



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.06 and #13257153.08

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

[MORE] medium distrib white painted flush prismatic lens 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	2678
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
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-LN-WHD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	61470	61470	61470
55	47408	47408	47408
65	37181	37181	37181
75	27892	27892	27892
85	15218	15218	15218

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LN-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	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644
2.5	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414
5.0	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890
7.5	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000
10.0	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704
12.5	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410
15.0	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808
17.5	900.302	900.302	900.302	900.302	900.302	900.302	900.302	900.302	900.302	900.302
20.0	678.813	678.813	678.813	678.813	678.813	678.813	678.813	678.813	678.813	678.813
22.5	541.793	541.793	541.793	541.793	541.793	541.793	541.793	541.793	541.793	541.793
25.0	440.882	440.882	440.882	440.882	440.882	440.882	440.882	440.882	440.882	440.882
27.5	358.186	358.186	358.186	358.186	358.186	358.186	358.186	358.186	358.186	358.186
30.0	295.721	295.721	295.721	295.721	295.721	295.721	295.721	295.721	295.721	295.721
32.5	252.520	252.520	252.520	252.520	252.520	252.520	252.520	252.520	252.520	252.520
35.0	221.731	221.731	221.731	221.731	221.731	221.731	221.731	221.731	221.731	221.731
37.5	197.631	197.631	197.631	197.631	197.631	197.631	197.631	197.631	197.631	197.631
40.0	175.950	175.950	175.950	175.950	175.950	175.950	175.950	175.950	175.950	175.950
42.5	155.558	155.558	155.558	155.558	155.558	155.558	155.558	155.558	155.558	155.558
45.0	137.342	137.342	137.342	137.342	137.342	137.342	137.342	137.342	137.342	137.342
47.5	121.545	121.545	121.545	121.545	121.545	121.545	121.545	121.545	121.545	121.545
50.0	107.843	107.843	107.843	107.843	107.843	107.843	107.843	107.843	107.843	107.843
52.5	96.236	96.236	96.236	96.236	96.236	96.236	96.236	96.236	96.236	96.236
55.0	85.920	85.920	85.920	85.920	85.920	85.920	85.920	85.920	85.920	85.920
57.5	76.167	76.167	76.167	76.167	76.167	76.167	76.167	76.167	76.167	76.167
60.0	66.898	66.898	66.898	66.898	66.898	66.898	66.898	66.898	66.898	66.898
62.5	58.032	58.032	58.032	58.032	58.032	58.032	58.032	58.032	58.032	58.032
65.0	49.650	49.650	49.650	49.650	49.650	49.650	49.650	49.650	49.650	49.650
67.5	41.993	41.993	41.993	41.993	41.993	41.993	41.993	41.993	41.993	41.993
70.0	34.980	34.980	34.980	34.980	34.980	34.980	34.980	34.980	34.980	34.980
72.5	28.613	28.613	28.613	28.613	28.613	28.613	28.613	28.613	28.613	28.613
75.0	22.810	22.810	22.810	22.810	22.810	22.810	22.810	22.810	22.810	22.810
77.5	17.490	17.490	17.490	17.490	17.490	17.490	17.490	17.490	17.490	17.490
80.0	12.654	12.654	12.654	12.654	12.654	12.654	12.654	12.654	12.654	12.654
82.5	8.221	8.221	8.221	8.221	8.221	8.221	8.221	8.221	8.221	8.221
85.0	4.191	4.191	4.191	4.191	4.191	4.191	4.191	4.191	4.191	4.191
87.5	0.806	0.806	0.806	0.806	0.806	0.806	0.806	0.806	0.806	0.806
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-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LN-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. 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	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644	4492.644
2.5	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414	4327.414
5.0	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890	3880.890
7.5	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000	3224.000
10.0	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704	2485.704
12.5	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410	1801.410
15.0	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808	1263.808
17.5	900.302	900.302	900.302	900.302	900.302	900.302	900.302
20.0	678.813	678.813	678.813	678.813	678.813	678.813	678.813
22.5	541.793	541.793	541.793	541.793	541.793	541.793	541.793
25.0	440.882	440.882	440.882	440.882	440.882	440.882	440.882
27.5	358.186	358.186	358.186	358.186	358.186	358.186	358.186
30.0	295.721	295.721	295.721	295.721	295.721	295.721	295.721
32.5	252.520	252.520	252.520	252.520	252.520	252.520	252.520
35.0	221.731	221.731	221.731	221.731	221.731	221.731	221.731
37.5	197.631	197.631	197.631	197.631	197.631	197.631	197.631
40.0	175.950	175.950	175.950	175.950	175.950	175.950	175.950
42.5	155.558	155.558	155.558	155.558	155.558	155.558	155.558
45.0	137.342	137.342	137.342	137.342	137.342	137.342	137.342
47.5	121.545	121.545	121.545	121.545	121.545	121.545	121.545
50.0	107.843	107.843	107.843	107.843	107.843	107.843	107.843
52.5	96.236	96.236	96.236	96.236	96.236	96.236	96.236
55.0	85.920	85.920	85.920	85.920	85.920	85.920	85.920
57.5	76.167	76.167	76.167	76.167	76.167	76.167	76.167
60.0	66.898	66.898	66.898	66.898	66.898	66.898	66.898
62.5	58.032	58.032	58.032	58.032	58.032	58.032	58.032
65.0	49.650	49.650	49.650	49.650	49.650	49.650	49.650
67.5	41.993	41.993	41.993	41.993	41.993	41.993	41.993
70.0	34.980	34.980	34.980	34.980	34.980	34.980	34.980
72.5	28.613	28.613	28.613	28.613	28.613	28.613	28.613
75.0	22.810	22.810	22.810	22.810	22.810	22.810	22.810
77.5	17.490	17.490	17.490	17.490	17.490	17.490	17.490
80.0	12.654	12.654	12.654	12.654	12.654	12.654	12.654

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

82.5	8.221	8.221	8.221	8.221	8.221	8.221	8.221
85.0	4.191	4.191	4.191	4.191	4.191	4.191	4.191
87.5	0.806	0.806	0.806	0.806	0.806	0.806	0.806
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-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LN-WHD-WM_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	692.11	N.A.	25.80
0-30	898.55	N.A.	33.60
0-40	1039.68	N.A.	38.80
0-60	1223.87	N.A.	45.70
0-80	1297.89	N.A.	48.50
0-90	1303.2	N.A.	48.70
10-90	978.17	N.A.	36.50
20-40	347.57	N.A.	13.00
20-50	454.57	N.A.	17.00
40-70	233.76	N.A.	8.70
60-80	74.02	N.A.	2.80
70-80	24.44	N.A.	0.90
80-90	5.31	N.A.	0.20
90-110	36.58	N.A.	1.40
90-120	94.06	N.A.	3.50
90-130	179.43	N.A.	6.70
90-150	435.30	N.A.	16.30
90-180	1374.39	N.A.	51.30
110-180	1337.81	N.A.	50.00
0-180	2677.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	325.03
10-20	367.08
20-30	206.44
30-40	141.14
40-50	106.99
50-60	77.19
60-70	49.58
70-80	24.44
80-90	5.31
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-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LN-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	83	83	83	68	68	68	55	55	55	49
1	99	96	93	90	92	89	86	84	75	73	72	63	62	61	52	51	50	45
2	93	87	82	77	85	80	76	73	69	66	63	58	56	54	48	47	46	42
3	86	79	73	68	80	73	68	64	63	60	57	54	52	49	45	44	43	39
4	81	72	65	61	75	67	62	57	59	54	51	50	48	45	43	41	40	36
5	76	66	59	55	70	62	56	52	54	50	47	47	44	42	41	39	37	34
6	71	61	55	50	66	58	52	48	51	47	43	45	41	39	39	37	35	32
7	67	57	50	46	63	54	48	44	48	43	40	42	39	37	37	35	33	31
8	63	53	47	42	59	50	45	41	45	41	38	40	37	34	35	33	31	29
9	60	50	44	40	56	47	42	38	43	38	35	38	35	33	34	32	30	28
10	57	47	41	37	54	45	39	36	41	36	33	36	33	31	33	30	29	27

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LN-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	17.2	17.9	18.2	18.9	20.2	17.2	17.9	18.2	18.9	20.2
	3H	18.5	19.1	19.5	20.1	21.4	18.5	19.1	19.5	20.1	21.4
	4H	18.9	19.5	19.9	20.5	21.8	18.9	19.5	19.9	20.5	21.8
	6H	19.1	19.7	20.1	20.7	22.0	19.1	19.7	20.1	20.7	22.0
	8H	19.2	19.7	20.2	20.7	22.0	19.2	19.7	20.2	20.7	22.0
	12H	19.2	19.7	20.2	20.7	22.0	19.2	19.7	20.2	20.7	22.0

UGR Viewed Endwise

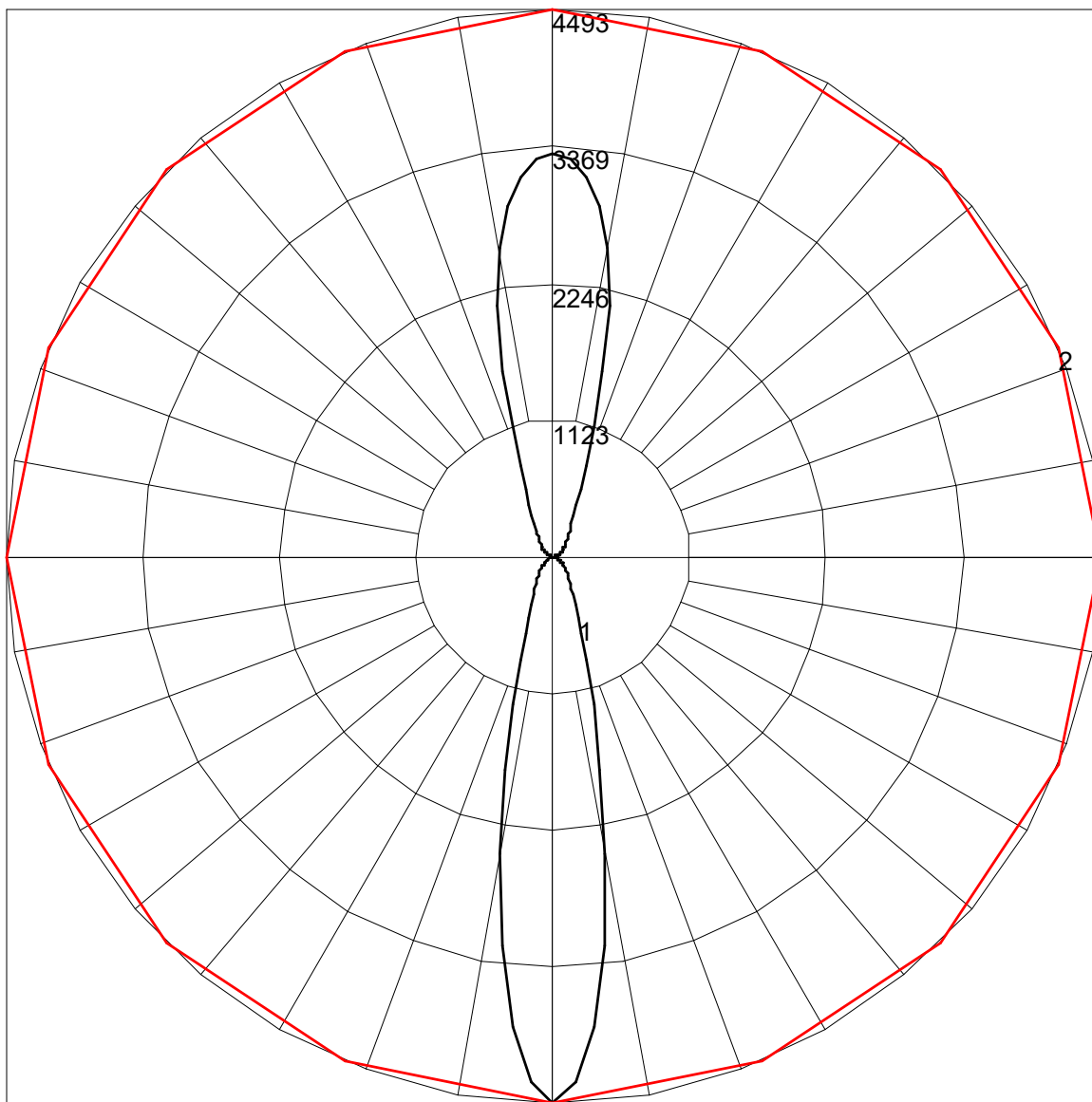
4H	2H	17.6	18.2	18.6	19.2	20.5	17.6	18.2	18.6	19.2	20.5
	3H	19.0	19.5	20.0	20.5	21.9	19.0	19.5	20.0	20.5	21.9
	4H	19.5	20.0	20.6	21.0	22.4	19.5	20.0	20.6	21.0	22.4
	6H	19.9	20.3	20.9	21.3	22.7	19.9	20.3	20.9	21.3	22.7
	8H	20.0	20.3	21.0	21.4	22.7	20.0	20.3	21.0	21.4	22.7
	12H	20.0	20.3	21.1	21.4	22.7	20.0	20.3	21.1	21.4	22.7
8H	4H	19.7	20.0	20.7	21.1	22.4	19.7	20.0	20.7	21.1	22.4
	6H	20.1	20.4	21.2	21.5	22.9	20.1	20.4	21.2	21.5	22.9
	8H	20.3	20.5	21.3	21.6	23.0	20.3	20.5	21.3	21.6	23.0
	12H	20.3	20.5	21.4	21.6	23.0	20.3	20.5	21.4	21.6	23.0
12H	4H	19.6	19.9	20.7	21.0	22.4	19.6	19.9	20.7	21.0	22.4
	6H	20.1	20.4	21.2	21.4	22.8	20.1	20.4	21.2	21.4	22.8
	8H	20.3	20.5	21.4	21.6	23.0	20.3	20.5	21.4	21.6	23.0

Maximum UGR = 23.0

IES INDOOR REPORT

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

POLAR GRAPH



Maximum Candela = 4492.644 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.)