



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-LW-WHD-WM_IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] MADE FROM 12316380.05 and UL12316380.07
 [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-LW-WHD-WM
 [LUMINAIRE] White formed aluminum housing, narrow distrib anodized aluminum reflector trim w/clear cover glass up,
 [MORE] wide 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	3088
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	39.5871
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	33240	33240	33240
55	27313	27313	27313
65	19982	19982	19982
75	13833	13833	13833
85	7541	7541	7541

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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	949.500	949.500	949.500	949.500	949.500	949.500	949.500	949.500	949.500	949.500
2.5	946.100	946.100	946.100	946.100	946.100	946.100	946.100	946.100	946.100	946.100
5.0	943.000	943.000	943.000	943.000	943.000	943.000	943.000	943.000	943.000	943.000
7.5	941.400	941.400	941.400	941.400	941.400	941.400	941.400	941.400	941.400	941.400
10.0	939.700	939.700	939.700	939.700	939.700	939.700	939.700	939.700	939.700	939.700
12.5	935.200	935.200	935.200	935.200	935.200	935.200	935.200	935.200	935.200	935.200
15.0	924.900	924.900	924.900	924.900	924.900	924.900	924.900	924.900	924.900	924.900
17.5	902.300	902.300	902.300	902.300	902.300	902.300	902.300	902.300	902.300	902.300
20.0	864.100	864.100	864.100	864.100	864.100	864.100	864.100	864.100	864.100	864.100
22.5	805.800	805.800	805.800	805.800	805.800	805.800	805.800	805.800	805.800	805.800
25.0	721.600	721.600	721.600	721.600	721.600	721.600	721.600	721.600	721.600	721.600
27.5	608.000	608.000	608.000	608.000	608.000	608.000	608.000	608.000	608.000	608.000
30.0	485.000	485.000	485.000	485.000	485.000	485.000	485.000	485.000	485.000	485.000
32.5	391.100	391.100	391.100	391.100	391.100	391.100	391.100	391.100	391.100	391.100
35.0	336.000	336.000	336.000	336.000	336.000	336.000	336.000	336.000	336.000	336.000
37.5	302.900	302.900	302.900	302.900	302.900	302.900	302.900	302.900	302.900	302.900
40.0	279.400	279.400	279.400	279.400	279.400	279.400	279.400	279.400	279.400	279.400
42.5	259.900	259.900	259.900	259.900	259.900	259.900	259.900	259.900	259.900	259.900
45.0	241.400	241.400	241.400	241.400	241.400	241.400	241.400	241.400	241.400	241.400
47.5	222.500	222.500	222.500	222.500	222.500	222.500	222.500	222.500	222.500	222.500
50.0	202.400	202.400	202.400	202.400	202.400	202.400	202.400	202.400	202.400	202.400
52.5	182.100	182.100	182.100	182.100	182.100	182.100	182.100	182.100	182.100	182.100
55.0	160.900	160.900	160.900	160.900	160.900	160.900	160.900	160.900	160.900	160.900
57.5	140.100	140.100	140.100	140.100	140.100	140.100	140.100	140.100	140.100	140.100
60.0	120.800	120.800	120.800	120.800	120.800	120.800	120.800	120.800	120.800	120.800
62.5	103.000	103.000	103.000	103.000	103.000	103.000	103.000	103.000	103.000	103.000
65.0	86.730	86.730	86.730	86.730	86.730	86.730	86.730	86.730	86.730	86.730
67.5	72.020	72.020	72.020	72.020	72.020	72.020	72.020	72.020	72.020	72.020
70.0	58.860	58.860	58.860	58.860	58.860	58.860	58.860	58.860	58.860	58.860
72.5	47.120	47.120	47.120	47.120	47.120	47.120	47.120	47.120	47.120	47.120
75.0	36.770	36.770	36.770	36.770	36.770	36.770	36.770	36.770	36.770	36.770
77.5	27.750	27.750	27.750	27.750	27.750	27.750	27.750	27.750	27.750	27.750
80.0	19.890	19.890	19.890	19.890	19.890	19.890	19.890	19.890	19.890	19.890
82.5	12.940	12.940	12.940	12.940	12.940	12.940	12.940	12.940	12.940	12.940
85.0	6.750	6.750	6.750	6.750	6.750	6.750	6.750	6.750	6.750	6.750
87.5	1.920	1.920	1.920	1.920	1.920	1.920	1.920	1.920	1.920	1.920
90.0	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
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	949.500	949.500	949.500	949.500	949.500	949.500	949.500
2.5	946.100	946.100	946.100	946.100	946.100	946.100	946.100
5.0	943.000	943.000	943.000	943.000	943.000	943.000	943.000
7.5	941.400	941.400	941.400	941.400	941.400	941.400	941.400
10.0	939.700	939.700	939.700	939.700	939.700	939.700	939.700
12.5	935.200	935.200	935.200	935.200	935.200	935.200	935.200
15.0	924.900	924.900	924.900	924.900	924.900	924.900	924.900
17.5	902.300	902.300	902.300	902.300	902.300	902.300	902.300
20.0	864.100	864.100	864.100	864.100	864.100	864.100	864.100
22.5	805.800	805.800	805.800	805.800	805.800	805.800	805.800
25.0	721.600	721.600	721.600	721.600	721.600	721.600	721.600
27.5	608.000	608.000	608.000	608.000	608.000	608.000	608.000
30.0	485.000	485.000	485.000	485.000	485.000	485.000	485.000
32.5	391.100	391.100	391.100	391.100	391.100	391.100	391.100
35.0	336.000	336.000	336.000	336.000	336.000	336.000	336.000
37.5	302.900	302.900	302.900	302.900	302.900	302.900	302.900
40.0	279.400	279.400	279.400	279.400	279.400	279.400	279.400
42.5	259.900	259.900	259.900	259.900	259.900	259.900	259.900
45.0	241.400	241.400	241.400	241.400	241.400	241.400	241.400
47.5	222.500	222.500	222.500	222.500	222.500	222.500	222.500
50.0	202.400	202.400	202.400	202.400	202.400	202.400	202.400
52.5	182.100	182.100	182.100	182.100	182.100	182.100	182.100
55.0	160.900	160.900	160.900	160.900	160.900	160.900	160.900
57.5	140.100	140.100	140.100	140.100	140.100	140.100	140.100
60.0	120.800	120.800	120.800	120.800	120.800	120.800	120.800
62.5	103.000	103.000	103.000	103.000	103.000	103.000	103.000
65.0	86.730	86.730	86.730	86.730	86.730	86.730	86.730
67.5	72.020	72.020	72.020	72.020	72.020	72.020	72.020
70.0	58.860	58.860	58.860	58.860	58.860	58.860	58.860
72.5	47.120	47.120	47.120	47.120	47.120	47.120	47.120
75.0	36.770	36.770	36.770	36.770	36.770	36.770	36.770
77.5	27.750	27.750	27.750	27.750	27.750	27.750	27.750
80.0	19.890	19.890	19.890	19.890	19.890	19.890	19.890

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82.5	12.940	12.940	12.940	12.940	12.940	12.940	12.940
85.0	6.750	6.750	6.750	6.750	6.750	6.750	6.750
87.5	1.920	1.920	1.920	1.920	1.920	1.920	1.920
90.0	0.250	0.250	0.250	0.250	0.250	0.250	0.250
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-LW-WHD-WM_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	348.59	N.A.	11.30
0-30	668.53	N.A.	21.60
0-40	887.93	N.A.	28.80
0-60	1217.8	N.A.	39.40
0-80	1344.44	N.A.	43.50
0-90	1353.05	N.A.	43.80
10-90	1263.11	N.A.	40.90
20-40	539.34	N.A.	17.50
20-50	725.32	N.A.	23.50
40-70	416.72	N.A.	13.50
60-80	126.64	N.A.	4.10
70-80	39.79	N.A.	1.30
80-90	8.61	N.A.	0.30
90-110	0.03	N.A.	0.00
90-120	0.77	N.A.	0.00
90-130	2.65	N.A.	0.10
90-150	102.11	N.A.	3.30
90-180	1735.22	N.A.	56.20
110-180	1735.18	N.A.	56.20
0-180	3088.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	89.95
10-20	258.64
20-30	319.94
30-40	219.41
40-50	185.97
50-60	143.89
60-70	86.85
70-80	39.79
80-90	8.61
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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	50	50	50	44
1	97	94	90	87	89	86	83	80	71	69	68	58	57	56	46	45	45	39
2	90	83	77	73	82	76	72	68	64	61	58	52	50	48	42	40	39	34
3	82	74	67	62	75	68	62	58	57	53	50	47	45	42	38	36	35	31
4	76	66	59	54	70	61	55	50	52	47	44	43	40	37	35	33	31	27
5	70	60	52	47	64	55	49	44	47	42	39	39	36	33	32	30	28	25
6	65	54	47	41	60	50	44	39	43	38	34	36	33	30	30	27	25	22
7	61	49	42	37	56	46	39	35	39	34	31	33	30	27	28	25	23	20
8	57	45	38	33	52	42	36	31	36	31	28	31	27	25	26	23	21	19
9	53	42	35	30	49	39	33	28	34	29	25	29	25	22	24	21	20	17
10	50	38	32	27	46	36	30	26	31	27	23	27	23	21	23	20	18	16

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-ON-CSU-LW-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	16.6	17.3	17.6	18.4	19.7	16.6	17.3	17.6	18.4	19.7
	3H	17.7	18.3	18.7	19.4	20.7	17.7	18.3	18.7	19.4	20.7
	4H	18.0	18.6	19.0	19.6	21.0	18.0	18.6	19.0	19.6	21.0
	6H	18.2	18.7	19.2	19.8	21.2	18.2	18.7	19.2	19.8	21.2
	8H	18.2	18.7	19.3	19.8	21.2	18.2	18.7	19.3	19.8	21.2
	12H	18.2	18.7	19.3	19.8	21.2	18.2	18.7	19.3	19.8	21.2

UGR Viewed Endwise

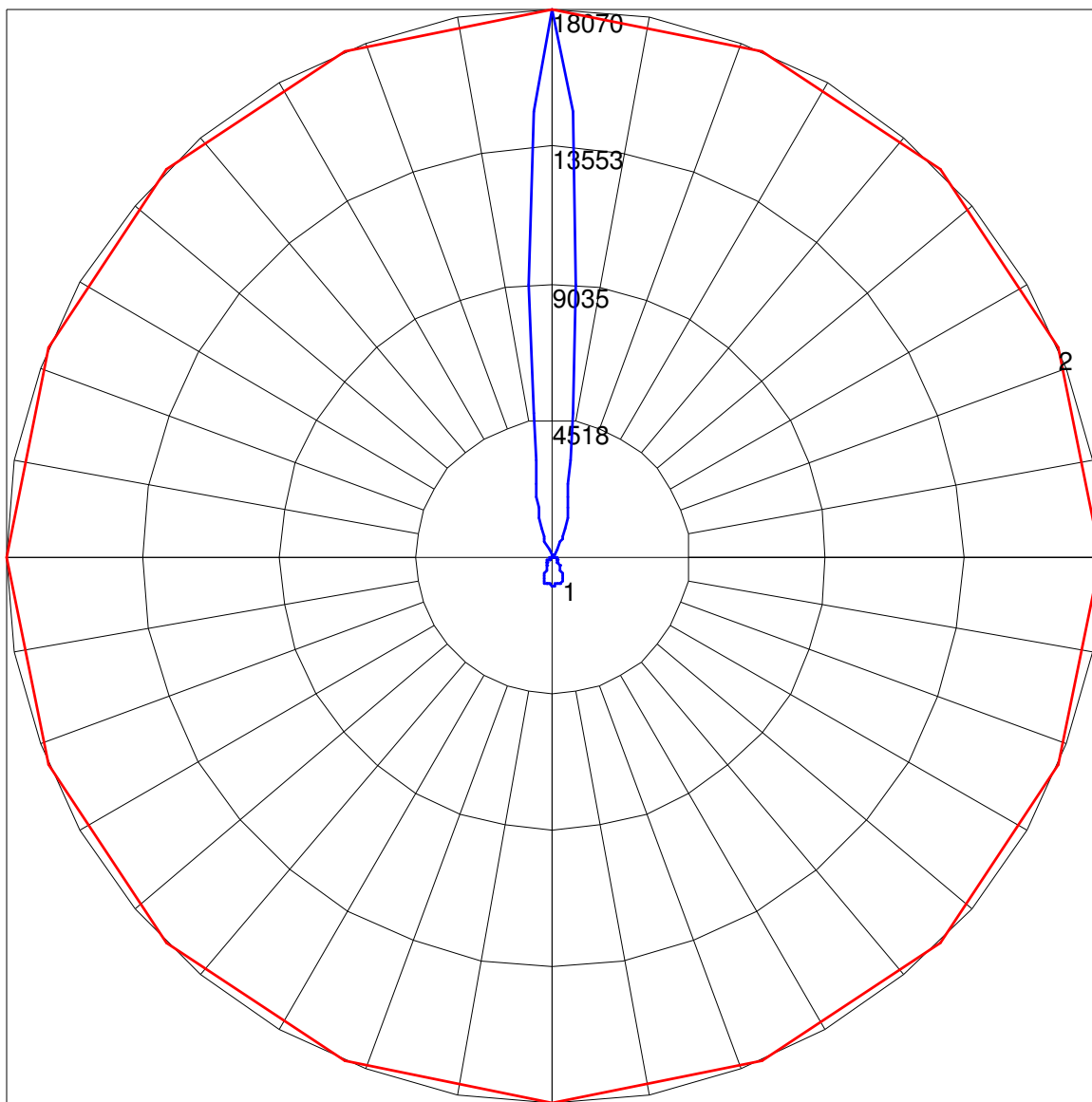
4H	2H	16.9	17.5	18.0	18.6	20.0	16.9	17.5	18.0	18.6	20.0
	3H	18.2	18.7	19.2	19.7	21.1	18.2	18.7	19.2	19.7	21.1
	4H	18.6	19.1	19.6	20.1	21.5	18.6	19.1	19.6	20.1	21.5
	6H	18.9	19.3	19.9	20.3	21.8	18.9	19.3	19.9	20.3	21.8
	8H	18.9	19.3	20.0	20.4	21.8	18.9	19.3	20.0	20.4	21.8
	12H	18.9	19.3	20.0	20.4	21.8	18.9	19.3	20.0	20.4	21.8
8H	4H	18.7	19.1	19.8	20.1	21.6	18.7	19.1	19.8	20.1	21.6
	6H	19.0	19.3	20.1	20.5	21.9	19.0	19.3	20.1	20.5	21.9
	8H	19.2	19.4	20.3	20.5	22.0	19.2	19.4	20.3	20.5	22.0
	12H	19.2	19.4	20.3	20.5	22.0	19.2	19.4	20.3	20.5	22.0
12H	4H	18.6	19.0	19.7	20.1	21.5	18.6	19.0	19.7	20.1	21.5
	6H	19.0	19.3	20.1	20.4	21.9	19.0	19.3	20.1	20.4	21.9
	8H	19.2	19.4	20.3	20.5	22.0	19.2	19.4	20.3	20.5	22.0

Maximum UGR = 22.0

IES INDOOR REPORT

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