

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-935-CS-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 4792018053.01
[TESTLAB] UL, LLC
[ISSUE DATE] 2025-12-10
[TEST DATE] 11/12/2025
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC.
[LUMCAT] 4LDR-L20-935-CS-DIM-UNV
[LUMINAIRE] 4" recessed downlight with clear semi-specular finish refl
[MORE] ector 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	1687
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	17
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.96
Spacing Criterion (90-270)	0.96
Spacing Criterion (Diagonal)	0.96
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	36703	36703	36703
55	11422	11422	11422
65	443	443	443
75	176	176	176
85	349	349	349

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CANDELA TABULATION

	<u>0</u>
0.0	1549.591
0.5	1549.591
1.0	1549.591
1.5	1550.111
2.0	1550.631
2.5	1551.151
3.0	1552.711
3.5	1553.751
4.0	1553.751
4.5	1554.791
5.0	1555.311
5.5	1554.791
6.0	1553.231
6.5	1551.671
7.0	1548.551
7.5	1543.871
8.0	1539.191
8.5	1533.991
9.0	1527.231
9.5	1519.951
10.0	1511.631
10.5	1502.271
11.0	1492.391
11.5	1480.951
12.0	1468.991
12.5	1456.511
13.0	1443.511
13.5	1429.991
14.0	1415.952
14.5	1400.872
15.0	1385.272
15.5	1369.152
16.0	1352.512
16.5	1336.392
17.0	1320.272
17.5	1304.152
18.0	1288.552
18.5	1272.432
19.0	1256.832
19.5	1242.273
20.0	1226.673
20.5	1212.113
21.0	1197.033
21.5	1181.953
22.0	1166.873
22.5	1151.273
23.0	1135.153
23.5	1118.513
24.0	1101.353
24.5	1083.674
25.0	1065.474
25.5	1046.754
26.0	1027.514
26.5	1007.234

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CANDELA TABULATION - (Cont.)

27.0	986.954
27.5	966.154
28.0	944.314
28.5	922.474
29.0	900.635
29.5	878.275
30.0	855.395
30.5	833.035
31.0	810.155
31.5	787.275
32.0	764.915
32.5	742.556
33.0	720.196
33.5	698.356
34.0	676.516
34.5	655.716
35.0	634.916
35.5	615.156
36.0	593.836
36.5	573.037
37.0	552.237
37.5	531.957
38.0	512.041
38.5	492.177
39.0	472.573
39.5	453.281
40.0	434.301
40.5	415.634
41.0	397.278
41.5	379.390
42.0	361.814
42.5	344.758
43.0	328.118
43.5	311.946
44.0	296.398
44.5	281.162
45.0	266.550
45.5	252.406
46.0	238.835
46.5	225.783
47.0	213.251
47.5	201.239
48.0	189.695
48.5	178.671
49.0	168.063
49.5	157.871
50.0	148.095
50.5	138.787
51.0	129.791
51.5	121.159
52.0	112.787
52.5	104.727
53.0	96.979
53.5	89.335
54.0	81.952
54.5	74.620

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CANDELA TABULATION - (Cont.)

55.0	67.288
55.5	59.852
56.0	52.364
56.5	45.032
57.0	38.064
57.5	31.564
58.0	25.636
58.5	20.280
59.0	15.548
59.5	11.596
60.0	8.528
60.5	6.292
61.0	4.784
61.5	3.952
62.0	3.380
62.5	3.016
63.0	2.704
63.5	2.496
64.0	2.288
64.5	2.080
65.0	1.924
65.5	1.768
66.0	1.664
66.5	1.560
67.0	1.404
67.5	1.352
68.0	1.248
68.5	1.144
69.0	1.092
69.5	0.988
70.0	0.936
70.5	0.884
71.0	0.832
71.5	0.780
72.0	0.728
72.5	0.676
73.0	0.624
73.5	0.572
74.0	0.572
74.5	0.520
75.0	0.468
75.5	0.468
76.0	0.416
76.5	0.416
77.0	0.416
77.5	0.364
78.0	0.364
78.5	0.312
79.0	0.312
79.5	0.312
80.0	0.312
80.5	0.312
81.0	0.312
81.5	0.312
82.0	0.312
82.5	0.260

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CANDELA TABULATION - (Cont.)

83.0	0.312
83.5	0.312
84.0	0.312
84.5	0.312
85.0	0.312
85.5	0.312
86.0	0.312
86.5	0.312
87.0	0.312
87.5	0.364
88.0	0.364
88.5	0.364
89.0	0.364
89.5	0.312
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
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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
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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
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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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146.5	0.000
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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	533.67	N.A.	31.60
0-30	1017.46	N.A.	60.30
0-40	1412.91	N.A.	83.70
0-60	1683.96	N.A.	99.80
0-80	1686.96	N.A.	100.00
0-90	1687.3	N.A.	100.00
10-90	1540.12	N.A.	91.30
20-40	879.24	N.A.	52.10
20-50	1088.99	N.A.	64.50
40-70	273.49	N.A.	16.20
60-80	3.00	N.A.	0.20
70-80	0.56	N.A.	0.00
80-90	0.34	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	1687.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	147.18
10-20	386.49
20-30	483.79
30-40	395.45
40-50	209.75
50-60	61.30
60-70	2.44
70-80	0.56
80-90	0.34
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	110	108	105	111	108	106	103	104	102	100	100	99	97	97	96	94	93
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	84	99	93	88	84	90	86	82	87	84	81	85	82	80	78
4	95	87	81	76	93	86	80	76	84	79	75	82	77	74	80	76	73	72
5	90	81	74	70	88	80	74	69	78	73	69	76	72	68	75	71	68	66
6	85	75	69	64	83	74	68	64	73	67	63	71	66	63	70	66	62	61
7	80	70	64	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52
9	72	61	55	51	71	61	55	51	60	54	50	59	54	50	58	53	50	49
10	68	58	51	47	67	57	51	47	56	51	47	56	51	47	55	50	47	45

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UGR TABLE - CORRECTED

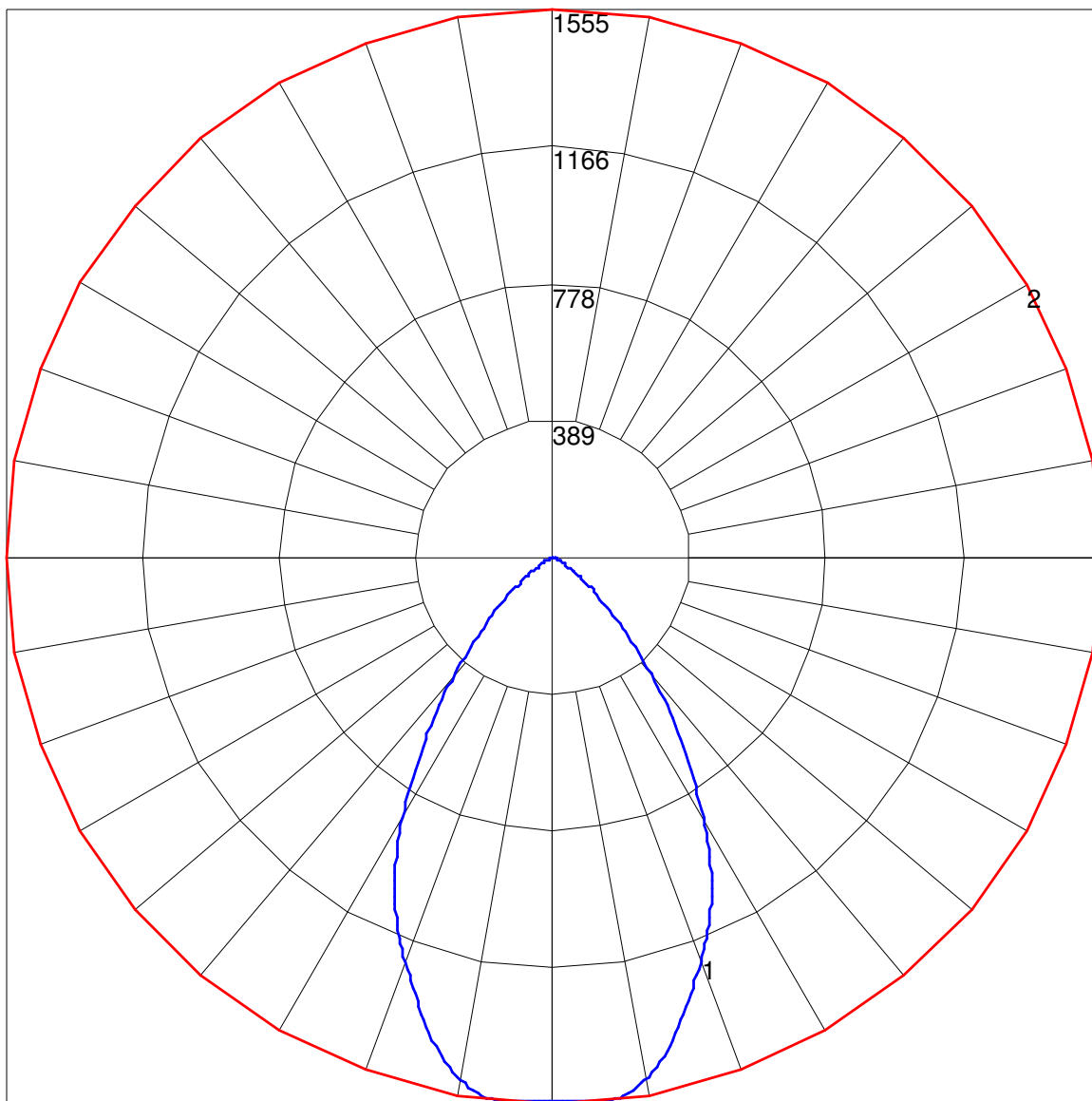
Reflectances

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	10.0	11.1	10.4	11.4	11.7	10.0	11.1	10.4	11.4	11.7
	3H	9.9	10.8	10.3	11.1	11.5	9.9	10.8	10.3	11.1	11.5
	4H	9.8	10.7	10.2	11.0	11.4	9.8	10.7	10.2	11.0	11.4
	6H	9.7	10.5	10.1	10.9	11.2	9.7	10.5	10.1	10.9	11.2
	8H	9.6	10.4	10.1	10.8	11.2	9.6	10.4	10.1	10.8	11.2
	12H	9.6	10.3	10.0	10.7	11.1	9.6	10.3	10.0	10.7	11.1
4H	2H	9.8	10.6	10.2	11.0	11.4	9.8	10.6	10.2	11.0	11.4
	3H	9.6	10.3	10.0	10.7	11.1	9.6	10.3	10.0	10.7	11.1
	4H	9.5	10.1	9.9	10.5	11.0	9.5	10.1	9.9	10.5	11.0
	6H	9.4	9.9	9.9	10.4	10.8	9.4	9.9	9.9	10.4	10.8
	8H	9.3	9.8	9.8	10.3	10.7	9.3	9.8	9.8	10.3	10.7
	12H	9.3	9.7	9.8	10.2	10.7	9.3	9.7	9.8	10.2	10.7
8H	4H	9.3	9.8	9.8	10.3	10.7	9.3	9.8	9.8	10.3	10.7
	6H	9.2	9.6	9.7	10.1	10.6	9.2	9.6	9.7	10.1	10.6
	8H	9.1	9.5	9.7	10.0	10.5	9.1	9.5	9.7	10.0	10.5
	12H	9.1	9.4	9.6	9.9	10.5	9.1	9.4	9.6	9.9	10.5
12H	4H	9.3	9.7	9.7	10.2	10.7	9.3	9.7	9.7	10.2	10.7
	6H	9.1	9.5	9.7	10.0	10.5	9.1	9.5	9.7	10.0	10.5
	8H	9.1	9.4	9.6	9.9	10.5	9.1	9.4	9.6	9.9	10.5

Maximum UGR = 11.7

POLAR GRAPH



Maximum Candela = 1555.311 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.)