



IES INDOOR REPORT
PHOTOMETRIC FILENAME : NLR48MFA35.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 8,389P2
[TESTLAB] CSA Group
[ISSUEDATE] 10/29/2015 11:51:52 AM
[MANUFAC] LAMAR LIGHTING CO., INC.
[LUMINAIRE] NLR48MFA35
[_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] 3,104

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3104
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
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	18038	17135	16190
55	16409	15579	14745
65	14508	13914	13269
75	11843	11755	11499
85	6348	8996	10272

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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	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220
2.5	1288.301	1289.016	1288.756	1291.050	1293.224	1296.299	1293.252	1291.143	1290.038	1287.279
5.0	1283.043	1282.792	1282.486	1284.046	1286.034	1287.883	1285.217	1282.179	1280.071	1277.507
7.5	1273.606	1272.370	1272.268	1272.695	1273.931	1274.702	1270.837	1266.583	1264.317	1261.818
10.0	1260.443	1258.176	1257.405	1257.210	1257.294	1256.532	1251.451	1246.779	1243.974	1241.754
12.5	1242.980	1240.732	1238.382	1237.518	1236.821	1234.815	1228.582	1222.293	1219.237	1216.292
15.0	1221.039	1218.540	1215.791	1214.370	1211.193	1207.923	1201.365	1193.804	1189.559	1186.837
17.5	1195.745	1193.079	1189.196	1186.818	1182.638	1177.232	1168.983	1160.716	1156.220	1152.672
20.0	1167.609	1164.673	1158.989	1154.883	1150.563	1143.773	1133.091	1125.418	1119.074	1115.321
22.5	1134.298	1132.506	1126.654	1120.532	1115.247	1106.422	1095.368	1086.079	1079.307	1075.638
25.0	1098.201	1096.854	1090.779	1083.766	1075.768	1066.600	1054.822	1044.594	1038.194	1032.844
27.5	1060.720	1059.141	1051.756	1044.037	1036.272	1023.982	1012.074	1001.076	993.663	989.381
30.0	1020.294	1018.985	1010.671	1002.664	992.836	980.166	966.502	955.271	948.955	943.512
32.5	976.794	975.624	967.449	959.024	948.416	934.845	920.503	908.650	902.770	897.680
35.0	932.003	932.151	921.274	914.233	902.250	888.419	873.482	862.484	855.888	851.616
37.5	885.697	885.660	876.547	868.187	854.421	840.320	827.511	816.243	810.019	805.784
40.0	840.720	839.614	829.796	820.943	807.660	793.829	779.886	768.869	762.831	758.791
42.5	792.212	791.460	781.465	772.715	759.506	746.325	732.466	722.703	716.135	711.779
45.0	742.024	742.674	733.394	724.588	711.640	698.068	684.794	676.592	670.155	665.993
47.5	694.604	692.959	685.073	676.174	664.674	652.097	640.049	631.541	625.131	619.809
50.0	645.808	644.675	638.117	628.085	617.198	605.299	595.174	586.526	579.550	576.317
52.5	597.338	596.586	591.598	581.380	571.143	560.062	550.243	542.004	536.031	533.272
55.0	547.531	547.605	543.434	535.186	525.534	514.109	505.470	498.606	493.590	492.001
57.5	499.256	499.711	495.698	488.369	479.786	470.265	461.060	455.728	451.157	448.854
60.0	451.148	451.678	447.172	443.085	433.174	425.204	418.646	413.426	409.552	407.481
62.5	404.332	404.982	401.099	396.538	387.890	381.434	376.093	372.489	369.266	366.999
65.0	356.679	359.085	355.332	351.217	344.743	339.411	334.608	331.413	330.131	326.220
67.5	310.392	313.030	310.838	306.008	301.855	297.127	293.440	290.681	291.461	286.863
70.0	265.898	267.142	265.350	262.600	259.516	256.107	253.766	250.998	252.791	247.022
72.5	221.496	222.862	221.719	218.812	216.582	215.273	214.372	212.532	214.121	209.829
75.0	178.312	179.807	179.045	177.726	176.816	177.178	176.277	175.367	175.451	173.138
77.5	135.954	138.100	138.945	139.159	140.227	140.403	140.143	140.338	140.060	139.354
80.0	98.045	99.801	100.600	102.458	103.832	106.015	106.981	107.344	107.585	107.167
82.5	62.766	63.583	65.952	69.835	71.962	74.544	76.133	77.823	78.241	78.186
85.0	32.186	33.255	37.072	40.612	43.723	47.504	49.566	51.368	51.795	52.083
87.5	9.131	10.868	14.779	18.299	22.099	25.043	28.341	29.976	30.812	31.220
90.0	0.056	1.681	4.645	8.211	11.444	14.435	17.250	18.847	20.408	20.752

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	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220
2.5	1286.350	1281.687	1279.690	1273.791	1273.280	1279.067	1283.489	1288.988	1287.641	1287.678
5.0	1275.473	1272.333	1270.345	1264.874	1264.725	1270.029	1275.807	1281.594	1281.696	1282.049
7.5	1259.848	1257.210	1254.675	1250.652	1250.643	1256.839	1263.462	1269.351	1272.547	1271.720
10.0	1238.428	1237.313	1235.010	1231.433	1233.013	1238.326	1247.169	1253.755	1258.483	1257.712
12.5	1213.125	1212.660	1210.803	1207.942	1210.970	1217.017	1227.058	1234.480	1239.227	1239.004
15.0	1184.134	1183.251	1183.103	1181.338	1184.905	1193.646	1202.405	1210.338	1216.673	1216.004
17.5	1150.591	1149.997	1150.805	1150.108	1155.022	1164.488	1175.690	1183.391	1191.175	1190.738
20.0	1114.364	1114.569	1115.804	1115.999	1121.888	1132.338	1144.275	1153.016	1163.299	1161.924
22.5	1074.003	1073.725	1077.431	1078.053	1087.259	1097.291	1110.426	1120.003	1131.809	1129.756
25.0	1032.556	1032.677	1037.219	1039.801	1048.440	1061.491	1073.502	1083.571	1096.316	1095.582
27.5	989.474	989.232	994.564	998.261	1007.318	1019.960	1035.844	1043.229	1057.692	1056.912
30.0	943.762	944.663	949.856	954.733	964.458	978.132	993.524	1001.893	1017.155	1017.303

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CANDELA TABULATION - (Cont.)

32.5	896.045	899.157	903.792	909.560	919.955	934.501	950.042	958.588	974.741	975.447
35.0	849.451	853.371	857.960	864.416	875.191	889.691	905.557	913.564	931.575	932.328
37.5	804.186	806.294	812.277	819.866	829.628	843.822	857.570	867.713	885.604	884.591
40.0	757.778	759.320	766.231	773.495	783.314	796.569	811.171	820.646	838.239	837.441
42.5	711.528	712.634	719.433	726.901	735.419	749.455	762.673	773.105	790.949	789.045
45.0	665.055	666.885	672.505	679.490	688.268	702.295	714.501	725.183	743.176	741.457
47.5	620.626	622.363	627.695	635.042	641.628	656.602	666.486	676.044	696.071	693.963
50.0	575.584	578.027	583.999	589.629	595.917	608.680	619.688	627.091	647.499	644.945
52.5	533.839	534.554	539.347	545.459	551.590	561.975	572.202	580.693	597.989	596.075
55.0	488.778	492.521	495.819	500.724	506.994	516.366	524.996	532.733	549.426	547.754
57.5	447.535	450.201	452.439	458.431	463.837	471.649	479.015	484.969	503.612	501.457
60.0	406.171	407.899	410.620	415.729	419.863	427.173	432.617	438.088	456.461	454.288
62.5	366.005	366.014	368.662	372.294	376.353	382.057	387.249	391.856	409.496	408.400
65.0	325.988	325.970	328.190	331.441	334.088	338.779	342.876	345.523	362.243	360.989
67.5	286.120	285.618	286.250	290.151	292.130	295.047	298.121	301.252	315.993	315.120
70.0	246.985	246.567	247.087	248.862	249.419	253.422	254.389	255.708	271.545	270.886
72.5	209.272	208.315	208.724	208.928	208.928	210.061	211.864	211.315	226.614	227.841
75.0	173.388	171.633	171.159	170.945	169.636	169.524	170.128	170.156	185.083	184.972
77.5	137.914	137.737	135.814	134.031	133.409	131.644	131.059	130.761	142.753	143.106
80.0	105.616	105.105	102.969	100.498	98.083	96.420	94.766	93.410	104.362	104.780
82.5	77.322	75.436	73.337	71.061	67.596	64.670	61.893	59.301	68.748	70.039
85.0	51.470	49.157	47.736	44.178	40.825	37.221	33.589	30.663	37.955	39.785
87.5	30.459	28.694	26.622	23.631	19.943	16.590	12.549	9.614	13.924	15.745
90.0	20.148	18.820	18.847	14.231	11.398	7.905	4.877	1.876	0.873	2.861

**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	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220
2.5	1287.604	1290.920	1293.317	1296.410	1293.224	1291.645	1291.413	1289.415	1288.096	1284.381
5.0	1281.269	1284.204	1286.917	1289.620	1286.684	1284.204	1284.427	1282.551	1281.668	1278.222
7.5	1271.478	1274.200	1276.912	1278.603	1275.017	1272.184	1272.807	1271.060	1270.364	1266.843
10.0	1257.313	1258.585	1261.335	1261.233	1258.019	1254.312	1253.727	1254.080	1252.129	1240.592
12.5	1237.685	1238.549	1239.218	1239.255	1235.233	1229.929	1229.529	1228.535	1227.634	1213.849
15.0	1214.983	1214.044	1213.738	1211.221	1206.558	1201.244	1198.903	1199.089	1197.148	1187.097
17.5	1188.704	1187.013	1185.425	1181.022	1175.226	1168.370	1167.116	1165.556	1165.045	1160.354
20.0	1159.472	1156.982	1153.229	1147.740	1140.726	1133.351	1130.499	1129.245	1128.929	1132.338
22.5	1126.338	1122.966	1117.309	1110.565	1102.688	1093.770	1090.965	1089.247	1090.111	1093.074
25.0	1089.293	1084.927	1078.109	1069.861	1059.550	1051.701	1047.651	1045.375	1046.861	1050.047
27.5	1049.620	1043.972	1035.844	1025.608	1014.526	1005.126	1001.642	998.289	1001.252	1003.853
30.0	1007.959	1002.738	993.301	981.290	967.477	959.034	955.485	952.345	955.838	958.114
32.5	965.396	959.136	949.252	935.532	921.385	912.756	908.464	906.003	909.895	913.452
35.0	919.537	913.471	902.324	890.360	875.433	865.818	861.453	858.452	863.152	867.667
37.5	873.807	866.329	854.987	840.264	826.052	816.782	812.360	810.651	813.874	820.674
40.0	825.458	820.014	806.722	791.692	775.929	767.179	764.689	761.596	765.553	771.256
42.5	778.307	772.213	758.233	742.981	730.143	719.145	716.061	715.327	717.482	724.626
45.0	731.109	725.071	710.757	695.430	684.441	674.827	670.239	669.811	671.762	679.044
47.5	683.754	676.341	663.913	649.385	639.975	630.398	625.187	627.119	626.673	634.587
50.0	637.030	627.407	615.907	601.890	594.087	585.681	580.702	581.120	582.411	589.136
52.5	588.690	579.801	568.273	555.101	547.800	540.880	536.384	535.892	537.926	543.629
55.0	541.409	532.901	521.949	508.889	502.535	497.203	492.921	493.478	495.029	499.414
57.5	494.463	486.660	476.711	467.413	461.366	455.951	453.164	452.467	455.412	458.747
60.0	449.541	441.553	432.970	424.647	419.129	416.407	414.039	413.082	415.051	418.999
62.5	402.715	396.455	388.838	382.874	377.839	375.647	374.644	372.972	376.418	378.072
65.0	356.660	351.477	345.384	341.111	336.420	335.203	334.172	332.574	335.658	337.544
67.5	310.921	307.661	302.701	298.966	295.725	294.768	294.406	293.783	296.013	297.917

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CANDELA TABULATION - (Cont.)

70.0	267.941	264.922	261.225	258.894	257.305	256.051	256.460	256.943	257.825	260.213
72.5	225.165	223.707	221.013	220.530	219.583	218.830	219.778	220.651	221.385	223.020
75.0	182.705	182.612	182.259	182.975	182.817	183.226	184.219	184.377	185.585	186.430
77.5	143.199	143.376	144.528	145.902	147.472	148.317	149.209	150.974	151.420	151.866
80.0	104.836	107.641	109.722	112.378	114.914	115.704	117.218	118.425	119.122	118.797
82.5	71.600	75.705	78.836	81.242	84.511	86.388	87.818	89.267	89.416	88.654
85.0	43.194	47.281	51.006	53.941	58.084	60.629	61.995	62.794	63.240	62.162
87.5	19.656	24.003	28.211	32.446	35.688	38.726	40.463	41.076	41.160	39.766
90.0	6.911	10.877	15.661	19.442	22.702	24.848	26.864	27.616	27.338	26.464

**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	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220	1289.220
2.5	1282.244	1276.838	1276.411	1281.836	1286.192	1290.837	1288.301
5.0	1276.160	1271.534	1271.952	1277.107	1281.733	1286.257	1283.043
7.5	1265.227	1261.799	1263.731	1269.072	1274.339	1278.752	1273.606
10.0	1249.371	1248.534	1249.835	1255.668	1262.180	1266.351	1260.443
12.5	1227.021	1227.133	1229.678	1236.737	1244.512	1249.984	1242.980
15.0	1200.120	1201.337	1205.443	1213.738	1222.377	1228.953	1221.039
17.5	1170.070	1172.179	1177.873	1187.162	1197.389	1204.635	1195.745
20.0	1137.475	1139.918	1147.702	1157.614	1169.467	1177.455	1167.609
22.5	1100.078	1104.490	1112.850	1125.139	1137.197	1146.095	1134.298
25.0	1058.221	1064.064	1075.090	1088.401	1102.288	1110.686	1098.201
27.5	1013.950	1020.926	1033.448	1047.892	1063.052	1072.201	1060.720
30.0	969.056	976.943	991.926	1007.355	1023.053	1031.330	1020.294
32.5	923.791	933.675	947.524	964.876	980.222	988.963	976.794
35.0	875.674	889.236	903.058	920.921	936.898	946.196	932.003
37.5	828.950	841.147	855.963	875.052	890.323	900.829	885.697
40.0	779.988	792.733	807.790	826.173	842.252	853.538	840.720
42.5	732.781	745.870	760.425	778.140	794.590	805.486	792.212
45.0	687.042	701.282	714.166	731.880	746.938	756.784	742.024
47.5	641.582	656.008	667.972	685.324	700.437	709.828	694.604
50.0	596.419	608.532	619.669	636.445	650.685	659.686	645.808
52.5	550.540	561.529	572.760	588.152	602.373	610.594	597.338
55.0	507.328	516.506	526.538	540.638	553.021	561.836	547.531
57.5	465.323	473.302	482.350	494.686	507.161	514.815	499.256
60.0	425.371	430.768	439.193	450.442	459.694	468.556	451.148
62.5	384.026	388.299	395.507	404.908	414.187	420.299	404.332
65.0	342.699	344.891	351.784	358.871	367.445	372.275	356.679
67.5	301.298	303.351	308.125	314.609	321.390	324.632	310.392
70.0	261.643	264.690	268.591	272.168	277.871	279.868	265.898
72.5	223.168	225.695	227.794	230.534	234.018	235.615	221.496
75.0	186.783	187.796	188.910	190.694	192.245	192.477	178.312
77.5	151.327	151.717	151.206	151.281	150.937	151.030	135.954
80.0	117.627	117.367	115.537	113.818	112.908	111.264	98.045
82.5	86.741	85.802	83.164	80.656	77.693	75.891	62.766
85.0	60.676	58.158	54.424	50.681	47.216	44.801	32.186
87.5	38.652	34.750	31.787	26.929	22.619	19.581	9.131
90.0	24.031	21.123	17.788	13.135	8.834	4.468	0.056

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	460.15	N.A.	14.80
0-30	950.86	N.A.	30.60
0-40	1508.13	N.A.	48.60
0-60	2514.75	N.A.	81.00
0-80	3046.48	N.A.	98.20
0-90	3103.88	N.A.	100.00
10-90	2982.61	N.A.	96.10
20-40	1047.99	N.A.	33.80
20-50	1590.56	N.A.	51.20
40-70	1347.06	N.A.	43.40
60-80	531.72	N.A.	17.10
70-80	191.28	N.A.	6.20
80-90	57.40	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	3103.88	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	121.27
10-20	338.88
20-30	490.71
30-40	557.27
40-50	542.57
50-60	464.05
60-70	340.44
70-80	191.28
80-90	57.40
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

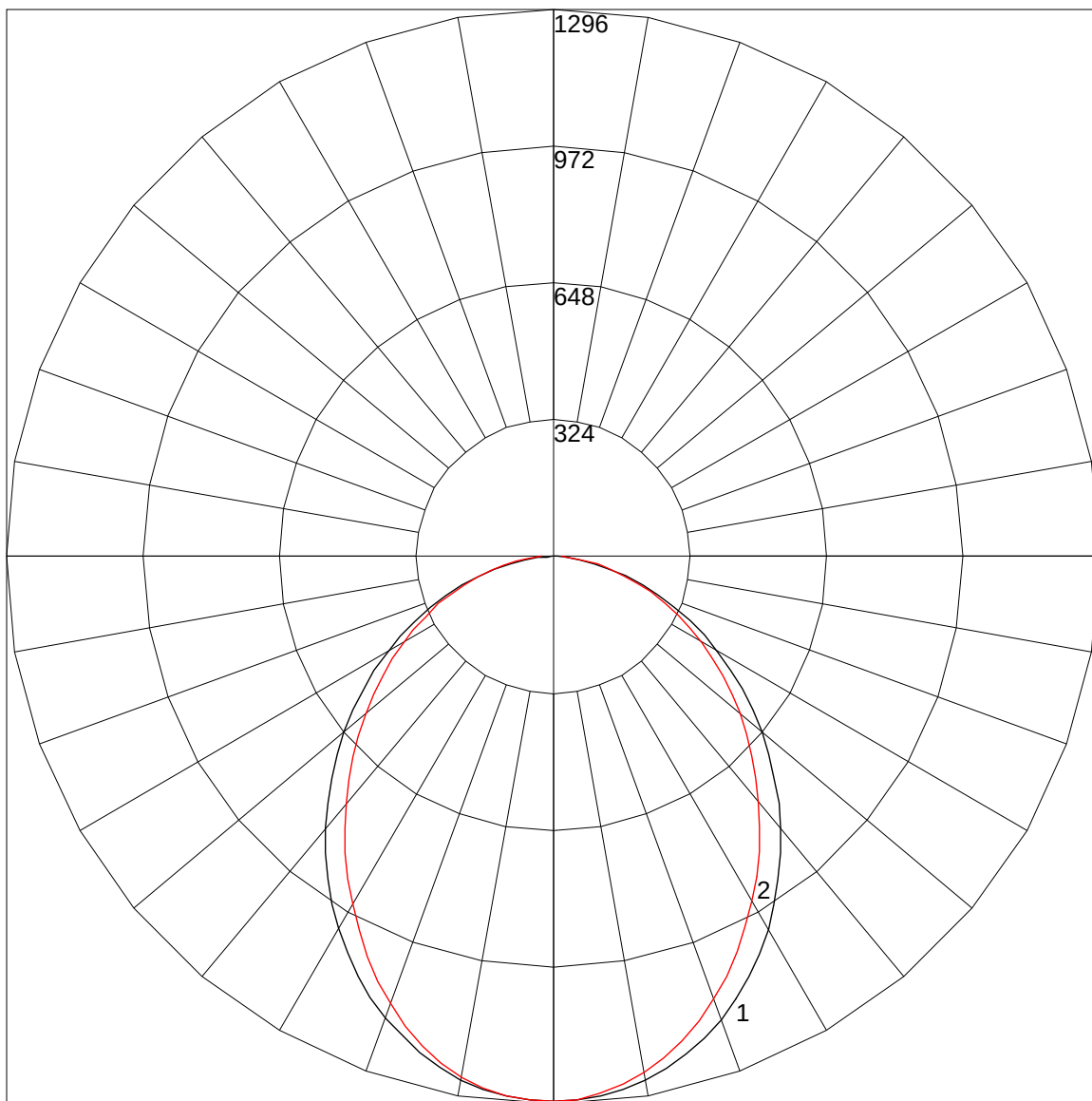
IES INDOOR REPORT
 PHOTOMETRIC FILENAME : NLR48MFA35.IES

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 = 1296.41 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)