



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-10_30_30-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.10

[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-LN-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	5280
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
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	8397	8397	8397
55	6145	6145	6145
65	4996	4996	4996
75	4079	4079	4079
85	2641	2641	2641

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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	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659
2.5	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270
5.0	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685
7.5	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315
10.0	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961
12.5	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500
15.0	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304
17.5	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700
20.0	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921
22.5	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008
25.0	919.465	919.465	919.465	919.465	919.465	919.465	919.465	919.465	919.465	919.465
27.5	629.886	629.886	629.886	629.886	629.886	629.886	629.886	629.886	629.886	629.886
30.0	440.891	440.891	440.891	440.891	440.891	440.891	440.891	440.891	440.891	440.891
32.5	318.566	318.566	318.566	318.566	318.566	318.566	318.566	318.566	318.566	318.566
35.0	238.562	238.562	238.562	238.562	238.562	238.562	238.562	238.562	238.562	238.562
37.5	185.951	185.951	185.951	185.951	185.951	185.951	185.951	185.951	185.951	185.951
40.0	150.732	150.732	150.732	150.732	150.732	150.732	150.732	150.732	150.732	150.732
42.5	126.383	126.383	126.383	126.383	126.383	126.383	126.383	126.383	126.383	126.383
45.0	108.411	108.411	108.411	108.411	108.411	108.411	108.411	108.411	108.411	108.411
47.5	94.352	94.352	94.352	94.352	94.352	94.352	94.352	94.352	94.352	94.352
50.0	82.613	82.613	82.613	82.613	82.613	82.613	82.613	82.613	82.613	82.613
52.5	72.757	72.757	72.757	72.757	72.757	72.757	72.757	72.757	72.757	72.757
55.0	64.351	64.351	64.351	64.351	64.351	64.351	64.351	64.351	64.351	64.351
57.5	56.959	56.959	56.959	56.959	56.959	56.959	56.959	56.959	56.959	56.959
60.0	50.292	50.292	50.292	50.292	50.292	50.292	50.292	50.292	50.292	50.292
62.5	44.205	44.205	44.205	44.205	44.205	44.205	44.205	44.205	44.205	44.205
65.0	38.553	38.553	38.553	38.553	38.553	38.553	38.553	38.553	38.553	38.553
67.5	33.190	33.190	33.190	33.190	33.190	33.190	33.190	33.190	33.190	33.190
70.0	28.117	28.117	28.117	28.117	28.117	28.117	28.117	28.117	28.117	28.117
72.5	23.479	23.479	23.479	23.479	23.479	23.479	23.479	23.479	23.479	23.479
75.0	19.276	19.276	19.276	19.276	19.276	19.276	19.276	19.276	19.276	19.276
77.5	15.073	15.073	15.073	15.073	15.073	15.073	15.073	15.073	15.073	15.073
80.0	11.305	11.305	11.305	11.305	11.305	11.305	11.305	11.305	11.305	11.305
82.5	7.682	7.682	7.682	7.682	7.682	7.682	7.682	7.682	7.682	7.682
85.0	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203
87.5	1.594	1.594	1.594	1.594	1.594	1.594	1.594	1.594	1.594	1.594
90.0	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420
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

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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	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659	9952.659
2.5	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270	9706.270
5.0	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685	9007.685
7.5	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315	7945.315
10.0	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961	6624.961
12.5	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500	5207.500
15.0	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304	3868.304
17.5	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700	2769.700
20.0	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921	1947.921
22.5	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008	1346.008
25.0	919.465	919.465	919.465	919.465	919.465	919.465	919.465
27.5	629.886	629.886	629.886	629.886	629.886	629.886	629.886
30.0	440.891	440.891	440.891	440.891	440.891	440.891	440.891
32.5	318.566	318.566	318.566	318.566	318.566	318.566	318.566
35.0	238.562	238.562	238.562	238.562	238.562	238.562	238.562
37.5	185.951	185.951	185.951	185.951	185.951	185.951	185.951
40.0	150.732	150.732	150.732	150.732	150.732	150.732	150.732
42.5	126.383	126.383	126.383	126.383	126.383	126.383	126.383
45.0	108.411	108.411	108.411	108.411	108.411	108.411	108.411
47.5	94.352	94.352	94.352	94.352	94.352	94.352	94.352
50.0	82.613	82.613	82.613	82.613	82.613	82.613	82.613
52.5	72.757	72.757	72.757	72.757	72.757	72.757	72.757
55.0	64.351	64.351	64.351	64.351	64.351	64.351	64.351
57.5	56.959	56.959	56.959	56.959	56.959	56.959	56.959
60.0	50.292	50.292	50.292	50.292	50.292	50.292	50.292
62.5	44.205	44.205	44.205	44.205	44.205	44.205	44.205
65.0	38.553	38.553	38.553	38.553	38.553	38.553	38.553
67.5	33.190	33.190	33.190	33.190	33.190	33.190	33.190
70.0	28.117	28.117	28.117	28.117	28.117	28.117	28.117
72.5	23.479	23.479	23.479	23.479	23.479	23.479	23.479
75.0	19.276	19.276	19.276	19.276	19.276	19.276	19.276
77.5	15.073	15.073	15.073	15.073	15.073	15.073	15.073
80.0	11.305	11.305	11.305	11.305	11.305	11.305	11.305

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82.5	7.682	7.682	7.682	7.682	7.682	7.682	7.682
85.0	4.203	4.203	4.203	4.203	4.203	4.203	4.203
87.5	1.594	1.594	1.594	1.594	1.594	1.594	1.594
90.0	0.420	0.420	0.420	0.420	0.420	0.420	0.420
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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1857.86	N.A.	35.20
0-30	2311.08	N.A.	43.80
0-40	2470.8	N.A.	46.80
0-60	2614.57	N.A.	49.50
0-80	2673.38	N.A.	50.60
0-90	2678.64	N.A.	50.70
10-90	1895.31	N.A.	35.90
20-40	612.94	N.A.	11.60
20-50	698.55	N.A.	13.20
40-70	182.13	N.A.	3.40
60-80	58.80	N.A.	1.10
70-80	20.44	N.A.	0.40
80-90	5.26	N.A.	0.10
90-110	2.17	N.A.	0.00
90-120	7.66	N.A.	0.10
90-130	25.11	N.A.	0.50
90-150	441.46	N.A.	8.40
90-180	2601.7	N.A.	49.30
110-180	2599.53	N.A.	49.20
0-180	5280.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	783.33
10-20	1074.54
20-30	453.22
30-40	159.72
40-50	85.61
50-60	58.16
60-70	38.36
70-80	20.44
80-90	5.26
90-100	0.48
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

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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	84	84	84	70	70	70	57	57	57	51
1	101	97	95	92	93	90	88	86	77	76	74	65	64	63	54	54	53	48
2	94	89	84	81	88	83	79	76	72	69	67	62	60	58	52	51	50	46
3	89	82	76	72	83	77	72	68	67	64	61	58	56	54	50	48	47	44
4	84	76	70	65	78	71	66	62	63	59	56	55	53	51	48	46	45	42
5	79	70	64	60	74	67	61	57	59	55	52	52	50	48	46	44	43	40
6	75	66	60	55	70	62	57	53	56	52	49	50	47	45	44	42	41	39
7	71	62	56	52	67	59	54	50	53	49	46	48	45	43	43	41	39	37
8	68	58	52	48	64	56	50	47	51	47	44	46	43	41	41	39	38	36
9	65	55	50	46	61	53	48	44	48	44	42	44	41	39	40	38	36	35
10	62	53	47	43	58	50	45	42	46	42	40	42	39	37	39	37	35	34

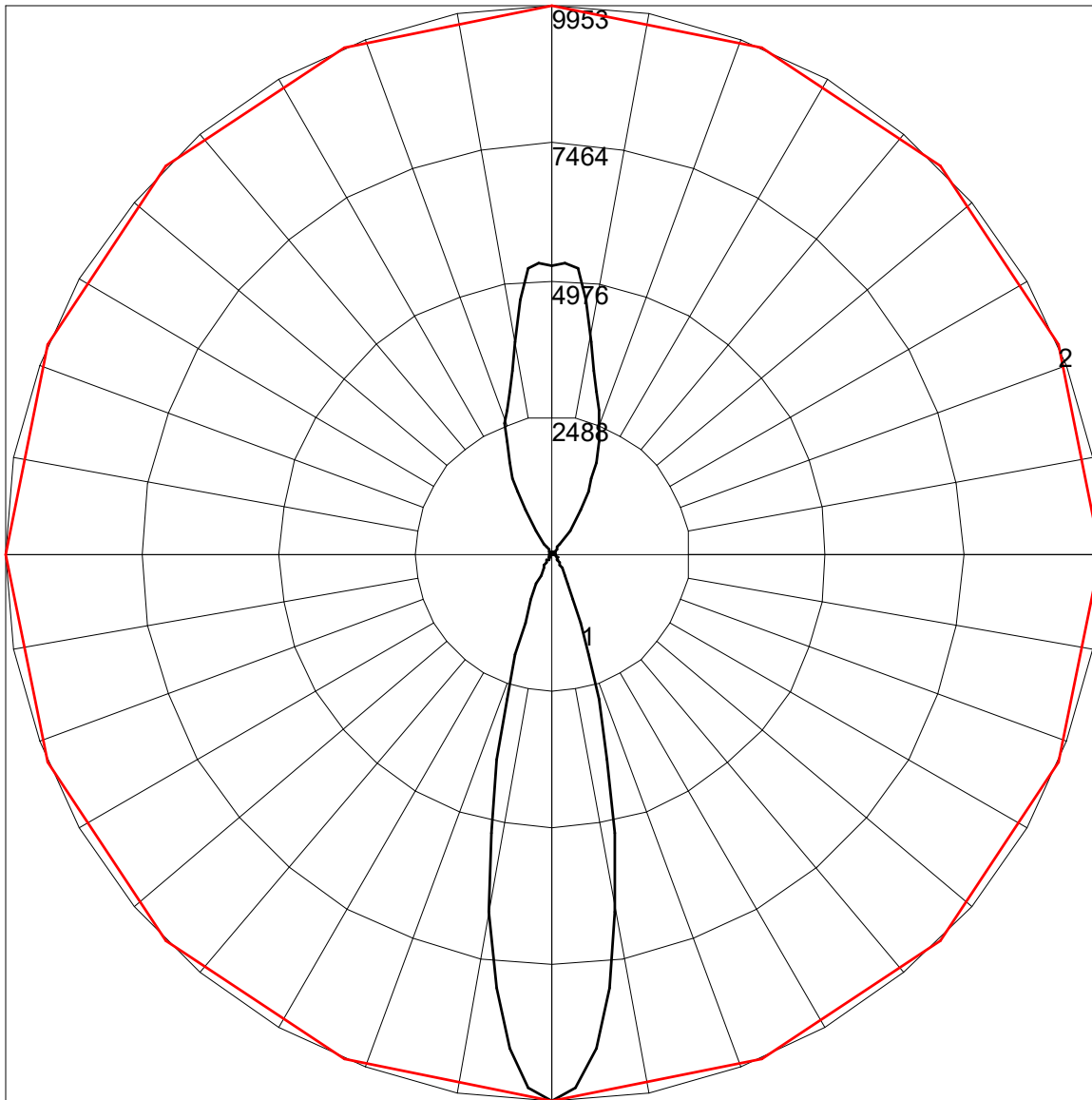
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-10_30_30-MERGED.IES

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	6.8	7.5	7.8	8.4	9.7	6.8	7.5	7.8	8.4	9.7
	3H	8.2	8.8	9.2	9.8	11.1	8.2	8.8	9.2	9.8	11.1
	4H	8.7	9.2	9.7	10.2	11.5	8.7	9.2	9.7	10.2	11.5
	6H	9.0	9.5	10.0	10.5	11.8	9.0	9.5	10.0	10.5	11.8
	8H	9.1	9.6	10.1	10.6	11.9	9.1	9.6	10.1	10.6	11.9
	12H	9.1	9.6	10.2	10.6	11.9	9.1	9.6	10.2	10.6	11.9
4H	2H	7.2	7.8	8.2	8.7	10.0	7.2	7.8	8.2	8.7	10.0
	3H	8.8	9.2	9.8	10.3	11.6	8.8	9.2	9.8	10.3	11.6
	4H	9.4	9.8	10.4	10.8	12.2	9.4	9.8	10.4	10.8	12.2
	6H	9.8	10.2	10.9	11.2	12.6	9.8	10.2	10.9	11.2	12.6
	8H	10.0	10.3	11.0	11.4	12.7	10.0	10.3	11.0	11.4	12.7
	12H	10.0	10.3	11.1	11.4	12.7	10.0	10.3	11.1	11.4	12.7
8H	4H	9.6	9.9	10.6	10.9	12.3	9.6	9.9	10.6	10.9	12.3
	6H	10.1	10.4	11.2	11.5	12.8	10.1	10.4	11.2	11.5	12.8
	8H	10.4	10.6	11.4	11.6	13.0	10.4	10.6	11.4	11.6	13.0
	12H	10.5	10.7	11.5	11.7	13.1	10.5	10.7	11.5	11.7	13.1
12H	4H	9.5	9.8	10.6	10.9	12.2	9.5	9.8	10.6	10.9	12.2
	6H	10.2	10.4	11.2	11.4	12.8	10.2	10.4	11.2	11.4	12.8
	8H	10.4	10.6	11.5	11.7	13.1	10.4	10.6	11.5	11.7	13.1

Maximum UGR = 13.1

POLAR GRAPH



Maximum Candela = 9952.659 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.)