



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : DLLR48HRA40.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 3,079P2  
[TESTLAB] TUV SUD America  
[ISSUEDATE] 5/28/2015 2:12:53 PM  
[MANUFAC] LAMAR LIGHTING CO., INC.  
[LUMCAT] DLLR48HRA40  
[LUMINAIRE] 4' FIXTURE, WITH ROUND FROSTED LENS, 4000K  
[MORE] HIGH OUTPUT  
[LAMPCAT] 1847-4  
[LAMP] 72105858  
[\_AMBIENT] 25.5 deg C  
[\_POWERFACTOR] 0.9986  
[\_ATHD] 4.35%  
[\_CURRENT] 0.44  
[\_VOLTAGE] 120.56  
[\_STABILIZATION] 42:20.0 Stable  
[\_POWER VARIATION] 0.44 %  
[\_LIGHT VARIATION] 0.48 %  
[\_Lumens] 5920

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5920
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	52.63
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.42 ft
Luminous Width (90-270)	3.83 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	7192	6938	8133
55	6160	5455	6427
65	5074	4494	4784
75	4514	3810	3095
85	3959	3311	930

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>	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123
<b>2.5</b>	1941.834	1927.691	1910.581	1928.480	1926.184	1940.869	1933.273	1937.642	1937.571	1928.633
<b>5.0</b>	1937.465	1919.378	1899.947	1916.398	1914.573	1928.539	1921.638	1927.927	1928.457	1922.475
<b>7.5</b>	1929.752	1908.567	1885.216	1898.181	1896.403	1909.815	1903.998	1914.561	1914.867	1911.346
<b>10.0</b>	1917.340	1893.423	1865.703	1875.889	1871.756	1885.816	1882.860	1894.884	1898.558	1895.755
<b>12.5</b>	1900.854	1873.781	1842.351	1848.487	1841.138	1855.576	1856.447	1871.026	1876.749	1875.147
<b>15.0</b>	1879.834	1850.854	1814.596	1816.232	1805.634	1821.426	1823.993	1842.846	1850.500	1850.135
<b>17.5</b>	1854.528	1822.156	1781.929	1777.301	1762.546	1780.139	1786.475	1810.874	1819.318	1819.129
<b>20.0</b>	1826.996	1790.431	1745.553	1734.307	1715.596	1732.624	1744.729	1773.321	1784.496	1784.025
<b>22.5</b>	1794.553	1754.480	1704.821	1683.765	1661.379	1679.832	1698.367	1732.176	1745.789	1744.965
<b>25.0</b>	1759.108	1714.265	1658.306	1629.679	1600.875	1620.411	1646.577	1686.544	1704.185	1702.948
<b>27.5</b>	1717.609	1670.894	1607.351	1569.221	1535.577	1557.115	1590.394	1637.839	1655.915	1656.398
<b>30.0</b>	1675.098	1624.945	1553.936	1503.618	1465.075	1488.721	1530.949	1584.977	1605.950	1605.856
<b>32.5</b>	1628.595	1576.051	1497.282	1435.058	1391.546	1416.276	1469.573	1530.561	1553.430	1550.097
<b>35.0</b>	1578.736	1523.648	1437.802	1362.036	1313.661	1340.922	1404.300	1472.152	1497.942	1493.231
<b>37.5</b>	1525.744	1468.313	1373.682	1284.598	1230.782	1262.188	1337.742	1411.883	1439.415	1433.892
<b>40.0</b>	1469.432	1411.530	1308.656	1205.829	1143.982	1180.251	1266.957	1347.705	1379.912	1373.270
<b>42.5</b>	1408.515	1353.781	1243.417	1124.952	1051.082	1098.668	1197.633	1285.834	1320.879	1313.943
<b>45.0</b>	1351.108	1294.996	1178.850	1011.644	925.503	968.933	1129.662	1225.271	1262.000	1252.532
<b>47.5</b>	1291.687	1233.785	1113.294	917.696	844.803	891.000	1060.891	1161.222	1203.591	1190.779
<b>50.0</b>	1231.712	1174.269	1023.102	842.224	764.951	814.598	947.136	1099.904	1144.994	1132.441
<b>52.5</b>	1171.243	1115.496	934.865	769.661	687.972	741.128	884.417	1004.414	1088.741	1073.303
<b>55.0</b>	1116.544	1050.811	875.291	698.805	613.407	671.756	825.573	940.953	1016.166	968.556
<b>57.5</b>	1061.633	955.920	817.377	630.965	543.623	604.481	768.154	891.259	937.256	916.448
<b>60.0</b>	957.628	904.801	760.499	565.396	476.983	540.643	712.995	841.624	889.245	867.095
<b>62.5</b>	906.650	856.909	707.449	505.269	413.829	480.527	661.476	794.814	844.061	822.229
<b>65.0</b>	858.239	811.607	656.660	448.473	354.879	424.180	611.075	751.432	801.020	777.304
<b>67.5</b>	813.562	768.366	611.358	395.482	299.438	373.638	564.749	706.213	756.978	733.262
<b>70.0</b>	770.568	726.208	566.986	347.130	247.741	324.650	521.131	664.750	712.795	690.244
<b>72.5</b>	727.586	684.710	523.886	302.358	200.614	281.444	480.127	622.462	667.576	647.627
<b>75.0</b>	685.616	644.613	485.226	260.977	156.831	240.864	441.066	582.236	624.464	605.658
<b>77.5</b>	643.777	605.128	447.520	224.590	115.910	203.664	403.407	542.268	582.424	565.137
<b>80.0</b>	601.466	565.337	411.956	191.241	79.428	171.610	368.468	502.937	542.174	525.417
<b>82.5</b>	558.766	524.652	379.384	162.001	48.658	143.383	335.931	464.465	501.394	486.286
<b>85.0</b>	514.689	485.073	346.624	136.895	23.834	119.066	305.302	426.193	458.130	445.447
<b>87.5</b>	470.212	445.223	316.148	114.685	6.053	97.881	276.251	389.735	414.453	406.163
<b>90.0</b>	426.841	404.997	286.037	96.091	0.000	79.970	247.353	352.358	374.297	367.926
<b>92.5</b>	385.048	368.256	258.128	80.088	0.000	64.249	220.845	316.642	337.733	332.163
<b>95.0</b>	346.659	330.691	232.091	66.911	0.000	52.155	196.504	283.505	301.946	298.967
<b>97.5</b>	309.388	295.304	207.786	56.136	0.000	41.557	173.753	252.334	267.654	265.935
<b>100.0</b>	275.309	263.545	184.163	46.527	0.000	32.690	153.110	224.154	234.211	234.894
<b>102.5</b>	243.973	233.952	163.426	38.389	0.000	25.777	134.033	198.236	204.300	204.653
<b>105.0</b>	214.722	206.432	143.489	30.982	0.000	19.842	115.828	173.129	178.970	178.087
<b>107.5</b>	188.779	180.548	125.107	24.894	0.000	15.132	98.470	150.249	157.832	155.713
<b>110.0</b>	165.722	157.632	107.950	19.654	0.000	11.010	82.655	129.311	137.908	135.753
<b>112.5</b>	145.562	137.177	92.712	15.273	0.000	7.996	69.077	111.259	118.901	116.546
<b>115.0</b>	126.614	119.266	78.463	11.034	0.000	5.299	57.160	95.149	102.297	99.153
<b>117.5</b>	110.646	102.980	65.992	8.373	0.000	3.309	47.080	80.889	87.566	83.585
<b>120.0</b>	96.480	88.967	53.957	6.394	0.000	1.331	38.813	68.041	74.718	69.702
<b>122.5</b>	83.738	76.108	43.677	4.310	0.000	0.082	30.700	57.007	63.166	58.632
<b>125.0</b>	72.198	64.461	35.964	2.591	0.000	0.035	24.612	47.433	53.769	49.671
<b>127.5</b>	61.776	53.981	28.922	1.178	0.000	0.200	19.030	39.426	45.950	40.921
<b>130.0</b>	52.744	45.137	21.927	0.506	0.212	0.294	14.143	32.195	38.378	33.220
<b>132.5</b>	44.690	37.377	16.510	0.577	0.624	0.330	10.433	26.248	31.041	26.531

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**CANDELA TABULATION - (Cont.)**

135.0	37.577	30.405	12.659	1.013	0.765	0.848	7.030	21.020	24.941	21.032
137.5	31.559	24.930	8.950	1.025	0.977	1.060	4.180	15.933	19.889	16.098
140.0	25.883	19.736	6.206	1.719	1.590	1.248	2.214	12.200	15.297	12.329
142.5	20.514	15.285	4.404	1.766	1.472	1.755	1.837	8.373	11.623	8.432
145.0	15.992	11.258	2.850	2.226	2.120	2.002	2.155	5.440	7.831	5.535
147.5	11.752	8.290	2.532	2.367	2.096	2.226	2.343	3.321	4.487	3.026
150.0	8.667	5.476	2.862	2.661	2.602	2.579	2.402	2.661	2.920	2.461
152.5	5.323	3.391	2.532	2.979	2.496	2.744	2.685	3.015	2.673	2.426
155.0	2.814	2.944	3.309	2.826	3.038	3.179	2.826	3.074	2.732	2.508
157.5	2.979	3.415	3.486	3.227	3.203	3.474	3.321	3.215	2.779	2.473
160.0	3.486	3.580	3.603	3.391	3.533	3.497	3.227	3.592	3.333	3.074
162.5	3.368	3.792	3.533	3.521	3.521	3.768	3.827	3.639	3.615	3.250
165.0	3.462	3.968	3.910	3.545	3.757	3.709	3.874	3.910	3.709	3.533
167.5	4.004	3.804	3.874	3.721	3.968	3.921	3.827	3.639	3.827	3.627
170.0	3.945	4.122	3.910	4.098	4.063	4.169	3.957	4.110	3.792	3.910
172.5	4.074	4.286	4.157	4.286	3.933	4.192	4.228	4.157	4.204	4.122
175.0	4.381	4.298	4.216	4.122	4.145	4.381	4.122	4.404	4.369	4.133
177.5	4.404	4.192	4.534	4.487	4.110	4.463	4.016	4.263	4.228	4.322
180.0	4.298	4.298	4.298	4.298	4.298	4.298	4.298	4.298	4.298	4.298

**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	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123	1936.123
2.5	1915.162	1934.945	1932.296	1948.158	1939.820	1944.448	1941.834
5.0	1909.910	1928.975	1926.090	1942.635	1935.852	1939.832	1937.465
7.5	1898.758	1918.000	1916.080	1932.979	1927.468	1932.190	1929.752
10.0	1883.909	1901.490	1899.841	1917.870	1913.442	1920.037	1917.340
12.5	1863.454	1879.610	1878.327	1895.366	1895.190	1903.586	1900.854
15.0	1837.582	1850.960	1848.922	1867.269	1870.637	1882.425	1879.834
17.5	1806.600	1817.092	1814.301	1833.143	1841.433	1857.460	1854.528
20.0	1769.459	1776.124	1770.954	1792.539	1807.071	1827.502	1826.996
22.5	1728.078	1728.278	1721.154	1747.814	1768.187	1794.565	1794.553
25.0	1681.128	1674.509	1664.936	1695.953	1724.416	1757.117	1759.108
27.5	1629.796	1615.677	1604.290	1638.770	1676.405	1714.983	1717.609
30.0	1574.709	1553.677	1538.533	1576.240	1622.342	1671.012	1675.098
32.5	1515.182	1484.552	1465.593	1507.551	1565.900	1621.836	1628.595
35.0	1451.827	1410.847	1387.413	1437.202	1506.609	1569.951	1578.736
37.5	1386.718	1332.526	1305.688	1361.165	1442.866	1514.864	1525.744
40.0	1319.278	1251.967	1219.453	1280.971	1376.096	1458.186	1469.432
42.5	1249.564	1170.642	1133.772	1198.045	1307.360	1397.941	1408.515
45.0	1180.452	1088.011	1027.871	1113.906	1239.578	1336.871	1351.108
47.5	1112.893	958.146	911.537	981.333	1171.101	1277.120	1291.687
50.0	1030.874	881.261	828.493	904.071	1101.624	1215.391	1231.712
52.5	932.663	804.353	749.548	827.151	1007.923	1154.521	1171.243
55.0	870.357	730.553	671.485	751.491	919.144	1095.559	1116.544
57.5	811.171	660.758	596.343	678.904	857.698	1008.453	1061.633
60.0	756.778	594.918	526.724	610.828	798.771	936.867	957.628
62.5	703.516	533.083	462.887	547.014	742.788	887.526	906.650
65.0	653.080	476.382	402.936	487.817	690.091	842.236	858.239
67.5	605.599	422.861	346.047	432.882	638.890	795.121	813.562
70.0	559.214	371.200	295.693	380.939	590.185	750.148	770.568
72.5	515.219	324.485	246.470	332.834	544.176	705.318	727.586
75.0	473.427	281.915	201.238	290.476	501.924	664.243	685.616
77.5	435.814	244.091	160.034	252.110	462.157	624.865	643.777
80.0	399.486	209.623	122.034	218.172	426.547	584.697	601.466

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**CANDELA TABULATION - (Cont.)**

82.5	363.722	179.005	88.366	186.966	391.820	543.540	558.766
85.0	329.384	150.472	59.692	158.233	356.303	500.758	514.689
87.5	298.024	124.954	36.152	133.056	323.048	457.564	470.212
90.0	268.184	104.429	20.243	112.472	292.313	417.409	426.841
92.5	240.169	86.529	16.934	95.773	263.003	380.456	385.048
95.0	214.192	71.491	15.156	79.923	236.766	343.279	346.659
97.5	189.674	58.279	13.283	66.546	211.107	306.432	309.388
100.0	165.640	46.727	11.093	54.805	186.730	272.447	275.309
102.5	142.995	36.152	8.679	44.148	163.767	240.511	243.973
105.0	123.129	27.826	6.689	35.398	143.690	212.626	214.722
107.5	105.771	20.843	4.593	27.932	127.121	187.131	188.779
110.0	90.250	15.709	2.767	21.609	110.128	164.721	165.722
112.5	75.319	11.835	1.649	16.792	94.195	143.195	145.562
115.0	62.259	8.114	0.495	13.189	79.664	123.199	126.614
117.5	50.754	4.852	0.000	9.444	66.075	105.677	110.646
120.0	40.909	2.826	0.000	6.901	54.723	90.839	96.480
122.5	33.608	0.718	0.000	4.651	45.290	77.603	83.738
125.0	27.367	0.012	0.000	2.803	36.870	66.157	72.198
127.5	21.091	0.000	0.012	1.531	30.123	56.042	61.776
130.0	15.768	0.188	0.247	0.742	23.140	45.749	52.744
132.5	11.116	0.671	0.447	0.730	17.699	37.777	44.690
135.0	7.619	0.777	0.742	0.518	13.519	30.676	37.577
137.5	4.734	0.813	1.048	1.107	10.186	25.153	31.559
140.0	2.791	1.048	1.178	1.236	7.313	19.642	25.883
142.5	1.872	1.708	1.554	1.531	4.781	15.580	20.514
145.0	1.978	1.978	2.061	2.084	2.873	11.517	15.992
147.5	1.990	2.120	2.037	2.108	2.320	7.925	11.752
150.0	2.237	2.108	2.049	2.296	2.190	4.875	8.667
152.5	2.438	2.379	2.473	2.591	2.308	2.708	5.323
155.0	2.485	2.591	2.673	2.685	2.803	2.744	2.814
157.5	2.791	2.744	2.979	3.026	2.555	2.791	2.979
160.0	2.909	3.062	3.274	3.344	3.074	3.050	3.486
162.5	3.227	3.462	3.227	3.250	3.285	3.356	3.368
165.0	3.486	3.333	3.450	3.427	3.792	3.439	3.462
167.5	3.862	3.886	3.403	3.627	3.745	3.839	4.004
170.0	3.839	3.898	3.968	3.709	4.051	3.933	3.945
172.5	3.933	4.004	3.910	3.862	4.016	4.275	4.074
175.0	3.992	4.122	4.192	3.968	4.074	4.345	4.381
177.5	4.440	4.145	4.228	4.228	4.180	4.557	4.404
180.0	4.298	4.298	4.298	4.298	4.298	4.298	4.298

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	702.82	N.A.	11.90
0-30	1477.3	N.A.	25.00
0-40	2382.97	N.A.	40.30
0-60	4054.00	N.A.	68.50
0-80	5151.42	N.A.	87.00
0-90	5481.47	N.A.	92.60
10-90	5298.66	N.A.	89.50
20-40	1680.15	N.A.	28.40
20-50	2576.33	N.A.	43.50
40-70	2294.99	N.A.	38.80
60-80	1097.42	N.A.	18.50
70-80	473.46	N.A.	8.00
80-90	330.04	N.A.	5.60
90-110	332.13	N.A.	5.60
90-120	394.26	N.A.	6.70
90-130	422.12	N.A.	7.10
90-150	436.12	N.A.	7.40
90-180	438.91	N.A.	7.40
110-180	106.78	N.A.	1.80
0-180	5920.37	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	182.80
10-20	520.01
20-30	774.49
30-40	905.66
40-50	896.17
50-60	774.86
60-70	623.96
70-80	473.46
80-90	330.04
90-100	210.66
100-110	121.47
110-120	62.14
120-130	27.85
130-140	10.65
140-150	3.35
150-160	1.38
160-170	1.02
170-180	0.39

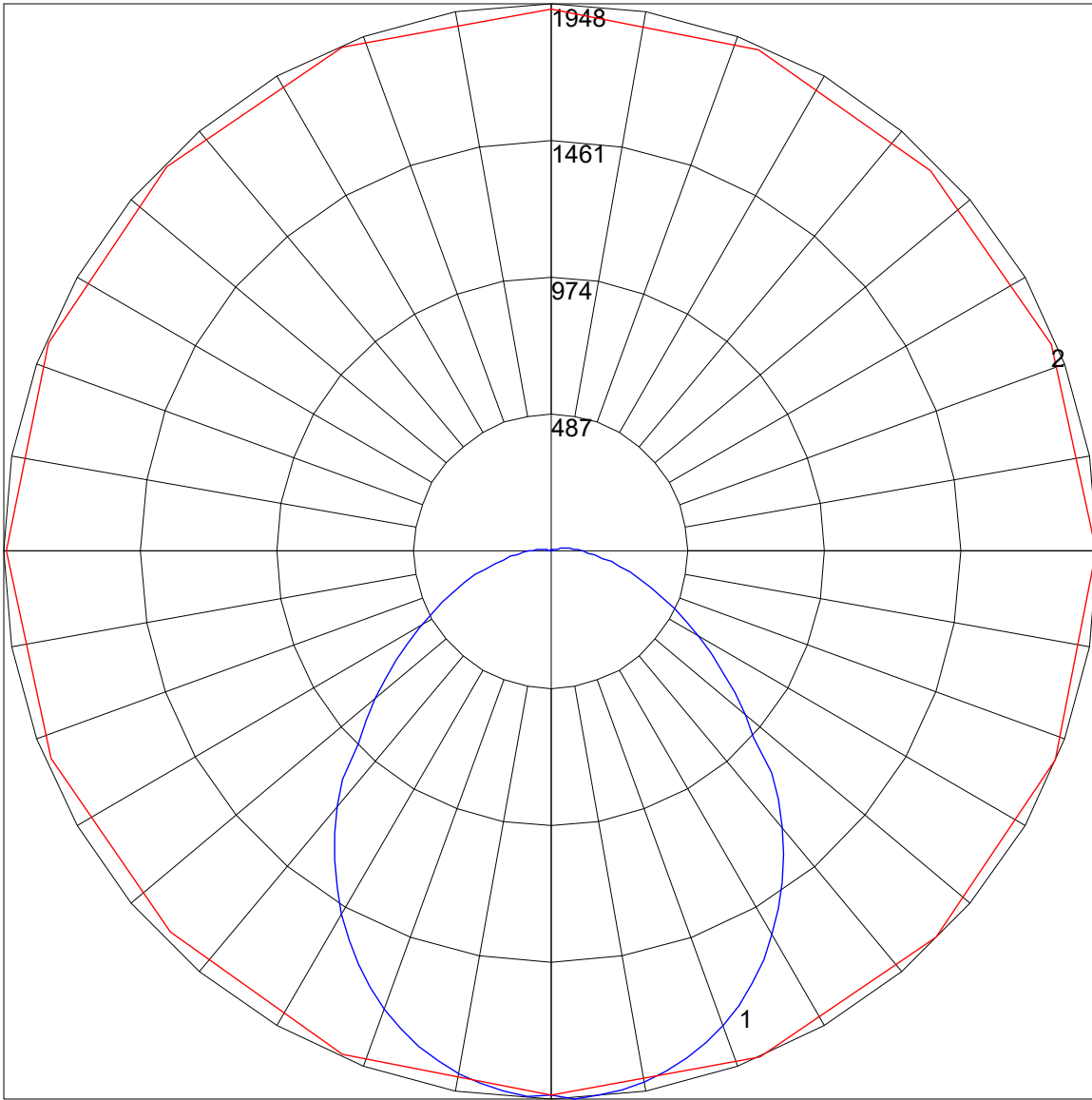
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : DLLR48HRA40.IES**

**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	93	89	91	88	84	86	83	81	81	79	77	74
2	96	87	80	73	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	51
4	80	67	58	52	77	66	57	51	62	55	49	59	53	48	56	51	46	44
5	73	60	51	44	71	59	50	44	56	48	43	53	47	42	50	45	40	38
6	68	54	45	39	65	53	45	38	50	43	37	48	42	37	46	40	36	33
7	63	49	41	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	26
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

POLAR GRAPH



Maximum Candela = 1948.158 Located At Horizontal Angle = 292.5, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (292.5 - 112.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)