

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-840-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-L20-840-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	2094
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
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	45547	45547	45547
55	14175	14175	14175
65	550	550	550
75	219	219	219
85	432	432	432

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CANDELA TABULATION

	<u>0</u>
0.0	1922.986
0.5	1922.986
1.0	1922.986
1.5	1923.632
2.0	1924.277
2.5	1924.922
3.0	1926.858
3.5	1928.149
4.0	1928.149
4.5	1929.439
5.0	1930.085
5.5	1929.439
6.0	1927.503
6.5	1925.567
7.0	1921.696
7.5	1915.888
8.0	1910.080
8.5	1903.627
9.0	1895.238
9.5	1886.204
10.0	1875.880
10.5	1864.264
11.0	1852.004
11.5	1837.807
12.0	1822.965
12.5	1807.478
13.0	1791.346
13.5	1774.568
14.0	1757.145
14.5	1738.431
15.0	1719.072
15.5	1699.068
16.0	1678.419
16.5	1658.414
17.0	1638.410
17.5	1618.406
18.0	1599.047
18.5	1579.043
19.0	1559.684
19.5	1541.616
20.0	1522.257
20.5	1504.188
21.0	1485.475
21.5	1466.761
22.0	1448.047
22.5	1428.688
23.0	1408.684
23.5	1388.035
24.0	1366.740
24.5	1344.800
25.0	1322.214
25.5	1298.984
26.0	1275.108
26.5	1249.941

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CANDELA TABULATION - (Cont.)

27.0	1224.774
27.5	1198.963
28.0	1171.860
28.5	1144.758
29.0	1117.655
29.5	1089.907
30.0	1061.514
30.5	1033.766
31.0	1005.373
31.5	976.980
32.0	949.232
32.5	921.485
33.0	893.737
33.5	866.634
34.0	839.532
34.5	813.720
35.0	787.908
35.5	763.387
36.0	736.930
36.5	711.118
37.0	685.306
37.5	660.139
38.0	635.424
38.5	610.774
39.0	586.446
39.5	562.506
40.0	538.952
40.5	515.786
41.0	493.007
41.5	470.809
42.0	448.998
42.5	427.832
43.0	407.183
43.5	387.114
44.0	367.820
44.5	348.912
45.0	330.779
45.5	313.227
46.0	296.385
46.5	280.188
47.0	264.636
47.5	249.730
48.0	235.404
48.5	221.724
49.0	208.560
49.5	195.912
50.0	183.781
50.5	172.230
51.0	161.066
51.5	150.354
52.0	139.965
52.5	129.963
53.0	120.348
53.5	110.862
54.0	101.699
54.5	92.600

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CANDELA TABULATION - (Cont.)

55.0	83.501
55.5	74.274
56.0	64.981
56.5	55.883
57.0	47.236
57.5	39.170
58.0	31.813
58.5	25.167
59.0	19.294
59.5	14.390
60.0	10.583
60.5	7.808
61.0	5.937
61.5	4.904
62.0	4.194
62.5	3.743
63.0	3.356
63.5	3.097
64.0	2.839
64.5	2.581
65.0	2.388
65.5	2.194
66.0	2.065
66.5	1.936
67.0	1.742
67.5	1.678
68.0	1.549
68.5	1.420
69.0	1.355
69.5	1.226
70.0	1.162
70.5	1.097
71.0	1.032
71.5	0.968
72.0	0.903
72.5	0.839
73.0	0.774
73.5	0.710
74.0	0.710
74.5	0.645
75.0	0.581
75.5	0.581
76.0	0.516
76.5	0.516
77.0	0.516
77.5	0.452
78.0	0.452
78.5	0.387
79.0	0.387
79.5	0.387
80.0	0.387
80.5	0.387
81.0	0.387
81.5	0.387
82.0	0.387
82.5	0.323

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CANDELA TABULATION - (Cont.)

83.0	0.387
83.5	0.387
84.0	0.387
84.5	0.387
85.0	0.387
85.5	0.387
86.0	0.387
86.5	0.387
87.0	0.387
87.5	0.452
88.0	0.452
88.5	0.452
89.0	0.452
89.5	0.387
90.0	0.000
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
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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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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
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
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152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
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155.0	0.000
155.5	0.000
156.0	0.000
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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	662.27	N.A.	31.60
0-30	1262.63	N.A.	60.30
0-40	1753.37	N.A.	83.70
0-60	2089.73	N.A.	99.80
0-80	2093.46	N.A.	100.00
0-90	2093.88	N.A.	100.00
10-90	1911.23	N.A.	91.30
20-40	1091.11	N.A.	52.10
20-50	1351.39	N.A.	64.50
40-70	339.39	N.A.	16.20
60-80	3.73	N.A.	0.20
70-80	0.70	N.A.	0.00
80-90	0.42	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	2093.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	182.65
10-20	479.62
20-30	600.36
30-40	490.74
40-50	260.29
50-60	76.07
60-70	3.03
70-80	0.70
80-90	0.42
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

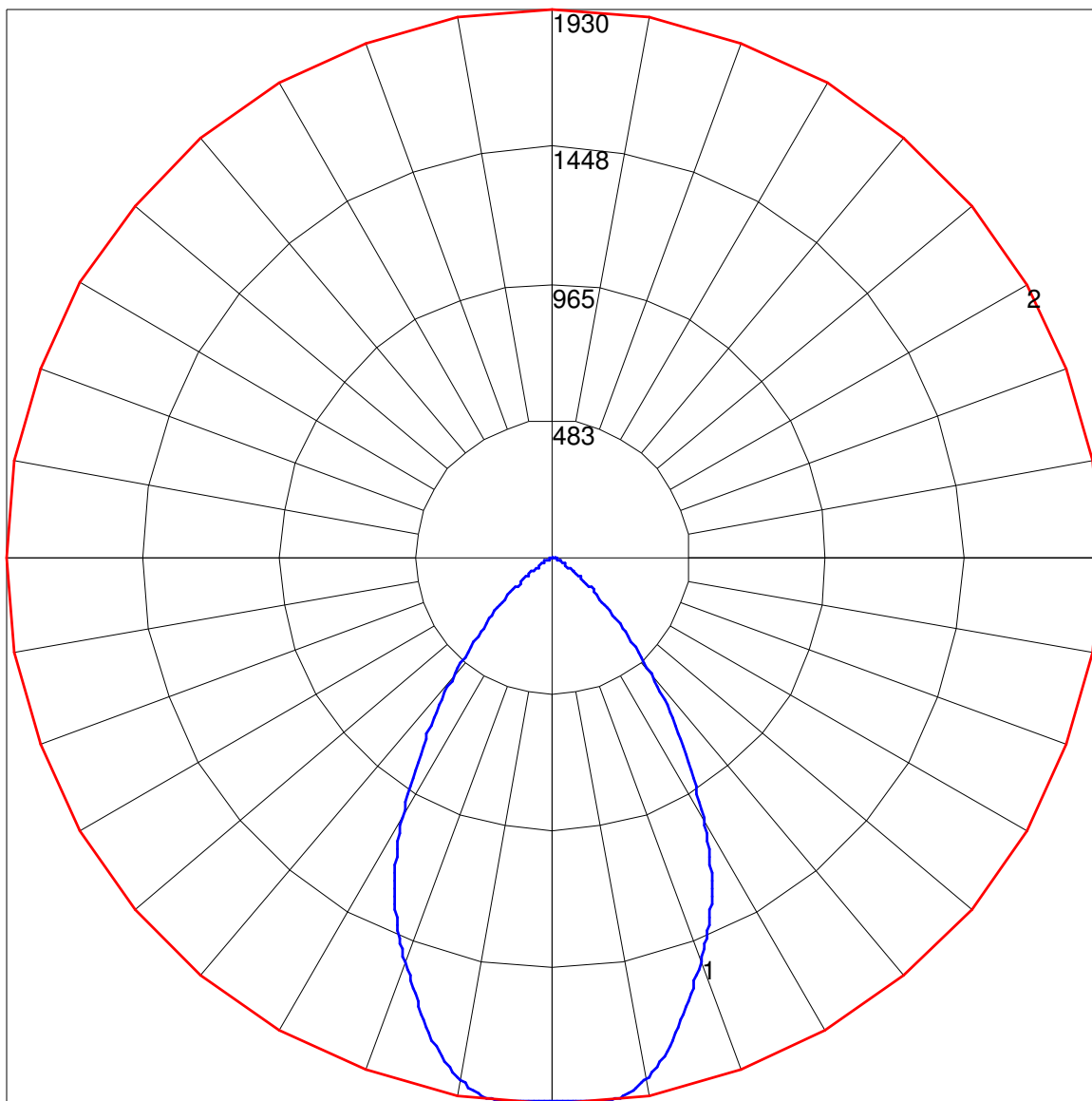
Reflectances

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	10.8	11.9	11.2	12.2	12.5	10.8	11.9	11.2	12.2	12.5
	3H	10.7	11.6	11.1	11.9	12.3	10.7	11.6	11.1	11.9	12.3
	4H	10.6	11.5	11.0	11.8	12.2	10.6	11.5	11.0	11.8	12.2
	6H	10.5	11.3	10.9	11.7	12.0	10.5	11.3	10.9	11.7	12.0
	8H	10.4	11.2	10.9	11.6	12.0	10.4	11.2	10.9	11.6	12.0
	12H	10.4	11.1	10.8	11.5	11.9	10.4	11.1	10.8	11.5	11.9
4H	2H	10.6	11.4	11.0	11.8	12.2	10.6	11.4	11.0	11.8	12.2
	3H	10.4	11.1	10.8	11.5	11.9	10.4	11.1	10.8	11.5	11.9
	4H	10.3	10.9	10.7	11.3	11.8	10.3	10.9	10.7	11.3	11.8
	6H	10.2	10.7	10.7	11.2	11.6	10.2	10.7	10.7	11.2	11.6
	8H	10.1	10.6	10.6	11.1	11.5	10.1	10.6	10.6	11.1	11.5
	12H	10.1	10.5	10.6	11.0	11.5	10.1	10.5	10.6	11.0	11.5
8H	4H	10.1	10.6	10.6	11.1	11.5	10.1	10.6	10.6	11.1	11.5
	6H	10.0	10.4	10.5	10.9	11.4	10.0	10.4	10.5	10.9	11.4
	8H	9.9	10.3	10.5	10.8	11.3	9.9	10.3	10.5	10.8	11.3
	12H	9.9	10.2	10.4	10.7	11.3	9.9	10.2	10.4	10.7	11.3
12H	4H	10.1	10.5	10.5	11.0	11.5	10.1	10.5	10.5	11.0	11.5
	6H	9.9	10.3	10.5	10.8	11.3	9.9	10.3	10.5	10.8	11.3
	8H	9.9	10.2	10.4	10.7	11.3	9.9	10.2	10.4	10.7	11.3

Maximum UGR = 12.5

POLAR GRAPH



Maximum Candela = 1930.085 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.)