



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-15_59_36-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.10

[TESTLAB]

[ISSUE DATE] 25-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-8TWU-P29-8TWD-xxx-PoE PR-OM-CSU-LN-WHD-WM 4000k

[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	4890
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
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	7775	7775	7775
55	5690	5690	5690
65	4626	4626	4626
75	3777	3777	3777
85	2446	2446	2446

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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	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844
2.5	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695
5.0	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828
7.5	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107
10.0	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501
12.5	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978
15.0	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926
17.5	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654
20.0	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713
22.5	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360
25.0	851.395	851.395	851.395	851.395	851.395	851.395	851.395	851.395	851.395	851.395
27.5	583.254	583.254	583.254	583.254	583.254	583.254	583.254	583.254	583.254	583.254
30.0	408.251	408.251	408.251	408.251	408.251	408.251	408.251	408.251	408.251	408.251
32.5	294.982	294.982	294.982	294.982	294.982	294.982	294.982	294.982	294.982	294.982
35.0	220.901	220.901	220.901	220.901	220.901	220.901	220.901	220.901	220.901	220.901
37.5	172.185	172.185	172.185	172.185	172.185	172.185	172.185	172.185	172.185	172.185
40.0	139.573	139.573	139.573	139.573	139.573	139.573	139.573	139.573	139.573	139.573
42.5	117.027	117.027	117.027	117.027	117.027	117.027	117.027	117.027	117.027	117.027
45.0	100.385	100.385	100.385	100.385	100.385	100.385	100.385	100.385	100.385	100.385
47.5	87.367	87.367	87.367	87.367	87.367	87.367	87.367	87.367	87.367	87.367
50.0	76.497	76.497	76.497	76.497	76.497	76.497	76.497	76.497	76.497	76.497
52.5	67.371	67.371	67.371	67.371	67.371	67.371	67.371	67.371	67.371	67.371
55.0	59.587	59.587	59.587	59.587	59.587	59.587	59.587	59.587	59.587	59.587
57.5	52.742	52.742	52.742	52.742	52.742	52.742	52.742	52.742	52.742	52.742
60.0	46.569	46.569	46.569	46.569	46.569	46.569	46.569	46.569	46.569	46.569
62.5	40.932	40.932	40.932	40.932	40.932	40.932	40.932	40.932	40.932	40.932
65.0	35.698	35.698	35.698	35.698	35.698	35.698	35.698	35.698	35.698	35.698
67.5	30.733	30.733	30.733	30.733	30.733	30.733	30.733	30.733	30.733	30.733
70.0	26.036	26.036	26.036	26.036	26.036	26.036	26.036	26.036	26.036	26.036
72.5	21.741	21.741	21.741	21.741	21.741	21.741	21.741	21.741	21.741	21.741
75.0	17.849	17.849	17.849	17.849	17.849	17.849	17.849	17.849	17.849	17.849
77.5	13.957	13.957	13.957	13.957	13.957	13.957	13.957	13.957	13.957	13.957
80.0	10.468	10.468	10.468	10.468	10.468	10.468	10.468	10.468	10.468	10.468
82.5	7.113	7.113	7.113	7.113	7.113	7.113	7.113	7.113	7.113	7.113
85.0	3.892	3.892	3.892	3.892	3.892	3.892	3.892	3.892	3.892	3.892
87.5	1.476	1.476	1.476	1.476	1.476	1.476	1.476	1.476	1.476	1.476
90.0	0.389	0.389	0.389	0.389	0.389	0.389	0.389	0.389	0.389	0.389
92.5	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242
95.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
97.5	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484
100.0	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727
102.5	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969	0.969
105.0	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332
107.5	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938	1.938
110.0	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664
112.5	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512	3.512
115.0	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844
117.5	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539	6.539
120.0	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840
122.5	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110	12.110
125.0	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712
127.5	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493	23.493
130.0	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455
132.5	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353	43.353

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135.0	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947
137.5	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077	79.077
140.0	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232
142.5	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895	208.895
145.0	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944
147.5	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250	861.250
150.0	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
152.5	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325
155.0	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
157.5	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605
160.0	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
162.5	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327
165.0	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
167.5	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395
170.0	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
172.5	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627
175.0	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
177.5	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006
180.0	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

**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	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844	9215.844
2.5	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695	8987.695
5.0	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828	8340.828
7.5	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107	7357.107
10.0	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501	6134.501
12.5	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978	4821.978
15.0	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926	3581.926
17.5	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654	2564.654
20.0	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713	1803.713
22.5	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360	1246.360
25.0	851.395	851.395	851.395	851.395	851.395	851.395	851.395
27.5	583.254	583.254	583.254	583.254	583.254	583.254	583.254
30.0	408.251	408.251	408.251	408.251	408.251	408.251	408.251
32.5	294.982	294.982	294.982	294.982	294.982	294.982	294.982
35.0	220.901	220.901	220.901	220.901	220.901	220.901	220.901
37.5	172.185	172.185	172.185	172.185	172.185	172.185	172.185
40.0	139.573	139.573	139.573	139.573	139.573	139.573	139.573
42.5	117.027	117.027	117.027	117.027	117.027	117.027	117.027
45.0	100.385	100.385	100.385	100.385	100.385	100.385	100.385
47.5	87.367	87.367	87.367	87.367	87.367	87.367	87.367
50.0	76.497	76.497	76.497	76.497	76.497	76.497	76.497
52.5	67.371	67.371	67.371	67.371	67.371	67.371	67.371
55.0	59.587	59.587	59.587	59.587	59.587	59.587	59.587
57.5	52.742	52.742	52.742	52.742	52.742	52.742	52.742
60.0	46.569	46.569	46.569	46.569	46.569	46.569	46.569
62.5	40.932	40.932	40.932	40.932	40.932	40.932	40.932
65.0	35.698	35.698	35.698	35.698	35.698	35.698	35.698
67.5	30.733	30.733	30.733	30.733	30.733	30.733	30.733
70.0	26.036	26.036	26.036	26.036	26.036	26.036	26.036
72.5	21.741	21.741	21.741	21.741	21.741	21.741	21.741
75.0	17.849	17.849	17.849	17.849	17.849	17.849	17.849
77.5	13.957	13.957	13.957	13.957	13.957	13.957	13.957
80.0	10.468	10.468	10.468	10.468	10.468	10.468	10.468

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82.5	7.113	7.113	7.113	7.113	7.113	7.113	7.113
85.0	3.892	3.892	3.892	3.892	3.892	3.892	3.892
87.5	1.476	1.476	1.476	1.476	1.476	1.476	1.476
90.0	0.389	0.389	0.389	0.389	0.389	0.389	0.389
92.5	0.242	0.242	0.242	0.242	0.242	0.242	0.242
95.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363
97.5	0.484	0.484	0.484	0.484	0.484	0.484	0.484
100.0	0.727	0.727	0.727	0.727	0.727	0.727	0.727
102.5	0.969	0.969	0.969	0.969	0.969	0.969	0.969
105.0	1.332	1.332	1.332	1.332	1.332	1.332	1.332
107.5	1.938	1.938	1.938	1.938	1.938	1.938	1.938
110.0	2.664	2.664	2.664	2.664	2.664	2.664	2.664
112.5	3.512	3.512	3.512	3.512	3.512	3.512	3.512
115.0	4.844	4.844	4.844	4.844	4.844	4.844	4.844
117.5	6.539	6.539	6.539	6.539	6.539	6.539	6.539
120.0	8.840	8.840	8.840	8.840	8.840	8.840	8.840
122.5	12.110	12.110	12.110	12.110	12.110	12.110	12.110
125.0	16.712	16.712	16.712	16.712	16.712	16.712	16.712
127.5	23.493	23.493	23.493	23.493	23.493	23.493	23.493
130.0	32.455	32.455	32.455	32.455	32.455	32.455	32.455
132.5	43.353	43.353	43.353	43.353	43.353	43.353	43.353
135.0	55.947	55.947	55.947	55.947	55.947	55.947	55.947
137.5	79.077	79.077	79.077	79.077	79.077	79.077	79.077
140.0	140.232	140.232	140.232	140.232	140.232	140.232	140.232
142.5	208.895	208.895	208.895	208.895	208.895	208.895	208.895
145.0	478.944	478.944	478.944	478.944	478.944	478.944	478.944
147.5	861.250	861.250	861.250	861.250	861.250	861.250	861.250
150.0	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
152.5	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325	1425.325
155.0	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
157.5	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605	2029.605
160.0	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
162.5	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327	2550.327
165.0	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
167.5	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395	3153.395
170.0	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
172.5	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627	4325.627
175.0	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
177.5	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006	4919.006
180.0	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1720.32	N.A.	35.20
0-30	2139.99	N.A.	43.80
0-40	2287.89	N.A.	46.80
0-60	2421.01	N.A.	49.50
0-80	2475.46	N.A.	50.60
0-90	2480.33	N.A.	50.70
10-90	1755.00	N.A.	35.90
20-40	567.56	N.A.	11.60
20-50	646.83	N.A.	13.20
40-70	168.65	N.A.	3.40
60-80	54.45	N.A.	1.10
70-80	18.93	N.A.	0.40
80-90	4.87	N.A.	0.10
90-110	2.01	N.A.	0.00
90-120	7.10	N.A.	0.10
90-130	23.26	N.A.	0.50
90-150	408.89	N.A.	8.40
90-180	2409.72	N.A.	49.30
110-180	2407.71	N.A.	49.20
0-180	4890.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	725.33
10-20	994.99
20-30	419.67
30-40	147.90
40-50	79.27
50-60	53.85
60-70	35.52
70-80	18.93
80-90	4.87
90-100	0.45
100-110	1.56
110-120	5.08
120-130	16.16
130-140	50.26
140-150	335.37
150-160	786.40
160-170	795.89
170-180	418.54

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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	95	92	93	90	88	86	77	76	74	65	64	63	54	54	53	48
2	94	89	84	81	88	83	79	76	72	69	67	62	60	58	52	51	50	46
3	89	82	76	72	83	77	72	68	67	64	61	58	56	54	50	48	47	44
4	84	76	70	65	78	71	66	62	63	59	56	55	53	51	48	46	45	42
5	79	70	64	60	74	67	61	57	59	55	52	52	50	48	46	44	43	40
6	75	66	60	55	70	62	57	53	56	52	49	50	47	45	44	42	41	39
7	71	62	56	52	67	59	54	50	53	49	46	48	45	43	43	41	39	37
8	68	58	52	48	64	56	50	47	51	47	44	46	43	41	41	39	38	36
9	65	55	50	46	61	53	48	44	48	44	42	44	41	39	40	38	36	35
10	62	53	47	43	58	50	45	42	46	42	40	42	39	37	39	37	35	34

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-15_59_36-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	6.6	7.3	7.6	8.2	9.5	6.6	7.3	7.6	8.2	9.5
	3H	8.0	8.6	9.0	9.6	10.9	8.0	8.6	9.0	9.6	10.9
	4H	8.5	9.0	9.5	10.0	11.3	8.5	9.0	9.5	10.0	11.3
	6H	8.8	9.3	9.8	10.3	11.6	8.8	9.3	9.8	10.3	11.6
	8H	8.9	9.4	9.9	10.4	11.7	8.9	9.4	9.9	10.4	11.7
	12H	8.9	9.4	10.0	10.4	11.7	8.9	9.4	10.0	10.4	11.7

UGR Viewed Endwise

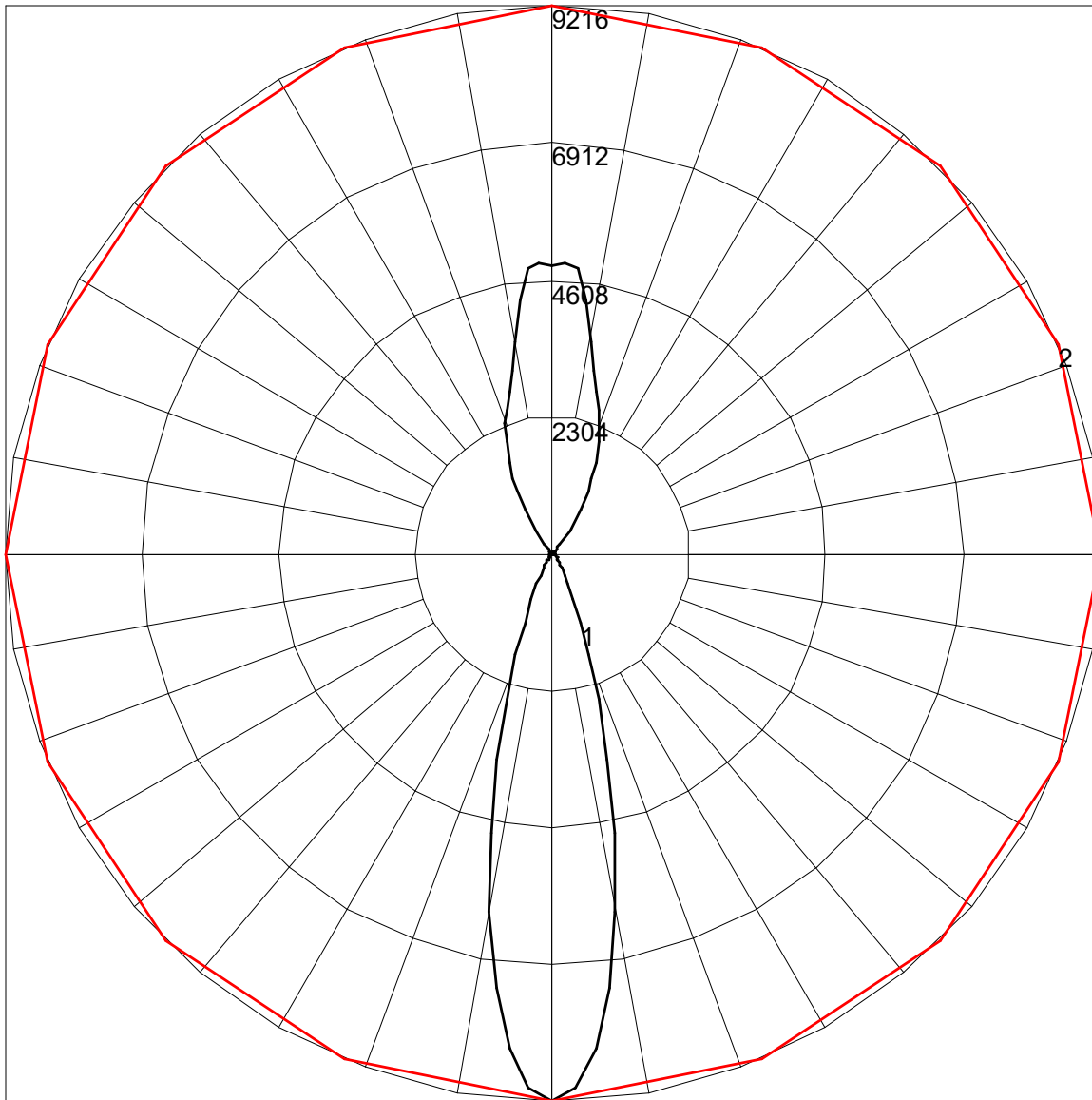
4H	2H	7.0	7.6	8.0	8.5	9.8	7.0	7.6	8.0	8.5	9.8
	3H	8.6	9.0	9.6	10.1	11.4	8.6	9.0	9.6	10.1	11.4
	4H	9.2	9.6	10.2	10.6	12.0	9.2	9.6	10.2	10.6	12.0
	6H	9.6	10.0	10.7	11.0	12.4	9.6	10.0	10.7	11.0	12.4
	8H	9.8	10.1	10.8	11.2	12.5	9.8	10.1	10.8	11.2	12.5
	12H	9.8	10.1	10.9	11.2	12.5	9.8	10.1	10.9	11.2	12.5

8H	4H	9.4	9.7	10.4	10.7	12.1	9.4	9.7	10.4	10.7	12.1
	6H	9.9	10.2	11.0	11.3	12.6	9.9	10.2	11.0	11.3	12.6
	8H	10.2	10.4	11.2	11.4	12.8	10.2	10.4	11.2	11.4	12.8
	12H	10.3	10.5	11.3	11.5	12.9	10.3	10.5	11.3	11.5	12.9

12H	4H	9.3	9.6	10.4	10.7	12.0	9.3	9.6	10.4	10.7	12.0
	6H	10.0	10.2	11.0	11.2	12.6	10.0	10.2	11.0	11.2	12.6
	8H	10.2	10.4	11.3	11.5	12.9	10.2	10.4	11.3	11.5	12.9

Maximum UGR = 12.9

POLAR GRAPH



Maximum Candela = 9215.844 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.)