



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-11_13_19-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[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-RM-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	5186
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
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	8488	8488	8488
55	5708	5708	5708
65	4248	4248	4248
75	2933	2933	2933
85	2450	2450	2450

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-11_13_19-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	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467
2.5	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717
5.0	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681
7.5	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134
10.0	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086
12.5	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211
15.0	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724
17.5	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032
20.0	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432
22.5	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006
25.0	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103
27.5	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581
30.0	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822
32.5	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369
35.0	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152
37.5	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198
40.0	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132
42.5	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436
45.0	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591
47.5	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687
50.0	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547
52.5	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296
55.0	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777
57.5	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269
60.0	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338
62.5	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840
65.0	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776
67.5	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145
70.0	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947
72.5	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327
75.0	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861
77.5	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974
80.0	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519
82.5	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209
85.0	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898
87.5	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877
90.0	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708	0.708
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_234-11_13_19-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. 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	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467
2.5	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717
5.0	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681
7.5	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134
10.0	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086
12.5	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211
15.0	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724
17.5	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032
20.0	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432
22.5	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006
25.0	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103
27.5	876.581	876.581	876.581	876.581	876.581	876.581	876.581
30.0	629.822	629.822	629.822	629.822	629.822	629.822	629.822
32.5	452.369	452.369	452.369	452.369	452.369	452.369	452.369
35.0	324.152	324.152	324.152	324.152	324.152	324.152	324.152
37.5	234.198	234.198	234.198	234.198	234.198	234.198	234.198
40.0	174.132	174.132	174.132	174.132	174.132	174.132	174.132
42.5	135.436	135.436	135.436	135.436	135.436	135.436	135.436
45.0	109.591	109.591	109.591	109.591	109.591	109.591	109.591
47.5	91.687	91.687	91.687	91.687	91.687	91.687	91.687
50.0	78.547	78.547	78.547	78.547	78.547	78.547	78.547
52.5	68.296	68.296	68.296	68.296	68.296	68.296	68.296
55.0	59.777	59.777	59.777	59.777	59.777	59.777	59.777
57.5	52.269	52.269	52.269	52.269	52.269	52.269	52.269
60.0	45.338	45.338	45.338	45.338	45.338	45.338	45.338
62.5	38.840	38.840	38.840	38.840	38.840	38.840	38.840
65.0	32.776	32.776	32.776	32.776	32.776	32.776	32.776
67.5	27.145	27.145	27.145	27.145	27.145	27.145	27.145
70.0	21.947	21.947	21.947	21.947	21.947	21.947	21.947
72.5	17.327	17.327	17.327	17.327	17.327	17.327	17.327
75.0	13.861	13.861	13.861	13.861	13.861	13.861	13.861
77.5	10.974	10.974	10.974	10.974	10.974	10.974	10.974
80.0	8.519	8.519	8.519	8.519	8.519	8.519	8.519

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 192_168_37_234-11_13_19-MERGED.IES****CANDELA TABULATION - (Cont.)**

82.5	6.209	6.209	6.209	6.209	6.209	6.209	6.209
85.0	3.898	3.898	3.898	3.898	3.898	3.898	3.898
87.5	1.877	1.877	1.877	1.877	1.877	1.877	1.877
90.0	0.708	0.708	0.708	0.708	0.708	0.708	0.708
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_234-11_13_19-MERGED.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1585.55	N.A.	30.60
0-30	2172.77	N.A.	41.90
0-40	2389.14	N.A.	46.10
0-60	2531.88	N.A.	48.80
0-80	2579.71	N.A.	49.70
0-90	2584.23	N.A.	49.80
10-90	2038.56	N.A.	39.30
20-40	803.59	N.A.	15.50
20-50	892.26	N.A.	17.20
40-70	175.44	N.A.	3.40
60-80	47.84	N.A.	0.90
70-80	15.13	N.A.	0.30
80-90	4.52	N.A.	0.10
90-110	2.21	N.A.	0.00
90-120	7.70	N.A.	0.10
90-130	25.15	N.A.	0.50
90-150	441.50	N.A.	8.50
90-180	2601.74	N.A.	50.20
110-180	2599.53	N.A.	50.10
0-180	5185.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	545.67
10-20	1039.88
20-30	587.22
30-40	216.37
40-50	88.67
50-60	54.06
60-70	32.71
70-80	15.13
80-90	4.52
90-100	0.52
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_234-11_13_19-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	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

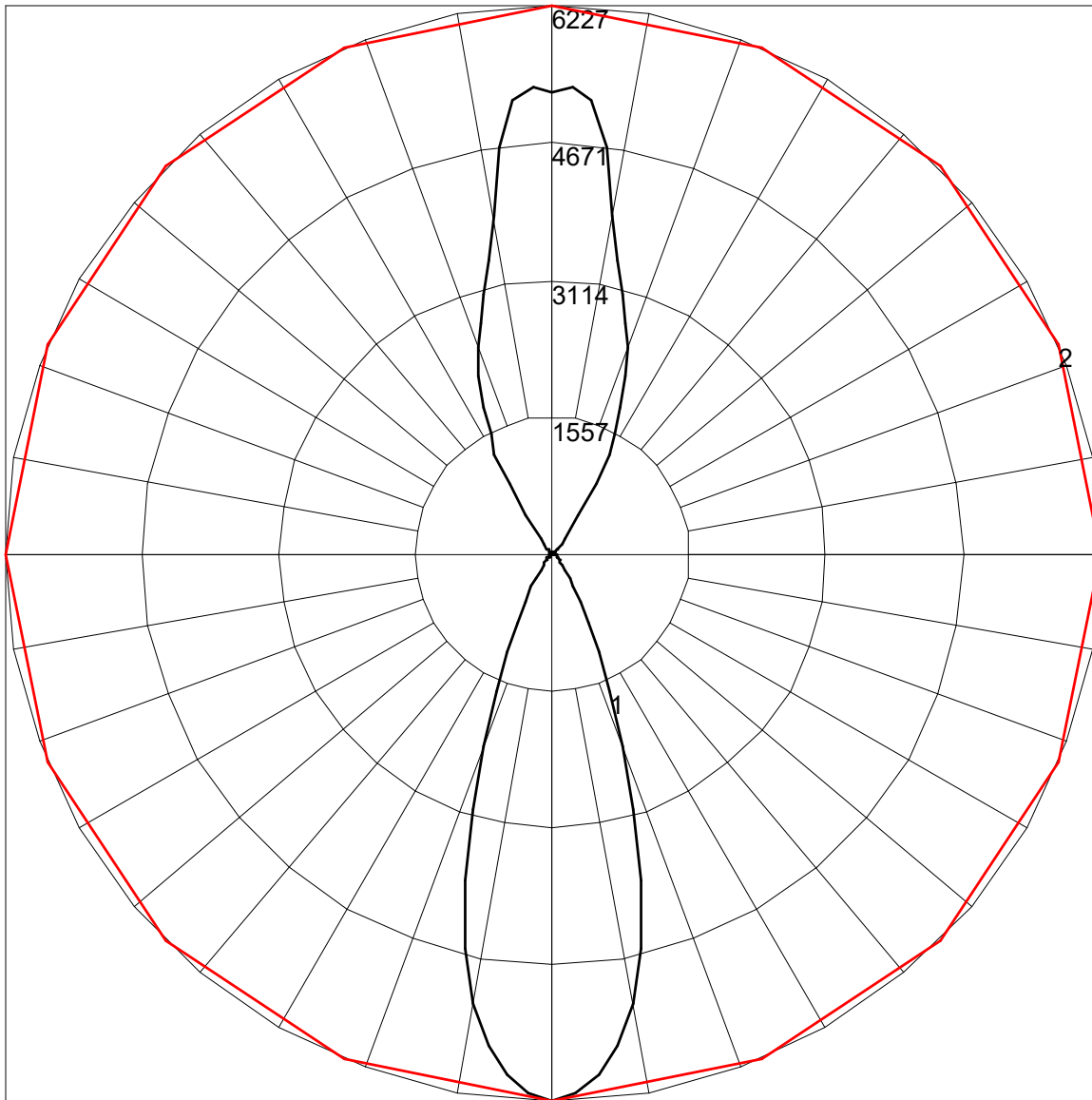
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-11_13_19-MERGED.IES

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	6.3	6.9	7.3	7.9	9.2	6.3	6.9	7.3	7.9	9.2
	3H	7.3	7.9	8.4	8.9	10.2	7.3	7.9	8.4	8.9	10.2
	4H	7.7	8.2	8.7	9.2	10.5	7.7	8.2	8.7	9.2	10.5
	6H	7.9	8.4	8.9	9.4	10.7	7.9	8.4	8.9	9.4	10.7
	8H	8.0	8.4	9.0	9.5	10.8	8.0	8.4	9.0	9.5	10.8
	12H	8.0	8.5	9.0	9.5	10.8	8.0	8.5	9.0	9.5	10.8
4H	2H	6.6	7.1	7.6	8.1	9.5	6.6	7.1	7.6	8.1	9.5
	3H	7.8	8.3	8.8	9.3	10.6	7.8	8.3	8.8	9.3	10.6
	4H	8.2	8.7	9.3	9.7	11.0	8.2	8.7	9.3	9.7	11.0
	6H	8.6	8.9	9.6	10.0	11.3	8.6	8.9	9.6	10.0	11.3
	8H	8.7	9.0	9.7	10.1	11.4	8.7	9.0	9.7	10.1	11.4
	12H	8.8	9.1	9.8	10.1	11.5	8.8	9.1	9.8	10.1	11.5
8H	4H	8.3	8.7	9.4	9.7	11.1	8.3	8.7	9.4	9.7	11.1
	6H	8.8	9.0	9.8	10.1	11.5	8.8	9.0	9.8	10.1	11.5
	8H	9.0	9.2	10.1	10.3	11.7	9.0	9.2	10.1	10.3	11.7
	12H	9.1	9.3	10.2	10.4	11.8	9.1	9.3	10.2	10.4	11.8
12H	4H	8.3	8.6	9.4	9.6	11.0	8.3	8.6	9.4	9.6	11.0
	6H	8.8	9.0	9.9	10.1	11.5	8.8	9.0	9.9	10.1	11.5
	8H	9.0	9.2	10.1	10.3	11.7	9.0	9.2	10.1	10.3	11.7

Maximum UGR = 11.8

POLAR GRAPH



Maximum Candela = 6227.467 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.)