



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_39_135-13_26_29-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 15-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-L25-9DWU-L25-9DWD-xxx-DIM-UNV-ON-CSU-RM-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	4531
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	7344	7344	7344
55	4938	4938	4938
65	3675	3675	3675
75	2538	2538	2538
85	2120	2120	2120

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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	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618
2.5	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410
5.0	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272
7.5	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201
10.0	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713
12.5	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817
15.0	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003
17.5	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215
20.0	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899
22.5	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010
25.0	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287
27.5	758.364	758.364	758.364	758.364	758.364	758.364	758.364	758.364	758.364	758.364
30.0	544.883	544.883	544.883	544.883	544.883	544.883	544.883	544.883	544.883	544.883
32.5	391.361	391.361	391.361	391.361	391.361	391.361	391.361	391.361	391.361	391.361
35.0	280.436	280.436	280.436	280.436	280.436	280.436	280.436	280.436	280.436	280.436
37.5	202.613	202.613	202.613	202.613	202.613	202.613	202.613	202.613	202.613	202.613
40.0	150.648	150.648	150.648	150.648	150.648	150.648	150.648	150.648	150.648	150.648
42.5	117.171	117.171	117.171	117.171	117.171	117.171	117.171	117.171	117.171	117.171
45.0	94.811	94.811	94.811	94.811	94.811	94.811	94.811	94.811	94.811	94.811
47.5	79.322	79.322	79.322	79.322	79.322	79.322	79.322	79.322	79.322	79.322
50.0	67.954	67.954	67.954	67.954	67.954	67.954	67.954	67.954	67.954	67.954
52.5	59.085	59.085	59.085	59.085	59.085	59.085	59.085	59.085	59.085	59.085
55.0	51.715	51.715	51.715	51.715	51.715	51.715	51.715	51.715	51.715	51.715
57.5	45.220	45.220	45.220	45.220	45.220	45.220	45.220	45.220	45.220	45.220
60.0	39.224	39.224	39.224	39.224	39.224	39.224	39.224	39.224	39.224	39.224
62.5	33.602	33.602	33.602	33.602	33.602	33.602	33.602	33.602	33.602	33.602
65.0	28.356	28.356	28.356	28.356	28.356	28.356	28.356	28.356	28.356	28.356
67.5	23.484	23.484	23.484	23.484	23.484	23.484	23.484	23.484	23.484	23.484
70.0	18.987	18.987	18.987	18.987	18.987	18.987	18.987	18.987	18.987	18.987
72.5	14.990	14.990	14.990	14.990	14.990	14.990	14.990	14.990	14.990	14.990
75.0	11.992	11.992	11.992	11.992	11.992	11.992	11.992	11.992	11.992	11.992
77.5	9.494	9.494	9.494	9.494	9.494	9.494	9.494	9.494	9.494	9.494
80.0	7.370	7.370	7.370	7.370	7.370	7.370	7.370	7.370	7.370	7.370
82.5	5.371	5.371	5.371	5.371	5.371	5.371	5.371	5.371	5.371	5.371
85.0	3.373	3.373	3.373	3.373	3.373	3.373	3.373	3.373	3.373	3.373
87.5	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.624	1.624
90.0	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
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. 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	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618	5387.618
2.5	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410	5326.410
5.0	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272	5160.272
7.5	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201	4894.201
10.0	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713	4505.713
12.5	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817	3979.817
15.0	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003	3334.003
17.5	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215	2648.215
20.0	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899	2004.899
22.5	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010	1469.010
25.0	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287	1057.287
27.5	758.364	758.364	758.364	758.364	758.364	758.364	758.364
30.0	544.883	544.883	544.883	544.883	544.883	544.883	544.883
32.5	391.361	391.361	391.361	391.361	391.361	391.361	391.361
35.0	280.436	280.436	280.436	280.436	280.436	280.436	280.436
37.5	202.613	202.613	202.613	202.613	202.613	202.613	202.613
40.0	150.648	150.648	150.648	150.648	150.648	150.648	150.648
42.5	117.171	117.171	117.171	117.171	117.171	117.171	117.171
45.0	94.811	94.811	94.811	94.811	94.811	94.811	94.811
47.5	79.322	79.322	79.322	79.322	79.322	79.322	79.322
50.0	67.954	67.954	67.954	67.954	67.954	67.954	67.954
52.5	59.085	59.085	59.085	59.085	59.085	59.085	59.085
55.0	51.715	51.715	51.715	51.715	51.715	51.715	51.715
57.5	45.220	45.220	45.220	45.220	45.220	45.220	45.220
60.0	39.224	39.224	39.224	39.224	39.224	39.224	39.224
62.5	33.602	33.602	33.602	33.602	33.602	33.602	33.602
65.0	28.356	28.356	28.356	28.356	28.356	28.356	28.356
67.5	23.484	23.484	23.484	23.484	23.484	23.484	23.484
70.0	18.987	18.987	18.987	18.987	18.987	18.987	18.987
72.5	14.990	14.990	14.990	14.990	14.990	14.990	14.990
75.0	11.992	11.992	11.992	11.992	11.992	11.992	11.992
77.5	9.494	9.494	9.494	9.494	9.494	9.494	9.494
80.0	7.370	7.370	7.370	7.370	7.370	7.370	7.370

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CANDELA TABULATION - (Cont.)

82.5	5.371	5.371	5.371	5.371	5.371	5.371	5.371
85.0	3.373	3.373	3.373	3.373	3.373	3.373	3.373
87.5	1.624	1.624	1.624	1.624	1.624	1.624	1.624
90.0	0.500	0.500	0.500	0.500	0.500	0.500	0.500
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	1371.72	N.A.	30.30
0-30	1879.75	N.A.	41.50
0-40	2066.94	N.A.	45.60
0-60	2190.42	N.A.	48.30
0-80	2231.81	N.A.	49.30
0-90	2235.7	N.A.	49.30
10-90	1763.62	N.A.	38.90
20-40	695.22	N.A.	15.30
20-50	771.93	N.A.	17.00
40-70	151.78	N.A.	3.30
60-80	41.39	N.A.	0.90
70-80	13.09	N.A.	0.30
80-90	3.89	N.A.	0.10
90-110	0.50	N.A.	0.00
90-120	2.01	N.A.	0.00
90-130	6.20	N.A.	0.10
90-150	217.60	N.A.	4.80
90-180	2295.51	N.A.	50.70
110-180	2295.00	N.A.	50.60
0-180	4531.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	472.08
10-20	899.64
20-30	508.03
30-40	187.19
40-50	76.71
50-60	46.77
60-70	28.30
70-80	13.09
80-90	3.89
90-100	0.07
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	49
1	100	97	94	91	92	90	87	85	76	75	73	64	63	62	53	52	52	47
2	94	88	84	80	87	82	78	75	71	68	66	60	58	57	50	49	48	44
3	88	81	75	71	82	75	71	67	66	62	59	56	54	52	48	47	45	42
4	83	74	68	64	77	70	65	61	61	57	54	53	51	49	46	44	43	40
5	78	69	63	58	72	65	59	55	57	53	50	50	48	45	44	42	41	38
6	73	64	58	53	69	60	55	51	54	50	47	48	45	43	42	40	38	36
7	69	60	54	49	65	57	51	47	51	47	44	45	42	40	40	38	37	34
8	66	56	50	46	62	53	48	44	48	44	41	43	40	38	39	36	35	33
9	63	53	47	43	59	50	45	41	46	42	39	41	38	36	37	35	33	32
10	60	50	44	40	56	48	43	39	43	39	37	39	36	34	36	34	32	30

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_39_135-13_26_29-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

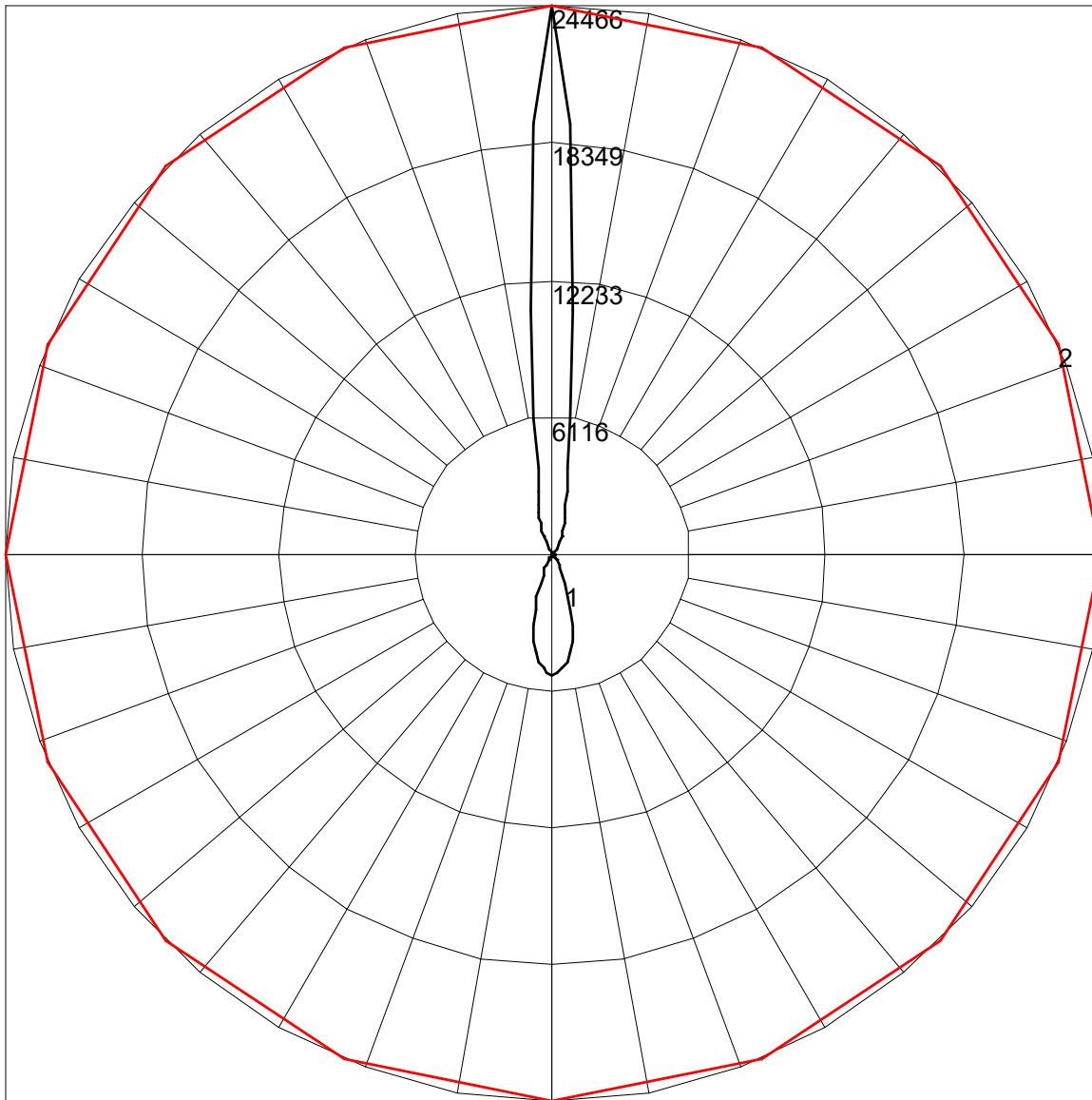
X=2H	Y=2H	5.8	6.4	6.8	7.4	8.7	5.8	6.4	6.8	7.4	8.7
	3H	6.8	7.4	7.9	8.4	9.7	6.8	7.4	7.9	8.4	9.7
	4H	7.2	7.7	8.2	8.7	10.0	7.2	7.7	8.2	8.7	10.0
	6H	7.4	7.9	8.4	8.9	10.2	7.4	7.9	8.4	8.9	10.2
	8H	7.5	7.9	8.5	9.0	10.3	7.5	7.9	8.5	9.0	10.3
	12H	7.5	8.0	8.5	9.0	10.3	7.5	8.0	8.5	9.0	10.3

UGR Viewed Endwise

4H	2H	6.1	6.6	7.1	7.6	8.9	6.1	6.6	7.1	7.6	8.9
	3H	7.3	7.8	8.3	8.8	10.1	7.3	7.8	8.3	8.8	10.1
	4H	7.7	8.2	8.8	9.2	10.5	7.7	8.2	8.8	9.2	10.5
	6H	8.1	8.4	9.1	9.5	10.8	8.1	8.4	9.1	9.5	10.8
	8H	8.2	8.5	9.2	9.6	10.9	8.2	8.5	9.2	9.6	10.9
	12H	8.2	8.6	9.3	9.6	11.0	8.2	8.6	9.3	9.6	11.0
8H	4H	7.8	8.2	8.9	9.2	10.6	7.8	8.2	8.9	9.2	10.6
	6H	8.3	8.6	9.3	9.6	11.0	8.3	8.6	9.3	9.6	11.0
	8H	8.5	8.7	9.5	9.8	11.1	8.5	8.7	9.5	9.8	11.1
	12H	8.6	8.8	9.7	9.9	11.3	8.6	8.8	9.7	9.9	11.3
12H	4H	7.8	8.1	8.8	9.1	10.5	7.8	8.1	8.8	9.1	10.5
	6H	8.3	8.5	9.3	9.6	11.0	8.3	8.5	9.3	9.6	11.0
	8H	8.5	8.7	9.6	9.8	11.2	8.5	8.7	9.6	9.8	11.2

Maximum UGR = 11.3

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.)