



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.12

[TESTLAB]

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-PoE PR-OM-CSU-RW-WHD-WM

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

[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	4980
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
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	29433	29433	29433
55	24546	24546	24546
65	17317	17317	17317
75	10608	10608	10608
85	8366	8366	8366

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-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	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007
2.5	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859
5.0	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274
7.5	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402
10.0	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243
12.5	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796
15.0	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350
17.5	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684
20.0	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634
22.5	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448
25.0	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706
27.5	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422
30.0	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229
32.5	853.357	853.357	853.357	853.357	853.357	853.357	853.357	853.357	853.357	853.357
35.0	647.907	647.907	647.907	647.907	647.907	647.907	647.907	647.907	647.907	647.907
37.5	518.720	518.720	518.720	518.720	518.720	518.720	518.720	518.720	518.720	518.720
40.0	451.825	451.825	451.825	451.825	451.825	451.825	451.825	451.825	451.825	451.825
42.5	410.900	410.900	410.900	410.900	410.900	410.900	410.900	410.900	410.900	410.900
45.0	380.000	380.000	380.000	380.000	380.000	380.000	380.000	380.000	380.000	380.000
47.5	351.566	351.566	351.566	351.566	351.566	351.566	351.566	351.566	351.566	351.566
50.0	322.310	322.310	322.310	322.310	322.310	322.310	322.310	322.310	322.310	322.310
52.5	290.260	290.260	290.260	290.260	290.260	290.260	290.260	290.260	290.260	290.260
55.0	257.059	257.059	257.059	257.059	257.059	257.059	257.059	257.059	257.059	257.059
57.5	223.201	223.201	223.201	223.201	223.201	223.201	223.201	223.201	223.201	223.201
60.0	191.315	191.315	191.315	191.315	191.315	191.315	191.315	191.315	191.315	191.315
62.5	161.401	161.401	161.401	161.401	161.401	161.401	161.401	161.401	161.401	161.401
65.0	133.625	133.625	133.625	133.625	133.625	133.625	133.625	133.625	133.625	133.625
67.5	108.149	108.149	108.149	108.149	108.149	108.149	108.149	108.149	108.149	108.149
70.0	85.303	85.303	85.303	85.303	85.303	85.303	85.303	85.303	85.303	85.303
72.5	65.415	65.415	65.415	65.415	65.415	65.415	65.415	65.415	65.415	65.415
75.0	50.130	50.130	50.130	50.130	50.130	50.130	50.130	50.130	50.130	50.130
77.5	39.118	39.118	39.118	39.118	39.118	39.118	39.118	39.118	39.118	39.118
80.0	29.749	29.749	29.749	29.749	29.749	29.749	29.749	29.749	29.749	29.749
82.5	21.038	21.038	21.038	21.038	21.038	21.038	21.038	21.038	21.038	21.038
85.0	13.313	13.313	13.313	13.313	13.313	13.313	13.313	13.313	13.313	13.313
87.5	6.081	6.081	6.081	6.081	6.081	6.081	6.081	6.081	6.081	6.081
90.0	1.774	1.774	1.774	1.774	1.774	1.774	1.774	1.774	1.774	1.774
92.5	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261
95.0	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392
97.5	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522
100.0	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785
102.5	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046
105.0	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438
107.5	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093
110.0	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876
112.5	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792
115.0	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230
117.5	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060
120.0	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544
122.5	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075
125.0	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043
127.5	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364
130.0	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040
132.5	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-MERGED.IES

CANDELA TABULATION - (Cont.)

135.0	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404
137.5	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377
140.0	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404
142.5	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537
145.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100
147.5	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864
150.0	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380
152.5	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878
155.0	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131
157.5	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300
160.0	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860
162.5	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507
165.0	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840
167.5	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621
170.0	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222
172.5	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242
175.0	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225
177.5	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895
180.0	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619

**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	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007	1757.007
2.5	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859	1743.859
5.0	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274	1714.274
7.5	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402	1681.402
10.0	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243	1645.243
12.5	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796	1605.796
15.0	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350	1566.350
17.5	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684	1530.684
20.0	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634	1498.634
22.5	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448	1452.448
25.0	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706	1374.706
27.5	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422	1252.422
30.0	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229	1076.229
32.5	853.357	853.357	853.357	853.357	853.357	853.357	853.357
35.0	647.907	647.907	647.907	647.907	647.907	647.907	647.907
37.5	518.720	518.720	518.720	518.720	518.720	518.720	518.720
40.0	451.825	451.825	451.825	451.825	451.825	451.825	451.825
42.5	410.900	410.900	410.900	410.900	410.900	410.900	410.900
45.0	380.000	380.000	380.000	380.000	380.000	380.000	380.000
47.5	351.566	351.566	351.566	351.566	351.566	351.566	351.566
50.0	322.310	322.310	322.310	322.310	322.310	322.310	322.310
52.5	290.260	290.260	290.260	290.260	290.260	290.260	290.260
55.0	257.059	257.059	257.059	257.059	257.059	257.059	257.059
57.5	223.201	223.201	223.201	223.201	223.201	223.201	223.201
60.0	191.315	191.315	191.315	191.315	191.315	191.315	191.315
62.5	161.401	161.401	161.401	161.401	161.401	161.401	161.401
65.0	133.625	133.625	133.625	133.625	133.625	133.625	133.625
67.5	108.149	108.149	108.149	108.149	108.149	108.149	108.149
70.0	85.303	85.303	85.303	85.303	85.303	85.303	85.303
72.5	65.415	65.415	65.415	65.415	65.415	65.415	65.415
75.0	50.130	50.130	50.130	50.130	50.130	50.130	50.130
77.5	39.118	39.118	39.118	39.118	39.118	39.118	39.118
80.0	29.749	29.749	29.749	29.749	29.749	29.749	29.749

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-MERGED.IES

CANDELA TABULATION - (Cont.)

82.5	21.038	21.038	21.038	21.038	21.038	21.038	21.038
85.0	13.313	13.313	13.313	13.313	13.313	13.313	13.313
87.5	6.081	6.081	6.081	6.081	6.081	6.081	6.081
90.0	1.774	1.774	1.774	1.774	1.774	1.774	1.774
92.5	0.261	0.261	0.261	0.261	0.261	0.261	0.261
95.0	0.392	0.392	0.392	0.392	0.392	0.392	0.392
97.5	0.522	0.522	0.522	0.522	0.522	0.522	0.522
100.0	0.785	0.785	0.785	0.785	0.785	0.785	0.785
102.5	1.046	1.046	1.046	1.046	1.046	1.046	1.046
105.0	1.438	1.438	1.438	1.438	1.438	1.438	1.438
107.5	2.093	2.093	2.093	2.093	2.093	2.093	2.093
110.0	2.876	2.876	2.876	2.876	2.876	2.876	2.876
112.5	3.792	3.792	3.792	3.792	3.792	3.792	3.792
115.0	5.230	5.230	5.230	5.230	5.230	5.230	5.230
117.5	7.060	7.060	7.060	7.060	7.060	7.060	7.060
120.0	9.544	9.544	9.544	9.544	9.544	9.544	9.544
122.5	13.075	13.075	13.075	13.075	13.075	13.075	13.075
125.0	18.043	18.043	18.043	18.043	18.043	18.043	18.043
127.5	25.364	25.364	25.364	25.364	25.364	25.364	25.364
130.0	35.040	35.040	35.040	35.040	35.040	35.040	35.040
132.5	46.807	46.807	46.807	46.807	46.807	46.807	46.807
135.0	60.404	60.404	60.404	60.404	60.404	60.404	60.404
137.5	85.377	85.377	85.377	85.377	85.377	85.377	85.377
140.0	151.404	151.404	151.404	151.404	151.404	151.404	151.404
142.5	225.537	225.537	225.537	225.537	225.537	225.537	225.537
145.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100
147.5	929.864	929.864	929.864	929.864	929.864	929.864	929.864
150.0	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380
152.5	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878
155.0	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131
157.5	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300
160.0	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860
162.5	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507
165.0	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840
167.5	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621
170.0	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222
172.5	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242
175.0	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225
177.5	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895
180.0	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-MERGED.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	604.04	N.A.	12.10
0-30	1219.5	N.A.	24.50
0-40	1648.85	N.A.	33.10
0-60	2172.95	N.A.	43.60
0-80	2362.55	N.A.	47.40
0-90	2377.84	N.A.	47.80
10-90	2216.34	N.A.	44.50
20-40	1044.81	N.A.	21.00
20-50	1339.62	N.A.	26.90
40-70	657.80	N.A.	13.20
60-80	189.61	N.A.	3.80
70-80	55.91	N.A.	1.10
80-90	15.29	N.A.	0.30
90-110	2.36	N.A.	0.00
90-120	7.85	N.A.	0.20
90-130	25.30	N.A.	0.50
90-150	441.65	N.A.	8.90
90-180	2601.88	N.A.	52.20
110-180	2599.53	N.A.	52.20
0-180	4979.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	161.50
10-20	442.53
20-30	615.46
30-40	429.35
40-50	294.81
50-60	229.29
60-70	133.70
70-80	55.91
80-90	15.29
90-100	0.67
100-110	1.69
110-120	5.49
120-130	17.45
130-140	54.27
140-150	362.08
150-160	849.05
160-170	859.30
170-180	451.89

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	48
1	98	95	91	88	91	87	84	82	74	72	70	61	60	59	50	49	48	43
2	91	84	79	74	84	78	73	69	66	63	60	55	53	51	45	44	43	38
3	84	75	69	64	77	70	64	60	60	56	52	50	47	45	41	40	38	34
4	77	68	61	55	71	63	57	52	54	49	46	46	42	40	38	36	34	30
5	72	61	54	48	66	57	51	46	49	44	41	42	38	36	35	33	31	28
6	67	56	48	43	61	52	45	41	45	40	36	39	35	32	33	30	28	25
7	62	51	43	38	57	48	41	36	41	36	33	36	32	29	30	28	25	23
8	58	47	39	35	54	44	37	33	38	33	30	33	29	27	28	25	23	21
9	54	43	36	31	50	40	34	30	35	31	27	31	27	24	26	24	22	20
10	51	40	33	29	47	37	31	27	33	28	25	29	25	22	25	22	20	18

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_23_8-MERGED.IES

UGR TABLE - CORRECTED

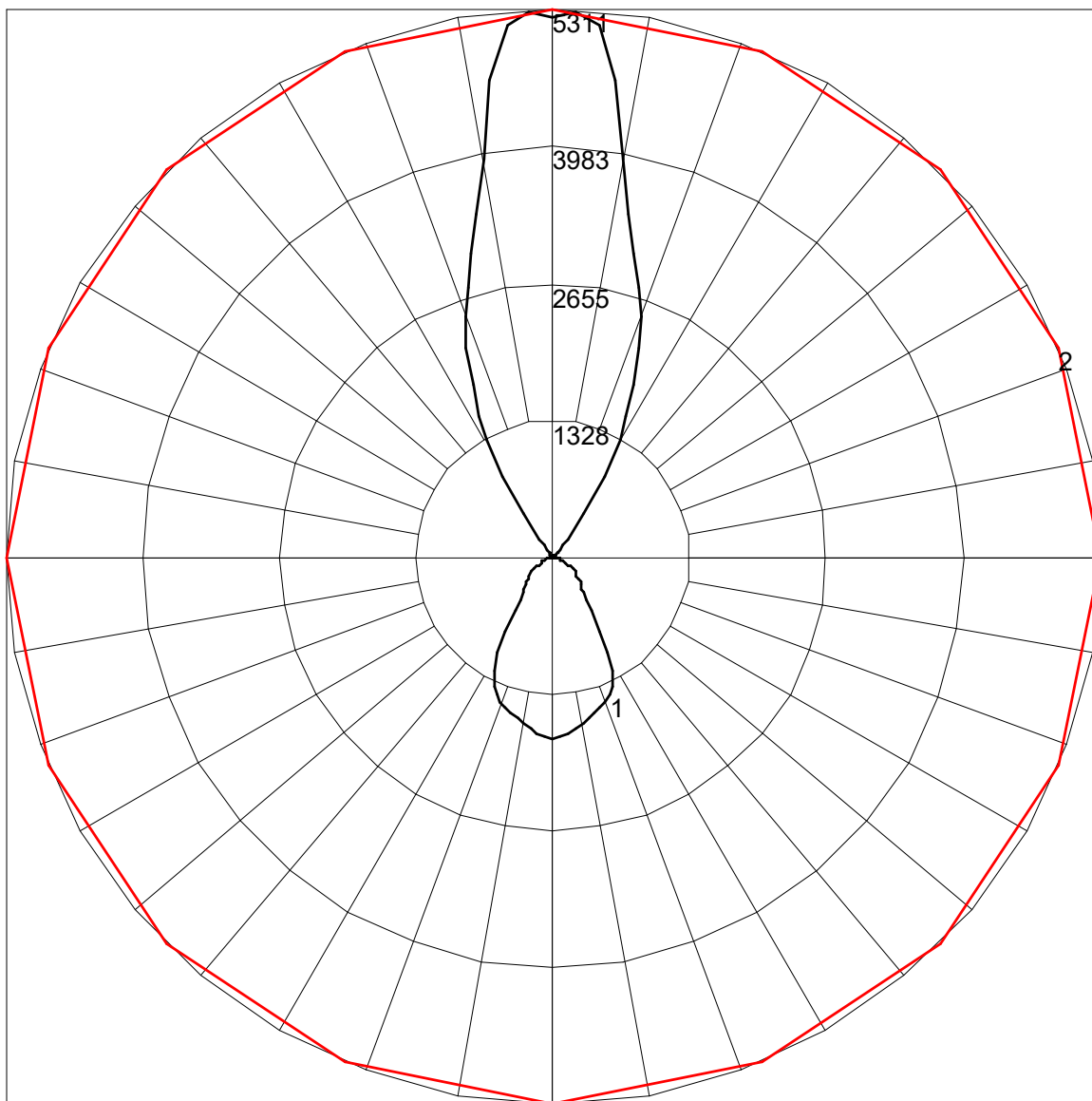
Reflectances

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	16.3	17.0	17.3	18.0	19.4	16.3	17.0	17.3	18.0	19.4
	3H	17.2	17.9	18.2	18.9	20.2	17.2	17.9	18.2	18.9	20.2
	4H	17.5	18.1	18.5	19.1	20.4	17.5	18.1	18.5	19.1	20.4
	6H	17.6	18.2	18.6	19.2	20.5	17.6	18.2	18.6	19.2	20.5
	8H	17.6	18.2	18.7	19.2	20.6	17.6	18.2	18.7	19.2	20.6
	12H	17.6	18.2	18.7	19.2	20.6	17.6	18.2	18.7	19.2	20.6
4H	2H	16.6	17.2	17.6	18.2	19.6	16.6	17.2	17.6	18.2	19.6
	3H	17.7	18.2	18.7	19.2	20.6	17.7	18.2	18.7	19.2	20.6
	4H	18.0	18.4	19.0	19.5	20.9	18.0	18.4	19.0	19.5	20.9
	6H	18.2	18.6	19.3	19.7	21.0	18.2	18.6	19.3	19.7	21.0
	8H	18.3	18.7	19.3	19.7	21.1	18.3	18.7	19.3	19.7	21.1
	12H	18.3	18.7	19.4	19.7	21.1	18.3	18.7	19.4	19.7	21.1
8H	4H	18.0	18.4	19.1	19.4	20.8	18.0	18.4	19.1	19.4	20.8
	6H	18.4	18.7	19.4	19.8	21.1	18.4	18.7	19.4	19.8	21.1
	8H	18.5	18.8	19.6	19.8	21.2	18.5	18.8	19.6	19.8	21.2
	12H	18.6	18.8	19.7	19.9	21.3	18.6	18.8	19.7	19.9	21.3
12H	4H	18.0	18.3	19.1	19.4	20.8	18.0	18.3	19.1	19.4	20.8
	6H	18.3	18.6	19.4	19.7	21.1	18.3	18.6	19.4	19.7	21.1
	8H	18.5	18.7	19.6	19.8	21.3	18.5	18.7	19.6	19.8	21.3

Maximum UGR = 21.3

POLAR GRAPH



Maximum Candela = 5310.895 Located At Horizontal Angle = 0, Vertical Angle = 177.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (177.5) (Through Max. Cd.)