



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OW-CSU-LM-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.03 and #12326812.09

[TESTLAB]

[ISSUEDATE] 17-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L20-835D-L20-835D-xxx-DIM1-UNV-OW-CSU-LM-WHD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trim, clear uplight glass lens enclosure, medium distr flush prismatic lens down

[LAMP] Two white LEDs (one up/one down)

[_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	3651
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	38.0105
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)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	783	783	783
55	425	425	425
65	242	242	242
75	118	118	118
85	26	26	26

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CANDELA TABULATION

	<u>0</u>
0.0	4338.000
0.5	4336.000
1.0	4330.000
1.5	4321.000
2.0	4309.000
2.5	4292.000
3.0	4273.000
3.5	4251.000
4.0	4225.000
4.5	4198.000
5.0	4168.000
5.5	4134.000
6.0	4097.000
6.5	4056.000
7.0	4012.000
7.5	3964.000
8.0	3911.000
8.5	3854.000
9.0	3794.000
9.5	3730.000
10.0	3661.000
10.5	3588.000
11.0	3510.000
11.5	3426.000
12.0	3339.000
12.5	3247.000
13.0	3151.000
13.5	3050.000
14.0	2946.000
14.5	2838.000
15.0	2728.000
15.5	2616.000
16.0	2504.000
16.5	2391.000
17.0	2281.000
17.5	2171.000
18.0	2060.000
18.5	1951.000
19.0	1843.000
19.5	1739.000
20.0	1638.000
20.5	1541.000
21.0	1450.000
21.5	1363.000
22.0	1276.000
22.5	1194.000
23.0	1116.000
23.5	1042.000
24.0	973.100
24.5	907.900
25.0	847.000
25.5	789.600
26.0	736.400
26.5	686.600

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27.0	640.300
27.5	597.400
28.0	557.400
28.5	520.400
29.0	486.100
29.5	454.100
30.0	424.500
30.5	396.900
31.0	371.300
31.5	347.500
32.0	325.300
32.5	304.700
33.0	285.500
33.5	267.600
34.0	251.100
34.5	235.800
35.0	221.500
35.5	208.400
36.0	196.200
36.5	185.100
37.0	174.800
37.5	165.400
38.0	156.900
38.5	149.000
39.0	141.800
39.5	135.200
40.0	129.200
40.5	123.600
41.0	118.500
41.5	113.800
42.0	109.400
42.5	105.400
43.0	101.600
43.5	98.100
44.0	94.900
44.5	91.800
45.0	88.900
45.5	86.200
46.0	83.700
46.5	81.300
47.0	79.000
47.5	76.800
48.0	74.800
48.5	72.800
49.0	70.900
49.5	69.100
50.0	67.400
50.5	65.700
51.0	64.100
51.5	62.500
52.0	61.000
52.5	59.600
53.0	58.100
53.5	56.700
54.0	55.400
54.5	54.100

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55.0	52.800
55.5	51.500
56.0	50.300
56.5	49.100
57.0	47.900
57.5	46.700
58.0	45.600
58.5	44.500
59.0	43.400
59.5	42.400
60.0	41.400
60.5	40.300
61.0	39.300
61.5	38.300
62.0	37.300
62.5	36.400
63.0	35.400
63.5	34.500
64.0	33.600
64.5	32.700
65.0	31.700
65.5	30.800
66.0	29.900
66.5	29.100
67.0	28.200
67.5	27.300
68.0	26.500
68.5	25.700
69.0	24.800
69.5	24.000
70.0	23.200
70.5	22.400
71.0	21.700
71.5	20.900
72.0	20.100
72.5	19.400
73.0	18.600
73.5	17.900
74.0	17.200
74.5	16.500
75.0	15.800
75.5	15.100
76.0	14.400
76.5	13.700
77.0	13.000
77.5	12.400
78.0	11.700
78.5	11.100
79.0	10.500
79.5	9.800
80.0	9.200
80.5	8.600
81.0	8.000
81.5	7.400
82.0	6.800
82.5	6.200

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83.0	5.700
83.5	5.100
84.0	4.600
84.5	4.000
85.0	3.500
85.5	3.000
86.0	2.500
86.5	2.100
87.0	1.700
87.5	1.400
88.0	1.100
88.5	0.900
89.0	0.700
89.5	0.500
90.0	3.878
90.5	3.607
91.0	3.635
91.5	3.664
92.0	3.720
92.5	3.749
93.0	3.806
93.5	3.862
94.0	3.919
94.5	4.004
95.0	4.061
95.5	4.146
96.0	4.203
96.5	4.288
97.0	4.374
97.5	4.459
98.0	4.544
98.5	4.629
99.0	4.714
99.5	4.800
100.0	4.913
100.5	5.027
101.0	5.112
101.5	5.254
102.0	5.311
102.5	5.453
103.0	5.566
103.5	5.680
104.0	5.822
104.5	5.964
105.0	6.078
105.5	6.220
106.0	6.362
106.5	6.532
107.0	6.674
107.5	6.816
108.0	6.986
108.5	7.157
109.0	7.299
109.5	7.469
110.0	7.668
110.5	7.867

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111.0	8.066
111.5	8.293
112.0	8.520
112.5	8.719
113.0	8.974
113.5	9.230
114.0	9.486
114.5	9.770
115.0	10.054
115.5	10.366
116.0	10.678
116.5	11.019
117.0	11.360
117.5	11.729
118.0	12.127
118.5	12.524
119.0	12.979
119.5	13.405
120.0	13.916
120.5	14.427
121.0	14.967
121.5	15.563
122.0	16.216
122.5	16.898
123.0	17.636
123.5	18.403
124.0	19.255
124.5	20.136
125.0	21.073
125.5	22.095
126.0	23.146
126.5	24.367
127.0	25.617
127.5	26.866
128.0	28.088
128.5	29.366
129.0	30.729
129.5	32.120
130.0	33.484
130.5	34.904
131.0	36.352
131.5	37.886
132.0	39.561
132.5	41.350
133.0	43.338
133.5	45.412
134.0	47.627
134.5	50.183
135.0	53.335
135.5	57.226
136.0	62.224
136.5	69.012
137.0	78.469
137.5	91.533
138.0	108.204
138.5	128.340

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139.0	152.224
139.5	180.170
140.0	212.460
140.5	248.869
141.0	290.248
141.5	336.824
142.0	387.944
142.5	443.608
143.0	503.532
143.5	566.012
144.0	629.912
144.5	692.960
145.0	755.156
145.5	817.636
146.0	880.400
146.5	943.164
147.0	1006.496
147.5	1068.692
148.0	1128.616
148.5	1185.416
149.0	1239.660
149.5	1290.212
150.0	1336.504
150.5	1377.968
151.0	1415.456
151.5	1448.968
152.0	1478.504
152.5	1504.348
153.0	1526.216
153.5	1545.528
154.0	1561.716
154.5	1574.780
155.0	1585.004
155.5	1592.388
156.0	1596.648
156.5	1597.216
157.0	1594.660
157.5	1590.684
158.0	1584.720
158.5	1577.904
159.0	1569.952
159.5	1561.716
160.0	1552.912
160.5	1544.108
161.0	1534.736
161.5	1525.080
162.0	1515.708
162.5	1506.904
163.0	1497.816
163.5	1489.864
164.0	1482.480
164.5	1475.664
165.0	1469.700
165.5	1463.168
166.0	1457.204
166.5	1450.956

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167.0	1444.992
167.5	1439.028
168.0	1433.064
168.5	1427.384
169.0	1421.420
169.5	1415.172
170.0	1408.356
170.5	1400.688
171.0	1392.168
171.5	1382.512
172.0	1370.300
172.5	1357.236
173.0	1343.320
173.5	1328.836
174.0	1314.068
174.5	1299.300
175.0	1285.384
175.5	1271.752
176.0	1258.404
176.5	1245.056
177.0	1232.276
177.5	1220.632
178.0	1210.976
178.5	1203.024
179.0	1197.060
179.5	1193.368
180.0	1192.516

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Zone	Lumens	%Lamp	%Fixt
0-20	1115.67	N.A.	30.60
0-30	1519.73	N.A.	41.60
0-40	1666.66	N.A.	45.60
0-60	1784.78	N.A.	48.90
0-80	1833.11	N.A.	50.20
0-90	1837.48	N.A.	50.30
10-90	1455.46	N.A.	39.90
20-40	550.99	N.A.	15.10
20-50	621.53	N.A.	17.00
40-70	149.66	N.A.	4.10
60-80	48.33	N.A.	1.30
70-80	16.78	N.A.	0.50
80-90	4.37	N.A.	0.10
90-110	11.00	N.A.	0.30
90-120	21.18	N.A.	0.60
90-130	40.77	N.A.	1.10
90-150	558.11	N.A.	15.30
90-180	1813.51	N.A.	49.70
110-180	1802.51	N.A.	49.40
0-180	3650.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	382.01
10-20	733.66
20-30	404.06
30-40	146.93
40-50	70.54
50-60	47.57
60-70	31.55
70-80	16.78
80-90	4.37
90-100	4.50
100-110	6.50
110-120	10.18
120-130	19.59
130-140	55.74
140-150	461.60
150-160	708.42
160-170	419.91
170-180	127.07

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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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	100	97	94	91	93	90	87	85	77	75	74	65	64	63	54	53	52	47
2	94	88	84	80	87	82	78	75	71	68	66	61	59	57	51	50	49	45
3	88	81	75	71	82	76	71	67	66	62	60	57	55	53	49	47	46	42
4	83	74	68	64	77	70	65	61	61	58	55	54	51	49	46	45	43	40
5	78	69	63	58	73	65	59	55	57	53	50	51	48	46	44	42	41	38
6	73	64	58	53	69	61	55	51	54	50	47	48	45	43	42	40	39	36
7	69	60	54	49	65	57	51	47	51	47	44	46	42	40	40	38	37	35
8	66	56	50	46	62	53	48	44	48	44	41	43	40	38	39	37	35	33
9	63	53	47	43	59	50	45	41	46	42	39	41	38	36	37	35	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	34	36	34	32	30

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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	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	3H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	4H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	6H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	8H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	12H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

UGR Viewed Endwise

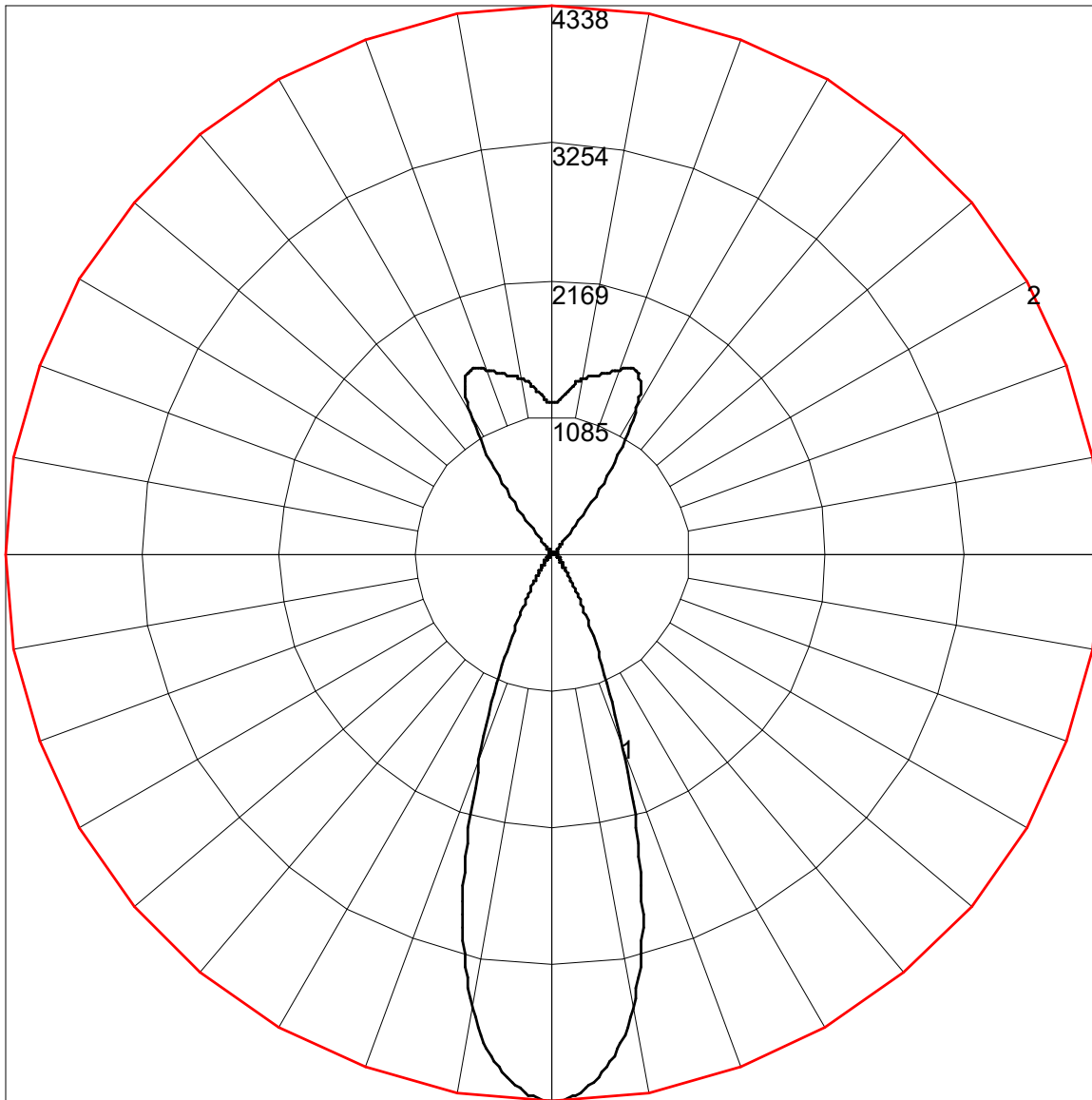
4H	2H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	3H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	4H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	6H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	8H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	12H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
8H	4H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	6H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	8H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	12H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
12H	4H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	6H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	8H	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

Maximum UGR = 4.5

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POLAR GRAPH



Maximum Candela = 4338 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (90 - 270)

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