



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-15_29_20-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] 5-MAR-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 8CRDI-TL-L25-9DWU-L25-9DWD-xxx-DIM-UNV-LW-CSU-ON-CSD-WM

[LUMINAIRE] 8" DIA. ALUMINUM REFLECTOR

[LAMP] Two white LEDs (one up/one down)

[_SEARCH_SOURCE TYPE] LED

[_SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[_SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4623
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	61
Total Luminaire Watts	75.4
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	140	140	140
55	39	39	39
65	9	9	9
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	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
2.5	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
5.0	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
7.5	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
10.0	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
12.5	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
15.0	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
17.5	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
20.0	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
22.5	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
25.0	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
27.5	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
30.0	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071
32.5	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219
35.0	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231
37.5	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359
40.0	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619
42.5	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739
45.0	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859
47.5	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200
50.0	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760
52.5	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100
55.0	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880
57.5	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660
60.0	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
62.5	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
65.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
67.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
70.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
72.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
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	4.997	4.997	4.997	4.997	4.997	4.997	4.997	4.997	4.997	4.997
92.5	7.695	7.695	7.695	7.695	7.695	7.695	7.695	7.695	7.695	7.695
95.0	13.447	13.447	13.447	13.447	13.447	13.447	13.447	13.447	13.447	13.447
97.5	22.807	22.807	22.807	22.807	22.807	22.807	22.807	22.807	22.807	22.807
100.0	33.952	33.952	33.952	33.952	33.952	33.952	33.952	33.952	33.952	33.952
102.5	45.653	45.653	45.653	45.653	45.653	45.653	45.653	45.653	45.653	45.653
105.0	58.268	58.268	58.268	58.268	58.268	58.268	58.268	58.268	58.268	58.268
107.5	72.507	72.507	72.507	72.507	72.507	72.507	72.507	72.507	72.507	72.507
110.0	89.086	89.086	89.086	89.086	89.086	89.086	89.086	89.086	89.086	89.086
112.5	107.728	107.728	107.728	107.728	107.728	107.728	107.728	107.728	107.728	107.728
115.0	128.830	128.830	128.830	128.830	128.830	128.830	128.830	128.830	128.830	128.830
117.5	152.471	152.471	152.471	152.471	152.471	152.471	152.471	152.471	152.471	152.471
120.0	178.926	178.926	178.926	178.926	178.926	178.926	178.926	178.926	178.926	178.926
122.5	208.358	208.358	208.358	208.358	208.358	208.358	208.358	208.358	208.358	208.358
125.0	240.883	240.883	240.883	240.883	240.883	240.883	240.883	240.883	240.883	240.883
127.5	275.589	275.589	275.589	275.589	275.589	275.589	275.589	275.589	275.589	275.589
130.0	311.684	311.684	311.684	311.684	311.684	311.684	311.684	311.684	311.684	311.684
132.5	347.977	347.977	347.977	347.977	347.977	347.977	347.977	347.977	347.977	347.977

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CANDELA TABULATION - (Cont.)

135.0	384.231	384.231	384.231	384.231	384.231	384.231	384.231	384.231	384.231	384.231
137.5	422.031	422.031	422.031	422.031	422.031	422.031	422.031	422.031	422.031	422.031
140.0	465.662	465.662	465.662	465.662	465.662	465.662	465.662	465.662	465.662	465.662
142.5	521.589	521.589	521.589	521.589	521.589	521.589	521.589	521.589	521.589	521.589
145.0	596.952	596.952	596.952	596.952	596.952	596.952	596.952	596.952	596.952	596.952
147.5	694.527	694.527	694.527	694.527	694.527	694.527	694.527	694.527	694.527	694.527
150.0	815.504	815.504	815.504	815.504	815.504	815.504	815.504	815.504	815.504	815.504
152.5	941.637	941.637	941.637	941.637	941.637	941.637	941.637	941.637	941.637	941.637
155.0	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753
157.5	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987
160.0	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233
162.5	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126
165.0	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238
167.5	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483
170.0	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796
172.5	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332
175.0	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075
177.5	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249
180.0	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544

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	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
2.5	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
5.0	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
7.5	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
10.0	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
12.5	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
15.0	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
17.5	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
20.0	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
22.5	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
25.0	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
27.5	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
30.0	921.071	921.071	921.071	921.071	921.071	921.071	921.071
32.5	661.219	661.219	661.219	661.219	661.219	661.219	661.219
35.0	295.231	295.231	295.231	295.231	295.231	295.231	295.231
37.5	46.359	46.359	46.359	46.359	46.359	46.359	46.359
40.0	25.619	25.619	25.619	25.619	25.619	25.619	25.619
42.5	20.739	20.739	20.739	20.739	20.739	20.739	20.739
45.0	15.859	15.859	15.859	15.859	15.859	15.859	15.859
47.5	12.200	12.200	12.200	12.200	12.200	12.200	12.200
50.0	9.760	9.760	9.760	9.760	9.760	9.760	9.760
52.5	6.100	6.100	6.100	6.100	6.100	6.100	6.100
55.0	4.880	4.880	4.880	4.880	4.880	4.880	4.880
57.5	3.660	3.660	3.660	3.660	3.660	3.660	3.660
60.0	2.440	2.440	2.440	2.440	2.440	2.440	2.440
62.5	2.440	2.440	2.440	2.440	2.440	2.440	2.440
65.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
67.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
70.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
72.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
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	4.997	4.997	4.997	4.997	4.997	4.997	4.997
92.5	7.695	7.695	7.695	7.695	7.695	7.695	7.695
95.0	13.447	13.447	13.447	13.447	13.447	13.447	13.447
97.5	22.807	22.807	22.807	22.807	22.807	22.807	22.807
100.0	33.952	33.952	33.952	33.952	33.952	33.952	33.952
102.5	45.653	45.653	45.653	45.653	45.653	45.653	45.653
105.0	58.268	58.268	58.268	58.268	58.268	58.268	58.268
107.5	72.507	72.507	72.507	72.507	72.507	72.507	72.507
110.0	89.086	89.086	89.086	89.086	89.086	89.086	89.086
112.5	107.728	107.728	107.728	107.728	107.728	107.728	107.728
115.0	128.830	128.830	128.830	128.830	128.830	128.830	128.830
117.5	152.471	152.471	152.471	152.471	152.471	152.471	152.471
120.0	178.926	178.926	178.926	178.926	178.926	178.926	178.926
122.5	208.358	208.358	208.358	208.358	208.358	208.358	208.358
125.0	240.883	240.883	240.883	240.883	240.883	240.883	240.883
127.5	275.589	275.589	275.589	275.589	275.589	275.589	275.589
130.0	311.684	311.684	311.684	311.684	311.684	311.684	311.684
132.5	347.977	347.977	347.977	347.977	347.977	347.977	347.977
135.0	384.231	384.231	384.231	384.231	384.231	384.231	384.231
137.5	422.031	422.031	422.031	422.031	422.031	422.031	422.031
140.0	465.662	465.662	465.662	465.662	465.662	465.662	465.662
142.5	521.589	521.589	521.589	521.589	521.589	521.589	521.589
145.0	596.952	596.952	596.952	596.952	596.952	596.952	596.952
147.5	694.527	694.527	694.527	694.527	694.527	694.527	694.527
150.0	815.504	815.504	815.504	815.504	815.504	815.504	815.504
152.5	941.637	941.637	941.637	941.637	941.637	941.637	941.637
155.0	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753	1069.753
157.5	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987	1183.987
160.0	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233	1273.233
162.5	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126	1333.126
165.0	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238	1367.238
167.5	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483	1385.483
170.0	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796	1395.796
172.5	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332	1403.332
175.0	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075	1410.075
177.5	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249	1413.249
180.0	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544	1412.544

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1684.23	N.A.	36.40
0-30	2279.48	N.A.	49.30
0-40	2498.69	N.A.	54.00
0-60	2515.98	N.A.	54.40
0-80	2518.11	N.A.	54.50
0-90	2518.8	N.A.	54.50
10-90	1568.27	N.A.	33.90
20-40	814.45	N.A.	17.60
20-50	827.15	N.A.	17.90
40-70	18.95	N.A.	0.40
60-80	2.13	N.A.	0.00
70-80	0.48	N.A.	0.00
80-90	0.68	N.A.	0.00
90-110	79.98	N.A.	1.70
90-120	209.21	N.A.	4.50
90-130	425.65	N.A.	9.20
90-150	1103.85	N.A.	23.90
90-180	2104.68	N.A.	45.50
110-180	2024.7	N.A.	43.80
0-180	4623.48	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	950.53
10-20	733.71
20-30	595.25
30-40	219.21
40-50	12.70
50-60	4.60
60-70	1.65
70-80	0.48
80-90	0.68
90-100	17.26
100-110	62.72
110-120	129.23
120-130	216.45
130-140	297.12
140-150	381.08
150-160	484.27
160-170	382.46
170-180	134.11

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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	86	86	86	72	72	72	60	60	60	54
1	102	99	96	94	95	92	90	88	80	79	77	69	68	67	58	58	57	52
2	96	91	87	83	90	86	82	79	75	73	70	65	64	62	56	55	54	50
3	91	84	79	75	85	80	75	72	71	67	65	62	60	58	54	53	52	49
4	86	79	73	69	81	74	70	66	67	63	60	59	57	55	52	51	50	47
5	82	74	68	64	77	70	65	61	63	59	57	57	54	52	51	49	48	45
6	78	69	63	59	73	66	61	57	60	56	53	54	52	50	49	47	46	44
7	74	65	60	56	70	63	58	54	57	53	51	52	49	47	47	46	44	42
8	71	62	56	53	67	60	55	51	55	51	48	50	47	45	46	44	43	41
9	68	59	54	50	65	57	52	49	52	49	46	48	46	44	45	43	41	40
10	65	56	51	48	62	54	50	46	50	47	44	47	44	42	43	41	40	38

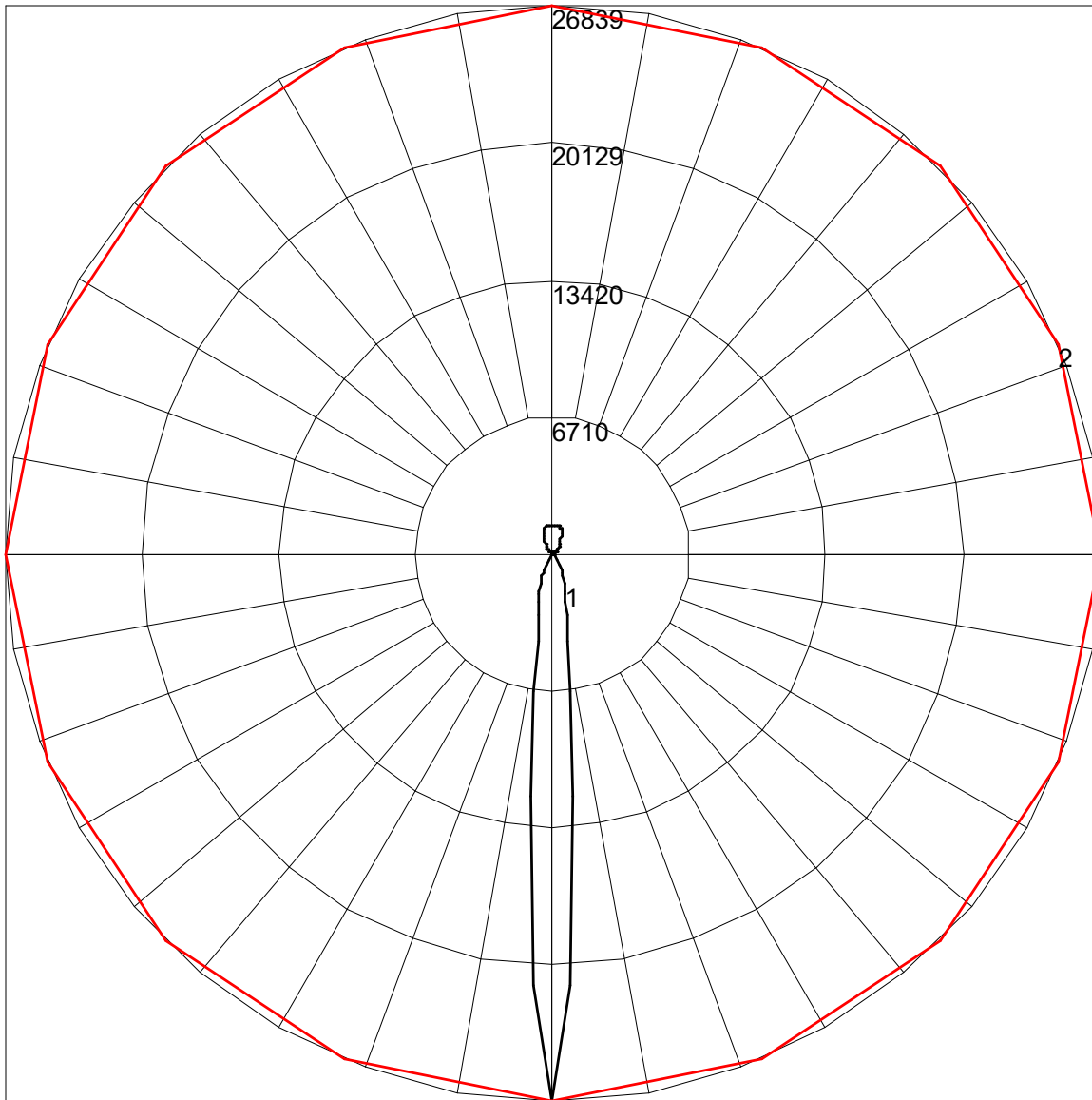
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-15_29_20-MERGED.IES

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	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	3H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	4H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	6H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	8H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	12H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
4H	2H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	3H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	4H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	6H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	8H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	12H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
8H	4H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	6H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	8H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	12H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
12H	4H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	6H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	8H	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4

Maximum UGR = 5.4

POLAR GRAPH



Maximum Candela = 26839.142 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.)