



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-14_4_24-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

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

[LUMINAIRE] White formed aluminum housing, specular reflector, clear glass cover

[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	5221
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	1332	1332	1332
55	505	505	505
65	171	171	171
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061

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135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

**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	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061
135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.867	6670.867	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.841	11855.841	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.478	20901.479	20901.479	20901.479	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1826.7	N.A.	35.00
0-30	2472.3	N.A.	47.40
0-40	2710.05	N.A.	51.90
0-60	2728.81	N.A.	52.30
0-80	2731.12	N.A.	52.30
0-90	2731.12	N.A.	52.30
10-90	1700.19	N.A.	32.60
20-40	883.35	N.A.	16.90
20-50	897.12	N.A.	17.20
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	0.00	N.A.	0.00
90-110	0.47	N.A.	0.00
90-120	2.11	N.A.	0.00
90-130	6.65	N.A.	0.10
90-150	235.92	N.A.	4.50
90-180	2489.47	N.A.	47.70
110-180	2489.00	N.A.	47.70
0-180	5220.6	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	0.00
90-100	0.00
100-110	0.47
110-120	1.64
120-130	4.54
130-140	12.56
140-150	216.71
150-160	588.48
160-170	725.36
170-180	939.72

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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	96	93	94	92	89	87	79	77	76	67	66	65	56	56	55	50
2	96	90	86	82	89	85	81	78	74	71	69	64	62	61	54	53	53	48
3	90	84	78	74	84	79	74	71	69	66	64	61	58	57	52	51	50	47
4	85	78	72	68	80	73	69	65	65	62	59	58	55	53	51	49	48	45
5	81	73	67	63	76	69	64	60	62	58	55	55	53	51	49	47	46	43
6	77	68	62	58	72	65	60	56	59	55	52	53	50	48	47	46	44	42
7	73	64	59	55	69	61	56	53	56	52	49	51	48	46	46	44	43	40
8	70	61	55	51	66	58	53	50	53	50	47	49	46	44	44	42	41	39
9	67	58	52	49	63	56	51	47	51	47	45	47	44	42	43	41	40	38
10	64	55	50	46	61	53	48	45	49	45	43	45	43	41	42	40	38	37

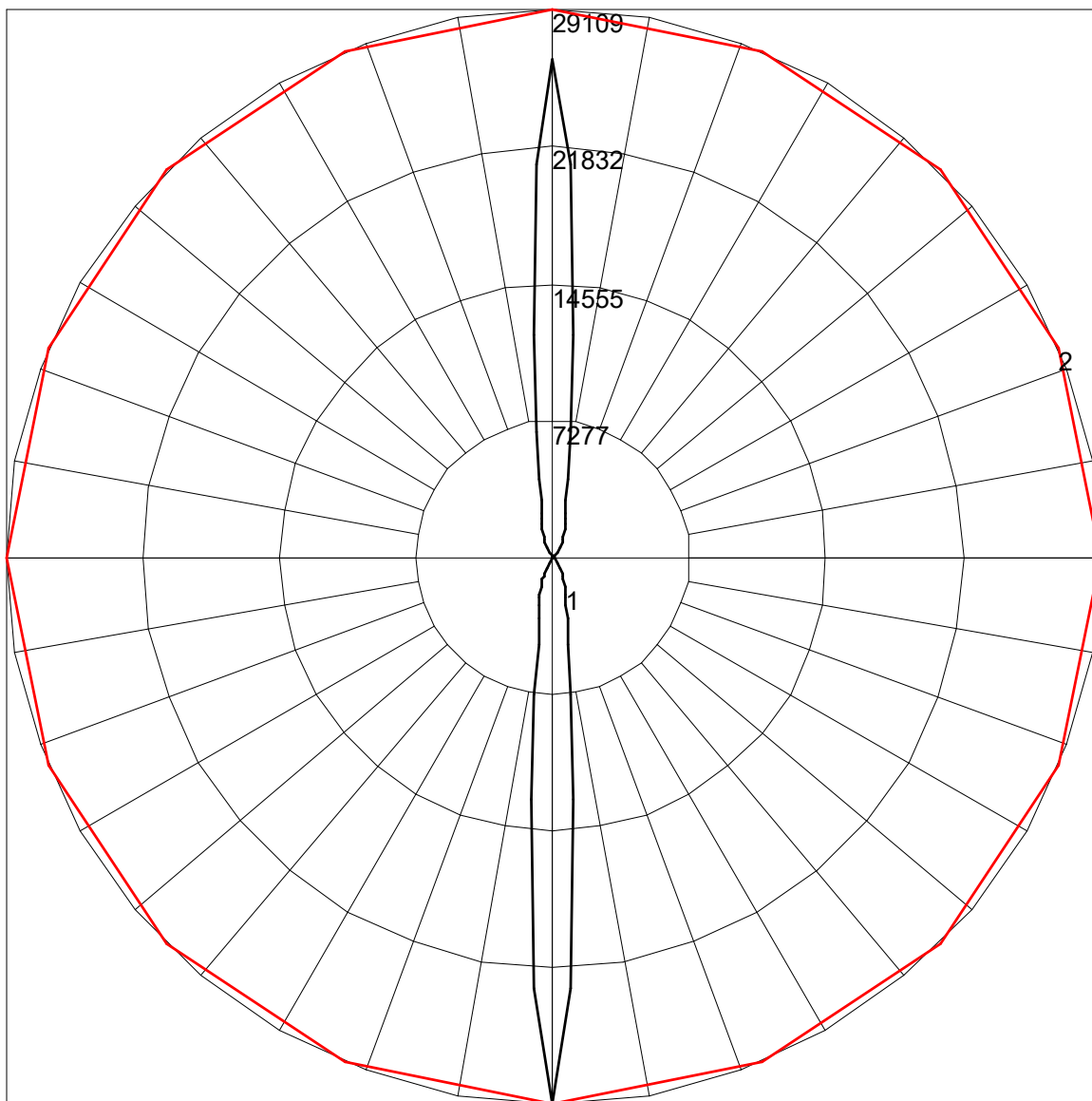
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-14_4_24-MERGED.IES

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	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	3H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
4H	2H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	3H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
8H	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	12H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
12H	4H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	6H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	8H	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9

Maximum UGR = 5.9

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.)