



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] make from 13537338.07 and 12316380.09

[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-LM-WHD-WM

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

[MORE] medium 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	3158
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	39.5946
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	1106	1106	1106
55	637	637	637
65	371	371	371
75	178	178	178
85	36	36	36

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## CANDELA TABULATION

	<u>0</u>
0.0	4642.000
0.5	4640.000
1.0	4633.000
1.5	4622.000
2.0	4608.000
2.5	4589.000
3.0	4567.000
3.5	4541.000
4.0	4511.000
4.5	4479.000
5.0	4443.000
5.5	4403.000
6.0	4359.000
6.5	4310.000
7.0	4257.000
7.5	4199.000
8.0	4136.000
8.5	4068.000
9.0	3996.000
9.5	3918.000
10.0	3834.000
10.5	3744.000
11.0	3650.000
11.5	3551.000
12.0	3446.000
12.5	3337.000
13.0	3223.000
13.5	3105.000
14.0	2982.000
14.5	2855.000
15.0	2727.000
15.5	2597.000
16.0	2467.000
16.5	2336.000
17.0	2206.000
17.5	2080.000
18.0	1955.000
18.5	1835.000
19.0	1720.000
19.5	1609.000
20.0	1504.000
20.5	1403.000
21.0	1309.000
21.5	1220.000
22.0	1136.000
22.5	1058.000
23.0	984.400
23.5	915.800
24.0	852.100
24.5	792.600
25.0	737.400
25.5	686.100
26.0	638.000
26.5	593.600

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27.0	552.200
27.5	514.300
28.0	479.000
28.5	446.400
29.0	416.500
29.5	388.600
30.0	362.700
30.5	338.800
31.0	316.700
31.5	296.400
32.0	277.600
32.5	260.300
33.0	244.400
33.5	229.700
34.0	216.300
34.5	203.900
35.0	192.700
35.5	182.300
36.0	172.800
36.5	164.100
37.0	156.100
37.5	148.800
38.0	142.200
38.5	136.100
39.0	130.500
39.5	125.400
40.0	120.700
40.5	116.300
41.0	112.200
41.5	108.500
42.0	105.000
42.5	101.700
43.0	98.700
43.5	95.800
44.0	93.100
44.5	90.600
45.0	88.100
45.5	85.800
46.0	83.700
46.5	81.600
47.0	79.600
47.5	77.800
48.0	75.900
48.5	74.200
49.0	72.500
49.5	70.800
50.0	69.300
50.5	67.800
51.0	66.400
51.5	64.900
52.0	63.500
52.5	62.200
53.0	60.800
53.5	59.500
54.0	58.200
54.5	56.900

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55.0	55.700
55.5	54.500
56.0	53.300
56.5	52.100
57.0	50.800
57.5	49.700
58.0	48.600
58.5	47.600
59.0	46.500
59.5	45.400
60.0	44.300
60.5	43.200
61.0	42.300
61.5	41.200
62.0	40.200
62.5	39.200
63.0	38.200
63.5	37.300
64.0	36.300
64.5	35.300
65.0	34.300
65.5	33.400
66.0	32.500
66.5	31.600
67.0	30.600
67.5	29.700
68.0	28.800
68.5	27.900
69.0	27.000
69.5	26.100
70.0	25.200
70.5	24.400
71.0	23.600
71.5	22.600
72.0	21.800
72.5	21.000
73.0	20.200
73.5	19.300
74.0	18.500
74.5	17.700
75.0	16.900
75.5	16.100
76.0	15.300
76.5	14.500
77.0	13.700
77.5	13.100
78.0	12.300
78.5	11.600
79.0	10.900
79.5	10.200
80.0	9.500
80.5	8.800
81.0	8.100
81.5	7.600
82.0	6.800
82.5	6.300

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83.0	5.600
83.5	5.100
84.0	4.500
84.5	3.900
85.0	3.400
85.5	2.800
86.0	2.400
86.5	1.900
87.0	1.600
87.5	1.300
88.0	1.000
88.5	0.800
89.0	0.600
89.5	0.400
90.0	3.540
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	1134.59	N.A.	35.90
0-30	1490.12	N.A.	47.20
0-40	1618.29	N.A.	51.20
0-60	1737.76	N.A.	55.00
0-80	1789.85	N.A.	56.70
0-90	1794.17	N.A.	56.80
10-90	1389.04	N.A.	44.00
20-40	483.70	N.A.	15.30
20-50	553.11	N.A.	17.50
40-70	153.59	N.A.	4.90
60-80	52.08	N.A.	1.60
70-80	17.97	N.A.	0.60
80-90	4.32	N.A.	0.10
90-110	51.97	N.A.	1.60
90-120	136.80	N.A.	4.30
90-130	277.43	N.A.	8.80
90-150	703.43	N.A.	22.30
90-180	1363.89	N.A.	43.20
110-180	1311.92	N.A.	41.50
0-180	3158.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	405.13
10-20	729.46
20-30	355.53
30-40	128.16
40-50	69.41
50-60	50.07
60-70	34.11
70-80	17.97
80-90	4.32
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	102	99	96	93	95	92	90	88	81	79	77	70	68	67	59	59	58	54
2	96	90	86	82	90	85	81	78	75	72	70	65	63	62	57	55	54	50
3	90	83	78	73	84	78	74	70	70	66	63	62	59	57	54	52	51	48
4	85	77	71	66	80	73	68	64	65	61	58	58	55	53	52	50	48	45
5	80	72	65	61	76	68	63	59	61	57	54	55	52	50	49	47	46	43
6	76	67	61	56	72	64	58	54	58	54	51	52	49	47	47	45	44	41
7	72	63	57	52	68	60	55	51	55	51	48	50	47	45	45	43	42	39
8	69	59	53	49	65	57	51	48	52	48	45	48	45	42	44	41	40	38
9	66	56	50	46	62	54	49	45	50	46	43	46	43	40	42	40	38	36
10	63	53	48	44	60	51	46	43	47	43	41	44	41	39	41	38	37	35

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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	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	3H	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	4H	4.0	4.0	4.0	4.0	4.2	4.0	4.0	4.0	4.2
	6H	4.0	4.0	4.0	4.0	4.3	4.0	4.0	4.0	4.3
	8H	4.0	4.0	4.0	4.0	4.2	4.0	4.0	4.0	4.2
	12H	4.0	4.0	4.0	4.0	4.2	4.0	4.0	4.0	4.2

### UGR Viewed Endwise

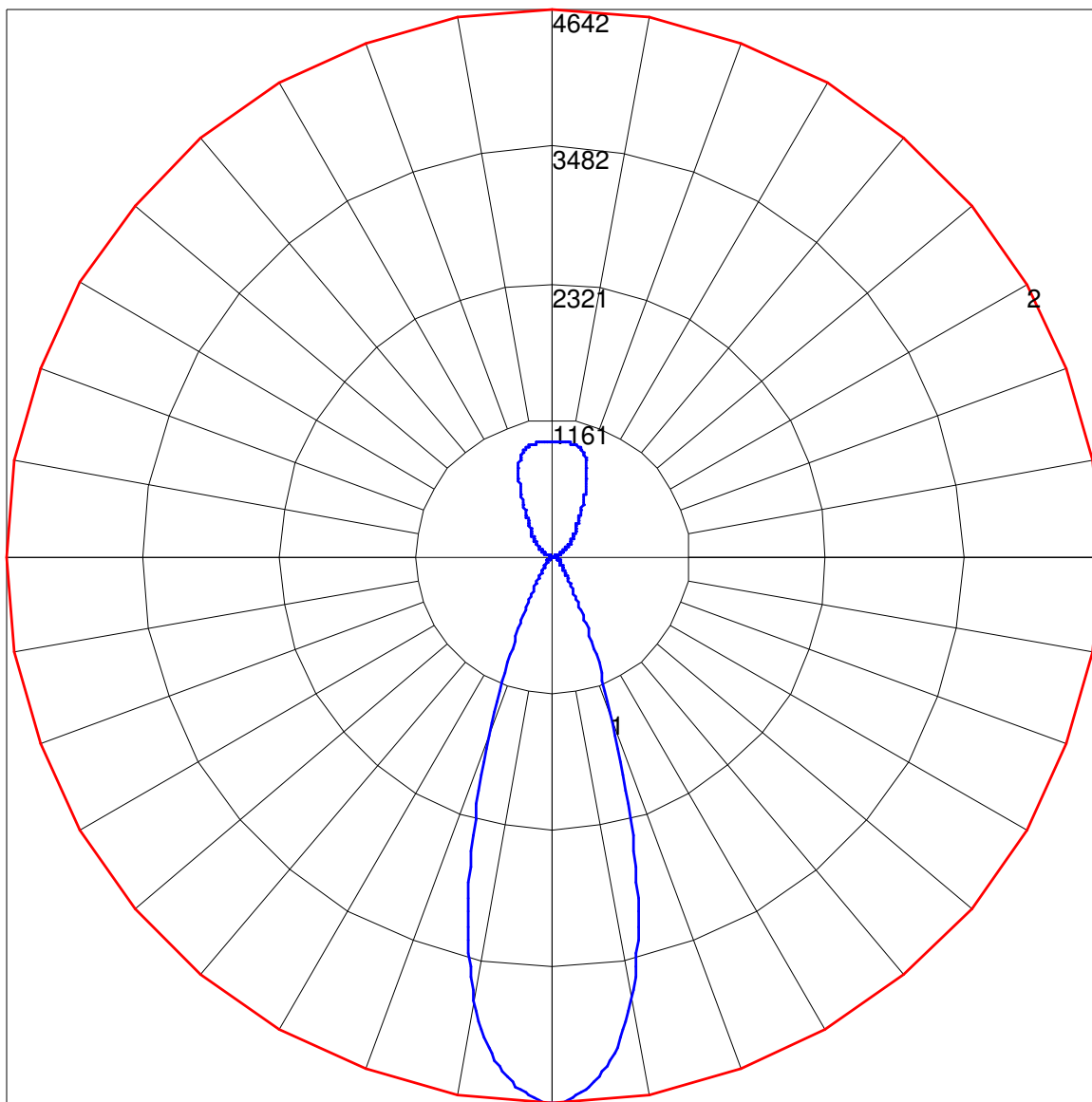
4H	2H	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	3H	4.0	4.0	4.0	4.0	4.2	4.0	4.0	4.0	4.2
	4H	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.5
	6H	4.0	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.7
	8H	4.0	4.0	4.0	4.0	4.6	4.0	4.0	4.0	4.6
	12H	4.0	4.0	4.0	4.0	4.6	4.0	4.0	4.0	4.6
8H	4H	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.5
	6H	4.0	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.7
	8H	4.0	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.7
	12H	4.0	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.7
12H	4H	4.0	4.0	4.0	4.0	4.4	4.0	4.0	4.0	4.4
	6H	4.0	4.0	4.0	4.0	4.6	4.0	4.0	4.0	4.6
	8H	4.0	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.7

Maximum UGR = 4.7

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## POLAR GRAPH



Maximum Candela = 4642 Located At Horizontal Angle = 0, Vertical Angle = 0

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

# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)