

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-830-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-L20-830-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	1709
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
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	40837	40837	40837
55	27450	27450	27450
65	20677	20677	20677
75	15700	15700	15700
85	11484	11484	11484

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CANDELA TABULATION

	<u>0</u>
0.0	1165.218
0.5	1165.833
1.0	1165.218
1.5	1164.602
2.0	1163.987
2.5	1163.371
3.0	1162.140
3.5	1160.909
4.0	1159.678
4.5	1157.831
5.0	1156.600
5.5	1154.138
6.0	1152.907
6.5	1149.829
7.0	1147.367
7.5	1144.289
8.0	1141.827
8.5	1138.750
9.0	1135.056
9.5	1131.363
10.0	1128.285
10.5	1124.592
11.0	1120.899
11.5	1116.590
12.0	1111.666
12.5	1107.357
13.0	1103.048
13.5	1097.508
14.0	1092.584
14.5	1087.660
15.0	1082.120
15.5	1076.580
16.0	1070.425
16.5	1064.885
17.0	1058.729
17.5	1051.958
18.0	1045.803
18.5	1039.032
19.0	1031.646
19.5	1024.259
20.0	1016.257
20.5	1008.255
21.0	999.637
21.5	989.789
22.0	979.940
22.5	969.476
23.0	958.396
23.5	946.085
24.0	932.544
24.5	919.617
25.0	904.844
25.5	890.071
26.0	875.914
26.5	859.910

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CANDELA TABULATION - (Cont.)

27.0	843.906
27.5	826.671
28.0	810.051
28.5	793.431
29.0	776.812
29.5	761.423
30.0	745.419
30.5	728.184
31.0	710.949
31.5	693.098
32.0	675.863
32.5	658.628
33.0	641.393
33.5	624.773
34.0	607.785
34.5	591.226
35.0	574.915
35.5	558.726
36.0	542.783
36.5	526.964
37.0	511.391
37.5	496.064
38.0	480.983
38.5	465.902
39.0	451.191
39.5	436.603
40.0	422.322
40.5	408.165
41.0	394.377
41.5	380.773
42.0	367.662
42.5	354.736
43.0	342.302
43.5	330.237
44.0	318.542
44.5	307.339
45.0	296.567
45.5	286.226
46.0	276.378
46.5	267.021
47.0	258.096
47.5	249.663
48.0	241.661
48.5	234.028
49.0	226.827
49.5	219.933
50.0	213.469
50.5	207.252
51.0	201.405
51.5	195.803
52.0	190.448
52.5	185.278
53.0	180.292
53.5	175.429
54.0	170.751
54.5	166.196

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CANDELA TABULATION - (Cont.)

55.0	161.702
55.5	157.455
56.0	153.393
56.5	149.392
57.0	145.391
57.5	141.451
58.0	137.512
58.5	133.572
59.0	129.756
59.5	126.063
60.0	122.369
60.5	118.799
61.0	115.229
61.5	111.844
62.0	108.458
62.5	105.196
63.0	101.995
63.5	98.856
64.0	95.655
64.5	92.700
65.0	89.746
65.5	86.853
66.0	83.960
66.5	81.190
67.0	78.481
67.5	75.835
68.0	73.249
68.5	70.664
69.0	68.140
69.5	65.678
70.0	63.278
70.5	60.938
71.0	58.599
71.5	56.322
72.0	54.106
72.5	51.952
73.0	49.797
73.5	47.766
74.0	45.735
74.5	43.703
75.0	41.734
75.5	39.825
76.0	37.979
76.5	36.132
77.0	34.347
77.5	32.562
78.0	30.900
78.5	29.177
79.0	27.515
79.5	25.914
80.0	24.314
80.5	22.775
81.0	21.236
81.5	19.759
82.0	18.343
82.5	16.927

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CANDELA TABULATION - (Cont.)

83.0	15.512
83.5	14.157
84.0	12.865
84.5	11.511
85.0	10.280
85.5	9.048
86.0	7.817
86.5	6.648
87.0	5.478
87.5	4.370
88.0	3.324
88.5	2.277
89.0	1.354
89.5	0.616
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
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121.0	0.000
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122.0	0.000
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123.0	0.000
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124.0	0.000
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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
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145.5	0.000
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146.5	0.000
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147.5	0.000
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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	413.63	N.A.	24.20
0-30	824.52	N.A.	48.30
0-40	1183.44	N.A.	69.30
0-60	1562.61	N.A.	91.40
0-80	1697.04	N.A.	99.30
0-90	1708.82	N.A.	100.00
10-90	1599.34	N.A.	93.60
20-40	769.81	N.A.	45.00
20-50	1002.82	N.A.	58.70
40-70	468.87	N.A.	27.40
60-80	134.44	N.A.	7.90
70-80	44.74	N.A.	2.60
80-90	11.77	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	1708.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	109.48
10-20	304.15
20-30	410.90
30-40	358.91
40-50	233.01
50-60	146.16
60-70	89.70
70-80	44.74
80-90	11.77
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	54	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

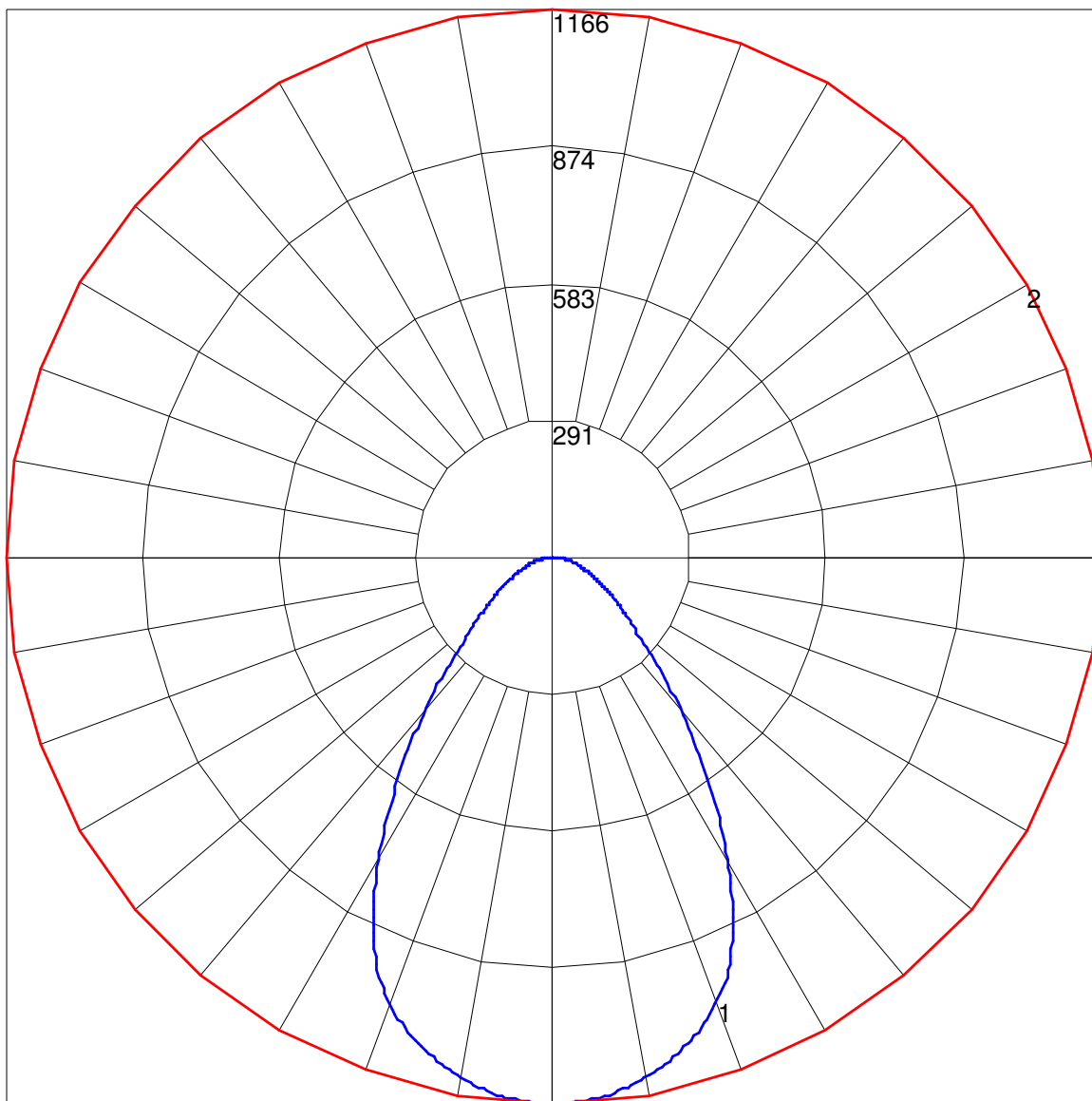
4H	2H	21.0	22.1	21.4	22.4	22.8	21.0	22.1	21.4	22.4	22.8
	3H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	4H	22.9	23.8	23.4	24.2	24.6	22.9	23.8	23.4	24.2	24.6
	6H	23.4	24.1	23.8	24.5	25.0	23.4	24.1	23.8	24.5	25.0
	8H	23.5	24.1	23.9	24.6	25.0	23.5	24.1	23.9	24.6	25.0
	12H	23.6	24.1	24.1	24.6	25.1	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	24.6	25.1	23.6	24.2	24.1	24.6	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 = 1165.833 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.)