



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] made from 13537338.06 and 12316380.09

[TESTLAB]

[ISSUEDATE] 02/10/2021

[MANUFAC] WILLIAMS INDOOR

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

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

[LUMINAIRE] White formed aluminum housing, wide distrib anodized aluminum reflector trim w/clear cover glass 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	3496
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
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	3.560
90.5	3.293
91.0	3.293
91.5	3.325
92.0	3.358
92.5	3.390
93.0	3.423
93.5	3.488
94.0	3.553
94.5	3.586
95.0	3.651
95.5	3.716
96.0	3.782
96.5	3.847
97.0	3.912
97.5	3.977
98.0	4.042
98.5	4.140
99.0	4.205
99.5	4.271
100.0	4.368
100.5	4.466
101.0	4.531
101.5	4.629
102.0	4.727
102.5	4.825
103.0	4.923
103.5	5.020
104.0	5.118
104.5	5.249
105.0	5.379
105.5	5.477
106.0	5.607
106.5	5.738
107.0	5.868
107.5	5.966
108.0	6.129
108.5	6.259
109.0	6.390
109.5	6.553
110.0	6.716
110.5	6.911

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111.0	7.074
111.5	7.237
112.0	7.433
112.5	7.661
113.0	7.857
113.5	8.085
114.0	8.313
114.5	8.541
115.0	8.802
115.5	9.063
116.0	9.324
116.5	9.617
117.0	9.910
117.5	10.236
118.0	10.562
118.5	10.888
119.0	11.280
119.5	11.638
120.0	12.095
120.5	12.518
121.0	12.975
121.5	13.496
122.0	14.018
122.5	14.572
123.0	15.192
123.5	15.844
124.0	16.561
124.5	17.311
125.0	18.158
125.5	19.038
126.0	20.049
126.5	21.125
127.0	22.298
127.5	23.472
128.0	24.711
128.5	25.982
129.0	27.351
129.5	28.818
130.0	30.448
130.5	32.176
131.0	33.969
131.5	35.860
132.0	37.946
132.5	40.261
133.0	42.934
133.5	45.999
134.0	49.454
134.5	53.399
135.0	58.061
135.5	63.994
136.0	71.753
136.5	81.761
137.0	94.214
137.5	108.917
138.0	126.064
138.5	145.461

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139.0	166.684
139.5	189.797
140.0	214.801
140.5	242.479
141.0	272.960
141.5	305.625
142.0	340.996
142.5	378.812
143.0	419.236
143.5	462.594
144.0	508.886
144.5	557.460
145.0	607.664
145.5	658.194
146.0	708.398
146.5	759.254
147.0	810.110
147.5	861.944
148.0	913.778
148.5	965.286
149.0	1015.816
149.5	1066.020
150.0	1114.594
150.5	1161.538
151.0	1206.852
151.5	1249.884
152.0	1290.960
152.5	1328.776
153.0	1363.658
153.5	1395.606
154.0	1423.968
154.5	1450.374
155.0	1473.520
155.5	1495.036
156.0	1512.966
156.5	1527.636
157.0	1540.024
157.5	1550.130
158.0	1557.302
158.5	1562.844
159.0	1566.104
159.5	1568.060
160.0	1568.060
160.5	1567.082
161.0	1565.126
161.5	1562.844
162.0	1559.258
162.5	1555.020
163.0	1550.130
163.5	1544.262
164.0	1539.372
164.5	1533.504
165.0	1528.288
165.5	1523.072
166.0	1517.856
166.5	1512.640

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167.0	1507.424
167.5	1501.230
168.0	1495.362
168.5	1489.168
169.0	1482.648
169.5	1476.454
170.0	1469.934
170.5	1463.740
171.0	1457.546
171.5	1451.678
172.0	1445.158
172.5	1437.334
173.0	1428.532
173.5	1418.426
174.0	1407.994
174.5	1398.540
175.0	1389.412
175.5	1381.262
176.0	1373.764
176.5	1366.918
177.0	1359.420
177.5	1352.574
178.0	1346.054
178.5	1339.534
179.0	1336.274
179.5	1333.992
180.0	1332.688

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Zone	Lumens	%Lamp	%Fixt
0-20	1134.59	N.A.	32.50
0-30	1490.12	N.A.	42.60
0-40	1618.29	N.A.	46.30
0-60	1737.76	N.A.	49.70
0-80	1789.85	N.A.	51.20
0-90	1794.17	N.A.	51.30
10-90	1389.04	N.A.	39.70
20-40	483.70	N.A.	13.80
20-50	553.11	N.A.	15.80
40-70	153.59	N.A.	4.40
60-80	52.08	N.A.	1.50
70-80	17.97	N.A.	0.50
80-90	4.32	N.A.	0.10
90-110	9.77	N.A.	0.30
90-120	18.66	N.A.	0.50
90-130	35.76	N.A.	1.00
90-150	477.02	N.A.	13.60
90-180	1701.54	N.A.	48.70
110-180	1691.77	N.A.	48.40
0-180	3495.71	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	4.05
100-110	5.72
110-120	8.89
120-130	17.09
130-140	60.18
140-150	381.08
150-160	654.68
160-170	434.29
170-180	135.54

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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	101	97	94	92	93	90	88	86	77	76	74	66	64	63	55	54	53	48
2	94	89	84	80	87	83	79	75	72	69	66	61	60	58	52	51	50	46
3	88	81	76	71	82	76	71	68	67	63	60	58	55	53	49	48	47	43
4	83	75	69	64	77	70	65	61	62	58	55	54	52	50	47	45	44	41
5	78	69	63	59	73	66	60	56	58	54	51	51	49	46	45	43	42	39
6	74	65	58	54	69	61	56	52	55	51	48	49	46	44	43	41	40	37
7	70	61	54	50	66	58	52	48	52	48	45	46	43	41	41	39	38	36
8	67	57	51	47	63	54	49	45	49	45	42	44	41	39	40	38	36	34
9	63	54	48	44	60	51	46	42	47	43	40	42	39	37	38	36	35	33
10	60	51	45	41	57	49	44	40	45	41	38	41	38	36	37	35	33	32

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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	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	3H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

UGR Viewed Endwise

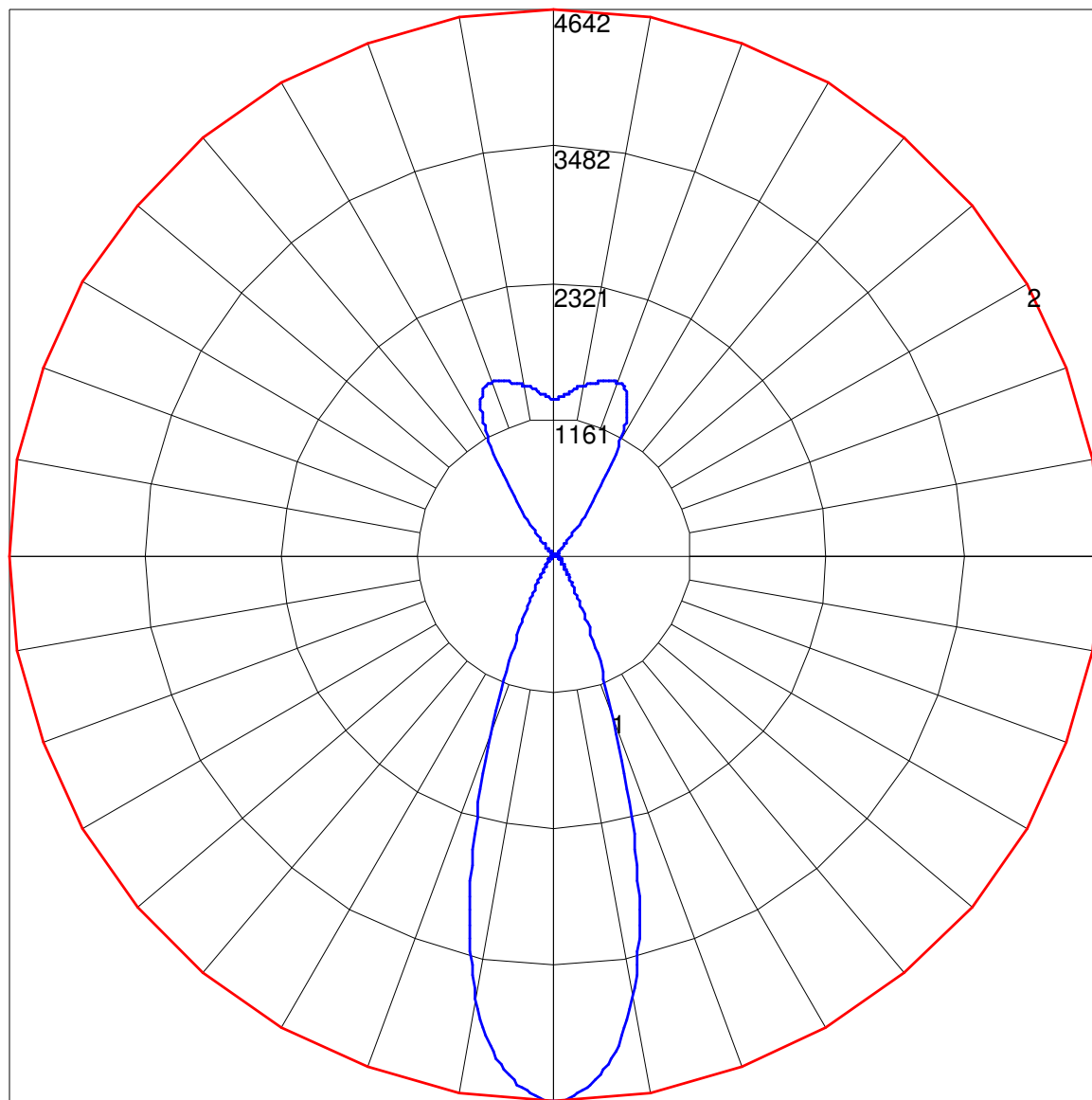
4H	2H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	3H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8H	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
12H	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

Maximum UGR = 4.4

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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.)