

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-835-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-L20-835-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	2033
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
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	44221	44221	44221
55	13762	13762	13762
65	534	534	534
75	212	212	212
85	420	420	420

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CANDELA TABULATION

	<u>0</u>
0.0	1866.977
0.5	1866.977
1.0	1866.977
1.5	1867.603
2.0	1868.230
2.5	1868.856
3.0	1870.736
3.5	1871.989
4.0	1871.989
4.5	1873.242
5.0	1873.868
5.5	1873.242
6.0	1871.362
6.5	1869.483
7.0	1865.724
7.5	1860.085
8.0	1854.447
8.5	1848.182
9.0	1840.037
9.5	1831.266
10.0	1821.242
10.5	1809.965
11.0	1798.062
11.5	1784.278
12.0	1769.869
12.5	1754.833
13.0	1739.170
13.5	1722.881
14.0	1705.966
14.5	1687.797
15.0	1669.002
15.5	1649.580
16.0	1629.532
16.5	1610.111
17.0	1590.689
17.5	1571.268
18.0	1552.473
18.5	1533.051
19.0	1514.256
19.5	1496.714
20.0	1477.919
20.5	1460.377
21.0	1442.208
21.5	1424.040
22.0	1405.871
22.5	1387.076
23.0	1367.654
23.5	1347.606
24.0	1326.932
24.5	1305.631
25.0	1283.703
25.5	1261.149
26.0	1237.968
26.5	1213.535

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CANDELA TABULATION - (Cont.)

27.0	1189.101
27.5	1164.041
28.0	1137.728
28.5	1111.415
29.0	1085.102
29.5	1058.162
30.0	1030.596
30.5	1003.657
31.0	976.091
31.5	948.524
32.0	921.585
32.5	894.645
33.0	867.706
33.5	841.393
34.0	815.079
34.5	790.019
35.0	764.959
35.5	741.152
36.0	715.466
36.5	690.406
37.0	665.345
37.5	640.912
38.0	616.917
38.5	592.984
39.0	569.365
39.5	546.122
40.0	523.255
40.5	500.763
41.0	478.648
41.5	457.096
42.0	435.920
42.5	415.371
43.0	395.323
43.5	375.839
44.0	357.106
44.5	338.750
45.0	321.145
45.5	304.104
46.0	287.752
46.5	272.027
47.0	256.929
47.5	242.456
48.0	228.548
48.5	215.266
49.0	202.486
49.5	190.206
50.0	178.428
50.5	167.213
51.0	156.375
51.5	145.975
52.0	135.888
52.5	126.178
53.0	116.843
53.5	107.633
54.0	98.737
54.5	89.903

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CANDELA TABULATION - (Cont.)

55.0	81.069
55.5	72.110
56.0	63.089
56.5	54.255
57.0	45.860
57.5	38.029
58.0	30.887
58.5	24.434
59.0	18.732
59.5	13.971
60.0	10.275
60.5	7.581
61.0	5.764
61.5	4.761
62.0	4.072
62.5	3.634
63.0	3.258
63.5	3.007
64.0	2.757
64.5	2.506
65.0	2.318
65.5	2.130
66.0	2.005
66.5	1.880
67.0	1.692
67.5	1.629
68.0	1.504
68.5	1.378
69.0	1.316
69.5	1.190
70.0	1.128
70.5	1.065
71.0	1.002
71.5	0.940
72.0	0.877
72.5	0.814
73.0	0.752
73.5	0.689
74.0	0.689
74.5	0.627
75.0	0.564
75.5	0.564
76.0	0.501
76.5	0.501
77.0	0.501
77.5	0.439
78.0	0.439
78.5	0.376
79.0	0.376
79.5	0.376
80.0	0.376
80.5	0.376
81.0	0.376
81.5	0.376
82.0	0.376
82.5	0.313

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CANDELA TABULATION - (Cont.)

83.0	0.376
83.5	0.376
84.0	0.376
84.5	0.376
85.0	0.376
85.5	0.376
86.0	0.376
86.5	0.376
87.0	0.376
87.5	0.439
88.0	0.439
88.5	0.439
89.0	0.439
89.5	0.376
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
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117.5	0.000
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125.5	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
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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	642.98	N.A.	31.60
0-30	1225.86	N.A.	60.30
0-40	1702.31	N.A.	83.70
0-60	2028.87	N.A.	99.80
0-80	2032.48	N.A.	100.00
0-90	2032.89	N.A.	100.00
10-90	1855.56	N.A.	91.30
20-40	1059.33	N.A.	52.10
20-50	1312.03	N.A.	64.50
40-70	329.50	N.A.	16.20
60-80	3.62	N.A.	0.20
70-80	0.68	N.A.	0.00
80-90	0.41	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	2032.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.33
10-20	465.65
20-30	582.88
30-40	476.45
40-50	252.71
50-60	73.85
60-70	2.94
70-80	0.68
80-90	0.41
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	107	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

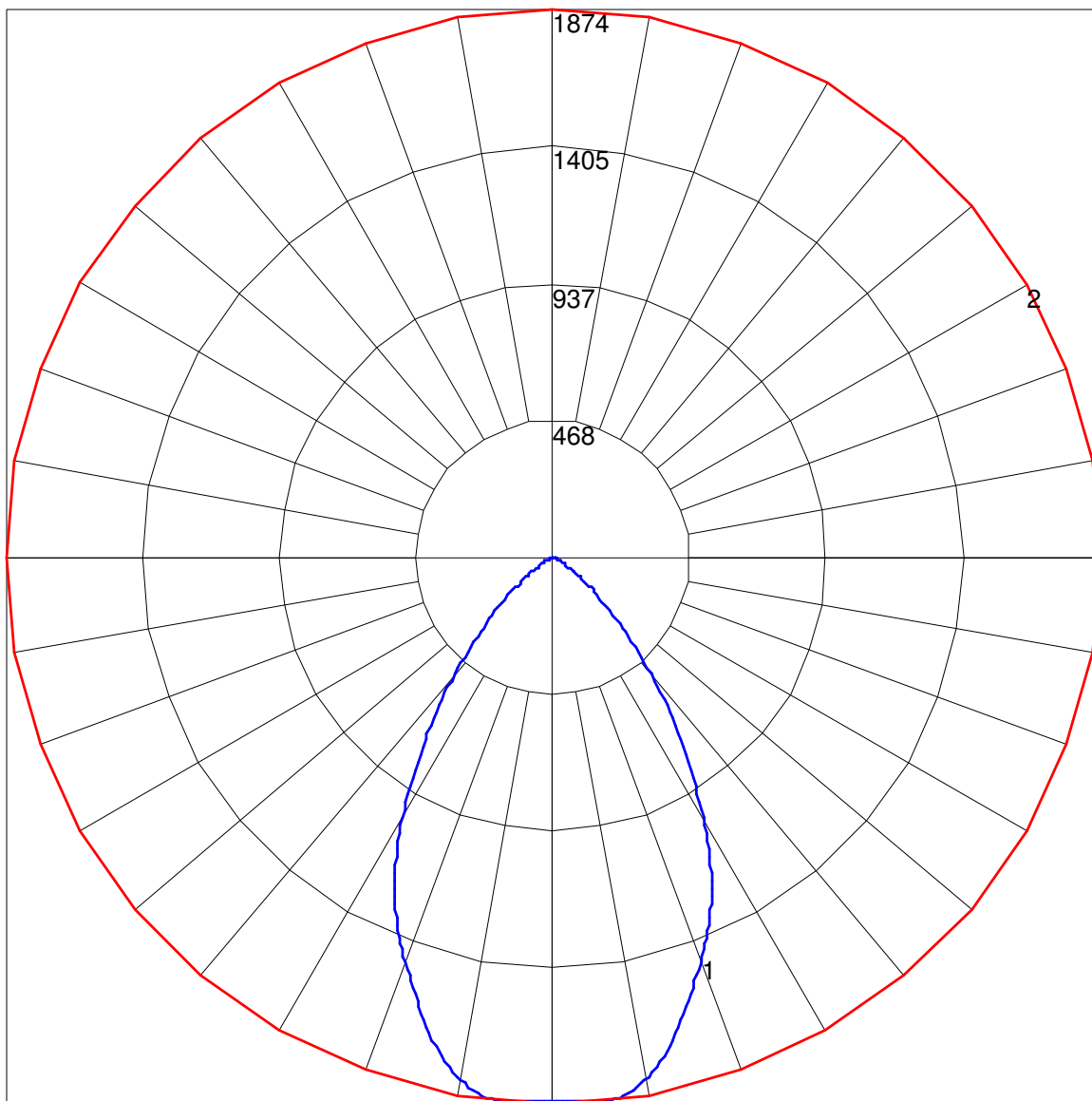
Reflectances

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	10.7	11.8	11.1	12.1	12.4	10.7	11.8	11.1	12.1	12.4
	3H	10.6	11.5	11.0	11.8	12.2	10.6	11.5	11.0	11.8	12.2
	4H	10.5	11.4	10.9	11.7	12.1	10.5	11.4	10.9	11.7	12.1
	6H	10.4	11.2	10.8	11.5	11.9	10.4	11.2	10.8	11.5	11.9
	8H	10.3	11.1	10.8	11.5	11.9	10.3	11.1	10.8	11.5	11.9
	12H	10.3	11.0	10.7	11.4	11.8	10.3	11.0	10.7	11.4	11.8
4H	2H	10.5	11.3	10.9	11.7	12.1	10.5	11.3	10.9	11.7	12.1
	3H	10.3	11.0	10.7	11.4	11.8	10.3	11.0	10.7	11.4	11.8
	4H	10.2	10.8	10.6	11.2	11.7	10.2	10.8	10.6	11.2	11.7
	6H	10.1	10.6	10.6	11.1	11.5	10.1	10.6	10.6	11.1	11.5
	8H	10.0	10.5	10.5	11.0	11.4	10.0	10.5	10.5	11.0	11.4
	12H	10.0	10.4	10.5	10.9	11.4	10.0	10.4	10.5	10.9	11.4
8H	4H	10.0	10.5	10.5	11.0	11.4	10.0	10.5	10.5	11.0	11.4
	6H	9.9	10.3	10.4	10.8	11.3	9.9	10.3	10.4	10.8	11.3
	8H	9.8	10.2	10.4	10.7	11.2	9.8	10.2	10.4	10.7	11.2
	12H	9.8	10.1	10.3	10.6	11.2	9.8	10.1	10.3	10.6	11.2
12H	4H	10.0	10.4	10.4	10.9	11.4	10.0	10.4	10.4	10.9	11.4
	6H	9.8	10.2	10.4	10.7	11.2	9.8	10.2	10.4	10.7	11.2
	8H	9.8	10.1	10.3	10.6	11.2	9.8	10.1	10.3	10.6	11.2

Maximum UGR = 12.4

POLAR GRAPH



Maximum Candela = 1873.868 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.)