



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BS400LEDHTMOWT50120-277V_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 10:39:19 2017
 [TEST] 1
 [MANUFAC] BEGHELLI
 [LUMCAT]
 [LUMINAIRE] BS400LEDHTMOWT50120-277V
 [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	39.51 (192 lamps)
Total Lamp Lumens	7585.92
Luminaire Lumens	5671
Total Luminaire Efficiency	75 %
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	45
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.82
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	5429	5313	5438
55	6369	5858	6376
65	7720	6668	7697
75	8891	7486	8885
85	9951	7939	9969

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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	734.79	734.79	734.79	734.79	734.79	734.79	734.79	734.79	734.79	734.79
2.5	757.21	739.54	704.50	738.03	722.65	720.93	713.46	719.05	734.14	728.67
5.0	754.62	733.96	731.18	738.46	738.19	728.15	738.90	743.17	737.78	745.89
7.5	743.31	753.93	748.34	758.48	747.05	750.19	747.20	743.66	754.55	756.23
10.0	765.09	767.72	760.31	763.13	755.41	767.65	772.44	766.66	766.20	771.80
12.5	775.70	774.79	787.36	786.97	790.51	780.98	789.14	779.27	785.57	787.52
15.0	804.52	804.58	798.67	805.03	803.06	811.68	811.63	806.04	808.68	808.75
17.5	819.61	817.76	818.09	824.35	829.61	826.45	823.58	832.91	831.58	831.54
20.0	835.87	836.02	836.70	834.60	838.53	848.37	847.44	855.06	855.30	849.71
22.5	852.23	847.29	850.24	854.55	858.17	861.17	866.72	869.88	884.12	873.34
25.0	857.34	859.90	867.28	870.59	870.16	879.71	886.25	887.94	899.23	893.54
27.5	866.50	865.34	865.65	877.56	885.27	888.69	899.78	903.30	912.88	908.86
30.0	868.91	876.83	878.88	883.05	889.31	900.13	914.05	917.93	920.01	924.35
32.5	870.68	874.56	879.60	883.33	902.77	909.06	919.43	921.26	931.17	928.82
35.0	882.86	879.48	881.40	895.27	906.53	917.67	928.34	936.11	936.40	936.72
37.5	875.87	891.10	890.61	899.98	910.03	914.48	930.62	933.80	939.45	935.81
40.0	887.82	888.87	896.94	903.17	913.64	920.51	934.06	939.81	939.42	938.94
42.5	896.84	890.97	903.45	914.15	915.59	925.02	925.21	933.39	938.17	939.18
45.0	895.46	902.53	901.47	907.12	915.87	922.02	924.85	931.49	933.62	933.48
47.5	900.16	905.43	904.65	909.57	921.25	924.07	921.34	929.14	932.65	933.02
50.0	900.76	908.62	911.36	915.71	918.60	920.65	923.43	925.93	920.27	931.27
52.5	909.20	909.20	918.39	912.97	919.86	920.84	920.88	916.90	921.62	924.05
55.0	909.54	915.71	913.07	918.66	918.94	919.91	915.83	919.13	920.62	909.70
57.5	916.73	913.41	916.67	918.38	916.90	914.10	912.62	907.96	904.80	906.48
60.0	909.02	916.59	918.02	914.15	912.57	908.19	906.39	899.37	893.51	896.39
62.5	910.87	909.54	909.27	908.76	902.94	902.08	896.51	891.71	887.07	887.84
65.0	898.24	900.13	899.58	892.73	898.44	887.44	883.08	873.91	866.83	867.80
67.5	881.07	883.85	882.91	882.03	875.24	869.53	862.69	856.87	848.25	853.80
70.0	856.36	853.33	853.31	856.92	849.07	843.61	839.80	837.85	827.63	825.10
72.5	818.18	820.23	820.02	817.78	819.25	813.92	808.19	801.85	794.32	796.80
75.0	767.74	774.21	773.80	775.21	776.43	770.46	771.22	761.53	757.59	756.45
77.5	721.64	723.01	722.36	725.16	725.73	722.45	721.90	718.04	716.33	716.96
80.0	651.53	662.10	661.87	662.71	670.79	667.43	669.64	669.51	663.14	665.22
82.5	596.03	598.97	603.01	603.94	606.84	611.61	609.82	614.78	608.07	609.43
85.0	534.64	535.67	534.47	541.89	546.18	550.10	547.26	551.90	550.12	546.89
87.5	475.40	472.65	473.54	476.72	480.57	482.30	486.50	489.76	490.61	489.09
90.0	411.51	412.67	412.57	417.87	422.38	422.23	431.29	430.60	428.37	430.41
92.5	358.68	356.75	359.40	359.86	361.27	364.62	369.29	371.61	373.27	370.88
95.0	311.71	308.12	308.73	307.37	312.20	314.08	313.74	317.42	315.30	317.22
97.5	268.04	266.97	262.41	261.81	260.78	261.79	264.99	266.27	266.29	266.33
100.0	227.37	225.81	224.57	220.33	218.51	219.48	221.81	221.21	223.06	224.29
102.5	190.43	191.66	187.52	183.86	182.48	181.09	179.53	180.55	181.45	181.36
105.0	160.61	161.32	157.70	152.07	147.47	147.63	145.49	145.84	146.12	146.75
107.5	133.49	131.47	129.06	123.77	120.65	117.20	116.06	114.83	115.56	114.30
110.0	108.34	107.24	106.04	102.95	97.79	94.23	91.94	88.76	88.34	88.38
112.5	89.46	87.96	84.95	82.71	78.33	73.76	70.67	67.94	66.59	65.83
115.0	69.65	69.92	67.99	65.06	61.48	55.83	52.25	50.03	48.01	47.81
117.5	54.81	53.58	53.43	50.35	47.39	42.71	37.45	36.15	34.32	33.35
120.0	42.74	41.48	40.27	38.22	36.12	31.20	27.42	24.02	22.26	21.13
122.5	32.36	31.17	29.84	28.32	26.67	23.11	18.96	16.11	13.38	13.30
125.0	22.11	21.91	21.91	20.33	17.96	15.14	13.15	9.91	7.59	6.55
127.5	16.90	16.70	14.94	14.42	12.36	10.25	7.97	6.04	3.82	2.79
130.0	10.67	11.01	9.51	9.14	8.37	6.16	4.45	3.18	2.19	2.04
132.5	6.77	6.17	6.11	5.36	4.35	3.18	2.38	1.85	1.73	1.75

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CANDELA TABULATION - (Cont.)

135.0	3.42	3.38	2.83	2.81	2.21	1.84	1.60	1.72	1.77	1.74
137.5	1.74	1.61	1.59	1.64	1.44	1.54	1.68	1.47	1.70	1.64
140.0	1.38	1.26	1.39	1.36	1.40	1.44	1.41	1.56	1.55	1.53
142.5	1.24	1.30	1.24	1.30	1.26	1.32	1.27	1.28	1.19	1.32
145.0	1.10	1.14	0.99	0.97	1.09	1.09	1.32	1.41	1.11	1.28
147.5	0.98	0.95	0.99	0.91	1.02	1.25	1.27	1.03	1.18	1.06
150.0	0.61	0.82	0.84	0.95	0.81	0.99	0.96	0.85	0.98	1.01
152.5	0.72	0.84	0.63	0.64	0.74	0.84	0.81	0.77	0.86	0.68
155.0	0.79	0.53	0.58	0.60	0.60	0.67	0.66	0.80	0.72	0.68
157.5	0.51	0.40	0.53	0.46	0.44	0.48	0.49	0.51	0.61	0.59
160.0	0.27	0.45	0.39	0.51	0.42	0.36	0.42	0.32	0.47	0.42
162.5	0.37	0.40	0.24	0.29	0.36	0.45	0.23	0.30	0.29	0.30
165.0	0.07	0.21	0.35	0.20	0.22	0.37	0.23	0.26	0.25	0.06
167.5	0.04	0.11	0.22	0.17	0.17	0.27	0.13	0.06	0.06	0.19
170.0	0.11	0.06	0.10	0.08	0.09	0.11	0.09	0.06	0.05	0.07
172.5	0.07	0.06	0.07	0.08	0.14	0.07	0.04	0.06	0.09	0.05
175.0	0.00	0.07	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.11
177.5	0.01	0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.10	0.00
180.0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

**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	734.79	734.79	734.79	734.79	734.79	734.79	734.79	734.79	734.79
2.5	735.08	721.17	735.45	736.13	728.35	731.18	736.51	731.61	731.23
5.0	739.58	726.41	734.40	738.69	738.51	741.58	748.91	734.13	753.36
7.5	758.59	749.10	752.67	749.09	754.16	746.19	751.61	752.02	752.98
10.0	755.62	769.15	768.50	771.83	761.70	758.70	755.24	762.35	774.66
12.5	784.49	783.57	779.46	783.71	783.89	779.74	786.36	793.04	790.24
15.0	802.33	814.20	802.10	809.64	809.04	797.47	799.50	802.62	810.95
17.5	830.88	828.74	823.97	821.29	818.23	823.86	818.67	823.70	820.69
20.0	846.65	860.35	844.71	842.03	839.18	843.73	836.47	835.71	846.00
22.5	871.49	870.87	868.90	868.89	858.14	853.32	851.61	855.78	842.30
25.0	888.25	892.85	884.70	879.55	866.22	864.43	850.43	859.36	854.89
27.5	901.06	902.72	897.94	892.18	884.50	876.74	871.32	862.13	871.47
30.0	924.17	921.21	913.74	899.48	890.04	880.19	874.27	870.83	871.49
32.5	924.86	926.79	918.88	909.82	908.35	894.13	881.75	872.57	877.51
35.0	933.32	927.24	922.31	919.09	908.46	897.79	885.72	882.75	885.99
37.5	938.23	929.27	929.08	916.85	907.23	899.03	890.81	886.92	894.54
40.0	943.19	934.39	925.13	920.89	912.78	899.89	897.07	891.37	889.91
42.5	938.88	933.66	931.17	923.32	911.11	905.30	901.38	896.39	892.81
45.0	936.38	934.42	929.36	925.60	924.22	911.34	903.75	899.32	896.87
47.5	932.48	933.06	923.78	924.71	925.91	916.78	908.04	905.17	900.87
50.0	925.88	931.08	928.32	925.42	920.60	914.78	911.29	911.19	906.85
52.5	919.90	923.93	924.74	925.14	922.63	919.46	920.79	910.56	912.08
55.0	920.74	915.62	914.90	917.20	918.48	916.45	916.56	913.54	910.59
57.5	907.15	909.52	917.29	920.30	920.57	919.13	924.85	918.04	915.67
60.0	902.74	899.39	906.94	913.04	910.44	919.26	917.71	919.98	923.81
62.5	888.63	891.74	896.43	901.25	909.93	907.43	905.49	908.91	906.41
65.0	871.10	876.61	878.80	886.44	896.50	895.25	893.22	897.71	895.50
67.5	850.41	855.81	860.94	871.04	874.19	875.38	876.05	876.31	880.65
70.0	831.39	833.17	838.85	841.13	851.62	849.51	848.78	847.90	847.90
72.5	791.97	801.00	808.13	813.55	812.17	809.27	810.14	811.38	812.52
75.0	757.29	763.16	765.67	768.52	771.11	768.99	770.56	766.76	767.21
77.5	715.67	711.35	711.07	718.19	721.00	715.71	715.81	712.28	716.78
80.0	661.05	661.66	665.54	668.69	661.46	662.05	655.96	652.53	653.07

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CANDELA TABULATION - (Cont.)

82.5	607.27	604.83	606.12	605.98	600.91	602.40	597.32	593.19	586.62
85.0	548.63	545.82	551.05	542.65	542.40	539.47	533.68	528.10	535.62
87.5	486.88	485.12	487.14	482.69	481.28	473.05	471.27	470.38	469.24
90.0	429.75	430.69	425.10	424.93	416.72	419.05	412.87	412.72	408.61
92.5	373.12	371.82	368.16	362.63	361.64	357.89	356.30	358.98	355.28
95.0	319.62	315.11	316.21	311.00	308.48	306.87	307.71	309.22	306.12
97.5	268.50	266.77	264.06	262.57	263.50	262.07	263.53	264.55	265.56
100.0	221.25	221.52	220.23	219.13	219.83	218.37	222.79	226.37	229.05
102.5	181.45	180.38	178.64	180.88	182.69	184.97	187.34	193.04	190.27
105.0	145.62	144.72	145.54	146.23	147.26	151.03	155.87	161.01	161.30
107.5	115.23	114.05	116.85	117.65	120.31	125.11	130.88	133.48	133.80
110.0	89.30	90.18	91.11	95.06	96.85	103.33	105.92	107.30	107.52
112.5	65.48	66.29	70.68	72.36	78.44	82.77	85.54	87.83	88.23
115.0	48.19	49.29	52.11	55.48	61.15	65.52	68.65	69.78	70.59
117.5	34.12	34.76	37.72	41.64	47.07	51.31	53.14	54.43	53.49
120.0	22.24	23.96	27.66	31.92	34.95	38.22	40.08	41.86	44.25
122.5	13.64	15.92	19.39	22.83	25.46	28.88	29.94	31.39	32.21
125.0	7.69	10.38	12.90	16.05	18.80	20.95	21.85	23.11	24.08
127.5	3.94	6.53	8.41	10.79	11.96	14.29	15.43	16.35	16.57
130.0	2.16	3.01	4.72	6.15	7.70	9.69	10.69	10.88	10.75
132.5	2.02	1.72	2.38	3.40	4.34	5.31	6.43	6.83	6.48
135.0	1.58	1.59	1.78	1.74	2.28	2.39	3.32	3.32	3.39
137.5	1.64	1.60	1.46	1.70	1.59	1.62	1.64	1.79	1.49
140.0	1.37	1.49	1.37	1.64	1.47	1.22	1.36	1.51	1.42
142.5	1.27	1.35	1.46	1.31	1.13	1.26	1.24	1.08	1.28
145.0	1.33	1.18	1.06	1.17	1.17	1.01	0.97	1.13	1.25
147.5	1.10	1.05	1.07	1.09	0.99	1.08	0.93	0.91	0.90
150.0	0.89	0.98	0.93	0.89	0.78	0.79	0.91	0.88	0.99
152.5	0.80	0.71	0.78	0.82	0.77	0.85	0.74	0.76	0.68
155.0	0.58	0.64	0.72	0.62	0.65	0.72	0.57	0.62	0.81
157.5	0.62	0.59	0.51	0.40	0.65	0.59	0.44	0.45	0.37
160.0	0.40	0.46	0.43	0.57	0.49	0.42	0.45	0.50	0.68
162.5	0.38	0.29	0.22	0.31	0.48	0.26	0.38	0.28	0.44
165.0	0.28	0.25	0.24	0.21	0.19	0.26	0.18	0.20	0.30
167.5	0.10	0.09	0.12	0.12	0.24	0.17	0.15	0.12	0.19
170.0	0.16	0.00	0.26	0.17	0.17	0.09	0.09	0.05	0.06
172.5	0.00	0.04	0.03	0.00	0.15	0.02	0.22	0.06	0.00
175.0	0.13	0.02	0.12	0.07	0.06	0.00	0.02	0.00	0.00
177.5	0.00	0.00	0.07	0.11	0.12	0.00	0.00	0.00	0.00
180.0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	300.65	4.00	5.30
0-30	705.74	9.30	12.40
0-40	1276.48	16.80	22.50
0-60	2809.6	37.00	49.50
0-80	4491.39	59.20	79.20
0-90	5082.99	67.00	89.60
10-90	5011.62	66.10	88.40
20-40	975.83	12.90	17.20
20-50	1687.11	22.20	29.70
40-70	2409.37	31.80	42.50
60-80	1681.79	22.20	29.70
70-80	805.54	10.60	14.20
80-90	591.60	7.80	10.40
90-110	507.95	6.70	9.00
90-120	569.05	7.50	10.00
90-130	584.94	7.70	10.30
90-150	588.05	7.80	10.40
90-180	588.43	7.80	10.40
110-180	80.48	1.10	1.40
0-180	5671.42	74.80	100.00

Total Luminaire Efficiency = 74.80%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	71.37
10-20	229.29
20-30	405.09
30-40	570.74
40-50	711.28
50-60	821.84
60-70	876.25
70-80	805.54
80-90	591.60
90-100	344.63
100-110	163.32
110-120	61.10
120-130	15.89
130-140	2.38
140-150	0.73
150-160	0.31
160-170	0.07
170-180	0.01

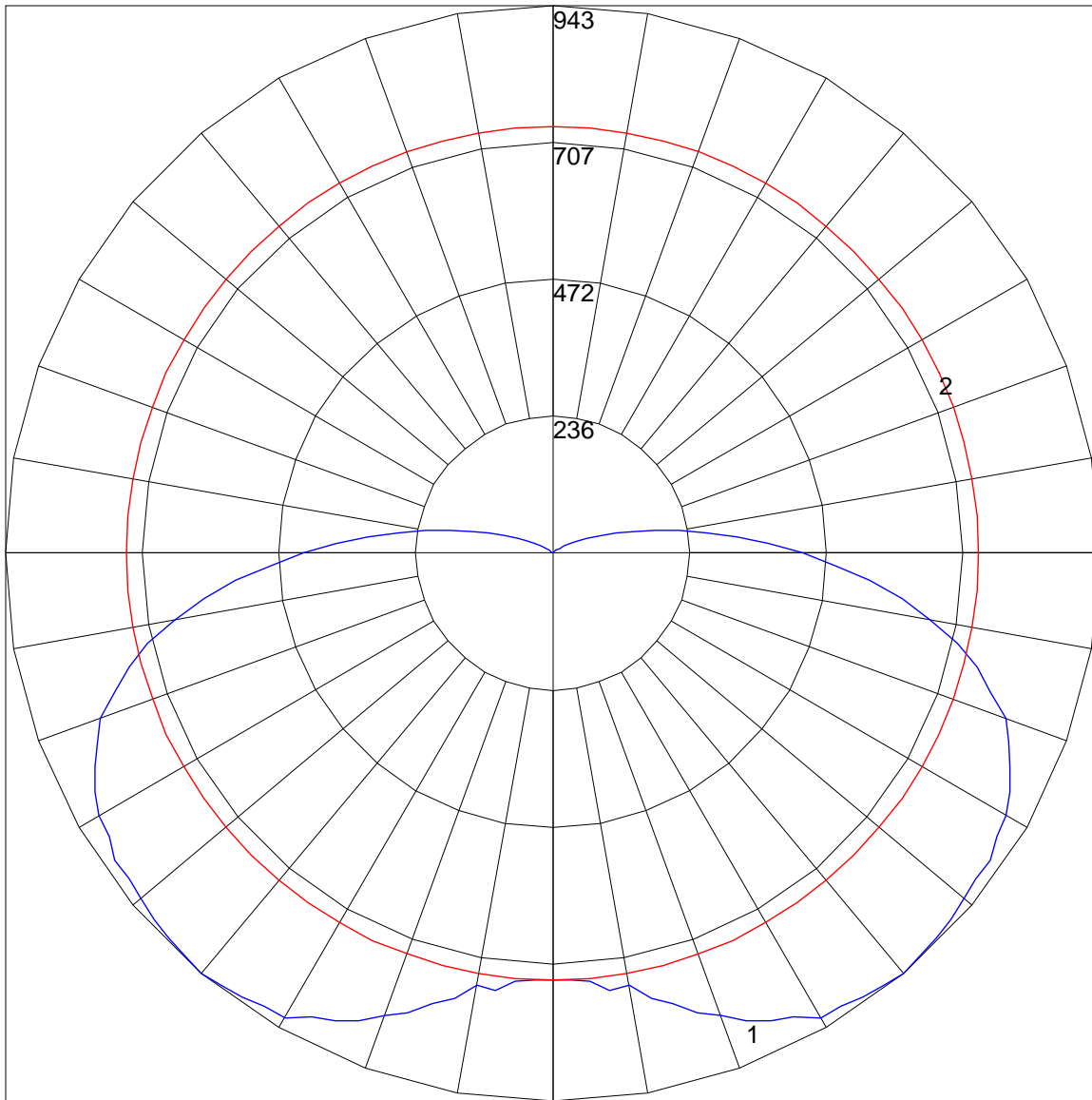
IES INDOOR REPORT
 PHOTOMETRIC FILENAME : BS400LEDHTMOWT50120-277V_S.IES

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	87	87	87	87	84	84	84	84	79	79	79	74	74	74	69	69	69	67
1	76	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 = 943.19 Located At Horizontal Angle = 50, Vertical Angle = 40
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0)