



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-RW-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] MADE FROM 12316380.05 and UL12316380.12
 [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-RW-WHD-WM
 [LUMINAIRE] White formed aluminum housing, narrow distrib anodized aluminum reflector trim w/clear cover glass up,
 [MORE] wide 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	3060
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	39.572
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	30610	30610	30610
55	24716	24716	24716
65	15989	15989	15989
75	8916	8916	8916
85	4580	4580	4580

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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	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000
2.5	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000
5.0	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000
7.5	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000
10.0	999.200	999.200	999.200	999.200	999.200	999.200	999.200	999.200	999.200	999.200
12.5	979.000	979.000	979.000	979.000	979.000	979.000	979.000	979.000	979.000	979.000
15.0	959.000	959.000	959.000	959.000	959.000	959.000	959.000	959.000	959.000	959.000
17.5	936.700	936.700	936.700	936.700	936.700	936.700	936.700	936.700	936.700	936.700
20.0	908.900	908.900	908.900	908.900	908.900	908.900	908.900	908.900	908.900	908.900
22.5	863.200	863.200	863.200	863.200	863.200	863.200	863.200	863.200	863.200	863.200
25.0	782.300	782.300	782.300	782.300	782.300	782.300	782.300	782.300	782.300	782.300
27.5	657.100	657.100	657.100	657.100	657.100	657.100	657.100	657.100	657.100	657.100
30.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100
32.5	394.900	394.900	394.900	394.900	394.900	394.900	394.900	394.900	394.900	394.900
35.0	313.700	313.700	313.700	313.700	313.700	313.700	313.700	313.700	313.700	313.700
37.5	273.200	273.200	273.200	273.200	273.200	273.200	273.200	273.200	273.200	273.200
40.0	251.300	251.300	251.300	251.300	251.300	251.300	251.300	251.300	251.300	251.300
42.5	236.300	236.300	236.300	236.300	236.300	236.300	236.300	236.300	236.300	236.300
45.0	222.300	222.300	222.300	222.300	222.300	222.300	222.300	222.300	222.300	222.300
47.5	206.300	206.300	206.300	206.300	206.300	206.300	206.300	206.300	206.300	206.300
50.0	187.800	187.800	187.800	187.800	187.800	187.800	187.800	187.800	187.800	187.800
52.5	167.100	167.100	167.100	167.100	167.100	167.100	167.100	167.100	167.100	167.100
55.0	145.600	145.600	145.600	145.600	145.600	145.600	145.600	145.600	145.600	145.600
57.5	124.300	124.300	124.300	124.300	124.300	124.300	124.300	124.300	124.300	124.300
60.0	104.400	104.400	104.400	104.400	104.400	104.400	104.400	104.400	104.400	104.400
62.5	86.100	86.100	86.100	86.100	86.100	86.100	86.100	86.100	86.100	86.100
65.0	69.400	69.400	69.400	69.400	69.400	69.400	69.400	69.400	69.400	69.400
67.5	54.300	54.300	54.300	54.300	54.300	54.300	54.300	54.300	54.300	54.300
70.0	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000	41.000
72.5	30.900	30.900	30.900	30.900	30.900	30.900	30.900	30.900	30.900	30.900
75.0	23.700	23.700	23.700	23.700	23.700	23.700	23.700	23.700	23.700	23.700
77.5	18.100	18.100	18.100	18.100	18.100	18.100	18.100	18.100	18.100	18.100
80.0	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000
82.5	8.400	8.400	8.400	8.400	8.400	8.400	8.400	8.400	8.400	8.400
85.0	4.100	4.100	4.100	4.100	4.100	4.100	4.100	4.100	4.100	4.100
87.5	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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. 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	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000	1063.000
2.5	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000	1056.000
5.0	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000	1040.000
7.5	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000	1020.000
10.0	999.200	999.200	999.200	999.200	999.200	999.200	999.200
12.5	979.000	979.000	979.000	979.000	979.000	979.000	979.000
15.0	959.000	959.000	959.000	959.000	959.000	959.000	959.000
17.5	936.700	936.700	936.700	936.700	936.700	936.700	936.700
20.0	908.900	908.900	908.900	908.900	908.900	908.900	908.900
22.5	863.200	863.200	863.200	863.200	863.200	863.200	863.200
25.0	782.300	782.300	782.300	782.300	782.300	782.300	782.300
27.5	657.100	657.100	657.100	657.100	657.100	657.100	657.100
30.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100
32.5	394.900	394.900	394.900	394.900	394.900	394.900	394.900
35.0	313.700	313.700	313.700	313.700	313.700	313.700	313.700
37.5	273.200	273.200	273.200	273.200	273.200	273.200	273.200
40.0	251.300	251.300	251.300	251.300	251.300	251.300	251.300
42.5	236.300	236.300	236.300	236.300	236.300	236.300	236.300
45.0	222.300	222.300	222.300	222.300	222.300	222.300	222.300
47.5	206.300	206.300	206.300	206.300	206.300	206.300	206.300
50.0	187.800	187.800	187.800	187.800	187.800	187.800	187.800
52.5	167.100	167.100	167.100	167.100	167.100	167.100	167.100
55.0	145.600	145.600	145.600	145.600	145.600	145.600	145.600
57.5	124.300	124.300	124.300	124.300	124.300	124.300	124.300
60.0	104.400	104.400	104.400	104.400	104.400	104.400	104.400
62.5	86.100	86.100	86.100	86.100	86.100	86.100	86.100
65.0	69.400	69.400	69.400	69.400	69.400	69.400	69.400
67.5	54.300	54.300	54.300	54.300	54.300	54.300	54.300
70.0	41.000	41.000	41.000	41.000	41.000	41.000	41.000
72.5	30.900	30.900	30.900	30.900	30.900	30.900	30.900
75.0	23.700	23.700	23.700	23.700	23.700	23.700	23.700
77.5	18.100	18.100	18.100	18.100	18.100	18.100	18.100
80.0	13.000	13.000	13.000	13.000	13.000	13.000	13.000

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82.5	8.400	8.400	8.400	8.400	8.400	8.400	8.400
85.0	4.100	4.100	4.100	4.100	4.100	4.100	4.100
87.5	1.300	1.300	1.300	1.300	1.300	1.300	1.300
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	368.03	N.A.	12.00
0-30	711.57	N.A.	23.30
0-40	922.95	N.A.	30.20
0-60	1223.59	N.A.	40.00
0-80	1319.56	N.A.	43.10
0-90	1325.08	N.A.	43.30
10-90	1227.11	N.A.	40.10
20-40	554.92	N.A.	18.10
20-50	725.50	N.A.	23.70
40-70	370.35	N.A.	12.10
60-80	95.96	N.A.	3.10
70-80	26.26	N.A.	0.90
80-90	5.52	N.A.	0.20
90-110	0.00	N.A.	0.00
90-120	0.73	N.A.	0.00
90-130	2.61	N.A.	0.10
90-150	102.08	N.A.	3.30
90-180	1735.18	N.A.	56.70
110-180	1735.18	N.A.	56.70
0-180	3060.26	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.97
10-20	270.06
20-30	343.55
30-40	211.38
40-50	170.58
50-60	130.06
60-70	69.70
70-80	26.26
80-90	5.52
90-100	0.00
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	97	94	90	87	89	86	83	81	72	70	68	58	57	56	46	45	45	39
2	90	83	78	73	82	77	72	68	64	61	58	53	51	49	42	41	40	35
3	83	74	68	63	76	69	63	59	58	54	51	48	45	43	39	37	35	31
4	77	67	60	54	70	62	56	51	52	48	44	44	41	38	36	33	32	28
5	71	60	53	48	65	56	50	45	48	43	39	40	37	34	33	31	29	25
6	66	55	48	42	60	51	45	40	44	39	35	37	33	31	30	28	26	23
7	61	50	43	38	56	47	40	36	40	35	32	34	30	28	28	26	24	21
8	57	46	39	34	53	43	37	32	37	32	29	32	28	25	26	24	22	20
9	54	42	35	31	49	40	34	29	34	30	26	29	26	23	25	22	20	18
10	50	39	33	28	46	37	31	27	32	27	24	28	24	22	23	21	19	17

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-RW-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	15.8	16.5	16.9	17.6	18.9	15.8	16.5	16.9	17.6	18.9
	3H	16.5	17.2	17.6	18.2	19.6	16.5	17.2	17.6	18.2	19.6
	4H	16.7	17.3	17.7	18.3	19.7	16.7	17.3	17.7	18.3	19.7
	6H	16.8	17.3	17.8	18.4	19.8	16.8	17.3	17.8	18.4	19.8
	8H	16.8	17.3	17.8	18.4	19.8	16.8	17.3	17.8	18.4	19.8
	12H	16.7	17.3	17.8	18.3	19.7	16.7	17.3	17.8	18.3	19.7

UGR Viewed Endwise

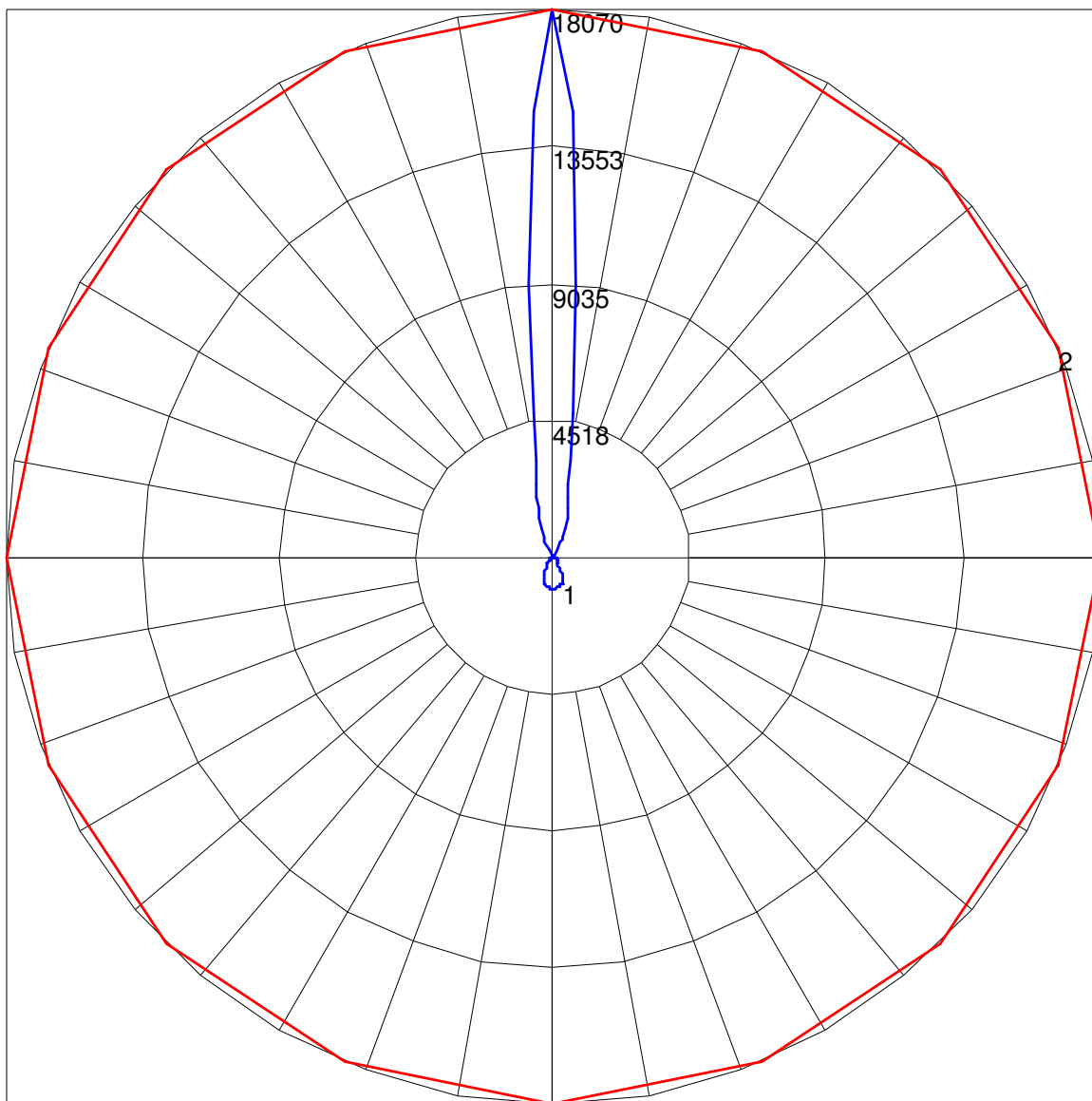
4H	2H	16.0	16.6	17.1	17.7	19.1	16.0	16.6	17.1	17.7	19.1
	3H	16.9	17.4	17.9	18.4	19.9	16.9	17.4	17.9	18.4	19.9
	4H	17.1	17.6	18.2	18.6	20.1	17.1	17.6	18.2	18.6	20.1
	6H	17.3	17.7	18.3	18.7	20.2	17.3	17.7	18.3	18.7	20.2
	8H	17.3	17.7	18.4	18.7	20.2	17.3	17.7	18.4	18.7	20.2
	12H	17.3	17.6	18.4	18.7	20.1	17.3	17.6	18.4	18.7	20.1
8H	4H	17.1	17.5	18.2	18.6	20.0	17.1	17.5	18.2	18.6	20.0
	6H	17.3	17.6	18.4	18.7	20.2	17.3	17.6	18.4	18.7	20.2
	8H	17.4	17.7	18.5	18.8	20.2	17.4	17.7	18.5	18.8	20.2
	12H	17.4	17.6	18.5	18.7	20.2	17.4	17.6	18.5	18.7	20.2
12H	4H	17.1	17.4	18.2	18.5	19.9	17.1	17.4	18.2	18.5	19.9
	6H	17.3	17.6	18.4	18.7	20.1	17.3	17.6	18.4	18.7	20.1
	8H	17.4	17.6	18.5	18.7	20.2	17.4	17.6	18.5	18.7	20.2

Maximum UGR = 20.2

IES INDOOR REPORT

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