



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BS400LEDHTMOWT40120-277V_S.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] Photopia 2017.2.1 see: www.ltioptics.com/ies

[ISSUEDATE]

[TESTDATE] Tue Oct 31 09:49:06 2017

[TEST] 1

[MANUFAC] BEGHELLI

[LUMCAT]

[LUMINAIRE] BS400LEDHTMOWT40120-277V

[LAMP] LED 0.195W White 5630 package (65mA)

[LAMPCAT] SPMWHT541MP5WAT0S5

[OTHER]

IESNA:LM-63-2002

[TEST] 6,552

[TESTLAB] CSA Group

[ISSUEDATE] 7/24/2013 1:09:24 PM

[OTHER] Luminous shape: Rectangle

[OTHER] Luminous dimensions (feet)

[OTHER] 0 - 180 Axis: 4.2

[OTHER] 90 - 270 Axis: 0.6

[OTHER] Height: 0.1

CHARACTERISTICS

Lumens Per Lamp	39.24 (192 lamps)
Total Lamp Lumens	7534.08
Luminaire Lumens	5632
Total Luminaire Efficiency	75 %
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	45
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.80
Spacing Criterion (90-270)	1.80
Spacing Criterion (Diagonal)	1.96
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	1.45 ft
Luminous Width (90-270)	1.45 ft
Luminous Height	0.27 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5384	5317	5402
55	6370	5847	6372
65	7679	6609	7647
75	8921	7442	8749
85	9827	7926	9798

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CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	730.22	730.22	730.22	730.22	730.22	730.22	730.22	730.22	730.22	730.22
2.5	730.16	742.20	716.07	712.79	735.43	738.31	712.29	732.40	719.64	724.96
5.0	734.64	735.55	735.56	743.23	731.60	731.57	737.24	726.61	731.41	726.15
7.5	753.30	745.99	745.84	749.07	738.57	744.24	749.97	742.29	746.39	749.12
10.0	750.21	746.76	756.55	763.30	761.29	747.57	763.25	762.84	761.31	755.15
12.5	767.06	773.05	772.58	781.08	783.71	781.85	772.91	782.88	774.33	772.57
15.0	784.97	795.63	801.49	784.68	790.97	798.76	797.46	804.51	801.74	803.34
17.5	819.54	811.57	818.09	810.49	814.56	819.81	822.07	819.88	820.36	821.17
20.0	825.35	830.50	833.99	830.34	832.27	845.90	839.56	847.99	846.15	843.28
22.5	844.38	846.70	844.58	842.74	854.15	854.30	860.17	863.72	871.65	875.05
25.0	847.39	852.80	851.27	862.45	861.34	868.09	878.01	881.01	889.87	887.84
27.5	854.21	857.34	865.53	869.22	876.32	879.66	894.22	894.71	904.92	904.41
30.0	869.90	870.96	875.69	874.91	882.91	896.20	901.73	907.46	918.30	916.37
32.5	873.27	873.61	881.28	878.80	885.89	896.22	912.47	929.68	927.00	930.11
35.0	872.03	873.69	879.56	887.87	900.88	907.46	924.51	921.93	932.48	929.78
37.5	871.15	879.43	881.52	896.26	899.38	915.87	924.22	930.10	931.21	937.29
40.0	882.33	885.30	894.30	902.82	909.39	908.48	923.54	927.47	934.27	933.06
42.5	886.78	890.90	892.76	899.66	905.41	909.58	926.10	934.97	929.71	931.25
45.0	887.97	894.36	893.70	904.15	912.00	919.15	922.52	927.27	927.94	934.22
47.5	895.83	896.82	899.15	904.69	913.03	914.64	923.38	919.12	927.34	925.81
50.0	898.80	898.07	901.60	905.67	912.54	918.02	912.59	915.18	917.99	918.43
52.5	907.36	903.28	903.55	906.55	915.69	912.53	916.85	913.91	912.52	911.99
55.0	909.76	909.56	905.14	904.15	918.70	914.48	908.75	909.37	908.59	907.91
57.5	907.48	905.55	912.13	907.25	912.89	909.21	904.36	904.00	894.86	899.34
60.0	911.11	901.67	910.95	904.84	904.32	903.27	901.82	901.11	893.21	887.45
62.5	909.71	904.80	904.61	904.87	900.35	893.42	889.11	883.98	878.22	876.67
65.0	893.46	891.39	889.21	892.55	887.16	886.52	878.94	869.16	869.45	860.13
67.5	876.86	879.38	873.70	875.75	867.97	866.87	859.07	850.76	845.92	843.60
70.0	848.27	848.25	846.45	849.81	842.72	841.68	829.38	826.66	823.45	821.38
72.5	812.98	813.26	814.47	812.71	811.84	808.30	800.12	795.50	791.40	790.99
75.0	770.36	772.01	769.60	772.62	771.87	766.66	758.75	756.57	755.59	752.05
77.5	715.08	714.90	718.00	718.68	720.54	720.31	714.72	716.94	710.68	709.37
80.0	650.81	658.03	658.92	659.28	664.05	665.33	664.51	663.26	658.35	659.34
82.5	595.95	595.25	601.51	603.23	608.12	605.51	607.71	606.53	604.16	603.24
85.0	527.98	528.72	531.47	538.61	543.74	546.06	541.68	547.43	547.90	546.01
87.5	467.92	469.35	469.91	472.98	479.64	480.88	480.66	484.51	485.44	486.26
90.0	407.77	410.82	411.19	414.56	418.85	420.02	422.99	425.42	425.80	429.84
92.5	354.89	357.36	355.34	356.46	361.69	365.18	366.98	370.20	369.99	370.43
95.0	307.81	307.22	304.04	306.70	307.50	308.70	313.02	314.41	314.04	318.37
97.5	262.81	264.00	262.41	257.76	261.26	263.39	264.73	266.96	265.50	267.11
100.0	225.17	224.65	219.26	215.87	218.06	218.70	218.20	218.81	221.96	222.80
102.5	193.47	189.29	186.61	182.84	178.84	180.08	180.21	179.84	179.92	180.28
105.0	160.29	157.95	154.78	151.94	148.47	143.89	144.94	143.89	143.98	145.48
107.5	130.44	132.49	128.27	123.54	121.92	117.74	117.48	114.30	113.87	114.97
110.0	108.73	109.35	105.46	101.35	96.98	93.36	91.61	87.98	87.00	88.48
112.5	86.49	87.52	85.48	80.71	76.30	72.08	69.79	66.82	66.20	66.51
115.0	69.58	69.81	66.00	65.00	61.30	55.53	49.92	49.64	47.87	47.22
117.5	54.18	55.01	52.24	50.55	47.57	42.40	37.83	34.75	34.30	33.01
120.0	41.98	41.69	40.63	38.94	34.67	31.15	27.27	23.51	22.95	21.53
122.5	32.34	32.10	30.67	29.05	25.88	22.72	19.21	15.65	13.38	13.22
125.0	22.82	23.41	21.59	19.82	17.77	16.20	12.73	9.91	7.48	6.27
127.5	15.79	15.47	15.14	14.01	12.46	10.05	7.82	5.89	4.03	2.70
130.0	10.46	10.78	9.97	8.84	7.83	6.27	4.48	2.97	1.88	1.91
132.5	6.39	6.45	5.77	5.50	4.46	3.05	2.15	1.79	1.78	1.74

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CANDELA TABULATION - (Cont.)

135.0	3.02	3.27	3.00	2.55	2.17	1.87	1.68	1.89	1.47	1.51
137.5	1.50	1.62	1.51	1.57	1.53	1.57	1.66	1.48	1.61	1.55
140.0	1.21	1.55	1.41	1.36	1.16	1.35	1.49	1.28	1.42	1.39
142.5	1.39	1.16	1.33	1.48	1.31	1.24	1.15	1.29	1.16	1.20
145.0	1.21	1.10	1.04	1.24	1.03	1.11	1.20	1.15	1.28	1.11
147.5	0.76	1.06	0.95	0.99	0.91	0.97	0.95	1.14	1.01	1.16
150.0	0.86	0.82	0.77	0.76	0.87	0.93	0.81	0.82	0.96	1.02
152.5	0.89	0.84	0.70	0.45	0.66	0.86	0.67	0.77	0.82	0.65
155.0	0.54	0.57	0.54	0.62	0.59	0.54	0.56	0.72	0.77	0.70
157.5	0.50	0.52	0.48	0.65	0.47	0.43	0.57	0.52	0.39	0.75
160.0	0.56	0.38	0.37	0.47	0.51	0.50	0.44	0.36	0.37	0.38
162.5	0.39	0.44	0.38	0.28	0.28	0.26	0.36	0.33	0.28	0.31
165.0	0.46	0.26	0.15	0.24	0.18	0.22	0.27	0.18	0.29	0.11
167.5	0.20	0.14	0.26	0.13	0.06	0.22	0.08	0.17	0.09	0.10
170.0	0.09	0.04	0.11	0.09	0.05	0.12	0.12	0.08	0.14	0.13
172.5	0.08	0.04	0.07	0.00	0.08	0.00	0.11	0.17	0.03	0.12
175.0	0.00	0.10	0.04	0.05	0.06	0.02	0.00	0.00	0.05	0.00
177.5	0.15	0.06	0.10	0.00	0.00	0.00	0.00	0.11	0.01	0.00
180.0	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	730.22	730.22	730.22	730.22	730.22	730.22	730.22	730.22	730.22
2.5	736.79	729.78	728.60	731.89	725.11	729.98	736.08	721.12	714.32
5.0	732.92	736.99	726.78	728.75	730.31	736.64	743.45	729.40	731.26
7.5	750.83	748.41	741.53	749.15	745.72	737.63	734.36	738.67	734.94
10.0	762.83	757.41	761.24	761.53	760.02	758.12	753.43	767.54	754.89
12.5	775.61	779.60	782.06	771.99	787.22	776.20	777.64	772.96	783.43
15.0	805.27	797.06	803.43	796.77	797.26	796.01	799.64	791.75	790.03
17.5	815.41	823.97	823.44	824.59	817.80	816.33	814.40	813.39	811.81
20.0	849.77	850.94	847.86	836.28	833.55	830.52	822.26	830.30	826.40
22.5	867.85	859.47	863.60	847.85	848.56	844.08	838.96	844.71	845.18
25.0	881.24	884.32	877.94	874.80	867.60	853.66	848.11	851.93	852.60
27.5	900.91	899.09	895.67	888.41	876.46	865.25	858.75	859.96	861.51
30.0	920.94	911.81	903.09	889.16	875.73	876.82	874.66	864.51	864.88
32.5	923.99	918.70	916.13	903.66	889.61	880.15	877.55	868.79	871.13
35.0	927.25	925.85	916.95	908.35	899.28	888.05	879.47	874.75	875.32
37.5	935.13	931.33	915.99	911.65	906.15	895.83	889.07	874.94	880.26
40.0	935.33	930.79	924.55	919.64	908.10	895.48	885.00	875.63	876.41
42.5	926.47	926.08	926.39	921.89	909.63	905.75	888.91	893.22	892.33
45.0	929.20	927.51	924.04	914.23	912.75	908.78	897.60	895.05	890.95
47.5	926.53	923.85	921.36	918.12	914.24	909.74	902.15	898.70	898.15
50.0	923.18	918.81	919.82	920.87	914.60	915.46	907.27	901.77	912.01
52.5	917.01	915.92	914.70	920.74	917.92	914.08	908.93	905.96	904.42
55.0	907.71	904.28	913.93	916.38	917.38	913.27	912.69	911.58	909.99
57.5	899.81	906.06	908.17	909.34	914.44	911.38	912.78	913.82	912.92
60.0	894.71	897.77	901.67	906.87	903.66	907.98	907.04	909.90	910.52
62.5	884.37	881.36	889.90	894.12	899.05	901.20	903.05	899.69	901.64
65.0	864.66	869.04	871.62	881.74	886.36	889.35	885.96	890.68	889.71
67.5	846.48	852.36	860.39	863.10	869.14	870.60	869.66	869.45	870.81
70.0	819.37	826.84	832.76	838.13	837.82	845.38	845.02	844.93	844.66
72.5	793.18	792.73	797.16	804.80	809.91	806.48	804.78	807.04	804.04
75.0	754.31	755.55	760.62	767.04	766.64	761.00	761.41	761.40	755.47
77.5	710.84	708.34	713.14	713.74	713.17	712.43	712.47	711.73	708.27
80.0	656.60	660.90	657.53	660.00	657.33	653.87	650.49	648.40	647.23

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CANDELA TABULATION - (Cont.)

82.5	602.94	603.89	604.67	604.61	600.02	596.95	592.32	586.55	582.80
85.0	545.05	542.67	543.13	542.16	540.82	531.89	531.20	527.62	526.43
87.5	483.08	483.76	485.51	477.12	476.33	472.30	468.86	462.93	465.81
90.0	424.70	427.06	424.98	418.61	419.16	411.15	409.41	407.52	407.96
92.5	368.79	369.84	367.37	362.14	359.66	355.40	355.07	352.18	356.67
95.0	318.76	313.81	311.42	308.73	306.23	304.47	303.73	306.17	306.25
97.5	267.42	263.91	265.81	262.61	259.02	259.20	262.18	262.49	266.69
100.0	220.42	221.22	218.22	218.10	218.45	217.30	219.62	226.08	225.17
102.5	181.19	180.48	178.71	180.82	181.40	183.83	187.78	188.49	188.67
105.0	144.72	145.35	144.96	145.83	147.29	152.43	156.57	160.50	160.19
107.5	113.84	114.57	116.72	118.11	119.07	125.13	129.30	131.00	130.90
110.0	87.82	90.37	91.55	92.87	94.21	102.22	105.18	108.35	108.58
112.5	66.07	66.99	69.84	71.72	77.37	82.09	85.71	85.79	86.26
115.0	47.17	48.87	51.82	56.87	61.60	64.02	68.08	69.24	68.82
117.5	33.23	34.84	37.77	43.65	45.48	49.83	51.66	52.99	54.60
120.0	22.16	23.64	27.97	31.55	35.40	39.20	40.68	41.72	42.87
122.5	13.70	15.64	19.75	22.83	26.25	27.37	29.74	31.69	30.60
125.0	7.53	9.99	12.95	15.84	18.55	20.34	21.84	22.96	22.60
127.5	4.10	6.21	8.32	10.44	12.13	14.05	14.89	15.88	16.70
130.0	2.19	3.01	4.77	5.97	7.88	9.19	10.03	10.60	10.51
132.5	1.89	1.92	2.31	3.10	4.45	4.58	6.14	6.53	6.64
135.0	1.56	1.77	1.55	2.06	2.03	2.43	2.82	3.47	3.54
137.5	1.61	1.67	1.50	1.39	1.40	1.77	1.77	1.61	1.39
140.0	1.48	1.40	1.40	1.57	1.57	1.56	1.54	1.44	1.56
142.5	1.31	1.41	1.43	1.29	1.17	1.22	1.19	1.26	1.23
145.0	1.18	1.09	1.27	1.18	1.21	1.07	1.15	1.06	0.95
147.5	1.06	0.95	1.04	1.06	0.91	0.89	1.01	0.97	1.06
150.0	0.95	0.97	0.77	0.75	0.82	1.00	0.88	0.87	0.93
152.5	0.83	0.76	0.68	0.80	0.58	0.74	0.73	0.65	0.91
155.0	0.96	0.70	0.73	0.68	0.66	0.70	0.69	0.49	0.80
157.5	0.48	0.52	0.51	0.49	0.54	0.60	0.67	0.59	0.69
160.0	0.38	0.43	0.43	0.27	0.35	0.44	0.49	0.48	0.45
162.5	0.27	0.39	0.33	0.43	0.29	0.27	0.21	0.29	0.34
165.0	0.50	0.33	0.18	0.29	0.20	0.36	0.17	0.28	0.38
167.5	0.21	0.14	0.06	0.06	0.28	0.09	0.17	0.17	0.12
170.0	0.11	0.08	0.09	0.06	0.17	0.00	0.16	0.12	0.00
172.5	0.02	0.00	0.04	0.05	0.07	0.02	0.04	0.17	0.16
175.0	0.00	0.00	0.07	0.20	0.05	0.29	0.02	0.07	0.11
177.5	0.00	0.03	0.08	0.08	0.00	0.00	0.11	0.11	0.00
180.0	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	298.12	4.00	5.30
0-30	699.97	9.30	12.40
0-40	1266.88	16.80	22.50
0-60	2789.26	37.00	49.50
0-80	4459.46	59.20	79.20
0-90	5047.01	67.00	89.60
10-90	4976.17	66.00	88.40
20-40	968.76	12.90	17.20
20-50	1675.23	22.20	29.70
40-70	2392.53	31.80	42.50
60-80	1670.2	22.20	29.70
70-80	800.05	10.60	14.20
80-90	587.55	7.80	10.40
90-110	504.85	6.70	9.00
90-120	565.48	7.50	10.00
90-130	581.29	7.70	10.30
90-150	584.34	7.80	10.40
90-180	584.72	7.80	10.40
110-180	79.88	1.10	1.40
0-180	5631.73	74.80	100.00

Total Luminaire Efficiency = 74.80%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.84
10-20	227.28
20-30	401.85
30-40	566.91
40-50	706.47
50-60	815.91
60-70	870.15
70-80	800.05
80-90	587.55
90-100	342.44
100-110	162.40
110-120	60.63
120-130	15.81
130-140	2.32
140-150	0.72
150-160	0.30
160-170	0.07
170-180	0.01

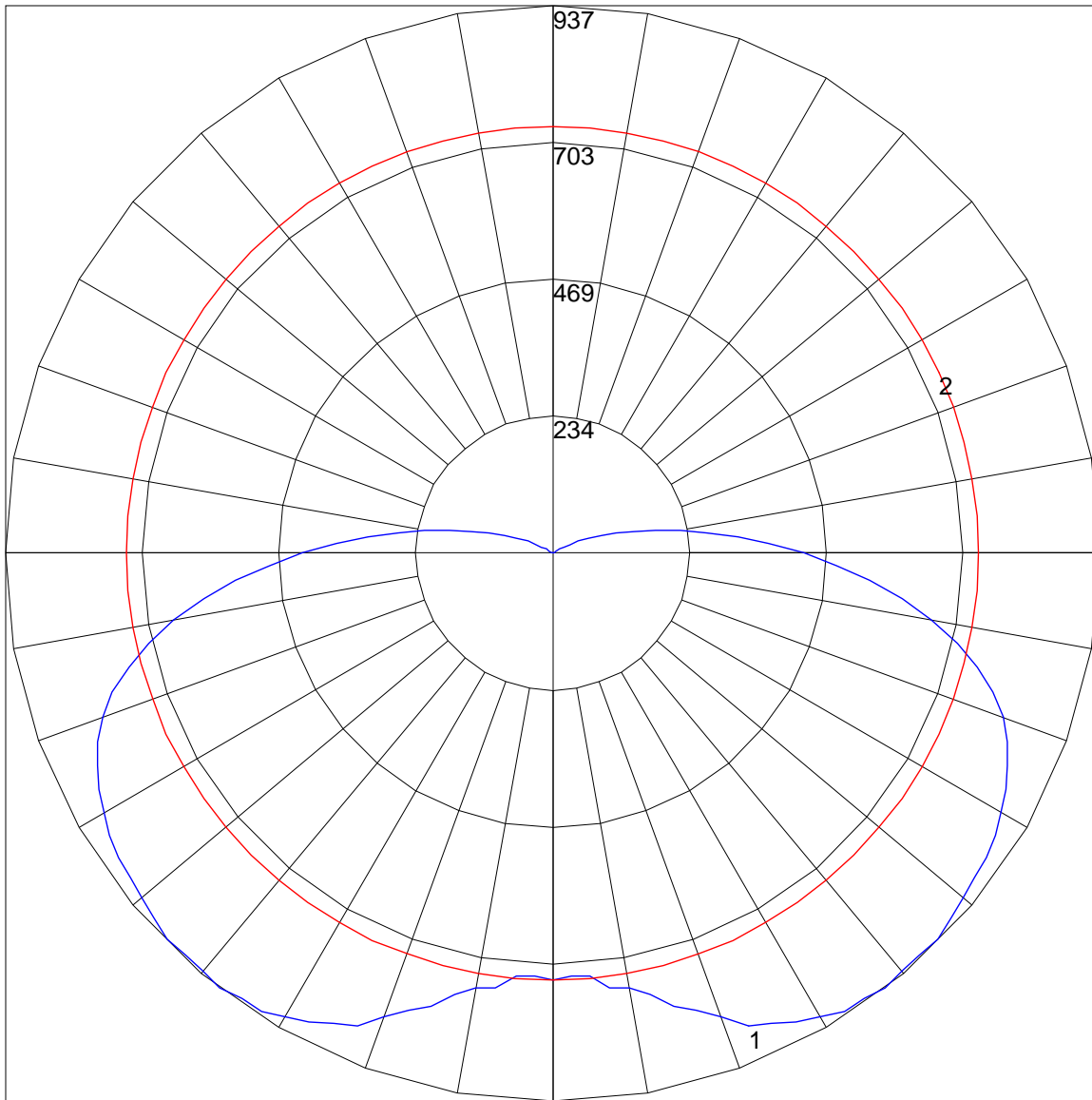
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	87	87	87	87	84	84	84	84	79	79	79	74	74	74	69	69	69	67
1	75	70	66	61	72	68	63	60	63	59	56	59	56	53	55	52	50	48
2	67	59	52	46	64	57	50	45	52	47	43	49	44	41	45	42	39	36
3	60	50	42	36	57	48	41	35	45	39	34	41	36	32	38	34	31	28
4	54	43	35	29	52	42	34	29	39	32	27	36	31	26	33	29	25	23
5	49	38	30	24	47	37	29	24	34	28	23	32	26	22	29	25	21	19
6	45	34	26	21	43	33	25	20	30	24	19	28	23	19	26	22	18	16
7	42	30	23	18	40	29	22	17	27	21	17	25	20	16	24	19	15	14
8	38	27	20	15	37	26	20	15	25	19	15	23	18	14	22	17	13	12
9	36	25	18	14	34	24	18	13	23	17	13	21	16	12	20	15	12	10
10	33	23	16	12	32	22	16	12	21	15	11	20	15	11	18	14	11	9

POLAR GRAPH



Maximum Candela = 937.29 Located At Horizontal Angle = 45, Vertical Angle = 37.5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0)