



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.06 and #13131414.09

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, medium 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)

[BALLAST] (2) ERP PHB30W-0700-42 Drivers

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[CONVERT] Photometric web converted from original test data

[CONVERT] Luminaire test position and photometric web converted from original test data

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2387
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
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 ft (Diameter)
Luminous Height	0.00 ft

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-ON-CSD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4345	4345	4345
55	2256	2256	2256
65	1913	1913	1913
75	2499	2499	2499
85	5567	5567	5567

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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	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533	1.533
92.5	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014
95.0	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239
97.5	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478
100.0	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886
102.5	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717
105.0	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970
107.5	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730
110.0	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912
112.5	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517
115.0	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629
117.5	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502
120.0	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797
122.5	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261
125.0	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147
127.5	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456
130.0	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864
132.5	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792

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CANDELA TABULATION - (Cont.)

135.0	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242
137.5	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635
140.0	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225
142.5	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843
145.0	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686
147.5	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894
150.0	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045
152.5	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814
155.0	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426
157.5	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261
160.0	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681
162.5	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005
165.0	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600
167.5	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500
170.0	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095
172.5	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251
175.0	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330
177.5	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375
180.0	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000

Vert. 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	1.533	1.533	1.533	1.533	1.533	1.533	1.533
92.5	1.014	1.014	1.014	1.014	1.014	1.014	1.014
95.0	5.239	5.239	5.239	5.239	5.239	5.239	5.239
97.5	10.478	10.478	10.478	10.478	10.478	10.478	10.478
100.0	15.886	15.886	15.886	15.886	15.886	15.886	15.886
102.5	21.717	21.717	21.717	21.717	21.717	21.717	21.717
105.0	27.970	27.970	27.970	27.970	27.970	27.970	27.970
107.5	34.730	34.730	34.730	34.730	34.730	34.730	34.730
110.0	41.912	41.912	41.912	41.912	41.912	41.912	41.912
112.5	49.517	49.517	49.517	49.517	49.517	49.517	49.517
115.0	57.629	57.629	57.629	57.629	57.629	57.629	57.629
117.5	66.502	66.502	66.502	66.502	66.502	66.502	66.502
120.0	75.797	75.797	75.797	75.797	75.797	75.797	75.797
122.5	85.261	85.261	85.261	85.261	85.261	85.261	85.261
125.0	95.147	95.147	95.147	95.147	95.147	95.147	95.147
127.5	105.456	105.456	105.456	105.456	105.456	105.456	105.456
130.0	116.864	116.864	116.864	116.864	116.864	116.864	116.864
132.5	129.792	129.792	129.792	129.792	129.792	129.792	129.792
135.0	144.242	144.242	144.242	144.242	144.242	144.242	144.242
137.5	160.635	160.635	160.635	160.635	160.635	160.635	160.635
140.0	179.225	179.225	179.225	179.225	179.225	179.225	179.225
142.5	199.843	199.843	199.843	199.843	199.843	199.843	199.843
145.0	224.686	224.686	224.686	224.686	224.686	224.686	224.686
147.5	257.894	257.894	257.894	257.894	257.894	257.894	257.894
150.0	305.045	305.045	305.045	305.045	305.045	305.045	305.045
152.5	372.814	372.814	372.814	372.814	372.814	372.814	372.814
155.0	465.426	465.426	465.426	465.426	465.426	465.426	465.426
157.5	592.261	592.261	592.261	592.261	592.261	592.261	592.261
160.0	791.681	791.681	791.681	791.681	791.681	791.681	791.681
162.5	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005
165.0	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600
167.5	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500
170.0	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095
172.5	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251
175.0	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330
177.5	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375
180.0	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000

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Zone	Lumens	%Lamp	%Fixt
0-20	752.84	N.A.	31.50
0-30	961.63	N.A.	40.30
0-40	994.33	N.A.	41.70
0-60	1006.06	N.A.	42.10
0-80	1010.76	N.A.	42.30
0-90	1012.64	N.A.	42.40
10-90	617.55	N.A.	25.90
20-40	241.50	N.A.	10.10
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	1.88	N.A.	0.10
90-110	36.79	N.A.	1.50
90-120	94.27	N.A.	3.90
90-130	179.64	N.A.	7.50
90-150	435.51	N.A.	18.20
90-180	1374.6	N.A.	57.60
110-180	1337.81	N.A.	56.00
0-180	2387.24	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	1.88
90-100	6.92
100-110	29.87
110-120	57.48
120-130	85.37
130-140	112.16
140-150	143.71
150-160	222.65
160-170	434.37
170-180	282.07

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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	42
1	99	95	93	90	90	88	85	83	73	72	70	60	59	58	47	47	46	41
2	92	87	83	79	85	80	77	73	68	65	63	56	55	53	46	45	44	39
3	87	80	75	70	80	74	70	66	63	60	58	53	51	50	44	43	42	38
4	82	74	68	64	76	69	64	60	60	56	53	51	49	47	43	41	40	37
5	77	69	63	58	72	64	59	55	56	52	50	48	46	44	41	40	39	36
6	73	64	58	54	68	60	55	51	53	49	47	46	44	42	40	38	37	35
7	70	60	54	50	65	57	52	48	50	47	44	44	42	40	39	37	36	34
8	66	57	51	47	62	54	49	45	48	44	42	43	40	38	38	36	35	33
9	63	54	48	44	59	51	46	43	46	42	40	41	39	37	36	35	34	32
10	60	51	46	42	57	49	44	41	44	41	38	40	37	35	35	34	33	31

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-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	3.6	3.1	3.1	3.1	3.6
	8H	3.1	3.1	3.1	3.1	4.2	3.1	3.1	3.1	4.2
	12H	3.1	3.1	3.1	3.5	4.9	3.1	3.1	3.1	4.9

UGR Viewed Endwise

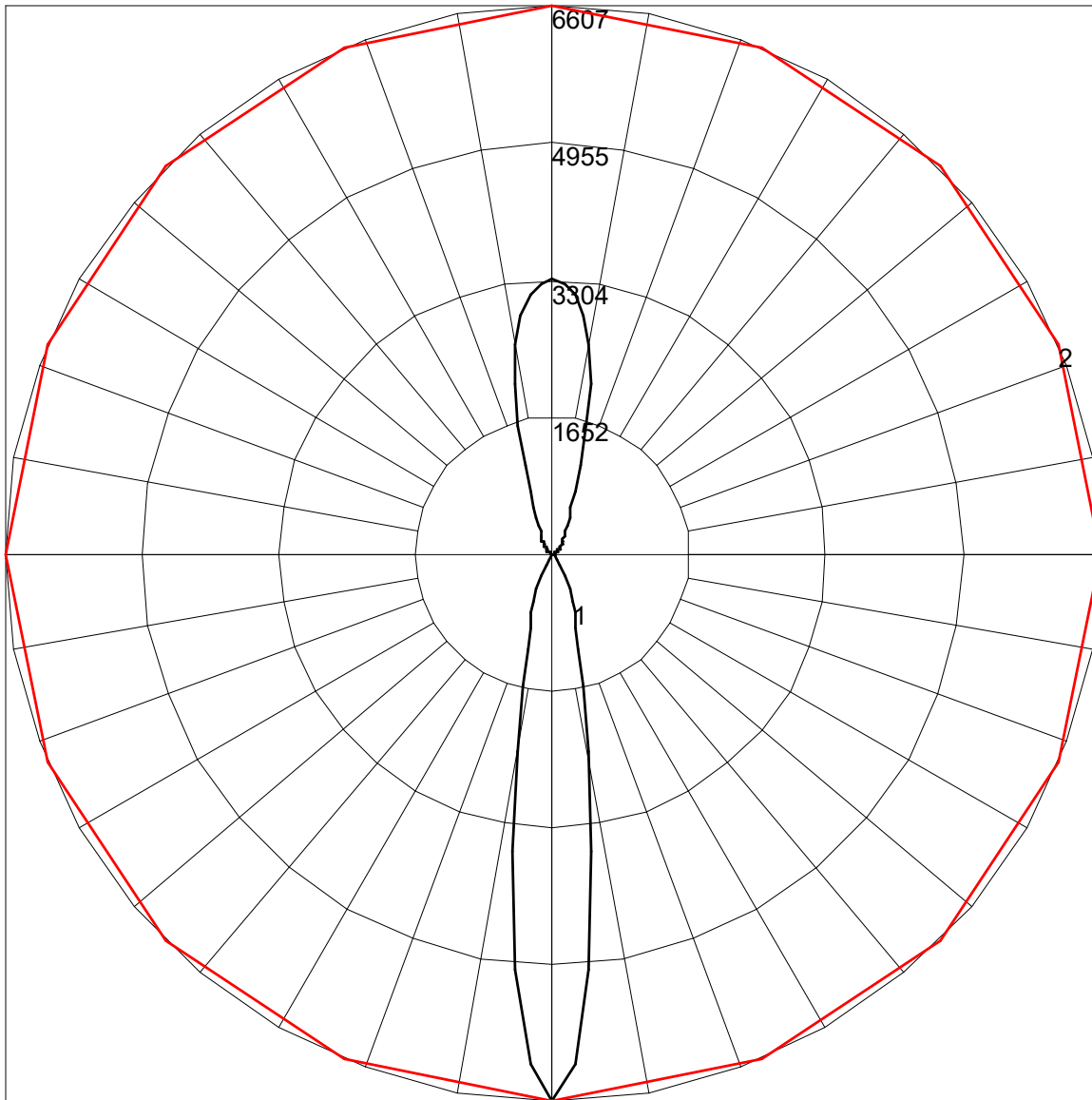
4H	2H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	3H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	4H	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
	6H	3.1	3.1	3.1	3.4	4.8	3.1	3.1	3.1	4.8
	8H	3.1	3.1	3.8	4.1	5.5	3.1	3.1	3.8	5.5
	12H	3.5	3.8	4.6	4.9	6.3	3.5	3.8	4.6	6.3
8H	4H	3.1	3.1	3.1	3.1	3.6	3.1	3.1	3.1	3.6
	6H	3.1	3.1	3.9	4.2	5.6	3.1	3.1	3.9	5.6
	8H	3.7	3.9	4.8	5.0	6.5	3.7	3.9	4.8	6.5
	12H	4.7	4.9	5.9	6.0	7.5	4.7	4.9	5.9	7.5
12H	4H	3.1	3.1	3.1	3.1	3.7	3.1	3.1	3.1	3.7
	6H	3.1	3.2	4.1	4.3	5.8	3.1	3.2	4.1	5.8
	8H	4.0	4.1	5.1	5.3	6.8	4.0	4.1	5.1	6.8

Maximum UGR = 7.5

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-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.)