



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-9_50_24-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 2-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-POE PR-LW-CSU-ON-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, flush upright frosted lens enclosure, no downlight enclosure

[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	5164
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
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 w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	151	151	151
55	43	43	43
65	10	10	10
75	0	0	0
85	0	0	0

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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	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498
2.5	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345
5.0	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653
7.5	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392
10.0	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459
12.5	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946
15.0	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659
17.5	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175
20.0	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482
22.5	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247
25.0	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945
27.5	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960
30.0	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985
32.5	717.152	717.152	717.152	717.152	717.152	717.152	717.152	717.152	717.152	717.152
35.0	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204
37.5	50.280	50.280	50.280	50.280	50.280	50.280	50.280	50.280	50.280	50.280
40.0	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786
42.5	22.494	22.494	22.494	22.494	22.494	22.494	22.494	22.494	22.494	22.494
45.0	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201
47.5	13.232	13.232	13.232	13.232	13.232	13.232	13.232	13.232	13.232	13.232
50.0	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585
52.5	6.616	6.616	6.616	6.616	6.616	6.616	6.616	6.616	6.616	6.616
55.0	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293
57.5	3.969	3.969	3.969	3.969	3.969	3.969	3.969	3.969	3.969	3.969
60.0	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646
62.5	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646
65.0	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
67.5	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
70.0	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
72.5	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	5.775	5.775	5.775	5.775	5.775	5.775	5.775	5.775	5.775	5.775
92.5	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894
95.0	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541
97.5	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359
100.0	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240
102.5	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764
105.0	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343
107.5	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799
110.0	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961
112.5	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507
115.0	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895
117.5	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218
120.0	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793
122.5	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809
125.0	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399
127.5	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511
130.0	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227
132.5	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173

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CANDELA TABULATION - (Cont.)

135.0	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073
137.5	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761
140.0	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187
142.5	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824
145.0	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924
147.5	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696
150.0	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515
152.5	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293
155.0	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363
157.5	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388
160.0	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533
162.5	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755
165.0	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179
167.5	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266
170.0	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185
172.5	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895
175.0	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689
177.5	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356
180.0	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542

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	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498
2.5	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345	22930.345
5.0	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653
7.5	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392	7318.392
10.0	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459
12.5	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946	3344.946
15.0	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659
17.5	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175	2318.175
20.0	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482
22.5	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247	1745.247
25.0	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945
27.5	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960	1088.960
30.0	998.985	998.985	998.985	998.985	998.985	998.985	998.985
32.5	717.152	717.152	717.152	717.152	717.152	717.152	717.152
35.0	320.204	320.204	320.204	320.204	320.204	320.204	320.204
37.5	50.280	50.280	50.280	50.280	50.280	50.280	50.280
40.0	27.786	27.786	27.786	27.786	27.786	27.786	27.786
42.5	22.494	22.494	22.494	22.494	22.494	22.494	22.494
45.0	17.201	17.201	17.201	17.201	17.201	17.201	17.201
47.5	13.232	13.232	13.232	13.232	13.232	13.232	13.232
50.0	10.585	10.585	10.585	10.585	10.585	10.585	10.585
52.5	6.616	6.616	6.616	6.616	6.616	6.616	6.616
55.0	5.293	5.293	5.293	5.293	5.293	5.293	5.293
57.5	3.969	3.969	3.969	3.969	3.969	3.969	3.969
60.0	2.646	2.646	2.646	2.646	2.646	2.646	2.646
62.5	2.646	2.646	2.646	2.646	2.646	2.646	2.646
65.0	1.323	1.323	1.323	1.323	1.323	1.323	1.323
67.5	1.323	1.323	1.323	1.323	1.323	1.323	1.323
70.0	1.323	1.323	1.323	1.323	1.323	1.323	1.323
72.5	1.323	1.323	1.323	1.323	1.323	1.323	1.323
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	5.775	5.775	5.775	5.775	5.775	5.775	5.775
92.5	8.894	8.894	8.894	8.894	8.894	8.894	8.894
95.0	15.541	15.541	15.541	15.541	15.541	15.541	15.541
97.5	26.359	26.359	26.359	26.359	26.359	26.359	26.359
100.0	39.240	39.240	39.240	39.240	39.240	39.240	39.240
102.5	52.764	52.764	52.764	52.764	52.764	52.764	52.764
105.0	67.343	67.343	67.343	67.343	67.343	67.343	67.343
107.5	83.799	83.799	83.799	83.799	83.799	83.799	83.799
110.0	102.961	102.961	102.961	102.961	102.961	102.961	102.961
112.5	124.507	124.507	124.507	124.507	124.507	124.507	124.507
115.0	148.895	148.895	148.895	148.895	148.895	148.895	148.895
117.5	176.218	176.218	176.218	176.218	176.218	176.218	176.218
120.0	206.793	206.793	206.793	206.793	206.793	206.793	206.793
122.5	240.809	240.809	240.809	240.809	240.809	240.809	240.809
125.0	278.399	278.399	278.399	278.399	278.399	278.399	278.399
127.5	318.511	318.511	318.511	318.511	318.511	318.511	318.511
130.0	360.227	360.227	360.227	360.227	360.227	360.227	360.227
132.5	402.173	402.173	402.173	402.173	402.173	402.173	402.173
135.0	444.073	444.073	444.073	444.073	444.073	444.073	444.073
137.5	487.761	487.761	487.761	487.761	487.761	487.761	487.761
140.0	538.187	538.187	538.187	538.187	538.187	538.187	538.187
142.5	602.824	602.824	602.824	602.824	602.824	602.824	602.824
145.0	689.924	689.924	689.924	689.924	689.924	689.924	689.924
147.5	802.696	802.696	802.696	802.696	802.696	802.696	802.696
150.0	942.515	942.515	942.515	942.515	942.515	942.515	942.515
152.5	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293
155.0	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363
157.5	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388
160.0	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533
162.5	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755
165.0	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179
167.5	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266
170.0	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185
172.5	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895
175.0	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689
177.5	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356
180.0	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1826.7	N.A.	35.40
0-30	2472.3	N.A.	47.90
0-40	2710.05	N.A.	52.50
0-60	2728.81	N.A.	52.80
0-80	2731.12	N.A.	52.90
0-90	2731.91	N.A.	52.90
10-90	1700.98	N.A.	32.90
20-40	883.35	N.A.	17.10
20-50	897.12	N.A.	17.40
40-70	20.55	N.A.	0.40
60-80	2.31	N.A.	0.00
70-80	0.52	N.A.	0.00
80-90	0.79	N.A.	0.00
90-110	92.44	N.A.	1.80
90-120	241.79	N.A.	4.70
90-130	491.95	N.A.	9.50
90-150	1275.77	N.A.	24.70
90-180	2432.48	N.A.	47.10
110-180	2340.04	N.A.	45.30
0-180	5164.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1030.93
10-20	795.77
20-30	645.60
30-40	237.75
40-50	13.77
50-60	4.99
60-70	1.79
70-80	0.52
80-90	0.79
90-100	19.95
100-110	72.49
110-120	149.35
120-130	250.16
130-140	343.40
140-150	440.43
150-160	559.69
160-170	442.03
170-180	154.99

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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	59	59	59	53
1	102	99	96	93	94	92	89	87	79	78	76	68	67	66	57	56	56	51
2	96	91	86	83	89	85	81	78	74	72	69	64	62	61	55	54	53	49
3	90	84	79	75	84	79	74	71	70	66	64	61	59	57	53	52	51	47
4	86	78	72	68	80	74	69	65	66	62	59	58	56	54	51	50	48	45
5	81	73	67	63	76	69	64	60	62	58	56	56	53	51	49	48	46	44
6	77	68	63	59	73	65	60	56	59	55	52	53	51	49	48	46	45	42
7	74	65	59	55	69	62	57	53	56	52	50	51	48	46	46	44	43	41
8	70	61	56	52	66	59	54	50	54	50	47	49	46	44	45	43	42	40
9	67	58	53	49	64	56	51	48	52	48	45	47	45	43	43	42	40	38
10	64	56	50	47	61	53	49	46	49	46	43	46	43	41	42	40	39	37

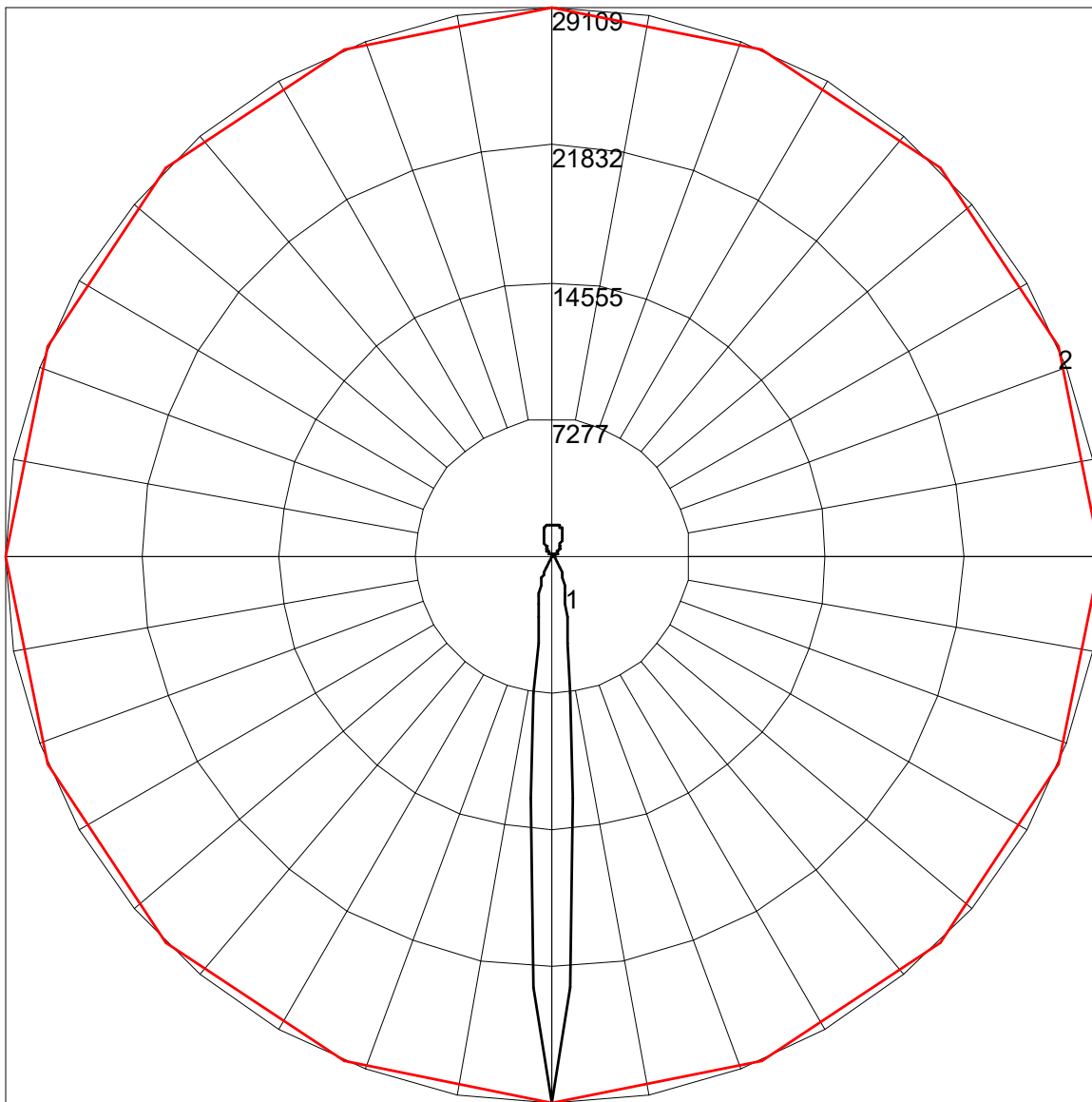
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-9_50_24-MERGED.IES

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	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	3H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
4H	2H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	3H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
8H	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
12H	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8

Maximum UGR = 5.8

POLAR GRAPH



Maximum Candela = 29109.498 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.)