

IES INDOOR REPORT

PHOTOMETRIC FILENAME : P4030-LED4-MO-FWA-D1.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] P3930 or 4030-LED4-MO-FWA -D1

[TESTLAB] Intertek

[ISSUE DATE] October 4, 2016

[MANUFAC] Prudential Ltg

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7445
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	73
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Circular
Luminous Length (0-180)	2.96 ft (Diameter)
Luminous Width (90-270)	2.96 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3812	3803	3810
55	3681	3665	3667
65	3477	3454	3466
75	3154	3145	3164
85	2479	2523	2577

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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	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723
2.5	2578.453	2577.698	2578.727	2578.553	2579.134	2578.553	2578.727	2577.698	2579.690	2577.698
5.0	2569.937	2569.879	2570.028	2569.539	2570.112	2569.539	2570.028	2569.879	2570.593	2569.879
7.5	2556.367	2556.151	2554.981	2554.234	2554.823	2554.234	2554.981	2556.151	2554.258	2556.151
10.0	2534.405	2534.679	2534.662	2535.276	2534.729	2535.276	2534.662	2534.679	2534.837	2534.679
12.5	2508.011	2509.356	2508.791	2507.388	2508.625	2507.388	2508.791	2509.356	2508.766	2509.356
15.0	2476.172	2479.061	2476.604	2476.861	2476.919	2476.861	2476.604	2479.061	2477.384	2479.061
17.5	2437.810	2440.922	2441.179	2439.113	2439.652	2439.113	2441.179	2440.922	2441.063	2440.922
20.0	2396.575	2397.812	2397.579	2397.521	2398.194	2397.521	2397.579	2397.812	2398.492	2397.812
22.5	2349.522	2351.315	2349.971	2349.398	2351.232	2349.398	2349.971	2351.315	2350.701	2351.315
25.0	2294.776	2297.390	2296.494	2295.747	2297.772	2295.747	2296.494	2297.390	2299.615	2297.390
27.5	2238.610	2240.062	2239.772	2238.693	2241.465	2238.693	2239.772	2240.062	2240.701	2240.062
30.0	2173.156	2179.148	2178.874	2176.700	2180.128	2176.700	2178.874	2179.148	2181.024	2179.148
32.5	2105.262	2111.744	2110.366	2110.424	2115.131	2110.424	2110.366	2111.744	2114.483	2111.744
35.0	2034.853	2042.754	2039.584	2041.227	2043.543	2041.227	2039.584	2042.754	2041.360	2042.754
37.5	1966.834	1966.104	1964.958	1964.411	1968.071	1964.411	1964.958	1966.104	1965.490	1966.104
40.0	1892.906	1886.175	1885.918	1885.552	1888.557	1885.552	1885.918	1886.175	1888.076	1886.175
42.5	1810.977	1806.337	1804.138	1804.105	1807.034	1804.105	1804.138	1806.337	1805.026	1806.337
45.0	1723.072	1719.718	1718.631	1717.967	1722.208	1717.967	1718.631	1719.718	1717.146	1719.718
47.5	1629.780	1630.469	1628.858	1629.107	1632.311	1629.107	1628.858	1630.469	1626.634	1630.469
50.0	1537.990	1538.878	1535.558	1536.297	1538.862	1536.297	1535.558	1538.878	1534.919	1538.878
52.5	1446.341	1443.694	1440.664	1440.473	1442.822	1440.473	1440.664	1443.694	1438.614	1443.694
55.0	1349.638	1345.305	1343.521	1342.508	1344.517	1342.508	1343.521	1345.305	1341.504	1345.305
57.5	1246.975	1245.647	1243.357	1243.830	1245.888	1243.830	1243.357	1245.647	1241.049	1245.647
60.0	1143.101	1145.068	1142.146	1142.628	1144.612	1142.628	1142.146	1145.068	1140.370	1145.068
62.5	1040.862	1040.969	1037.940	1040.704	1040.654	1040.704	1037.940	1040.969	1038.015	1040.969
65.0	939.162	937.286	933.061	936.489	936.273	936.489	933.061	937.286	932.356	937.286
67.5	834.059	832.291	828.348	829.751	833.179	829.751	828.348	832.291	828.523	832.291
70.0	725.735	727.080	725.495	725.022	727.810	725.022	725.495	727.080	724.557	727.080
72.5	621.919	623.654	622.243	623.529	625.106	623.529	622.243	623.654	622.450	623.654
75.0	521.696	521.771	520.252	522.643	523.398	522.643	520.252	521.771	521.838	521.771
77.5	423.375	421.773	419.997	423.790	424.487	423.790	419.997	421.773	422.536	421.773
80.0	325.584	325.850	324.082	326.082	326.987	326.082	324.082	325.850	324.248	325.850
82.5	230.026	232.549	230.176	231.537	233.421	231.537	230.176	232.549	230.566	232.549
85.0	138.087	143.681	140.536	142.918	143.532	142.918	140.536	143.681	142.370	143.681
87.5	56.888	60.250	57.228	59.378	60.324	59.378	57.228	60.250	58.498	60.250
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723	2581.723
2.5	2578.727	2578.553	2579.134	2578.553	2578.727	2577.698	2578.453
5.0	2570.028	2569.539	2570.112	2569.539	2570.028	2569.879	2569.937
7.5	2554.981	2554.234	2554.823	2554.234	2554.981	2556.151	2556.367
10.0	2534.662	2535.276	2534.729	2535.276	2534.662	2534.679	2534.405
12.5	2508.791	2507.388	2508.625	2507.388	2508.791	2509.356	2508.011
15.0	2476.604	2476.861	2476.919	2476.861	2476.604	2479.061	2476.172
17.5	2441.179	2439.113	2439.652	2439.113	2441.179	2440.922	2437.810
20.0	2397.579	2397.521	2398.194	2397.521	2397.579	2397.812	2396.575
22.5	2349.971	2349.398	2351.232	2349.398	2349.971	2351.315	2349.522
25.0	2296.494	2295.747	2297.772	2295.747	2296.494	2297.390	2294.776
27.5	2239.772	2238.693	2241.465	2238.693	2239.772	2240.062	2238.610
30.0	2178.874	2176.700	2180.128	2176.700	2178.874	2179.148	2173.156
32.5	2110.366	2110.424	2115.131	2110.424	2110.366	2111.744	2105.262
35.0	2039.584	2041.227	2043.543	2041.227	2039.584	2042.754	2034.853
37.5	1964.958	1964.411	1968.071	1964.411	1964.958	1966.104	1966.834
40.0	1885.918	1885.552	1888.557	1885.552	1885.918	1886.175	1892.906
42.5	1804.138	1804.105	1807.034	1804.105	1804.138	1806.337	1810.977
45.0	1718.631	1717.967	1722.208	1717.967	1718.631	1719.718	1723.072
47.5	1628.858	1629.107	1632.311	1629.107	1628.858	1630.469	1629.780
50.0	1535.558	1536.297	1538.862	1536.297	1535.558	1538.878	1537.990
52.5	1440.664	1440.473	1442.822	1440.473	1440.664	1443.694	1446.341
55.0	1343.521	1342.508	1344.517	1342.508	1343.521	1345.305	1349.638
57.5	1243.357	1243.830	1245.888	1243.830	1243.357	1245.647	1246.975
60.0	1142.146	1142.628	1144.612	1142.628	1142.146	1145.068	1143.101
62.5	1037.940	1040.704	1040.654	1040.704	1037.940	1040.969	1040.862
65.0	933.061	936.489	936.273	936.489	933.061	937.286	939.162
67.5	828.348	829.751	833.179	829.751	828.348	832.291	834.059
70.0	725.495	725.022	727.810	725.022	725.495	727.080	725.735
72.5	622.243	623.529	625.106	623.529	622.243	623.654	621.919
75.0	520.252	522.643	523.398	522.643	520.252	521.771	521.696
77.5	419.997	423.790	424.487	423.790	419.997	421.773	423.375
80.0	324.082	326.082	326.987	326.082	324.082	325.850	325.584

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CANDELA TABULATION - (Cont.)

82.5	230.176	231.537	233.421	231.537	230.176	232.549	230.026
85.0	140.536	142.918	143.532	142.918	140.536	143.681	138.087
87.5	57.228	59.378	60.324	59.378	57.228	60.250	56.888
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	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	943.25	N.A.	12.70
0-30	2001.95	N.A.	26.90
0-40	3278.43	N.A.	44.00
0-60	5805.36	N.A.	78.00
0-80	7283.09	N.A.	97.80
0-90	7445.08	N.A.	100.00
10-90	7200.89	N.A.	96.70
20-40	2335.18	N.A.	31.40
20-50	3660.92	N.A.	49.20
40-70	3452.61	N.A.	46.40
60-80	1477.73	N.A.	19.80
70-80	552.04	N.A.	7.40
80-90	161.99	N.A.	2.20
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	7445.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	244.19
10-20	699.06
20-30	1058.71
30-40	1276.48
40-50	1325.73
50-60	1201.19
60-70	925.69
70-80	552.04
80-90	161.99
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

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	15.9	17.5	16.2	17.8	18.1	UGR Viewed Endwise			
	3H	17.7	19.2	18.1	19.6	19.9	15.9	17.5	16.2	17.8
	4H	18.5	19.9	18.8	20.2	20.6	17.7	19.2	18.1	19.5
	6H	19.0	20.3	19.4	20.7	21.1	18.4	19.9	18.8	20.2
	8H	19.2	20.4	19.6	20.8	21.2	19.0	20.3	19.4	20.7
	12H	19.3	20.5	19.7	20.9	21.3	19.2	20.5	19.6	20.8

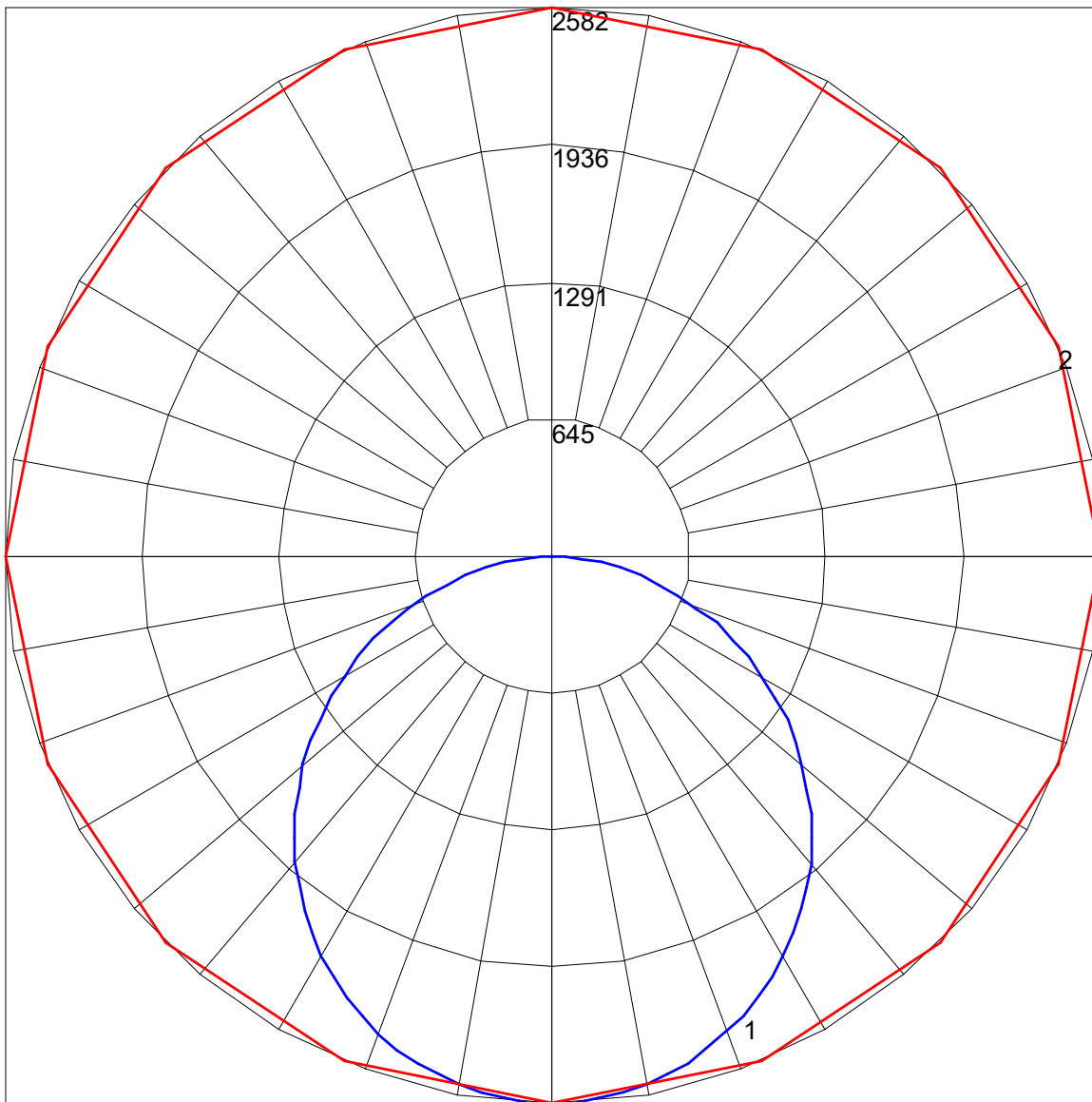
4H	2H	16.5	17.9	16.9	18.3	18.6	19.3	20.5	19.7	20.9
	3H	18.6	19.8	19.0	20.2	20.6	16.5	17.9	16.9	18.3
	4H	19.5	20.5	19.9	20.9	21.4	18.6	19.8	19.0	20.2
	6H	20.1	21.1	20.6	21.5	22.0	19.5	20.5	19.9	20.9
	8H	20.4	21.3	20.9	21.7	22.2	20.1	21.1	20.6	21.5
	12H	20.6	21.4	21.1	21.8	22.3	20.4	21.3	20.9	21.7

8H	4H	19.8	20.7	20.3	21.1	21.6	20.6	21.4	21.1	21.8
	6H	20.6	21.4	21.1	21.8	22.3	19.8	20.7	20.3	21.1
	8H	20.9	21.6	21.5	22.1	22.6	20.6	21.4	21.1	21.8
	12H	21.2	21.8	21.7	22.3	22.8	20.9	21.6	21.5	22.1

12H	4H	19.8	20.6	20.3	21.1	21.6	21.2	21.8	21.7	22.3
	6H	20.7	21.4	21.2	21.8	22.4	19.8	20.6	20.3	21.1
	8H	21.1	21.7	21.6	22.2	22.7	20.7	21.4	21.2	21.8

Maximum UGR = 22.8

POLAR GRAPH



Maximum Candela = 2581.723 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)