



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-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] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-POE PR-ON-CSU-OM-CSD-WM

[LUMINAIRE] White formed aluminum housing, specular reflector, clear glass cover

[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	5344
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	50
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	5134	5134	5134
55	1890	1890	1890
65	744	744	744
75	334	334	334
85	270	270	270

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.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	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
2.5	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
5.0	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
7.5	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
10.0	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
12.5	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
15.0	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
17.5	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
20.0	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
22.5	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
25.0	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
27.5	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
30.0	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
32.5	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
35.0	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413
37.5	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481
40.0	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135
42.5	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684
45.0	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282
47.5	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361
50.0	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449
52.5	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833
55.0	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798
57.5	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347
60.0	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473
62.5	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747
65.0	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739
67.5	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161
70.0	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156
72.5	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295
75.0	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578
77.5	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148
80.0	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861
82.5	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574
85.0	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430
87.5	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287
90.0	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.IES

CANDELA TABULATION - (Cont.)

135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

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	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
2.5	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
5.0	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
7.5	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
10.0	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
12.5	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
15.0	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
17.5	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
20.0	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
22.5	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
25.0	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
27.5	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
30.0	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
32.5	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
35.0	567.413	567.413	567.413	567.413	567.413	567.413	567.413
37.5	247.481	247.481	247.481	247.481	247.481	247.481	247.481
40.0	166.135	166.135	166.135	166.135	166.135	166.135	166.135
42.5	93.684	93.684	93.684	93.684	93.684	93.684	93.684
45.0	66.282	66.282	66.282	66.282	66.282	66.282	66.282
47.5	51.361	51.361	51.361	51.361	51.361	51.361	51.361
50.0	38.449	38.449	38.449	38.449	38.449	38.449	38.449
52.5	27.833	27.833	27.833	27.833	27.833	27.833	27.833
55.0	19.798	19.798	19.798	19.798	19.798	19.798	19.798
57.5	14.347	14.347	14.347	14.347	14.347	14.347	14.347
60.0	10.473	10.473	10.473	10.473	10.473	10.473	10.473
62.5	7.747	7.747	7.747	7.747	7.747	7.747	7.747
65.0	5.739	5.739	5.739	5.739	5.739	5.739	5.739
67.5	4.161	4.161	4.161	4.161	4.161	4.161	4.161
70.0	3.156	3.156	3.156	3.156	3.156	3.156	3.156
72.5	2.295	2.295	2.295	2.295	2.295	2.295	2.295
75.0	1.578	1.578	1.578	1.578	1.578	1.578	1.578
77.5	1.148	1.148	1.148	1.148	1.148	1.148	1.148
80.0	0.861	0.861	0.861	0.861	0.861	0.861	0.861

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.IES

CANDELA TABULATION - (Cont.)

82.5	0.574	0.574	0.574	0.574	0.574	0.574	0.574
85.0	0.430	0.430	0.430	0.430	0.430	0.430	0.430
87.5	0.287	0.287	0.287	0.287	0.287	0.287	0.287
90.0	0.143	0.143	0.143	0.143	0.143	0.143	0.143
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061
135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.867	6670.867	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.841	11855.841	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.478	20901.479	20901.479	20901.479	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1438.77	N.A.	26.90
0-30	2370.43	N.A.	44.40
0-40	2767.74	N.A.	51.80
0-60	2846.44	N.A.	53.30
0-80	2854.31	N.A.	53.40
0-90	2854.8	N.A.	53.40
10-90	2358.94	N.A.	44.10
20-40	1328.97	N.A.	24.90
20-50	1388.52	N.A.	26.00
40-70	84.72	N.A.	1.60
60-80	7.87	N.A.	0.10
70-80	1.85	N.A.	0.00
80-90	0.49	N.A.	0.00
90-110	0.49	N.A.	0.00
90-120	2.13	N.A.	0.00
90-130	6.67	N.A.	0.10
90-150	235.94	N.A.	4.40
90-180	2489.49	N.A.	46.60
110-180	2489.00	N.A.	46.60
0-180	5344.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	495.86
10-20	942.91
20-30	931.66
30-40	397.31
40-50	59.55
50-60	19.15
60-70	6.02
70-80	1.85
80-90	0.49
90-100	0.02
100-110	0.47
110-120	1.64
120-130	4.54
130-140	12.56
140-150	216.71
150-160	588.48
160-170	725.36
170-180	939.72

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.IES

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	72	72	72	59	59	59	53
1	101	98	95	93	94	91	89	87	79	77	76	67	66	65	57	56	55	51
2	95	90	85	81	88	84	80	77	73	70	68	63	61	60	54	53	52	48
3	89	82	77	72	83	77	72	69	68	65	62	59	57	55	51	50	49	45
4	84	76	70	65	78	71	66	62	63	60	57	56	53	51	49	47	46	43
5	79	70	64	59	74	66	61	57	59	55	52	53	50	48	47	45	43	40
6	74	65	59	54	70	62	56	52	56	51	48	50	47	44	44	42	41	38
7	70	61	54	50	66	58	52	48	52	48	45	47	44	42	42	40	38	36
8	67	57	51	47	63	54	49	45	49	45	42	45	42	39	40	38	36	34
9	63	53	47	43	60	51	46	42	47	43	40	43	39	37	39	36	35	33
10	60	50	45	41	57	48	43	40	44	40	37	41	37	35	37	35	33	31

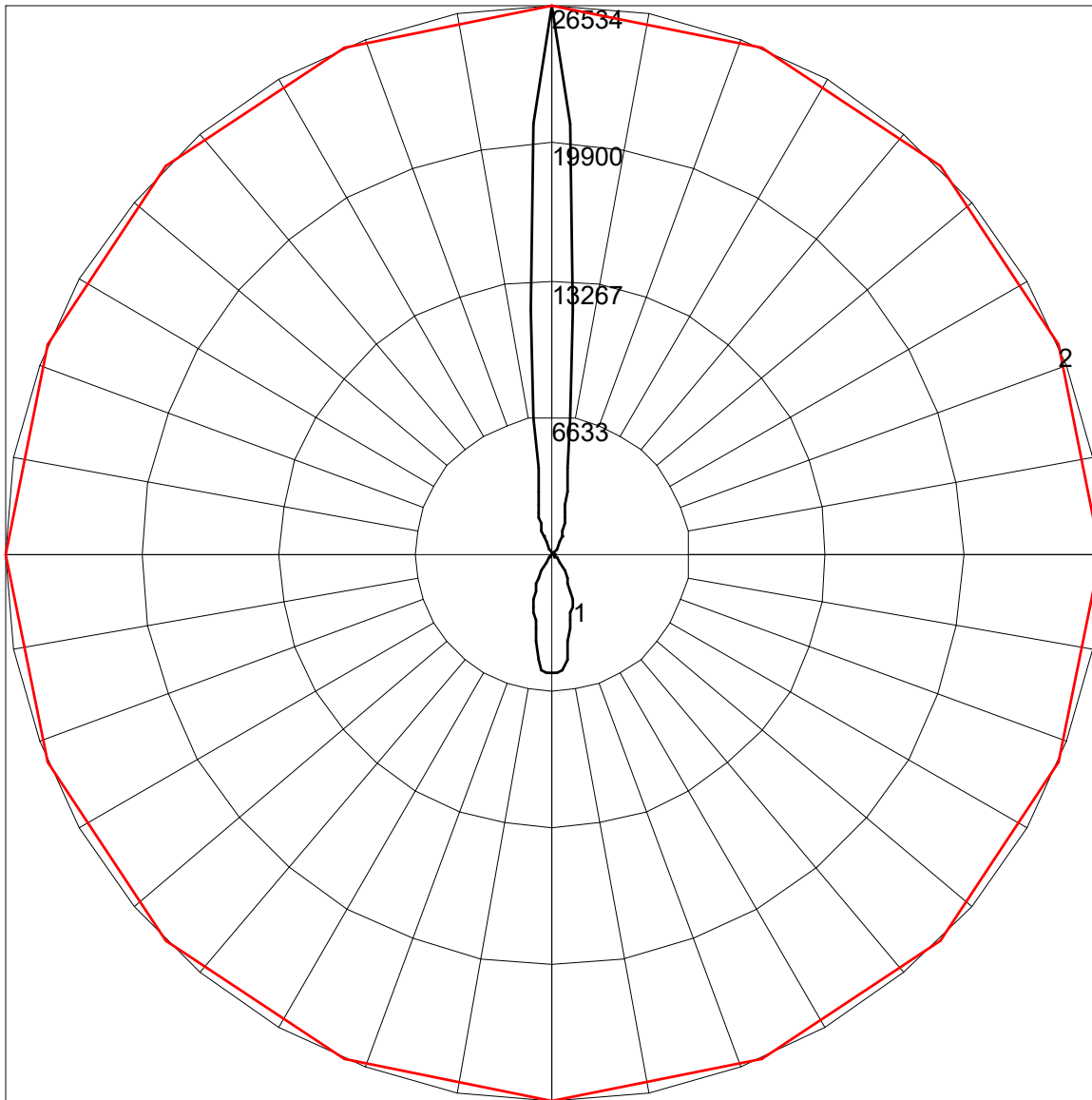
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_59_30-MERGED.IES

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	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	3H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
4H	2H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	3H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
8H	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
12H	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9

Maximum UGR = 5.9

POLAR GRAPH



Maximum Candela = 26533.881 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.)