



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 and #12326812.09

[TESTLAB]

[ISSUE DATE] 16-FEB-2021

[MANUFAC] WILLIAMS, INDOOR

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

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

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

[MORE] medium distrib white painted flush prismatic lens trim 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	3396
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
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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	<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	4.004
90.5	3.793
91.0	4.028
91.5	4.469
92.0	5.027
92.5	5.704
93.0	6.439
93.5	7.262
94.0	8.114
94.5	8.967
95.0	9.967
95.5	11.084
96.0	12.289
96.5	13.671
97.0	15.259
97.5	16.905
98.0	18.522
98.5	20.139
99.0	21.785
99.5	23.461
100.0	25.166
100.5	26.872
101.0	28.577
101.5	30.311
102.0	32.075
102.5	33.839
103.0	35.603
103.5	37.456
104.0	39.308
104.5	41.219
105.0	43.189
105.5	45.188
106.0	47.246
106.5	49.363
107.0	51.509
107.5	53.743
108.0	56.066
108.5	58.418
109.0	60.887
109.5	63.416
110.0	66.032
110.5	68.678

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111.0	71.354
111.5	74.147
112.0	76.969
112.5	79.850
113.0	82.849
113.5	85.936
114.0	89.053
114.5	92.228
115.0	95.491
115.5	98.843
116.0	102.253
116.5	105.752
117.0	109.368
117.5	113.014
118.0	116.747
118.5	120.569
119.0	124.509
119.5	128.537
120.0	132.623
120.5	136.769
121.0	141.061
121.5	145.412
122.0	149.911
122.5	154.438
123.0	159.083
123.5	163.846
124.0	168.668
124.5	173.578
125.0	178.546
125.5	183.603
126.0	188.719
126.5	193.864
127.0	199.038
127.5	204.271
128.0	209.563
128.5	214.885
129.0	220.265
129.5	225.645
130.0	231.025
130.5	236.405
131.0	241.815
131.5	247.166
132.0	252.546
132.5	257.926
133.0	263.277
133.5	268.657
134.0	274.067
134.5	279.418
135.0	284.798
135.5	290.207
136.0	295.764
136.5	301.350
137.0	306.936
137.5	312.816
138.0	318.990
138.5	325.164

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139.0	331.632
139.5	338.394
140.0	345.156
140.5	352.506
141.0	360.444
141.5	368.382
142.0	377.202
142.5	386.610
143.0	396.606
143.5	407.190
144.0	418.068
144.5	429.828
145.0	442.470
145.5	455.406
146.0	468.636
146.5	483.042
147.0	498.624
147.5	514.794
148.0	531.552
148.5	549.486
149.0	567.714
149.5	585.942
150.0	604.464
150.5	622.692
151.0	641.802
151.5	660.618
152.0	679.434
152.5	697.956
153.0	717.360
153.5	736.764
154.0	755.580
154.5	774.690
155.0	792.918
155.5	810.852
156.0	828.198
156.5	845.250
157.0	862.008
157.5	877.590
158.0	892.878
158.5	906.990
159.0	919.926
159.5	932.274
160.0	943.740
160.5	954.324
161.0	964.026
161.5	972.552
162.0	980.784
162.5	988.134
163.0	994.308
163.5	1000.188
164.0	1005.186
164.5	1009.302
165.0	1013.418
165.5	1016.652
166.0	1019.592
166.5	1022.238

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CANDELA TABULATION - (Cont.)

167.0	1024.590
167.5	1026.942
168.0	1028.706
168.5	1030.470
169.0	1032.234
169.5	1033.410
170.0	1034.586
170.5	1036.056
171.0	1036.938
171.5	1038.114
172.0	1038.996
172.5	1040.172
173.0	1041.348
173.5	1042.524
174.0	1043.406
174.5	1044.288
175.0	1045.170
175.5	1046.052
176.0	1046.640
176.5	1046.934
177.0	1047.522
177.5	1047.522
178.0	1047.816
178.5	1048.110
179.0	1047.816
179.5	1047.816
180.0	1047.816

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Zone	Lumens	%Lamp	%Fixt
0-20	1115.67	N.A.	32.90
0-30	1519.73	N.A.	44.80
0-40	1666.66	N.A.	49.10
0-60	1784.78	N.A.	52.60
0-80	1833.11	N.A.	54.00
0-90	1837.48	N.A.	54.10
10-90	1455.47	N.A.	42.90
20-40	550.99	N.A.	16.20
20-50	621.53	N.A.	18.30
40-70	149.66	N.A.	4.40
60-80	48.33	N.A.	1.40
70-80	16.78	N.A.	0.50
80-90	4.37	N.A.	0.10
90-110	58.97	N.A.	1.70
90-120	154.58	N.A.	4.60
90-130	314.85	N.A.	9.30
90-150	816.40	N.A.	24.00
90-180	1558.51	N.A.	45.90
110-180	1499.53	N.A.	44.20
0-180	3395.99	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	12.60
100-110	46.38
110-120	95.61
120-130	160.27
130-140	220.05
140-150	281.50
150-160	359.01
160-170	283.68
170-180	99.41

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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	101	98	95	93	94	91	89	87	79	77	76	68	66	65	57	56	56	51
2	95	89	85	81	88	84	80	77	73	70	68	63	61	60	54	53	52	48
3	89	82	77	72	83	77	72	69	68	65	62	60	57	55	52	50	49	45
4	84	76	70	65	78	72	66	62	64	60	57	56	53	51	49	47	46	43
5	79	70	64	59	74	67	61	57	60	56	52	53	50	48	47	45	43	41
6	75	65	59	55	70	62	57	53	56	52	49	50	47	45	45	43	41	39
7	71	61	55	51	67	58	53	49	53	49	46	48	45	43	43	41	39	37
8	67	58	52	47	64	55	50	46	50	46	43	46	43	40	41	39	37	36
9	64	54	49	45	61	52	47	43	48	44	41	44	41	38	40	38	36	34
10	61	52	46	42	58	49	44	41	46	41	39	42	39	37	38	36	34	33

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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

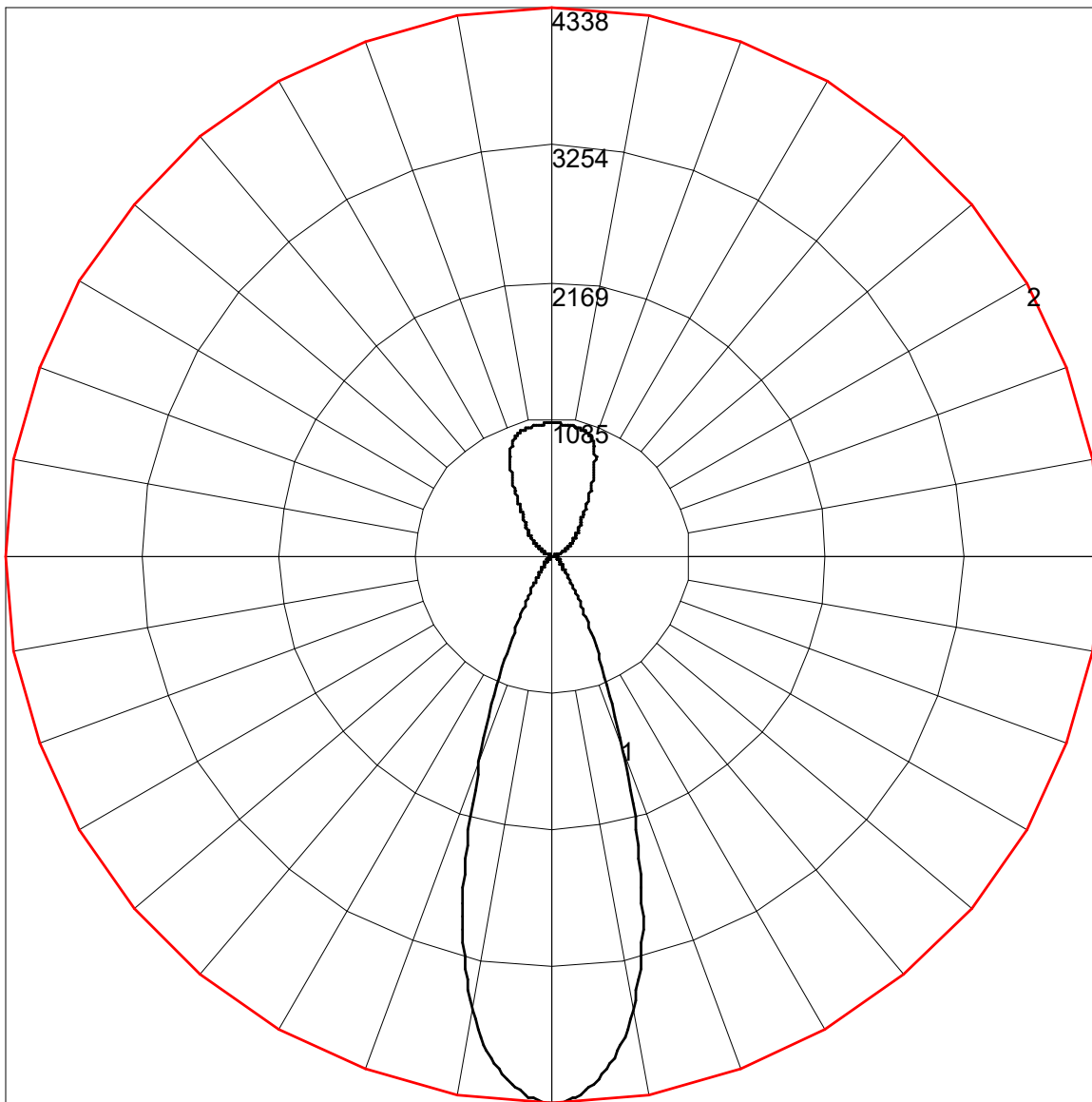
4H	2H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	3H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
8H	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	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 = 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.)