



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-15_21_31-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04

[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-OM-CSD-WM

[LUMINAIRE] 8" DIA. ALUMINUM CYLINDER

[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	4570
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	504	504	504
55	138	138	138
65	38	38	38
75	10	10	10
85	3	3	3

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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	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875
2.5	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571
5.0	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089
7.5	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611
10.0	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408
12.5	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557
15.0	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961
17.5	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687
20.0	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381
22.5	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049
25.0	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035
27.5	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942
30.0	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409
32.5	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958	880.958
35.0	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903	489.903
37.5	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675	213.675
40.0	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441	143.441
42.5	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887	80.887
45.0	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228	57.228
47.5	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345	44.345
50.0	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197	33.197
52.5	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031	24.031
55.0	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094	17.094
57.5	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387	12.387
60.0	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042	9.042
62.5	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689	6.689
65.0	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955
67.5	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592	3.592
70.0	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725	2.725
72.5	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982	1.982
75.0	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363	1.363
77.5	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991
80.0	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743	0.743
82.5	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495	0.495
85.0	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372
87.5	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248
90.0	5.121	5.121	5.121	5.121	5.121	5.121	5.121	5.121	5.121	5.121
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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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	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875	4970.875
2.5	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571	5031.571
5.0	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089	4920.089
7.5	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611	4424.611
10.0	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408	3707.408
12.5	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557	3225.557
15.0	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961	2879.961
17.5	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687	2608.687
20.0	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381	2368.381
22.5	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049	2076.049
25.0	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035	1749.035
27.5	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942	1457.942
30.0	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409	1242.409
32.5	880.958	880.958	880.958	880.958	880.958	880.958	880.958
35.0	489.903	489.903	489.903	489.903	489.903	489.903	489.903
37.5	213.675	213.675	213.675	213.675	213.675	213.675	213.675
40.0	143.441	143.441	143.441	143.441	143.441	143.441	143.441
42.5	80.887	80.887	80.887	80.887	80.887	80.887	80.887
45.0	57.228	57.228	57.228	57.228	57.228	57.228	57.228
47.5	44.345	44.345	44.345	44.345	44.345	44.345	44.345
50.0	33.197	33.197	33.197	33.197	33.197	33.197	33.197
52.5	24.031	24.031	24.031	24.031	24.031	24.031	24.031
55.0	17.094	17.094	17.094	17.094	17.094	17.094	17.094
57.5	12.387	12.387	12.387	12.387	12.387	12.387	12.387
60.0	9.042	9.042	9.042	9.042	9.042	9.042	9.042
62.5	6.689	6.689	6.689	6.689	6.689	6.689	6.689
65.0	4.955	4.955	4.955	4.955	4.955	4.955	4.955
67.5	3.592	3.592	3.592	3.592	3.592	3.592	3.592
70.0	2.725	2.725	2.725	2.725	2.725	2.725	2.725
72.5	1.982	1.982	1.982	1.982	1.982	1.982	1.982
75.0	1.363	1.363	1.363	1.363	1.363	1.363	1.363
77.5	0.991	0.991	0.991	0.991	0.991	0.991	0.991
80.0	0.743	0.743	0.743	0.743	0.743	0.743	0.743

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82.5	0.495	0.495	0.495	0.495	0.495	0.495	0.495
85.0	0.372	0.372	0.372	0.372	0.372	0.372	0.372
87.5	0.248	0.248	0.248	0.248	0.248	0.248	0.248
90.0	5.121	5.121	5.121	5.121	5.121	5.121	5.121
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	1242.23	N.A.	27.20
0-30	2046.62	N.A.	44.80
0-40	2389.66	N.A.	52.30
0-60	2457.61	N.A.	53.80
0-80	2464.41	N.A.	53.90
0-90	2465.51	N.A.	53.90
10-90	2037.39	N.A.	44.60
20-40	1147.43	N.A.	25.10
20-50	1198.85	N.A.	26.20
40-70	73.15	N.A.	1.60
60-80	6.80	N.A.	0.10
70-80	1.60	N.A.	0.00
80-90	1.11	N.A.	0.00
90-110	80.00	N.A.	1.80
90-120	209.22	N.A.	4.60
90-130	425.67	N.A.	9.30
90-150	1103.87	N.A.	24.20
90-180	2104.7	N.A.	46.10
110-180	2024.7	N.A.	44.30
0-180	4570.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	428.12
10-20	814.10
20-30	804.39
30-40	343.04
40-50	51.41
50-60	16.53
60-70	5.20
70-80	1.60
80-90	1.11
90-100	17.28
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	101	98	95	93	94	92	89	87	79	77	76	68	67	66	57	56	56	51
2	95	90	85	81	89	84	80	77	73	71	68	64	62	60	54	53	52	48
3	89	82	77	72	83	77	73	69	68	65	62	60	57	55	52	50	49	45
4	84	76	70	65	79	72	66	62	64	60	57	56	54	51	49	48	46	43
5	79	70	64	59	74	67	61	57	60	56	52	53	50	48	47	45	43	41
6	75	65	59	55	70	62	57	53	56	52	49	50	47	45	45	43	41	39
7	71	61	55	50	66	58	53	49	53	48	45	47	44	42	43	40	39	37
8	67	57	51	47	63	55	49	45	50	45	42	45	42	40	41	38	37	35
9	63	54	48	44	60	51	46	42	47	43	40	43	40	37	39	37	35	33
10	60	51	45	41	57	48	43	40	45	40	38	41	38	35	37	35	33	32

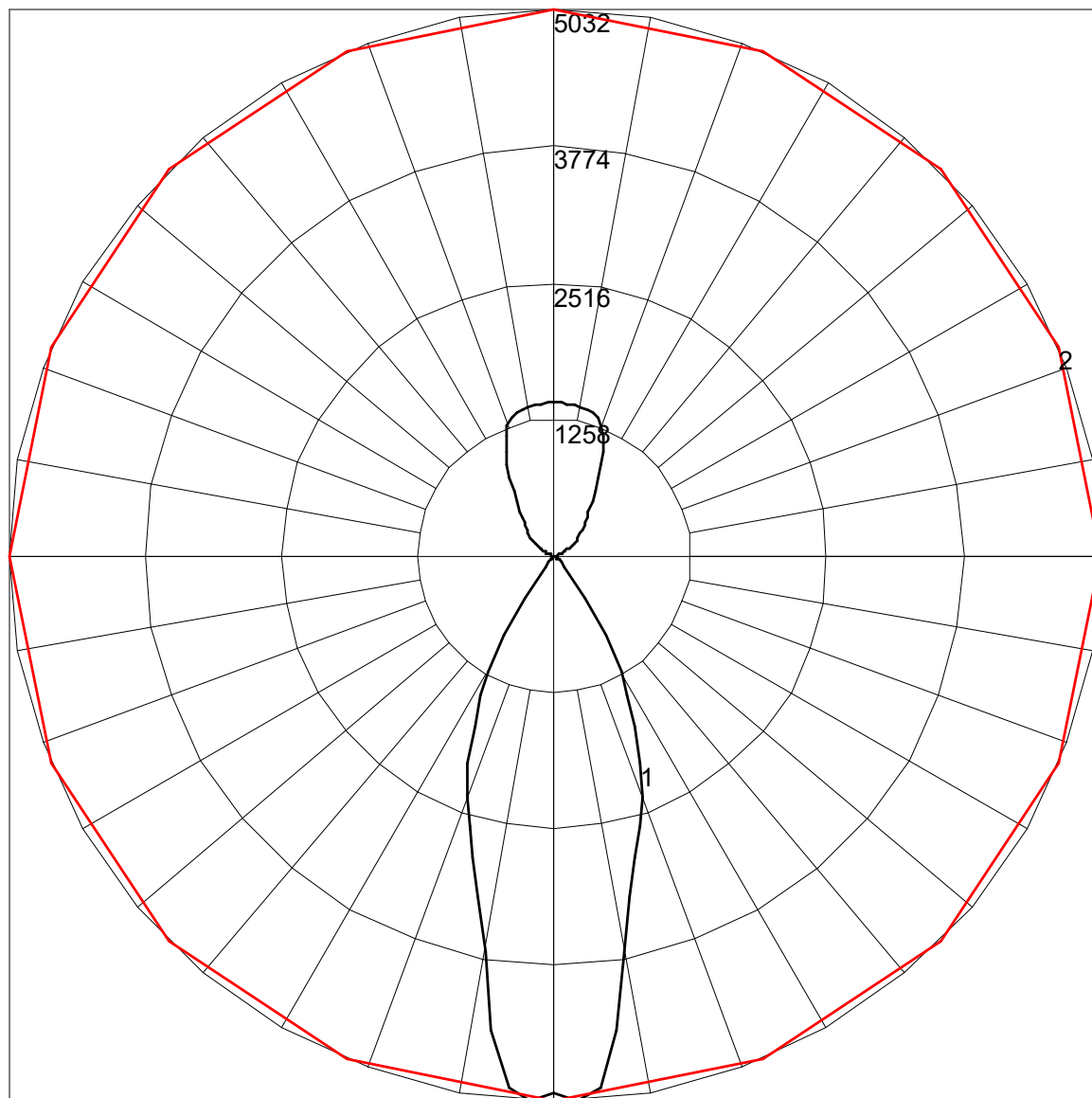
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-15_21_31-MERGED.IES

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	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	3H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	4H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	6H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	8H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	12H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
4H	2H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	3H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	4H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	6H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	8H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	12H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
8H	4H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	6H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	8H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	12H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
12H	4H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	6H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
	8H	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3

Maximum UGR = 5.3

POLAR GRAPH



Maximum Candela = 5031.571 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.)