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IES INDOOR REPORT PHOTOMETRIC FILENAME : CLD-7564W.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LM-79-08
[TESTLAB] Orb Optronix, Inc.
[ISSUE DATE] 07-19-2019
[MANUFAC] Justice Design
[LUMINAIRE] CLD-7564W-MBLK
[TOTAL LUMINAIRE LUMENS] 416.4
[ABSOLUTE LUMENS] 416.402358891872

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	416
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	21
Total Luminaire Watts	19.58
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.29 ft
Luminous Width (90-270)	0.54 ft
Luminous Height	1.50 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	950	783	588
55	1007	821	619
65	1043	845	638
75	1080	872	658
85	1140	912	692

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLD-7564W.IES

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	5.950	5.950	5.950	5.950	5.950	5.950	5.950	5.950	5.950	5.950
2.5	8.000	8.370	7.940	7.010	6.320	5.800	5.930	5.390	5.460	5.310
5.0	10.630	11.050	10.310	8.630	7.160	6.320	6.340	5.570	5.410	5.350
7.5	13.610	14.120	12.960	10.420	7.980	6.990	6.600	5.660	5.350	5.420
10.0	16.970	17.320	15.650	12.340	9.030	7.740	7.000	5.740	5.300	5.580
12.5	20.170	20.510	18.520	14.350	10.070	8.530	7.410	5.790	5.220	5.600
15.0	23.370	23.760	21.270	16.360	11.130	9.340	7.850	5.830	5.100	5.720
17.5	26.830	27.110	24.130	18.370	12.210	10.200	8.160	5.830	5.000	5.740
20.0	30.240	30.560	27.150	20.470	13.340	11.020	8.610	5.840	4.780	5.730
22.5	33.590	34.000	30.090	22.570	14.420	11.880	9.100	5.920	4.680	5.710
25.0	36.870	37.280	33.010	24.710	15.460	12.730	9.370	6.010	4.470	5.760
27.5	40.070	40.450	35.800	26.590	16.530	13.530	9.730	6.090	4.350	5.820
30.0	43.140	43.530	38.300	28.540	17.510	14.310	10.140	6.140	4.050	5.870
32.5	45.960	46.510	40.940	30.320	18.390	15.000	10.310	6.150	3.850	5.790
35.0	48.790	49.410	43.310	32.060	19.280	15.680	10.580	6.180	3.650	5.830
37.5	51.720	52.460	45.800	33.770	20.210	16.390	10.850	6.180	3.460	5.820
40.0	54.660	55.520	48.310	35.680	21.050	17.050	11.080	6.190	3.130	5.880
42.5	57.570	58.660	50.850	37.380	21.970	17.780	11.190	6.230	2.960	5.830
45.0	60.400	61.680	53.360	39.150	22.860	18.480	11.520	6.240	2.730	5.820
47.5	63.090	64.540	55.600	40.710	23.650	19.120	11.790	6.320	2.610	5.840
50.0	65.580	67.200	57.740	42.220	24.410	19.640	12.060	6.320	2.380	5.830
52.5	68.170	70.060	59.840	43.600	25.130	20.250	12.320	6.450	2.200	5.870
55.0	70.560	72.790	61.900	44.960	25.700	20.830	12.550	6.460	2.050	5.840
57.5	72.660	75.220	63.750	46.170	26.320	21.260	12.810	6.480	1.840	5.870
60.0	74.550	77.360	65.360	47.170	26.740	21.640	12.990	6.450	1.680	5.880
62.5	76.120	79.160	66.660	48.070	27.070	21.900	13.080	6.500	1.600	5.870
65.0	77.600	80.730	67.920	48.710	27.330	22.070	13.220	6.510	1.560	5.950
67.5	78.900	82.230	68.860	49.280	27.480	22.220	13.310	6.610	1.520	5.910
70.0	80.190	83.770	69.930	49.960	27.640	22.320	13.440	6.680	1.420	6.010
72.5	81.400	84.750	71.040	50.550	27.990	22.540	13.660	6.780	1.390	6.050
75.0	82.650	84.450	72.200	51.160	28.210	22.790	13.930	6.900	1.400	6.090
77.5	83.940	85.210	73.140	51.790	28.410	23.110	14.150	6.980	1.330	6.180
80.0	85.200	86.140	74.170	52.260	28.640	23.250	14.240	6.930	1.240	6.230
82.5	86.270	86.980	74.880	52.560	28.750	23.410	14.280	6.900	1.080	6.140
85.0	86.990	87.540	75.510	52.890	28.750	23.540	14.280	6.800	0.870	6.100
87.5	87.430	87.890	75.950	52.930	28.710	23.450	14.240	6.830	0.850	6.050
90.0	87.520	87.690	75.910	52.770	28.550	23.370	14.150	6.810	0.850	6.100
92.5	87.390	87.450	75.680	52.590	28.540	23.330	14.010	6.720	0.870	6.100
95.0	87.030	86.800	75.370	52.360	28.450	23.220	14.060	6.820	0.980	6.220
97.5	86.360	86.280	74.830	51.950	28.300	23.020	13.870	6.720	0.950	6.060
100.0	85.550	85.460	74.340	51.590	28.100	22.790	13.740	6.580	0.890	5.930
102.5	84.700	84.750	73.710	51.220	27.840	22.550	13.470	6.450	0.760	5.840
105.0	83.810	83.700	72.900	50.810	27.600	22.310	13.280	6.270	0.750	5.700
107.5	82.680	82.780	71.960	50.190	27.320	22.040	13.030	6.270	0.770	5.610
110.0	81.290	81.650	70.790	49.610	27.050	21.730	12.790	6.330	0.810	5.480
112.5	79.680	80.350	69.690	48.990	26.620	21.420	12.480	6.230	0.790	5.340
115.0	77.850	78.930	69.120	48.250	26.210	21.070	12.180	6.000	0.740	5.260
117.5	76.050	77.400	68.630	47.470	25.800	20.660	11.850	5.880	0.720	5.120
120.0	74.200	76.070	67.940	46.750	25.400	20.220	11.680	5.720	0.770	4.990
122.5	72.960	75.310	66.970	45.890	24.940	19.820	11.230	5.570	0.790	4.900
125.0	71.870	74.430	65.060	44.790	24.590	19.290	10.910	5.390	0.880	4.760
127.5	70.240	73.050	62.580	43.370	24.100	18.750	10.560	5.210	0.830	4.670
130.0	68.090	71.030	59.900	41.610	23.450	18.170	10.180	4.940	0.890	4.540
132.5	65.500	68.490	57.350	39.660	22.610	17.500	9.840	4.780	0.890	4.400

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLD-7564W.IES

CANDELA TABULATION - (Cont.)

135.0	62.400	65.320	54.900	37.790	21.740	16.750	9.430	4.680	0.920	4.270
137.5	59.300	62.280	52.190	35.950	20.800	16.030	8.980	4.500	1.050	4.140
140.0	56.060	59.340	50.730	34.010	19.820	15.320	8.600	4.290	1.140	4.050
142.5	52.930	56.270	47.800	32.040	18.800	14.560	8.190	4.180	1.150	3.870
145.0	49.600	52.800	45.190	29.810	17.760	13.800	7.800	3.980	1.190	3.740
147.5	45.960	49.020	42.370	27.540	16.670	12.870	7.230	3.600	1.290	3.640
150.0	42.230	45.350	39.360	25.240	15.480	11.890	6.540	3.320	1.040	3.330
152.5	38.420	41.600	36.140	22.890	13.880	10.730	6.190	2.980	1.040	2.970
155.0	33.690	35.200	32.680	20.170	12.830	9.920	5.440	2.540	0.900	2.620
157.5	31.050	33.680	28.310	18.150	11.650	8.800	4.880	2.270	0.650	2.260
160.0	27.160	29.480	26.200	15.560	10.060	7.550	4.170	1.790	0.490	1.990
162.5	23.220	25.270	22.490	12.840	8.370	6.440	3.580	1.420	0.400	1.620
165.0	19.410	21.260	18.680	10.010	6.940	5.360	2.720	1.050	0.390	1.050
167.5	15.460	17.010	15.080	7.490	5.550	4.030	1.840	0.650	0.440	0.790
170.0	12.160	13.350	11.450	5.100	3.930	2.820	0.960	0.480	0.370	0.650
172.5	7.600	8.630	5.790	3.030	2.240	1.440	0.500	0.400	0.330	0.490
175.0	3.270	3.880	2.900	1.460	0.940	0.610	0.300	0.460	0.440	0.540
177.5	0.600	1.110	1.000	0.520	0.320	0.350	0.430	0.450	0.440	0.450
180.0	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495

Vert. Angles **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	5.950	5.950	5.950	5.950	5.950	5.950	5.950
2.5	5.570	5.830	6.420	6.820	7.610	7.130	7.500
5.0	5.720	6.540	7.240	8.300	9.940	9.490	10.040
7.5	6.040	7.240	8.070	9.960	12.500	12.340	13.030
10.0	6.390	7.740	9.110	11.860	15.220	15.490	16.140
12.5	6.710	8.350	10.160	13.640	18.120	18.810	19.410
15.0	7.110	9.070	11.250	15.560	20.800	22.120	22.650
17.5	7.420	9.920	12.290	17.500	23.580	25.510	25.910
20.0	7.780	10.680	13.440	19.340	26.560	28.990	29.230
22.5	8.220	11.470	14.480	21.240	29.200	32.430	32.610
25.0	8.580	12.220	15.530	23.160	31.970	35.770	35.850
27.5	8.900	12.990	16.560	24.990	34.680	39.080	39.010
30.0	9.250	13.760	17.600	26.820	37.260	42.250	42.070
32.5	9.610	14.530	18.610	28.610	39.810	45.170	44.850
35.0	9.970	15.260	19.550	30.340	42.250	48.100	47.860
37.5	10.190	15.800	20.560	32.090	44.620	51.040	50.640
40.0	10.640	16.600	21.520	33.830	47.050	53.990	53.580
42.5	10.860	17.320	22.470	35.710	49.670	57.000	56.530
45.0	11.170	18.030	23.450	37.530	52.070	59.950	59.460
47.5	11.570	18.790	24.250	39.290	54.420	62.700	62.140
50.0	11.800	19.410	25.060	41.020	56.600	65.360	64.690
52.5	12.110	20.030	25.840	42.600	58.700	67.900	67.200
55.0	12.380	20.630	26.510	44.160	60.750	70.420	69.630
57.5	12.550	21.190	27.140	45.650	62.600	72.780	71.920
60.0	12.730	21.700	27.600	46.960	64.210	74.800	73.930
62.5	12.860	22.100	28.010	48.030	65.580	76.480	75.660
65.0	13.000	22.420	28.340	49.070	66.830	78.060	77.160
67.5	13.040	22.710	28.560	49.880	67.980	79.390	78.500
70.0	13.170	23.000	28.870	50.600	69.050	80.770	79.750
72.5	13.360	23.260	29.180	51.400	70.130	82.010	81.210
75.0	13.540	23.530	29.540	52.070	71.150	83.280	82.510
77.5	13.710	23.840	30.150	52.870	72.220	84.590	83.850
80.0	13.940	24.230	30.670	53.460	73.390	85.980	85.070

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLD-7564W.IES**

CANDELA TABULATION - (Cont.)

82.5	14.030	24.530	31.060	53.960	74.240	87.120	86.110
85.0	14.110	24.730	31.260	54.280	74.850	88.010	87.020
87.5	14.020	24.830	31.310	54.330	75.210	88.590	87.570
90.0	14.150	24.780	31.330	54.200	75.430	88.830	87.820
92.5	14.060	24.670	31.210	53.890	75.200	88.750	87.670
95.0	13.970	24.540	31.210	53.440	74.860	88.410	87.120
97.5	13.870	24.370	30.990	52.870	74.340	87.850	86.470
100.0	13.730	24.080	30.650	52.200	73.750	87.200	85.720
102.5	13.490	23.730	30.280	51.440	72.860	86.420	84.970
105.0	13.150	23.330	29.960	50.590	72.040	85.410	84.040
107.5	12.940	22.870	29.450	49.740	71.130	84.320	82.790
110.0	12.700	22.590	29.040	48.850	69.940	82.940	81.350
112.5	12.470	22.140	28.420	47.780	68.540	81.300	79.760
115.0	12.120	21.660	27.890	46.890	67.610	79.610	78.020
117.5	11.850	21.060	27.260	45.810	66.960	77.880	76.150
120.0	11.540	20.580	26.640	44.880	66.120	76.220	74.260
122.5	11.280	20.090	25.970	43.900	65.110	75.070	72.800
125.0	11.000	19.560	25.470	42.820	63.200	73.680	71.610
127.5	10.730	18.960	24.890	41.330	60.810	71.910	69.970
130.0	10.400	18.230	24.100	39.640	58.200	69.670	68.070
132.5	10.060	17.610	23.280	37.930	55.750	66.740	65.640
135.0	9.620	16.970	22.380	36.240	53.330	63.490	62.560
137.5	9.300	16.250	21.350	34.540	50.800	60.290	59.350
140.0	8.970	15.560	20.430	32.800	47.780	57.210	56.270
142.5	8.590	14.770	19.390	32.240	44.870	54.090	53.150
145.0	8.180	13.960	18.420	30.640	42.070	50.620	50.070
147.5	7.520	13.260	17.390	28.400	38.980	46.940	46.370
150.0	7.150	12.110	16.350	26.120	35.840	43.330	42.750
152.5	6.550	11.410	14.830	24.060	32.940	39.310	39.190
155.0	5.860	10.340	13.870	21.300	28.700	35.270	34.350
157.5	5.220	9.210	12.560	19.610	26.370	31.990	31.720
160.0	4.570	8.010	11.030	17.170	22.960	28.250	27.790
162.5	4.010	6.890	9.520	14.560	19.550	24.420	24.000
165.0	3.170	5.870	7.960	11.860	16.220	20.290	20.200
167.5	2.440	4.800	6.250	9.260	12.970	16.600	16.190
170.0	1.520	3.560	5.010	6.980	8.910	13.190	12.930
172.5	0.840	2.130	3.410	4.950	4.900	8.350	8.390
175.0	0.710	0.980	1.730	3.120	2.370	4.060	4.050
177.5	0.680	0.690	0.770	1.570	1.070	1.350	0.840
180.0	0.495	0.495	0.495	0.495	0.495	0.495	0.495

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PHOTOMETRIC FILENAME : CLD-7564W.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	4.73	N.A.	1.10
0-30	13.83	N.A.	3.30
0-40	29.59	N.A.	7.10
0-60	84.29	N.A.	20.20
0-80	164.57	N.A.	39.50
0-90	210.19	N.A.	50.50
10-90	209.36	N.A.	50.30
20-40	24.86	N.A.	6.00
20-50	48.30	N.A.	11.60
40-70	92.44	N.A.	22.20
60-80	80.29	N.A.	19.30
70-80	42.54	N.A.	10.20
80-90	45.61	N.A.	11.00
90-110	87.85	N.A.	21.10
90-120	125.18	N.A.	30.10
90-130	156.34	N.A.	37.60
90-150	194.94	N.A.	46.80
90-180	206.13	N.A.	49.50
110-180	118.28	N.A.	28.40
0-180	416.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	0.82
10-20	3.91
20-30	9.10
30-40	15.76
40-50	23.44
50-60	31.26
60-70	37.75
70-80	42.54
80-90	45.61
90-100	45.45
100-110	42.40
110-120	37.33
120-130	31.16
130-140	23.29
140-150	15.31
150-160	8.06
160-170	2.83
170-180	0.29

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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	
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	92	86	80	74	84	78	73	68	65	61	57	53	49	47	41	39	37	31
2	82	72	63	56	74	66	58	52	54	48	43	43	39	35	33	30	27	22
3	73	61	52	44	67	56	48	41	46	39	34	36	31	27	28	24	20	16
4	66	53	43	36	60	48	40	33	40	33	27	31	26	22	24	20	16	12
5	60	47	37	30	55	42	34	27	35	28	22	27	22	18	21	17	13	10
6	55	41	32	25	50	38	29	23	31	24	19	24	19	15	18	14	11	8
7	51	37	28	21	46	34	25	20	28	21	16	22	17	13	17	12	9	6
8	47	33	24	18	43	30	22	17	25	18	14	20	15	11	15	11	8	5
9	44	30	22	16	40	27	20	15	23	16	12	18	13	9	14	10	7	5
10	41	27	19	14	37	25	18	13	21	15	11	17	12	8	13	9	6	4

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UGR TABLE - CORRECTED

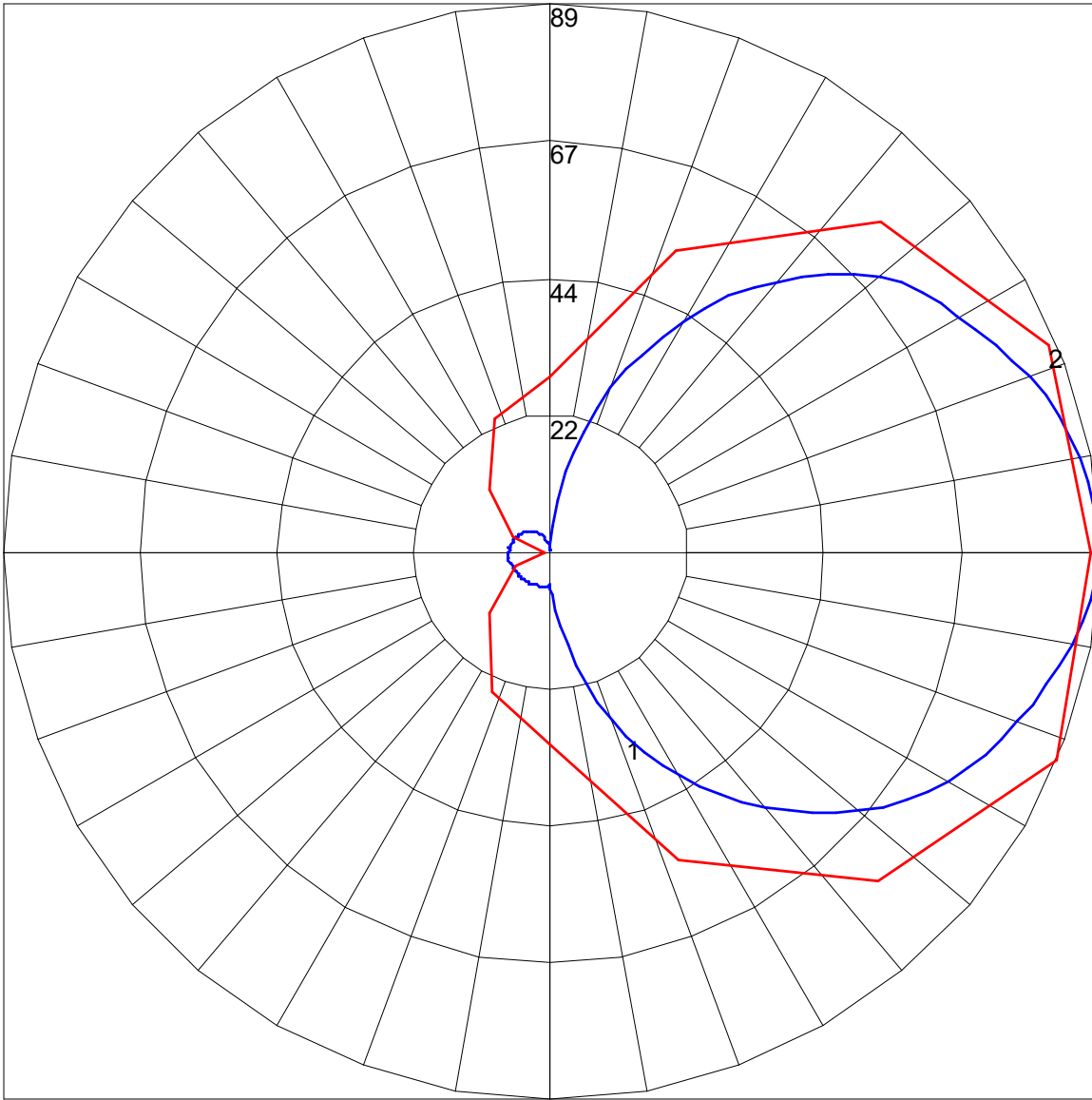
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	11.5	12.6	12.5	13.5	14.8	5.2	6.3	6.1	7.2	8.5
	3H	14.8	15.7	15.7	16.7	18.0	7.7	8.7	8.6	9.6	10.9
	4H	16.3	17.3	17.3	18.2	19.5	8.9	9.8	9.8	10.8	12.1
	6H	17.9	18.8	18.9	19.8	21.1	10.1	10.9	11.0	11.9	13.2
	8H	18.7	19.5	19.6	20.5	21.8	10.6	11.5	11.6	12.5	13.7
	12H	19.4	20.2	20.4	21.2	22.5	11.2	12.0	12.1	13.0	14.3
4H	2H	12.0	12.9	12.9	13.9	15.2	6.9	7.8	7.8	8.8	10.1
	3H	15.5	16.3	16.4	17.3	18.6	9.5	10.4	10.5	11.4	12.6
	4H	17.2	18.0	18.2	19.0	20.3	10.8	11.6	11.8	12.6	13.9
	6H	19.0	19.7	20.0	20.7	22.0	12.1	12.8	13.1	13.8	15.1
	8H	19.9	20.6	20.9	21.6	22.9	12.7	13.3	13.7	14.3	15.7
	12H	20.8	21.4	21.8	22.4	23.7	13.3	13.9	14.3	14.9	16.2
8H	4H	17.6	18.2	18.5	19.2	20.5	12.0	12.7	13.0	13.7	15.0
	6H	19.6	20.1	20.6	21.2	22.5	13.5	14.1	14.5	15.1	16.4
	8H	20.6	21.1	21.6	22.2	23.5	14.2	14.8	15.2	15.8	17.1
	12H	21.7	22.2	22.7	23.2	24.6	14.9	15.4	15.9	16.4	17.8
12H	4H	17.6	18.2	18.6	19.2	20.5	12.3	12.9	13.3	14.0	15.3
	6H	19.7	20.2	20.7	21.2	22.6	14.0	14.5	15.0	15.5	16.9
	8H	20.8	21.3	21.8	22.3	23.7	14.8	15.3	15.8	16.3	17.7

Maximum UGR = 24.6

POLAR GRAPH



Maximum Candela = 88.83 Located At Horizontal Angle = 337.5, Vertical Angle = 90
1 - Vertical Plane Through Horizontal Angles (337.5 - 157.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (90) (Through Max. Cd.)