



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_20_25-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB]

[ISSUE DATE] 25-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-8TWU-P29-8TWD-xxx-PoE PR-OM-CSU-RM-WHD-WM 4000k

[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	4803
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
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	7862	7862	7862
55	5286	5286	5286
65	3934	3934	3934
75	2717	2717	2717
85	2269	2269	2269

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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	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611
2.5	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085
5.0	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229
7.5	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393
10.0	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504
12.5	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517
15.0	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152
17.5	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995
20.0	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306
22.5	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620
25.0	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859
27.5	811.852	811.852	811.852	811.852	811.852	811.852	811.852	811.852	811.852	811.852
30.0	583.314	583.314	583.314	583.314	583.314	583.314	583.314	583.314	583.314	583.314
32.5	418.964	418.964	418.964	418.964	418.964	418.964	418.964	418.964	418.964	418.964
35.0	300.215	300.215	300.215	300.215	300.215	300.215	300.215	300.215	300.215	300.215
37.5	216.904	216.904	216.904	216.904	216.904	216.904	216.904	216.904	216.904	216.904
40.0	161.274	161.274	161.274	161.274	161.274	161.274	161.274	161.274	161.274	161.274
42.5	125.435	125.435	125.435	125.435	125.435	125.435	125.435	125.435	125.435	125.435
45.0	101.498	101.498	101.498	101.498	101.498	101.498	101.498	101.498	101.498	101.498
47.5	84.916	84.916	84.916	84.916	84.916	84.916	84.916	84.916	84.916	84.916
50.0	72.747	72.747	72.747	72.747	72.747	72.747	72.747	72.747	72.747	72.747
52.5	63.252	63.252	63.252	63.252	63.252	63.252	63.252	63.252	63.252	63.252
55.0	55.363	55.363	55.363	55.363	55.363	55.363	55.363	55.363	55.363	55.363
57.5	48.409	48.409	48.409	48.409	48.409	48.409	48.409	48.409	48.409	48.409
60.0	41.990	41.990	41.990	41.990	41.990	41.990	41.990	41.990	41.990	41.990
62.5	35.972	35.972	35.972	35.972	35.972	35.972	35.972	35.972	35.972	35.972
65.0	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356
67.5	25.141	25.141	25.141	25.141	25.141	25.141	25.141	25.141	25.141	25.141
70.0	20.326	20.326	20.326	20.326	20.326	20.326	20.326	20.326	20.326	20.326
72.5	16.047	16.047	16.047	16.047	16.047	16.047	16.047	16.047	16.047	16.047
75.0	12.838	12.838	12.838	12.838	12.838	12.838	12.838	12.838	12.838	12.838
77.5	10.163	10.163	10.163	10.163	10.163	10.163	10.163	10.163	10.163	10.163
80.0	7.890	7.890	7.890	7.890	7.890	7.890	7.890	7.890	7.890	7.890
82.5	5.750	5.750	5.750	5.750	5.750	5.750	5.750	5.750	5.750	5.750
85.0	3.611	3.611	3.611	3.611	3.611	3.611	3.611	3.611	3.611	3.611
87.5	1.738	1.738	1.738	1.738	1.738	1.738	1.738	1.738	1.738	1.738
90.0	0.656	0.656	0.656	0.656	0.656	0.656	0.656	0.656	0.656	0.656
92.5	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242
95.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
97.5	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484
100.0	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727
102.5	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969
105.0	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332
107.5	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938
110.0	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664
112.5	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512
115.0	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844
117.5	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539
120.0	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840
122.5	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110
125.0	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712
127.5	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493
130.0	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455
132.5	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353

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135.0	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947
137.5	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077
140.0	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232
142.5	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895
145.0	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944
147.5	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250
150.0	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
152.5	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325
155.0	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
157.5	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605
160.0	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
162.5	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327
165.0	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
167.5	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395
170.0	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
172.5	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627
175.0	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
177.5	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006
180.0	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

**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	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611	5767.611
2.5	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085	5702.085
5.0	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229	5524.229
7.5	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393	5239.393
10.0	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504	4823.504
12.5	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517	4260.517
15.0	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152	3569.152
17.5	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995	2834.995
20.0	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306	2146.306
22.5	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620	1572.620
25.0	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859	1131.859
27.5	811.852	811.852	811.852	811.852	811.852	811.852	811.852
30.0	583.314	583.314	583.314	583.314	583.314	583.314	583.314
32.5	418.964	418.964	418.964	418.964	418.964	418.964	418.964
35.0	300.215	300.215	300.215	300.215	300.215	300.215	300.215
37.5	216.904	216.904	216.904	216.904	216.904	216.904	216.904
40.0	161.274	161.274	161.274	161.274	161.274	161.274	161.274
42.5	125.435	125.435	125.435	125.435	125.435	125.435	125.435
45.0	101.498	101.498	101.498	101.498	101.498	101.498	101.498
47.5	84.916	84.916	84.916	84.916	84.916	84.916	84.916
50.0	72.747	72.747	72.747	72.747	72.747	72.747	72.747
52.5	63.252	63.252	63.252	63.252	63.252	63.252	63.252
55.0	55.363	55.363	55.363	55.363	55.363	55.363	55.363
57.5	48.409	48.409	48.409	48.409	48.409	48.409	48.409
60.0	41.990	41.990	41.990	41.990	41.990	41.990	41.990
62.5	35.972	35.972	35.972	35.972	35.972	35.972	35.972
65.0	30.356	30.356	30.356	30.356	30.356	30.356	30.356
67.5	25.141	25.141	25.141	25.141	25.141	25.141	25.141
70.0	20.326	20.326	20.326	20.326	20.326	20.326	20.326
72.5	16.047	16.047	16.047	16.047	16.047	16.047	16.047
75.0	12.838	12.838	12.838	12.838	12.838	12.838	12.838
77.5	10.163	10.163	10.163	10.163	10.163	10.163	10.163
80.0	7.890	7.890	7.890	7.890	7.890	7.890	7.890

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CANDELA TABULATION - (Cont.)

82.5	5.750	5.750	5.750	5.750	5.750	5.750	5.750
85.0	3.611	3.611	3.611	3.611	3.611	3.611	3.611
87.5	1.738	1.738	1.738	1.738	1.738	1.738	1.738
90.0	0.656	0.656	0.656	0.656	0.656	0.656	0.656
92.5	0.242	0.242	0.242	0.242	0.242	0.242	0.242
95.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363
97.5	0.484	0.484	0.484	0.484	0.484	0.484	0.484
100.0	0.727	0.727	0.727	0.727	0.727	0.727	0.727
102.5	0.969	0.969	0.969	0.969	0.969	0.969	0.969
105.0	1.332	1.332	1.332	1.332	1.332	1.332	1.332
107.5	1.938	1.938	1.938	1.938	1.938	1.938	1.938
110.0	2.664	2.664	2.664	2.664	2.664	2.664	2.664
112.5	3.512	3.512	3.512	3.512	3.512	3.512	3.512
115.0	4.844	4.844	4.844	4.844	4.844	4.844	4.844
117.5	6.539	6.539	6.539	6.539	6.539	6.539	6.539
120.0	8.840	8.840	8.840	8.840	8.840	8.840	8.840
122.5	12.110	12.110	12.110	12.110	12.110	12.110	12.110
125.0	16.712	16.712	16.712	16.712	16.712	16.712	16.712
127.5	23.493	23.493	23.493	23.493	23.493	23.493	23.493
130.0	32.455	32.455	32.455	32.455	32.455	32.455	32.455
132.5	43.353	43.353	43.353	43.353	43.353	43.353	43.353
135.0	55.947	55.947	55.947	55.947	55.947	55.947	55.947
137.5	79.077	79.077	79.077	79.077	79.077	79.077	79.077
140.0	140.232	140.232	140.232	140.232	140.232	140.232	140.232
142.5	208.895	208.895	208.895	208.895	208.895	208.895	208.895
145.0	478.944	478.944	478.944	478.944	478.944	478.944	478.944
147.5	861.250	861.250	861.250	861.250	861.250	861.250	861.250
150.0	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
152.5	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325
155.0	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
157.5	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605
160.0	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
162.5	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327
165.0	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
167.5	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395
170.0	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
172.5	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627
175.0	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
177.5	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006
180.0	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1468.47	N.A.	30.60
0-30	2012.33	N.A.	41.90
0-40	2212.72	N.A.	46.10
0-60	2344.91	N.A.	48.80
0-80	2389.22	N.A.	49.70
0-90	2393.4	N.A.	49.80
10-90	1888.03	N.A.	39.30
20-40	744.25	N.A.	15.50
20-50	826.38	N.A.	17.20
40-70	162.49	N.A.	3.40
60-80	44.30	N.A.	0.90
70-80	14.01	N.A.	0.30
80-90	4.18	N.A.	0.10
90-110	2.05	N.A.	0.00
90-120	7.13	N.A.	0.10
90-130	23.30	N.A.	0.50
90-150	408.92	N.A.	8.50
90-180	2409.76	N.A.	50.20
110-180	2407.71	N.A.	50.10
0-180	4803.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	505.37
10-20	963.10
20-30	543.86
30-40	200.39
40-50	82.13
50-60	50.07
60-70	30.29
70-80	14.01
80-90	4.18
90-100	0.49
100-110	1.56
110-120	5.08
120-130	16.16
130-140	50.26
140-150	335.37
150-160	786.40
160-170	795.89
170-180	418.54

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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	50
1	100	97	94	91	93	90	87	85	77	75	74	65	64	63	53	53	52	47
2	94	88	84	80	87	82	78	75	71	68	66	60	59	57	51	50	49	44
3	88	81	75	71	82	76	71	67	66	63	60	57	55	53	48	47	46	42
4	83	74	68	64	77	70	65	61	61	58	55	54	51	49	46	45	43	40
5	78	69	63	58	73	65	60	56	58	54	51	51	48	46	44	42	41	38
6	74	64	58	53	69	61	55	51	54	50	47	48	45	43	42	40	39	36
7	70	60	54	49	65	57	51	48	51	47	44	46	43	40	40	38	37	35
8	66	56	50	46	62	54	48	44	48	44	41	43	40	38	39	37	35	33
9	63	53	47	43	59	51	45	42	46	42	39	42	38	36	37	35	34	32
10	60	50	44	41	56	48	43	39	44	40	37	40	37	35	36	34	32	31

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_20_25-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

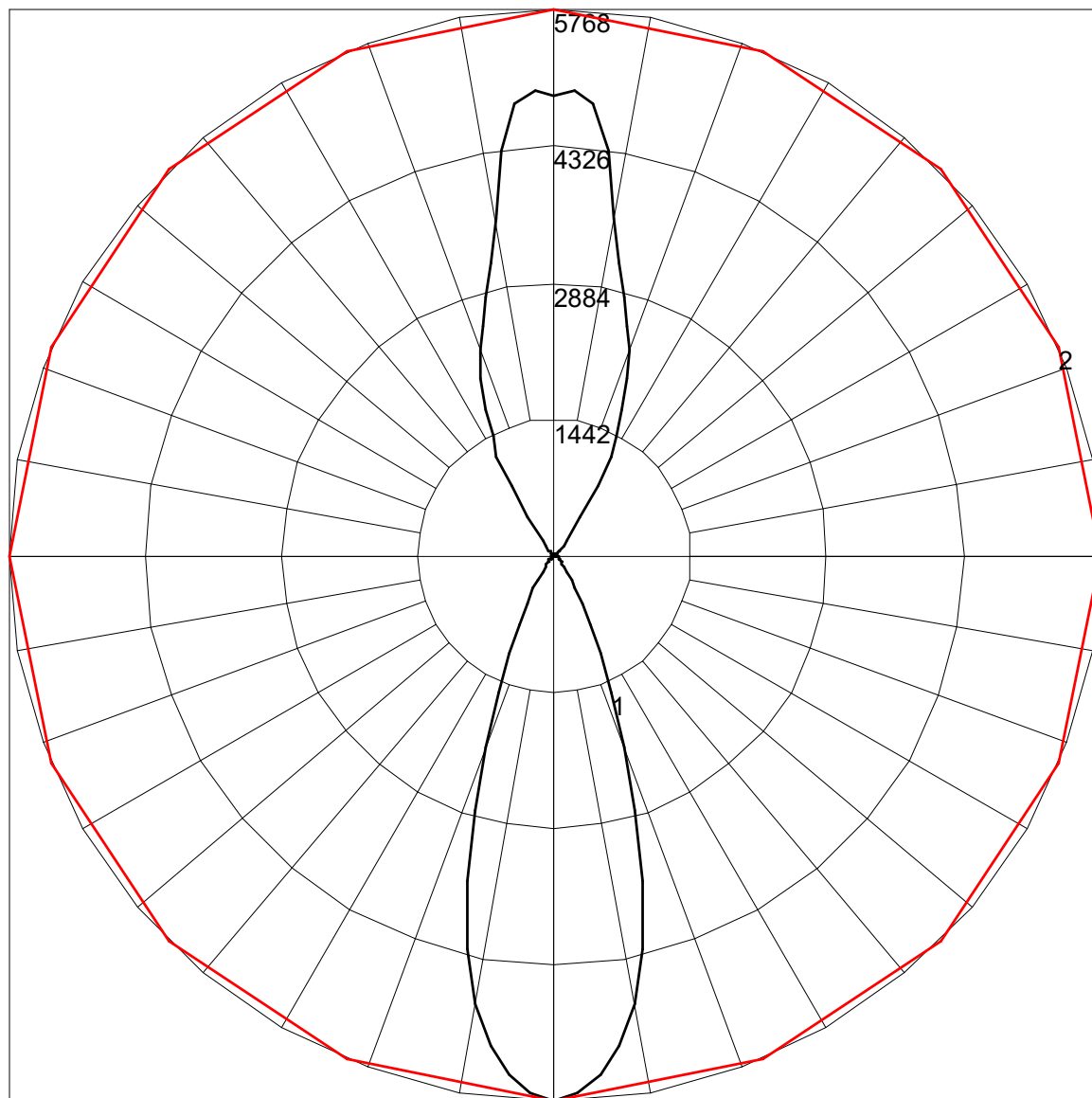
X=2H	Y=2H	6.0	6.6	7.0	7.6	8.9	6.0	6.6	7.0	7.6	8.9
	3H	7.0	7.6	8.1	8.6	9.9	7.0	7.6	8.1	8.6	9.9
	4H	7.4	7.9	8.4	8.9	10.2	7.4	7.9	8.4	8.9	10.2
	6H	7.6	8.1	8.6	9.1	10.4	7.6	8.1	8.6	9.1	10.4
	8H	7.7	8.1	8.7	9.2	10.5	7.7	8.1	8.7	9.2	10.5
	12H	7.7	8.2	8.7	9.2	10.5	7.7	8.2	8.7	9.2	10.5

UGR Viewed Endwise

4H	2H	6.3	6.8	7.3	7.8	9.2	6.3	6.8	7.3	7.8	9.2
	3H	7.5	8.0	8.5	9.0	10.3	7.5	8.0	8.5	9.0	10.3
	4H	7.9	8.4	9.0	9.4	10.7	7.9	8.4	9.0	9.4	10.7
	6H	8.3	8.6	9.3	9.7	11.0	8.3	8.6	9.3	9.7	11.0
	8H	8.4	8.7	9.4	9.8	11.1	8.4	8.7	9.4	9.8	11.1
	12H	8.5	8.8	9.5	9.8	11.2	8.5	8.8	9.5	9.8	11.2
8H	4H	8.0	8.4	9.1	9.4	10.8	8.0	8.4	9.1	9.4	10.8
	6H	8.5	8.7	9.5	9.8	11.2	8.5	8.7	9.5	9.8	11.2
	8H	8.7	8.9	9.8	10.0	11.4	8.7	8.9	9.8	10.0	11.4
	12H	8.8	9.0	9.9	10.1	11.5	8.8	9.0	9.9	10.1	11.5
12H	4H	8.0	8.3	9.1	9.3	10.7	8.0	8.3	9.1	9.3	10.7
	6H	8.5	8.7	9.6	9.8	11.2	8.5	8.7	9.6	9.8	11.2
	8H	8.7	8.9	9.8	10.0	11.4	8.7	8.9	9.8	10.0	11.4

Maximum UGR = 11.5

POLAR GRAPH



Maximum Candela = 5767.611 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.)