



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_42_22-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.05

[TESTLAB]

[ISSUE DATE] 5-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L25-9DWU-L25-9DWD-xxx-DIM-UNV-OM-CSU-ON-CSD-WM

[LUMINAIRE] 8" DIA. CYLINDER

[MORE]

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

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[_SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4764
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	1228	1228	1228
55	466	466	466
65	158	158	158
75	0	0	0
85	0	0	0

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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	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
2.5	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
5.0	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
7.5	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
10.0	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
12.5	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
15.0	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
17.5	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
20.0	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
22.5	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
25.0	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
27.5	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
30.0	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071
32.5	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219
35.0	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231
37.5	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359
40.0	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619
42.5	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739
45.0	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859
47.5	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200
50.0	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760
52.5	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100
55.0	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880
57.5	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660
60.0	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
62.5	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
65.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
67.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
70.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
72.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113
92.5	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225
95.0	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338
97.5	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451
100.0	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678
102.5	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903
105.0	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241
107.5	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806
110.0	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483
112.5	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273
115.0	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514
117.5	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094
120.0	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238
122.5	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286
125.0	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575
127.5	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894
130.0	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246
132.5	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403

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PHOTOMETRIC FILENAME : 192_168_37_234-16_42_22-MERGED.IES

CANDELA TABULATION - (Cont.)

135.0	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140
137.5	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696
140.0	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689
142.5	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680
145.0	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352
147.5	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642
150.0	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961
152.5	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333
155.0	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548
157.5	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492
160.0	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835
162.5	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779
165.0	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937
167.5	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809
170.0	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825
172.5	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271
175.0	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701
177.5	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272
180.0	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927

**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	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
2.5	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
5.0	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
7.5	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
10.0	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
12.5	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
15.0	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
17.5	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
20.0	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
22.5	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
25.0	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
27.5	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
30.0	921.071	921.071	921.071	921.071	921.071	921.071	921.071
32.5	661.219	661.219	661.219	661.219	661.219	661.219	661.219
35.0	295.231	295.231	295.231	295.231	295.231	295.231	295.231
37.5	46.359	46.359	46.359	46.359	46.359	46.359	46.359
40.0	25.619	25.619	25.619	25.619	25.619	25.619	25.619
42.5	20.739	20.739	20.739	20.739	20.739	20.739	20.739
45.0	15.859	15.859	15.859	15.859	15.859	15.859	15.859
47.5	12.200	12.200	12.200	12.200	12.200	12.200	12.200
50.0	9.760	9.760	9.760	9.760	9.760	9.760	9.760
52.5	6.100	6.100	6.100	6.100	6.100	6.100	6.100
55.0	4.880	4.880	4.880	4.880	4.880	4.880	4.880
57.5	3.660	3.660	3.660	3.660	3.660	3.660	3.660
60.0	2.440	2.440	2.440	2.440	2.440	2.440	2.440
62.5	2.440	2.440	2.440	2.440	2.440	2.440	2.440
65.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
67.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
70.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
72.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_42_22-MERGED.IES

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82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.113	0.113	0.113	0.113	0.113	0.113	0.113
92.5	0.225	0.225	0.225	0.225	0.225	0.225	0.225
95.0	0.338	0.338	0.338	0.338	0.338	0.338	0.338
97.5	0.451	0.451	0.451	0.451	0.451	0.451	0.451
100.0	0.678	0.678	0.678	0.678	0.678	0.678	0.678
102.5	0.903	0.903	0.903	0.903	0.903	0.903	0.903
105.0	1.241	1.241	1.241	1.241	1.241	1.241	1.241
107.5	1.806	1.806	1.806	1.806	1.806	1.806	1.806
110.0	2.483	2.483	2.483	2.483	2.483	2.483	2.483
112.5	3.273	3.273	3.273	3.273	3.273	3.273	3.273
115.0	4.514	4.514	4.514	4.514	4.514	4.514	4.514
117.5	6.094	6.094	6.094	6.094	6.094	6.094	6.094
120.0	8.238	8.238	8.238	8.238	8.238	8.238	8.238
122.5	11.286	11.286	11.286	11.286	11.286	11.286	11.286
125.0	15.575	15.575	15.575	15.575	15.575	15.575	15.575
127.5	21.894	21.894	21.894	21.894	21.894	21.894	21.894
130.0	30.246	30.246	30.246	30.246	30.246	30.246	30.246
132.5	40.403	40.403	40.403	40.403	40.403	40.403	40.403
135.0	52.140	52.140	52.140	52.140	52.140	52.140	52.140
137.5	73.696	73.696	73.696	73.696	73.696	73.696	73.696
140.0	130.689	130.689	130.689	130.689	130.689	130.689	130.689
142.5	194.680	194.680	194.680	194.680	194.680	194.680	194.680
145.0	446.352	446.352	446.352	446.352	446.352	446.352	446.352
147.5	802.642	802.642	802.642	802.642	802.642	802.642	802.642
150.0	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961
152.5	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333
155.0	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548
157.5	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492
160.0	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835
162.5	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779
165.0	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937
167.5	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809
170.0	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825
172.5	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271
175.0	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701
177.5	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272
180.0	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1684.23	N.A.	35.40
0-30	2279.48	N.A.	47.80
0-40	2498.69	N.A.	52.50
0-60	2515.98	N.A.	52.80
0-80	2518.11	N.A.	52.90
0-90	2518.13	N.A.	52.90
10-90	1567.6	N.A.	32.90
20-40	814.45	N.A.	17.10
20-50	827.15	N.A.	17.40
40-70	18.95	N.A.	0.40
60-80	2.13	N.A.	0.00
70-80	0.48	N.A.	0.00
80-90	0.02	N.A.	0.00
90-110	1.84	N.A.	0.00
90-120	6.58	N.A.	0.10
90-130	21.64	N.A.	0.50
90-150	381.03	N.A.	8.00
90-180	2245.71	N.A.	47.10
110-180	2243.87	N.A.	47.10
0-180	4763.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	950.53
10-20	733.71
20-30	595.25
30-40	219.21
40-50	12.70
50-60	4.60
60-70	1.65
70-80	0.48
80-90	0.02
90-100	0.38
100-110	1.46
110-120	4.74
120-130	15.06
130-140	46.84
140-150	312.54
150-160	732.88
160-170	741.73
170-180	390.06

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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	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	102	98	96	93	94	92	89	87	79	78	76	68	67	66	57	56	56	51
2	96	91	86	83	89	85	81	78	74	72	69	64	62	61	55	54	53	49
3	90	84	79	75	84	79	74	71	70	66	64	61	59	57	53	52	51	47
4	86	78	72	68	80	74	69	65	66	62	59	58	56	54	51	50	48	45
5	81	73	67	63	76	69	64	60	62	58	56	56	53	51	49	48	46	44
6	77	68	63	59	73	65	60	56	59	55	52	53	51	49	48	46	45	42
7	73	65	59	55	69	62	57	53	56	52	50	51	48	46	46	44	43	41
8	70	61	56	52	66	59	54	50	54	50	47	49	46	44	45	43	42	40
9	67	58	53	49	64	56	51	48	51	48	45	47	45	43	43	42	40	38
10	64	56	50	47	61	53	49	46	49	46	43	46	43	41	42	40	39	37

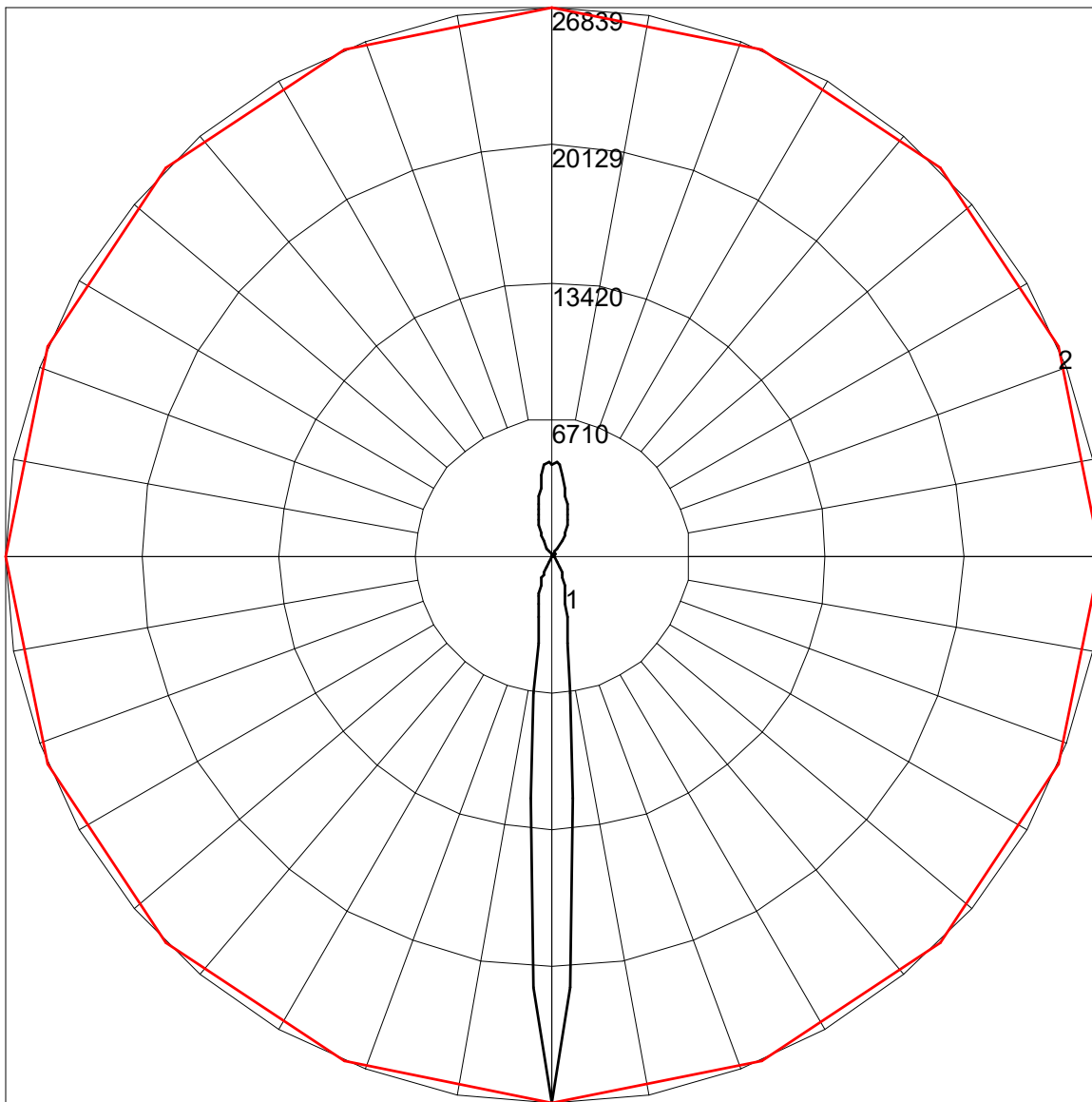
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_42_22-MERGED.IES

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	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
4H	2H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	3H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
8H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	12H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
12H	4H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	6H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	8H	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

Maximum UGR = 5.6

POLAR GRAPH



Maximum Candela = 26839.142 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)