



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : BS400LEDHTLOWT40120-277V\_S.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

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

[ISSUE DATE]

[TEST DATE] Mon Oct 30 12:20:23 2017

[TEST] 1

[MANUFACTURER] BEGHELLI

[LUMEN CATEGORY]

[LUMINAIRE] BS400LEDHTLOWT40120-277V

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

[LAMP CATEGORY] SPMWHT541MP5WAT0S5

[OTHER]

IESNA:LM-63-2002

[TEST] 6,552

[TESTLAB] CSA Group

[ISSUE DATE] 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	26.15 (192 lamps)
Total Lamp Lumens	5020.8
Luminaire Lumens	3753
Total Luminaire Efficiency	75 %
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.84
Spacing Criterion (90-270)	1.82
Spacing Criterion (Diagonal)	1.98
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	3591	3507	3584
55	4236	3893	4259
65	5152	4427	5086
75	5989	4953	5835
85	6612	5291	6585

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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>
<b>0.0</b>	479.87	479.87	479.87	479.87	479.87	479.87	479.87	479.87	479.87	479.87
<b>2.5</b>	493.23	488.70	485.69	495.26	491.43	478.75	484.18	481.08	484.02	475.45
<b>5.0</b>	487.32	478.24	489.94	491.20	484.22	485.06	493.98	483.33	487.95	481.64
<b>7.5</b>	489.78	489.36	494.73	496.94	499.63	494.82	497.14	493.95	494.29	494.44
<b>10.0</b>	506.50	509.83	509.73	506.86	508.12	503.24	506.24	507.77	510.55	505.43
<b>12.5</b>	517.28	514.60	518.76	517.48	520.94	517.98	521.64	519.85	522.14	520.47
<b>15.0</b>	535.72	528.47	534.79	531.42	533.66	536.71	528.81	535.62	534.26	532.51
<b>17.5</b>	535.33	543.53	542.26	541.78	542.81	553.15	544.31	548.90	546.09	551.09
<b>20.0</b>	550.09	547.99	549.02	551.65	559.42	558.32	563.50	562.57	567.80	563.91
<b>22.5</b>	564.34	558.19	558.79	567.12	569.43	570.89	569.20	580.64	580.62	581.54
<b>25.0</b>	568.80	570.73	568.36	572.89	578.02	577.01	587.23	590.46	592.96	590.84
<b>27.5</b>	571.09	571.72	574.04	580.37	583.49	592.24	593.25	594.89	599.13	604.08
<b>30.0</b>	577.47	574.18	578.96	584.31	588.83	597.74	599.34	605.28	613.08	612.57
<b>32.5</b>	580.94	582.90	581.65	587.48	594.01	602.72	606.95	611.18	619.02	614.14
<b>35.0</b>	579.32	583.98	586.88	592.06	599.98	605.18	613.62	617.12	622.32	621.31
<b>37.5</b>	582.35	587.25	591.64	591.29	601.73	608.89	613.09	620.00	624.38	621.14
<b>40.0</b>	588.06	586.51	594.05	597.65	606.19	609.27	612.58	619.11	621.12	625.68
<b>42.5</b>	594.19	592.26	595.73	599.80	603.37	614.58	616.96	617.18	619.91	621.79
<b>45.0</b>	592.36	594.15	600.48	600.95	607.18	608.80	613.22	616.53	615.49	616.22
<b>47.5</b>	602.03	599.52	600.39	602.59	607.28	610.18	614.21	615.50	613.64	615.85
<b>50.0</b>	597.25	601.01	600.39	605.18	607.53	609.99	614.43	612.83	610.78	612.34
<b>52.5</b>	602.80	604.48	601.97	606.68	609.77	612.87	611.75	606.66	610.52	608.83
<b>55.0</b>	604.90	602.53	605.87	610.39	607.77	607.08	604.69	606.90	604.29	604.46
<b>57.5</b>	609.81	602.40	608.74	605.82	605.28	605.48	603.03	601.99	602.08	600.64
<b>60.0</b>	602.92	607.48	608.78	603.83	605.50	600.94	597.86	594.71	593.92	591.97
<b>62.5</b>	603.02	605.45	600.57	599.32	598.56	594.07	590.84	590.84	587.37	585.42
<b>65.0</b>	599.44	594.92	591.02	594.25	592.19	586.12	584.94	581.94	576.34	576.20
<b>67.5</b>	582.31	582.46	584.98	585.24	579.75	574.00	572.52	567.19	565.59	560.66
<b>70.0</b>	566.16	563.72	566.31	563.78	561.96	558.31	554.30	550.74	547.70	545.47
<b>72.5</b>	544.96	541.33	540.94	541.95	541.42	538.80	535.30	530.70	530.16	527.93
<b>75.0</b>	517.15	513.64	513.16	515.62	513.31	512.33	509.45	505.61	503.85	500.50
<b>77.5</b>	475.46	479.93	478.44	480.97	480.87	479.97	477.25	477.10	474.26	472.28
<b>80.0</b>	438.18	436.11	439.09	442.14	443.04	442.59	445.31	441.02	441.66	440.44
<b>82.5</b>	393.27	394.59	400.97	400.46	404.45	405.03	403.95	405.13	402.54	401.77
<b>85.0</b>	355.26	353.80	356.70	358.90	359.28	361.80	365.03	361.51	363.44	364.50
<b>87.5</b>	311.21	311.65	311.52	316.89	318.89	318.50	323.02	325.34	322.70	323.97
<b>90.0</b>	270.79	273.49	275.69	275.80	278.42	278.83	283.32	283.42	283.01	282.42
<b>92.5</b>	239.70	239.44	237.00	237.43	239.07	241.02	243.33	244.48	245.50	245.86
<b>95.0</b>	204.39	207.08	203.47	203.97	204.47	208.12	206.37	210.14	210.18	210.85
<b>97.5</b>	175.73	175.22	174.95	173.24	172.15	175.75	174.08	176.61	176.29	177.85
<b>100.0</b>	149.16	149.56	147.26	146.59	144.57	144.86	146.14	146.47	147.90	149.46
<b>102.5</b>	128.91	125.70	125.00	122.31	121.66	119.12	120.00	119.65	121.22	121.30
<b>105.0</b>	105.67	105.44	104.12	100.56	99.75	96.83	97.97	96.59	97.80	96.47
<b>107.5</b>	88.93	87.72	85.62	82.63	80.71	77.85	75.97	76.19	76.07	76.15
<b>110.0</b>	72.84	71.35	70.13	67.91	64.89	61.22	59.41	59.32	59.12	57.78
<b>112.5</b>	59.20	57.51	56.70	54.22	51.53	48.38	45.74	44.61	43.92	44.81
<b>115.0</b>	47.72	46.70	45.15	42.84	40.13	36.58	35.21	34.12	31.67	31.95
<b>117.5</b>	36.53	35.85	34.94	33.51	30.56	28.45	25.61	23.09	22.23	21.31
<b>120.0</b>	28.90	28.27	26.68	25.56	22.99	20.99	17.71	16.05	14.76	14.25
<b>122.5</b>	21.17	21.09	19.35	19.04	16.96	15.50	12.88	10.51	9.08	8.63
<b>125.0</b>	15.45	15.24	14.76	13.46	12.56	10.55	8.34	6.60	4.96	4.43
<b>127.5</b>	10.67	10.81	10.05	9.17	8.58	6.78	5.35	3.92	2.45	1.85
<b>130.0</b>	6.82	7.06	6.35	6.21	5.27	3.80	3.07	1.82	1.32	1.34
<b>132.5</b>	4.62	4.46	4.07	3.60	2.76	1.96	1.44	1.26	1.18	1.21

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**CANDELA TABULATION - (Cont.)**

135.0	2.14	2.09	1.89	1.69	1.32	1.19	1.20	1.04	1.22	1.07
137.5	1.03	1.25	1.03	1.01	1.06	1.03	1.13	1.14	0.96	0.91
140.0	1.03	1.00	0.95	0.92	1.07	0.96	0.90	0.93	0.87	0.97
142.5	0.82	0.86	0.81	0.93	0.90	0.83	0.75	0.93	0.92	1.03
145.0	0.79	0.73	0.77	0.74	0.73	0.83	0.77	0.80	0.72	0.74
147.5	0.74	0.56	0.72	0.64	0.69	0.74	0.68	0.76	0.68	0.72
150.0	0.69	0.59	0.54	0.51	0.63	0.46	0.51	0.50	0.60	0.68
152.5	0.47	0.49	0.53	0.39	0.46	0.45	0.57	0.55	0.53	0.54
155.0	0.40	0.43	0.43	0.38	0.40	0.39	0.49	0.55	0.40	0.40
157.5	0.29	0.44	0.32	0.34	0.40	0.31	0.42	0.40	0.32	0.36
160.0	0.28	0.23	0.25	0.33	0.31	0.21	0.31	0.24	0.34	0.26
162.5	0.20	0.12	0.24	0.30	0.23	0.19	0.22	0.16	0.30	0.19
165.0	0.23	0.21	0.17	0.14	0.10	0.15	0.16	0.14	0.11	0.15
167.5	0.16	0.06	0.17	0.09	0.21	0.13	0.07	0.09	0.08	0.09
170.0	0.06	0.03	0.09	0.10	0.07	0.12	0.10	0.03	0.04	0.03
172.5	0.04	0.03	0.00	0.04	0.02	0.04	0.03	0.03	0.01	0.09
175.0	0.07	0.02	0.00	0.03	0.00	0.03	0.06	0.07	0.01	0.07
177.5	0.00	0.00	0.00	0.08	0.00	0.15	0.00	0.00	0.04	0.01
180.0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

**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	479.87	479.87	479.87	479.87	479.87	479.87	479.87	479.87	479.87
2.5	490.99	465.30	488.97	480.89	491.20	494.32	490.64	493.47	490.88
5.0	486.27	491.35	480.01	490.03	484.29	486.74	487.38	482.80	483.89
7.5	498.11	496.15	497.88	499.44	492.34	500.01	497.14	498.05	502.37
10.0	507.20	504.47	506.79	508.45	506.69	511.71	505.48	506.55	506.32
12.5	514.48	523.81	509.86	518.38	516.87	521.50	513.23	517.75	523.55
15.0	531.34	530.48	533.20	533.10	528.87	532.09	532.53	525.93	528.99
17.5	546.75	549.00	549.16	551.87	546.92	542.87	540.29	544.04	541.92
20.0	568.83	560.63	559.92	558.48	558.72	554.40	551.53	552.82	546.47
22.5	576.80	585.27	570.99	567.43	563.99	560.05	562.77	558.13	553.53
25.0	592.44	588.11	584.35	581.26	580.21	569.00	571.11	568.46	567.35
27.5	603.17	600.46	591.80	589.34	583.18	580.20	578.30	573.50	569.19
30.0	608.75	606.32	600.22	598.45	590.38	585.18	579.05	572.40	577.49
32.5	613.14	610.17	606.17	604.35	593.73	586.62	582.31	580.19	583.47
35.0	618.39	619.35	609.38	605.83	603.11	592.71	586.79	583.39	582.04
37.5	621.54	619.43	619.02	606.56	602.07	593.14	587.20	584.85	587.10
40.0	623.81	621.32	615.06	610.89	607.00	598.37	589.00	589.57	585.66
42.5	619.88	616.59	614.51	612.20	605.05	599.11	598.66	594.18	592.10
45.0	623.74	615.77	614.11	613.08	609.69	604.94	594.99	593.95	591.09
47.5	614.84	614.00	615.82	612.20	608.51	606.39	599.37	600.31	599.48
50.0	614.77	612.37	613.78	611.99	608.67	607.46	602.31	602.62	599.75
52.5	610.84	610.35	607.91	608.06	610.48	609.52	607.30	602.39	602.27
55.0	605.11	608.11	605.13	607.70	610.20	608.81	609.52	603.86	608.26
57.5	600.61	605.86	601.17	607.37	608.82	607.83	604.63	607.04	601.64
60.0	595.07	600.66	598.58	604.02	604.05	606.43	603.70	607.90	606.47
62.5	587.53	588.46	596.43	597.17	599.38	597.99	601.59	602.42	600.81
65.0	578.02	582.33	581.87	585.95	587.90	594.31	592.81	595.11	591.81
67.5	563.93	564.15	572.78	572.68	575.47	579.10	579.57	580.71	580.87
70.0	548.05	548.85	553.01	557.67	560.71	562.92	561.99	562.47	559.86
72.5	526.56	530.59	530.58	536.57	535.97	538.91	536.59	537.52	532.31
75.0	501.77	503.72	505.23	507.17	509.96	511.14	510.02	507.25	503.89
77.5	472.56	473.55	476.49	476.39	476.62	473.56	476.23	468.79	474.56
80.0	438.85	437.21	439.24	439.48	440.60	436.99	435.31	434.30	429.05

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**CANDELA TABULATION - (Cont.)**

82.5	402.22	402.32	400.60	399.64	398.96	398.00	395.35	391.43	391.74
85.0	364.81	364.29	360.84	361.96	359.86	356.05	355.17	351.40	353.82
87.5	323.59	324.39	321.16	318.85	320.07	315.20	310.30	310.26	314.86
90.0	285.80	280.61	282.43	278.88	278.95	274.97	273.56	271.74	272.06
92.5	245.63	246.18	244.99	241.61	238.92	236.73	236.39	237.38	237.31
95.0	209.28	207.69	209.23	206.14	204.38	202.83	202.09	203.84	202.84
97.5	176.81	176.29	174.26	173.65	174.42	172.91	173.02	175.76	176.64
100.0	147.47	146.86	146.25	145.50	146.13	145.08	147.62	146.78	150.78
102.5	121.18	119.65	120.17	119.49	120.26	121.92	125.00	125.73	126.80
105.0	96.16	95.92	97.39	97.56	99.58	101.75	103.48	106.31	106.85
107.5	75.95	76.80	76.66	78.54	80.82	82.99	86.29	88.26	88.80
110.0	58.95	59.56	60.29	61.28	64.17	68.17	69.77	71.48	72.20
112.5	43.81	44.63	45.82	48.17	50.86	54.98	57.09	58.61	58.38
115.0	31.87	32.64	33.57	37.05	40.31	43.67	45.22	46.05	47.17
117.5	22.55	23.43	25.47	28.20	30.97	34.09	35.27	36.67	36.90
120.0	14.75	15.33	18.05	20.96	24.09	25.26	26.69	28.54	27.81
122.5	9.24	10.92	12.95	15.18	17.31	18.68	20.10	21.02	20.74
125.0	5.15	7.11	8.80	10.56	12.37	13.57	14.92	15.37	15.61
127.5	2.76	4.07	5.46	6.75	8.22	9.41	9.69	10.81	10.73
130.0	1.32	1.92	3.12	4.21	5.31	6.36	6.89	7.11	7.53
132.5	1.07	1.20	1.38	2.12	2.84	3.18	3.72	4.41	4.59
135.0	1.06	1.20	1.02	1.19	1.51	1.67	1.94	2.17	2.25
137.5	1.01	1.16	0.96	1.07	1.06	1.10	1.01	1.13	1.09
140.0	0.90	0.95	1.05	0.98	1.02	0.88	0.92	0.95	1.00
142.5	0.89	0.77	0.92	0.79	0.85	0.89	0.87	0.90	1.00
145.0	0.77	0.72	0.84	0.67	0.81	0.80	0.82	0.81	0.77
147.5	0.80	0.67	0.75	0.65	0.66	0.72	0.59	0.69	0.63
150.0	0.70	0.53	0.54	0.59	0.60	0.63	0.57	0.65	0.43
152.5	0.53	0.53	0.56	0.49	0.39	0.50	0.60	0.55	0.54
155.0	0.49	0.38	0.48	0.40	0.38	0.41	0.36	0.43	0.40
157.5	0.46	0.32	0.40	0.39	0.37	0.35	0.39	0.43	0.31
160.0	0.28	0.21	0.24	0.34	0.24	0.32	0.27	0.24	0.23
162.5	0.24	0.15	0.15	0.22	0.15	0.22	0.16	0.27	0.14
165.0	0.16	0.16	0.22	0.21	0.12	0.10	0.17	0.18	0.17
167.5	0.08	0.03	0.17	0.14	0.06	0.11	0.10	0.17	0.08
170.0	0.08	0.08	0.11	0.09	0.08	0.06	0.10	0.05	0.08
172.5	0.02	0.05	0.06	0.05	0.00	0.03	0.08	0.02	0.06
175.0	0.00	0.00	0.03	0.06	0.07	0.02	0.04	0.02	0.01
177.5	0.08	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
180.0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	198.78	4.00	5.30
0-30	466.64	9.30	12.40
0-40	844.35	16.80	22.50
0-60	1858.63	37.00	49.50
0-80	2971.76	59.20	79.20
0-90	3363.47	67.00	89.60
10-90	3316.28	66.10	88.40
20-40	645.57	12.90	17.20
20-50	1116.19	22.20	29.70
40-70	1594.00	31.70	42.50
60-80	1113.13	22.20	29.70
70-80	533.41	10.60	14.20
80-90	391.71	7.80	10.40
90-110	336.29	6.70	9.00
90-120	376.74	7.50	10.00
90-130	387.29	7.70	10.30
90-150	389.33	7.80	10.40
90-180	389.59	7.80	10.40
110-180	53.29	1.10	1.40
0-180	3753.06	74.80	100.00

Total Luminaire Efficiency = 74.80%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	47.19
10-20	151.60
20-30	267.85
30-40	377.71
40-50	470.62
50-60	543.66
60-70	579.72
70-80	533.41
80-90	391.71
90-100	227.95
100-110	108.34
110-120	40.45
120-130	10.55
130-140	1.55
140-150	0.49
150-160	0.20
160-170	0.05
170-180	0.00

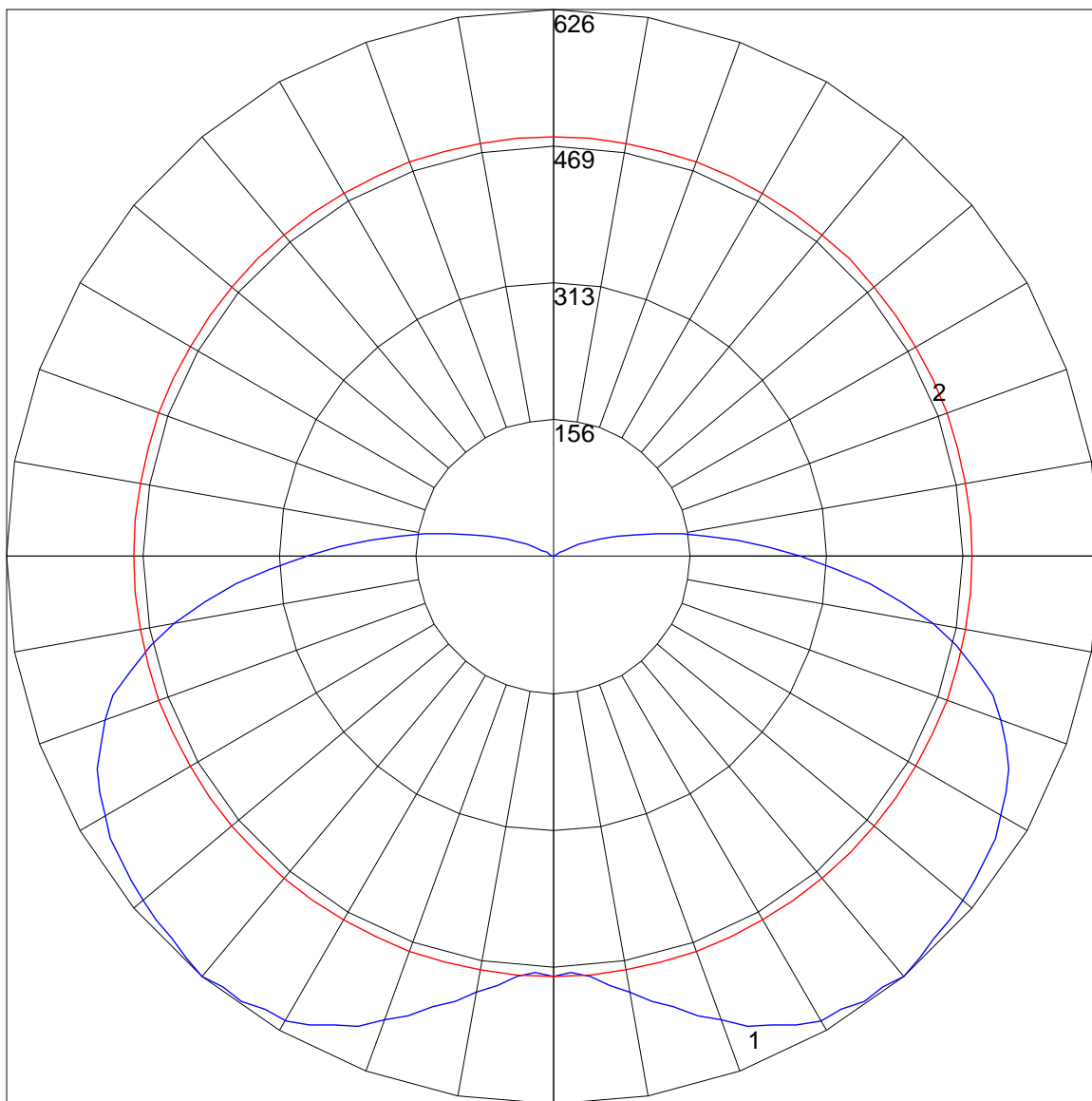
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : BS400LEDHTLOWT40120-277V\_S.IES**

**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	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 = 625.68 Located At Horizontal Angle = 45, Vertical Angle = 40  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0)