



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CRDI-XX-L9-835U-L9-835D-XXX-DIM-UNV-OW-RW-CS-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from UL #13571228.02
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 19-DEC-2024
 [MANUFAC] H E Williams Inc
 [LUMCAT] 4CRDI-xx-L9/835U-L9/835D-xx-DIM-UNV-OW/RW-CS-WM
 [LUMINAIRE] White formed aluminum housing, wide distribution reflector
 [MORE] trims, clear uplight glass lens enclosure, downlight enclosure
 [LAMP] white LEDs (one up,one down)
 [BALLAST] ERP PHB30W-0700-42 Drivers
 [OTHER] 24.7 C, 120.1 V, 0.196 A, 23.209 W, 0.981114 PF, 59.9711 Hz
 [OTHER] This test was performed using the calibrated photodetector method
 [MORE] of absolute photometry.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1705
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	21.3
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	2181	2181	2181
55	1264	1264	1264
65	652	652	652
75	202	202	202
85	41	41	41

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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	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604
2.5	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285
5.0	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112
7.5	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562
10.0	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794
12.5	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332
15.0	992.434	992.434	992.434	992.434	992.434	992.434	992.434	992.434	992.434	992.434
17.5	936.784	936.784	936.784	936.784	936.784	936.784	936.784	936.784	936.784	936.784
20.0	863.742	863.742	863.742	863.742	863.742	863.742	863.742	863.742	863.742	863.742
22.5	769.832	769.832	769.832	769.832	769.832	769.832	769.832	769.832	769.832	769.832
25.0	656.212	656.212	656.212	656.212	656.212	656.212	656.212	656.212	656.212	656.212
27.5	529.491	529.491	529.491	529.491	529.491	529.491	529.491	529.491	529.491	529.491
30.0	399.698	399.698	399.698	399.698	399.698	399.698	399.698	399.698	399.698	399.698
32.5	278.426	278.426	278.426	278.426	278.426	278.426	278.426	278.426	278.426	278.426
35.0	189.792	189.792	189.792	189.792	189.792	189.792	189.792	189.792	189.792	189.792
37.5	134.373	134.373	134.373	134.373	134.373	134.373	134.373	134.373	134.373	134.373
40.0	102.838	102.838	102.838	102.838	102.838	102.838	102.838	102.838	102.838	102.838
42.5	85.795	85.795	85.795	85.795	85.795	85.795	85.795	85.795	85.795	85.795
45.0	75.592	75.592	75.592	75.592	75.592	75.592	75.592	75.592	75.592	75.592
47.5	67.882	67.882	67.882	67.882	67.882	67.882	67.882	67.882	67.882	67.882
50.0	60.926	60.926	60.926	60.926	60.926	60.926	60.926	60.926	60.926	60.926
52.5	54.549	54.549	54.549	54.549	54.549	54.549	54.549	54.549	54.549	54.549
55.0	48.520	48.520	48.520	48.520	48.520	48.520	48.520	48.520	48.520	48.520
57.5	42.781	42.781	42.781	42.781	42.781	42.781	42.781	42.781	42.781	42.781
60.0	37.274	37.274	37.274	37.274	37.274	37.274	37.274	37.274	37.274	37.274
62.5	31.883	31.883	31.883	31.883	31.883	31.883	31.883	31.883	31.883	31.883
65.0	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724
67.5	21.854	21.854	21.854	21.854	21.854	21.854	21.854	21.854	21.854	21.854
70.0	17.217	17.217	17.217	17.217	17.217	17.217	17.217	17.217	17.217	17.217
72.5	12.753	12.753	12.753	12.753	12.753	12.753	12.753	12.753	12.753	12.753
75.0	8.521	8.521	8.521	8.521	8.521	8.521	8.521	8.521	8.521	8.521
77.5	5.449	5.449	5.449	5.449	5.449	5.449	5.449	5.449	5.449	5.449
80.0	4.058	4.058	4.058	4.058	4.058	4.058	4.058	4.058	4.058	4.058
82.5	2.841	2.841	2.841	2.841	2.841	2.841	2.841	2.841	2.841	2.841
85.0	1.739	1.739	1.739	1.739	1.739	1.739	1.739	1.739	1.739	1.739
87.5	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754
90.0	1.663	1.663	1.663	1.663	1.663	1.663	1.663	1.663	1.663	1.663
92.5	1.843	1.843	1.843	1.843	1.843	1.843	1.843	1.843	1.843	1.843
95.0	2.113	2.113	2.113	2.113	2.113	2.113	2.113	2.113	2.113	2.113
97.5	2.517	2.517	2.517	2.517	2.517	2.517	2.517	2.517	2.517	2.517
100.0	3.057	3.057	3.057	3.057	3.057	3.057	3.057	3.057	3.057	3.057
102.5	3.641	3.641	3.641	3.641	3.641	3.641	3.641	3.641	3.641	3.641
105.0	4.361	4.361	4.361	4.361	4.361	4.361	4.361	4.361	4.361	4.361
107.5	5.260	5.260	5.260	5.260	5.260	5.260	5.260	5.260	5.260	5.260
110.0	6.384	6.384	6.384	6.384	6.384	6.384	6.384	6.384	6.384	6.384
112.5	7.777	7.777	7.777	7.777	7.777	7.777	7.777	7.777	7.777	7.777
115.0	9.575	9.575	9.575	9.575	9.575	9.575	9.575	9.575	9.575	9.575
117.5	11.823	11.823	11.823	11.823	11.823	11.823	11.823	11.823	11.823	11.823
120.0	14.655	14.655	14.655	14.655	14.655	14.655	14.655	14.655	14.655	14.655
122.5	18.162	18.162	18.162	18.162	18.162	18.162	18.162	18.162	18.162	18.162
125.0	22.523	22.523	22.523	22.523	22.523	22.523	22.523	22.523	22.523	22.523
127.5	28.232	28.232	28.232	28.232	28.232	28.232	28.232	28.232	28.232	28.232
130.0	34.975	34.975	34.975	34.975	34.975	34.975	34.975	34.975	34.975	34.975
132.5	43.382	43.382	43.382	43.382	43.382	43.382	43.382	43.382	43.382	43.382

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CANDELA TABULATION - (Cont.)

135.0	57.138	57.138	57.138	57.138	57.138	57.138	57.138	57.138	57.138	57.138
137.5	86.090	86.090	86.090	86.090	86.090	86.090	86.090	86.090	86.090	86.090
140.0	138.823	138.823	138.823	138.823	138.823	138.823	138.823	138.823	138.823	138.823
142.5	209.089	209.089	209.089	209.089	209.089	209.089	209.089	209.089	209.089	209.089
145.0	275.398	275.398	275.398	275.398	275.398	275.398	275.398	275.398	275.398	275.398
147.5	336.224	336.224	336.224	336.224	336.224	336.224	336.224	336.224	336.224	336.224
150.0	413.548	413.548	413.548	413.548	413.548	413.548	413.548	413.548	413.548	413.548
152.5	497.659	497.659	497.659	497.659	497.659	497.659	497.659	497.659	497.659	497.659
155.0	575.882	575.882	575.882	575.882	575.882	575.882	575.882	575.882	575.882	575.882
157.5	613.645	613.645	613.645	613.645	613.645	613.645	613.645	613.645	613.645	613.645
160.0	630.728	630.728	630.728	630.728	630.728	630.728	630.728	630.728	630.728	630.728
162.5	639.270	639.270	639.270	639.270	639.270	639.270	639.270	639.270	639.270	639.270
165.0	657.702	657.702	657.702	657.702	657.702	657.702	657.702	657.702	657.702	657.702
167.5	675.684	675.684	675.684	675.684	675.684	675.684	675.684	675.684	675.684	675.684
170.0	681.079	681.079	681.079	681.079	681.079	681.079	681.079	681.079	681.079	681.079
172.5	666.693	666.693	666.693	666.693	666.693	666.693	666.693	666.693	666.693	666.693
175.0	646.013	646.013	646.013	646.013	646.013	646.013	646.013	646.013	646.013	646.013
177.5	624.434	624.434	624.434	624.434	624.434	624.434	624.434	624.434	624.434	624.434
180.0	615.029	615.029	615.029	615.029	615.029	615.029	615.029	615.029	615.029	615.029

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	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604	1124.604
2.5	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285	1122.285
5.0	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112	1110.112
7.5	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562	1091.562
10.0	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794	1067.794
12.5	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332	1035.332
15.0	992.434	992.434	992.434	992.434	992.434	992.434	992.434
17.5	936.784	936.784	936.784	936.784	936.784	936.784	936.784
20.0	863.742	863.742	863.742	863.742	863.742	863.742	863.742
22.5	769.832	769.832	769.832	769.832	769.832	769.832	769.832
25.0	656.212	656.212	656.212	656.212	656.212	656.212	656.212
27.5	529.491	529.491	529.491	529.491	529.491	529.491	529.491
30.0	399.698	399.698	399.698	399.698	399.698	399.698	399.698
32.5	278.426	278.426	278.426	278.426	278.426	278.426	278.426
35.0	189.792	189.792	189.792	189.792	189.792	189.792	189.792
37.5	134.373	134.373	134.373	134.373	134.373	134.373	134.373
40.0	102.838	102.838	102.838	102.838	102.838	102.838	102.838
42.5	85.795	85.795	85.795	85.795	85.795	85.795	85.795
45.0	75.592	75.592	75.592	75.592	75.592	75.592	75.592
47.5	67.882	67.882	67.882	67.882	67.882	67.882	67.882
50.0	60.926	60.926	60.926	60.926	60.926	60.926	60.926
52.5	54.549	54.549	54.549	54.549	54.549	54.549	54.549
55.0	48.520	48.520	48.520	48.520	48.520	48.520	48.520
57.5	42.781	42.781	42.781	42.781	42.781	42.781	42.781
60.0	37.274	37.274	37.274	37.274	37.274	37.274	37.274
62.5	31.883	31.883	31.883	31.883	31.883	31.883	31.883
65.0	26.724	26.724	26.724	26.724	26.724	26.724	26.724
67.5	21.854	21.854	21.854	21.854	21.854	21.854	21.854
70.0	17.217	17.217	17.217	17.217	17.217	17.217	17.217
72.5	12.753	12.753	12.753	12.753	12.753	12.753	12.753
75.0	8.521	8.521	8.521	8.521	8.521	8.521	8.521
77.5	5.449	5.449	5.449	5.449	5.449	5.449	5.449
80.0	4.058	4.058	4.058	4.058	4.058	4.058	4.058

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CRDI-XX-L9-835U-L9-835D-XXX-DIM-UNV-OW-RW-CS-WM_IES****CANDELA TABULATION - (Cont.)**

82.5	2.841	2.841	2.841	2.841	2.841	2.841	2.841
85.0	1.739	1.739	1.739	1.739	1.739	1.739	1.739
87.5	0.754	0.754	0.754	0.754	0.754	0.754	0.754
90.0	1.663	1.663	1.663	1.663	1.663	1.663	1.663
92.5	1.843	1.843	1.843	1.843	1.843	1.843	1.843
95.0	2.113	2.113	2.113	2.113	2.113	2.113	2.113
97.5	2.517	2.517	2.517	2.517	2.517	2.517	2.517
100.0	3.057	3.057	3.057	3.057	3.057	3.057	3.057
102.5	3.641	3.641	3.641	3.641	3.641	3.641	3.641
105.0	4.361	4.361	4.361	4.361	4.361	4.361	4.361
107.5	5.260	5.260	5.260	5.260	5.260	5.260	5.260
110.0	6.384	6.384	6.384	6.384	6.384	6.384	6.384
112.5	7.777	7.777	7.777	7.777	7.777	7.777	7.777
115.0	9.575	9.575	9.575	9.575	9.575	9.575	9.575
117.5	11.823	11.823	11.823	11.823	11.823	11.823	11.823
120.0	14.655	14.655	14.655	14.655	14.655	14.655	14.655
122.5	18.162	18.162	18.162	18.162	18.162	18.162	18.162
125.0	22.523	22.523	22.523	22.523	22.523	22.523	22.523
127.5	28.232	28.232	28.232	28.232	28.232	28.232	28.232
130.0	34.975	34.975	34.975	34.975	34.975	34.975	34.975
132.5	43.382	43.382	43.382	43.382	43.382	43.382	43.382
135.0	57.138	57.138	57.138	57.138	57.138	57.138	57.138
137.5	86.090	86.090	86.090	86.090	86.090	86.090	86.090
140.0	138.823	138.823	138.823	138.823	138.823	138.823	138.823
142.5	209.089	209.089	209.089	209.089	209.089	209.089	209.089
145.0	275.398	275.398	275.398	275.398	275.398	275.398	275.398
147.5	336.224	336.224	336.224	336.224	336.224	336.224	336.224
150.0	413.548	413.548	413.548	413.548	413.548	413.548	413.548
152.5	497.659	497.659	497.659	497.659	497.659	497.659	497.659
155.0	575.882	575.882	575.882	575.882	575.882	575.882	575.882
157.5	613.645	613.645	613.645	613.645	613.645	613.645	613.645
160.0	630.728	630.728	630.728	630.728	630.728	630.728	630.728
162.5	639.270	639.270	639.270	639.270	639.270	639.270	639.270
165.0	657.702	657.702	657.702	657.702	657.702	657.702	657.702
167.5	675.684	675.684	675.684	675.684	675.684	675.684	675.684
170.0	681.079	681.079	681.079	681.079	681.079	681.079	681.079
172.5	666.693	666.693	666.693	666.693	666.693	666.693	666.693
175.0	646.013	646.013	646.013	646.013	646.013	646.013	646.013
177.5	624.434	624.434	624.434	624.434	624.434	624.434	624.434
180.0	615.029	615.029	615.029	615.029	615.029	615.029	615.029

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Zone	Lumens	%Lamp	%Fixt
0-20	380.23	N.A.	22.30
0-30	673.25	N.A.	39.50
0-40	803.75	N.A.	47.10
0-60	907.10	N.A.	53.20
0-80	943.52	N.A.	55.30
0-90	945.76	N.A.	55.50
10-90	841.15	N.A.	49.30
20-40	423.51	N.A.	24.80
20-50	483.34	N.A.	28.30
40-70	129.95	N.A.	7.60
60-80	36.43	N.A.	2.10
70-80	9.83	N.A.	0.60
80-90	2.23	N.A.	0.10
90-110	7.15	N.A.	0.40
90-120	16.95	N.A.	1.00
90-130	37.80	N.A.	2.20
90-150	258.73	N.A.	15.20
90-180	759.58	N.A.	44.50
110-180	752.43	N.A.	44.10
0-180	1705.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.61
10-20	275.63
20-30	293.02
30-40	130.50
40-50	59.82
50-60	43.52
60-70	26.60
70-80	9.83
80-90	2.23
90-100	2.41
100-110	4.74
110-120	9.80
120-130	20.85
130-140	51.93
140-150	169.00
150-160	252.64
160-170	185.42
170-180	62.79

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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	101	98	95	92	94	91	89	86	79	77	76	68	67	65	58	57	56	51
2	94	88	84	79	88	83	79	75	72	69	67	63	61	59	54	52	51	47
3	88	80	75	70	82	76	71	66	67	63	60	58	56	53	50	49	47	44
4	82	73	67	62	77	69	64	59	61	57	54	54	51	49	47	45	44	40
5	77	67	61	56	72	64	58	54	57	52	49	51	47	45	45	42	40	38
6	72	62	56	51	68	59	53	49	53	48	45	47	44	41	42	40	38	35
7	68	58	51	46	64	55	49	45	49	45	41	44	41	38	40	37	35	33
8	64	54	47	43	60	51	45	41	46	42	38	42	38	36	38	35	33	31
9	61	50	44	39	57	48	42	38	44	39	36	39	36	33	36	33	31	29
10	57	47	41	37	54	45	39	36	41	37	33	37	34	31	34	31	29	28

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L9-835U-L9-835D-XXX-DIM-UNV-OW-RW-CS-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	4.1	4.8	5.0	5.7	7.0	4.1	4.8	5.0	5.7	7.0
	3H	4.8	5.4	5.7	6.4	7.6	4.8	5.4	5.7	6.4	7.6
	4H	4.8	5.4	5.8	6.4	7.6	4.8	5.4	5.8	6.4	7.6
	6H	4.8	5.3	5.8	6.3	7.6	4.8	5.3	5.8	6.3	7.6
	8H	4.7	5.3	5.7	6.2	7.5	4.7	5.3	5.7	6.2	7.5
	12H	4.7	5.2	5.7	6.2	7.4	4.7	5.2	5.7	6.2	7.4

UGR Viewed Endwise

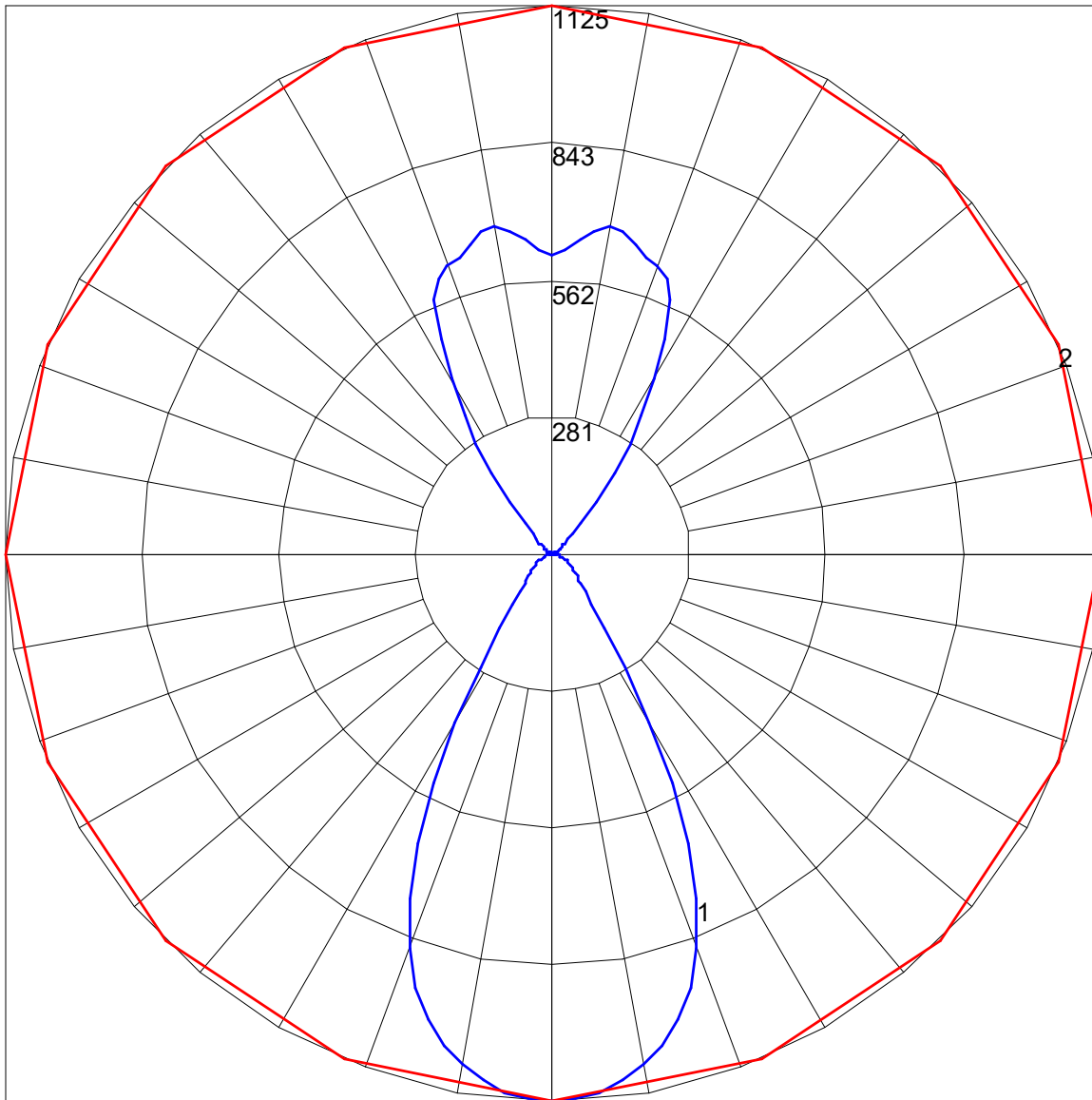
4H	2H	4.2	4.8	5.2	5.8	7.0	4.2	4.8	5.2	5.8	7.0
	3H	5.0	5.5	6.0	6.5	7.7	5.0	5.5	6.0	6.5	7.7
	4H	5.1	5.5	6.1	6.5	7.8	5.1	5.5	6.1	6.5	7.8
	6H	5.1	5.5	6.1	6.5	7.7	5.1	5.5	6.1	6.5	7.7
	8H	5.0	5.4	6.0	6.4	7.7	5.0	5.4	6.0	6.4	7.7
	12H	5.0	5.3	6.0	6.3	7.6	5.0	5.3	6.0	6.3	7.6
8H	4H	5.0	5.4	6.0	6.4	7.6	5.0	5.4	6.0	6.4	7.6
	6H	5.0	5.3	6.0	6.3	7.6	5.0	5.3	6.0	6.3	7.6
	8H	5.0	5.2	6.0	6.2	7.6	5.0	5.2	6.0	6.2	7.6
	12H	4.9	5.1	6.0	6.2	7.5	4.9	5.1	6.0	6.2	7.5
12H	4H	4.9	5.3	6.0	6.3	7.6	4.9	5.3	6.0	6.3	7.6
	6H	4.9	5.2	6.0	6.2	7.5	4.9	5.2	6.0	6.2	7.5
	8H	4.9	5.1	5.9	6.2	7.5	4.9	5.1	5.9	6.2	7.5

Maximum UGR = 7.8

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-XX-L9-835U-L9-835D-XXX-DIM-UNV-OW-RW-CS-WM_.IES

POLAR GRAPH



Maximum Candela = 1124.604 Located At Horizontal Angle = 0, Vertical Angle = 0

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

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)