



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] MADE FROM 12316380.04 and 12316380.07

[TESTLAB]

[ISSUEDATE] 02/09/2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-OM-CSU-LW-WHD-WM

[LUMINAIRE] White formed aluminum housing, medium 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

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3057
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
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	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
95.0	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
97.5	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
100.0	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
102.5	0.339	0.339	0.339	0.339	0.339	0.339	0.339	0.339	0.339	0.339
105.0	0.509	0.509	0.509	0.509	0.509	0.509	0.509	0.509	0.509	0.509
107.5	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678
110.0	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933
112.5	1.357	1.357	1.357	1.357	1.357	1.357	1.357	1.357	1.357	1.357
115.0	1.866	1.866	1.866	1.866	1.866	1.866	1.866	1.866	1.866	1.866
117.5	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544	2.544
120.0	3.562	3.562	3.562	3.562	3.562	3.562	3.562	3.562	3.562	3.562
122.5	5.003	5.003	5.003	5.003	5.003	5.003	5.003	5.003	5.003	5.003
125.0	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208
127.5	10.600	10.600	10.600	10.600	10.600	10.600	10.600	10.600	10.600	10.600
130.0	15.858	15.858	15.858	15.858	15.858	15.858	15.858	15.858	15.858	15.858
132.5	22.726	22.726	22.726	22.726	22.726	22.726	22.726	22.726	22.726	22.726

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## CANDELA TABULATION - (Cont.)

135.0	30.613	30.613	30.613	30.613	30.613	30.613	30.613	30.613	30.613	30.613
137.5	39.856	39.856	39.856	39.856	39.856	39.856	39.856	39.856	39.856	39.856
140.0	52.067	52.067	52.067	52.067	52.067	52.067	52.067	52.067	52.067	52.067
142.5	69.621	69.621	69.621	69.621	69.621	69.621	69.621	69.621	69.621	69.621
145.0	133.136	133.136	133.136	133.136	133.136	133.136	133.136	133.136	133.136	133.136
147.5	402.970	402.970	402.970	402.970	402.970	402.970	402.970	402.970	402.970	402.970
150.0	858.176	858.176	858.176	858.176	858.176	858.176	858.176	858.176	858.176	858.176
152.5	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888
155.0	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920
157.5	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800
160.0	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552
162.5	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632
165.0	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576
167.5	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368
170.0	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352
172.5	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704
175.0	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632
177.5	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064
180.0	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000

## 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	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	0.085	0.085	0.085	0.085	0.085	0.085	0.085
95.0	0.085	0.085	0.085	0.085	0.085	0.085	0.085
97.5	0.170	0.170	0.170	0.170	0.170	0.170	0.170
100.0	0.170	0.170	0.170	0.170	0.170	0.170	0.170
102.5	0.339	0.339	0.339	0.339	0.339	0.339	0.339
105.0	0.509	0.509	0.509	0.509	0.509	0.509	0.509
107.5	0.678	0.678	0.678	0.678	0.678	0.678	0.678
110.0	0.933	0.933	0.933	0.933	0.933	0.933	0.933
112.5	1.357	1.357	1.357	1.357	1.357	1.357	1.357
115.0	1.866	1.866	1.866	1.866	1.866	1.866	1.866
117.5	2.544	2.544	2.544	2.544	2.544	2.544	2.544
120.0	3.562	3.562	3.562	3.562	3.562	3.562	3.562
122.5	5.003	5.003	5.003	5.003	5.003	5.003	5.003
125.0	7.208	7.208	7.208	7.208	7.208	7.208	7.208
127.5	10.600	10.600	10.600	10.600	10.600	10.600	10.600
130.0	15.858	15.858	15.858	15.858	15.858	15.858	15.858
132.5	22.726	22.726	22.726	22.726	22.726	22.726	22.726
135.0	30.613	30.613	30.613	30.613	30.613	30.613	30.613
137.5	39.856	39.856	39.856	39.856	39.856	39.856	39.856
140.0	52.067	52.067	52.067	52.067	52.067	52.067	52.067
142.5	69.621	69.621	69.621	69.621	69.621	69.621	69.621
145.0	133.136	133.136	133.136	133.136	133.136	133.136	133.136
147.5	402.970	402.970	402.970	402.970	402.970	402.970	402.970
150.0	858.176	858.176	858.176	858.176	858.176	858.176	858.176
152.5	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888	1255.888
155.0	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920	1517.920
157.5	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800	1674.800
160.0	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552	1737.552
162.5	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632	1809.632
165.0	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576	1960.576
167.5	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368	2218.368
170.0	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352	2564.352
172.5	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704	3008.704
175.0	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632	3399.632
177.5	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064	3492.064
180.0	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000	3435.000

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

Zone	Lumens	%Lamp	%Fixt
0-20	348.59	N.A.	11.40
0-30	668.53	N.A.	21.90
0-40	887.93	N.A.	29.00
0-60	1217.8	N.A.	39.80
0-80	1344.44	N.A.	44.00
0-90	1353.05	N.A.	44.30
10-90	1263.11	N.A.	41.30
20-40	539.34	N.A.	17.60
20-50	725.32	N.A.	23.70
40-70	416.72	N.A.	13.60
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	0.70	N.A.	0.00
90-120	2.67	N.A.	0.10
90-130	9.86	N.A.	0.30
90-150	191.48	N.A.	6.30
90-180	1704.03	N.A.	55.70
110-180	1703.34	N.A.	55.70
0-180	3057.09	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	0.15
100-110	0.55
110-120	1.97
120-130	7.19
130-140	24.24
140-150	157.37
150-160	653.30
160-170	564.93
170-180	294.32

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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	51	51	51	44
1	98	94	90	87	89	86	83	80	72	70	68	59	57	56	46	46	45	39
2	90	83	78	73	82	76	72	68	64	61	58	53	50	48	42	41	40	35
3	83	74	67	62	76	68	63	58	58	53	50	48	45	42	39	37	35	31
4	76	66	59	54	70	61	55	50	52	47	44	43	40	37	35	33	31	28
5	70	60	52	47	65	55	49	44	47	42	39	40	36	33	32	30	28	25
6	65	54	47	41	60	50	44	39	43	38	34	36	33	30	30	27	26	23
7	61	49	42	37	56	46	40	35	40	35	31	34	30	27	28	25	23	21
8	57	45	38	33	52	42	36	31	36	32	28	31	27	25	26	23	21	19
9	53	42	35	30	49	39	33	29	34	29	26	29	25	23	24	22	20	18
10	50	39	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-OM-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	16.7	17.4	17.7	18.4	19.8	16.7	17.4	17.7	18.4	19.8
	3H	17.7	18.4	18.8	19.4	20.8	17.7	18.4	18.8	19.4	20.8
	4H	18.1	18.7	19.1	19.7	21.1	18.1	18.7	19.1	19.7	21.1
	6H	18.3	18.8	19.3	19.9	21.3	18.3	18.8	19.3	19.9	21.3
	8H	18.3	18.8	19.3	19.9	21.3	18.3	18.8	19.3	19.9	21.3
	12H	18.3	18.8	19.3	19.8	21.3	18.3	18.8	19.3	19.8	21.3

### UGR Viewed Endwise

4H	2H	17.0	17.6	18.0	18.6	20.0	17.0	17.6	18.0	18.6	20.0
	3H	18.2	18.8	19.3	19.8	21.2	18.2	18.8	19.3	19.8	21.2
	4H	18.7	19.1	19.7	20.2	21.6	18.7	19.1	19.7	20.2	21.6
	6H	18.9	19.3	20.0	20.4	21.8	18.9	19.3	20.0	20.4	21.8
	8H	19.0	19.4	20.1	20.4	21.9	19.0	19.4	20.1	20.4	21.9
	12H	19.0	19.3	20.1	20.4	21.9	19.0	19.3	20.1	20.4	21.9

8H	4H	18.8	19.1	19.8	20.2	21.6	18.8	19.1	19.8	20.2	21.6
	6H	19.1	19.4	20.2	20.5	22.0	19.1	19.4	20.2	20.5	22.0
	8H	19.2	19.5	20.3	20.6	22.0	19.2	19.5	20.3	20.6	22.0
	12H	19.3	19.5	20.4	20.6	22.1	19.3	19.5	20.4	20.6	22.1

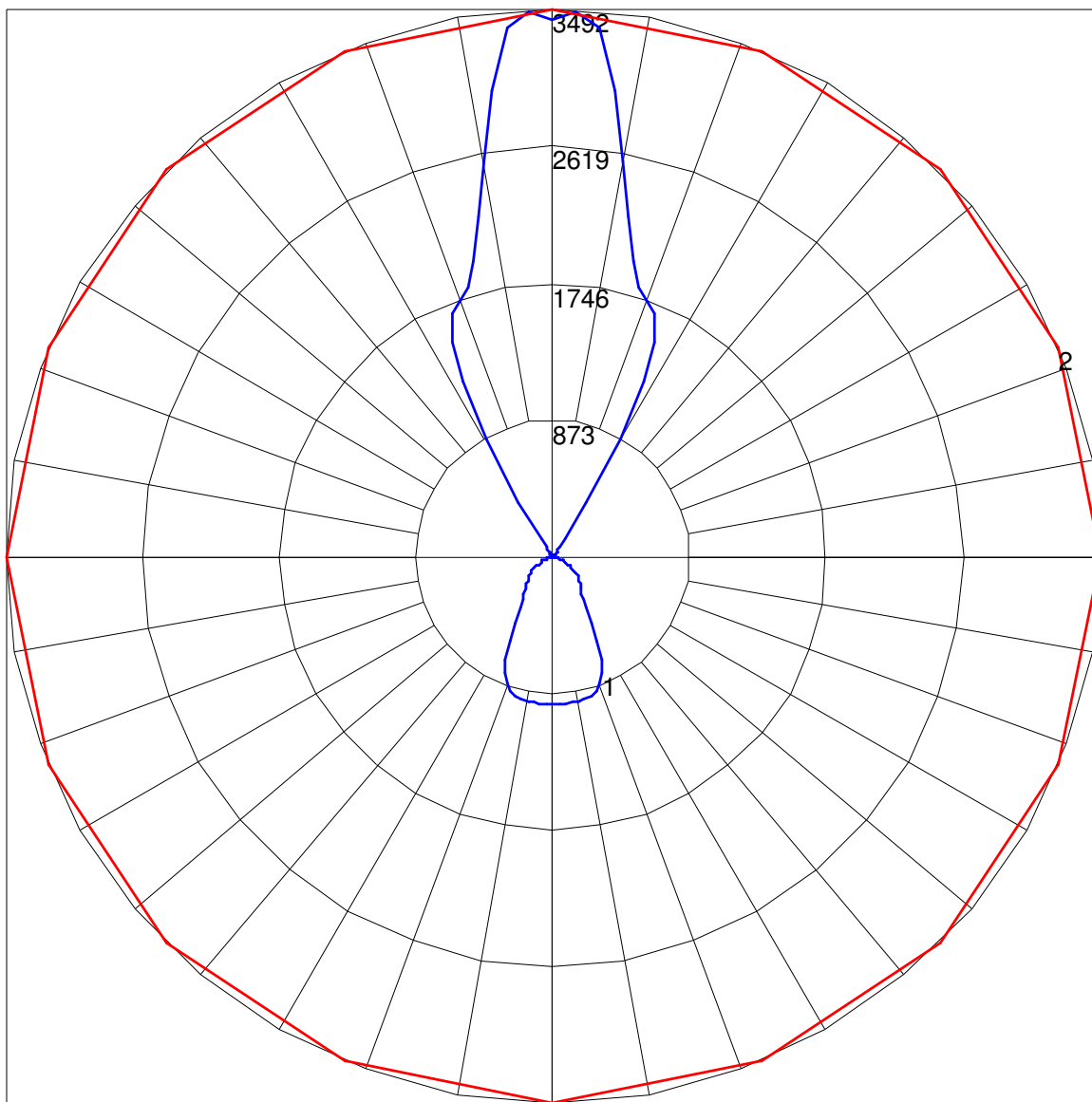
12H	4H	18.7	19.1	19.8	20.1	21.6	18.7	19.1	19.8	20.1	21.6
	6H	19.1	19.4	20.2	20.5	21.9	19.1	19.4	20.2	20.5	21.9
	8H	19.2	19.5	20.4	20.6	22.1	19.2	19.5	20.4	20.6	22.1

Maximum UGR = 22.1

# IES INDOOR REPORT

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

## POLAR GRAPH



Maximum Candela = 3492.064 Located At Horizontal Angle = 0, Vertical Angle = 177.5

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (177.5) (Through Max. Cd.)