17000	1.02344	0.0047	0.0000	18.1800	0.0327	0.015
0.18000	1.02272	0.0105	0.0000	18.1421	0.0385	0.017
0.18500	1.02044	0.0114	0.0000	18.4455	0.0442	0.020
0.19000	1.02214	0.0127	0.0000	18.7049	0.0502	0.024
0.19500	1.01844	0.0146	0.0000	18.9471	0.0565	0.028
0.20000	2.01444	0.1146	0.4427	18.1950	0.0717	0.032
0.20500	2.01944	0.0155	1.2620	18.2074	0.0822	0.037
0.21000	2.02054	0.0165	2.1171	18.6142	0.0935	0.041
0.21500	2.02184	0.0170	4.1242	11.8451	0.1082	0.048
0.22000	1.21255	0.0254	6.7381	13.7000	0.1234	0.054
0.22500	1.55744	0.0281	17.4594	11.5188	0.1404	0.061
0.23000	1.92755	0.0312	10.9405	11.1814	0.1591	0.072
0.23500	4.15131	0.1344	49.3495	11.2274	0.1797	0.081
0.24000	4.74444	0.1377	74.2192	11.0773	0.2023	0.091
0.24500	5.13444	0.0413	102.4486	12.9304	0.2272	0.103
0.25000	5.47110	0.1451	146.5487	12.7467	0.2543	0.115
0.25500	6.17017	0.0491	201.5402	12.5442	0.2819	0.128
0.26000	4.76941	0.0534	271.7441	12.4087	0.3161	0.143
0.26500	7.27144	0.0578	365.9004	12.3742	0.3511	0.159
0.27000	7.96244	0.0625	486.5410	12.2824	0.3882	0.174
0.27500	8.44314	0.0675	646.0777	12.1134	0.4298	0.194
0.28000	9.13314	0.0724	863.2563	11.8874	0.4734	0.214
0.28500	9.81274	0.0760	1127.4794	11.8640	0.5211	0.235
0.29000	10.52191	0.0837	1448.2192	11.7430	0.5720	0.254
0.29500	11.26244	0.0884	1875.4671	11.6243	0.6244	0.273
0.30000	12.02844	0.0957	2442.0105	11.4081	0.6844	0.307
0.30500	12.82627	0.1020	3149.7994	11.3942	0.7467	0.337
0.31000	13.65277	0.1084	4006.7818	11.2824	0.8129	0.367
0.31500	14.50800	0.1154	5099.1864	11.1730	0.8833	0.399
0.32000	15.39142	0.1224	6431.0724	11.0654	0.9581	0.431
0.32500	16.30371	0.1297	8011.3439	10.9602	1.0373	0.464
0.33000	17.24231	0.1371	10106.7553	10.8564	1.1211	0.504
0.33500	18.20841	0.1444	11729.2715	10.7554	1.2094	0.546
0.34000	19.20092	0.1527	14046.0231	10.6558	1.3033	0.588
0.34500	20.21924	0.1608	16174.1054	10.5581	1.4018	0.631
0.35000	21.26272	0.1691	18136.3533	10.4621	1.5055	0.680
0.35500	22.33103	0.1774	19944.8248	10.3670	1.6145	0.729
0.36000	23.42224	0.1863	15847.4975	10.2754	1.7288	0.781
0.36500	24.53681	0.1952	16336.4441	10.1844	1.8487	0.835
0.37000	25.67344	0.2042	16619.9848	10.0952	1.9741	0.891

0.9200	20,43100	0.2110	10000, 10	10,0000	0.1000	0.0001
0.9300	20,70200	0.2220	10000, 20	10,0000	0.2000	0.0001
0.9400	21,07300	0.2330	10000, 30	10,0000	0.3000	0.0001
0.9500	21,44400	0.2440	10000, 40	10,0000	0.4000	0.0001
0.9600	21,81500	0.2550	10000, 50	10,0000	0.5000	0.0001
0.9700	22,18600	0.2660	10000, 60	10,0000	0.6000	0.0001
0.9800	22,55700	0.2770	10000, 70	10,0000	0.7000	0.0001
0.9900	22,92800	0.2880	10000, 80	10,0000	0.8000	0.0001
1.0000	23,30000	0.2990	10000, 90	10,0000	0.9000	0.0001
1.0100	23,67200	0.3100	10000, 00	10,0000	0.0000	0.0001
1.0200	24,04400	0.3210	10000, 10	10,0000	0.1000	0.0001
1.0300	24,41600	0.3320	10000, 20	10,0000	0.2000	0.0001
1.0400	24,78800	0.3430	10000, 30	10,0000	0.3000	0.0001
1.0500	25,16000	0.3540	10000, 40	10,0000	0.4000	0.0001
1.0600	25,53200	0.3650	10000, 50	10,0000	0.5000	0.0001
1.0700	25,90400	0.3760	10000, 60	10,0000	0.6000	0.0001
1.0800	26,27600	0.3870	10000, 70	10,0000	0.7000	0.0001
1.0900	26,64800	0.3980	10000, 80	10,0000	0.8000	0.0001
1.1000	27,02000	0.4090	10000, 90	10,0000	0.9000	0.0001
1.1100	27,39200	0.4200	10000, 00	10,0000	0.0000	0.0001
1.1200	27,76400	0.4310	10000, 10	10,0000	0.1000	0.0001
1.1300	28,13600	0.4420	10000, 20	10,0000	0.2000	0.0001
1.1400	28,50800	0.4530	10000, 30	10,0000	0.3000	0.0001
1.1500	28,88000	0.4640	10000, 40	10,0000	0.4000	0.0001
1.1600	29,25200	0.4750	10000, 50	10,0000	0.5000	0.0001
1.1700	29,62400	0.4860	10000, 60	10,0000	0.6000	0.0001
1.1800	29,99600	0.4970	10000, 70	10,0000	0.7000	0.0001
1.1900	30,36800	0.5080	10000, 80	10,0000	0.8000	0.0001
1.2000	30,74000	0.5190	10000, 90	10,0000	0.9000	0.0001
1.2100	31,11200	0.5300	10000, 00	10,0000	0.0000	0.0001
1.2200	31,48400	0.5410	10000, 10	10,0000	0.1000	0.0001
1.2300	31,85600	0.5520	10000, 20	10,0000	0.2000	0.0001
1.2400	32,22800	0.5630	10000, 30	10,0000	0.3000	0.0001
1.2500	32,60000	0.5740	10000, 40	10,0000	0.4000	0.0001
1.2600	32,97200	0.5850	10000, 50	10,0000	0.5000	0.0001
1.2700	33,34400	0.5960	10000, 60	10,0000	0.6000	0.0001
1.2800	33,71600	0.6070	10000, 70	10,0000	0.7000	0.0001
1.2900	34,08800	0.6180	10000, 80	10,0000	0.8000	0.0001
1.3000	34,46000	0.6290	10000, 90	10,0000	0.9000	0.0001
1.3100	34,83200	0.6400	10000, 00	10,0000	0.0000	0.0001
1.3200	35,20400	0.6510	10000, 10	10,0000	0.1000	0.0001
1.3300	35,57600	0.6620	10000, 20	10,0000	0.2000	0.0001
1.3400	35,94800	0.6730	10000, 30	10,0000	0.3000	0.0001
1.3500	36,32000	0.6840	10000, 40	10,0000	0.4000	0.0001
1.3600	36,69200	0.6950	10000, 50	10,0000	0.5000	0.0001
1.3700	37,06400	0.7060	10000, 60	10,0000	0.6000	0.0001
1.3800	37,43600	0.7170	10000, 70	10,0000	0.7000	0.0001
1.3900	37,80800	0.7280	10000, 80	10,0000	0.8000	0.0001
1.4000	38,18000	0.7390	10000, 90	10,0000	0.9000	0.0001
1.4100	38,55200	0.7500	10000, 00	10,0000	0.0000	0.0001
1.4200	38,92400	0.7610	10000, 10	10,0000	0.1000	0.0001
1.4300	39,29600	0.7720	10000, 20	10,0000	0.2000	0.0001
1.4400	39,66800	0.7830	10000, 30	10,0000	0.3000	0.0001
1.4500	40,04000	0.7940	10000, 40	10,0000	0.4000	0.0001
1.4600	40,41200	0.8050	10000, 50	10,0000	0.5000	0.0001
1.4700	40,78400	0.8160	10000, 60	10,0000	0.6000	0.0001
1.4800	41,15600	0.8270	10000, 70	10,0000	0.7000	0.0001
1.4900	41,52800	0.8380	10000, 80	10,0000	0.8000	0.0001
1.5000	41,90000	0.8490	10000, 90	10,0000	0.9000	0.0001

0.95000	114,40000	0.9000	0.0000	0.0711	29,9000	13,500
0.96000	114,71100	0.9120	0.0000	0.0812	31,1000	14,000
0.97000	115,02200	0.9240	0.0000	0.0913	32,3000	14,500
0.98000	115,33300	0.9360	0.0000	0.1014	33,5000	15,000
0.99000	115,64400	0.9480	0.0000	0.1115	34,7000	15,500
1.00000	115,95500	0.9600	0.0000	0.1216	35,9000	16,000
1.01000	116,26600	0.9720	0.0000	0.1317	37,1000	16,500
1.02000	116,57700	0.9840	0.0000	0.1418	38,3000	17,000
1.03000	116,88800	0.9960	0.0000	0.1519	39,5000	17,500
1.04000	117,19900	1.0080	0.0000	0.1620	40,7000	18,000
1.05000	117,51000	1.0200	0.0000	0.1721	41,9000	18,500
1.06000	117,82100	1.0320	0.0000	0.1822	43,1000	19,000
1.07000	118,13200	1.0440	0.0000	0.1923	44,3000	19,500
1.08000	118,44300	1.0560	0.0000	0.2024	45,5000	20,000
1.09000	118,75400	1.0680	0.0000	0.2125	46,7000	20,500
1.10000	119,06500	1.0800	0.0000	0.2226	47,9000	21,000
1.11000	119,37600	1.0920	0.0000	0.2327	49,1000	21,500
1.12000	119,68700	1.1040	0.0000	0.2428	50,3000	22,000
1.13000	119,99800	1.1160	0.0000	0.2529	51,5000	22,500
1.14000	120,30900	1.1280	0.0000	0.2630	52,7000	23,000
1.15000	120,62000	1.1400	0.0000	0.2731	53,9000	23,500
1.16000	120,93100	1.1520	0.0000	0.2832	55,1000	24,000
1.17000	121,24200	1.1640	0.0000	0.2933	56,3000	24,500
1.18000	121,55300	1.1760	0.0000	0.3034	57,5000	25,000
1.19000	121,86400	1.1880	0.0000	0.3135	58,7000	25,500
1.20000	122,17500	1.2000	0.0000	0.3236	59,9000	26,000
1.21000	122,48600	1.2120	0.0000	0.3337	61,1000	26,500
1.22000	122,79700	1.2240	0.0000	0.3438	62,3000	27,000
1.23000	123,10800	1.2360	0.0000	0.3539	63,5000	27,500
1.24000	123,41900	1.2480	0.0000	0.3640	64,7000	28,000
1.25000	123,73000	1.2600	0.0000	0.3741	65,9000	28,500
1.26000	124,04100	1.2720	0.0000	0.3842	67,1000	29,000
1.27000	124,35200	1.2840	0.0000	0.3943	68,3000	29,500
1.28000	124,66300	1.2960	0.0000	0.4044	69,5000	30,000
1.29000	124,97400	1.3080	0.0000	0.4145	70,7000	30,500
1.30000	125,28500	1.3200	0.0000	0.4246	71,9000	31,000
1.31000	125,59600	1.3320	0.0000	0.4347	73,1000	31,500
1.32000	125,90700	1.3440	0.0000	0.4448	74,3000	32,000
1.33000	126,21800	1.3560	0.0000	0.4549	75,5000	32,500
1.34000	126,52900	1.3680	0.0000	0.4650	76,7000	33,000
1.35000	126,84000	1.3800	0.0000	0.4751	77,9000	33,500
1.36000	127,15100	1.3920	0.0000	0.4852	79,1000	34,000
1.37000	127,46200	1.4040	0.0000	0.4953	80,3000	34,500
1.38000	127,77300	1.4160	0.0000	0.5054	81,5000	35,000
1.39000	128,08400	1.4280	0.0000	0.5155	82,7000	35,500
1.40000	128,39500	1.4400	0.0000	0.5256	83,9000	36,000
1.41000	128,70600	1.4520	0.0000	0.5357	85,1000	36,500
1.42000	129,01700	1.4640	0.0000	0.5458	86,3000	37,000
1.43000	129,32800	1.4760	0.0000	0.5559	87,5000	37,500
1.44000	129,63900	1.4880	0.0000	0.5660	88,7000	38,000
1.45000	129,95000	1.5000	0.0000	0.5761	89,9000	38,500
1.46000	130,26100	1.5120	0.0000	0.5862	91,1000	39,000
1.47000	130,57200	1.5240	0.0000	0.5963	92,3000	39,500
1.48000	130,88300	1.5360	0.0000	0.6064	93,5000	40,000
1.49000	131,19400	1.5480	0.0000	0.6165	94,7000	40,500
1.50000	131,50500	1.5600	0.0000	0.6266	95,9000	41,000

1.50000	104.4411	0.0000	0.0000	1.0000	96.1229	81.402
1.60000	104.4411	0.0000	0.0000	1.0000	104.5478	81.127
1.70000	104.4411	0.0000	0.0000	1.0000	119.2374	52.484
1.80000	104.4411	0.0000	0.0000	1.0000	125.0754	54.475
1.90000	104.4411	0.0000	0.0000	1.0000	131.1134	60.113
2.00000	104.4411	0.0000	0.0000	1.0000	140.4544	63.419
2.10000	104.4411	0.0000	0.0000	1.0000	147.1001	64.619
2.20000	104.4411	0.0000	0.0000	1.0000	153.1194	69.137
2.30000	104.4411	0.0000	0.0000	1.0000	159.3724	71.599
2.40000	104.4411	0.0000	0.0000	1.0000	163.5116	73.629
2.50000	104.4411	0.0000	0.0000	1.0000	167.9874	75.659
2.60000	104.4411	0.0000	0.0000	1.0000	172.0474	77.681
2.70000	104.4411	0.0000	0.0000	1.0000	175.7327	79.347
2.80000	104.4411	0.0000	0.0000	1.0000	179.0820	80.860
2.90000	104.4411	0.0000	0.0000	1.0000	182.1295	82.236
3.00000	104.4411	0.0000	0.0000	1.0000	184.8061	83.489
3.10000	104.4411	0.0000	0.0000	1.0000	187.1614	84.633
3.20000	104.4411	0.0000	0.0000	1.0000	189.2514	85.678
3.30000	104.4411	0.0000	0.0000	1.0000	191.1714	86.634
3.40000	104.4411	0.0000	0.0000	1.0000	193.0115	87.510
3.50000	104.4411	0.0000	0.0000	1.0000	195.5917	88.314
3.60000	104.4411	0.0000	0.0000	1.0000	197.2724	89.053
3.70000	104.4411	0.0000	0.0000	1.0000	198.7324	89.732
3.80000	104.4411	0.0000	0.0000	1.0000	200.1101	90.354
3.90000	104.4411	0.0000	0.0000	1.0000	201.3944	90.936
4.00000	104.4411	0.0000	0.0000	1.0000	202.5807	91.470
4.10000	104.4411	0.0000	0.0000	1.0000	203.6742	91.964
4.20000	104.4411	0.0000	0.0000	1.0000	204.6811	92.421
4.30000	104.4411	0.0000	0.0000	1.0000	205.6245	92.845
4.40000	104.4411	0.0000	0.0000	1.0000	206.5494	93.239
4.50000	104.4411	0.0000	0.0000	1.0000	207.3094	93.605
4.60000	104.4411	0.0000	0.0000	1.0000	208.0647	93.944
4.70000	104.4411	0.0000	0.0000	1.0000	208.7641	94.264
4.80000	104.4411	0.0000	0.0000	1.0000	209.4282	94.569
4.90000	104.4411	0.0000	0.0000	1.0000	210.0370	94.837
5.00000	104.4411	0.0000	0.0000	1.0000	210.6094	95.095
5.10000	104.4411	0.0000	0.0000	1.0000	211.1459	95.337
5.20000	104.4411	0.0000	0.0000	1.0000	211.6441	95.564
5.30000	104.4411	0.0000	0.0000	1.0000	212.1149	95.777
5.40000	104.4411	0.0000	0.0000	1.0000	212.5609	95.974
5.50000	104.4411	0.0000	0.0000	1.0000	212.9744	96.164
5.60000	104.4411	0.0000	0.0000	1.0000	213.3664	96.340
5.70000	104.4411	0.0000	0.0000	1.0000	213.7334	96.506
5.80000	104.4411	0.0000	0.0000	1.0000	214.0794	96.662
5.90000	104.4411	0.0000	0.0000	1.0000	214.4040	96.809
6.00000	104.4411	0.0000	0.0000	1.0000	214.7117	96.948
6.10000	104.4411	0.0000	0.0000	1.0000	215.0041	97.079
6.20000	104.4411	0.0000	0.0000	1.0000	215.2794	97.203
6.30000	104.4411	0.0000	0.0000	1.0000	215.5345	97.321
6.40000	104.4411	0.0000	0.0000	1.0000	215.7807	97.437
6.50000	104.4411	0.0000	0.0000	1.0000	216.0144	97.537
6.60000	104.4411	0.0000	0.0000	1.0000	216.2373	97.634
6.70000	104.4411	0.0000	0.0000	1.0000	216.4445	97.731
6.80000	104.4411	0.0000	0.0000	1.0000	216.6449	97.820
6.90000	104.4411	0.0000	0.0000	1.0000	216.8333	97.905
7.00000	104.4411	0.0000	0.0000	1.0000	217.0124	97.984
7.10000	104.4411	0.0000	0.0000	1.0000	217.1824	98.063
7.20000	104.4411	0.0000	0.0000	1.0000	217.3444	98.136
7.30000	104.4411	0.0000	0.0000	1.0000	217.4987	98.204
7.40000	104.4411	0.0000	0.0000	1.0000	217.6454	98.272
7.50000	104.4411	0.0000	0.0000	1.0000	217.7845	98.335
7.60000	104.4411	0.0000	0.0000	1.0000	217.9169	98.395
7.70000	104.4411	0.0000	0.0000	1.0000	218.0427	98.451
7.80000	104.4411	0.0000	0.0000	1.0000	218.1614	98.508
7.90000	104.4411	0.0000	0.0000	1.0000	218.2814	98.560
8.00000	104.4411	0.0000	0.0000	1.0000	218.3947	98.610
8.10000	104.4411	0.0000	0.0000	1.0000	218.5007	98.654
8.20000	104.4411	0.0000	0.0000	1.0000	218.6074	98.704
8.30000	104.4411	0.0000	0.0000	1.0000	218.7164	98.748
8.40000	104.4411	0.0000	0.0000	1.0000	218.8211	98.790
8.50000	104.4411	0.0000	0.0000	1.0000	218.9244	98.830
8.60000	104.4411	0.0000	0.0000	1.0000	219.0244	98.864
8.70000	104.4411	0.0000	0.0000	1.0000	219.1214	98.905
8.80000	104.4411	0.0000	0.0000	1.0000	219.2164	98.941
8.90000	104.4411	0.0000	0.0000	1.0000	219.3074	98.975
9.00000	104.4411	0.0000	0.0000	1.0000	219.3944	99.007
9.10000	104.4411	0.0000	0.0000	1.0000	219.4764	99.039
9.20000	104.4411	0.0000	0.0000	1.0000	219.5544	99.069
9.30000	104.4411	0.0000	0.0000	1.0000	219.6274	99.094
9.40000	104.4411	0.0000	0.0000	1.0000	219.6944	99.125
9.50000	104.4411	0.0000	0.0000	1.0000	219.7564	99.152
9.60000	104.4411	0.0000	0.0000	1.0000	219.8134	99.174
9.70000	104.4411	0.0000	0.0000	1.0000	219.8654	99.201
9.80000	104.4411	0.0000	0.0000	1.0000	219.9124	99.226
9.90000	104.4411	0.0000	0.0000	1.0000	219.9544	99.249
10.00000	104.4411	0.0000	0.0000	1.0000	219.9914	99.271
10.10000	104.4411	0.0000	0.0000	1.0000	220.0234	99.293
10.20000	104.4411	0.0000	0.0000	1.0000	220.0504	99.313
10.30000	104.4411	0.0000	0.0000	1.0000	220.0724	99.333
10.40000	104.4411	0.0000	0.0000	1.0000	220.0894	99.357
10.50000	104.4411	0.0000	0.0000	1.0000	220.1014	99.371
10.60000	104.4411	0.0000	0.0000	1.0000	220.1084	99.389
10.70000	104.4411	0.0000	0.0000	1.0000	220.1104	99.406
10.80000	104.4411	0.0000	0.0000	1.0000	220.1074	99.427
10.90000	104.4411	0.0000	0.0000	1.0000	220.0994	99.438
11.00000	104.4411	0.0000	0.0000	1.0000	220.0864	99.454
11.10000	104.4411	0.0000	0.0000	1.0000	220.0684	99.469
11.20000	104.4411	0.0000	0.0000	1.0000	220.0454	99.483
11.30000	104.4411	0.0000	0.0000	1.0000	220.0174	99.498
11.40000	104.4411	0.0000	0.0000	1.0000	220.0004	99.511
11.50000	104.4411	0.0000	0.0000	1.0000	220.0004	99.524
11.60000	104.4411	0.0000	0.0000	1.0000	220.0004	99.537
11.70000	104.4411	0.0000	0.0000	1.0000	220.0004	99.549
11.80000	104.4411	0.0000	0.0000	1.0000	220.0004	99.561
11.90000	104.4411	0.0000	0.0000	1.0000	220.0004	99.571
12.00000	104.4411	0.0000	0.0000	1.0000	220.0004	99.580

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, D.R.C., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2276.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2550.0  
DEGREES FAHRENHEIT = 4130.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 12.83 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 2185.22 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 682.84 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.058 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 167.210 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.949 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1369 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4322 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EFFICIENCY TO TOTAL RADIANT EFFICIENCY.

THE TOTAL POWER RADIATED IS 239.73 WATT/CM<sup>2</sup> OR 2.39729E+09 FNU/SEC/CM<sup>2</sup> OR 5.72944E+09 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 134.82 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 680 LUMENS PER WATT \* RADIANT EFFICIENCY \* VISIBILITY FACTOR,  
WHERE RADIANT EFFICIENCY IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EFFICIENCY (%) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: % = M \* KATION .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2276.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2550.0  
DEGREES FAHRENHEIT = 4130.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR KATION	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	0.71250	0.0051	0.0000	14.1174	0.0187	0.008
0.35500	0.73284	0.0060	0.0000	14.2804	0.0224	0.009
0.36000	0.75619	0.0070	0.0000	14.4499	0.0271	0.011
0.36500	1.12627	0.0081	0.0000	14.6253	0.0323	0.013
0.37000	1.24869	0.0093	0.0000	14.8064	0.0383	0.016
0.37500	1.47782	0.0106	0.0000	14.9931	0.0452	0.019
0.38000	1.66587	0.0121	0.0000	15.1852	0.0531	0.022
0.38500	1.91494	0.0138	0.0000	15.3824	0.0621	0.026
0.39000	2.16614	0.0156	0.0000	15.5844	0.0723	0.030
0.39500	2.44110	0.0174	0.0000	15.7915	0.0838	0.035
0.40000	2.74012	0.0197	0.7454	15.9930	0.0969	0.040
0.40500	3.06507	0.0221	1.4674	16.1984	0.1113	0.044
0.41000	3.41619	0.0246	2.7874	16.4074	0.1271	0.051
0.41500	3.79324	0.0273	4.8777	16.6202	0.1445	0.058
0.42000	4.20724	0.0303	11.4309	16.8364	0.1635	0.066
0.42500	4.65917	0.0336	21.0248	17.0554	0.1846	0.074
0.43000	5.15050	0.0374	40.2753	17.2770	0.2119	0.084
0.43500	5.68267	0.0414	64.0141	17.5013	0.2387	0.100
0.44000	6.25614	0.0442	85.9130	17.7280	0.2640	0.112
0.44500	6.87170	0.0482	131.9989	17.9564	0.3011	0.125
0.45000	7.52945	0.0525	189.3074	18.1864	0.3390	0.140
0.45500	8.23949	0.0570	258.1204	18.4182	0.3770	0.154
0.46000	9.00267	0.0614	349.8356	18.6524	0.4167	0.173
0.46500	9.81982	0.0664	464.3772	18.8884	0.4588	0.191
0.47000	10.69191	0.0720	618.8464	19.1264	0.5049	0.211
0.47500	11.61974	0.0775	819.2951	19.3664	0.5548	0.233
0.48000	12.60310	0.0832	1092.0044	19.6084	0.6084	0.254
0.48500	13.74284	0.0892	1423.0119	19.8524	0.6744	0.281
0.49000	15.03974	0.0954	1873.5488	20.0984	0.7385	0.308
0.49500	16.49370	0.1014	2481.1019	20.3464	0.8069	0.337
0.50000	18.10374	0.1086	3310.7998	20.5964	0.8799	0.367
0.50500	19.86974	0.1155	4438.4577	20.8484	0.9577	0.399
0.51000	21.79174	0.1227	5824.0547	21.1024	1.0404	0.434
0.51500	23.86974	0.1301	7647.3147	21.3584	1.1281	0.471
0.52000	26.10374	0.1377	9911.0991	21.6164	1.2210	0.509
0.52500	28.49374	0.1456	12809.0292	21.8764	1.3184	0.550
0.53000	31.03974	0.1537	16504.4127	22.1384	1.4212	0.594
0.53500	33.74174	0.1620	21308.1201	22.4024	1.5297	0.639
0.54000	36.59974	0.1705	27350.4104	22.6684	1.6441	0.687
0.54500	39.61374	0.1792	34673.2732	22.9364	1.7644	0.738
0.55000	42.78374	0.1880	43407.0854	23.2064	1.8904	0.791
0.55500	46.10974	0.1971	53607.0629	23.4784	2.0305	0.847
0.56000	49.59174	0.2064	65394.4123	23.7524	2.1745	0.905
0.56500	53.22974	0.2158	78885.1153	24.0284	2.3170	0.967
0.57000	57.02374	0.2254	94198.0256	24.3064	2.4702	1.030

0.97900	32.44800	0.7352	20311.8900	4.6111	7.6100	1.067
0.98000	32.52877	0.7491	20120.0540	4.7227	7.7907	1.167
0.98100	32.60954	0.7630	19928.2180	4.8353	7.9714	1.267
0.98200	32.69031	0.7769	19736.3820	4.9479	8.1521	1.367
0.98300	32.77108	0.7908	19544.5460	5.0605	8.3328	1.467
0.98400	32.85185	0.8047	19352.7100	5.1731	8.5135	1.567
0.98500	32.93262	0.8186	19160.8740	5.2857	8.6942	1.667
0.98600	33.01339	0.8325	18969.0380	5.3983	8.8749	1.767
0.98700	33.09416	0.8464	18777.2020	5.5109	9.0556	1.867
0.98800	33.17493	0.8603	18585.3660	5.6235	9.2363	1.967
0.98900	33.25570	0.8742	18393.5300	5.7361	9.4170	2.067
0.99000	33.33647	0.8881	18201.6940	5.8487	9.5977	2.167
0.99100	33.41724	0.9020	18009.8580	5.9613	9.7784	2.267
0.99200	33.49801	0.9159	17818.0220	6.0739	9.9591	2.367
0.99300	33.57878	0.9298	17626.1860	6.1865	10.1398	2.467
0.99400	33.65955	0.9437	17434.3500	6.2991	10.3205	2.567
0.99500	33.74032	0.9576	17242.5140	6.4117	10.5012	2.667
0.99600	33.82109	0.9715	17050.6780	6.5243	10.6819	2.767
0.99700	33.90186	0.9854	16858.8420	6.6369	10.8626	2.867
0.99800	33.98263	0.9993	16667.0060	6.7495	11.0433	2.967
0.99900	34.06340	1.0132	16475.1700	6.8621	11.2240	3.067
1.00000	34.14417	1.0271	16283.3340	6.9747	11.4047	3.167

0.99900	127.41570	0.9207	0.0000	5.0534	34.7870	14.511
0.98000	129.04001	0.9297	0.0000	5.1659	36.0723	15.047
0.97900	130.21603	0.9388	0.0000	5.2784	37.3576	15.583
0.97800	131.39205	0.9478	0.0000	5.3909	38.6429	16.119
0.97700	132.56807	0.9569	0.0000	5.5034	39.9282	16.655
1.00000	133.74409	0.9659	0.0000	5.6159	41.2135	17.191
1.01000	134.92011	0.9750	0.0000	5.7284	42.4988	17.727
1.02000	136.09613	0.9840	0.0000	5.8409	43.7841	18.263
1.03000	137.27215	0.9931	0.0000	5.9534	45.0694	18.799
1.04000	138.44817	1.0021	0.0000	6.0659	46.3547	19.335
1.05000	139.62419	1.0112	0.0000	6.1784	47.6400	19.871
1.06000	140.80021	1.0202	0.0000	6.2909	48.9253	20.407
1.07000	141.97623	1.0293	0.0000	6.4034	50.2106	20.943
1.08000	143.15225	1.0383	0.0000	6.5159	51.4959	21.479
1.09000	144.32827	1.0474	0.0000	6.6284	52.7812	22.015
1.10000	145.50429	1.0564	0.0000	6.7409	54.0665	22.551
1.11000	146.68031	1.0655	0.0000	6.8534	55.3518	23.087
1.12000	147.85633	1.0745	0.0000	6.9659	56.6371	23.623
1.13000	149.03235	1.0836	0.0000	7.0784	57.9224	24.159
1.14000	150.20837	1.0926	0.0000	7.1909	59.2077	24.695
1.15000	151.38439	1.1017	0.0000	7.3034	60.4930	25.231
1.16000	152.56041	1.1107	0.0000	7.4159	61.7783	25.767
1.17000	153.73643	1.1198	0.0000	7.5284	63.0636	26.303
1.18000	154.91245	1.1288	0.0000	7.6409	64.3489	26.839
1.19000	156.08847	1.1379	0.0000	7.7534	65.6342	27.375
1.20000	157.26449	1.1469	0.0000	7.8659	66.9195	27.911
1.21000	158.44051	1.1560	0.0000	7.9784	68.2048	28.447
1.22000	159.61653	1.1650	0.0000	8.0909	69.4901	28.983
1.23000	160.79255	1.1741	0.0000	8.2034	70.7754	29.519
1.24000	161.96857	1.1831	0.0000	8.3159	72.0607	30.055
1.25000	163.14459	1.1922	0.0000	8.4284	73.3460	30.591
1.26000	164.32061	1.2012	0.0000	8.5409	74.6313	31.127
1.27000	165.49663	1.2103	0.0000	8.6534	75.9166	31.663
1.28000	166.67265	1.2193	0.0000	8.7659	77.2019	32.199
1.29000	167.84867	1.2284	0.0000	8.8784	78.4872	32.735
1.30000	169.02469	1.2374	0.0000	8.9909	79.7725	33.271
1.31000	170.20071	1.2465	0.0000	9.1034	81.0578	33.807
1.32000	171.37673	1.2555	0.0000	9.2159	82.3431	34.343
1.33000	172.55275	1.2646	0.0000	9.3284	83.6284	34.879
1.34000	173.72877	1.2736	0.0000	9.4409	84.9137	35.415
1.35000	174.90479	1.2827	0.0000	9.5534	86.1990	35.951
1.36000	176.08081	1.2917	0.0000	9.6659	87.4843	36.487
1.37000	177.25683	1.3008	0.0000	9.7784	88.7696	37.023
1.38000	178.43285	1.3098	0.0000	9.8909	90.0549	37.559
1.39000	179.60887	1.3189	0.0000	10.0034	91.3402	38.095
1.40000	180.78489	1.3279	0.0000	10.1159	92.6255	38.631
1.41000	181.96091	1.3370	0.0000	10.2284	93.9108	39.167
1.42000	183.13693	1.3460	0.0000	10.3409	95.1961	39.703
1.43000	184.31295	1.3551	0.0000	10.4534	96.4814	40.239
1.44000	185.48897	1.3641	0.0000	10.5659	97.7667	40.775
1.45000	186.66499	1.3732	0.0000	10.6784	99.0520	41.311
1.46000	187.84101	1.3822	0.0000	10.7909	100.3373	41.847
1.47000	189.01703	1.3913	0.0000	10.9034	101.6226	42.383
1.48000	190.19305	1.4003	0.0000	11.0159	102.9079	42.919
1.49000	191.36907	1.4094	0.0000	11.1284	104.1932	43.455
1.50000	192.54509	1.4184	0.0000	11.2409	105.4785	43.991

1,50000	117,17997	0,8452	0,0000	1,4534	107,5141	84,847
1,60000	108,14720	0,7707	0,0000	1,4324	111,4117	84,561
1,70000	98,98449	0,7111	0,0000	1,4130	124,1691	84,281
1,80000	90,12159	0,6492	0,0000	1,3947	139,4207	84,007
1,90000	81,77471	0,5861	0,0000	1,3774	167,2107	83,807
2,00000	74,04341	0,5230	0,0000	2,3623	198,8943	84,654
2,10000	66,94464	0,4824	0,0000	2,3827	162,0617	87,303
2,20000	60,51825	0,4341	0,0000	2,3780	148,8149	70,250
2,30000	54,72504	0,3942	0,0000	2,4516	174,1648	72,652
2,40000	49,48452	0,3564	0,0000	2,4982	174,3752	74,874
2,50000	44,80204	0,3227	0,0000	2,5204	184,0459	76,749
2,60000	40,58114	0,2924	0,0000	2,5494	194,1518	78,569
2,70000	36,82240	0,2653	0,0000	2,5844	172,2191	80,182
2,80000	33,44452	0,2409	0,0000	2,5247	195,7294	81,644
2,90000	30,41805	0,2191	0,0000	2,5807	168,9194	82,977
3,00000	27,74842	0,1994	0,0000	2,2154	201,8234	84,144
3,10000	25,42741	0,1820	0,0000	2,1717	204,4700	85,297
3,20000	23,40189	0,1663	0,0000	2,1270	206,4444	86,300
3,30000	21,68107	0,1521	0,0000	2,0817	209,0942	87,271
3,40000	19,34827	0,1394	0,0000	2,0421	211,1149	88,064
3,50000	17,35270	0,1279	0,0000	2,0134	214,0636	88,838
3,60000	15,61242	0,1175	0,0000	1,9802	216,4717	89,544
3,70000	14,11074	0,1081	0,0000	1,9430	218,2347	90,200
3,80000	12,83231	0,0996	0,0000	1,9114	217,4779	90,802
3,90000	11,76399	0,0919	0,0000	1,8814	219,0049	91,354
4,00000	10,94413	0,0854	0,0000	1,8544	220,2180	91,860
4,10000	10,31241	0,0794	0,0000	1,8300	221,1644	92,341
4,20000	9,81084	0,0738	0,0000	1,8174	222,4191	92,779
4,30000	9,47740	0,0687	0,0000	1,8074	223,1629	93,184
4,40000	9,26045	0,0642	0,0000	1,7984	224,2944	93,563
4,50000	9,09841	0,0601	0,0000	1,7904	225,1344	93,913
4,60000	8,98041	0,0564	0,0000	1,7834	225,6143	94,239
4,70000	8,90704	0,0530	0,0000	1,7774	226,4443	94,543
4,80000	8,87644	0,0497	0,0000	1,7702	227,1251	94,824
4,90000	8,87437	0,0464	0,0000	1,7630	227,6509	95,090
5,00000	8,89841	0,0431	0,0000	1,7560	228,0511	95,337
5,10000	8,94841	0,0401	0,0000	1,7490	228,1052	95,564
5,20000	9,02200	0,0372	0,0000	1,7420	228,0241	95,785
5,30000	9,11000	0,0346	0,0000	1,7350	228,1105	95,988
5,40000	9,21144	0,0321	0,0000	1,7280	228,0649	96,174
5,50000	9,32447	0,0299	0,0000	1,7210	228,0095	96,357
5,60000	9,44841	0,0279	0,0000	1,7140	228,1304	96,525
5,70000	9,58247	0,0265	0,0000	1,7070	228,1775	96,683
5,80000	9,72447	0,0250	0,0000	1,7000	228,1305	96,832
5,90000	9,87447	0,0235	0,0000	1,6930	228,0710	96,972
6,00000	10,03245	0,0222	0,0000	1,6860	227,9843	97,105
6,10000	10,19117	0,0210	0,0000	1,6790	227,8879	97,230
6,20000	10,35111	0,0198	0,0000	1,6720	227,7700	97,348
6,30000	10,51203	0,0187	0,0000	1,6650	227,6385	97,459
6,40000	10,67401	0,0177	0,0000	1,6580	227,4917	97,565
6,50000	10,83709	0,0168	0,0000	1,6510	227,3304	97,665
6,60000	11,00124	0,0159	0,0000	1,6440	227,1546	97,760
6,70000	11,16647	0,0151	0,0000	1,6370	226,9643	97,850
6,80000	11,33274	0,0143	0,0000	1,6300	226,7583	97,935
6,90000	11,49907	0,0136	0,0000	1,6230	226,5373	98,014
7,00000	11,66541	0,0129	0,0000	1,6160	226,3016	98,089
7,10000	11,83174	0,0122	0,0000	1,6090	226,0514	98,166
7,20000	11,99807	0,0117	0,0000	1,6020	225,7867	98,235
7,30000	12,16440	0,0111	0,0000	1,5950	225,5074	98,301
7,40000	12,33073	0,0106	0,0000	1,5880	225,2134	98,364
7,50000	12,49706	0,0101	0,0000	1,5810	224,9057	98,424
7,60000	12,66339	0,0097	0,0000	1,5740	224,5844	98,489
7,70000	12,82972	0,0092	0,0000	1,5670	224,2494	98,534
7,80000	12,99605	0,0088	0,0000	1,5600	223,9007	98,568
7,90000	13,16238	0,0084	0,0000	1,5530	223,5384	98,634
8,00000	13,32871	0,0080	0,0000	1,5460	223,1627	98,688
8,10000	13,49504	0,0077	0,0000	1,5390	222,7737	98,731
8,20000	13,66137	0,0073	0,0000	1,5320	222,3714	98,775
8,30000	13,82770	0,0070	0,0000	1,5250	221,9557	98,814
8,40000	13,99403	0,0067	0,0000	1,5180	221,5267	98,850
8,50000	14,16036	0,0064	0,0000	1,5110	221,0844	98,894
8,60000	14,32669	0,0062	0,0000	1,5040	220,6287	98,931
8,70000	14,49302	0,0059	0,0000	1,4970	220,1597	98,964
8,80000	14,65935	0,0057	0,0000	1,4900	219,6774	98,990
8,90000	14,82568	0,0055	0,0000	1,4830	219,1817	99,032
9,00000	14,99201	0,0052	0,0000	1,4760	218,6727	99,063
9,10000	15,15834	0,0050	0,0000	1,4690	218,1504	99,099
9,20000	15,32467	0,0048	0,0000	1,4620	217,6147	99,121
9,30000	15,49100	0,0046	0,0000	1,4550	217,0657	99,148
9,40000	15,65733	0,0045	0,0000	1,4480	216,5034	99,175
9,50000	15,82366	0,0043	0,0000	1,4410	215,9277	99,200
9,60000	15,99000	0,0041	0,0000	1,4340	215,3387	99,225
9,70000	16,15633	0,0040	0,0000	1,4270	214,7364	99,248
9,80000	16,32266	0,0038	0,0000	1,4200	214,1207	99,271
9,90000	16,48900	0,0037	0,0000	1,4130	213,4917	99,293
10,00000	16,65533	0,0036	0,0000	1,4060	212,8494	99,314
10,10000	16,82166	0,0034	0,0000	1,4000	212,1937	99,334
10,20000	16,98800	0,0033	0,0000	1,3930	211,5247	99,353
10,30000	17,15433	0,0032	0,0000	1,3860	210,8424	99,372
10,40000	17,32066	0,0031	0,0000	1,3790	210,1467	99,390
10,50000	17,48700	0,0030	0,0000	1,3720	209,4376	99,407
10,60000	17,65333	0,0029	0,0000	1,3650	208,7151	99,424
10,70000	17,81966	0,0028	0,0000	1,3580	207,9794	99,441
10,80000	17,98600	0,0027	0,0000	1,3510	207,2304	99,456
10,90000	18,15233	0,0026	0,0000	1,3440	206,4687	99,472
11,00000	18,31866	0,0025	0,0000	1,3370	205,6944	99,484
11,10000	18,48500	0,0024	0,0000	1,3300	204,9074	99,501
11,20000	18,65133	0,0023	0,0000	1,3230	204,1077	99,514
11,30000	18,81766	0,0023	0,0000	1,3160	203,2954	99,524
11,40000	18,98400	0,0022	0,0000	1,3090	202,4707	99,538
11,50000	19,15033	0,0021	0,0000	1,3020	201,6334	99,553
11,60000	19,31666	0,0020	0,0000	1,2950	200,7837	99,565
11,70000	19,48300	0,0020	0,0000	1,2880	199,9214	99,577
11,80000	19,64933	0,0019	0,0000	1,2810	199,0467	99,587
11,90000	19,81566	0,0019	0,0000	1,2740	198,1594	99,599
12,00000	19,98200	0,0018	0,0000	1,2670	197,2597	99,610



VISIBILITY AND OTHER DATA FOR PLANK RADIATOR, MECHANICS DIVISION, D.W.L. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2326.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2600.0  
DEGREES FAHRENHEIT = 4220.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 15.23 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 2573.14 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 425.42 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.099 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 170.262 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 10.000 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.1146 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4046 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 259.09 WATT/CM<sup>2</sup> OR 2.5909E+09 ERG/SEC/CM<sup>2</sup> OR 4.1924E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 192.97 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, WAO LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA W = K/T<sup>N</sup>

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2326.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2600.0  
DEGREES FAHRENHEIT = 4220.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT N FOR K/T <sup>N</sup>	POWER FROM ZERO TO L	% TOTAL POWER FROM TO L
0.35000	0.97140	0.3044	0.0000	15.4077	0.0241	0.010
0.35500	1.11054	0.3574	0.0000	15.4251	0.0314	0.013
0.36000	1.30825	0.4044	0.0000	15.4464	0.0375	0.015
0.36500	1.56801	0.5099	0.0000	15.4701	0.0445	0.017
0.37000	1.72912	0.5513	0.0000	15.4952	0.0528	0.020
0.37500	1.87360	0.6012	0.0000	15.5219	0.0618	0.024
0.38000	2.02220	0.6517	0.0000	15.5497	0.0724	0.028
0.38500	2.13822	0.7164	0.0000	15.5784	0.0843	0.033
0.39000	2.29112	0.7817	0.0000	15.6084	0.0974	0.038
0.39500	2.21244	0.8210	0.0000	15.6294	0.1110	0.044
0.40000	1.99644	0.6214	0.0000	15.6317	0.1100	0.050
0.40500	2.00444	0.6242	2.1794	15.6410	0.1149	0.057
0.41000	4.45123	0.1429	1.4125	15.6494	0.1201	0.048
0.41500	4.92917	0.1522	7.1739	15.6565	0.1215	0.075
0.42000	5.44111	0.1654	14.7909	15.6621	0.1231	0.085
0.42500	5.98821	0.1819	29.7255	15.6661	0.1240	0.094
0.43000	6.57113	0.1930	51.8331	15.6686	0.1248	0.104
0.43500	7.19061	0.2000	82.1454	15.6704	0.1254	0.114
0.44000	7.84727	0.2051	122.7112	15.6714	0.1258	0.114
0.44500	8.54143	0.2088	168.6810	15.6718	0.1261	0.115
0.45000	9.27415	0.2108	219.4460	15.6719	0.1264	0.116
0.45500	10.04514	0.2123	277.8740	15.6719	0.1265	0.117
0.46000	10.85491	0.2129	342.8804	15.6717	0.1264	0.117
0.46500	11.70354	0.2126	414.8230	15.6714	0.1261	0.117
0.47000	12.59115	0.2113	494.1406	15.6711	0.1256	0.117
0.47500	13.51767	0.2084	580.9054	15.6707	0.1249	0.117
0.48000	14.48294	0.2047	675.4298	15.6704	0.1240	0.116
0.48500	15.48683	0.2002	777.7440	15.6701	0.1228	0.114
0.49000	16.52894	0.1951	887.8533	15.6701	0.1214	0.113
0.49500	17.60891	0.1895	1005.6773	15.6701	0.1197	0.110
0.50000	18.72624	0.1834	1131.0188	15.6704	0.1178	0.113
0.50500	19.88041	0.1760	1264.6733	15.6704	0.1157	0.110
0.51000	21.07074	0.1677	1407.4174	15.6704	0.1134	0.109
0.51500	22.29654	0.1584	1559.0294	15.6704	0.1109	0.105
0.52000	23.55700	0.1481	1719.3109	15.6704	0.1082	0.104
0.52500	24.85129	0.1368	1888.0102	15.6704	0.1054	0.102
0.53000	26.17849	0.1245	2064.7954	15.6704	0.1024	0.099
0.53500	27.54764	0.1112	2249.2173	15.6704	0.0992	0.097
0.54000	28.95749	0.0969	2441.8231	15.6704	0.0958	0.094
0.54500	30.40744	0.0814	2643.1114	15.6704	0.0921	0.091
0.55000	31.89790	0.0709	2853.6111	15.6702	0.0882	0.085
0.55500	33.42727	0.0617	3072.7125	15.6704	0.0841	0.084
0.56000	34.99449	0.0527	3300.0023	15.6704	0.0800	0.081
0.56500	36.60751	0.0437	3536.1222	15.6702	0.0760	0.078
0.57000	37.25401	0.0347	3780.5140	15.6701	0.0720	0.073



1.50000	126.35577	0.0260	0.0000	3.7831	119.9090	44.281
1.00000	116.00251	0.7583	0.0000	3.5704	134.0278	50.957
1.70000	105.76809	0.6918	0.0000	3.3857	144.1137	55.217
1.00000	95.90169	0.6275	0.0000	3.2274	154.1049	59.174
1.00000	86.45591	0.5678	0.0000	3.0794	164.1135	62.655
2.00000	78.44742	0.5128	0.0000	2.9520	174.1395	65.843
2.10000	70.78931	0.4628	0.0000	2.8413	178.0481	68.720
2.20000	63.66331	0.4175	0.0000	2.7411	184.7748	71.316
2.30000	57.03020	0.3767	0.0000	2.6491	190.8810	73.659
2.40000	50.93877	0.3405	0.0000	2.5607	196.3222	75.773
2.50000	45.43894	0.3075	0.0000	2.4744	201.2711	77.683
2.60000	40.56649	0.2789	0.0000	2.4154	205.7644	79.411
2.70000	36.35519	0.2520	0.0000	2.3522	209.7983	80.975
2.80000	32.87637	0.2287	0.0000	2.2940	213.4714	82.392
2.90000	31.77954	0.2077	0.0000	2.2403	216.8045	83.679
3.00000	28.91664	0.1890	0.0000	2.1907	219.8387	84.850
3.10000	26.35199	0.1723	0.0000	2.1447	222.5994	85.915
3.20000	24.05171	0.1572	0.0000	2.1020	225.1179	86.887
3.30000	21.94620	0.1437	0.0000	2.0622	227.4140	87.775
3.40000	20.12800	0.1316	0.0000	2.0251	229.5221	88.587
3.50000	18.45650	0.1207	0.0000	1.9904	231.4499	89.331
3.60000	16.94841	0.1108	0.0000	1.9579	233.2149	90.014
3.70000	15.54447	0.1019	0.0000	1.9274	234.8445	90.641
3.80000	14.23470	0.0938	0.0000	1.8987	236.3655	91.219
3.90000	13.23000	0.0865	0.0000	1.8717	237.7903	91.751
4.00000	12.27491	0.0799	0.0000	1.8462	239.1297	92.242
4.10000	11.30747	0.0739	0.0000	1.8221	240.3847	92.694
4.20000	10.47097	0.0685	0.0000	1.7992	241.5540	93.116
4.30000	9.70841	0.0635	0.0000	1.7774	242.6444	93.505
4.40000	9.01345	0.0590	0.0000	1.7571	243.6600	93.864
4.50000	8.37811	0.0548	0.0000	1.7374	244.6091	94.202
4.60000	7.79681	0.0510	0.0000	1.7191	245.4974	94.514
4.70000	7.26425	0.0475	0.0000	1.7015	246.3301	94.804
4.80000	6.77569	0.0443	0.0000	1.6847	247.1137	95.075
4.90000	6.32493	0.0414	0.0000	1.6684	247.8445	95.329
5.00000	5.91421	0.0387	0.0000	1.6533	248.5283	95.564
5.10000	5.53615	0.0362	0.0000	1.6384	249.1705	95.785
5.20000	5.18175	0.0339	0.0000	1.6244	249.7641	95.992
5.30000	4.84033	0.0318	0.0000	1.6112	249.3041	96.185
5.40000	4.51145	0.0298	0.0000	1.5984	249.7990	96.367
5.50000	4.28494	0.0278	0.0000	1.5859	250.2512	96.538
5.60000	4.07244	0.0263	0.0000	1.5740	250.6647	96.694
5.70000	3.79181	0.0246	0.0000	1.5626	250.9274	96.840
5.80000	3.57107	0.0233	0.0000	1.5517	251.1455	96.991
5.90000	3.36634	0.0220	0.0000	1.5411	251.3243	97.129
6.00000	3.17595	0.0206	0.0000	1.5309	251.4693	97.251
6.10000	2.99872	0.0196	0.0000	1.5211	251.5779	97.370
6.20000	2.83354	0.0185	0.0000	1.5117	251.6564	97.483
6.30000	2.67944	0.0175	0.0000	1.5024	251.7040	97.589
6.40000	2.53579	0.0164	0.0000	1.4934	251.7257	97.690
6.50000	2.40144	0.0157	0.0000	1.4845	251.7295	97.785
6.60000	2.27585	0.0149	0.0000	1.4757	251.7141	97.875
6.70000	2.15829	0.0141	0.0000	1.4671	251.6879	97.961
6.80000	2.04817	0.0134	0.0000	1.4584	251.6512	98.042
6.90000	1.94444	0.0127	0.0000	1.4490	251.6046	98.119

7.00000	1.84810	0.0121	0.0000	1.4407	251.5474	98.199
7.10000	1.75717	0.0115	0.0000	1.4317	251.4874	98.262
7.20000	1.67174	0.0109	0.0000	1.4222	251.4250	98.320
7.30000	1.59141	0.0104	0.0000	1.4124	251.3601	98.371
7.40000	1.51581	0.0099	0.0000	1.4020	251.2924	98.415
7.50000	1.44443	0.0094	0.0000	1.3914	251.2224	98.454
7.60000	1.37754	0.0090	0.0000	1.4074	251.1645	98.502
7.70000	1.31432	0.0086	0.0000	1.4019	251.1011	98.544
7.80000	1.25465	0.0082	0.0000	1.3942	251.0395	98.584
7.90000	1.19831	0.0078	0.0000	1.3897	250.9791	98.711
8.00000	1.14509	0.0075	0.0000	1.3853	250.9202	98.756
8.10000	1.09477	0.0072	0.0000	1.3801	250.8612	98.799
8.20000	1.04717	0.0068	0.0000	1.3750	250.8041	98.841
8.30000	1.00212	0.0065	0.0000	1.3701	250.7497	98.880
8.40000	0.95948	0.0063	0.0000	1.3652	250.6988	98.918
8.50000	0.91904	0.0060	0.0000	1.3605	250.6497	98.954
8.60000	0.88072	0.0058	0.0000	1.3559	250.6027	98.988
8.70000	0.84434	0.0056	0.0000	1.3514	250.5540	99.022
8.80000	0.80984	0.0053	0.0000	1.3471	250.5040	99.054
8.90000	0.77709	0.0051	0.0000	1.3424	250.4540	99.085
9.00000	0.74594	0.0049	0.0000	1.3387	250.4041	99.118
9.10000	0.71637	0.0047	0.0000	1.3344	250.3540	99.149
9.20000	0.68827	0.0045	0.0000	1.3304	250.3040	99.179
9.30000	0.66144	0.0043	0.0000	1.3264	250.2540	99.194
9.40000	0.63594	0.0042	0.0000	1.3230	250.2040	99.221
9.50000	0.61167	0.0040	0.0000	1.3191	250.1551	99.245
9.60000	0.58853	0.0039	0.0000	1.3157	250.1041	99.264
9.70000	0.56647	0.0037	0.0000	1.3122	250.0524	99.290
9.80000	0.54544	0.0036	0.0000	1.3087	250.0040	99.312
9.90000	0.52534	0.0034	0.0000	1.3053	249.9540	99.332
10.00000	0.50621	0.0033	0.0000	1.3020	249.9041	99.352
10.10000	0.48791	0.0032	0.0000	1.2984	249.8540	99.371
10.20000	0.47043	0.0031	0.0000	1.2954	249.8041	99.389
10.30000	0.45371	0.0030	0.0000	1.2924	249.7540	99.408
10.40000	0.43775	0.0029	0.0000	1.2894	249.7040	99.427
10.50000	0.42244	0.0028	0.0000	1.2865	249.6540	99.447
10.60000	0.40744	0.0027	0.0000	1.2834	249.6040	99.464
10.70000	0.39287	0.0026	0.0000	1.2807	249.5540	99.471
10.80000	0.37867	0.0025	0.0000	1.2779	249.5040	99.478
10.90000	0.36473	0.0024	0.0000	1.2752	249.4540	99.501
11.00000	0.35133	0.0023	0.0000	1.2725	249.4040	99.514
11.10000	0.33834	0.0022	0.0000	1.2699	249.3540	99.530
11.20000	0.32574	0.0022	0.0000	1.2672	249.3040	99.543
11.30000	0.31339	0.0021	0.0000	1.2647	249.2540	99.554
11.40000	0.30108	0.0020	0.0000	1.2622	249.2040	99.564
11.50000	0.28899	0.0020	0.0000	1.2598	249.1540	99.570
11.60000	0.27710	0.0019	0.0000	1.2574	249.1040	99.591
11.70000	0.26544	0.0018	0.0000	1.2550	249.0540	99.602
11.80000	0.25391	0.0018	0.0000	1.2527	249.0040	99.613
11.90000	0.24241	0.0017	0.0000	1.2504	248.9540	99.621
12.00000	0.23083	0.0017	0.0000	1.2482	248.9040	99.631

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, U.S.I.C. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2376.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2650.0  
DEGREES FAHRENHEIT = 4310.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 17.97 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 3112.78 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 990.93 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.044 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 173.183 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 11.131 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.0236 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.3781 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 279.60 WATT/CM<sup>2</sup> OR 2.796000000 ERG/SEC/CM<sup>2</sup> OR 4.662700000 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 149.26 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA W = K(T/M)

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2376.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2650.0  
DEGREES FAHRENHEIT = 4310.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR K(T/M)	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	1.30894	0.0074	1.0000	15.4094	0.0340	0.013
0.35500	1.51703	0.0090	0.0000	15.2910	0.0431	0.015
0.36000	1.74027	0.0106	0.0000	15.0784	0.0513	0.019
0.36500	2.00730	0.0119	0.0000	14.8721	0.0606	0.022
0.37000	2.26271	0.0134	0.0000	14.6711	0.0714	0.024
0.37500	2.60709	0.0155	0.0000	14.4755	0.0836	0.030
0.38000	2.95194	0.0175	0.0000	14.2850	0.0974	0.035
0.38500	3.37884	0.0198	0.0000	14.0995	0.1132	0.040
0.39000	3.79723	0.0222	0.0000	13.9197	0.1308	0.047
0.39500	4.18444	0.0248	0.0000	13.7426	0.1506	0.054
0.40000	4.66980	0.0277	1.2491	13.5708	0.1727	0.062
0.40500	5.18447	0.0308	11.4832	13.4032	0.1974	0.071
0.41000	5.74101	0.0341	4.4854	13.2404	0.2247	0.080
0.41500	6.33887	0.0377	9.4829	13.0803	0.2548	0.091
0.42000	6.97483	0.0415	16.8759	12.9224	0.2881	0.101
0.42500	7.65564	0.0455	30.0017	12.7725	0.3247	0.114
0.43000	8.37871	0.0498	46.0755	12.6290	0.3647	0.130
0.43500	9.14984	0.0543	66.4252	12.4920	0.4085	0.146
0.44000	9.98285	0.0591	92.5438	12.3617	0.4562	0.163
0.44500	10.79092	0.0642	125.0764	12.2384	0.5081	0.182
0.45000	11.69554	0.0695	162.2137	12.1210	0.5643	0.202
0.45500	12.63564	0.0751	204.4274	12.0094	0.6249	0.224
0.46000	13.62021	0.0809	252.7064	11.9007	0.6907	0.247
0.46500	14.65826	0.0871	307.1508	11.7939	0.7614	0.272
0.47000	15.72267	0.0934	368.9189	11.6897	0.8373	0.299
0.47500	16.81420	0.1001	438.5407	11.5881	0.9187	0.329
0.48000	17.93191	0.1070	516.4225	11.4891	1.0054	0.360
0.48500	19.07484	0.1141	593.0704	11.3924	1.0980	0.393
0.49000	20.24197	0.1214	670.0029	11.2983	1.1964	0.428
0.49500	21.43331	0.1289	747.8154	11.2064	1.3004	0.464
0.50000	22.64884	0.1367	827.0064	11.1170	1.4104	0.504
0.50500	23.88954	0.1447	908.0011	11.0303	1.5267	0.549
0.51000	25.15540	0.1529	991.0004	10.9460	1.6498	0.599
0.51500	26.44641	0.1613	1076.0000	10.8640	1.7798	0.651
0.52000	27.76256	0.1700	1163.0011	10.7843	1.9161	0.704
0.52500	29.10384	0.1789	1252.0000	10.7068	2.0584	0.760
0.53000	30.47024	0.1881	1344.0000	10.6314	2.2074	0.818
0.53500	31.86174	0.1975	1439.0000	10.5580	2.3627	0.878
0.54000	33.27834	0.2072	1537.0000	10.4864	2.5247	0.940
0.54500	34.72004	0.2172	1638.0000	10.4164	2.6927	1.004
0.55000	36.18684	0.2274	1742.0000	10.3480	2.8667	1.071
0.55500	37.67874	0.2379	1849.0000	10.2810	3.0467	1.141
0.56000	39.19574	0.2486	1959.0000	10.2154	3.2327	1.213
0.56500	40.73784	0.2595	2072.0000	10.1510	3.4247	1.287
0.57000	42.30504	0.2707	2188.0000	10.0878	3.6227	1.363

0.47500	47.27777	0.2810	29414.2104	9.4413	4.0040	1.434
0.50000	49.11387	0.2710	28095.1290	9.1590	4.2490	1.529
0.52500	50.96991	0.2609	28316.0573	0.2400	4.5001	1.600
0.55000	52.84214	0.2511	27201.1211	0.2010	4.7500	1.700
0.57500	54.73162	0.2414	25844.1659	0.1242	5.0245	1.700
0.60000	56.63544	0.2304	24371.1532	0.0482	5.3069	1.800
0.62500	58.55231	0.2188	22575.0151	0.0714	5.5900	2.001
0.65000	60.48084	0.2065	20486.7744	0.0901	5.8925	2.107
0.67500	62.41867	0.1931	18714.1100	0.1270	6.1997	2.217
0.70000	64.36504	0.1785	16675.0294	0.1747	6.5147	2.331
0.72500	66.31817	0.1625	14475.0285	0.2404	6.8434	2.444
0.75000	68.27652	0.1454	12303.1283	0.3170	7.1790	2.560
0.77500	70.23860	0.1274	10364.0077	0.4009	7.5241	2.692
0.80000	72.20204	0.1081	8592.1495	0.4835	7.8827	2.819
0.82500	74.16804	0.0874	6959.9127	0.5617	8.2642	2.950
0.85000	76.13261	0.0652	5539.4084	0.6352	8.6339	3.084
0.87500	78.09513	0.0414	4301.0800	0.7004	9.0095	3.222
0.90000	80.05429	0.0158	3320.4220	0.7269	9.4004	3.364
0.92500	82.00875	0.0000	2509.0674	0.7042	9.8190	3.509
0.95000	83.95722	0.0000	1826.0091	0.6322	10.2249	3.657
0.97500	85.89844	0.0000	1343.0515	0.5104	10.6496	3.809
0.99000	87.83114	0.0000	1015.3284	0.3455	11.0839	3.964
0.99500	89.75425	0.0000	726.2914	0.2274	11.5279	4.123
0.99800	91.66651	0.0000	511.1324	0.1501	11.9814	4.284
0.99900	93.56644	0.0000	362.6451	0.1017	12.4445	4.449
0.99950	95.45417	0.0000	246.1242	0.0754	12.9171	4.620
0.99980	97.32745	0.0000	161.0297	0.0532	13.3990	4.792
0.99990	99.18571	0.0000	101.0372	0.0399	13.8903	4.964
0.99995	101.02704	0.0000	63.0484	0.0299	14.3909	5.147
0.99998	102.85330	0.0000	40.0143	0.0213	14.9006	5.339
0.99999	104.66084	0.0000	25.0186	0.0145	15.4194	5.515
0.99999	106.44877	0.0000	16.0129	0.0098	15.9472	5.701
0.99999	108.21825	0.0000	10.0134	0.0068	16.4838	5.895
0.99999	109.96853	0.0000	6.0104	0.0048	17.0291	6.091
0.99999	111.69884	0.0000	4.0074	0.0034	17.5835	6.288
0.99999	113.40834	0.0000	2.7114	0.0024	18.1463	6.490
0.99999	115.09872	0.0000	0.0000	0.0017	18.7179	6.698
0.99999	120.00000	0.0000	0.0000	0.0012	20.0000	7.000
0.99999	123.15442	0.0000	0.0000	0.0008	21.4968	7.360
0.99999	126.20070	0.0000	0.0000	0.0006	22.9417	7.760
0.99999	129.15728	0.0000	0.0000	0.0004	24.3220	8.192
0.99999	131.90806	0.0000	0.0000	0.0003	25.6285	8.650
0.99999	134.52047	0.0000	0.0000	0.0002	26.8602	9.130
0.99999	137.00460	0.0000	0.0000	0.0001	28.0277	9.630
0.99999	139.35762	0.0000	0.0000	0.0001	29.1309	10.150
0.99999	142.58234	0.0000	0.0000	0.0000	30.1715	10.690
0.99999	144.53364	0.0000	0.0000	0.0000	31.1515	11.250
0.99999	146.20084	0.0000	0.0000	0.0000	32.0715	11.830
0.99999	147.58463	0.0000	0.0000	0.0000	32.9315	12.430
0.99999	150.00000	0.0000	0.0000	0.0000	33.7315	13.050
0.99999	152.53370	0.0000	0.0000	0.0000	34.4715	13.700
0.99999	154.24000	0.0000	0.0000	0.0000	35.1515	14.370
0.99999	155.00000	0.0000	0.0000	0.0000	35.7715	15.060
0.99999	157.16650	0.0000	0.0000	0.0000	36.3315	15.760
0.99999	158.73011	0.0000	0.0000	0.0000	36.8315	16.480

0.95000	100.02484	0.0511	0.0000	5.7370	44.2234	14.538
0.96000	101.20814	0.0381	0.0000	5.4744	47.8209	17.106
0.97000	102.29014	0.0284	0.0000	5.4170	49.4474	17.685
0.98000	103.27314	0.0204	0.0000	5.4009	51.0753	18.267
0.99000	104.14025	0.0140	0.0000	5.4060	52.7124	18.853
1.00000	104.95257	0.0084	0.0000	5.4322	54.3542	19.441
1.01000	105.65303	0.0045	0.0000	5.4906	56.0113	20.032
1.02000	106.24411	0.0022	0.0000	5.4400	57.6710	20.626
1.03000	106.72831	0.0011	0.0000	5.2974	59.3343	21.222
1.04000	107.20825	0.0005	0.0000	5.2479	61.0005	21.819
1.05000	107.58444	0.0002	0.0000	5.1994	62.6686	22.418
1.06000	107.85554	0.0001	0.0000	5.1518	64.3370	23.014
1.07000	108.00000	0.0000	0.0000	5.1052	66.0057	23.614
1.08000	108.10473	0.0000	0.0000	5.0594	67.6719	24.220
1.09000	108.17402	0.0000	0.0000	5.0146	69.3344	24.831
1.10000	108.20254	0.0000	0.0000	4.9704	71.0039	25.443
1.11000	108.18482	0.0000	0.0000	4.9274	72.6800	26.058
1.12000	108.02342	0.0000	0.0000	4.8851	74.3627	26.674
1.13000	107.72047	0.0000	0.0000	4.8435	76.0523	27.292
1.14000	107.35944	0.0000	0.0000	4.8027	77.7482	27.914
1.15000	107.24171	0.0000	0.0000	4.7627	79.4507	28.540
1.16000	106.87004	0.0000	0.0000	4.7234	81.1600	29.170
1.17000	106.44475	0.0000	0.0000	4.6848	82.8764	29.804
1.18000	105.97417	0.0000	0.0000	4.6470	84.6000	30.443
1.19000	105.45833	0.0000	0.0000	4.6097	86.3310	31.087
1.20000	104.89663	0.0000	0.0000	4.5732	88.0695	31.736
1.21000	104.28914	0.0000	0.0000	4.5373	89.8155	32.390
1.22000	103.63301	0.0000	0.0000	4.5020	91.5690	33.049
1.23000	102.92699	0.0000	0.0000	4.4674	93.3300	33.714
1.24000	102.22335	0.0000	0.0000	4.4333	95.0984	34.384
1.25000	101.44400	0.0000	0.0000	4.3998	96.8742	35.059
1.26000	100.07351	0.0000	0.0000	4.3669	98.6575	35.739
1.27000	99.05007	0.0000	0.0000	4.3346	100.4484	36.424
1.28000	98.09955	0.0000	0.0000	4.3028	102.2468	37.114
1.29000	98.11944	0.0000	0.0000	4.2715	104.0528	37.809
1.30000	97.21377	0.0000	0.0000	4.2404	105.8664	38.509
1.31000	96.28344	0.0000	0.0000	4.2105	107.6876	39.214
1.32000	95.33061	0.0000	0.0000	4.1808	109.5164	39.924
1.33000	94.35612	0.0000	0.0000	4.1515	111.3538	40.639
1.34000	93.36163	0.0000	0.0000	4.1227	113.2000	41.359
1.35000	92.34852	0.0000	0.0000	4.0944	115.0560	42.084
1.36000	91.31812	0.0000	0.0000	4.0665	116.9220	42.814
1.37000	90.27171	0.0000	0.0000	4.0391	118.7980	43.549
1.38000	89.21052	0.0000	0.0000	4.0121	120.6840	44.289
1.39000	88.13574	0.0000	0.0000	3.9855	122.5800	45.034
1.40000	87.04855	0.0000	0.0000	3.9593	124.4860	45.784
1.41000	85.95000	0.0000	0.0000	3.9336	126.4020	46.539
1.42000	84.84117	0.0000	0.0000	3.9083	128.3280	47.299
1.43000	83.72307	0.0000	0.0000	3.8834	130.2640	48.064
1.44000	82.59664	0.0000	0.0000	3.8589	132.2100	48.834
1.45000	81.46289	0.0000	0.0000	3.8348	134.1660	49.609
1.46000	80.32261	0.0000	0.0000	3.8110	136.1320	50.389
1.47000	79.17474	0.0000	0.0000	3.7876	138.1080	51.174
1.48000	78.02040	0.0000	0.0000	3.7646	140.0940	51.964
1.49000	76.87117	0.0000	0.0000	3.7419	142.0900	52.759

1.00000	118.71439	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	118.70421	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	118.70411	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	102.01800	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	92.04024	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	82.06924	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	72.09824	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	62.12724	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	52.15624	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	42.18524	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	32.21424	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	22.24324	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	12.27224	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.30124	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	23.43384	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	25.02615	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	27.46181	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	29.91594	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	31.38411	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	30.14105	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	27.44384	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	25.02615	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	22.46181	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	20.91594	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	19.14548	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	17.58884	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	14.14614	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	11.88051	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	13.71604	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	12.04227	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	11.70474	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	10.43824	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	10.04147	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	9.31877	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	8.44872	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	8.05514	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	7.50245	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	6.99504	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	6.53014	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	6.10240	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	5.70886	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	5.34509	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	5.01117	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	4.70187	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	4.41583	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	4.15100	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	3.90551	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	3.67778	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	3.48425	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	3.28954	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	3.08455	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.87105	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.75704	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.60072	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.47011	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.34054	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.21931	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	2.11570	0.90000	0.00000	1.71800	133.20000	67.671
1.00000	1.99939	0.90000	0.00000	1.71800	133.20000	67.671

7.00000	1.89954	0.01117	0.00000	1.43740	274.80000	99.285
7.10000	1.50587	0.01070	0.00000	1.43740	274.80000	99.285
7.20000	1.21785	0.01020	0.00000	1.43740	274.80000	99.285
7.30000	1.03504	0.00970	0.00000	1.43740	274.80000	99.285
7.40000	1.55724	0.00930	0.00000	1.43740	274.80000	99.285
7.50000	1.48394	0.00880	0.00000	1.43740	274.80000	99.285
7.60000	1.41049	0.00840	0.00000	1.43740	274.80000	99.285
7.70000	1.34974	0.00800	0.00000	1.43740	274.80000	99.285
7.80000	1.28834	0.00770	0.00000	1.43740	274.80000	99.285
7.90000	1.23034	0.00730	0.00000	1.43740	274.80000	99.285
8.00000	1.17541	0.00700	0.00000	1.43740	274.80000	99.285
8.10000	1.12384	0.00670	0.00000	1.43740	274.80000	99.285
8.20000	1.07444	0.00640	0.00000	1.43740	274.80000	99.285
8.30000	1.02884	0.00610	0.00000	1.43740	274.80000	99.285
8.40000	0.98684	0.00580	0.00000	1.43740	274.80000	99.285
8.50000	0.94314	0.00550	0.00000	1.43740	274.80000	99.285
8.60000	0.90084	0.00520	0.00000	1.43740	274.80000	99.285
8.70000	0.86684	0.00490	0.00000	1.43740	274.80000	99.285
8.80000	0.83084	0.00460	0.00000	1.43740	274.80000	99.285
8.90000	0.79774	0.00430	0.00000	1.43740	274.80000	99.285
9.00000	0.76514	0.00400	0.00000	1.43740	274.80000	99.285
9.10000	0.73474	0.00370	0.00000	1.43740	274.80000	99.285
9.20000	0.70544	0.00340	0.00000	1.43740	274.80000	99.285
9.30000	0.67811	0.00310	0.00000	1.43740	274.80000	99.285
9.40000	0.65214	0.00280	0.00000	1.43740	274.80000	99.285
9.50000	0.62710	0.00250	0.00000	1.43740	274.80000	99.285
9.60000	0.60384	0.00220	0.00000	1.43740	274.80000	99.285
9.70000	0.58077	0.00190	0.00000	1.43740	274.80000	99.285
9.80000	0.55917	0.00160	0.00000	1.43740	274.80000	99.285
9.90000	0.53854	0.00130	0.00000	1.43740	274.80000	99.285
10.00000	0.51889	0.00100	0.00000	1.43740	274.80000	99.285
10.10000	0.50010	0.00080	0.00000	1.43740	274.80000	99.285
10.20000	0.48216	0.00060	0.00000	1.43740	274.80000	99.285
10.30000	0.46501	0.00040	0.00000	1.43740	274.80000	99.285
10.40000	0.44861	0.00020	0.00000	1.43740	274.80000	99.285
10.50000	0.43291	0.00010	0.00000	1.43740	274.80000	99.285
10.60000	0.41791	0.00000	0.00000	1.43740	274.80000	99.285
10.70000	0.40357	0.00000	0.00000	1.43740	274.80000	99.285
10.80000	0.38982	0.00000	0.00000	1.43740	274.80000	99.285
10.90000	0.37664	0.00000	0.00000	1.43740	274.80000	99.285
11.00000	0.36403	0.00000	0.00000	1.43740	274.80000	99.285
11.10000	0.35193	0.00000	0.00000	1.43740	274.80000	99.285
11.20000	0.34031	0.00000	0.00000	1.43740	274.80000	99.285
11.30000	0.32921	0.00000	0.00000	1.43740	274.80000	99.285
11.40000	0.31853	0.00000	0.00000	1.43740	274.80000	99.285
11.50000	0.30824	0.00000	0.00000	1.43740	274.80000	99.285
11.60000	0.29834	0.00000	0.00000	1.43740	274.80000	99.285
11.70000	0.28889	0.00000	0.00000	1.43740	274.80000	99.285
11.80000	0.27991	0.00000	0.00000	1.43740	274.80000	99.285
11.90000	0.27114	0.00000	0.00000	1.43740	274.80000	99.285
12.00000	0.26279	0.00000	0.00000	1.43740	274.80000	99.285

VISIBILITY AND OTHER DATA FOR PLANCH RADIATOR, MECHANICS DIVISION, CALIF. UNIVERSITY OF SAN DIEGO

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2026.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3700.0  
DEGREES FAHRENHEIT = 3680.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 21.09 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 3711.00 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 1181.50 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.070 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 175.074 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 12.319 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.0733 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.3324 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 301.31 WATT/CM<sup>2</sup> OR 301310000 ERG/SEC/CM<sup>2</sup> OR 7.201510000 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 184.74 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 490 LUMENS PER WATT X RADIANT EMITTANCE X VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta \epsilon = \epsilon \cdot \Delta T \cdot m$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2026.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3700.0  
DEGREES FAHRENHEIT = 3680.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOONENT M FOR WATON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	1.78887	0.0094	0.0000	15.2277	0.0091	0.016
0.35500	2.01340	0.1100	0.0000	15.4074	0.0545	0.019
0.36000	2.31274	0.1295	0.0000	15.7968	0.0693	0.023
0.36500	2.68375	0.1513	0.0000	16.3597	0.0917	0.027
0.37000	3.00884	0.1643	0.0000	16.9894	0.0958	0.032
0.37500	3.40459	0.1855	0.0000	17.7074	0.1114	0.037
0.38000	3.85592	0.2094	0.0000	18.5145	0.1300	0.043
0.38500	4.32204	0.2234	0.0000	19.4134	0.1504	0.050
0.39000	4.83845	0.2462	0.0000	20.4081	0.1729	0.057
0.39500	5.39711	0.2795	0.0000	21.5031	0.1979	0.066
0.40000	5.99947	0.3195	1.4117	22.7034	0.2253	0.074
0.40500	6.64521	0.3600	3.8150	24.0150	0.2549	0.084
0.41000	7.33371	0.4017	5.9077	25.4424	0.2866	0.096
0.41500	8.06425	0.4437	12.0421	26.9911	0.3203	0.110
0.42000	8.83624	0.4860	24.1072	28.6657	0.3567	0.124
0.42500	9.65024	0.5275	46.1621	30.4700	0.4210	0.140
0.43000	10.50683	0.5673	81.3774	32.4082	0.4877	0.157
0.43500	11.40624	0.6023	131.3730	34.4839	0.5570	0.175
0.44000	12.34912	0.6377	195.3306	36.7007	0.6270	0.193
0.44500	13.33713	0.6733	266.0523	39.0724	0.6971	0.211
0.45000	14.37134	0.7092	377.0597	41.6034	0.7684	0.230
0.45500	15.45269	0.7453	514.3983	44.2994	0.8404	0.250
0.46000	16.58164	0.7817	691.4332	47.1657	0.9051	0.269
0.46500	17.75964	0.8084	915.0671	50.1057	0.9679	0.289
0.47000	18.98719	0.8354	1204.9389	53.1234	1.0291	0.308
0.47500	20.26493	0.8624	1584.0389	56.2215	1.1227	0.326
0.48000	21.59337	0.8891	2097.0042	59.4037	1.2749	0.349
0.48500	22.97299	0.9179	2775.5175	62.6731	1.4848	0.400
0.49000	24.40514	0.9479	3651.7218	66.1339	1.7546	0.460
0.49500	25.89012	0.9789	4673.5686	69.7904	2.0871	0.533
0.50000	27.42844	0.1027	5954.5834	73.6481	2.4731	0.598
0.50500	29.02001	0.1015	7594.7640	77.7104	2.9051	0.637
0.51000	31.06654	0.1705	10771.0372	82.0800	3.3854	0.687
0.51500	33.19284	0.1707	13723.2470	86.7654	3.9111	0.741
0.52000	34.93561	0.1701	16866.2170	91.7661	4.4814	0.798
0.52500	36.71685	0.1687	19799.1936	97.0824	5.1070	0.857
0.53000	38.53583	0.2006	25588.0425	102.7260	5.7870	0.919
0.53500	40.39317	0.2186	35130.7057	108.7000	6.5140	0.985
0.54000	42.27886	0.2309	47427.1390	115.0160	7.2886	1.054
0.54500	44.20007	0.2393	62454.8821	121.6773	8.1130	1.125
0.55000	46.15199	0.2498	81294.3730	128.6873	8.9877	1.200
0.55500	48.13274	0.2605	104030.7977	136.0491	9.9134	1.279
0.56000	50.14000	0.2714	131775.3380	143.7664	10.8911	1.360
0.56500	52.17443	0.2824	164632.9515	151.8429	11.9210	1.445
0.57000	54.23154	0.2936	202707.3393	160.2824	13.0110	1.533

0.57000	58.31044	0.3044	35036.3571	9.7044	4.8942	1.625
0.58000	58.40924	0.3142	34554.8124	9.1844	5.1010	1.720
0.59000	60.42611	0.3274	33625.8991	9.1043	5.4401	1.810
0.60000	62.44924	0.3397	32254.4741	9.0312	5.7803	1.901
0.61000	64.48084	0.3508	30427.6710	8.9554	6.1069	2.007
0.62000	66.52084	0.3625	28734.1254	8.8809	6.4306	2.130
0.63000	68.57044	0.3742	26654.7280	8.8074	6.7746	2.249
0.64000	71.31740	0.3848	24393.4241	8.7355	7.1270	2.364
0.65000	73.50431	0.3979	22042.4780	8.6644	7.4895	2.486
0.66000	75.49084	0.4097	19411.4916	8.5944	7.8620	2.610
0.67000	77.49244	0.4214	17002.4135	8.5261	8.2460	2.737
0.68000	80.00024	0.4334	14437.3381	8.4584	8.6417	2.868
0.69000	82.20804	0.4454	12147.4588	8.3921	9.0477	3.003
0.70000	84.48592	0.4573	10051.8245	8.3267	9.4646	3.141
0.71000	86.47995	0.4692	8134.8441	8.2623	9.8925	3.283
0.72000	88.48924	0.4810	6446.1627	8.1988	10.3314	3.429
0.73000	91.02987	0.4929	5015.1977	8.1364	10.7812	3.578
0.74000	93.27804	0.5048	3847.1381	8.0749	11.2419	3.731
0.75000	95.39599	0.5168	2919.1174	8.0144	11.7135	3.888
0.76000	97.35267	0.5286	2127.7441	7.9547	12.1959	4.048
0.77000	99.40763	0.5407	1559.2789	7.8948	12.6890	4.211
0.78000	101.42954	0.5512	1177.1498	7.8341	13.1928	4.378
0.79000	103.94720	0.5627	841.1608	7.7710	13.7073	4.549
0.80000	106.04031	0.5740	591.1310	7.7244	14.2323	4.723
0.81000	108.13474	0.5853	419.1303	7.6849	14.7677	4.901
0.82000	110.20916	0.5965	307.2642	7.6414	15.3134	5.082
0.83000	112.25176	0.6074	221.3591	7.5941	15.8697	5.267
0.84000	114.27081	0.6184	163.1916	7.5500	16.4361	5.455
0.85000	116.28763	0.6295	115.4134	7.5084	17.0125	5.646
0.86000	118.27354	0.6402	68.4484	7.4682	17.5989	5.841
0.87000	120.23672	0.6506	47.2327	7.4293	18.1952	6.039
0.88000	122.17624	0.6613	41.1309	7.3911	18.8012	6.240
0.89000	124.09131	0.6717	31.7528	7.3538	19.4169	6.444
0.90000	125.98118	0.6819	25.7021	7.3171	20.0421	6.652
0.91000	127.84511	0.6920	17.3848	7.2817	20.6767	6.862
0.92000	129.68244	0.7020	11.8184	7.2476	21.3205	7.074
0.93000	131.27474	0.7114	6.0000	7.2144	21.9734	7.288
0.94000	134.75359	0.7207	0.0000	7.1824	22.6454	7.504
0.95000	140.11493	0.7284	0.0000	7.1514	23.3364	7.760
0.96000	143.34984	0.7350	0.0000	7.1214	24.0464	8.060
0.97000	146.47267	0.7429	0.0000	7.0924	24.7754	8.401
0.98000	149.48372	0.7500	0.0000	7.0644	25.5234	8.782
0.99000	152.37254	0.7564	0.0000	7.0374	26.2904	9.203
1.00000	155.14074	0.7624	0.0000	7.0114	27.0764	9.664
1.01000	157.88859	0.7680	0.0000	6.9864	27.8814	10.166
1.02000	160.61679	0.7734	0.0000	6.9624	28.7054	10.709
1.03000	162.42442	0.7784	0.0000	6.9394	29.5484	11.292
1.04000	164.20931	0.7834	0.0000	6.9174	30.4104	11.915
1.05000	166.97111	0.7884	0.0000	6.8964	31.2914	12.578
1.06000	168.70984	0.7934	0.0000	6.8764	32.1914	13.280
1.07000	170.42604	0.7984	0.0000	6.8574	33.1104	14.022
1.08000	172.11944	0.8034	0.0000	6.8394	34.0484	14.804
1.09000	173.79977	0.8084	0.0000	6.8224	35.0054	15.626
1.10000	175.46684	0.8134	0.0000	6.8064	35.9814	16.488
1.11000	176.71131	0.8184	0.0000	6.7914	36.9764	17.390
1.12000	177.45393	0.8237	0.0000	6.7774	37.9894	18.332
1.13000	178.07361	0.8293	0.0000	6.7644	39.0204	19.314
1.14000	178.68047	0.8348	0.0000	6.7524	40.0694	20.336
1.15000	179.27477	0.8407	0.0000	6.7414	41.1364	21.398
1.16000	179.85674	0.8460	0.0000	6.7314	42.2204	22.499
1.17000	180.42674	0.8516	0.0000	6.7224	43.3214	23.629
1.18000	180.98494	0.8574	0.0000	6.7144	44.4394	24.788
1.19000	181.53174	0.8634	0.0000	6.7074	45.5744	25.976
1.20000	182.06724	0.8694	0.0000	6.7014	46.7264	27.193
1.21000	182.59174	0.8754	0.0000	6.6964	47.8954	28.438
1.22000	183.10574	0.8814	0.0000	6.6924	49.0814	29.711
1.23000	183.60974	0.8874	0.0000	6.6894	50.2844	31.012
1.24000	184.11424	0.8934	0.0000	6.6864	51.5044	32.341
1.25000	184.61974	0.8994	0.0000	6.6844	52.7414	33.697
1.26000	185.12674	0.9054	0.0000	6.6824	54.0944	35.079
1.27000	185.63474	0.9114	0.0000	6.6814	55.4644	36.487
1.28000	186.14374	0.9174	0.0000	6.6804	56.8514	37.921
1.29000	186.65374	0.9234	0.0000	6.6804	58.2544	39.381
1.30000	187.16474	0.9294	0.0000	6.6804	59.6744	40.876
1.31000	187.67674	0.9354	0.0000	6.6804	61.1114	42.406
1.32000	188.18974	0.9414	0.0000	6.6804	62.5644	43.970
1.33000	188.70374	0.9474	0.0000	6.6804	64.0344	45.568
1.34000	189.21874	0.9534	0.0000	6.6804	65.5214	47.199
1.35000	189.73474	0.9594	0.0000	6.6804	67.0244	48.862
1.36000	190.25174	0.9654	0.0000	6.6804	68.5444	50.557
1.37000	190.76974	0.9714	0.0000	6.6804	70.0814	52.284
1.38000	191.28874	0.9774	0.0000	6.6804	71.6344	54.042
1.39000	191.80874	0.9834	0.0000	6.6804	73.2044	55.831
1.40000	192.32974	0.9894	0.0000	6.6804	74.7914	57.651
1.41000	192.85174	0.9954	0.0000	6.6804	76.3944	59.501
1.42000	193.37474	1.0014	0.0000	6.6804	78.0144	61.381
1.43000	193.89874	1.0074	0.0000	6.6804	79.6514	63.291
1.44000	194.42374	1.0134	0.0000	6.6804	81.3044	65.231
1.45000	194.94974	1.0194	0.0000	6.6804	82.9744	67.201
1.46000	195.47674	1.0254	0.0000	6.6804	84.6614	69.201
1.47000	196.00474	1.0314	0.0000	6.6804	86.3644	71.231
1.48000	196.53374	1.0374	0.0000	6.6804	88.0844	73.291
1.49000	197.06374	1.0434	0.0000	6.6804	89.8214	75.381
1.50000	197.59474	1.0494	0.0000	6.6804	91.5744	77.501



1.50000	145.19771	0.7870	0.0000	1.45667	147.7244	49.029
1.60000	147.41066	0.7149	0.0000	1.45335	141.5144	53.638
1.70000	149.93521	0.4492	0.0000	1.47667	174.2209	57.892
1.80000	108.10817	0.4457	0.0000	1.47117	147.4293	61.607
1.90000	87.34474	0.4271	0.0000	1.49449	147.0074	65.018
2.00000	87.54544	0.4739	0.0000	1.48334	205.1384	68.009
2.10000	78.64479	0.4254	0.0000	1.47557	213.4416	70.838
2.20000	70.70484	0.3827	0.0000	1.45774	220.9029	73.314
2.30000	63.54791	0.3447	0.0000	1.44499	227.4104	75.549
2.40000	57.24224	0.3099	0.0000	1.42914	213.4442	77.543
2.50000	51.59154	0.2793	0.0000	1.41127	219.0424	79.347
2.60000	46.56234	0.2529	0.0000	1.39222	243.9452	80.974
2.70000	42.04601	0.2274	0.0000	1.37114	248.4113	82.444
2.80000	38.04974	0.2047	0.0000	1.34844	257.4118	83.774
2.90000	34.54711	0.1870	0.0000	1.32452	264.4477	84.978
3.00000	31.37749	0.1694	0.0000	1.30119	269.3410	86.071
3.10000	28.54612	0.1545	0.0000	1.27941	262.1345	87.066
3.20000	26.01144	0.1404	0.0000	1.25935	265.0601	87.969
3.30000	23.74444	0.1274	0.0000	1.24154	267.4440	88.794
3.40000	21.70009	0.1175	0.0000	1.22402	269.4114	89.548
3.50000	19.87097	0.1074	0.0000	1.20771	271.4047	90.237
3.60000	18.23371	0.9947	0.0000	1.19162	273.7049	90.869
3.70000	16.74941	0.9917	0.0000	1.17671	275.5444	91.449
3.80000	15.40944	0.9834	0.0000	1.16297	277.1537	91.983
3.90000	14.14779	0.9749	0.0000	1.14930	278.4110	92.474
4.00000	13.10009	0.9709	0.0000	1.13694	279.4070	92.926
4.10000	12.10423	0.9655	0.0000	1.12484	281.2544	93.344
4.20000	11.19937	0.9604	0.0000	1.11249	282.4209	93.731
4.30000	10.37594	0.9542	0.0000	1.10041	283.4040	94.088
4.40000	9.62551	0.9471	0.0000	1.08847	284.4945	94.420
4.50000	8.94060	0.9404	0.0000	1.07661	285.4843	94.724
4.60000	8.31459	0.9340	0.0000	1.06484	286.2844	95.014
4.70000	7.74142	0.9270	0.0000	1.05314	287.0910	95.281
4.80000	7.21549	0.9201	0.0000	1.04154	287.8345	95.529
4.90000	6.73455	0.9135	0.0000	1.03001	288.5147	95.760
5.00000	6.29147	0.9071	0.0000	1.01857	289.1847	95.976
5.10000	5.88414	0.9009	0.0000	1.00717	289.7922	96.178
5.20000	5.50877	0.8949	0.0000	1.00041	290.3444	96.347
5.30000	5.16951	0.8890	0.0000	1.00054	290.8449	96.544
5.40000	4.86274	0.8832	0.0000	1.00031	291.3440	96.710
5.50000	4.58711	0.8774	0.0000	1.00013	291.8473	96.866
5.60000	4.34246	0.8717	0.0000	1.00000	292.3442	97.012
5.70000	4.11994	0.8661	0.0000	1.00001	292.7227	97.150
5.80000	3.91847	0.8605	0.0000	1.00004	293.1120	97.279
5.90000	3.73642	0.8550	0.0000	1.00004	293.4402	97.401
6.00000	3.57345	0.8496	0.0000	1.00004	293.7244	97.516
6.10000	3.42840	0.8443	0.0000	1.00005	294.0134	97.628
6.20000	3.29847	0.8391	0.0000	1.00004	294.4619	97.727
6.30000	3.18147	0.8340	0.0000	1.00007	294.7535	97.824
6.40000	3.07641	0.8290	0.0000	1.00003	295.0292	97.919
6.50000	2.98141	0.8241	0.0000	1.00002	295.2902	98.002
6.60000	2.89641	0.8193	0.0000	1.00003	295.5373	98.084
6.70000	2.82049	0.8146	0.0000	1.00007	295.7716	98.127
6.80000	2.75352	0.8100	0.0000	1.00004	295.9937	98.235
6.90000	2.69549	0.8055	0.0000	1.00003	296.2045	98.305

7.00000	1.94111	0.8010	0.0000	1.00004	296.4047	98.372
7.10000	1.85445	0.7964	0.0000	1.00007	296.5950	98.435
7.20000	1.77444	0.7919	0.0000	1.00003	296.7774	98.495
7.30000	1.69844	0.7874	0.0000	1.00002	296.9479	98.559
7.40000	1.62474	0.7830	0.0000	1.00004	297.1114	98.606
7.50000	1.55232	0.7787	0.0000	1.00009	297.2674	98.658
7.60000	1.48227	0.7744	0.0000	1.00001	297.4164	98.707
7.70000	1.41440	0.7701	0.0000	1.00005	297.5544	98.755
7.80000	1.34843	0.7659	0.0000	1.00001	297.6910	98.799
7.90000	1.28450	0.7617	0.0000	1.00004	297.8230	98.849
8.00000	1.22144	0.7576	0.0000	1.00007	297.9444	98.887
8.10000	1.16044	0.7535	0.0000	1.00003	298.0643	98.922
8.20000	1.10144	0.7494	0.0000	1.00004	298.1771	98.960
8.30000	1.04440	0.7453	0.0000	1.00005	298.2840	98.996
8.40000	0.98941	0.7413	0.0000	1.00004	298.3842	99.030
8.50000	0.93647	0.7373	0.0000	1.00009	298.4770	99.063
8.60000	0.88441	0.7333	0.0000	1.00004	298.5617	99.094
8.70000	0.83441	0.7293	0.0000	1.00003	298.6724	99.124
8.80000	0.78641	0.7253	0.0000	1.00007	298.7594	99.153
8.90000	0.74041	0.7213	0.0000	1.00004	298.8424	99.181
9.00000	0.69641	0.7173	0.0000	1.00009	298.9229	99.207
9.10000	0.65441	0.7133	0.0000	1.00001	299.0000	99.233
9.20000	0.61441	0.7093	0.0000	1.00007	299.0714	99.257
9.30000	0.57641	0.7053	0.0000	1.00004	299.1445	99.281
9.40000	0.54041	0.7013	0.0000	1.00001	299.2192	99.304
9.50000	0.50641	0.6973	0.0000	1.00004	299.2942	99.325
9.60000	0.47441	0.6933	0.0000	1.00009	299.3413	99.344
9.70000	0.44441	0.6893	0.0000	1.00004	299.4019	99.364
9.80000	0.41641	0.6853	0.0000	1.00009	299.4441	99.384
9.90000	0.39041	0.6813	0.0000	1.00004	299.5146	99.404
10.00000	0.36641	0.6773	0.0000	1.00009	299.5707	99.422
10.10000	0.34441	0.6733	0.0000	1.00004	299.6229	99.440
10.20000	0.32441	0.6693	0.0000	1.00009	299.6712	99.454
10.30000	0.30641	0.6653	0.0000	1.00004	299.7217	99.473
10.40000	0.29041	0.6613	0.0000	1.00009	299.7645	99.484
10.50000	0.27641	0.6573	0.0000	1.00004	299.8136	99.503
10.60000	0.26441	0.6533	0.0000	1.00009	299.8572	99.517
10.70000	0.25441	0.6493	0.0000	1.00004	299.8963	99.531
10.80000	0.24641	0.6453	0.0000	1.00009	299.9309	99.545
10.90000	0.24041	0.6413	0.0000	1.00004	299.9701	99.554
11.00000	0.23641	0.6373	0.0000	1.00009	300.0170	99.571
11.10000	0.23441	0.6333	0.0000	1.00004	300.0517	99.584
11.20000	0.23441	0.6293	0.0000	1.00009	300.0801	99.596
11.30000	0.23641	0.6253	0.0000	1.00004	300.1134	99.606
11.40000	0.23941	0.6213	0.0000	1.00009	300.1345	99.617
11.50000	0.24441	0.6173	0.0000	1.00004	300.1494	99.627
11.60000	0.25041	0.6133	0.0000	1.00009	300.1597	99.634
11.70000	0.25741	0.6093	0.0000	1.00004	300.1744	99.647
11.80000	0.26441	0.6053	0.0000	1.00009	300.1847	99.657
11.90000	0.27241	0.6013	0.0000	1.00004	300.1974	99.667
12.00000	0.28041	0.5973	0.0000	1.00009	300.2144	99.674

VISIBILITY AND OTHER DATA FOR PLANCK RADIATOR, MECHANICS DIVISION, D.R.T., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2750.0  
DEGREES FAHRENHEIT = 4490.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 74.62 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 4390.95 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 1400.23 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.076 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 170.644 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 13.566 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.0534 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.3220 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 324.26 WATT/CM<sup>2</sup> OR 3.74258E+09 ERG/SEC/CM<sup>2</sup> OR 7.74995E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 202.80 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 680 LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta W = M \Delta T / T$

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2750.0  
DEGREES FAHRENHEIT = 4490.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR K/T=M	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	2.30071	0.0114	0.0000	10.9455	0.0062	0.000
0.35500	2.44532	0.0131	0.0000	10.7350	0.0786	0.025
0.36000	1.02442	0.0149	0.0000	14.5303	0.0070	0.002
0.36500	1.44730	0.0170	0.0000	14.3313	0.1089	0.034
0.37000	1.97887	0.0193	0.0000	14.1376	0.1273	0.039
0.37500	4.41127	0.0214	0.0000	13.9491	0.1481	0.046
0.38000	4.92461	0.0245	0.0000	13.7654	0.1715	0.053
0.38500	4.55849	0.0275	0.0000	13.5748	0.1974	0.061
0.39000	4.20290	0.0306	0.0000	13.4124	0.2272	0.070
0.39500	6.80710	0.0341	0.0000	13.2428	0.2599	0.080
0.40000	7.44244	0.0377	2.0788	13.0773	0.2962	0.091
0.40500	8.84081	0.0417	4.5918	12.9159	0.3364	0.104
0.41000	9.79224	0.0459	7.4829	12.7584	0.3807	0.117
0.41500	10.19084	0.0504	15.2586	12.6046	0.4294	0.132
0.42000	11.14204	0.0551	30.3608	12.4546	0.4826	0.149
0.42500	12.18095	0.0602	60.4462	12.3081	0.5412	0.167
0.43000	13.25680	0.0655	104.5476	12.1650	0.6047	0.186
0.43500	14.39000	0.0711	168.3914	12.0252	0.6738	0.206
0.44000	15.58080	0.0769	263.6837	11.8885	0.7487	0.231
0.44500	16.82929	0.0831	331.8735	11.7549	0.8297	0.256
0.45000	18.13534	0.0896	468.4187	11.6241	0.9171	0.281
0.45500	19.49884	0.0964	636.4426	11.4966	1.0112	0.312
0.46000	20.91933	0.1033	853.5087	11.3717	1.1128	0.343
0.46500	22.39629	0.1106	1126.9812	11.2494	1.2205	0.376
0.47000	23.92966	0.1182	1480.7300	11.1294	1.3343	0.410
0.47500	25.51841	0.1260	1943.1620	11.0126	1.4539	0.449
0.48000	27.15244	0.1341	2567.0386	10.8979	1.5815	0.491
0.48500	28.83354	0.1425	3315.8480	10.7854	1.7315	0.534
0.49000	30.56223	0.1511	4226.0966	10.6756	1.8801	0.580
0.49500	32.33974	0.1600	5441.8095	10.5687	2.0376	0.628
0.50000	34.16382	0.1691	7021.3117	10.4642	2.2042	0.680
0.50500	36.03171	0.1785	8981.5016	10.3624	2.3801	0.730
0.51000	37.94784	0.1880	11324.1519	10.2627	2.5657	0.781
0.51500	40.00224	0.1976	14063.3504	10.1655	2.7610	0.831
0.52000	42.19933	0.2074	17237.7277	10.0709	2.9644	0.881
0.52500	44.53714	0.2181	21811.3159	9.9781	3.1820	0.931
0.53000	46.99395	0.2285	27116.0748	9.8872	3.4080	1.051
0.53500	49.56970	0.2391	33119.2704	9.7980	3.6447	1.124
0.54000	50.36865	0.2498	39816.4424	9.6875	3.8921	1.209
0.54500	52.29817	0.2607	47186.7036	9.5866	4.1506	1.280
0.55000	54.36081	0.2718	55240.6124	9.5114	4.4202	1.363
0.55500	57.31227	0.2830	64972.3439	9.4258	4.7010	1.450
0.56000	59.41045	0.2944	76332.8272	9.3417	4.9933	1.540
0.56500	61.93321	0.3059	89210.1748	9.2591	5.2972	1.634
0.57000	64.97441	0.3174	104111.2440	9.1780	5.6127	1.731

0.57500	64.44397	0.3291	41065.8809	0.0993	5.9480	1.032
0.58000	69.02770	0.3609	40834.7877	0.0100	4.2702	1.034
0.58500	71.42764	0.3527	39682.2522	0.0020	6.0303	2.045
0.59000	73.44120	0.3647	38010.4978	0.0072	6.0935	2.157
0.59500	74.24674	0.3746	36043.6717	0.7924	7.3647	2.272
0.60000	74.70204	0.3827	33769.4877	0.7104	7.7542	2.392
0.60500	81.14410	0.4007	31284.3033	0.4477	8.1548	2.515
0.61000	83.59370	0.4128	28509.6190	0.4769	8.5674	2.642
0.61500	86.04614	0.4249	25443.4912	0.4073	8.9917	2.773
0.62000	88.50024	0.4371	22928.4670	0.4384	9.4281	2.908
0.62500	90.95611	0.4492	19853.4639	0.3714	9.8767	3.046
0.63000	93.41588	0.4613	16431.7422	0.3051	10.3374	3.188
0.63500	95.87934	0.4734	14164.1779	0.2394	10.8108	3.334
0.64000	98.34644	0.4854	11697.2064	0.1754	11.2961	3.484
0.64500	100.73044	0.4974	9452.5487	0.1124	11.7937	3.637
0.65000	103.15593	0.5094	7405.4254	0.0501	12.3034	3.794
0.65500	105.57094	0.5214	5474.8253	0.0000	12.8253	3.955
0.66000	107.97271	0.5332	4474.7079	0.0000	13.3591	4.120
0.66500	110.36049	0.5450	3377.0411	0.0000	13.9050	4.288
0.67000	112.73354	0.5567	2451.0027	0.0000	14.4627	4.460
0.67500	115.09034	0.5684	1799.0073	0.0000	15.0323	4.636
0.68000	117.42749	0.5799	1357.4534	0.0000	15.6134	4.815
0.68500	119.74487	0.5914	966.9733	0.0000	16.2045	4.998
0.69000	122.04141	0.6027	649.5030	0.0000	16.8041	5.184
0.69500	124.31612	0.6139	481.8493	0.0000	17.4219	5.374
0.70000	126.56749	0.6250	352.8701	0.0000	18.0561	5.568
0.70500	128.79440	0.6360	251.9924	0.0000	18.7054	5.765
0.71000	130.99584	0.6469	177.0420	0.0000	19.3701	5.965
0.71500	133.17084	0.6577	115.8149	0.0000	20.0504	6.169
0.72000	135.31849	0.6683	101.2171	0.0000	20.7467	6.376
0.72500	137.43712	0.6787	65.4201	0.0000	21.4584	6.586
0.73000	139.52641	0.6890	47.4391	0.0000	22.1850	6.800
0.73500	141.58647	0.6992	36.5114	0.0000	22.9258	7.016
0.74000	143.61544	0.7092	29.2974	0.0000	23.6800	7.234
0.74500	145.61314	0.7191	19.8734	0.0000	24.4484	7.459
0.75000	147.57942	0.7288	10.0343	0.0000	25.2319	7.685
0.75500	151.41049	0.7384	0.0000	0.0000	26.0304	7.914
0.76000	153.10724	0.7479	0.0000	0.0000	26.8439	8.146
0.76500	154.44424	0.7574	0.0000	0.0000	27.6724	8.381
0.77000	162.00149	0.7668	0.0000	0.0000	28.5144	8.619
0.77500	165.35399	0.7764	0.0000	0.0000	29.3694	8.860
0.78000	168.44074	0.7859	0.0000	0.0000	30.2369	9.103
0.78500	171.44084	0.7954	0.0000	0.0000	31.1164	9.349
0.79000	174.20309	0.8049	0.0000	0.0000	32.0074	9.597
0.79500	176.97492	0.8144	0.0000	0.0000	32.9094	9.847
0.80000	179.74714	0.8238	0.0000	0.0000	33.8224	10.098
0.80500	181.90905	0.8332	0.0000	0.0000	34.7459	10.351
0.81000	184.15572	0.8426	0.0000	0.0000	35.6794	10.605
0.81500	186.25840	0.8519	0.0000	0.0000	36.6224	10.860
0.82000	188.21944	0.8612	0.0000	0.0000	37.5744	11.116
0.82500	190.04034	0.8705	0.0000	0.0000	38.5349	11.374
0.83000	191.72340	0.8798	0.0000	0.0000	39.5034	11.633
0.83500	193.27144	0.8890	0.0000	0.0000	40.4794	11.894
0.84000	194.64719	0.8982	0.0000	0.0000	41.4624	12.156
0.84500	195.97312	0.9074	0.0000	0.0000	42.4519	12.419

0.85000	197.11241	0.9165	0.0000	0.0000	43.4474	12.684
0.85500	198.14424	0.9256	0.0000	0.0000	44.4484	12.950
0.86000	199.06344	0.9346	0.0000	0.0000	45.4544	13.217
0.86500	199.87247	0.9435	0.0000	0.0000	46.4649	13.485
0.87000	200.56754	0.9524	0.0000	0.0000	47.4794	13.754
1.00000	201.14250	0.9612	0.0000	0.0000	48.4974	14.024
1.01000	201.61074	0.9699	0.0000	0.0000	49.5184	14.295
1.02000	201.97444	0.9786	0.0000	0.0000	50.5419	14.567
1.03000	202.24130	0.9872	0.0000	0.0000	51.5674	14.840
1.04000	202.41043	0.9958	0.0000	0.0000	52.5944	15.114
1.05000	202.48704	1.0043	0.0000	0.0000	53.6219	15.389
1.06000	202.47430	0.9999	0.0000	0.0000	54.6504	15.665
1.07000	202.37574	0.9954	0.0000	0.0000	55.6794	15.942
1.08000	202.19474	0.9908	0.0000	0.0000	56.7084	16.219
1.09000	201.93464	0.9862	0.0000	0.0000	57.7374	16.497
1.10000	201.59877	0.9815	0.0000	0.0000	58.7664	16.775
1.11000	201.19035	0.9768	0.0000	0.0000	59.7944	17.054
1.12000	200.71244	0.9720	0.0000	0.0000	60.8219	17.334
1.13000	200.16854	0.9672	0.0000	0.0000	61.8484	17.614
1.14000	199.56132	0.9624	0.0000	0.0000	62.8734	17.895
1.15000	198.89301	0.9575	0.0000	0.0000	63.8964	18.177
1.16000	198.16421	0.9526	0.0000	0.0000	64.9164	18.460
1.17000	197.38007	0.9477	0.0000	0.0000	65.9324	18.744
1.18000	196.54524	0.9427	0.0000	0.0000	66.9444	19.029
1.19000	195.67944	0.9377	0.0000	0.0000	67.9514	19.314
1.20000	194.78327	0.9326	0.0000	0.0000	68.9534	19.600
1.21000	193.75712	0.9275	0.0000	0.0000	69.9504	19.887
1.22000	192.71104	0.9223	0.0000	0.0000	70.9414	20.175
1.23000	191.54544	0.9171	0.0000	0.0000	71.9264	20.464
1.24000	190.27144	0.9118	0.0000	0.0000	72.9044	20.754
1.25000	188.89301	0.9065	0.0000	0.0000	73.8744	21.045
1.26000	187.41247	0.9011	0.0000	0.0000	74.8364	21.337
1.27000	185.83132	0.8957	0.0000	0.0000	75.7894	21.630
1.28000	184.15043	0.8902	0.0000	0.0000	76.7324	21.924
1.29000	182.37007	0.8847	0.0000	0.0000	77.6644	22.219
1.30000	180.49034	0.8791	0.0000	0.0000	78.5844	22.515
1.31000	178.51144	0.8735	0.0000	0.0000	79.4914	22.812
1.32000	176.43344	0.8678	0.0000	0.0000	80.3844	23.110
1.33000	174.25644	0.8620	0.0000	0.0000	81.2614	23.409
1.34000	172.08044	0.8562	0.0000	0.0000	82.1214	23.709
1.35000	169.80544	0.8503	0.0000	0.0000	82.9614	24.010
1.36000	167.43144	0.8444	0.0000	0.0000	83.7814	24.312
1.37000	164.95844	0.8384	0.0000	0.0000	84.5814	24.615
1.38000	162.38544	0.8324	0.0000	0.0000	85.3614	24.919
1.39000	159.71244	0.8263	0.0000	0.0000	86.1214	25.224
1.40000	156.94044	0.8202	0.0000	0.0000	86.8614	25.530
1.41000	154.06844	0.8140	0.0000	0.0000	87.5814	25.837
1.42000	151.09644	0.8078	0.0000	0.0000	88.2814	26.145
1.43000	148.02444	0.8015	0.0000	0.0000	88.9614	26.454
1.44000	144.85244	0.7952	0.0000	0.0000	89.6214	26.764
1.45000	141.58044	0.7888	0.0000	0.0000	90.2614	27.075
1.46000	138.20844	0.7824	0.0000	0.0000	90.8814	27.387
1.47000	134.73644	0.7759	0.0000	0.0000	91.4814	27.700
1.48000	131.16444	0.7694	0.0000	0.0000	92.0614	28.014
1.49000	127.49244	0.7628	0.0000	0.0000	92.6214	28.329
1.50000	123.72044	0.7562	0.0000	0.0000	93.1614	28.645

1.30000	155.40320	0.7675	0.0000	3.4973	163.2692	50.398
1.40000	141.73355	0.6945	0.0000	3.3946	170.0075	54.922
1.70000	127.30743	0.6267	0.0000	3.2257	191.4074	59.057
1.80000	114.52680	0.5656	0.0000	3.0742	203.3007	62.784
1.90000	102.82524	0.5078	0.0000	2.9405	214.4301	66.132
2.00000	92.23282	0.4555	0.0000	2.8218	224.1828	69.137
2.10000	82.71751	0.4085	0.0000	2.7159	232.9216	71.839
2.20000	74.21310	0.3665	0.0000	2.6204	240.7600	74.240
2.30000	66.63497	0.3291	0.0000	2.5351	247.7991	76.419
2.40000	59.90754	0.2958	0.0000	2.4575	254.1154	78.368
2.50000	53.91674	0.2663	0.0000	2.3849	259.8003	80.121
2.60000	48.60274	0.2400	0.0000	2.3225	264.9210	81.701
2.70000	43.88215	0.2167	0.0000	2.2635	269.5406	83.125
2.80000	39.68548	0.1960	0.0000	2.2091	273.7149	84.418
2.90000	35.95192	0.1775	0.0000	2.1594	277.4932	85.578
3.00000	32.62544	0.1611	0.0000	2.1137	280.9189	86.634
3.10000	29.65790	0.1465	0.0000	2.0704	284.0303	87.599
3.20000	27.00644	0.1334	0.0000	2.0307	286.8410	88.487
3.30000	24.61424	0.1217	0.0000	1.9937	289.4409	89.299
3.40000	22.50804	0.1112	0.0000	1.9591	291.7961	90.039
3.50000	20.69824	0.1017	0.0000	1.9268	293.9497	90.699
3.60000	19.18824	0.9333	0.0000	1.8964	295.9273	91.281
3.70000	17.93474	0.8654	0.0000	1.8681	297.7370	91.810
3.80000	16.91174	0.8087	0.0000	1.8418	299.3947	92.332
3.90000	16.10124	0.7629	0.0000	1.8162	300.9248	92.806
4.00000	15.48024	0.7269	0.0000	1.7925	302.3350	93.239
4.10000	14.93574	0.6918	0.0000	1.7700	303.6364	93.644
4.20000	14.45624	0.6571	0.0000	1.7484	304.8393	94.011
4.30000	14.03174	0.6239	0.0000	1.7284	305.9525	94.355
4.40000	13.65224	0.5919	0.0000	1.7095	306.9847	94.673
4.50000	13.31774	0.5614	0.0000	1.6914	307.9415	94.964
4.60000	13.02824	0.5324	0.0000	1.6741	308.8110	95.242
4.70000	12.77374	0.5049	0.0000	1.6574	309.5984	95.497
4.80000	12.54424	0.4787	0.0000	1.6419	310.3090	95.735
4.90000	12.33974	0.4538	0.0000	1.6270	311.1475	95.957
5.00000	12.15024	0.4300	0.0000	1.6127	311.8182	96.164
5.10000	11.97574	0.4079	0.0000	1.5990	312.4450	96.357
5.20000	11.81624	0.3874	0.0000	1.5859	313.0313	96.538
5.30000	11.67174	0.3684	0.0000	1.5734	313.5804	96.707
5.40000	11.54224	0.3506	0.0000	1.5613	314.0991	96.864
5.50000	11.42774	0.3339	0.0000	1.5494	314.5841	97.019
5.60000	11.32824	0.3181	0.0000	1.5377	315.0316	97.159
5.70000	11.24374	0.3034	0.0000	1.5261	315.4540	97.284
5.80000	11.17424	0.2897	0.0000	1.5147	315.8592	97.410
5.90000	11.11974	0.2769	0.0000	1.5036	316.2370	97.528
6.00000	11.07024	0.2649	0.0000	1.4925	316.5893	97.636
6.10000	11.02574	0.2536	0.0000	1.4814	316.9200	97.740
6.20000	10.98624	0.2429	0.0000	1.4704	317.2441	97.834
6.30000	10.95174	0.2327	0.0000	1.4592	317.5657	97.930
6.40000	10.92224	0.2229	0.0000	1.4481	317.8800	98.017
6.50000	10.89774	0.2134	0.0000	1.4374	318.1897	98.100
6.60000	10.87824	0.2041	0.0000	1.4267	318.4900	98.178
6.70000	10.86374	0.1951	0.0000	1.4161	318.7815	98.257
6.80000	10.85424	0.1864	0.0000	1.4055	319.0690	98.323
6.90000	10.84974	0.1780	0.0000	1.3949	319.3480	98.390

7.00000	2.00274	0.0094	0.0000	1.4197	319.6215	98.453
7.10000	1.99324	0.0094	0.0000	1.4132	319.8346	98.513
7.20000	1.98374	0.0094	0.0000	1.4069	319.9724	98.570
7.30000	1.97424	0.0094	0.0000	1.4007	319.7990	98.625
7.40000	1.96474	0.0094	0.0000	1.3947	319.9471	98.677
7.50000	1.95524	0.0094	0.0000	1.3889	320.1272	98.726
7.60000	1.94574	0.0094	0.0000	1.3833	320.2798	98.773
7.70000	1.93624	0.0094	0.0000	1.3778	320.4053	98.818
7.80000	1.92674	0.0094	0.0000	1.3725	320.5041	98.861
7.90000	1.91724	0.0094	0.0000	1.3673	320.5864	98.902
8.00000	1.90774	0.0094	0.0000	1.3623	320.6712	98.941
8.10000	1.89824	0.0094	0.0000	1.3574	320.7641	98.978
8.20000	1.88874	0.0094	0.0000	1.3524	320.8641	99.014
8.30000	1.87924	0.0094	0.0000	1.3474	320.9707	99.048
8.40000	1.86974	0.0094	0.0000	1.3425	321.1701	99.080
8.50000	1.86024	0.0094	0.0000	1.3375	321.3701	99.112
8.60000	1.85074	0.0094	0.0000	1.3324	321.5704	99.142
8.70000	1.84124	0.0094	0.0000	1.3274	321.7704	99.170
8.80000	1.83174	0.0094	0.0000	1.3224	321.9704	99.198
8.90000	1.82224	0.0094	0.0000	1.3172	322.1704	99.224
9.00000	1.81274	0.0094	0.0000	1.3124	322.3704	99.249
9.10000	1.80324	0.0094	0.0000	1.3074	322.5704	99.274
9.20000	1.79374	0.0094	0.0000	1.3024	322.7704	99.297
9.30000	1.78424	0.0094	0.0000	1.2974	322.9704	99.319
9.40000	1.77474	0.0094	0.0000	1.2924	323.1704	99.341
9.50000	1.76524	0.0094	0.0000	1.2874	323.3704	99.362
9.60000	1.75574	0.0094	0.0000	1.2824	323.5704	99.382
9.70000	1.74624	0.0094	0.0000	1.2774	323.7704	99.401
9.80000	1.73674	0.0094	0.0000	1.2724	323.9704	99.418
9.90000	1.72724	0.0094	0.0000	1.2674	324.1704	99.437
10.00000	1.71774	0.0094	0.0000	1.2624	324.3704	99.454
10.10000	1.70824	0.0094	0.0000	1.2574	324.5704	99.470
10.20000	1.69874	0.0094	0.0000	1.2524	324.7704	99.484
10.30000	1.68924	0.0094	0.0000	1.2474	324.9704	99.500
10.40000	1.67974	0.0094	0.0000	1.2424	325.1704	99.516
10.50000	1.67024	0.0094	0.0000	1.2374	325.3704	99.531
10.60000	1.66074	0.0094	0.0000	1.2324	325.5704	99.546
10.70000	1.65124	0.0094	0.0000	1.2274	325.7704	99.558
10.80000	1.64174	0.0094	0.0000	1.2224	325.9704	99.571
10.90000	1.63224	0.0094	0.0000	1.2174	326.1704	99.583
11.00000	1.62274	0.0094	0.0000	1.2124	326.3704	99.594
11.10000	1.61324	0.0094	0.0000	1.2074	326.5704	99.604
11.20000	1.60374	0.0094	0.0000	1.2024	326.7704	99.614
11.30000	1.59424	0.0094	0.0000	1.1974	326.9704	99.624
11.40000	1.58474	0.0094	0.0000	1.1924	327.1704	99.634
11.50000	1.57524	0.0094	0.0000	1.1874	327.3704	99.644
11.60000	1.56574	0.0094	0.0000	1.1824	327.5704	99.654
11.70000	1.55624	0.0094	0.0000	1.1774	327.7704	99.667
11.80000	1.54674	0.0094	0.0000	1.1724	327.9704	99.677
11.90000	1.53724	0.0094	0.0000	1.1674	328.1704	99.686
12.00000	1.52774	0.0094	0.0000	1.1624	328.3704	99.695

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, U.S.I.C. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2524.8 DEGREES CELSIUS FOR THE FOLLOWING TABLE. DEGREES K = 2800.0  
DEGREES FAHRENHEIT = 4500.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 26.40 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 5192.27 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 1689.57 CAND/FLAZ/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.082 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 181.191 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 14.872 LUMENS/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.0050 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0041 MICRONS.  
I.E., WMS MAXIMIZED, THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 348.49 WATT/CM<sup>2</sup> OR 3.484900E+00 FLOZ/SEC/CM<sup>2</sup> OR 8.11715E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 221.58 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (E) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\frac{\Delta E}{E} = M \frac{\Delta T}{T}$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2524.8 DEGREES CELSIUS FOR THE FOLLOWING TABLE. DEGREES K = 2800.0  
DEGREES FAHRENHEIT = 4500.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WATTS	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	3.10446	0.0134	0.0000	14.6784	0.0684	0.025
0.35500	3.44153	0.0155	0.0000	14.4718	0.1045	0.030
0.36000	3.92150	0.0177	0.0000	14.2700	0.1229	0.035
0.36500	4.45269	0.0201	0.0000	14.0754	0.1418	0.041
0.37000	5.03134	0.0227	0.0000	13.8851	0.1675	0.048
0.37500	5.66140	0.0254	0.0000	13.7000	0.1947	0.054
0.38000	6.34549	0.0284	0.0000	13.5194	0.2242	0.060
0.38500	7.08400	0.0320	0.0000	13.3442	0.2578	0.074
0.39000	7.88157	0.0354	0.0000	13.1731	0.2952	0.085
0.39500	8.74112	0.0394	0.0000	13.0064	0.3347	0.097
0.40000	9.65297	0.0436	2.6254	12.8434	0.3826	0.110
0.40500	10.61041	0.0480	5.7929	12.6852	0.4333	0.124
0.41000	11.60792	0.0527	9.5231	12.5305	0.4881	0.140
0.41500	12.74223	0.0574	19.1172	12.3794	0.5451	0.158
0.42000	13.99224	0.0622	37.9229	12.2322	0.6149	0.177
0.42500	15.35171	0.0685	75.3295	12.0893	0.6897	0.198
0.43000	16.82332	0.0743	129.9415	11.9498	0.7684	0.221
0.43500	17.41683	0.0805	203.7486	11.8104	0.8545	0.245
0.44000	19.26584	0.0869	301.3140	11.6762	0.9472	0.272
0.44500	20.76005	0.0937	409.3882	11.5451	1.0473	0.301
0.45000	22.31909	0.1007	576.7254	11.4164	1.1550	0.331
0.45500	23.94244	0.1081	781.4813	11.2913	1.2706	0.365
0.46000	25.62934	0.1157	1045.6748	11.1684	1.3945	0.400
0.46500	27.37904	0.1236	1377.7134	11.0484	1.5270	0.434
0.47000	29.19039	0.1317	1806.3011	10.9310	1.6684	0.479
0.47500	31.06223	0.1402	2365.6995	10.8160	1.8190	0.522
0.48000	32.99324	0.1489	3118.9220	10.7034	1.9791	0.568
0.48500	34.98194	0.1579	4020.1266	10.5930	2.1400	0.617
0.49000	37.02644	0.1671	5237.0769	10.4850	2.3200	0.668
0.49500	39.12613	0.1766	6844.2877	10.3791	2.5194	0.723
0.50000	41.27802	0.1863	9044.3034	10.2754	2.7264	0.781
0.50500	43.48040	0.1962	12033.6097	10.1737	2.9323	0.841
0.51000	45.73184	0.2064	15642.1252	10.0740	3.1553	0.905
0.51500	48.02972	0.2168	19897.4041	9.9769	3.3807	0.973
0.52000	50.37200	0.2273	24319.6026	9.8803	3.6356	1.043
0.52500	52.75649	0.2381	29448.4072	9.7863	3.8934	1.117
0.53000	55.18088	0.2490	32344.8238	9.6940	4.1633	1.195
0.53500	57.64284	0.2601	35045.3781	9.6035	4.4453	1.274
0.54000	60.14001	0.2714	39014.0254	9.5144	4.7398	1.360
0.54500	62.66995	0.2828	41743.2276	9.4274	5.0468	1.448
0.55000	65.23025	0.2944	44134.7881	9.3417	5.3665	1.540
0.55500	67.81044	0.3061	44116.5423	9.2574	5.6991	1.635
0.56000	70.43207	0.3179	47654.3382	9.1751	6.0447	1.735
0.56500	73.09864	0.3298	48443.2668	9.0939	6.4035	1.837
0.57000	75.72574	0.3417	49021.8168	9.0143	6.7755	1.944

0.57500	78.40087	0.1918	48781.0192	4.0340	7.1686	2.055
0.58000	81.09159	0.1940	47973.7921	4.0590	7.5595	2.169
0.58500	81.79544	0.1782	46551.4144	4.7814	7.0717	2.287
0.59000	44.51014	0.1904	44511.9578	4.7061	8.1075	2.410
0.59500	89.21170	0.4027	42171.4000	4.6160	9.4364	2.546
0.60000	91.96232	0.4130	19459.1928	4.5641	9.2890	2.686
0.60500	96.49521	0.4274	16510.6849	4.5415	9.7455	2.800
0.61000	97.42940	0.4387	13326.8214	4.4240	10.2368	2.937
0.61500	100.16329	0.4520	10036.9671	4.4954	10.7307	3.079
0.62000	102.49819	0.4644	7647.8040	4.5884	11.2384	3.225
0.62500	105.41893	0.4747	7194.7174	4.5222	11.7597	3.374
0.63000	108.33870	0.4840	19527.6344	4.4571	12.2946	3.526
0.63500	111.78842	0.5012	16384.1753	4.5400	12.8411	3.685
0.64000	113.76714	0.5133	13535.9094	4.6100	13.4000	3.847
0.64500	116.43294	0.5255	10929.9484	7.0471	14.0715	4.012
0.65000	119.18405	0.5378	8646.0107	7.0004	14.8564	4.181
0.65500	121.75844	0.5494	6736.4664	7.0464	15.7575	4.353
0.66000	124.19505	0.5614	5199.9064	7.0773	16.7849	4.530
0.66500	127.01140	0.5732	3846.5530	7.0740	17.9416	4.710
0.67000	129.60074	0.5849	2820.2424	7.0415	17.0570	4.895
0.67500	132.17893	0.5965	2047.9795	7.0140	17.7115	5.082
0.68000	134.79674	0.6080	1537.4411	7.5391	18.1787	5.274
0.68500	137.26477	0.6194	1119.6170	7.0740	18.0547	5.469
0.69000	139.74370	0.6307	779.2109	7.0500	18.7512	5.668
0.69500	142.21094	0.6418	581.2070	7.0944	20.0561	5.870
0.70000	144.68730	0.6529	403.2747	7.1841	21.1732	6.074
0.70500	147.05365	0.6637	249.8494	7.2422	21.9025	6.280
0.71000	149.42873	0.6744	213.3835	7.2811	22.6437	6.488
0.71500	151.77005	0.6849	154.8055	7.1904	24.3947	6.714
0.72000	154.07817	0.6954	111.2505	7.1811	24.1614	6.931
0.72500	156.35144	0.7056	74.4234	7.1621	24.9374	7.156
0.73000	158.58974	0.7157	41.9275	7.1440	25.7244	7.382
0.73500	160.79161	0.7257	43.7353	4.0962	26.5233	7.611
0.74000	162.95654	0.7354	33.2431	4.0493	27.3327	7.841
0.74500	165.08396	0.7450	22.4514	4.2039	28.1526	8.074
0.75000	167.17314	0.7544	11.1474	4.0577	28.9814	8.317
0.75500	171.23477	0.7638	0.0000	0.7677	30.8254	8.569
0.76000	175.13763	0.7700	0.0000	4.4404	32.4074	8.909
0.76500	178.87867	0.8073	0.0000	4.4454	34.1778	9.267
0.77000	182.45555	0.8230	0.0000	4.4120	35.9846	10.326
0.77500	185.86663	0.8388	0.0000	4.4323	37.8266	10.854
0.78000	189.11084	0.8535	0.0000	4.4534	39.7014	11.397
0.78500	192.18799	0.8673	0.0000	4.5772	41.6040	11.930
0.79000	195.09770	0.8804	0.0000	4.2025	43.5446	12.495
0.79500	197.84121	0.8920	0.0000	4.1294	45.5094	13.059
0.80000	200.41922	0.9045	0.0000	4.0545	47.5009	13.630
0.80500	202.83333	0.9154	0.0000	5.0491	49.5173	14.209
0.81000	205.08541	0.9254	0.0000	5.0213	51.5570	14.794
0.81500	207.17774	0.9350	0.0000	5.0551	53.6144	15.384
0.82000	209.11274	0.9437	0.0000	5.2404	55.7000	15.981
0.82500	210.89334	0.9514	0.0000	5.2271	57.8002	16.586
0.83000	212.52251	0.9591	0.0000	5.4454	59.9176	17.193
0.83500	214.00364	0.9658	0.0000	5.4053	62.0591	17.805
0.84000	215.33967	0.9714	0.0000	5.4461	64.1970	18.421
0.84500	216.53467	0.9779	0.0000	5.4754	66.3344	19.041

0.99500	217.59217	0.9820	0.0000	5.4322	68.4722	19.664
0.99000	218.51594	0.9842	0.0000	5.1771	70.7074	20.290
0.98500	219.16989	0.9891	0.0000	5.1231	72.4971	20.914
0.98000	219.67813	0.9924	0.0000	5.0712	74.0914	21.548
0.97500	220.32641	0.9952	0.0000	5.2185	77.2942	22.180
1.00000	220.75275	0.9472	0.0000	5.1874	79.5017	22.814
1.01000	221.26744	0.9484	0.0000	5.1181	81.7140	23.444
1.02000	221.47235	0.9494	0.0000	5.0637	83.9287	24.081
1.03000	221.57144	0.9499	0.0000	5.0221	86.1440	24.710
1.04000	221.56882	0.9499	0.0000	4.9754	88.3598	25.355
1.05000	221.46847	0.9494	0.0000	4.9294	90.5751	25.991
1.06000	221.27412	0.9484	0.0000	4.8851	92.7884	26.624
1.07000	220.98984	0.9473	0.0000	4.8412	95.0002	27.260
1.08000	220.61914	0.9457	0.0000	4.7982	97.2083	27.894
1.09000	220.16649	0.9436	0.0000	4.7560	99.4123	28.526
1.10000	219.63825	0.9412	0.0000	4.7144	101.6114	29.158
1.11000	219.02884	0.9384	0.0000	4.6740	103.8048	29.787
1.12000	218.34944	0.9354	0.0000	4.6342	105.9917	30.414
1.13000	217.60307	0.9320	0.0000	4.5952	108.1714	31.040
1.14000	216.79164	0.9284	0.0000	4.5580	110.3434	31.661
1.15000	215.91874	0.9244	0.0000	4.5143	112.5072	32.284
1.16000	214.98750	0.9202	0.0000	4.4721	114.6614	32.907
1.17000	214.00100	0.9158	0.0000	4.4311	116.8047	33.514
1.18000	212.94224	0.9111	0.0000	4.4105	118.9416	34.130
1.19000	211.87427	0.9060	0.0000	4.3784	121.0654	34.760
1.20000	210.73971	0.9011	0.0000	4.3413	123.1749	35.384
1.21000	209.56144	0.8957	0.0000	4.3074	125.2685	35.989
1.22000	204.14217	0.8402	0.0000	4.2745	127.3700	36.545
1.23000	207.08421	0.8344	0.0000	4.2419	129.4472	37.185
1.24000	205.79012	0.8287	0.0000	4.2100	131.5116	37.737
1.25000	204.44274	0.8227	0.0000	4.1784	133.5629	38.324
1.26000	203.16381	0.8166	0.0000	4.1477	135.6007	38.911
1.27000	201.71974	0.8103	0.0000	4.1173	137.6240	39.499
1.28000	200.30064	0.8040	0.0000	4.0874	139.6350	40.084
1.29000	198.84041	0.8074	0.0000	4.0582	141.6374	40.641
1.30000	197.36741	0.8009	0.0000	4.0294	143.6121	41.210
1.31000	195.91352	0.8042	0.0000	4.0010	145.5747	41.774
1.32000	194.41015	0.8174	0.0000	3.9731	147.5303	42.334
1.33000	192.88927	0.8204	0.0000	3.9457	149.4684	42.899
1.34000	191.35255	0.8234	0.0000	3.9187	151.3880	43.441
1.35000	189.80147	0.8264	0.0000	3.8921	153.2918	43.989
1.36000	188.23740	0.8494	0.0000	3.8660	155.1840	44.530
1.37000	186.64287	0.8424	0.0000	3.8403	157.0645	45.064
1.38000	185.02820	0.8353	0.0000	3.8150	158.9173	45.601
1.39000	183.40401	0.8281	0.0000	3.7901	160.7401	46.130
1.40000	181.88444	0.8204	0.0000	3.7654	162.5444	46.654
1.41000	180.27294	0.8134	0.0000	3.7415	164.3377	47.174
1.42000	178.66641	0.8061	0.0000	3.7177	166.1025	47.689
1.43000	177.05140	0.7990	0.0000	3.6943	167.9711	48.189
1.44000	175.43355	0.7917	0.0000	3.6713	169.7335	48.705
1.45000	173.81464	0.7844	0.0000	3.6484	171.4707	49.204
1.46000	172.19410	0.7771	0.0000	3.6263	173.2008	49.703
1.47000	170.57442	0.7694	0.0000	3.6043	174.9236	50.195
1.48000	168.95555	0.7622	0.0000	3.5824	176.6213	50.682
1.49000	167.33844	0.7542	0.0000	3.5613	178.3027	51.164

1.50000	185.72419	0.7479	0.0000	1.5409	179.9690	51.647
1.60000	187.86849	0.9764	0.0000	1.3458	195.7824	54.164
1.70000	134.86662	0.4097	0.0000	1.1784	209.9705	60.251
1.80000	170.99943	0.5461	0.0000	1.0244	222.7517	61.819
1.90000	108.37847	0.4891	0.0000	2.4979	214.2121	67.207
2.00000	97.00867	0.4374	0.0000	2.7810	244.4717	70.151
2.10000	86.83461	0.3919	0.0000	2.4784	254.6539	72.784
2.20000	77.77887	0.3510	0.0000	2.4555	261.8746	75.145
2.30000	69.73074	0.3147	0.0000	2.4017	269.2629	77.269
2.40000	62.59464	0.2825	0.0000	2.4259	275.4520	79.154
2.50000	56.27095	0.2540	0.0000	2.4569	281.7849	80.860
2.60000	50.66674	0.2297	0.0000	2.2940	287.1372	82.392
2.70000	44.89765	0.2082	0.0000	2.3141	291.9430	83.773
2.80000	41.24784	0.1861	0.0000	2.1436	294.2843	85.028
2.90000	37.36995	0.1647	0.0000	2.1344	300.2174	86.148
3.00000	33.88439	0.1529	0.0000	2.0894	303.7747	87.169
3.10000	30.77887	0.1394	0.0000	2.0477	307.8849	88.094
3.20000	28.00754	0.1264	0.0000	2.0084	309.9437	88.939
3.30000	25.53045	0.1132	0.0000	1.9727	312.4183	89.704
3.40000	23.31251	0.1032	0.0000	1.9400	315.0584	90.404
3.50000	21.32321	0.0945	0.0000	1.91071	317.2844	91.044
3.60000	19.53591	0.0842	0.0000	1.88474	319.1997	91.632
3.70000	17.92731	0.7809	0.0000	1.8500	321.2015	92.169
3.80000	16.47707	0.744	0.0000	1.81740	322.8205	92.667
3.90000	15.16737	0.6845	0.0000	1.7842	324.4016	93.114
4.00000	13.98262	0.6131	0.0000	1.7766	325.941	93.534
4.10000	12.90912	0.5541	0.0000	1.7541	327.3018	93.920
4.20000	11.93884	0.4939	0.0000	1.7333	328.5473	94.274
4.30000	11.04924	0.4409	0.0000	1.7134	329.6818	94.605
4.40000	10.24300	0.3942	0.0000	1.6940	330.7555	94.911
4.50000	9.50787	0.3529	0.0000	1.6772	331.7627	95.194
4.60000	8.83659	0.3169	0.0000	1.6611	332.7495	95.457
4.70000	8.22271	0.2854	0.0000	1.6462	333.7120	95.702
4.80000	7.66059	0.2586	0.0000	1.6324	334.6547	95.929
4.90000	7.14519	0.2362	0.0000	1.6192	335.5816	96.147
5.00000	6.67175	0.2181	0.0000	1.6069	336.4981	96.346
5.10000	6.23651	0.1994	0.0000	1.5964	337.4084	96.525
5.20000	5.83587	0.1801	0.0000	1.5874	338.3168	96.684
5.30000	5.46655	0.1621	0.0000	1.5798	339.2266	96.826
5.40000	5.12571	0.1451	0.0000	1.5736	340.1390	96.952
5.50000	4.81079	0.1297	0.0000	1.5679	341.0544	97.067
5.60000	4.51947	0.1157	0.0000	1.5627	341.9720	97.174
5.70000	4.24970	0.1027	0.0000	1.5575	342.8911	97.274
5.80000	3.99959	0.0911	0.0000	1.5524	343.8116	97.367
5.90000	3.76784	0.0800	0.0000	1.5474	344.7336	97.454
6.00000	3.55184	0.0694	0.0000	1.5424	345.6566	97.536
6.10000	3.35130	0.0593	0.0000	1.5374	346.5804	97.612
6.20000	3.16462	0.0497	0.0000	1.5324	347.5048	97.683
6.30000	2.99064	0.0406	0.0000	1.5274	348.4298	97.749
6.40000	2.82845	0.0320	0.0000	1.5224	349.3554	97.811
6.50000	2.67700	0.0239	0.0000	1.5174	350.2816	97.869
6.60000	2.53550	0.0164	0.0000	1.5124	351.2084	97.924
6.70000	2.40317	0.0094	0.0000	1.5074	352.1358	97.976
6.80000	2.27931	0.0029	0.0000	1.5024	353.0638	98.025
6.90000	2.16329	0.0000	0.0000	1.4974	353.9924	98.071

7.00000	2.05452	0.0000	0.0000	1.4924	354.9216	98.114
7.10000	1.95247	0.0000	0.0000	1.4874	355.8504	98.154
7.20000	1.85664	0.0000	0.0000	1.4824	356.7792	98.191
7.30000	1.76661	0.0000	0.0000	1.4774	357.7080	98.226
7.40000	1.68193	0.0000	0.0000	1.4724	358.6368	98.259
7.50000	1.60225	0.0000	0.0000	1.4674	359.5656	98.289
7.60000	1.52720	0.0000	0.0000	1.4624	360.4944	98.317
7.70000	1.45649	0.0000	0.0000	1.4574	361.4232	98.343
7.80000	1.38980	0.0000	0.0000	1.4524	362.3520	98.367
7.90000	1.32687	0.0000	0.0000	1.4474	363.2808	98.389
8.00000	1.26745	0.0000	0.0000	1.4424	364.2096	98.409
8.10000	1.21131	0.0000	0.0000	1.4374	365.1384	98.427
8.20000	1.15821	0.0000	0.0000	1.4324	366.0672	98.443
8.30000	1.10801	0.0000	0.0000	1.4274	366.9960	98.457
8.40000	1.06044	0.0000	0.0000	1.4224	367.9248	98.469
8.50000	1.01547	0.0000	0.0000	1.4174	368.8536	98.479
8.60000	0.97280	0.0000	0.0000	1.4124	369.7824	98.487
8.70000	0.93235	0.0000	0.0000	1.4074	370.7112	98.493
8.80000	0.89397	0.0000	0.0000	1.4024	371.6400	98.497
8.90000	0.85755	0.0000	0.0000	1.3974	372.5688	98.499
9.00000	0.82295	0.0000	0.0000	1.3924	373.4976	98.499
9.10000	0.79007	0.0000	0.0000	1.3874	374.4264	98.497
9.20000	0.75882	0.0000	0.0000	1.3824	375.3552	98.493
9.30000	0.72909	0.0000	0.0000	1.3774	376.2840	98.487
9.40000	0.70089	0.0000	0.0000	1.3724	377.2128	98.479
9.50000	0.67387	0.0000	0.0000	1.3674	378.1416	98.469
9.60000	0.64821	0.0000	0.0000	1.3624	379.0704	98.457
9.70000	0.62374	0.0000	0.0000	1.3574	380.0000	98.443
9.80000	0.60045	0.0000	0.0000	1.3524	380.9296	98.427
9.90000	0.57821	0.0000	0.0000	1.3474	381.8592	98.409
10.00000	0.55700	0.0000	0.0000	1.3424	382.7888	98.389
10.10000	0.53674	0.0000	0.0000	1.3374	383.7184	98.367
10.20000	0.51740	0.0000	0.0000	1.3324	384.6480	98.343
10.30000	0.49881	0.0000	0.0000	1.3274	385.5776	98.317
10.40000	0.48125	0.0000	0.0000	1.3224	386.5072	98.289
10.50000	0.46435	0.0000	0.0000	1.3174	387.4368	98.259
10.60000	0.44820	0.0000	0.0000	1.3124	388.3664	98.226
10.70000	0.43273	0.0000	0.0000	1.3074	389.2960	98.191
10.80000	0.41793	0.0000	0.0000	1.3024	390.2256	98.154
10.90000	0.40375	0.0000	0.0000	1.2974	391.1552	98.114
11.00000	0.39017	0.0000	0.0000	1.2924	392.0848	98.071
11.10000	0.37715	0.0000	0.0000	1.2874	393.0144	98.025
11.20000	0.36467	0.0000	0.0000	1.2824	393.9440	97.976
11.30000	0.35270	0.0000	0.0000	1.2774	394.8736	97.924
11.40000	0.34122	0.0000	0.0000	1.2724	395.8032	97.869
11.50000	0.33020	0.0000	0.0000	1.2674	396.7328	97.811
11.60000	0.31962	0.0000	0.0000	1.2624	397.6624	97.749
11.70000	0.30946	0.0000	0.0000	1.2574	398.5920	97.683
11.80000	0.29970	0.0000	0.0000	1.2524	399.5216	97.612
11.90000	0.29032	0.0000	0.0000	1.2474	400.4512	97.536
12.00000	0.28133	0.0000	0.0000	1.2424	401.3808	97.454

VISIBILITY AND OTHER DATA FOR PLANCK RADIATOR, MECHANICS DIVISION, D.R.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2976.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2850.0  
DEGREES FAHRENHEIT = 4670.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 33.06 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 6070.91 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 1932.43 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.088.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 183.416 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 18.210 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.014 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.2710 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT INTENSITY TO TOTAL RADIANT INTENSITY.

THE TOTAL POWER RADIATED IS 374.06 WATT/CM<sup>2</sup> OR 3.740540600 ERG/SEC/CM<sup>2</sup> OR 0.947138002 CAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 242.00 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT INTENSITY \* VISIBILITY FACTOR, WHERE RADIANT INTENSITY IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT INTENSITY (%) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA: % = N \* K.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2976.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2850.0  
DEGREES FAHRENHEIT = 4670.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT N FOR WATTS	POWER FROM ZFNO TO L	% TOTAL POWER ZFNO TO L
0.35000	1.00492	0.0141	0.0000	10.6711	0.1169	0.031
0.35500	4.03675	0.0153	0.0000	10.2179	0.1377	0.037
0.36000	5.01071	0.0208	0.0000	10.0000	0.1613	0.044
0.36500	5.00047	0.0235	0.0000	13.0214	0.1842	0.050
0.37000	6.41915	0.0265	0.0000	13.4010	0.2144	0.058
0.37500	7.19084	0.0257	0.0000	13.4997	0.2524	0.067
0.38000	8.04405	0.0312	0.0100	13.2826	0.2905	0.078
0.38500	8.95374	0.0370	0.0200	13.1101	0.3310	0.090
0.39000	9.91027	0.0410	0.0300	12.9420	0.3802	0.104
0.39500	10.92454	0.0451	0.0400	12.7782	0.4324	0.118
0.40000	12.00222	0.0500	3.2372	12.6185	0.4901	0.131
0.40500	13.28010	0.0540	7.2944	12.4627	0.5535	0.146
0.41000	14.55195	0.0601	11.0446	11.3107	0.6230	0.167
0.41500	15.72293	0.0656	21.7459	12.1424	0.6990	0.187
0.42000	17.27057	0.0710	47.0004	12.0174	0.7818	0.209
0.42500	18.76017	0.0775	93.1255	11.4762	0.8719	0.233
0.43000	20.31485	0.0815	140.2435	11.7382	0.9696	0.255
0.43500	21.94344	0.0904	250.6471	11.6033	1.0752	0.287
0.44000	23.64540	0.0977	349.8146	11.4714	1.1591	0.317
0.44500	25.42100	0.1050	501.3021	11.3425	1.3118	0.351
0.45000	27.24004	0.1126	704.6217	11.2165	1.4435	0.380
0.45500	29.10768	0.1200	952.6899	11.0933	1.5546	0.404
0.46000	31.12703	0.1280	1272.0217	10.9727	1.7355	0.444
0.46500	33.29330	0.1371	1679.4004	10.8540	1.8945	0.507
0.47000	35.51111	0.1441	2198.1452	10.7393	2.0479	0.553
0.47500	37.78278	0.1501	2840.0201	10.6263	2.2052	0.602
0.48000	39.80854	0.1644	3742.7044	10.5156	2.4010	0.653
0.48500	42.12644	0.1740	4841.1756	10.4073	2.6444	0.708
0.49000	44.50442	0.1810	6294.7190	10.3011	2.8649	0.766
0.49500	46.94060	0.1839	8225.2390	10.1971	3.0635	0.827
0.50000	49.43210	0.2042	10857.2444	10.0952	3.3344	0.891
0.50500	51.97494	0.2147	14395.1442	10.0000	3.5879	0.959
0.51000	54.57260	0.2254	18066.0174	9.9123	3.8343	1.030
0.51500	57.21644	0.2363	23055.5729	9.8023	4.1337	1.105
0.52000	59.90591	0.2475	29922.5732	9.7071	4.4945	1.182
0.52500	62.64187	0.2587	37777.0611	9.6167	4.7329	1.264
0.53000	65.41701	0.2709	46811.1294	9.5260	5.0520	1.351
0.53500	68.22075	0.2818	57444.9503	9.4351	5.3871	1.440
0.54000	71.04529	0.2916	69101.4751	9.3478	5.7353	1.531
0.54500	73.89111	0.3054	82274.6640	9.2621	6.0978	1.630
0.55000	76.84864	0.3174	97904.9032	9.1780	6.4747	1.731
0.55500	79.92780	0.3295	116299.1757	9.0954	6.8623	1.836
0.56000	83.13279	0.3417	137977.0075	9.0143	7.2725	1.946
0.56500	86.50780	0.3540	163097.3994	8.9346	7.6916	2.057
0.57000	89.70642	0.3664	19221.1030	8.8563	8.1296	2.173





1,50000	174,19480	0,7285	0,0000	1,4854	197,0741	52,899
1,60000	158,94019	0,4545	0,0000	1,2992	214,6315	57,379
1,70000	142,40757	0,5081	0,0000	1,1204	229,4985	61,407
1,80000	127,41344	0,5271	0,0000	2,0049	243,1978	65,014
1,90000	114,04104	0,4711	0,0000	2,4571	255,2647	68,243
2,00000	101,87017	0,4204	0,0000	2,7434	266,0398	71,124
2,10000	91,22323	0,3740	0,0000	2,4424	275,4649	73,702
2,20000	81,19424	0,3347	0,0000	2,5519	284,2941	76,004
2,30000	72,48651	0,3010	0,0000	2,4497	292,0025	78,063
2,40000	65,12317	0,2694	0,0000	2,1955	298,9042	79,804
2,50000	58,45300	0,2423	0,0000	2,1241	305,0942	81,564
2,60000	52,75343	0,2179	0,0000	2,2944	310,6605	83,051
2,70000	47,53172	0,1943	0,0000	2,2103	315,6655	84,390
2,80000	42,90517	0,1722	0,0000	2,1545	320,1547	85,598
2,90000	38,40043	0,1503	0,0000	2,1104	324,2479	86,489
3,00000	35,15347	0,1452	0,0000	2,0667	327,8420	87,477
3,10000	31,90444	0,1114	0,0000	2,0254	331,1120	88,579
3,20000	29,71541	0,1199	0,0000	1,9879	334,1555	89,384
3,30000	28,43247	0,1092	0,0000	1,9524	337,1255	90,124
3,40000	24,12227	0,0944	0,0000	1,9195	339,6512	90,802
3,50000	22,75149	0,0911	0,0000	1,8884	341,9540	91,418
3,60000	20,19247	0,0834	0,0000	1,8597	344,0646	91,983
3,70000	18,52117	0,745	0,0000	1,8325	346,0028	92,500
3,80000	17,01511	0,0703	0,0000	1,8070	347,7743	92,974
3,90000	15,65949	0,0647	0,0000	1,7829	349,4107	93,411
4,00000	14,42711	0,0594	0,0000	1,7602	350,9134	93,813
4,10000	13,11437	0,0550	0,0000	1,7387	352,3000	94,183
4,20000	12,10904	0,0508	0,0000	1,7184	353,5802	94,529
4,30000	11,18404	0,0470	0,0000	1,6992	354,7441	94,842
4,40000	10,55363	0,0434	0,0000	1,6809	355,8405	95,135
4,50000	9,79315	0,0405	0,0000	1,6635	356,8773	95,407
4,60000	9,09044	0,0374	0,0000	1,6470	357,8214	95,659
4,70000	8,44647	0,0350	0,0000	1,6313	358,6891	95,894
4,80000	7,84177	0,0324	0,0000	1,6163	359,5161	96,118
4,90000	7,35138	0,0304	0,0000	1,6019	360,2774	96,318
5,00000	6,84249	0,0283	0,0000	1,5882	360,9874	96,504
5,10000	6,41351	0,0265	0,0000	1,5749	361,6513	96,653
5,20000	6,00013	0,0248	0,0000	1,5625	362,2717	96,849
5,30000	5,51921	0,232	0,0000	1,5504	362,8524	97,004
5,40000	5,26777	0,0214	0,0000	1,5391	363,3945	97,159
5,50000	4,84314	0,0204	0,0000	1,5281	363,9048	97,284
5,60000	4,44293	0,0192	0,0000	1,5175	364,3860	97,414
5,70000	4,06497	0,0180	0,0000	1,5073	364,8362	97,535
5,80000	3,70734	0,0170	0,0000	1,4974	365,2566	97,644
5,90000	3,36834	0,0160	0,0000	1,4880	365,6483	97,754
6,00000	3,04434	0,0151	0,0000	1,4789	366,0139	97,855
6,10000	2,74199	0,0142	0,0000	1,4701	366,3641	97,948
6,20000	2,47773	0,0134	0,0000	1,4617	366,7223	98,039
6,30000	2,24644	0,0127	0,0000	1,4535	367,0341	98,123
6,40000	2,04194	0,0120	0,0000	1,4454	367,3145	98,203
6,50000	1,86622	0,0113	0,0000	1,4380	367,6144	98,278
6,60000	1,70072	0,0107	0,0000	1,4304	367,8861	98,350
6,70000	1,54447	0,0102	0,0000	1,4235	368,1393	98,418
6,80000	1,39734	0,0097	0,0000	1,4164	368,3793	98,482
6,90000	1,27912	0,0092	0,0000	1,4100	368,6070	98,543

7,00000	1,18634	0,0087	0,0000	1,4035	368,8232	98,600
7,10000	1,090150	0,0083	0,0000	1,3972	369,0245	98,654
7,20000	1,00104	0,0079	0,0000	1,3911	369,2217	98,707
7,30000	1,41054	0,0075	0,0000	1,3852	369,4149	98,757
7,40000	1,72342	0,0071	0,0000	1,3795	369,5940	98,804
7,50000	1,44179	0,0068	0,0000	1,3740	369,7542	98,849
7,60000	1,54875	0,0065	0,0000	1,3684	369,9145	98,892
7,70000	1,49215	0,0062	0,0000	1,3633	370,0673	98,933
7,80000	1,42370	0,0059	0,0000	1,3582	370,2131	98,972
7,90000	1,34912	0,0056	0,0000	1,3532	370,3572	99,009
8,00000	1,26814	0,0054	0,0000	1,3484	370,4850	99,045
8,10000	1,24054	0,0051	0,0000	1,3437	370,6119	99,079
8,20000	1,18604	0,0049	0,0000	1,3391	370,7332	99,111
8,30000	1,13457	0,0047	0,0000	1,3347	370,8493	99,142
8,40000	1,09541	0,0045	0,0000	1,3303	370,9672	99,172
8,50000	1,03944	0,0043	0,0000	1,3261	371,0665	99,200
8,60000	0,99549	0,0041	0,0000	1,3220	371,1643	99,227
8,70000	0,95441	0,0039	0,0000	1,3180	371,2654	99,253
8,80000	0,91574	0,0038	0,0000	1,3140	371,3592	99,274
8,90000	0,87771	0,0036	0,0000	1,3102	371,4448	99,302
9,00000	0,84224	0,0035	0,0000	1,3065	371,5344	99,325
9,10000	0,80844	0,0033	0,0000	1,3028	371,6173	99,347
9,20000	0,77644	0,0032	0,0000	1,2991	371,6964	99,369
9,30000	0,74404	0,0031	0,0000	1,2954	371,7727	99,389
9,40000	0,71204	0,0030	0,0000	1,2924	371,8454	99,408
9,50000	0,68044	0,0028	0,0000	1,2891	371,9162	99,427
9,60000	0,64914	0,0027	0,0000	1,2858	371,9848	99,445
9,70000	0,61811	0,0026	0,0000	1,2824	372,0644	99,463
9,80000	0,51423	0,0025	0,0000	1,2795	372,1114	99,479
9,90000	0,59145	0,0024	0,0000	1,2765	372,1717	99,494
10,00000	0,56927	0,0024	0,0000	1,2735	372,2298	99,511
10,10000	0,54897	0,0023	0,0000	1,2704	372,2847	99,524
10,20000	0,52914	0,0022	0,0000	1,2677	372,3394	99,540
10,30000	0,51023	0,0021	0,0000	1,2649	372,3915	99,554
10,40000	0,49214	0,0020	0,0000	1,2622	372,4417	99,568
10,50000	0,47484	0,0020	0,0000	1,2595	372,4890	99,581
10,60000	0,45810	0,0019	0,0000	1,2568	372,5347	99,593
10,70000	0,44244	0,0018	0,0000	1,2543	372,5817	99,605
10,80000	0,42733	0,0018	0,0000	1,2518	372,6252	99,617
10,90000	0,41279	0,0017	0,0000	1,2493	372,6672	99,629
11,00000	0,39889	0,0016	0,0000	1,2469	372,7077	99,639
11,10000	0,38556	0,0016	0,0000	1,2445	372,7470	99,649
11,20000	0,37279	0,0015	0,0000	1,2422	372,7849	99,660
11,30000	0,36054	0,0015	0,0000	1,2399	372,8215	99,669
11,40000	0,34879	0,0014	0,0000	1,2377	372,8570	99,679
11,50000	0,33751	0,0014	0,0000	1,2355	372,8913	99,688
11,60000	0,32664	0,0013	0,0000	1,2333	372,9245	99,697
11,70000	0,31629	0,0013	0,0000	1,2312	372,9567	99,705
11,80000	0,30640	0,0013	0,0000	1,2291	372,9871	99,714
11,90000	0,29697	0,0012	0,0000	1,2270	373,0179	99,722
12,00000	0,28744	0,0012	0,0000	1,2250	373,0471	99,730

VISIBILITY AND OTHER DATA FOR PLANK RADIATION, MECHANICS DIVISION, S.R.T.C. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2026.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2900.0  
DEGREES FAHRENHEIT = 3700.2

THE POWER RADIATED FROM 0.400 TO 0.75 MICRON IS 18.05 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 7074.10 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 2251.76 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.095 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 105.933 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 17.001 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.9991 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.2991 MICRONS.  
I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 401.01 WATT/CM<sup>2</sup> OR 4110070619 ERG/SEC/CM<sup>2</sup> OR 2.56410E+02 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 264.00 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W = RTM \* T.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2026.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 2900.0  
DEGREES FAHRENHEIT = 3700.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOINENT M PER KRTON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	4.94819	0.1849	0.0000	14.1724	0.1531	0.038
0.35500	5.46862	0.2015	0.0000	13.9724	0.1797	0.045
0.36000	6.01784	0.2203	0.0000	13.7747	0.2099	0.052
0.36500	7.21851	0.2774	0.0000	13.5210	0.2440	0.061
0.37000	8.12724	0.3008	0.0000	13.2748	0.2823	0.070
0.37500	9.04041	0.3304	0.0000	13.0274	0.3253	0.081
0.38000	10.11423	0.3653	0.0000	12.7816	0.3733	0.093
0.38500	11.22862	0.4025	0.0000	12.5340	0.4266	0.104
0.39000	12.42335	0.4420	0.0000	12.2849	0.4857	0.117
0.39500	13.64193	0.4838	0.0000	12.0379	0.5509	0.131
0.40000	15.01161	0.5289	4.0884	12.0000	0.6224	0.155
0.40500	16.44381	0.5773	8.9561	12.0474	0.7013	0.175
0.41000	17.97870	0.6289	14.6701	12.0945	0.7874	0.194
0.41500	19.62715	0.6841	20.3459	12.1427	0.8817	0.220
0.42000	21.42281	0.7430	27.0211	12.1913	0.9843	0.245
0.42500	23.27313	0.8072	34.7888	12.2415	1.0957	0.271
0.43000	24.27779	0.8762	43.6587	12.2934	1.2157	0.301
0.43500	25.40331	0.1015	53.6211	12.3469	1.3444	0.335
0.44000	26.61694	0.1091	64.7871	12.4017	1.4818	0.370
0.44500	27.91174	0.1171	77.1690	12.4570	1.6279	0.407
0.45000	29.29652	0.1253	90.8657	12.5127	1.7819	0.447
0.45500	30.77381	0.1338	105.8890	12.5691	1.9441	0.489
0.46000	32.34604	0.1424	122.2431	12.6261	2.1146	0.535
0.46500	34.01584	0.1511	139.9490	12.6837	2.2936	0.581
0.47000	35.78309	0.1601	159.0170	12.7419	2.4811	0.635
0.47500	37.64881	0.1704	179.4590	12.8007	2.6774	0.689
0.48000	39.61412	0.1807	199.2895	12.8600	2.8826	0.747
0.48500	41.68012	0.1909	219.5317	12.9197	3.0969	0.808
0.49000	43.84717	0.2013	240.2090	12.9799	3.3204	0.871
0.49500	46.11531	0.2119	261.3451	13.0406	3.5531	0.934
0.50000	48.48304	0.2227	282.9531	13.1017	3.7951	1.001
0.50500	50.95081	0.2334	305.0470	13.1633	4.0464	1.068
0.51000	53.51804	0.2451	327.6401	13.2254	4.3070	1.137
0.51500	56.18435	0.2566	350.7461	13.2880	4.5770	1.209
0.52000	58.94914	0.2682	374.3771	13.3511	4.8564	1.284
0.52500	61.81281	0.2800	398.5461	13.4147	5.1451	1.362
0.53000	64.77482	0.2919	423.2661	13.4787	5.4431	1.441
0.53500	67.83462	0.3040	448.5491	13.5431	5.7504	1.521
0.54000	70.99161	0.3162	474.4071	13.6079	6.0670	1.601
0.54500	74.24513	0.3285	500.8531	13.6731	6.3920	1.681
0.55000	77.59462	0.3409	527.8991	13.7387	6.7254	1.761
0.55500	81.03931	0.3534	555.5571	13.8047	7.0674	1.841
0.56000	84.57961	0.3660	583.8391	13.8711	7.4179	1.921
0.56500	88.21482	0.3786	612.7571	13.9379	7.7760	2.001
0.57000	91.94435	0.3913	642.3231	14.0051	8.1417	2.081



1.50000	187,20930	0,7092	0,0000	1,4324	217,0391	54,121
1.60000	188,24313	0,6171	0,0000	1,3154	214,4042	54,554
1.70000	189,25257	0,5709	0,0000	1,2044	210,7121	54,974
1.80000	190,24374	0,5044	0,0000	2,0424	204,9434	54,074
1.90000	191,40972	0,4533	0,0000	2,4174	207,4544	54,240
2.00000	106,41854	0,4085	0,0000	2,7064	208,9774	72,044
2.10000	95,27502	0,3604	0,0000	2,474	204,0773	74,544
2.20000	85,04131	0,3201	0,0000	2,5100	104,0747	74,824
2.30000	74,04400	0,2844	0,0000	2,4349	110,1227	74,832
2.40000	64,04444	0,2574	0,0000	2,4444	121,1274	80,627
2.50000	54,04144	0,2312	0,0000	2,3004	124,1274	82,234
2.60000	44,04144	0,2077	0,0000	2,0000	135,1404	81,674
2.70000	34,04342	0,1870	0,0000	1,7000	140,1472	84,974
2.80000	24,04714	0,1647	0,0000	1,4000	144,1444	86,144
2.90000	14,04344	0,1424	0,0000	1,1000	144,1444	87,204
3.00000	4,04344	0,1200	0,0000	0,8000	144,1444	84,154
3.10000	31,04444	0,1077	0,0000	0,5000	144,1444	89,024
3.20000	30,04132	0,1017	0,0000	0,2000	144,1444	89,810
3.30000	27,04124	0,1014	0,0000	0,0000	144,1444	90,524
3.40000	24,04100	0,0944	0,0000	0,0000	144,1444	91,174
3.50000	22,04447	0,0847	0,0000	0,0000	144,1444	91,771
3.60000	20,04444	0,0774	0,0000	0,0000	144,1444	92,314
3.70000	19,04444	0,0724	0,0000	0,0000	144,1444	92,812
3.80000	17,04444	0,0644	0,0000	0,0000	144,1444	91,249
3.90000	16,04444	0,0584	0,0000	0,0000	144,1444	91,684
4.00000	14,04444	0,0511	0,0000	0,0000	144,1444	94,074
4.10000	14,04444	0,0444	0,0000	0,0000	144,1444	94,432
4.20000	11,04444	0,0324	0,0000	0,0000	144,1444	94,781
4.30000	12,04444	0,0244	0,0000	0,0000	144,1444	95,064
4.40000	11,04444	0,0144	0,0000	0,0000	144,1444	95,347
4.50000	10,04444	0,0044	0,0000	0,0000	144,1444	95,404
4.60000	9,04444	0,0042	0,0000	0,0000	144,1444	95,450
4.70000	8,04444	0,0044	0,0000	0,0000	144,1444	96,074
4.80000	7,04444	0,0044	0,0000	0,0000	144,1444	96,244
4.90000	6,04444	0,0044	0,0000	0,0000	144,1444	96,480
5.00000	5,04444	0,0044	0,0000	0,0000	144,1444	96,644
5.10000	4,04444	0,0044	0,0000	0,0000	144,1444	96,832
5.20000	3,04444	0,0044	0,0000	0,0000	144,1444	96,991
5.30000	2,04444	0,0044	0,0000	0,0000	144,1444	97,140
5.40000	1,04444	0,0044	0,0000	0,0000	144,1444	97,279
5.50000	0,04444	0,0044	0,0000	0,0000	144,1444	97,410
5.60000	0,04444	0,0044	0,0000	0,0000	144,1444	97,532
5.70000	0,04444	0,0044	0,0000	0,0000	144,1444	97,644
5.80000	0,04444	0,0044	0,0000	0,0000	144,1444	97,754
5.90000	0,04444	0,0044	0,0000	0,0000	144,1444	97,854
6.00000	0,04444	0,0044	0,0000	0,0000	144,1444	97,954
6.10000	0,04444	0,0044	0,0000	0,0000	144,1444	98,044
6.20000	0,04444	0,0044	0,0000	0,0000	144,1444	98,130
6.30000	0,04444	0,0044	0,0000	0,0000	144,1444	98,211
6.40000	0,04444	0,0044	0,0000	0,0000	144,1444	98,287
6.50000	0,04444	0,0044	0,0000	0,0000	144,1444	98,360
6.60000	0,04444	0,0044	0,0000	0,0000	144,1444	98,424
6.70000	0,04444	0,0044	0,0000	0,0000	144,1444	98,484
6.80000	0,04444	0,0044	0,0000	0,0000	144,1444	98,544
6.90000	0,04444	0,0044	0,0000	0,0000	144,1444	98,612

7.00000	2,14424	0,0042	0,0000	1,1454	104,4444	98,667
7.10000	2,14424	0,0042	0,0000	1,1407	104,4444	98,724
7.20000	1,14404	0,0042	0,0000	1,1372	104,4444	98,779
7.30000	1,14404	0,0042	0,0000	1,1337	104,4444	98,817
7.40000	1,14404	0,0042	0,0000	1,1302	104,4444	98,862
7.50000	1,14404	0,0042	0,0000	1,1267	104,4444	98,905
7.60000	1,14404	0,0042	0,0000	1,1232	104,4444	98,944
7.70000	1,14404	0,0042	0,0000	1,1197	104,4444	98,984
7.80000	1,14404	0,0042	0,0000	1,1162	104,4444	99,022
7.90000	1,14404	0,0042	0,0000	1,1127	104,4444	99,054
8.00000	1,14404	0,0042	0,0000	1,1092	104,4444	99,089
8.10000	1,14404	0,0042	0,0000	1,1057	104,4444	99,124
8.20000	1,14404	0,0042	0,0000	1,1022	104,4444	99,154
8.30000	1,14404	0,0042	0,0000	1,1000	104,4444	99,184
8.40000	1,14404	0,0042	0,0000	1,1000	104,4444	99,213
8.50000	1,14404	0,0042	0,0000	1,1000	104,4444	99,240
8.60000	1,14404	0,0042	0,0000	1,1000	104,4444	99,264
8.70000	1,14404	0,0042	0,0000	1,1000	104,4444	99,291
8.80000	1,14404	0,0042	0,0000	1,1000	104,4444	99,314
8.90000	1,14404	0,0042	0,0000	1,1000	104,4444	99,334
9.00000	1,14404	0,0042	0,0000	1,1000	104,4444	99,360
9.10000	1,14404	0,0042	0,0000	1,1000	104,4444	99,381
9.20000	1,14404	0,0042	0,0000	1,1000	104,4444	99,401
9.30000	1,14404	0,0042	0,0000	1,1000	104,4444	99,420
9.40000	1,14404	0,0042	0,0000	1,1000	104,4444	99,439
9.50000	1,14404	0,0042	0,0000	1,1000	104,4444	99,457
9.60000	1,14404	0,0042	0,0000	1,1000	104,4444	99,474
9.70000	1,14404	0,0042	0,0000	1,1000	104,4444	99,491
9.80000	1,14404	0,0042	0,0000	1,1000	104,4444	99,507
9.90000	1,14404	0,0042	0,0000	1,1000	104,4444	99,522
10.00000	1,14404	0,0042	0,0000	1,1000	104,4444	99,537
10.10000	1,14404	0,0042	0,0000	1,1000	104,4444	99,551
10.20000	1,14404	0,0042	0,0000	1,1000	104,4444	99,564
10.30000	1,14404	0,0042	0,0000	1,1000	104,4444	99,574
10.40000	1,14404	0,0042	0,0000	1,1000	104,4444	99,584
10.50000	1,14404	0,0042	0,0000	1,1000	104,4444	99,594
10.60000	1,14404	0,0042	0,0000	1,1000	104,4444	99,603
10.70000	1,14404	0,0042	0,0000	1,1000	104,4444	99,612
10.80000	1,14404	0,0042	0,0000	1,1000	104,4444	99,627
10.90000	1,14404	0,0042	0,0000	1,1000	104,4444	99,634
11.00000	1,14404	0,0042	0,0000	1,1000	104,4444	99,644
11.10000	1,14404	0,0042	0,0000	1,1000	104,4444	99,649
11.20000	1,14404	0,0042	0,0000	1,1000	104,4444	99,654
11.30000	1,14404	0,0042	0,0000	1,1000	104,4444	99,664
11.40000	1,14404	0,0042	0,0000	1,1000	104,4444	99,674
11.50000	1,14404	0,0042	0,0000	1,1000	104,4444	99,684
11.60000	1,14404	0,0042	0,0000	1,1000	104,4444	99,694
11.70000	1,14404	0,0042	0,0000	1,1000	104,4444	99,704
11.80000	1,14404	0,0042	0,0000	1,1000	104,4444	99,714
11.90000	1,14404	0,0042	0,0000	1,1000	104,4444	99,722
12.00000	1,14404	0,0042	0,0000	1,1000	104,4444	99,734

THE TEMPERATURE IS 1000° K. THE TEMPERATURE IN CELSIUS DEGREES IS SHOWN IN THE FOLLOWING TABLE. DEGREES K = 2950.0  
DEGREES FAHRENHEIT = 4850.2

THE POWER RADIATED FROM SURFACE AREA IS 0.159 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 0.22184 LUMENS/CM<sup>2</sup>.

THE LUMINANCE OF TOTAL VISIBLE FLUX IS 0.50166 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE FLUX TO THE TOTAL POWER IS 0.1077.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 0.4544 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.22184 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER IS 0.71662 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0187 MICRONS.  
AT THIS WAVELENGTH THE RATIO OF VISIBLE FLUX TO TOTAL RADIANT FLUX IS 0.0104.

THE TOTAL POWER RADIATED IS 0.22184 WATT/CM<sup>2</sup> OR 0.000887909 CAL/CM<sup>2</sup> SEC. OR 0.000887909 BTU/CM<sup>2</sup> SEC/CM<sup>2</sup>.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 0.01766 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (CANDLES) IS THE PRODUCT OF LUMENS PER WATT AND RADIANT EMITTANCE IN CONSISTENCY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED THE CHANGE IN RADIANT EMITTANCE MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA WHERE M:

THE TEMPERATURE IS 1000° K. THE TEMPERATURE IN CELSIUS DEGREES IS SHOWN IN THE FOLLOWING TABLE. DEGREES K = 2950.0  
DEGREES FAHRENHEIT = 4850.2

WAVELENGTH MICRONS	NUMERICAL POWER WATTS/CM <sup>2</sup> /MICRON	WAVELENGTH MICRONS	NUMERICAL LUMENS PER CM <sup>2</sup> PER MICRON	WAVELENGTH MICRONS	NUMERICAL LUMENS PER CM <sup>2</sup>	WAVELENGTH MICRONS	NUMERICAL POWER ZERO TO 1
0.10000	86.43732	1.00000	20.000	10.00000	0.19000	100.00000	0.000
0.11000	84.18611	1.10000	18.182	11.00000	0.17273	110.00000	0.054
0.12000	82.08611	1.20000	16.667	12.00000	0.15778	120.00000	0.100
0.13000	80.03025	1.30000	15.385	13.00000	0.14452	130.00000	0.150
0.14000	78.01177	1.40000	14.286	14.00000	0.13240	140.00000	0.200
0.15000	76.02413	1.50000	13.333	15.00000	0.12130	150.00000	0.250
0.16000	74.06171	1.60000	12.500	16.00000	0.11121	160.00000	0.300
0.17000	72.12000	1.70000	11.765	17.00000	0.10204	170.00000	0.350
0.18000	70.19449	1.80000	11.111	18.00000	0.09380	180.00000	0.400
0.19000	68.28166	1.90000	10.526	19.00000	0.08641	190.00000	0.450
0.20000	66.37892	2.00000	10.000	20.00000	0.07980	200.00000	0.500
0.22000	62.54020	2.20000	9.091	22.00000	0.07197	220.00000	0.600
0.24000	59.04785	2.40000	8.333	24.00000	0.06528	240.00000	0.700
0.26000	55.87500	2.60000	7.692	26.00000	0.05956	260.00000	0.800
0.28000	52.90375	2.80000	7.143	28.00000	0.05472	280.00000	0.900
0.30000	50.11750	3.00000	6.667	30.00000	0.05068	300.00000	1.000
0.32000	47.50000	3.20000	6.250	32.00000	0.04738	320.00000	1.100
0.34000	45.04750	3.40000	5.882	34.00000	0.04477	340.00000	1.200
0.36000	42.74750	3.60000	5.556	36.00000	0.04280	360.00000	1.300
0.38000	40.58750	3.80000	5.263	38.00000	0.04143	380.00000	1.400
0.40000	38.56250	4.00000	5.000	40.00000	0.04062	400.00000	1.500
0.42000	36.66875	4.20000	4.762	42.00000	0.04035	420.00000	1.600
0.44000	34.89375	4.40000	4.545	44.00000	0.04061	440.00000	1.700
0.46000	33.23500	4.60000	4.348	46.00000	0.04138	460.00000	1.800
0.48000	31.69000	4.80000	4.167	48.00000	0.04265	480.00000	1.900
0.50000	30.25750	5.00000	4.000	50.00000	0.04441	500.00000	2.000
0.52000	28.93500	5.20000	3.846	52.00000	0.04665	520.00000	2.100
0.54000	27.71000	5.40000	3.704	54.00000	0.04947	540.00000	2.200
0.56000	26.58000	5.60000	3.571	56.00000	0.05287	560.00000	2.300
0.58000	25.54250	5.80000	3.448	58.00000	0.05685	580.00000	2.400
0.60000	24.59500	6.00000	3.333	60.00000	0.06141	600.00000	2.500
0.62000	23.73500	6.20000	3.226	62.00000	0.06655	620.00000	2.600
0.64000	22.96000	6.40000	3.125	64.00000	0.07227	640.00000	2.700
0.66000	22.26750	6.60000	3.030	66.00000	0.07857	660.00000	2.800
0.68000	21.64500	6.80000	2.941	68.00000	0.08545	680.00000	2.900
0.70000	21.09000	7.00000	2.857	70.00000	0.09291	700.00000	3.000
0.72000	20.60000	7.20000	2.778	72.00000	0.10095	720.00000	3.100
0.74000	20.17250	7.40000	2.703	74.00000	0.10957	740.00000	3.200
0.76000	19.80500	7.60000	2.632	76.00000	0.11877	760.00000	3.300
0.78000	19.49500	7.80000	2.564	78.00000	0.12855	780.00000	3.400
0.80000	19.24000	8.00000	2.500	80.00000	0.13891	800.00000	3.500
0.82000	18.93750	8.20000	2.438	82.00000	0.14984	820.00000	3.600
0.84000	18.68500	8.40000	2.381	84.00000	0.16134	840.00000	3.700
0.86000	18.48000	8.60000	2.328	86.00000	0.17341	860.00000	3.800
0.88000	18.32000	8.80000	2.279	88.00000	0.18604	880.00000	3.900
0.90000	18.20250	9.00000	2.234	90.00000	0.19924	900.00000	4.000
0.92000	18.12500	9.20000	2.192	92.00000	0.21300	920.00000	4.100
0.94000	18.08500	9.40000	2.153	94.00000	0.22731	940.00000	4.200
0.96000	18.08000	9.60000	2.117	96.00000	0.24217	960.00000	4.300
0.98000	18.10750	9.80000	2.084	98.00000	0.25758	980.00000	4.400
1.00000	18.16500	10.00000	2.054	100.00000	0.27354	1000.00000	4.500







VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, U.S.I.C. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2720.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3000.0  
DEGREES FAHRENHEIT = 4940.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 49.79 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 9842.74 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 3012.00 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.1000.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 193.231 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 20.615 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.5960 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.2174 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 459.25 WATT/CM<sup>2</sup> OR 4.59250E+10 ERG/SEC/CM<sup>2</sup> OR 1.00742E+01 FCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 312.46 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE ( W ) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA: W = W \* N \* ΔT.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2720.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3000.0  
DEGREES FAHRENHEIT = 4940.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOINENT N FOR W/TON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	7.49384	0.0256	0.0000	11.7000	0.2559	0.056
0.35500	9.73133	0.0249	0.0000	13.5071	0.2985	0.065
0.36000	10.15011	0.0225	0.0000	11.1104	0.3444	0.074
0.36500	11.38002	0.0344	0.0000	11.1370	0.4007	0.087
0.37000	12.49609	0.0406	0.0000	12.0509	0.4694	0.100
0.37500	14.11221	0.0451	0.0000	12.7667	0.5276	0.115
0.38000	15.22707	0.0500	0.0000	12.6185	0.6017	0.131
0.38500	17.24504	0.0551	0.0000	12.4514	0.6836	0.149
0.39000	19.04745	0.0606	0.0000	12.2940	0.7743	0.169
0.39500	20.79814	0.0665	0.0000	12.1593	0.8747	0.190
0.40000	22.72623	0.0726	0.0000	11.9474	0.9824	0.214
0.40500	24.76427	0.0792	11.4714	11.8394	1.1011	0.240
0.41000	26.94745	0.0860	21.9477	11.6952	1.2302	0.268
0.41500	29.29427	0.0932	41.6207	11.5493	1.3704	0.298
0.42000	31.81321	0.1007	85.7159	11.4164	1.5220	0.331
0.42500	34.51321	0.1084	148.4397	11.2825	1.6847	0.367
0.43000	37.49745	0.1164	288.1455	11.1511	1.8619	0.405
0.43500	40.76427	0.1243	447.8015	11.0232	2.0512	0.447
0.44000	44.31804	0.1333	656.2744	10.8974	2.2541	0.491
0.44500	48.16854	0.1433	883.8984	10.7755	2.4710	0.538
0.45000	52.31804	0.1543	1234.5444	10.6554	2.7024	0.587
0.45500	56.76427	0.1665	1658.9704	10.5387	2.9489	0.639
0.46000	61.51321	0.1800	2201.7381	10.4272	3.2109	0.694
0.46500	66.56427	0.1934	2977.7296	10.3122	3.4887	0.752
0.47000	71.91804	0.2067	3743.5103	10.2025	3.7829	0.811
0.47500	77.56427	0.2200	4665.3935	10.0952	4.0948	0.871
0.48000	83.51321	0.2343	5745.9703	9.9900	4.4219	0.933
0.48500	89.76427	0.2493	6985.9875	9.8871	4.7644	1.000
0.49000	96.31804	0.2649	8385.7200	9.7863	5.1304	1.071
0.49500	103.16854	0.2811	9945.1525	9.6874	5.5224	1.147
0.50000	110.31804	0.2977	11665.4441	9.5907	5.9407	1.227
0.50500	117.76427	0.3147	13545.7444	9.4954	6.3854	1.311
0.51000	125.51321	0.3320	15585.9703	9.4017	6.8563	1.397
0.51500	133.56427	0.3497	17795.1525	9.3094	7.3534	1.487
0.52000	141.91804	0.3677	20175.4441	9.2184	7.8763	1.579
0.52500	150.56427	0.3860	22735.7200	9.1287	8.4254	1.674
0.53000	159.51321	0.4047	25475.1525	9.0400	8.9997	1.771
0.53500	168.76427	0.4237	28395.4441	8.9524	9.5984	1.871
0.54000	178.31804	0.4430	31495.7200	8.8654	10.2209	1.974
0.54500	188.16854	0.4627	34775.1525	8.7787	10.8663	2.081
0.55000	198.31804	0.4827	38235.4441	8.6924	11.5354	2.191
0.55500	208.76427	0.5030	41875.7200	8.6064	12.2287	2.304
0.56000	219.51321	0.5237	45695.1525	8.5207	12.9463	2.421
0.56500	230.56427	0.5447	49695.4441	8.4354	13.6884	2.541
0.57000	241.91804	0.5659	53875.7200	8.3504	14.4554	2.664
0.57500	253.56427	0.5874	58235.1525	8.2654	15.2477	2.790
0.58000	265.51321	0.6091	62775.4441	8.1804	16.0654	2.921
0.58500	277.76427	0.6311	67495.7200	8.0954	16.9084	3.057
0.59000	290.31804	0.6533	72395.1525	8.0104	17.7763	3.197
0.59500	303.16854	0.6757	77475.4441	7.9254	18.6684	3.341
0.60000	316.31804	0.6983	82735.7200	7.8404	19.5844	3.489
0.60500	329.76427	0.7211	88175.1525	7.7554	20.5254	3.641
0.61000	343.51321	0.7441	93795.4441	7.6704	21.4914	3.797
0.61500	357.56427	0.7673	99595.7200	7.5854	22.4824	3.957
0.62000	371.91804	0.7907	105575.1525	7.5004	23.4984	4.121
0.62500	386.56427	0.8143	111735.4441	7.4154	24.5394	4.289
0.63000	401.51321	0.8381	118075.7200	7.3304	25.6054	4.461
0.63500	416.76427	0.8621	124695.1525	7.2454	26.6964	4.637
0.64000	432.31804	0.8863	131595.4441	7.1604	27.8114	4.817
0.64500	448.16854	0.9107	138775.7200	7.0754	28.9504	4.999
0.65000	464.31804	0.9353	146235.1525	6.9904	30.1134	5.184
0.65500	480.76427	0.9601	153975.4441	6.9054	31.3004	5.371
0.66000	497.51321	0.9851	161995.7200	6.8204	32.5114	5.561
0.66500	514.56427	1.0103	170295.1525	6.7354	33.7464	5.753
0.67000	531.91804	1.0357	178875.4441	6.6504	35.0044	5.947
0.67500	549.56427	1.0613	187735.7200	6.5654	36.2854	6.143
0.68000	567.51321	1.0871	196875.1525	6.4804	37.5894	6.341
0.68500	585.76427	1.1131	206295.4441	6.3954	38.9164	6.541
0.69000	604.31804	1.1393	216095.7200	6.3104	40.2654	6.743
0.69500	623.16854	1.1657	226275.1525	6.2254	41.6364	6.947
0.70000	642.31804	1.1923	236835.4441	6.1404	43.0294	7.153
0.70500	661.76427	1.2191	247775.7200	6.0554	44.4434	7.361
0.71000	681.51321	1.2461	259095.1525	5.9704	45.8784	7.571
0.71500	701.56427	1.2733	270795.4441	5.8854	47.3344	7.783
0.72000	721.91804	1.3007	282875.7200	5.8004	48.8114	7.997
0.72500	742.56427	1.3283	295335.1525	5.7154	50.3094	8.213
0.73000	763.51321	1.3561	308175.4441	5.6304	51.8284	8.431
0.73500	784.76427	1.3841	321395.7200	5.5454	53.3684	8.651
0.74000	806.31804	1.4123	335095.1525	5.4604	54.9294	8.873
0.74500	828.16854	1.4407	349275.4441	5.3754	56.5114	9.097
0.75000	850.31804	1.4693	363935.7200	5.2904	58.1144	9.323



1,90000	711,3450	0,6710	0,0000	3,3100	209,3500	77,4700
1,80000	149,2750	0,5590	0,0000	3,1700	179,2750	77,2600
1,70000	103,9750	0,4310	0,0000	2,9900	129,9750	64,2000
1,60000	144,7500	0,6710	0,0000	2,9000	112,8500	64,0000
1,50000	131,6500	0,6200	0,0000	2,7900	129,6500	71,1200
2,00000	110,9000	0,3730	0,0000	2,4370	139,7500	71,6200
2,10000	103,9650	0,3320	0,0000	2,4570	150,9500	76,2110
2,20000	82,5000	0,2450	0,0000	2,4670	149,9000	76,1000
2,30000	82,5100	0,2637	0,0000	2,3700	149,8000	80,2790
2,40000	73,7020	0,2350	0,0000	2,3510	149,8000	81,0700
2,50000	65,9550	0,2100	0,0000	2,2900	141,8710	83,0000
2,60000	58,1000	0,1890	0,0000	2,2100	140,4000	84,0000
2,70000	51,1800	0,1690	0,0000	2,1300	137,2700	86,2710
2,80000	47,8027	0,1520	0,0000	2,0600	137,1270	87,1000
2,90000	41,1830	0,1380	0,0000	2,0100	132,4000	88,1000
3,00000	39,0210	0,1287	0,0000	1,9700	128,2700	89,0000
3,10000	35,3870	0,1130	0,0000	1,9300	127,9500	89,8000
3,20000	32,0020	0,1025	0,0000	1,9000	126,8270	90,0000
3,30000	29,1700	0,0930	0,0000	1,8700	126,3000	90,8000
3,40000	26,5000	0,0850	0,0000	1,8500	124,1000	91,2000
3,50000	24,7020	0,0770	0,0000	1,8300	122,4000	91,8000
3,60000	22,1051	0,0700	0,0000	1,8200	120,4000	92,4000
3,70000	20,1210	0,0650	0,0000	1,8100	118,4000	92,9000
3,80000	18,4400	0,0600	0,0000	1,8000	116,4000	93,3000
3,90000	17,1150	0,0560	0,0000	1,8000	114,4000	93,7000
4,00000	15,7727	0,0520	0,0000	1,8000	112,4000	94,2000
4,10000	14,5000	0,0480	0,0000	1,8000	110,4000	94,5000
4,20000	13,4000	0,0450	0,0000	1,8000	108,4000	94,8000
4,30000	12,4122	0,0410	0,0000	1,8000	106,4000	95,1000
4,40000	11,4022	0,0380	0,0000	1,8000	104,4000	95,4000
4,50000	10,4000	0,0340	0,0000	1,8000	102,4000	95,7000
4,60000	9,4000	0,0310	0,0000	1,8000	100,4000	96,0000
4,70000	8,4000	0,0290	0,0000	1,8000	98,4000	96,3000
4,80000	7,9700	0,0270	0,0000	1,8000	96,4000	96,6000
4,90000	7,4300	0,0250	0,0000	1,8000	94,4000	96,9000
5,00000	6,9000	0,0230	0,0000	1,8000	92,4000	97,2000
5,10000	6,3800	0,0220	0,0000	1,8000	90,4000	97,5000
5,20000	5,8800	0,0200	0,0000	1,8000	88,4000	97,8000
5,30000	5,4000	0,0190	0,0000	1,8000	86,4000	98,1000
5,40000	5,0000	0,0180	0,0000	1,8000	84,4000	98,4000
5,50000	4,6000	0,0170	0,0000	1,8000	82,4000	98,7000
5,60000	4,2000	0,0160	0,0000	1,8000	80,4000	99,0000
5,70000	3,8000	0,0150	0,0000	1,8000	78,4000	99,3000
5,80000	3,4000	0,0140	0,0000	1,8000	76,4000	99,6000
5,90000	3,0000	0,0130	0,0000	1,8000	74,4000	99,9000
6,00000	2,9300	0,0120	0,0000	1,8000	72,4000	100,2000
6,10000	2,7000	0,0110	0,0000	1,8000	70,4000	100,5000
6,20000	2,4000	0,0100	0,0000	1,8000	68,4000	100,8000
6,30000	2,1000	0,0090	0,0000	1,8000	66,4000	101,1000
6,40000	1,8000	0,0080	0,0000	1,8000	64,4000	101,4000
6,50000	1,5000	0,0070	0,0000	1,8000	62,4000	101,7000
6,60000	1,2000	0,0060	0,0000	1,8000	60,4000	102,0000
6,70000	0,9000	0,0050	0,0000	1,8000	58,4000	102,3000
6,80000	0,6000	0,0040	0,0000	1,8000	56,4000	102,6000
6,90000	0,3000	0,0030	0,0000	1,8000	54,4000	102,9000

7,00000	2,2000	0,0020	0,0000	1,8000	52,4000	103,2000
7,10000	2,1000	0,0019	0,0000	1,8000	50,4000	103,5000
7,20000	2,0000	0,0018	0,0000	1,8000	48,4000	103,8000
7,30000	1,9000	0,0017	0,0000	1,8000	46,4000	104,1000
7,40000	1,8000	0,0016	0,0000	1,8000	44,4000	104,4000
7,50000	1,7000	0,0015	0,0000	1,8000	42,4000	104,7000
7,60000	1,6000	0,0014	0,0000	1,8000	40,4000	105,0000
7,70000	1,5000	0,0013	0,0000	1,8000	38,4000	105,3000
7,80000	1,4000	0,0012	0,0000	1,8000	36,4000	105,6000
7,90000	1,3000	0,0011	0,0000	1,8000	34,4000	105,9000
8,00000	1,2000	0,0010	0,0000	1,8000	32,4000	106,2000
8,10000	1,1000	0,0009	0,0000	1,8000	30,4000	106,5000
8,20000	1,0000	0,0008	0,0000	1,8000	28,4000	106,8000
8,30000	0,9000	0,0007	0,0000	1,8000	26,4000	107,1000
8,40000	0,8000	0,0006	0,0000	1,8000	24,4000	107,4000
8,50000	0,7000	0,0005	0,0000	1,8000	22,4000	107,7000
8,60000	0,6000	0,0004	0,0000	1,8000	20,4000	108,0000
8,70000	0,5000	0,0003	0,0000	1,8000	18,4000	108,3000
8,80000	0,4000	0,0002	0,0000	1,8000	16,4000	108,6000
8,90000	0,3000	0,0001	0,0000	1,8000	14,4000	108,9000
9,00000	0,2000	0,0000	0,0000	1,8000	12,4000	109,2000
9,10000	0,1000	0,0000	0,0000	1,8000	10,4000	109,5000
9,20000	0,0000	0,0000	0,0000	1,8000	8,4000	109,8000
9,30000	0,0000	0,0000	0,0000	1,8000	6,4000	110,1000
9,40000	0,0000	0,0000	0,0000	1,8000	4,4000	110,4000
9,50000	0,0000	0,0000	0,0000	1,8000	2,4000	110,7000
9,60000	0,0000	0,0000	0,0000	1,8000	0,4000	111,0000
9,70000	0,0000	0,0000	0,0000	1,8000	0,0000	111,3000
9,80000	0,0000	0,0000	0,0000	1,8000	0,0000	111,6000
9,90000	0,0000	0,0000	0,0000	1,8000	0,0000	111,9000
10,00000	0,0000	0,0000	0,0000	1,8000	0,0000	112,2000
10,10000	0,0000	0,0000	0,0000	1,8000	0,0000	112,5000
10,20000	0,0000	0,0000	0,0000	1,8000	0,0000	112,8000
10,30000	0,0000	0,0000	0,0000	1,8000	0,0000	113,1000
10,40000	0,0000	0,0000	0,0000	1,8000	0,0000	113,4000
10,50000	0,0000	0,0000	0,0000	1,8000	0,0000	113,7000
10,60000	0,0000	0,0000	0,0000	1,8000	0,0000	114,0000
10,70000	0,0000	0,0000	0,0000	1,8000	0,0000	114,3000
10,80000	0,0000	0,0000	0,0000	1,8000	0,0000	114,6000
10,90000	0,0000	0,0000	0,0000	1,8000	0,0000	114,9000
11,00000	0,0000	0,0000	0,0000	1,8000	0,0000	115,2000
11,10000	0,0000	0,0000	0,0000	1,8000	0,0000	115,5000
11,20000	0,0000	0,0000	0,0000	1,8000	0,0000	115,8000
11,30000	0,0000	0,0000	0,0000	1,8000	0,0000	116,1000
11,40000	0,0000	0,0000	0,0000	1,8000	0,0000	116,4000
11,50000	0,0000	0,0000	0,0000	1,8000	0,0000	116,7000
11,60000	0,0000	0,0000	0,0000	1,8000	0,0000	117,0000
11,70000	0,0000	0,0000	0,0000	1,8000	0,0000	117,3000
11,80000	0,0000	0,0000	0,0000	1,8000	0,0000	117,6000
11,90000	0,0000	0,0000	0,0000	1,8000	0,0000	117,9000
12,00000	0,0000	0,0000	0,0000	1,8000	0,0000	118,2000

VISIBILITY AND OTHER DATA FOR ANCHER RADIATION, MECHANICS DIVISION, BUREAU OF AERONAUTICS, UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2774.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3050.0  
DEGREES FAHRENHEIT = 5010.2

THE POWER RADIATED FROM 1.00 TO 10.00 MICRONS IS 186.54 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 10000.00 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI) OF TOTAL VISIBLE FLUX IS 3183.09 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.115.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 190.2223 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 20.121 LUMEN/WATT.

THE WAVELENGTH OF LEAN POWER OUTPUT IS 0.22802 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1472 MICRONS.  
I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT INTENSANCE TO TOTAL RADIANT INTENSANCE.

THE TOTAL POWER RADIATED IS 163.906 WATT/CM<sup>2</sup> OR 6.9003690777 ERG/SEC/CM<sup>2</sup> OR 1.1122258701 CAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE MEAN WAVELENGTH IS 31.227 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS COLUMN IS THE PRODUCT OF LUMENS PER WATT \* RADIANT INTENSANCE \* VISIBILITY FACTOR.  
WHERE RADIANT INTENSANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (%) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: % = M \* R/T.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2774.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3050.0  
DEGREES FAHRENHEIT = 5010.2

WAVELENGTH MICRONS	HEAT POWER TOTAL WATTS/CM <sup>2</sup> /MICRON	POWER SIGNALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	INTENSITY IN CANDLES PER CM <sup>2</sup> PER MICRON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
1.05000	13.074677	0.1294	0.0000	13.0746	0.3270	0.067
1.10000	11.240048	0.1332	0.0000	11.2400	1.3191	0.077
1.15000	10.034473	0.0170	0.0000	10.0345	0.4399	0.099
1.20000	10.116843	0.0045	0.0000	9.3217	0.5067	0.103
1.25000	17.712927	0.1162	0.0000	12.7827	0.5112	0.116
1.30000	17.043331	0.1512	0.0000	12.6773	0.6639	0.135
1.35000	22.219204	0.1864	0.0000	12.6314	0.7554	0.154
1.40000	22.182314	0.1622	0.0000	12.5504	0.8563	0.175
1.45000	31.203134	0.2643	0.0000	12.4634	0.9671	0.197
1.50000	35.470719	0.2747	0.0000	11.3413	1.0885	0.222
1.55000	37.241134	0.2814	7.6212	11.2733	1.2211	0.249
1.60000	43.748954	0.3485	14.4875	11.2055	1.3654	0.278
1.65000	42.744077	0.2959	28.4874	11.1375	1.5220	0.310
1.70000	48.748634	0.2047	42.1374	11.0697	1.6915	0.345
1.75000	47.249204	0.1114	101.1541	11.0027	1.8744	0.382
1.80000	50.274481	0.1203	202.2014	10.9357	2.0717	0.422
1.85000	43.744397	0.1291	345.9913	10.8685	2.2835	0.465
1.90000	48.744214	0.1382	534.4895	10.8015	2.5105	0.512
1.95000	50.744034	0.1474	744.4820	10.7343	2.7533	0.561
2.00000	51.482107	0.1574	1054.4730	10.6670	3.0124	0.614
2.05000	54.482943	0.1674	1470.2121	10.6002	3.2883	0.671
2.10000	60.481157	0.1774	1971.8335	10.5334	3.5815	0.730
2.15000	64.482793	0.1874	2612.0524	10.4664	3.8926	0.793
2.20000	67.721271	0.1973	3407.7544	10.4002	4.2219	0.860
2.25000	71.209944	0.2104	4425.0344	10.3335	4.5697	0.931
2.30000	75.181164	0.2234	5741.0523	9.8797	4.9371	1.004
2.35000	78.131187	0.2335	7409.4441	9.4764	5.3239	1.085
2.40000	81.484442	0.2453	9479.1504	9.2751	5.7306	1.168
2.45000	87.481131	0.2573	12349.1100	9.0759	6.1574	1.255
2.50000	91.481117	0.2694	16072.2518	8.8794	6.6052	1.344
2.55000	94.481154	0.2820	21048.1738	8.6835	7.0734	1.442
2.60000	100.481197	0.2944	2775.4923	8.4902	7.5616	1.547
2.65000	104.483329	0.3073	35720.3110	8.2987	8.0749	1.664
2.70000	108.480545	0.3202	44984.5244	8.1090	8.6070	1.794
2.75000	113.21841	0.3332	54661.8974	7.9210	9.1631	1.868
2.80000	117.04769	0.3463	64851.0732	7.7347	9.7403	1.995
2.85000	122.18783	0.3595	76580.1717	7.5500	10.3394	2.107
2.90000	127.64833	0.3727	89804.1619	7.3667	10.9614	2.234
2.95000	133.44284	0.3860	104470.7094	7.1845	11.6064	2.364
3.00000	139.57274	0.3994	120448.7436	7.0034	12.2736	2.502
3.05000	147.04643	0.4128	137816.5017	6.8242	12.9637	2.647
3.10000	154.81409	0.4263	156697.4949	6.6477	13.6765	2.788
3.15000	162.98149	0.4397	177105.9329	6.4740	14.4122	2.937
3.20000	171.54349	0.4531	199109.0483	6.3024	15.1707	3.092
3.25000	180.50449	0.4664	223454.3145	6.1329	15.9520	3.251

0.97900	183.08947	0.48011	191478.0786	8.2047	19.7541	3.415
0.94000	187.43204	0.48333	99371.6581	8.1181	17.9279	1.584
0.94900	172.15754	0.49068	95441.0789	8.0644	18.4326	3.757
0.94000	178.45067	0.51198	90912.6819	7.9966	19.3064	3.935
0.94900	181.12337	0.51320	85598.9045	7.9239	20.1089	4.117
0.90000	185.58717	0.5481	79673.2247	7.8837	21.1194	4.301
0.90500	189.97900	0.5591	73248.3162	7.7989	22.0565	4.485
0.91000	194.39527	0.5719	66877.2582	7.7357	23.0193	4.669
0.91500	198.82772	0.5867	60583.0733	7.6725	23.9980	4.851
0.92000	207.98854	0.5973	52500.2703	7.6100	25.0022	5.036
0.92500	207.23879	0.6099	45216.3018	7.5502	26.0278	5.105
0.93000	211.44315	0.6222	38102.1880	7.4935	27.0765	5.214
0.93500	215.59782	0.6345	31813.6188	7.4398	28.1421	5.334
0.94000	219.49958	0.6465	26164.2858	7.3890	29.2306	5.458
0.94500	223.74659	0.6584	20996.1802	7.3411	30.3390	5.584
0.95000	227.73187	0.6702	16570.1288	7.2961	31.4674	5.714
0.95500	231.44807	0.6817	12740.2774	7.2530	32.6163	5.848
0.96000	235.53853	0.6931	9770.1383	7.2117	33.7863	6.006
0.96500	239.38635	0.7043	7321.0984	7.1722	34.9791	6.178
0.97000	243.09909	0.7154	5249.6363	7.1345	36.1977	6.374
0.97500	246.76782	0.7262	3899.8855	7.0987	37.4424	6.483
0.98000	250.37808	0.7368	2894.3704	7.0647	38.7143	6.607
0.98500	253.92000	0.7472	2054.7204	7.0324	39.0240	6.734
0.99000	257.39218	0.7574	1415.2188	7.0017	41.1883	6.864
0.99500	260.79354	0.7675	1010.8158	6.9724	42.7998	6.998
0.90000	264.12317	0.7773	734.3754	6.9447	43.7922	7.134
0.90500	267.38015	0.7868	527.2737	6.9182	45.1299	7.274
0.91000	270.56379	0.7962	384.3659	6.8929	46.6668	7.417
0.91500	273.68332	0.8054	279.1688	6.8688	47.9265	7.564
0.92000	276.74811	0.8143	208.0778	6.8459	49.2024	7.714
0.92500	279.66823	0.8230	133.1221	6.8241	50.5934	7.867
0.93000	282.55273	0.8315	94.0679	6.8033	51.9990	8.024
0.93500	285.38141	0.8398	77.6143	6.7834	53.4198	8.184
0.94000	288.04337	0.8478	58.7713	6.7644	54.8525	8.348
0.94500	290.74118	0.8556	39.5422	6.7462	56.2986	8.516
0.95000	293.33888	0.8632	19.9468	6.7289	57.7599	8.688
0.95500	296.26734	0.8717	0.0000	6.7124	60.2181	8.864
0.96000	302.49515	0.8813	0.0000	6.6968	61.7281	9.044
0.96500	307.22349	0.8901	0.0000	6.6820	63.2750	9.228
0.97000	311.25810	0.8989	0.0000	6.6679	64.8674	9.416
0.97500	314.99011	0.9076	0.0000	6.6544	66.5001	9.608
0.98000	318.41574	0.9161	0.0000	6.6415	68.1785	9.804
0.98500	321.59688	0.9244	0.0000	6.6292	69.9068	10.004
0.99000	324.47774	0.9326	0.0000	6.6174	71.6898	10.208
0.99500	327.09591	0.9407	0.0000	6.6061	73.5215	10.416
0.90000	329.42749	0.9486	0.0000	6.5952	75.4068	10.628
0.90500	331.50944	0.9564	0.0000	6.5847	77.3498	10.844
0.91000	333.33901	0.9640	0.0000	6.5746	79.3548	11.064
0.91500	334.92388	0.9715	0.0000	6.5648	81.4265	11.288
0.92000	336.27114	0.9789	0.0000	6.5554	83.5605	11.516
0.92500	337.34918	0.9862	0.0000	6.5464	85.7525	11.748
0.93000	338.28574	0.9934	0.0000	6.5377	88.0081	11.984
0.93500	338.98878	0.9995	0.0000	6.5293	90.3328	12.224
0.94000	339.46431	0.9975	0.0000	6.5212	92.7312	12.468
0.94500	339.72631	0.9997	0.0000	6.5134	95.1990	12.716
0.95000	339.77631	0.9997	0.0000	6.5059	97.7306	12.968

0.94900	339.41475	1.0000	0.0000	4.9995	122.7489	25.026
0.94000	339.72553	0.9987	0.0000	4.9993	126.1828	25.714
0.97000	339.48045	0.9990	0.0000	4.9992	129.5748	26.410
0.98000	339.02924	0.9977	0.0000	4.9971	132.9216	27.107
0.99000	338.41948	0.9950	0.0000	4.9950	136.3589	27.799
1.00000	337.69863	0.9918	0.0000	4.9918	139.7937	28.481
1.01000	336.81481	0.9873	0.0000	4.9873	143.3174	29.160
1.02000	335.79275	0.9815	0.0000	4.9815	146.8355	29.854
1.03000	334.64188	0.9744	0.0000	4.9744	150.3427	30.537
1.04000	333.36811	0.9660	0.0000	4.9660	153.8340	31.218
1.05000	331.97818	0.9564	0.0000	4.9564	157.3048	31.896
1.06000	330.47888	0.9456	0.0000	4.9456	160.7507	32.571
1.07000	328.87518	0.9336	0.0000	4.9336	164.1680	33.243
1.08000	327.17488	0.9204	0.0000	4.9204	167.5528	33.912
1.09000	325.38213	0.9059	0.0000	4.9059	170.9007	34.577
1.10000	323.50388	0.8902	0.0000	4.8902	174.2174	35.237
1.11000	321.54512	0.8734	0.0000	4.8734	177.5000	35.896
1.12000	319.51119	0.8554	0.0000	4.8554	180.7549	36.549
1.13000	317.40718	0.8361	0.0000	4.8361	184.0000	37.198
1.14000	315.23903	0.8155	0.0000	4.8155	187.2300	37.843
1.15000	313.00881	0.7937	0.0000	4.7937	190.4400	38.483
1.16000	310.72251	0.7708	0.0000	4.7708	193.6250	39.119
1.17000	308.38519	0.7467	0.0000	4.7467	196.7900	39.758
1.18000	306.00041	0.7214	0.0000	4.7214	199.9300	40.378
1.19000	303.57218	0.6949	0.0000	4.6949	203.0500	40.997
1.20000	301.10427	0.6673	0.0000	4.6673	206.1500	41.613
1.21000	298.60019	0.6387	0.0000	4.6387	209.2300	42.226
1.22000	296.06401	0.6091	0.0000	4.6091	212.2900	42.830
1.23000	293.49884	0.5785	0.0000	4.5785	215.3300	43.431
1.24000	290.90497	0.5469	0.0000	4.5469	218.3500	44.027
1.25000	288.29251	0.5144	0.0000	4.5144	221.3500	44.617
1.26000	285.65804	0.4810	0.0000	4.4810	224.3300	45.200
1.27000	283.00627	0.4467	0.0000	4.4467	227.2900	45.781
1.28000	280.34183	0.4115	0.0000	4.4115	230.2300	46.355
1.29000	277.66122	0.3754	0.0000	4.3754	233.1500	46.924
1.30000	274.97279	0.3384	0.0000	4.3384	236.0500	47.487
1.31000	272.27679	0.3005	0.0000	4.3005	238.9300	48.045
1.32000	269.57338	0.2618	0.0000	4.2618	241.7900	48.597
1.33000	266.86270	0.2223	0.0000	4.2223	244.6300	49.144
1.34000	264.14412	0.1820	0.0000	4.1820	247.4500	49.685
1.35000	261.41704	0.1409	0.0000	4.1409	250.2500	50.221
1.36000	258.68195	0.0991	0.0000	4.0991	253.0300	50.751
1.37000	255.93888	0.0566	0.0000	4.0566	255.7900	51.275
1.38000	253.18810	0.0143	0.0000	4.0143	258.5300	51.795
1.39000	250.42928	0.0000	0.0000	4.0000	261.2500	52.308
1.40000	247.66208	0.0000	0.0000	4.0000	263.9500	52.814
1.41000	244.88699	0.0000	0.0000	4.0000	266.6300	53.319
1.42000	242.11351	0.0000	0.0000	4.0000	269.2900	53.816
1.43000	240.00921	0.0000	0.0000	4.0000	271.9300	54.308
1.44000	237.38775	0.0000	0.0000	4.0000	274.5500	54.795
1.45000	234.74374	0.0000	0.0000	4.0000	277.1500	55.276
1.46000	232.13185	0.0000	0.0000	4.0000	279.7300	55.751
1.47000	229.53977	0.0000	0.0000	4.0000	282.2900	56.220
1.48000	226.96182	0.0000	0.0000	4.0000	284.8300	56.687
1.49000	224.39981	0.0000	0.0000	4.0000	287.3500	57.147

1.50000	321.89941	0.4929	0.0000	1.2859	282.6144	97.602
1.60000	187.88832	0.3812	0.0000	1.1109	101.5470	81.872
1.70000	175.28464	0.3156	0.0000	2.0790	122.1874	85.867
1.80000	155.18464	0.4571	0.0000	2.4259	118.7012	89.033
1.90000	137.72014	0.4053	0.0000	2.7084	141.1810	72.017
2.00000	129.11801	0.3594	0.0000	3.0086	168.3145	74.882
2.10000	108.80051	0.3190	0.0000	2.5117	177.8274	77.004
2.20000	98.16287	0.2814	0.0000	2.8284	188.0524	79.092
2.30000	85.89933	0.2253	0.0000	2.1514	197.1854	80.984
2.40000	74.59554	0.2014	0.0000	2.2244	405.2577	82.594
2.50000	68.43802	0.1804	0.0000	2.2736	412.4984	84.074
2.60000	61.30967	0.1470	0.0000	2.1673	418.9785	85.395
2.70000	55.03927	0.1497	0.0000	2.1154	424.7493	86.479
2.80000	49.51929	0.1114	0.0000	2.0482	430.0112	87.484
2.90000	44.63977	0.1167	0.0000	2.0244	434.7140	88.402
3.00000	40.32852	0.1074	0.0000	1.9445	438.9580	89.447
3.10000	36.50854	0.0974	0.0000	1.8655	442.7940	90.249
3.20000	33.11701	0.1074	0.0000	1.7117	446.2740	90.944
3.30000	30.09864	0.0986	0.0000	1.6791	449.4119	91.602
3.40000	27.40972	0.0807	0.0000	1.4440	452.3054	92.187
3.50000	25.00872	0.0734	0.0000	1.4207	454.9234	92.721
3.60000	22.85589	0.0673	0.0000	1.7942	457.1184	93.209
3.70000	20.92464	0.0614	0.0000	1.7492	459.5019	93.654
3.80000	19.19311	0.0564	0.0000	1.7484	461.5544	94.063
3.90000	17.63211	0.0519	0.0000	1.7217	463.1443	94.434
4.00000	16.22442	0.0477	0.0000	1.7124	464.0310	94.781
4.10000	14.95217	0.0440	0.0000	1.6443	465.5457	95.100
4.20000	13.80044	0.0404	0.0000	1.6444	466.0324	95.393
4.30000	12.75402	0.0367	0.0000	1.6467	467.1594	95.641
4.40000	11.80731	0.0327	0.0000	1.6429	467.5844	95.914
4.50000	10.94411	0.0282	0.0000	1.6161	467.7217	96.184
4.60000	10.15742	0.0224	0.0000	1.5444	467.7742	96.369
4.70000	9.43947	0.0154	0.0000	1.5444	467.7575	96.560
4.80000	8.78329	0.0084	0.0000	1.5444	467.6641	96.745
4.90000	8.18253	0.0024	0.0000	1.5444	467.5140	96.914
5.00000	7.63114	0.0024	0.0000	1.5442	467.3043	97.079
5.10000	7.12620	0.0194	0.0000	1.5427	467.0419	97.230
5.20000	6.66144	0.0143	0.0000	1.5421	467.7129	97.370
5.30000	6.23367	0.0172	0.0000	1.5411	467.1754	97.501
5.40000	5.83987	0.0141	0.0000	1.5411	467.9804	97.624
5.50000	5.47542	0.0151	0.0000	1.5404	467.5443	97.740
5.60000	5.13952	0.0142	0.0000	1.5404	467.0704	97.848
5.70000	4.82864	0.0134	0.0000	1.5401	466.5750	97.940
5.80000	4.54077	0.0124	0.0000	1.5401	466.0633	98.045
5.90000	4.27390	0.0114	0.0000	1.5400	465.4839	98.135
6.00000	4.02823	0.0112	0.0000	1.5396	464.8597	98.210
6.10000	3.79814	0.0104	0.0000	1.5391	464.2897	98.280
6.20000	3.58217	0.0100	0.0000	1.5384	463.6585	98.374
6.30000	3.38204	0.0094	0.0000	1.5374	463.0044	98.445
6.40000	3.19717	0.0084	0.0000	1.5363	462.3345	98.517
6.50000	3.02824	0.0084	0.0000	1.5354	461.6445	98.575
6.60000	2.88264	0.0080	0.0000	1.5344	460.9404	98.634
6.70000	2.74164	0.0074	0.0000	1.5339	460.2194	98.689
6.80000	2.60701	0.0074	0.0000	1.5329	459.4834	98.744
6.90000	2.48122	0.0072	0.0000	1.5314	458.7334	98.797
7.00000	2.36432	0.0064	0.0000	1.5304	457.9714	98.845
7.10000	2.25624	0.0061	0.0000	1.5294	457.1949	98.891
7.20000	2.14930	0.0054	0.0000	1.5284	456.4111	98.935
7.30000	2.04774	0.0044	0.0000	1.5274	455.6170	98.977
7.40000	1.94960	0.0034	0.0000	1.5262	454.8049	99.014
7.50000	1.85519	0.0024	0.0000	1.5252	454.0914	99.054
7.60000	1.764524	0.0014	0.0000	1.5242	453.3749	99.090
7.70000	1.67764	0.0004	0.0000	1.5232	452.6544	99.124
7.80000	1.594524	0.0004	0.0000	1.5224	451.9294	99.154
7.90000	1.515071	0.0004	0.0000	1.5214	451.2044	99.187
8.00000	1.43947	0.0004	0.0000	1.5204	450.4794	99.217
8.10000	1.36724	0.0004	0.0000	1.5194	449.7544	99.245
8.20000	1.29824	0.0004	0.0000	1.5184	449.0294	99.272
8.30000	1.23247	0.0004	0.0000	1.5174	448.3044	99.299
8.40000	1.16974	0.0004	0.0000	1.5164	447.5794	99.324
8.50000	1.10997	0.0004	0.0000	1.5154	446.8544	99.348
8.60000	1.05297	0.0004	0.0000	1.5144	446.1294	99.371
8.70000	0.99854	0.0004	0.0000	1.5134	445.4044	99.391
8.80000	0.94654	0.0004	0.0000	1.5124	444.6794	99.412
8.90000	0.89674	0.0004	0.0000	1.5114	443.9544	99.432
9.00000	0.84894	0.0004	0.0000	1.5104	443.2294	99.451
9.10000	0.80314	0.0004	0.0000	1.5094	442.5044	99.466
9.20000	0.75924	0.0004	0.0000	1.5084	441.7794	99.487
9.30000	0.71714	0.0004	0.0000	1.5074	441.0544	99.504
9.40000	0.67674	0.0004	0.0000	1.5064	440.3294	99.520
9.50000	0.63794	0.0004	0.0000	1.5054	439.6044	99.534
9.60000	0.59974	0.0004	0.0000	1.5044	438.8794	99.551
9.70000	0.56314	0.0004	0.0000	1.5034	438.1544	99.564
9.80000	0.52804	0.0004	0.0000	1.5024	437.4294	99.579
9.90000	0.49444	0.0004	0.0000	1.5014	436.7044	99.591
10.00000	0.46224	0.0004	0.0000	1.5004	435.9794	99.604
10.10000	0.43144	0.0004	0.0000	1.4994	435.2544	99.618
10.20000	0.40194	0.0004	0.0000	1.4984	434.5294	99.630
10.30000	0.37374	0.0004	0.0000	1.4974	433.8044	99.641
10.40000	0.34674	0.0004	0.0000	1.4964	433.0794	99.652
10.50000	0.32194	0.0004	0.0000	1.4954	432.3544	99.663
10.60000	0.29924	0.0004	0.0000	1.4944	431.6294	99.674
10.70000	0.27854	0.0004	0.0000	1.4934	430.9044	99.683
10.80000	0.25974	0.0004	0.0000	1.4924	430.1794	99.693
10.90000	0.24284	0.0004	0.0000	1.4914	429.4544	99.702
11.00000	0.22774	0.0004	0.0000	1.4904	428.7294	99.711
11.10000	0.21444	0.0004	0.0000	1.4894	428.0044	99.720
11.20000	0.20274	0.0004	0.0000	1.4884	427.2794	99.729
11.30000	0.19264	0.0004	0.0000	1.4874	426.5544	99.737
11.40000	0.18394	0.0004	0.0000	1.4864	425.8294	99.745
11.50000	0.17654	0.0004	0.0000	1.4854	425.1044	99.753
11.60000	0.17034	0.0004	0.0000	1.4844	424.3794	99.759
11.70000	0.16524	0.0004	0.0000	1.4834	423.6544	99.767
11.80000	0.16114	0.0004	0.0000	1.4824	422.9294	99.773
11.90000	0.15794	0.0004	0.0000	1.4814	422.2044	99.778
12.00000	0.15554	0.0004	0.0000	1.4804	421.4794	99.787

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, U.S. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2926.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3100.0  
DEGREES FAHRENHEIT = 5120.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 48.02 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 12427.71 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 3945.87 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.122.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 194.314 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 23.715 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.9348 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1761 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 523.61 WATT/CM<sup>2</sup> OR 5.236098099 FERG/SEC/CM<sup>2</sup> OR 1.271448001 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 344.40 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 680 LUMENS PER WATT = RADIANT EMITTANCE x VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = K/T<sup>4</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2926.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3100.0  
DEGREES FAHRENHEIT = 5120.0

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR AIRY	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.39000	12.43415	0.0337	0.0000	11.2581	0.4144	0.078
0.39500	13.96110	0.0370	0.0000	13.0714	2.4806	0.469
0.40000	15.41190	0.0424	0.0000	12.4498	0.5544	0.104
0.40500	17.14554	0.0472	0.0000	12.7133	0.6369	0.122
0.41000	19.28663	0.0523	0.0000	12.9415	0.7205	0.139
0.41500	21.31725	0.0578	0.0000	12.3782	0.8100	0.156
0.42000	23.47907	0.0637	0.0000	12.2114	0.9019	0.180
0.42500	25.77331	0.0699	0.0000	12.0529	1.0050	0.203
0.43000	28.20064	0.0765	0.0000	11.8981	1.1199	0.229
0.43500	30.76147	0.0835	0.0000	11.7477	1.3472	0.257
0.44000	33.45440	0.0908	0.0000	11.6009	1.5977	0.288
0.44500	36.28211	0.0984	0.0000	11.4577	1.8820	0.321
0.45000	39.24623	0.1064	19.7375	11.3180	1.8708	0.357
0.45500	42.44814	0.1148	32.8232	11.1817	2.0744	0.394
0.46000	45.88857	0.1236	63.3232	11.0486	2.2943	0.438
0.46500	49.56655	0.1326	121.8812	10.9186	2.5303	0.481
0.47000	53.48655	0.1420	242.4728	10.7917	2.7833	0.532
0.47500	57.75141	0.1518	412.9495	10.6677	3.0540	0.581
0.48000	62.36623	0.1618	639.0210	10.5465	3.3429	0.638
0.48500	67.33694	0.1721	932.7449	10.4280	3.6506	0.697
0.49000	72.66851	0.1828	1251.2976	10.3122	3.9776	0.760
0.49500	78.36494	0.1937	1741.0212	10.1994	4.3245	0.828
0.50000	84.43234	0.2049	2330.8758	10.0881	4.6914	0.896
0.50500	90.87480	0.2164	3081.8712	9.9797	5.0800	0.970
0.51000	97.70000	0.2281	4013.4827	9.8734	5.4906	1.048
0.51500	104.91400	0.2400	5202.4991	9.7697	5.9209	1.131
0.52000	112.52100	0.2522	6738.2495	9.6688	6.3745	1.219
0.52500	120.52634	0.2646	8700.2353	9.5703	6.8506	1.309
0.53000	128.93304	0.2771	11206.1948	9.4740	7.3497	1.404
0.53500	137.74354	0.2908	14446.4109	9.3792	7.8721	1.503
0.54000	146.96044	0.3048	18742.3345	9.2855	8.4181	1.608
0.54500	156.58620	0.3192	24507.4743	9.1927	8.9880	1.717
0.55000	166.62324	0.3341	32210.2247	9.0997	9.5820	1.830
0.55500	177.07400	0.3492	41864.8758	9.0114	10.2004	1.948
0.56000	187.94000	0.3646	53185.9083	8.9249	10.8444	2.071
0.56500	199.22300	0.3803	66274.0404	8.8400	11.5110	2.198
0.57000	210.92600	0.3960	81234.8225	8.7567	12.2034	2.331
0.57500	223.05100	0.4124	98098.4728	8.6750	12.9211	2.468
0.58000	235.59900	0.4291	117877.2526	8.5948	13.6637	2.610
0.58500	248.57200	0.4462	140774.8956	8.5161	14.4314	2.754
0.59000	261.97100	0.4634	166999.8157	8.4388	15.2243	2.908
0.59500	275.79700	0.4807	196666.7301	8.3629	16.0424	3.064
0.60000	290.06100	0.4981	230000.3364	8.2884	16.8857	3.225
0.60500	304.77300	0.5156	267287.9937	8.2152	17.7540	3.391
0.61000	319.94400	0.5334	310000.1930	8.1433	18.6475	3.561





1.50000	213,26512	0.4447	0.0000	1.2477	107,1506	54,492
1.60000	207,44445	0.5456	0.0000	1.2477	107,1506	54,492
1.70000	193,44045	0.4449	0.0000	1.2477	107,1506	54,492
1.80000	167,45573	0.3413	0.0000	1.2477	107,1506	54,492
1.90000	144,48204	0.1903	0.0000	1.2477	107,1506	54,492
2.00000	127,16974	0.1855	0.0000	1.2477	107,1506	54,492
2.10000	112,49213	0.1033	0.0000	1.2477	107,1506	54,492
2.20000	100,22140	0.2719	0.0000	1.2477	107,1506	54,492
2.30000	89,13745	0.2414	0.0000	1.2477	107,1506	54,492
2.40000	79,31847	0.2155	0.0000	1.2477	107,1506	54,492
2.50000	70,94517	0.1925	0.0000	1.2477	107,1506	54,492
2.60000	63,10712	0.1723	0.0000	1.2477	107,1506	54,492
2.70000	56,39545	0.1545	0.0000	1.2477	107,1506	54,492
2.80000	51,20013	0.1389	0.0000	1.2477	107,1506	54,492
2.90000	46,12432	0.1251	0.0000	1.2477	107,1506	54,492
3.00000	41,58440	0.1130	0.0000	1.2477	107,1506	54,492
3.10000	37,67707	0.1022	0.0000	1.2477	107,1506	54,492
3.20000	34,15743	0.0927	0.0000	1.2477	107,1506	54,492
3.30000	31,02942	0.0842	0.0000	1.2477	107,1506	54,492
3.40000	28,24742	0.0766	0.0000	1.2477	107,1506	54,492
3.50000	25,75440	0.0699	0.0000	1.2477	107,1506	54,492
3.60000	23,52954	0.0634	0.0000	1.2477	107,1506	54,492
3.70000	21,51462	0.0574	0.0000	1.2477	107,1506	54,492
3.80000	19,76151	0.0519	0.0000	1.2477	107,1506	54,492
3.90000	18,11140	0.0462	0.0000	1.2477	107,1506	54,492
4.00000	16,54715	0.0405	0.0000	1.2477	107,1506	54,492
4.10000	15,05534	0.0347	0.0000	1.2477	107,1506	54,492
4.20000	13,62742	0.0285	0.0000	1.2477	107,1506	54,492
4.30000	12,25092	0.0229	0.0000	1.2477	107,1506	54,492
4.40000	10,92124	0.0179	0.0000	1.2477	107,1506	54,492
4.50000	9,63412	0.0135	0.0000	1.2477	107,1506	54,492
4.60000	8,38411	0.0093	0.0000	1.2477	107,1506	54,492
4.70000	7,16504	0.0054	0.0000	1.2477	107,1506	54,492
4.80000	6,00071	0.0018	0.0000	1.2477	107,1506	54,492
4.90000	4,88164	0.0005	0.0000	1.2477	107,1506	54,492
5.00000	3,82527	0.0000	0.0000	1.2477	107,1506	54,492
5.10000	2,93445	0.0000	0.0000	1.2477	107,1506	54,492
5.20000	2,20774	0.0000	0.0000	1.2477	107,1506	54,492
5.30000	1,63410	0.0000	0.0000	1.2477	107,1506	54,492
5.40000	1,11111	0.0000	0.0000	1.2477	107,1506	54,492
5.50000	0,62834	0.0000	0.0000	1.2477	107,1506	54,492
5.60000	0,28310	0.0000	0.0000	1.2477	107,1506	54,492
5.70000	0,04512	0.0000	0.0000	1.2477	107,1506	54,492
5.80000	0,00943	0.0000	0.0000	1.2477	107,1506	54,492
5.90000	0,00175	0.0000	0.0000	1.2477	107,1506	54,492
6.00000	0,00022	0.0000	0.0000	1.2477	107,1506	54,492
6.10000	0,00007	0.0000	0.0000	1.2477	107,1506	54,492
6.20000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.30000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.40000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.50000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.60000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.70000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.80000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
6.90000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492
7.00000	0,00000	0.0000	0.0000	1.2477	107,1506	54,492

7.00000	2,34657	0.0044	0.0000	1.2477	917,4145	98,889
7.10000	2,26741	0.0041	0.0000	1.2477	917,4145	98,889
7.20000	2,13405	0.0034	0.0000	1.2477	917,4145	98,889
7.30000	2,03124	0.0028	0.0000	1.2477	917,4145	98,889
7.40000	1,93784	0.0022	0.0000	1.2477	917,4145	98,889
7.50000	1,84024	0.0016	0.0000	1.2477	917,4145	98,889
7.60000	1,74315	0.0010	0.0000	1.2477	917,4145	98,889
7.70000	1,64711	0.0004	0.0000	1.2477	917,4145	98,889
7.80000	1,55242	0.0000	0.0000	1.2477	917,4145	98,889
7.90000	1,45949	0.0000	0.0000	1.2477	917,4145	98,889
8.00000	1,36774	0.0000	0.0000	1.2477	917,4145	98,889
8.10000	1,27741	0.0000	0.0000	1.2477	917,4145	98,889
8.20000	1,18794	0.0000	0.0000	1.2477	917,4145	98,889
8.30000	1,10000	0.0000	0.0000	1.2477	917,4145	98,889
8.40000	1,01344	0.0000	0.0000	1.2477	917,4145	98,889
8.50000	0,92874	0.0000	0.0000	1.2477	917,4145	98,889
8.60000	0,84549	0.0000	0.0000	1.2477	917,4145	98,889
8.70000	0,76344	0.0000	0.0000	1.2477	917,4145	98,889
8.80000	0,68244	0.0000	0.0000	1.2477	917,4145	98,889
8.90000	0,60244	0.0000	0.0000	1.2477	917,4145	98,889
9.00000	0,52344	0.0000	0.0000	1.2477	917,4145	98,889
9.10000	0,44544	0.0000	0.0000	1.2477	917,4145	98,889
9.20000	0,36844	0.0000	0.0000	1.2477	917,4145	98,889
9.30000	0,29244	0.0000	0.0000	1.2477	917,4145	98,889
9.40000	0,21744	0.0000	0.0000	1.2477	917,4145	98,889
9.50000	0,14344	0.0000	0.0000	1.2477	917,4145	98,889
9.60000	0,07044	0.0000	0.0000	1.2477	917,4145	98,889
9.70000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
9.80000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
9.90000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.00000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.10000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.20000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.30000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.40000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.50000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.60000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.70000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.80000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
10.90000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.00000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.10000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.20000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.30000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.40000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.50000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.60000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.70000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.80000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
11.90000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889
12.00000	0,00000	0.0000	0.0000	1.2477	917,4145	98,889

VISIBILITY AND OTHER DATA FOR PLANCK RADIATOR, MECHANICS DIVISION, D.R.T., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2076.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3190.8  
DEGREES FAHRENHEIT = 3720.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 72.24 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 10192.16 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 4574.76 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.129 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 109,900 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 25,352 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 1.4920 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1994 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 456.22 WATT/CM<sup>2</sup> OR 568716000 ERG/SEC/CM<sup>2</sup> OR 1.6319770E11 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 392.10 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (C) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W \* R \* T<sup>M</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2076.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3190.8  
DEGREES FAHRENHEIT = 3720.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR W * R * T <sup>M</sup>	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	15.14000	0.0394	0.0000	13.0474	0.5220	0.094
0.35500	17.14725	0.0437	0.0000	12.4439	0.6037	0.100
0.36000	19.15450	0.0480	0.0000	11.8402	0.6890	0.124
0.36500	21.16175	0.0533	0.0000	11.2415	0.7941	0.142
0.37000	23.16900	0.0590	0.0000	10.6424	0.9070	0.162
0.37500	25.17625	0.0650	0.0000	10.0477	1.0307	0.185
0.38000	27.18350	0.0714	0.0000	9.4514	1.1647	0.209
0.38500	29.19075	0.0782	0.0000	8.8514	1.3159	0.234
0.39000	31.19800	0.0853	0.0000	8.2505	1.4790	0.265
0.39500	33.20525	0.0928	0.0000	7.6463	1.6548	0.297
0.40000	35.21250	0.1007	10.4994	7.0404	1.8400	0.331
0.40500	37.21975	0.1090	23.6742	6.4329	2.0392	0.369
0.41000	39.22700	0.1177	38.3214	5.8244	2.2454	0.409
0.41500	41.23425	0.1268	55.6314	5.2142	2.4691	0.453
0.42000	43.24150	0.1365	77.6241	4.6027	2.7011	0.500
0.42500	45.24875	0.1468	104.5954	4.0004	2.9421	0.550
0.43000	47.25600	0.1576	137.5225	3.4074	3.1927	0.604
0.43500	49.26325	0.1689	177.4957	2.8244	3.4534	0.662
0.44000	51.27050	0.1807	225.5115	2.2514	3.7244	0.721
0.44500	53.27775	0.2003	274.0212	1.6884	3.9977	0.780
0.45000	55.28500	0.2220	331.4929	1.1354	4.2744	0.839
0.45500	57.29225	0.2461	397.3488	0.5924	4.5544	0.899
0.46000	59.29950	0.2727	472.0212	0.0594	4.8377	0.959
0.46500	61.30675	0.3018	556.0212	-0.4736	5.1244	1.019
0.47000	63.31400	0.3333	649.9954	-0.9874	5.4144	1.079
0.47500	65.32125	0.3672	754.4954	-1.4974	5.7077	1.139
0.48000	67.32850	0.4035	870.0212	-2.0034	6.0044	1.199
0.48500	69.33575	0.4422	997.0212	-2.5054	6.3044	1.259
0.49000	71.34300	0.4833	1136.0212	-3.0034	6.6077	1.319
0.49500	73.35025	0.5268	1287.4954	-3.4974	6.9144	1.379
0.50000	75.35750	0.5737	1451.9954	-3.9874	7.2244	1.439
0.50500	77.36475	0.6240	1630.0212	-4.4736	7.5377	1.499
0.51000	79.37200	0.6777	1822.0212	-4.9554	7.8544	1.559
0.51500	81.37925	0.7348	2038.4954	-5.4334	8.1744	1.619
0.52000	83.38650	0.7953	2279.9954	-5.9074	8.4977	1.679
0.52500	85.39375	0.8592	2547.0212	-6.3774	8.8244	1.739
0.53000	87.40100	0.9265	2840.0212	-6.8434	9.1544	1.799
0.53500	89.40825	0.9972	3160.4954	-7.3054	9.4877	1.859
0.54000	91.41550	1.0713	3509.9954	-7.7634	9.8244	1.919
0.54500	93.42275	1.1488	3889.0212	-8.2174	10.1644	1.979
0.55000	95.43000	1.2297	4298.4954	-8.6674	10.5077	2.039
0.55500	97.43725	1.3140	4739.9954	-9.1134	10.8544	2.099
0.56000	99.44450	1.4017	5214.0212	-9.5554	11.2044	2.159
0.56500	101.45175	1.4928	5722.4954	-10.0034	11.5577	2.219
0.57000	103.45900	1.5873	6266.0212	-10.4574	11.9144	2.279
0.57500	105.46625	1.6852	6845.4954	-10.9174	12.2744	2.339
0.58000	107.47350	1.7865	7461.9954	-11.3834	12.6377	2.399
0.58500	109.48075	1.8912	8116.0212	-11.8554	13.0044	2.459
0.59000	111.48800	2.0003	8809.4954	-12.3334	13.3744	2.519
0.59500	113.49525	2.1138	9543.9954	-12.8174	13.7477	2.579
0.60000	115.50250	2.2317	10320.0212	-13.3074	14.1244	2.639
0.60500	117.50975	2.3540	11148.4954	-13.8034	14.5044	2.699
0.61000	119.51700	2.4807	12030.9954	-14.3054	14.8877	2.759
0.61500	121.52425	2.6118	12968.0212	-14.8134	15.2744	2.819
0.62000	123.53150	2.7473	13960.4954	-15.3274	15.6644	2.879
0.62500	125.53875	2.8872	15009.9954	-15.8474	16.0577	2.939
0.63000	127.54600	3.0315	16117.4954	-16.3734	16.4544	2.999
0.63500	129.55325	3.1802	17284.0212	-16.9054	16.8544	3.059
0.64000	131.56050	3.3333	18510.4954	-17.4434	17.2577	3.119
0.64500	133.56775	3.4908	19798.9954	-17.9874	17.6644	3.179
0.65000	135.57500	3.6527	21150.0212	-18.5374	18.0744	3.239
0.65500	137.58225	3.8190	22564.4954	-19.0934	18.4877	3.299
0.66000	139.58950	3.9897	24043.9954	-19.6554	18.9044	3.359
0.66500	141.59675	4.1648	25589.0212	-20.2234	19.3244	3.419
0.67000	143.60400	4.3443	27200.4954	-20.7974	19.7477	3.479
0.67500	145.61125	4.5282	28879.9954	-21.3774	20.1744	3.539
0.68000	147.61850	4.7165	30628.0212	-21.9634	20.6044	3.599
0.68500	149.62575	4.9092	32446.4954	-22.5554	21.0377	3.659
0.69000	151.63300	5.1063	34336.9954	-23.1534	21.4744	3.719
0.69500	153.64025	5.3078	36300.0212	-23.7574	21.9144	3.779
0.70000	155.64750	5.5137	38337.4954	-24.3674	22.3577	3.839



1.50000	264.10824	0.4169	0.0000	1.1967	333.4135	59.764
1.60000	218.14541	0.5861	0.0000	1.0786	346.8081	63.919
1.70000	192.41879	0.4824	0.0000	2.6827	377.3175	67.593
1.80000	170.03314	0.4258	0.0000	2.7550	395.4249	70.838
1.90000	150.11657	0.3744	0.0000	2.6424	411.4134	73.702
2.00000	132.48967	0.3323	0.0000	2.5425	425.5356	76.231
2.10000	117.43874	0.2941	0.0000	2.4514	438.0248	78.469
2.20000	104.12312	0.2608	0.0000	2.3735	449.0878	80.451
2.30000	92.49992	0.2317	0.0000	2.3015	458.9054	82.209
2.40000	82.34845	0.2062	0.0000	2.2413	467.4349	83.773
2.50000	73.47139	0.1840	0.0000	2.1771	475.4811	85.167
2.60000	65.70244	0.1645	0.0000	2.1230	482.3683	86.412
2.70000	58.98460	0.1475	0.0000	2.0734	488.5904	87.527
2.80000	52.89700	0.1325	0.0000	2.0270	494.1732	88.527
2.90000	47.42272	0.1193	0.0000	1.9850	499.1934	89.427
3.00000	42.66445	0.1074	0.0000	1.9471	503.7184	90.237
3.10000	38.55239	0.0973	0.0000	1.9112	507.8052	90.969
3.20000	35.02435	0.0887	0.0000	1.8774	511.5044	91.632
3.30000	31.96402	0.0810	0.0000	1.8464	514.8587	92.233
3.40000	29.27941	0.0742	0.0000	1.8174	517.9091	92.779
3.50000	26.90449	0.0684	0.0000	1.7904	520.6840	93.277
3.60000	24.79624	0.0630	0.0000	1.7649	523.2195	93.731
3.70000	22.91454	0.0585	0.0000	1.7410	525.5542	94.145
3.80000	20.29607	0.0540	0.0000	1.7184	527.6544	94.525
3.90000	18.00324	0.0497	0.0000	1.6972	529.4806	94.874
4.00000	17.13349	0.0459	0.0000	1.6772	531.1878	95.194
4.10000	14.78011	0.0425	0.0000	1.6582	532.8122	95.489
4.20000	14.55601	0.0395	0.0000	1.6401	534.3480	95.760
4.30000	13.44684	0.0371	0.0000	1.6231	535.8072	96.011
4.40000	12.44014	0.0352	0.0000	1.6071	537.2908	96.242
4.50000	11.52491	0.0337	0.0000	1.5918	538.7984	96.457
4.60000	10.69142	0.0324	0.0000	1.5772	540.3308	96.656
4.70000	9.93114	0.0312	0.0000	1.5631	541.8879	96.840
4.80000	9.23670	0.0301	0.0000	1.5496	543.4704	97.012
4.90000	8.60133	0.0291	0.0000	1.5367	545.0790	97.172
5.00000	8.01920	0.0281	0.0000	1.5242	546.7144	97.321
5.10000	7.48510	0.0271	0.0000	1.5122	548.3774	97.459
5.20000	6.99439	0.0262	0.0000	1.5004	549.9684	97.588
5.30000	6.54294	0.0254	0.0000	1.4891	551.4972	97.710
5.40000	6.12704	0.0246	0.0000	1.4781	552.9644	97.824
5.50000	5.74351	0.0239	0.0000	1.4674	554.3708	97.930
5.60000	5.39930	0.0233	0.0000	1.4570	555.7172	98.038
5.70000	5.09181	0.0227	0.0000	1.4468	557.0044	98.133
5.80000	4.81847	0.0221	0.0000	1.4368	558.2320	98.211
5.90000	4.57774	0.0215	0.0000	1.4268	559.4008	98.284
6.00000	4.36714	0.0210	0.0000	1.4174	560.5104	98.352
6.10000	4.18514	0.0205	0.0000	1.4084	561.5616	98.415
6.20000	4.03019	0.0200	0.0000	1.4000	562.5552	98.474
6.30000	3.89974	0.0195	0.0000	1.3924	563.4920	98.529
6.40000	3.79014	0.0190	0.0000	1.3854	564.3728	98.581
6.50000	3.70149	0.0185	0.0000	1.3788	565.2072	98.630
6.60000	3.63244	0.0180	0.0000	1.3726	565.9960	98.676
6.70000	3.58144	0.0175	0.0000	1.3668	566.7392	98.719
6.80000	3.54641	0.0170	0.0000	1.3614	567.4472	98.759
6.90000	3.52471	0.0164	0.0000	1.3562	568.1200	98.795
7.00000	2.51441	0.0161	0.0000	1.3514	568.7584	98.828
7.10000	2.29704	0.0154	0.0000	1.3474	569.3624	98.858
7.20000	2.18282	0.0149	0.0000	1.3434	569.9320	98.884
7.30000	2.07144	0.0144	0.0000	1.3392	570.4672	98.908
7.40000	1.97282	0.0140	0.0000	1.3350	570.9680	98.929
7.50000	1.88700	0.0136	0.0000	1.3308	571.4344	98.947
7.60000	1.81304	0.0132	0.0000	1.3268	571.8672	98.962
7.70000	1.74994	0.0128	0.0000	1.3228	572.2672	98.975
7.80000	1.69672	0.0124	0.0000	1.3188	572.6344	98.986
7.90000	1.65351	0.0120	0.0000	1.3148	572.9680	98.995
8.00000	1.62024	0.0116	0.0000	1.3108	573.2680	99.002
8.10000	1.58694	0.0112	0.0000	1.3068	573.5344	99.007
8.20000	1.55351	0.0108	0.0000	1.3028	573.7672	99.011
8.30000	1.52004	0.0104	0.0000	1.2988	573.9672	99.014
8.40000	1.48644	0.0100	0.0000	1.2948	574.1344	99.016
8.50000	1.45274	0.0096	0.0000	1.2908	574.2680	99.017
8.60000	1.41894	0.0092	0.0000	1.2868	574.3680	99.018
8.70000	1.38504	0.0088	0.0000	1.2828	574.4344	99.019
8.80000	1.35104	0.0084	0.0000	1.2788	574.4672	99.020
8.90000	1.31694	0.0080	0.0000	1.2748	574.4672	99.020
9.00000	1.28274	0.0076	0.0000	1.2708	574.4344	99.020
9.10000	1.24844	0.0072	0.0000	1.2668	574.3672	99.019
9.20000	1.21404	0.0068	0.0000	1.2628	574.2672	99.018
9.30000	1.17954	0.0064	0.0000	1.2588	574.1344	99.017
9.40000	1.14494	0.0060	0.0000	1.2548	573.9672	99.016
9.50000	1.11024	0.0056	0.0000	1.2508	573.7672	99.015
9.60000	1.07544	0.0052	0.0000	1.2468	573.5344	99.014
9.70000	1.04054	0.0048	0.0000	1.2428	573.2672	99.013
9.80000	1.00554	0.0044	0.0000	1.2388	572.9672	99.012
9.90000	0.97044	0.0040	0.0000	1.2348	572.6344	99.011
10.00000	0.93514	0.0036	0.0000	1.2308	572.2672	99.010
10.10000	0.90004	0.0032	0.0000	1.2268	571.8672	99.009
10.20000	0.86494	0.0028	0.0000	1.2228	571.4344	99.008
10.30000	0.82984	0.0024	0.0000	1.2188	570.9672	99.007
10.40000	0.79474	0.0020	0.0000	1.2148	570.4672	99.006
10.50000	0.75964	0.0016	0.0000	1.2108	569.9344	99.005
10.60000	0.72454	0.0012	0.0000	1.2068	569.3672	99.004
10.70000	0.68944	0.0008	0.0000	1.2028	568.7672	99.003
10.80000	0.65434	0.0004	0.0000	1.1988	568.1344	99.002
10.90000	0.61924	0.0000	0.0000	1.1948	567.4672	99.001
11.00000	0.58414	0.0000	0.0000	1.1908	566.7672	99.000
11.10000	0.54904	0.0000	0.0000	1.1868	566.0344	99.000
11.20000	0.51394	0.0000	0.0000	1.1828	565.2672	99.000
11.30000	0.47884	0.0000	0.0000	1.1788	564.4672	99.000
11.40000	0.44374	0.0000	0.0000	1.1748	563.6344	99.000
11.50000	0.40864	0.0000	0.0000	1.1708	562.7672	99.000
11.60000	0.37354	0.0000	0.0000	1.1668	561.8672	99.000
11.70000	0.33844	0.0000	0.0000	1.1628	560.9344	99.000
11.80000	0.30334	0.0000	0.0000	1.1588	560.0000	99.000
11.90000	0.26824	0.0000	0.0000	1.1548	559.0672	99.000
12.00000	0.23314	0.0000	0.0000	1.1508	558.1344	99.000

VISIBILITY AND OTHER DATA FOR PLANCH RADIATOR, MECHANICS DIVISION, D. R. L. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2924.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3200.0  
DEGREES FAHRENHEIT = 5300.8

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 91.23 WA./CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 14052.02 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 5109.52 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.137.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 597.611 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 27.000 LUMEN/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.62054 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1413 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE.

THE TOTAL POWER RADIATED IS 504.51 WATT/CM<sup>2</sup> OR 5.0451E+00 THU/SEC/CM<sup>2</sup> OR 1.42702E+01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 412.01 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT:  $\pi \times \text{LUMENS PER WATT} \times \text{RADIANT EXITANCE} \times \text{VISIBILITY FACTOR}$ ,  
WHERE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta W = W \times M \times \Delta T / T$

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 2924.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3200.0  
DEGREES FAHRENHEIT = 5300.8

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR WATTS	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	18.22005	0.0434	0.0000	12.4434	0.6527	0.110
0.35500	21.50742	0.2084	0.0000	12.4429	0.7522	0.127
0.36000	23.15549	0.2641	0.0000	12.4420	0.8630	0.145
0.36500	25.06599	0.3099	0.0000	12.4410	0.9840	0.164
0.37000	27.25074	0.3641	0.0000	12.4404	1.1220	0.180
0.37500	31.18137	0.4724	0.0000	11.9974	1.2717	0.210
0.38000	34.18433	0.4794	0.0000	11.8249	1.4361	0.248
0.38500	37.54195	0.4869	0.0000	11.6762	1.6159	0.279
0.39000	40.90143	0.4947	0.0000	11.5264	1.8120	0.305
0.39500	44.40427	0.4924	0.0000	11.3807	2.0252	0.341
0.40000	48.10714	0.4811	11.0742	11.2384	2.2543	0.380
0.40500	51.90311	0.4701	26.2351	11.0997	2.5077	0.422
0.41000	55.89029	0.4794	45.4264	10.9644	2.7756	0.467
0.41500	60.03243	0.4395	69.4064	10.8323	3.0643	0.516
0.42000	64.32745	0.4189	174.9640	10.7034	3.3742	0.568
0.42500	68.76603	0.4192	341.3544	10.5775	3.7048	0.624
0.43000	73.34842	0.4198	574.5719	10.4544	4.0641	0.684
0.43500	78.06850	0.4207	891.8544	10.3344	4.4426	0.747
0.44000	82.92024	0.4199	1294.8732	10.2170	4.8450	0.815
0.44500	87.89824	0.42035	1733.3533	10.1022	5.2720	0.887
0.45000	92.99619	0.42151	2403.0247	9.9900	5.7242	0.961
0.45500	98.20847	0.42273	3205.5245	9.8803	6.2021	1.043
0.46000	103.52800	0.42394	4223.9425	9.7730	6.7064	1.128
0.46500	108.94812	0.42522	5482.2705	9.6680	7.2376	1.217
0.47000	114.46259	0.42650	7087.0453	9.5652	7.7941	1.311
0.47500	120.06387	0.42779	9144.0444	9.4644	8.3824	1.410
0.48000	125.74510	0.42911	11885.4264	9.3660	8.9949	1.513
0.48500	131.49914	0.43044	15111.8921	9.2694	9.6319	1.621
0.49000	137.31844	0.43179	18922.4793	9.1751	10.2920	1.735
0.49500	143.19704	0.43315	25122.4895	9.0825	11.0132	1.858
0.50000	149.12453	0.43452	32744.1513	8.9917	11.7440	1.979
0.50500	155.10017	0.43590	42925.5237	8.9024	12.5046	2.103
0.51000	161.11044	0.43729	55104.3337	8.8154	13.2951	2.230
0.51500	167.15182	0.43869	69107.1651	8.7302	14.1157	2.370
0.52000	173.21547	0.44010	85228.4297	8.6464	14.9664	2.517
0.52500	179.29561	0.44150	10403.3446	8.5641	15.8479	2.668
0.53000	185.38534	0.44291	106645.4792	8.4835	16.7596	2.819
0.53500	191.47809	0.44432	119137.6682	8.4043	17.7018	2.974
0.54000	197.56744	0.44573	174165.9404	8.3267	18.6744	3.111
0.54500	203.64719	0.44714	135710.4442	8.2504	19.6774	3.110
0.55000	209.71120	0.44854	141890.5971	8.1756	20.7108	3.484
0.55500	215.75340	0.44994	146719.4480	8.1021	21.7745	3.663
0.56000	221.74844	0.45133	150044.4491	8.0300	22.8683	3.847
0.56500	227.73093	0.45272	151610.3462	7.9591	23.9921	4.036
0.57000	233.69502	0.45409	151204.8101	7.8894	25.1458	4.230

0.57500	239,99994	0.55884	189076,96884	7,42711	24,12900	4,429
0.58000	244,44444	0.56400	185207,14200	7,75139	27,5416	4,433
0.58500	251,24444	0.56916	139981,5556	7,4074	25,7834	4,437
0.59000	258,99999	0.57432	132288,4407	7,4229	10,0860	5,055
0.59500	267,47184	0.57948	126118,7183	7,4391	11,3632	5,279
0.60000	266,28715	0.58464	115118,4501	7,4564	12,4896	5,497
0.60500	273,83299	0.58980	105579,0898	7,4747	14,0160	5,726
0.61000	279,30573	0.59500	95533,7317	7,4940	15,4188	5,958
0.61500	286,70197	0.59996	85376,4263	7,5143	16,8299	6,199
0.62000	290,01858	0.60492	75137,9273	7,5357	18,2657	6,437
0.62500	295,25232	0.60988	64867,4756	7,5590	19,7299	6,681
0.63000	100,40064	0.61484	54132,1930	7,5841	41,2181	6,933
0.63500	105,46683	0.61980	43071,4001	7,6092	42,7329	7,188
0.64000	110,43352	0.62476	31941,2372	7,6302	44,2726	7,447
0.64500	115,40749	0.62972	20544,4543	4,9769	45,8349	7,710
0.65000	120,38670	0.63468	23289,7267	4,9227	47,4255	7,977
0.65500	124,77532	0.63964	17888,6244	4,8703	49,0377	8,248
0.66000	129,36244	0.64460	13461,9431	4,8186	50,6731	8,523
0.66500	133,84929	0.64956	10215,4171	4,7677	52,3311	8,802
0.67000	138,73671	0.65452	7360,0304	4,7176	54,0118	9,085
0.67500	142,52091	0.65948	5357,0270	4,6683	55,7133	9,371
0.68000	146,70142	0.66444	4007,8711	4,6197	57,4368	9,661
0.68500	150,77859	0.66940	2838,5903	4,5719	59,1829	9,954
0.69000	154,75067	0.67436	1978,0884	4,5244	60,9467	10,251
0.69500	158,81691	0.67932	1349,9991	4,4781	62,7275	10,551
0.70000	162,37744	0.68428	1010,3081	4,4323	64,5179	10,854
0.70500	166,73174	0.68924	721,8146	4,3872	66,3111	11,161
0.71000	169,57961	0.69420	477,7497	4,3427	68,1092	11,470
0.71500	173,02102	0.69916	300,4818	4,2988	70,1847	11,782
0.72000	176,35594	0.70412	241,5183	4,2556	71,9292	12,097
0.72500	179,58454	0.70908	180,4622	4,2130	73,4418	12,415
0.73000	182,74707	0.71404	130,1204	4,1710	75,1158	12,736
0.73500	185,72384	0.71900	104,0149	4,1294	76,8379	13,059
0.74000	188,43531	0.72396	79,2414	4,0884	78,5129	13,385
0.74500	191,44197	0.72892	51,2341	4,0484	81,2231	13,713
0.75000	194,44464	0.73388	26,8918	4,0087	81,8872	14,043
0.75500	199,23954	0.73884	0,0000	3,9699	87,4944	14,718
0.76000	403,92694	0.74380	0,0000	3,9311	91,2706	15,384
0.76500	404,51387	0.74876	0,0000	3,8918	95,3316	16,049
0.77000	412,10653	0.75372	0,0000	3,8524	99,6335	16,759
0.77500	415,61997	0.75868	0,0000	3,8134	101,7725	17,455
0.78000	418,74740	0.76364	0,0000	3,7744	107,9447	18,157
0.78500	421,53181	0.76860	0,0000	3,7354	112,1444	18,864
0.79000	423,95314	0.77356	0,0000	3,6969	116,3741	19,575
0.79500	424,03270	0.77852	0,0000	3,6577	120,6243	20,290
0.80000	427,78144	0.78348	0,0000	3,6184	124,8917	21,008
0.80500	429,21161	0.78844	0,0000	3,5794	129,1749	21,729
0.81000	430,33613	0.79340	0,0000	3,5404	132,4769	22,452
0.81500	431,14087	0.79836	0,0000	3,5014	137,7844	23,174
0.82000	431,78384	0.80332	0,0000	3,4624	142,0902	23,907
0.82500	431,98472	0.80828	0,0000	3,4234	146,4178	24,628
0.83000	431,74585	0.81324	0,0000	3,3844	150,7378	25,355
0.83500	431,26934	0.81820	0,0000	3,3454	155,0546	26,081
0.84000	435,56640	0.82316	0,0000	3,3064	159,3719	26,807
0.84500		0.82812	0,0000	3,2674	163,6813	27,533

0.85000	429,44424	0.83308	0,0000	4,7740	147,9825	28,256
0.85500	428,52452	0.83804	0,0000	4,7266	172,2735	28,977
0.86000	427,20480	0.84300	0,0000	4,6798	176,5526	29,697
0.86500	424,71849	0.84796	0,0000	4,6324	180,8171	30,414
0.87000	424,03443	0.85292	0,0000	4,5857	185,0640	31,129
1.00000	422,18641	0.85788	0,0000	4,5401	189,2972	31,841
1.01000	420,20444	0.86284	0,0000	4,4934	193,5094	32,549
1.02000	418,04714	0.86780	0,0000	4,4466	197,7008	33,254
1.03000	415,78350	0.87276	0,0000	4,4000	201,8701	33,954
1.04000	413,39222	0.87772	0,0000	4,3534	206,0142	34,653
1.05000	410,87157	0.88268	0,0000	4,3068	210,1377	35,346
1.06000	408,23951	0.88764	0,0000	4,2602	214,2433	36,035
1.07000	405,50301	0.89260	0,0000	4,2136	218,3271	36,720
1.08000	402,87141	0.89756	0,0000	4,1670	222,3931	37,399
1.09000	399,75045	0.90252	0,0000	4,1204	226,4353	38,074
1.10000	396,74713	0.90748	0,0000	4,0738	230,4578	38,744
1.11000	393,44781	0.91244	0,0000	4,0272	234,4570	39,409
1.12000	390,51495	0.91740	0,0000	3,9806	238,4310	40,068
1.13000	387,30644	0.92236	0,0000	3,9340	242,3801	40,723
1.14000	384,23431	0.92732	0,0000	3,8874	246,3049	41,371
1.15000	380,71373	0.93228	0,0000	3,8408	249,7807	42,014
1.16000	377,34401	0.93724	0,0000	3,7942	253,5710	42,652
1.17000	373,34213	0.94220	0,0000	3,7476	257,3274	43,284
1.18000	370,44281	0.94716	0,0000	3,7010	261,0495	43,910
1.19000	367,00041	0.95212	0,0000	3,6544	264,7370	44,530
1.20000	363,48874	0.95708	0,0000	3,6078	268,3894	45,145
1.21000	359,95413	0.96204	0,0000	3,5612	272,0067	45,753
1.22000	356,39870	0.96700	0,0000	3,5146	275,5885	46,355
1.23000	352,82501	0.97196	0,0000	3,4680	279,1346	46,952
1.24000	349,23829	0.97692	0,0000	3,4214	282,4449	47,542
1.25000	345,44124	0.98188	0,0000	3,3748	286,1193	48,127
1.26000	342,03704	0.98684	0,0000	3,3282	289,5577	48,705
1.27000	338,42854	0.99180	0,0000	3,2816	292,9600	49,277
1.28000	334,80800	0.99676	0,0000	3,2350	296,3263	49,844
1.29000	331,20974	0.99980	0,0000	3,1884	299,6544	50,404
1.30000	327,60450	0.99980	0,0000	3,1418	302,9505	50,958
1.31000	324,00513	0.99980	0,0000	3,0952	306,2085	51,506
1.32000	320,41382	0.99980	0,0000	3,0486	309,4376	52,048
1.33000	316,83264	0.99980	0,0000	3,0020	312,6168	52,584
1.34000	313,26344	0.99980	0,0000	2,9554	315,7473	53,114
1.35000	309,70607	0.99980	0,0000	2,9088	318,8822	53,638
1.36000	306,14814	0.99980	0,0000	2,8622	321,9615	54,156
1.37000	302,64533	0.99980	0,0000	2,8156	325,0044	54,666
1.38000	299,14099	0.99980	0,0000	2,7690	328,0145	55,174
1.39000	295,64552	0.99980	0,0000	2,7224	330,9845	55,678
1.40000	292,18317	0.99980	0,0000	2,6758	333,9277	56,168
1.41000	288,75211	0.99980	0,0000	2,6292	336,8324	56,657
1.42000	285,33443	0.99980	0,0000	2,5826	339,7020	57,140
1.43000	281,94112	0.99980	0,0000	2,5360	342,5392	57,617
1.44000	278,57311	0.99980	0,0000	2,4894	345,3417	58,084
1.45000	275,23225	0.99980	0,0000	2,4428	348,1107	58,556
1.46000	271,91631	0.99980	0,0000	2,3962	350,8464	59,018
1.47000	268,62449	0.99980	0,0000	2,3496	353,5491	59,469
1.48000	265,36095	0.99980	0,0000	2,3030	356,2191	59,918
1.49000	262,13974	0.99980	0,0000	2,2564	358,8546	60,362

1.50000	254.91495	0.59991	0.00000	1.17443	141.4420	60.800
1.60000	224.62709	0.59922	0.00000	2.07444	145.8181	60.800
1.70000	271.55427	0.48444	0.00000	1.44444	407.2081	60.800
1.80000	177.52540	0.01109	0.00000	2.72110	426.2203	71.000
1.90000	154.47510	0.00000	0.00000	2.51110	442.8970	74.400
2.00000	134.07841	0.11944	0.00000	2.81132	447.4014	74.971
2.10000	122.01843	0.24244	0.00000	2.62209	470.5910	70.154
2.20000	104.76844	0.27011	0.00000	2.44774	442.0774	81.000
2.30000	84.40543	0.27000	0.00000	2.27700	432.2684	87.000
2.40000	64.74847	0.14774	0.00000	2.21111	501.3115	84.321
2.50000	44.07244	0.11740	0.00000	2.15500	504.3645	85.674
2.60000	24.07247	0.11772	0.00000	2.10221	510.5440	86.867
2.70000	4.01154	0.11404	0.00000	2.05335	522.9849	87.960
2.80000	44.07534	0.11404	0.00000	2.10244	524.7501	88.010
2.90000	44.37014	0.11117	0.00000	1.94777	533.9310	90.504
3.00000	40.04425	0.11025	0.00000	1.87444	538.5074	91.304
3.10000	34.27614	0.27000	0.00000	1.84444	542.4074	91.945
3.20000	32.70321	0.27000	0.00000	1.81112	546.4275	92.524
3.30000	22.92044	0.26933	0.00000	1.77777	550.0752	93.054
3.40000	27.26147	0.26111	0.00000	1.74440	553.2135	93.534
3.50000	24.48575	0.26111	0.00000	1.71110	556.0701	93.972
3.60000	22.74884	0.26227	0.00000	1.67774	558.6752	94.371
3.70000	20.45049	0.26227	0.00000	1.64440	561.0555	94.730
3.80000	12.13517	0.26441	0.00000	1.61111	563.2341	95.075
3.90000	12.59017	0.26441	0.00000	1.57777	565.2111	95.364
4.00000	14.19411	0.26375	0.00000	1.54440	567.0670	95.684
4.10000	14.91517	0.26375	0.00000	1.51111	568.7541	95.929
4.20000	11.74344	0.26115	0.00000	1.47777	570.2842	96.171
4.30000	12.74797	0.26225	0.00000	1.44443	571.6710	96.394
4.40000	11.41449	0.26274	0.00000	1.41111	572.9110	96.601
4.50000	11.25441	0.26274	0.00000	1.37777	574.0101	96.792
4.60000	10.17797	0.26233	0.00000	1.34440	574.9854	96.970
4.70000	9.44421	0.26233	0.00000	1.31111	575.8449	97.134
4.80000	8.41144	0.26233	0.00000	1.27777	576.5902	97.288
4.90000	8.21154	0.26199	0.00000	1.24440	577.2611	97.431
5.00000	7.44412	0.26177	0.00000	1.21111	577.8644	97.565
5.10000	7.16137	0.26154	0.00000	1.17777	578.4034	97.690
5.20000	6.69473	0.26154	0.00000	1.14440	578.8744	97.806
5.30000	6.27137	0.26144	0.00000	1.11111	579.2814	97.915
5.40000	5.47742	0.26144	0.00000	1.07777	579.6274	98.017
5.50000	5.51452	0.26128	0.00000	1.04440	579.9134	98.113
5.60000	5.17449	0.26127	0.00000	1.01111	580.1404	98.203
5.70000	4.84749	0.26111	0.00000	0.97777	580.3074	98.287
5.80000	4.57091	0.26104	0.00000	0.94440	580.4147	98.367
5.90000	4.31244	0.26103	0.00000	0.91111	580.4642	98.444
6.00000	4.06444	0.26094	0.00000	0.87777	580.4548	98.512
6.10000	3.83432	0.26089	0.00000	0.84440	580.3944	98.574
6.20000	3.61944	0.26084	0.00000	0.81111	580.2844	98.641
6.30000	3.42044	0.26079	0.00000	0.77777	580.1244	98.700
6.40000	3.23345	0.26071	0.00000	0.74440	579.9144	98.750
6.50000	3.06007	0.26061	0.00000	0.71111	579.6544	98.800
6.60000	2.49774	0.26047	0.00000	0.67777	579.3444	98.850
6.70000	2.74402	0.26043	0.00000	0.64440	578.9844	98.907
6.80000	2.40405	0.26043	0.00000	0.61111	578.5844	98.959

7.00000	2.47110	0.26057	0.00000	1.3552	544.5124	98.994
7.10000	2.14453	0.26054	0.00000	1.3444	544.7732	99.035
7.20000	2.22043	0.26053	0.00000	1.3344	544.9020	99.074
7.30000	2.11002	0.26049	0.00000	1.3244	544.9104	99.114
7.40000	2.01444	0.26047	0.00000	1.3144	544.8262	99.145
7.50000	1.91905	0.26044	0.00000	1.3044	544.6910	99.178
7.60000	1.82470	0.26042	0.00000	1.2944	544.5104	99.200
7.70000	1.73034	0.26040	0.00000	1.2844	544.2849	99.230
7.80000	1.63604	0.26034	0.00000	1.2744	544.0101	99.264
7.90000	1.54174	0.26033	0.00000	1.2644	543.6844	99.295
8.00000	1.44744	0.26033	0.00000	1.2544	543.3144	99.321
8.10000	1.35314	0.26033	0.00000	1.2444	542.9044	99.346
8.20000	1.25884	0.26033	0.00000	1.2344	542.4544	99.370
8.30000	1.16454	0.26032	0.00000	1.2244	541.9644	99.393
8.40000	1.07024	0.26031	0.00000	1.2144	541.4344	99.410
8.50000	0.97594	0.26029	0.00000	1.2044	540.8644	99.435
8.60000	0.88164	0.26027	0.00000	1.1944	540.2544	99.455
8.70000	0.78734	0.26026	0.00000	1.1844	539.6044	99.474
8.80000	0.69304	0.26025	0.00000	1.1744	538.9144	99.491
8.90000	0.59874	0.26024	0.00000	1.1644	538.1844	99.507
9.00000	0.50444	0.26024	0.00000	1.1544	537.4144	99.521
9.10000	0.41014	0.26024	0.00000	1.1444	536.6044	99.534
9.20000	0.31584	0.26022	0.00000	1.1344	535.7544	99.545
9.30000	0.22154	0.26021	0.00000	1.1244	534.8644	99.554
9.40000	0.12724	0.26021	0.00000	1.1144	533.9344	99.564
9.50000	0.03294	0.26021	0.00000	1.1044	532.9644	99.571
9.60000	0.03864	0.26021	0.00000	1.0944	531.9544	99.584
9.70000	0.04434	0.26019	0.00000	1.0844	530.9044	99.594
9.80000	0.05004	0.26018	0.00000	1.0744	529.8144	99.604
9.90000	0.05574	0.26018	0.00000	1.0644	528.6844	99.614
10.00000	0.06144	0.26017	0.00000	1.0544	527.5144	99.627
10.10000	0.06714	0.26016	0.00000	1.0444	526.3044	99.641
10.20000	0.07284	0.26016	0.00000	1.0344	525.0544	99.651
10.30000	0.07854	0.26015	0.00000	1.0244	523.7644	99.669
10.40000	0.08424	0.26015	0.00000	1.0144	522.4344	99.687
10.50000	0.08994	0.26015	0.00000	1.0044	521.0644	99.703
10.60000	0.09564	0.26014	0.00000	0.9944	519.6544	99.713
10.70000	0.10134	0.26014	0.00000	0.9844	518.2044	99.722
10.80000	0.10704	0.26013	0.00000	0.9744	516.7144	99.731
10.90000	0.11274	0.26013	0.00000	0.9644	515.1844	99.739
11.00000	0.11844	0.26011	0.00000	0.9544	513.6144	99.747
11.10000	0.12414	0.26011	0.00000	0.9444	512.0044	99.755
11.20000	0.12984	0.26011	0.00000	0.9344	510.3544	99.763
11.30000	0.13554	0.26010	0.00000	0.9244	508.6644	99.770
11.40000	0.14124	0.26010	0.00000	0.9144	506.9344	99.777
11.50000	0.14694	0.26009	0.00000	0.9044	505.1644	99.780
11.60000	0.15264	0.26009	0.00000	0.8944	503.3544	99.791
11.70000	0.15834	0.26009	0.00000	0.8844	501.5044	99.797
11.80000	0.16404	0.26008	0.00000	0.8744	499.6144	99.803
11.90000	0.16974	0.26008	0.00000	0.8644	497.6844	99.808
12.00000	0.17544	0.26008	0.00000	0.8544	495.7144	99.815
12.10000	0.18114	0.26008	0.00000	0.8444	493.7044	99.822

VISIBILITY AND OTHER DATA FOR PLASMA RADIATOR, MECHANICS DIVISION, D.R.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2076.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3250.0  
DEGREES FAHRENHEIT = 5390.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 91.04 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 18118.04 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 5771.52 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.100 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 194.224 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 28.675 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.4917 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.4737 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 012.55 WATT/CM<sup>2</sup> = 0.1255000E+01 WATT/SEC/CM<sup>2</sup> OR 1.51313E+01 HCA./SEC/CM<sup>2</sup>

THE POWER RADIATED BY THE PEAK WAVELENGTH IS 464.93 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 8) IS THE PROD. OF WAVELENGTH PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA: W = B \* W \* N.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 2076.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3250.0  
DEGREES FAHRENHEIT = 5390.2

WAVELENGTH (MICRONS)	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	PERCENT OF TOTAL POWER FOR BAND	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	22.93149	0.0401	0.0000	17.6447	0.8109	0.128
0.35500	24.92617	0.0587	0.0000	19.6447	0.9319	0.147
0.36000	28.19728	0.0666	0.0000	22.1245	1.0644	0.166
0.36500	31.24278	0.0670	0.0000	24.1245	1.2152	0.190
0.37000	34.40644	0.0737	0.0000	25.9497	1.3793	0.214
0.37500	37.71681	0.0808	0.0000	27.4912	1.5506	0.240
0.38000	41.24245	0.0884	0.0000	28.7479	1.7270	0.270
0.38500	44.95134	0.0961	0.0000	29.7244	1.9074	0.312
0.39000	48.81374	0.1040	0.0000	30.4302	2.0904	0.360
0.39500	52.80142	0.1133	0.0000	30.8754	2.2841	0.380
0.40000	57.00140	0.1224	15.8443	31.0654	2.4872	0.433
0.40500	61.40139	0.1319	33.2810	31.0201	2.7029	0.470
0.41000	66.00138	0.1417	51.0944	30.7857	2.9321	0.510
0.41500	70.80137	0.1519	70.0944	30.4657	3.1744	0.550
0.42000	75.80136	0.1625	90.2991	30.0687	3.4284	0.600
0.42500	81.00135	0.1733	111.6787	29.6044	3.6934	0.670
0.43000	86.40134	0.1845	134.2528	29.0737	3.9670	0.770
0.43500	92.00133	0.1962	158.0444	28.4754	4.2471	0.860
0.44000	97.80132	0.2079	183.0644	27.8199	4.5324	0.915
0.44500	103.80131	0.2199	209.3433	27.1064	4.8224	0.990
0.45000	109.90130	0.2323	236.8944	26.3344	5.1154	1.077
0.45500	116.20129	0.2449	265.6444	25.5044	5.4104	1.165
0.46000	122.70128	0.2577	295.5944	24.6164	5.7074	1.258
0.46500	129.40127	0.2704	326.7444	23.6704	6.0054	1.355
0.47000	136.30126	0.2831	359.0944	22.6754	6.3044	1.454
0.47500	143.40125	0.2957	392.6444	21.6314	6.6044	1.558
0.48000	150.70124	0.3083	427.3944	20.5374	6.9054	1.677
0.48500	158.20123	0.3210	463.3444	19.3934	7.2074	1.795
0.49000	165.90122	0.3337	500.4944	18.2094	7.5104	1.917
0.49500	173.80121	0.3464	538.8444	16.9854	7.8144	2.045
0.50000	181.90120	0.3591	578.3944	15.7214	8.1194	2.170
0.50500	190.20119	0.3718	619.1444	14.4174	8.4254	2.315
0.51000	198.70118	0.3845	661.0944	13.0734	8.7324	2.450
0.51500	207.40117	0.3972	704.2444	11.6894	9.0404	2.607
0.52000	216.30116	0.4099	748.5944	10.2654	9.3494	2.781
0.52500	225.40115	0.4226	794.1444	8.8014	9.6594	2.920
0.53000	234.70114	0.4353	840.8944	7.2874	9.9704	3.084
0.53500	244.20113	0.4480	888.8444	5.7274	10.2824	3.266
0.54000	253.90112	0.4607	937.9944	4.1214	10.5954	3.470
0.54500	263.80111	0.4734	988.3444	2.4694	10.9094	3.698
0.55000	273.90110	0.4861	1039.8944	8.701	11.2244	3.954
0.55500	284.20109	0.4988	1092.6444	0.9774	11.5404	4.232
0.56000	294.70108	0.5115	1146.6944	0.954	11.8574	4.534
0.56500	305.40107	0.5242	1202.0444	0.9304	12.1744	4.862
0.57000	316.30106	0.5369	1258.6944	0.9064	12.4914	5.216
0.57500	327.40105	0.5496	1316.6444	0.8824	12.8084	5.596
0.58000	338.70104	0.5623	1375.8944	0.8584	13.1254	6.002
0.58500	350.20103	0.5750	1436.4444	0.8344	13.4424	6.434
0.59000	361.90102	0.5877	1498.2944	0.8104	13.7594	6.892
0.59500	373.80101	0.6004	1561.4444	0.7864	14.0764	7.376
0.60000	385.90100	0.6131	1625.8944	0.7624	14.3934	7.886
0.60500	398.20099	0.6258	1691.6444	0.7384	14.7104	8.422
0.61000	410.70098	0.6385	1758.6944	0.7144	15.0274	8.984
0.61500	423.40097	0.6512	1827.0444	0.6904	15.3444	9.572
0.62000	436.30096	0.6639	1896.6944	0.6664	15.6614	10.186
0.62500	449.40095	0.6766	1967.6444	0.6424	15.9784	10.826
0.63000	462.70094	0.6893	2039.8944	0.6184	16.2954	11.492
0.63500	476.20093	0.7020	2113.4444	0.5944	16.6124	12.184
0.64000	490.00092	0.7147	2188.2944	0.5704	16.9294	12.902
0.64500	504.10091	0.7274	2264.4444	0.5464	17.2464	13.646
0.65000	518.50090	0.7401	2341.8944	0.5224	17.5634	14.416
0.65500	533.20089	0.7528	2420.6444	0.4984	17.8804	15.212
0.66000	548.20088	0.7655	2500.6944	0.4744	18.1974	16.034
0.66500	563.50087	0.7782	2582.0444	0.4504	18.5144	16.882
0.67000	579.10086	0.7909	2664.6944	0.4264	18.8314	17.756
0.67500	595.00085	0.8036	2748.6444	0.4024	19.1484	18.656
0.68000	611.20084	0.8163	2833.8944	0.3784	19.4654	19.582
0.68500	627.70083	0.8290	2920.4444	0.3544	19.7824	20.534
0.69000	644.50082	0.8417	3008.2944	0.3304	20.0994	21.512
0.69500	661.60081	0.8544	3097.4444	0.3064	20.4164	22.516
0.70000	679.00080	0.8671	3187.8944	0.2824	20.7334	23.546
0.70500	696.70079	0.8798	3279.6444	0.2584	21.0504	24.602
0.71000	714.70078	0.8925	3372.6944	0.2344	21.3674	25.684
0.71500	733.00077	0.9052	3467.0444	0.2104	21.6844	26.792
0.72000	751.60076	0.9179	3562.6944	0.1864	22.0014	27.926
0.72500	770.50075	0.9306	3659.6444	0.1624	22.3184	29.086
0.73000	789.70074	0.9433	3757.8944	0.1384	22.6354	30.272
0.73500	809.20073	0.9560	3857.4444	0.1144	22.9524	31.484
0.74000	829.00072	0.9687	3958.2944	0.0904	23.2694	32.722
0.74500	849.10071	0.9814	4060.4444	0.0664	23.5864	33.986
0.75000	869.50070	0.9941	4163.8944	0.0424	23.9034	35.286
0.75500	890.20069	1.0068	4268.6444	0.0184	24.2204	36.622
0.76000	911.20068	1.0195	4374.6944	0.0000	24.5374	37.994





1.50000	271.83129	0.5821	0.0000	1.1136	390.8511	81.806
1.60000	239.40175	0.4128	0.0000	2.0520	418.4853	85.847
1.70000	210.54200	0.4510	0.0000	2.4117	438.9530	89.394
1.80000	185.12931	0.3466	0.0000	2.4888	458.7088	92.514
1.90000	162.90120	0.3689	0.0000	2.4808	478.0891	95.265
2.00000	141.53113	0.3075	0.0000	2.4844	491.3844	97.683
2.10000	126.44867	0.2714	0.0000	2.3997	504.4759	99.814
2.20000	112.05054	0.2400	0.0000	2.3225	518.7958	101.701
2.30000	99.32304	0.2128	0.0000	2.2533	527.3497	103.369
2.40000	88.24454	0.1890	0.0000	2.1907	538.7154	104.859
2.50000	78.59284	0.1684	0.0000	2.1337	548.0444	106.167
2.60000	70.14884	0.1503	0.0000	2.0814	552.4744	107.341
2.70000	62.79001	0.1345	0.0000	2.0343	559.1143	108.391
2.80000	56.32477	0.1207	0.0000	1.9903	565.0431	109.331
2.90000	50.54455	0.1084	0.0000	1.9501	570.4054	110.174
3.00000	45.41977	0.9874	0.0000	1.9128	575.2143	110.936
3.10000	41.22214	0.8843	0.0000	1.8781	579.5529	111.622
3.20000	37.51154	0.7790	0.0000	1.8462	583.4758	112.242
3.30000	33.84461	0.6725	0.0000	1.8162	587.0103	112.804
3.40000	30.76504	0.5650	0.0000	1.7881	590.2579	113.314
3.50000	28.01947	0.4600	0.0000	1.7622	593.1944	113.779
3.60000	25.56795	0.3584	0.0000	1.7374	595.8714	114.202
3.70000	23.37431	0.2591	0.0000	1.7144	598.3147	114.584
3.80000	21.40730	0.1630	0.0000	1.6930	600.5540	114.942
3.90000	19.63991	0.0671	0.0000	1.6725	602.6048	115.264
4.00000	18.04872	0.0347	0.0000	1.6531	604.4879	115.564
4.10000	16.6134	0.0156	0.0000	1.6341	606.2198	115.834
4.20000	15.31424	0.0080	0.0000	1.6174	607.8152	116.080
4.30000	14.14181	0.0031	0.0000	1.6014	609.2871	116.323
4.40000	13.07841	0.0001	0.0000	1.5859	610.6472	116.538
4.50000	12.10842	0.0000	0.0000	1.5711	611.9057	116.737
4.60000	11.22404	0.0000	0.0000	1.5571	613.0718	116.921
4.70000	10.42522	0.0000	0.0000	1.5437	614.1519	117.092
4.80000	9.70224	0.0000	0.0000	1.5309	615.1502	117.251
4.90000	9.05204	0.0000	0.0000	1.5187	616.0944	117.399
5.00000	8.46831	0.0000	0.0000	1.5071	616.9655	117.537
5.10000	7.94551	0.0000	0.0000	1.4959	617.7778	117.665
5.20000	7.47867	0.0000	0.0000	1.4851	618.5341	117.785
5.30000	7.06387	0.0000	0.0000	1.4746	619.2449	117.897
5.40000	6.69581	0.0000	0.0000	1.4652	619.9091	118.002
5.50000	6.36737	0.0000	0.0000	1.4567	620.5292	118.100
5.60000	6.07495	0.0000	0.0000	1.4487	621.1116	118.192
5.70000	5.81237	0.0000	0.0000	1.4410	621.6591	118.274
5.80000	5.57724	0.0000	0.0000	1.4338	622.1716	118.340
5.90000	5.36622	0.0000	0.0000	1.4270	622.6544	118.436
6.00000	5.17647	0.0000	0.0000	1.4214	623.1098	118.508
6.10000	5.00447	0.0000	0.0000	1.4161	623.5394	118.575
6.20000	4.84861	0.0000	0.0000	1.4109	623.9443	118.639
6.30000	4.70691	0.0000	0.0000	1.4059	624.3210	118.699
6.40000	4.57851	0.0000	0.0000	1.4011	624.6804	118.754
6.50000	4.46249	0.0000	0.0000	1.3964	625.0204	118.810
6.60000	4.35804	0.0000	0.0000	1.3925	625.3418	118.861
6.70000	4.26364	0.0000	0.0000	1.3884	625.6447	118.909
6.80000	4.17889	0.0000	0.0000	1.3845	625.9341	118.954
6.90000	4.10345	0.0000	0.0000	1.3808	626.2071	118.998

7.00000	4.03644	0.0000	0.0000	1.3773	626.4663	119.039
7.10000	3.96807	0.0000	0.0000	1.3739	626.7123	119.077
7.20000	3.90842	0.0000	0.0000	1.3707	626.9444	119.114
7.30000	3.85697	0.0000	0.0000	1.3676	627.1674	119.149
7.40000	3.81302	0.0000	0.0000	1.3647	627.3789	119.183
7.50000	3.77595	0.0000	0.0000	1.3619	627.5798	119.215
7.60000	3.74444	0.0000	0.0000	1.3593	627.7711	119.245
7.70000	3.71792	0.0000	0.0000	1.3568	627.9533	119.274
7.80000	3.69594	0.0000	0.0000	1.3544	628.1270	119.301
7.90000	3.67801	0.0000	0.0000	1.3521	628.2927	119.327
8.00000	3.66367	0.0000	0.0000	1.3500	628.4508	119.352
8.10000	3.65242	0.0000	0.0000	1.3480	628.6014	119.376
8.20000	3.64387	0.0000	0.0000	1.3461	628.7460	119.399
8.30000	3.63752	0.0000	0.0000	1.3442	628.8839	119.421
8.40000	3.63287	0.0000	0.0000	1.3425	629.0157	119.442
8.50000	3.62944	0.0000	0.0000	1.3409	629.1419	119.462
8.60000	3.62682	0.0000	0.0000	1.3394	629.2626	119.481
8.70000	3.62484	0.0000	0.0000	1.3379	629.3782	119.499
8.80000	3.62343	0.0000	0.0000	1.3365	629.4890	119.516
8.90000	3.62254	0.0000	0.0000	1.3352	629.5952	119.533
9.00000	3.62214	0.0000	0.0000	1.3340	629.6970	119.549
9.10000	3.62200	0.0000	0.0000	1.3329	629.7947	119.565
9.20000	3.62200	0.0000	0.0000	1.3319	629.8884	119.580
9.30000	3.62211	0.0000	0.0000	1.3308	629.9785	119.594
9.40000	3.62230	0.0000	0.0000	1.3298	630.0649	119.607
9.50000	3.62255	0.0000	0.0000	1.3289	630.1480	119.621
9.60000	3.62284	0.0000	0.0000	1.3280	630.2279	119.633
9.70000	3.62317	0.0000	0.0000	1.3272	630.3047	119.645
9.80000	3.62354	0.0000	0.0000	1.3264	630.3784	119.657
9.90000	3.62394	0.0000	0.0000	1.3257	630.4497	119.668
10.00000	3.62437	0.0000	0.0000	1.3250	630.5192	119.679
10.10000	3.62484	0.0000	0.0000	1.3243	630.5861	119.690
10.20000	3.62535	0.0000	0.0000	1.3237	630.6476	119.700
10.30000	3.62590	0.0000	0.0000	1.3230	630.7089	119.709
10.40000	3.62649	0.0000	0.0000	1.3224	630.7679	119.719
10.50000	3.62712	0.0000	0.0000	1.3218	630.8248	119.728
10.60000	3.62779	0.0000	0.0000	1.3213	630.8797	119.738
10.70000	3.62850	0.0000	0.0000	1.3207	630.9327	119.745
10.80000	3.62925	0.0000	0.0000	1.3202	630.9838	119.753
10.90000	3.63004	0.0000	0.0000	1.3197	631.0332	119.761
11.00000	3.63087	0.0000	0.0000	1.3192	631.0809	119.768
11.10000	3.63174	0.0000	0.0000	1.3187	631.1270	119.775
11.20000	3.63265	0.0000	0.0000	1.3182	631.1716	119.782
11.30000	3.63360	0.0000	0.0000	1.3177	631.2144	119.789
11.40000	3.63459	0.0000	0.0000	1.3172	631.2553	119.796
11.50000	3.63562	0.0000	0.0000	1.3167	631.2944	119.802
11.60000	3.63670	0.0000	0.0000	1.3162	631.3319	119.808
11.70000	3.63782	0.0000	0.0000	1.3157	631.3679	119.814
11.80000	3.63899	0.0000	0.0000	1.3152	631.4027	119.820
11.90000	3.64021	0.0000	0.0000	1.3147	631.4451	119.826
12.00000	3.64148	0.0000	0.0000	1.3142	631.4793	119.831

VISIBILITY AND OTHER DATA FOR PLANCH RADIATION, MECHANICS DIVISION, D.R.L., UNIVERSITY OF DENVER.

THE ENISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3026.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3100.0  
DEGREES FAHRENHEIT = 5480.0

THE POWER RADIATED FROM 0.30 TO 0.75 MICRON IS 101.72 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 26421.07 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 4500.23 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.151 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 200.750 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 30.371 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.4772 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.1147 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 672.38 WATT/CM<sup>2</sup> OR 4.7238E+02 PHOT/SEC/CM<sup>2</sup> OR 1.40E+01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 503.87 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA: W = W/TOM \* N

THE ENISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3026.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3100.0  
DEGREES FAHRENHEIT = 5480.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPIENT N FOR W/TOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	27.77479	0.0551	0.0000	12.4344	1.0000	0.180
0.36500	30.43414	0.0612	0.0000	12.2762	1.1478	0.171
0.38000	34.09749	0.0677	0.0000	12.1087	1.3098	0.195
0.39500	37.56756	0.0746	0.0000	11.9424	1.4887	0.221
0.41000	41.24385	0.0819	0.0000	11.7814	1.6847	0.251
0.42500	45.12663	0.0896	0.0000	11.6243	1.9015	0.283
0.44000	49.21500	0.0977	0.0000	11.4714	2.1373	0.318
0.45500	53.50724	0.1062	0.0000	11.3225	2.3940	0.356
0.47000	58.00100	0.1151	0.0000	11.1773	2.6727	0.397
0.48500	62.69302	0.1244	0.0000	11.0359	2.9744	0.442
0.50000	67.57900	0.1341	14.3816	10.8979	3.3000	0.491
0.51500	72.65989	0.1442	19.5244	10.7734	3.6505	0.543
0.53000	77.93702	0.1546	25.5401	10.6612	4.0268	0.599
0.54500	83.35740	0.1654	32.4227	10.5601	4.4290	0.659
0.56000	88.92054	0.1766	39.9000	10.4791	4.8567	0.723
0.57500	94.62691	0.1880	47.9338	10.4070	5.3104	0.791
0.59000	100.47821	0.1998	56.5728	10.3434	5.7905	0.864
0.60500	106.47704	0.2119	65.8616	10.2873	6.2971	0.941
0.62000	112.62124	0.2243	75.7401	10.2385	6.8305	1.023
0.63500	118.91985	0.2369	86.2517	10.1963	7.3907	1.109
0.65000	125.37324	0.2498	97.4372	10.1605	7.9785	1.200
0.66500	132.08045	0.2629	109.2359	10.1301	8.5944	1.296
0.68000	139.04164	0.2763	121.6816	10.1050	9.2395	1.397
0.69500	146.25679	0.2898	134.8070	10.0852	9.9147	1.503
0.71000	153.72600	0.3034	148.5401	10.0705	10.6191	1.615
0.72500	161.45031	0.3174	162.9037	10.0608	11.3533	1.731
0.74000	169.42964	0.3315	177.8416	10.0562	12.1174	1.852
0.75500	177.66400	0.3458	193.3874	10.0568	12.9115	1.979
0.77000	186.15327	0.3599	209.5819	10.0627	13.7356	2.111
0.78500	194.89759	0.3742	226.4570	10.0746	14.5990	2.249
0.80000	203.89694	0.3887	244.0527	10.1004	15.5010	2.392
0.81500	213.15124	0.4031	262.3984	10.1314	16.4420	2.540
0.83000	222.66054	0.4177	281.5359	10.1677	17.4220	2.694
0.84500	232.42489	0.4322	301.5021	10.2094	18.4410	2.853
0.86000	242.44424	0.4467	322.3472	10.2564	19.4990	3.018
0.87500	252.71859	0.4613	344.0104	10.3087	20.5960	3.189
0.89000	263.24789	0.4758	366.5324	10.3664	21.7320	3.364
0.90500	274.03214	0.4902	390.9544	10.4294	22.9070	3.544
0.92000	285.07144	0.5046	417.3171	10.4977	24.1210	3.728
0.93500	296.36574	0.5190	445.6704	10.5714	25.3740	3.917
0.95000	307.91504	0.5332	476.0549	10.6504	26.6660	4.110
0.96500	319.71929	0.5474	508.5007	10.7347	27.9970	4.307
0.98000	331.77854	0.5614	543.0485	10.8244	29.3680	4.508
0.99500	344.09279	0.5753	579.7384	10.9194	30.7800	4.713
1.01000	356.66204	0.5891	618.6104	11.0197	32.2330	4.921



1.50000	284.97834	0.5646	0.0000	3.7742	472.1447	67.783
1.60000	250.37071	0.4969	0.0000	2.9157	449.4760	66.760
1.70000	219.72019	0.4361	0.0000	2.7780	472.3511	70.290
1.80000	192.84140	0.3827	0.0000	2.4574	492.0449	73.314
1.90000	169.43001	0.3362	0.0000	2.5515	511.0343	74.000
2.00000	149.05172	0.2958	0.0000	2.4575	526.9314	78.164
2.10000	131.39055	0.2608	0.0000	2.1735	540.9345	80.451
2.20000	116.07347	0.2304	0.0000	2.2943	543.2806	82.288
2.30000	102.78148	0.2040	0.0000	2.2374	544.2147	83.913
2.40000	91.23284	0.1811	0.0000	2.1699	573.9040	85.354
2.50000	81.14253	0.1611	0.0000	2.1132	542.4112	86.634
2.60000	72.41910	0.1437	0.0000	2.0622	500.1833	87.775
2.70000	64.74143	0.1285	0.0000	2.0154	497.0310	88.790
2.80000	58.05479	0.1152	0.0000	1.9727	603.1673	89.704
2.90000	52.14724	0.1035	0.0000	1.9331	498.6721	90.529
3.00000	46.98644	0.0933	0.0000	1.8966	613.4243	91.261
3.10000	42.41653	0.0842	0.0000	1.8627	616.0897	91.925
3.20000	38.37584	0.0762	0.0000	1.8312	422.1252	92.524
3.30000	34.79445	0.0691	0.0000	1.8014	425.7402	93.049
3.40000	31.61324	0.0627	0.0000	1.7744	429.0975	93.513
3.50000	28.78054	0.0571	0.0000	1.7488	612.1145	94.011
3.60000	26.25274	0.0521	0.0000	1.7247	634.8637	94.420
3.70000	23.99109	0.0476	0.0000	1.7021	437.3739	94.753
3.80000	21.96580	0.0434	0.0000	1.6809	619.4730	95.135
3.90000	20.14604	0.0400	0.0000	1.6602	441.7736	95.448
4.00000	18.50849	0.0367	0.0000	1.6419	644.7052	95.735
4.10000	17.03191	0.0334	0.0000	1.6241	645.4810	95.999
4.20000	15.69794	0.0312	0.0000	1.6071	447.1164	96.242
4.30000	14.48049	0.0284	0.0000	1.5911	648.0248	96.467
4.40000	13.36904	0.0264	0.0000	1.5758	650.0143	96.674
4.50000	12.34014	0.0244	0.0000	1.5613	651.3074	96.866
4.60000	11.49734	0.0224	0.0000	1.5474	652.5614	97.043
4.70000	10.81304	0.0212	0.0000	1.5344	653.4195	97.208
4.80000	9.92077	0.0197	0.0000	1.5219	454.6346	97.361
4.90000	9.23395	0.0183	0.0000	1.5092	655.5948	97.504
5.00000	8.60344	0.0171	0.0000	1.4965	656.4872	97.634
5.10000	8.02624	0.0159	0.0000	1.48475	457.3163	97.740
5.20000	7.49629	0.0149	0.0000	1.47270	658.0940	97.875
5.30000	7.00907	0.0139	0.0000	1.46070	458.8149	97.983
5.40000	6.56054	0.0130	0.0000	1.44871	659.4971	98.084
5.50000	6.14713	0.0122	0.0000	1.43681	460.1322	98.178
5.60000	5.76537	0.0114	0.0000	1.42492	660.7274	98.267
5.70000	5.41300	0.0107	0.0000	1.41304	461.3863	98.350
5.80000	5.08683	0.0101	0.0000	1.40124	661.8111	98.428
5.90000	4.78473	0.0095	0.0000	1.38948	462.3045	98.501
6.00000	4.50462	0.0089	0.0000	1.37769	662.7688	98.570
6.10000	4.24441	0.0084	0.0000	1.36585	463.2061	98.635
6.20000	4.00301	0.0079	0.0000	1.35394	663.6143	98.697
6.30000	3.77824	0.0075	0.0000	1.34195	464.0072	98.755
6.40000	3.56903	0.0071	0.0000	1.32989	664.3749	98.809
6.50000	3.37401	0.0067	0.0000	1.31775	464.7215	98.861
6.60000	3.19204	0.0063	0.0000	1.30541	665.0497	98.910
6.70000	3.02220	0.0060	0.0000	1.29283	465.3401	98.956
6.80000	2.86341	0.0057	0.0000	1.28045	665.6545	99.000
6.90000	2.71491	0.0054	0.0000	1.26809	465.9334	99.041

7.00000	2.57547	0.0051	0.0000	1.25535	666.1978	99.080
7.10000	2.44554	0.0049	0.0000	1.24282	466.4488	99.118
7.20000	2.32340	0.0044	0.0000	1.23031	666.8872	99.151
7.30000	2.20873	0.0040	0.0000	1.21781	467.0137	99.187
7.40000	2.10103	0.0036	0.0000	1.20531	667.1292	99.219
7.50000	2.00070	0.0034	0.0000	1.19284	467.3342	99.248
7.60000	1.90844	0.0031	0.0000	1.18040	667.5293	99.274
7.70000	1.82492	0.0029	0.0000	1.16794	467.7153	99.304
7.80000	1.74964	0.0027	0.0000	1.15551	667.8924	99.332
7.90000	1.68204	0.0025	0.0000	1.14311	468.0614	99.357
8.00000	1.62249	0.0023	0.0000	1.13071	668.2224	99.381
8.10000	1.57049	0.0021	0.0000	1.11831	468.3764	99.404
8.20000	1.52644	0.0020	0.0000	1.10592	668.5239	99.424
8.30000	1.48987	0.0019	0.0000	1.09355	468.6645	99.447
8.40000	1.45927	0.0018	0.0000	1.08114	668.7980	99.467
8.50000	1.43413	0.0017	0.0000	1.06872	468.9274	99.484
8.60000	1.41394	0.0016	0.0000	1.05631	669.0507	99.505
8.70000	1.39817	0.0015	0.0000	1.04394	469.1664	99.522
8.80000	1.38622	0.0014	0.0000	1.03154	669.2714	99.539
8.90000	1.37847	0.0014	0.0000	1.01914	469.3694	99.555
9.00000	1.37441	0.0013	0.0000	1.00674	669.4614	99.570
9.10000	1.37365	0.0013	0.0000	0.99434	469.5432	99.585
9.20000	1.37545	0.0013	0.0000	0.98194	669.6194	99.600
9.30000	1.37913	0.0013	0.0000	0.96954	469.6904	99.613
9.40000	1.38435	0.0013	0.0000	0.95714	669.7564	99.624
9.50000	1.39073	0.0013	0.0000	0.94474	469.8174	99.639
9.60000	1.39802	0.0013	0.0000	0.93234	669.8734	99.651
9.70000	1.40607	0.0013	0.0000	0.92004	469.9244	99.663
9.80000	1.41484	0.0013	0.0000	0.90764	669.9704	99.674
9.90000	1.42411	0.0013	0.0000	0.89524	470.0114	99.685
10.00000	1.43388	0.0013	0.0000	0.88284	670.0464	99.695
10.10000	1.44402	0.0013	0.0000	0.87044	470.0754	99.705
10.20000	1.45449	0.0013	0.0000	0.85804	670.1084	99.715
10.30000	1.46524	0.0012	0.0000	0.84564	470.1354	99.724
10.40000	1.47624	0.0012	0.0000	0.83324	670.1564	99.731
10.50000	1.48744	0.0011	0.0000	0.82084	470.1714	99.741
10.60000	1.49884	0.0011	0.0000	0.80844	670.1804	99.750
10.70000	1.51044	0.0011	0.0000	0.79604	470.1834	99.754
10.80000	1.52214	0.0010	0.0000	0.78364	670.1804	99.764
10.90000	1.53394	0.0010	0.0000	0.77124	470.1714	99.773
11.00000	1.54574	0.0009	0.0000	0.75884	670.1564	99.780
11.10000	1.55754	0.0009	0.0000	0.74644	470.1354	99.787
11.20000	1.56934	0.0009	0.0000	0.73404	670.1084	99.794
11.30000	1.58114	0.0009	0.0000	0.72164	470.0754	99.800
11.40000	1.59294	0.0008	0.0000	0.70924	670.0364	99.807
11.50000	1.60474	0.0008	0.0000	0.69684	470.0014	99.811
11.60000	1.61654	0.0008	0.0000	0.68444	670.1533	99.818
11.70000	1.62834	0.0008	0.0000	0.67204	470.2017	99.825
11.80000	1.64014	0.0007	0.0000	0.65964	670.2469	99.835
11.90000	1.65194	0.0007	0.0000	0.64724	470.2889	99.843
12.00000	1.66374	0.0007	0.0000	0.63484	670.3278	99.841

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3300.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES R = 3300.0  
DEGREES FAHRENHEIT = 5970.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 111.32 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 2292.05 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI) OF TOTAL VISIBLE FLUX IS 2292.05 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.4150.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 2292.05 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 12.0077 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.4458 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.4901 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE.

THE TOTAL POWER RADIATED IS 264.07 WATT/CM<sup>2</sup> OR 2640000000 ERG/SEC/CM<sup>2</sup> OR 1.0000000E10 CAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 504.25 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 6) IS THE PRODUCT WAVELENGTH PER WATT \* RADIANT EXITANCE \* VISIBILITY FACTOR, WHERE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (EW) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: EW = KW \* (M/T)<sup>M</sup>.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3300.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES R = 3300.0  
DEGREES FAHRENHEIT = 5970.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER SUMMER (1/PI) CANDLE/CM <sup>2</sup>	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOSURE PER WATT*CM	POWER PER ZERO TO L	% TOTAL POWER ZERO TO L
0.3500	11.06444	0.34814	0.7000	12.3587	1.2294	0.172
0.3550	17.01633	0.5282	0.6000	12.2942	1.4845	0.197
0.3600	26.40328	0.8287	0.5100	11.2672	1.5201	0.224
0.3650	40.49723	1.2607	0.4300	11.2634	1.6134	0.254
0.3700	59.17297	1.8404	0.3600	11.2454	2.0444	0.287
0.3750	83.67623	2.6088	0.3000	11.2239	2.3054	0.323
0.3800	114.06591	3.6316	0.2500	11.2002	2.5447	0.362
0.3850	151.28829	4.9549	0.2100	11.1745	2.8010	0.405
0.3900	195.33624	6.7384	0.1700	11.1474	3.2104	0.451
0.3950	256.21814	9.1381	0.1400	10.8710	3.5754	0.501
0.4000	334.93727	12.444	0.1100	21.4224	4.1952	0.554
0.4050	441.59447	17.1571	0.0900	44.4129	4.4712	0.619
0.4100	587.20637	23.0981	0.0700	74.3145	4.8127	0.674
0.4150	781.69437	31.2447	0.0500	145.8492	5.2917	0.740
0.4200	1044.97813	41.3810	0.0400	292.5445	6.1146	0.811
0.4250	1394.22033	55.2133	0.0300	584.1149	6.3127	0.884
0.4300	1851.33652	74.2154	0.0250	921.9729	6.3926	0.948
0.4350	2447.0513	99.2489	0.0200	1416.8349	6.4514	1.050
0.4400	3201.02150	133.2817	0.0170	2049.1763	6.4947	1.139
0.4450	4151.7532	174.2544	0.0150	2724.8187	6.5301	1.233
0.4500	5345.8712	226.274	0.0130	3358.6120	6.5437	1.332
0.4550	6812.94663	294.2814	0.0110	4089.2403	6.4342	1.437
0.4600	8601.34321	382.2452	0.0100	4949.3393	6.3357	1.547
0.4650	10767.94804	504.1092	0.0090	5989.1529	6.2354	1.662
0.4700	13369.9934	664.8000	0.0080	7269.8000	6.1377	1.782
0.4750	16472.2714	873.277	0.0070	8849.8143	6.0411	1.908
0.4800	20142.8125	1150.0134	0.0060	10704.0134	6.0471	2.039
0.4850	24514.127	1506.6637	0.0050	12884.6637	6.0549	2.175
0.4900	29744.705	1950.3929	0.0040	15429.3929	6.0647	2.314
0.4950	36004.885	2495.9720	0.0030	18429.8720	6.0763	2.457
0.5000	43494.885	3264.106	0.0020	22091.9875	6.0897	2.619
0.5050	52409.23	4295.454	0.0010	26395.7211	6.1048	2.774
0.5100	62909.17	5640.1	0.0005	31778.0580	6.1215	2.947
0.5150	75104.35	7449.4684	0.0003	38213.4684	6.1399	3.113
0.5200	89111.72	9949.9340	0.0002	45872.9340	6.1599	3.274
0.5250	105066.7	13387.1300	0.0001	54872.1300	6.1814	3.470
0.5300	123020.4	17909.8748	0.0001	65309.8748	6.2044	3.657
0.5350	143020.5	23753.2882	0.0001	77353.2882	6.2288	3.882
0.5400	165020.7	31104.384	0.0001	90904.384	6.2547	4.084
0.5450	190020.7	39421.3449	0.0001	106121.3449	6.2819	4.251
0.5500	218020.3	49908.9301	0.0001	123077.9301	6.3105	4.440
0.5550	249020.7	62707.7887	0.0001	141877.7887	6.3404	4.675
0.5600	283020.4	78007.151	0.0001	162407.151	6.3715	4.894
0.5650	320020.4	95904.391	0.0001	185104.391	6.4039	5.120
0.5700	360020.7	116425	0.0001	210100.1197	6.4374	5.350



1.50000	294.17725	0.5493	0.0000	1.0381	455.0051	61.711
1.60000	291.52317	0.4814	0.0000	2.4405	443.0514	67.604
1.70000	290.03718	0.4216	0.0000	2.7455	507.5450	71.074
1.80000	200.55043	0.3694	0.0000	2.4274	520.9070	74.082
1.90000	175.90909	0.3240	0.0000	2.5233	547.4010	74.714
2.00000	154.63214	0.2807	0.0000	2.4310	544.3075	79.027
2.10000	134.11140	0.2504	0.0000	2.5487	574.4234	81.060
2.20000	120.11104	0.2212	0.0000	2.2749	591.6142	82.452
2.30000	104.24944	0.1954	0.0000	2.2044	602.9210	84.435
2.40000	94.24244	0.1715	0.0000	2.1441	612.9114	85.837
2.50000	81.70124	0.1543	0.0000	2.0934	621.9220	87.082
2.60000	74.44944	0.1374	0.0000	2.0434	629.7346	88.190
2.70000	64.24533	0.1229	0.0000	1.9934	636.7094	89.170
2.80000	59.74502	0.1101	0.0000	1.9435	643.1144	90.064
2.90000	51.49017	0.0986	0.0000	1.8937	648.7044	90.854
3.00000	44.34004	0.0880	0.0000	1.8440	653.8812	91.572
3.10000	38.41644	0.0781	0.0000	1.7944	658.4741	92.215
3.20000	33.74454	0.0689	0.0000	1.7449	662.6244	92.794
3.30000	29.44444	0.0604	0.0000	1.6955	666.3494	93.320
3.40000	25.54444	0.0526	0.0000	1.6462	669.6494	93.799
3.50000	22.04444	0.0454	0.0000	1.5970	672.6244	94.231
3.60000	18.94444	0.0387	0.0000	1.5479	675.2744	94.620
3.70000	16.24444	0.0324	0.0000	1.4989	677.6244	94.980
3.80000	13.94444	0.0264	0.0000	1.4499	679.6244	95.314
3.90000	12.04444	0.0207	0.0000	1.4010	681.2744	95.620
4.00000	10.54444	0.0154	0.0000	1.3521	682.5494	95.894
4.10000	9.44444	0.0104	0.0000	1.3032	683.4744	96.151
4.20000	8.64444	0.0074	0.0000	1.2543	684.0494	96.387
4.30000	8.04444	0.0054	0.0000	1.2054	684.3744	96.604
4.40000	7.54444	0.0039	0.0000	1.1565	684.4494	96.804
4.50000	7.14444	0.0029	0.0000	1.1076	684.2744	96.984
4.60000	6.84444	0.0021	0.0000	1.0587	683.8494	97.150
4.70000	6.64444	0.0016	0.0000	1.0098	683.1744	97.314
4.80000	6.54444	0.0012	0.0000	0.9609	682.2744	97.464
4.90000	6.54444	0.0009	0.0000	0.9120	681.1494	97.603
5.00000	6.64444	0.0007	0.0000	0.8631	679.8494	97.731
5.10000	6.84444	0.0005	0.0000	0.8142	678.3744	97.854
5.20000	7.14444	0.0004	0.0000	0.7653	676.7494	97.964
5.30000	7.54444	0.0003	0.0000	0.7164	674.9744	98.064
5.40000	8.04444	0.0002	0.0000	0.6675	673.0744	98.164
5.50000	8.64444	0.0002	0.0000	0.6186	671.0494	98.259
5.60000	9.44444	0.0001	0.0000	0.5697	668.8744	98.344
5.70000	10.44444	0.0001	0.0000	0.5208	666.5494	98.414
5.80000	11.64444	0.0000	0.0000	0.4719	664.0744	98.474
5.90000	13.04444	0.0000	0.0000	0.4230	661.4494	98.524
6.00000	14.64444	0.0000	0.0000	0.3741	658.6744	98.564
6.10000	16.44444	0.0000	0.0000	0.3252	655.7494	98.604
6.20000	18.44444	0.0000	0.0000	0.2763	652.6744	98.644
6.30000	20.64444	0.0000	0.0000	0.2274	649.4494	98.684
6.40000	23.04444	0.0000	0.0000	0.1785	646.0744	98.724
6.50000	25.64444	0.0000	0.0000	0.1296	642.5494	98.764
6.60000	28.44444	0.0000	0.0000	0.0807	638.8744	98.804
6.70000	31.44444	0.0000	0.0000	0.0318	635.0494	98.844
6.80000	34.64444	0.0000	0.0000	0.0000	631.0744	98.894
6.90000	38.04444	0.0000	0.0000	0.0000	626.9494	98.944
7.00000	41.64444	0.0000	0.0000	0.0000	622.6744	98.994

7.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.10000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.20000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.30000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.40000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.50000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.60000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.70000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.80000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
7.90000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.10000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.20000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.30000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.40000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.50000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.60000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.70000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.80000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
8.90000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.10000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.20000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.30000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.40000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.50000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.60000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.70000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.80000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
9.90000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.10000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.20000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.30000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.40000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.50000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.60000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.70000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.80000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
10.90000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.10000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.20000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.30000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.40000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.50000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.60000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.70000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.80000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
11.90000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124
12.00000	2.42432	0.0044	0.0000	1.3170	707.2824	99.124



VISIBILITY AND OTHER DATA FOR PLANCE RADIATION, MECHANICS DIVISION, D.U.C.L. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3120.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3400.0  
DEGREES FAHRENHEIT = 5640.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 125.87 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 25421.80 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX ) IS 4155.04 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.6140 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 203.550 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 33.817 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.6826 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0741 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 257.66 WATT/CM<sup>2</sup> OR 7.5766E+09 ERG/SEC/CM<sup>2</sup> OR 1.4100E+01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 584.98 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS ( COLUMN 4 ) IS THE PRODUCT, 680 LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = W/TOM .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3120.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3400.0  
DEGREES FAHRENHEIT = 5640.0

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR W/TOM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	40.06251	0.0685	0.0000	12.0001	1.4980	0.190
0.35500	40.20664	0.0750	0.0000	11.9181	1.7096	0.220
0.36000	40.44509	0.0832	0.0000	11.7525	1.9410	0.250
0.36500	40.37807	0.0912	0.0000	11.5414	2.1949	0.290
0.37000	40.32804	0.0997	0.0000	11.4349	2.4741	0.327
0.37500	40.32004	0.1086	0.0000	11.2825	2.7806	0.367
0.38000	40.40461	0.1179	0.0000	11.1131	3.1117	0.411
0.38500	40.65154	0.1274	0.0000	10.9095	3.4706	0.450
0.39000	40.57614	0.1377	0.0000	10.6434	3.8586	0.500
0.39500	40.73305	0.1481	0.0000	10.7113	4.2760	0.564
0.40000	43.11474	0.1592	25.3272	10.5775	4.7243	0.620
0.40500	49.71404	0.1705	34.2444	10.4469	5.2043	0.687
0.41000	104.52269	0.1821	46.0225	10.3194	5.7210	0.759
0.41500	113.53197	0.1941	169.0437	10.1953	6.2739	0.828
0.42000	120.73225	0.2064	320.9917	10.0740	6.8595	0.905
0.42500	128.11199	0.2190	435.9578	9.9555	7.4815	0.987
0.43000	135.66642	0.2319	1070.1399	9.8398	8.1409	1.074
0.43500	143.39012	0.2451	1437.9745	9.7267	8.8384	1.167
0.44000	151.24294	0.2585	2365.4395	9.6163	9.5749	1.264
0.44500	159.24404	0.2727	3140.2933	9.5083	10.3511	1.366
0.45000	167.37214	0.2861	4324.0970	9.4027	11.1676	1.474
0.45500	175.61564	0.3002	5732.0959	9.2995	12.0250	1.587
0.46000	183.96299	0.3145	7505.6098	9.1985	12.9239	1.706
0.46500	192.40242	0.3289	9681.6899	9.0997	13.8640	1.830
0.47000	200.92233	0.3435	12433.0739	9.0030	14.8461	1.960
0.47500	209.51110	0.3582	15950.3655	8.9083	15.8742	2.095
0.48000	218.15720	0.3729	20620.2185	8.8156	16.9433	2.236
0.48500	226.94922	0.3878	26069.5124	8.7249	18.0550	2.383
0.49000	235.87591	0.4027	33319.0571	8.6360	19.2119	2.534
0.49500	244.94925	0.4177	42864.9907	8.5489	20.4116	2.694
0.50000	253.08927	0.4326	55980.5278	8.4636	21.6551	2.858
0.50500	261.45449	0.4474	72470.6477	8.3799	22.9475	3.028
0.51000	270.01151	0.4626	92550.0620	8.2979	24.2737	3.204
0.51500	278.85030	0.4773	115494.5863	8.2175	25.6406	3.385
0.52000	288.06104	0.4924	139075.0095	8.1387	27.0471	3.572
0.52500	296.73443	0.5073	160011.0743	8.0614	28.4929	3.765
0.53000	305.86124	0.5220	178990.9456	7.9855	30.0364	3.964
0.53500	313.93275	0.5367	193320.9503	7.9111	31.5820	4.168
0.54000	322.44055	0.5512	209173.4384	7.8381	33.1736	4.378
0.54500	330.87654	0.5656	226490.1521	7.7664	34.8069	4.594
0.55000	339.23315	0.5799	245225.5102	7.6960	36.4822	4.815
0.55500	347.50294	0.5940	264302.0000	7.6269	38.1991	5.042
0.56000	355.67800	0.6080	284630.0000	7.5591	39.9571	5.274
0.56500	363.75473	0.6218	242150.7960	7.4925	41.7557	5.511
0.57000	371.72301	0.6354	240630.1910	7.4270	43.5945	5.754

0.95000	378.54970	0.4689	235175.1110	7.1617	55.4728	4.007
0.96000	377.31941	0.4621	229118.2748	7.1244	57.1071	6.255
0.97000	376.13549	0.4551	219610.5548	7.0875	58.1488	9.513
0.98000	375.00357	0.4482	207151.5578	7.0515	59.1197	6.774
0.99000	373.92042	0.4415	191641.7554	7.0165	59.1169	7.064
1.00000	372.89495	0.4352	178925.0284	6.9828	59.1434	7.317
1.01000	371.92419	0.4294	161507.6684	6.9506	57.5195	7.594
1.02000	371.01412	0.4244	147423.1174	6.9202	59.0771	7.877
1.03000	370.16364	0.4204	131248.5657	6.8914	61.8894	8.163
1.04000	369.37195	0.4174	115146.2082	6.8642	64.0551	8.454
1.05000	368.63811	0.4150	98829.2914	6.8387	66.2816	8.750
1.06000	367.96204	0.4131	82389.1600	6.8150	68.5642	9.050
1.07000	367.34262	0.4117	64835.4811	6.7931	70.8999	9.353
1.08000	366.77881	0.4107	54868.0244	6.7731	73.2842	9.661
1.09000	366.27094	0.4102	44876.1044	6.7550	75.7143	9.974
1.10000	365.82099	0.4100	34899.2472	6.7388	77.1951	10.294
1.11000	365.43094	0.4100	24959.8402	6.7245	77.9513	10.608
1.12000	365.09291	0.4101	20455.4102	6.7119	77.9168	10.908
1.13000	364.80901	0.4102	15712.9940	6.7010	75.2866	11.257
1.14000	364.57344	0.4104	10927.9448	6.6918	71.7879	11.587
1.15000	364.38041	0.4107	7910.9518	6.6843	68.3112	11.920
1.16000	364.22547	0.4112	5814.4815	6.6784	62.9585	12.256
1.17000	364.10427	0.4119	4174.5915	6.6741	55.4291	12.595
1.18000	364.01204	0.4127	2913.8081	6.6714	48.0221	12.937
1.19000	363.94534	0.4137	2015.0084	6.6702	40.8167	13.283
1.20000	363.90091	0.4147	1475.1513	6.6704	33.7271	13.630
1.21000	363.87647	0.4157	1041.1415	6.6721	26.8975	13.981
1.22000	363.87147	0.4167	786.5348	6.6744	20.3651	14.334
1.23000	363.88624	0.4177	581.2935	6.6774	14.1295	14.689
1.24000	363.92041	0.4187	408.7959	6.6820	11.0054	15.047
1.25000	363.97341	0.4197	290.6184	6.6872	11.0733	15.407
1.26000	364.04512	0.4207	187.3954	6.6931	11.0479	15.769
1.27000	364.13550	0.4217	100.6498	6.6997	12.2359	16.133
1.28000	364.24324	0.4227	113.6869	6.7071	122.0094	16.499
1.29000	364.36821	0.4237	75.8975	6.7154	127.7068	16.867
1.30000	364.51022	0.4247	38.1170	6.7246	130.5972	17.237
1.31000	364.66939	0.4257	0.0000	6.7348	138.2365	17.601
1.32000	364.84574	0.4267	0.0000	6.7459	141.9157	18.071
1.33000	365.03927	0.4277	0.0000	6.7580	147.6151	19.484
1.34000	365.25094	0.4287	0.0000	6.7710	151.1876	20.245
1.35000	365.48091	0.4297	0.0000	6.7850	159.1678	21.008
1.36000	365.72934	0.4307	0.0000	6.7998	144.8709	21.774
1.37000	365.99621	0.4317	0.0000	6.8154	170.7921	22.542
1.38000	366.28154	0.4327	0.0000	6.8318	176.6268	23.319
1.39000	366.58541	0.4337	0.0000	6.8490	182.4794	24.083
1.40000	366.90784	0.4347	0.0000	6.8670	188.3192	24.855
1.41000	367.24891	0.4357	0.0000	6.8858	194.1647	25.627
1.42000	367.60864	0.4367	0.0000	6.9054	200.0151	26.399
1.43000	367.98701	0.4377	0.0000	6.9258	205.8550	27.170
1.44000	368.38404	0.4387	0.0000	6.9469	211.6847	27.939
1.45000	368.79974	0.4397	0.0000	6.9687	217.5010	28.707
1.46000	369.23421	0.4407	0.0000	6.9912	223.3099	29.479
1.47000	369.68754	0.4417	0.0000	6.9955	229.0813	30.255
1.48000	370.16084	0.4427	0.0000	6.9990	234.8195	30.999
1.49000	370.65421	0.4437	0.0000	6.9995	240.5728	31.752

0.95000	968.16533	0.8730	0.0000	6.5060	238.2789	32.505
0.96000	968.09674	0.8677	0.0000	6.4814	251.9554	33.254
0.97000	967.81984	0.8621	0.0000	6.4141	257.4001	33.898
0.98000	967.34854	0.8562	0.0000	6.3754	263.2111	34.740
0.99000	966.69434	0.8500	0.0000	6.3360	268.7865	35.674
1.00000	965.87812	0.8434	0.0000	6.2931	274.3245	36.207
1.01000	964.90025	0.8364	0.0000	6.2555	279.8235	36.938
1.02000	963.78864	0.8290	0.0000	6.2145	285.2829	37.653
1.03000	962.52849	0.8211	0.0000	6.1701	290.6987	38.368
1.04000	961.13524	0.8128	0.0000	6.1320	296.0722	39.077
1.05000	959.62081	0.8042	0.0000	6.1024	301.4014	39.780
1.06000	957.99527	0.7953	0.0000	6.0865	306.6853	40.478
1.07000	956.26889	0.7861	0.0000	6.0834	311.9228	41.169
1.08000	954.44330	0.7767	0.0000	6.0970	317.1132	41.858
1.09000	952.52850	0.7672	0.0000	6.1263	322.2555	42.523
1.10000	950.53464	0.7576	0.0000	6.1707	327.3482	43.205
1.11000	948.47171	0.7478	0.0000	6.2204	332.3916	43.871
1.12000	946.34981	0.7378	0.0000	6.2754	337.3862	44.528
1.13000	944.17914	0.7276	0.0000	6.3358	342.3325	45.183
1.14000	941.96081	0.7172	0.0000	6.4017	347.2240	45.829
1.15000	939.69551	0.7066	0.0000	6.4741	352.0685	46.468
1.16000	937.39419	0.6958	0.0000	6.5529	356.8696	47.100
1.17000	935.05784	0.6848	0.0000	6.6381	361.6302	47.726
1.18000	932.68649	0.6736	0.0000	6.7297	366.3571	48.344
1.19000	930.28014	0.6622	0.0000	6.8277	370.9532	48.956
1.20000	927.83881	0.6507	0.0000	6.9320	375.5233	49.561
1.21000	925.37244	0.6390	0.0000	7.0426	380.0695	50.159
1.22000	922.88109	0.6271	0.0000	7.1594	384.5957	50.751
1.23000	920.36474	0.6150	0.0000	7.2823	389.1032	51.335
1.24000	917.83339	0.6027	0.0000	7.4113	393.5948	51.913
1.25000	915.28704	0.5902	0.0000	7.5464	397.0728	52.484
1.26000	912.72569	0.5775	0.0000	7.6876	401.5404	53.048
1.27000	910.14934	0.5647	0.0000	7.8349	406.0016	53.609
1.28000	907.55801	0.5517	0.0000	7.9883	410.4600	54.156
1.29000	904.95164	0.5385	0.0000	8.1478	414.9195	54.699
1.30000	902.33024	0.5251	0.0000	8.3134	419.3840	55.237
1.31000	899.69384	0.5115	0.0000	8.4851	423.8571	55.767
1.32000	897.04244	0.4977	0.0000	8.6629	428.3428	56.291
1.33000	894.37604	0.4837	0.0000	8.8468	432.8440	56.808
1.34000	891.69464	0.4695	0.0000	9.0368	437.3635	57.319
1.35000	889.00824	0.4551	0.0000	9.2329	441.9050	57.824
1.36000	886.31684	0.4405	0.0000	9.4351	446.4715	58.322
1.37000	883.62044	0.4257	0.0000	9.6434	451.0660	58.814
1.38000	880.91904	0.4107	0.0000	9.8578	455.6915	59.299
1.39000	878.21264	0.3955	0.0000	10.0783	460.3500	59.778
1.40000	875.50124	0.3801	0.0000	10.3049	465.0455	60.251
1.41000	872.78484	0.3645	0.0000	10.5376	469.7800	60.718
1.42000	870.06344	0.3487	0.0000	10.7764	474.5565	61.179
1.43000	867.33704	0.3327	0.0000	11.0213	479.3770	61.634
1.44000	864.60564	0.3165	0.0000	11.2723	484.2445	62.083
1.45000	861.86924	0.2999	0.0000	11.5294	489.1620	62.528
1.46000	859.12784	0.2831	0.0000	11.7926	494.1325	62.965
1.47000	856.38144	0.2661	0.0000	12.0619	499.1590	63.394
1.48000	853.63004	0.2489	0.0000	12.3373	504.2445	63.820
1.49000	850.87364	0.2315	0.0000	12.6188	509.3920	64.240

1.50000	312.01925	0.4334	0.0000	2.9993	689.8643	64.659
1.60000	272.85643	0.4666	0.0000	2.8466	519.0672	68.500
1.70000	234.48977	0.4077	0.0000	2.7141	564.5997	71.874
1.80000	208.57795	0.3564	0.0000	2.5989	560.9138	74.824
1.90000	182.66599	0.3173	0.0000	2.4940	586.4447	77.402
2.00000	160.27248	0.2740	0.0000	2.4053	603.5643	79.661
2.10000	140.93492	0.2409	0.0000	2.3247	616.6010	81.646
2.20000	124.23105	0.2124	0.0000	2.2523	631.8390	83.393
2.30000	109.78654	0.1877	0.0000	2.1870	643.5225	84.935
2.40000	97.27374	0.1663	0.0000	2.1279	653.8607	86.308
2.50000	86.41824	0.1477	0.0000	2.0742	663.0327	87.510
2.60000	76.97469	0.1314	0.0000	2.0251	671.1915	88.587
2.70000	68.74124	0.1175	0.0000	1.9802	678.4679	89.568
2.80000	61.54509	0.1052	0.0000	1.9389	684.9743	90.468
2.90000	55.23954	0.0944	0.0000	1.9004	690.8066	91.176
3.00000	49.78034	0.0850	0.0000	1.8654	696.0477	91.868
3.10000	44.87199	0.0766	0.0000	1.8336	700.7687	92.491
3.20000	40.51474	0.0693	0.0000	1.8027	705.0311	93.053
3.30000	36.70234	0.0627	0.0000	1.7744	708.8841	93.563
3.40000	33.31940	0.570	0.0000	1.7480	712.3859	94.024
3.50000	30.31142	0.0514	0.0000	1.7233	715.5644	94.444
3.60000	27.62945	0.0472	0.0000	1.7002	718.4591	94.826
3.70000	25.23362	0.0431	0.0000	1.6784	721.1000	95.174
3.80000	23.08820	0.0395	0.0000	1.6579	723.5141	95.493
3.90000	21.16307	0.0362	0.0000	1.6386	725.7250	95.785
4.00000	19.43203	0.0332	0.0000	1.6204	727.7532	96.052
4.10000	17.87240	0.0306	0.0000	1.6032	729.6171	96.298
4.20000	16.46447	0.0281	0.0000	1.5868	731.3370	96.525
4.30000	15.19104	0.0260	0.0000	1.5714	732.9145	96.734
4.40000	14.03727	0.0240	0.0000	1.5567	734.3750	96.924
4.50000	12.98994	0.0222	0.0000	1.5427	735.7255	97.105
4.60000	12.03769	0.0204	0.0000	1.5294	736.9761	97.270
4.70000	11.17039	0.0191	0.0000	1.5167	738.1359	97.423
4.80000	10.37920	0.0177	0.0000	1.5044	739.2127	97.565
4.90000	9.65412	0.0165	0.0000	1.4931	740.2140	97.697
5.00000	8.99444	0.0154	0.0000	1.4821	741.1460	97.820
5.10000	8.38467	0.0143	0.0000	1.4714	742.0140	97.935
5.20000	7.82234	0.0134	0.0000	1.4614	742.8254	98.042
5.30000	7.31214	0.0125	0.0000	1.4517	743.5828	98.148
5.40000	6.85074	0.0117	0.0000	1.4424	744.2910	98.235
5.50000	6.44179	0.0110	0.0000	1.4335	744.9541	98.323
5.60000	6.07139	0.0103	0.0000	1.4249	745.5756	98.405
5.70000	5.74401	0.0097	0.0000	1.4166	746.1586	98.482
5.80000	5.45639	0.0091	0.0000	1.4087	746.7041	98.554
5.90000	5.20491	0.0085	0.0000	1.4010	747.2208	98.622
6.00000	4.98484	0.0080	0.0000	1.3937	747.7099	98.686
6.10000	4.79212	0.0074	0.0000	1.3867	748.1668	98.746
6.20000	4.62484	0.0069	0.0000	1.3797	748.5959	98.803
6.30000	4.47710	0.0064	0.0000	1.3731	748.9939	98.856
6.40000	4.34784	0.0060	0.0000	1.3667	749.3745	98.907
6.50000	4.23459	0.0056	0.0000	1.3605	749.7410	98.954
6.60000	4.13489	0.0052	0.0000	1.3545	750.0819	98.999
6.70000	4.04681	0.0049	0.0000	1.3487	750.4053	99.042
6.80000	3.96910	0.0046	0.0000	1.3431	750.7116	99.083
6.90000	3.90104	0.0044	0.0000	1.3377	751.0019	99.121

7.00000	2.84043	0.0044	0.0000	1.3325	751.2772	99.157
7.10000	2.54444	0.0044	0.0000	1.3274	751.5384	99.192
7.20000	2.41734	0.0041	0.0000	1.3224	751.7844	99.224
7.30000	2.30777	0.0039	0.0000	1.3174	752.0271	99.254
7.40000	2.21515	0.0037	0.0000	1.3124	752.2642	99.285
7.50000	2.13594	0.0036	0.0000	1.3074	752.4954	99.313
7.60000	2.06974	0.0034	0.0000	1.3024	752.7204	99.340
7.70000	1.99644	0.0032	0.0000	1.2974	752.9457	99.366
7.80000	1.92607	0.0031	0.0000	1.2924	753.1659	99.390
7.90000	1.85864	0.0029	0.0000	1.2874	753.3813	99.413
8.00000	1.79414	0.0027	0.0000	1.2824	753.5933	99.435
8.10000	1.73259	0.0026	0.0000	1.2774	753.8024	99.456
8.20000	1.67394	0.0024	0.0000	1.2724	754.0092	99.477
8.30000	1.61819	0.0023	0.0000	1.2674	754.2134	99.498
8.40000	1.56534	0.0022	0.0000	1.2624	754.4154	99.514
8.50000	1.51544	0.0021	0.0000	1.2574	754.6154	99.530
8.60000	1.46844	0.0020	0.0000	1.2524	754.8134	99.549
8.70000	1.42429	0.0019	0.0000	1.2474	755.0094	99.565
8.80000	1.38284	0.0018	0.0000	1.2424	755.2034	99.580
8.90000	1.34404	0.0017	0.0000	1.2374	755.3954	99.595
9.00000	1.30779	0.0016	0.0000	1.2324	755.5854	99.609
9.10000	1.27404	0.0015	0.0000	1.2274	755.7734	99.623
9.20000	1.24279	0.0014	0.0000	1.2224	755.9594	99.636
9.30000	1.21404	0.0014	0.0000	1.2174	756.1434	99.649
9.40000	1.18779	0.0013	0.0000	1.2124	756.3254	99.661
9.50000	1.16404	0.0012	0.0000	1.2074	756.5054	99.672
9.60000	1.14279	0.0011	0.0000	1.2024	756.6834	99.682
9.70000	1.12404	0.0011	0.0000	1.1974	756.8594	99.691
9.80000	1.10779	0.0010	0.0000	1.1924	757.0334	99.700
9.90000	1.09404	0.0010	0.0000	1.1874	757.2054	99.709
10.00000	1.08279	0.0009	0.0000	1.1824	757.3754	99.718
10.10000	1.07404	0.0009	0.0000	1.1774	757.5434	99.726
10.20000	1.06779	0.0008	0.0000	1.1724	757.7094	99.733
10.30000	1.06404	0.0008	0.0000	1.1674	757.8734	99.740
10.40000	1.06279	0.0008	0.0000	1.1624	758.0354	99.747
10.50000	1.06404	0.0007	0.0000	1.1574	758.1954	99.753
10.60000	1.06779	0.0007	0.0000	1.1524	758.3534	99.759
10.70000	1.07404	0.0007	0.0000	1.1474	758.5094	99.767
10.80000	1.08279	0.0006	0.0000	1.1424	758.6634	99.775
10.90000	1.09404	0.0006	0.0000	1.1374	758.8154	99.782
11.00000	1.10779	0.0006	0.0000	1.1324	758.9654	99.789
11.10000	1.12404	0.0005	0.0000	1.1274	759.1134	99.796
11.20000	1.14279	0.0005	0.0000	1.1224	759.2594	99.803
11.30000	1.16404	0.0004	0.0000	1.1174	759.4034	99.809
11.40000	1.18779	0.0004	0.0000	1.1124	759.5454	99.815
11.50000	1.21404	0.0003	0.0000	1.1074	759.6854	99.821
11.60000	1.24279	0.0003	0.0000	1.1024	759.8234	99.827
11.70000	1.27404	0.0002	0.0000	1.0974	759.9594	99.833
11.80000	1.30779	0.0002	0.0000	1.0924	760.0934	99.839
11.90000	1.34404	0.0001	0.0000	1.0874	760.2254	99.845
12.00000	1.38279	0.0001	0.0000	1.0824	760.3554	99.851

VISIBILITY AND OTHER DATA FOR PLANCK RADIATOR, MECHANICS DIVISION, G. R. U., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3650.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3650.0  
DEGREES FAHRENHEIT = 5750.0

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 1116.01 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 20841.60 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (TYPE OF TOTAL VISIBLE FLUX) IS 9.96114 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.1784.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 2084.66 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 15.5258 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.6465 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0386 MICRONS.  
I.E., THIS WAVELENGTH THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 6212.22 WATT/CM<sup>2</sup> OR 4.132224E+09 ENCH/SEC/CM<sup>2</sup> OR 1.37074E+01 KAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1.47228 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS COLUMN (B) IS THE PRODUCT AND DIMENS PER WATT R RADIANT EMITTANCE X VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQ. CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (B) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT (N) IN THE FOLLOWING FORMULA (WHERE N = 1/5).

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3650.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3650.0  
DEGREES FAHRENHEIT = 5750.0

WAVELENGTH (MICRONS)	HEMISPHERICAL POWER (WATTS/CM <sup>2</sup> /MICRON)	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT (M FOR WATTS)	POWER FROM TABLE TO 1	% TOTAL POWER ZERO TO 1
0.35000	67.71855	0.00780	0.00000	11.3131	1.4192	0.228
0.35500	53.50854	0.00614	0.00000	11.2453	2.0699	0.258
0.36000	41.72854	0.00491	0.00000	11.1822	2.7355	0.292
0.36500	32.14249	0.00380	0.00000	11.1236	3.4176	0.337
0.37000	24.41441	0.00289	0.00000	11.0692	4.1174	0.371
0.37500	18.24028	0.00218	0.00000	11.0180	4.8344	0.415
0.38000	13.41411	0.00163	0.00000	10.9691	5.5679	0.460
0.38500	10.01411	0.00121	0.00000	10.9224	6.3174	0.514
0.39000	7.41411	0.00088	0.00000	10.8779	7.0824	0.573
0.39500	5.51411	0.00065	0.00000	10.8354	7.8624	0.638
0.40000	4.11411	0.00048	0.00000	10.7949	8.6569	0.699
0.40500	3.11411	0.00036	0.00000	10.7564	9.4654	0.760
0.41000	2.31411	0.00027	0.00000	10.7199	10.2874	0.824
0.41500	1.71411	0.00020	0.00000	10.6854	11.1224	0.893
0.42000	1.21411	0.00015	0.00000	10.6529	11.9704	1.007
0.42500	0.91411	0.00011	0.00000	10.6224	12.8314	1.097
0.43000	0.68411	0.00008	0.00000	10.5939	13.7054	1.192
0.43500	0.51411	0.00006	0.00000	10.5674	14.5924	1.292
0.44000	0.38411	0.00004	0.00000	10.5429	15.4924	1.397
0.44500	0.28411	0.00003	0.00000	10.5204	16.4054	1.504
0.45000	0.21411	0.00002	0.00000	10.5004	17.3304	1.625
0.45500	0.16411	0.00002	0.00000	10.4824	18.2674	1.747
0.46000	0.12411	0.00001	0.00000	10.4664	19.2164	1.875
0.46500	0.09411	0.00001	0.00000	10.4524	20.1774	2.009
0.47000	0.071411	0.00001	0.00000	10.4404	21.1504	2.148
0.47500	0.054111	0.00001	0.00000	10.4304	22.1354	2.294
0.48000	0.041411	0.00001	0.00000	10.4224	23.1324	2.445
0.48500	0.031411	0.00001	0.00000	10.4164	24.1414	2.602
0.49000	0.023411	0.00001	0.00000	10.4124	25.1614	2.764
0.49500	0.017411	0.00001	0.00000	10.4094	26.1924	2.935
0.50000	0.013411	0.00001	0.00000	10.4074	27.2344	3.110
0.50500	0.010411	0.00001	0.00000	10.4064	28.2874	3.291
0.51000	0.0078411	0.00001	0.00000	10.4064	29.3514	3.478
0.51500	0.0059411	0.00001	0.00000	10.4074	30.4264	3.671
0.52000	0.0044411	0.00001	0.00000	10.4094	31.5124	3.870
0.52500	0.0033411	0.00001	0.00000	10.4124	32.6094	4.075
0.53000	0.0025411	0.00001	0.00000	10.4164	33.7174	4.285
0.53500	0.0019411	0.00001	0.00000	10.4214	34.8364	4.501
0.54000	0.0014411	0.00001	0.00000	10.4274	35.9664	4.723
0.54500	0.0010411	0.00001	0.00000	10.4344	37.1074	4.951
0.55000	0.00078411	0.00001	0.00000	10.4424	38.2594	5.183
0.55500	0.00059411	0.00001	0.00000	10.4514	39.4224	5.423
0.56000	0.00044411	0.00001	0.00000	10.4614	40.5964	5.668
0.56500	0.00033411	0.00001	0.00000	10.4724	41.7814	5.917
0.57000	0.00025411	0.00001	0.00000	10.4844	42.9774	6.172



0.97900	477,17500	0.8711	25771,7314	7,7566	51,4666	6,411
0.98000	477,17500	0.8692	25771,7314	7,1191	51,4666	6,409
0.98100	477,17500	0.8673	25771,7314	6,4816	51,4666	6,407
0.98200	477,17500	0.8654	25771,7314	5,8441	51,4666	6,405
0.98300	477,17500	0.8635	25771,7314	5,2066	51,4666	6,403
0.98400	477,17500	0.8616	25771,7314	4,5691	51,4666	6,401
0.98500	477,17500	0.8597	25771,7314	3,9316	51,4666	6,399
0.98600	477,17500	0.8578	25771,7314	3,2941	51,4666	6,397
0.98700	477,17500	0.8559	25771,7314	2,6566	51,4666	6,395
0.98800	477,17500	0.8540	25771,7314	2,0191	51,4666	6,393
0.98900	477,17500	0.8521	25771,7314	1,3816	51,4666	6,391
0.99000	477,17500	0.8502	25771,7314	7,7566	51,4666	6,411
0.99100	477,17500	0.8483	25771,7314	7,1191	51,4666	6,409
0.99200	477,17500	0.8464	25771,7314	6,4816	51,4666	6,407
0.99300	477,17500	0.8445	25771,7314	5,8441	51,4666	6,405
0.99400	477,17500	0.8426	25771,7314	5,2066	51,4666	6,403
0.99500	477,17500	0.8407	25771,7314	4,5691	51,4666	6,401
0.99600	477,17500	0.8388	25771,7314	3,9316	51,4666	6,399
0.99700	477,17500	0.8369	25771,7314	3,2941	51,4666	6,397
0.99800	477,17500	0.8350	25771,7314	2,6566	51,4666	6,395
0.99900	477,17500	0.8331	25771,7314	2,0191	51,4666	6,393
1.00000	477,17500	0.8312	25771,7314	1,3816	51,4666	6,391
1.00100	477,17500	0.8293	25771,7314	7,7566	51,4666	6,411
1.00200	477,17500	0.8274	25771,7314	7,1191	51,4666	6,409
1.00300	477,17500	0.8255	25771,7314	6,4816	51,4666	6,407
1.00400	477,17500	0.8236	25771,7314	5,8441	51,4666	6,405
1.00500	477,17500	0.8217	25771,7314	5,2066	51,4666	6,403
1.00600	477,17500	0.8198	25771,7314	4,5691	51,4666	6,401
1.00700	477,17500	0.8179	25771,7314	3,9316	51,4666	6,399
1.00800	477,17500	0.8160	25771,7314	3,2941	51,4666	6,397
1.00900	477,17500	0.8141	25771,7314	2,6566	51,4666	6,395
1.01000	477,17500	0.8122	25771,7314	2,0191	51,4666	6,393
1.01100	477,17500	0.8103	25771,7314	1,3816	51,4666	6,391
1.01200	477,17500	0.8084	25771,7314	7,7566	51,4666	6,411
1.01300	477,17500	0.8065	25771,7314	7,1191	51,4666	6,409
1.01400	477,17500	0.8046	25771,7314	6,4816	51,4666	6,407
1.01500	477,17500	0.8027	25771,7314	5,8441	51,4666	6,405
1.01600	477,17500	0.8008	25771,7314	5,2066	51,4666	6,403
1.01700	477,17500	0.7989	25771,7314	4,5691	51,4666	6,401
1.01800	477,17500	0.7970	25771,7314	3,9316	51,4666	6,399
1.01900	477,17500	0.7951	25771,7314	3,2941	51,4666	6,397
1.02000	477,17500	0.7932	25771,7314	2,6566	51,4666	6,395
1.02100	477,17500	0.7913	25771,7314	2,0191	51,4666	6,393
1.02200	477,17500	0.7894	25771,7314	1,3816	51,4666	6,391
1.02300	477,17500	0.7875	25771,7314	7,7566	51,4666	6,411
1.02400	477,17500	0.7856	25771,7314	7,1191	51,4666	6,409
1.02500	477,17500	0.7837	25771,7314	6,4816	51,4666	6,407
1.02600	477,17500	0.7818	25771,7314	5,8441	51,4666	6,405
1.02700	477,17500	0.7799	25771,7314	5,2066	51,4666	6,403
1.02800	477,17500	0.7780	25771,7314	4,5691	51,4666	6,401
1.02900	477,17500	0.7761	25771,7314	3,9316	51,4666	6,399
1.03000	477,17500	0.7742	25771,7314	3,2941	51,4666	6,397
1.03100	477,17500	0.7723	25771,7314	2,6566	51,4666	6,395
1.03200	477,17500	0.7704	25771,7314	2,0191	51,4666	6,393
1.03300	477,17500	0.7685	25771,7314	1,3816	51,4666	6,391
1.03400	477,17500	0.7666	25771,7314	7,7566	51,4666	6,411
1.03500	477,17500	0.7647	25771,7314	7,1191	51,4666	6,409
1.03600	477,17500	0.7628	25771,7314	6,4816	51,4666	6,407
1.03700	477,17500	0.7609	25771,7314	5,8441	51,4666	6,405
1.03800	477,17500	0.7590	25771,7314	5,2066	51,4666	6,403
1.03900	477,17500	0.7571	25771,7314	4,5691	51,4666	6,401
1.04000	477,17500	0.7552	25771,7314	3,9316	51,4666	6,399
1.04100	477,17500	0.7533	25771,7314	3,2941	51,4666	6,397
1.04200	477,17500	0.7514	25771,7314	2,6566	51,4666	6,395
1.04300	477,17500	0.7495	25771,7314	2,0191	51,4666	6,393
1.04400	477,17500	0.7476	25771,7314	1,3816	51,4666	6,391
1.04500	477,17500	0.7457	25771,7314	7,7566	51,4666	6,411
1.04600	477,17500	0.7438	25771,7314	7,1191	51,4666	6,409
1.04700	477,17500	0.7419	25771,7314	6,4816	51,4666	6,407
1.04800	477,17500	0.7400	25771,7314	5,8441	51,4666	6,405
1.04900	477,17500	0.7381	25771,7314	5,2066	51,4666	6,403
1.05000	477,17500	0.7362	25771,7314	4,5691	51,4666	6,401

0.95000	407,54324	0.7655	0,0000	6,4000	249,4845	33,551
0.95100	407,54324	0.7636	0,0000	5,7625	249,4845	34,305
0.95200	407,54324	0.7617	0,0000	5,1250	249,4845	35,059
0.95300	407,54324	0.7598	0,0000	4,4875	249,4845	35,813
0.95400	407,54324	0.7579	0,0000	3,8500	249,4845	36,567
0.95500	407,54324	0.7560	0,0000	3,2125	249,4845	37,321
0.95600	407,54324	0.7541	0,0000	2,5750	249,4845	38,075
0.95700	407,54324	0.7522	0,0000	1,9375	249,4845	38,829
0.95800	407,54324	0.7503	0,0000	1,3000	249,4845	39,583
0.95900	407,54324	0.7484	0,0000	0,6625	249,4845	40,337
0.96000	407,54324	0.7465	0,0000	0,0250	249,4845	41,091
0.96100	407,54324	0.7446	0,0000	0,0000	249,4845	41,845
0.96200	407,54324	0.7427	0,0000	0,0000	249,4845	42,599
0.96300	407,54324	0.7408	0,0000	0,0000	249,4845	43,353
0.96400	407,54324	0.7389	0,0000	0,0000	249,4845	44,107
0.96500	407,54324	0.7370	0,0000	0,0000	249,4845	44,861
0.96600	407,54324	0.7351	0,0000	0,0000	249,4845	45,615
0.96700	407,54324	0.7332	0,0000	0,0000	249,4845	46,369
0.96800	407,54324	0.7313	0,0000	0,0000	249,4845	47,123
0.96900	407,54324	0.7294	0,0000	0,0000	249,4845	47,877
0.97000	407,54324	0.7275	0,0000	0,0000	249,4845	48,631
0.97100	407,54324	0.7256	0,0000	0,0000	249,4845	49,385
0.97200	407,54324	0.7237	0,0000	0,0000	249,4845	50,139
0.97300	407,54324	0.7218	0,0000	0,0000	249,4845	50,893
0.97400	407,54324	0.7199	0,0000	0,0000	249,4845	51,647
0.97500	407,54324	0.7180	0,0000	0,0000	249,4845	52,401
0.97600	407,54324	0.7161	0,0000	0,0000	249,4845	53,155
0.97700	407,54324	0.7142	0,0000	0,0000	249,4845	53,909
0.97800	407,54324	0.7123	0,0000	0,0000	249,4845	54,663
0.97900	407,54324	0.7104	0,0000	0,0000	249,4845	55,417
0.98000	407,54324	0.7085	0,0000	0,0000	249,4845	56,171
0.98100	407,54324	0.7066	0,0000	0,0000	249,4845	56,925
0.98200	407,54324	0.7047	0,0000	0,0000	249,4845	57,679
0.98300	407,54324	0.7028	0,0000	0,0000	249,4845	58,433
0.98400	407,54324	0.7009	0,0000	0,0000	249,4845	59,187
0.98500	407,54324	0.6990	0,0000	0,0000	249,4845	59,941
0.98600	407,54324	0.6971	0,0000	0,0000	249,4845	60,695
0.98700	407,54324	0.6952	0,0000	0,0000	249,4845	61,449
0.98800	407,54324	0.6933	0,0000	0,0000	249,4845	62,203
0.98900	407,54324	0.6914	0,0000	0,0000	249,4845	62,957
0.99000	407,54324	0.6895	0,0000	0,0000	249,4845	63,711
0.99100	407,54324	0.6876	0,0000	0,0000	249,4845	64,465
0.99200	407,54324	0.6857	0,0000	0,0000	249,4845	65,219
0.99300	407,54324	0.6838	0,0000	0,0000	249,4845	65,973
0.99400	407,54324	0.6819	0,0000	0,0000	249,4845	66,727
0.99500	407,54324	0.6800	0,0000	0,0000	249,4845	67,481

1.50000	101,10000	0,00170	0,0000	1,0010	500,5110	00,550
1.60000	101,10000	0,00180	0,0000	1,0010	500,5110	00,550
1.70000	101,10000	0,00190	0,0000	1,0010	500,5110	00,550
1.80000	101,10000	0,00200	0,0000	1,0010	500,5110	00,550
1.90000	101,10000	0,00210	0,0000	1,0010	500,5110	00,550
2.00000	101,10000	0,00220	0,0000	1,0010	500,5110	00,550
2.10000	101,10000	0,00230	0,0000	1,0010	500,5110	00,550
2.20000	101,10000	0,00240	0,0000	1,0010	500,5110	00,550
2.30000	101,10000	0,00250	0,0000	1,0010	500,5110	00,550
2.40000	101,10000	0,00260	0,0000	1,0010	500,5110	00,550
2.50000	101,10000	0,00270	0,0000	1,0010	500,5110	00,550
2.60000	101,10000	0,00280	0,0000	1,0010	500,5110	00,550
2.70000	101,10000	0,00290	0,0000	1,0010	500,5110	00,550
2.80000	101,10000	0,00300	0,0000	1,0010	500,5110	00,550
2.90000	101,10000	0,00310	0,0000	1,0010	500,5110	00,550
3.00000	101,10000	0,00320	0,0000	1,0010	500,5110	00,550
3.10000	101,10000	0,00330	0,0000	1,0010	500,5110	00,550
3.20000	101,10000	0,00340	0,0000	1,0010	500,5110	00,550
3.30000	101,10000	0,00350	0,0000	1,0010	500,5110	00,550
3.40000	101,10000	0,00360	0,0000	1,0010	500,5110	00,550
3.50000	101,10000	0,00370	0,0000	1,0010	500,5110	00,550
3.60000	101,10000	0,00380	0,0000	1,0010	500,5110	00,550
3.70000	101,10000	0,00390	0,0000	1,0010	500,5110	00,550
3.80000	101,10000	0,00400	0,0000	1,0010	500,5110	00,550
3.90000	101,10000	0,00410	0,0000	1,0010	500,5110	00,550
4.00000	101,10000	0,00420	0,0000	1,0010	500,5110	00,550
4.10000	101,10000	0,00430	0,0000	1,0010	500,5110	00,550
4.20000	101,10000	0,00440	0,0000	1,0010	500,5110	00,550
4.30000	101,10000	0,00450	0,0000	1,0010	500,5110	00,550
4.40000	101,10000	0,00460	0,0000	1,0010	500,5110	00,550
4.50000	101,10000	0,00470	0,0000	1,0010	500,5110	00,550
4.60000	101,10000	0,00480	0,0000	1,0010	500,5110	00,550
4.70000	101,10000	0,00490	0,0000	1,0010	500,5110	00,550
4.80000	101,10000	0,00500	0,0000	1,0010	500,5110	00,550
4.90000	101,10000	0,00510	0,0000	1,0010	500,5110	00,550
5.00000	101,10000	0,00520	0,0000	1,0010	500,5110	00,550
5.10000	101,10000	0,00530	0,0000	1,0010	500,5110	00,550
5.20000	101,10000	0,00540	0,0000	1,0010	500,5110	00,550
5.30000	101,10000	0,00550	0,0000	1,0010	500,5110	00,550
5.40000	101,10000	0,00560	0,0000	1,0010	500,5110	00,550
5.50000	101,10000	0,00570	0,0000	1,0010	500,5110	00,550
5.60000	101,10000	0,00580	0,0000	1,0010	500,5110	00,550
5.70000	101,10000	0,00590	0,0000	1,0010	500,5110	00,550
5.80000	101,10000	0,00600	0,0000	1,0010	500,5110	00,550
5.90000	101,10000	0,00610	0,0000	1,0010	500,5110	00,550
6.00000	101,10000	0,00620	0,0000	1,0010	500,5110	00,550
6.10000	101,10000	0,00630	0,0000	1,0010	500,5110	00,550
6.20000	101,10000	0,00640	0,0000	1,0010	500,5110	00,550
6.30000	101,10000	0,00650	0,0000	1,0010	500,5110	00,550
6.40000	101,10000	0,00660	0,0000	1,0010	500,5110	00,550
6.50000	101,10000	0,00670	0,0000	1,0010	500,5110	00,550
6.60000	101,10000	0,00680	0,0000	1,0010	500,5110	00,550
6.70000	101,10000	0,00690	0,0000	1,0010	500,5110	00,550
6.80000	101,10000	0,00700	0,0000	1,0010	500,5110	00,550
6.90000	101,10000	0,00710	0,0000	1,0010	500,5110	00,550
7.00000	101,10000	0,00720	0,0000	1,0010	500,5110	00,550

7.00000	2,73130	0,0043	0,0000	1,1277	700,7300	00,103
7.10000	2,59050	0,0041	0,0000	1,1272	707,0050	00,204
7.20000	2,44970	0,0039	0,0000	1,1174	707,2902	00,257
7.30000	2,30890	0,0037	0,0000	1,1126	707,4905	00,287
7.40000	2,22750	0,0035	0,0000	1,1060	707,7900	00,310
7.50000	2,11060	0,0034	0,0000	1,1010	707,8402	00,320
7.60000	2,01060	0,0032	0,0000	1,2909	708,1511	00,320
7.70000	1,92100	0,0031	0,0000	1,2911	708,3401	00,320
7.80000	1,83320	0,0029	0,0000	1,2870	708,5350	00,320
7.90000	1,74600	0,0027	0,0000	1,2831	708,7150	00,320
8.00000	1,66070	0,0026	0,0000	1,2790	708,8800	00,320
8.10000	1,57700	0,0024	0,0000	1,2750	709,0400	00,320
8.20000	1,49500	0,0024	0,0000	1,2701	709,2000	00,320
8.30000	1,41450	0,0023	0,0000	1,2721	709,3535	00,320
8.40000	1,33550	0,0022	0,0000	1,2684	709,4900	00,320
8.50000	1,25850	0,0021	0,0000	1,2652	709,6110	00,320
8.60000	1,18350	0,0020	0,0000	1,2619	709,7201	00,320
8.70000	1,11050	0,0019	0,0000	1,2587	709,8200	00,320
8.80000	1,03950	0,0018	0,0000	1,2555	800,0000	00,320
8.90000	1,12000	0,0018	0,0000	1,2524	800,1200	00,320
9.00000	1,07000	0,0017	0,0000	1,2490	800,2300	00,320
9.10000	1,02130	0,0016	0,0000	1,2465	800,3350	00,320
9.20000	0,97400	0,0016	0,0000	1,2437	800,4300	00,320
9.30000	0,92800	0,0015	0,0000	1,2409	800,5330	00,320
9.40000	0,88350	0,0015	0,0000	1,2381	800,6271	00,320
9.50000	0,84050	0,0014	0,0000	1,2355	800,7160	00,320
9.60000	0,79900	0,0013	0,0000	1,2328	800,8020	00,320
9.70000	0,75900	0,0013	0,0000	1,2301	800,8853	00,320
9.80000	0,72050	0,0012	0,0000	1,2274	800,9600	00,320
9.90000	0,75100	0,0012	0,0000	1,2253	801,0010	00,320
10.00000	0,72300	0,0011	0,0000	1,2229	801,1151	00,320
10.10000	0,69630	0,0011	0,0000	1,2204	801,1801	00,320
10.20000	0,67080	0,0011	0,0000	1,2183	801,2500	00,320
10.30000	0,64650	0,0010	0,0000	1,2160	801,3203	00,320
10.40000	0,62330	0,0010	0,0000	1,2138	801,3810	00,320
10.50000	0,60110	0,0010	0,0000	1,2117	801,4450	00,320
10.60000	0,57990	0,0009	0,0000	1,2095	801,5041	00,320
10.70000	0,55960	0,0009	0,0000	1,2075	801,5610	00,320
10.80000	0,54020	0,0009	0,0000	1,2054	801,6160	00,320
10.90000	0,52170	0,0008	0,0000	1,2034	801,6691	00,320
11.00000	0,50392	0,0008	0,0000	1,2014	801,7200	00,320
11.10000	0,48669	0,0008	0,0000	1,1995	801,7699	00,320
11.20000	0,47057	0,0007	0,0000	1,1977	801,8178	00,320
11.30000	0,45492	0,0007	0,0000	1,1958	801,8641	00,320
11.40000	0,43980	0,0007	0,0000	1,1940	801,9080	00,320
11.50000	0,42520	0,0007	0,0000	1,1922	801,9521	00,320
11.60000	0,41110	0,0007	0,0000	1,1905	801,9939	00,320
11.70000	0,39749	0,0006	0,0000	1,1887	802,0340	00,320
11.80000	0,38437	0,0006	0,0000	1,1871	802,0734	00,320
11.90000	0,37175	0,0006	0,0000	1,1854	802,1110	00,320
12.00000	0,35962	0,0006	0,0000	1,1838	802,1480	00,320

VISIBILITY AND THE DATA FOR PLANE PARALLEL, HEMISPHERICAL, DIFFUSE, SURFACE, REFLECTIVITY OF 0.8000,

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1200.0 DEGREES CENTIGRADE FOR THE FULL-WIDTH TABLE, DEGREES F = 3500.0  
 CELSIUS FAHRENHEIT = 5980.0

THE POWER RADIATED FROM THE SURFACE WITHIN IS 10.0000 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 0.001727 CANNEL/CM<sup>2</sup>.

THE LUMINANCE (CD/CM<sup>2</sup>) OF TOTAL VISIBLE RADIATION IS 0.001727 CANNEL/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.01727.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 200.0000 CM/CM<sup>2</sup>.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 0.01727 WATT/WATT.

THE WAVELENGTH OF PEAK POWER RADIATION IS 0.6448 MICRONS.

THE WAVELENGTH FROM WHICH POWER EQUIVALENT IS 1.0000 MICRONS.  
 LENGTHS WAVELENGTHS THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE IS

THE TOTAL POWER RADIATED IS 10.0000 WATT/CM<sup>2</sup> = 10.000000000000000 WATT/CM<sup>2</sup> = 10.000000000000000 WATT/CM<sup>2</sup> = 10.000000000000000 WATT/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 0.07412 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (CD/CM<sup>2</sup>) IS THE PRODUCT OF THE RADIANT EXITANCE (WATT/CM<sup>2</sup>) BY THE DISTANCE (M) DIVIDED BY THE VISIBILITY FACTOR.  
 WHEN THE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (WATT/CM<sup>2</sup>) MAY BE CALCULATED USING THE  
 TEMPERATURE EXPONENT N IN THE FOLLOWING FORMULA:  $\Delta W = n W \Delta T$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1200.0 DEGREES CENTIGRADE FOR THE FULL-WIDTH TABLE, DEGREES F = 3500.0  
 CELSIUS FAHRENHEIT = 5980.0

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EQUIVALENT TEMPERATURE	POWER FLUX ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	58.58017	0.0037	0.0000	11.7410	2.1943	0.254
0.35500	62.19884	0.0040	0.0000	11.5772	2.4911	0.291
0.36000	64.11047	0.0041	0.0000	11.4164	2.8114	0.331
0.36500	74.13547	0.0109	0.0000	11.2474	3.1748	0.373
0.37000	81.04070	0.0115	0.0000	11.1104	3.5624	0.419
0.37500	87.04219	0.0127	0.0000	10.9512	3.9839	0.468
0.38000	94.79441	0.0140	0.0000	10.8147	4.4400	0.529
0.38500	102.18444	0.0151	0.0000	10.6754	4.9123	0.580
0.39000	109.28547	0.0162	0.0000	10.5417	5.4024	0.642
0.39500	117.28647	0.0174	0.0000	10.4154	5.9113	0.709
0.40000	125.28751	0.0186	0.0000	10.2754	6.4404	0.781
0.40500	134.28854	0.0198	0.0000	10.1354	7.0014	0.857
0.41000	143.28957	0.0211	114.7300	10.0044	7.6044	0.930
0.41500	151.29057	0.0224	227.2740	9.8741	8.2223	1.025
0.42000	161.29157	0.0238	417.0200	9.7463	8.8645	1.117
0.42500	170.29257	0.0251	845.2011	9.6212	10.5324	1.214
0.43000	179.29357	0.0265	1417.4474	9.4984	11.2275	1.317
0.43500	189.29457	0.0280	2142.2727	9.3780	12.1300	1.424
0.44000	199.29557	0.0294	3111.4044	9.2597	13.1009	1.540
0.44500	209.29657	0.0309	4120.5430	9.1440	14.1209	1.667
0.45000	219.29757	0.0323	5457.8345	9.0314	15.1906	1.785
0.45500	229.29857	0.0338	7476.6441	8.9214	16.3106	1.917
0.46000	239.29957	0.0353	9741.8247	8.8140	17.4814	2.055
0.46500	249.30057	0.0369	12556.4152	8.7080	18.7034	2.199
0.47000	259.30157	0.0384	16040.2559	8.6041	19.9744	2.348
0.47500	270.30257	0.0399	20541.1691	8.5024	21.3023	2.504
0.48000	280.30357	0.0415	26226.2792	8.4024	22.6873	2.666
0.48500	291.30457	0.0430	33450.0527	8.3040	24.1066	2.834
0.49000	301.30557	0.0445	42644.6548	8.2080	25.5570	3.008
0.49500	311.30657	0.0461	54274.2295	8.1051	27.1236	3.188
0.50000	322.30757	0.0476	70795.2791	8.0022	28.7902	3.374
0.50500	332.30857	0.0492	92076.2942	7.9010	30.5468	3.567
0.51000	343.30957	0.0507	117324.2741	7.8014	32.3911	3.765
0.51500	353.31057	0.0522	146040.1134	7.7033	34.3249	3.970
0.52000	363.31157	0.0537	175446.5574	7.6064	35.3484	4.181
0.52500	373.31257	0.0552	201457.2203	7.5117	37.4115	4.397
0.53000	383.31357	0.0567	224465.0318	7.4180	39.3046	4.620
0.53500	393.31457	0.0582	244469.8110	7.3254	41.2478	4.848
0.54000	403.31557	0.0596	261679.4303	7.2349	43.2399	5.082
0.54500	413.31657	0.0610	275279.8848	7.1453	45.2811	5.322
0.55000	422.31757	0.0625	285976.8634	7.0770	47.3706	5.569
0.55500	432.31857	0.0639	293840.1014	7.0099	49.5076	5.819
0.56000	441.31957	0.0652	298670.5517	7.0441	51.6915	6.074
0.56500	450.32057	0.0666	299948.7022	7.0794	53.9216	6.330
0.57000	459.32157	0.0679	297529.2605	7.1150	56.1972	6.605



0.47500	448,45809	0.49728	291874,6299	7.1534	48,5174	8.478
0.58000	477,18174	0.705A	282280,8105	6,0971	40,8815	7.158
0.98000	485,44787	0.7182	269817,6485	7,0110	43,2884	7.439
0.99000	490,01679	0.730A	254299,0511	6,9727	45,7319	7.727
0.99500	502,18404	0.742A	217312,1451	4,8164	48,2244	8.019
0.00000	510,17194	0.754A	218004,5747	4,8573	70,7594	8.317
0.00500	517,97508	0.7660	199710,4715	4,8010	73,3298	8.619
0.01000	525,59059	0.7773	179772,9401	4,7457	75,9388	8.925
0.01500	533,01565	0.7882	159840,7327	4,6913	78,5844	9.217
0.02000	540,24873	0.7989	139967,5124	4,6378	81,2687	9.559
0.02500	547,28437	0.8093	119441,6440	4,5852	83,9874	9.873
0.03000	554,12849	0.8195	99851,9531	4,5334	86,7412	10.195
0.03500	560,77337	0.8293	82747,7118	4,4824	89,5285	10,523
0.04000	567,21993	0.8388	67689,1712	4,4323	92,3486	10,854
0.04500	573,46743	0.8481	53814,2024	4,3830	95,2004	11,189
0.05000	579,51604	0.8570	42145,5473	4,3346	98,0839	11,528
0.05500	585,36504	0.8656	32241,8042	4,2870	100,9992	11,871
0.06000	591,01473	0.8740	24515,2910	4,2404	103,9462	12,214
0.06500	594,46549	0.8821	18251,8434	4,1947	106,9240	12,554
0.07000	601,71784	0.8899	13081,3407	4,1497	109,9334	12,891
0.07500	608,77284	0.8973	9489,8247	4,1052	112,9719	13,227
0.08000	611,43091	0.9045	7070,6433	4,0615	115,9808	13,476
0.08500	618,29337	0.9114	4947,6448	4,0186	119,0174	13,991
0.09000	620,74259	0.9180	3441,3714	3,9769	122,1104	14,355
0.09500	625,03877	0.9245	2422,4503	3,9367	125,2451	14,721
0.10000	629,12416	0.9308	1753,6982	3,8980	128,4186	15,089
0.10500	633,02052	0.9368	1244,3145	3,8607	131,6251	15,467
0.11000	636,72977	0.9417	909,2931	3,8245	134,8595	15,811
0.11500	640,25404	0.9464	651,4591	3,7894	137,9010	16,204
0.12000	643,59547	0.9510	481,4094	3,7552	140,1137	16,588
0.12500	646,75437	0.9554	367,8540	3,7224	142,5487	16,965
0.13000	649,73913	0.9596	290,9113	3,6904	144,9360	17,144
0.13500	652,56622	0.9636	177,4924	3,6594	147,5858	17,329
0.14000	655,18077	0.9674	111,4544	3,6294	150,1052	17,513
0.14500	657,44371	0.9712	48,4395	3,5997	152,4873	17,690
0.15000	659,43944	0.9750	48,4394	3,5702	144,4813	18,088
0.15500	661,03841	0.9787	0,0000	3,5422	147,3017	18,664
0.16000	662,50037	0.9821	0,0000	3,5154	149,9400	20,444
0.16500	663,84771	0.9853	0,0000	3,4895	149,6487	21,233
0.17000	665,08441	0.9884	0,0000	3,4643	147,3449	22,022
0.17500	666,24459	0.9912	0,0000	3,4394	146,0999	22,814
0.18000	667,34189	0.9940	0,0000	3,4149	144,8480	23,607
0.18500	668,37722	0.9968	0,0000	3,3904	143,6070	24,401
0.19000	669,35464	1,0000	0,0000	3,3671	214,3448	25,194
0.19500	670,28791	0.9995	0,0000	3,3444	221,3295	25,990
0.20000	671,18745	0,0000	0,0000	3,3224	227,8844	26,784
0.20500	672,05337	0,0000	0,0000	3,3009	218,4294	27,577
0.21000	672,88537	0,0000	0,0000	3,2794	241,3404	28,364
0.21500	673,68314	0,0000	0,0000	3,2584	248,0737	29,157
0.22000	674,44739	0,0000	0,0000	3,2380	254,7450	29,944
0.22500	675,17844	0,0000	0,0000	3,2181	261,4311	30,727
0.23000	675,87644	0,0000	0,0000	3,1984	268,0847	31,507
0.23500	676,54177	0,0000	0,0000	3,1790	274,6747	32,284
0.24000	677,17464	0,0000	0,0000	3,1600	281,2044	33,054
0.24500	677,77537	0,0000	0,0000	3,1412	287,7000	33,824
0.25000	678,34464	0,0000	0,0000	3,1228	294,1694	34,584
0.25500	678,88291	0,0000	0,0000	3,1046	300,6184	35,335
0.26000	679,39064	0,0000	0,0000	3,0864	307,0434	36,080
0.26500	679,86841	0,0000	0,0000	3,0694	313,4404	36,820
0.27000	680,31664	0,0000	0,0000	3,0524	319,8154	37,556
0.27500	680,73491	0,0000	0,0000	3,0364	326,1654	38,286
0.28000	681,12364	0,0000	0,0000	3,0204	332,4854	39,011
0.28500	681,49291	0,0000	0,0000	3,0054	338,7704	39,731
0.29000	681,84264	0,0000	0,0000	2,9904	345,0154	40,446
0.29500	682,17291	0,0000	0,0000	2,9754	351,2154	41,156
0.30000	682,48364	0,0000	0,0000	2,9604	357,3654	41,861
0.30500	682,77491	0,0000	0,0000	2,9454	363,4604	42,561
0.31000	683,04664	0,0000	0,0000	2,9304	369,5054	43,256
0.31500	683,29891	0,0000	0,0000	2,9154	375,4954	43,946
0.32000	683,53164	0,0000	0,0000	2,9004	381,4254	44,631
0.32500	683,74491	0,0000	0,0000	2,8854	387,2904	45,311
0.33000	683,92864	0,0000	0,0000	2,8704	393,0854	45,986
0.33500	684,09291	0,0000	0,0000	2,8554	398,8054	46,656
0.34000	684,23764	0,0000	0,0000	2,8404	404,4454	47,321
0.34500	684,36291	0,0000	0,0000	2,8254	410,0004	47,981
0.35000	684,46864	0,0000	0,0000	2,8104	415,4654	48,636
0.35500	684,55491	0,0000	0,0000	2,7954	420,8354	49,286
0.36000	684,62264	0,0000	0,0000	2,7804	426,1054	49,931
0.36500	684,67191	0,0000	0,0000	2,7654	431,2704	50,571
0.37000	684,70264	0,0000	0,0000	2,7504	436,3254	51,206
0.37500	684,71491	0,0000	0,0000	2,7354	441,2704	51,836
0.38000	684,71864	0,0000	0,0000	2,7204	446,1004	52,461
0.38500	684,71391	0,0000	0,0000	2,7054	450,8154	53,081
0.39000	684,70064	0,0000	0,0000	2,6904	455,4104	53,696
0.39500	684,67891	0,0000	0,0000	2,6754	460,8804	54,306
0.40000	684,64864	0,0000	0,0000	2,6604	466,2204	54,911
0.40500	684,61064	0,0000	0,0000	2,6454	471,4254	55,511
0.41000	684,56491	0,0000	0,0000	2,6304	476,4904	56,106
0.41500	684,51164	0,0000	0,0000	2,6154	481,4104	56,696
0.42000	684,45091	0,0000	0,0000	2,6004	486,1854	57,281
0.42500	684,38264	0,0000	0,0000	2,5854	490,8104	57,861
0.43000	684,30691	0,0000	0,0000	2,5704	495,2854	58,436
0.43500	684,22364	0,0000	0,0000	2,5554	499,6104	58,996
0.44000	684,13291	0,0000	0,0000	2,5404	503,7854	59,551
0.44500	684,03464	0,0000	0,0000	2,5254	507,8104	60,101
0.45000	683,92891	0,0000	0,0000	2,5104	511,6854	60,646
0.45500	683,81564	0,0000	0,0000	2,4954	515,4104	61,186
0.46000	683,69491	0,0000	0,0000	2,4804	518,9854	61,721
0.46500	683,56764	0,0000	0,0000	2,4654	522,4104	62,251
0.47000	683,43391	0,0000	0,0000	2,4504	525,6854	62,776
0.47500	683,29364	0,0000	0,0000	2,4354	528,8104	63,296
0.48000	683,14691	0,0000	0,0000	2,4204	531,7854	63,811
0.48500	682,99364	0,0000	0,0000	2,4054	534,6104	64,321
0.49000	682,83491	0,0000	0,0000	2,3904	537,2854	64,826
0.49500	682,67064	0,0000	0,0000	2,3754	539,8104	65,326
0.50000	682,50191	0,0000	0,0000	2,3604	542,1854	65,821



VISIBILITY AND OTHER DATA FOR BLANCH RADIATION, MECHANICS DIVISION, CU, R. I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3272.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3550.0  
DEGREES FAHRENHEIT = 5930.9

THE POWER RADIATED FROM 0.30 TO 0.75 MICRONS IS 149.75 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 3570.71 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 3570.71 CAND/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.149.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 207.211 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 19.241 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.6103 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.7297 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1000.00 WATT/CM<sup>2</sup> OR 0.00070000 W/CM<sup>2</sup> PER 1/1000 CM<sup>2</sup> AREA AT 1000 CM<sup>2</sup>.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 728.92 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT: WATTS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta E/E = M \Delta T/T$ .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3272.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3550.0  
DEGREES FAHRENHEIT = 5930.9

WAVELENGTH MICRONS	Hemispherical POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPO. M FOR WATTS	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	84.76740	0.0920	0.0000	11.5776	2.4344	0.293
0.35500	73.21177	0.1009	0.0000	11.4185	2.9882	0.332
0.36000	79.29467	0.1100	0.0000	11.2592	3.3711	0.370
0.36500	87.11123	0.1200	0.0000	11.1014	3.7447	0.421
0.37000	94.55502	0.1410	0.0000	10.9514	4.2427	0.471
0.37500	102.31870	0.1410	0.0000	10.8039	4.7348	0.526
0.38000	110.39323	0.1521	0.0000	10.6587	5.2692	0.589
0.38500	118.76974	0.1634	0.0000	10.5251	5.8392	0.644
0.39000	127.41824	0.1755	0.0000	10.4004	6.4544	0.717
0.39500	136.37743	0.1879	0.0000	10.2799	7.1140	0.780
0.40000	145.54667	0.2006	19.5294	10.1717	7.8180	0.868
0.40500	154.92717	0.2134	84.3447	10.0657	8.5703	0.952
0.41000	164.50913	0.2269	134.4320	9.9617	9.3697	1.041
0.41500	174.28574	0.2404	261.2990	9.8607	10.2182	1.134
0.42000	184.24300	0.2544	502.4387	9.7627	11.1167	1.235
0.42500	194.38337	0.2688	948.5418	9.6685	12.0644	1.340
0.43000	204.70831	0.2837	1671.6384	9.5781	13.0682	1.451
0.43500	215.22881	0.2970	2470.6864	9.4916	14.1278	1.564
0.44000	227.04024	0.3128	3551.2278	9.4089	15.2310	1.691
0.44500	237.94425	0.3278	4693.0494	9.3299	16.3836	1.821
0.45000	249.01824	0.3430	6034.6313	9.2544	17.6111	1.956
0.45500	260.24585	0.3584	8491.1004	9.1824	18.9139	2.097
0.46000	271.63079	0.3738	11071.1123	9.1137	20.2917	2.245
0.46500	282.16194	0.3893	14721.2852	9.0481	21.7454	2.399
0.47000	293.92884	0.4048	18184.2941	8.9851	23.2740	2.559
0.47500	305.92874	0.4205	22249.3487	8.9234	24.8766	2.725
0.48000	316.25553	0.4362	26927.4454	8.8637	26.5591	2.898
0.48500	327.98080	0.4518	37691.5653	8.8058	27.7032	3.076
0.49000	339.32134	0.4674	47993.6127	8.7497	29.3714	3.267
0.49500	350.33242	0.4830	61515.0215	8.6944	31.0903	3.453
0.50000	361.90144	0.4985	79488.0604	8.6407	32.8777	3.651
0.50500	373.11474	0.5140	103263.2149	8.5886	34.7142	3.859
0.51000	384.25940	0.5293	131432.0841	8.5379	36.6087	4.065
0.51500	395.32352	0.5444	163882.5460	8.4881	38.5577	4.289
0.52000	406.29542	0.5597	196150.4265	8.4395	40.5610	4.504
0.52500	417.16407	0.5747	228951.9530	8.3924	42.6205	4.733
0.53000	427.91891	0.5895	250828.9492	8.3467	44.7332	4.968
0.53500	438.54994	0.6041	272869.7499	8.3024	46.8995	5.208
0.54000	449.04744	0.6186	291306.2113	8.2594	49.1195	5.455
0.54500	459.40323	0.6329	306146.3114	8.2177	51.3897	5.707
0.55000	469.60820	0.6469	317736.6092	8.1772	53.7123	5.965
0.55500	479.65474	0.6608	326145.2354	8.1380	56.0855	6.228
0.56000	489.51554	0.6744	331219.7743	8.1001	58.5085	6.497
0.56500	499.24389	0.6877	333556.6421	8.1144	60.9806	6.779
0.57000	508.77330	0.7009	329359.5445	8.1144	63.5007	7.052



1,50000	194,15317	0,4881	0,0000	2,4957	A15,686A	67,261
1,60000	197,40936	0,4881	0,0000	2,4957	A15,7484	70,936
1,70000	202,62163	0,4887	0,0000	2,4957	A17,8271	75,124
1,80000	212,91833	0,4900	0,0000	2,4981	A17,8555	76,499
1,90000	221,11044	0,4908	0,0000	2,4994	714,2101	77,315
2,00000	177,51822	0,2444	0,0000	2,1114	711,218A	81,425
2,10000	155,78539	0,2141	0,0000	2,2573	749,8467	81,272
2,20000	146,72851	0,1884	0,0000	2,1884	777,4397	84,899
2,30000	170,50014	0,1860	0,0000	2,1271	772,2800	84,319
2,40000	104,50177	0,1467	0,0000	2,0712	748,6131	87,377
2,50000	94,40101	0,1100	0,0000	2,0201	798,4439	88,891
2,60000	81,91182	0,115A	0,0000	1,9749	807,5473	89,889
2,70000	74,79888	0,1030	0,0000	1,9415	815,4873	90,460
2,80000	66,85073	0,0921	0,0000	1,9023	822,5457	91,345
2,90000	52,99875	0,0825	0,0000	1,8681	828,6754	92,048
3,00000	51,41000	0,0741	0,0000	1,8273	A14,5555	92,674
3,10000	44,44944	0,0664	0,0000	1,7721	819,6652	93,244
3,20000	41,75025	0,0613	0,0000	1,7261	848,2706	93,758
3,30000	39,59181	0,0565	0,0000	1,716A	848,4117	94,220
3,40000	35,90108	0,0495	0,0000	1,711A	852,0488	94,639
3,50000	32,62754	0,0440	0,0000	1,6642	855,8291	95,019
3,60000	29,71195	0,0400	0,0000	1,6212	859,7421	95,165
3,70000	27,11155	0,0375	0,0000	1,6485	861,5813	95,680
3,80000	24,78420	0,0341	0,0000	1,6262	864,1716	95,968
3,90000	22,69013	0,0313	0,0000	1,6272	866,5452	96,232
4,00000	20,82258	0,3287	0,0000	1,6444	868,7205	96,471
4,10000	19,18115	0,3144	0,0000	1,6503	870,7174	96,689
4,20000	17,82117	0,3021	0,0000	1,6588	872,5542	96,899
4,30000	16,82475	0,2924	0,0000	1,6500	874,2445	97,087
4,40000	15,20041	0,2807	0,0000	1,6403	875,8081	97,260
4,50000	13,97878	0,0191	0,0000	1,6319	877,2513	97,421
4,60000	12,85243	0,177	0,0000	1,6344	878,5849	97,569
4,70000	11,81295	0,164	0,0000	1,6427	879,8248	97,706
4,80000	11,07005	0,1552	0,0000	1,6507	880,9737	97,834
4,90000	10,29805	0,1442	0,0000	1,6494	882,0413	97,952
5,00000	9,58444	0,1332	0,0000	1,6505	883,0387	98,061
5,10000	8,91854	0,0123	0,0000	1,6493	884,9602	98,164
5,20000	8,31852	0,0115	0,0000	1,6477	886,8216	98,261
5,30000	7,79132	0,107	0,0000	1,6455	888,6275	98,351
5,40000	7,34762	0,1160	0,0000	1,6417	890,3631	98,435
5,50000	6,92194	0,0894	0,0000	1,6312	892,0483	98,513
5,60000	6,51943	0,1088	0,0000	1,6257	893,7491	98,584
5,70000	6,140168	0,1081	0,0000	1,6172	895,3647	98,655
5,80000	5,78479	0,0978	0,0000	1,6077	896,9574	98,728
5,90000	5,459909	0,0873	0,0000	1,5973	898,4970	98,790
6,00000	4,94422	0,1069	0,0000	1,5859	899,9110	98,838
6,10000	4,62594	0,1065	0,0000	1,578A	901,3150	98,891
6,20000	4,42042	0,1061	0,0000	1,5621	902,6979	98,942
6,30000	4,17594	0,105A	0,0000	1,5458	904,1309	98,990
6,40000	3,94284	0,1054	0,0000	1,5298	905,7887	99,035
6,50000	3,72574	0,0051	0,0000	1,5145	907,1700	99,077
6,60000	3,52333	0,0049	0,0000	1,4981	908,5123	99,118
6,70000	3,34443	0,004A	0,0000	1,4827	909,8751	99,156
6,80000	3,18727	0,1045	0,0000	1,4674	911,1296	99,192
6,90000	2,99307	0,1041	0,0000	1,4522	912,5071	99,224

7,00000	2,81863	0,0039	0,0000	1,4372	913,7084	99,258
7,10000	2,69405	0,1037	0,0000	1,4224	914,9751	99,289
7,20000	2,58454	0,1045	0,0000	1,4177	916,1177	99,318
7,30000	2,491142	0,0033	0,0000	1,4031	917,1401	99,346
7,40000	2,41204	0,0042	0,0000	1,3947	918,0742	99,372
7,50000	2,34905	0,0030	0,0000	1,3843	918,9244	99,397
7,60000	2,30052	0,0029	0,0000	1,3742	919,7645	99,421
7,70000	1,26432	0,0027	0,0000	1,3641	920,5889	99,444
7,80000	1,20197	0,0016	0,0000	1,3521	921,4617	99,465
7,90000	1,15334	0,0025	0,0000	1,3403	922,3495	99,48A
8,00000	1,73084	0,0026	0,0000	1,3245	923,0287	99,50A
8,10000	1,65757	0,0023	0,0000	1,3202	924,1958	99,524
8,20000	1,57862	0,0022	0,0000	1,3073	925,1573	99,542
8,30000	1,50875	0,0021	0,0000	1,2939	926,5117	99,559
8,40000	1,44271	0,0020	0,0000	1,2805	927,6492	99,574
8,50000	1,38022	0,0019	0,0000	1,2672	928,8003	99,591
8,60000	1,32108	0,0018	0,0000	1,2540	929,9354	99,60A
8,70000	1,26507	0,0017	0,0000	1,2409	931,0644	99,621
8,80000	1,21194	0,0017	0,0000	1,2278	932,1885	99,635
8,90000	1,16166	0,0016	0,0000	1,2149	933,2899	99,648
9,00000	1,11191	0,0015	0,0000	1,2020	934,3702	99,660
9,10000	1,06854	0,0014	0,0000	1,1891	935,4300	99,673
9,20000	1,02553	0,0014	0,0000	1,1763	936,4747	99,684
9,30000	0,98284	0,0013	0,0000	1,163A	937,5021	99,697
9,40000	0,94574	0,0013	0,0000	1,1504	938,5117	99,706
9,50000	0,90875	0,0012	0,0000	1,1374	939,5044	99,716
9,60000	0,87155	0,0012	0,0000	1,1259	940,0135	99,726
9,70000	0,84003	0,0011	0,0000	1,1134	940,8091	99,736
9,80000	0,80811	0,0011	0,0000	1,1020	941,8115	99,745
9,90000	0,77768	0,0011	0,0000	1,0918	942,2608	99,754
10,00000	0,74847	0,0010	0,0000	1,0814	943,3371	99,762
10,10000	0,72160	0,0000	0,0000	1,0710	944,4106	99,770
10,20000	0,69859	0,0010	0,0000	1,061A	945,4814	99,778
10,30000	0,68049	0,0009	0,0000	1,050A	946,5495	99,786
10,40000	0,66530	0,0009	0,0000	1,0407	947,6153	99,793
10,50000	0,62210	0,0009	0,0000	1,0301	948,6786	99,800
10,60000	0,60031	0,000A	0,0000	1,0203	949,7398	99,807
10,70000	0,57924	0,0008	0,0000	1,0103	950,7987	99,813
10,80000	0,55914	0,0008	0,0000	1,0003	951,8547	99,820
10,90000	0,53991	0,0007	0,0000	1,0874	952,9106	99,828
11,00000	0,52147	0,0007	0,0000	1,0755	953,9617	99,832
11,10000	0,50382	0,0007	0,0000	1,063A	954,0149	99,837
11,20000	0,48691	0,0007	0,0000	1,0518	954,0665	99,843
11,30000	0,47070	0,0006	0,0000	1,0400	954,1173	99,848
11,40000	0,45514	0,0006	0,0000	1,0282	954,1586	99,853
11,50000	0,44025	0,0006	0,0000	1,0165	954,2034	99,858
11,60000	0,42595	0,000A	0,0000	1,0048	954,2467	99,863
11,70000	0,41222	0,0006	0,0000	1,0831	954,2886	99,868
11,80000	0,39908	0,0005	0,0000	1,0715	954,3291	99,872
11,90000	0,38639	0,0005	0,0000	1,0609	954,3684	99,877
12,00000	0,37423	0,0004	0,0000	1,0503	954,4064	99,881

RESULTS OF CALCULATIONS FOR PLANK RADIATION, MECHANICAL DESIGN, GRAFLEX, UNIVERSITY OF TORONTO

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1324.8 DEGREES CENTIGRADE FOR THE TOTAL VISIBLE FLUX. LIGHTS R = 3600.0  
 DEGREES FAHRENHEIT = 8020.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 134.66 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 10000.16 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (TYPE OF TOTAL VISIBLE FLUX) IS 1540.13 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE FLUX TO THE TOTAL POWER IS 0.1941.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 208.39 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL AREA IS 10000.16 WATTS/CM<sup>2</sup>.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.65 MICRONS.

THE WAVELENGTH PROVIDED MOST EFFICIENCY IS 0.50 MICRONS. ILLUMINANCE MAINTAINS THE RATIO OF SPECTRAL RADIANCE TO TOTAL RADIANCE CONSTANT.

THE TOTAL POWER RADIATED IS 452.22 WATT/CM<sup>2</sup> OR 0.5222 WATT/CM<sup>2</sup> PER MICRON. WAVELENGTH RANGE IS 0.40 TO 0.75 MICRONS.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 774.50 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT X PER AREA (TYPE OF VISIBLE FLUX) X VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED THE CHANGE IN RADIANT EMITTANCE CAN BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING EQUATION:  $\frac{\Delta E}{E} = M \frac{\Delta T}{T}$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1324.8 DEGREES CENTIGRADE FOR THE TOTAL VISIBLE FLUX. LIGHTS R = 3600.0  
 DEGREES FAHRENHEIT = 8020.2

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> PER MICRON	POWER NORMALIZED TO PLANK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EFFECTIVE PER WATT	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	28.41495	0.1037	61.000	11.1144	3.1504	0.331
0.35500	45.28034	0.1102	61.000	11.2542	3.4444	0.374
0.36000	73.21117	0.1170	61.000	11.4027	4.0128	0.421
0.36500	110.24402	0.1240	61.000	11.5607	4.8304	0.473
0.37000	157.28034	0.1313	61.000	11.7294	5.9227	0.528
0.37500	214.32034	0.1390	61.000	11.9094	7.3027	0.584
0.38000	281.36034	0.1470	61.000	12.1016	8.9927	0.651
0.38500	358.40034	0.1553	61.000	12.3064	11.0227	0.721
0.39000	445.44034	0.1640	61.000	12.5244	13.4127	0.797
0.39500	542.48034	0.1730	61.000	12.7564	16.1727	0.877
0.40000	650.52034	0.1823	61.000	13.0034	19.3227	0.941
0.40500	768.56034	0.1920	61.000	13.2664	22.8827	1.051
0.41000	896.60034	0.2020	61.000	13.5464	26.8627	1.150
0.41500	1034.64034	0.2123	61.000	13.8434	31.2827	1.250
0.42000	1182.68034	0.2230	61.000	14.1584	36.1527	1.360
0.42500	1340.72034	0.2340	61.000	14.4914	41.4827	1.474
0.43000	1508.76034	0.2453	61.000	14.8434	47.2827	1.594
0.43500	1686.80034	0.2570	61.000	15.2154	53.5527	1.720
0.44000	1874.84034	0.2690	61.000	15.6084	60.2927	1.852
0.44500	2072.88034	0.2813	61.000	16.0234	67.5127	1.991
0.45000	2280.92034	0.2940	61.000	16.4614	75.2127	2.134
0.45500	2498.96034	0.3070	61.000	16.9234	83.4927	2.287
0.46000	2726.00034	0.3203	61.000	17.4104	92.3527	2.445
0.46500	2964.04034	0.3340	61.000	17.9234	101.7927	2.609
0.47000	3212.08034	0.3480	61.000	18.4634	111.8127	2.774
0.47500	3470.12034	0.3623	61.000	19.0304	122.4127	2.937
0.48000	3738.16034	0.3770	61.000	19.6254	133.5927	3.101
0.48500	4016.20034	0.3920	61.000	20.2484	145.3527	3.267
0.49000	4304.24034	0.4073	61.000	20.9004	157.6927	3.434
0.49500	4602.28034	0.4230	61.000	21.5824	170.6127	3.601
0.50000	4910.32034	0.4390	61.000	22.2954	184.1127	3.767
0.50500	5228.36034	0.4553	61.000	23.0404	198.1927	3.931
0.51000	5556.40034	0.4720	61.000	23.8174	212.8527	4.091
0.51500	5894.44034	0.4890	61.000	24.6274	228.0927	4.247
0.52000	6242.48034	0.5063	61.000	25.4704	243.9127	4.401
0.52500	6600.52034	0.5240	61.000	26.3474	260.3127	4.551
0.53000	6968.56034	0.5420	61.000	27.2594	277.2927	4.697
0.53500	7346.60034	0.5603	61.000	28.2074	294.8527	4.839
0.54000	7734.64034	0.5790	61.000	29.1924	312.9927	4.977
0.54500	8132.68034	0.5980	61.000	30.2154	331.7127	5.111
0.55000	8540.72034	0.6173	61.000	31.2774	350.9927	5.241
0.55500	8958.76034	0.6370	61.000	32.3794	370.8327	5.367
0.56000	9386.80034	0.6570	61.000	33.5224	391.2327	5.489
0.56500	9824.84034	0.6773	61.000	34.7074	412.1927	5.607
0.57000	10272.88034	0.6980	61.000	35.9354	433.7127	5.721
0.57500	10730.92034	0.7190	61.000	37.2074	455.7927	5.831
0.58000	11198.96034	0.7403	61.000	38.5254	478.4327	5.937
0.58500	11677.00034	0.7620	61.000	39.8904	501.6327	6.041
0.59000	12165.04034	0.7840	61.000	41.3044	525.3927	6.141
0.59500	12663.08034	0.8063	61.000	42.7684	549.7127	6.237
0.60000	13171.12034	0.8290	61.000	44.2844	574.5927	6.331
0.60500	13689.16034	0.8520	61.000	45.8534	600.0327	6.421
0.61000	14217.20034	0.8753	61.000	47.4774	626.0327	6.507
0.61500	14755.24034	0.8990	61.000	49.1584	652.5927	6.589
0.62000	15303.28034	0.9230	61.000	50.8984	679.7127	6.667
0.62500	15861.32034	0.9473	61.000	52.6994	707.3927	6.741
0.63000	16429.36034	0.9720	61.000	54.5634	735.6327	6.811
0.63500	17007.40034	0.9970	61.000	56.4924	764.4327	6.877
0.64000	17595.44034	1.0223	61.000	58.4884	793.7927	6.941
0.64500	18193.48034	1.0480	61.000	60.5534	823.7127	7.001
0.65000	18801.52034	1.0740	61.000	62.6894	854.1927	7.057
0.65500	19419.56034	1.1003	61.000	64.8984	885.2327	7.111
0.66000	20047.60034	1.1270	61.000	67.1834	916.8327	7.161
0.66500	20685.64034	1.1540	61.000	69.5474	948.9927	7.207
0.67000	21333.68034	1.1813	61.000	71.9934	981.7127	7.251
0.67500	21991.72034	1.2090	61.000	74.5244	1014.9927	7.291
0.68000	22659.76034	1.2370	61.000	77.1434	1048.8327	7.327
0.68500	23337.80034	1.2653	61.000	79.8544	1083.2327	7.361
0.69000	24025.84034	1.2940	61.000	82.6604	1118.1927	7.391
0.69500	24723.88034	1.3230	61.000	85.5654	1153.7127	7.417
0.70000	25431.92034	1.3523	61.000	88.5724	1189.7927	7.441
0.70500	26149.96034	1.3820	61.000	91.6844	1226.4327	7.461
0.71000	26877.00034	1.4120	61.000	94.9054	1263.6327	7.477
0.71500	27614.04034	1.4423	61.000	98.2394	1301.3927	7.491
0.72000	28361.08034	1.4730	61.000	101.6894	1339.7127	7.501
0.72500	29118.12034	1.5040	61.000	105.2594	1378.5927	7.507
0.73000	29885.16034	1.5353	61.000	108.9534	1418.0327	7.509
0.73500	30662.20034	1.5670	61.000	112.7754	1458.0327	7.507
0.74000	31449.24034	1.5990	61.000	116.7294	1498.5927	7.501
0.74500	32246.28034	1.6313	61.000	120.8184	1539.7127	7.491
0.75000	33053.32034	1.6640	61.000	125.0374	1581.3927	7.477







VISIBILITY AND OTHER DATA FOR PLANAR BLACK BODY MECHANICS DIVISION, CALIFORNIA UNIVERSITY OF BERKELEY

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3373.4 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3350.0  
DEGREES FAHRENHEIT = 6110.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 174.66 WATTS/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 42845.02 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 13815.08 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.2031.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE MEAN IS 209.402 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 42.567 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7641 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 1.0000 MICRONS.  
I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE.

THE TOTAL POWER RADIATED IS 1000.31 WATTS/CM<sup>2</sup> OR 1.000310E+06 WATTS/SEC/CM<sup>2</sup> OR 1.000310E+06 WATTS/SEC/CM<sup>2</sup>.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 434.00 WATTS/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT AND DIMENSION PER WATT W RADIANT EXITANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta W = W * M * \Delta T$ .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3373.4 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3350.0  
DEGREES FAHRENHEIT = 6110.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPO. M FOR WATT/M	POWER FROM 2% TO L	% TOTAL POWER 2% TO L
0.35000	91.48942	0.1000	0.0000	11.2614	2.7537	0.373
0.35500	100.9117	0.1200	0.0000	11.1014	4.2330	0.421
0.36000	108.49071	0.1400	0.0000	10.9477	4.7554	0.471
0.36500	114.07814	0.1616	0.0000	10.7977	5.3224	0.520
0.37000	127.44260	0.1537	0.0000	10.6510	5.9367	0.590
0.37500	137.57154	0.1649	0.0000	10.5099	6.5996	0.654
0.38000	147.45117	0.1773	0.0000	10.3714	7.3130	0.727
0.38500	154.46632	0.1900	0.0000	10.2370	8.0767	0.803
0.39000	169.40104	0.2031	0.0000	10.1058	8.8903	0.884
0.39500	180.43812	0.2166	0.0000	9.9770	9.7732	0.971
0.40000	192.15952	0.2302	52.2474	9.8531	10.7051	1.064
0.40500	203.46687	0.2445	117.9471	9.7317	11.6893	1.162
0.41000	215.24051	0.2586	176.2401	9.6131	12.7440	1.267
0.41500	228.24092	0.2734	241.4445	9.4973	13.8554	1.377
0.42000	240.70009	0.2886	314.7240	9.3844	15.0278	1.493
0.42500	253.34151	0.3034	395.6065	9.2740	16.2620	1.614
0.43000	266.14044	0.3191	484.0332	9.1663	17.5617	1.745
0.43500	279.14504	0.3347	579.0512	9.0610	18.9240	1.881
0.44000	292.23409	0.3504	680.7411	8.9582	20.3513	2.023
0.44500	305.42733	0.3662	789.0269	8.8577	21.8474	2.171
0.45000	318.70455	0.3821	893.9255	8.7594	23.4077	2.324
0.45500	332.04974	0.3981	1003.4743	8.6632	25.0344	2.480
0.46000	345.43139	0.4141	1117.6004	8.5692	26.7243	2.644
0.46500	358.84213	0.4302	1236.3159	8.4772	28.4800	2.811
0.47000	372.25021	0.4463	1359.5397	8.3872	30.3067	3.013
0.47500	385.66432	0.4624	1487.2743	8.2991	32.2115	3.201
0.48000	399.01969	0.4784	1619.5217	8.2128	34.1933	3.396
0.48500	412.34814	0.4944	1756.2844	8.1284	36.2514	3.597
0.49000	425.61307	0.5103	1897.5618	8.0454	38.3869	3.806
0.49500	438.81853	0.5261	2043.3523	7.9646	40.5980	4.020
0.50000	451.96814	0.5418	2193.6555	7.8852	42.8844	4.237
0.50500	464.99044	0.5574	2348.4770	7.8071	45.2469	4.459
0.51000	477.74829	0.5728	2507.8200	7.7310	47.6836	4.704
0.51500	490.26950	0.5880	2671.7091	7.6562	50.1942	4.964
0.52000	502.50184	0.6031	2840.1460	7.5829	52.7780	5.191
0.52500	514.44214	0.6180	2992.1324	7.5110	55.4343	5.444
0.53000	527.09044	0.6327	3093.11425	7.4404	57.1623	5.703
0.53500	539.74683	0.6471	3350.304804	7.3712	60.0609	5.968
0.54000	551.61015	0.6613	3574.03334	7.3033	62.7894	6.240
0.54500	563.27179	0.6753	3753.043233	7.2366	65.3767	6.517
0.55000	574.72133	0.6890	3888.57042	7.1712	67.4310	6.799
0.55500	585.91698	0.7025	3984.57441	7.1069	71.3236	7.088
0.56000	596.96554	0.7157	4030.04134	7.0439	74.2810	7.382
0.56500	607.74263	0.7286	4045.04230	6.9819	77.2924	7.681
0.57000	618.28221	0.7413	4029.511720	6.9211	80.3540	7.985

0.57500	478,57907	0.7518	191101,8650	4,4413	41,8752	4,295
0.58000	478,42817	0.7457	17712,5116	4,4424	40,8811	4,610
0.58500	484,42541	0.7378	160219,5040	4,4440	42,8611	4,915
0.59000	487,98821	0.7289	144085,7180	4,4462	43,1272	5,254
0.59500	487,25225	0.7196	128143,1191	4,4490	44,4803	5,584
0.60000	476,27482	0.7104	209174,9292	4,4521	49,7992	9,917
0.60500	485,31117	0.6971	248171,8521	4,4563	101,2024	10,254
0.61000	491,32912	0.6831	217318,8543	4,4610	106,4431	10,594
0.61500	701,75723	0.6684	212612,0116	4,4662	110,1175	10,945
0.62000	700,71992	0.6579	184876,2110	4,4721	111,4645	11,295
0.62500	717,41110	0.6480	164596,9416	4,4783	117,2182	11,650
0.63000	724,41049	0.6387	150616,1110	4,4852	120,8192	12,008
0.63500	731,99984	0.6300	108011,7647	4,4927	124,4821	12,370
0.64000	738,80192	0.6218	47928,1386	4,5010	128,1595	12,738
0.64500	745,51914	0.6143	40957,5152	4,5100	131,8706	13,104
0.65000	751,86201	0.6074	58716,0162	4,5197	135,6182	13,474
0.65500	757,98204	0.6011	41789,4853	4,5300	139,1890	13,850
0.66000	763,92151	0.5954	11481,2244	4,5410	143,1916	14,230
0.66500	769,61104	0.5904	21541,7719	4,5527	147,0268	14,610
0.67000	775,07634	0.5860	14588,0714	4,5650	150,8822	14,994
0.67500	779,76381	0.5822	12195,0848	4,5779	154,7716	15,380
0.68000	784,61001	0.5790	9070,1023	4,5914	158,6847	15,769
0.68500	789,17924	0.5764	4386,0828	4,6057	162,1212	16,160
0.69000	793,50290	0.5744	4474,5227	4,6207	165,8741	16,551
0.69500	797,58177	0.5729	1091,4318	4,6363	170,5510	16,944
0.70000	801,42541	0.5719	2234,1741	4,6526	174,5515	17,346
0.70500	805,13146	0.5714	1587,5220	4,6696	178,5677	17,745
0.71000	808,69952	0.5714	1158,4022	4,6872	182,4014	18,140
0.71500	811,85100	0.5713	827,7820	4,7054	185,8514	18,534
0.72000	814,87198	0.5718	499,2240	4,7241	190,7165	18,952
0.72500	817,17222	0.5727	388,9740	4,7434	194,7047	19,357
0.73000	819,65566	0.5740	278,6870	4,7633	198,8879	19,784
0.73500	821,92629	0.5757	221,5440	4,7838	202,9910	20,172
0.74000	823,39411	0.5779	168,2916	4,8048	207,1068	20,591
0.74500	825,86518	0.5805	112,3140	4,8263	211,2115	20,901
0.75000	827,90201	0.5835	56,2701	4,8484	215,2649	21,401
0.75500	830,21083	0.5869	0,0000	4,8710	224,6542	22,225
0.76000	832,27064	0.5907	0,0000	4,8941	231,0670	23,051
0.76500	833,88910	0.5948	0,0000	4,9187	240,2040	23,879
0.77000	834,03888	0.5993	0,0000	4,9448	248,8180	24,708
0.77500	833,98111	0.6042	0,0000	4,9724	248,9745	25,536
0.78000	833,76505	0.6095	0,0000	5,0014	245,3112	26,365
0.78500	833,48120	0.6152	0,0000	5,0319	243,4370	27,192
0.79000	833,14784	0.6213	0,0000	5,0638	241,0400	28,018
0.79500	827,74911	0.6278	0,0000	5,0971	239,2391	28,842
0.80000	824,39877	0.6347	0,0000	5,1319	238,5011	29,661
0.80500	821,22350	0.6419	0,0000	5,1681	238,7343	30,481
0.81000	817,87664	0.6495	0,0000	5,2058	314,9342	31,294
0.81500	813,72501	0.6575	0,0000	5,2449	325,0025	32,107
0.82000	809,19817	0.6659	0,0000	5,2857	331,2074	32,911
0.82500	804,30647	0.6747	0,0000	5,3284	339,2752	33,715
0.83000	799,09477	0.6839	0,0000	5,3729	347,2025	34,512
0.83500	793,57940	0.6934	0,0000	5,4193	355,2541	35,303
0.84000	787,76177	0.7032	0,0000	5,4674	363,1632	36,089
0.84500	781,72844	0.7132	0,0000	5,5172	371,0159	36,864

0.95000	775,43000	0.9257	0,0000	9,2151	378,7949	37,642
0.96000	769,91755	0.9319	0,0000	9,1791	366,5148	38,410
0.97000	762,20443	0.9384	0,0000	9,1461	354,1745	39,170
0.98000	755,31557	0.9451	0,0000	9,1162	341,7623	39,924
0.99000	748,26082	0.9521	0,0000	9,0896	329,2851	40,671
1.00000	741,06020	0.9593	0,0000	9,0662	316,7270	41,411
1.01000	733,72801	0.9667	0,0000	9,0452	304,1011	42,144
1.02000	726,28179	0.9744	0,0000	9,0267	291,4012	42,870
1.03000	718,73291	0.9823	0,0000	9,0115	278,6288	43,588
1.04000	711,09454	0.9904	0,0000	9,0000	265,7854	44,298
1.05000	703,38210	0.9987	0,0000	9,0000	252,8640	44,991
1.06000	695,60897	0.9613	0,0000	9,0000	240,8610	45,666
1.07000	687,77873	0.9644	0,0000	9,0000	228,7899	46,333
1.08000	679,90210	0.9678	0,0000	9,0000	216,6543	47,003
1.09000	671,98693	0.9714	0,0000	9,0000	204,4579	47,675
1.10000	664,03852	0.9752	0,0000	9,0000	192,2052	48,348
1.11000	656,05554	0.9791	0,0000	9,0000	180,0007	49,024
1.12000	648,11715	0.9832	0,0000	9,0000	167,8497	49,702
1.13000	640,22297	0.9874	0,0000	9,0000	155,7563	50,381
1.14000	632,37411	0.9917	0,0000	9,0000	143,7145	51,061
1.15000	624,57122	0.9961	0,0000	9,0000	131,7282	51,741
1.16000	616,81498	0.9999	0,0000	9,0000	120,0000	52,421
1.17000	609,10245	0.9999	0,0000	9,0000	108,6267	53,101
1.18000	601,73400	0.9970	0,0000	9,0000	97,6037	53,781
1.19000	592,93071	0.9913	0,0000	9,0000	86,9371	54,461
1.20000	585,18515	0.9823	0,0000	9,0000	76,6221	55,141
1.21000	577,49561	0.9693	0,0000	9,0000	66,6549	55,821
1.22000	569,77402	0.9527	0,0000	9,0000	57,0310	56,501
1.23000	562,13994	0.9327	0,0000	9,0000	47,7499	57,181
1.24000	554,60071	0.9096	0,0000	9,0000	38,8165	57,861
1.25000	547,10135	0.8838	0,0000	9,0000	30,2376	58,541
1.26000	539,64688	0.8559	0,0000	9,0000	22,0197	59,221
1.27000	532,24225	0.8263	0,0000	9,0000	14,1597	59,901
1.28000	524,89417	0.7952	0,0000	9,0000	6,7543	60,581
1.29000	517,53132	0.7627	0,0000	9,0000	0,0000	61,261
1.30000	510,58963	0.7291	0,0000	9,0000	0,0000	61,941
1.31000	503,99871	0.6947	0,0000	9,0000	0,0000	62,621
1.32000	496,80214	0.6600	0,0000	9,0000	0,0000	63,301
1.33000	489,94115	0.6254	0,0000	9,0000	0,0000	63,981
1.34000	482,67684	0.5907	0,0000	9,0000	0,0000	64,661
1.35000	475,89023	0.5559	0,0000	9,0000	0,0000	65,341
1.36000	469,18209	0.5204	0,0000	9,0000	0,0000	66,021
1.37000	462,55311	0.4844	0,0000	9,0000	0,0000	66,701
1.38000	456,00384	0.4479	0,0000	9,0000	0,0000	67,381
1.39000	449,53477	0.4111	0,0000	9,0000	0,0000	68,061
1.40000	443,14617	0.3741	0,0000	9,0000	0,0000	68,741
1.41000	436,83829	0.3370	0,0000	9,0000	0,0000	69,421
1.42000	430,61124	0.3000	0,0000	9,0000	0,0000	70,101
1.43000	424,46511	0.2630	0,0000	9,0000	0,0000	70,781
1.44000	418,39984	0.2261	0,0000	9,0000	0,0000	71,461
1.45000	412,41530	0.1893	0,0000	9,0000	0,0000	72,141
1.46000	406,51131	0.1526	0,0000	9,0000	0,0000	72,821
1.47000	400,68760	0.1161	0,0000	9,0000	0,0000	73,501
1.48000	394,94487	0.0797	0,0000	9,0000	0,0000	74,181
1.49000	389,27974	0.0437	0,0000	9,0000	0,0000	74,861

1.50000	181,09872	0.0001	0.0000	2,8121	891,1140	88,877
1.60000	132,17477	0.0001	0.0000	2,8225	728,4415	72,427
1.70000	287,05388	0.0001	0.0000	2,8316	749,7711	75,501
1.80000	248,00551	0.0001	0.0000	2,8354	748,5447	74,164
1.90000	217,00002	0.0001	0.0000	2,8373	809,8747	80,880
2.00000	189,10882	0.0001	0.0000	2,8387	810,1602	81,004
2.10000	165,55889	0.0001	0.0000	2,8398	847,8727	84,254
2.20000	145,27114	0.0001	0.0000	2,8408	843,1854	85,747
2.30000	127,78925	0.0001	0.0000	2,8417	877,0130	87,151
2.40000	112,75633	0.0001	0.0000	2,8424	889,0256	88,365
2.50000	99,00658	0.0001	0.0000	2,8429	899,8330	89,100
2.60000	88,60889	0.0001	0.0000	2,8432	909,0802	90,338
2.70000	78,88851	0.0001	0.0000	2,8434	917,8013	91,145
2.80000	70,43072	0.0001	0.0000	2,8437	926,8505	91,904
2.90000	63,05177	0.0001	0.0000	2,8439	931,5253	92,568
3.00000	56,59188	0.0001	0.0000	2,8442	937,5005	93,142
3.10000	50,92593	0.0001	0.0000	2,8444	942,8704	93,694
3.20000	45,91745	0.0001	0.0000	2,8447	947,7083	94,177
3.30000	41,51501	0.0001	0.0000	2,8449	952,0774	94,611
3.40000	37,43257	0.0001	0.0000	2,8451	956,0322	95,004
3.50000	34,18180	0.0001	0.0000	2,8454	959,6200	95,360
3.60000	31,11044	0.0001	0.0000	2,8456	962,9817	95,684
3.70000	28,37081	0.0001	0.0000	2,8458	966,0512	95,980
3.80000	25,92241	0.0001	0.0000	2,8460	968,8556	96,248
3.90000	23,72983	0.0001	0.0000	2,8462	971,0842	96,484
4.00000	21,78189	0.0001	0.0000	2,8464	972,8190	96,722
4.10000	19,99186	0.0001	0.0000	2,8466	974,3352	96,929
4.20000	18,34651	0.0001	0.0000	2,8468	975,6915	97,120
4.30000	16,84587	0.0001	0.0000	2,8470	976,9086	97,298
4.40000	15,48238	0.0001	0.0000	2,8472	977,9973	97,457
4.50000	14,24082	0.0001	0.0000	2,8474	978,9710	97,607
4.60000	13,10917	0.0001	0.0000	2,8476	979,8314	97,745
4.70000	12,08284	0.0001	0.0000	2,8478	980,5970	97,873
4.80000	11,14755	0.0001	0.0000	2,8480	981,3681	97,992
4.90000	10,29902	0.0001	0.0000	2,8482	982,1441	98,103
5.00000	9,53032	0.0001	0.0000	2,8484	982,9255	98,205
5.10000	8,84771	0.0001	0.0000	2,8486	983,7110	98,301
5.20000	8,24654	0.0001	0.0000	2,8488	984,5000	98,390
5.30000	7,72984	0.0001	0.0000	2,8490	985,2911	98,474
5.40000	7,29994	0.0001	0.0000	2,8492	986,0836	98,552
5.50000	6,94888	0.0001	0.0000	2,8494	986,8864	98,625
5.60000	6,66889	0.0001	0.0000	2,8496	987,6984	98,693
5.70000	6,45314	0.0001	0.0000	2,8498	988,5180	98,757
5.80000	6,29574	0.0001	0.0000	2,8500	989,3441	98,817
5.90000	6,19284	0.0001	0.0000	2,8502	990,1752	98,873
6.00000	6,14959	0.0001	0.0000	2,8504	991,0100	98,926
6.10000	6,17221	0.0001	0.0000	2,8506	991,8488	98,976
6.20000	6,25649	0.0001	0.0000	2,8508	992,6903	99,023
6.30000	6,39842	0.0001	0.0000	2,8510	993,5337	99,068
6.40000	6,59201	0.0001	0.0000	2,8512	994,3780	99,110
6.50000	6,84091	0.0001	0.0000	2,8514	995,2229	99,149
6.60000	7,14824	0.0001	0.0000	2,8516	996,0673	99,187
6.70000	7,51971	0.0001	0.0000	2,8518	996,9106	99,222
6.80000	7,96118	0.0001	0.0000	2,8520	997,7513	99,255
6.90000	8,47854	0.0001	0.0000	2,8522	998,5883	99,287

7.00000	9,08801	0.0001	0.0000	2,8524	999,4374	99,317
7.10000	9,79372	0.0001	0.0000	2,8526	1,000,2924	99,346
7.20000	10,58283	0.0001	0.0000	2,8528	1,001,1546	99,373
7.30000	11,45207	0.0001	0.0000	2,8530	1,002,0230	99,398
7.40000	12,40722	0.0001	0.0000	2,8532	1,002,8974	99,423
7.50000	13,45409	0.0001	0.0000	2,8534	1,003,7770	99,446
7.60000	14,59749	0.0001	0.0000	2,8536	1,004,6610	99,468
7.70000	15,84224	0.0001	0.0000	2,8538	1,005,5480	99,489
7.80000	17,19324	0.0001	0.0000	2,8540	1,006,4380	99,509
7.90000	18,65529	0.0001	0.0000	2,8542	1,007,3300	99,528
8.00000	20,23408	0.0001	0.0000	2,8544	1,008,2240	99,547
8.10000	21,93531	0.0001	0.0000	2,8546	1,009,1190	99,564
8.20000	23,76479	0.0001	0.0000	2,8548	1,010,0150	99,581
8.30000	25,72822	0.0001	0.0000	2,8550	1,010,9120	99,597
8.40000	27,83149	0.0001	0.0000	2,8552	1,011,8100	99,612
8.50000	29,98051	0.0001	0.0000	2,8554	1,012,7080	99,626
8.60000	32,28127	0.0001	0.0000	2,8556	1,013,6060	99,640
8.70000	34,73078	0.0001	0.0000	2,8558	1,014,5040	99,653
8.80000	37,33504	0.0001	0.0000	2,8560	1,015,4020	99,666
8.90000	40,00005	0.0001	0.0000	2,8562	1,016,3000	99,678
9.00000	42,73280	0.0001	0.0000	2,8564	1,017,1980	99,690
9.10000	45,54029	0.0001	0.0000	2,8566	1,018,0960	99,701
9.20000	48,41952	0.0001	0.0000	2,8568	1,018,9940	99,712
9.30000	51,37749	0.0001	0.0000	2,8570	1,019,8920	99,722
9.40000	54,41121	0.0001	0.0000	2,8572	1,020,7900	99,732
9.50000	57,52768	0.0001	0.0000	2,8574	1,021,6880	99,747
9.60000	60,72491	0.0001	0.0000	2,8576	1,022,5860	99,757
9.70000	64,00190	0.0001	0.0000	2,8578	1,023,4840	99,769
9.80000	67,35865	0.0001	0.0000	2,8580	1,024,3820	99,788
9.90000	70,79516	0.0001	0.0000	2,8582	1,025,2800	99,796
10.00000	74,31143	0.0001	0.0000	2,8584	1,026,1780	99,802
10.10000	77,90746	0.0001	0.0000	2,8586	1,027,0760	99,808
10.20000	81,58325	0.0001	0.0000	2,8588	1,027,9740	99,813
10.30000	85,33880	0.0001	0.0000	2,8590	1,028,8720	99,819
10.40000	89,17421	0.0001	0.0000	2,8592	1,029,7700	99,824
10.50000	93,08948	0.0001	0.0000	2,8594	1,030,6680	99,832
10.60000	97,08471	0.0001	0.0000	2,8596	1,031,5660	99,838
10.70000	101,15990	0.0001	0.0000	2,8598	1,032,4640	99,843
10.80000	105,31515	0.0001	0.0000	2,8600	1,033,3620	99,849
10.90000	109,55046	0.0001	0.0000	2,8602	1,034,2600	99,854
11.00000	113,86673	0.0001	0.0000	2,8604	1,035,1580	99,859
11.10000	118,26406	0.0001	0.0000	2,8606	1,036,0560	99,864
11.20000	122,74245	0.0001	0.0000	2,8608	1,036,9540	99,869
11.30000	127,30190	0.0001	0.0000	2,8610	1,037,8520	99,873
11.40000	131,94241	0.0001	0.0000	2,8612	1,038,7500	99,878
11.50000	136,66498	0.0001	0.0000	2,8614	1,039,6480	99,882
11.60000	141,46961	0.0001	0.0000	2,8616	1,040,5460	99,887
11.70000	146,35630	0.0001	0.0000	2,8618	1,041,4440	99,891
11.80000	151,32505	0.0001	0.0000	2,8620	1,042,3420	99,896
11.90000	156,37586	0.0001	0.0000	2,8622	1,043,2400	99,899
12.00000	161,50873	0.0001	0.0000	2,8624	1,044,1380	99,904

VISIBILITY AND THE EFFECT OF PLASMA RADIATION MECHANICS DIVISION, N.R.L., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1624.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3700.0  
DEGREES FAHRENHEIT = 6200.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRONS IS 121.95 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 18747.31 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI) OF TOTAL VISIBLE FLUX IS 14994.17 CAND/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.2111.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 211.247 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 44.344 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER IS 0.4762 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.4762 MICRONS.  
(I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EFFICIENCY TO TOTAL RADIANT EFFICIENCY.)

THE TOTAL POWER RADIATED IS 1142.59 WATT/CM<sup>2</sup> OR 114259.61 BTU/SEC/CM<sup>2</sup> OR 2.6199E+11 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 140.44 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS COLUMN IS THE PRODUCT, WATTS PER SQUARE CENTIMETER PER MICRON \* VISIBILITY FACTOR, WHERE RADIANT EFFICIENCY IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EFFICIENCY CAN BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W/BRTM.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 1624.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3700.0  
DEGREES FAHRENHEIT = 6200.2

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER WATTS/CM <sup>2</sup> PER MICRON	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE PER UNIT M FOR WATT/CM <sup>2</sup>	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	114.27014	0.3124	0.0000	11.1184	4.4674	0.419
0.35500	114.29227	0.31374	0.0000	12.2514	5.0749	0.471
0.36000	114.32597	0.31511	0.0000	13.4924	5.6111	0.524
0.36500	114.37287	0.31654	0.0000	14.8419	6.2691	0.580
0.37000	114.43471	0.31803	0.0000	16.3103	6.9743	0.657
0.37500	114.51422	0.31957	0.0000	17.9079	7.7426	0.729
0.38000	114.61441	0.32116	0.0000	19.6451	8.5804	0.804
0.38500	114.73972	0.32280	0.0000	21.5327	9.4843	0.889
0.39000	114.89425	0.32449	0.0000	23.5813	10.4604	0.977
0.39500	115.08183	0.32623	0.0000	25.8023	11.5144	1.079
0.40000	115.30722	0.32802	52.7116	28.2072	12.6523	1.172
0.40500	115.57511	0.32985	176.8424	30.8073	13.8805	1.274
0.41000	115.89075	0.33173	330.4444	33.6133	15.2044	1.391
0.41500	116.25942	0.33365	504.2374	36.6361	16.6303	1.510
0.42000	116.68647	0.33561	708.9505	39.9774	18.1641	1.635
0.42500	117.17722	0.33761	945.2094	43.6478	19.8111	1.767
0.43000	117.73702	0.33974	1223.6045	47.6572	21.5783	1.904
0.43500	118.37125	0.34199	1645.8441	52.0167	23.4708	2.058
0.44000	119.08542	0.34436	2222.7237	56.7373	25.4931	2.202
0.44500	120.88474	0.34684	2975.0010	61.8201	27.6506	2.341
0.45000	123.88364	0.34943	3922.0190	67.2652	29.9484	2.524
0.45500	128.32415	0.35211	5184.0566	73.0727	32.3894	2.699
0.46000	134.56112	0.35488	6881.0125	79.2423	34.9772	2.874
0.46500	144.10784	0.35774	9144.6602	85.7747	37.7159	3.064
0.47000	157.52181	0.36068	12100.0012	92.6702	40.6091	3.254
0.47500	175.43304	0.36370	15884.1445	99.9272	43.6611	3.454
0.48000	198.52775	0.36680	20644.0599	107.5461	46.8764	3.662
0.48500	228.28404	0.37000	26521.4740	115.5272	50.2584	3.879
0.49000	267.30031	0.37328	33771.1540	123.8702	53.8091	4.094
0.49500	318.24474	0.37664	42643.8409	132.5741	57.5347	4.322
0.50000	384.72324	0.38008	53401.1328	141.6372	61.4403	4.554
0.50500	471.20564	0.38359	66400.0020	151.0592	65.5227	4.794
0.51000	583.18215	0.38717	81900.0693	160.8409	69.8851	5.041
0.51500	724.91818	0.39082	99400.0136	171.0722	74.5261	5.294
0.52000	899.12419	0.39454	119400.0012	181.7527	79.4409	5.553
0.52500	1110.51244	0.39834	142400.0074	192.8802	84.6299	5.819
0.53000	1363.92111	0.40221	169000.0114	204.4623	90.0941	6.090
0.53500	1664.20511	0.40615	199800.0127	216.5072	95.8337	6.368
0.54000	2017.22919	0.41016	235400.0145	229.0221	101.8464	6.651
0.54500	2429.14041	0.41424	276400.0168	242.0141	108.1291	6.941
0.55000	2906.78047	0.41839	323400.0193	255.4902	114.6791	7.238
0.55500	3456.02511	0.42261	377000.0219	269.4561	121.4911	7.537
0.56000	4084.74811	0.42690	437800.0245	283.9172	128.5601	7.843
0.56500	4800.02311	0.43126	506400.0271	298.8781	135.8811	8.154
0.57000	5610.02511	0.43569	583400.0297	314.3441	143.4581	8.471

0.57500	889,65189	0.7725	429101,4036	6.7623	93,4372	8.793
0.58000	700,12201	0.7847	414192,1839	6.7114	96,9118	9.120
0.58500	710,30927	0.7956	394419,3881	6.6545	100,4380	9.459
0.59000	720,21034	0.8067	370735,476A	6.5986	104,0148	9.789
0.59500	729,82988	0.8175	344914,255A	6.5437	107,6398	10.130
0.60000	739,14457	0.8279	317152,1765	6.4897	111,3171	10.474
0.60500	748,14457	0.8380	288665,935A	6.436A	115,0305	10.829
0.61000	756,90892	0.847A	258893,4463	6.3844	118,7833	11.180
0.61500	765,3418A	0.8572	229513,7222	6.3331	122,5991	11.530
0.62000	773,49961	0.866A	200398,2751	6.282A	126,446A	11.900
0.62500	781,34330	0.8752	170951,798A	6.2329	130,3316	12.264
0.63000	789,9133A	0.8836	142142,2743	6.1841	134,259A	12.639
0.63500	79A,1813A	0.891A	117489,520A	6.1360	138,2272	13.00A
0.64000	803,1579A	0.899A	95575,7099	6.088A	142,2207	13.38A
0.64500	809,8450A	0.9071	75995,8619	6.0422	146,2533	13.76A
0.65000	816,24457	0.9143	59389,9548	5.996A	150,3187	14.14A
0.65500	822,3586A	0.9211	45299,5141	5.951A	154,4153	14.539
0.66000	828,189A9	0.927A	34533,3167	5.9070	158,4A18	14.920
0.66500	833,74893	0.933A	25512,472A	5.8631	162,4967	15.311
0.67000	839,01875	0.939A	18256,9689	5.8203	166,4887	15.705
0.67500	844,01451	0.945A	13200,1970	5.7780	171,087A	16.101
0.68000	848,7A3A9	0.9507	9811,4759	5.7363	175,318A	16.499
0.68500	853,20557	0.9557	690A,1389	5.6952	179,573A	16.900
0.69000	857,4039A	0.960A	4780,88A5	5.6547	184,1500	17.302
0.69500	861,34280	0.96A9	3338,5A47	5.6149	188,1470	17.70A
0.70000	865,07A01	0.9727	2411,4925	5.575A	192,4630	18.113
0.70500	868,4576A	0.9761	1712,598A	5.5370	196,796A	18.529
0.71000	871,64203	0.979A	1248,708A	5.4990	201,1472	18.939
0.71500	874,5A31A	0.982A	892,075A	5.4613	205,5128	19.341
0.72000	877,2A601	0.985A	65A,2799	5.4243	209,892A	19.753
0.72500	879,754A4	0.988A	41A,7A31	5.387A	214,2853	20.166
0.73000	881,9932A	0.9907	229,8777	5.351A	218,4897	20.581
0.73500	88A,00696	0.9922	210,4499	5.316A	223,108A	20.998
0.74000	885,80015	0.9937	140,7032	5.281A	227,529A	21.413
0.74500	887,377A7	0.9955	120,6A33	5.2470	231,9625	21.828
0.75000	88A,74359	0.997A	80,1866	5.2130	236,4028	22.246
0.75500	890,4A092	0.9993	0.0000	5.1795	240,8428	22.668
0.76000	892,189A5	0.999A	0.0000	5.1465	245,3015	23.096
0.76500	892,7A7A3	1.0000	0.0000	5.1141	249,787A	23.530
0.77000	892,43152	0.999A	0.0000	5.082A	254,3015	23.969
0.77500	891,41827	0.998A	0.0000	5.051A	258,8428	24.413
0.78000	890,36410	0.9973	0.0000	5.020A	263,407A	24.863
0.78500	889,30451	0.9959	0.0000	4.989A	267,996A	25.318
0.79000	888,24273	0.9950	0.0000	4.959A	272,608A	25.777
0.79500	887,17473	0.9940	0.0000	4.929A	277,2428	26.240
0.80000	886,10671	0.993A	0.0000	4.899A	281,898A	26.707
0.80500	884,43669	0.9927	0.0000	4.870A	286,576A	27.179
0.81000	884,69305	0.991A	0.0000	4.841A	291,276A	27.654
0.81500	884,10A8A	0.9900	0.0000	4.812A	295,997A	28.133
0.82000	88A,11382	0.9890	0.0000	4.783A	300,740A	28.616
0.82500	889,7153A	0.9880	0.0000	4.754A	305,504A	29.102
0.83000	888,00237	0.9865	0.0000	4.725A	310,289A	29.591
0.83500	887,34922	0.985A	0.0000	4.696A	315,095A	30.083
0.84000	884,9490A	0.984A	0.0000	4.667A	319,922A	30.578
0.84500	884,74352	0.9830	0.0000	4.638A	324,770A	31.076
0.85000	884,74352	0.9815	0.0000	4.609A	329,639A	31.577
0.85500	884,74352	0.9800	0.0000	4.580A	334,529A	32.081
0.86000	884,74352	0.9785	0.0000	4.551A	339,439A	32.588
0.86500	884,74352	0.9770	0.0000	4.522A	344,369A	33.097
0.87000	884,74352	0.9755	0.0000	4.493A	349,319A	33.608
0.87500	884,74352	0.9740	0.0000	4.464A	354,289A	34.122
0.88000	884,74352	0.9725	0.0000	4.435A	359,279A	34.638
0.88500	884,74352	0.9710	0.0000	4.406A	364,289A	35.155
0.89000	884,74352	0.9695	0.0000	4.377A	369,309A	35.673
0.89500	884,74352	0.9680	0.0000	4.348A	374,339A	36.192
0.90000	884,74352	0.9665	0.0000	4.319A	379,379A	36.713
0.90500	884,74352	0.9650	0.0000	4.290A	384,429A	37.236
0.91000	884,74352	0.9635	0.0000	4.261A	389,489A	37.761
0.91500	884,74352	0.9620	0.0000	4.232A	394,559A	38.287
0.92000	884,74352	0.9605	0.0000	4.203A	399,639A	38.814
0.92500	884,74352	0.9590	0.0000	4.174A	404,729A	39.342
0.93000	884,74352	0.9575	0.0000	4.145A	409,829A	39.871
0.93500	884,74352	0.9560	0.0000	4.116A	414,939A	40.401
0.94000	884,74352	0.9545	0.0000	4.087A	420,059A	40.932

0.94500	820,40249	0.9135	0.0000	4.1420	410,5A81	3A.839
0.95000	813,55A21	0.9112	0.0000	4.1217	414,7525	39.409
0.95500	80A,40317A	0.912A	0.0000	4.1022	424,6596	40.171
0.96000	79A,31227	0.9142	0.0000	4.0837	434,872A	40.926
0.96500	790,84779	0.915A	0.0000	4.0660	442,8143	41.673
1.00000	782,4854A	0.917A	0.0000	4.0492	450,6889	42.413
1.01000	77A,32160	0.9163	0.0000	4.0331	458,6A48	43.146
1.02000	76A,29112	0.9151	0.0000	4.017A	466,5170	43.871
1.03000	757,7A9A5	0.914A	0.0000	4.0012	473,7863	44.58A
1.04000	749,1497A	0.9133	0.0000	3.985A	481,3271	45.297
1.05000	740,29473	0.9129	0.0000	3.9693	488,7735	45.998
1.06000	732,1A6A0	0.9121	0.0000	3.9539	496,1400	46.691
1.07000	724,426A5	0.9111	0.0000	3.9381	503,5211	47.377
1.08000	71A,2181A	0.9100	0.0000	3.9220	510,916A	48.05A
1.09000	70A,62455	0.9085	0.0000	3.9059	517,725A	48.723
1.10000	69A,00182	0.907A	0.0000	3.890A	524,7A89	49.38A
1.11000	68A,37555	0.9062	0.0000	3.8743	531,4A5A	50.037
1.12000	680,75A15	0.9050	0.0000	3.8582A	538,534A	50.681
1.13000	672,147A7	0.9037	0.0000	3.8425	545,3099	51.318
1.14000	663,5A095	0.9027	0.0000	3.8269	551,979A	51.946
1.15000	655,00600	0.901A	0.0000	3.811A	558,5722	52.567
1.16000	64A,4735A	0.9000	0.0000	3.795A	565,0796	53.179
1.17000	637,7A520	0.898A	0.0000	3.7793	571,501A	53.78A
1.18000	629,5A05A	0.8970	0.0000	3.7639	577,832A	54.380
1.19000	621,1A53A	0.895A	0.0000	3.7481	584,092A	54.969
1.20000	612,45327	0.8940	0.0000	3.7329	590,2825	55.549
1.21000	60A,518A9	0.8931	0.0000	3.717A	596,1491	56.129
1.22000	59A,29A46	0.892A	0.0000	3.7017	602,3531	56.687
1.23000	58A,116A7	0.891A	0.0000	3.6860	608,7752	57.24A
1.24000	580,0A425	0.8900	0.0000	3.6701	614,1141	57.78A
1.25000	570,026A3	0.8885	0.0000	3.6545	619,874A	58.336
1.26000	56A,0A000	0.887A	0.0000	3.6389	625,556A	58.871
1.27000	556,70930	0.8860	0.0000	3.623A	631,159A	59.39A
1.28000	548,414A3	0.884A	0.0000	3.6072	636,8813	59.918
1.29000	540,70330	0.8830	0.0000	3.5917	642,124A	60.430
1.30000	533,0715A	0.8815	0.0000	3.576A	647,495A	60.935
1.31000	525,522A4	0.8800	0.0000	3.560A	652,78A5	61.434
1.32000	51A,05786	0.8780	0.0000	3.544A	658,00A3	61.925
1.33000	510,47832	0.8770	0.0000	3.528A	66A,1500	62.407
1.34000	493,1A4A5	0.875A	0.0000	3.512A	66A,2202	62.886
1.35000	49A,178A5	0.87A9	0.0000	3.496A	673,2179	63.356
1.36000	489,0597A	0.8700	0.0000	3.480A	678,1441	63.820
1.37000	482,02907	0.8685	0.0000	3.464A	682,998A	64.277
1.38000	475,0A8A9	0.8670	0.0000	3.448A	687,7A49	64.727
1.39000	468,233A4	0.8655	0.0000	3.432A	692,5015	65.171
1.40000	461,4689A	0.8640	0.0000	3.416A	697,1499	65.608
1.41000	45A,743A1	0.8620	0.0000	3.400A	701,7312	66.040
1.42000	448,206A4	0.8600	0.0000	3.384A	706,2661	66.46A
1.43000	441,7090A	0.8580	0.0000	3.368A	710,695A	66.883
1.44000	435,299A9	0.8560	0.0000	3.352A	715,000A	67.296
1.45000	42A,9790A	0.8540	0.0000	3.336A	719,4019	67.702
1.46000	422,7A61A	0.8520	0.0000	3.320A	723,6A0A	68.103
1.47000	416,608A4	0.8500	0.0000	3.304A	727,8571	68.498
1.48000	410,542A0	0.8480	0.0000	3.288A	731,9927	68.887
1.49000	40A,57092	0.8460	0.0000	3.272A	736,0A92	69.271

1.50000	184,44521	0.4444	0.0000	2.8017	749,0044	69.649
1.60000	184,40157	0.1854	0.0000	2.4445	777,1708	73.138
1.70000	207,84207	0.3314	0.0000	2.5455	809,2274	76.155
1.80000	258,07834	0.2891	0.0000	2.6415	846,9454	78.764
1.90000	224,17449	0.2511	0.0000	2.1409	881,0334	81.031
2.00000	195,27080	0.2187	0.0000	2.2647	881,9674	83.001
2.10000	170,40302	0.1911	0.0000	2.1942	940,2287	84.720
2.20000	149,51174	0.1675	0.0000	2.1312	918,2071	86.228
2.30000	131,43931	0.1472	0.0000	2.0727	910,2317	87.548
2.40000	115,91074	0.1294	0.0000	2.0194	942,4707	88.708
2.50000	102,53085	0.1144	0.0000	1.9714	943,4954	89.732
2.60000	90,96422	0.1019	0.0000	1.9274	943,1444	90.641
2.70000	80,94594	0.0907	0.0000	1.8871	971,7303	91.448
2.80000	72,23264	0.0809	0.0000	1.8500	974,3702	92.168
2.90000	64,41840	0.0724	0.0000	1.8154	986,2140	92.812
3.00000	57,94940	0.0650	0.0000	1.7834	992,1179	93.384
3.10000	52,14073	0.0584	0.0000	1.7534	997,8391	93.904
3.20000	47,03167	0.0527	0.0000	1.7254	1002,7934	94.377
3.30000	42,51137	0.4786	0.0000	1.7001	1007,2640	94.791
3.40000	38,51174	0.0441	0.0000	1.6764	1011,3131	95.174
3.50000	34,94527	0.0392	0.0000	1.6542	1014,9434	95.519
3.60000	31,91247	0.0354	0.0000	1.6331	1018,3192	95.831
3.70000	29,00311	0.0325	0.0000	1.6137	1021,3571	96.119
3.80000	26,49341	0.0297	0.0000	1.5957	1024,1204	96.380
3.90000	24,24493	0.0272	0.0000	1.5799	1026,6644	96.619
4.00000	22,21109	0.0249	0.0000	1.5654	1028,9649	96.837
4.10000	20,41853	0.0229	0.0000	1.5520	1031,1174	97.034
4.20000	18,74514	0.0210	0.0000	1.5392	1033,0746	97.222
4.30000	17,11095	0.0194	0.0000	1.5274	1034,8872	97.392
4.40000	15,51724	0.0179	0.0000	1.5160	1036,5435	97.544
4.50000	14,06442	0.0165	0.0000	1.5044	1038,0704	97.683
4.60000	12,74114	0.0153	0.0000	1.4934	1039,5009	97.827
4.70000	11,52734	0.0142	0.0000	1.4829	1040,8174	97.951
4.80000	10,41413	0.0132	0.0000	1.4724	1042,0344	98.066
4.90000	9,41141	0.0122	0.0000	1.4614	1043,1729	98.172
5.00000	8,517474	0.0114	0.0000	1.4507	1044,2279	98.279
5.10000	7,74244	0.0107	0.0000	1.4401	1045,2104	98.364
5.20000	7,04244	0.0100	0.0000	1.4292	1046,1244	98.450
5.30000	6,41244	0.0099	0.0000	1.4182	1046,9815	98.531
5.40000	5,84244	0.0093	0.0000	1.4074	1047,7804	98.606
5.50000	5,31244	0.0087	0.0000	1.3967	1048,5242	98.676
5.60000	4,81244	0.0081	0.0000	1.3862	1049,2241	98.742
5.70000	4,34244	0.0074	0.0000	1.3754	1049,8847	98.804
5.80000	3,91244	0.0067	0.0000	1.3643	1050,5007	98.862
5.90000	3,51244	0.0061	0.0000	1.3529	1051,0793	98.916
6.00000	3,14244	0.0054	0.0000	1.3414	1051,6234	98.968
6.10000	2,81244	0.0052	0.0000	1.3292	1052,1354	99.018
6.20000	2,51244	0.0048	0.0000	1.3161	1052,6177	99.061
6.30000	2,24244	0.0044	0.0000	1.3021	1053,0724	99.104
6.40000	2,01244	0.0040	0.0000	1.2871	1053,5014	99.144
6.50000	1,81244	0.0036	0.0000	1.2717	1053,9066	99.183
6.60000	1,64244	0.0032	0.0000	1.2551	1054,2895	99.219
6.70000	1,49244	0.0028	0.0000	1.2374	1054,6516	99.253
6.80000	1,35244	0.0024	0.0000	1.2187	1054,9944	99.285
6.90000	1,22244	0.0020	0.0000	1.2000	1055,3191	99.315

7.00000	2,10244	0.0014	0.0000	1.1813	1055,6249	99.344
7.10000	1,98244	0.0012	0.0000	1.1647	1055,9148	99.372
7.20000	1,87244	0.0010	0.0000	1.1482	1056,1949	99.398
7.30000	1,77244	0.0009	0.0000	1.1314	1056,4591	99.423
7.40000	1,68244	0.0007	0.0000	1.1144	1056,7093	99.446
7.50000	1,60244	0.0006	0.0000	1.0974	1056,9472	99.469
7.60000	1,53244	0.0005	0.0000	1.0801	1057,1736	99.490
7.70000	1,47244	0.0004	0.0000	1.0624	1057,3882	99.510
7.80000	1,41244	0.0003	0.0000	1.0444	1057,5946	99.530
7.90000	1,36244	0.0002	0.0000	1.0261	1057,7904	99.548
8.00000	1,31244	0.0001	0.0000	1.0074	1057,9771	99.566
8.10000	1,27244	0.0000	0.0000	0.9884	1058,1554	99.582
8.20000	1,23244	0.0000	0.0000	0.9692	1058,3256	99.598
8.30000	1,19244	0.0000	0.0000	0.9497	1058,4882	99.614
8.40000	1,15244	0.0000	0.0000	0.9299	1058,6435	99.629
8.50000	1,11244	0.0000	0.0000	0.9097	1058,7922	99.644
8.60000	1,07244	0.0000	0.0000	0.8892	1058,9344	99.658
8.70000	1,03244	0.0000	0.0000	0.8684	1059,0705	99.664
8.80000	99244	0.0000	0.0000	0.8471	1059,2009	99.681
8.90000	95244	0.0000	0.0000	0.8254	1059,3246	99.693
9.00000	91244	0.0000	0.0000	0.8034	1059,4456	99.704
9.10000	87244	0.0000	0.0000	0.7811	1059,5604	99.715
9.20000	83244	0.0000	0.0000	0.7584	1059,6706	99.725
9.30000	79244	0.0000	0.0000	0.7354	1059,7741	99.735
9.40000	75244	0.0000	0.0000	0.7121	1059,8714	99.744
9.50000	71244	0.0000	0.0000	0.6884	1059,9753	99.754
9.60000	67244	0.0000	0.0000	0.6644	1060,0691	99.762
9.70000	63244	0.0000	0.0000	0.6401	1060,1492	99.771
9.80000	59244	0.0000	0.0000	0.6154	1060,2454	99.779
9.90000	55244	0.0000	0.0000	0.5902	1060,3292	99.787
10.00000	51244	0.0000	0.0000	0.5644	1060,4094	99.794
10.10000	47244	0.0000	0.0000	0.5384	1060,4867	99.802
10.20000	43244	0.0000	0.0000	0.5121	1060,5611	99.809
10.30000	39244	0.0000	0.0000	0.4854	1060,6327	99.818
10.40000	35244	0.0000	0.0000	0.4584	1060,7014	99.822
10.50000	31244	0.0000	0.0000	0.4311	1060,7664	99.824
10.60000	27244	0.0000	0.0000	0.4034	1060,8277	99.824
10.70000	23244	0.0000	0.0000	0.3754	1060,8844	99.824
10.80000	19244	0.0000	0.0000	0.3471	1060,9366	99.824
10.90000	15244	0.0000	0.0000	0.3184	1060,9844	99.824
11.00000	11244	0.0000	0.0000	0.2892	1061,0277	99.824
11.10000	7244	0.0000	0.0000	0.2594	1061,0679	99.824
11.20000	3244	0.0000	0.0000	0.2291	1061,1044	99.824
11.30000	0	0.0000	0.0000	0.1984	1061,1366	99.824
11.40000	0	0.0000	0.0000	0.1671	1061,1644	99.824
11.50000	0	0.0000	0.0000	0.1354	1061,1877	99.824
11.60000	0	0.0000	0.0000	0.1034	1061,2066	99.824
11.70000	0	0.0000	0.0000	0.0711	1061,2211	99.824
11.80000	0	0.0000	0.0000	0.0384	1061,2314	99.824
11.90000	0	0.0000	0.0000	0.0054	1061,2377	99.824
12.00000	0	0.0000	0.0000	0.0000	1061,2400	99.824

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, D.R.T., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3273.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3750.0  
DEGREES FAHRENHEIT = 6790.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 248.52 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 51433.17 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 16435.36 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.218 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 211.159 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 44.041 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7728 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.9739 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1121.21 WATT/CM<sup>2</sup> OR 1.12121E+10 ERG/SEC/CM<sup>2</sup> OR 2.47E+09 FCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 954.78 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (W) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: W = M\*W/T.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3273.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3750.0  
DEGREES FAHRENHEIT = 6790.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WATT/CM <sup>2</sup>	POWER FROM ZERO TO L	TOTAL POWER ZERO TO L
0.35000	123.80251	0.1297	0.0000	10.0000	5.2440	0.468
0.35500	134.57441	0.1410	0.0000	10.4750	5.8497	0.524
0.36000	145.40701	0.1527	0.0000	10.9550	6.5045	0.588
0.36500	157.47824	0.1649	0.0000	11.4399	7.2115	0.654
0.37000	169.57324	0.1776	0.0000	11.9299	7.9710	0.720
0.37500	182.07314	0.1907	0.0000	12.4249	8.7840	0.807
0.38000	194.95802	0.2042	0.0000	12.9249	9.6524	0.891
0.38500	208.20444	0.2191	0.0000	13.4299	10.5781	0.981
0.39000	221.79609	0.2353	0.0000	13.9414	11.5630	1.077
0.39500	235.70344	0.2489	0.0000	14.4594	12.6091	1.179
0.40000	249.90522	0.2617	47.9742	14.9839	13.7184	1.287
0.40500	264.37412	0.2749	143.8206	15.5149	14.8936	1.402
0.41000	279.09135	0.2893	227.7345	16.0524	16.1374	1.523
0.41500	294.02544	0.3040	439.4422	16.5964	17.4527	1.651
0.42000	309.15327	0.3191	840.8949	17.1469	18.8424	1.785
0.42500	324.44892	0.3346	1610.5645	17.7039	20.3093	1.924
0.43000	339.88025	0.3504	2641.0290	18.2674	21.8560	2.070
0.43500	355.44236	0.3672	4040.5735	18.8374	23.4853	2.230
0.44000	371.09845	0.3847	5873.8452	19.4139	25.1996	2.397
0.44500	386.80487	0.4019	7627.7921	19.9969	26.9993	2.561
0.45000	402.54327	0.4216	10402.2349	20.5864	28.8857	2.737
0.45500	418.34139	0.4382	13694.8820	21.1824	30.8592	2.920
0.46000	434.11814	0.4547	17711.9400	21.7849	32.9210	3.110
0.46500	449.86925	0.4712	22437.2105	22.3939	35.0717	3.307
0.47000	465.56491	0.4876	28409.2814	23.0094	37.3117	3.511
0.47500	481.20029	0.5040	34448.2142	23.6314	39.6417	3.722
0.48000	496.74519	0.5203	40952.3554	24.2599	42.0624	3.940
0.48500	512.18231	0.5366	48059.9914	24.8949	44.5744	4.165
0.49000	527.49319	0.5529	54408.4363	25.5364	47.1784	4.397
0.49500	542.66020	0.5688	62485.9004	26.1844	49.8744	4.634
0.50000	557.66444	0.5841	72408.0160	26.8389	52.6624	4.881
0.50500	572.49664	0.5996	84408.0160	27.4999	55.5440	5.133
0.51000	587.13527	0.6149	98408.0160	28.1674	58.5210	5.391
0.51500	601.56845	0.6301	114408.0160	28.8414	61.6924	5.657
0.52000	615.78301	0.6449	132408.0160	29.5219	65.0584	5.924
0.52500	629.76645	0.6596	152408.0160	30.2089	68.6184	6.206
0.53000	643.50795	0.6740	174408.0160	30.9024	72.3717	6.490
0.53500	656.99632	0.6881	198408.0160	31.6024	76.3184	6.780
0.54000	670.22203	0.7020	224408.0160	32.3089	80.4584	7.074
0.54500	683.17414	0.7155	252408.0160	33.0219	84.7917	7.377
0.55000	695.85064	0.7288	282408.0160	33.7414	89.3184	7.685
0.55500	708.23809	0.7418	314408.0160	34.4674	94.0417	7.998
0.56000	720.33194	0.7545	348408.0160	35.2009	98.9624	8.314
0.56500	732.12640	0.7668	384408.0160	35.9419	104.0817	8.640
0.57000	743.61624	0.7788	422408.0160	36.6904	109.4000	8.969





1.50000	413.44195	0.4335	0.0000	2.7722	789.3082	70.384
1.60000	156.47702	0.3734	0.0000	2.4374	827.7730	71.829
1.70000	108.14361	0.3227	0.0000	2.2204	840.9594	73.789
1.80000	268.43441	0.2793	0.0000	2.4187	849.4425	75.347
1.90000	231.32444	0.2423	0.0000	2.4281	914.4929	81.581
2.00000	201.24114	0.2108	0.0000	2.2483	936.0829	83.489
2.10000	175.64459	0.1840	0.0000	2.1771	954.8977	85.187
2.20000	151.43290	0.1611	0.0000	2.1132	971.3445	86.634
2.30000	135.13199	0.1415	0.0000	2.0554	985.7687	87.920
2.40000	119.04312	0.1247	0.0000	2.0034	998.4592	89.052
2.50000	105.26943	0.1131	0.0000	1.9561	1009.4598	90.051
2.60000	93.34324	0.0974	0.0000	1.9124	1019.5740	90.936
2.70000	83.01479	0.0869	0.0000	1.8712	1028.3816	91.721
2.80000	74.04223	0.0775	0.0000	1.8317	1036.2281	92.421
2.90000	66.22167	0.0694	0.0000	1.7931	1043.2285	93.045
3.00000	59.39009	0.0622	0.0000	1.7552	1049.5016	93.605
3.10000	53.59974	0.0559	0.0000	1.7182	1055.1346	94.117
3.20000	48.13345	0.0504	0.0000	1.6824	1060.2047	94.559
3.30000	43.49049	0.0454	0.0000	1.6474	1064.7821	94.968
3.40000	39.38452	0.0411	0.0000	1.6134	1068.9218	95.337
3.50000	35.74987	0.0374	0.0000	1.5802	1072.6749	95.672
3.60000	32.51649	0.0341	0.0000	1.5477	1076.1940	95.976
3.70000	29.63714	0.0310	0.0000	1.5164	1079.1900	96.253
3.80000	27.06614	0.0281	0.0000	1.4862	1082.0227	96.505
3.90000	24.74917	0.0259	0.0000	1.4571	1084.6122	96.736
4.00000	22.70124	0.0238	0.0000	1.4290	1086.9817	96.948
4.10000	20.84607	0.0218	0.0000	1.4022	1089.1594	97.142
4.20000	19.17497	0.0201	0.0000	1.3765	1091.1590	97.320
4.30000	17.64664	0.0185	0.0000	1.3515	1092.9994	97.484
4.40000	16.30277	0.0171	0.0000	1.3275	1094.6972	97.634
4.50000	15.09692	0.0158	0.0000	1.3041	1096.2646	97.776
4.60000	13.94524	0.0146	0.0000	1.2812	1097.7183	97.905
4.70000	12.92534	0.0135	0.0000	1.2590	1099.0571	98.024
4.80000	11.99644	0.0124	0.0000	1.2372	1100.3024	98.136
4.90000	11.14904	0.0117	0.0000	1.2162	1101.4641	98.239
5.00000	10.37472	0.0109	0.0000	1.1957	1102.5317	98.335
5.10000	9.66812	0.0101	0.0000	1.1752	1103.5362	98.424
5.20000	9.01664	0.0094	0.0000	1.1548	1104.4899	98.507
5.30000	8.42042	0.0088	0.0000	1.1342	1105.4013	98.585
5.40000	7.87277	0.0082	0.0000	1.1134	1106.2854	98.658
5.50000	7.36854	0.0077	0.0000	1.0924	1107.1473	98.726
5.60000	6.90391	0.0072	0.0000	1.0713	1107.9914	98.789
5.70000	6.47514	0.0068	0.0000	1.0500	1108.8293	98.848
5.80000	6.07905	0.0064	0.0000	1.0284	1109.6628	98.905
5.90000	5.71265	0.0060	0.0000	1.0067	1110.5012	98.957
6.00000	5.37335	0.0056	0.0000	0.9848	1111.3536	99.007
6.10000	5.05874	0.0053	0.0000	0.9627	1112.2216	99.053
6.20000	4.76681	0.0050	0.0000	0.9404	1113.1047	99.097
6.30000	4.49554	0.0047	0.0000	0.9179	1113.9937	99.138
6.40000	4.24321	0.0044	0.0000	0.8952	1114.8884	99.177
6.50000	4.00843	0.0042	0.0000	0.8723	1115.7889	99.214
6.60000	3.78940	0.0040	0.0000	0.8492	1116.6946	99.249
6.70000	3.58514	0.0038	0.0000	0.8259	1117.6053	99.282
6.80000	3.39450	0.0036	0.0000	0.8024	1118.5211	99.313
6.90000	3.21622	0.0034	0.0000	0.7787	1119.4426	99.342

7.00000	3.04952	0.0032	0.0000	1.2989	1119.3698	99.370
7.10000	2.89351	0.0030	0.0000	1.2943	1119.4427	99.397
7.20000	2.76734	0.0029	0.0000	1.2899	1119.7248	99.429
7.30000	2.67101	0.0027	0.0000	1.2854	1119.9926	99.446
7.40000	2.60144	0.0026	0.0000	1.2815	1120.2471	99.469
7.50000	2.54654	0.0025	0.0000	1.2774	1120.4892	99.489
7.60000	2.49495	0.0024	0.0000	1.2735	1120.7195	99.511
7.70000	2.44607	0.0022	0.0000	1.2697	1120.9388	99.530
7.80000	2.40045	0.0021	0.0000	1.2660	1121.1477	99.549
7.90000	2.35764	0.0020	0.0000	1.2624	1121.3469	99.567
8.00000	2.31731	0.0019	0.0000	1.2589	1121.5364	99.584
8.10000	2.27912	0.0019	0.0000	1.2554	1121.7141	99.600
8.20000	2.24385	0.0018	0.0000	1.2521	1121.8912	99.615
8.30000	2.21130	0.0017	0.0000	1.2489	1122.0565	99.630
8.40000	2.18124	0.0016	0.0000	1.2457	1122.2144	99.644
8.50000	2.15349	0.0015	0.0000	1.2424	1122.3657	99.658
8.60000	2.12851	0.0015	0.0000	1.2395	1122.5103	99.670
8.70000	2.10581	0.0014	0.0000	1.2364	1122.6487	99.683
8.80000	2.08497	0.0014	0.0000	1.2337	1122.7813	99.695
8.90000	2.06572	0.0013	0.0000	1.2309	1122.9083	99.706
9.00000	2.04792	0.0012	0.0000	1.2282	1123.0300	99.717
9.10000	2.03142	0.0012	0.0000	1.2255	1123.1467	99.727
9.20000	2.01603	0.0011	0.0000	1.2229	1123.2587	99.737
9.30000	2.00162	0.0011	0.0000	1.2204	1123.3662	99.747
9.40000	1.98813	0.0011	0.0000	1.2179	1123.4694	99.756
9.50000	1.97549	0.0010	0.0000	1.2154	1123.5696	99.765
9.60000	1.96363	0.0010	0.0000	1.2131	1123.6668	99.773
9.70000	1.95249	0.0009	0.0000	1.2107	1123.7594	99.781
9.80000	1.94191	0.0009	0.0000	1.2084	1123.8475	99.789
9.90000	1.93181	0.0009	0.0000	1.2062	1123.9312	99.797
10.00000	1.92211	0.0008	0.0000	1.2040	1124.0109	99.804
10.10000	1.91284	0.0008	0.0000	1.2019	1124.0863	99.811
10.20000	1.90404	0.0008	0.0000	1.1998	1124.1639	99.818
10.30000	1.89564	0.0007	0.0000	1.1977	1124.2437	99.824
10.40000	1.88763	0.0007	0.0000	1.1957	1124.3249	99.831
10.50000	1.88004	0.0007	0.0000	1.1938	1124.4074	99.837
10.60000	1.87281	0.0007	0.0000	1.1918	1124.4913	99.843
10.70000	1.86599	0.0006	0.0000	1.1899	1124.5768	99.848
10.80000	1.85954	0.0006	0.0000	1.1881	1124.6636	99.854
10.90000	1.85341	0.0006	0.0000	1.1863	1124.7517	99.859
11.00000	1.84757	0.0006	0.0000	1.1845	1124.8411	99.864
11.10000	1.84200	0.0006	0.0000	1.1827	1124.9316	99.869
11.20000	1.83667	0.0005	0.0000	1.1810	1125.0234	99.873
11.30000	1.83157	0.0005	0.0000	1.1793	1125.1166	99.878
11.40000	1.82668	0.0005	0.0000	1.1777	1125.2111	99.882
11.50000	1.82200	0.0005	0.0000	1.1760	1125.3069	99.887
11.60000	1.81751	0.0005	0.0000	1.1744	1125.4040	99.891
11.70000	1.81319	0.0005	0.0000	1.1729	1125.5025	99.895
11.80000	1.80902	0.0004	0.0000	1.1713	1125.6024	99.899
11.90000	1.80499	0.0004	0.0000	1.1698	1125.7036	99.902
12.00000	1.80109	0.0004	0.0000	1.1683	1125.8061	99.906

VISIBILITY AND OTHER DATA FOR PLANCH RADIATOR, MECHANICS DIVISION, D.R.L., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREE K = 3400.0  
DEGREE F = 6380.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 246.43 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 5683.70 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 17970.34 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.225 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 212.001 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 47.774 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER (OUTPUT IS 0.7424 MICRONS).

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.7431 MICRONS.  
I.E., THIS WAVELENGTH MAXIMIZES THE RATIO OF SPECTRAL RADIANT EXITANCE TO TOTAL RADIANT EXITANCE.

THE TOTAL POWER RADIATED IS 1142.21 WATT/CM<sup>2</sup> OR 1.14221E+10 ERG/SEC/CM<sup>2</sup> OR 2.40558E+01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1020.15 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT \* RADIANT EXITANCE \* VISIBILITY FACTOR.  
WHERE RADIANT EXITANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EXITANCE (4) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT 'M' IN THE FOLLOWING FORM:  $\Delta E = E * M * \Delta T$

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3476.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREE K = 3400.0  
DEGREE F = 6380.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT 'M' PER WATT	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	143.00804	0.1407	0.0000	10.4140	6.1450	0.521
0.35500	155.13814	0.1521	0.0000	10.4417	6.9142	0.585
0.36000	167.75241	0.1646	0.0000	10.4614	7.7172	0.653
0.36500	180.83130	0.1773	0.0000	10.4714	8.5885	0.724
0.37000	194.38889	0.1905	0.0000	10.4735	9.5241	0.804
0.37500	208.43664	0.2042	0.0000	10.4682	10.5324	0.881
0.38000	222.98524	0.2183	0.0000	9.4564	11.6100	0.989
0.38500	237.13765	0.2327	0.0000	9.4431	12.7600	1.079
0.39000	252.88301	0.2475	0.0000	9.4271	13.9844	1.183
0.39500	267.43136	0.2628	0.0000	9.4094	15.2844	1.293
0.40000	283.51787	0.2770	75.1160	9.3894	16.6612	1.400
0.40500	299.44854	0.2916	142.9100	9.3674	18.1206	1.531
0.41000	315.65724	0.3064	257.5761	9.3430	19.6543	1.663
0.41500	332.15565	0.3217	406.7552	9.3161	21.2775	1.800
0.42000	348.94531	0.3377	589.2880	9.2874	22.9972	1.944
0.42500	365.93794	0.3545	813.6465	9.2564	24.7441	2.095
0.43000	382.22564	0.3727	1080.9844	9.2230	26.6111	2.253
0.43500	399.10011	0.3914	1460.2314	9.1874	28.5945	2.414
0.44000	416.20462	0.4080	1900.4402	9.1490	30.6900	2.584
0.44500	433.27215	0.4247	2544.1788	9.1084	32.7947	2.774
0.45000	450.34554	0.4415	3443.7131	9.0651	34.9077	2.974
0.45500	467.43232	0.4582	4640.9810	9.0191	37.0222	3.181
0.46000	484.47475	0.4749	6196.5607	8.9704	39.1370	3.392
0.46500	501.48999	0.4914	8153.4610	8.9191	41.2494	3.561
0.47000	518.39479	0.5081	10707.4078	8.8649	43.3465	3.727
0.47500	535.16700	0.5248	13956.3190	8.8079	45.4203	3.880
0.48000	551.88954	0.5409	18111.4824	8.7480	47.4704	4.029
0.48500	568.56311	0.5572	23311.7810	8.6851	49.4984	4.164
0.49000	584.75134	0.5732	29701.2207	8.6191	51.5047	4.291
0.49500	600.94904	0.5889	37329.8647	8.5500	53.4895	4.414
0.50000	614.91144	0.6047	46350.6170	8.4781	55.4527	4.531
0.50500	627.70710	0.6202	56812.4103	8.4034	57.3952	4.644
0.51000	640.25204	0.6354	68775.0078	8.3259	59.3172	4.753
0.51500	652.52177	0.6504	82290.0078	8.2454	61.2194	4.858
0.52000	664.44814	0.6652	97425.2524	8.1619	63.1023	4.959
0.52500	675.96414	0.6797	114240.8440	8.0754	64.9663	5.056
0.53000	687.11524	0.6939	132814.8368	7.9859	66.8112	5.149
0.53500	697.85524	0.7079	153201.0953	7.8934	68.6372	5.239
0.54000	707.92924	0.7214	175454.1790	7.7979	70.4442	5.324
0.54500	717.27901	0.7347	199628.7475	7.6994	72.2322	5.406
0.55000	725.93701	0.7477	225760.2104	7.5979	74.0012	5.484
0.55500	732.79962	0.7604	253901.8087	7.4934	75.7512	5.559
0.56000	737.81124	0.7728	284201.8741	7.3859	77.4822	5.631
0.56500	740.62841	0.7848	316801.9507	7.2754	79.1942	5.699
0.57000	742.55714	0.7965	351760.9472	7.1619	80.8872	5.764

0.57500	424.18447	0.8070	517707.8429	6.5824	116.1547	9.825
0.58000	435.18344	0.8189	491217.8438	6.5363	120.3036	10.174
0.58500	444.27179	0.8294	470154.7529	6.4810	126.5079	10.539
0.59000	456.80757	0.8399	441052.7449	6.4267	128.7467	10.889
0.59500	468.84954	0.8499	409739.2663	6.3732	133.0754	11.254
0.60000	474.41707	0.8595	374224.6678	6.3207	137.4350	11.625
0.60500	484.28997	0.8688	341717.9802	6.2691	141.8279	11.990
0.61000	494.40864	0.8777	306265.4724	6.2183	146.2673	12.379
0.61500	504.17304	0.8863	271141.4879	6.1684	150.7444	12.759
0.62000	512.58775	0.8944	236433.1055	6.1199	155.2685	13.140
0.62500	520.85027	0.9025	200959.5410	6.0711	159.8317	13.527
0.63000	528.16317	0.9100	167291.4040	6.0234	164.5444	13.910
0.63500	535.73449	0.9173	138074.9818	5.9769	169.3080	14.313
0.64000	542.76112	0.9243	112188.5729	5.9308	173.9811	14.710
0.64500	549.48825	0.9307	89094.2242	5.8857	178.6310	15.110
0.65000	555.79942	0.9369	69543.8546	5.8412	183.3991	15.513
0.65500	561.81800	0.9429	52974.9572	5.7971	188.1892	15.910
0.66000	567.50924	0.9484	40132.2831	5.7542	193.0127	16.325
0.66500	572.87422	0.9537	29770.8123	5.7118	197.8630	16.737
0.67000	577.89385	0.9586	21379.4299	5.6700	202.7409	17.140
0.67500	582.65480	0.9632	15348.7524	5.6289	207.6425	17.564
0.68000	587.07894	0.9674	11410.4443	5.5883	212.5669	17.980
0.68500	591.19831	0.9714	8020.7749	5.5484	217.5194	18.399
0.69000	595.01710	0.9754	5548.2154	5.5091	222.4744	18.810
0.69500	598.56155	0.9791	3870.3471	5.4704	227.4294	19.240
0.70000	1001.77704	0.9820	2747.6545	5.4322	232.3813	19.663
0.70500	1004.72914	0.9849	1981.3299	5.3947	237.3707	20.080
0.71000	1007.48344	0.9875	1434.8721	5.3574	242.3102	20.513
0.71500	1009.90484	0.9899	1030.0014	5.3212	247.2033	20.940
0.72000	1011.94101	0.9920	754.9319	5.2852	252.0578	21.367
0.72500	1013.61574	0.9938	482.4743	5.2494	256.8793	21.784
0.73000	1015.43954	0.9954	345.2481	5.2144	261.6745	22.225
0.73500	1016.80417	0.9967	274.8713	5.1804	266.4492	22.655
0.74000	1017.91324	0.9978	207.4544	5.1464	271.2011	23.089
0.74500	1018.82282	0.9987	136.5509	5.1130	276.0051	23.516
0.75000	1019.48060	0.9993	69.3247	5.0800	281.1010	23.947
0.76000	1020.12193	1.0000	0.0000	5.0474	286.2897	24.800
0.77000	1019.90925	0.9998	0.0000	4.9524	303.5006	25.472
0.78000	1018.98204	0.9988	0.0000	4.8914	313.6852	26.335
0.79000	1017.08791	0.9976	0.0000	4.8319	323.8756	27.304
0.80000	1014.56807	0.9954	0.0000	4.7740	334.0345	28.255
0.81000	1011.36790	0.9914	0.0000	4.7174	344.1687	29.195
0.82000	1007.52234	0.9856	0.0000	4.6624	354.2887	30.116
0.83000	1003.08984	0.9783	0.0000	4.6091	364.3133	31.014
0.84000	998.09179	0.9704	0.0000	4.5569	374.3104	31.883
0.85000	992.57149	0.9620	0.0000	4.5060	384.2734	32.588
0.86000	986.56634	0.9531	0.0000	4.4564	394.1494	33.349
0.87000	980.11091	0.9438	0.0000	4.4080	404.0039	34.174
0.88000	973.23970	0.9340	0.0000	4.3608	413.7793	35.000
0.89000	965.98294	0.9238	0.0000	4.3147	423.4847	35.800
0.90000	958.37374	0.9134	0.0000	4.2694	433.0887	36.624
0.91000	950.44087	0.9026	0.0000	4.2259	442.6331	37.461
0.92000	942.21244	0.8916	0.0000	4.1830	452.0560	38.268
0.93000	933.71537	0.8803	0.0000	4.1411	461.4764	39.035
0.94000	924.97344	0.8687	0.0000	4.1007	470.7701	39.821

0.95000	916.01571	0.8579	0.0000	4.0603	479.9752	40.608
0.96000	906.98024	0.8489	0.0000	4.0212	489.0897	41.371
0.97000	897.53040	0.8394	0.0000	3.9830	498.1110	42.134
0.98000	887.84691	0.8295	0.0000	3.9457	507.0399	42.889
0.99000	877.92844	0.8191	0.0000	3.9092	515.8723	43.634
1.00000	867.85474	0.8085	0.0000	3.8734	524.6080	44.379
1.01000	857.61175	0.7978	0.0000	3.8385	533.2459	45.116
1.02000	847.20409	0.7872	0.0000	3.8043	541.7850	45.849
1.03000	836.72373	0.7766	0.0000	3.7704	550.2246	46.577
1.04000	826.17444	0.7661	0.0000	3.7381	558.5640	47.297
1.05000	814.55105	0.7557	0.0000	3.7060	566.8030	48.013
1.06000	802.84809	0.7454	0.0000	3.6744	574.9410	48.723
1.07000	791.02974	0.7352	0.0000	3.6434	582.9779	49.423
1.08000	779.07072	0.7251	0.0000	3.6137	590.9136	50.114
1.09000	774.19004	0.7151	0.0000	3.5842	598.7480	50.807
1.10000	768.28884	0.7051	0.0000	3.5552	606.4810	51.500
1.11000	762.36104	0.6952	0.0000	3.5269	614.1139	52.191
1.12000	756.40603	0.6854	0.0000	3.4991	621.6457	52.883
1.13000	750.42373	0.6756	0.0000	3.4714	629.0773	53.571
1.14000	744.41507	0.6659	0.0000	3.4451	636.4091	54.264
1.15000	738.39057	0.6563	0.0000	3.4189	643.6410	54.951
1.16000	732.35164	0.6468	0.0000	3.3932	650.7753	55.647
1.17000	726.29874	0.6374	0.0000	3.3680	657.8109	56.340
1.18000	720.23244	0.6281	0.0000	3.3433	664.7490	57.031
1.19000	714.15314	0.6189	0.0000	3.3190	671.5904	57.721
1.20000	708.06144	0.6098	0.0000	3.2952	678.3354	58.411
1.21000	701.95784	0.6008	0.0000	3.2718	684.9861	59.101
1.22000	695.84284	0.5918	0.0000	3.2488	691.5427	59.791
1.23000	689.71694	0.5829	0.0000	3.2263	698.0067	60.481
1.24000	683.58064	0.5741	0.0000	3.2042	704.3767	61.171
1.25000	677.43454	0.5654	0.0000	3.1824	710.6531	61.861
1.26000	671.27914	0.5568	0.0000	3.1611	716.8410	62.551
1.27000	665.11484	0.5483	0.0000	3.1401	722.9390	63.241
1.28000	658.94214	0.5400	0.0000	3.1194	728.9486	63.931
1.29000	652.76064	0.5317	0.0000	3.0991	734.8693	64.621
1.30000	646.57084	0.5236	0.0000	3.0794	740.7010	65.311
1.31000	640.37314	0.5156	0.0000	3.0600	746.4554	66.001
1.32000	634.16804	0.5077	0.0000	3.0410	752.1206	66.691
1.33000	627.95594	0.5000	0.0000	3.0221	757.7093	67.381
1.34000	621.73744	0.4924	0.0000	3.0031	763.2110	68.071
1.35000	615.51304	0.4850	0.0000	2.9840	768.6269	68.761
1.36000	609.28344	0.4777	0.0000	2.9659	773.9572	69.451
1.37000	603.04924	0.4705	0.0000	2.9489	779.2010	70.141
1.38000	596.81104	0.4634	0.0000	2.9319	784.3586	70.831
1.39000	590.56944	0.4564	0.0000	2.9144	789.4303	71.521
1.40000	584.32484	0.4495	0.0000	2.8979	794.4164	72.211
1.41000	578.07784	0.4427	0.0000	2.8814	799.3174	72.901
1.42000	571.82804	0.4360	0.0000	2.8651	804.1332	73.591
1.43000	565.57584	0.4294	0.0000	2.8491	808.8642	74.281
1.44000	559.32164	0.4229	0.0000	2.8333	813.5107	74.971
1.45000	553.06584	0.4165	0.0000	2.8174	818.0730	75.661
1.46000	546.80884	0.4102	0.0000	2.8025	822.5514	76.351
1.47000	540.55114	0.4040	0.0000	2.7874	827.0461	77.041
1.48000	534.29324	0.3979	0.0000	2.7726	831.5573	77.731
1.49000	528.03564	0.3919	0.0000	2.7580		

1.50000	429,78004	0.4208	0.0000	2,7434	840,49524	71,124
1.60000	142,45204	0.3622	0.0000	2,4110	840,7111	74,487
1.70000	119,35704	0.3123	0.0000	2,4460	915,0470	77,401
1.80000	275,27130	0.2696	0.0000	2,1955	944,6791	79,408
1.90000	230,53570	0.2314	0.0000	2,1070	970,3193	82,077
2.00000	207,33801	0.2032	0.0000	2,2284	992,5707	83,959
2.10000	180,80207	0.1772	0.0000	2,1585	1011,9422	85,594
2.20000	158,18110	0.1551	0.0000	2,0957	1029,8615	87,029
2.30000	138,84659	0.1361	0.0000	2,0391	1045,6676	88,261
2.40000	122,27281	0.1199	0.0000	1,9879	1059,7228	89,354
2.50000	108,02185	0.1059	0.0000	1,9413	1068,2197	90,354
2.60000	95,72943	0,0934	0.0000	1,4967	1074,3923	91,214
2.70000	85,00259	0,0834	0.0000	1,4597	1081,4208	91,982
2.80000	75,85913	0,0744	0.0000	1,4239	1095,4574	92,662
2.90000	67,81875	0,0665	0.0000	1,3904	1102,4371	93,269
3.00000	60,70974	0,0596	0.0000	1,3602	1109,0552	93,819
3.10000	54,64291	0,0534	0.0000	1,3319	1114,8205	94,300
3.20000	49,23664	0,0483	0.0000	1,3055	1120,0047	94,730
3.30000	44,47949	0,0441	0.0000	1,4800	1124,6892	95,135
3.40000	40,26344	0,0395	0.0000	1,6579	1128,0217	95,493
3.50000	36,53453	0,0354	0.0000	1,4364	1132,7579	95,817
3.60000	33,22214	0,0324	0.0000	1,4143	1136,2425	96,112
3.70000	30,27264	0,0297	0.0000	1,4973	1139,4144	96,380
3.80000	27,63994	0,0271	0.0000	1,3795	1142,3076	96,624
3.90000	25,28451	0,0248	0.0000	1,4625	1144,9517	96,844
4.00000	23,17247	0,0227	0.0000	1,4467	1147,3724	97,051
4.10000	21,27444	0,0209	0.0000	1,4317	1149,5013	97,241
4.20000	19,56527	0,0192	0.0000	1,5174	1151,4314	97,414
4.30000	18,02301	0,0177	0.0000	1,4039	1153,3519	97,573
4.40000	16,62049	0,0163	0.0000	1,4911	1155,2633	97,719
4.50000	15,36549	0,0151	0.0000	1,4769	1156,8620	97,854
4.60000	14,21957	0,0139	0.0000	1,4673	1158,3203	97,979
4.70000	13,17747	0,0129	0.0000	1,4562	1159,6894	98,094
4.80000	12,22801	0,0120	0.0000	1,4454	1160,9990	98,202
4.90000	11,36354	0,0111	0.0000	1,4355	1162,1379	98,302
5.00000	10,57296	0,0104	0.0000	1,4259	1163,2342	98,395
5.10000	9,84649	0,0097	0.0000	1,4164	1164,2884	98,481
5.20000	9,18675	0,0092	0.0000	1,4074	1165,2011	98,562
5.30000	8,57847	0,0084	0.0000	1,3991	1166,0819	98,637
5.40000	8,01944	0,0079	0.0000	1,3911	1166,9255	98,707
5.50000	7,50510	0,0074	0.0000	1,3833	1167,6901	98,771
5.60000	7,03113	0,0069	0.0000	1,3758	1168,4258	98,834
5.70000	6,59384	0,0065	0.0000	1,3684	1169,1044	98,892
5.80000	6,18949	0,0061	0.0000	1,3616	1169,7457	98,944
5.90000	5,81630	0,0057	0.0000	1,3549	1170,3494	98,994
6.00000	5,47034	0,0054	0.0000	1,3484	1170,9099	99,044
6.10000	5,14968	0,0050	0.0000	1,3422	1171,4447	99,089
6.20000	4,85208	0,0048	0.0000	1,3362	1171,9406	99,131
6.30000	4,57567	0,0045	0.0000	1,3303	1172,4118	99,171
6.40000	4,31844	0,0042	0.0000	1,3247	1172,8544	99,209
6.50000	4,07911	0,0040	0.0000	1,3193	1173,2741	99,244
6.60000	3,85645	0,0038	0.0000	1,3140	1173,6777	99,274
6.70000	3,64799	0,0036	0.0000	1,3090	1174,0674	99,310
6.80000	3,45374	0,0034	0.0000	1,3040	1174,4028	99,340
6.90000	3,27271	0,0032	0.0000	1,2991	1174,7190	99,364

7.00000	3,10247	0,0030	0.0000	1,2944	1175,0476	99,395
7.10000	2,94344	0,0029	0.0000	1,2902	1175,3598	99,421
7.20000	2,79444	0,0027	0.0000	1,2858	1175,6444	99,445
7.30000	2,65402	0,0026	0.0000	1,2814	1175,9190	99,464
7.40000	2,52344	0,0025	0.0000	1,2775	1176,1779	99,480
7.50000	2,40047	0,0024	0.0000	1,2735	1176,4241	99,511
7.60000	2,28412	0,0022	0.0000	1,2694	1176,6543	99,530
7.70000	2,17431	0,0021	0.0000	1,2659	1176,8613	99,549
7.80000	2,07144	0,0020	0.0000	1,2627	1177,0934	99,567
7.90000	1,97477	0,0019	0.0000	1,2587	1177,2943	99,584
8.00000	1,88447	0,0018	0.0000	1,2552	1177,4495	99,601
8.10000	1,80007	0,0018	0.0000	1,2514	1177,6714	99,614
8.20000	1,72179	0,0017	0.0000	1,2485	1177,8474	99,631
8.30000	1,64932	0,0016	0.0000	1,2453	1178,0179	99,645
8.40000	1,57994	0,0015	0.0000	1,2427	1178,1785	99,659
8.50000	1,50258	0,0015	0.0000	1,2392	1178,3322	99,672
8.60000	1,42749	0,0014	0.0000	1,2362	1178,4792	99,684
8.70000	1,35444	0,0013	0.0000	1,2333	1178,6199	99,698
8.80000	1,28347	0,0013	0.0000	1,2305	1178,7544	99,704
8.90000	1,21414	0,0012	0.0000	1,2277	1178,8817	99,719
9.00000	1,14644	0,0012	0.0000	1,2250	1179,0074	99,729
9.10000	1,08193	0,0011	0.0000	1,2224	1179,1241	99,739
9.20000	1,02047	0,0011	0.0000	1,2194	1179,2399	99,749
9.30000	1,07024	0,0010	0.0000	1,2173	1179,3491	99,754
9.40000	1,02741	0,0010	0.0000	1,2144	1179,4540	99,767
9.50000	0,98744	0,0010	0.0000	1,2124	1179,5544	99,775
9.60000	0,94901	0,0009	0.0000	1,2101	1179,6516	99,784
9.70000	0,91247	0,0009	0.0000	1,2074	1179,7444	99,791
9.80000	0,87745	0,0009	0.0000	1,2055	1179,8341	99,799
9.90000	0,84444	0,0008	0.0000	1,2033	1179,9202	99,804
10.00000	0,81245	0,0008	0.0000	1,2017	1180,0031	99,811
10.10000	0,78249	0,0008	0.0000	1,1991	1180,0828	99,820
10.20000	0,75399	0,0007	0.0000	1,1970	1180,1597	99,827
10.30000	0,72645	0,0007	0.0000	1,1950	1180,2317	99,831
10.40000	0,70022	0,0007	0.0000	1,1930	1180,3090	99,839
10.50000	0,67514	0,0007	0.0000	1,1911	1180,3738	99,845
10.60000	0,65172	0,0006	0.0000	1,1892	1180,4401	99,850
10.70000	0,62942	0,0006	0.0000	1,1873	1180,5040	99,856
10.80000	0,60847	0,0006	0.0000	1,1855	1180,5658	99,861
10.90000	0,58947	0,0006	0.0000	1,1837	1180,6253	99,864
11.00000	0,57141	0,0006	0.0000	1,1818	1180,6829	99,871
11.10000	0,55470	0,0005	0.0000	1,1802	1180,7385	99,876
11.20000	0,53927	0,0005	0.0000	1,1785	1180,7921	99,880
11.30000	0,52507	0,0005	0.0000	1,1768	1180,8440	99,884
11.40000	0,51197	0,0005	0.0000	1,1752	1180,8942	99,889
11.50000	0,49970	0,0005	0.0000	1,1736	1180,9427	99,893
11.60000	0,48811	0,0005	0.0000	1,1720	1180,9894	99,897
11.70000	0,47749	0,0004	0.0000	1,1705	1181,0350	99,901
11.80000	0,46779	0,0004	0.0000	1,1690	1181,0790	99,904
11.90000	0,45891	0,0004	0.0000	1,1675	1181,1215	99,908
12.00000	0,45050	0,0004	0.0000	1,1660	1181,1627	99,911

VISIBILITY AND OTHER DATA FOR PLANCK RADIATION, MECHANICS DIVISION, UNITED STATES OFFICE OF DEFENSE.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3272.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3850.0  
DEGREES FAHRENHEIT = 6670.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 280.77 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 11400.11 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 18473.54 CANDLE/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.231.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 212.749 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 40.791 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7577 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.7044 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1285.67 WATT/CM<sup>2</sup> OR 1.28567E+01 WAT/SEC/CM<sup>2</sup> OR 0.47222E+01 KWAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1090.05 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT RADIANT EMITTANCE X VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED THE CHANGE IN RADIANT EMITTANCE (%) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: % CHG. =

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3272.0 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 3850.0  
DEGREES FAHRENHEIT = 6670.2

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	PEAK SPECTRAL BRT TO PEAK	SPECTRAL BRT LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOSURE FOR PEAK	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	166.57534	0.1511	0.0000	10.4756	7.2153	0.570
0.35500	178.14292	0.1534	0.0000	10.5253	8.0720	0.648
0.36000	192.39042	0.1566	0.0000	10.5761	9.0900	0.722
0.36500	209.40742	0.1600	0.0000	10.6280	9.8054	0.802
0.37000	227.49442	0.1634	0.0000	10.6807	11.0479	0.880
0.37500	247.48742	0.1671	0.0000	0.0000	12.2164	0.961
0.38000	269.40714	0.1707	0.0000	0.0000	13.4435	1.070
0.38500	292.70707	0.1747	0.0000	0.0000	14.7531	1.148
0.39000	317.48044	0.1790	0.0000	0.0000	16.1411	1.264
0.39500	343.33844	0.1834	0.0000	0.0000	17.6151	1.414
0.40000	370.55924	0.1880	47.2030	0.1417	19.1740	1.530
0.40500	398.12309	0.1925	181.0499	0.2265	20.8217	1.672
0.41000	426.14241	0.1974	290.1917	0.3141	22.5444	1.811
0.41500	454.40242	0.1933	559.2402	0.4048	24.3806	1.957
0.42000	482.91441	0.1990	1066.0627	0.4973	26.2951	2.111
0.42500	511.18095	0.1976	2036.1382	0.5928	28.3053	2.272
0.43000	539.52994	0.1935	3350.2444	0.6807	30.4971	2.440
0.43500	568.05164	0.19104	5105.9751	0.8000	32.8858	2.614
0.44000	597.41424	0.1774	7279.1094	0.4935	34.8647	2.740
0.44500	627.49843	0.14443	9547.4061	0.3982	37.2600	2.908
0.45000	657.35932	0.14913	12990.9648	0.3051	39.7054	3.107
0.45500	687.79234	0.14782	16998.3363	0.2140	42.2435	3.313
0.46000	718.13754	0.14951	21996.8133	0.1240	44.9133	3.464
0.46500	748.19244	0.15114	28084.3460	0.0374	47.4547	3.624
0.47000	778.54192	0.15285	35614.6540	0.0225	50.4871	4.053
0.47500	808.54733	0.15450	45204.5687	0.0090	53.4099	4.264
0.48000	838.38754	0.15614	57788.3409	0.0073	56.4273	4.529
0.48500	868.06140	0.15774	72949.6671	0.0073	59.5235	4.774
0.49000	898.49489	0.15934	91440.2372	0.0070	62.7174	5.026
0.49500	928.72312	0.16094	116443.5839	0.0022	65.9440	5.297
0.50000	958.71031	0.16250	149511.2133	0.0070	69.3692	5.567
0.50500	988.43943	0.16404	193023.4483	0.0031	72.7947	5.848
0.51000	1018.09615	0.16555	244181.0397	0.0010	76.3231	6.127
0.51500	1047.06485	0.16704	301830.0107	0.0002	79.9332	6.417
0.52000	1075.93259	0.16849	360136.2542	0.0004	83.4233	6.713
0.52500	1104.48711	0.16992	418674.3112	0.0027	87.3920	7.018
0.53000	1132.71720	0.17132	485280.5562	0.0059	91.2376	7.320
0.53500	1160.61440	0.17249	562581.3996	0.0003	95.1544	7.630
0.54000	1188.14249	0.17402	629274.9004	0.0040	99.1511	7.968
0.54500	1215.36164	0.17533	746690.4727	0.0029	103.2104	8.266
0.55000	1242.20484	0.17660	884822.4567	0.0010	107.3542	8.614
0.55500	1268.67484	0.17784	1074421.3548	0.0042	111.5610	8.956
0.56000	1294.78154	0.17904	128404.4144	0.6405	115.8123	9.299
0.56500	1320.50869	0.18021	151512.2030	0.6219	120.1642	9.647
0.57000	1345.95990	0.18134	171647.6739	0.5844	124.5668	10.000



1.50000	888.87463	0.4085	0.0000	2.7159	884.7819	71.832
1.60000	182.26449	0.3510	0.0000	2.4855	938.0570	75.145
1.70000	329.06686	0.3029	0.0000	2.4724	971.5406	77.994
1.80000	281.98674	0.2608	0.0000	2.3734	1002.1409	80.450
1.90000	245.80579	0.2257	0.0000	2.2865	1028.5778	82.577
2.00000	213.43998	0.1960	0.0000	2.2093	1051.4958	84.412
2.10000	185.95421	0.1707	0.0000	2.1405	1071.4283	86.017
2.20000	162.35631	0.1493	0.0000	2.0787	1088.8297	87.409
2.30000	142.58237	0.1309	0.0000	2.0231	1104.0536	88.631
2.40000	125.47927	0.1152	0.0000	1.9727	1117.4368	89.706
2.50000	110.78761	0.1017	0.0000	1.9244	1129.2207	90.659
2.60000	98.12633	0.9001	0.0000	1.8850	1139.6509	91.490
2.70000	87.17909	0.8081	0.0000	1.8464	1148.8121	92.232
2.80000	77.68311	0.7313	0.0000	1.8114	1157.1481	92.893
2.90000	69.41964	0.6637	0.0000	1.7789	1164.8808	93.483
3.00000	62.20418	0.6051	0.0000	1.7488	1171.0670	94.011
3.10000	55.89004	0.5513	0.0000	1.7209	1176.9689	94.484
3.20000	50.34319	0.5042	0.0000	1.6949	1182.7466	94.918
3.30000	45.45787	0.4617	0.0000	1.6707	1187.5515	95.304
3.40000	41.14314	0.4238	0.0000	1.6481	1191.3772	95.641
3.50000	37.32216	0.3903	0.0000	1.6270	1195.2944	95.936
3.60000	33.92951	0.3612	0.0000	1.6071	1199.2559	96.247
3.70000	30.90961	0.3364	0.0000	1.5885	1202.9888	96.502
3.80000	28.21467	0.3159	0.0000	1.5709	1205.9896	96.739
3.90000	25.80490	0.2987	0.0000	1.5544	1208.7474	96.956
4.00000	23.64447	0.2837	0.0000	1.5387	1210.7159	97.154
4.10000	21.70359	0.2717	0.0000	1.5239	1212.4836	97.334
4.20000	19.95624	0.2613	0.0000	1.5099	1214.5441	97.503
4.30000	18.37094	0.2514	0.0000	1.4964	1216.4896	97.657
4.40000	16.91520	0.2420	0.0000	1.4834	1218.2482	97.798
4.50000	15.56492	0.2331	0.0000	1.4709	1219.8741	97.929
4.60000	14.30929	0.2247	0.0000	1.4590	1221.3811	98.050
4.70000	13.13014	0.2167	0.0000	1.4476	1222.7745	98.162
4.80000	12.01844	0.2091	0.0000	1.4367	1224.0794	98.264
4.90000	11.07832	0.2018	0.0000	1.4261	1225.2737	98.363
5.00000	10.27714	0.1949	0.0000	1.4160	1226.3906	98.458
5.10000	9.57370	0.1884	0.0000	1.4064	1227.4305	98.556
5.20000	8.95702	0.1823	0.0000	1.4019	1228.3993	98.614
5.30000	8.41650	0.1765	0.0000	1.3934	1229.3035	98.686
5.40000	7.94177	0.1710	0.0000	1.3855	1230.1483	98.754
5.50000	7.51467	0.1658	0.0000	1.3778	1230.9381	98.817
5.60000	7.12421	0.1609	0.0000	1.3704	1231.6780	98.877
5.70000	6.76984	0.1563	0.0000	1.3633	1232.3713	98.932
5.80000	6.44094	0.1519	0.0000	1.3564	1233.0217	98.985
5.90000	6.13693	0.1477	0.0000	1.3494	1233.6355	99.034
6.00000	5.84744	0.1437	0.0000	1.3435	1234.2084	99.080
6.10000	5.57207	0.1398	0.0000	1.3377	1234.7440	99.123
6.20000	5.31032	0.1361	0.0000	1.3314	1235.2555	99.164
6.30000	5.06171	0.1326	0.0000	1.3257	1235.7357	99.202
6.40000	4.82574	0.1292	0.0000	1.3201	1236.1873	99.239
6.50000	4.60195	0.1260	0.0000	1.3144	1236.6144	99.273
6.60000	4.38987	0.1229	0.0000	1.3094	1237.0179	99.305
6.70000	4.18901	0.1199	0.0000	1.3044	1237.3994	99.334
6.80000	3.99887	0.1170	0.0000	1.2994	1237.7674	99.365
6.90000	3.81897	0.1143	0.0000	1.2941	1238.1025	99.392
7.00000	3.64870	0.1117	0.0000	1.2895	1238.4244	99.419
7.10000	3.48744	0.1092	0.0000	1.2841	1238.7319	99.443
7.20000	3.33459	0.1068	0.0000	1.2789	1239.0274	99.467
7.30000	3.18954	0.1045	0.0000	1.2737	1239.3026	99.489
7.40000	3.05169	0.1023	0.0000	1.2687	1239.5658	99.510
7.50000	2.92044	0.1002	0.0000	1.2639	1240.0541	99.549
7.60000	2.79520	0.0981	0.0000	1.2592	1240.2810	99.585
7.70000	2.67547	0.0961	0.0000	1.2544	1240.4970	99.601
7.80000	2.56064	0.0941	0.0000	1.2495	1240.7029	99.617
7.90000	2.45021	0.0922	0.0000	1.2446	1240.9097	99.632
8.00000	2.34369	0.0903	0.0000	1.2393	1241.0866	99.646
8.10000	2.24058	0.0885	0.0000	1.2341	1241.2655	99.660
8.20000	2.14039	0.0867	0.0000	1.2290	1241.4383	99.673
8.30000	2.04262	0.0850	0.0000	1.2238	1241.5996	99.686
8.40000	1.94667	0.0833	0.0000	1.2185	1241.7554	99.699
8.50000	1.85204	0.0817	0.0000	1.2132	1241.9052	99.709
8.60000	1.75832	0.0801	0.0000	1.2081	1242.0482	99.720
8.70000	1.66511	0.0785	0.0000	1.2027	1242.1851	99.731
8.80000	1.57291	0.0770	0.0000	1.1974	1242.3143	99.741
8.90000	1.48122	0.0755	0.0000	1.1920	1242.4420	99.748
9.00000	1.39054	0.0740	0.0000	1.1863	1242.5675	99.751
9.10000	1.30037	0.0725	0.0000	1.1809	1242.6927	99.760
9.20000	1.21022	0.0710	0.0000	1.1754	1242.8172	99.767
9.30000	1.12059	0.0695	0.0000	1.1699	1242.9437	99.777
9.40000	1.03097	0.0680	0.0000	1.1644	1243.0727	99.786
9.50000	0.94174	0.0665	0.0000	1.1589	1243.2041	99.793
9.60000	0.85249	0.0650	0.0000	1.1532	1243.3389	99.801
9.70000	0.76374	0.0635	0.0000	1.1477	1243.4781	99.808
9.80000	0.67499	0.0620	0.0000	1.1420	1243.6214	99.815
9.90000	0.58674	0.0605	0.0000	1.1364	1243.7694	99.822
10.00000	0.49849	0.0590	0.0000	1.1308	1243.9216	99.829
10.10000	0.41024	0.0575	0.0000	1.1251	1244.0784	99.835
10.20000	0.32199	0.0560	0.0000	1.1195	1244.2392	99.841
10.30000	0.23374	0.0545	0.0000	1.1138	1244.4044	99.847
10.40000	0.14549	0.0530	0.0000	1.1081	1244.5744	99.852
10.50000	0.05724	0.0515	0.0000	1.1024	1244.7494	99.858
10.60000	0.00000	0.0500	0.0000	1.0967	1244.9294	99.863
10.70000	0.00000	0.0485	0.0000	1.0910	1245.1144	99.868
10.80000	0.00000	0.0470	0.0000	1.0853	1245.3044	99.873
10.90000	0.00000	0.0455	0.0000	1.0796	1245.5004	99.877
11.00000	0.00000	0.0440	0.0000	1.0739	1245.7024	99.882
11.10000	0.00000	0.0425	0.0000	1.0681	1245.9104	99.886
11.20000	0.00000	0.0410	0.0000	1.0624	1246.1244	99.891
11.30000	0.00000	0.0395	0.0000	1.0567	1246.3444	99.895
11.40000	0.00000	0.0380	0.0000	1.0510	1246.5704	99.899
11.50000	0.00000	0.0365	0.0000	1.0453	1246.8024	99.903
11.60000	0.00000	0.0350	0.0000	1.0396	1247.0404	99.906
11.70000	0.00000	0.0335	0.0000	1.0339	1247.2844	99.910
11.80000	0.00000	0.0320	0.0000	1.0281	1247.5344	99.913
11.90000	0.00000	0.0305	0.0000	1.0224	1247.7904	99.917
12.00000	0.00000	0.0290	0.0000	1.0167	1248.0524	99.921

VISIBILITY AND OTHER DATA FOR LANCER RADIATION MECHANICS DIVISION, GEORGE WASHINGTON UNIVERSITY, WASHINGTON, D.C.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3420.0 DEGREES CENTIGRADE FROM THE FOLLOWING TABLE. DEGREES K = 3900.0  
 DEGREES FAHRENHEIT = 6160.0

THE POWER RADIATED FROM 0.001 TO 1000 MICRONS IS 114.81 WATTS/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 2747.17 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (CDPI) OF TOTAL VISIBLE FLUX IS 21471.15 CANDLES/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.2740.

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 214.87 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 23.87 WATTS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7631 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.726 MICRONS.  
 (EQUATION MAXIMIZES THE RATIO OF SPECTRAL RADIANCE TO TOTAL RADIANCE.)

THE TOTAL POWER RADIATE IS 413.1155 WATTS/CM<sup>2</sup> (0.001 TO INFINITE WAVELENGTHS) FROM 0.001 TO 1000 MICRONS.

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 114.81 WATTS/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (CD/MSR) IS THE PRODUCT OF LUMENS PER WATT PER SQUARED METRE TIMES VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARED METRE PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE CAN BE CALCULATED USING THE TEMPERATURE EXPONENT  $n$  IN THE FOLLOWING EQUATION:  $n = 4.76/T^2$ .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3420.0 DEGREES CENTIGRADE FROM THE FOLLOWING TABLE. DEGREES K = 3900.0  
 DEGREES FAHRENHEIT = 6160.0

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> PER MICRON	POWER NORMAL TO SURFACE	SPECTRAL RADIANCE LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPO. IN PER CENT	VISIBLE FLUX LUMENS/CM <sup>2</sup>	R. TOTAL POWER ZERO TO L
0.38000	188.71849	0.1824	0.0300	11.5387	0.8178	0.681
0.38500	201.03150	0.1755	0.0300	11.3404	0.1304	0.714
0.39000	210.24967	0.1691	0.0300	11.1561	10.4559	0.747
0.39500	218.02457	0.1631	0.0300	10.9849	11.45917	0.780
0.40000	224.64207	0.1575	0.0300	10.8260	12.48110	0.813
0.40500	230.42445	0.1523	0.0300	10.6791	13.5199	1.076
0.41000	235.48474	0.1474	0.0300	10.5440	14.58327	1.183
0.41500	240.82478	0.1429	0.0300	10.4201	15.67083	1.294
0.42000	246.44729	0.1387	0.0300	10.3069	16.78377	1.414
0.42500	252.36735	0.1348	0.0300	10.2040	17.92127	1.543
0.43000	258.59075	0.1311	0.0300	10.1119	19.08357	1.677
0.43500	265.12310	0.1277	0.0300	10.0301	20.27077	1.814
0.44000	271.97074	0.1246	0.0300	9.9580	21.48307	1.957
0.44500	279.13925	0.1217	0.0300	9.8959	22.72057	2.103
0.45000	286.63425	0.1191	0.0300	9.8431	24.08327	2.253
0.45500	294.46145	0.1167	0.0300	9.7989	25.57117	2.407
0.46000	302.63645	0.1145	0.0300	9.7627	27.18427	2.565
0.46500	311.16575	0.1125	0.0300	9.7340	28.92257	2.727
0.47000	320.05575	0.1107	0.0300	9.7122	30.78607	2.893
0.47500	329.31275	0.1091	0.0300	9.6970	32.77477	3.063
0.48000	338.94325	0.1077	0.0300	9.6880	34.88857	3.237
0.48500	348.96375	0.1064	0.0300	9.6847	37.12747	3.415
0.49000	359.38075	0.1053	0.0300	9.6869	39.49147	3.597
0.49500	370.20075	0.1043	0.0300	9.6944	41.98057	3.783
0.50000	381.43075	0.1035	0.0300	9.7070	44.59477	3.973
0.50500	393.07675	0.1028	0.0300	9.7254	47.33407	4.167
0.51000	405.14575	0.1022	0.0300	9.7494	50.20847	4.365
0.51500	417.63475	0.1017	0.0300	9.7788	53.21787	4.567
0.52000	430.54975	0.1013	0.0300	9.8135	56.36227	4.773
0.52500	443.89675	0.1010	0.0300	9.8534	59.64167	4.983
0.53000	457.68075	0.1008	0.0300	9.8984	63.05607	5.197
0.53500	471.90775	0.1007	0.0300	9.9484	66.60647	5.415
0.54000	486.59275	0.1007	0.0300	10.0034	70.29287	5.637
0.54500	501.74175	0.1007	0.0300	10.0634	74.11627	5.863
0.55000	517.36075	0.1008	0.0300	10.1284	78.07667	6.093
0.55500	533.46575	0.1009	0.0300	10.1984	82.17507	6.327
0.56000	549.96275	0.1010	0.0300	10.2734	86.40247	6.565
0.56500	566.86675	0.1011	0.0300	10.3534	90.76087	6.807
0.57000	584.18375	0.1012	0.0300	10.4384	95.25027	7.053
0.57500	601.91975	0.1013	0.0300	10.5284	99.87067	7.303
0.58000	620.08075	0.1014	0.0300	10.6234	104.62307	7.557
0.58500	638.67275	0.1015	0.0300	10.7234	109.50747	7.815
0.59000	657.70175	0.1016	0.0300	10.8284	114.52387	8.077
0.59500	677.17475	0.1017	0.0300	10.9384	119.67227	8.343
0.60000	697.10775	0.1018	0.0300	11.0534	124.95367	8.613
0.60500	717.50675	0.1019	0.0300	11.1734	130.36807	8.887
0.61000	738.37675	0.1020	0.0300	11.2984	135.91647	9.165
0.61500	759.72375	0.1021	0.0300	11.4284	141.59987	9.447
0.62000	781.55375	0.1022	0.0300	11.5634	147.41927	9.733
0.62500	803.88275	0.1023	0.0300	11.7034	153.37567	10.023
0.63000	826.71675	0.1024	0.0300	11.8484	159.46907	10.317
0.63500	850.06175	0.1025	0.0300	11.9984	165.69947	10.615
0.64000	873.92375	0.1026	0.0300	12.1534	172.06687	10.917



0.95000	1016.42894	0.4752	0.0000	3.9442	557.6118	42.512
0.96000	1005.46267	0.4654	0.0000	3.9244	547.7280	43.283
0.97000	994.51667	0.4556	0.0000	3.9046	537.7222	44.045
0.98000	982.70312	0.4460	0.0000	3.8849	527.6045	44.790
0.99000	971.15244	0.4365	0.0000	3.8652	517.3749	45.544
1.00000	959.91374	0.4270	0.0000	3.8455	507.0293	46.280
1.01000	947.80519	0.4179	0.0000	3.8258	496.5699	47.007
1.02000	936.04364	0.4094	0.0000	3.8061	486.0005	47.725
1.03000	924.74922	0.4014	0.0000	3.7864	475.3210	48.434
1.04000	912.82374	0.3935	0.0000	3.7667	464.5326	49.134
1.05000	900.26631	0.3859	0.0000	3.7470	453.6352	49.825
1.06000	888.07685	0.3787	0.0000	3.7273	442.6289	50.507
1.07000	876.25441	0.3717	0.0000	3.7076	431.5136	51.181
1.08000	864.79894	0.3649	0.0000	3.6879	420.2892	51.845
1.09000	853.70948	0.3584	0.0000	3.6682	408.9559	52.500
1.10000	842.98594	0.3521	0.0000	3.6485	397.5136	53.146
1.11000	832.62831	0.3460	0.0000	3.6288	385.9623	53.783
1.12000	822.63654	0.3401	0.0000	3.6091	374.3030	54.412
1.13000	812.91054	0.3344	0.0000	3.5894	362.5357	55.031
1.14000	803.45018	0.3289	0.0000	3.5697	350.6604	55.642
1.15000	794.24523	0.3236	0.0000	3.5500	338.6771	56.244
1.16000	785.28553	0.3185	0.0000	3.5303	326.5858	56.830
1.17000	776.56091	0.3136	0.0000	3.5106	314.3865	57.403
1.18000	768.06224	0.3088	0.0000	3.4909	302.0792	57.966
1.19000	759.77944	0.3042	0.0000	3.4712	289.6639	58.520
1.20000	751.70244	0.2998	0.0000	3.4515	277.0406	59.066
1.21000	743.83118	0.2956	0.0000	3.4318	264.3093	59.604
1.22000	736.15553	0.2915	0.0000	3.4121	251.4700	60.134
1.23000	728.76544	0.2876	0.0000	3.3924	238.5227	60.656
1.24000	721.65084	0.2838	0.0000	3.3727	225.4674	61.171
1.25000	714.80164	0.2802	0.0000	3.3530	212.3041	61.679
1.26000	708.20774	0.2767	0.0000	3.3333	199.0328	62.180
1.27000	701.85904	0.2734	0.0000	3.3136	185.6535	62.675
1.28000	695.74544	0.2702	0.0000	3.2939	172.1662	63.165
1.29000	689.85674	0.2671	0.0000	3.2742	158.5709	63.649
1.30000	684.18284	0.2641	0.0000	3.2545	144.8676	64.127
1.31000	678.71354	0.2613	0.0000	3.2348	131.0563	64.600
1.32000	673.43874	0.2586	0.0000	3.2151	117.1370	65.068
1.33000	668.34834	0.2560	0.0000	3.1954	103.1097	65.531
1.34000	663.43224	0.2535	0.0000	3.1757	88.9744	65.989
1.35000	658.68034	0.2511	0.0000	3.1560	74.7311	66.443
1.36000	654.09254	0.2488	0.0000	3.1363	60.3798	66.892
1.37000	649.65874	0.2466	0.0000	3.1166	45.9215	67.337
1.38000	645.36884	0.2445	0.0000	3.0969	31.3572	67.778
1.39000	641.21274	0.2425	0.0000	3.0772	16.6879	68.215
1.40000	637.18034	0.2406	0.0000	3.0575	1.9136	68.648
1.41000	633.27154	0.2388	0.0000	3.0378	-3.0657	69.077
1.42000	629.47624	0.2371	0.0000	3.0181	-8.2180	69.502
1.43000	625.78434	0.2355	0.0000	3.0014	-13.4603	69.923
1.44000	622.19584	0.2340	0.0000	2.9847	-18.7926	70.341
1.45000	618.71074	0.2326	0.0000	2.9680	-24.2149	70.756
1.46000	615.31804	0.2313	0.0000	2.9513	-29.7272	71.168
1.47000	612.00774	0.2301	0.0000	2.9346	-35.3295	71.577
1.48000	608.77984	0.2290	0.0000	2.9179	-41.0218	71.983
1.49000	605.63434	0.2280	0.0000	2.9012	-46.7941	72.387

0.4752	375.70767	0.4802	872240.8158	4.0752	187.8842	10.901
0.4800	267.45344	0.4704	544807.4141	4.1712	147.6936	11.276
0.4850	227.28864	0.4606	455171.5845	4.2672	117.6618	11.654
0.4900	191.03504	0.4508	390722.5454	4.3632	97.6664	12.037
0.4950	159.74024	0.4410	342400.5950	4.4592	82.6383	12.425
0.5000	133.41204	0.4312	304227.5571	4.5552	71.5996	12.814
0.4850	124.14764	0.4214	271113.5422	4.6512	63.5384	13.211
0.4800	105.71644	0.4116	239216.2047	4.7472	57.4564	13.609
0.4750	89.31454	0.4018	209521.6174	4.8432	52.3544	14.011
0.4700	75.04274	0.3920	182927.7072	4.9392	48.2324	14.417
0.4650	62.91094	0.3822	159333.8743	5.0352	44.0904	14.825
0.4600	52.91914	0.3724	138740.8142	5.1312	40.9284	15.237
0.4550	44.16734	0.3626	121147.2544	5.2272	38.7464	15.651
0.4500	36.65554	0.3528	106553.0844	5.3232	37.5444	16.064
0.4450	30.38374	0.3430	94959.0044	5.4192	37.3224	16.488
0.4400	25.35194	0.3332	85964.9244	5.5152	38.0804	16.910
0.4350	21.56014	0.3234	79270.8444	5.6112	39.8184	17.334
0.4300	18.90834	0.3136	74576.7644	5.7072	42.5364	17.761
0.4250	17.39654	0.3038	71782.6844	5.8032	46.2344	18.189
0.4200	16.92474	0.2940	70688.6044	5.9032	50.9124	18.619
0.4150	17.49294	0.2842	71394.5244	6.0032	56.5704	19.051
0.4100	18.10114	0.2744	73900.4444	6.1032	63.2084	19.485
0.4050	18.74934	0.2646	78206.3644	6.2032	70.8264	19.920
0.4000	19.43754	0.2548	84412.2844	6.3032	79.4244	20.354
0.3950	20.16574	0.2450	92618.2044	6.4032	89.0024	20.794
0.3900	20.93394	0.2352	103024.1244	6.5032	100.5604	21.237
0.3850	21.74214	0.2254	115830.0444	6.6032	114.0984	21.681
0.3800	22.59034	0.2156	131235.9644	6.7032	129.7164	22.127
0.3750	23.47854	0.2058	149441.8844	6.8032	147.4144	22.575
0.3700	24.40674	0.1960	170647.8044	6.9032	167.1924	23.025
0.3650	25.37494	0.1862	195053.7244	7.0032	189.0504	23.477
0.3600	26.38314	0.1764	223859.6444	7.1032	213.9884	23.931
0.3550	27.43134	0.1666	267265.5644	7.2032	242.0064	24.387
0.3500	28.52954	0.1568	326271.4844	7.3032	273.1044	24.845
0.3450	29.67774	0.1470	401877.4044	7.4032	307.2924	25.306
0.3400	30.87594	0.1372	495083.3244	7.5032	344.5804	25.770
0.3350	32.12414	0.1274	616089.2444	7.6032	385.0684	26.237
0.3300	33.42234	0.1176	765095.1644	7.7032	429.7564	26.707
0.3250	34.77054	0.1078	942101.0844	7.8032	488.6444	27.181
0.3200	36.16874	0.0980	1148107.0044	7.9032	561.7324	27.660
0.3150	37.61694	0.0882	1384112.9244	8.0032	650.0204	28.144
0.3100	39.11514	0.0784	1651118.8444	8.1032	754.5084	28.633
0.3050	40.66334	0.0686	1950124.7644	8.2032	876.2964	29.127
0.3000	42.26154	0.0588	2283130.6844	8.3032	1016.3844	29.627
0.2950	43.90974	0.0490	2752136.6044	8.4032	1175.7724	30.133
0.2900	45.60794	0.0392	3360142.5244	8.5032	1355.4604	30.645
0.2850	47.35614	0.0294	4118148.4444	8.6032	1556.4484	31.163
0.2800	49.15434	0.0196	5036154.3644	8.7032	1780.7364	31.687
0.2750	51.00254	0.0098	6214160.2844	8.8032	2029.4244	32.217
0.2700	52.90074	0.0000	7652166.2044	8.9032	2303.5124	32.753
0.2650	54.84894	0.0000	9360172.1244	9.0032	2604.0004	33.295
0.2600	56.84714	0.0000	11348178.0444	9.1032	2932.9884	33.843
0.2550	58.89534	0.0000	13626183.9644	9.2032	3291.4764	34.397
0.2500	60.99354	0.0000	16204189.8844	9.3032	3680.4644	34.957
0.2450	63.14174	0.0000	19092195.8044	9.4032	4101.8524	35.523
0.2400	65.34004	0.0000	22300201.7244	9.5032	4556.6404	36.095
0.2350	67.58824	0.0000	26838207.6444	9.6032	5045.8284	36.673
0.2300	69.88644	0.0000	32716213.5644	9.7032	5570.4164	37.257
0.2250	72.23464	0.0000	39944219.4844	9.8032	6131.4044	37.847
0.2200	74.63284	0.0000	48622225.4044	9.9032	6730.7924	38.443
0.2150	77.08104	0.0000	58860231.3244	10.0032	7370.5804	39.045
0.2100	79.57924	0.0000	70768237.2444	10.1032	8052.7684	39.653
0.2050	82.12744	0.0000	84446243.1644	10.2032	8778.3564	40.267
0.2000	84.72564	0.0000	100004249.0844	10.3032	9548.3444	40.887
0.1950	87.37384	0.0000	117442254.0044	10.4032	10363.7324	41.513

1.90000	440.44094	0.3946	0.0000	2.4880	951.1692	72.517
1.40000	395.14094	0.3407	0.0000	2.4497	901.8713	75.773
1.70000	439.40367	0.4274	0.0000	2.4494	1017.5347	78.508
1.80000	492.77851	0.2520	0.0000	2.4322	1042.0839	80.076
1.90000	555.13334	0.2179	0.0000	2.4244	1049.3381	83.051
2.00000	619.58574	0.1880	0.0000	2.4107	1117.9236	84.889
2.10000	691.14004	0.1645	0.0000	2.4120	1133.4211	86.412
2.20000	766.93749	0.1437	0.0000	2.4022	1151.2936	87.774
2.30000	846.33867	0.1260	0.0000	2.4075	1168.9313	88.967
2.40000	928.70194	0.1108	0.0000	1.40570	1187.4607	90.013
2.50000	113.56635	0.0978	0.0000	1.0124	1192.7550	90.935
2.60000	100.53343	0.0865	0.0000	1.0137	1203.4439	91.750
2.70000	89.27399	0.0769	0.0000	1.0139	1212.9204	92.473
2.80000	79.51393	0.0685	0.0000	1.7992	1221.3487	93.115
2.90000	71.02614	0.0611	0.0000	1.7877	1228.4659	93.689
1.00000	83.47124	0.0548	0.0000	1.7376	1235.5900	94.201
3.10000	57.18104	0.0497	0.0000	1.7112	1241.6210	94.661
3.20000	51.45292	0.0453	0.0000	1.6847	1247.6644	95.074
3.30000	46.44543	0.0400	0.0000	1.6609	1251.8342	95.467
3.40000	42.02493	0.0362	0.0000	1.6384	1255.1532	95.784
3.50000	38.11171	0.0328	0.0000	1.6174	1257.7543	96.089
3.60000	34.63944	0.0298	0.0000	1.5983	1261.5902	96.364
3.70000	31.58794	0.0272	0.0000	1.5799	1267.2944	96.618
1.00000	28.70114	0.0248	0.0000	1.5624	1270.3109	96.868
1.90000	26.32632	0.0227	0.0000	1.5463	1273.2645	97.054
4.00000	24.11747	0.0208	0.0000	1.5309	1275.5847	97.250
4.10000	22.13341	0.0191	0.0000	1.5164	1277.4955	97.424
4.20000	20.34791	0.0175	0.0000	1.5024	1279.0180	97.584
4.30000	18.73741	0.0161	0.0000	1.4895	1281.0739	97.737
4.40000	17.28222	0.0149	0.0000	1.4770	1283.2707	97.874
4.50000	15.96449	0.0137	0.0000	1.4652	1285.4319	98.001
4.60000	14.76941	0.0127	0.0000	1.4532	1287.6477	98.118
4.70000	13.68334	0.0114	0.0000	1.4412	1289.8455	98.224
4.80000	12.69474	0.0109	0.0000	1.4299	1294.7074	98.327
4.90000	11.79334	0.0102	0.0000	1.4212	1299.9313	98.420
5.00000	10.97017	0.0094	0.0000	1.4138	1299.0689	98.507
5.10000	10.21722	0.0084	0.0000	1.4074	1293.1277	98.584
5.20000	9.52747	0.0082	0.0000	1.3982	1294.1144	98.663
5.30000	8.89870	0.0077	0.0000	1.3880	1295.0341	98.733
5.40000	8.31337	0.0072	0.0000	1.3791	1295.8951	98.799
5.50000	7.77449	0.0067	0.0000	1.3725	1296.4993	98.860
5.60000	7.28593	0.0063	0.0000	1.3652	1297.2452	98.917
5.70000	6.83143	0.0059	0.0000	1.3582	1298.1574	98.971
5.80000	6.41144	0.0055	0.0000	1.3514	1298.4197	98.022
5.90000	6.02384	0.0052	0.0000	1.3449	1299.4412	98.049
6.00000	5.66444	0.0049	0.0000	1.3387	1300.0254	98.114
6.10000	5.33177	0.0046	0.0000	1.3324	1300.5700	98.156
6.20000	5.02243	0.0043	0.0000	1.3268	1301.0925	98.195
6.30000	4.73491	0.0041	0.0000	1.3211	1301.5803	98.232
6.40000	4.46893	0.0038	0.0000	1.3157	1302.0404	98.267
6.50000	4.22241	0.0034	0.0000	1.3109	1302.4747	98.300
6.60000	3.99419	0.0031	0.0000	1.3053	1302.8851	98.332
6.70000	3.77374	0.0031	0.0000	1.3004	1303.2712	98.361
6.80000	3.57234	0.0031	0.0000	1.2956	1303.4474	98.389
6.90000	3.38614	0.0029	0.0000	1.2910	1303.9841	98.418

7.00000	3.20810	0.0028	0.0000	1.2865	1304.3176	98.441
7.10000	3.04364	0.0028	0.0000	1.2821	1304.4331	98.465
7.20000	2.88919	0.0025	0.0000	1.2779	1304.9244	98.487
7.30000	2.74465	0.0024	0.0000	1.2739	1305.2042	98.500
7.40000	2.60877	0.0022	0.0000	1.2698	1305.4754	98.520
7.50000	2.48110	0.0021	0.0000	1.2660	1305.7303	98.549
7.60000	2.36141	0.0020	0.0000	1.2622	1305.9724	98.567
7.70000	2.24843	0.0019	0.0000	1.2584	1306.2024	98.585
7.80000	2.14240	0.0018	0.0000	1.2550	1306.4223	98.601
7.90000	2.04291	0.0017	0.0000	1.2515	1306.6314	98.617
8.00000	1.94847	0.0017	0.0000	1.2482	1306.8311	98.632
8.10000	1.85807	0.0016	0.0000	1.2443	1307.0215	98.647
8.20000	1.77124	0.0015	0.0000	1.2417	1307.2033	98.661
8.30000	1.68792	0.0015	0.0000	1.2384	1307.3749	98.674
8.40000	1.60731	0.0014	0.0000	1.2354	1307.5469	98.687
8.50000	1.52914	0.0013	0.0000	1.2324	1307.7015	98.699
8.60000	1.45449	0.0013	0.0000	1.2297	1307.8533	98.710
8.70000	1.38214	0.0012	0.0000	1.2269	1307.9946	98.721
8.80000	1.31211	0.0012	0.0000	1.2242	1308.1377	98.732
8.90000	1.24445	0.0011	0.0000	1.2215	1308.2749	98.742
9.00000	1.17911	0.0011	0.0000	1.2189	1308.4047	98.752
9.10000	1.11612	0.0010	0.0000	1.2163	1308.5211	98.761
9.20000	1.05542	0.0010	0.0000	1.2138	1308.6344	98.770
9.30000	1.00444	0.0010	0.0000	1.2114	1308.7514	98.779
9.40000	0.95344	0.0009	0.0000	1.2090	1308.8596	98.787
9.50000	0.90244	0.0009	0.0000	1.2067	1308.9614	98.795
9.60000	0.85144	0.0008	0.0000	1.2044	1309.0615	98.803
9.70000	0.80044	0.0008	0.0000	1.2021	1309.1595	98.810
9.80000	0.74944	0.0008	0.0000	1.2000	1309.2518	98.817
9.90000	0.69844	0.0007	0.0000	1.1978	1309.3406	98.824
10.00000	0.64744	0.0007	0.0000	1.1957	1309.4241	98.830
10.10000	0.59644	0.0007	0.0000	1.1937	1309.5044	98.837
10.20000	0.54544	0.0007	0.0000	1.1917	1309.5874	98.843
10.30000	0.49444	0.0006	0.0000	1.1897	1309.6644	98.848
10.40000	0.44344	0.0006	0.0000	1.1878	1309.7375	98.854
10.50000	0.39244	0.0006	0.0000	1.1859	1309.8085	98.859
10.60000	0.34144	0.0006	0.0000	1.1841	1309.8745	98.864
10.70000	0.29044	0.0006	0.0000	1.1822	1309.9428	98.870
10.80000	0.23944	0.0005	0.0000	1.1804	1310.0045	98.875
10.90000	0.18844	0.0005	0.0000	1.1787	1310.0679	98.879
11.00000	0.13744	0.0005	0.0000	1.1770	1310.1273	98.884
11.10000	0.08644	0.0005	0.0000	1.1753	1310.1846	98.888
11.20000	0.03544	0.0005	0.0000	1.1737	1310.2399	98.892
11.30000	0.00444	0.0004	0.0000	1.1721	1310.2934	98.894
11.40000	0.00444	0.0004	0.0000	1.1705	1310.3451	98.890
11.50000	0.00444	0.0004	0.0000	1.1689	1310.3951	98.894
11.60000	0.00444	0.0004	0.0000	1.1674	1310.4435	98.898
11.70000	0.00444	0.0004	0.0000	1.1659	1310.4903	98.901
11.80000	0.00444	0.0004	0.0000	1.1644	1310.5356	98.905
11.90000	0.00444	0.0004	0.0000	1.1630	1310.5794	98.914
12.00000	0.00444	0.0004	0.0000	1.1615	1310.6219	98.921

VISIBILITY AND OTHER DATA FOR PLANCH RADIATOR, MECHANICS DIVISION, U.S. UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3076.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE, DEGREES K = 3050.0  
DEGREES FAHRENHEIT = 6650.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 300.61 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 79044.33 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 23225.29 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.247 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 210.217 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 52.846 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7137 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.7204 MICRONS.  
I.E. THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1140.22 WATT/CM<sup>2</sup> OR 1.34022E+10 ERG/SEC/CM<sup>2</sup> OR 3.20441E+01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1234.03 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, 400 LUMENS PER WATT \* RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (4) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $\Delta E = E \cdot M \cdot \Delta T / T$

THE EMISSIVITY IS 1.000, AND THE TEMPERATURE IS 3076.8 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE, DEGREES K = 3050.0  
DEGREES FAHRENHEIT = 6650.9

WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPONENT M FOR WATTON	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	215.44541	0.1742	0.0000	10.4054	0.7711	0.700
0.35500	232.54810	0.1870	0.0000	10.2540	10.4036	0.700
0.36000	251.04043	0.2020	0.0000	10.1144	12.1001	0.877
0.36500	269.12084	0.2144	0.0000	9.9770	13.3954	0.871
0.37000	286.24540	0.2315	0.0000	9.8432	14.7422	1.071
0.37500	302.42944	0.2440	0.0000	9.7120	16.2627	1.170
0.38000	317.68154	0.2625	0.0000	9.5843	17.4302	1.202
0.38500	332.42900	0.2744	0.0000	9.4600	19.5137	1.414
0.39000	346.24924	0.2944	0.0000	9.3387	21.2441	1.502
0.39500	359.41854	0.3113	0.0000	9.2206	23.1439	1.678
0.40000	372.04015	0.3251	110.4497	9.1054	25.1427	1.829
0.40500	384.23515	0.3450	212.3170	8.9931	27.2247	1.973
0.41000	395.23515	0.3621	345.2599	8.8836	29.4139	2.191
0.41500	405.23515	0.3773	502.4247	8.7767	31.7043	2.297
0.42000	414.23515	0.3904	673.3914	8.6724	34.1005	2.471
0.42500	422.23515	0.4019	858.3053	8.5705	36.6140	2.693
0.43000	429.23515	0.4119	1057.1350	8.4710	39.2381	2.883
0.43500	435.23515	0.4207	1269.4108	8.3738	41.9679	3.040
0.44000	440.23515	0.4284	1495.3599	8.2780	44.7895	3.265
0.44500	444.23515	0.4351	1735.1243	8.1840	47.7045	3.458
0.45000	448.23515	0.4407	1988.5141	8.0915	50.7147	3.620
0.45500	451.23515	0.4453	2255.4571	8.0004	53.8224	3.907
0.46000	454.23515	0.4489	2535.8843	7.9104	57.0301	4.103
0.46500	457.23515	0.4518	2829.7413	7.8214	60.3400	4.307
0.47000	460.23515	0.4540	3137.0844	7.7334	63.7544	4.507
0.47500	463.23515	0.4556	3458.0101	7.6464	67.2747	4.699
0.48000	466.23515	0.4567	3792.5844	7.5604	70.9017	4.883
0.48500	469.23515	0.4574	4140.8844	7.4754	74.6344	5.058
0.49000	472.23515	0.4578	4502.9844	7.3914	78.4744	5.217
0.49500	475.23515	0.4579	4878.9844	7.3084	82.4144	5.362
0.50000	478.23515	0.4578	5268.9844	7.2264	86.4544	5.494
0.50500	481.23515	0.4575	5672.9844	7.1454	90.5944	5.614
0.51000	484.23515	0.4570	6090.9844	7.0654	94.8344	5.723
0.51500	487.23515	0.4563	6522.9844	6.9864	99.1744	5.821
0.52000	490.23515	0.4554	6968.9844	6.9084	103.6144	5.908
0.52500	493.23515	0.4544	7428.9844	6.8314	108.1544	6.000
0.53000	496.23515	0.4533	7902.9844	6.7554	112.7944	6.090
0.53500	499.23515	0.4521	8390.9844	6.6804	117.5344	6.179
0.54000	502.23515	0.4509	8892.9844	6.6064	122.3744	6.267
0.54500	505.23515	0.4496	9408.9844	6.5334	127.3144	6.354
0.55000	508.23515	0.4482	9938.9844	6.4614	132.3544	6.440
0.55500	511.23515	0.4468	10482.9844	6.3904	137.4944	6.525
0.56000	514.23515	0.4454	11040.9844	6.3204	142.7344	6.609
0.56500	517.23515	0.4440	11612.9844	6.2514	148.0744	6.692
0.57000	520.23515	0.4426	12198.9844	6.1834	153.5144	6.774



1.50000	478.43437	0.3850	0.0000	2.4424	1319.0741	73.187
1.60000	408.20974	0.1297	0.0000	2.4364	1348.2212	74.381
1.70000	350.40021	0.2830	0.0000	2.4272	1392.0714	76.123
1.80000	301.44444	0.2434	0.0000	2.4115	1448.4344	81.480
1.90000	260.51679	0.2104	0.0000	2.3973	1512.6548	83.519
2.00000	225.77307	0.1824	0.0000	2.3724	1578.0208	85.270
2.10000	194.34840	0.1586	0.0000	2.3460	1640.0870	86.797
2.20000	171.18443	0.1384	0.0000	2.3180	1701.1874	88.127
2.30000	150.11844	0.1213	0.0000	2.2874	1757.3472	89.289
2.40000	131.94034	0.1064	0.0000	2.2544	1808.6444	90.309
2.50000	116.34754	0.0940	0.0000	2.2190	1855.1174	91.207
2.60000	102.95084	0.0832	0.0000	2.1814	1897.8174	92.001
2.70000	91.37701	0.0734	0.0000	2.1414	1936.7512	92.704
2.80000	81.35137	0.0657	0.0000	2.0974	1971.9174	93.328
2.90000	72.63804	0.0587	0.0000	2.0504	2003.3174	93.885
3.00000	65.04074	0.0525	0.0000	2.0004	2030.9472	94.384
3.10000	58.39570	0.0472	0.0000	1.9474	2054.8072	94.830
3.20000	52.54474	0.0425	0.0000	1.8914	2074.8974	95.238
3.30000	47.43574	0.0383	0.0000	1.8314	2091.2071	95.598
3.40000	42.97887	0.0347	0.0000	1.7674	2103.7317	95.921
3.50000	39.03389	0.0314	0.0000	1.7004	2112.4617	96.217
3.60000	35.54897	0.0284	0.0000	1.6304	2117.3914	96.485
3.70000	32.48744	0.0260	0.0000	1.5574	2119.5214	96.730
3.80000	29.80854	0.0237	0.0000	1.4804	2118.8514	96.953
3.90000	27.48871	0.0217	0.0000	1.4004	2115.3814	97.154
4.00000	25.50114	0.0199	0.0000	1.3174	2109.1114	97.327
4.10000	22.84614	0.0182	0.0000	1.2304	2100.0414	97.471
4.20000	20.52020	0.0164	0.0000	1.1394	2088.2714	97.587
4.30000	18.52549	0.0154	0.0000	1.0444	2073.8014	97.674
4.40000	17.00972	0.0142	0.0000	0.9464	2056.6314	97.747
4.50000	14.26669	0.0131	0.0000	0.8454	2036.7614	97.807
4.60000	15.04490	0.0122	0.0000	0.7414	2014.1914	97.853
4.70000	13.93649	0.0113	0.0000	0.6344	1988.9214	97.888
4.80000	12.92811	0.0104	0.0000	0.5244	1961.0514	97.915
4.90000	12.08866	0.0097	0.0000	0.4114	1930.5814	97.935
5.00000	11.38912	0.0090	0.0000	0.2964	1897.5114	97.950
5.10000	10.80134	0.0084	0.0000	0.1804	1861.8414	97.961
5.20000	9.89811	0.0074	0.0000	0.0634	1823.5714	97.968
5.30000	9.05304	0.0073	0.0000	0.0000	1782.7014	97.971
5.40000	8.46054	0.0064	0.0000	0.0000	1739.2314	97.971
5.50000	7.91542	0.0064	0.0000	0.0000	1693.1614	97.971
5.60000	7.41352	0.0064	0.0000	0.0000	1644.4914	97.971
5.70000	6.94044	0.0064	0.0000	0.0000	1593.2214	97.971
5.80000	6.52303	0.0063	0.0000	0.0000	1539.3514	97.971
5.90000	6.17277	0.0064	0.0000	0.0000	1482.8814	97.971
6.00000	5.87490	0.0064	0.0000	0.0000	1423.8114	97.971
6.10000	5.62284	0.0064	0.0000	0.0000	1362.1414	97.971
6.20000	5.40830	0.0061	0.0000	0.0000	1297.8714	97.971
6.30000	5.21614	0.0059	0.0000	0.0000	1231.0014	97.971
6.40000	5.04454	0.0057	0.0000	0.0000	1161.5314	97.971
6.50000	4.89177	0.0055	0.0000	0.0000	1099.4614	97.971
6.60000	4.75627	0.0053	0.0000	0.0000	1043.6914	97.971
6.70000	4.63667	0.0051	0.0000	0.0000	994.2214	97.971
6.80000	4.53169	0.0049	0.0000	0.0000	950.0514	97.971
6.90000	4.44019	0.0048	0.0000	0.0000	911.1814	97.971

7.00000	4.26112	0.0046	0.0000	1.2724	1372.7046	99.469
7.10000	4.09352	0.0045	0.0000	1.2563	1373.1142	99.484
7.20000	3.93654	0.0044	0.0000	1.2411	1373.4156	99.507
7.30000	3.78934	0.0043	0.0000	1.2260	1373.7019	99.528
7.40000	3.65174	0.0042	0.0000	1.2110	1373.9736	99.547
7.50000	3.52154	0.0040	0.0000	1.1960	1374.2314	99.564
7.60000	3.39974	0.0039	0.0000	1.1810	1374.4784	99.580
7.70000	3.28514	0.0038	0.0000	1.1660	1374.7126	99.601
7.80000	3.17774	0.0037	0.0000	1.1510	1374.9346	99.617
7.90000	3.07752	0.0037	0.0000	1.1360	1375.1442	99.633
8.00000	2.98499	0.0036	0.0000	1.1210	1375.3414	99.647
8.10000	2.89971	0.0035	0.0000	1.1060	1375.5264	99.661
8.20000	2.82151	0.0035	0.0000	1.0910	1375.7014	99.675
8.30000	2.74994	0.0034	0.0000	1.0760	1375.8664	99.687
8.40000	2.68441	0.0033	0.0000	1.0610	1376.0214	99.700
8.50000	2.62412	0.0033	0.0000	1.0460	1376.1664	99.711
8.60000	2.56810	0.0032	0.0000	1.0310	1376.3014	99.722
8.70000	2.51570	0.0032	0.0000	1.0160	1376.4264	99.733
8.80000	2.46734	0.0031	0.0000	1.0010	1376.5414	99.743
8.90000	2.42244	0.0031	0.0000	0.9860	1376.6464	99.753
9.00000	2.38044	0.0030	0.0000	0.9710	1376.7414	99.763
9.10000	2.34087	0.0030	0.0000	0.9560	1376.8264	99.772
9.20000	2.30314	0.0029	0.0000	0.9410	1376.9014	99.779
9.30000	2.26784	0.0029	0.0000	0.9260	1376.9664	99.786
9.40000	2.23444	0.0029	0.0000	0.9110	1377.0214	99.789
9.50000	2.20244	0.0028	0.0000	0.8960	1377.0664	99.794
9.60000	2.17144	0.0028	0.0000	0.8810	1377.1014	99.798
9.70000	2.14114	0.0028	0.0000	0.8660	1377.1264	99.801
9.80000	2.11144	0.0027	0.0000	0.8510	1377.1414	99.804
9.90000	2.08214	0.0027	0.0000	0.8360	1377.1464	99.807
10.00000	2.05314	0.0027	0.0000	0.8210	1377.1414	99.811
10.10000	2.02444	0.0026	0.0000	0.8060	1377.1264	99.814
10.20000	2.00004	0.0026	0.0000	0.7910	1377.1014	99.817
10.30000	1.97994	0.0026	0.0000	0.7760	1377.0664	99.820
10.40000	1.96244	0.0025	0.0000	0.7610	1377.0214	99.823
10.50000	1.94714	0.0025	0.0000	0.7460	1376.9664	99.826
10.60000	1.93344	0.0025	0.0000	0.7310	1376.9014	99.829
10.70000	1.92084	0.0024	0.0000	0.7160	1376.8264	99.832
10.80000	1.90914	0.0024	0.0000	0.7010	1376.7414	99.835
10.90000	1.89814	0.0024	0.0000	0.6860	1376.6464	99.838
11.00000	1.88784	0.0023	0.0000	0.6710	1376.5414	99.841
11.10000	1.87814	0.0023	0.0000	0.6560	1376.4264	99.844
11.20000	1.86894	0.0023	0.0000	0.6410	1376.3014	99.847
11.30000	1.86014	0.0022	0.0000	0.6260	1376.1664	99.850
11.40000	1.85174	0.0022	0.0000	0.6110	1376.0214	99.853
11.50000	1.84374	0.0022	0.0000	0.5960	1375.8664	99.856
11.60000	1.83604	0.0021	0.0000	0.5810	1375.7014	99.859
11.70000	1.82874	0.0021	0.0000	0.5660	1375.5264	99.862
11.80000	1.82184	0.0021	0.0000	0.5510	1375.3414	99.865
11.90000	1.81534	0.0020	0.0000	0.5360	1375.1464	99.868
12.00000	1.80914	0.0020	0.0000	0.5210	1374.9414	99.871

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3226.8 DEGREES CENTIGRADE FROM THE FOLLOWING TABLE. DEGREES K = 4000.0  
DEGREES FAHRENHEIT = 6740.2

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 348.30 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 7013.54 LUMENS/CM<sup>2</sup>.

THE LUMINANCE (1/PI OF TOTAL VISIBLE FLUX) IS 2519.01 CAND/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.254 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 210.860 LUMENS/WATT.

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 58.521 LUMENS/WATT.

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7285 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.9130 MICRONS;  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1451.68 WATT/CM<sup>2</sup>. FROM 1.5-18.4 MICRONS ENERGY USED IS 1.44831390E11 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1314.39 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT X RADIANT EMITTANCE X VISIBILITY FACTOR, WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (A) MAY BE CALCULATED USING THE TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA:  $M = K/T^2$

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3226.8 DEGREES CENTIGRADE FROM THE FOLLOWING TABLE. DEGREES K = 4000.0  
DEGREES FAHRENHEIT = 6740.2

WAVELENGTH MICRONS	HEMISPHERICAL POWER WATT/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE CORRECTION FACTOR	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.35000	285.60034	0.1881	0.0000	0.2754	11.3141	0.780
0.36000	246.81115	0.1596	0.0000	0.1817	12.5899	0.867
0.38000	203.40264	0.1353	0.0000	0.1000	13.9592	0.962
0.40000	163.73469	0.1074	0.0000	0.2333	15.4279	1.063
0.42000	124.17509	0.0809	0.0000	0.2772	16.9975	1.171
0.44000	88.02933	0.0577	0.0000	0.3317	18.6704	1.284
0.46000	58.00564	0.0379	0.0000	0.4044	20.4490	1.409
0.48000	34.11159	0.0224	0.0000	0.4817	22.3351	1.539
0.50000	17.18000	0.0111	0.0000	0.5621	24.3107	1.674
0.52000	8.50267	0.0054	0.0000	0.6454	26.3732	1.811
0.54000	4.55300	0.0029	0.0000	0.7317	28.5241	1.954
0.56000	2.47502	0.0016	0.0000	0.8200	30.7644	2.100
0.58000	1.30244	0.0008	0.0000	0.9093	33.0955	2.248
0.60000	0.68704	0.0004	0.0000	1.0000	35.5176	2.400
0.62000	0.37094	0.0002	0.0000	1.0931	38.0314	2.554
0.64000	0.20194	0.0001	0.0000	1.1898	40.6375	2.710
0.66000	0.11094	0.0000	0.0000	1.2893	43.3363	2.867
0.68000	0.06104	0.0000	0.0000	1.3915	46.1282	3.024
0.70000	0.03404	0.0000	0.0000	1.4975	49.0147	3.180
0.72000	0.01874	0.0000	0.0000	1.6063	52.0873	3.334
0.74000	0.01044	0.0000	0.0000	1.7179	55.3482	3.484
0.76000	0.00574	0.0000	0.0000	1.8323	58.7990	3.628
0.78000	0.00314	0.0000	0.0000	1.9495	62.4422	3.766
0.80000	0.00174	0.0000	0.0000	2.0695	66.2804	3.898
0.82000	0.00094	0.0000	0.0000	2.1923	70.3162	4.023
0.84000	0.00054	0.0000	0.0000	2.3179	74.5520	4.141
0.86000	0.00034	0.0000	0.0000	2.4463	79.0894	4.251
0.88000	0.00024	0.0000	0.0000	2.5775	83.9314	4.353
0.90000	0.00014	0.0000	0.0000	2.7115	89.0723	4.448
0.92000	0.00004	0.0000	0.0000	2.8483	94.5168	4.536
0.94000	0.00004	0.0000	0.0000	2.9879	100.2693	4.617
0.96000	0.00004	0.0000	0.0000	3.1303	106.3343	4.691
0.98000	0.00004	0.0000	0.0000	3.2755	112.7157	4.758
1.00000	0.00004	0.0000	0.0000	3.4235	119.4181	4.819
1.02000	0.00004	0.0000	0.0000	3.5743	126.4459	4.874
1.04000	0.00004	0.0000	0.0000	3.7279	133.8037	4.923
1.06000	0.00004	0.0000	0.0000	3.8843	141.5059	4.966
1.08000	0.00004	0.0000	0.0000	4.0435	149.5671	5.003
1.10000	0.00004	0.0000	0.0000	4.2055	157.9929	5.035
1.12000	0.00004	0.0000	0.0000	4.3703	166.7978	5.061
1.14000	0.00004	0.0000	0.0000	4.5379	175.9863	5.082
1.16000	0.00004	0.0000	0.0000	4.7083	185.5631	5.098
1.18000	0.00004	0.0000	0.0000	4.8815	195.5328	5.110
1.20000	0.00004	0.0000	0.0000	5.0575	205.9001	5.118
1.22000	0.00004	0.0000	0.0000	5.2363	216.6697	5.122
1.24000	0.00004	0.0000	0.0000	5.4179	227.8461	5.123
1.26000	0.00004	0.0000	0.0000	5.6023	239.4338	5.121
1.28000	0.00004	0.0000	0.0000	5.7895	251.4384	5.116
1.30000	0.00004	0.0000	0.0000	5.9795	263.8655	5.108
1.32000	0.00004	0.0000	0.0000	6.1723	276.7208	5.097
1.34000	0.00004	0.0000	0.0000	6.3679	290.0101	5.082
1.36000	0.00004	0.0000	0.0000	6.5663	303.7391	5.064
1.38000	0.00004	0.0000	0.0000	6.7675	317.9135	5.042
1.40000	0.00004	0.0000	0.0000	6.9715	332.5300	5.017
1.42000	0.00004	0.0000	0.0000	7.1783	347.5954	4.989
1.44000	0.00004	0.0000	0.0000	7.3879	363.1164	4.958
1.46000	0.00004	0.0000	0.0000	7.5993	379.0997	4.923
1.48000	0.00004	0.0000	0.0000	7.8125	395.5421	4.885
1.50000	0.00004	0.0000	0.0000	8.0275	412.4503	4.843
1.52000	0.00004	0.0000	0.0000	8.2443	429.8311	4.798
1.54000	0.00004	0.0000	0.0000	8.4629	447.6923	4.750
1.56000	0.00004	0.0000	0.0000	8.6833	466.0417	4.699
1.58000	0.00004	0.0000	0.0000	8.9055	484.8861	4.644
1.60000	0.00004	0.0000	0.0000	9.1295	504.2323	4.586
1.62000	0.00004	0.0000	0.0000	9.3553	524.0861	4.524
1.64000	0.00004	0.0000	0.0000	9.5829	544.4543	4.458
1.66000	0.00004	0.0000	0.0000	9.8123	565.3437	4.388
1.68000	0.00004	0.0000	0.0000	10.0435	586.7611	4.313
1.70000	0.00004	0.0000	0.0000	10.2763	608.7143	4.234
1.72000	0.00004	0.0000	0.0000	10.5107	631.2101	4.150
1.74000	0.00004	0.0000	0.0000	10.7467	654.2551	4.062
1.76000	0.00004	0.0000	0.0000	10.9843	677.8561	3.970
1.78000	0.00004	0.0000	0.0000	11.2235	702.0197	3.874
1.80000	0.00004	0.0000	0.0000	11.4643	726.7527	3.774
1.82000	0.00004	0.0000	0.0000	11.7067	752.0619	3.670
1.84000	0.00004	0.0000	0.0000	11.9507	777.9541	3.562
1.86000	0.00004	0.0000	0.0000	12.1963	804.4361	3.450
1.88000	0.00004	0.0000	0.0000	12.4435	831.5151	3.334
1.90000	0.00004	0.0000	0.0000	12.6923	859.1971	3.214
1.92000	0.00004	0.0000	0.0000	12.9427	887.4791	3.089
1.94000	0.00004	0.0000	0.0000	13.1947	916.3671	2.960
1.96000	0.00004	0.0000	0.0000	13.4483	945.8671	2.827
1.98000	0.00004	0.0000	0.0000	13.7035	976.0851	2.690
2.00000	0.00004	0.0000	0.0000	13.9603	1007.0271	2.549

0.57800	1184.40110	0.4943	713061.9214	6.3886	174.4211	12.017
0.58000	1184.40110	0.4784	685108.4094	6.5110	174.1805	12.414
0.58200	1176.26111	0.4874	650150.2515	6.4104	174.0044	12.815
0.58400	1181.41817	0.4843	609288.8717	6.3101	191.4843	13.220
0.58600	1192.47464	0.4745	583543.4249	6.3005	197.4217	13.629
0.60000	1202.43337	0.4912	516111.7411	6.2007	203.4102	14.002
0.60500	1212.40887	0.4908	467548.0207	6.0504	209.4492	14.454
0.61000	1222.07444	0.4749	417094.1544	6.1114	215.4341	14.877
0.61500	1230.90643	0.4937	369142.2117	6.3005	222.0491	15.300
0.62000	1239.17979	0.4901	321088.5144	6.4100	228.2452	15.725
0.62500	1247.32049	0.4941	272268.1144	6.3703	234.4421	16.154
0.63000	1254.79683	0.4914	224114.0249	6.2703	240.7174	16.585
0.63500	1261.40942	0.4937	186192.5944	6.4001	247.0003	17.014
0.64000	1268.37129	0.4921	149016.1833	6.3104	253.1349	17.454
0.64500	1274.48727	0.4947	119547.9229	6.1004	259.4921	17.892
0.65000	1280.16649	0.4910	9314.4847	6.3547	266.0701	18.312
0.65500	1284.41610	0.4749	70600.4194	6.3513	272.4932	18.774
0.66000	1290.24024	0.4784	51519.1842	6.4004	278.9125	19.214
0.66500	1294.88205	0.4900	32414.1524	6.4003	285.1049	19.649
0.67000	1298.66401	0.4905	24254.7243	6.3272	291.4943	20.110
0.67500	1302.26651	0.4948	20147.4444	6.3014	298.1024	20.558
0.68000	1305.48404	0.4902	15091.4141	6.4104	304.9004	21.007
0.68500	1308.32530	0.4926	10544.2443	6.4777	311.4350	21.457
0.69000	1310.79242	0.4942	7104.9800	6.2605	317.9429	21.904
0.69500	1312.89742	0.4904	5004.7414	6.2009	324.5421	22.340
0.70000	1314.44774	0.4972	3654.2146	6.4478	331.1113	22.813
0.70500	1314.05261	0.4942	2574.2544	6.1423	337.4442	23.284
0.71000	1317.12077	0.4900	1844.4445	6.1004	344.2713	23.710
0.71500	1317.46092	0.4904	1344.2141	6.4004	350.4949	24.173
0.72000	1314.28121	0.4920	944.0744	6.3202	357.4493	24.627
0.72500	1314.19202	0.4900	627.4544	6.4004	364.0611	25.081
0.73000	1314.20034	0.4909	444.1441	6.3004	370.4327	25.535
0.73500	1317.71524	0.4935	354.4145	6.2208	377.2207	25.989
0.74000	1314.24520	0.4949	244.4544	6.4774	383.4094	26.443
0.74500	1315.49462	0.4941	174.9422	6.4442	390.1314	26.897
0.75000	1314.48144	0.4971	49.2127	6.4150	396.9479	27.350
0.76000	1311.14250	0.4945	0.0000	6.3703	411.0974	28.254
0.77000	1304.40574	0.4912	0.0000	6.2104	421.1441	29.154
0.78000	1301.41611	0.4972	0.0000	6.4549	434.2307	30.055
0.79000	1294.17547	0.4925	0.0000	6.4007	449.2158	30.950
0.80000	1284.44141	0.4973	0.0000	6.3941	464.1155	31.840
0.81000	1280.77197	0.4915	0.0000	6.4704	474.9422	32.725
0.82000	1272.42042	0.4951	0.0000	6.4410	487.7447	33.604
0.83000	1263.44009	0.4943	0.0000	6.1904	500.4245	34.478
0.84000	1253.88051	0.4911	0.0000	6.1413	513.0155	35.345
0.85000	1243.74075	0.4934	0.0000	6.3033	525.5043	36.204
0.86000	1233.21349	0.4934	0.0000	6.2445	537.4497	37.059
0.87000	1222.19514	0.4920	0.0000	6.2009	549.1471	37.905
0.88000	1210.77414	0.4904	0.0000	6.1565	562.3323	38.743
0.89000	1198.99449	0.4904	0.0000	6.1111	574.3414	39.573
0.90000	1184.49044	0.4900	0.0000	6.1007	586.3111	40.399
0.91000	1174.44442	0.4900	0.0000	6.1004	598.1103	41.209
0.92000	1161.44610	0.4913	0.0000	6.0900	609.8002	42.013
0.93000	1148.47094	0.4715	0.0000	6.0804	621.3544	42.800
0.94000	1135.49049	0.4914	0.0000	6.0111	632.7740	43.597

0.95000	1122.46219	0.4915	0.0000	6.4714	644.0710	44.375
0.96000	1109.48244	0.4914	0.0000	6.4647	655.2117	45.141
0.97000	1095.48540	0.4912	0.0000	6.4607	664.2571	45.901
0.98000	1082.19443	0.4904	0.0000	6.1654	671.1471	46.653
0.99000	1068.51804	0.4904	0.0000	6.2513	677.4004	47.194
1.00000	1054.41341	0.4901	0.0000	6.4477	684.5175	48.124
1.01000	1041.38213	0.4784	0.0000	6.4404	700.0049	48.844
1.02000	1027.24177	0.4720	0.0000	6.4124	710.1147	49.500
1.03000	1013.52454	0.4744	0.0000	6.4012	729.5428	50.243
1.04000	999.74942	0.4744	0.0000	6.3704	749.4091	50.957
1.05000	986.04244	0.4749	0.0000	6.4402	769.3341	51.641
1.06000	972.16644	0.4735	0.0000	6.4107	789.3303	52.314
1.07000	958.72344	0.4722	0.0000	6.3014	808.4844	52.981
1.08000	945.15421	0.4714	0.0000	6.2035	828.5049	53.637
1.09000	931.45444	0.4707	0.0000	6.4254	847.4849	54.283
1.10000	918.25573	0.4645	0.0000	6.3944	867.1344	54.920
1.11000	904.92443	0.4646	0.0000	6.3719	886.2542	55.544
1.12000	891.70279	0.4644	0.0000	6.1454	905.2712	56.149
1.13000	874.58721	0.4644	0.0000	6.3202	924.0844	56.727
1.14000	865.48631	0.4645	0.0000	6.2459	942.4001	57.174
1.15000	852.49944	0.4644	0.0000	6.2704	961.4004	57.670
1.16000	840.91917	0.4647	0.0000	6.2844	980.4417	58.553
1.17000	827.10471	0.4625	0.0000	6.3224	999.1909	59.127
1.18000	813.40442	0.4610	0.0000	6.1424	1018.4103	59.693
1.19000	802.44315	0.4607	0.0000	6.1744	1038.4045	60.250
1.20000	790.21494	0.4594	0.0000	6.1544	1057.4494	60.790
1.21000	774.11217	0.4599	0.0000	6.1125	1076.1013	61.310
1.22000	764.20015	0.4512	0.0000	6.1109	1094.0209	61.871
1.23000	754.40940	0.4522	0.0000	6.3949	1095.4244	62.195
1.24000	745.74444	0.4534	0.0000	6.1449	1113.1114	62.911
1.25000	737.27714	0.4547	0.0000	6.3844	1020.4417	63.418
1.26000	719.93714	0.4561	0.0000	6.3004	1027.7374	63.914
1.27000	708.74944	0.45374	0.0000	6.1007	1034.8409	64.410
1.28000	697.71440	0.45202	0.0000	6.2004	1041.9131	64.895
1.29000	686.43294	0.45210	0.0000	6.3717	1048.4337	65.372
1.30000	674.10492	0.45124	0.0000	6.2320	1055.4503	65.841
1.31000	665.33043	0.4504	0.0000	6.3017	1062.3543	66.304
1.32000	655.10917	0.4499	0.0000	6.2117	1068.9414	66.758
1.33000	644.84125	0.44991	0.0000	6.4979	1075.4410	67.204
1.34000	634.72471	0.44814	0.0000	6.4000	1081.4544	67.447
1.35000	624.74211	0.44710	0.0000	6.4414	1088.1541	67.801
1.36000	614.94864	0.44644	0.0000	6.4444	1094.3545	68.508
1.37000	605.24747	0.4591	0.0000	6.4100	1090.4544	68.924
1.38000	595.77454	0.4510	0.0000	6.4177	1096.4404	69.362
1.39000	586.40492	0.4464	0.0000	6.2719	1092.3716	69.749
1.40000	577.19209	0.4374	0.0000	6.2719	1098.1404	70.150
1.41000	568.12019	0.4309	0.0000	6.2844	1093.9159	70.565
1.42000	559.19249	0.4241	0.0000	6.2517	1029.5523	70.933
1.43000	550.40744	0.4175	0.0000	6.2141	1035.1009	71.315
1.44000	541.74440	0.4109	0.0000	6.2714	1040.5610	71.801
1.45000	533.24172	0.4044	0.0000	6.2744	1045.9340	72.062
1.46000	524.90749	0.3981	0.0000	6.4925	1051.2247	72.424
1.47000	516.68930	0.3919	0.0000	6.4704	1056.4344	72.789
1.48000	508.57474	0.3858	0.0000	6.4645	1061.5605	73.138
1.49000	500.61742	0.3797	0.0000	6.4504	1066.6044	73.484

1.50000	497.79015	0.17134	0.0000	2.4174	1071.5713	71.824
1.40000	421.14147	0.16194	0.0000	2.5112	1117.1404	74.970
1.70000	161.21179	0.27447	0.0000	2.4055	1155.2241	79.450
1.40000	110.58751	0.2154	0.0000	2.3115	1199.7413	81.970
1.40000	267.95681	0.2154	0.0000	2.2245	1210.4074	83.954
2.00000	312.00341	0.1740	0.0000	2.1555	1215.5544	85.677
2.00000	901.60070	0.1579	0.0000	2.0885	1265.1930	87.144
2.00000	174.61971	0.1330	0.0000	2.4007	1244.0102	88.644
2.00000	153.01024	0.1147	0.0000	1.9777	1301.6441	89.609
2.00000	139.10107	0.1147	0.0000	1.9707	1319.9191	90.594
2.00000	119.14091	0.1075	0.0000	1.8440	1327.4144	91.649
2.00000	104.17802	0.1004	0.0000	1.8449	1339.9242	92.241
2.00000	93.48740	0.1004	0.0000	1.40194	1368.7550	92.925
2.00000	81.10570	0.1011	0.0000	1.2740	1357.5770	93.533
2.00000	74.25572	0.1011	0.0000	1.7880	1347.4191	94.075
2.00000	66.44441	0.1011	0.0000	1.7144	1372.4441	94.559
2.00000	59.65194	0.1011	0.0000	1.8449	1372.4441	94.559
2.00000	53.48154	0.1011	0.0000	1.8449	1384.6250	95.383
2.00000	48.07552	0.1011	0.0000	1.8419	1389.5240	95.734
2.00000	43.70601	0.1011	0.0000	1.8419	1394.1311	96.051
2.00000	39.09674	0.1011	0.0000	1.8419	1399.3014	96.339
2.00000	34.06107	0.1011	0.0000	1.8419	1402.0440	96.589
2.00000	29.42854	0.1011	0.0000	1.8419	1402.5274	96.837
2.00000	25.04701	0.1011	0.0000	1.8419	1408.6414	97.053
2.00000	20.97904	0.1011	0.0000	1.8419	1411.5270	97.250
2.00000	17.17904	0.1011	0.0000	1.8419	1414.1440	97.430
2.00000	13.61904	0.1011	0.0000	1.8419	1418.5440	97.584
2.00000	10.29904	0.1011	0.0000	1.8419	1418.7524	97.744
2.00000	7.13311	0.1011	0.0000	1.8419	1420.7804	97.887
2.00000	4.15470	0.1011	0.0000	1.8419	1422.4401	98.014
2.00000	1.37440	0.1011	0.0000	1.8419	1424.3711	98.135
2.00000	16.58520	0.1011	0.0000	1.8419	1427.8644	98.245
2.00000	15.12074	0.1011	0.0000	1.8419	1427.4410	98.347
2.00000	14.19034	0.1011	0.0000	1.8419	1428.4072	98.440
2.00000	13.16174	0.1011	0.0000	1.8419	1428.7644	98.524
2.00000	12.27872	0.1011	0.0000	1.8419	1430.2544	98.609
2.00000	11.16410	0.1011	0.0000	1.8419	1431.2524	98.685
2.00000	10.58564	0.1011	0.0000	1.8419	1432.3747	98.754
2.00000	9.44402	0.1011	0.0000	1.8419	1433.3247	98.821
2.00000	8.21154	0.1011	0.0000	1.8419	1433.7144	98.887
2.00000	7.00744	0.1011	0.0000	1.8419	1433.7515	98.940
2.00000	6.00744	0.1011	0.0000	1.8419	1434.2104	98.993
2.00000	5.00744	0.1011	0.0000	1.8419	1434.5414	99.044
2.00000	4.00744	0.1011	0.0000	1.8419	1434.7414	99.091
2.00000	3.00744	0.1011	0.0000	1.8419	1434.9414	99.135
2.00000	2.00744	0.1011	0.0000	1.8419	1435.1414	99.177
2.00000	1.00744	0.1011	0.0000	1.8419	1435.3414	99.214
2.00000	0.00744	0.1011	0.0000	1.8419	1435.5414	99.253
2.00000	0.00744	0.1011	0.0000	1.8419	1435.7414	99.287
2.00000	0.00744	0.1011	0.0000	1.8419	1435.9414	99.320
2.00000	0.00744	0.1011	0.0000	1.8419	1436.1414	99.351
2.00000	0.00744	0.1011	0.0000	1.8419	1436.3414	99.380
2.00000	0.00744	0.1011	0.0000	1.8419	1436.5414	99.404
2.00000	0.00744	0.1011	0.0000	1.8419	1436.7414	99.434
2.00000	0.00744	0.1011	0.0000	1.8419	1436.9414	99.459

7.00000	1.31404	0.0024	0.0000	1.2744	1443.9102	99.487
7.00000	1.14359	0.0024	0.0000	1.2745	1444.2510	99.505
7.00000	2.94300	0.0021	0.0000	1.2704	1444.5501	99.524
7.00000	2.43420	0.0021	0.0000	1.2644	1444.8501	99.546
7.00000	2.469174	0.0020	0.0000	1.2624	1445.1244	99.565
7.00000	2.56187	0.0019	0.0000	1.2544	1445.3801	99.583
7.00000	2.41707	0.0018	0.0000	1.2542	1445.6300	99.600
7.00000	2.12145	0.0018	0.0000	1.2514	1445.8770	99.617
7.00000	2.21179	0.0017	0.0000	1.2442	1446.1036	99.632
7.00000	2.10447	0.0014	0.0000	1.2444	1446.3195	99.647
7.00000	2.01121	0.0015	0.0000	1.2414	1446.5245	99.661
7.00000	1.91947	0.0014	0.0000	1.2344	1446.7219	99.675
7.00000	1.83240	0.0014	0.0000	1.2313	1446.9105	99.688
7.00000	1.75101	0.0013	0.0000	1.2322	1447.0847	99.700
7.00000	1.67373	0.0013	0.0000	1.2243	1447.2509	99.712
7.00000	1.59745	0.0012	0.0000	1.2244	1447.4234	99.721
7.00000	1.51152	0.0012	0.0000	1.2234	1447.5801	99.734
7.00000	1.44407	0.0011	0.0000	1.2209	1447.7300	99.744
7.00000	1.40804	0.0011	0.0000	1.2142	1447.8735	99.754
7.00000	1.34437	0.0010	0.0000	1.2154	1448.0170	99.764
7.00000	1.27947	0.0010	0.0000	1.2131	1448.1476	99.773
7.00000	1.21674	0.0009	0.0000	1.2104	1448.2680	99.781
7.00000	1.14445	0.0009	0.0000	1.2061	1448.3801	99.789
7.00000	1.11447	0.0008	0.0000	1.2054	1448.5043	99.794
7.00000	1.00347	0.0008	0.0000	1.2034	1448.6179	99.805
7.00000	1.04049	0.0008	0.0000	1.2012	1448.7251	99.813
7.00000	1.00952	0.0008	0.0000	1.1964	1448.8241	99.824
7.00000	0.97051	0.0007	0.0000	1.1947	1448.9271	99.827
7.00000	0.93137	0.0007	0.0000	1.1924	1449.0223	99.831
7.00000	0.89709	0.0007	0.0000	1.1924	1449.1134	99.840
7.00000	0.86427	0.0007	0.0000	1.1904	1449.2019	99.844
10.00000	0.83212	0.0006	0.0000	1.1840	1449.2867	99.851
10.00000	0.80104	0.0006	0.0000	1.1844	1449.3644	99.857
10.00000	0.77214	0.0006	0.0000	1.1847	1449.4470	99.862
10.00000	0.74421	0.0006	0.0000	1.1824	1449.5229	99.866
10.00000	0.71751	0.0005	0.0000	1.1810	1449.5959	99.873
10.00000	0.69200	0.0005	0.0000	1.1792	1449.6644	99.879
10.00000	0.66741	0.0005	0.0000	1.1774	1449.7304	99.887
10.00000	0.64424	0.0005	0.0000	1.1757	1449.7944	99.891
10.00000	0.62184	0.0005	0.0000	1.1740	1449.8533	99.895
10.00000	0.60049	0.0005	0.0000	1.1724	1449.9074	99.899
11.00000	0.58015	0.0004	0.0000	1.1707	1449.9574	99.907
11.00000	0.56054	0.0004	0.0000	1.1491	1450.0444	99.914
11.00000	0.54179	0.0004	0.0000	1.1476	1450.0955	99.917
11.00000	0.52379	0.0004	0.0000	1.1460	1450.1444	99.919
11.00000	0.50644	0.0004	0.0000	1.1444	1450.2003	99.921
11.00000	0.48999	0.0004	0.0000	1.1430	1450.2507	99.924
11.00000	0.47441	0.0004	0.0000	1.1415	1450.2943	99.927
11.00000	0.45847	0.0003	0.0000	1.1401	1450.3400	99.927
11.00000	0.44244	0.0003	0.0000	1.1387	1450.3801	99.930
12.00000	0.41014	0.0003	0.0000	1.1371	1450.4339	99.930



VISIBILITY AND OTHER DATA FOR PLACER RADIATION, MECHANICS DIVISION, D.R.I., UNIVERSITY OF DENVER.

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3776.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 4050.0  
DEGREES FAHRENHEIT = 6030.9

THE POWER RADIATED FROM 0.40 TO 0.75 MICRON IS 197.65 WATT/CM<sup>2</sup>.

THE TOTAL VISIBLE FLUX IS 45496.35 LUMENS/CM<sup>2</sup>.

THE LUMINANCE ( 1/PI OF TOTAL VISIBLE FLUX) IS 27265.29 CANDELA/CM<sup>2</sup>.

THE RATIO OF THE VISIBLE POWER TO THE TOTAL POWER IS 0.261 .

THE RATIO OF THE TOTAL VISIBLE FLUX TO VISIBLE POWER IS 215.460 (LUMENS/WATT).

THE RATIO OF THE TOTAL VISIBLE FLUX TO TOTAL POWER IS 56.154 LUMEN/WATT

THE WAVELENGTH OF PEAK POWER OUTPUT IS 0.7154 MICRONS.

THE WAVELENGTH PRODUCED MOST EFFICIENTLY IS 0.9017 MICRONS.  
I.E., THIS MAXIMIZES THE RATIO OF SPECTRAL RADIANT EMITTANCE TO TOTAL RADIANT EMITTANCE.

THE TOTAL POWER RADIATED IS 1525.39 WATT/CM<sup>2</sup> IN 1.52539E+10 PHOTONS/SEC/CM<sup>2</sup> OR 3.6476E-01 KCAL/SEC/CM<sup>2</sup>

THE POWER RADIATED AT THE PEAK WAVELENGTH IS 1402.88 WATT/CM<sup>2</sup> PER MICRON.

THE SPECTRAL BRIGHTNESS (COLUMN 4) IS THE PRODUCT, AND LUMENS PER WATT = RADIANT EMITTANCE \* VISIBILITY FACTOR,  
WHERE RADIANT EMITTANCE IS EXPRESSED IN WATTS PER SQUARE CENTIMETER PER MICRON.

WHEN SMALL TEMPERATURE CHANGES ARE INVOLVED, THE CHANGE IN RADIANT EMITTANCE (M) MAY BE CALCULATED USING THE  
TEMPERATURE EXPONENT M IN THE FOLLOWING FORMULA: M = WATPM .

THE EMISSIVITY IS 1.0000 AND THE TEMPERATURE IS 3776.6 DEGREES CENTIGRADE FOR THE FOLLOWING TABLE. DEGREES K = 4050.0  
DEGREES FAHRENHEIT = 6030.9

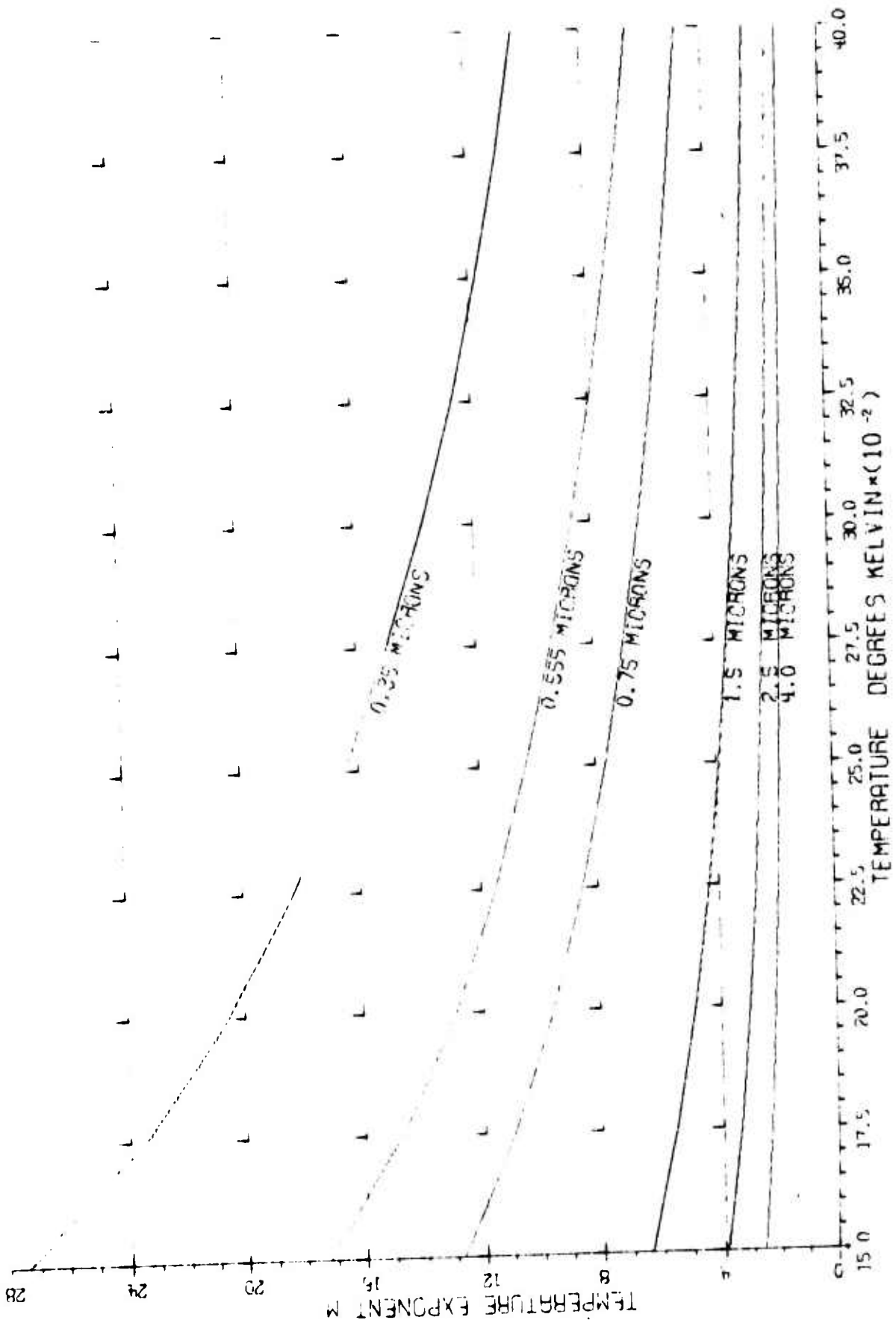
WAVELENGTH L MICRONS	HEMISPHERICAL POWER WATTS/CM <sup>2</sup> /MICRON	POWER NORMALIZED TO PEAK	SPECTRAL BRIGHTNESS LUMENS PER CM <sup>2</sup> PER MICRON	TEMPERATURE EXPOENENT M FOR WATPM	POWER FROM ZERO TO L	% TOTAL POWER ZERO TO L
0.15000	274.81857	0.1987	0.0000	10.1885	13.0518	0.856
0.15500	299.41821	0.2115	0.0000	10.0057	14.8997	0.951
0.16000	321.05907	0.2259	0.0000	9.8466	16.0512	1.052
0.16500	341.02651	0.2405	0.0000	9.7317	17.07112	1.161
0.17000	359.50837	0.2485	0.0000	9.6003	17.9823	1.277
0.17500	376.45524	0.2760	0.0000	9.4723	21.3670	1.401
0.18000	411.42047	0.2934	0.0000	9.3478	21.1674	1.532
0.18500	435.55830	0.3105	0.0000	9.2265	25.4459	1.671
0.19000	459.82033	0.3276	0.0000	9.1043	27.7237	1.817
0.19500	483.95970	0.3450	0.0000	8.9931	30.0825	1.972
0.20000	508.52933	0.3625	138.3200	8.8909	32.5637	2.135
0.20500	533.28260	0.3801	290.1057	8.7718	35.1661	2.304
0.21000	558.17349	0.3979	455.4494	8.6664	37.8947	2.484
0.21500	583.15685	0.4157	672.4026	8.5603	40.7500	2.671
0.22000	608.18889	0.4335	1494.2727	8.4586	43.7244	2.867
0.22500	633.22540	0.4514	3141.1309	8.3593	46.8119	3.070
0.23000	658.22584	0.4692	5192.0844	8.2623	49.0604	3.282
0.23500	683.18924	0.4870	7604.2994	8.1675	53.4141	3.502
0.24000	707.95741	0.5046	11072.4530	8.0740	58.8919	3.730
0.24500	732.61283	0.5222	14447.1171	7.9808	60.4934	3.964
0.25000	757.07884	0.5397	19562.9142	7.8896	64.2177	4.210
0.25500	781.32283	0.5569	25502.3771	7.8004	68.0634	4.467
0.26000	805.31207	0.5740	32896.7326	7.7244	72.0305	4.722
0.26500	829.01614	0.5908	41716.0941	7.6421	76.1144	4.980
0.27000	852.40647	0.6074	52744.9125	7.5611	80.3201	5.244
0.27500	875.45507	0.6240	66674.7345	7.4818	84.6399	5.509
0.28000	898.13987	0.6402	84892.1402	7.4042	89.0740	5.839
0.28500	920.43451	0.6561	109776.3140	7.3282	93.6204	6.137
0.29000	942.31880	0.6717	133281.5146	7.2539	98.2777	6.443
0.29500	963.89779	0.6870	169044.0980	7.1810	103.0431	6.755
0.30000	984.77685	0.7020	214294.2118	7.1094	107.9166	7.075
0.30500	1005.31505	0.7164	278230.4029	7.0394	112.8901	7.401
0.31000	1025.37369	0.7309	350718.4145	6.9710	117.9670	7.734
0.31500	1044.93954	0.7449	432019.3992	6.9038	123.1430	8.073
0.32000	1063.99779	0.7584	513698.1313	6.8379	128.4195	8.419
0.32500	1082.54002	0.7717	593749.3648	6.7732	133.7971	8.770
0.33000	1100.55891	0.7845	681103.4235	6.7099	139.2800	9.124
0.33500	1118.04413	0.7970	785647.0571	6.6477	144.8667	9.482
0.34000	1134.99011	0.8090	908990.7444	6.5867	150.5605	9.861
0.34500	1151.39172	0.8207	1047287.4407	6.5264	156.3557	10.234
0.35000	1167.24495	0.8320	1207557.9324	6.4668	161.2525	10.614
0.35500	1182.54891	0.8429	1384131.9131	6.4084	167.2472	11.001
0.36000	1197.29545	0.8535	1570000.3701	6.3518	173.3521	11.381
0.36500	1211.49048	0.8634	1769513.7101	6.2962	179.5793	11.766
0.37000	1225.13217	0.8733	1983101.5401	6.2434	185.9710	12.149

0.57500	1718,72073	0.4824	770620,9151	2.1917	172,0294	12,589
0.58000	1750,75841	0.4916	719988,8771	2.1173	178,2524	12,997
0.58500	1782,78787	0.5001	701512,2773	2.0754	204,5143	11,807
0.59000	1774,10247	0.5083	455901,1177	2.1147	210,8749	11,824
0.59500	1785,09427	0.5160	607131,4075	2.2484	217,2773	18,244
0.60000	1795,48104	0.5234	565957,6721	2.2157	221,7289	16,467
0.60500	1805,30074	0.5304	501271,7704	2.4474	230,2310	15,093
0.61000	1814,41254	0.5371	489650,0479	2.4400	236,7810	15,523
0.61500	1823,40545	0.5433	394862,8470	2.7913	243,3743	15,955
0.62000	1831,48675	0.5493	345013,4041	2.7475	250,0142	16,100
0.62500	1839,48104	0.5544	292377,9969	2.7124	256,4924	16,429
0.63000	1846,74212	0.5600	242682,9104	2.6580	263,4040	17,264
0.63500	1853,93183	0.5644	199727,1547	2.6148	270,1580	17,711
0.64000	1859,94037	0.5693	161821,0038	2.5714	276,9425	18,156
0.64500	1865,67620	0.5735	129155,0547	2.5292	283,7565	18,609
0.65000	1871,08402	0.5773	99757,4542	2.4874	290,5885	19,051
0.65500	1875,96474	0.5804	75788,1381	2.4467	297,4662	19,501
0.66000	1880,43544	0.5820	57260,4623	2.4065	304,3878	19,953
0.66500	1884,48036	0.5840	42368,7625	2.3664	311,2698	20,404
0.67000	1888,07584	0.5894	30208,5374	2.3278	318,2013	20,849
0.67500	1891,26441	0.5937	21759,3754	2.2894	325,1804	21,314
0.68000	1894,04445	0.5973	16115,1550	2.2514	332,1113	21,777
0.68500	1896,42549	0.5994	11247,8784	2.2144	339,0894	22,238
0.69000	1898,41807	0.5968	7787,5792	2.1777	346,0749	22,688
0.69500	1900,03077	0.5980	5424,5192	2.1414	353,0731	23,144
0.70000	1901,27344	0.5949	3904,7510	2.1049	360,0745	23,604
0.70500	1902,15635	0.5990	2745,0523	2.0710	367,0843	24,065
0.71000	1902,68852	0.5990	2001,0192	2.0365	374,0975	24,526
0.71500	1902,87974	1.0000	1430,9371	2.0024	381,1114	24,985
0.72000	1902,73957	0.9980	1049,2492	2.0049	388,1247	25,444
0.72500	1902,27744	0.9984	667,4941	2.0459	395,1384	25,904
0.73000	1901,50277	0.9980	474,5109	2.0931	402,1440	26,364
0.73500	1900,42484	0.9952	380,9184	2.0411	409,1529	26,823
0.74000	1899,05290	0.9973	285,4444	2.0194	416,1517	27,282
0.74500	1897,39602	0.9941	190,0459	2.0065	423,1430	27,740
0.75000	1895,44121	0.9947	94,4015	2.0000	430,1242	28,198
0.75500	1893,40514	0.9914	0.0000	2.0175	448,0574	29,111
0.76000	1891,18030	0.9874	0.0000	2.0420	457,9380	30,021
0.76500	1888,55992	0.9827	0.0000	2.0721	471,7573	30,927
0.77000	1885,10512	0.9773	0.0000	2.1067	485,5063	31,824
0.80000	1862,48440	0.9715	0.0000	2.1429	499,1747	32,725
0.81000	1853,84444	0.9650	0.0000	2.1807	512,7887	33,615
0.82000	1846,15704	0.9581	0.0000	2.2192	526,2513	34,500
0.83000	1839,83011	0.9504	0.0000	2.2584	539,4618	35,377
0.84000	1832,98345	0.9430	0.0000	2.2980	552,4241	36,248
0.85000	1825,52100	0.9340	0.0000	2.3382	565,1989	37,119
0.86000	1819,61003	0.9246	0.0000	2.3787	577,1540	37,984
0.87000	1814,28321	0.9144	0.0000	2.4194	589,0894	38,814
0.88000	1808,55665	0.9045	0.0000	2.4604	604,8093	39,655
0.89000	1804,48014	0.8949	0.0000	2.5014	617,5104	40,487
0.90000	1804,09224	0.8847	0.0000	2.5424	630,2129	41,309
0.91000	1804,42934	0.8799	0.0000	2.5835	642,4807	42,123
0.92000	1804,52580	0.8700	0.0000	2.6247	654,8154	42,924
0.93000	1804,41374	0.8600	0.0000	2.6660	666,9505	43,723
0.94000	1802,12364	0.8494	0.0000	2.7074	678,9813	44,510

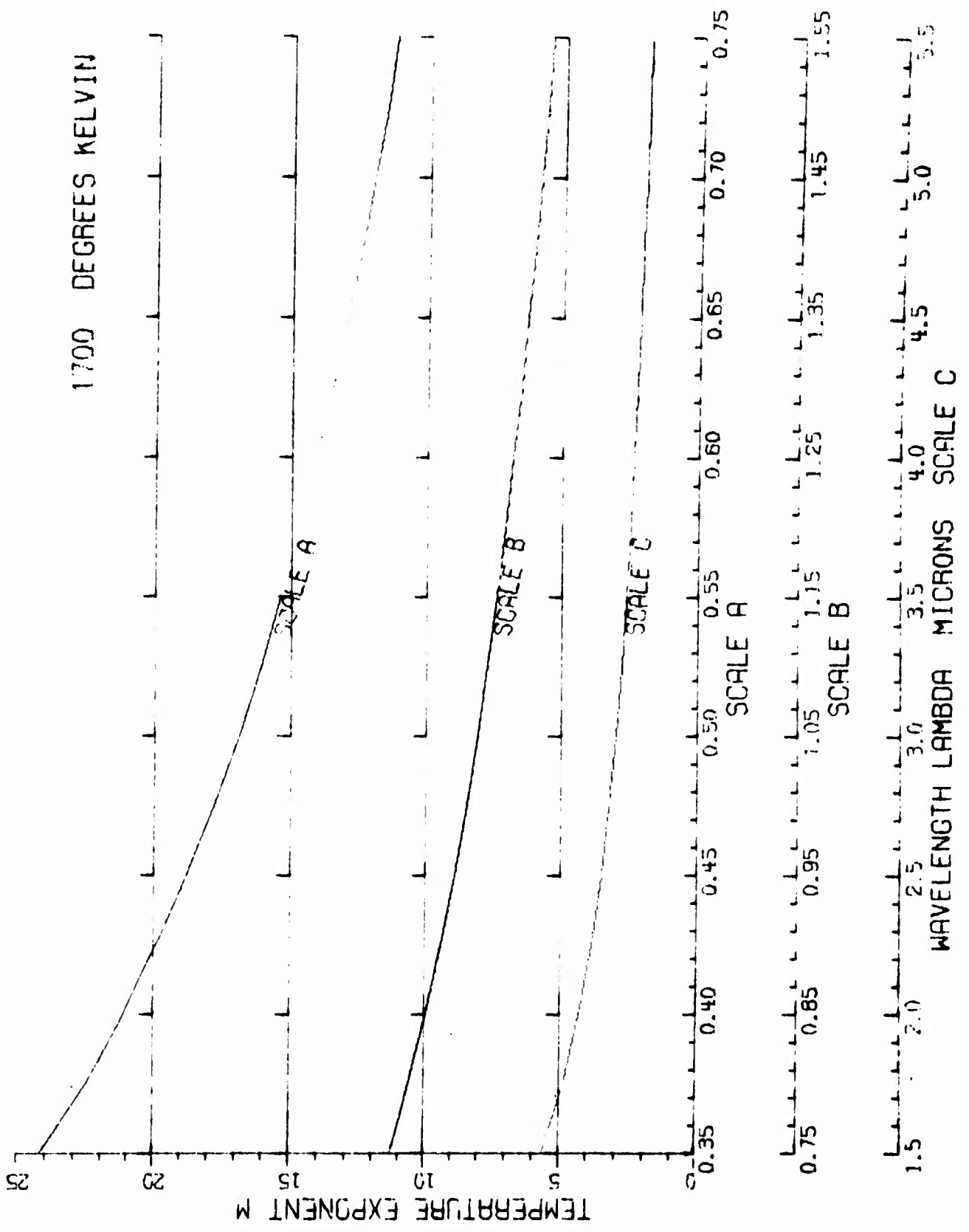
0.95000	1800,94141	0.8394	0.0000	2.7489	690,7074	45,284
0.96000	1801,12094	0.8291	0.0000	2.7917	702,4284	46,054
0.97000	1804,94002	0.8184	0.0000	2.8352	714,0544	46,811
0.98000	1811,72424	0.8081	0.0000	2.8794	725,4655	47,559
0.99000	1818,93444	0.7974	0.0000	2.9241	736,7289	48,298
1.00000	1824,11347	0.7870	0.0000	2.9697	747,8441	49,027
1.01000	1829,27429	0.7764	0.0000	3.0163	758,8111	49,745
1.02000	1834,44423	0.7659	0.0000	3.0634	769,4297	50,455
1.03000	1839,63391	0.7553	0.0000	3.1114	780,1001	51,154
1.04000	1844,84634	0.7448	0.0000	3.1603	790,8225	51,844
1.05000	1850,12741	0.7343	0.0000	3.2104	801,1974	52,524
1.06000	1855,45894	0.7234	0.0000	3.2615	811,4243	53,195
1.07000	1860,78954	0.7134	0.0000	3.3134	821,5048	53,856
1.08000	1866,15425	0.7031	0.0000	3.3662	831,4479	54,507
1.09000	1871,50845	0.6924	0.0000	3.4199	841,2342	55,149
1.10000	1877,02941	0.6824	0.0000	3.4741	850,8820	55,781
1.11000	1882,67373	0.6725	0.0000	3.5289	860,3871	56,404
1.12000	1888,41974	0.6625	0.0000	3.5842	869,7504	57,014
1.13000	1894,24180	0.6525	0.0000	3.6400	878,9743	57,623
1.14000	1900,12544	0.6424	0.0000	3.6962	888,0590	58,219
1.15000	1906,05544	0.6329	0.0000	3.7529	897,0059	58,804
1.16000	1912,02927	0.6232	0.0000	3.8101	905,8147	59,381
1.17000	1918,05442	0.6137	0.0000	3.8678	914,4928	59,952
1.18000	1924,12815	0.6042	0.0000	3.9261	923,0356	60,512
1.19000	1930,25714	0.5948	0.0000	3.9849	931,4447	61,063
1.20000	1936,43619	0.5857	0.0000	4.0441	939,7275	61,604
1.21000	1942,66044	0.5764	0.0000	4.1037	947,9794	62,140
1.22000	1948,93484	0.5674	0.0000	4.1637	956,2051	62,664
1.23000	1955,25433	0.5587	0.0000	4.2241	964,4090	63,184
1.24000	1961,62227	0.5499	0.0000	4.2849	972,5854	63,698
1.25000	1968,03484	0.5413	0.0000	4.3461	980,7292	64,194
1.26000	1974,48709	0.5328	0.0000	4.4077	988,7444	64,680
1.27000	1980,98514	0.5244	0.0000	4.4697	996,7247	65,174
1.28000	1987,52377	0.5161	0.0000	4.5320	1004,6814	65,654
1.29000	1994,10797	0.5079	0.0000	4.5947	1012,6138	66,129
1.30000	2000,73234	0.4998	0.0000	4.6578	1020,5274	66,598
1.31000	2007,39294	0.4919	0.0000	4.7213	1028,4189	67,065
1.32000	2014,09497	0.4841	0.0000	4.7851	1036,2931	67,531
1.33000	2020,83360	0.4764	0.0000	4.8491	1044,1547	67,995
1.34000	2027,60374	0.4688	0.0000	4.9134	1052,0077	68,470
1.35000	2034,40040	0.4614	0.0000	4.9780	1059,8464	68,944
1.36000	2041,22047	0.4540	0.0000	5.0429	1067,6744	69,418
1.37000	2048,06044	0.4468	0.0000	5.1080	1075,4954	69,891
1.38000	2054,91610	0.4397	0.0000	5.1734	1083,3038	70,364
1.39000	2061,78352	0.4327	0.0000	5.2391	1091,0934	70,841
1.40000	2068,65957	0.4254	0.0000	5.3051	1098,8684	71,325
1.41000	2075,54934	0.4181	0.0000	5.3714	1106,6327	71,807
1.42000	2082,44752	0.4124	0.0000	5.4380	1114,3804	72,295
1.43000	2089,35097	0.4058	0.0000	5.5049	1122,1164	72,777
1.44000	2096,25559	0.3994	0.0000	5.5720	1129,8453	73,230
1.45000	2103,16614	0.3931	0.0000	5.6394	1137,5616	73,677
1.46000	2110,08644	0.3868	0.0000	5.7070	1145,2686	74,110
1.47000	2117,01291	0.3807	0.0000			
1.48000	2124,04044	0.3747	0.0000			
1.49000	2131,17304	0.3687	0.0000			

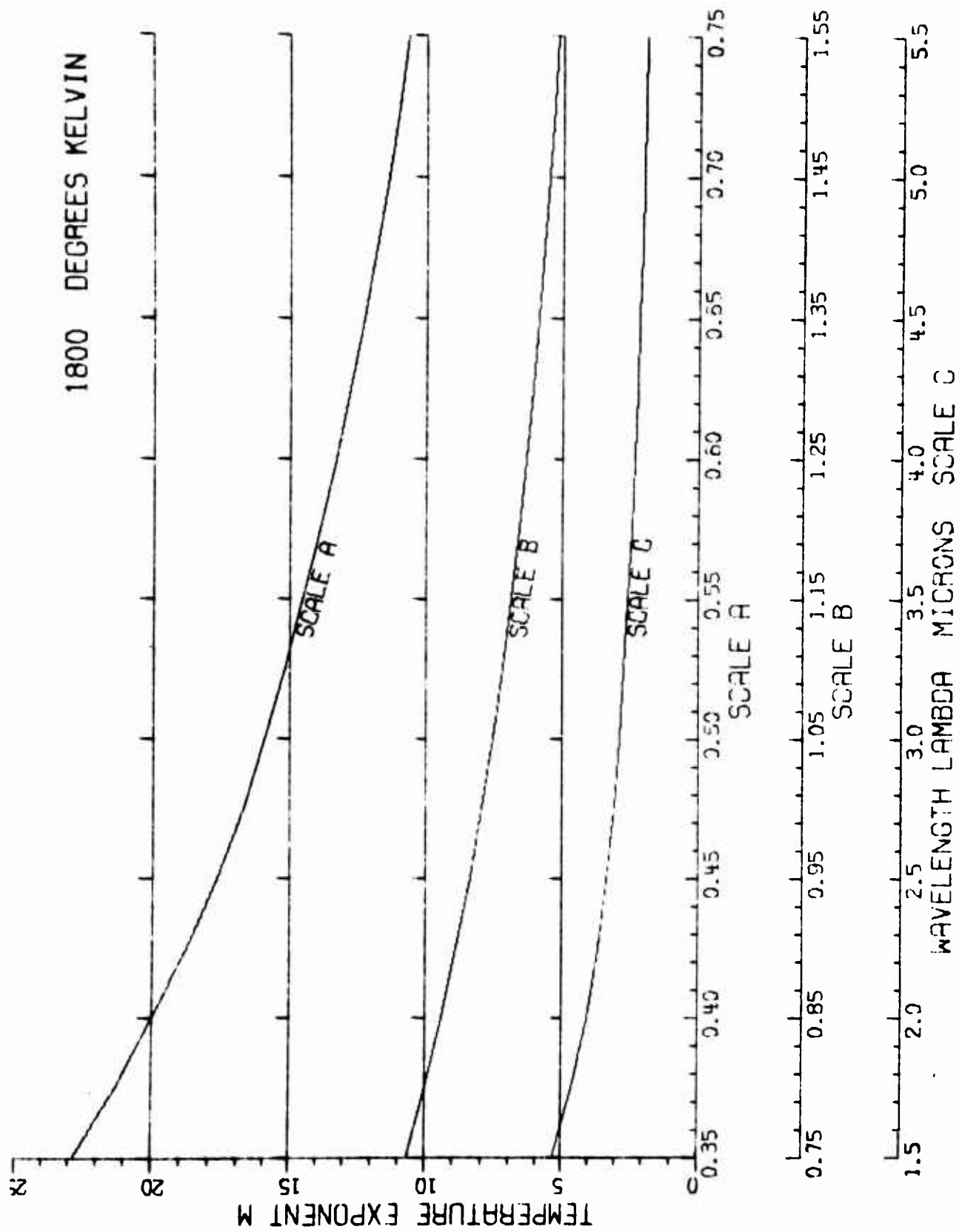
1.40000	579,12464	0.1424	0.0000	2,4124	1135,7100	74,455
1.40000	434,48124	0.1099	0.0000	2,4904	1142,8111	77,542
1.70000	372,12151	0.2453	0.0000	2,3884	1223,0675	80,180
1.70000	319,59044	0.2274	0.0000	2,4114	1257,5714	82,441
1.90000	275,44447	0.1541	0.0000	2,3134	1287,2599	84,169
2.00000	234,27244	0.1494	0.0000	2,1179	1312,4029	86,049
2.00000	204,88964	0.1475	0.0000	2,0734	1335,1072	87,524
2.10000	180,31041	0.1285	0.0000	2,0154	1354,4304	88,791
2.10000	157,72424	0.1124	0.0000	1,9634	1371,3023	89,499
2.40000	134,44221	0.0947	0.0000	1,9147	1386,0448	90,864
2.50000	121,97494	0.0849	0.0000	1,8732	1399,0472	91,720
2.60000	107,41444	0.0769	0.0000	1,8414	1410,5590	92,472
2.70000	95,68434	0.0687	0.0000	1,8140	1420,7151	93,134
2.80000	85,04524	0.0604	0.0000	1,7840	1429,7151	93,729
2.90000	75,47744	0.0541	0.0000	1,7714	1437,7705	94,254
3.00000	67,49244	0.0481	0.0000	1,7641	1444,8400	94,727
3.10000	60,91544	0.0434	0.0000	1,7600	1451,3424	95,144
3.20000	54,90222	0.0391	0.0000	1,7554	1457,1614	95,527
3.30000	49,42364	0.0352	0.0000	1,7499	1462,3471	95,869
3.40000	44,48297	0.0319	0.0000	1,7437	1467,0477	96,177
3.50000	40,49114	0.0284	0.0000	1,7414	1471,4222	96,454
3.60000	36,74444	0.0262	0.0000	1,7371	1475,1814	96,709
3.70000	33,40794	0.0239	0.0000	1,7354	1478,4674	96,939
3.80000	30,52451	0.0214	0.0000	1,7321	1481,4479	97,144
3.90000	27,99432	0.0199	0.0000	1,7235	1484,4044	97,340
4.00000	25,54117	0.0187	0.0000	1,7144	1487,4743	97,515
4.10000	23,42754	0.0167	0.0000	1,7049	1489,9229	97,675
4.20000	21,52461	0.0151	0.0000	1,6992	1492,1689	97,822
4.30000	19,81114	0.0141	0.0000	1,6922	1494,2145	97,954
4.40000	18,26611	0.0130	0.0000	1,6873	1496,1371	98,082
4.50000	16,84411	0.0120	0.0000	1,6840	1497,4026	98,194
4.60000	15,59494	0.0111	0.0000	1,6814	1498,5147	98,304
4.70000	14,44411	0.0103	0.0000	1,6790	1501,0154	98,402
4.80000	13,39544	0.0095	0.0000	1,6752	1502,4079	98,491
4.90000	12,44001	0.0087	0.0000	1,6749	1503,4991	98,574
5.00000	11,56744	0.0082	0.0000	1,6741	1504,4674	98,657
5.10000	10,77016	0.0077	0.0000	1,6731	1505,0141	98,730
5.20000	10,03990	0.0072	0.0000	1,6721	1505,7941	98,798
5.30000	9,37025	0.0067	0.0000	1,6722	1506,0241	98,869
5.40000	8,75522	0.0062	0.0000	1,6744	1506,9100	98,921
5.50000	8,19977	0.0054	0.0000	1,6774	1507,4748	98,977
5.60000	7,66002	0.0054	0.0000	1,6764	1507,5494	98,929
5.70000	7,14444	0.0051	0.0000	1,6747	1511,3120	98,977
5.80000	6,74544	0.0048	0.0000	1,6771	1512,0044	98,123
5.90000	6,33441	0.0045	0.0000	1,6791	1512,4622	98,164
6.00000	5,95644	0.0042	0.0000	1,6740	1513,2764	98,204
6.10000	5,60410	0.0040	0.0000	1,6702	1511,4545	98,244
6.20000	5,27942	0.0038	0.0000	1,6714	1514,1045	98,284
6.30000	4,97441	0.0035	0.0000	1,6742	1514,4111	98,311
6.40000	4,69452	0.0033	0.0000	1,6730	1515,1044	98,345
6.50000	4,43374	0.0032	0.0000	1,6744	1515,4509	98,375
6.60000	4,18947	0.0030	0.0000	1,6741	1516,2819	98,403
6.70000	3,96244	0.0028	0.0000	1,6744	1514,4444	98,430
6.80000	3,75051	0.0027	0.0000	1,6744	1517,0740	98,455
6.90000	3,55244	0.0025	0.0000	1,6704	1517,4400	98,479

7.00000	3,34707	0.0024	0.0000	1,6731	1517,4074	98,504
7.10000	3,19344	0.0023	0.0000	1,6730	1518,1134	98,523
7.20000	3,03117	0.0022	0.0000	1,6749	1518,4240	98,544
7.30000	2,87904	0.0021	0.0000	1,6749	1514,7204	98,563
7.40000	2,73624	0.0020	0.0000	1,6741	1519,0011	98,581
7.50000	2,60221	0.0019	0.0000	1,6754	1514,2440	98,599
7.60000	2,47474	0.0018	0.0000	1,6754	1514,5214	98,615
7.70000	2,35774	0.0017	0.0000	1,6741	1519,7614	98,631
7.80000	2,24631	0.0016	0.0000	1,6749	1519,9916	98,644
7.90000	2,14134	0.0015	0.0000	1,6744	1520,2129	98,661
8.00000	2,04242	0.0014	0.0000	1,6744	1520,4221	98,674
8.10000	1,94913	0.0014	0.0000	1,6742	1520,6216	98,684
8.20000	1,84111	0.0013	0.0000	1,6732	1520,8121	98,700
8.30000	1,77799	0.0013	0.0000	1,6722	1520,9940	98,712
8.40000	1,69944	0.0012	0.0000	1,6743	1521,1674	98,721
8.50000	1,62522	0.0012	0.0000	1,6734	1521,1340	98,734
8.60000	1,55495	0.0011	0.0000	1,6707	1521,4930	98,745
8.70000	1,48444	0.0011	0.0000	1,6740	1521,6441	98,755
8.80000	1,41444	0.0010	0.0000	1,6751	1521,7904	98,764
8.90000	1,34577	0.0010	0.0000	1,6724	1521,9303	98,773
9.00000	1,28914	0.0009	0.0000	1,6703	1522,0641	98,789
9.10000	1,25444	0.0009	0.0000	1,6744	1,6744	98,791
9.20000	1,20447	0.0009	0.0000	1,6754	1522,3152	98,799
9.30000	1,15604	0.0008	0.0000	1,6731	1522,4332	98,806
9.40000	1,11002	0.0008	0.0000	1,6704	1522,5445	98,814
9.50000	1,06427	0.0008	0.0000	1,6744	1522,6533	98,821
9.60000	1,02444	0.0007	0.0000	1,6744	1522,7594	98,829
9.70000	0,98444	0.0007	0.0000	1,6742	1522,8603	98,834
9.80000	0,94732	0.0007	0.0000	1,6721	1522,9549	98,841
9.90000	0,91114	0.0006	0.0000	1,6701	1523,0494	98,847
10.00000	0,87714	0.0006	0.0000	1,6741	1523,1393	98,853
10.10000	0,84444	0.0006	0.0000	1,6741	1523,2253	98,858
10.20000	0,81333	0.0006	0.0000	1,6742	1523,3042	98,864
10.30000	0,78340	0.0006	0.0000	1,6721	1523,3840	98,869
10.40000	0,75522	0.0005	0.0000	1,6704	1523,4640	98,874
10.50000	0,72811	0.0005	0.0000	1,6747	1523,5391	98,879
10.60000	0,70222	0.0005	0.0000	1,6749	1523,6104	98,884
10.70000	0,67743	0.0004	0.0000	1,6751	1523,6796	98,888
10.80000	0,65375	0.0004	0.0000	1,6734	1523,7441	98,892
10.90000	0,63109	0.0004	0.0000	1,6714	1523,8104	98,897
11.00000	0,60940	0.0004	0.0000	1,6701	1523,8724	98,901
11.10000	0,58844	0.0004	0.0000	1,6645	1523,9323	98,905
11.20000	0,56879	0.0004	0.0000	1,6640	1523,9902	98,908
11.30000	0,54969	0.0004	0.0000	1,6644	1524,0441	98,914
11.40000	0,53143	0.0004	0.0000	1,6639	1524,1001	98,919
11.50000	0,51391	0.0004	0.0000	1,6624	1524,1524	98,922
11.60000	0,49712	0.0004	0.0000	1,6600	1524,2029	98,924
11.70000	0,48100	0.0003	0.0000	1,6584	1524,2514	98,929
11.80000	0,46553	0.0003	0.0000	1,6560	1524,2991	98,932
11.90000	0,45067	0.0003	0.0000	1,6547	1524,3450	98,933
12.00000	0,43641	0.0003	0.0000	1,6531	1524,3893	98,935

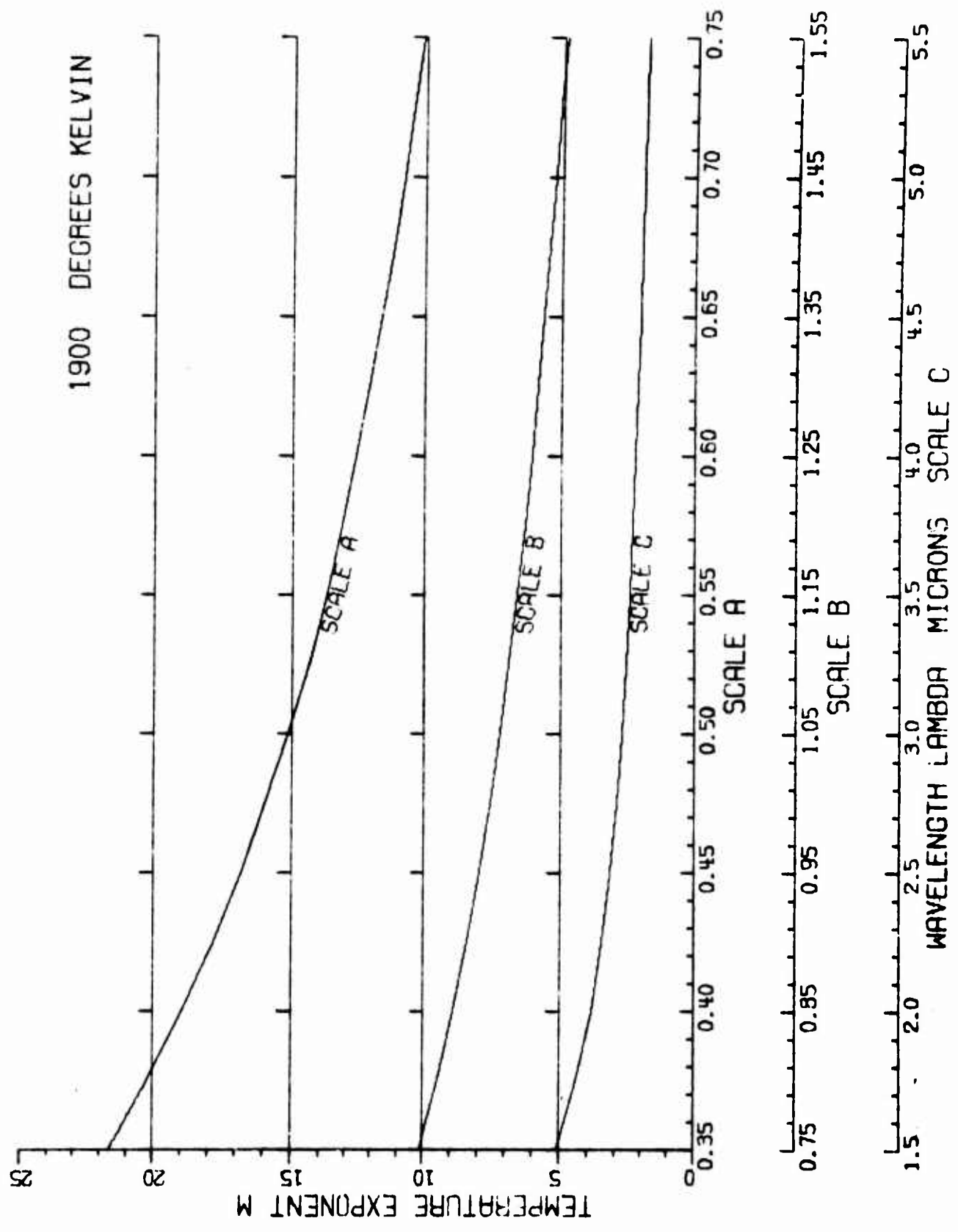


1700 DEGREES KELVIN

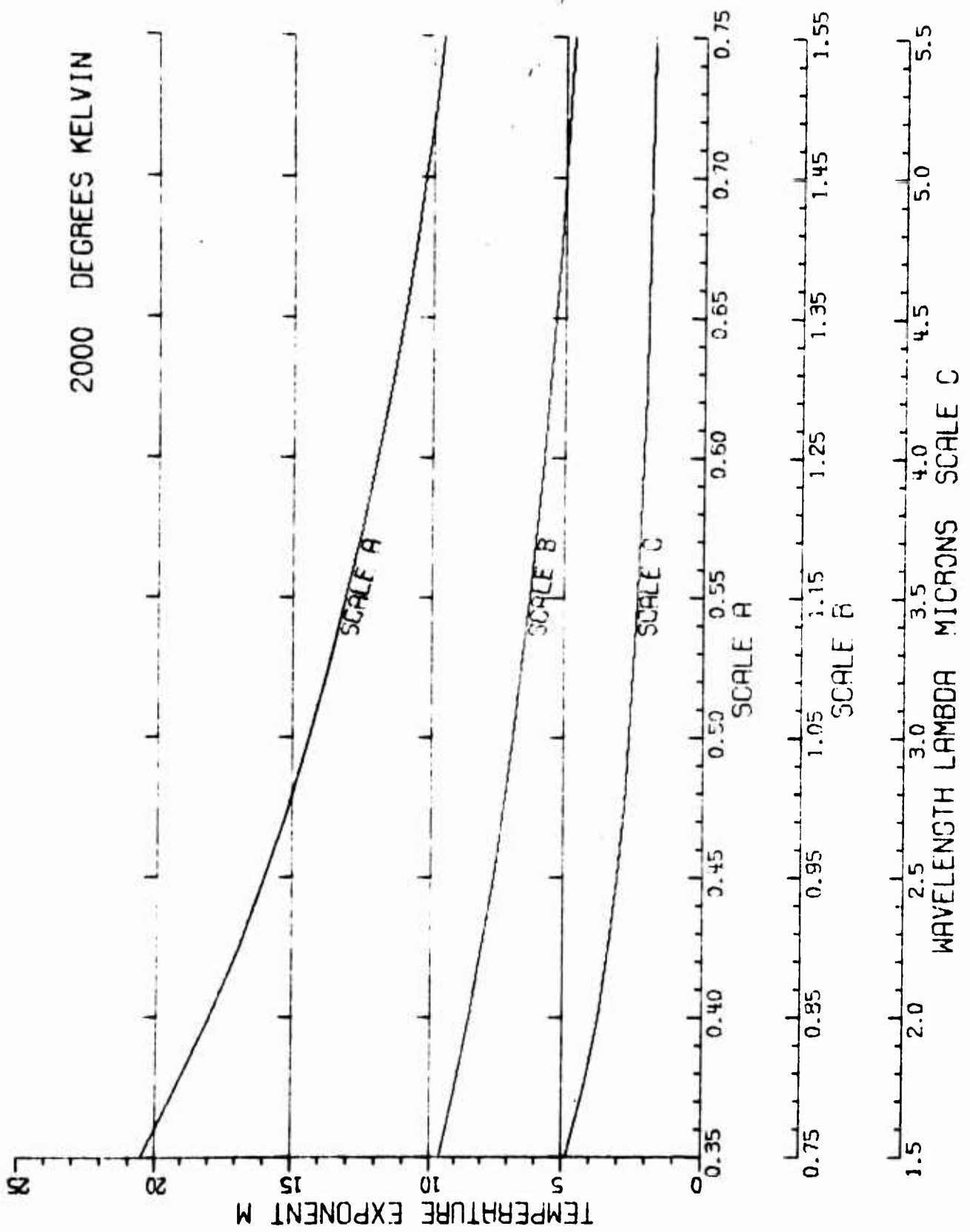




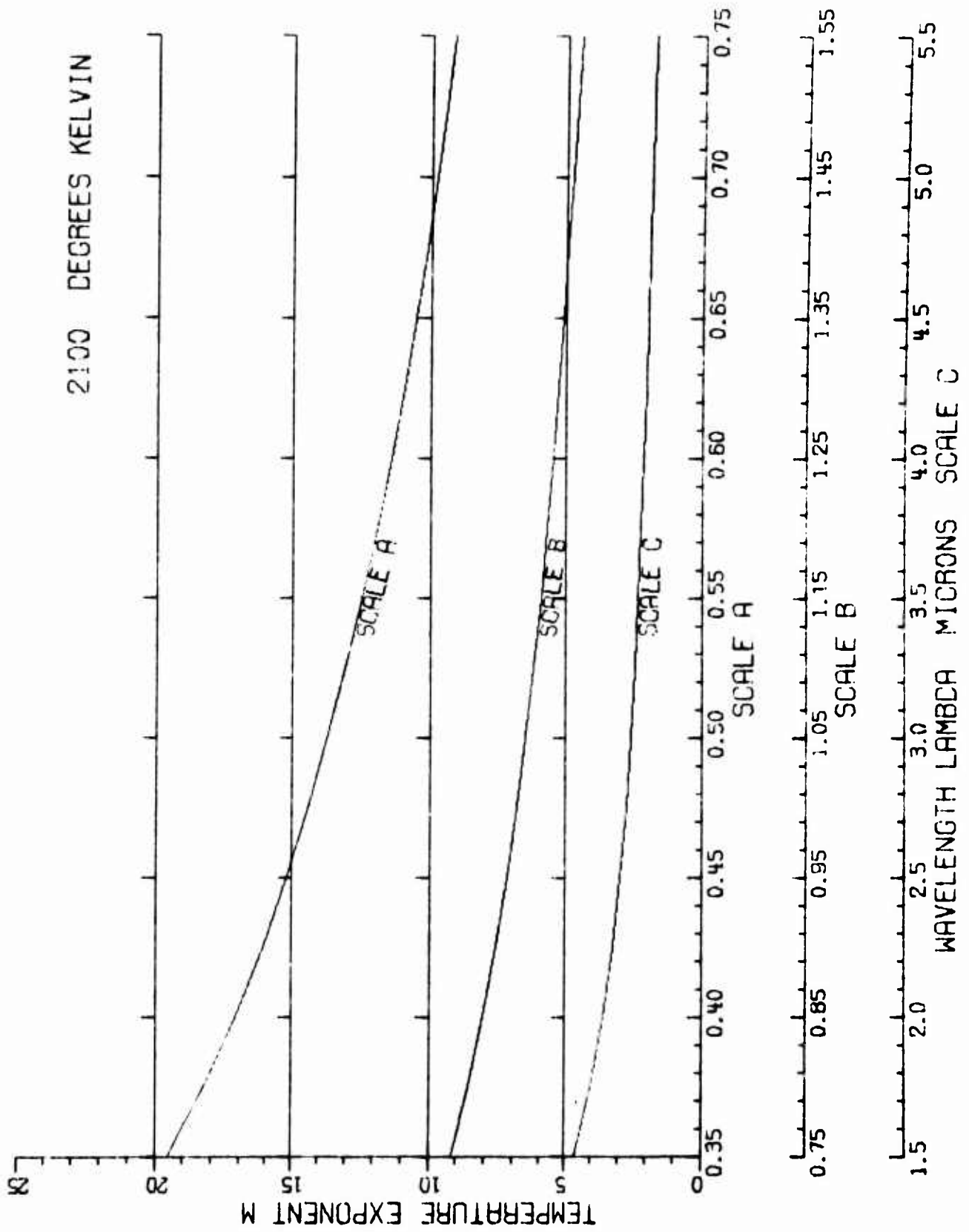
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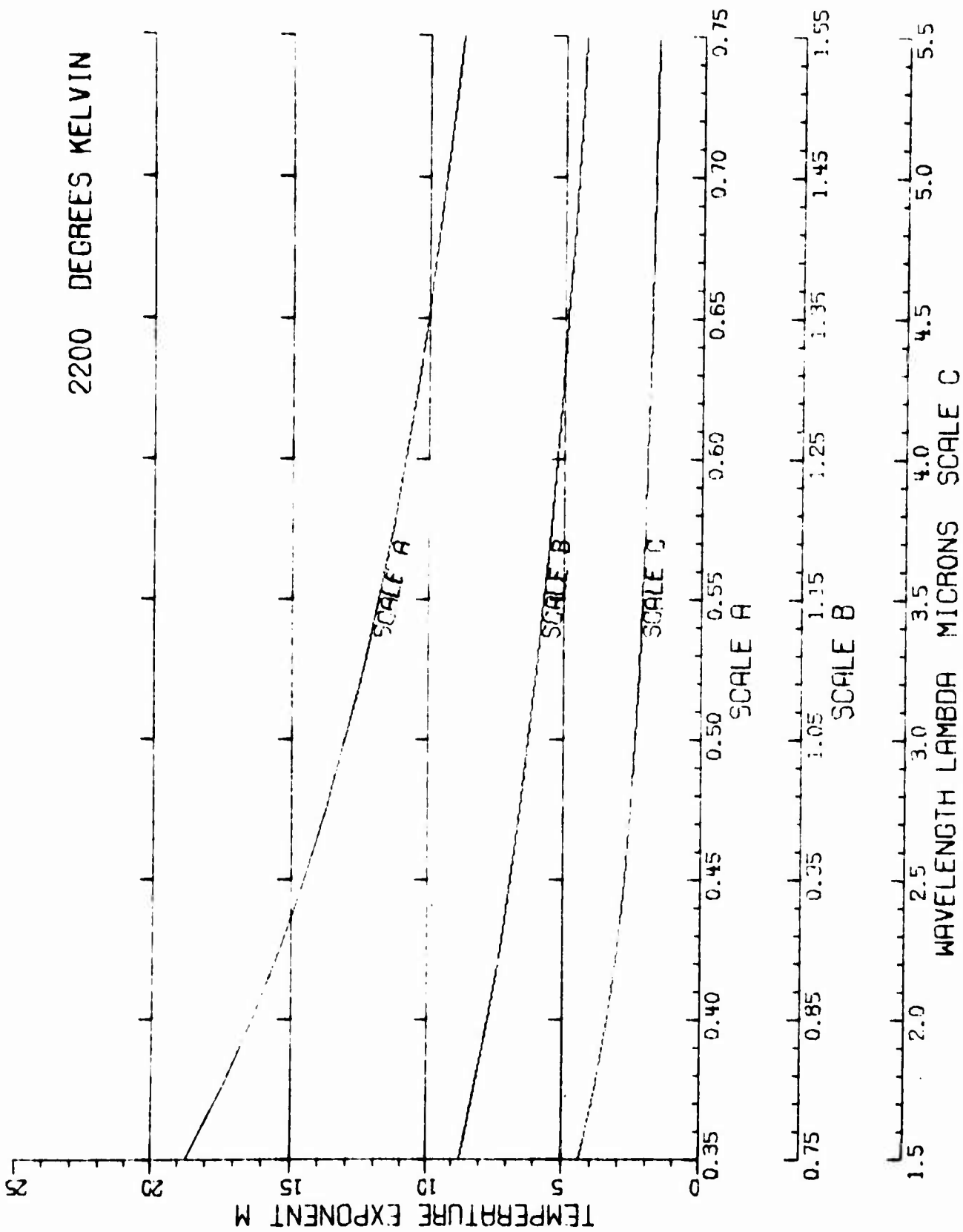
2000 DEGREES KELVIN



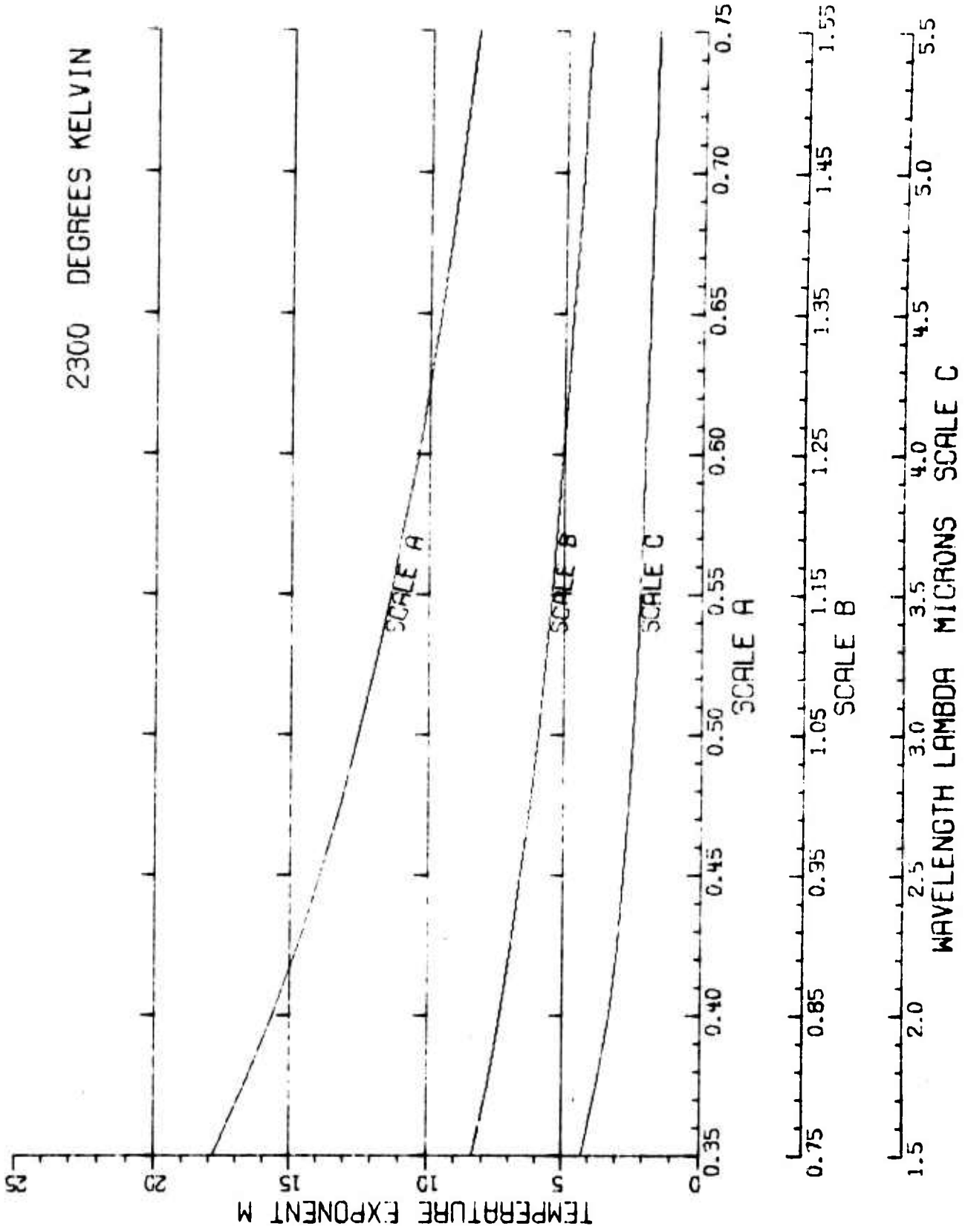




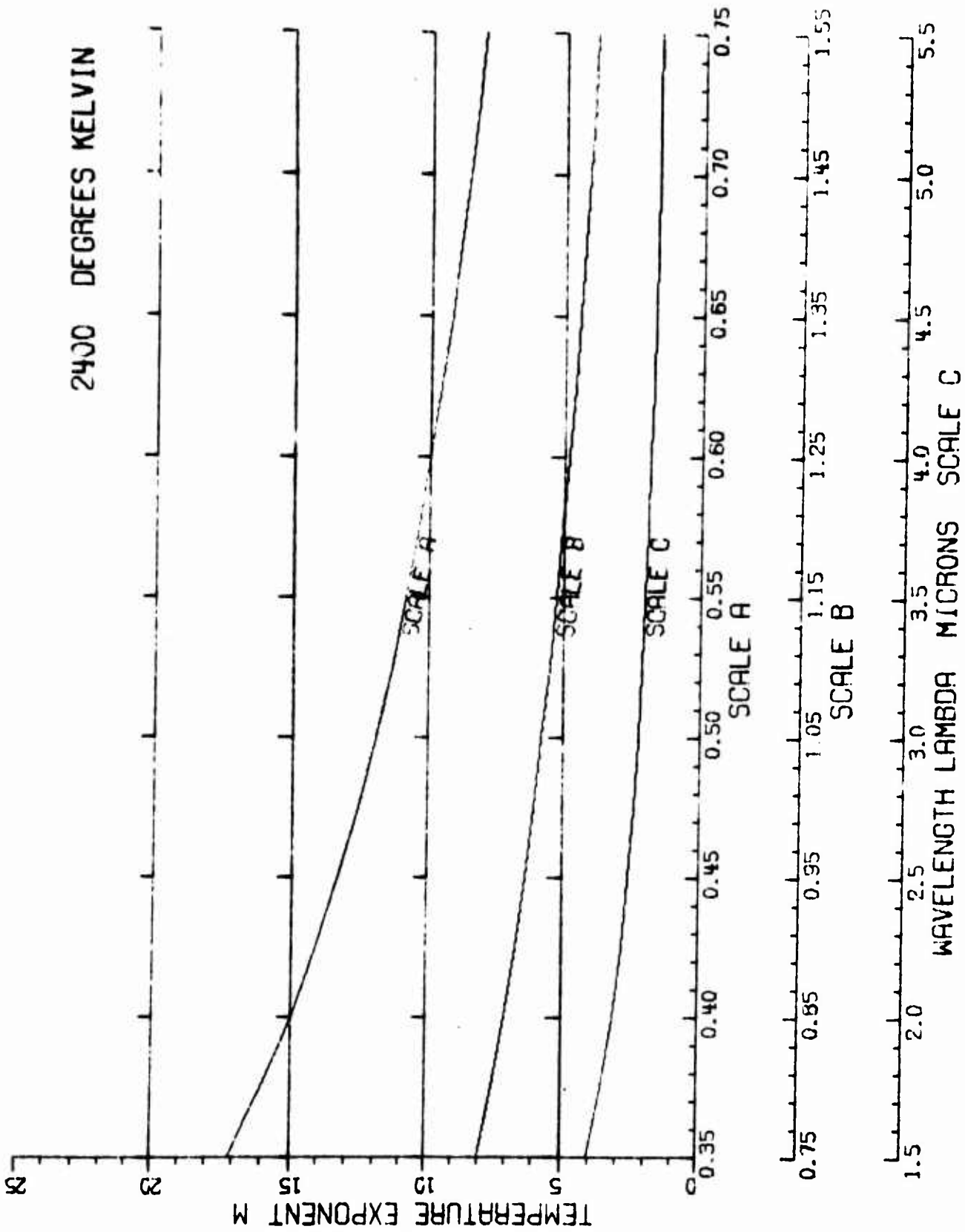
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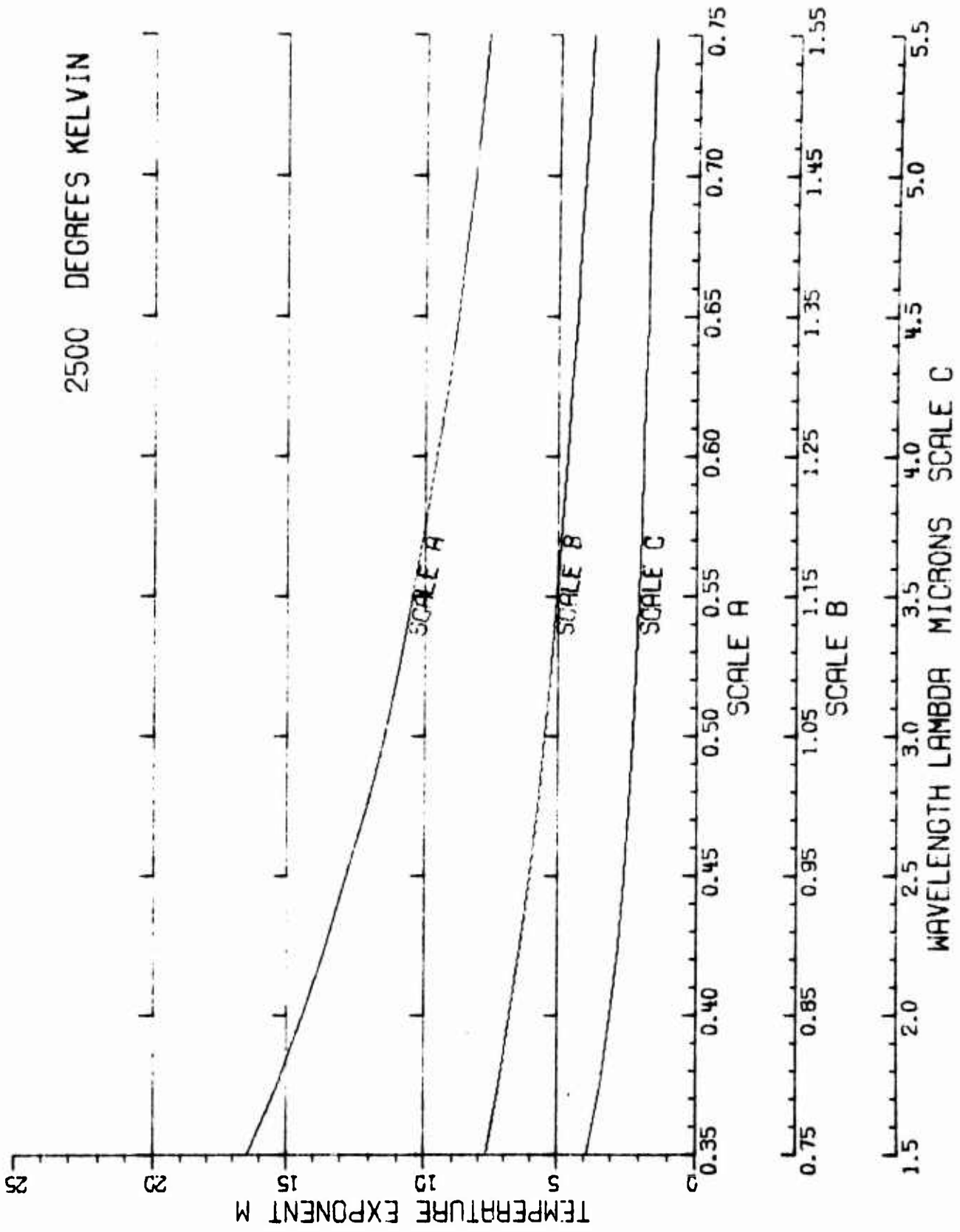
2300 DEGREES KELVIN



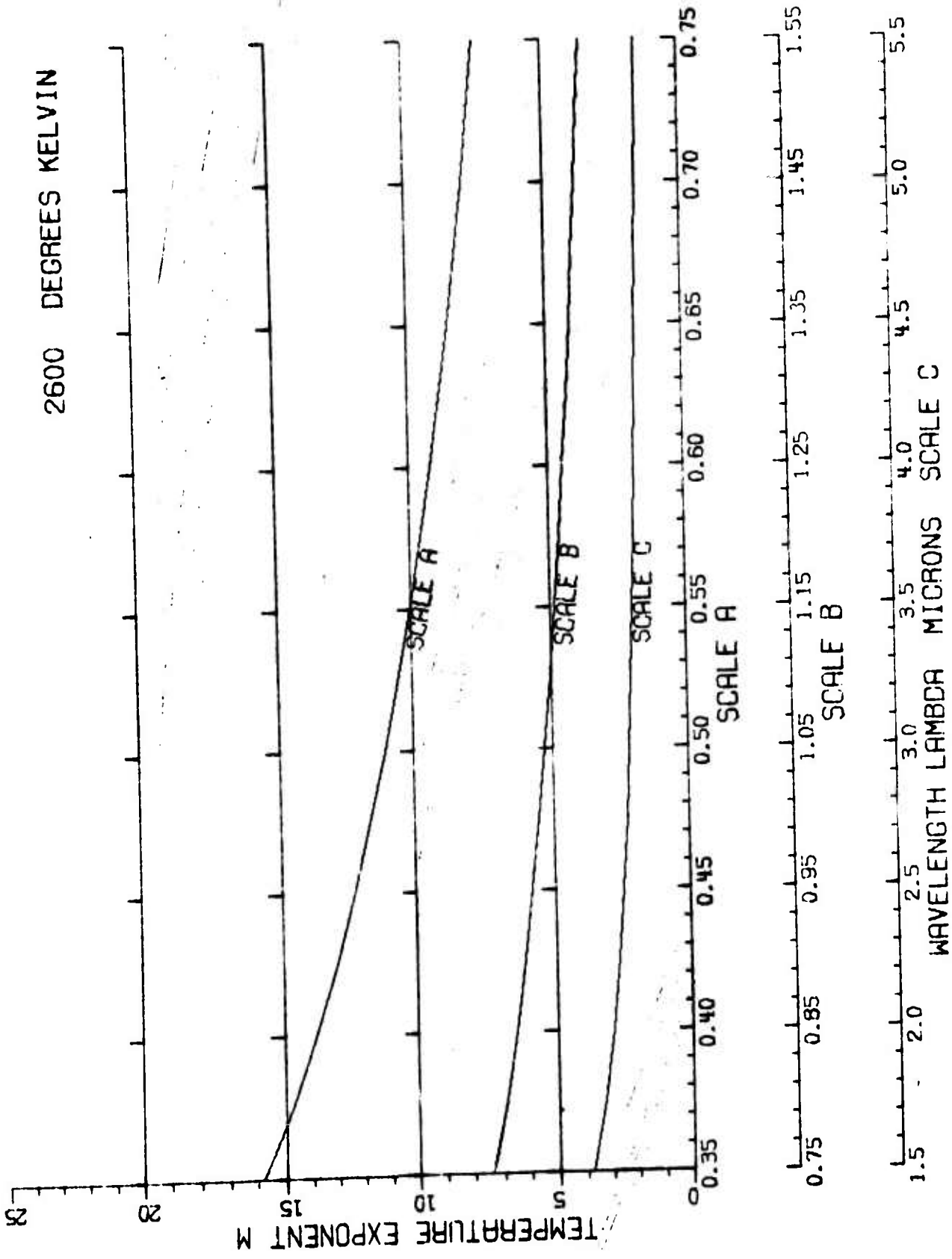
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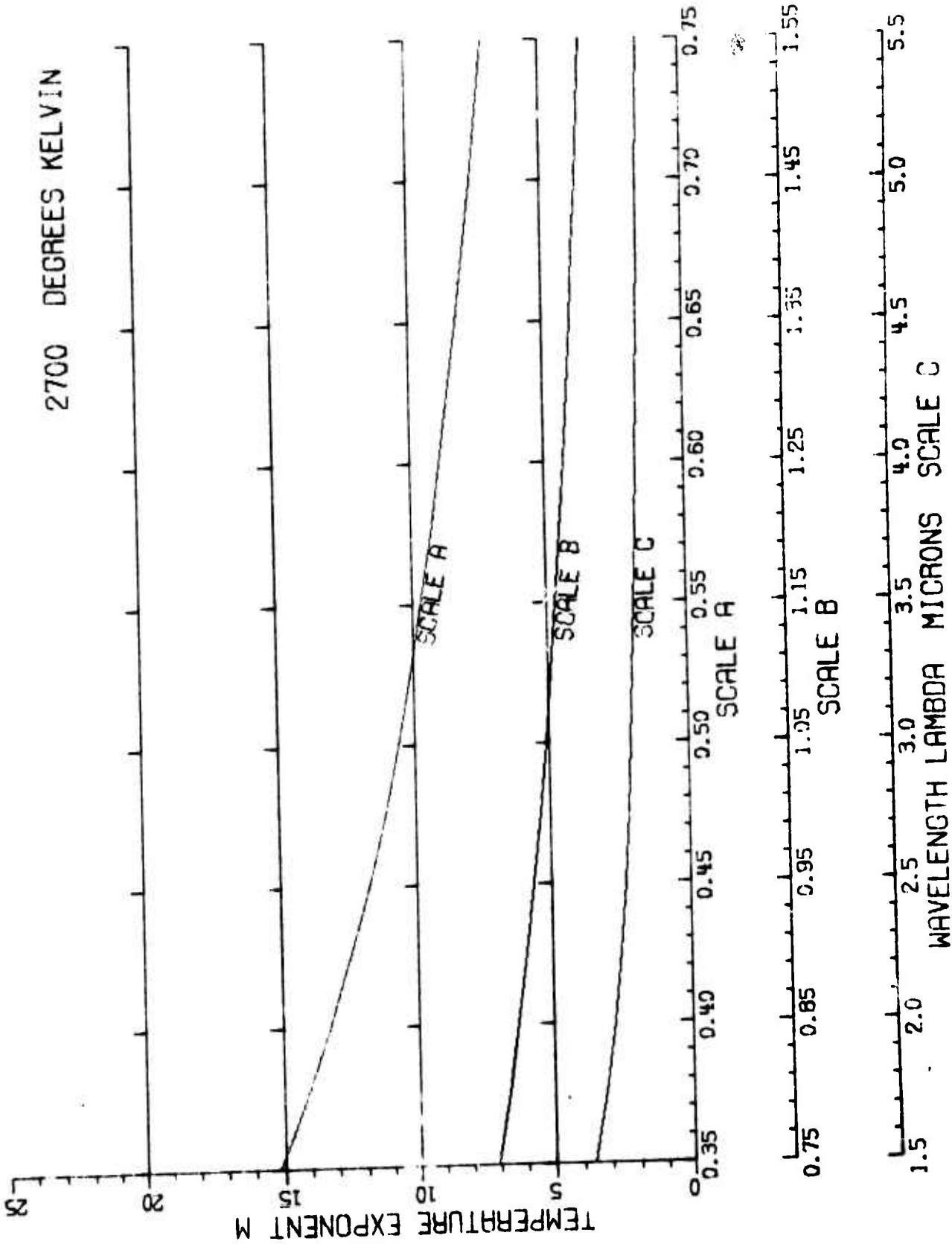


2500 DEGREES KELVIN

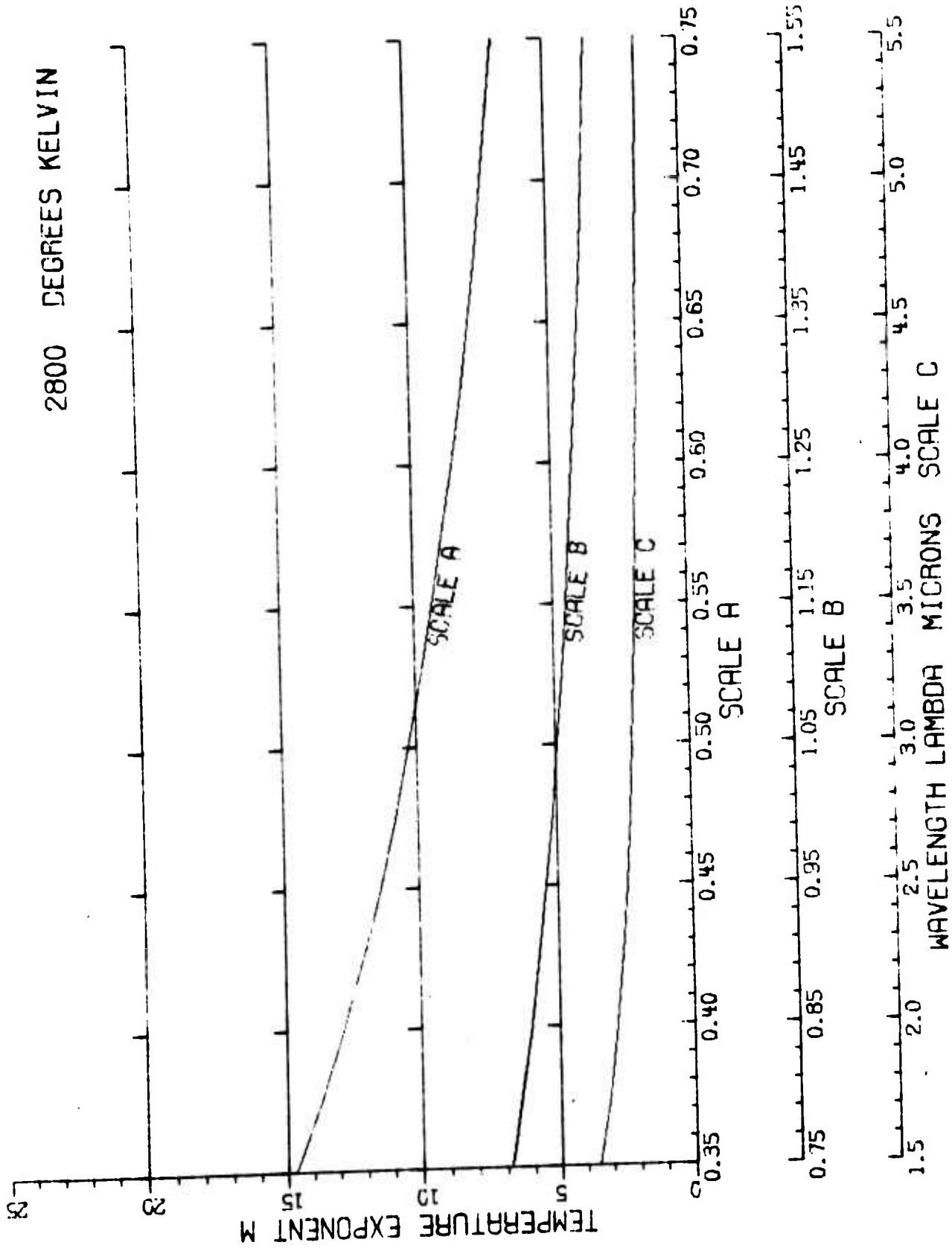


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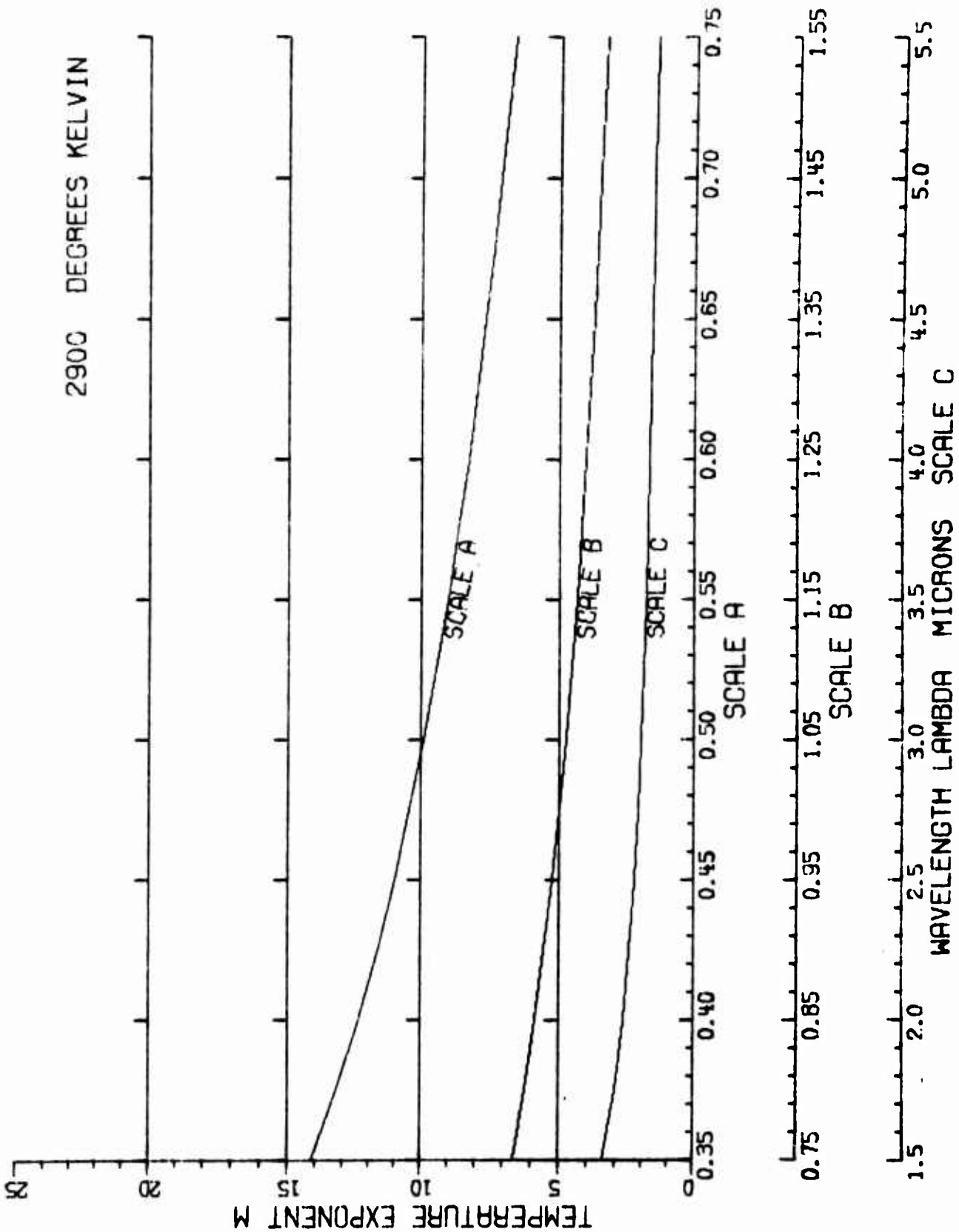




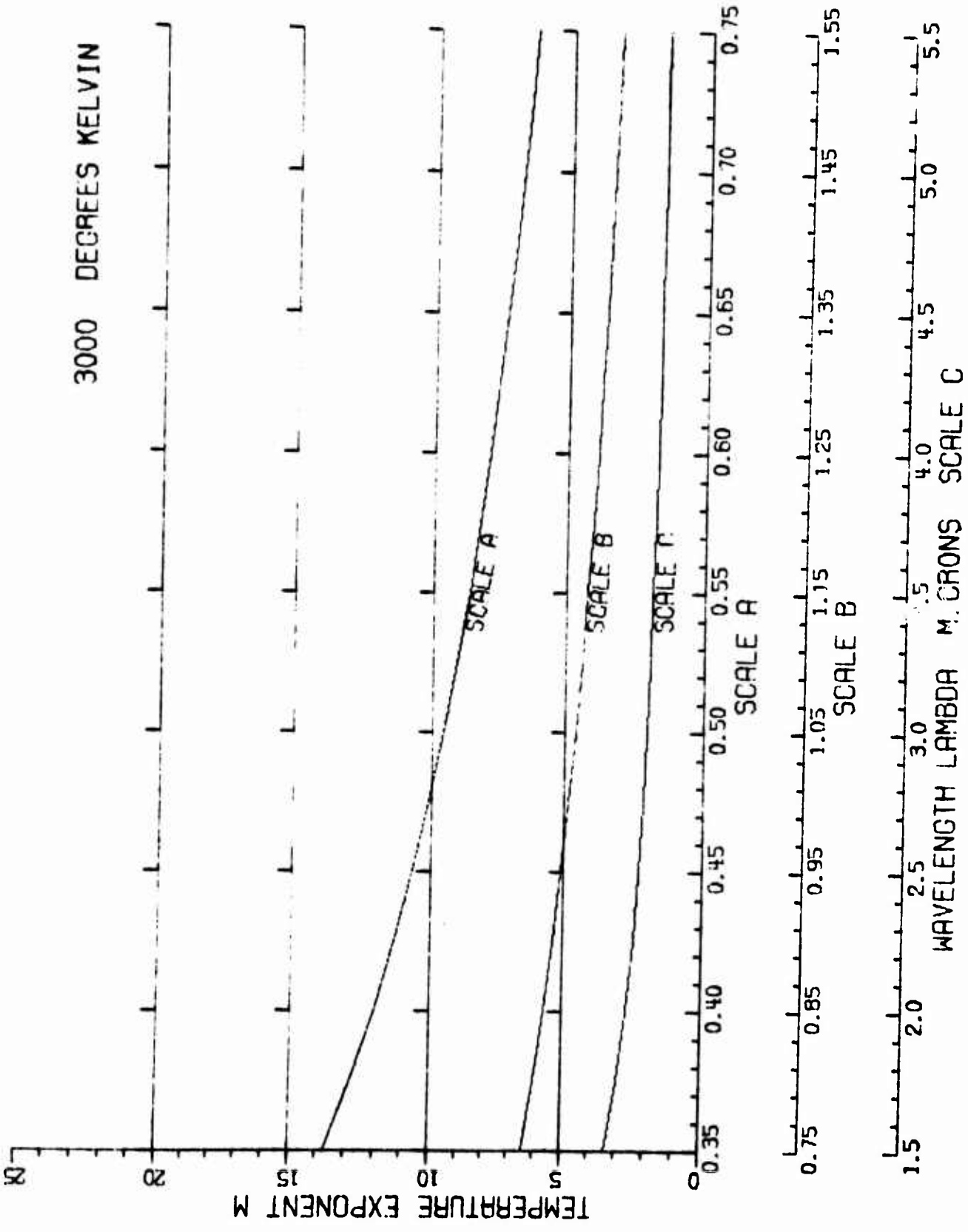
2800 DEGREES KELVIN





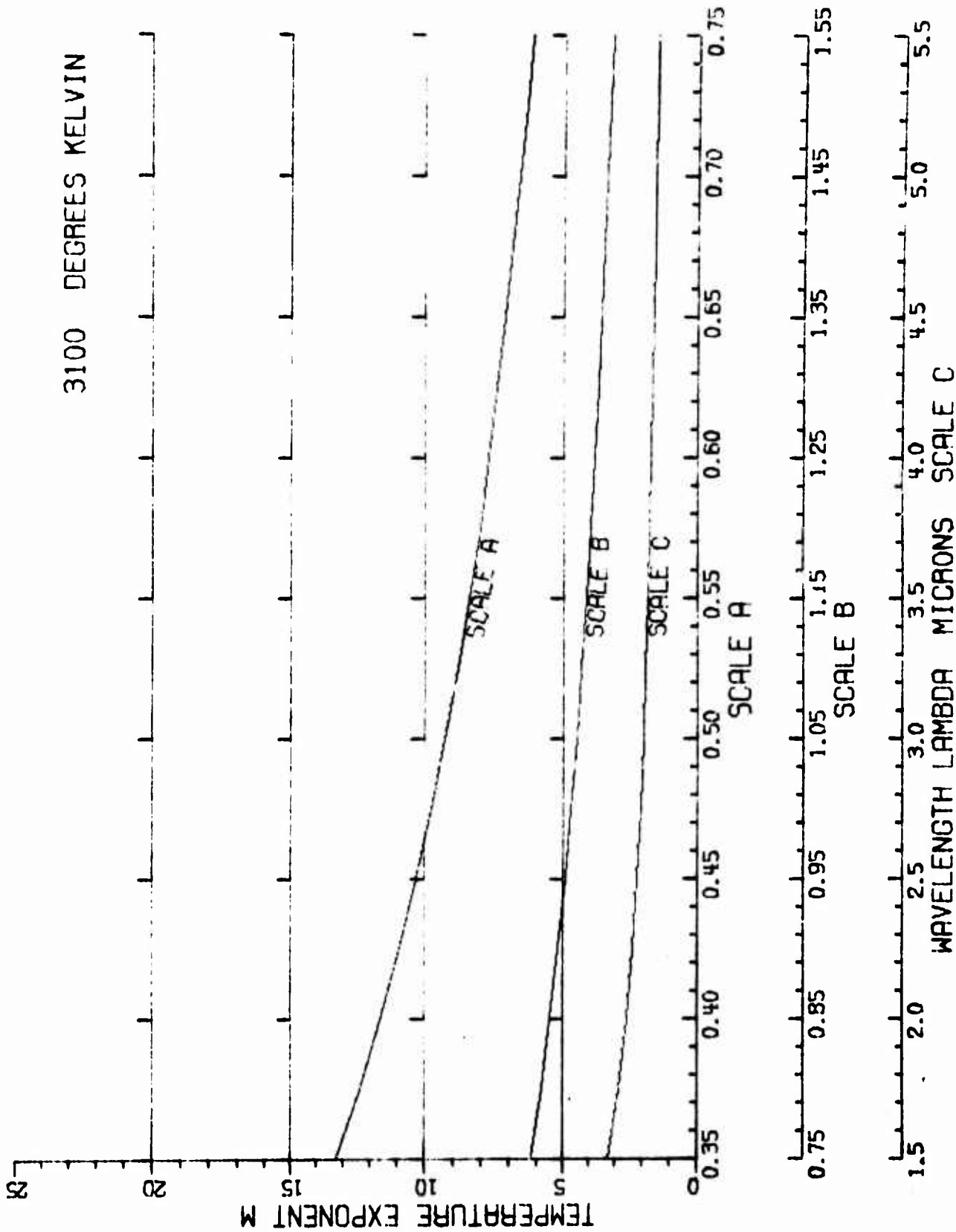


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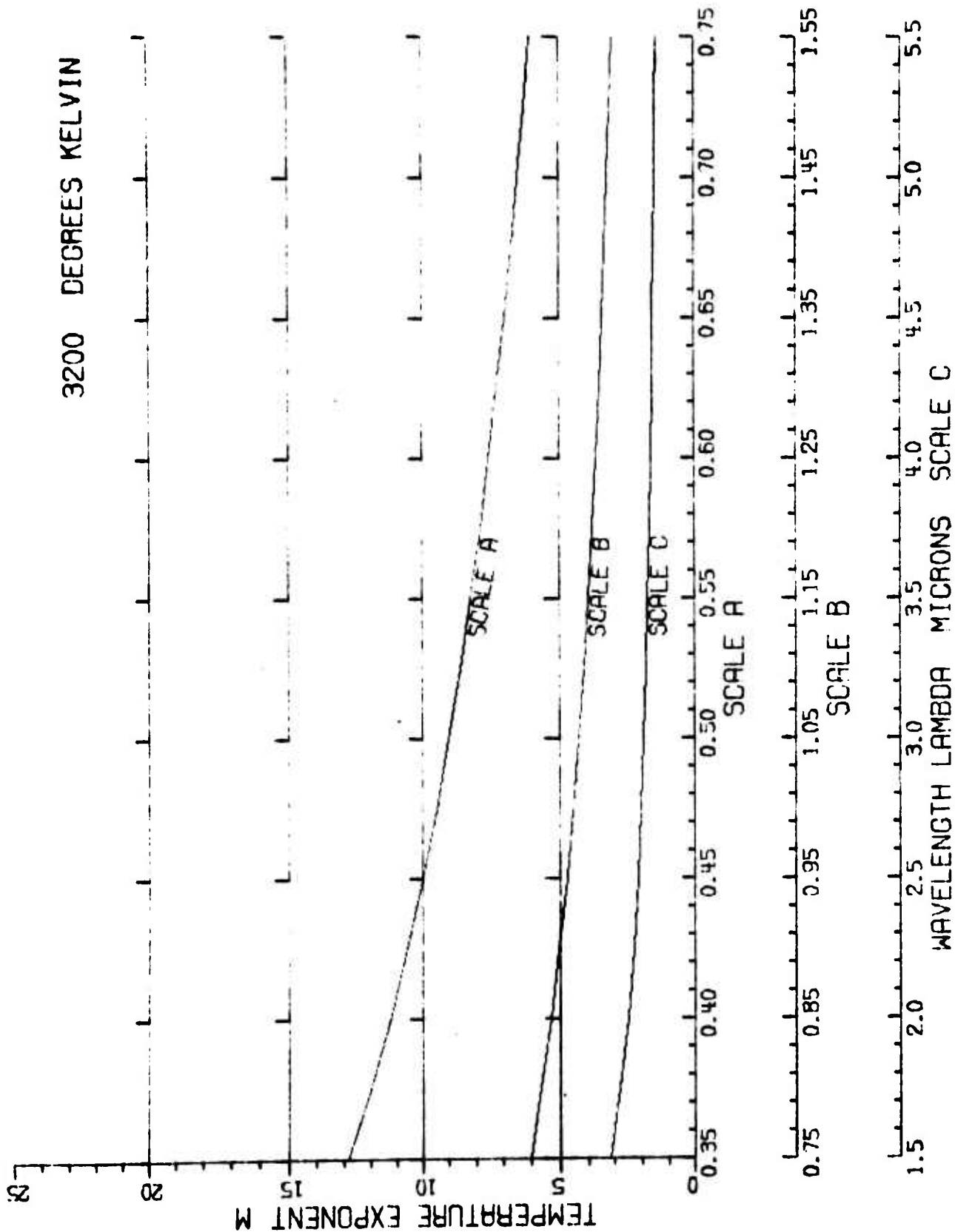


234

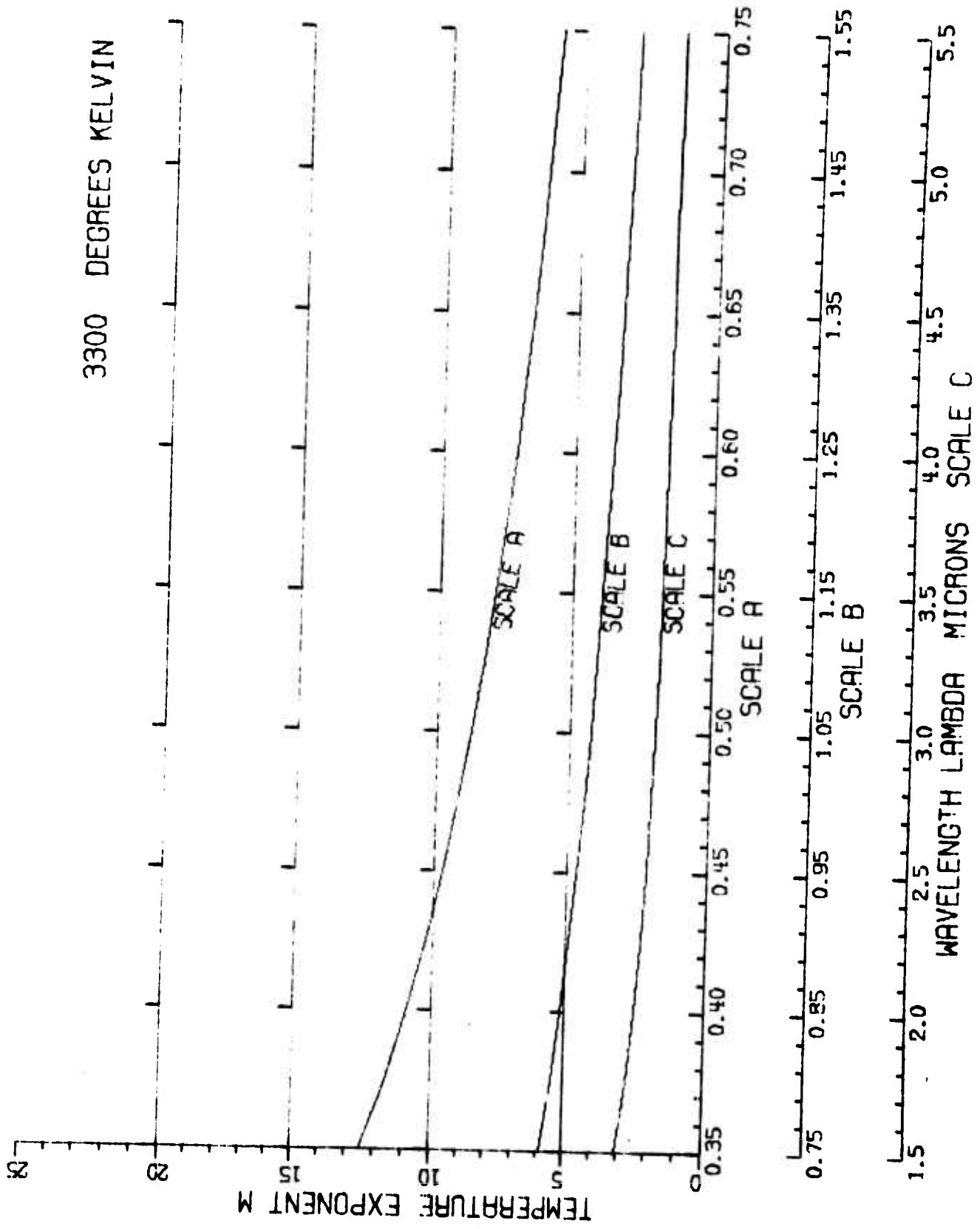
3100 DEGREES KELVIN



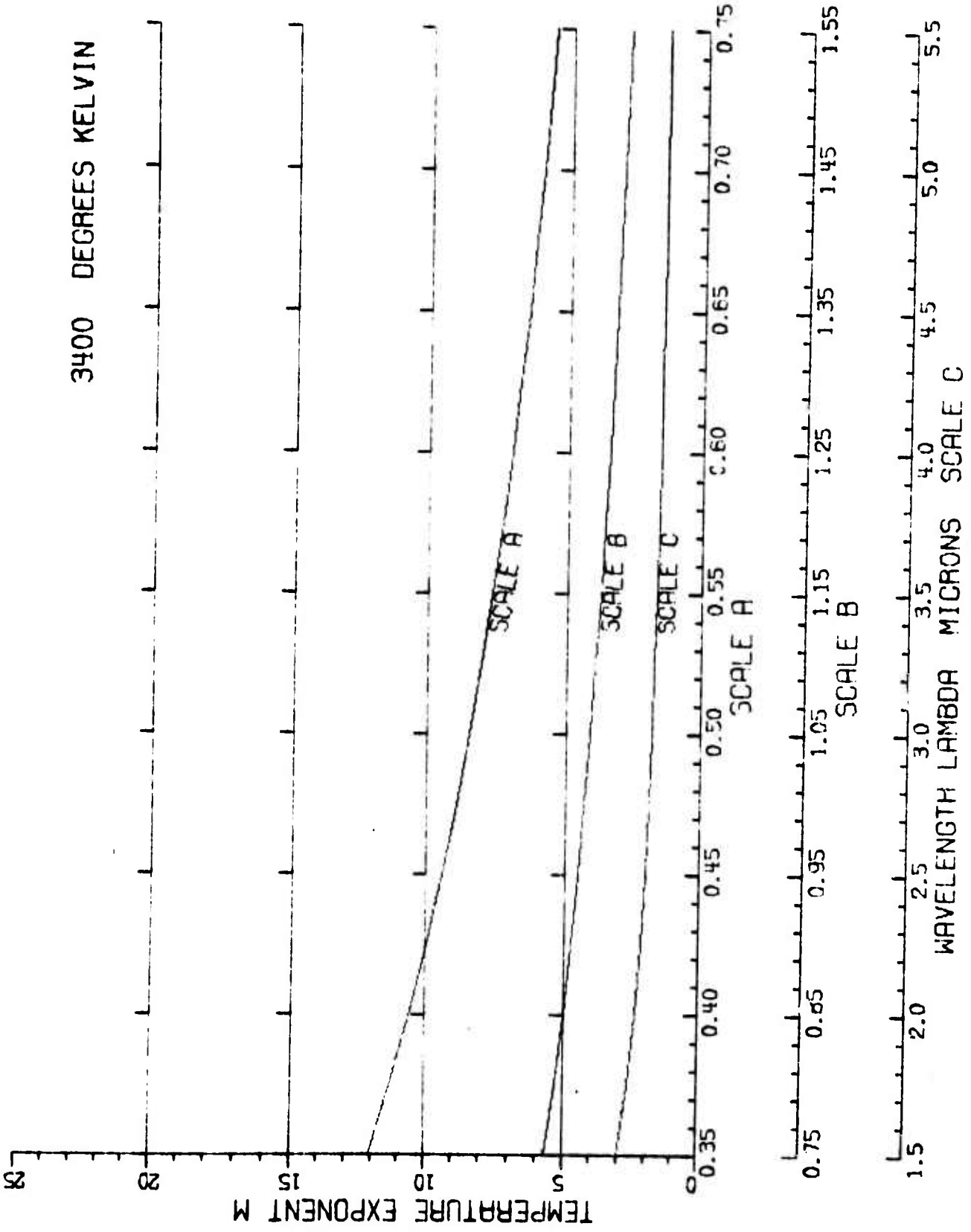
3200 DEGREES KELVIN



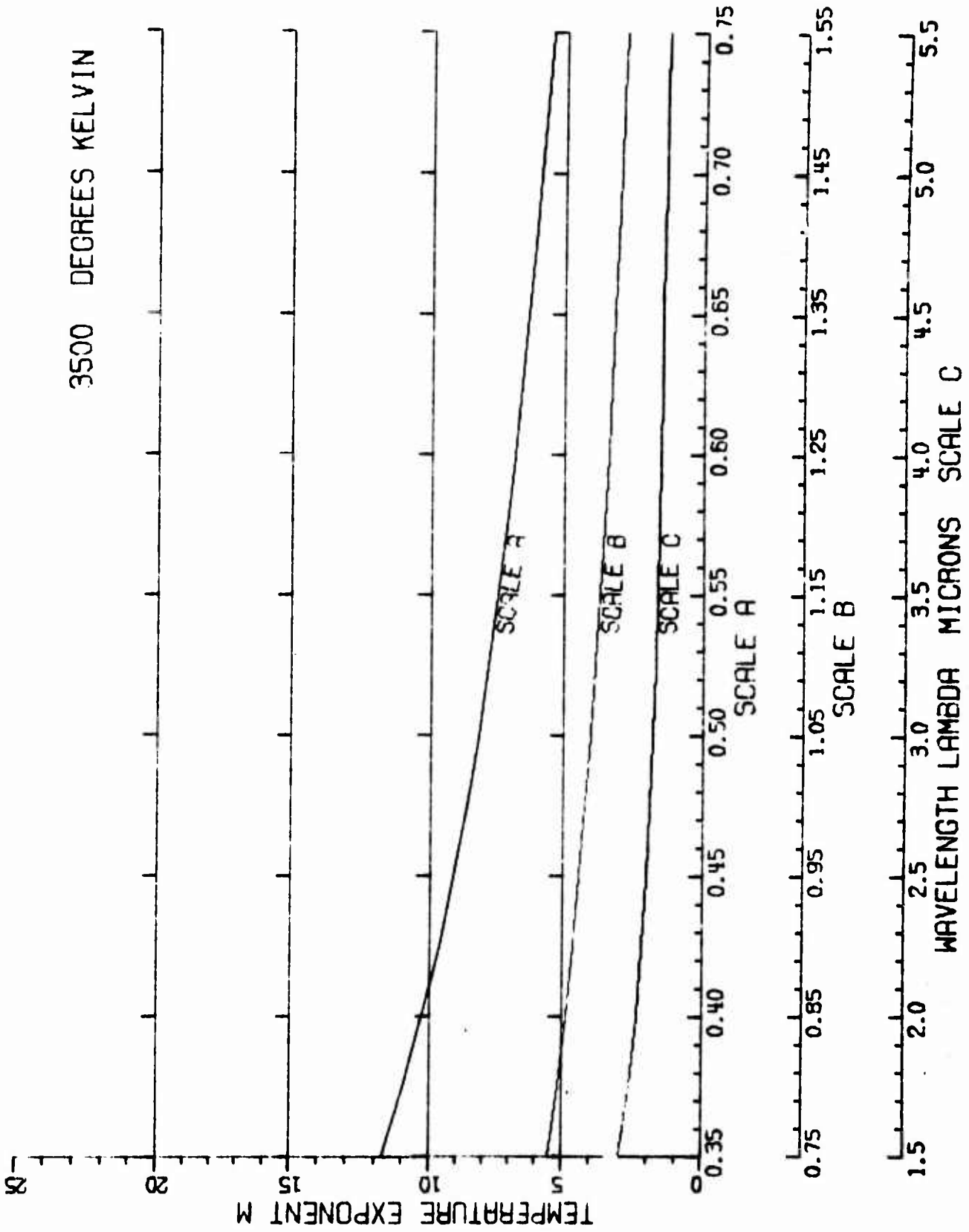
3300 DEGREES KELVIN



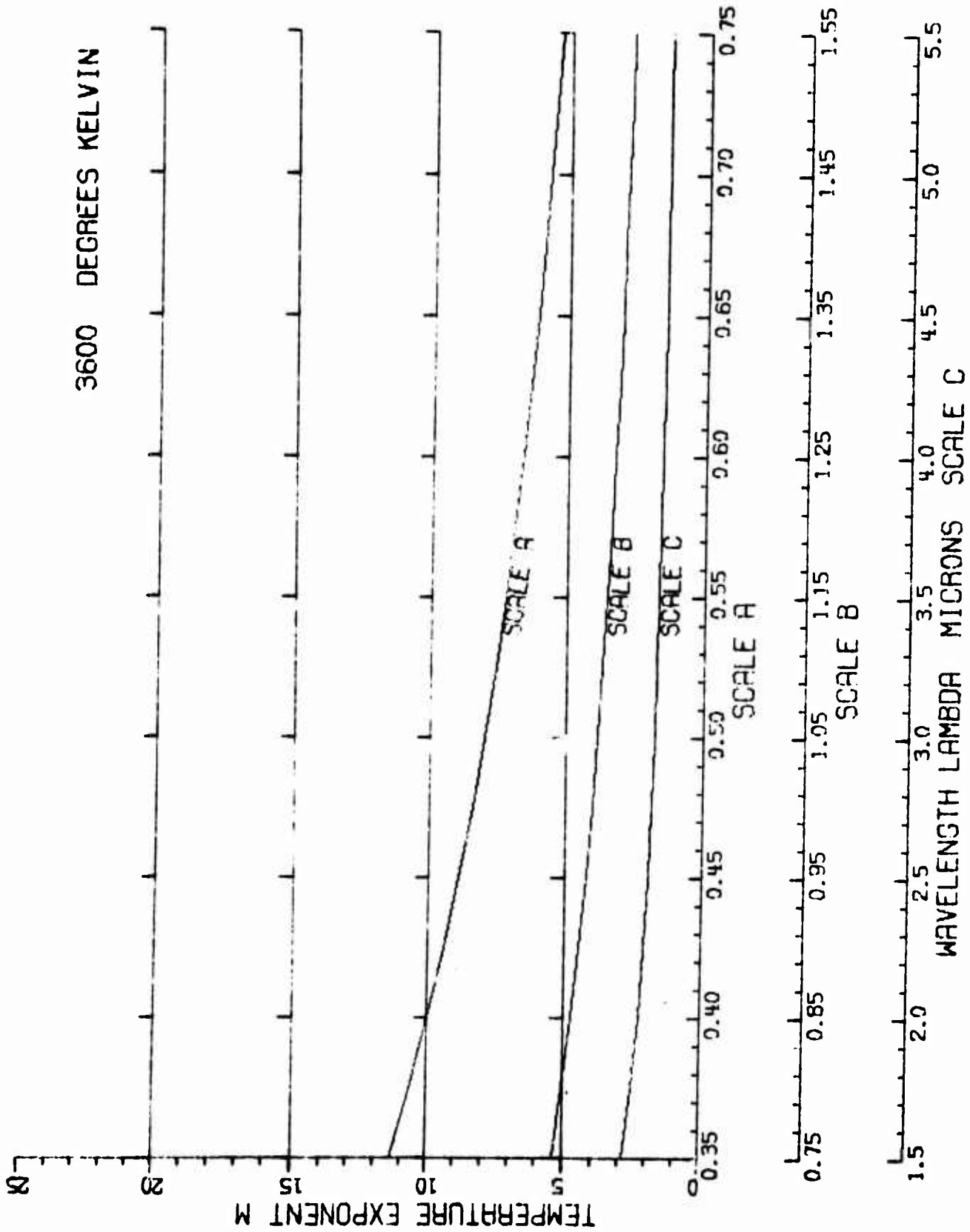
3400 DEGREES KELVIN



3500 DEGREES KELVIN



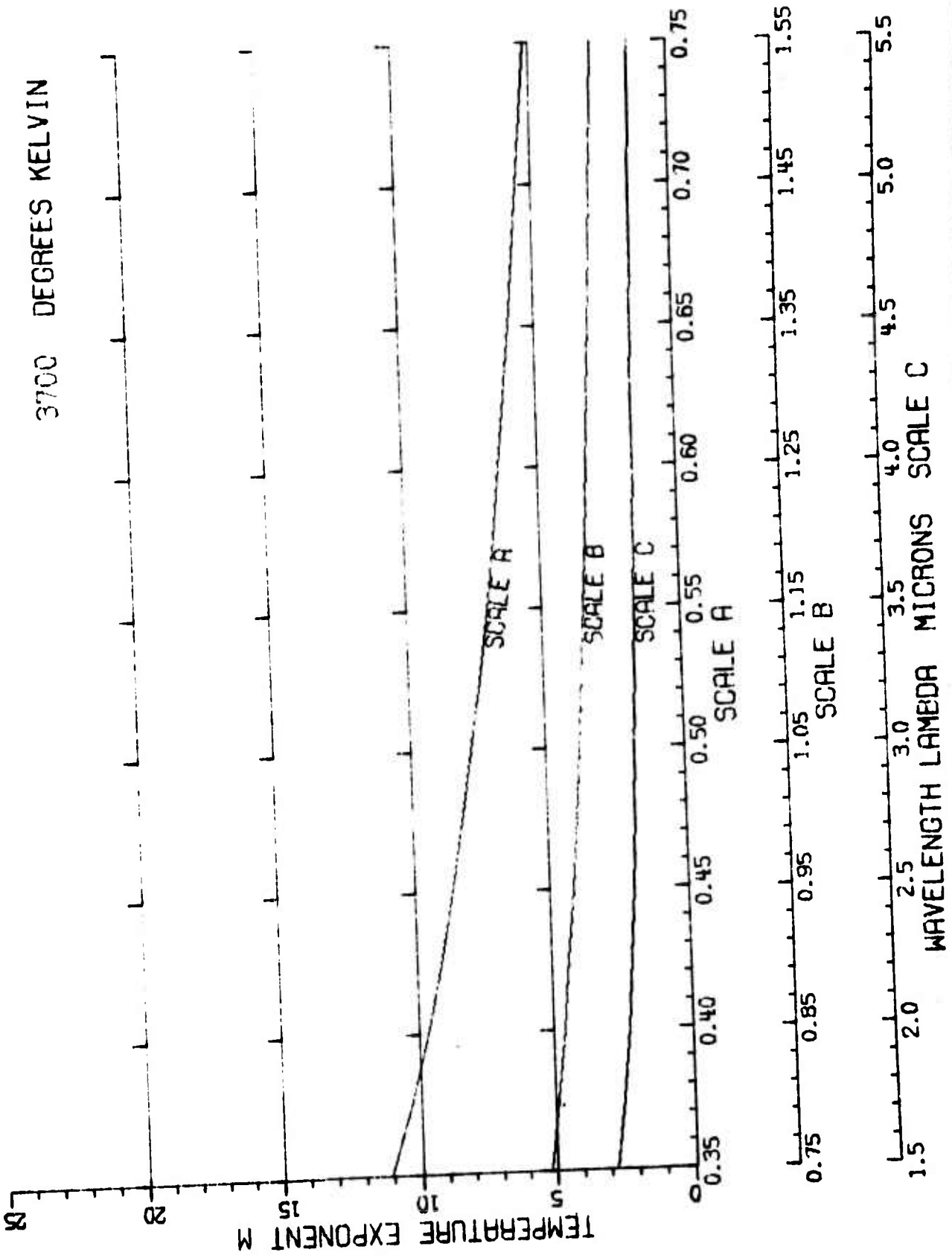
3600 DEGREES KELVIN



240

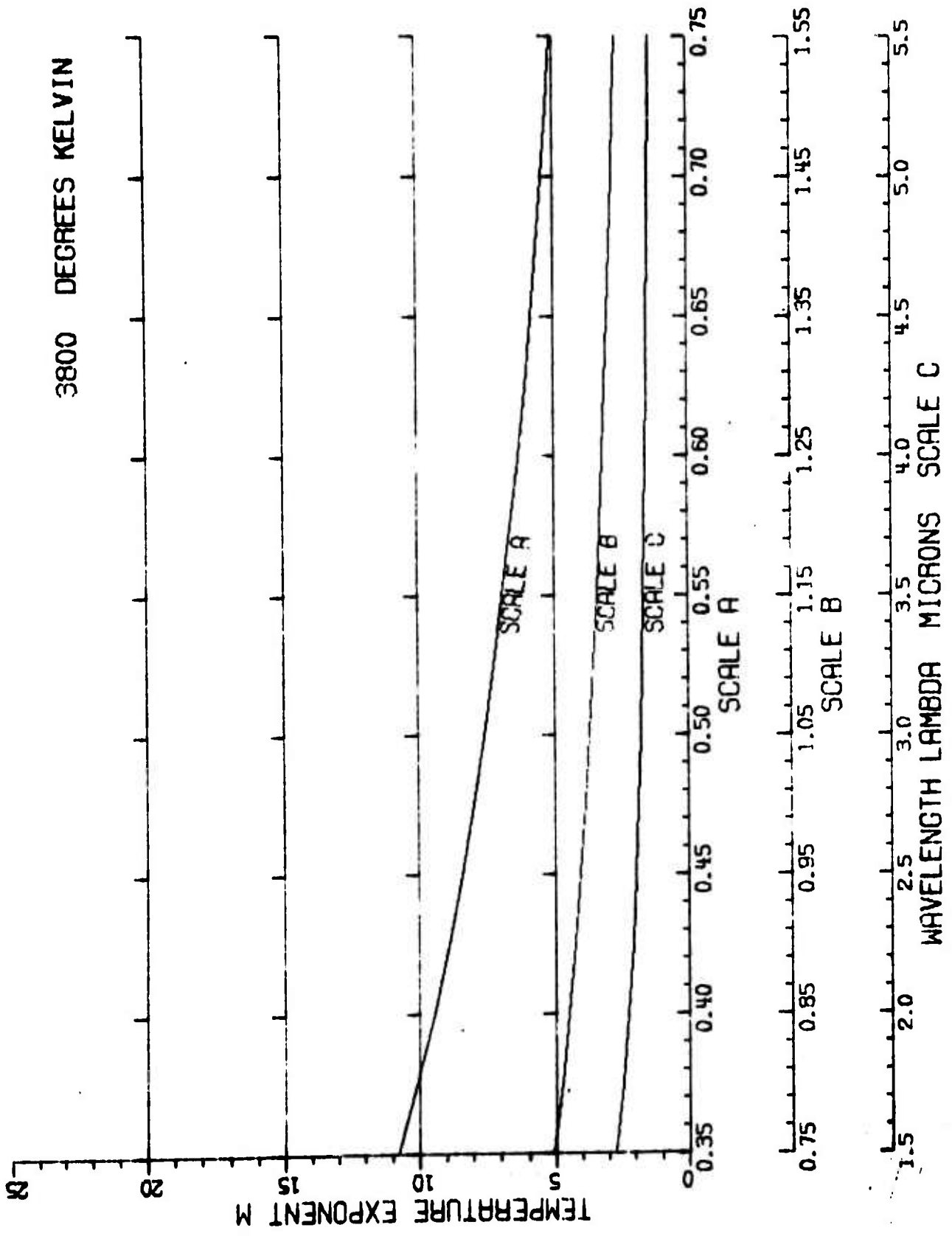


3700 DEGREES KELVIN

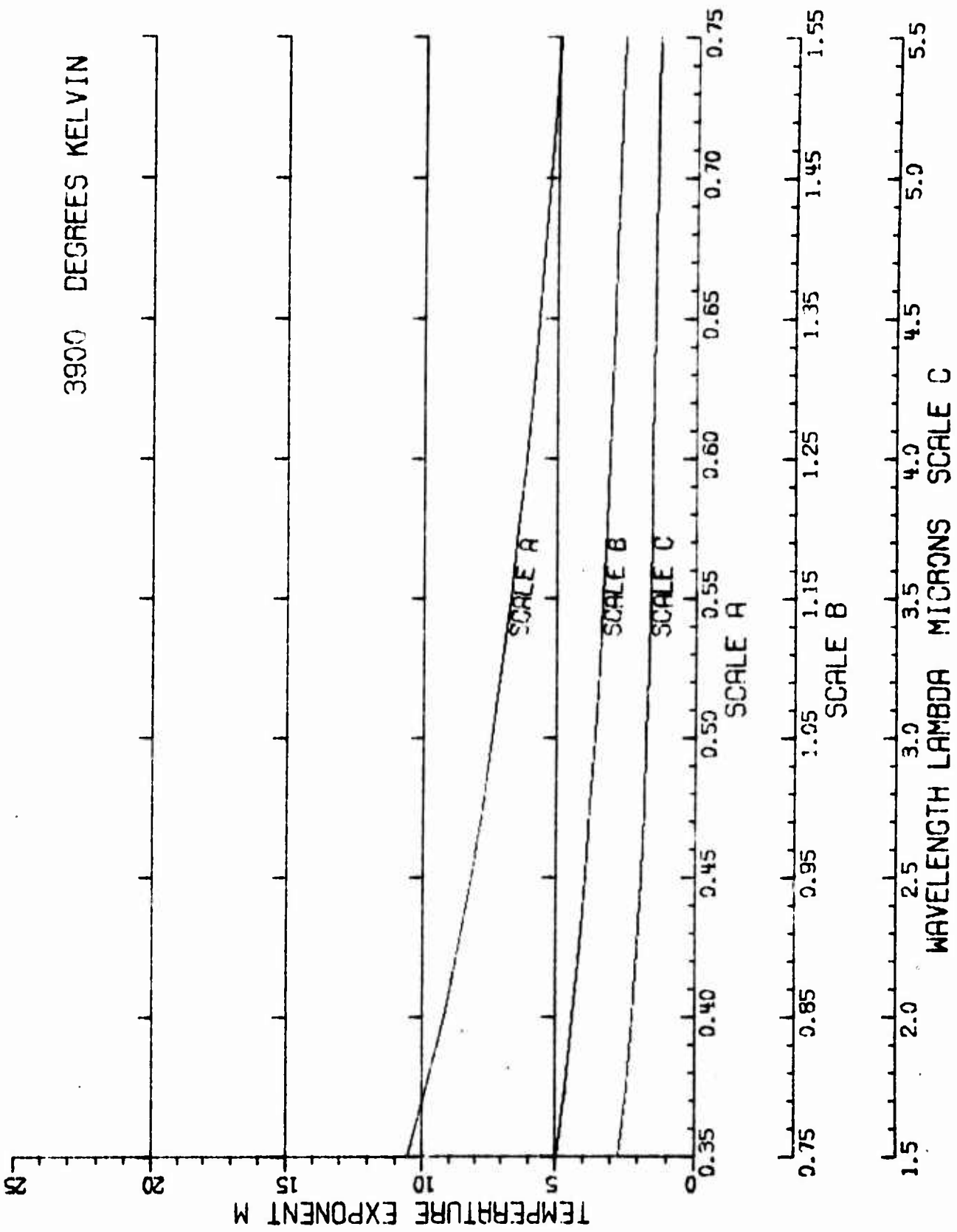


241

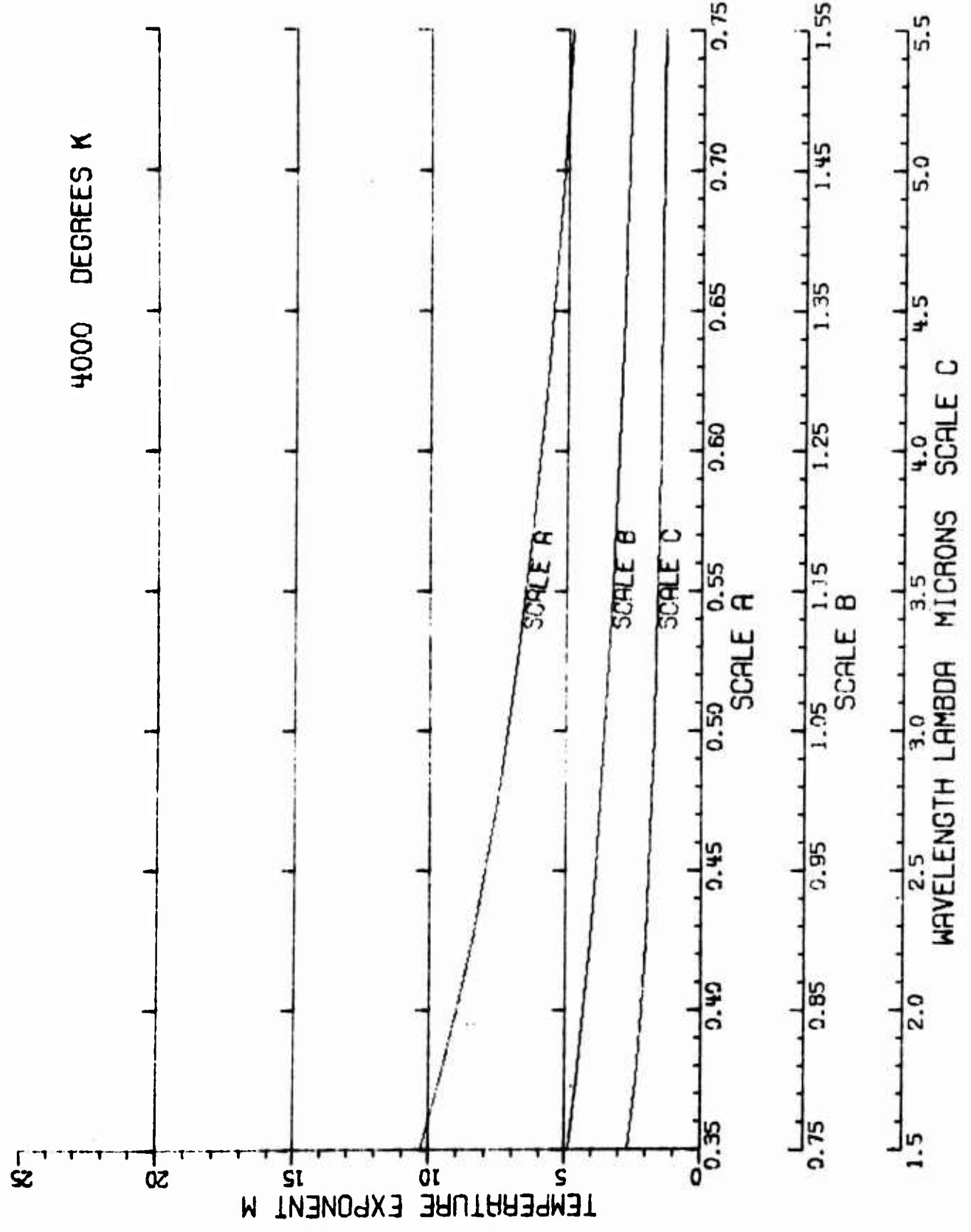
3800 DEGREES KELVIN



3900 DEGREES KELVIN



4000 DEGREES K



244



```

DAY * DAY * (42 I 4) * 10 * DAY * (16 I 4) * 100 * DAY * (1 I 1) *
FOR * IF * VR * (42 I 4) * MOD * 0 * 0 * THEN * (OPEN * ELSE * (OPEN *
FOR * M * (JAN * FEB * MAR * APR * MAY * JUN * JUL * AUG *
* SEPT * OCT * NOV * DEC * 0 * NO
BEGIN * IF * DAY * 0 * 114 I 00) * THEN * GO * TO * (GOTO)
DAY * DAY * MD * (16 I 4)
END)
GOTO * MINS * TIME (1) / 3600
NRS * 100 * (MINS DIV 60) * MINS MOD 60
IF * USED * THEN * WRITE * (LINE * LAY * TIME (2) / 60 * TIME (1) / 60 * MD *
DAY * VR * NRS) * ELSE * WRITE * (LINE * MD * DAY * VR * NRS * FOR * I * 0 * STEP * 1 * UNTIL
* IN * NO * PROGRAM) * )
USE * TRUE
END * OF * DAY * LINE)
COMMENT * FOLLOWING * WILL * FILL * THE * DATE * HEADING * WITH * FIRST * AN * ALPHA *
CHARACTERS * ON * ONE * CARD * AND * THE * FIRST * 30 * ON * THE * NEXT)
READ * (CARD * FNAME) * FOR * I * 0 * STEP * 1 * UNTIL * 10 * NO * HEADINGS)
READ * (CARD * FNAME2) * FOR * I * 0 * STEP * 1 * UNTIL * 15 * NO * HEADINGS)
COMMENT * M * IS * THE * NUMBER * OF * CARDS * IN * THE * VISIBILITY * FACTOR * TABLE)
READ * (CARD * FMT) * M)
COMMENT * READ * IN * A * TABLE * OF * VISIBILITY * RESPONSE * FACTORS * FOR * 0.4 * TO * 0.75
* MICRONS * IN * 0.005 * MICRON * STEPS)
READ * (CARD * FMT) * FOR * M * 0 * STEP * 1 * UNTIL * M * 0 * 1 * NO * LUMIN)
(FINI)
COMMENT * T * IS * THE * INITIAL * TEMP * D * THE * TEMP * INCREMENT *
* N * THE * NO * OF * TEMPS * D * THE * WAVELENGTH * STEPS *
* D * THE * NO * OF * STEPS * F * THE * SENSITIVITY)
NOW * READ * (CARD * FMT) * T * D * N * D * N * D * N * D * N * D * N * D * F * M * S)
(FINI)
CLOSE * (CARD * RELEASE)
TEST * 0 * T * I * F * L * E * M * I * S * S *
DATE * LINE * (MEANS)
START * WRITE * (LINE * PAGE)
M * T * J * K * N * M * O *
FRACTION * 0.0
IF * TEST * M * I * S * S * THEN * GO * TO * NOW)
WRITE * (LINE * NOW)
L * 0.3700 * D * 0.005 * E * M * I * S * S)
L * MAX * (200 * D * T * ) * RTUT * (1 * 4.007 * 10 * (-12) * T * 0 * W *
AREA * (0.195 * 195)
FIRST * FACTOR * (1400 * O * (1 * T * ) * FACTOR * (EXP * FACTOR))
V * (1 * K * ) * 3700 * O * (1 * T * ) * (FACT * (1 * T * ) * (1 * T * ) * L *
V * (1 * K * ) * FACTOR * FACTOR * (FACT * (1 * T * ) * )
V * (1 * K * ) * L *
V * (1 * K * ) * EXP * (3700 * O * (1 * T * ) * (L * MAX * (1 * T * ) * (1 * T * ) * (-1) * ) * (-1) * )
V * (1 * K * ) * V * (1 * K * ) * V * (1 * K * ) * V * (1 * K * ) *
IF * M * 0 * THEN
V * (1 * K * ) * 0.0 * ELSE * IF * 10 * < * K * AND * K * < * 5 * NO * THEN
V * (1 * K * ) * 0.0 * V * (1 * K * ) * (1 * K * ) * (1 * K * ) * 10 * 1 * ) * ELSE *
IF * K * < * 5 * THEN * V * (1 * K * ) * 0.0 *
IF * K * > * 0 * THEN
AREA * (0 * IF * K * < * 5 * NO * THEN * 5 * ELSE * IF * NOW * V * 1 * 0 * 2 * K * AND
* 2 * 1 * THEN * 10 * ELSE * 100 * )
V * (1 * K * ) * FRACTION *
V * (1 * K * ) * FRACTION * RTUT * (1) * 100.0
IF * K * < * 5 * THEN
BEGIN
L * L * D * 0 * V *
GO * TO * FIRST
END * ELSE *
IF * NOW * V * 1 * 0 * 2 * K * AND * K * < * 5 * THEN
BEGIN
L * L * D * 0 * V *
GO * TO * FIRST
END * ELSE *
IF * NOW * V * 1 * 0 * 2 * K * AND * K * < * 5 * THEN
BEGIN
L * L * D * 0 * V *
GO * TO * FIRST
END *
SECOND * SUM * SUM * 0.0
FOR * K * 1 * STEP * 1 * UNTIL * 70 * DO * SUM * SUM * V * (1 * K * )
SUM * 0.005 * (V * (1 * 10 * ) * V * (1 * 10 * ) * 2 * 0 * SUM * )
FOR * K * 11 * STEP * 1 * UNTIL * 70 * DO * SUM * SUM * V * (1 * K * )
SUM * 0.005 * (V * (1 * 10 * ) * V * (1 * 10 * ) * 2 * 0 * SUM * )
L * SUM * 2 * 1 * 10 * 100
EFFECT * SUM * SUM *
EFFECT * SUM * RTUT * (1) * EFFECT * SUM * RTUT * (1)
R * 5.007 * T * 0 * 10 * (-5)
R * R * (4.100 * 10 * 10)
WRITE * (LINE * F * M * S * T * 2 * 2 * T * (1 * 0 * (T * 2 * 2 * ) * 3 * 0 * ) * )
WRITE * (LINE * F * M * S * SUM * SUM * L * EFFECT * EFFECT * EFFECT *
* L * MAX * (1 * 10 * ) * RTUT * (1) * R * V * (1 * K * ) * )
WRITE * (LINE * PAGE)
WRITE * (LINE * F * M * S * T * 2 * 2 * T * (1 * 0 * (T * 2 * 2 * ) * 3 * 0 * ) * )
WRITE * (LINE * F * M * S * )
WRITE * (LINE * F * M * S * ) * FOR * K * 0 * STEP * 1 * UNTIL * 70 * DO * FOR * J * 0
* STEP * 1 * UNTIL * 6 * DO * V * (1 * K * ) *
T * T * D * T * L * T * T * T * 1 * 1 * 1 * )
GO * TO * START)
FINI
DATE * LINE * (TIME)
END.

```

EXP IS SEGMENT NUMBER 0015, PRT ADDRESS IS 0110  
OUTPUT IS SEGMENT NUMBER 0016, PRT ADDRESS IS 0117  
BLOCK CONTROL IS SEGMENT NUMBER 0017, PRT ADDRESS IS 0005  
INPUT IS SEGMENT NUMBER 0018, PRT ADDRESS IS 0122  
GO TO SOLVER IS SEGMENT NUMBER 0019, PRT ADDRESS IS 0130  
ALGO WRITE IS SEGMENT NUMBER 0020, PRT ADDRESS IS 0016  
ALGO READ IS SEGMENT NUMBER 0021, PRT ADDRESS IS 0015  
ALGO SELECT IS SEGMENT NUMBER 0022, PRT ADDRESS IS 0016

SEG	SIZE	NOB
V1000000	13	5
V1000000	13	9
V1000001	13	13
V1000002	13	26
V1000003	13	38
V1000004	13	39
V1000005	13	41
V1000006	13	56
V1000007	13	57
V1000008	13	60
V1000009	13	73
V1000100	13	68
V1000101	13	97
V1000102	13	98
V1000103	2	15
V1000104	2	15
V1000105	2	15
V1000106	2	26
V1000107	2	38
V1000108	2	38
V1000109	2	46
V1000110	2	46
V1000111	2	46
V1000112	2	58
V1000113	2	66
V1000114	2	66
V1000115	2	66
V1000116	2	46
V1000117	2	46
V1000118	2	84
V1000119	2	86
V1000120	2	88
V1000121	2	90
V1000122	2	93
V1000123	2	97
V1000124	2	97
V1000125	2	99
V1000126	2	102
V1000127	2	104
V1000128	2	112
V1000129	2	113
V1000130	2	117
V1000131	2	124
V1000132	2	127
V1000133	2	129
V1000134	2	137
V1000135	2	140
V1000136	2	141
V1000137	2	154
V1000138	2	154
V1000139	2	160
V1000140	2	160
V1000141	2	174
V1000142	2	177
V1000143	2	179
V1000144	2	180
V1000145	2	180
V1000146	2	181
V1000147	2	182
V1000148	2	183
V1000149	2	185
V1000150	2	187
V1000151	2	188
V1000152	2	189
V1000153	2	190
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V1000156	2	194
V1000157	2	195
V1000158	2	195
V1000159	2	197
V1000160	2	197
V1000161	2	197
V1000162	2	199
V1000163	2	204
V1000164	2	209
V1000165	2	216
V1000166	2	221
V1000167	2	222
V1000168	2	223
V1000169	2	224
V1000170	2	231
V1000171	2	235
V1000172	2	261
V1000173	2	273
V1000174	2	286
V1000175	2	289
V1000176	2	309
V1000177	2	312
V1000178	2	318
V1000179	2	320
V1000180	2	332
V1000181	2	332
V1000182	2	333
V1000183	2	334
V1000184	2	334

NUMBER OF ERRORS DETECTED = 000. COMPILATION TIME = 0019 SECONDS.

SEG SIZE 2 NOB  
SEG SIZE 69 NOB

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DOCUMENT CONTROL DATA - R&D		
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13. ABSTRACT  The data presented in the following tabulation is derived from Planck's radiation law. The values used for the first and second radiation constant are $C_1 = 3.7405 \times 10^{-12}$ watts $\text{cm}^2$ and $C_2 = 14385$ micron $^\circ\text{K}$ . The value of the Stefan-Boltzmann constant is $\sigma = 5.6697 \times 10^{-12}$ watts $\text{cm}^{-2}$ $\text{deg}^{-4}$ . The conversion factor from watts/ $\text{cm}^2$ in the visible region to lumens/ $\text{cm}^2$ is 680 lumens $\text{watt}^{-1}$ at 0.555 micron.  In general, the values are hemispherical values and should be divided by $\pi$ if values of the component normal to the surface are required.  The wavelength at which the power peaks is calculated from $\lambda_{\text{max}} = 2898$ micron $-\text{K}/T^\circ\text{K}$ . The wavelength produced most efficiently is computed from $\lambda_e = 3652/T^\circ\text{K}$ . This relation is derived by Benford* by setting the derivative of the quotient of Planck's law divided by $\sigma T^4$ , with respect to T, equal to zero and solving this equation.		

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UNCLASSIFIED

Security Classification

**Security Classification**

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Black Body Functions Tables Radiation Temperature Planck's Radiation Equation Stefan-Boltzmann Equation						

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