



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_26_19-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.15

[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-RN-WHD-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	4828
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
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	7218	7218	7218
55	4721	4721	4721
65	3213	3213	3213
75	2076	2076	2076
85	1666	1666	1666

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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	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010
2.5	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610
5.0	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203
7.5	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673
10.0	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162
12.5	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161
15.0	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766
17.5	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165
20.0	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174
22.5	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820
25.0	866.682	866.682	866.682	866.682	866.682	866.682	866.682	866.682	866.682	866.682
27.5	600.102	600.102	600.102	600.102	600.102	600.102	600.102	600.102	600.102	600.102
30.0	423.266	423.266	423.266	423.266	423.266	423.266	423.266	423.266	423.266	423.266
32.5	306.613	306.613	306.613	306.613	306.613	306.613	306.613	306.613	306.613	306.613
35.0	228.270	228.270	228.270	228.270	228.270	228.270	228.270	228.270	228.270	228.270
37.5	174.715	174.715	174.715	174.715	174.715	174.715	174.715	174.715	174.715	174.715
40.0	137.996	137.996	137.996	137.996	137.996	137.996	137.996	137.996	137.996	137.996
42.5	112.146	112.146	112.146	112.146	112.146	112.146	112.146	112.146	112.146	112.146
45.0	93.190	93.190	93.190	93.190	93.190	93.190	93.190	93.190	93.190	93.190
47.5	78.476	78.476	78.476	78.476	78.476	78.476	78.476	78.476	78.476	78.476
50.0	66.811	66.811	66.811	66.811	66.811	66.811	66.811	66.811	66.811	66.811
52.5	57.266	57.266	57.266	57.266	57.266	57.266	57.266	57.266	57.266	57.266
55.0	49.445	49.445	49.445	49.445	49.445	49.445	49.445	49.445	49.445	49.445
57.5	42.552	42.552	42.552	42.552	42.552	42.552	42.552	42.552	42.552	42.552
60.0	36.322	36.322	36.322	36.322	36.322	36.322	36.322	36.322	36.322	36.322
62.5	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356	30.356
65.0	24.789	24.789	24.789	24.789	24.789	24.789	24.789	24.789	24.789	24.789
67.5	20.017	20.017	20.017	20.017	20.017	20.017	20.017	20.017	20.017	20.017
70.0	15.907	15.907	15.907	15.907	15.907	15.907	15.907	15.907	15.907	15.907
72.5	12.461	12.461	12.461	12.461	12.461	12.461	12.461	12.461	12.461	12.461
75.0	9.809	9.809	9.809	9.809	9.809	9.809	9.809	9.809	9.809	9.809
77.5	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689
80.0	5.965	5.965	5.965	5.965	5.965	5.965	5.965	5.965	5.965	5.965
82.5	4.242	4.242	4.242	4.242	4.242	4.242	4.242	4.242	4.242	4.242
85.0	2.651	2.651	2.651	2.651	2.651	2.651	2.651	2.651	2.651	2.651
87.5	1.326	1.326	1.326	1.326	1.326	1.326	1.326	1.326	1.326	1.326
90.0	0.519	0.519	0.519	0.519	0.519	0.519	0.519	0.519	0.519	0.519
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	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010	8920.010
2.5	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610	8702.610
5.0	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203	8086.203
7.5	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673	7147.673
10.0	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162	5977.162
12.5	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161	4719.161
15.0	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766	3528.766
17.5	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165	2545.165
20.0	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174	1800.174
22.5	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820	1254.820
25.0	866.682	866.682	866.682	866.682	866.682	866.682	866.682
27.5	600.102	600.102	600.102	600.102	600.102	600.102	600.102
30.0	423.266	423.266	423.266	423.266	423.266	423.266	423.266
32.5	306.613	306.613	306.613	306.613	306.613	306.613	306.613
35.0	228.270	228.270	228.270	228.270	228.270	228.270	228.270
37.5	174.715	174.715	174.715	174.715	174.715	174.715	174.715
40.0	137.996	137.996	137.996	137.996	137.996	137.996	137.996
42.5	112.146	112.146	112.146	112.146	112.146	112.146	112.146
45.0	93.190	93.190	93.190	93.190	93.190	93.190	93.190
47.5	78.476	78.476	78.476	78.476	78.476	78.476	78.476
50.0	66.811	66.811	66.811	66.811	66.811	66.811	66.811
52.5	57.266	57.266	57.266	57.266	57.266	57.266	57.266
55.0	49.445	49.445	49.445	49.445	49.445	49.445	49.445
57.5	42.552	42.552	42.552	42.552	42.552	42.552	42.552
60.0	36.322	36.322	36.322	36.322	36.322	36.322	36.322
62.5	30.356	30.356	30.356	30.356	30.356	30.356	30.356
65.0	24.789	24.789	24.789	24.789	24.789	24.789	24.789
67.5	20.017	20.017	20.017	20.017	20.017	20.017	20.017
70.0	15.907	15.907	15.907	15.907	15.907	15.907	15.907
72.5	12.461	12.461	12.461	12.461	12.461	12.461	12.461
75.0	9.809	9.809	9.809	9.809	9.809	9.809	9.809
77.5	7.689	7.689	7.689	7.689	7.689	7.689	7.689
80.0	5.965	5.965	5.965	5.965	5.965	5.965	5.965

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82.5	4.242	4.242	4.242	4.242	4.242	4.242	4.242
85.0	2.651	2.651	2.651	2.651	2.651	2.651	2.651
87.5	1.326	1.326	1.326	1.326	1.326	1.326	1.326
90.0	0.519	0.519	0.519	0.519	0.519	0.519	0.519
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	1683.34	N.A.	34.90
0-30	2108.61	N.A.	43.70
0-40	2260.73	N.A.	46.80
0-60	2379.55	N.A.	49.30
0-80	2415.33	N.A.	50.00
0-90	2418.45	N.A.	50.10
10-90	1714.26	N.A.	35.50
20-40	577.39	N.A.	12.00
20-50	651.43	N.A.	13.50
40-70	143.83	N.A.	3.00
60-80	35.78	N.A.	0.70
70-80	10.78	N.A.	0.20
80-90	3.12	N.A.	0.10
90-110	2.03	N.A.	0.00
90-120	7.11	N.A.	0.10
90-130	23.28	N.A.	0.50
90-150	408.91	N.A.	8.50
90-180	2409.74	N.A.	49.90
110-180	2407.71	N.A.	49.90
0-180	4828.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	704.19
10-20	979.15
20-30	425.27
30-40	152.12
40-50	74.04
50-60	44.79
60-70	25.00
70-80	10.78
80-90	3.12
90-100	0.47
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	101	97	94	92	93	90	88	86	77	76	74	65	64	63	54	53	53	48
2	94	89	84	81	87	83	79	76	72	69	67	61	60	58	52	51	50	45
3	89	82	76	72	82	77	72	68	67	64	61	58	56	54	50	48	47	43
4	84	76	70	65	78	71	66	62	63	59	56	55	52	50	48	46	45	42
5	79	70	64	60	74	66	61	57	59	55	52	52	50	47	46	44	43	40
6	75	66	60	55	70	62	57	53	56	52	49	50	47	45	44	42	41	38
7	71	62	56	52	67	59	54	50	53	49	46	48	45	43	42	41	39	37
8	68	58	52	48	64	56	50	47	50	47	44	46	43	41	41	39	38	36
9	65	55	49	46	61	53	48	44	48	44	42	44	41	39	40	38	36	34
10	62	52	47	43	58	50	45	42	46	42	40	42	39	37	38	36	35	33

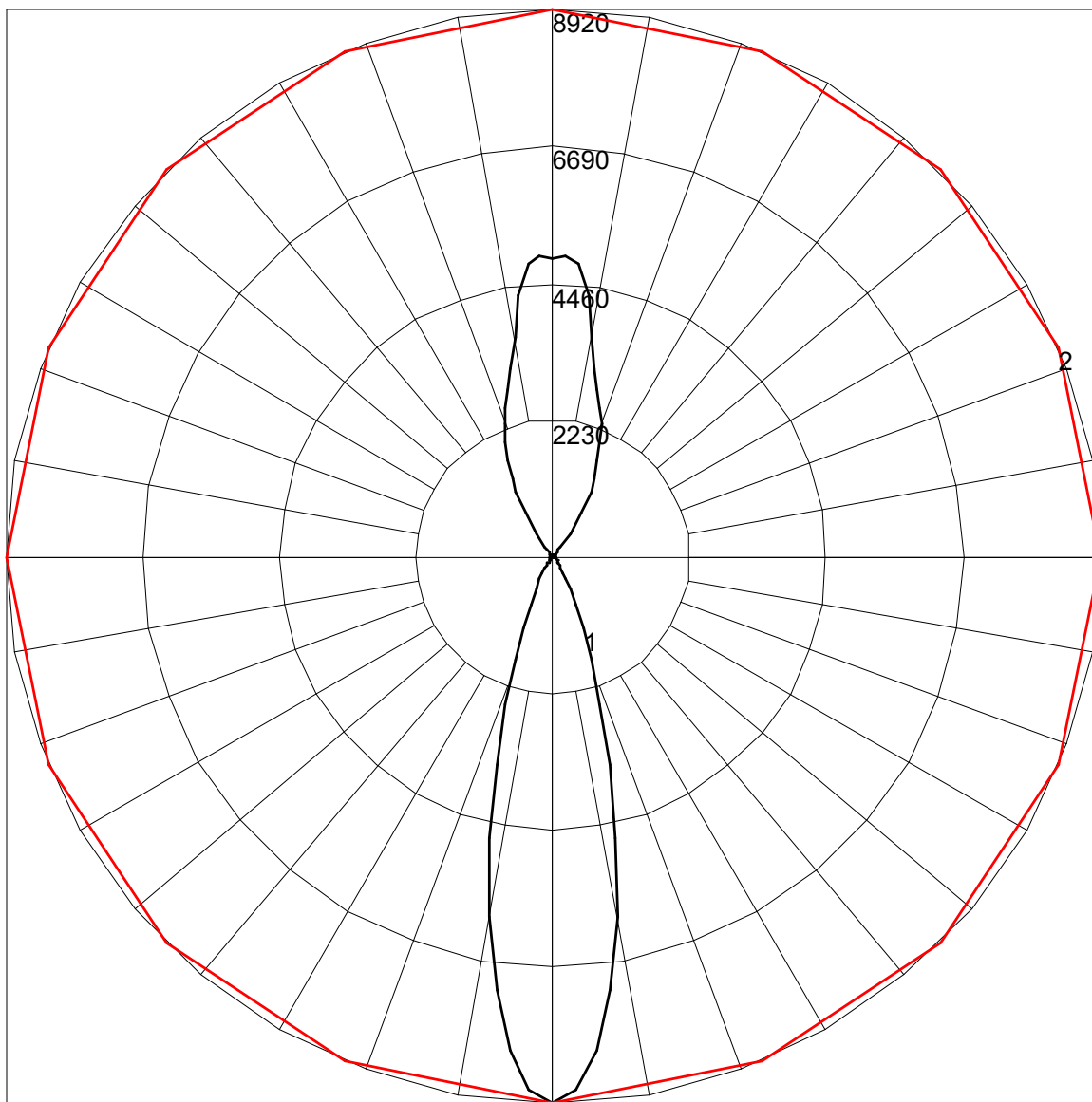
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_26_19-MERGED.IES

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	5.5	5.7	6.1	6.7	8.0	5.5	5.7	6.1	6.7	8.0
	3H	5.9	6.5	6.9	7.5	8.8	5.9	6.5	6.9	7.5	8.8
	4H	6.2	6.7	7.2	7.7	9.0	6.2	6.7	7.2	7.7	9.0
	6H	6.3	6.8	7.4	7.8	9.2	6.3	6.8	7.4	7.8	9.2
	8H	6.4	6.9	7.4	7.9	9.2	6.4	6.9	7.4	7.9	9.2
	12H	6.4	6.8	7.4	7.9	9.2	6.4	6.8	7.4	7.9	9.2
4H	2H	5.5	5.8	6.3	6.8	8.2	5.5	5.8	6.3	6.8	8.2
	3H	6.3	6.8	7.4	7.8	9.1	6.3	6.8	7.4	7.8	9.1
	4H	6.6	7.1	7.7	8.1	9.4	6.6	7.1	7.7	8.1	9.4
	6H	6.9	7.3	8.0	8.3	9.7	6.9	7.3	8.0	8.3	9.7
	8H	7.0	7.3	8.1	8.4	9.7	7.0	7.3	8.1	8.4	9.7
	12H	7.0	7.3	8.1	8.4	9.7	7.0	7.3	8.1	8.4	9.7
8H	4H	6.7	7.0	7.8	8.1	9.4	6.7	7.0	7.8	8.1	9.4
	6H	7.1	7.3	8.1	8.4	9.8	7.1	7.3	8.1	8.4	9.8
	8H	7.2	7.4	8.3	8.5	9.9	7.2	7.4	8.3	8.5	9.9
	12H	7.3	7.5	8.4	8.6	10.0	7.3	7.5	8.4	8.6	10.0
12H	4H	6.7	7.0	7.7	8.0	9.4	6.7	7.0	7.7	8.0	9.4
	6H	7.1	7.3	8.1	8.3	9.7	7.1	7.3	8.1	8.3	9.7
	8H	7.2	7.4	8.3	8.5	9.9	7.2	7.4	8.3	8.5	9.9

Maximum UGR = 10.0

POLAR GRAPH



Maximum Candela = 8920.01 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.)