



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : DLLR96MRA50.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 3,081P3  
[TESTLAB] TUV SUD America  
[ISSUEDATE] 5/28/2015 4:33:14 PM  
[MANUFAC] LAMAR LIGHTING CO., INC.  
[LUMCAT] DLLR96MRA50  
[LUMINAIRE] 8' FIXTURE, WITH (2) 4' ROUND FROSTED LENS, 5000K  
[MORE] MEDIUM OUTPUT  
[MORE] 1847-14  
[\_AMBIENT] 25.6 deg C  
[\_POWERFACTOR] 0.9989  
[\_ATHD] 3.6%  
[\_CURRENT] 0.497  
[\_VOLTAGE] 120.13  
[\_STABILIZATION] 40:40.0 Stable  
[\_POWER VARIATION] 0.13 %  
[\_LIGHT VARIATION] 0.48 %  
[\_Lumens] 7,133

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7133
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	62.01
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.10
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.42 ft
Luminous Width (90-270)	7.50 ft
Luminous Height	0.33 ft

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**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4102	4084	5282
55	3487	3356	4196
65	2988	2763	3150
75	2615	2330	2047
85	2234	2003	557

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
<b>0.0</b>	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211
<b>2.5</b>	2388.044	2370.120	2350.154	2378.766	2375.615	2394.698	2389.354	2395.782	2397.194	2385.194
<b>5.0</b>	2376.270	2355.574	2333.541	2362.859	2362.582	2382.547	2381.338	2390.943	2392.656	2382.952
<b>7.5</b>	2359.431	2334.776	2312.063	2338.356	2337.423	2363.515	2365.657	2380.128	2384.186	2374.253
<b>10.0</b>	2338.104	2309.416	2284.560	2308.937	2310.474	2339.340	2343.775	2365.657	2370.750	2363.490
<b>12.5</b>	2310.474	2279.190	2194.008	2270.039	2274.047	2305.963	2316.650	2344.709	2351.767	2344.734
<b>15.0</b>	2277.375	2245.308	2102.272	2117.221	2165.446	2267.544	2281.963	2317.055	2328.600	2321.163
<b>17.5</b>	2241.679	2100.986	2061.105	2070.937	2074.768	2112.759	2237.267	2284.409	2298.778	2292.803
<b>20.0</b>	2098.869	2059.769	2013.435	2018.022	2020.190	2059.568	2093.071	2193.478	2263.510	2257.031
<b>22.5</b>	2056.542	2012.451	1961.529	1956.159	1955.731	1999.973	2042.702	2096.625	2123.851	2122.514
<b>25.0</b>	2008.015	1960.747	1903.194	1888.195	1885.473	1932.966	1986.914	2049.786	2073.685	2065.114
<b>27.5</b>	1959.361	1904.581	1841.835	1815.794	1807.955	1859.481	1925.934	1999.266	2026.618	2017.216
<b>30.0</b>	1903.876	1846.903	1774.375	1737.318	1723.756	1780.729	1860.314	1944.134	1971.966	1964.352
<b>32.5</b>	1844.331	1788.089	1708.831	1654.783	1633.658	1696.051	1790.282	1887.540	1918.119	1907.304
<b>35.0</b>	1784.283	1722.822	1636.028	1566.198	1539.754	1608.172	1719.218	1824.945	1857.843	1844.936
<b>37.5</b>	1719.394	1655.791	1563.425	1475.999	1441.740	1512.679	1639.179	1754.763	1793.635	1779.921
<b>40.0</b>	1648.707	1586.340	1485.302	1381.490	1337.551	1414.968	1557.249	1680.018	1725.469	1710.899
<b>42.5</b>	1577.088	1518.603	1409.497	1287.358	1236.411	1318.140	1475.873	1608.146	1655.993	1640.313
<b>45.0</b>	1509.073	1450.513	1333.920	1190.631	1131.238	1218.941	1393.389	1537.157	1586.769	1568.391
<b>47.5</b>	1439.723	1378.642	1255.041	1094.861	1029.620	1122.062	1308.786	1461.580	1514.367	1494.830
<b>50.0</b>	1367.222	1307.778	1176.438	1000.756	929.110	1024.754	1225.974	1384.893	1444.211	1423.917
<b>52.5</b>	1297.694	1241.074	1100.357	912.497	833.265	929.009	1144.372	1312.745	1373.423	1351.416
<b>55.0</b>	1237.671	1180.522	1030.805	826.786	742.134	839.669	1068.517	1247.428	1302.434	1278.384
<b>57.5</b>	1172.455	1116.617	960.622	740.597	653.977	756.478	996.243	1177.976	1236.487	1209.362
<b>60.0</b>	1109.230	1054.022	893.187	662.574	570.459	675.557	923.463	1109.885	1171.951	1144.649
<b>62.5</b>	1048.023	996.570	828.224	589.846	495.033	598.012	855.954	1045.628	1110.340	1081.576
<b>65.0</b>	989.638	941.589	769.007	523.015	422.657	527.024	791.090	985.453	1053.569	1024.074
<b>67.5</b>	936.396	890.490	713.169	460.774	352.853	462.463	730.941	928.833	996.470	967.075
<b>70.0</b>	884.339	838.030	661.288	401.281	292.351	402.692	675.204	874.710	939.673	909.195
<b>72.5</b>	830.770	787.990	610.164	348.114	233.588	347.156	619.768	822.450	881.793	852.979
<b>75.0</b>	777.830	738.050	561.459	299.283	178.909	297.041	570.610	770.141	828.199	798.754
<b>77.5</b>	724.941	689.220	516.159	255.193	130.534	251.638	522.461	720.756	774.049	748.385
<b>80.0</b>	674.044	639.684	471.311	215.337	86.191	211.203	477.487	669.683	725.269	701.169
<b>82.5</b>	620.449	589.643	430.926	181.204	49.561	176.262	435.565	621.180	678.481	658.262
<b>85.0</b>	568.745	542.376	393.314	150.549	21.151	145.684	398.306	573.232	624.457	606.509
<b>87.5</b>	517.898	497.025	358.198	125.643	2.193	120.072	361.702	527.831	569.652	552.863
<b>90.0</b>	468.337	447.540	320.510	103.282	0.000	97.636	324.341	479.731	517.469	503.907
<b>92.5</b>	420.717	401.911	286.957	84.728	0.000	79.762	291.772	434.179	470.001	457.623
<b>95.0</b>	375.844	359.357	255.495	70.536	0.000	64.486	261.697	392.280	425.279	416.254
<b>97.5</b>	334.148	319.048	226.858	57.099	0.000	52.989	231.975	351.896	382.953	375.693
<b>100.0</b>	295.704	282.620	200.363	46.133	0.000	42.175	206.413	315.770	340.626	336.921
<b>102.5</b>	259.932	248.765	175.683	37.058	0.000	33.528	182.035	280.502	296.964	294.872
<b>105.0</b>	226.505	216.875	152.163	29.016	0.000	26.772	158.163	245.437	259.504	256.983
<b>107.5</b>	197.842	188.137	130.458	23.066	0.000	20.647	136.357	215.060	228.118	225.420
<b>110.0</b>	171.927	163.558	110.315	17.671	0.000	15.907	117.248	187.002	200.262	197.791
<b>112.5</b>	149.390	140.743	93.400	13.260	0.000	11.470	99.374	160.608	175.607	172.507
<b>115.0</b>	129.777	121.155	77.871	9.756	0.000	8.395	83.215	138.449	152.541	149.011
<b>117.5</b>	112.685	103.408	64.687	6.226	0.000	5.042	70.208	119.190	130.382	126.374
<b>120.0</b>	96.249	87.199	52.309	2.975	0.000	2.647	57.653	100.761	109.206	104.139
<b>122.5</b>	81.955	73.233	42.579	1.210	0.000	0.756	47.091	85.232	92.518	86.265
<b>125.0</b>	69.249	61.031	33.150	0.000	0.000	0.000	38.091	71.292	80.746	74.972
<b>127.5</b>	58.208	50.720	25.663	0.000	0.000	0.000	29.823	60.023	69.350	63.527
<b>130.0</b>	49.082	42.326	19.436	0.000	0.000	0.000	23.546	49.964	58.107	53.216
<b>132.5</b>	40.990	34.310	13.588	0.000	0.000	0.000	17.772	40.688	48.024	43.461

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**CANDELA TABULATION - (Cont.)**

135.0	33.629	27.957	9.478	0.000	0.000	0.000	12.807	34.109	38.898	33.755
137.5	26.445	21.756	5.773	0.076	0.076	0.000	8.571	27.680	31.512	26.369
140.0	20.899	16.008	3.050	0.403	0.025	0.151	4.840	20.041	25.007	20.167
142.5	15.428	10.764	1.184	0.378	0.252	0.580	2.319	14.974	20.444	16.411
145.0	11.520	7.765	1.387	1.285	0.428	0.454	0.580	10.613	15.076	10.966
147.5	7.613	4.588	1.589	1.436	1.513	1.008	0.630	6.453	10.185	7.135
150.0	3.781	2.597	1.841	1.538	2.168	0.907	1.891	3.605	5.445	2.748
152.5	1.916	2.294	1.790	1.967	1.362	1.538	1.337	1.488	2.571	1.689
155.0	2.294	2.395	1.815	1.992	1.488	1.715	1.488	2.067	1.765	1.488
157.5	1.941	2.244	2.294	1.664	2.067	2.168	1.841	2.193	1.134	1.639
160.0	2.622	3.000	2.546	3.176	2.370	2.345	2.748	2.294	2.067	1.639
162.5	3.050	2.672	3.126	2.496	2.546	3.277	2.345	2.899	1.941	2.269
165.0	3.050	3.453	2.975	2.219	2.672	2.420	3.378	1.967	2.899	2.219
167.5	2.874	3.353	3.000	3.227	3.151	1.992	3.000	2.622	2.647	2.849
170.0	2.823	3.252	3.252	2.949	3.075	3.302	3.050	3.201	3.227	2.521
172.5	4.135	3.378	3.504	3.403	3.453	3.277	2.697	3.453	3.101	3.101
175.0	2.849	3.378	2.672	3.554	3.025	3.731	3.151	3.075	3.554	3.126
177.5	3.453	4.058	3.655	3.453	3.655	3.327	3.050	4.209	3.327	3.075
180.0	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579

**Vert. Angles**      **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211	2387.211
2.5	2362.758	2387.312	2384.463	2396.665	2385.624	2389.253	2388.044
5.0	2360.036	2380.582	2377.279	2389.153	2374.253	2377.305	2376.270
7.5	2351.238	2369.364	2362.431	2371.960	2358.070	2359.809	2359.431
10.0	2340.020	2352.422	2341.280	2349.296	2336.138	2339.440	2338.104
12.5	2320.432	2328.525	2314.382	2319.398	2307.827	2311.962	2310.474
15.0	2296.987	2297.617	2276.720	2282.417	2273.669	2280.727	2277.375
17.5	2263.812	2259.956	2164.009	2198.923	2124.556	2185.967	2241.679
20.0	2131.993	2104.263	2076.609	2080.062	2080.037	2097.129	2098.869
22.5	2071.391	2053.164	2018.905	2023.367	2029.997	2051.879	2056.542
25.0	2021.401	1993.999	1954.924	1962.613	1975.646	2002.519	2008.015
27.5	1967.302	1927.597	1884.817	1893.792	1916.454	1950.412	1959.361
30.0	1905.892	1854.390	1806.946	1819.727	1852.575	1891.523	1903.876
32.5	1841.659	1778.384	1722.696	1737.822	1784.283	1834.701	1844.331
35.0	1774.753	1693.253	1630.734	1650.674	1711.428	1772.284	1784.283
37.5	1698.622	1605.348	1537.737	1562.417	1635.094	1704.420	1719.394
40.0	1618.053	1510.158	1437.782	1468.538	1556.266	1634.993	1648.707
42.5	1539.678	1414.867	1336.642	1374.809	1480.386	1564.635	1577.088
45.0	1460.293	1316.677	1235.427	1276.923	1397.297	1490.646	1509.073
47.5	1379.524	1221.058	1132.524	1179.690	1316.475	1417.690	1439.723
50.0	1300.064	1125.793	1030.729	1083.946	1237.092	1350.709	1367.222
52.5	1220.202	1028.460	929.035	990.142	1158.615	1280.452	1297.694
55.0	1139.884	937.303	832.433	899.616	1082.307	1212.941	1237.671
57.5	1058.283	848.441	740.975	812.014	1008.192	1146.137	1172.455
60.0	990.974	764.066	655.566	731.571	936.749	1086.492	1109.230
62.5	920.464	686.220	577.089	656.650	869.063	1027.376	1048.023
65.0	855.500	614.247	502.974	584.349	807.325	972.344	989.638
67.5	793.636	548.098	435.262	518.680	745.386	917.187	936.396
70.0	734.268	483.211	372.088	455.656	687.228	861.399	884.339
72.5	675.506	423.213	311.636	399.238	632.575	806.342	830.770
75.0	621.659	369.290	256.529	347.106	581.400	753.931	777.830
77.5	570.913	320.938	206.312	301.830	533.351	705.379	724.941
80.0	526.318	277.477	159.826	259.151	488.832	657.758	674.044

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**CANDELA TABULATION - (Cont.)**

82.5	483.841	239.084	118.760	221.135	446.379	607.542	620.449
85.0	442.850	203.312	82.459	187.733	403.827	555.813	568.745
87.5	400.473	170.868	51.956	155.944	364.021	504.764	517.898
90.0	361.172	142.180	32.016	130.332	326.459	457.749	468.337
92.5	325.753	119.190	25.285	109.206	293.763	413.229	420.717
95.0	295.250	98.921	21.806	89.997	262.378	372.743	375.844
97.5	265.503	82.913	18.277	72.300	233.361	331.148	334.148
100.0	237.320	67.712	15.353	57.855	205.682	293.385	295.704
102.5	206.968	54.679	11.344	44.368	178.002	255.923	259.932
105.0	180.372	43.184	7.387	34.386	153.801	221.463	226.505
107.5	156.070	33.931	4.639	26.141	132.828	194.464	197.842
110.0	135.727	25.562	2.168	19.083	112.534	169.734	171.927
112.5	116.643	19.512	0.378	13.185	95.795	145.785	149.390
115.0	98.719	15.277	0.000	9.530	79.283	125.063	129.777
117.5	82.182	11.117	0.000	5.571	64.107	105.325	112.685
120.0	65.569	7.361	0.000	1.891	51.553	87.426	96.249
122.5	52.460	3.882	0.000	0.101	41.771	74.543	81.955
125.0	43.965	1.563	0.000	0.000	33.629	63.930	69.249
127.5	35.822	0.000	0.000	0.000	25.763	53.646	58.208
130.0	28.335	0.000	0.000	0.000	18.882	43.385	49.082
132.5	21.504	0.000	0.000	0.000	11.571	34.361	40.990
135.0	15.175	0.000	0.000	0.000	7.513	26.268	33.629
137.5	10.109	0.000	0.000	0.000	4.236	21.075	26.445
140.0	6.504	0.000	0.000	0.000	1.765	16.084	20.899
142.5	3.151	0.202	0.000	0.655	0.554	11.722	15.428
145.0	1.891	0.277	0.025	0.428	1.159	7.235	11.520
147.5	0.907	0.983	0.857	0.227	0.907	2.546	7.613
150.0	0.454	1.033	0.731	1.184	0.806	1.538	3.781
152.5	1.008	1.387	1.235	1.235	1.337	1.210	1.916
155.0	1.436	1.488	1.235	1.765	1.033	1.740	2.294
157.5	1.639	1.941	1.790	2.067	1.815	1.841	1.941
160.0	2.093	2.269	1.765	2.219	2.823	2.697	2.622
162.5	2.748	2.017	2.345	2.219	2.672	2.294	3.050
165.0	2.521	2.672	2.294	2.672	2.471	2.067	3.050
167.5	2.823	2.370	2.849	2.622	2.949	3.176	2.874
170.0	3.176	3.655	3.050	3.201	2.874	3.277	2.823
172.5	2.647	2.924	3.075	3.378	3.479	3.277	4.135
175.0	3.227	3.227	3.655	3.680	3.630	3.453	2.849
177.5	3.957	3.353	3.605	3.327	3.151	4.008	3.453
180.0	3.579	3.579	3.579	3.579	3.579	3.579	3.579

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	857.66	N.A.	12.00
0-30	1769.84	N.A.	24.80
0-40	2837.39	N.A.	39.80
0-60	4847.33	N.A.	68.00
0-80	6195.85	N.A.	86.90
0-90	6599.96	N.A.	92.50
10-90	6374.56	N.A.	89.40
20-40	1979.74	N.A.	27.80
20-50	3045.49	N.A.	42.70
40-70	2778.01	N.A.	38.90
60-80	1348.52	N.A.	18.90
70-80	580.45	N.A.	8.10
80-90	404.11	N.A.	5.70
90-110	407.03	N.A.	5.70
90-120	482.56	N.A.	6.80
90-130	515.51	N.A.	7.20
90-150	530.70	N.A.	7.40
90-180	532.62	N.A.	7.50
110-180	125.59	N.A.	1.80
0-180	7132.58	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	225.40
10-20	632.26
20-30	912.18
30-40	1067.56
40-50	1065.75
50-60	944.19
60-70	768.07
70-80	580.45
80-90	404.11
90-100	258.26
100-110	148.77
110-120	75.53
120-130	32.96
130-140	12.15
140-150	3.05
150-160	0.85
160-170	0.76
170-180	0.31

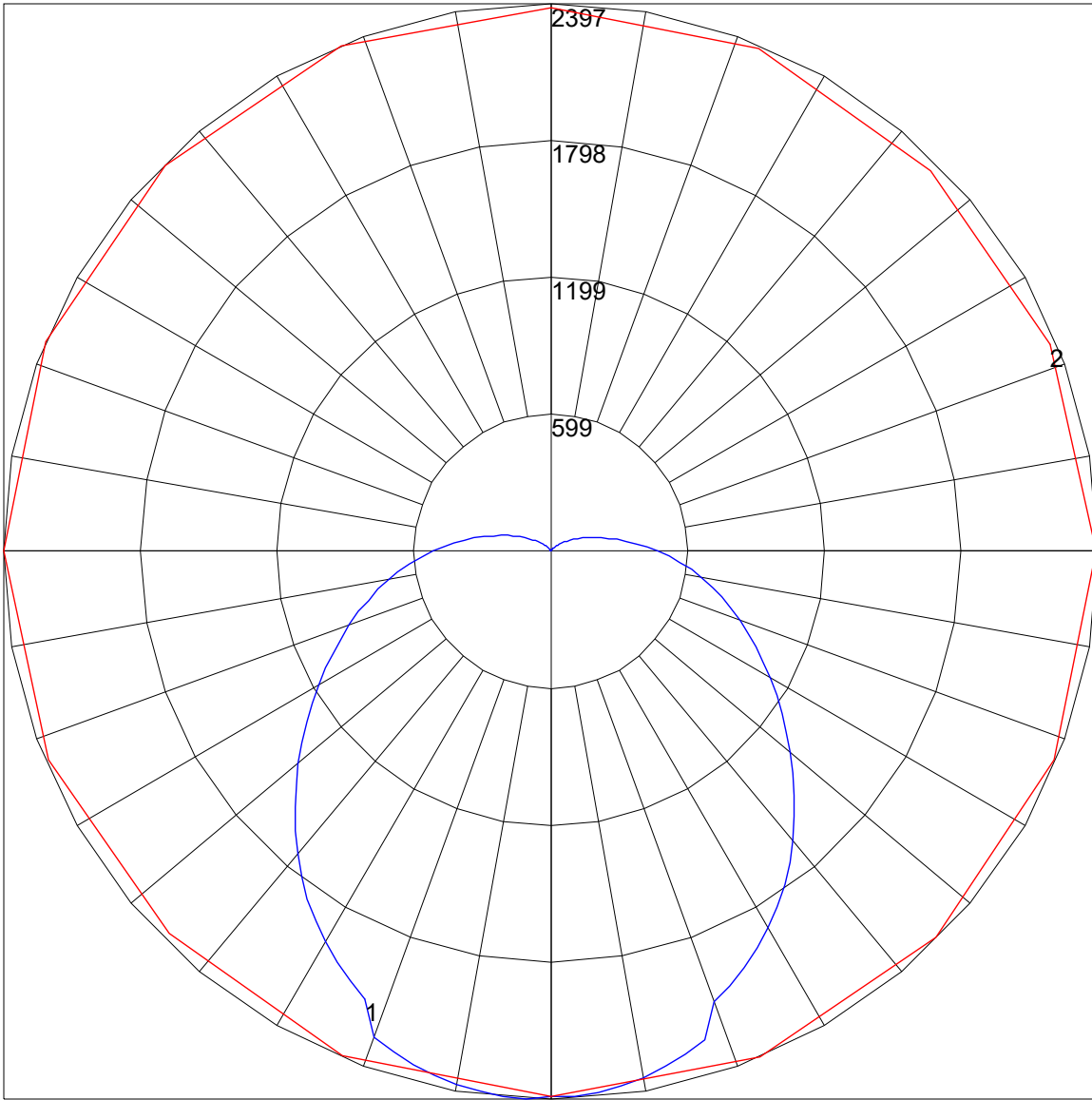
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : DLLR96MRA50.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	74
2	95	87	79	73	92	84	77	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	71	59	50	44	56	48	42	53	46	41	50	45	40	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	35	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	32	29
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	38	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22

POLAR GRAPH



Maximum Candela = 2397.194 Located At Horizontal Angle = 180, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)