



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-13_44_57-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.09

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-PoE PR-ON-CSU-LM-WHD-WM

[LUMINAIRE] White formed aluminum housing, specular reflector, clear glass cover

[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	5146
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
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	0.432	0.432	0.432	0.432	0.432	0.432	0.432	0.432	0.432	0.432
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061

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135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

**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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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	0.432	0.432	0.432	0.432	0.432	0.432	0.432
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061
135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.867	6670.867	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.841	11855.841	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.478	20901.479	20901.479	20901.479	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1608.43	N.A.	31.30
0-30	2196.31	N.A.	42.70
0-40	2410.21	N.A.	46.80
0-60	2580.9	N.A.	50.20
0-80	2650.58	N.A.	51.50
0-90	2656.79	N.A.	51.60
10-90	2106.79	N.A.	40.90
20-40	801.78	N.A.	15.60
20-50	903.84	N.A.	17.60
40-70	216.15	N.A.	4.20
60-80	69.68	N.A.	1.40
70-80	24.22	N.A.	0.50
80-90	6.21	N.A.	0.10
90-110	0.53	N.A.	0.00
90-120	2.17	N.A.	0.00
90-130	6.71	N.A.	0.10
90-150	235.98	N.A.	4.60
90-180	2489.53	N.A.	48.40
110-180	2489.00	N.A.	48.40
0-180	5146.32	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	6.21
90-100	0.06
100-110	0.47
110-120	1.64
120-130	4.54
130-140	12.56
140-150	216.71
150-160	588.48
160-170	725.36
170-180	939.72

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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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	101	97	94	92	93	90	88	86	78	76	74	66	65	64	55	54	54	49
2	94	89	84	80	87	83	79	75	72	69	67	62	60	58	52	51	50	46
3	88	81	76	71	82	76	71	68	67	63	60	58	55	53	50	48	47	43
4	83	75	69	64	77	70	65	61	62	58	55	54	52	50	47	46	44	41
5	78	69	63	58	73	65	60	56	58	54	51	51	49	46	45	43	42	39
6	74	64	58	54	69	61	56	52	55	51	47	49	46	43	43	41	40	37
7	70	60	54	50	66	57	52	48	52	47	44	46	43	41	41	39	38	35
8	66	57	50	46	62	54	49	45	49	45	42	44	41	39	40	38	36	34
9	63	53	47	43	59	51	46	42	46	42	39	42	39	37	38	36	34	33
10	60	50	45	41	57	48	43	40	44	40	37	40	37	35	37	34	33	31

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_44_57-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	8.1	8.7	9.0	9.7	11.0	UGR Viewed Endwise	8.1	8.7	9.0	9.7	11.0
	3H	9.5	10.1	10.4	11.0	12.3		9.5	10.1	10.4	11.0	12.3
	4H	10.0	10.5	11.0	11.5	12.8		10.0	10.5	11.0	11.5	12.8
	6H	10.3	10.8	11.3	11.8	13.1		10.3	10.8	11.3	11.8	13.1
	8H	10.4	10.9	11.4	11.9	13.2		10.4	10.9	11.4	11.9	13.2
	12H	10.4	10.9	11.4	11.9	13.2		10.4	10.9	11.4	11.9	13.2

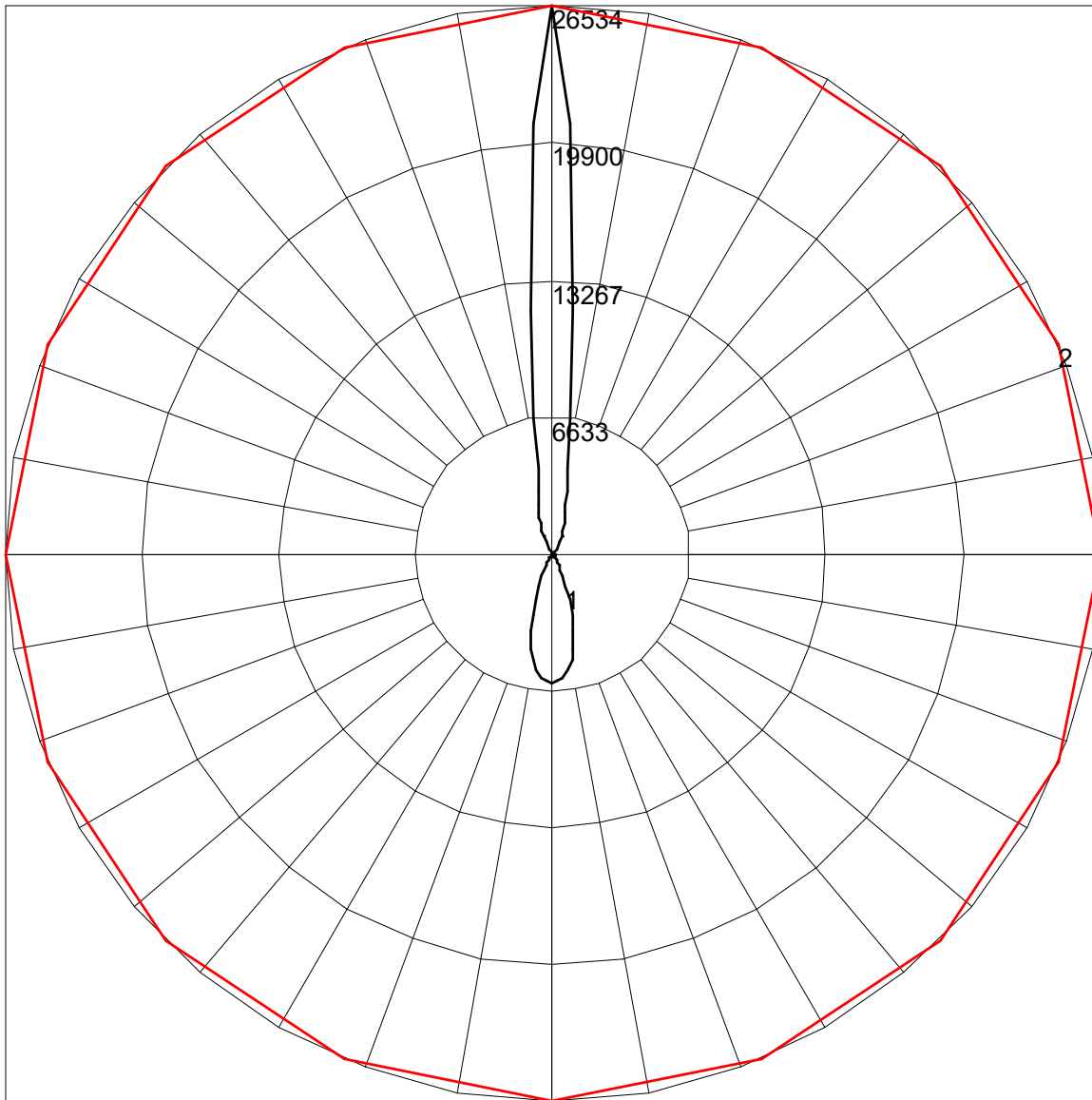
4H	2H	8.5	9.0	9.5	10.0	11.3	8.5	9.0	9.5	10.0	11.3
	3H	10.1	10.5	11.1	11.5	12.9	10.1	10.5	11.1	11.5	12.9
	4H	10.7	11.1	11.7	12.1	13.4	10.7	11.1	11.7	12.1	13.4
	6H	11.1	11.5	12.2	12.5	13.9	11.1	11.5	12.2	12.5	13.9
	8H	11.3	11.6	12.3	12.6	14.0	11.3	11.6	12.3	12.6	14.0
	12H	11.3	11.6	12.4	12.7	14.0	11.3	11.6	12.4	12.7	14.0

8H	4H	10.9	11.2	11.9	12.2	13.6	10.9	11.2	11.9	12.2	13.6
	6H	11.4	11.7	12.5	12.8	14.1	11.4	11.7	12.5	12.8	14.1
	8H	11.6	11.9	12.7	12.9	14.3	11.6	11.9	12.7	12.9	14.3
	12H	11.7	11.9	12.8	13.0	14.4	11.7	11.9	12.8	13.0	14.4

12H	4H	10.8	11.1	11.9	12.2	13.5	10.8	11.1	11.9	12.2	13.5
	6H	11.4	11.7	12.5	12.7	14.1	11.4	11.7	12.5	12.7	14.1
	8H	11.7	11.9	12.7	12.9	14.3	11.7	11.9	12.7	12.9	14.3

Maximum UGR = 14.4

POLAR GRAPH



Maximum Candela = 26533.881 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.)