

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-835-WH-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 4792018053.02  
[TESTLAB] UL, LLC  
[ISSUE DATE] 2025-12-10  
[TEST DATE] 11/11/2025  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] 4LDR-L20-835-WH-DIM-UNV  
[LUMINAIRE] 4" recessed downlight with textured white finish reflector  
[MORE] and top diffuser lens  
[LAMP] LED  
[BALLAST] 0-10V LED DRIVER

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1726
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	17
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	1.04
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 ft (Diameter)
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	41249	41249	41249
55	27727	27727	27727
65	20885	20885	20885
75	15859	15859	15859
85	11599	11599	11599

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CANDELA TABULATION

	<u>0</u>
0.0	1176.988
0.5	1177.610
1.0	1176.988
1.5	1176.366
2.0	1175.744
2.5	1175.122
3.0	1173.879
3.5	1172.635
4.0	1171.392
4.5	1169.527
5.0	1168.283
5.5	1165.796
6.0	1164.553
6.5	1161.444
7.0	1158.957
7.5	1155.848
8.0	1153.361
8.5	1150.252
9.0	1146.522
9.5	1142.791
10.0	1139.682
10.5	1135.952
11.0	1132.221
11.5	1127.869
12.0	1122.895
12.5	1118.543
13.0	1114.190
13.5	1108.594
14.0	1103.620
14.5	1098.646
15.0	1093.050
15.5	1087.455
16.0	1081.237
16.5	1075.641
17.0	1069.424
17.5	1062.584
18.0	1056.367
18.5	1049.527
19.0	1042.066
19.5	1034.605
20.0	1026.522
20.5	1018.439
21.0	1009.735
21.5	999.787
22.0	989.839
22.5	979.269
23.0	968.077
23.5	955.642
24.0	941.963
24.5	928.906
25.0	913.984
25.5	899.062
26.0	884.762
26.5	868.596

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**CANDELA TABULATION - (Cont.)**

27.0	852.430
27.5	835.021
28.0	818.233
28.5	801.446
29.0	784.659
29.5	769.115
30.0	752.949
30.5	735.540
31.0	718.130
31.5	700.099
32.0	682.690
32.5	665.281
33.0	647.872
33.5	631.084
34.0	613.924
34.5	597.198
35.0	580.722
35.5	564.370
36.0	548.266
36.5	532.287
37.0	516.556
37.5	501.075
38.0	485.842
38.5	470.609
39.0	455.749
39.5	441.013
40.0	426.588
40.5	412.288
41.0	398.360
41.5	384.619
42.0	371.376
42.5	358.319
43.0	345.760
43.5	333.573
44.0	321.760
44.5	310.444
45.0	299.563
45.5	289.117
46.0	279.169
46.5	269.719
47.0	260.703
47.5	252.185
48.0	244.102
48.5	236.392
49.0	229.118
49.5	222.154
50.0	215.626
50.5	209.346
51.0	203.439
51.5	197.781
52.0	192.372
52.5	187.149
53.0	182.113
53.5	177.201
54.0	172.476
54.5	167.875

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**CANDELA TABULATION - (Cont.)**

55.0	163.336
55.5	159.046
56.0	154.942
56.5	150.901
57.0	146.859
57.5	142.880
58.0	138.901
58.5	134.921
59.0	131.067
59.5	127.336
60.0	123.605
60.5	119.999
61.0	116.393
61.5	112.973
62.0	109.554
62.5	106.258
63.0	103.025
63.5	99.854
64.0	96.621
64.5	93.637
65.0	90.652
65.5	87.730
66.0	84.808
66.5	82.010
67.0	79.274
67.5	76.601
68.0	73.989
68.5	71.378
69.0	68.829
69.5	66.342
70.0	63.917
70.5	61.554
71.0	59.191
71.5	56.891
72.0	54.653
72.5	52.476
73.0	50.300
73.5	48.248
74.0	46.197
74.5	44.145
75.0	42.155
75.5	40.228
76.0	38.362
76.5	36.497
77.0	34.694
77.5	32.891
78.0	31.212
78.5	29.471
79.0	27.793
79.5	26.176
80.0	24.559
80.5	23.005
81.0	21.451
81.5	19.958
82.0	18.528
82.5	17.098

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CANDELA TABULATION - (Cont.)

83.0	15.668
83.5	14.300
84.0	12.995
84.5	11.627
85.0	10.383
85.5	9.140
86.0	7.896
86.5	6.715
87.0	5.534
87.5	4.414
88.0	3.357
88.5	2.301
89.0	1.368
89.5	0.622
90.0	0.000
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

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CANDELA TABULATION - (Cont.)

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
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120.5	0.000
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122.0	0.000
122.5	0.000
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125.5	0.000
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127.0	0.000
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130.0	0.000
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131.0	0.000
131.5	0.000
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133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

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CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	417.81	N.A.	24.20
0-30	832.85	N.A.	48.30
0-40	1195.39	N.A.	69.30
0-60	1578.39	N.A.	91.40
0-80	1714.19	N.A.	99.30
0-90	1726.08	N.A.	100.00
10-90	1615.49	N.A.	93.60
20-40	777.58	N.A.	45.00
20-50	1012.95	N.A.	58.70
40-70	473.61	N.A.	27.40
60-80	135.80	N.A.	7.90
70-80	45.19	N.A.	2.60
80-90	11.89	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1726.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	110.58
10-20	307.22
20-30	415.05
30-40	362.54
40-50	235.36
50-60	147.64
60-70	90.61
70-80	45.19
80-90	11.89
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	74	79	75	72	71
4	90	81	73	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	82	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37

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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	20.6	21.9	20.9	22.2	22.5	20.6	21.9	20.9	22.2	22.5
	3H	21.8	23.0	22.2	23.3	23.7	21.8	23.0	22.2	23.3	23.7
	4H	22.2	23.3	22.6	23.7	24.1	22.2	23.3	22.6	23.7	24.1
	6H	22.5	23.5	22.9	23.9	24.3	22.5	23.5	22.9	23.9	24.3
	8H	22.6	23.6	23.1	24.0	24.4	22.6	23.6	23.1	24.0	24.4
	12H	22.7	23.6	23.1	24.0	24.4	22.7	23.6	23.1	24.0	24.4

UGR Viewed Endwise

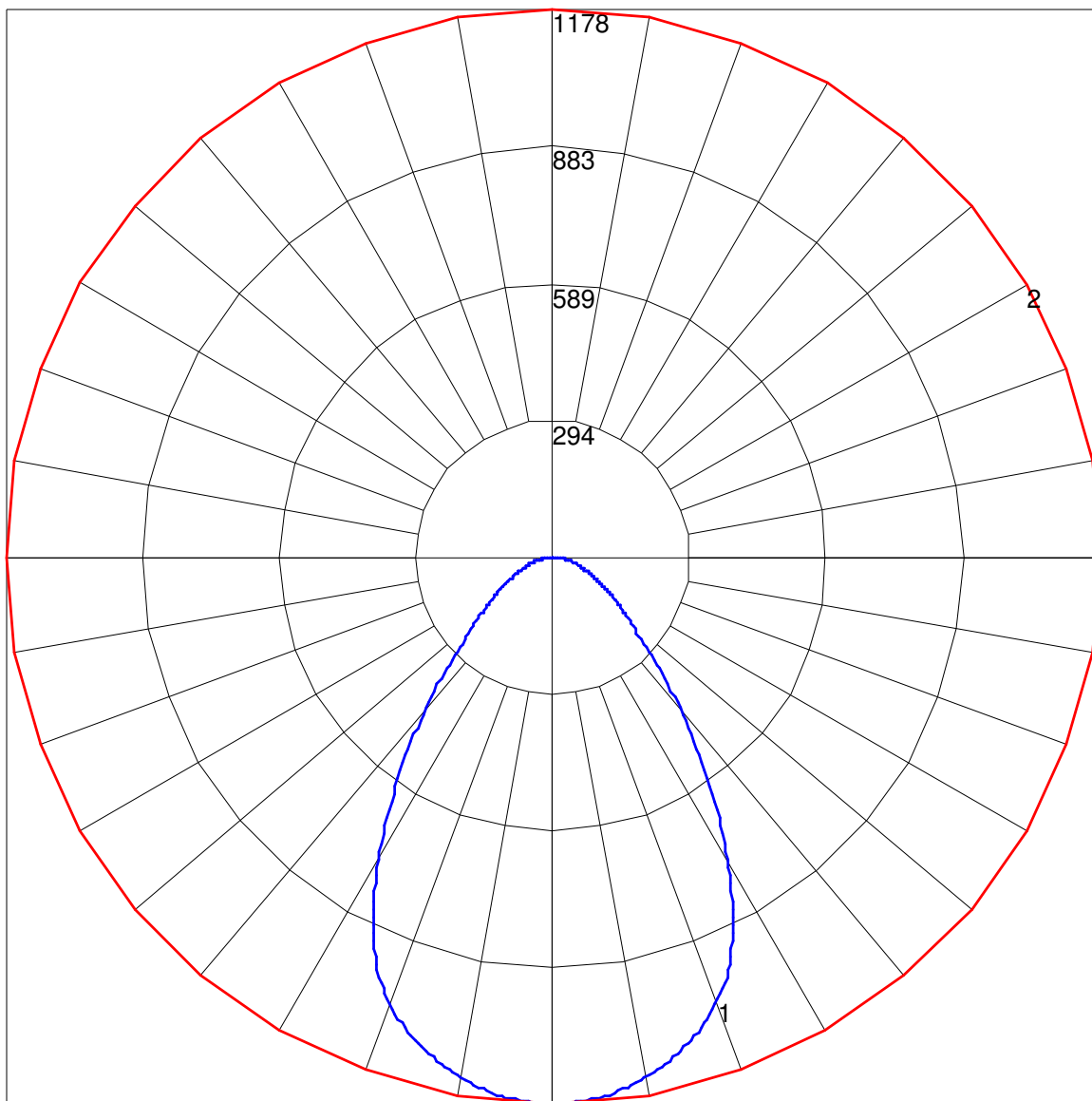
4H	2H	21.0	22.1	21.4	22.4	22.8	21.0	22.1	21.4	22.4	22.8
	3H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	4H	23.0	23.8	23.4	24.2	24.6	23.0	23.8	23.4	24.2	24.6
	6H	23.4	24.1	23.8	24.5	25.0	23.4	24.1	23.8	24.5	25.0
	8H	23.5	24.1	23.9	24.6	25.0	23.5	24.1	23.9	24.6	25.0
	12H	23.6	24.1	24.1	24.6	25.1	23.6	24.1	24.1	24.6	25.1

8H	4H	23.1	23.8	23.6	24.2	24.7	23.1	23.8	23.6	24.2	24.7
	6H	23.6	24.2	24.1	24.7	25.1	23.6	24.2	24.1	24.7	25.1
	8H	23.8	24.3	24.3	24.8	25.3	23.8	24.3	24.3	24.8	25.3
	12H	23.9	24.4	24.5	24.9	25.4	23.9	24.4	24.5	24.9	25.4

12H	4H	23.1	23.7	23.6	24.2	24.6	23.1	23.7	23.6	24.2	24.6
	6H	23.6	24.1	24.2	24.6	25.1	23.6	24.1	24.2	24.6	25.1
	8H	23.9	24.3	24.4	24.8	25.4	23.9	24.3	24.4	24.8	25.4

Maximum UGR = 25.4

POLAR GRAPH



Maximum Candela = 1177.61 Located At Horizontal Angle = 0, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)