



IES INDOOR REPORT
PHOTOMETRIC FILENAME : NLR48MFA30.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 8,389P3
[TESTLAB] CSA Group
[ISSUEDATE] 10/29/2015 11:51:52 AM
[MANUFAC] LAMAR LIGHTING CO., INC.
[LUMINAIRE] NLR48MFA30
[_AMBIENT] 24.6 deg C
[_POWERFACTOR] 0.9973
[_ATHD] 5.35%
[_CURRENT] 0.27591
[_VOLTAGE] 120.00
[_STABILIZATION] 23:22.1 Stable
[_POWER VARIATION] 0.36 %
[_LIGHT VARIATION] 0.40 %
[_Lumens] 3,011

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3011
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	33.02
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.16 ft
Luminous Width (90-270)	3.91 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17497	16620	15704
55	15916	15111	14302
65	14072	13496	12870
75	11487	11402	11154
85	6157	8726	9964

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CANDELA TABULATION

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
0.0	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498
2.5	1249.606	1250.300	1250.047	1252.273	1254.381	1257.364	1254.408	1252.363	1251.291	1248.615
5.0	1244.506	1244.263	1243.966	1245.479	1247.408	1249.200	1246.615	1243.668	1241.623	1239.136
7.5	1235.352	1234.154	1234.055	1234.469	1235.667	1236.415	1232.667	1228.541	1226.342	1223.918
10.0	1222.585	1220.387	1219.639	1219.449	1219.531	1218.792	1213.863	1209.331	1206.610	1204.457
12.5	1205.646	1203.466	1201.186	1200.348	1199.673	1197.726	1191.681	1185.581	1182.617	1179.760
15.0	1184.365	1181.941	1179.274	1177.895	1174.814	1171.642	1165.281	1157.947	1153.830	1151.190
17.5	1159.830	1157.244	1153.478	1151.172	1147.117	1141.873	1133.872	1125.854	1121.493	1118.051
20.0	1132.539	1129.692	1124.178	1120.195	1116.006	1109.419	1099.058	1091.616	1085.462	1081.822
22.5	1100.229	1098.490	1092.814	1086.876	1081.750	1073.190	1062.468	1053.458	1046.890	1043.331
25.0	1065.216	1063.910	1058.017	1051.215	1043.457	1034.564	1023.140	1013.220	1007.012	1001.822
27.5	1028.861	1027.329	1020.166	1012.679	1005.147	993.226	981.676	971.008	963.818	959.664
30.0	989.649	988.379	980.315	972.548	963.016	950.726	937.473	926.579	920.453	915.173
32.5	947.456	946.320	938.392	930.219	919.930	906.766	892.855	881.358	875.655	870.717
35.0	904.009	904.154	893.603	886.773	875.150	861.734	847.246	836.579	830.181	826.037
37.5	859.095	859.058	850.220	842.111	828.758	815.081	802.656	791.727	785.690	781.581
40.0	815.468	814.396	804.872	796.286	783.401	769.986	756.462	745.776	739.919	736.000
42.5	768.418	767.688	757.993	749.506	736.694	723.908	710.466	700.996	694.626	690.400
45.0	719.737	720.368	711.367	702.825	690.265	677.102	664.226	656.270	650.026	645.990
47.5	673.741	672.146	664.497	655.865	644.711	632.511	620.825	612.572	606.355	601.192
50.0	626.411	625.312	618.951	609.220	598.660	587.119	577.298	568.909	562.143	559.007
52.5	579.397	578.667	573.829	563.918	553.989	543.240	533.716	525.725	519.931	517.255
55.0	531.085	531.158	527.112	519.111	509.750	498.667	490.288	483.630	478.764	477.224
57.5	484.260	484.702	480.810	473.701	465.376	456.140	447.211	442.040	437.607	435.372
60.0	437.598	438.111	433.741	429.777	420.163	412.433	406.072	401.008	397.251	395.242
62.5	392.187	392.818	389.052	384.628	376.240	369.978	364.797	361.301	358.175	355.976
65.0	345.966	348.300	344.660	340.668	334.388	329.216	324.558	321.459	320.215	316.422
67.5	301.069	303.628	301.502	296.816	292.789	288.203	284.626	281.950	282.707	278.247
70.0	257.911	259.119	257.380	254.713	251.721	248.415	246.144	243.459	245.198	239.603
72.5	214.843	216.168	215.060	212.240	210.077	208.807	207.933	206.149	207.690	203.527
75.0	172.956	174.407	173.668	172.388	171.505	171.857	170.983	170.100	170.181	167.937
77.5	131.870	133.952	134.772	134.979	136.015	136.186	135.934	136.123	135.853	135.168
80.0	95.101	96.803	97.578	99.380	100.714	102.831	103.768	104.120	104.354	103.948
82.5	60.881	61.673	63.971	67.737	69.800	72.305	73.846	75.486	75.891	75.837
85.0	31.220	32.256	35.959	39.392	42.410	46.077	48.077	49.825	50.240	50.519
87.5	8.857	10.542	14.335	17.750	21.435	24.291	27.490	29.075	29.886	30.283
90.0	0.054	1.631	4.505	7.965	11.100	14.002	16.732	18.281	19.795	20.128

Vert. Angles **Horizontal Angles**

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>
0.0	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498
2.5	1247.714	1243.191	1241.254	1235.532	1235.037	1240.650	1244.939	1250.273	1248.966	1249.002
5.0	1237.163	1234.118	1232.190	1226.883	1226.739	1231.883	1237.487	1243.101	1243.200	1243.542
7.5	1222.008	1219.449	1216.990	1213.088	1213.079	1219.089	1225.513	1231.226	1234.325	1233.523
10.0	1201.231	1200.150	1197.916	1194.447	1195.978	1201.132	1209.710	1216.098	1220.684	1219.936
12.5	1176.688	1176.238	1174.436	1171.660	1174.598	1180.463	1190.203	1197.402	1202.006	1201.790
15.0	1148.568	1147.712	1147.568	1145.856	1149.316	1157.794	1166.290	1173.985	1180.130	1179.481
17.5	1116.033	1115.456	1116.240	1115.564	1120.330	1129.512	1140.378	1147.847	1155.397	1154.974
20.0	1080.894	1081.092	1082.290	1082.479	1088.192	1098.328	1109.906	1118.384	1128.358	1127.025
22.5	1041.745	1041.475	1045.070	1045.674	1054.603	1064.333	1077.073	1086.363	1097.814	1095.823
25.0	1001.543	1001.660	1006.066	1008.570	1016.950	1029.609	1041.259	1051.026	1063.387	1062.675
27.5	959.754	959.520	964.692	968.278	977.062	989.325	1004.732	1011.895	1025.924	1025.167
30.0	915.416	916.290	921.327	926.057	935.490	948.753	963.683	971.801	986.604	986.748

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CANDELA TABULATION - (Cont.)

32.5	869.132	872.150	876.646	882.241	892.323	906.433	921.507	929.796	945.464	946.149
35.0	823.937	827.740	832.191	838.453	848.904	862.969	878.358	886.125	903.595	904.325
37.5	780.032	782.077	787.879	795.241	804.710	818.477	831.812	841.651	859.004	858.022
40.0	735.018	736.513	743.217	750.263	759.786	772.644	786.807	795.997	813.062	812.288
42.5	690.157	691.229	697.825	705.069	713.331	726.945	739.766	749.884	767.193	765.345
45.0	645.080	646.855	652.306	659.082	667.596	681.201	693.040	703.402	720.854	719.187
47.5	601.985	603.670	608.842	615.969	622.357	636.881	646.468	655.739	675.164	673.119
50.0	558.296	560.665	566.459	571.919	578.019	590.398	601.075	608.256	628.051	625.573
52.5	517.805	518.498	523.148	529.076	535.023	545.096	555.016	563.251	580.028	578.172
55.0	474.097	477.728	480.927	485.684	491.766	500.857	509.227	516.733	532.923	531.302
57.5	434.093	436.679	438.850	444.662	449.905	457.483	464.628	470.403	488.486	486.396
60.0	393.971	395.647	398.287	403.243	407.252	414.343	419.623	424.930	442.751	440.643
62.5	355.012	355.021	357.589	361.112	365.049	370.581	375.618	380.087	397.197	396.134
65.0	316.197	316.179	318.332	321.486	324.054	328.604	332.577	335.145	351.363	350.147
67.5	277.526	277.039	277.652	281.436	283.355	286.185	289.167	292.203	306.502	305.655
70.0	239.567	239.161	239.666	241.387	241.928	245.811	246.748	248.027	263.389	262.750
72.5	202.986	202.058	202.455	202.653	202.653	203.752	205.500	204.968	219.808	220.997
75.0	168.181	166.478	166.018	165.811	164.541	164.433	165.018	165.045	179.524	179.416
77.5	133.771	133.600	131.735	130.005	129.402	127.690	127.122	126.834	138.466	138.808
80.0	102.444	101.948	99.876	97.479	95.137	93.524	91.920	90.605	101.227	101.633
82.5	74.999	73.170	71.134	68.927	65.566	62.728	60.034	57.520	66.683	67.935
85.0	49.924	47.681	46.302	42.852	39.599	36.103	32.580	29.742	36.815	38.590
87.5	29.544	27.832	25.823	22.921	19.344	16.092	12.173	9.325	13.506	15.272
90.0	19.543	18.254	18.281	13.803	11.055	7.668	4.730	1.820	0.847	2.775

**Vert.
Angles**

Horizontal Angles

	<u>200</u>	<u>210</u>	<u>220</u>	<u>230</u>	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>
0.0	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498
2.5	1248.930	1252.147	1254.471	1257.472	1254.381	1252.850	1252.624	1250.687	1249.408	1245.804
5.0	1242.785	1245.633	1248.263	1250.885	1248.038	1245.633	1245.849	1244.029	1243.173	1239.830
7.5	1233.289	1235.929	1238.560	1240.200	1236.722	1233.974	1234.577	1232.883	1232.208	1228.793
10.0	1219.549	1220.783	1223.450	1223.351	1220.233	1216.638	1216.071	1216.413	1214.521	1203.331
12.5	1200.510	1201.348	1201.997	1202.033	1198.132	1192.987	1192.600	1191.636	1190.762	1177.391
15.0	1178.490	1177.580	1177.283	1174.841	1170.318	1165.164	1162.894	1163.074	1161.191	1151.442
17.5	1153.001	1151.361	1149.820	1145.549	1139.927	1133.278	1132.061	1130.548	1130.052	1125.502
20.0	1124.646	1122.232	1118.592	1113.267	1106.464	1099.310	1096.544	1095.328	1095.021	1098.328
22.5	1092.508	1089.237	1083.750	1077.209	1069.568	1060.919	1058.197	1056.531	1057.369	1060.243
25.0	1056.576	1052.341	1045.728	1037.727	1027.726	1020.112	1016.184	1013.976	1015.418	1018.508
27.5	1018.094	1012.616	1004.732	994.803	984.054	974.936	971.557	968.305	971.179	973.702
30.0	977.684	972.621	963.466	951.816	938.419	930.228	926.787	923.741	927.129	929.336
32.5	936.400	930.328	920.741	907.433	893.711	885.341	881.178	878.790	882.566	886.016
35.0	891.918	886.034	875.222	863.618	849.138	839.813	835.578	832.668	837.227	841.606
37.5	847.562	840.309	829.307	815.027	801.241	792.249	787.961	786.303	789.429	796.025
40.0	800.665	795.385	782.491	767.913	752.623	744.136	741.721	738.721	742.559	748.091
42.5	754.930	749.019	735.459	720.665	708.213	697.545	694.554	693.842	695.932	702.861
45.0	709.150	703.294	689.409	674.543	663.884	654.558	650.108	649.693	651.585	658.649
47.5	663.217	656.027	643.972	629.880	620.753	611.464	606.409	608.283	607.851	615.527
50.0	617.897	608.562	597.408	583.812	576.244	568.090	563.260	563.666	564.918	571.441
52.5	571.009	562.386	551.205	538.429	531.347	524.634	520.273	519.796	521.769	527.301
55.0	525.148	516.895	506.272	493.604	487.441	482.269	478.116	478.656	480.161	484.414
57.5	479.611	472.043	462.393	453.374	447.509	442.256	439.553	438.877	441.733	444.968
60.0	436.039	428.290	419.965	411.892	406.540	403.900	401.603	400.675	402.585	406.414
62.5	390.620	384.547	377.159	371.374	366.491	364.364	363.391	361.770	365.112	366.716
65.0	345.948	340.920	335.010	330.865	326.315	325.135	324.135	322.585	325.576	327.405
67.5	301.583	298.420	293.609	289.987	286.842	285.914	285.563	284.959	287.122	288.969

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CANDELA TABULATION - (Cont.)

70.0	259.893	256.965	253.379	251.118	249.577	248.361	248.757	249.226	250.082	252.397
72.5	218.402	216.988	214.375	213.906	212.987	212.258	213.177	214.024	214.735	216.321
75.0	177.218	177.128	176.785	177.479	177.326	177.722	178.686	178.839	180.011	180.831
77.5	138.898	139.069	140.187	141.520	143.043	143.863	144.728	146.440	146.872	147.304
80.0	101.687	104.408	106.426	109.003	111.463	112.229	113.697	114.868	115.544	115.229
82.5	69.449	73.432	76.468	78.801	81.973	83.793	85.181	86.586	86.730	85.991
85.0	41.897	45.861	49.474	52.321	56.340	58.808	60.133	60.908	61.340	60.295
87.5	19.065	23.282	27.363	31.472	34.616	37.563	39.248	39.842	39.923	38.572
90.0	6.703	10.551	15.191	18.858	22.020	24.102	26.057	26.787	26.516	25.669

**Vert.
Angles**

Horizontal Angles

	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0.0	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498	1250.498
2.5	1243.731	1238.488	1238.073	1243.335	1247.561	1252.066	1249.606
5.0	1237.830	1233.343	1233.748	1238.749	1243.236	1247.624	1244.506
7.5	1227.225	1223.900	1225.774	1230.955	1236.064	1240.344	1235.352
10.0	1211.845	1211.034	1212.296	1217.954	1224.270	1228.315	1222.585
12.5	1190.167	1190.275	1192.744	1199.591	1207.133	1212.440	1205.646
15.0	1164.074	1165.254	1169.237	1177.283	1185.662	1192.041	1184.365
17.5	1134.927	1136.972	1142.495	1151.505	1161.425	1168.453	1159.830
20.0	1103.311	1105.680	1113.231	1122.844	1134.341	1142.090	1132.539
22.5	1067.036	1071.316	1079.425	1091.345	1103.040	1111.672	1100.229
25.0	1026.437	1032.105	1042.799	1055.711	1069.181	1077.326	1065.216
27.5	983.496	990.262	1002.408	1016.418	1031.122	1039.997	1028.861
30.0	939.950	947.600	962.133	977.098	992.325	1000.353	989.649
32.5	896.045	905.631	919.065	935.896	950.780	959.259	947.456
35.0	849.373	862.527	875.934	893.260	908.758	917.777	904.009
37.5	804.052	815.883	830.254	848.769	863.581	873.772	859.095
40.0	756.561	768.922	783.528	801.358	816.955	827.902	815.468
42.5	710.772	723.467	737.586	754.768	770.724	781.293	768.418
45.0	666.407	680.219	692.716	709.898	724.503	734.054	719.737
47.5	622.312	636.304	647.909	664.740	679.399	688.508	673.741
50.0	578.505	590.254	601.057	617.329	631.142	639.872	626.411
52.5	534.005	544.664	555.557	570.486	584.280	592.254	579.397
55.0	492.090	500.992	510.723	524.400	536.410	544.961	531.085
57.5	451.347	459.087	467.862	479.828	491.928	499.352	484.260
60.0	412.595	417.830	426.002	436.913	445.887	454.482	437.598
62.5	372.491	376.636	383.628	392.746	401.747	407.675	392.187
65.0	332.406	334.532	341.218	348.092	356.409	361.094	345.966
67.5	292.248	294.240	298.871	305.160	311.737	314.881	301.069
70.0	253.785	256.740	260.524	263.993	269.525	271.462	257.911
72.5	216.465	218.916	220.952	223.610	226.989	228.539	214.843
75.0	181.173	182.155	183.236	184.966	186.471	186.696	172.956
77.5	146.782	147.160	146.665	146.737	146.403	146.494	131.870
80.0	114.094	113.841	112.066	110.400	109.517	107.922	95.101
82.5	84.135	83.225	80.667	78.234	75.360	73.612	60.881
85.0	58.853	56.412	52.790	49.159	45.798	43.455	31.220
87.5	37.491	33.706	30.832	26.120	21.939	18.993	8.857
90.0	23.309	20.489	17.254	12.740	8.569	4.334	0.054

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	446.33	N.A.	14.80
0-30	922.30	N.A.	30.60
0-40	1462.84	N.A.	48.60
0-60	2439.22	N.A.	81.00
0-80	2954.97	N.A.	98.20
0-90	3010.65	N.A.	100.00
10-90	2893.03	N.A.	96.10
20-40	1016.51	N.A.	33.80
20-50	1542.79	N.A.	51.20
40-70	1306.6	N.A.	43.40
60-80	515.75	N.A.	17.10
70-80	185.54	N.A.	6.20
80-90	55.68	N.A.	1.80
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3010.65	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.62
10-20	328.70
20-30	475.97
30-40	540.54
40-50	526.28
50-60	450.11
60-70	330.22
70-80	185.54
80-90	55.68
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

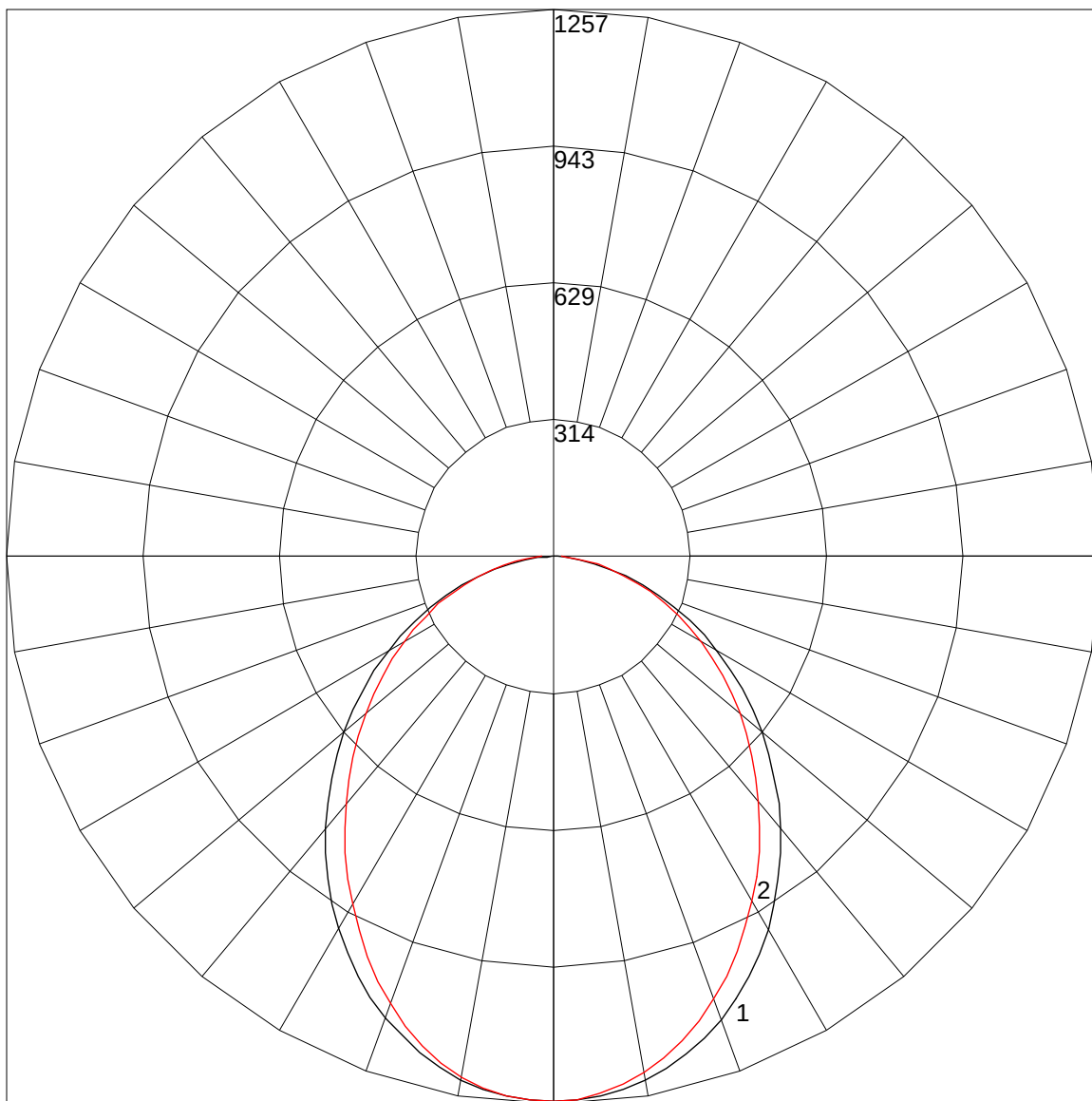
IES INDOOR REPORT
 PHOTOMETRIC FILENAME : NLR48MFA30.IES

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	59	54	52
5	77	65	56	49	75	63	55	49	61	54	49	59	53	48	58	52	48	45
6	71	58	50	43	70	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 1257.472 Located At Horizontal Angle = 230, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (0 - 180)
2 - Vertical Plane Through Horizontal Angles (90 - 270)