

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-930-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-L20-930-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	659
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	39
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	8258	8258	8258
55	1069	1069	1069
65	371	371	371
75	160	160	160
85	106	106	106

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CANDELA TABULATION

	<u>0</u>
0.0	658.460
0.5	658.460
1.0	658.460
1.5	657.986
2.0	657.513
2.5	657.039
3.0	656.565
3.5	655.144
4.0	654.197
4.5	653.249
5.0	651.828
5.5	650.881
6.0	648.986
6.5	647.565
7.0	645.670
7.5	643.775
8.0	641.880
8.5	639.511
9.0	637.143
9.5	634.774
10.0	632.406
10.5	629.564
11.0	626.721
11.5	623.879
12.0	620.563
12.5	617.721
13.0	613.931
13.5	611.089
14.0	607.299
14.5	603.983
15.0	600.193
15.5	596.404
16.0	593.088
16.5	589.298
17.0	586.456
17.5	582.666
18.0	578.876
18.5	575.087
19.0	570.349
19.5	565.139
20.0	559.928
20.5	554.717
21.0	548.559
21.5	542.400
22.0	535.295
22.5	528.189
23.0	520.136
23.5	511.609
24.0	502.135
24.5	492.187
25.0	482.239
25.5	471.817
26.0	460.922
26.5	449.695

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CANDELA TABULATION - (Cont.)

27.0	438.184
27.5	426.341
28.0	414.214
28.5	401.897
29.0	389.534
29.5	377.028
30.0	364.569
30.5	352.016
31.0	339.415
31.5	326.861
32.0	314.403
32.5	302.039
33.0	289.817
33.5	277.832
34.0	266.037
34.5	254.336
35.0	242.920
35.5	231.693
36.0	220.655
36.5	209.712
37.0	199.054
37.5	188.537
38.0	178.258
38.5	168.168
39.0	158.220
39.5	148.414
40.0	138.892
40.5	129.608
41.0	120.560
41.5	111.796
42.0	103.317
42.5	95.121
43.0	87.353
43.5	79.915
44.0	72.857
44.5	66.225
45.0	59.972
45.5	54.098
46.0	48.650
46.5	43.629
47.0	39.034
47.5	34.818
48.0	30.981
48.5	27.475
49.0	24.349
49.5	21.554
50.0	19.043
50.5	16.817
51.0	14.875
51.5	13.217
52.0	11.748
52.5	10.469
53.0	9.380
53.5	8.432
54.0	7.627
54.5	6.916

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CANDELA TABULATION - (Cont.)

55.0	6.300
55.5	5.827
56.0	5.400
56.5	5.069
57.0	4.784
57.5	4.500
58.0	4.216
58.5	3.932
59.0	3.695
59.5	3.411
60.0	3.221
60.5	2.984
61.0	2.795
61.5	2.605
62.0	2.416
62.5	2.274
63.0	2.132
63.5	1.990
64.0	1.847
64.5	1.753
65.0	1.611
65.5	1.516
66.0	1.421
66.5	1.326
67.0	1.232
67.5	1.184
68.0	1.090
68.5	1.042
69.0	0.947
69.5	0.900
70.0	0.853
70.5	0.805
71.0	0.758
71.5	0.711
72.0	0.663
72.5	0.616
73.0	0.568
73.5	0.568
74.0	0.521
74.5	0.474
75.0	0.426
75.5	0.426
76.0	0.379
76.5	0.379
77.0	0.332
77.5	0.332
78.0	0.284
78.5	0.284
79.0	0.284
79.5	0.237
80.0	0.237
80.5	0.189
81.0	0.189
81.5	0.189
82.0	0.189
82.5	0.142

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CANDELA TABULATION - (Cont.)

83.0	0.142
83.5	0.142
84.0	0.095
84.5	0.095
85.0	0.095
85.5	0.095
86.0	0.095
86.5	0.047
87.0	0.047
87.5	0.047
88.0	0.047
88.5	0.047
89.0	0.047
89.5	0.047
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
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	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	230.44	N.A.	35.00
0-30	447.65	N.A.	68.00
0-40	599.24	N.A.	91.00
0-60	656.34	N.A.	99.60
0-80	658.57	N.A.	100.00
0-90	658.68	N.A.	100.00
10-90	597.07	N.A.	90.60
20-40	368.79	N.A.	56.00
20-50	418.95	N.A.	63.60
40-70	58.83	N.A.	8.90
60-80	2.23	N.A.	0.30
70-80	0.50	N.A.	0.10
80-90	0.11	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	658.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	61.61
10-20	168.83
20-30	217.21
30-40	151.59
40-50	50.15
50-60	6.95
60-70	1.73
70-80	0.50
80-90	0.11
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	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80
4	97	89	83	79	95	88	83	78	86	81	78	84	80	77	82	78	76	74
5	92	83	77	73	90	82	76	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	61	68	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	53	50	49

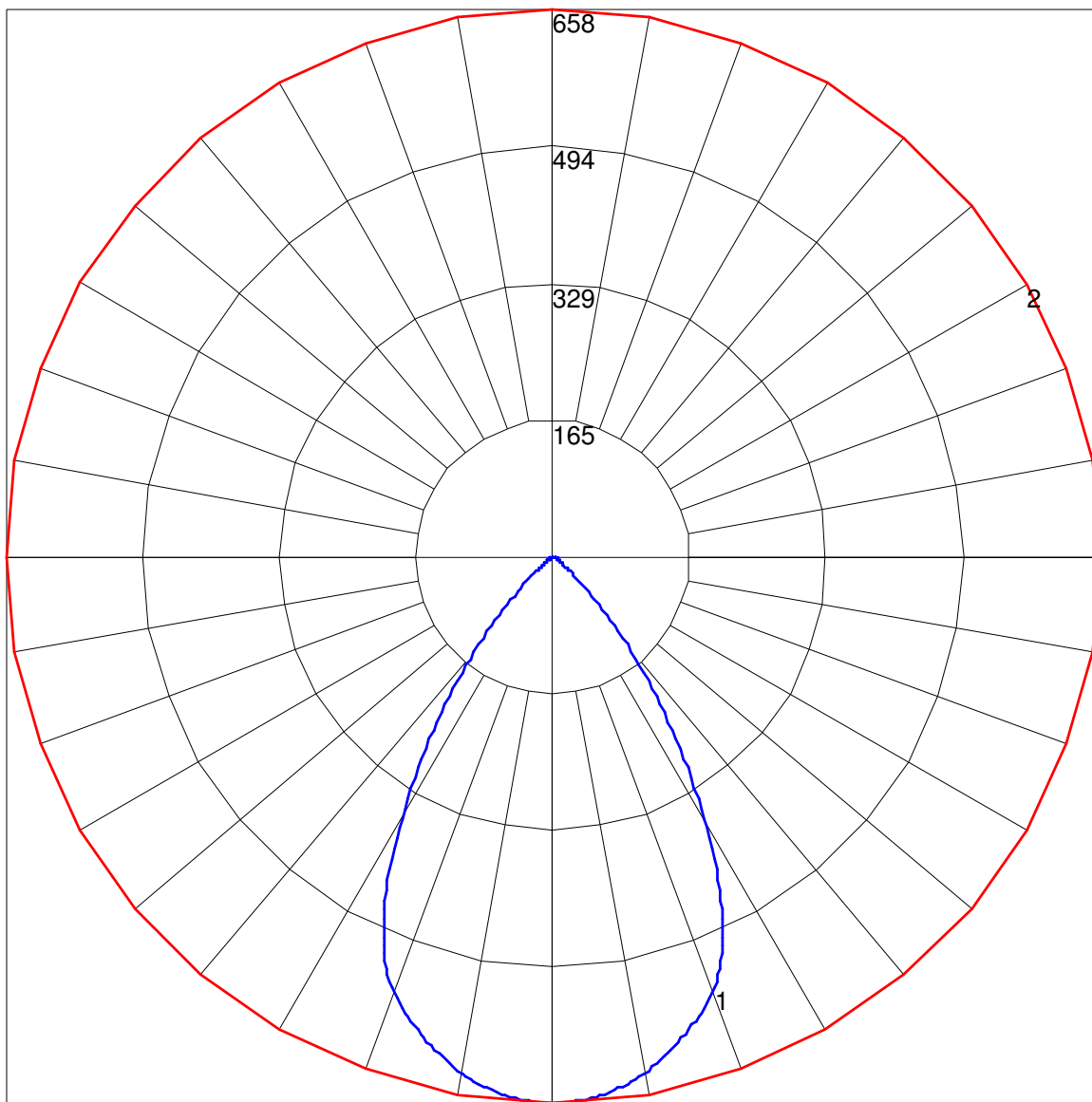
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UGR TABLE - CORRECTED

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	0.3	1.3	0.7	1.6	1.9	0.3	1.3	0.7	1.6	1.9
	3H	0.4	1.3	0.8	1.7	2.0	0.4	1.3	0.8	1.7	2.0
	4H	0.4	1.2	0.8	1.6	2.0	0.4	1.2	0.8	1.6	2.0
	6H	0.4	1.1	0.8	1.5	1.9	0.4	1.1	0.8	1.5	1.9
	8H	0.3	1.0	0.8	1.4	1.8	0.3	1.0	0.8	1.4	1.8
	12H	0.3	1.0	0.7	1.3	1.8	0.3	1.0	0.7	1.3	1.8
4H	2H	0.2	1.0	0.6	1.4	1.8	0.2	1.0	0.6	1.4	1.8
	3H	0.5	1.1	0.9	1.5	1.9	0.5	1.1	0.9	1.5	1.9
	4H	0.5	1.0	0.9	1.5	1.9	0.5	1.0	0.9	1.5	1.9
	6H	0.4	0.9	0.9	1.4	1.9	0.4	0.9	0.9	1.4	1.9
	8H	0.4	0.9	0.9	1.3	1.8	0.4	0.9	0.9	1.3	1.8
	12H	0.4	0.7	0.8	1.2	1.7	0.4	0.7	0.8	1.2	1.7
8H	4H	0.3	0.8	0.8	1.3	1.7	0.3	0.8	0.8	1.3	1.7
	6H	0.3	0.7	0.9	1.2	1.7	0.3	0.7	0.9	1.2	1.7
	8H	0.3	0.6	0.8	1.2	1.7	0.3	0.6	0.8	1.2	1.7
	12H	0.3	0.6	0.8	1.1	1.6	0.3	0.6	0.8	1.1	1.6
12H	4H	0.3	0.7	0.8	1.2	1.6	0.3	0.7	0.8	1.2	1.6
	6H	0.3	0.6	0.8	1.1	1.6	0.3	0.6	0.8	1.1	1.6
	8H	0.3	0.6	0.8	1.1	1.6	0.3	0.6	0.8	1.1	1.6

Maximum UGR = 2.0

POLAR GRAPH



Maximum Candela = 658.46 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.)