



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_39_135-11_54_56-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.04

[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-OM-CSD-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	4760
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	63
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	4433	4433	4433
55	1632	1632	1632
65	642	642	642
75	288	288	288
85	234	234	234

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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	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875
2.5	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571
5.0	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089
7.5	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611
10.0	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408
12.5	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557
15.0	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961
17.5	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687
20.0	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381
22.5	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049
25.0	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035
27.5	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942
30.0	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409
32.5	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958
35.0	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903
37.5	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675
40.0	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441
42.5	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887
45.0	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228
47.5	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345
50.0	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197
52.5	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031
55.0	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094
57.5	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387
60.0	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042
62.5	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689
65.0	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955
67.5	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592
70.0	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725
72.5	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982
75.0	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363
77.5	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991
80.0	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743
82.5	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495
85.0	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372
87.5	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248
90.0	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124
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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CANDELA TABULATION - (Cont.)

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. 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	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875
2.5	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571
5.0	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089
7.5	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611
10.0	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408
12.5	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557
15.0	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961
17.5	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687
20.0	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381
22.5	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049
25.0	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035
27.5	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942
30.0	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409
32.5	880.958	880.958	880.958	880.958	880.958	880.958	880.958
35.0	489.903	489.903	489.903	489.903	489.903	489.903	489.903
37.5	213.675	213.675	213.675	213.675	213.675	213.675	213.675
40.0	143.441	143.441	143.441	143.441	143.441	143.441	143.441
42.5	80.887	80.887	80.887	80.887	80.887	80.887	80.887
45.0	57.228	57.228	57.228	57.228	57.228	57.228	57.228
47.5	44.345	44.345	44.345	44.345	44.345	44.345	44.345
50.0	33.197	33.197	33.197	33.197	33.197	33.197	33.197
52.5	24.031	24.031	24.031	24.031	24.031	24.031	24.031
55.0	17.094	17.094	17.094	17.094	17.094	17.094	17.094
57.5	12.387	12.387	12.387	12.387	12.387	12.387	12.387
60.0	9.042	9.042	9.042	9.042	9.042	9.042	9.042
62.5	6.689	6.689	6.689	6.689	6.689	6.689	6.689
65.0	4.955	4.955	4.955	4.955	4.955	4.955	4.955
67.5	3.592	3.592	3.592	3.592	3.592	3.592	3.592
70.0	2.725	2.725	2.725	2.725	2.725	2.725	2.725
72.5	1.982	1.982	1.982	1.982	1.982	1.982	1.982
75.0	1.363	1.363	1.363	1.363	1.363	1.363	1.363
77.5	0.991	0.991	0.991	0.991	0.991	0.991	0.991
80.0	0.743	0.743	0.743	0.743	0.743	0.743	0.743

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82.5	0.495	0.495	0.495	0.495	0.495	0.495	0.495
85.0	0.372	0.372	0.372	0.372	0.372	0.372	0.372
87.5	0.248	0.248	0.248	0.248	0.248	0.248	0.248
90.0	0.124	0.124	0.124	0.124	0.124	0.124	0.124
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	1242.23	N.A.	26.10
0-30	2046.62	N.A.	43.00
0-40	2389.66	N.A.	50.20
0-60	2457.61	N.A.	51.60
0-80	2464.41	N.A.	51.80
0-90	2464.83	N.A.	51.80
10-90	2036.7	N.A.	42.80
20-40	1147.43	N.A.	24.10
20-50	1198.85	N.A.	25.20
40-70	73.15	N.A.	1.50
60-80	6.80	N.A.	0.10
70-80	1.60	N.A.	0.00
80-90	0.42	N.A.	0.00
90-110	0.45	N.A.	0.00
90-120	1.96	N.A.	0.00
90-130	6.15	N.A.	0.10
90-150	217.55	N.A.	4.60
90-180	2295.46	N.A.	48.20
110-180	2295.00	N.A.	48.20
0-180	4760.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	428.12
10-20	814.10
20-30	804.39
30-40	343.04
40-50	51.41
50-60	16.53
60-70	5.20
70-80	1.60
80-90	0.42
90-100	0.02
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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	101	98	95	92	93	91	88	86	78	76	75	66	65	64	55	55	54	49
2	95	89	84	81	88	83	79	76	72	69	67	62	60	59	53	51	51	46
3	89	82	76	72	82	76	72	68	67	64	61	58	56	54	50	49	47	44
4	83	75	69	64	78	71	65	61	62	59	56	55	52	50	48	46	44	41
5	78	69	63	59	73	66	60	56	58	54	51	52	49	46	45	43	42	39
6	74	64	58	54	69	61	56	52	55	51	47	49	46	43	43	41	40	37
7	70	60	54	49	65	57	52	48	51	47	44	46	43	41	41	39	37	35
8	66	56	50	46	62	54	48	44	48	44	41	44	41	38	39	37	35	33
9	63	53	47	43	59	50	45	41	46	42	39	42	38	36	38	35	34	32
10	59	50	44	40	56	48	42	39	43	39	37	40	36	34	36	34	32	30

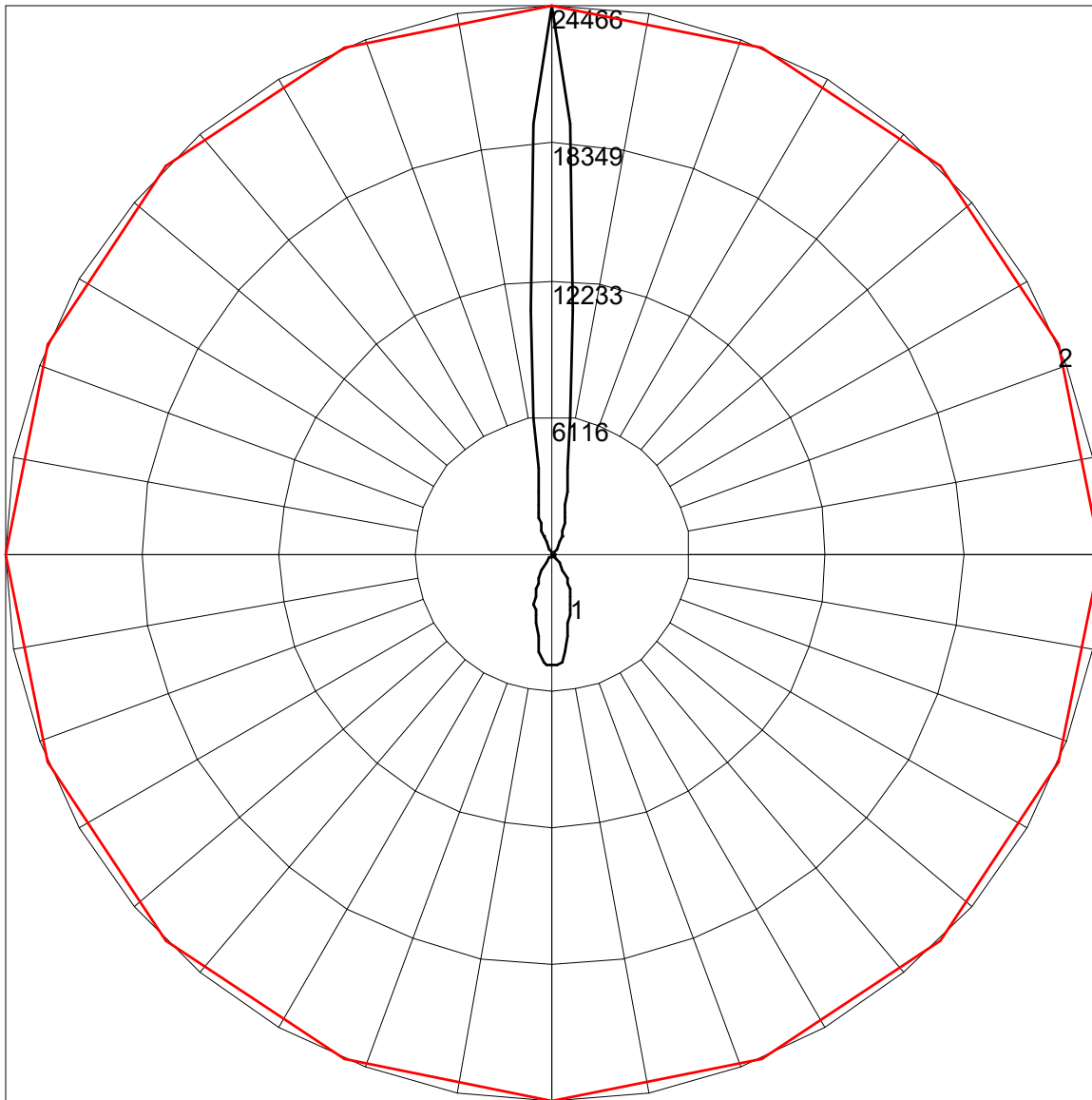
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_39_135-11_54_56-MERGED.IES

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	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	3H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	4H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	6H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	8H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	12H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
4H	2H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	3H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	4H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	6H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	8H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	12H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
8H	4H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	6H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	8H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	12H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
12H	4H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	6H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	8H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5

Maximum UGR = 5.5

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.)