



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] MADE FROM 12316380.04 and 12316380.12
 [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-OM-CSU-RW-WHD-WM
 [LUMINAIRE] White formed aluminum housing, medium 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	3029
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	0.085	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	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	0.085	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

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Zone	Lumens	%Lamp	%Fixt
0-20	368.03	N.A.	12.10
0-30	711.57	N.A.	23.50
0-40	922.95	N.A.	30.50
0-60	1223.59	N.A.	40.40
0-80	1319.56	N.A.	43.60
0-90	1325.08	N.A.	43.70
10-90	1227.11	N.A.	40.50
20-40	554.92	N.A.	18.30
20-50	725.50	N.A.	24.00
40-70	370.35	N.A.	12.20
60-80	95.96	N.A.	3.20
70-80	26.26	N.A.	0.90
80-90	5.52	N.A.	0.20
90-110	0.66	N.A.	0.00
90-120	2.64	N.A.	0.10
90-130	9.83	N.A.	0.30
90-150	191.45	N.A.	6.30
90-180	1704.00	N.A.	56.30
110-180	1703.34	N.A.	56.20
0-180	3029.08	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	0.12
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	64	64	64	50	50	50	44
1	98	94	90	87	89	86	83	81	72	70	68	59	57	56	46	46	45	39
2	90	83	78	74	82	77	72	68	64	61	58	53	51	49	42	41	40	35
3	83	75	68	63	76	69	63	59	58	54	51	48	45	43	39	37	36	31
4	77	67	60	55	70	62	56	51	53	48	45	44	41	38	36	34	32	28
5	71	61	53	48	65	56	50	45	48	43	40	40	37	34	33	31	29	26
6	66	55	48	42	61	51	45	40	44	39	35	37	34	31	31	28	26	23
7	61	50	43	38	56	47	40	36	40	35	32	34	31	28	29	26	24	22
8	57	46	39	34	53	43	37	32	37	32	29	32	28	26	27	24	22	20
9	54	42	36	31	50	40	34	29	35	30	26	30	26	24	25	22	21	19
10	50	39	33	28	47	37	31	27	32	28	24	28	24	22	24	21	19	17

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OM-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	15.9	16.6	16.9	17.6	19.0	15.9	16.6	16.9	17.6	19.0
	3H	16.6	17.2	17.7	18.3	19.7	16.6	17.2	17.7	18.3	19.7
	4H	16.8	17.4	17.8	18.4	19.8	16.8	17.4	17.8	18.4	19.8
	6H	16.8	17.4	17.9	18.4	19.8	16.8	17.4	17.9	18.4	19.8
	8H	16.8	17.4	17.9	18.4	19.8	16.8	17.4	17.9	18.4	19.8
	12H	16.8	17.3	17.9	18.4	19.8	16.8	17.3	17.9	18.4	19.8

UGR Viewed Endwise

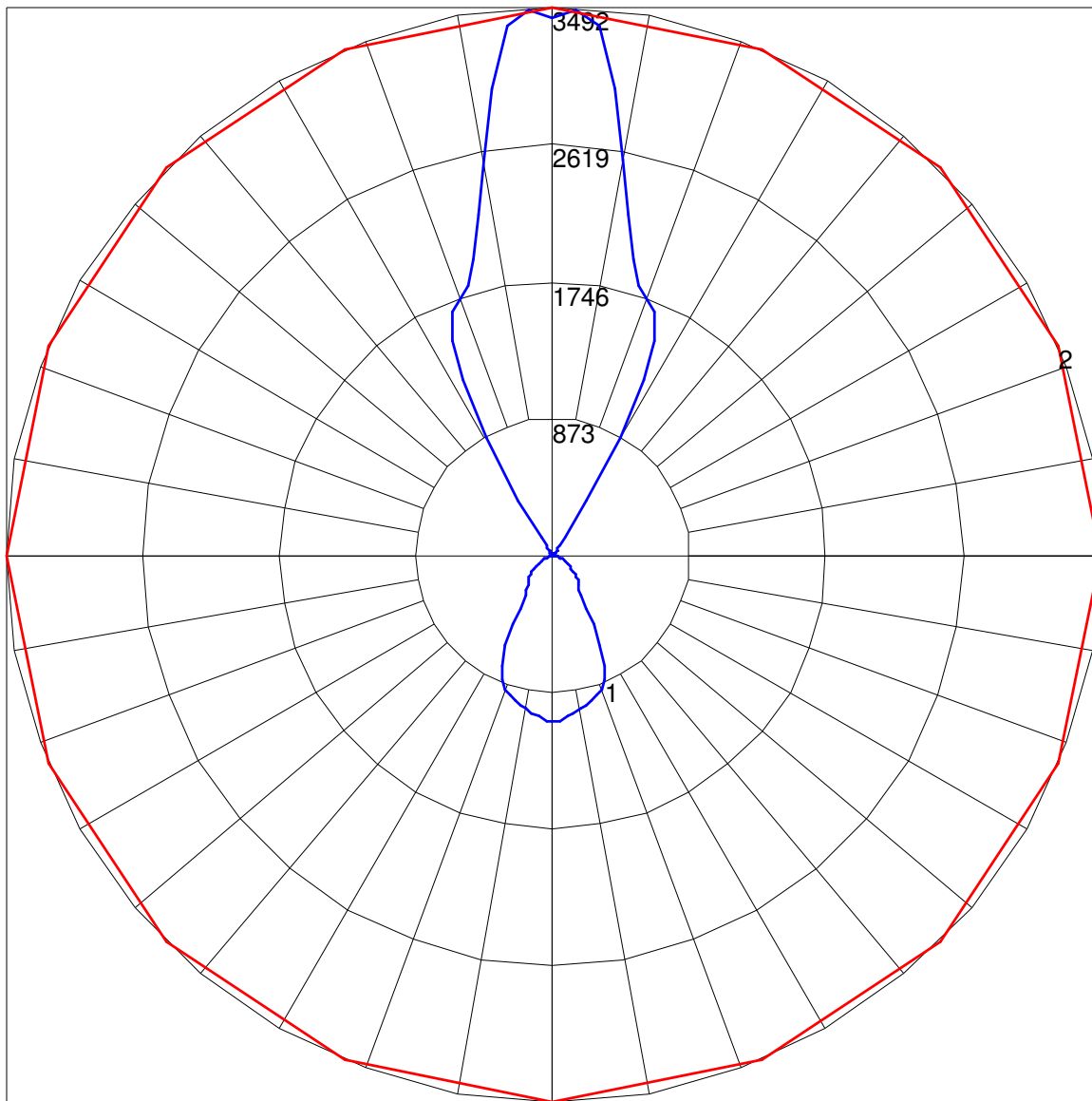
4H	2H	16.1	16.7	17.2	17.7	19.1	16.1	16.7	17.2	17.7	19.1
	3H	16.9	17.4	18.0	18.5	19.9	16.9	17.4	18.0	18.5	19.9
	4H	17.2	17.6	18.2	18.7	20.1	17.2	17.6	18.2	18.7	20.1
	6H	17.3	17.7	18.4	18.8	20.2	17.3	17.7	18.4	18.8	20.2
	8H	17.4	17.7	18.4	18.8	20.2	17.4	17.7	18.4	18.8	20.2
	12H	17.3	17.7	18.4	18.7	20.2	17.3	17.7	18.4	18.7	20.2
8H	4H	17.2	17.5	18.3	18.6	20.1	17.2	17.5	18.3	18.6	20.1
	6H	17.4	17.7	18.5	18.8	20.2	17.4	17.7	18.5	18.8	20.2
	8H	17.5	17.7	18.6	18.8	20.3	17.5	17.7	18.6	18.8	20.3
	12H	17.5	17.7	18.6	18.8	20.3	17.5	17.7	18.6	18.8	20.3
12H	4H	17.1	17.5	18.2	18.5	20.0	17.1	17.5	18.2	18.5	20.0
	6H	17.4	17.6	18.5	18.7	20.2	17.4	17.6	18.5	18.7	20.2
	8H	17.5	17.7	18.6	18.8	20.3	17.5	17.7	18.6	18.8	20.3

Maximum UGR = 20.3

IES INDOOR REPORT

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