



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_39_135-13_31_1-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 15-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-L25-9DWU-L25-9DWD-xxx-DIM-UNV-ON-CSU-RW-WHD-WM

[LUMINAIRE] 8" DIA. ALUMINUM CYLINDER

[LAMP] Two white LEDs, one up/ one down

[BALLAST]

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[_ CONVERT] Photometric web converted from original test data

[_ CONVERT] Luminaire test position and photometric web converted from original test data for upright orientation and clear glass

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4352
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
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
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	25455	25455	25455
55	21228	21228	21228
65	14976	14976	14976
75	9174	9174	9174
85	7235	7235	7235

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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	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533
2.5	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162
5.0	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575
7.5	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146
10.0	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874
12.5	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760
15.0	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645
17.5	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799
20.0	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081
22.5	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138
25.0	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903
27.5	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147
30.0	930.767	930.767	930.767	930.767	930.767	930.767	930.767	930.767	930.767	930.767
32.5	738.018	738.018	738.018	738.018	738.018	738.018	738.018	738.018	738.018	738.018
35.0	560.337	560.337	560.337	560.337	560.337	560.337	560.337	560.337	560.337	560.337
37.5	448.611	448.611	448.611	448.611	448.611	448.611	448.611	448.611	448.611	448.611
40.0	390.757	390.757	390.757	390.757	390.757	390.757	390.757	390.757	390.757	390.757
42.5	355.363	355.363	355.363	355.363	355.363	355.363	355.363	355.363	355.363	355.363
45.0	328.640	328.640	328.640	328.640	328.640	328.640	328.640	328.640	328.640	328.640
47.5	304.049	304.049	304.049	304.049	304.049	304.049	304.049	304.049	304.049	304.049
50.0	278.747	278.747	278.747	278.747	278.747	278.747	278.747	278.747	278.747	278.747
52.5	251.029	251.029	251.029	251.029	251.029	251.029	251.029	251.029	251.029	251.029
55.0	222.315	222.315	222.315	222.315	222.315	222.315	222.315	222.315	222.315	222.315
57.5	193.033	193.033	193.033	193.033	193.033	193.033	193.033	193.033	193.033	193.033
60.0	165.457	165.457	165.457	165.457	165.457	165.457	165.457	165.457	165.457	165.457
62.5	139.587	139.587	139.587	139.587	139.587	139.587	139.587	139.587	139.587	139.587
65.0	115.564	115.564	115.564	115.564	115.564	115.564	115.564	115.564	115.564	115.564
67.5	93.532	93.532	93.532	93.532	93.532	93.532	93.532	93.532	93.532	93.532
70.0	73.773	73.773	73.773	73.773	73.773	73.773	73.773	73.773	73.773	73.773
72.5	56.574	56.574	56.574	56.574	56.574	56.574	56.574	56.574	56.574	56.574
75.0	43.354	43.354	43.354	43.354	43.354	43.354	43.354	43.354	43.354	43.354
77.5	33.831	33.831	33.831	33.831	33.831	33.831	33.831	33.831	33.831	33.831
80.0	25.728	25.728	25.728	25.728	25.728	25.728	25.728	25.728	25.728	25.728
82.5	18.195	18.195	18.195	18.195	18.195	18.195	18.195	18.195	18.195	18.195
85.0	11.514	11.514	11.514	11.514	11.514	11.514	11.514	11.514	11.514	11.514
87.5	5.259	5.259	5.259	5.259	5.259	5.259	5.259	5.259	5.259	5.259
90.0	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
110.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
112.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
115.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
117.5	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
120.0	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
122.5	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336
125.0	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448
127.5	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560
130.0	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897
132.5	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121

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135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.924	6150.924	6150.924	6150.924	6150.924	6150.923	6150.923	6150.923	6150.923	6150.923
175.0	10931.768	10931.768	10931.768	10931.768	10931.768	10931.766	10931.766	10931.766	10931.766	10931.766
177.5	19272.364	19272.364	19272.364	19272.363	19272.363	19272.363	19272.362	19272.362	19272.362	19272.362
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

**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	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533	1519.533
2.5	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162	1508.162
5.0	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575	1482.575
7.5	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146	1454.146
10.0	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874	1422.874
12.5	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760	1388.760
15.0	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645	1354.645
17.5	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799	1323.799
20.0	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081	1296.081
22.5	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138	1256.138
25.0	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903	1188.903
27.5	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147	1083.147
30.0	930.767	930.767	930.767	930.767	930.767	930.767	930.767
32.5	738.018	738.018	738.018	738.018	738.018	738.018	738.018
35.0	560.337	560.337	560.337	560.337	560.337	560.337	560.337
37.5	448.611	448.611	448.611	448.611	448.611	448.611	448.611
40.0	390.757	390.757	390.757	390.757	390.757	390.757	390.757
42.5	355.363	355.363	355.363	355.363	355.363	355.363	355.363
45.0	328.640	328.640	328.640	328.640	328.640	328.640	328.640
47.5	304.049	304.049	304.049	304.049	304.049	304.049	304.049
50.0	278.747	278.747	278.747	278.747	278.747	278.747	278.747
52.5	251.029	251.029	251.029	251.029	251.029	251.029	251.029
55.0	222.315	222.315	222.315	222.315	222.315	222.315	222.315
57.5	193.033	193.033	193.033	193.033	193.033	193.033	193.033
60.0	165.457	165.457	165.457	165.457	165.457	165.457	165.457
62.5	139.587	139.587	139.587	139.587	139.587	139.587	139.587
65.0	115.564	115.564	115.564	115.564	115.564	115.564	115.564
67.5	93.532	93.532	93.532	93.532	93.532	93.532	93.532
70.0	73.773	73.773	73.773	73.773	73.773	73.773	73.773
72.5	56.574	56.574	56.574	56.574	56.574	56.574	56.574
75.0	43.354	43.354	43.354	43.354	43.354	43.354	43.354
77.5	33.831	33.831	33.831	33.831	33.831	33.831	33.831
80.0	25.728	25.728	25.728	25.728	25.728	25.728	25.728

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82.5	18.195	18.195	18.195	18.195	18.195	18.195	18.195
85.0	11.514	11.514	11.514	11.514	11.514	11.514	11.514
87.5	5.259	5.259	5.259	5.259	5.259	5.259	5.259
90.0	1.421	1.421	1.421	1.421	1.421	1.421	1.421
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112
110.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
112.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112
115.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
117.5	2.224	2.224	2.224	2.224	2.224	2.224	2.224
120.0	2.224	2.224	2.224	2.224	2.224	2.224	2.224
122.5	3.336	3.336	3.336	3.336	3.336	3.336	3.336
125.0	4.448	4.448	4.448	4.448	4.448	4.448	4.448
127.5	5.560	5.560	5.560	5.560	5.560	5.560	5.560
130.0	8.897	8.897	8.897	8.897	8.897	8.897	8.897
132.5	11.121	11.121	11.121	11.121	11.121	11.121	11.121
135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.923	6150.923	6150.924	6150.924	6150.924	6150.924	6150.924
175.0	10931.766	10931.766	10931.768	10931.768	10931.768	10931.768	10931.768
177.5	19272.362	19272.363	19272.363	19272.363	19272.364	19272.364	19272.364
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	522.40	N.A.	12.00
0-30	1054.67	N.A.	24.20
0-40	1425.99	N.A.	32.80
0-60	1879.25	N.A.	43.20
0-80	2043.23	N.A.	46.90
0-90	2056.44	N.A.	47.30
10-90	1916.77	N.A.	44.00
20-40	903.59	N.A.	20.80
20-50	1158.56	N.A.	26.60
40-70	568.89	N.A.	13.10
60-80	163.98	N.A.	3.80
70-80	48.35	N.A.	1.10
80-90	13.21	N.A.	0.30
90-110	0.63	N.A.	0.00
90-120	2.14	N.A.	0.00
90-130	6.33	N.A.	0.10
90-150	217.73	N.A.	5.00
90-180	2295.63	N.A.	52.70
110-180	2295.00	N.A.	52.70
0-180	4352.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.67
10-20	382.72
20-30	532.28
30-40	371.32
40-50	254.97
50-60	198.30
60-70	115.63
70-80	48.35
80-90	13.21
90-100	0.19
100-110	0.43
110-120	1.51
120-130	4.19
130-140	11.58
140-150	199.82
150-160	542.61
160-170	668.82
170-180	866.47

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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	98	95	91	88	90	87	84	82	73	71	70	61	60	58	49	48	48	42
2	91	84	79	74	83	78	73	69	66	63	60	55	53	51	45	43	42	37
3	84	75	69	63	77	70	64	59	59	55	52	50	47	45	41	39	38	33
4	77	68	60	55	71	63	57	52	54	49	46	46	42	40	38	36	34	30
5	72	61	54	48	66	57	50	46	49	44	40	42	38	35	35	32	30	27
6	66	55	48	43	61	52	45	41	45	40	36	38	35	32	32	30	28	25
7	62	51	43	38	57	47	41	36	41	36	33	35	32	29	30	27	25	23
8	58	46	39	34	53	44	37	33	38	33	30	33	29	26	28	25	23	21
9	54	43	36	31	50	40	34	30	35	30	27	31	27	24	26	23	21	19
10	51	40	33	28	47	37	31	27	33	28	25	29	25	22	25	22	20	18

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_39_135-13_31_1-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

X=2H	Y=2H	15.7	16.5	16.7	17.5	18.8	UGR Viewed Endwise	15.7	16.5	16.7	17.5	18.8
	3H	16.7	17.3	17.7	18.3	19.7		16.7	17.3	17.7	18.3	19.7
	4H	16.9	17.5	17.9	18.5	19.9		16.9	17.5	17.9	18.5	19.9
	6H	17.0	17.6	18.1	18.6	20.0		17.0	17.6	18.1	18.6	20.0
	8H	17.1	17.6	18.1	18.7	20.0		17.1	17.6	18.1	18.7	20.0
	12H	17.1	17.6	18.1	18.6	20.0		17.1	17.6	18.1	18.6	20.0

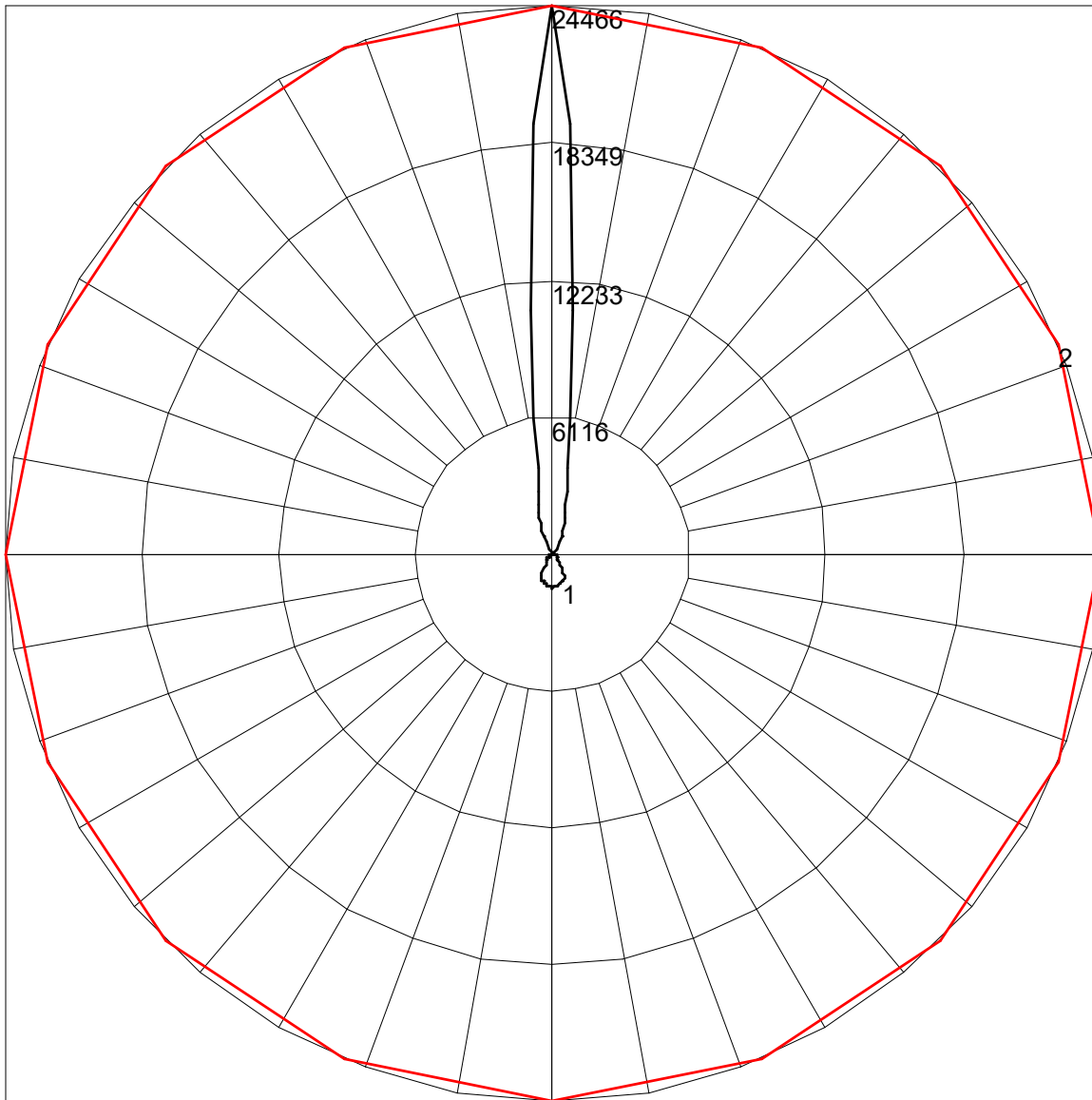
4H	2H	16.0	16.6	17.0	17.6	19.0	16.0	16.6	17.0	17.6	19.0
	3H	17.1	17.6	18.1	18.6	20.0	17.1	17.6	18.1	18.6	20.0
	4H	17.4	17.9	18.4	18.9	20.3	17.4	17.9	18.4	18.9	20.3
	6H	17.6	18.1	18.7	19.1	20.5	17.6	18.1	18.7	19.1	20.5
	8H	17.7	18.1	18.8	19.1	20.5	17.7	18.1	18.8	19.1	20.5
	12H	17.7	18.1	18.8	19.2	20.5	17.7	18.1	18.8	19.2	20.5

8H	4H	17.5	17.8	18.5	18.9	20.3	17.5	17.8	18.5	18.9	20.3
	6H	17.8	18.1	18.9	19.2	20.6	17.8	18.1	18.9	19.2	20.6
	8H	17.9	18.2	19.0	19.3	20.7	17.9	18.2	19.0	19.3	20.7
	12H	18.0	18.3	19.1	19.3	20.8	18.0	18.3	19.1	19.3	20.8

12H	4H	17.4	17.8	18.5	18.8	20.2	17.4	17.8	18.5	18.8	20.2
	6H	17.8	18.1	18.9	19.1	20.5	17.8	18.1	18.9	19.1	20.5
	8H	17.9	18.2	19.0	19.2	20.7	17.9	18.2	19.0	19.2	20.7

Maximum UGR = 20.8

POLAR GRAPH



Maximum Candela = 24465.761 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)