



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OW-CSU-OM-CSD-WM_IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.03 and #12326812.04

[TESTLAB]

[ISSUE DATE] 17-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-OW-CSU-OM-CSD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, clear uplight glass lens enclosure, no downlight enclosure

[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	3806
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	38.0077
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)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	407	407	407
55	111	111	111
65	31	31	31
75	8	8	8
85	2	2	2

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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	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000
2.5	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000
5.0	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000
7.5	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000
10.0	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000
12.5	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000
15.0	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000
17.5	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000
20.0	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000
22.5	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000
25.0	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000
27.5	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000
30.0	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000
32.5	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200
35.0	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500
37.5	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500
40.0	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800
42.5	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300
45.0	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200
47.5	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800
50.0	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800
52.5	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400
55.0	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800
57.5	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
60.0	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300
62.5	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400
65.0	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
67.5	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900
70.0	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
72.5	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600
75.0	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
77.5	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
80.0	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
82.5	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
85.0	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
87.5	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
90.0	3.678	3.678	3.678	3.678	3.678	3.678	3.678	3.678	3.678	3.678
92.5	3.749	3.749	3.749	3.749	3.749	3.749	3.749	3.749	3.749	3.749
95.0	4.061	4.061	4.061	4.061	4.061	4.061	4.061	4.061	4.061	4.061
97.5	4.459	4.459	4.459	4.459	4.459	4.459	4.459	4.459	4.459	4.459
100.0	4.913	4.913	4.913	4.913	4.913	4.913	4.913	4.913	4.913	4.913
102.5	5.453	5.453	5.453	5.453	5.453	5.453	5.453	5.453	5.453	5.453
105.0	6.078	6.078	6.078	6.078	6.078	6.078	6.078	6.078	6.078	6.078
107.5	6.816	6.816	6.816	6.816	6.816	6.816	6.816	6.816	6.816	6.816
110.0	7.668	7.668	7.668	7.668	7.668	7.668	7.668	7.668	7.668	7.668
112.5	8.719	8.719	8.719	8.719	8.719	8.719	8.719	8.719	8.719	8.719
115.0	10.054	10.054	10.054	10.054	10.054	10.054	10.054	10.054	10.054	10.054
117.5	11.729	11.729	11.729	11.729	11.729	11.729	11.729	11.729	11.729	11.729
120.0	13.916	13.916	13.916	13.916	13.916	13.916	13.916	13.916	13.916	13.916
122.5	16.898	16.898	16.898	16.898	16.898	16.898	16.898	16.898	16.898	16.898
125.0	21.073	21.073	21.073	21.073	21.073	21.073	21.073	21.073	21.073	21.073
127.5	26.866	26.866	26.866	26.866	26.866	26.866	26.866	26.866	26.866	26.866
130.0	33.484	33.484	33.484	33.484	33.484	33.484	33.484	33.484	33.484	33.484
132.5	41.350	41.350	41.350	41.350	41.350	41.350	41.350	41.350	41.350	41.350

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CANDELA TABULATION - (Cont.)

135.0	53.335	53.335	53.335	53.335	53.335	53.335	53.335	53.335	53.335	53.335
137.5	91.533	91.533	91.533	91.533	91.533	91.533	91.533	91.533	91.533	91.533
140.0	212.460	212.460	212.460	212.460	212.460	212.460	212.460	212.460	212.460	212.460
142.5	443.608	443.608	443.608	443.608	443.608	443.608	443.608	443.608	443.608	443.608
145.0	755.156	755.156	755.156	755.156	755.156	755.156	755.156	755.156	755.156	755.156
147.5	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692
150.0	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504
152.5	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348
155.0	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004
157.5	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684
160.0	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912
162.5	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904
165.0	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700
167.5	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028
170.0	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356
172.5	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236
175.0	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384
177.5	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632
180.0	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516

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	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000
2.5	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000
5.0	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000
7.5	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000
10.0	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000
12.5	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000
15.0	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000
17.5	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000
20.0	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000
22.5	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000
25.0	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000
27.5	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000
30.0	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000
32.5	711.200	711.200	711.200	711.200	711.200	711.200	711.200
35.0	395.500	395.500	395.500	395.500	395.500	395.500	395.500
37.5	172.500	172.500	172.500	172.500	172.500	172.500	172.500
40.0	115.800	115.800	115.800	115.800	115.800	115.800	115.800
42.5	65.300	65.300	65.300	65.300	65.300	65.300	65.300
45.0	46.200	46.200	46.200	46.200	46.200	46.200	46.200
47.5	35.800	35.800	35.800	35.800	35.800	35.800	35.800
50.0	26.800	26.800	26.800	26.800	26.800	26.800	26.800
52.5	19.400	19.400	19.400	19.400	19.400	19.400	19.400
55.0	13.800	13.800	13.800	13.800	13.800	13.800	13.800
57.5	10.000	10.000	10.000	10.000	10.000	10.000	10.000
60.0	7.300	7.300	7.300	7.300	7.300	7.300	7.300
62.5	5.400	5.400	5.400	5.400	5.400	5.400	5.400
65.0	4.000	4.000	4.000	4.000	4.000	4.000	4.000
67.5	2.900	2.900	2.900	2.900	2.900	2.900	2.900
70.0	2.200	2.200	2.200	2.200	2.200	2.200	2.200
72.5	1.600	1.600	1.600	1.600	1.600	1.600	1.600
75.0	1.100	1.100	1.100	1.100	1.100	1.100	1.100
77.5	0.800	0.800	0.800	0.800	0.800	0.800	0.800
80.0	0.600	0.600	0.600	0.600	0.600	0.600	0.600

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82.5	0.400	0.400	0.400	0.400	0.400	0.400	0.400
85.0	0.300	0.300	0.300	0.300	0.300	0.300	0.300
87.5	0.200	0.200	0.200	0.200	0.200	0.200	0.200
90.0	3.678	3.678	3.678	3.678	3.678	3.678	3.678
92.5	3.749	3.749	3.749	3.749	3.749	3.749	3.749
95.0	4.061	4.061	4.061	4.061	4.061	4.061	4.061
97.5	4.459	4.459	4.459	4.459	4.459	4.459	4.459
100.0	4.913	4.913	4.913	4.913	4.913	4.913	4.913
102.5	5.453	5.453	5.453	5.453	5.453	5.453	5.453
105.0	6.078	6.078	6.078	6.078	6.078	6.078	6.078
107.5	6.816	6.816	6.816	6.816	6.816	6.816	6.816
110.0	7.668	7.668	7.668	7.668	7.668	7.668	7.668
112.5	8.719	8.719	8.719	8.719	8.719	8.719	8.719
115.0	10.054	10.054	10.054	10.054	10.054	10.054	10.054
117.5	11.729	11.729	11.729	11.729	11.729	11.729	11.729
120.0	13.916	13.916	13.916	13.916	13.916	13.916	13.916
122.5	16.898	16.898	16.898	16.898	16.898	16.898	16.898
125.0	21.073	21.073	21.073	21.073	21.073	21.073	21.073
127.5	26.866	26.866	26.866	26.866	26.866	26.866	26.866
130.0	33.484	33.484	33.484	33.484	33.484	33.484	33.484
132.5	41.350	41.350	41.350	41.350	41.350	41.350	41.350
135.0	53.335	53.335	53.335	53.335	53.335	53.335	53.335
137.5	91.533	91.533	91.533	91.533	91.533	91.533	91.533
140.0	212.460	212.460	212.460	212.460	212.460	212.460	212.460
142.5	443.608	443.608	443.608	443.608	443.608	443.608	443.608
145.0	755.156	755.156	755.156	755.156	755.156	755.156	755.156
147.5	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692	1068.692
150.0	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504	1336.504
152.5	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348	1504.348
155.0	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004	1585.004
157.5	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684	1590.684
160.0	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912	1552.912
162.5	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904	1506.904
165.0	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700	1469.700
167.5	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028	1439.028
170.0	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356	1408.356
172.5	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236	1357.236
175.0	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384	1285.384
177.5	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632	1220.632
180.0	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516	1192.516

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Zone	Lumens	%Lamp	%Fixt
0-20	1002.85	N.A.	26.40
0-30	1652.24	N.A.	43.40
0-40	1929.18	N.A.	50.70
0-60	1984.03	N.A.	52.10
0-80	1989.52	N.A.	52.30
0-90	1990.35	N.A.	52.30
10-90	1644.73	N.A.	43.20
20-40	926.33	N.A.	24.30
20-50	967.83	N.A.	25.40
40-70	59.05	N.A.	1.60
60-80	5.49	N.A.	0.10
70-80	1.29	N.A.	0.00
80-90	0.83	N.A.	0.00
90-110	11.02	N.A.	0.30
90-120	21.23	N.A.	0.60
90-130	40.92	N.A.	1.10
90-150	562.57	N.A.	14.80
90-180	1815.28	N.A.	47.70
110-180	1804.26	N.A.	47.40
0-180	3805.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	345.63
10-20	657.23
20-30	649.39
30-40	276.94
40-50	41.51
50-60	13.35
60-70	4.20
70-80	1.29
80-90	0.83
90-100	4.52
100-110	6.51
110-120	10.21
120-130	19.69
130-140	58.29
140-150	463.36
150-160	706.05
160-170	419.88
170-180	126.78

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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	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	101	98	95	92	94	91	88	86	78	77	75	66	65	64	56	55	54	49
2	95	89	85	81	88	83	79	76	72	70	67	62	61	59	53	52	51	47
3	89	82	76	72	83	77	72	68	67	64	61	59	56	54	50	49	48	44
4	83	75	69	65	78	71	66	62	63	59	56	55	52	50	48	46	45	42
5	79	70	63	59	73	66	60	56	59	55	51	52	49	47	46	44	42	39
6	74	65	58	54	69	61	56	52	55	51	48	49	46	44	44	41	40	37
7	70	60	54	50	66	57	52	48	52	47	44	46	43	41	42	39	38	35
8	66	56	50	46	62	54	48	45	49	45	42	44	41	39	40	37	36	34
9	63	53	47	43	59	51	45	42	46	42	39	42	39	36	38	36	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	35	36	34	32	31

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OW-CSU-OM-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	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	3H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	4H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	6H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	8H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	12H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

UGR Viewed Endwise

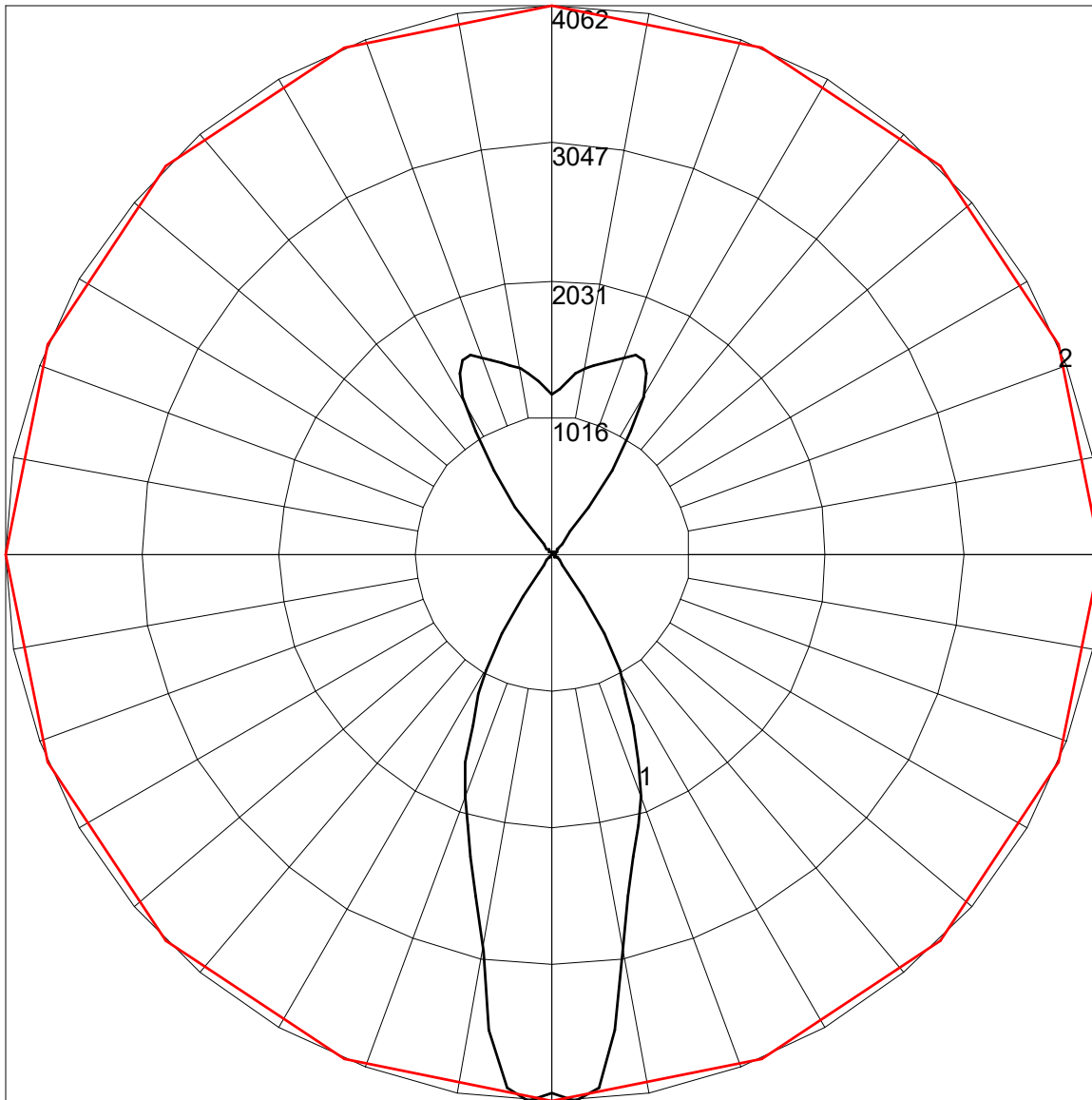
4H	2H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	3H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	4H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	6H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	8H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	12H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
8H	4H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	6H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	8H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	12H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
12H	4H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	6H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	8H	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

Maximum UGR = 4.7

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OW-CSU-OM-CSD-WM_.IES

POLAR GRAPH



Maximum Candela = 4062 Located At Horizontal Angle = 0, Vertical Angle = 2.5

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)