



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_26_44-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.10

[TESTLAB]

[ISSUEDATE] 5-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L25-9DW-L25-9DWD-DIM-UNV-OM-CSU-LN-WHD-WM

[LUMINAIRE] 8" DIA. CYLINDER

[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	4563
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	61
Total Luminaire Watts	75.4
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	7264	7264	7264
55	5316	5316	5316
65	4322	4322	4322
75	3529	3529	3529
85	2285	2285	2285

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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	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934
2.5	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786
5.0	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448
7.5	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403
10.0	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179
12.5	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950
15.0	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427
17.5	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037
20.0	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125
22.5	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416
25.0	795.419	795.419	795.419	795.419	795.419	795.419	795.419	795.419	795.419	795.419
27.5	544.907	544.907	544.907	544.907	544.907	544.907	544.907	544.907	544.907	544.907
30.0	381.410	381.410	381.410	381.410	381.410	381.410	381.410	381.410	381.410	381.410
32.5	275.588	275.588	275.588	275.588	275.588	275.588	275.588	275.588	275.588	275.588
35.0	206.378	206.378	206.378	206.378	206.378	206.378	206.378	206.378	206.378	206.378
37.5	160.864	160.864	160.864	160.864	160.864	160.864	160.864	160.864	160.864	160.864
40.0	130.397	130.397	130.397	130.397	130.397	130.397	130.397	130.397	130.397	130.397
42.5	109.332	109.332	109.332	109.332	109.332	109.332	109.332	109.332	109.332	109.332
45.0	93.785	93.785	93.785	93.785	93.785	93.785	93.785	93.785	93.785	93.785
47.5	81.623	81.623	81.623	81.623	81.623	81.623	81.623	81.623	81.623	81.623
50.0	71.467	71.467	71.467	71.467	71.467	71.467	71.467	71.467	71.467	71.467
52.5	62.941	62.941	62.941	62.941	62.941	62.941	62.941	62.941	62.941	62.941
55.0	55.669	55.669	55.669	55.669	55.669	55.669	55.669	55.669	55.669	55.669
57.5	49.275	49.275	49.275	49.275	49.275	49.275	49.275	49.275	49.275	49.275
60.0	43.507	43.507	43.507	43.507	43.507	43.507	43.507	43.507	43.507	43.507
62.5	38.241	38.241	38.241	38.241	38.241	38.241	38.241	38.241	38.241	38.241
65.0	33.351	33.351	33.351	33.351	33.351	33.351	33.351	33.351	33.351	33.351
67.5	28.712	28.712	28.712	28.712	28.712	28.712	28.712	28.712	28.712	28.712
70.0	24.324	24.324	24.324	24.324	24.324	24.324	24.324	24.324	24.324	24.324
72.5	20.312	20.312	20.312	20.312	20.312	20.312	20.312	20.312	20.312	20.312
75.0	16.676	16.676	16.676	16.676	16.676	16.676	16.676	16.676	16.676	16.676
77.5	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040
80.0	9.780	9.780	9.780	9.780	9.780	9.780	9.780	9.780	9.780	9.780
82.5	6.645	6.645	6.645	6.645	6.645	6.645	6.645	6.645	6.645	6.645
85.0	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636
87.5	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
90.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
92.5	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225
95.0	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338
97.5	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451	0.451
100.0	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678
102.5	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903	0.903
105.0	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241	1.241
107.5	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806
110.0	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483	2.483
112.5	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273	3.273
115.0	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514	4.514
117.5	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094	6.094
120.0	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238	8.238
122.5	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286	11.286
125.0	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575	15.575
127.5	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894	21.894
130.0	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246	30.246
132.5	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403	40.403

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CANDELA TABULATION - (Cont.)

135.0	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140	52.140
137.5	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696	73.696
140.0	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689	130.689
142.5	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680	194.680
145.0	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352	446.352
147.5	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642	802.642
150.0	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961
152.5	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333
155.0	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548
157.5	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492
160.0	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835
162.5	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779
165.0	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937
167.5	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809
170.0	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825
172.5	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271
175.0	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701
177.5	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272
180.0	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927

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	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934	8609.934
2.5	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786	8396.786
5.0	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448	7792.448
7.5	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403	6873.403
10.0	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179	5731.179
12.5	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950	4504.950
15.0	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427	3346.427
17.5	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037	2396.037
20.0	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125	1685.125
22.5	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416	1164.416
25.0	795.419	795.419	795.419	795.419	795.419	795.419	795.419
27.5	544.907	544.907	544.907	544.907	544.907	544.907	544.907
30.0	381.410	381.410	381.410	381.410	381.410	381.410	381.410
32.5	275.588	275.588	275.588	275.588	275.588	275.588	275.588
35.0	206.378	206.378	206.378	206.378	206.378	206.378	206.378
37.5	160.864	160.864	160.864	160.864	160.864	160.864	160.864
40.0	130.397	130.397	130.397	130.397	130.397	130.397	130.397
42.5	109.332	109.332	109.332	109.332	109.332	109.332	109.332
45.0	93.785	93.785	93.785	93.785	93.785	93.785	93.785
47.5	81.623	81.623	81.623	81.623	81.623	81.623	81.623
50.0	71.467	71.467	71.467	71.467	71.467	71.467	71.467
52.5	62.941	62.941	62.941	62.941	62.941	62.941	62.941
55.0	55.669	55.669	55.669	55.669	55.669	55.669	55.669
57.5	49.275	49.275	49.275	49.275	49.275	49.275	49.275
60.0	43.507	43.507	43.507	43.507	43.507	43.507	43.507
62.5	38.241	38.241	38.241	38.241	38.241	38.241	38.241
65.0	33.351	33.351	33.351	33.351	33.351	33.351	33.351
67.5	28.712	28.712	28.712	28.712	28.712	28.712	28.712
70.0	24.324	24.324	24.324	24.324	24.324	24.324	24.324
72.5	20.312	20.312	20.312	20.312	20.312	20.312	20.312
75.0	16.676	16.676	16.676	16.676	16.676	16.676	16.676
77.5	13.040	13.040	13.040	13.040	13.040	13.040	13.040
80.0	9.780	9.780	9.780	9.780	9.780	9.780	9.780

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82.5	6.645	6.645	6.645	6.645	6.645	6.645	6.645
85.0	3.636	3.636	3.636	3.636	3.636	3.636	3.636
87.5	1.379	1.379	1.379	1.379	1.379	1.379	1.379
90.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363
92.5	0.225	0.225	0.225	0.225	0.225	0.225	0.225
95.0	0.338	0.338	0.338	0.338	0.338	0.338	0.338
97.5	0.451	0.451	0.451	0.451	0.451	0.451	0.451
100.0	0.678	0.678	0.678	0.678	0.678	0.678	0.678
102.5	0.903	0.903	0.903	0.903	0.903	0.903	0.903
105.0	1.241	1.241	1.241	1.241	1.241	1.241	1.241
107.5	1.806	1.806	1.806	1.806	1.806	1.806	1.806
110.0	2.483	2.483	2.483	2.483	2.483	2.483	2.483
112.5	3.273	3.273	3.273	3.273	3.273	3.273	3.273
115.0	4.514	4.514	4.514	4.514	4.514	4.514	4.514
117.5	6.094	6.094	6.094	6.094	6.094	6.094	6.094
120.0	8.238	8.238	8.238	8.238	8.238	8.238	8.238
122.5	11.286	11.286	11.286	11.286	11.286	11.286	11.286
125.0	15.575	15.575	15.575	15.575	15.575	15.575	15.575
127.5	21.894	21.894	21.894	21.894	21.894	21.894	21.894
130.0	30.246	30.246	30.246	30.246	30.246	30.246	30.246
132.5	40.403	40.403	40.403	40.403	40.403	40.403	40.403
135.0	52.140	52.140	52.140	52.140	52.140	52.140	52.140
137.5	73.696	73.696	73.696	73.696	73.696	73.696	73.696
140.0	130.689	130.689	130.689	130.689	130.689	130.689	130.689
142.5	194.680	194.680	194.680	194.680	194.680	194.680	194.680
145.0	446.352	446.352	446.352	446.352	446.352	446.352	446.352
147.5	802.642	802.642	802.642	802.642	802.642	802.642	802.642
150.0	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961	1131.961
152.5	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333	1328.333
155.0	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548	1593.548
157.5	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492	1891.492
160.0	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835	2157.835
162.5	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779	2376.779
165.0	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937	2623.937
167.5	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809	2938.809
170.0	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825	3377.825
172.5	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271	4031.271
175.0	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701	4482.701
177.5	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272	4584.272
180.0	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927	4527.927

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1607.22	N.A.	35.20
0-30	1999.29	N.A.	43.80
0-40	2137.46	N.A.	46.80
0-60	2261.84	N.A.	49.60
0-80	2312.71	N.A.	50.70
0-90	2317.26	N.A.	50.80
10-90	1639.61	N.A.	35.90
20-40	530.25	N.A.	11.60
20-50	604.31	N.A.	13.20
40-70	157.56	N.A.	3.50
60-80	50.87	N.A.	1.10
70-80	17.68	N.A.	0.40
80-90	4.55	N.A.	0.10
90-110	1.87	N.A.	0.00
90-120	6.61	N.A.	0.10
90-130	21.68	N.A.	0.50
90-150	381.06	N.A.	8.40
90-180	2245.74	N.A.	49.20
110-180	2243.87	N.A.	49.20
0-180	4563.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	677.65
10-20	929.57
20-30	392.07
30-40	138.17
40-50	74.06
50-60	50.31
60-70	33.19
70-80	17.68
80-90	4.55
90-100	0.42
100-110	1.46
110-120	4.74
120-130	15.06
130-140	46.84
140-150	312.54
150-160	732.88
160-170	741.73
170-180	390.06

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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	49	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	51	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	59	50	45	42	46	42	40	42	40	38	39	37	35	34

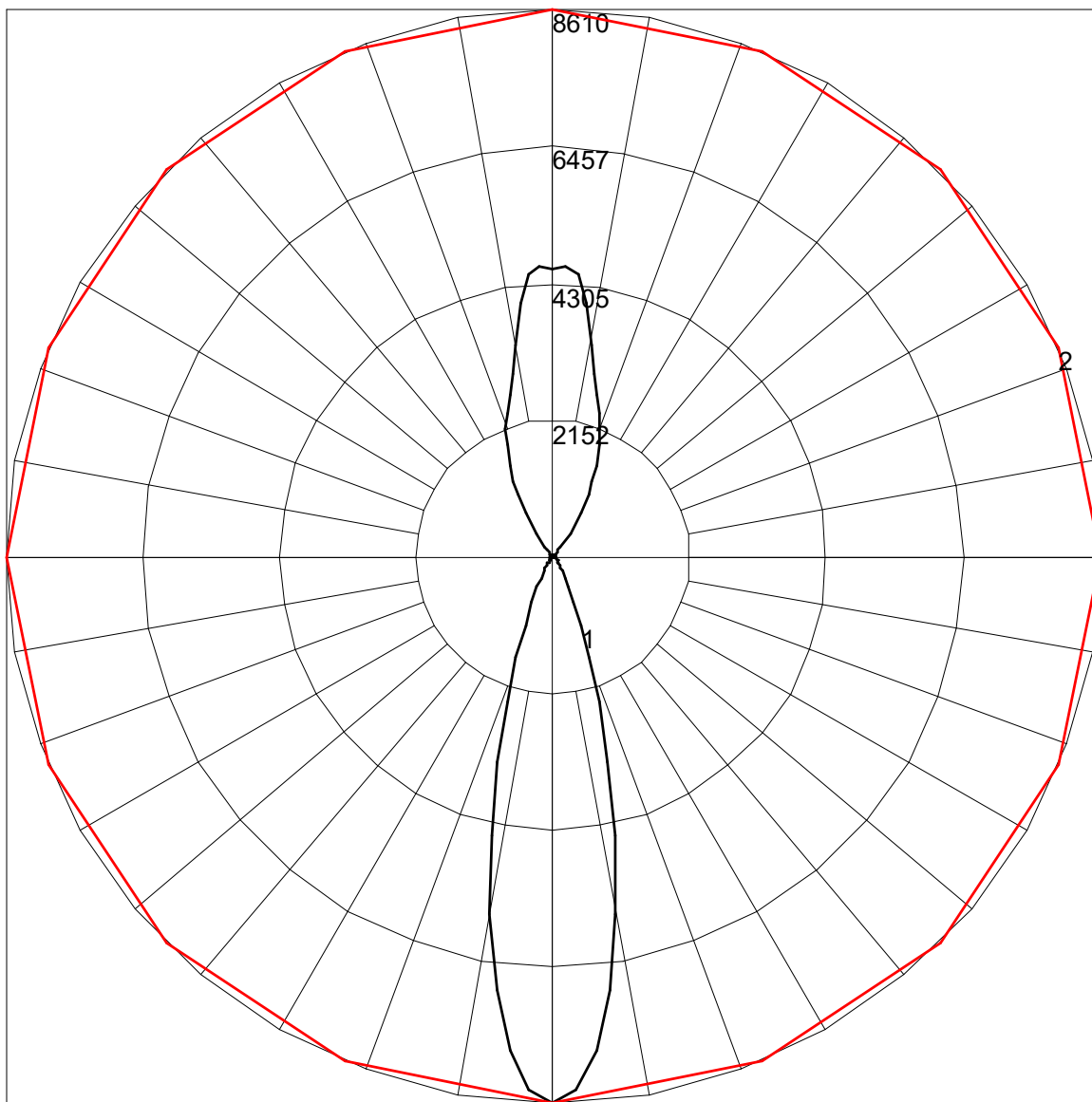
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_26_44-MERGED.IES

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	7.0	7.3	8.0	9.2	6.3	7.0	7.3	8.0	9.2
	3H	7.7	8.3	8.7	9.3	10.6	7.7	8.3	8.7	9.3	10.6
	4H	8.2	8.7	9.2	9.7	11.0	8.2	8.7	9.2	9.7	11.0
	6H	8.5	9.0	9.5	10.0	11.3	8.5	9.0	9.5	10.0	11.3
	8H	8.6	9.1	9.6	10.1	11.4	8.6	9.1	9.6	10.1	11.4
	12H	8.6	9.1	9.7	10.1	11.4	8.6	9.1	9.7	10.1	11.4
4H	2H	6.7	7.3	7.7	8.3	9.6	6.7	7.3	7.7	8.3	9.6
	3H	8.3	8.8	9.3	9.8	11.1	8.3	8.8	9.3	9.8	11.1
	4H	8.9	9.3	9.9	10.3	11.7	8.9	9.3	9.9	10.3	11.7
	6H	9.4	9.7	10.4	10.8	12.1	9.4	9.7	10.4	10.8	12.1
	8H	9.5	9.8	10.5	10.9	12.2	9.5	9.8	10.5	10.9	12.2
	12H	9.5	9.9	10.6	10.9	12.2	9.5	9.9	10.6	10.9	12.2
8H	4H	9.1	9.4	10.1	10.4	11.8	9.1	9.4	10.1	10.4	11.8
	6H	9.7	9.9	10.7	11.0	12.3	9.7	9.9	10.7	11.0	12.3
	8H	9.9	10.1	10.9	11.2	12.5	9.9	10.1	10.9	11.2	12.5
	12H	10.0	10.2	11.0	11.2	12.6	10.0	10.2	11.0	11.2	12.6
12H	4H	9.0	9.4	10.1	10.4	11.7	9.0	9.4	10.1	10.4	11.7
	6H	9.7	9.9	10.7	11.0	12.3	9.7	9.9	10.7	11.0	12.3
	8H	9.9	10.1	11.0	11.2	12.6	9.9	10.1	11.0	11.2	12.6

Maximum UGR = 12.6

POLAR GRAPH



Maximum Candela = 8609.934 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.)