



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-CSU-ON-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN from UL #13537338.10 and #13131414.09

[TESTLAB]

[ISSUE DATE] 10-FEB-2021

[MANUFAC] WILLIAMS OUTDOOR

[MORE] H E Williams Inc. - Carthage, MO

[LUMCAT] 4CRDI-L12-835U-L12-835D-xxx-DIM1-UNV-LW-CSU-ON-CSD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distrib white painted flush prismatic lens trim up,

[MORE] narrow distrib anodized alum open reflector trim down

[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	2406
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	28.5
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 w/ Sides
Luminous Length (0-180)	0.31 ft (Diameter)
Luminous Width (90-270)	0.31 ft (Diameter)
Luminous Height	1.44 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	280	280	280
55	106	106	106
65	62	62	62
75	48	48	48
85	36	36	36

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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	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230
2.5	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880
5.0	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658
7.5	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853
10.0	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404
12.5	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997
15.0	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718
17.5	929.509	929.509	929.509	929.509	929.509	929.509	929.509	929.509	929.509	929.509
20.0	759.857	759.857	759.857	759.857	759.857	759.857	759.857	759.857	759.857	759.857
22.5	622.398	622.398	622.398	622.398	622.398	622.398	622.398	622.398	622.398	622.398
25.0	473.186	473.186	473.186	473.186	473.186	473.186	473.186	473.186	473.186	473.186
27.5	313.754	313.754	313.754	313.754	313.754	313.754	313.754	313.754	313.754	313.754
30.0	170.674	170.674	170.674	170.674	170.674	170.674	170.674	170.674	170.674	170.674
32.5	74.606	74.606	74.606	74.606	74.606	74.606	74.606	74.606	74.606	74.606
35.0	31.171	31.171	31.171	31.171	31.171	31.171	31.171	31.171	31.171	31.171
37.5	19.929	19.929	19.929	19.929	19.929	19.929	19.929	19.929	19.929	19.929
40.0	15.841	15.841	15.841	15.841	15.841	15.841	15.841	15.841	15.841	15.841
42.5	12.775	12.775	12.775	12.775	12.775	12.775	12.775	12.775	12.775	12.775
45.0	9.709	9.709	9.709	9.709	9.709	9.709	9.709	9.709	9.709	9.709
47.5	7.665	7.665	7.665	7.665	7.665	7.665	7.665	7.665	7.665	7.665
50.0	6.132	6.132	6.132	6.132	6.132	6.132	6.132	6.132	6.132	6.132
52.5	5.110	5.110	5.110	5.110	5.110	5.110	5.110	5.110	5.110	5.110
55.0	4.088	4.088	4.088	4.088	4.088	4.088	4.088	4.088	4.088	4.088
57.5	3.577	3.577	3.577	3.577	3.577	3.577	3.577	3.577	3.577	3.577
60.0	3.066	3.066	3.066	3.066	3.066	3.066	3.066	3.066	3.066	3.066
62.5	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555
65.0	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555
67.5	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555	2.555
70.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
72.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
75.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
77.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
80.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
82.5	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533
85.0	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533
87.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044	2.044
90.0	3.928	3.928	3.928	3.928	3.928	3.928	3.928	3.928	3.928	3.928
92.5	2.824	2.824	2.824	2.824	2.824	2.824	2.824	2.824	2.824	2.824
95.0	4.789	4.789	4.789	4.789	4.789	4.789	4.789	4.789	4.789	4.789
97.5	7.798	7.798	7.798	7.798	7.798	7.798	7.798	7.798	7.798	7.798
100.0	11.850	11.850	11.850	11.850	11.850	11.850	11.850	11.850	11.850	11.850
102.5	16.332	16.332	16.332	16.332	16.332	16.332	16.332	16.332	16.332	16.332
105.0	21.244	21.244	21.244	21.244	21.244	21.244	21.244	21.244	21.244	21.244
107.5	26.525	26.525	26.525	26.525	26.525	26.525	26.525	26.525	26.525	26.525
110.0	32.296	32.296	32.296	32.296	32.296	32.296	32.296	32.296	32.296	32.296
112.5	38.498	38.498	38.498	38.498	38.498	38.498	38.498	38.498	38.498	38.498
115.0	45.129	45.129	45.129	45.129	45.129	45.129	45.129	45.129	45.129	45.129
117.5	52.129	52.129	52.129	52.129	52.129	52.129	52.129	52.129	52.129	52.129
120.0	59.128	59.128	59.128	59.128	59.128	59.128	59.128	59.128	59.128	59.128
122.5	65.882	65.882	65.882	65.882	65.882	65.882	65.882	65.882	65.882	65.882
125.0	72.145	72.145	72.145	72.145	72.145	72.145	72.145	72.145	72.145	72.145
127.5	78.285	78.285	78.285	78.285	78.285	78.285	78.285	78.285	78.285	78.285
130.0	84.978	84.978	84.978	84.978	84.978	84.978	84.978	84.978	84.978	84.978
132.5	93.267	93.267	93.267	93.267	93.267	93.267	93.267	93.267	93.267	93.267

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CANDELA TABULATION - (Cont.)

135.0	104.564	104.564	104.564	104.564	104.564	104.564	104.564	104.564	104.564	104.564
137.5	120.160	120.160	120.160	120.160	120.160	120.160	120.160	120.160	120.160	120.160
140.0	141.957	141.957	141.957	141.957	141.957	141.957	141.957	141.957	141.957	141.957
142.5	173.087	173.087	173.087	173.087	173.087	173.087	173.087	173.087	173.087	173.087
145.0	217.417	217.417	217.417	217.417	217.417	217.417	217.417	217.417	217.417	217.417
147.5	282.194	282.194	282.194	282.194	282.194	282.194	282.194	282.194	282.194	282.194
150.0	381.908	381.908	381.908	381.908	381.908	381.908	381.908	381.908	381.908	381.908
152.5	528.286	528.286	528.286	528.286	528.286	528.286	528.286	528.286	528.286	528.286
155.0	728.818	728.818	728.818	728.818	728.818	728.818	728.818	728.818	728.818	728.818
157.5	979.330	979.330	979.330	979.330	979.330	979.330	979.330	979.330	979.330	979.330
160.0	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402
162.5	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334
165.0	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794
167.5	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204
170.0	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968
172.5	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998
175.0	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662
177.5	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012
180.0	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000

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	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230	6607.230
2.5	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880	6172.880
5.0	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658	5047.658
7.5	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853	3639.853
10.0	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404	2434.404
12.5	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997	1648.997
15.0	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718	1194.718
17.5	929.509	929.509	929.509	929.509	929.509	929.509	929.509
20.0	759.857	759.857	759.857	759.857	759.857	759.857	759.857
22.5	622.398	622.398	622.398	622.398	622.398	622.398	622.398
25.0	473.186	473.186	473.186	473.186	473.186	473.186	473.186
27.5	313.754	313.754	313.754	313.754	313.754	313.754	313.754
30.0	170.674	170.674	170.674	170.674	170.674	170.674	170.674
32.5	74.606	74.606	74.606	74.606	74.606	74.606	74.606
35.0	31.171	31.171	31.171	31.171	31.171	31.171	31.171
37.5	19.929	19.929	19.929	19.929	19.929	19.929	19.929
40.0	15.841	15.841	15.841	15.841	15.841	15.841	15.841
42.5	12.775	12.775	12.775	12.775	12.775	12.775	12.775
45.0	9.709	9.709	9.709	9.709	9.709	9.709	9.709
47.5	7.665	7.665	7.665	7.665	7.665	7.665	7.665
50.0	6.132	6.132	6.132	6.132	6.132	6.132	6.132
52.5	5.110	5.110	5.110	5.110	5.110	5.110	5.110
55.0	4.088	4.088	4.088	4.088	4.088	4.088	4.088
57.5	3.577	3.577	3.577	3.577	3.577	3.577	3.577
60.0	3.066	3.066	3.066	3.066	3.066	3.066	3.066
62.5	2.555	2.555	2.555	2.555	2.555	2.555	2.555
65.0	2.555	2.555	2.555	2.555	2.555	2.555	2.555
67.5	2.555	2.555	2.555	2.555	2.555	2.555	2.555
70.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044
72.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044
75.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044
77.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044
80.0	2.044	2.044	2.044	2.044	2.044	2.044	2.044

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82.5	1.533	1.533	1.533	1.533	1.533	1.533	1.533
85.0	1.533	1.533	1.533	1.533	1.533	1.533	1.533
87.5	2.044	2.044	2.044	2.044	2.044	2.044	2.044
90.0	3.928	3.928	3.928	3.928	3.928	3.928	3.928
92.5	2.824	2.824	2.824	2.824	2.824	2.824	2.824
95.0	4.789	4.789	4.789	4.789	4.789	4.789	4.789
97.5	7.798	7.798	7.798	7.798	7.798	7.798	7.798
100.0	11.850	11.850	11.850	11.850	11.850	11.850	11.850
102.5	16.332	16.332	16.332	16.332	16.332	16.332	16.332
105.0	21.244	21.244	21.244	21.244	21.244	21.244	21.244
107.5	26.525	26.525	26.525	26.525	26.525	26.525	26.525
110.0	32.296	32.296	32.296	32.296	32.296	32.296	32.296
112.5	38.498	38.498	38.498	38.498	38.498	38.498	38.498
115.0	45.129	45.129	45.129	45.129	45.129	45.129	45.129
117.5	52.129	52.129	52.129	52.129	52.129	52.129	52.129
120.0	59.128	59.128	59.128	59.128	59.128	59.128	59.128
122.5	65.882	65.882	65.882	65.882	65.882	65.882	65.882
125.0	72.145	72.145	72.145	72.145	72.145	72.145	72.145
127.5	78.285	78.285	78.285	78.285	78.285	78.285	78.285
130.0	84.978	84.978	84.978	84.978	84.978	84.978	84.978
132.5	93.267	93.267	93.267	93.267	93.267	93.267	93.267
135.0	104.564	104.564	104.564	104.564	104.564	104.564	104.564
137.5	120.160	120.160	120.160	120.160	120.160	120.160	120.160
140.0	141.957	141.957	141.957	141.957	141.957	141.957	141.957
142.5	173.087	173.087	173.087	173.087	173.087	173.087	173.087
145.0	217.417	217.417	217.417	217.417	217.417	217.417	217.417
147.5	282.194	282.194	282.194	282.194	282.194	282.194	282.194
150.0	381.908	381.908	381.908	381.908	381.908	381.908	381.908
152.5	528.286	528.286	528.286	528.286	528.286	528.286	528.286
155.0	728.818	728.818	728.818	728.818	728.818	728.818	728.818
157.5	979.330	979.330	979.330	979.330	979.330	979.330	979.330
160.0	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402	1254.402
162.5	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334	1523.334
165.0	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794	1762.794
167.5	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204	1956.204
170.0	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968	2094.968
172.5	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998	2183.998
175.0	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662	2230.662
177.5	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012	2246.012
180.0	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000	2249.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-CSU-ON-CSD-WM_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	752.84	N.A.	31.30
0-30	961.63	N.A.	40.00
0-40	994.33	N.A.	41.30
0-60	1006.06	N.A.	41.80
0-80	1010.76	N.A.	42.00
0-90	1012.97	N.A.	42.10
10-90	617.88	N.A.	25.70
20-40	241.50	N.A.	10.00
20-50	249.36	N.A.	10.40
40-70	14.26	N.A.	0.60
60-80	4.69	N.A.	0.20
70-80	2.16	N.A.	0.10
80-90	2.21	N.A.	0.10
90-110	29.06	N.A.	1.20
90-120	73.92	N.A.	3.10
90-130	138.38	N.A.	5.80
90-150	365.27	N.A.	15.20
90-180	1393.33	N.A.	57.90
110-180	1364.28	N.A.	56.70
0-180	2406.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	395.09
10-20	357.74
20-30	208.79
30-40	32.71
40-50	7.86
50-60	3.87
60-70	2.53
70-80	2.16
80-90	2.21
90-100	6.34
100-110	22.71
110-120	44.86
120-130	64.46
130-140	82.95
140-150	143.95
150-160	341.48
160-170	477.91
170-180	208.67

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	99	95	92	90	90	87	85	83	73	71	70	59	59	58	47	47	46	41
2	92	87	82	79	85	80	76	73	68	65	63	56	55	53	45	45	44	39
3	87	80	74	70	80	74	70	66	63	60	58	53	51	50	44	43	42	38
4	82	74	68	63	75	69	64	60	59	56	53	51	48	47	42	41	40	37
5	77	69	63	58	71	64	59	55	56	52	50	48	46	44	41	40	38	35
6	73	64	58	54	68	60	55	51	53	49	46	46	44	42	40	38	37	34
7	69	60	54	50	65	57	52	48	50	47	44	44	42	40	38	37	36	33
8	66	57	51	47	62	54	49	45	48	44	42	42	40	38	37	36	35	33
9	63	54	48	44	59	51	46	43	46	42	40	41	38	37	36	35	33	32
10	60	51	46	42	57	49	44	41	44	40	38	39	37	35	35	34	33	31

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-CSU-ON-CSD-WM_.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	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	3H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	4H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	6H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	8H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	12H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

UGR Viewed Endwise

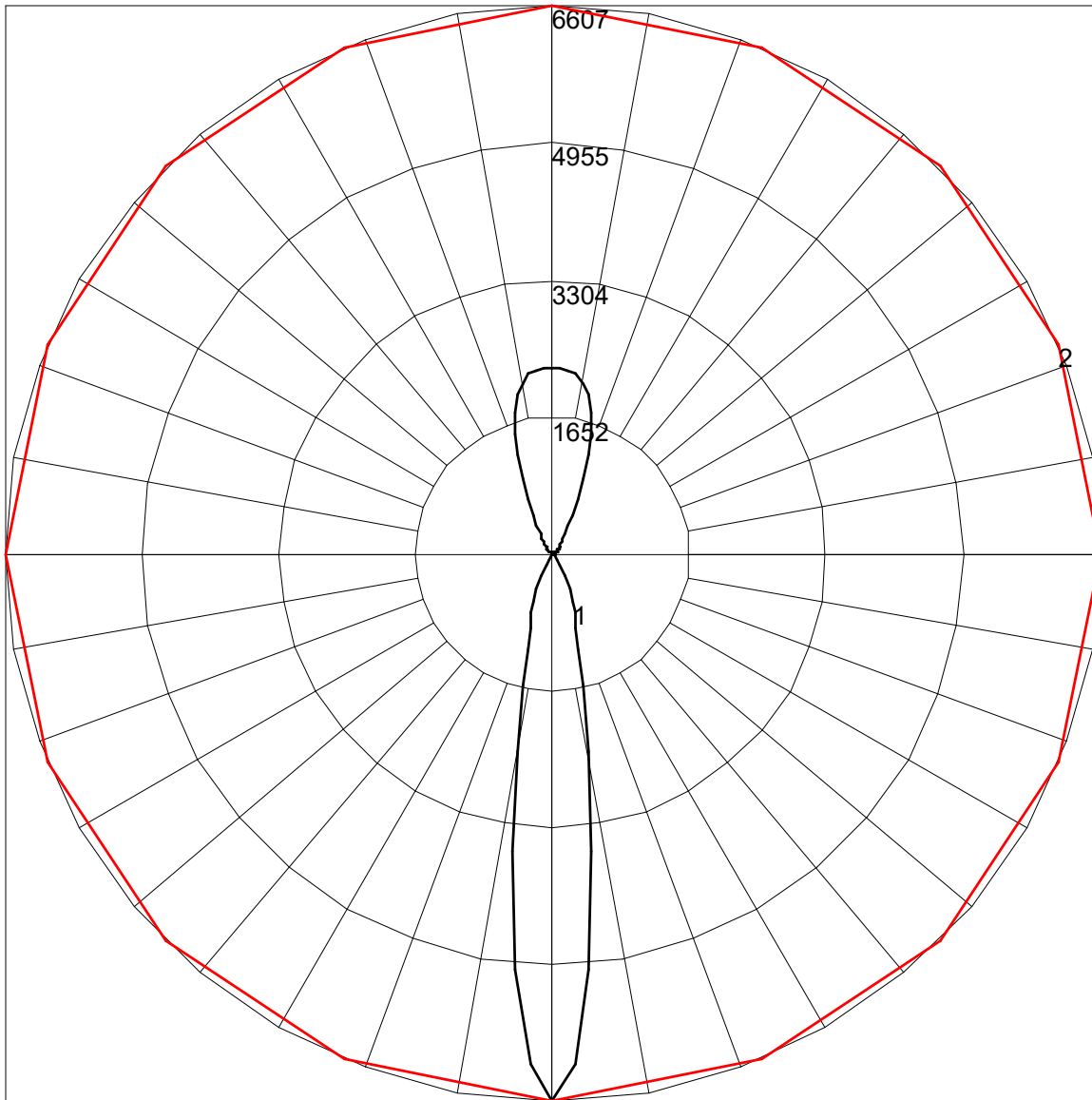
4H	2H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	3H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	4H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	6H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	8H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	12H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8H	4H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	6H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	8H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	12H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
12H	4H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	6H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	8H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

Maximum UGR = 3.1

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-CSU-ON-CSD-WM_.IES

POLAR GRAPH



Maximum Candela = 6607.23 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.)