



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_39_135-13_28_42-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.15

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 15-MAR-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS INC. - CARTHAGE, MO.

[LUMCAT] 8CRDI-L25-9DWU-L25-9DWD-xxx-DIM-UNV-ON-CSU-RN-WHD-WM

[LUMINAIRE] 8" DIA. ALUMINUM CYLINDER

[LAMP] Two white LEDs, one up/ one down

[BALLAST]

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[_ CONVERT] Photometric web converted from original test data

[_ CONVERT] Luminaire test position and photometric web converted from original test data for upright orientation and clear glass

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4554
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	75.4
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	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	6740	6740	6740
55	4409	4409	4409
65	3000	3000	3000
75	1938	1938	1938
85	1556	1556	1556

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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	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553
2.5	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544
5.0	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940
7.5	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536
10.0	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506
12.5	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778
15.0	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181
17.5	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689
20.0	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013
22.5	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757
25.0	809.312	809.312	809.312	809.312	809.312	809.312	809.312	809.312	809.312	809.312
27.5	560.379	560.379	560.379	560.379	560.379	560.379	560.379	560.379	560.379	560.379
30.0	395.248	395.248	395.248	395.248	395.248	395.248	395.248	395.248	395.248	395.248
32.5	286.317	286.317	286.317	286.317	286.317	286.317	286.317	286.317	286.317	286.317
35.0	213.159	213.159	213.159	213.159	213.159	213.159	213.159	213.159	213.159	213.159
37.5	163.150	163.150	163.150	163.150	163.150	163.150	163.150	163.150	163.150	163.150
40.0	128.861	128.861	128.861	128.861	128.861	128.861	128.861	128.861	128.861	128.861
42.5	104.723	104.723	104.723	104.723	104.723	104.723	104.723	104.723	104.723	104.723
45.0	87.021	87.021	87.021	87.021	87.021	87.021	87.021	87.021	87.021	87.021
47.5	73.281	73.281	73.281	73.281	73.281	73.281	73.281	73.281	73.281	73.281
50.0	62.388	62.388	62.388	62.388	62.388	62.388	62.388	62.388	62.388	62.388
52.5	53.476	53.476	53.476	53.476	53.476	53.476	53.476	53.476	53.476	53.476
55.0	46.172	46.172	46.172	46.172	46.172	46.172	46.172	46.172	46.172	46.172
57.5	39.735	39.735	39.735	39.735	39.735	39.735	39.735	39.735	39.735	39.735
60.0	33.917	33.917	33.917	33.917	33.917	33.917	33.917	33.917	33.917	33.917
62.5	28.347	28.347	28.347	28.347	28.347	28.347	28.347	28.347	28.347	28.347
65.0	23.148	23.148	23.148	23.148	23.148	23.148	23.148	23.148	23.148	23.148
67.5	18.692	18.692	18.692	18.692	18.692	18.692	18.692	18.692	18.692	18.692
70.0	14.854	14.854	14.854	14.854	14.854	14.854	14.854	14.854	14.854	14.854
72.5	11.636	11.636	11.636	11.636	11.636	11.636	11.636	11.636	11.636	11.636
75.0	9.160	9.160	9.160	9.160	9.160	9.160	9.160	9.160	9.160	9.160
77.5	7.180	7.180	7.180	7.180	7.180	7.180	7.180	7.180	7.180	7.180
80.0	5.570	5.570	5.570	5.570	5.570	5.570	5.570	5.570	5.570	5.570
82.5	3.961	3.961	3.961	3.961	3.961	3.961	3.961	3.961	3.961	3.961
85.0	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476
87.5	1.238	1.238	1.238	1.238	1.238	1.238	1.238	1.238	1.238	1.238
90.0	0.371	0.371	0.371	0.371	0.371	0.371	0.371	0.371	0.371	0.371
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	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
110.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
112.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
115.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
117.5	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
120.0	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
122.5	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336
125.0	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448
127.5	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560
130.0	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897
132.5	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121

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135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.924	6150.924	6150.924	6150.924	6150.924	6150.923	6150.923	6150.923	6150.923	6150.923
175.0	10931.768	10931.768	10931.768	10931.768	10931.768	10931.766	10931.766	10931.766	10931.766	10931.766
177.5	19272.364	19272.364	19272.364	19272.363	19272.363	19272.363	19272.362	19272.362	19272.362	19272.362
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

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	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553	8329.553
2.5	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544	8126.544
5.0	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940	7550.940
7.5	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536	6674.536
10.0	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506	5581.506
12.5	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778	4406.778
15.0	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181	3295.181
17.5	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689	2376.689
20.0	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013	1681.013
22.5	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757	1171.757
25.0	809.312	809.312	809.312	809.312	809.312	809.312	809.312
27.5	560.379	560.379	560.379	560.379	560.379	560.379	560.379
30.0	395.248	395.248	395.248	395.248	395.248	395.248	395.248
32.5	286.317	286.317	286.317	286.317	286.317	286.317	286.317
35.0	213.159	213.159	213.159	213.159	213.159	213.159	213.159
37.5	163.150	163.150	163.150	163.150	163.150	163.150	163.150
40.0	128.861	128.861	128.861	128.861	128.861	128.861	128.861
42.5	104.723	104.723	104.723	104.723	104.723	104.723	104.723
45.0	87.021	87.021	87.021	87.021	87.021	87.021	87.021
47.5	73.281	73.281	73.281	73.281	73.281	73.281	73.281
50.0	62.388	62.388	62.388	62.388	62.388	62.388	62.388
52.5	53.476	53.476	53.476	53.476	53.476	53.476	53.476
55.0	46.172	46.172	46.172	46.172	46.172	46.172	46.172
57.5	39.735	39.735	39.735	39.735	39.735	39.735	39.735
60.0	33.917	33.917	33.917	33.917	33.917	33.917	33.917
62.5	28.347	28.347	28.347	28.347	28.347	28.347	28.347
65.0	23.148	23.148	23.148	23.148	23.148	23.148	23.148
67.5	18.692	18.692	18.692	18.692	18.692	18.692	18.692
70.0	14.854	14.854	14.854	14.854	14.854	14.854	14.854
72.5	11.636	11.636	11.636	11.636	11.636	11.636	11.636
75.0	9.160	9.160	9.160	9.160	9.160	9.160	9.160
77.5	7.180	7.180	7.180	7.180	7.180	7.180	7.180
80.0	5.570	5.570	5.570	5.570	5.570	5.570	5.570

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82.5	3.961	3.961	3.961	3.961	3.961	3.961	3.961
85.0	2.476	2.476	2.476	2.476	2.476	2.476	2.476
87.5	1.238	1.238	1.238	1.238	1.238	1.238	1.238
90.0	0.371	0.371	0.371	0.371	0.371	0.371	0.371
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	1.112	1.112	1.112	1.112	1.112	1.112	1.112
110.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
112.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112
115.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
117.5	2.224	2.224	2.224	2.224	2.224	2.224	2.224
120.0	2.224	2.224	2.224	2.224	2.224	2.224	2.224
122.5	3.336	3.336	3.336	3.336	3.336	3.336	3.336
125.0	4.448	4.448	4.448	4.448	4.448	4.448	4.448
127.5	5.560	5.560	5.560	5.560	5.560	5.560	5.560
130.0	8.897	8.897	8.897	8.897	8.897	8.897	8.897
132.5	11.121	11.121	11.121	11.121	11.121	11.121	11.121
135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.923	6150.923	6150.924	6150.924	6150.924	6150.924	6150.924
175.0	10931.766	10931.766	10931.768	10931.768	10931.768	10931.768	10931.768
177.5	19272.362	19272.363	19272.363	19272.363	19272.364	19272.364	19272.364
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1571.91	N.A.	34.50
0-30	1969.03	N.A.	43.20
0-40	2111.08	N.A.	46.40
0-60	2222.04	N.A.	48.80
0-80	2255.45	N.A.	49.50
0-90	2258.35	N.A.	49.60
10-90	1600.77	N.A.	35.20
20-40	539.17	N.A.	11.80
20-50	608.31	N.A.	13.40
40-70	134.31	N.A.	2.90
60-80	33.41	N.A.	0.70
70-80	10.06	N.A.	0.20
80-90	2.90	N.A.	0.10
90-110	0.49	N.A.	0.00
90-120	1.99	N.A.	0.00
90-130	6.18	N.A.	0.10
90-150	217.58	N.A.	4.80
90-180	2295.49	N.A.	50.40
110-180	2295.00	N.A.	50.40
0-180	4553.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	657.57
10-20	914.34
20-30	397.12
30-40	142.05
40-50	69.14
50-60	41.82
60-70	23.35
70-80	10.06
80-90	2.90
90-100	0.05
100-110	0.43
110-120	1.51
120-130	4.19
130-140	11.58
140-150	199.82
150-160	542.61
160-170	668.82
170-180	866.47

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	100	97	94	92	93	90	88	86	77	75	74	65	64	63	53	53	52	47
2	94	89	84	80	87	83	79	76	71	69	67	61	59	58	51	50	49	45
3	89	82	76	72	82	76	72	68	67	63	61	58	55	54	49	48	47	43
4	83	75	70	65	78	71	66	62	62	59	56	55	52	50	47	46	44	41
5	79	70	64	60	74	66	61	57	59	55	52	52	49	47	45	44	42	39
6	75	66	59	55	70	62	57	53	56	52	49	49	47	45	44	42	40	38
7	71	62	56	51	66	59	53	50	53	49	46	47	44	42	42	40	39	37
8	67	58	52	48	63	55	50	47	50	46	43	45	42	40	41	39	37	35
9	64	55	49	45	61	53	47	44	48	44	41	43	41	39	39	37	36	34
10	62	52	47	43	58	50	45	42	46	42	39	42	39	37	38	36	35	33

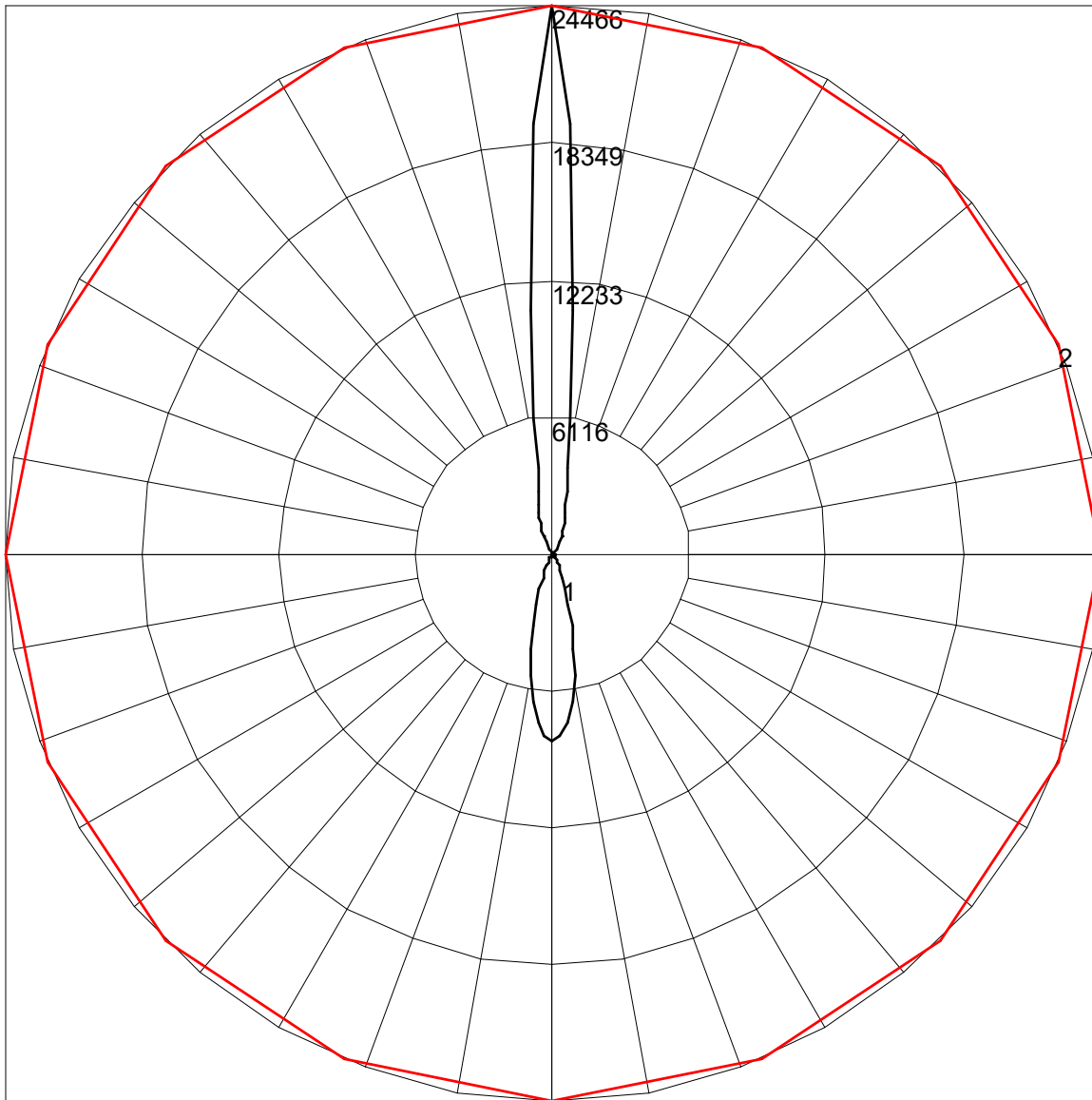
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_39_135-13_28_42-MERGED.IES

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	5.4	5.5	5.8	6.5	7.7	5.4	5.5	5.8	6.5	7.7
	3H	5.7	6.3	6.7	7.3	8.6	5.7	6.3	6.7	7.3	8.6
	4H	5.9	6.5	6.9	7.5	8.8	5.9	6.5	6.9	7.5	8.8
	6H	6.1	6.6	7.1	7.6	8.9	6.1	6.6	7.1	7.6	8.9
	8H	6.1	6.6	7.2	7.6	8.9	6.1	6.6	7.2	7.6	8.9
	12H	6.1	6.6	7.2	7.6	8.9	6.1	6.6	7.2	7.6	8.9
4H	2H	5.4	5.6	6.1	6.6	7.9	5.4	5.6	6.1	6.6	7.9
	3H	6.1	6.5	7.1	7.5	8.9	6.1	6.5	7.1	7.5	8.9
	4H	6.4	6.8	7.4	7.8	9.2	6.4	6.8	7.4	7.8	9.2
	6H	6.7	7.0	7.7	8.1	9.4	6.7	7.0	7.7	8.1	9.4
	8H	6.7	7.1	7.8	8.1	9.5	6.7	7.1	7.8	8.1	9.5
	12H	6.8	7.1	7.9	8.1	9.5	6.8	7.1	7.9	8.1	9.5
8H	4H	6.4	6.8	7.5	7.8	9.2	6.4	6.8	7.5	7.8	9.2
	6H	6.8	7.1	7.9	8.2	9.5	6.8	7.1	7.9	8.2	9.5
	8H	7.0	7.2	8.0	8.3	9.6	7.0	7.2	8.0	8.3	9.6
	12H	7.1	7.3	8.1	8.3	9.7	7.1	7.3	8.1	8.3	9.7
12H	4H	6.4	6.7	7.5	7.8	9.1	6.4	6.7	7.5	7.8	9.1
	6H	6.8	7.0	7.9	8.1	9.5	6.8	7.0	7.9	8.1	9.5
	8H	7.0	7.2	8.1	8.2	9.7	7.0	7.2	8.1	8.2	9.7

Maximum UGR = 9.7

POLAR GRAPH



Maximum Candela = 24465.761 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)