

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-830-BL-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 4792018053.05
[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-L20-830-BL-DIM-UNV
[LUMINAIRE] 4" recessed downlight with textured black 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	795
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	47
Total Luminaire Watts	17
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.94
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	9970	9970	9970
55	1291	1291	1291
65	448	448	448
75	194	194	194
85	127	127	127

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CANDELA TABULATION

	0
0.0	794.970
0.5	794.970
1.0	794.970
1.5	794.398
2.0	793.826
2.5	793.254
3.0	792.682
3.5	790.967
4.0	789.823
4.5	788.679
5.0	786.963
5.5	785.819
6.0	783.532
6.5	781.816
7.0	779.528
7.5	777.240
8.0	774.953
8.5	772.093
9.0	769.234
9.5	766.374
10.0	763.514
10.5	760.083
11.0	756.651
11.5	753.220
12.0	749.216
12.5	745.785
13.0	741.209
13.5	737.778
14.0	733.203
14.5	729.199
15.0	724.624
15.5	720.048
16.0	716.045
16.5	711.470
17.0	708.038
17.5	703.463
18.0	698.887
18.5	694.312
19.0	688.593
19.5	682.302
20.0	676.010
20.5	669.719
21.0	662.284
21.5	654.849
22.0	646.271
22.5	637.692
23.0	627.969
23.5	617.675
24.0	606.236
24.5	594.226
25.0	582.215
25.5	569.633
26.0	556.479
26.5	542.924

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CANDELA TABULATION - (Cont.)

27.0	529.027
27.5	514.729
28.0	500.088
28.5	485.218
29.0	470.291
29.5	455.192
30.0	440.150
30.5	424.994
31.0	409.781
31.5	394.625
32.0	379.584
32.5	364.657
33.0	349.901
33.5	335.432
34.0	321.191
34.5	307.064
35.0	293.281
35.5	279.726
36.0	266.401
36.5	253.189
37.0	240.321
37.5	227.625
38.0	215.214
38.5	203.032
39.0	191.022
39.5	179.183
40.0	167.687
40.5	156.478
41.0	145.554
41.5	134.973
42.0	124.736
42.5	114.842
43.0	105.462
43.5	96.483
44.0	87.961
44.5	79.955
45.0	72.405
45.5	65.313
46.0	58.736
46.5	52.674
47.0	47.126
47.5	42.036
48.0	37.404
48.5	33.171
49.0	29.397
49.5	26.022
50.0	22.991
50.5	20.303
51.0	17.958
51.5	15.957
52.0	14.184
52.5	12.639
53.0	11.324
53.5	10.180
54.0	9.208
54.5	8.350

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CANDELA TABULATION - (Cont.)

55.0	7.607
55.5	7.035
56.0	6.520
56.5	6.120
57.0	5.776
57.5	5.433
58.0	5.090
58.5	4.747
59.0	4.461
59.5	4.118
60.0	3.889
60.5	3.603
61.0	3.374
61.5	3.146
62.0	2.917
62.5	2.745
63.0	2.574
63.5	2.402
64.0	2.230
64.5	2.116
65.0	1.945
65.5	1.830
66.0	1.716
66.5	1.601
67.0	1.487
67.5	1.430
68.0	1.315
68.5	1.258
69.0	1.144
69.5	1.087
70.0	1.029
70.5	0.972
71.0	0.915
71.5	0.858
72.0	0.801
72.5	0.743
73.0	0.686
73.5	0.686
74.0	0.629
74.5	0.572
75.0	0.515
75.5	0.515
76.0	0.458
76.5	0.458
77.0	0.400
77.5	0.400
78.0	0.343
78.5	0.343
79.0	0.343
79.5	0.286
80.0	0.286
80.5	0.229
81.0	0.229
81.5	0.229
82.0	0.229
82.5	0.172

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CANDELA TABULATION - (Cont.)

83.0	0.172
83.5	0.172
84.0	0.114
84.5	0.114
85.0	0.114
85.5	0.114
86.0	0.114
86.5	0.057
87.0	0.057
87.5	0.057
88.0	0.057
88.5	0.057
89.0	0.057
89.5	0.057
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
120.0	0.000
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128.0	0.000
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129.0	0.000
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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

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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	278.21	N.A.	35.00
0-30	540.45	N.A.	68.00
0-40	723.47	N.A.	91.00
0-60	792.41	N.A.	99.60
0-80	795.10	N.A.	100.00
0-90	795.24	N.A.	100.00
10-90	720.86	N.A.	90.60
20-40	445.25	N.A.	56.00
20-50	505.80	N.A.	63.60
40-70	71.03	N.A.	8.90
60-80	2.69	N.A.	0.30
70-80	0.61	N.A.	0.10
80-90	0.14	N.A.	0.00
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	795.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	74.38
10-20	203.83
20-30	262.24
30-40	183.02
40-50	60.55
50-60	8.39
60-70	2.08
70-80	0.61
80-90	0.14
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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86
3	102	96	90	86	100	94	89	86	91	88	84	89	86	83	87	84	82	80
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74
5	92	83	77	73	90	82	77	72	80	75	72	79	74	71	77	73	70	69
6	87	78	72	67	85	77	71	67	75	70	66	74	69	66	73	69	66	64
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60
8	78	68	62	58	77	68	62	58	67	61	58	66	61	57	65	60	57	56
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52
10	71	61	55	51	70	60	55	51	59	54	51	59	54	50	58	54	50	49

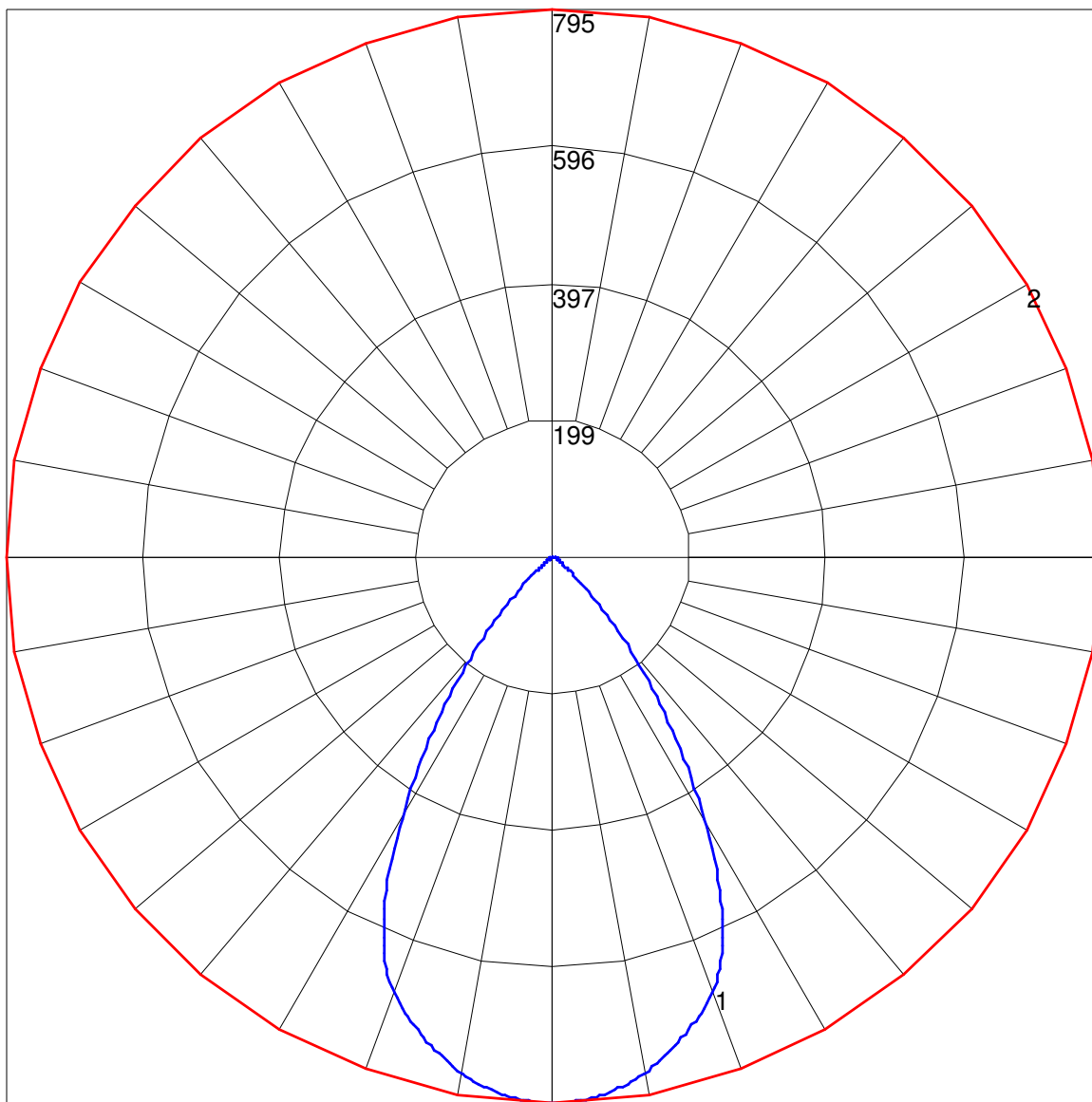
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	0.9	1.9	1.3	2.2	2.5	0.9	1.9	1.3	2.2	2.5
	3H	1.0	1.9	1.4	2.3	2.6	1.0	1.9	1.4	2.3	2.6
	4H	1.0	1.8	1.5	2.2	2.6	1.0	1.8	1.5	2.2	2.6
	6H	1.0	1.7	1.4	2.1	2.5	1.0	1.7	1.4	2.1	2.5
	8H	1.0	1.6	1.4	2.0	2.4	1.0	1.6	1.4	2.0	2.4
	12H	0.9	1.6	1.3	1.9	2.4	0.9	1.6	1.3	1.9	2.4
4H	2H	0.8	1.6	1.2	2.0	2.4	0.8	1.6	1.2	2.0	2.4
	3H	1.1	1.7	1.5	2.1	2.5	1.1	1.7	1.5	2.1	2.5
	4H	1.1	1.6	1.5	2.1	2.5	1.1	1.6	1.5	2.1	2.5
	6H	1.0	1.5	1.5	2.0	2.5	1.0	1.5	1.5	2.0	2.5
	8H	1.0	1.5	1.5	1.9	2.4	1.0	1.5	1.5	1.9	2.4
	12H	1.0	1.4	1.5	1.8	2.3	1.0	1.4	1.5	1.8	2.3
8H	4H	0.9	1.4	1.4	1.9	2.3	0.9	1.4	1.4	1.9	2.3
	6H	0.9	1.3	1.5	1.8	2.3	0.9	1.3	1.5	1.8	2.3
	8H	0.9	1.2	1.5	1.8	2.3	0.9	1.2	1.5	1.8	2.3
	12H	0.9	1.2	1.4	1.7	2.3	0.9	1.2	1.4	1.7	2.3
12H	4H	0.9	1.3	1.4	1.8	2.3	0.9	1.3	1.4	1.8	2.3
	6H	0.9	1.2	1.4	1.7	2.2	0.9	1.2	1.4	1.7	2.2
	8H	0.9	1.2	1.4	1.7	2.2	0.9	1.2	1.4	1.7	2.2

Maximum UGR = 2.6

POLAR GRAPH



Maximum Candela = 794.97 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.)