



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-RM-WHD-WM\_IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] MADE FROM 12316380.05 and 12316380.14  
 [TESTLAB]  
 [ISSUE DATE] 02/10/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-ON-CSU-RM-WHD-WM  
 [LUMINAIRE] White formed aluminum housing, narrow distrib anodized aluminum reflector trim w/clear cover glass up,  
 [MORE] medium distrib white painted regressed 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	3540
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	39.5717
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	10300	10300	10300
55	7164	7164	7164
65	5115	5115	5115
75	3423	3423	3423
85	2793	2793	2793

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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	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000
2.5	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000
5.0	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000
7.5	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000
10.0	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000
12.5	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000
15.0	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000
17.5	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000
20.0	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000
22.5	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000
25.0	786.100	786.100	786.100	786.100	786.100	786.100	786.100	786.100	786.100	786.100
27.5	546.100	546.100	546.100	546.100	546.100	546.100	546.100	546.100	546.100	546.100
30.0	380.200	380.200	380.200	380.200	380.200	380.200	380.200	380.200	380.200	380.200
32.5	268.700	268.700	268.700	268.700	268.700	268.700	268.700	268.700	268.700	268.700
35.0	193.800	193.800	193.800	193.800	193.800	193.800	193.800	193.800	193.800	193.800
37.5	143.500	143.500	143.500	143.500	143.500	143.500	143.500	143.500	143.500	143.500
40.0	111.000	111.000	111.000	111.000	111.000	111.000	111.000	111.000	111.000	111.000
42.5	89.800	89.800	89.800	89.800	89.800	89.800	89.800	89.800	89.800	89.800
45.0	74.800	74.800	74.800	74.800	74.800	74.800	74.800	74.800	74.800	74.800
47.5	63.900	63.900	63.900	63.900	63.900	63.900	63.900	63.900	63.900	63.900
50.0	55.500	55.500	55.500	55.500	55.500	55.500	55.500	55.500	55.500	55.500
52.5	48.400	48.400	48.400	48.400	48.400	48.400	48.400	48.400	48.400	48.400
55.0	42.200	42.200	42.200	42.200	42.200	42.200	42.200	42.200	42.200	42.200
57.5	36.600	36.600	36.600	36.600	36.600	36.600	36.600	36.600	36.600	36.600
60.0	31.500	31.500	31.500	31.500	31.500	31.500	31.500	31.500	31.500	31.500
62.5	26.700	26.700	26.700	26.700	26.700	26.700	26.700	26.700	26.700	26.700
65.0	22.200	22.200	22.200	22.200	22.200	22.200	22.200	22.200	22.200	22.200
67.5	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000
70.0	14.300	14.300	14.300	14.300	14.300	14.300	14.300	14.300	14.300	14.300
72.5	11.400	11.400	11.400	11.400	11.400	11.400	11.400	11.400	11.400	11.400
75.0	9.100	9.100	9.100	9.100	9.100	9.100	9.100	9.100	9.100	9.100
77.5	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200
80.0	5.500	5.500	5.500	5.500	5.500	5.500	5.500	5.500	5.500	5.500
82.5	3.900	3.900	3.900	3.900	3.900	3.900	3.900	3.900	3.900	3.900
85.0	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
87.5	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200
90.0	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
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	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000	5176.000
2.5	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000	5082.000
5.0	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000	4824.000
7.5	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000	4421.000
10.0	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000	3896.000
12.5	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000	3295.000
15.0	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000	2680.000
17.5	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000	2088.000
20.0	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000	1557.000
22.5	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000	1120.000
25.0	786.100	786.100	786.100	786.100	786.100	786.100	786.100
27.5	546.100	546.100	546.100	546.100	546.100	546.100	546.100
30.0	380.200	380.200	380.200	380.200	380.200	380.200	380.200
32.5	268.700	268.700	268.700	268.700	268.700	268.700	268.700
35.0	193.800	193.800	193.800	193.800	193.800	193.800	193.800
37.5	143.500	143.500	143.500	143.500	143.500	143.500	143.500
40.0	111.000	111.000	111.000	111.000	111.000	111.000	111.000
42.5	89.800	89.800	89.800	89.800	89.800	89.800	89.800
45.0	74.800	74.800	74.800	74.800	74.800	74.800	74.800
47.5	63.900	63.900	63.900	63.900	63.900	63.900	63.900
50.0	55.500	55.500	55.500	55.500	55.500	55.500	55.500
52.5	48.400	48.400	48.400	48.400	48.400	48.400	48.400
55.0	42.200	42.200	42.200	42.200	42.200	42.200	42.200
57.5	36.600	36.600	36.600	36.600	36.600	36.600	36.600
60.0	31.500	31.500	31.500	31.500	31.500	31.500	31.500
62.5	26.700	26.700	26.700	26.700	26.700	26.700	26.700
65.0	22.200	22.200	22.200	22.200	22.200	22.200	22.200
67.5	18.000	18.000	18.000	18.000	18.000	18.000	18.000
70.0	14.300	14.300	14.300	14.300	14.300	14.300	14.300
72.5	11.400	11.400	11.400	11.400	11.400	11.400	11.400
75.0	9.100	9.100	9.100	9.100	9.100	9.100	9.100
77.5	7.200	7.200	7.200	7.200	7.200	7.200	7.200
80.0	5.500	5.500	5.500	5.500	5.500	5.500	5.500

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82.5	3.900	3.900	3.900	3.900	3.900	3.900	3.900
85.0	2.500	2.500	2.500	2.500	2.500	2.500	2.500
87.5	1.200	1.200	1.200	1.200	1.200	1.200	1.200
90.0	0.400	0.400	0.400	0.400	0.400	0.400	0.400
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	1161.27	N.A.	32.80
0-30	1541.31	N.A.	43.50
0-40	1671.85	N.A.	47.20
0-60	1769.71	N.A.	50.00
0-80	1801.8	N.A.	50.90
0-90	1804.67	N.A.	51.00
10-90	1373.82	N.A.	38.80
20-40	510.58	N.A.	14.40
20-50	570.36	N.A.	16.10
40-70	120.04	N.A.	3.40
60-80	32.09	N.A.	0.90
70-80	9.91	N.A.	0.30
80-90	2.87	N.A.	0.10
90-110	0.05	N.A.	0.00
90-120	0.79	N.A.	0.00
90-130	2.67	N.A.	0.10
90-150	102.13	N.A.	2.90
90-180	1735.24	N.A.	49.00
110-180	1735.18	N.A.	49.00
0-180	3539.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	430.85
10-20	730.42
20-30	380.04
30-40	130.53
40-50	59.79
50-60	38.08
60-70	22.17
70-80	9.91
80-90	2.87
90-100	0.05
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	101	97	94	92	93	90	88	86	77	76	74	66	64	64	55	54	53	48
2	94	89	84	80	88	83	79	76	72	69	67	62	60	58	52	51	50	46
3	89	82	76	72	82	76	72	68	67	64	61	58	56	54	50	48	47	43
4	83	75	69	65	78	71	66	62	63	59	56	55	52	50	48	46	45	41
5	79	70	64	59	74	66	61	57	59	55	52	52	49	47	46	44	42	39
6	74	65	59	55	70	62	56	52	55	51	48	49	46	44	44	42	40	38
7	71	61	55	51	66	58	53	49	52	48	45	47	44	42	42	40	38	36
8	67	57	51	47	63	55	49	46	50	46	43	45	42	40	40	38	37	35
9	64	54	48	44	60	52	47	43	47	43	40	43	40	38	39	37	35	33
10	61	51	46	42	58	49	44	41	45	41	38	41	38	36	38	35	34	32

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-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	7.1	7.8	8.1	8.8	10.0	7.1	7.8	8.1	8.8	10.0
	3H	8.1	8.7	9.1	9.7	10.9	8.1	8.7	9.1	9.7	10.9
	4H	8.4	8.9	9.4	9.9	11.2	8.4	8.9	9.4	9.9	11.2
	6H	8.6	9.1	9.6	10.1	11.4	8.6	9.1	9.6	10.1	11.4
	8H	8.6	9.1	9.6	10.1	11.4	8.6	9.1	9.6	10.1	11.4
	12H	8.6	9.1	9.7	10.1	11.4	8.6	9.1	9.7	10.1	11.4

### UGR Viewed Endwise

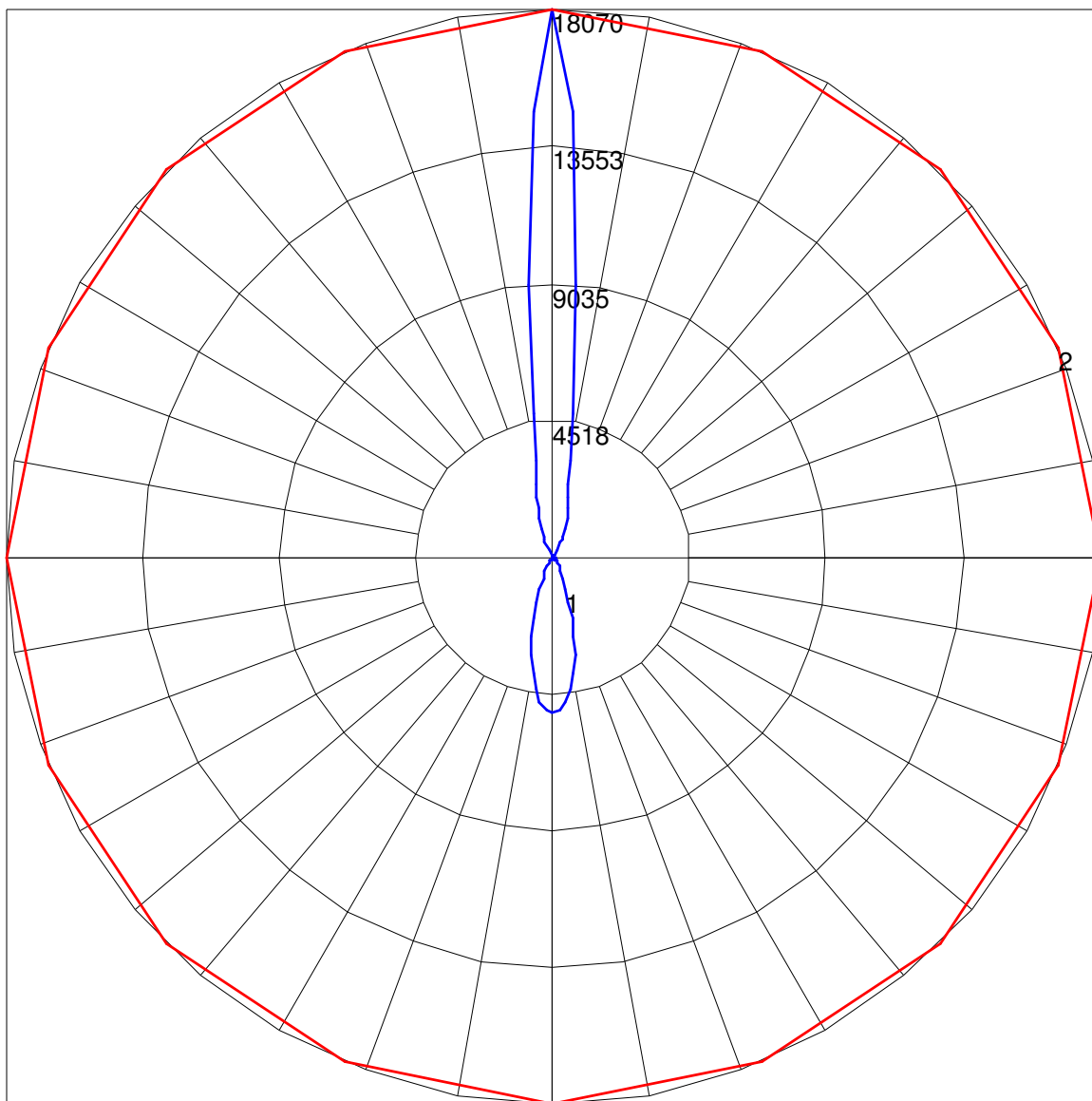
4H	2H	7.4	8.0	8.4	8.9	10.2	7.4	8.0	8.4	8.9	10.2
	3H	8.5	9.0	9.5	10.0	11.3	8.5	9.0	9.5	10.0	11.3
	4H	8.9	9.3	9.9	10.3	11.7	8.9	9.3	9.9	10.3	11.7
	6H	9.2	9.6	10.2	10.6	11.9	9.2	9.6	10.2	10.6	11.9
	8H	9.3	9.6	10.3	10.6	12.0	9.3	9.6	10.3	10.6	12.0
	12H	9.3	9.6	10.4	10.7	12.0	9.3	9.6	10.4	10.7	12.0
8H	4H	9.0	9.3	10.0	10.3	11.7	9.0	9.3	10.0	10.3	11.7
	6H	9.4	9.6	10.4	10.7	12.1	9.4	9.6	10.4	10.7	12.1
	8H	9.5	9.8	10.6	10.8	12.2	9.5	9.8	10.6	10.8	12.2
	12H	9.7	9.9	10.7	10.9	12.3	9.7	9.9	10.7	10.9	12.3
12H	4H	8.9	9.2	10.0	10.3	11.6	8.9	9.2	10.0	10.3	11.6
	6H	9.4	9.6	10.4	10.7	12.0	9.4	9.6	10.4	10.7	12.0
	8H	9.6	9.8	10.6	10.8	12.2	9.6	9.8	10.6	10.8	12.2

Maximum UGR = 12.3

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-RM-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.)