



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_8_53-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-OM-CSD-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	5055
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
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	4756	4756	4756
55	1751	1751	1751
65	689	689	689
75	309	309	309
85	251	251	251

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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	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863
2.5	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991
5.0	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368
7.5	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710
10.0	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134
12.5	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096
15.0	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264
17.5	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181
20.0	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327
22.5	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649
25.0	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754
27.5	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405
30.0	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133
32.5	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289	945.289
35.0	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677	525.677
37.5	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278	229.278
40.0	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915	153.915
42.5	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793	86.793
45.0	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407	61.407
47.5	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583	47.583
50.0	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621	35.621
52.5	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785	25.785
55.0	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342	18.342
57.5	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291	13.291
60.0	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703	9.703
62.5	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177	7.177
65.0	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317	5.317
67.5	3.855	3.855	3.855	3.855	3.855	3.855	3.855	3.855	3.855	3.855
70.0	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924	2.924
72.5	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127	2.127
75.0	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462	1.462
77.5	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063
80.0	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797
82.5	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532
85.0	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399	0.399
87.5	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266	0.266
90.0	0.254	0.254	0.254	0.254	0.254	0.254	0.254	0.254	0.254	0.254
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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CANDELA TABULATION - (Cont.)

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	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863	5333.863
2.5	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991	5398.991
5.0	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368	5279.368
7.5	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710	4747.710
10.0	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134	3978.134
12.5	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096	3461.096
15.0	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264	3090.264
17.5	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181	2799.181
20.0	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327	2541.327
22.5	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649	2227.649
25.0	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754	1876.754
27.5	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405	1564.405
30.0	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133	1333.133
32.5	945.289	945.289	945.289	945.289	945.289	945.289	945.289
35.0	525.677	525.677	525.677	525.677	525.677	525.677	525.677
37.5	229.278	229.278	229.278	229.278	229.278	229.278	229.278
40.0	153.915	153.915	153.915	153.915	153.915	153.915	153.915
42.5	86.793	86.793	86.793	86.793	86.793	86.793	86.793
45.0	61.407	61.407	61.407	61.407	61.407	61.407	61.407
47.5	47.583	47.583	47.583	47.583	47.583	47.583	47.583
50.0	35.621	35.621	35.621	35.621	35.621	35.621	35.621
52.5	25.785	25.785	25.785	25.785	25.785	25.785	25.785
55.0	18.342	18.342	18.342	18.342	18.342	18.342	18.342
57.5	13.291	13.291	13.291	13.291	13.291	13.291	13.291
60.0	9.703	9.703	9.703	9.703	9.703	9.703	9.703
62.5	7.177	7.177	7.177	7.177	7.177	7.177	7.177
65.0	5.317	5.317	5.317	5.317	5.317	5.317	5.317
67.5	3.855	3.855	3.855	3.855	3.855	3.855	3.855
70.0	2.924	2.924	2.924	2.924	2.924	2.924	2.924
72.5	2.127	2.127	2.127	2.127	2.127	2.127	2.127
75.0	1.462	1.462	1.462	1.462	1.462	1.462	1.462
77.5	1.063	1.063	1.063	1.063	1.063	1.063	1.063
80.0	0.797	0.797	0.797	0.797	0.797	0.797	0.797

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82.5	0.532	0.532	0.532	0.532	0.532	0.532	0.532
85.0	0.399	0.399	0.399	0.399	0.399	0.399	0.399
87.5	0.266	0.266	0.266	0.266	0.266	0.266	0.266
90.0	0.254	0.254	0.254	0.254	0.254	0.254	0.254
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	1332.94	N.A.	26.40
0-30	2196.07	N.A.	43.40
0-40	2564.16	N.A.	50.70
0-60	2637.07	N.A.	52.20
0-80	2644.36	N.A.	52.30
0-90	2644.83	N.A.	52.30
10-90	2185.45	N.A.	43.20
20-40	1231.22	N.A.	24.40
20-50	1286.39	N.A.	25.50
40-70	78.49	N.A.	1.60
60-80	7.30	N.A.	0.10
70-80	1.71	N.A.	0.00
80-90	0.47	N.A.	0.00
90-110	1.99	N.A.	0.00
90-120	7.08	N.A.	0.10
90-130	23.24	N.A.	0.50
90-150	408.87	N.A.	8.10
90-180	2409.7	N.A.	47.70
110-180	2407.71	N.A.	47.60
0-180	5054.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	459.39
10-20	873.55
20-30	863.13
30-40	368.09
40-50	55.17
50-60	17.74
60-70	5.58
70-80	1.71
80-90	0.47
90-100	0.43
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	101	98	95	92	94	91	89	86	78	77	75	66	65	64	56	55	54	50
2	95	89	85	81	88	83	79	76	72	70	67	62	61	59	53	52	51	47
3	89	82	76	72	83	77	72	68	67	64	61	59	56	54	50	49	48	44
4	83	75	69	65	78	71	66	62	63	59	56	55	52	50	48	46	45	42
5	79	70	63	59	73	66	60	56	59	55	52	52	49	47	46	44	42	39
6	74	65	58	54	69	61	56	52	55	51	48	49	46	44	44	41	40	37
7	70	60	54	50	66	57	52	48	52	48	44	46	43	41	42	39	38	35
8	66	56	50	46	62	54	48	45	49	45	42	44	41	39	40	37	36	34
9	63	53	47	43	59	51	45	42	46	42	39	42	39	36	38	36	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	35	36	34	32	31

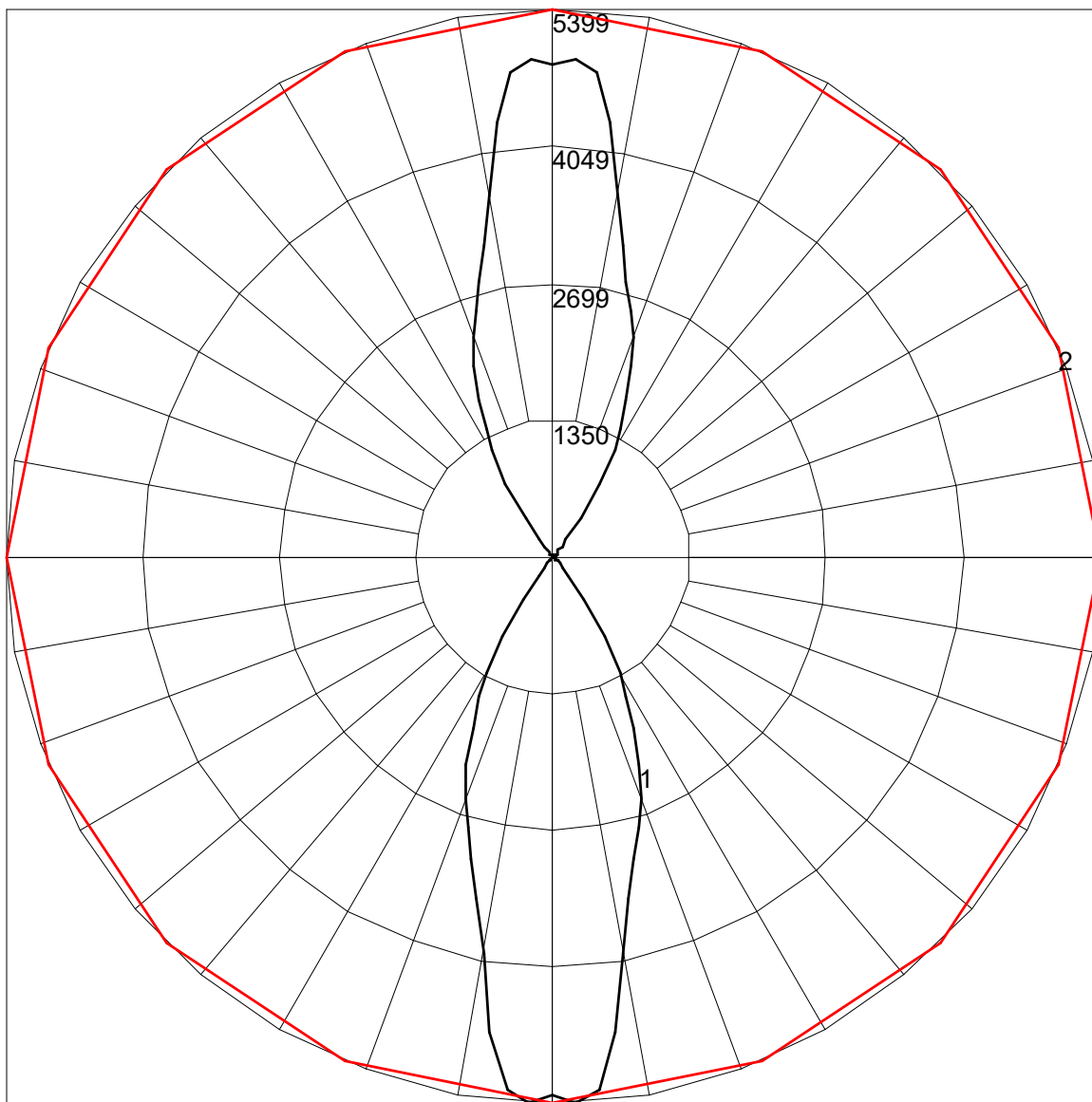
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_8_53-MERGED.IES

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	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
4H	2H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
8H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
12H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7

Maximum UGR = 5.7

POLAR GRAPH



Maximum Candela = 5398.991 Located At Horizontal Angle = 0, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)