



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] made from 13537338.07 and 12316380.04

[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-LW-CSU-OM-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distrib white painted flush prismatic lens trim up,

[MORE] medium distrib anodized alum open reflector 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	3366
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	39.6249
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 w/ Sides
Luminous Length (0-180)	0.52 ft (Diameter)
Luminous Width (90-270)	0.52 ft (Diameter)
Luminous Height	1.92 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	453	453	453
55	97	97	97
65	24	24	24
75	6	6	6
85	1	1	1

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## CANDELA TABULATION

	<u>0</u>
0.0	4051.000
0.5	4054.000
1.0	4066.000
1.5	4077.000
2.0	4102.000
2.5	4118.000
3.0	4121.000
3.5	4122.000
4.0	4099.000
4.5	4068.000
5.0	4009.000
5.5	3934.000
6.0	3850.000
6.5	3756.000
7.0	3654.000
7.5	3548.000
8.0	3439.000
8.5	3331.000
9.0	3225.000
9.5	3122.000
10.0	3024.000
10.5	2932.000
11.0	2846.000
11.5	2765.000
12.0	2688.000
12.5	2616.000
13.0	2548.000
13.5	2483.000
14.0	2421.000
14.5	2364.000
15.0	2312.000
15.5	2266.000
16.0	2228.000
16.5	2194.000
17.0	2162.000
17.5	2134.000
18.0	2109.000
18.5	2088.000
19.0	2073.000
19.5	2060.000
20.0	2049.000
20.5	2036.000
21.0	2023.000
21.5	2009.000
22.0	1994.000
22.5	1975.000
23.0	1952.000
23.5	1924.000
24.0	1889.000
24.5	1843.000
25.0	1790.000
25.5	1734.000
26.0	1679.000
26.5	1618.000

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27.0	1554.000
27.5	1481.000
28.0	1398.000
28.5	1307.000
29.0	1212.000
29.5	1115.000
30.0	1012.000
30.5	905.300
31.0	793.600
31.5	682.300
32.0	575.300
32.5	475.200
33.0	388.100
33.5	313.800
34.0	251.200
34.5	199.200
35.0	157.000
35.5	125.200
36.0	104.800
36.5	94.100
37.0	87.700
37.5	82.100
38.0	77.200
38.5	72.700
39.0	68.600
39.5	64.900
40.0	61.400
40.5	58.100
41.0	55.000
41.5	52.200
42.0	49.500
42.5	47.000
43.0	44.500
43.5	42.300
44.0	40.100
44.5	38.000
45.0	36.100
45.5	34.200
46.0	32.300
46.5	30.500
47.0	28.600
47.5	26.800
48.0	25.100
48.5	23.500
49.0	21.900
49.5	20.300
50.0	18.700
50.5	17.200
51.0	15.900
51.5	14.700
52.0	13.500
52.5	12.500
53.0	11.500
53.5	10.700
54.0	9.900
54.5	9.100

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55.0	8.500
55.5	7.900
56.0	7.300
56.5	6.800
57.0	6.300
57.5	5.900
58.0	5.500
58.5	5.100
59.0	4.800
59.5	4.500
60.0	4.200
60.5	3.900
61.0	3.700
61.5	3.400
62.0	3.200
62.5	3.000
63.0	2.800
63.5	2.700
64.0	2.500
64.5	2.300
65.0	2.200
65.5	2.100
66.0	1.900
66.5	1.800
67.0	1.700
67.5	1.600
68.0	1.500
68.5	1.400
69.0	1.300
69.5	1.200
70.0	1.100
70.5	1.100
71.0	1.000
71.5	0.900
72.0	0.800
72.5	0.800
73.0	0.700
73.5	0.700
74.0	0.600
74.5	0.600
75.0	0.600
75.5	0.500
76.0	0.500
76.5	0.400
77.0	0.400
77.5	0.400
78.0	0.300
78.5	0.300
79.0	0.300
79.5	0.300
80.0	0.200
80.5	0.200
81.0	0.200
81.5	0.200
82.0	0.200
82.5	0.200

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83.0	0.200
83.5	0.100
84.0	0.100
84.5	0.100
85.0	0.100
85.5	0.100
86.0	0.100
86.5	0.100
87.0	0.100
87.5	0.100
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	3.240
90.5	3.340
91.0	3.474
91.5	3.774
92.0	4.142
92.5	4.609
93.0	5.177
93.5	5.845
94.0	6.613
94.5	7.448
95.0	8.383
95.5	9.452
96.0	10.621
96.5	11.857
97.0	13.226
97.5	14.663
98.0	16.099
98.5	17.535
99.0	19.038
99.5	20.508
100.0	22.011
100.5	23.514
101.0	25.050
101.5	26.586
102.0	28.156
102.5	29.726
103.0	31.363
103.5	33.066
104.0	34.803
104.5	36.573
105.0	38.343
105.5	40.180
106.0	42.051
106.5	43.988
107.0	45.958
107.5	47.996
108.0	50.067
108.5	52.204
109.0	54.375
109.5	56.613
110.0	58.884
110.5	61.222

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111.0	63.627
111.5	66.099
112.0	68.637
112.5	71.175
113.0	73.814
113.5	76.486
114.0	79.225
114.5	82.030
115.0	84.836
115.5	87.708
116.0	90.681
116.5	93.720
117.0	96.827
117.5	99.966
118.0	103.239
118.5	106.579
119.0	109.953
119.5	113.426
120.0	116.967
120.5	120.574
121.0	124.281
121.5	128.056
122.0	131.830
122.5	135.771
123.0	139.779
123.5	143.854
124.0	147.995
124.5	152.170
125.0	156.512
125.5	160.888
126.0	165.397
126.5	169.906
127.0	174.482
127.5	179.057
128.0	183.667
128.5	188.309
129.0	192.918
129.5	197.461
130.0	201.936
130.5	206.479
131.0	210.954
131.5	215.463
132.0	220.006
132.5	224.548
133.0	229.024
133.5	233.566
134.0	238.075
134.5	242.551
135.0	247.026
135.5	251.535
136.0	256.111
136.5	260.787
137.0	265.563
137.5	270.340
138.0	275.216
138.5	280.193

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139.0	285.269
139.5	290.446
140.0	295.891
140.5	301.635
141.0	307.614
141.5	313.927
142.0	320.540
142.5	327.420
143.0	334.668
143.5	342.350
144.0	350.700
144.5	359.384
145.0	368.736
145.5	378.756
146.0	389.444
146.5	400.800
147.0	412.824
147.5	425.516
148.0	438.876
148.5	452.904
149.0	467.600
149.5	482.964
150.0	498.662
150.5	514.360
151.0	530.726
151.5	548.094
152.0	565.462
152.5	583.164
153.0	601.200
153.5	619.570
154.0	637.606
154.5	656.310
155.0	675.348
155.5	693.718
156.0	712.088
156.5	729.790
157.0	747.492
157.5	764.860
158.0	781.894
158.5	797.926
159.0	813.624
159.5	828.320
160.0	842.348
160.5	855.374
161.0	867.398
161.5	878.754
162.0	889.442
162.5	899.128
163.0	908.146
163.5	916.496
164.0	923.844
164.5	930.524
165.0	936.536
165.5	941.546
166.0	946.556
166.5	950.898

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167.0	954.906
167.5	957.912
168.0	960.918
168.5	963.256
169.0	965.594
169.5	967.932
170.0	969.602
170.5	971.272
171.0	972.608
171.5	973.944
172.0	975.280
172.5	975.948
173.0	976.950
173.5	977.618
174.0	977.952
174.5	978.286
175.0	978.620
175.5	978.620
176.0	978.620
176.5	978.286
177.0	977.952
177.5	977.952
178.0	977.952
178.5	977.618
179.0	977.284
179.5	977.284
180.0	976.950



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Zone	Lumens	%Lamp	%Fixt
0-20	1009.84	N.A.	30.00
0-30	1783.62	N.A.	53.00
0-40	1962.24	N.A.	58.30
0-60	1999.02	N.A.	59.40
0-80	2001.94	N.A.	59.50
0-90	2002.15	N.A.	59.50
10-90	1655.27	N.A.	49.20
20-40	952.39	N.A.	28.30
20-50	980.82	N.A.	29.10
40-70	39.08	N.A.	1.20
60-80	2.93	N.A.	0.10
70-80	0.62	N.A.	0.00
80-90	0.21	N.A.	0.00
90-110	51.96	N.A.	1.50
90-120	136.79	N.A.	4.10
90-130	277.42	N.A.	8.20
90-150	703.42	N.A.	20.90
90-180	1363.88	N.A.	40.50
110-180	1311.92	N.A.	39.00
0-180	3366.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	346.88
10-20	662.96
20-30	773.78
30-40	178.62
40-50	28.42
50-60	8.35
60-70	2.31
70-80	0.62
80-90	0.21
90-100	10.80
100-110	41.16
110-120	84.84
120-130	140.62
130-140	190.71
140-150	235.29
150-160	306.68
160-170	260.63
170-180	93.14

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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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	59
1	103	100	97	95	96	94	91	89	82	81	79	72	71	70	62	62	61	56
2	97	92	87	84	91	87	83	80	77	74	72	68	66	64	59	58	57	53
3	91	85	79	75	86	80	76	72	72	68	66	64	62	60	57	55	54	51
4	86	78	73	68	81	75	69	66	67	63	61	60	58	56	54	52	51	48
5	81	73	67	62	77	70	64	60	63	59	56	57	54	52	52	50	48	45
6	77	68	62	58	73	65	60	56	60	55	52	54	51	49	49	47	45	43
7	73	64	58	53	69	61	56	52	56	52	49	52	48	46	47	45	43	41
8	69	60	54	50	66	58	52	49	53	49	46	49	46	44	45	43	41	39
9	66	57	51	47	63	54	49	46	51	46	43	47	44	41	43	41	39	37
10	63	53	48	44	60	52	46	43	48	44	41	45	41	39	41	39	37	36

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## 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	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	3H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3

### UGR Viewed Endwise

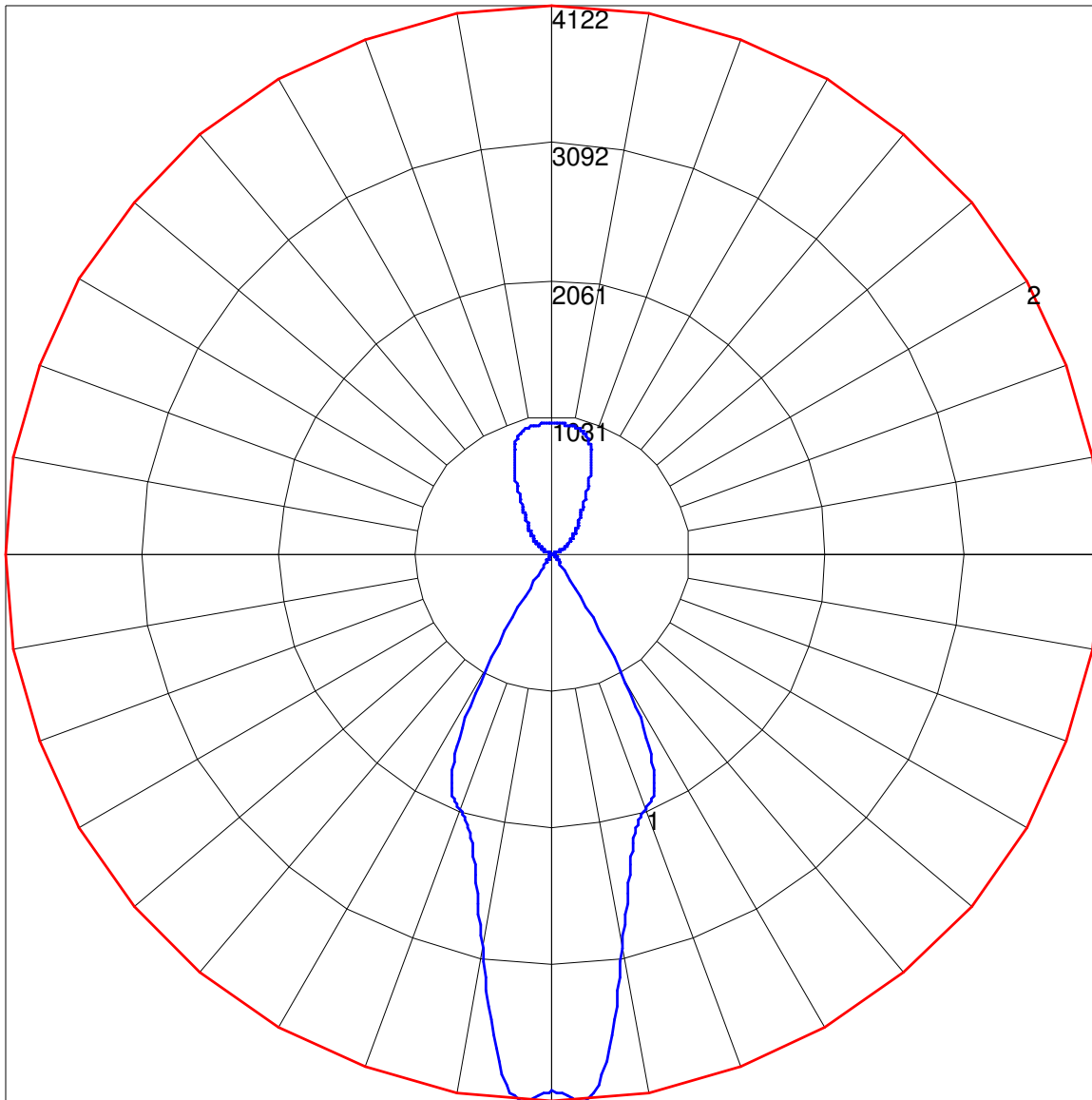
4H	2H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	3H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
8H	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
12H	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3

Maximum UGR = 4.3

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## POLAR GRAPH



Maximum Candela = 4122 Located At Horizontal Angle = 0, Vertical Angle = 3.5

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

# 2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)