



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 and #12326812.07

[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-LW-WHD

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

[MORE] wide 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	3120
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	38.0038
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	2475	2475	2475
55	1530	1530	1530
65	812	812	812
75	353	353	353
85	78	78	78

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	<u>0</u>
0.0	993.300
0.5	993.100
1.0	992.300
1.5	991.100
2.0	989.600
2.5	987.600
3.0	985.600
3.5	983.300
4.0	981.200
4.5	979.100
5.0	977.600
5.5	976.200
6.0	974.900
6.5	973.600
7.0	972.200
7.5	970.900
8.0	969.600
8.5	968.400
9.0	967.200
9.5	966.200
10.0	965.200
10.5	964.400
11.0	963.700
11.5	963.300
12.0	962.600
12.5	961.900
13.0	960.900
13.5	959.600
14.0	958.000
14.5	956.200
15.0	954.300
15.5	951.900
16.0	949.300
16.5	946.700
17.0	944.100
17.5	941.400
18.0	938.500
18.5	935.200
19.0	931.500
19.5	927.400
20.0	922.700
20.5	917.600
21.0	911.300
21.5	903.800
22.0	895.300
22.5	885.700
23.0	875.200
23.5	863.800
24.0	851.200
24.5	837.600
25.0	822.900
25.5	807.600
26.0	791.300
26.5	774.300

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27.0	756.200
27.5	737.600
28.0	718.000
28.5	697.300
29.0	675.800
29.5	653.200
30.0	630.000
30.5	606.100
31.0	582.200
31.5	558.100
32.0	534.700
32.5	512.300
33.0	490.800
33.5	470.700
34.0	452.200
34.5	435.400
35.0	420.400
35.5	406.600
36.0	394.500
36.5	383.400
37.0	373.500
37.5	364.600
38.0	356.500
38.5	349.100
39.0	342.100
39.5	335.800
40.0	329.700
40.5	324.000
41.0	318.700
41.5	313.500
42.0	308.500
42.5	303.900
43.0	299.200
43.5	294.600
44.0	290.100
44.5	285.700
45.0	281.200
45.5	276.900
46.0	272.500
46.5	268.100
47.0	263.600
47.5	259.200
48.0	254.700
48.5	250.200
49.0	245.700
49.5	241.000
50.0	236.500
50.5	231.900
51.0	227.300
51.5	222.600
52.0	217.900
52.5	213.200
53.0	208.500
53.5	203.800
54.0	199.300
54.5	194.700

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55.0	189.900
55.5	185.200
56.0	180.500
56.5	176.100
57.0	171.700
57.5	167.100
58.0	162.500
58.5	158.000
59.0	153.600
59.5	149.200
60.0	145.000
60.5	140.800
61.0	136.700
61.5	132.600
62.0	128.700
62.5	124.800
63.0	121.000
63.5	117.200
64.0	113.500
64.5	109.900
65.0	106.300
65.5	102.800
66.0	99.310
66.5	95.880
67.0	92.490
67.5	89.170
68.0	85.910
68.5	82.640
69.0	79.470
69.5	76.330
70.0	73.280
70.5	70.330
71.0	67.440
71.5	64.640
72.0	61.940
72.5	59.320
73.0	56.770
73.5	54.270
74.0	51.870
74.5	49.520
75.0	47.210
75.5	44.980
76.0	42.790
76.5	40.640
77.0	38.550
77.5	36.500
78.0	34.510
78.5	32.560
79.0	30.650
79.5	28.810
80.0	26.980
80.5	25.210
81.0	23.460
81.5	21.720
82.0	20.020
82.5	18.330

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83.0	16.680
83.5	15.060
84.0	13.460
84.5	11.890
85.0	10.360
85.5	8.880
86.0	7.450
86.5	6.070
87.0	4.730
87.5	3.610
88.0	2.760
88.5	2.020
89.0	1.400
89.5	0.880
90.0	4.264
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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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	361.83	N.A.	11.60
0-30	731.40	N.A.	23.40
0-40	1005.44	N.A.	32.20
0-60	1392.38	N.A.	44.60
0-80	1549.11	N.A.	49.60
0-90	1561.6	N.A.	50.00
10-90	1468.65	N.A.	47.10
20-40	643.61	N.A.	20.60
20-50	860.77	N.A.	27.60
40-70	492.90	N.A.	15.80
60-80	156.73	N.A.	5.00
70-80	50.77	N.A.	1.60
80-90	12.49	N.A.	0.40
90-110	58.98	N.A.	1.90
90-120	154.59	N.A.	5.00
90-130	314.86	N.A.	10.10
90-150	816.41	N.A.	26.20
90-180	1558.51	N.A.	50.00
110-180	1499.53	N.A.	48.10
0-180	3120.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	92.95
10-20	268.87
20-30	369.57
30-40	274.04
40-50	217.15
50-60	169.79
60-70	105.96
70-80	50.77
80-90	12.49
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	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	83	83	83	69	69	69	56	56	56	50
1	99	95	91	88	91	88	85	82	75	72	71	62	61	60	51	50	49	44
2	91	84	79	74	84	78	73	69	67	63	60	56	54	52	46	45	43	39
3	84	75	68	63	77	70	64	59	60	56	52	51	48	45	42	40	38	34
4	77	67	60	54	71	63	56	51	54	49	45	46	43	40	39	36	34	31
5	71	61	53	48	66	57	50	45	49	44	40	42	38	35	35	33	31	27
6	66	55	47	42	61	51	45	40	45	40	36	39	35	32	33	30	28	25
7	62	50	43	38	57	47	40	36	41	36	32	36	32	29	30	27	25	23
8	57	46	39	34	53	43	37	32	38	33	29	33	29	26	28	25	23	21
9	54	42	35	30	50	40	33	29	35	30	26	31	27	24	26	23	21	19
10	50	39	32	28	47	37	31	27	33	28	24	29	25	22	25	22	20	18

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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	7.1	7.9	8.1	8.9	10.1	7.1	7.9	8.1	8.9	10.1
	3H	7.9	8.6	8.9	9.6	10.9	7.9	8.6	8.9	9.6	10.9
	4H	8.1	8.8	9.1	9.7	11.1	8.1	8.8	9.1	9.7	11.1
	6H	8.2	8.8	9.2	9.8	11.1	8.2	8.8	9.2	9.8	11.1
	8H	8.1	8.7	9.1	9.7	11.0	8.1	8.7	9.1	9.7	11.0
	12H	8.1	8.7	9.1	9.7	11.0	8.1	8.7	9.1	9.7	11.0

UGR Viewed Endwise

4H	2H	7.3	7.9	8.3	8.9	10.2	7.3	7.9	8.3	8.9	10.2
	3H	8.2	8.7	9.2	9.8	11.1	8.2	8.7	9.2	9.8	11.1
	4H	8.5	9.0	9.5	10.0	11.3	8.5	9.0	9.5	10.0	11.3
	6H	8.6	9.0	9.6	10.0	11.4	8.6	9.0	9.6	10.0	11.4
	8H	8.6	9.0	9.6	10.0	11.4	8.6	9.0	9.6	10.0	11.4
	12H	8.5	8.9	9.6	9.9	11.3	8.5	8.9	9.6	9.9	11.3

8H	4H	8.4	8.8	9.5	9.9	11.2	8.4	8.8	9.5	9.9	11.2
	6H	8.6	8.9	9.7	10.0	11.4	8.6	8.9	9.7	10.0	11.4
	8H	8.6	8.9	9.7	10.0	11.3	8.6	8.9	9.7	10.0	11.3
	12H	8.6	8.9	9.7	9.9	11.3	8.6	8.9	9.7	9.9	11.3

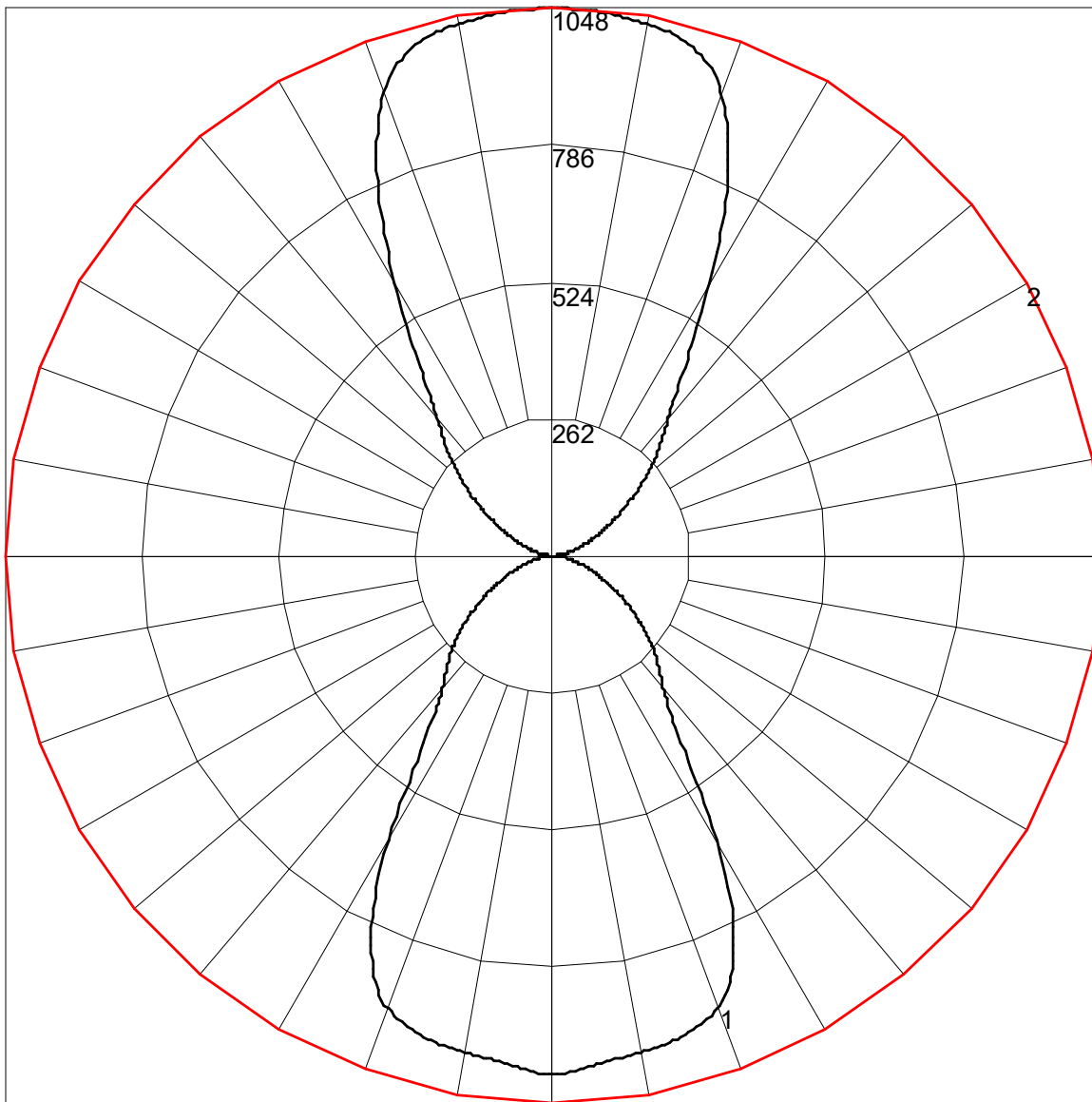
12H	4H	8.4	8.7	9.4	9.8	11.2	8.4	8.7	9.4	9.8	11.2
	6H	8.6	8.9	9.6	9.9	11.3	8.6	8.9	9.6	9.9	11.3
	8H	8.6	8.9	9.7	9.9	11.3	8.6	8.9	9.7	9.9	11.3

Maximum UGR = 11.4

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POLAR GRAPH



Maximum Candela = 1048.11 Located At Horizontal Angle = 0, Vertical Angle = 178.5

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

2 - Horizontal Cone Through Vertical Angle (178.5) (Through Max. Cd.)