

IES INDOOR REPORT**PHOTOMETRIC FILENAME : WA1212LEDLX-100L35KE1-WA1315XX.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] 102668521CRT-001_M-100L
[TESTLAB] Intertek
[ISSUE DATE] 08/10/2016
[UPDATE] 10/12/2016
[LAB-REF LUMCAT] CRT1607200959-002_M-100L
[MANUFAC] Spectrum Lighting
[LUMCAT] WA1212LEDLX-100L-35K-E1-WA1315-MW
[LUMINAIRE] 12" Diam. LED Opal Acrylic Pendant
[OTHER] Matte White finish on metal parts
[OTHER] LED Driver remote from heat sink and emitter
[LAMP] N/A
[LAMPCAT] N/A
[OTHER] Total Luminaire Watts is approximate
[OTHER] CCT Output Multipliers: 40K x 1.031, 30K x 0.979, 27K x 0.959
[OTHER] Cat. No. change from 90W to 100L
[OTHER] This report prepared by Spectrum Lighting, scaled from 65L

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8933
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	88
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.46
Spacing Criterion (90-270)	1.46
Spacing Criterion (Diagonal)	1.68
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	1.06 ft (Diameter)
Luminous Width (90-270)	1.06 ft (Diameter)
Luminous Height	0.75 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10487	10463	10491
55	10460	10407	10425
65	10474	10415	10413
75	10552	10493	10476
85	10665	10641	10584

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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>
0.0	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287
2.5	1237.389	1237.090	1236.790	1236.641	1237.239	1236.641	1236.790	1237.090	1237.389	1237.090
5.0	1234.096	1233.797	1233.647	1233.797	1233.947	1233.797	1233.647	1233.797	1234.096	1233.797
7.5	1229.457	1228.559	1228.858	1228.858	1229.307	1228.858	1228.858	1228.559	1229.457	1228.559
10.0	1222.872	1222.872	1222.273	1222.573	1222.872	1222.573	1222.273	1222.872	1222.872	1222.872
12.5	1215.389	1215.688	1214.940	1215.389	1216.437	1215.389	1214.940	1215.688	1215.389	1215.688
15.0	1207.008	1207.158	1206.858	1207.457	1207.756	1207.457	1206.858	1207.158	1207.008	1207.158
17.5	1197.579	1197.430	1197.729	1198.328	1198.328	1198.328	1197.729	1197.430	1197.579	1197.430
20.0	1186.056	1185.457	1186.804	1188.001	1188.300	1188.001	1186.804	1185.457	1186.056	1185.457
22.5	1174.532	1174.382	1176.777	1178.124	1176.926	1178.124	1176.777	1174.382	1174.532	1174.382
25.0	1169.593	1170.641	1172.137	1173.783	1173.035	1173.783	1172.137	1170.641	1169.593	1170.641
27.5	1168.246	1169.743	1170.790	1172.137	1171.987	1172.137	1170.790	1169.743	1168.246	1169.743
30.0	1167.947	1169.443	1169.892	1171.239	1171.987	1171.239	1169.892	1169.443	1167.947	1169.443
32.5	1167.498	1169.294	1168.545	1170.042	1171.239	1170.042	1168.545	1169.294	1167.498	1169.294
35.0	1166.899	1168.396	1167.647	1169.144	1170.341	1169.144	1167.647	1168.396	1166.899	1168.396
37.5	1166.001	1167.049	1166.151	1167.348	1169.144	1167.348	1166.151	1167.049	1166.001	1167.049
40.0	1164.804	1164.953	1163.756	1164.504	1166.450	1164.504	1163.756	1164.953	1164.804	1164.953
42.5	1161.661	1161.362	1159.715	1160.464	1162.409	1160.464	1159.715	1161.362	1161.661	1161.362
45.0	1156.722	1156.124	1154.028	1154.926	1157.171	1154.926	1154.028	1156.124	1156.722	1156.124
47.5	1150.885	1149.838	1147.144	1147.743	1150.137	1147.743	1147.144	1149.838	1150.885	1149.838
50.0	1143.552	1142.804	1139.362	1140.260	1142.355	1140.260	1139.362	1142.804	1143.552	1142.804
52.5	1135.919	1133.974	1130.681	1130.831	1132.926	1130.831	1130.681	1133.974	1135.919	1133.974
55.0	1125.743	1124.246	1120.055	1120.055	1122.001	1120.055	1124.246	1125.743	1125.743	1124.246
57.5	1113.770	1112.273	1107.634	1107.634	1109.130	1107.634	1107.634	1112.273	1113.770	1112.273
60.0	1100.001	1098.205	1094.015	1093.416	1094.913	1093.416	1094.015	1098.205	1100.001	1098.205
62.5	1084.137	1082.790	1077.851	1077.552	1078.450	1077.552	1077.851	1082.790	1084.137	1082.790
65.0	1064.981	1063.634	1058.994	1058.096	1058.845	1058.096	1058.994	1063.634	1064.981	1063.634
67.5	1044.926	1044.178	1038.790	1037.443	1038.640	1037.443	1038.790	1044.178	1044.926	1044.178
70.0	1023.674	1022.926	1017.987	1016.341	1016.940	1016.341	1017.987	1022.926	1023.674	1022.926
72.5	1001.225	1000.028	995.838	993.892	994.640	993.892	995.838	1000.028	1001.225	1000.028
75.0	977.579	976.083	972.191	970.096	970.545	970.096	972.191	976.083	977.579	976.083
77.5	951.239	950.491	946.600	944.055	944.953	944.055	946.600	950.491	951.239	950.491
80.0	923.851	922.804	919.361	916.967	916.817	916.967	919.361	922.804	923.851	922.804
82.5	893.919	892.572	889.878	887.035	886.586	887.035	889.878	892.572	893.919	892.572
85.0	861.742	862.640	859.797	856.504	855.157	856.504	859.797	862.640	861.742	862.640
87.5	829.715	831.661	828.069	825.076	822.531	825.076	828.069	831.661	829.715	831.661
90.0	797.538	799.783	796.940	794.695	789.457	794.695	796.940	799.783	797.538	799.783
92.5	762.967	766.708	763.116	760.871	755.933	760.871	763.116	766.708	762.967	766.708
95.0	728.844	732.436	728.695	726.300	721.361	726.300	728.695	732.436	728.844	732.436
97.5	693.375	697.416	693.524	691.280	685.742	691.280	693.524	697.416	693.375	697.416
100.0	658.504	661.797	658.205	655.960	650.273	655.960	658.205	661.797	658.504	661.797
102.5	622.137	625.728	621.688	619.892	613.905	619.892	621.688	625.728	622.137	625.728
105.0	585.021	588.313	584.422	582.926	577.538	582.926	584.422	588.313	585.021	588.313
107.5	547.756	550.001	546.858	545.361	539.674	545.361	546.858	550.001	547.756	550.001
110.0	511.239	512.735	509.293	508.545	503.157	508.545	509.293	512.735	511.239	512.735
112.5	475.470	475.769	472.327	472.177	467.538	472.177	472.327	475.769	475.470	475.769
115.0	439.851	438.953	435.361	435.511	431.320	435.511	435.361	438.953	439.851	438.953
117.5	403.334	401.687	398.395	398.545	395.252	398.545	398.395	401.687	403.334	401.687
120.0	368.014	364.871	361.878	362.477	360.082	362.477	361.878	364.871	368.014	364.871
122.5	333.293	328.653	326.109	326.558	325.361	326.558	326.109	328.653	333.293	328.653
125.0	299.470	293.034	290.490	291.538	291.687	291.538	290.490	293.034	299.470	293.034
127.5	267.143	258.463	256.517	257.415	259.361	257.415	256.517	258.463	267.143	258.463
130.0	235.116	224.939	222.395	224.041	227.783	224.041	222.395	224.939	235.116	224.939
132.5	204.286	192.612	190.068	191.864	197.851	191.864	190.068	192.612	204.286	192.612

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CANDELA TABULATION - (Cont.)

135.0	174.504	161.333	158.490	160.885	168.517	160.885	158.490	161.333	174.504	161.333
137.5	146.218	132.000	129.007	131.401	141.578	131.401	129.007	132.000	146.218	132.000
140.0	118.830	104.612	100.272	103.265	115.238	103.265	100.272	104.612	118.830	104.612
142.5	92.789	80.517	74.231	78.871	90.694	78.871	74.231	80.517	92.789	80.517
145.0	68.844	59.116	50.884	57.769	68.544	57.769	50.884	59.116	68.844	59.116
147.5	46.844	40.109	30.980	39.061	47.442	39.061	30.980	40.109	46.844	40.109
150.0	27.837	24.245	16.762	23.796	28.735	23.796	16.762	24.245	27.837	24.245
152.5	12.721	11.673	6.286	11.823	13.769	11.823	6.286	11.673	12.721	11.673
155.0	2.844	2.095	0.748	1.946	3.891	1.946	0.748	2.095	2.844	2.095
157.5	0.449	0.150	0.000	0.299	0.150	0.299	0.000	0.150	0.449	0.150
160.0	0.000	0.000	0.000	0.000	0.748	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.299	0.150	0.000	0.000	0.000	0.150	0.299	0.000	0.299
165.0	0.150	0.150	0.150	0.748	0.000	0.748	0.150	0.150	0.150	0.150
167.5	0.000	0.000	0.150	0.150	0.898	0.150	0.150	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. 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	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287	1238.287
2.5	1236.790	1236.641	1237.239	1236.641	1236.790	1237.090	1237.389
5.0	1233.647	1233.797	1233.947	1233.797	1233.647	1233.797	1234.096
7.5	1228.858	1228.858	1229.307	1228.858	1228.858	1228.559	1229.457
10.0	1222.273	1222.573	1222.872	1222.573	1222.273	1222.872	1222.872
12.5	1214.940	1215.389	1216.437	1215.389	1214.940	1215.688	1215.389
15.0	1206.858	1207.457	1207.756	1207.457	1206.858	1207.158	1207.008
17.5	1197.729	1198.328	1198.328	1198.328	1197.729	1197.430	1197.579
20.0	1186.804	1188.001	1188.300	1188.001	1186.804	1185.457	1186.056
22.5	1176.777	1178.124	1176.926	1178.124	1176.777	1174.382	1174.532
25.0	1172.137	1173.783	1173.035	1173.783	1172.137	1170.641	1169.593
27.5	1170.790	1172.137	1171.987	1172.137	1170.790	1169.743	1168.246
30.0	1169.892	1171.239	1171.987	1171.239	1169.892	1169.443	1167.947
32.5	1168.545	1170.042	1171.239	1170.042	1168.545	1169.294	1167.498
35.0	1167.647	1169.144	1170.341	1169.144	1167.647	1168.396	1166.899
37.5	1166.151	1167.348	1169.144	1167.348	1166.151	1167.049	1166.001
40.0	1163.756	1164.504	1166.450	1164.504	1163.756	1164.953	1164.804
42.5	1159.715	1160.464	1162.409	1160.464	1159.715	1161.362	1161.661
45.0	1154.028	1154.926	1157.171	1154.926	1154.028	1156.124	1156.722
47.5	1147.144	1147.743	1150.137	1147.743	1147.144	1149.838	1150.885
50.0	1139.362	1140.260	1142.355	1140.260	1139.362	1142.804	1143.552
52.5	1130.681	1130.831	1132.926	1130.831	1130.681	1133.974	1135.919
55.0	1120.055	1120.055	1122.001	1120.055	1120.055	1124.246	1125.743
57.5	1107.634	1107.634	1109.130	1107.634	1107.634	1112.273	1113.770
60.0	1094.015	1093.416	1094.913	1093.416	1094.015	1098.205	1100.001
62.5	1077.851	1077.552	1078.450	1077.552	1077.851	1082.790	1084.137
65.0	1058.994	1058.096	1058.845	1058.096	1058.994	1063.634	1064.981
67.5	1038.790	1037.443	1038.640	1037.443	1038.790	1044.178	1044.926
70.0	1017.987	1016.341	1016.940	1016.341	1017.987	1022.926	1023.674
72.5	995.838	993.892	994.640	993.892	995.838	1000.028	1001.225
75.0	972.191	970.096	970.545	970.096	972.191	976.083	977.579
77.5	946.600	944.055	944.953	944.055	946.600	950.491	951.239
80.0	919.361	916.967	916.817	916.967	919.361	922.804	923.851

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CANDELA TABULATION - (Cont.)

82.5	889.878	887.035	886.586	887.035	889.878	892.572	893.919
85.0	859.797	856.504	855.157	856.504	859.797	862.640	861.742
87.5	828.069	825.076	822.531	825.076	828.069	831.661	829.715
90.0	796.940	794.695	789.457	794.695	796.940	799.783	797.538
92.5	763.116	760.871	755.933	760.871	763.116	766.708	762.967
95.0	728.695	726.300	721.361	726.300	728.695	732.436	728.844
97.5	693.524	691.280	685.742	691.280	693.524	697.416	693.375
100.0	658.205	655.960	650.273	655.960	658.205	661.797	658.504
102.5	621.688	619.892	613.905	619.892	621.688	625.728	622.137
105.0	584.422	582.926	577.538	582.926	584.422	588.313	585.021
107.5	546.858	545.361	539.674	545.361	546.858	550.001	547.756
110.0	509.293	508.545	503.157	508.545	509.293	512.735	511.239
112.5	472.327	472.177	467.538	472.177	472.327	475.769	475.470
115.0	435.361	435.511	431.320	435.511	435.361	438.953	439.851
117.5	398.395	398.545	395.252	398.545	398.395	401.687	403.334
120.0	361.878	362.477	360.082	362.477	361.878	364.871	368.014
122.5	326.109	326.558	325.361	326.558	326.109	328.653	333.293
125.0	290.490	291.538	291.687	291.538	290.490	293.034	299.470
127.5	256.517	257.415	259.361	257.415	256.517	258.463	267.143
130.0	222.395	224.041	227.783	224.041	222.395	224.939	235.116
132.5	190.068	191.864	197.851	191.864	190.068	192.612	204.286
135.0	158.490	160.885	168.517	160.885	158.490	161.333	174.504
137.5	129.007	131.401	141.578	131.401	129.007	132.000	146.218
140.0	100.272	103.265	115.238	103.265	100.272	104.612	118.830
142.5	74.231	78.871	90.694	78.871	74.231	80.517	92.789
145.0	50.884	57.769	68.544	57.769	50.884	59.116	68.844
147.5	30.980	39.061	47.442	39.061	30.980	40.109	46.844
150.0	16.762	23.796	28.735	23.796	16.762	24.245	27.837
152.5	6.286	11.823	13.769	11.823	6.286	11.673	12.721
155.0	0.748	1.946	3.891	1.946	0.748	2.095	2.844
157.5	0.000	0.299	0.150	0.299	0.000	0.150	0.449
160.0	0.000	0.000	0.748	0.000	0.000	0.000	0.000
162.5	0.150	0.000	0.000	0.000	0.150	0.299	0.000
165.0	0.150	0.748	0.000	0.748	0.150	0.150	0.150
167.5	0.150	0.150	0.898	0.150	0.150	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	458.86	N.A.	5.10
0-30	1002.23	N.A.	11.20
0-40	1735.94	N.A.	19.40
0-60	3634.9	N.A.	40.70
0-80	5713.89	N.A.	64.00
0-90	6650.69	N.A.	74.50
10-90	6533.27	N.A.	73.10
20-40	1277.08	N.A.	14.30
20-50	2170.97	N.A.	24.30
40-70	2950.32	N.A.	33.00
60-80	2078.99	N.A.	23.30
70-80	1027.63	N.A.	11.50
80-90	936.81	N.A.	10.50
90-110	1412.35	N.A.	15.80
90-120	1846.35	N.A.	20.70
90-130	2110.79	N.A.	23.60
90-150	2278.69	N.A.	25.50
90-180	2281.89	N.A.	25.50
110-180	869.53	N.A.	9.70
0-180	8932.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.42
10-20	341.44
20-30	543.37
30-40	733.71
40-50	893.89
50-60	1005.07
60-70	1051.35
70-80	1027.63
80-90	936.81
90-100	794.07
100-110	618.28
110-120	433.99
120-130	264.44
130-140	128.47
140-150	39.43
150-160	3.16
160-170	0.04
170-180	0.00

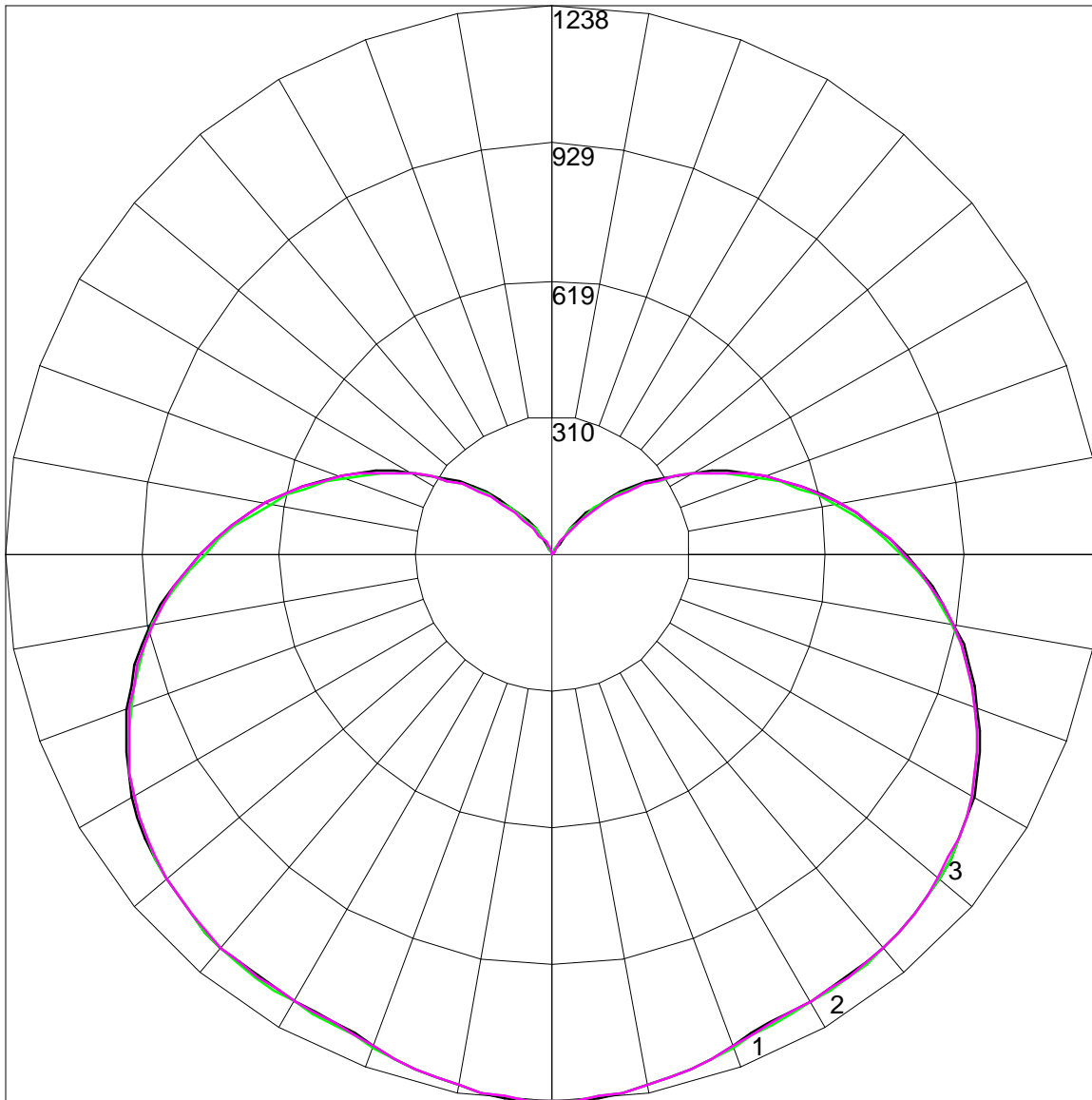
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	79	79	79	74
1	98	91	85	80	93	87	81	76	77	73	69	69	66	62	61	59	56	52
2	87	77	68	61	82	73	65	59	65	59	53	58	53	48	51	47	43	40
3	78	66	56	49	74	62	54	47	56	48	43	49	44	39	44	39	35	31
4	71	58	48	40	67	54	45	38	49	41	35	43	37	32	38	33	29	25
5	65	51	41	33	61	48	39	32	43	35	29	38	32	27	34	28	24	21
6	60	45	35	29	56	43	34	27	38	31	25	34	28	23	30	25	21	18
7	55	41	31	25	52	39	30	24	35	27	22	31	25	20	28	22	18	16
8	51	37	28	22	48	35	27	21	31	24	19	28	22	17	25	20	16	14
9	47	33	25	19	45	32	24	18	29	22	17	26	20	16	23	18	14	12
10	44	31	22	17	42	29	22	16	26	20	15	24	18	14	21	16	13	11

POLAR GRAPH



Maximum Candela = 1238.287 Located At Horizontal Angle = 0, Vertical Angle = 0

- # 1 - Vertical Plane Through Horizontal Angles (0 - 180)
- # 2 - Vertical Plane Through Horizontal Angles (90 - 270)
- # 3 - Vertical Plane Through Horizontal Angles (45 - 225)