



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-10_23_33-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & \$12326812.09

[TESTLAB]

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-POE PR-OM-CSU-LM-WHD-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	5259
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
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	9914	9914	9914
55	7259	7259	7259
65	5915	5915	5915
75	4814	4814	4814
85	3167	3167	3167

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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	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056
2.5	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823
5.0	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282
7.5	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554
10.0	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280
12.5	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183
15.0	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903
17.5	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908
20.0	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469
22.5	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177
25.0	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550
27.5	860.165	860.165	860.165	860.165	860.165	860.165	860.165	860.165	860.165	860.165
30.0	611.215	611.215	611.215	611.215	611.215	611.215	611.215	611.215	611.215	611.215
32.5	438.721	438.721	438.721	438.721	438.721	438.721	438.721	438.721	438.721	438.721
35.0	318.926	318.926	318.926	318.926	318.926	318.926	318.926	318.926	318.926	318.926
37.5	238.151	238.151	238.151	238.151	238.151	238.151	238.151	238.151	238.151	238.151
40.0	186.028	186.028	186.028	186.028	186.028	186.028	186.028	186.028	186.028	186.028
42.5	151.760	151.760	151.760	151.760	151.760	151.760	151.760	151.760	151.760	151.760
45.0	128.002	128.002	128.002	128.002	128.002	128.002	128.002	128.002	128.002	128.002
47.5	110.580	110.580	110.580	110.580	110.580	110.580	110.580	110.580	110.580	110.580
50.0	97.046	97.046	97.046	97.046	97.046	97.046	97.046	97.046	97.046	97.046
52.5	85.815	85.815	85.815	85.815	85.815	85.815	85.815	85.815	85.815	85.815
55.0	76.024	76.024	76.024	76.024	76.024	76.024	76.024	76.024	76.024	76.024
57.5	67.241	67.241	67.241	67.241	67.241	67.241	67.241	67.241	67.241	67.241
60.0	59.610	59.610	59.610	59.610	59.610	59.610	59.610	59.610	59.610	59.610
62.5	52.410	52.410	52.410	52.410	52.410	52.410	52.410	52.410	52.410	52.410
65.0	45.643	45.643	45.643	45.643	45.643	45.643	45.643	45.643	45.643	45.643
67.5	39.308	39.308	39.308	39.308	39.308	39.308	39.308	39.308	39.308	39.308
70.0	33.404	33.404	33.404	33.404	33.404	33.404	33.404	33.404	33.404	33.404
72.5	27.933	27.933	27.933	27.933	27.933	27.933	27.933	27.933	27.933	27.933
75.0	22.750	22.750	22.750	22.750	22.750	22.750	22.750	22.750	22.750	22.750
77.5	17.854	17.854	17.854	17.854	17.854	17.854	17.854	17.854	17.854	17.854
80.0	13.247	13.247	13.247	13.247	13.247	13.247	13.247	13.247	13.247	13.247
82.5	8.927	8.927	8.927	8.927	8.927	8.927	8.927	8.927	8.927	8.927
85.0	5.039	5.039	5.039	5.039	5.039	5.039	5.039	5.039	5.039	5.039
87.5	2.016	2.016	2.016	2.016	2.016	2.016	2.016	2.016	2.016	2.016
90.0	0.563	0.563	0.563	0.563	0.563	0.563	0.563	0.563	0.563	0.563
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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PHOTOMETRIC FILENAME : 192_168_37_234-10_23_33-MERGED.IES

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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	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056	6246.056
2.5	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823	6179.823
5.0	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282	6001.282
7.5	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554	5707.554
10.0	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280	5271.280
12.5	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183	4675.183
15.0	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903	3927.903
17.5	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908	3125.908
20.0	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469	2358.469
22.5	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177	1719.177
25.0	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550	1219.550
27.5	860.165	860.165	860.165	860.165	860.165	860.165	860.165
30.0	611.215	611.215	611.215	611.215	611.215	611.215	611.215
32.5	438.721	438.721	438.721	438.721	438.721	438.721	438.721
35.0	318.926	318.926	318.926	318.926	318.926	318.926	318.926
37.5	238.151	238.151	238.151	238.151	238.151	238.151	238.151
40.0	186.028	186.028	186.028	186.028	186.028	186.028	186.028
42.5	151.760	151.760	151.760	151.760	151.760	151.760	151.760
45.0	128.002	128.002	128.002	128.002	128.002	128.002	128.002
47.5	110.580	110.580	110.580	110.580	110.580	110.580	110.580
50.0	97.046	97.046	97.046	97.046	97.046	97.046	97.046
52.5	85.815	85.815	85.815	85.815	85.815	85.815	85.815
55.0	76.024	76.024	76.024	76.024	76.024	76.024	76.024
57.5	67.241	67.241	67.241	67.241	67.241	67.241	67.241
60.0	59.610	59.610	59.610	59.610	59.610	59.610	59.610
62.5	52.410	52.410	52.410	52.410	52.410	52.410	52.410
65.0	45.643	45.643	45.643	45.643	45.643	45.643	45.643
67.5	39.308	39.308	39.308	39.308	39.308	39.308	39.308
70.0	33.404	33.404	33.404	33.404	33.404	33.404	33.404
72.5	27.933	27.933	27.933	27.933	27.933	27.933	27.933
75.0	22.750	22.750	22.750	22.750	22.750	22.750	22.750
77.5	17.854	17.854	17.854	17.854	17.854	17.854	17.854
80.0	13.247	13.247	13.247	13.247	13.247	13.247	13.247

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PHOTOMETRIC FILENAME : 192_168_37_234-10_23_33-MERGED.IES

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82.5	8.927	8.927	8.927	8.927	8.927	8.927	8.927
85.0	5.039	5.039	5.039	5.039	5.039	5.039	5.039
87.5	2.016	2.016	2.016	2.016	2.016	2.016	2.016
90.0	0.563	0.563	0.563	0.563	0.563	0.563	0.563
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	1608.43	N.A.	30.60
0-30	2196.31	N.A.	41.80
0-40	2410.21	N.A.	45.80
0-60	2580.9	N.A.	49.10
0-80	2650.58	N.A.	50.40
0-90	2656.8	N.A.	50.50
10-90	2106.81	N.A.	40.10
20-40	801.78	N.A.	15.20
20-50	903.84	N.A.	17.20
40-70	216.15	N.A.	4.10
60-80	69.68	N.A.	1.30
70-80	24.22	N.A.	0.50
80-90	6.23	N.A.	0.10
90-110	2.19	N.A.	0.00
90-120	7.68	N.A.	0.10
90-130	25.13	N.A.	0.50
90-150	441.48	N.A.	8.40
90-180	2601.72	N.A.	49.50
110-180	2599.53	N.A.	49.40
0-180	5258.52	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	549.99
10-20	1058.44
20-30	587.88
30-40	213.89
40-50	102.06
50-60	68.63
60-70	45.46
70-80	24.22
80-90	6.23
90-100	0.50
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	100	97	94	91	93	90	88	85	77	75	74	65	64	63	54	53	53	48
2	94	88	84	80	87	82	78	75	71	68	66	61	59	57	51	50	49	45
3	88	81	75	71	82	76	71	67	66	63	60	57	55	53	49	47	46	42
4	83	74	68	64	77	70	65	61	61	58	55	54	51	49	46	45	43	40
5	78	69	63	58	73	65	59	55	58	54	50	51	48	46	44	42	41	38
6	73	64	58	53	69	61	55	51	54	50	47	48	45	43	42	40	39	36
7	69	60	54	49	65	57	51	47	51	47	44	46	43	40	41	38	37	35
8	66	56	50	46	62	53	48	44	48	44	41	43	40	38	39	37	35	33
9	63	53	47	43	59	50	45	42	46	42	39	41	38	36	37	35	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_23_33-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	8.0	8.6	9.0	9.6	10.9	UGR Viewed Endwise	8.0	8.6	9.0	9.6	10.9
	3H	9.3	9.9	10.3	10.9	12.2		9.3	9.9	10.3	10.9	12.2
	4H	9.8	10.4	10.9	11.4	12.7		9.8	10.4	10.9	11.4	12.7
	6H	10.2	10.7	11.2	11.7	13.0		10.2	10.7	11.2	11.7	13.0
	8H	10.3	10.8	11.3	11.8	13.1		10.3	10.8	11.3	11.8	13.1
	12H	10.3	10.8	11.3	11.8	13.1		10.3	10.8	11.3	11.8	13.1

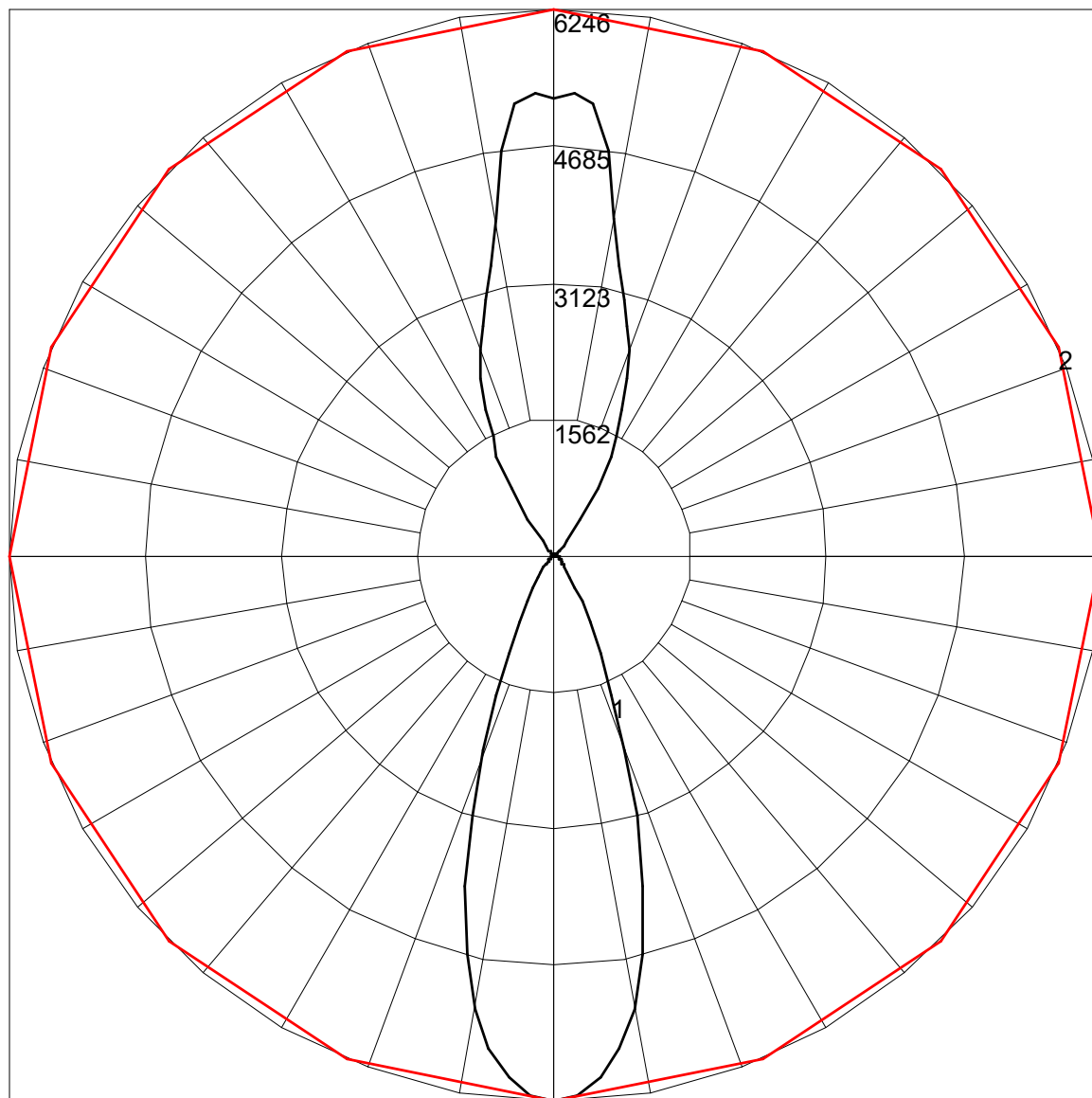
4H	2H	8.4	8.9	9.4	9.9	11.2	8.4	8.9	9.4	9.9	11.2
	3H	9.9	10.4	11.0	11.4	12.8	9.9	10.4	11.0	11.4	12.8
	4H	10.6	11.0	11.6	12.0	13.4	10.6	11.0	11.6	12.0	13.4
	6H	11.0	11.4	12.1	12.4	13.8	11.0	11.4	12.1	12.4	13.8
	8H	11.2	11.5	12.2	12.5	13.9	11.2	11.5	12.2	12.5	13.9
	12H	11.2	11.5	12.3	12.6	13.9	11.2	11.5	12.3	12.6	13.9

8H	4H	10.7	11.1	11.8	12.1	13.5	10.7	11.1	11.8	12.1	13.5
	6H	11.3	11.6	12.4	12.7	14.0	11.3	11.6	12.4	12.7	14.0
	8H	11.5	11.8	12.6	12.8	14.2	11.5	11.8	12.6	12.8	14.2
	12H	11.6	11.8	12.7	12.9	14.3	11.6	11.8	12.7	12.9	14.3

12H	4H	10.7	11.0	11.8	12.1	13.4	10.7	11.0	11.8	12.1	13.4
	6H	11.3	11.6	12.4	12.6	14.0	11.3	11.6	12.4	12.6	14.0
	8H	11.6	11.8	12.6	12.8	14.2	11.6	11.8	12.6	12.8	14.2

Maximum UGR = 14.3

POLAR GRAPH



Maximum Candela = 6246.056 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.)