



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-14_10_43-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 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-RM-WHD-WM

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

[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	5074
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
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	8488	8488	8488
55	5708	5708	5708
65	4248	4248	4248
75	2933	2933	2933
85	2450	2450	2450

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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	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467
2.5	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717
5.0	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681
7.5	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134
10.0	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086
12.5	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211
15.0	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724
17.5	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032
20.0	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432
22.5	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006
25.0	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103
27.5	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581	876.581
30.0	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822	629.822
32.5	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369	452.369
35.0	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152	324.152
37.5	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198	234.198
40.0	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132	174.132
42.5	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436	135.436
45.0	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591	109.591
47.5	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687	91.687
50.0	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547	78.547
52.5	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296	68.296
55.0	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777	59.777
57.5	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269	52.269
60.0	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338	45.338
62.5	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840	38.840
65.0	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776	32.776
67.5	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145	27.145
70.0	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947	21.947
72.5	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327	17.327
75.0	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861	13.861
77.5	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974	10.974
80.0	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519	8.519
82.5	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209	6.209
85.0	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898	3.898
87.5	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877	1.877
90.0	0.578	0.578	0.578	0.578	0.578	0.578	0.578	0.578	0.578	0.578
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	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467	6227.467
2.5	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717	6156.717
5.0	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681	5964.681
7.5	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134	5657.134
10.0	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086	5208.086
12.5	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211	4600.211
15.0	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724	3853.724
17.5	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032	3061.032
20.0	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432	2317.432
22.5	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006	1698.006
25.0	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103	1222.103
27.5	876.581	876.581	876.581	876.581	876.581	876.581	876.581
30.0	629.822	629.822	629.822	629.822	629.822	629.822	629.822
32.5	452.369	452.369	452.369	452.369	452.369	452.369	452.369
35.0	324.152	324.152	324.152	324.152	324.152	324.152	324.152
37.5	234.198	234.198	234.198	234.198	234.198	234.198	234.198
40.0	174.132	174.132	174.132	174.132	174.132	174.132	174.132
42.5	135.436	135.436	135.436	135.436	135.436	135.436	135.436
45.0	109.591	109.591	109.591	109.591	109.591	109.591	109.591
47.5	91.687	91.687	91.687	91.687	91.687	91.687	91.687
50.0	78.547	78.547	78.547	78.547	78.547	78.547	78.547
52.5	68.296	68.296	68.296	68.296	68.296	68.296	68.296
55.0	59.777	59.777	59.777	59.777	59.777	59.777	59.777
57.5	52.269	52.269	52.269	52.269	52.269	52.269	52.269
60.0	45.338	45.338	45.338	45.338	45.338	45.338	45.338
62.5	38.840	38.840	38.840	38.840	38.840	38.840	38.840
65.0	32.776	32.776	32.776	32.776	32.776	32.776	32.776
67.5	27.145	27.145	27.145	27.145	27.145	27.145	27.145
70.0	21.947	21.947	21.947	21.947	21.947	21.947	21.947
72.5	17.327	17.327	17.327	17.327	17.327	17.327	17.327
75.0	13.861	13.861	13.861	13.861	13.861	13.861	13.861
77.5	10.974	10.974	10.974	10.974	10.974	10.974	10.974
80.0	8.519	8.519	8.519	8.519	8.519	8.519	8.519

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CANDELA TABULATION - (Cont.)

82.5	6.209	6.209	6.209	6.209	6.209	6.209	6.209
85.0	3.898	3.898	3.898	3.898	3.898	3.898	3.898
87.5	1.877	1.877	1.877	1.877	1.877	1.877	1.877
90.0	0.578	0.578	0.578	0.578	0.578	0.578	0.578
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	1585.55	N.A.	31.20
0-30	2172.77	N.A.	42.80
0-40	2389.14	N.A.	47.10
0-60	2531.88	N.A.	49.90
0-80	2579.71	N.A.	50.80
0-90	2584.21	N.A.	50.90
10-90	2038.55	N.A.	40.20
20-40	803.59	N.A.	15.80
20-50	892.26	N.A.	17.60
40-70	175.44	N.A.	3.50
60-80	47.84	N.A.	0.90
70-80	15.13	N.A.	0.30
80-90	4.50	N.A.	0.10
90-110	0.55	N.A.	0.00
90-120	2.19	N.A.	0.00
90-130	6.73	N.A.	0.10
90-150	236.00	N.A.	4.70
90-180	2489.55	N.A.	49.10
110-180	2489.00	N.A.	49.10
0-180	5073.77	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	545.67
10-20	1039.88
20-30	587.22
30-40	216.37
40-50	88.67
50-60	54.06
60-70	32.71
70-80	15.13
80-90	4.50
90-100	0.08
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	101	97	94	92	93	90	88	86	77	76	74	65	64	63	54	54	53	48
2	94	89	84	80	87	83	79	76	72	69	67	61	59	58	52	51	50	45
3	88	81	76	71	82	76	71	68	67	63	60	58	55	53	49	48	47	43
4	83	75	69	64	77	70	65	61	62	58	55	54	52	50	47	45	44	41
5	78	69	63	59	73	66	60	56	58	54	51	51	49	46	45	43	42	39
6	74	65	58	54	69	61	56	52	55	51	48	49	46	44	43	41	40	37
7	70	60	54	50	66	57	52	48	52	48	45	46	43	41	41	39	38	35
8	66	57	51	46	62	54	49	45	49	45	42	44	41	39	40	38	36	34
9	63	53	48	44	60	51	46	42	46	42	40	42	39	37	38	36	34	33
10	60	51	45	41	57	48	43	40	44	40	38	40	37	35	37	35	33	31

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-14_10_43-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	6.4	7.0	7.4	8.0	9.3	6.4	7.0	7.4	8.0	9.3
	3H	7.4	8.0	8.5	9.0	10.3	7.4	8.0	8.5	9.0	10.3
	4H	7.8	8.3	8.8	9.3	10.6	7.8	8.3	8.8	9.3	10.6
	6H	8.0	8.5	9.0	9.5	10.8	8.0	8.5	9.0	9.5	10.8
	8H	8.1	8.5	9.1	9.6	10.9	8.1	8.5	9.1	9.6	10.9
	12H	8.1	8.6	9.1	9.6	10.9	8.1	8.6	9.1	9.6	10.9

UGR Viewed Endwise

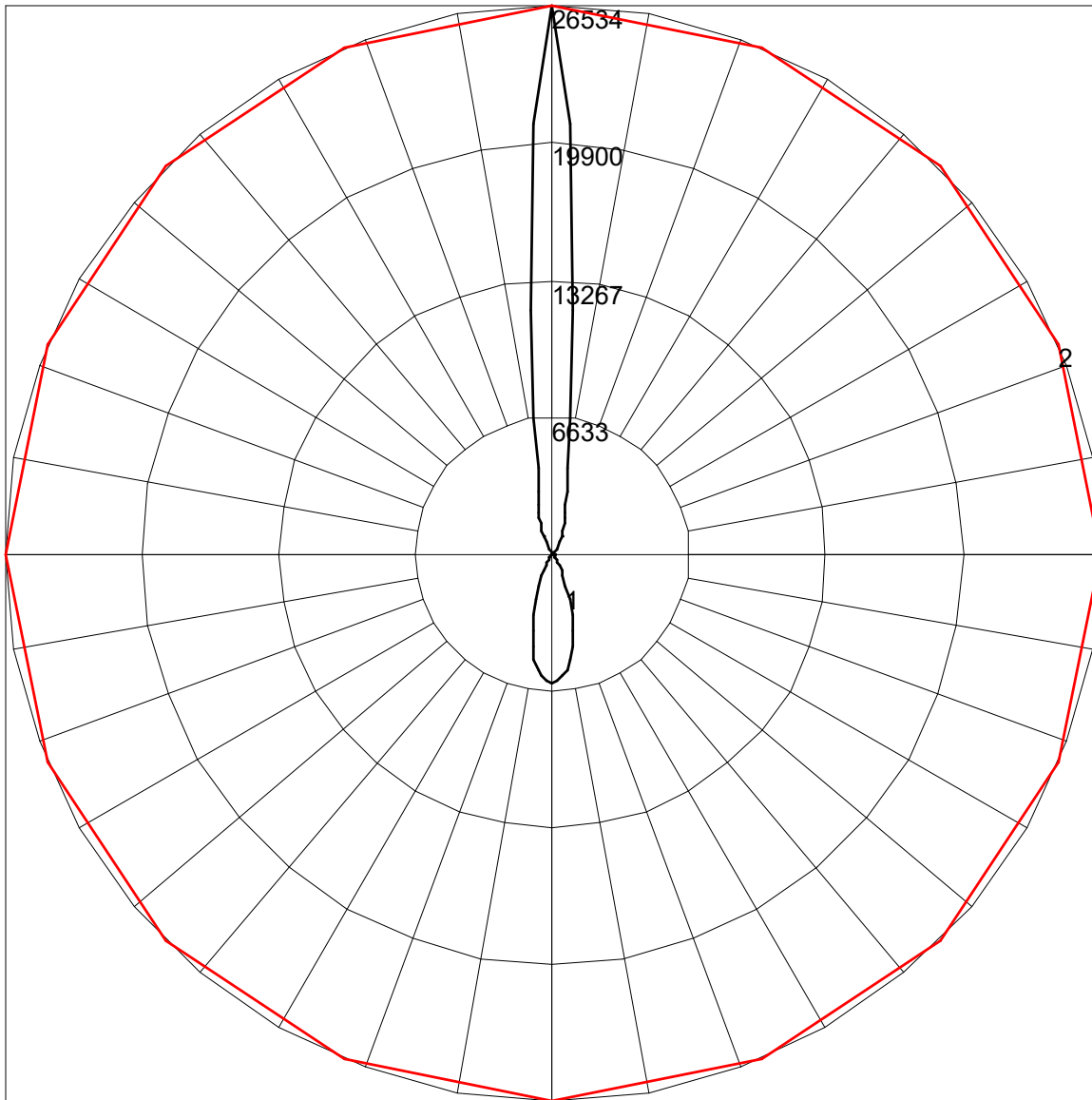
4H	2H	6.7	7.2	7.7	8.2	9.5	6.7	7.2	7.7	8.2	9.5
	3H	7.9	8.4	8.9	9.4	10.7	7.9	8.4	8.9	9.4	10.7
	4H	8.3	8.8	9.4	9.8	11.1	8.3	8.8	9.4	9.8	11.1
	6H	8.7	9.0	9.7	10.1	11.4	8.7	9.0	9.7	10.1	11.4
	8H	8.8	9.1	9.8	10.2	11.5	8.8	9.1	9.8	10.2	11.5
	12H	8.9	9.2	9.9	10.2	11.6	8.9	9.2	9.9	10.2	11.6

8H	4H	8.4	8.8	9.5	9.8	11.1	8.4	8.8	9.5	9.8	11.1
	6H	8.9	9.2	9.9	10.2	11.6	8.9	9.2	9.9	10.2	11.6
	8H	9.1	9.3	10.2	10.4	11.7	9.1	9.3	10.2	10.4	11.7
	12H	9.2	9.4	10.3	10.5	11.9	9.2	9.4	10.3	10.5	11.9

12H	4H	8.4	8.7	9.5	9.7	11.1	8.4	8.7	9.5	9.7	11.1
	6H	8.9	9.1	10.0	10.2	11.6	8.9	9.1	10.0	10.2	11.6
	8H	9.1	9.3	10.2	10.4	11.8	9.1	9.3	10.2	10.4	11.8

Maximum UGR = 11.9

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.)