



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.06 and #13257153.07

[TESTLAB]

[ISSUE DATE] 18-DEC-2024

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4CRDI-xx-L12-835U-L12-835D-xxx-DIM1-UNV-LM-CSU-RM-WHD-WM

[MORE]

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

[MORE] medium distrib white painted regressed prismatic lens trim down

[LAMP] Two white LEDs (one up/one down)

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2629
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
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

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	57719	57719	57719
55	42293	42293	42293
65	30964	30964	30964
75	15276	15276	15276
85	9074	9074	9074

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_IES

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	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550
2.5	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742
5.0	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990
7.5	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160
10.0	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028
12.5	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430
15.0	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144
17.5	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636
20.0	754.577	754.577	754.577	754.577	754.577	754.577	754.577	754.577	754.577	754.577
22.5	574.517	574.517	574.517	574.517	574.517	574.517	574.517	574.517	574.517	574.517
25.0	465.868	465.868	465.868	465.868	465.868	465.868	465.868	465.868	465.868	465.868
27.5	385.832	385.832	385.832	385.832	385.832	385.832	385.832	385.832	385.832	385.832
30.0	315.630	315.630	315.630	315.630	315.630	315.630	315.630	315.630	315.630	315.630
32.5	255.663	255.663	255.663	255.663	255.663	255.663	255.663	255.663	255.663	255.663
35.0	215.283	215.283	215.283	215.283	215.283	215.283	215.283	215.283	215.283	215.283
37.5	188.120	188.120	188.120	188.120	188.120	188.120	188.120	188.120	188.120	188.120
40.0	166.197	166.197	166.197	166.197	166.197	166.197	166.197	166.197	166.197	166.197
42.5	146.531	146.531	146.531	146.531	146.531	146.531	146.531	146.531	146.531	146.531
45.0	128.960	128.960	128.960	128.960	128.960	128.960	128.960	128.960	128.960	128.960
47.5	113.162	113.162	113.162	113.162	113.162	113.162	113.162	113.162	113.162	113.162
50.0	99.138	99.138	99.138	99.138	99.138	99.138	99.138	99.138	99.138	99.138
52.5	87.129	87.129	87.129	87.129	87.129	87.129	87.129	87.129	87.129	87.129
55.0	76.651	76.651	76.651	76.651	76.651	76.651	76.651	76.651	76.651	76.651
57.5	67.140	67.140	67.140	67.140	67.140	67.140	67.140	67.140	67.140	67.140
60.0	58.193	58.193	58.193	58.193	58.193	58.193	58.193	58.193	58.193	58.193
62.5	49.569	49.569	49.569	49.569	49.569	49.569	49.569	49.569	49.569	49.569
65.0	41.348	41.348	41.348	41.348	41.348	41.348	41.348	41.348	41.348	41.348
67.5	33.610	33.610	33.610	33.610	33.610	33.610	33.610	33.610	33.610	33.610
70.0	26.195	26.195	26.195	26.195	26.195	26.195	26.195	26.195	26.195	26.195
72.5	19.183	19.183	19.183	19.183	19.183	19.183	19.183	19.183	19.183	19.183
75.0	12.493	12.493	12.493	12.493	12.493	12.493	12.493	12.493	12.493	12.493
77.5	7.818	7.818	7.818	7.818	7.818	7.818	7.818	7.818	7.818	7.818
80.0	5.803	5.803	5.803	5.803	5.803	5.803	5.803	5.803	5.803	5.803
82.5	4.030	4.030	4.030	4.030	4.030	4.030	4.030	4.030	4.030	4.030
85.0	2.499	2.499	2.499	2.499	2.499	2.499	2.499	2.499	2.499	2.499
87.5	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_IES

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	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550	3163.550
2.5	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742	3108.742
5.0	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990	2953.990
7.5	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160	2708.160
10.0	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028	2368.028
12.5	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430	1938.430
15.0	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144	1470.144
17.5	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636	1052.636
20.0	754.577	754.577	754.577	754.577	754.577	754.577	754.577
22.5	574.517	574.517	574.517	574.517	574.517	574.517	574.517
25.0	465.868	465.868	465.868	465.868	465.868	465.868	465.868
27.5	385.832	385.832	385.832	385.832	385.832	385.832	385.832
30.0	315.630	315.630	315.630	315.630	315.630	315.630	315.630
32.5	255.663	255.663	255.663	255.663	255.663	255.663	255.663
35.0	215.283	215.283	215.283	215.283	215.283	215.283	215.283
37.5	188.120	188.120	188.120	188.120	188.120	188.120	188.120
40.0	166.197	166.197	166.197	166.197	166.197	166.197	166.197
42.5	146.531	146.531	146.531	146.531	146.531	146.531	146.531
45.0	128.960	128.960	128.960	128.960	128.960	128.960	128.960
47.5	113.162	113.162	113.162	113.162	113.162	113.162	113.162
50.0	99.138	99.138	99.138	99.138	99.138	99.138	99.138
52.5	87.129	87.129	87.129	87.129	87.129	87.129	87.129
55.0	76.651	76.651	76.651	76.651	76.651	76.651	76.651
57.5	67.140	67.140	67.140	67.140	67.140	67.140	67.140
60.0	58.193	58.193	58.193	58.193	58.193	58.193	58.193
62.5	49.569	49.569	49.569	49.569	49.569	49.569	49.569
65.0	41.348	41.348	41.348	41.348	41.348	41.348	41.348
67.5	33.610	33.610	33.610	33.610	33.610	33.610	33.610
70.0	26.195	26.195	26.195	26.195	26.195	26.195	26.195
72.5	19.183	19.183	19.183	19.183	19.183	19.183	19.183
75.0	12.493	12.493	12.493	12.493	12.493	12.493	12.493
77.5	7.818	7.818	7.818	7.818	7.818	7.818	7.818
80.0	5.803	5.803	5.803	5.803	5.803	5.803	5.803

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_IES****CANDELA TABULATION - (Cont.)**

82.5	4.030	4.030	4.030	4.030	4.030	4.030	4.030
85.0	2.499	2.499	2.499	2.499	2.499	2.499	2.499
87.5	1.048	1.048	1.048	1.048	1.048	1.048	1.048
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	666.03	N.A.	25.30
0-30	887.37	N.A.	33.70
0-40	1026.95	N.A.	39.10
0-60	1196.26	N.A.	45.50
0-80	1252.03	N.A.	47.60
0-90	1254.88	N.A.	47.70
10-90	991.44	N.A.	37.70
20-40	360.92	N.A.	13.70
20-50	461.14	N.A.	17.50
40-70	210.49	N.A.	8.00
60-80	55.76	N.A.	2.10
70-80	14.59	N.A.	0.60
80-90	2.85	N.A.	0.10
90-110	36.58	N.A.	1.40
90-120	94.06	N.A.	3.60
90-130	179.43	N.A.	6.80
90-150	435.30	N.A.	16.60
90-180	1374.39	N.A.	52.30
110-180	1337.81	N.A.	50.90
0-180	2629.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	263.44
10-20	402.59
20-30	221.34
30-40	139.58
40-50	100.23
50-60	69.09
60-70	41.17
70-80	14.59
80-90	2.85
90-100	6.71
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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_.IES

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	98	98	98	98	82	82	82	67	67	67	54	54	54	48
1	99	96	93	90	91	89	86	84	75	73	72	62	61	60	51	50	50	44
2	92	87	82	77	85	80	76	73	69	66	63	58	56	54	48	47	46	41
3	86	79	73	68	80	73	68	64	63	59	56	54	51	49	45	43	42	38
4	81	72	65	60	75	67	62	57	58	54	51	50	47	45	42	41	39	36
5	75	66	59	54	70	62	56	52	54	50	47	47	44	42	40	38	37	34
6	71	61	54	50	66	57	52	47	51	46	43	44	41	39	38	36	34	32
7	67	57	50	45	62	53	48	44	47	43	40	42	38	36	36	34	32	30
8	63	53	46	42	59	50	44	40	45	40	37	39	36	34	35	32	31	29
9	60	50	43	39	56	47	41	38	42	38	35	38	34	32	33	31	29	27
10	57	47	41	37	53	44	39	35	40	36	33	36	33	30	32	30	28	26

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-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	16.3	17.0	17.3	18.0	19.3	16.3	17.0	17.3	18.0	19.3
	3H	17.3	17.9	18.3	18.9	20.3	17.3	17.9	18.3	18.9	20.3
	4H	17.5	18.0	18.5	19.0	20.4	17.5	18.0	18.5	19.0	20.4
	6H	17.4	18.0	18.5	19.0	20.4	17.4	18.0	18.5	19.0	20.4
	8H	17.4	17.9	18.5	19.0	20.3	17.4	17.9	18.5	19.0	20.3
	12H	17.4	17.9	18.4	18.9	20.3	17.4	17.9	18.4	18.9	20.3

UGR Viewed Endwise

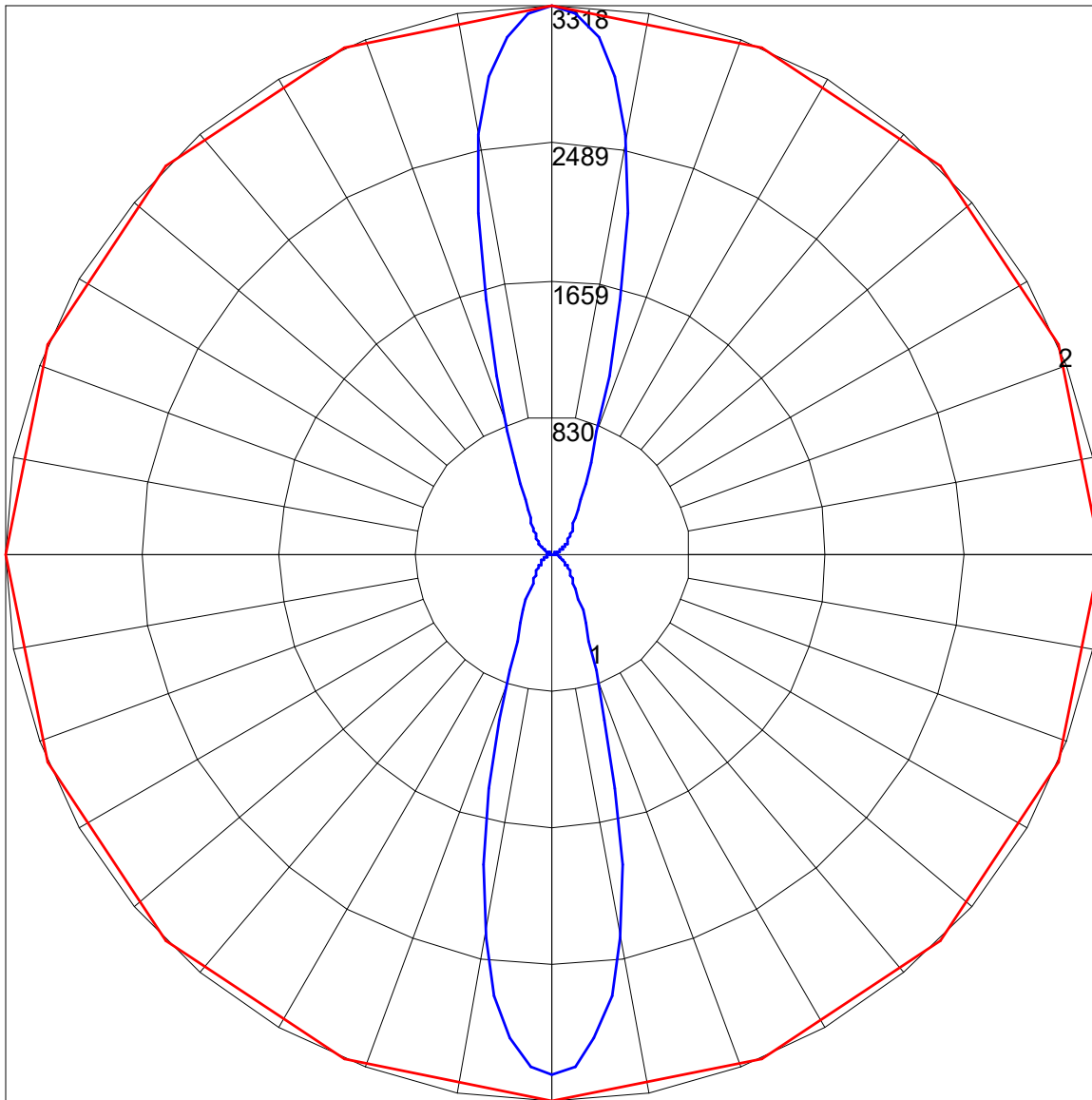
4H	2H	16.6	17.2	17.7	18.2	19.6	16.6	17.2	17.7	18.2	19.6
	3H	17.7	18.2	18.8	19.2	20.6	17.7	18.2	18.8	19.2	20.6
	4H	17.9	18.4	19.0	19.4	20.8	17.9	18.4	19.0	19.4	20.8
	6H	18.0	18.3	19.0	19.4	20.8	18.0	18.3	19.0	19.4	20.8
	8H	18.0	18.3	19.0	19.4	20.8	18.0	18.3	19.0	19.4	20.8
	12H	17.9	18.3	19.0	19.3	20.7	17.9	18.3	19.0	19.3	20.7
8H	4H	17.9	18.3	19.0	19.3	20.7	17.9	18.3	19.0	19.3	20.7
	6H	18.0	18.3	19.1	19.4	20.8	18.0	18.3	19.1	19.4	20.8
	8H	18.0	18.3	19.1	19.3	20.8	18.0	18.3	19.1	19.3	20.8
	12H	18.0	18.2	19.1	19.3	20.8	18.0	18.2	19.1	19.3	20.8
12H	4H	17.8	18.2	18.9	19.2	20.6	17.8	18.2	18.9	19.2	20.6
	6H	18.0	18.2	19.0	19.3	20.7	18.0	18.2	19.0	19.3	20.7
	8H	18.0	18.2	19.1	19.3	20.7	18.0	18.2	19.1	19.3	20.7

Maximum UGR = 20.8

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-RM-WHD-WM_.IES

POLAR GRAPH



Maximum Candela = 3318 Located At Horizontal Angle = 0, Vertical Angle = 180

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)