



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-10_56_58-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & 12326812.05

[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-ON-CSD-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	5333
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
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	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131
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	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	0.131	0.131	0.131	0.131	0.131	0.131	0.131
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	1826.7	N.A.	34.30
0-30	2472.3	N.A.	46.40
0-40	2710.05	N.A.	50.80
0-60	2728.81	N.A.	51.20
0-80	2731.12	N.A.	51.20
0-90	2731.14	N.A.	51.20
10-90	1700.21	N.A.	31.90
20-40	883.35	N.A.	16.60
20-50	897.12	N.A.	16.80
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	0.02	N.A.	0.00
90-110	2.13	N.A.	0.00
90-120	7.62	N.A.	0.10
90-130	25.07	N.A.	0.50
90-150	441.42	N.A.	8.30
90-180	2601.66	N.A.	48.80
110-180	2599.53	N.A.	48.70
0-180	5332.8	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	0.02
90-100	0.44
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 RW	80				70				50			30			10			0
	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	98	95	93	94	91	89	87	78	77	75	66	65	64	55	55	54	49
2	95	90	86	82	88	84	80	77	73	71	68	63	61	60	53	52	52	47
3	90	83	78	74	84	78	74	70	69	65	63	60	58	56	51	50	49	46
4	85	77	72	67	79	73	68	64	65	61	58	57	55	53	50	48	47	44
5	80	72	66	62	75	68	63	60	61	57	55	54	52	50	48	46	45	42
6	76	68	62	58	72	64	59	56	58	54	51	52	49	47	46	45	43	41
7	73	64	58	54	69	61	56	52	55	51	49	50	47	45	45	43	42	40
8	69	60	55	51	66	58	53	49	53	49	46	48	45	43	43	42	40	38
9	66	57	52	48	63	55	50	47	50	47	44	46	43	42	42	40	39	37
10	64	55	49	46	60	53	48	45	48	45	42	45	42	40	41	39	38	36

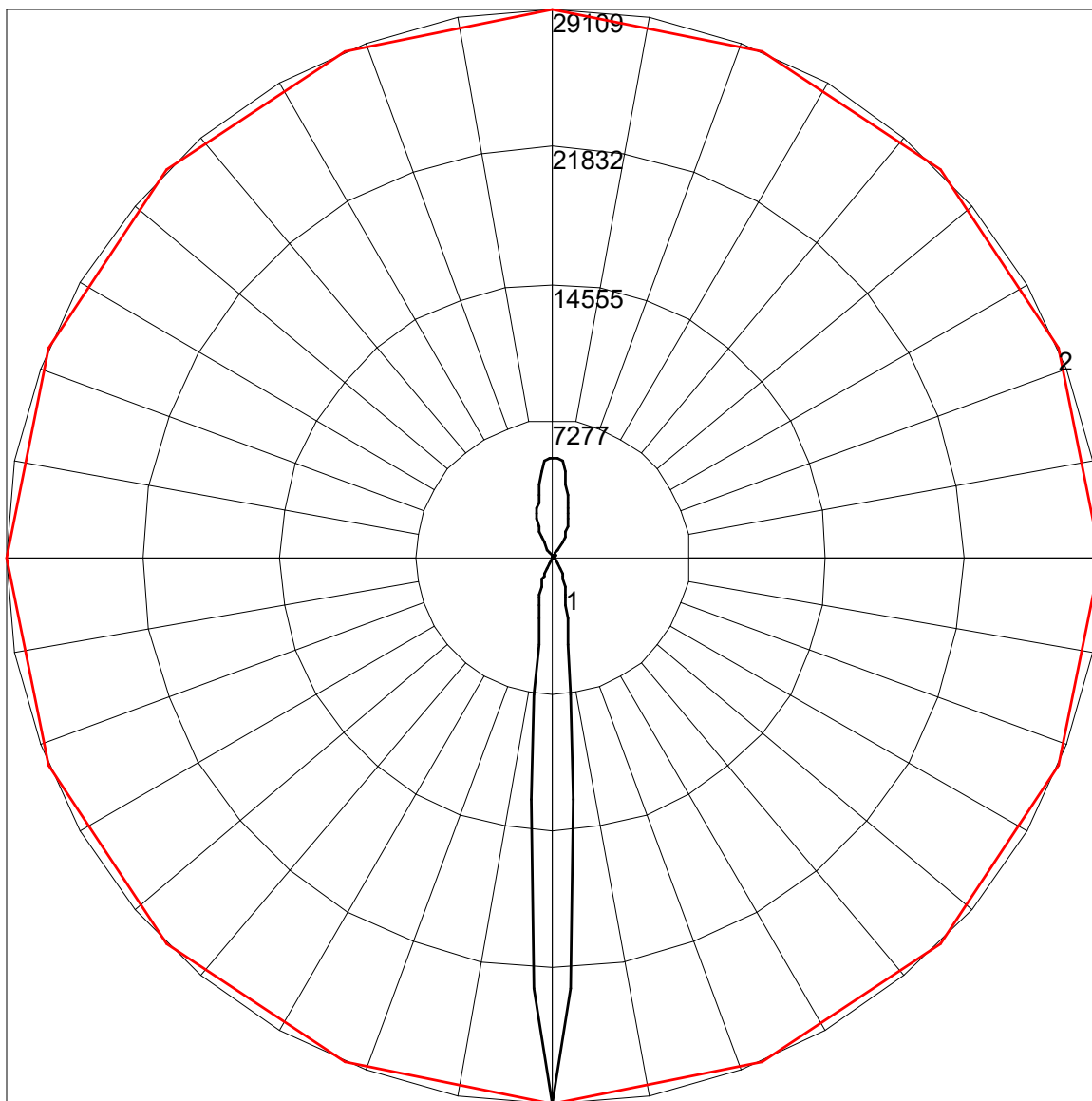
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-10_56_58-MERGED.IES

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.)