



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-10_41_9-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB]

[ISSUE DATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-P29-835U-P29-835D-xxx-PoE PR-OM-CSU-OM-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	5456
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
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	5134	5134	5134
55	1890	1890	1890
65	744	744	744
75	334	334	334
85	270	270	270

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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	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
2.5	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
5.0	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
7.5	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
10.0	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
12.5	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
15.0	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
17.5	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
20.0	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
22.5	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
25.0	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
27.5	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
30.0	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
32.5	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
35.0	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413
37.5	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481
40.0	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135
42.5	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684
45.0	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282
47.5	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361
50.0	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449
52.5	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833
55.0	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798
57.5	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347
60.0	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473
62.5	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747
65.0	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739
67.5	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161
70.0	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156
72.5	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295
75.0	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578
77.5	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148
80.0	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861
82.5	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574
85.0	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430
87.5	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287
90.0	0.274	0.274	0.274	0.274	0.274	0.274	0.274	0.274	0.274	0.274
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	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
2.5	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
5.0	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
7.5	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
10.0	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
12.5	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
15.0	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
17.5	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
20.0	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
22.5	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
25.0	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
27.5	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
30.0	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
32.5	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
35.0	567.413	567.413	567.413	567.413	567.413	567.413	567.413
37.5	247.481	247.481	247.481	247.481	247.481	247.481	247.481
40.0	166.135	166.135	166.135	166.135	166.135	166.135	166.135
42.5	93.684	93.684	93.684	93.684	93.684	93.684	93.684
45.0	66.282	66.282	66.282	66.282	66.282	66.282	66.282
47.5	51.361	51.361	51.361	51.361	51.361	51.361	51.361
50.0	38.449	38.449	38.449	38.449	38.449	38.449	38.449
52.5	27.833	27.833	27.833	27.833	27.833	27.833	27.833
55.0	19.798	19.798	19.798	19.798	19.798	19.798	19.798
57.5	14.347	14.347	14.347	14.347	14.347	14.347	14.347
60.0	10.473	10.473	10.473	10.473	10.473	10.473	10.473
62.5	7.747	7.747	7.747	7.747	7.747	7.747	7.747
65.0	5.739	5.739	5.739	5.739	5.739	5.739	5.739
67.5	4.161	4.161	4.161	4.161	4.161	4.161	4.161
70.0	3.156	3.156	3.156	3.156	3.156	3.156	3.156
72.5	2.295	2.295	2.295	2.295	2.295	2.295	2.295
75.0	1.578	1.578	1.578	1.578	1.578	1.578	1.578
77.5	1.148	1.148	1.148	1.148	1.148	1.148	1.148
80.0	0.861	0.861	0.861	0.861	0.861	0.861	0.861

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82.5	0.574	0.574	0.574	0.574	0.574	0.574	0.574
85.0	0.430	0.430	0.430	0.430	0.430	0.430	0.430
87.5	0.287	0.287	0.287	0.287	0.287	0.287	0.287
90.0	0.274	0.274	0.274	0.274	0.274	0.274	0.274
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	1438.77	N.A.	26.40
0-30	2370.43	N.A.	43.40
0-40	2767.74	N.A.	50.70
0-60	2846.44	N.A.	52.20
0-80	2854.31	N.A.	52.30
0-90	2854.82	N.A.	52.30
10-90	2358.96	N.A.	43.20
20-40	1328.97	N.A.	24.40
20-50	1388.52	N.A.	25.40
40-70	84.72	N.A.	1.60
60-80	7.87	N.A.	0.10
70-80	1.85	N.A.	0.00
80-90	0.51	N.A.	0.00
90-110	2.15	N.A.	0.00
90-120	7.64	N.A.	0.10
90-130	25.09	N.A.	0.50
90-150	441.44	N.A.	8.10
90-180	2601.68	N.A.	47.70
110-180	2599.53	N.A.	47.60
0-180	5456.5	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	495.86
10-20	942.91
20-30	931.66
30-40	397.31
40-50	59.55
50-60	19.15
60-70	6.02
70-80	1.85
80-90	0.51
90-100	0.46
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	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	36
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

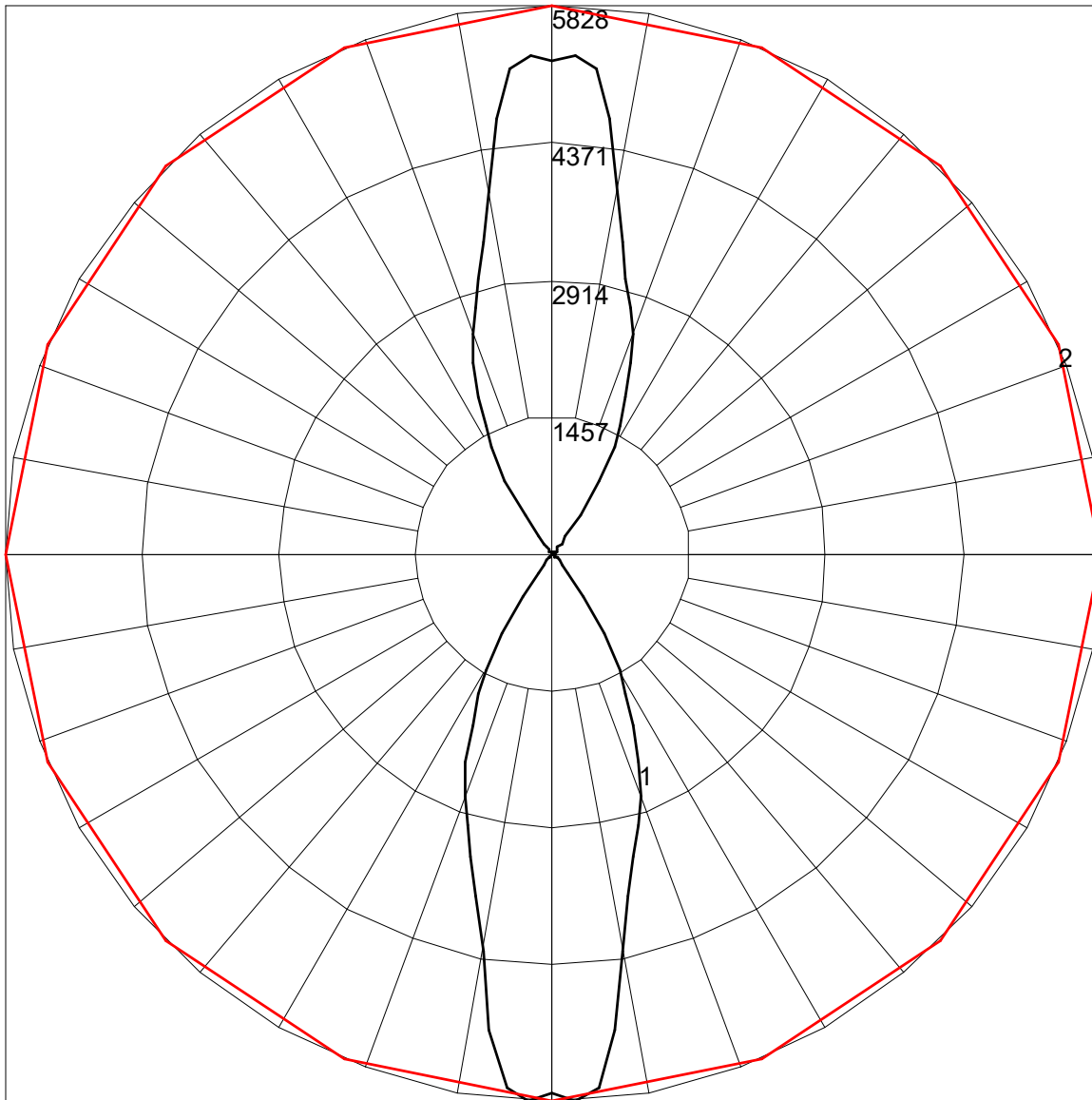
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-10_41_9-MERGED.IES

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 = 5827.642 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.)