



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-LN-WHD-WM\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] MADE FROM 12316380.05 and 12316380.10  
 [TESTLAB]  
 [ISSUE DATE] 02/09/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-ON-CSU-LN-WHD-WM  
 [LUMINAIRE] White formed aluminum housing, narrow distrib anodized aluminum reflector trim w/clear cover glass up,  
 [MORE] narrow distrib white painted flush prismatic lens trim down  
 [LAMP] Two white LEDs (one up/one down)  
 [BALLAST] (2) Osram Optotronic OTi25W/120-277/2A0 DIM-1 Drivers  
 [\_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	3581
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	39.5854
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)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	10727	10727	10727
55	8046	8046	8046
65	6658	6658	6658
75	5417	5417	5417
85	3016	3016	3016

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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	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000
2.5	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000
5.0	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000
7.5	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000
10.0	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000
12.5	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000
15.0	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000
17.5	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000
20.0	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000
22.5	915.200	915.200	915.200	915.200	915.200	915.200	915.200	915.200	915.200	915.200
25.0	624.800	624.800	624.800	624.800	624.800	624.800	624.800	624.800	624.800	624.800
27.5	428.500	428.500	428.500	428.500	428.500	428.500	428.500	428.500	428.500	428.500
30.0	300.500	300.500	300.500	300.500	300.500	300.500	300.500	300.500	300.500	300.500
32.5	217.700	217.700	217.700	217.700	217.700	217.700	217.700	217.700	217.700	217.700
35.0	164.000	164.000	164.000	164.000	164.000	164.000	164.000	164.000	164.000	164.000
37.5	129.200	129.200	129.200	129.200	129.200	129.200	129.200	129.200	129.200	129.200
40.0	106.100	106.100	106.100	106.100	106.100	106.100	106.100	106.100	106.100	106.100
42.5	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000
45.0	77.900	77.900	77.900	77.900	77.900	77.900	77.900	77.900	77.900	77.900
47.5	68.400	68.400	68.400	68.400	68.400	68.400	68.400	68.400	68.400	68.400
50.0	60.300	60.300	60.300	60.300	60.300	60.300	60.300	60.300	60.300	60.300
52.5	53.400	53.400	53.400	53.400	53.400	53.400	53.400	53.400	53.400	53.400
55.0	47.400	47.400	47.400	47.400	47.400	47.400	47.400	47.400	47.400	47.400
57.5	42.100	42.100	42.100	42.100	42.100	42.100	42.100	42.100	42.100	42.100
60.0	37.400	37.400	37.400	37.400	37.400	37.400	37.400	37.400	37.400	37.400
62.5	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000
65.0	28.900	28.900	28.900	28.900	28.900	28.900	28.900	28.900	28.900	28.900
67.5	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000
70.0	21.300	21.300	21.300	21.300	21.300	21.300	21.300	21.300	21.300	21.300
72.5	17.800	17.800	17.800	17.800	17.800	17.800	17.800	17.800	17.800	17.800
75.0	14.400	14.400	14.400	14.400	14.400	14.400	14.400	14.400	14.400	14.400
77.5	11.100	11.100	11.100	11.100	11.100	11.100	11.100	11.100	11.100	11.100
80.0	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
82.5	5.300	5.300	5.300	5.300	5.300	5.300	5.300	5.300	5.300	5.300
85.0	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700	2.700
87.5	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
90.0	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
115.0	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
117.5	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
120.0	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
122.5	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696
125.0	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696	1.696
127.5	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544
130.0	4.240	4.240	4.240	4.240	4.240	4.240	4.240	4.240	4.240	4.240
132.5	5.936	5.936	5.936	5.936	5.936	5.936	5.936	5.936	5.936	5.936

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## CANDELA TABULATION - (Cont.)

135.0	8.480	8.480	8.480	8.480	8.480	8.480	8.480	8.480	8.480	8.480
137.5	11.872	11.872	11.872	11.872	11.872	11.872	11.872	11.872	11.872	11.872
140.0	14.416	14.416	14.416	14.416	14.416	14.416	14.416	14.416	14.416	14.416
142.5	18.656	18.656	18.656	18.656	18.656	18.656	18.656	18.656	18.656	18.656
145.0	75.472	75.472	75.472	75.472	75.472	75.472	75.472	75.472	75.472	75.472
147.5	265.424	265.424	265.424	265.424	265.424	265.424	265.424	265.424	265.424	265.424
150.0	525.760	525.760	525.760	525.760	525.760	525.760	525.760	525.760	525.760	525.760
152.5	687.728	687.728	687.728	687.728	687.728	687.728	687.728	687.728	687.728	687.728
155.0	773.376	773.376	773.376	773.376	773.376	773.376	773.376	773.376	773.376	773.376
157.5	985.376	985.376	985.376	985.376	985.376	985.376	985.376	985.376	985.376	985.376
160.0	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640
162.5	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408
165.0	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456
167.5	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888
170.0	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592
172.5	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552
175.0	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120
177.5	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360
180.0	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000

## 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	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000	6885.000
2.5	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000	6704.000
5.0	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000	6211.000
7.5	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000	5474.000
10.0	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000	4555.000
12.5	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000
15.0	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000	2650.000
17.5	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000	1893.000
20.0	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000	1326.000
22.5	915.200	915.200	915.200	915.200	915.200	915.200	915.200
25.0	624.800	624.800	624.800	624.800	624.800	624.800	624.800
27.5	428.500	428.500	428.500	428.500	428.500	428.500	428.500
30.0	300.500	300.500	300.500	300.500	300.500	300.500	300.500
32.5	217.700	217.700	217.700	217.700	217.700	217.700	217.700
35.0	164.000	164.000	164.000	164.000	164.000	164.000	164.000
37.5	129.200	129.200	129.200	129.200	129.200	129.200	129.200
40.0	106.100	106.100	106.100	106.100	106.100	106.100	106.100
42.5	90.000	90.000	90.000	90.000	90.000	90.000	90.000
45.0	77.900	77.900	77.900	77.900	77.900	77.900	77.900
47.5	68.400	68.400	68.400	68.400	68.400	68.400	68.400
50.0	60.300	60.300	60.300	60.300	60.300	60.300	60.300
52.5	53.400	53.400	53.400	53.400	53.400	53.400	53.400
55.0	47.400	47.400	47.400	47.400	47.400	47.400	47.400
57.5	42.100	42.100	42.100	42.100	42.100	42.100	42.100
60.0	37.400	37.400	37.400	37.400	37.400	37.400	37.400
62.5	33.000	33.000	33.000	33.000	33.000	33.000	33.000
65.0	28.900	28.900	28.900	28.900	28.900	28.900	28.900
67.5	25.000	25.000	25.000	25.000	25.000	25.000	25.000
70.0	21.300	21.300	21.300	21.300	21.300	21.300	21.300
72.5	17.800	17.800	17.800	17.800	17.800	17.800	17.800
75.0	14.400	14.400	14.400	14.400	14.400	14.400	14.400
77.5	11.100	11.100	11.100	11.100	11.100	11.100	11.100
80.0	8.100	8.100	8.100	8.100	8.100	8.100	8.100

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82.5	5.300	5.300	5.300	5.300	5.300	5.300	5.300
85.0	2.700	2.700	2.700	2.700	2.700	2.700	2.700
87.5	1.100	1.100	1.100	1.100	1.100	1.100	1.100
90.0	0.200	0.200	0.200	0.200	0.200	0.200	0.200
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.848	0.848	0.848	0.848	0.848	0.848	0.848
115.0	0.848	0.848	0.848	0.848	0.848	0.848	0.848
117.5	0.848	0.848	0.848	0.848	0.848	0.848	0.848
120.0	0.848	0.848	0.848	0.848	0.848	0.848	0.848
122.5	1.696	1.696	1.696	1.696	1.696	1.696	1.696
125.0	1.696	1.696	1.696	1.696	1.696	1.696	1.696
127.5	2.544	2.544	2.544	2.544	2.544	2.544	2.544
130.0	4.240	4.240	4.240	4.240	4.240	4.240	4.240
132.5	5.936	5.936	5.936	5.936	5.936	5.936	5.936
135.0	8.480	8.480	8.480	8.480	8.480	8.480	8.480
137.5	11.872	11.872	11.872	11.872	11.872	11.872	11.872
140.0	14.416	14.416	14.416	14.416	14.416	14.416	14.416
142.5	18.656	18.656	18.656	18.656	18.656	18.656	18.656
145.0	75.472	75.472	75.472	75.472	75.472	75.472	75.472
147.5	265.424	265.424	265.424	265.424	265.424	265.424	265.424
150.0	525.760	525.760	525.760	525.760	525.760	525.760	525.760
152.5	687.728	687.728	687.728	687.728	687.728	687.728	687.728
155.0	773.376	773.376	773.376	773.376	773.376	773.376	773.376
157.5	985.376	985.376	985.376	985.376	985.376	985.376	985.376
160.0	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640	1318.640
162.5	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408	1671.408
165.0	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456	2011.456
167.5	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888	2421.888
170.0	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592	3204.592
172.5	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552	4811.552
175.0	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120	9065.120
177.5	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360	14687.360
180.0	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000	18070.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1275.81	N.A.	35.60
0-30	1584.08	N.A.	44.20
0-40	1693.94	N.A.	47.30
0-60	1798.14	N.A.	50.20
0-80	1842.18	N.A.	51.40
0-90	1845.78	N.A.	51.50
10-90	1305.89	N.A.	36.50
20-40	418.13	N.A.	11.70
20-50	479.52	N.A.	13.40
40-70	132.94	N.A.	3.70
60-80	44.03	N.A.	1.20
70-80	15.29	N.A.	0.40
80-90	3.60	N.A.	0.10
90-110	0.03	N.A.	0.00
90-120	0.76	N.A.	0.00
90-130	2.64	N.A.	0.10
90-150	102.10	N.A.	2.90
90-180	1735.21	N.A.	48.50
110-180	1735.18	N.A.	48.50
0-180	3580.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	539.89
10-20	735.92
20-30	308.27
30-40	109.86
40-50	61.38
50-60	42.81
60-70	28.75
70-80	15.29
80-90	3.60
90-100	0.03
100-110	0.00
110-120	0.73
120-130	1.88
130-140	6.78
140-150	92.68
150-160	380.13
160-170	567.88
170-180	685.09

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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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	101	98	95	92	93	91	88	86	78	76	75	66	65	64	55	54	54	49
2	95	89	85	81	88	83	79	76	72	70	67	62	60	59	53	52	51	46
3	89	82	77	72	83	77	72	69	67	64	61	59	56	55	50	49	48	44
4	84	76	70	66	78	72	66	63	63	60	57	56	53	51	48	47	45	42
5	79	71	65	60	74	67	62	58	60	56	53	53	50	48	47	45	43	41
6	75	66	60	56	70	63	57	54	56	52	49	50	48	45	45	43	41	39
7	71	62	56	52	67	59	54	50	53	49	47	48	45	43	43	41	40	38
8	68	59	53	49	64	56	51	47	51	47	44	46	43	41	42	40	38	36
9	65	56	50	46	61	53	48	45	49	45	42	44	41	39	40	38	37	35
10	62	53	47	44	59	51	46	42	47	43	40	43	40	38	39	37	36	34

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-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	8.1	8.8	9.1	9.8	11.0	8.1	8.8	9.1	9.8	11.0
	3H	9.6	10.1	10.6	11.1	12.4	9.6	10.1	10.6	11.1	12.4
	4H	10.1	10.6	11.1	11.6	12.9	10.1	10.6	11.1	11.6	12.9
	6H	10.4	10.9	11.4	11.9	13.2	10.4	10.9	11.4	11.9	13.2
	8H	10.5	10.9	11.5	11.9	13.3	10.5	10.9	11.5	11.9	13.3
	12H	10.5	10.9	11.5	11.9	13.3	10.5	10.9	11.5	11.9	13.3

### UGR Viewed Endwise

4H	2H	8.5	9.1	9.6	10.1	11.4	8.5	9.1	9.6	10.1	11.4
	3H	10.2	10.6	11.2	11.6	13.0	10.2	10.6	11.2	11.6	13.0
	4H	10.8	11.2	11.8	12.2	13.6	10.8	11.2	11.8	12.2	13.6
	6H	11.2	11.6	12.3	12.6	14.0	11.2	11.6	12.3	12.6	14.0
	8H	11.3	11.7	12.4	12.7	14.0	11.3	11.7	12.4	12.7	14.0
	12H	11.4	11.7	12.4	12.7	14.1	11.4	11.7	12.4	12.7	14.1

8H	4H	11.0	11.3	12.0	12.3	13.7	11.0	11.3	12.0	12.3	13.7
	6H	11.5	11.8	12.6	12.8	14.2	11.5	11.8	12.6	12.8	14.2
	8H	11.7	11.9	12.7	13.0	14.3	11.7	11.9	12.7	13.0	14.3
	12H	11.8	12.0	12.8	13.0	14.4	11.8	12.0	12.8	13.0	14.4

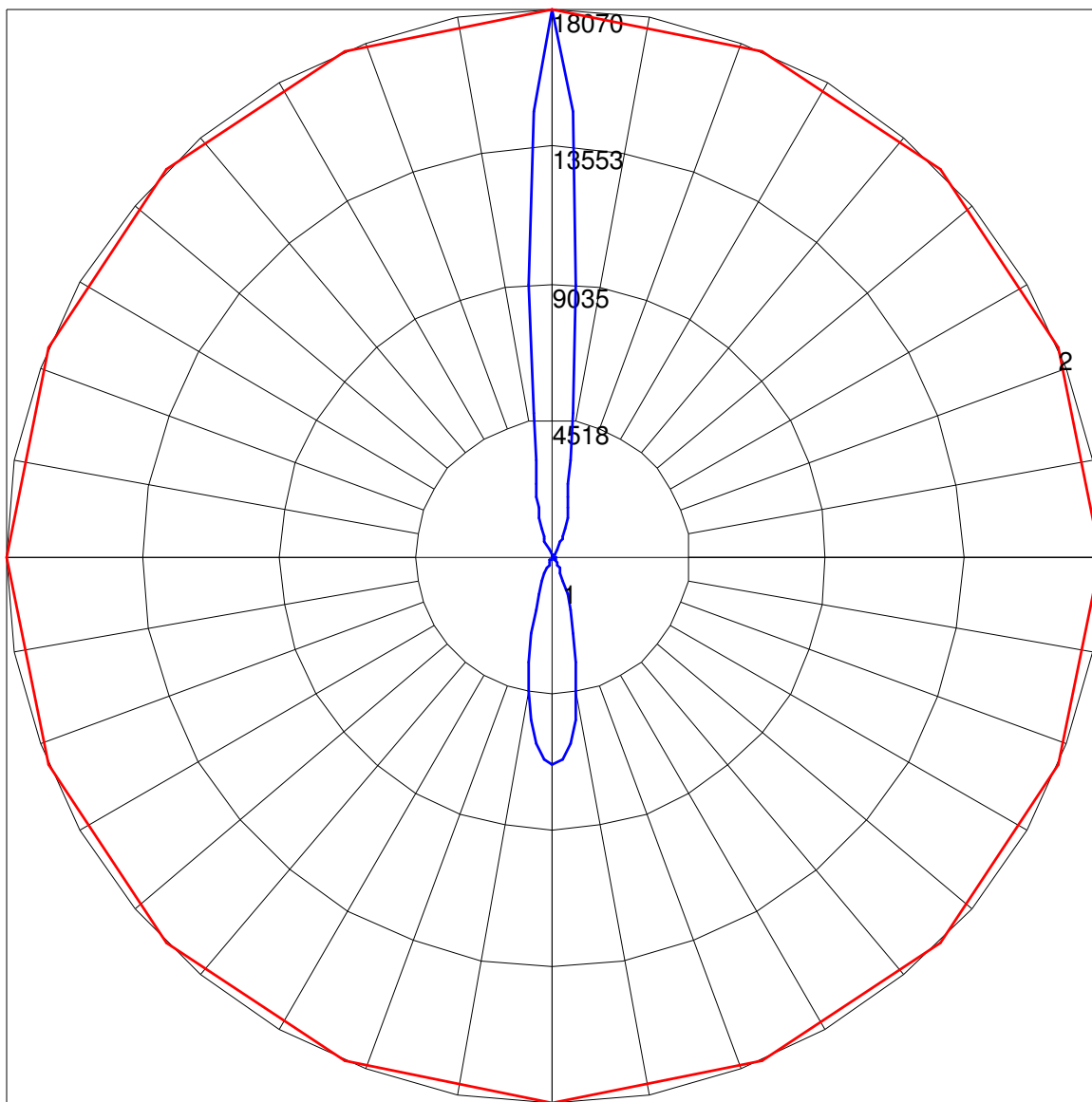
12H	4H	10.9	11.2	12.0	12.3	13.6	10.9	11.2	12.0	12.3	13.6
	6H	11.5	11.7	12.6	12.8	14.2	11.5	11.7	12.6	12.8	14.2
	8H	11.7	11.9	12.8	13.0	14.4	11.7	11.9	12.8	13.0	14.4

Maximum UGR = 14.4

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-LN-WHD-WM\_.IES

## POLAR GRAPH



Maximum Candela = 18070 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.)