

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4LDR-L20-830-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-L20-830-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	2013
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
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	43779	43779	43779
55	13624	13624	13624
65	529	529	529
75	210	210	210
85	416	416	416

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CANDELA TABULATION

	<u>0</u>
0.0	1848.307
0.5	1848.307
1.0	1848.307
1.5	1848.927
2.0	1849.548
2.5	1850.168
3.0	1852.029
3.5	1853.269
4.0	1853.269
4.5	1854.509
5.0	1855.130
5.5	1854.509
6.0	1852.649
6.5	1850.788
7.0	1847.067
7.5	1841.485
8.0	1835.902
8.5	1829.700
9.0	1821.637
9.5	1812.954
10.0	1803.030
10.5	1791.866
11.0	1780.081
11.5	1766.436
12.0	1752.170
12.5	1737.285
13.0	1721.779
13.5	1705.653
14.0	1688.906
14.5	1670.919
15.0	1652.312
15.5	1633.085
16.0	1613.237
16.5	1594.010
17.0	1574.782
17.5	1555.555
18.0	1536.948
18.5	1517.721
19.0	1499.114
19.5	1481.747
20.0	1463.140
20.5	1445.773
21.0	1427.786
21.5	1409.799
22.0	1391.812
22.5	1373.205
23.0	1353.978
23.5	1334.130
24.0	1313.663
24.5	1292.575
25.0	1270.866
25.5	1248.538
26.0	1225.589
26.5	1201.400

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**CANDELA TABULATION - (Cont.)**

27.0	1177.210
27.5	1152.401
28.0	1126.351
28.5	1100.301
29.0	1074.251
29.5	1047.581
30.0	1020.290
30.5	993.620
31.0	966.330
31.5	939.039
32.0	912.369
32.5	885.699
33.0	859.029
33.5	832.979
34.0	806.929
34.5	782.119
35.0	757.310
35.5	733.741
36.0	708.311
36.5	683.501
37.0	658.692
37.5	634.503
38.0	610.748
38.5	587.055
39.0	563.672
39.5	540.661
40.0	518.022
40.5	495.756
41.0	473.861
41.5	452.525
42.0	431.561
42.5	411.217
43.0	391.370
43.5	372.080
44.0	353.535
44.5	335.362
45.0	317.934
45.5	301.063
46.0	284.875
46.5	269.307
47.0	254.359
47.5	240.032
48.0	226.263
48.5	213.114
49.0	200.461
49.5	188.304
50.0	176.644
50.5	165.541
51.0	154.811
51.5	144.515
52.0	134.529
52.5	124.916
53.0	115.674
53.5	106.557
54.0	97.749
54.5	89.004

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**CANDELA TABULATION - (Cont.)**

55.0	80.259
55.5	71.389
56.0	62.458
56.5	53.713
57.0	45.401
57.5	37.648
58.0	30.578
58.5	24.189
59.0	18.545
59.5	13.831
60.0	10.172
60.5	7.505
61.0	5.706
61.5	4.714
62.0	4.032
62.5	3.597
63.0	3.225
63.5	2.977
64.0	2.729
64.5	2.481
65.0	2.295
65.5	2.109
66.0	1.985
66.5	1.861
67.0	1.675
67.5	1.613
68.0	1.489
68.5	1.365
69.0	1.302
69.5	1.178
70.0	1.116
70.5	1.054
71.0	0.992
71.5	0.930
72.0	0.868
72.5	0.806
73.0	0.744
73.5	0.682
74.0	0.682
74.5	0.620
75.0	0.558
75.5	0.558
76.0	0.496
76.5	0.496
77.0	0.496
77.5	0.434
78.0	0.434
78.5	0.372
79.0	0.372
79.5	0.372
80.0	0.372
80.5	0.372
81.0	0.372
81.5	0.372
82.0	0.372
82.5	0.310

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CANDELA TABULATION - (Cont.)

83.0	0.372
83.5	0.372
84.0	0.372
84.5	0.372
85.0	0.372
85.5	0.372
86.0	0.372
86.5	0.372
87.0	0.372
87.5	0.434
88.0	0.434
88.5	0.434
89.0	0.434
89.5	0.372
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
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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
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
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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	636.55	N.A.	31.60
0-30	1213.6	N.A.	60.30
0-40	1685.28	N.A.	83.70
0-60	2008.58	N.A.	99.80
0-80	2012.16	N.A.	100.00
0-90	2012.56	N.A.	100.00
10-90	1837.01	N.A.	91.30
20-40	1048.73	N.A.	52.10
20-50	1298.91	N.A.	64.50
40-70	326.21	N.A.	16.20
60-80	3.58	N.A.	0.20
70-80	0.67	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	2012.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	175.56
10-20	460.99
20-30	577.05
30-40	471.68
40-50	250.18
50-60	73.12
60-70	2.91
70-80	0.67
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**

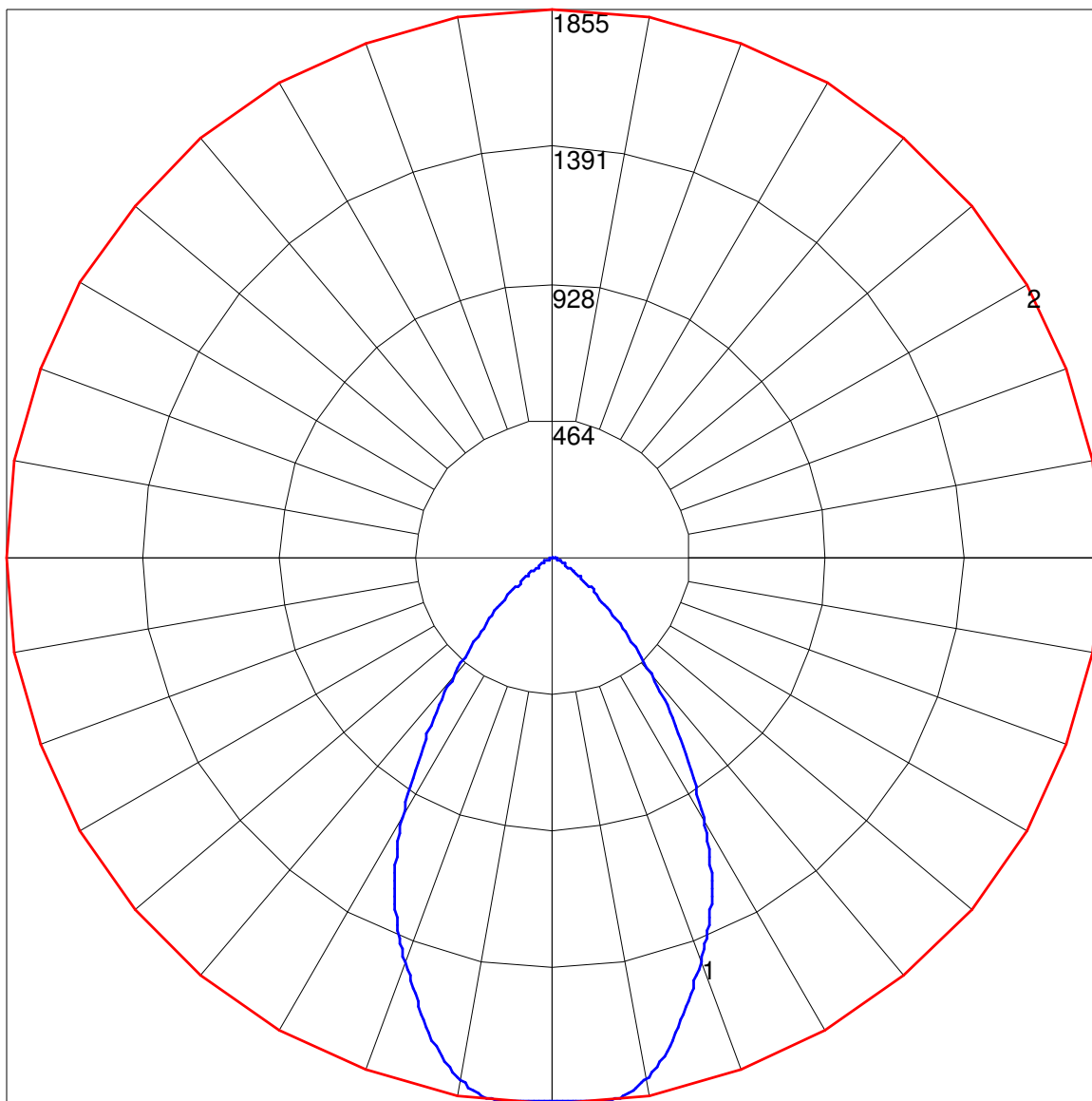
Reflectances

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	10.6	11.7	11.0	12.0	12.3	10.6	11.7	11.0	12.0	12.3
	3H	10.5	11.4	10.9	11.8	12.1	10.5	11.4	10.9	11.8	12.1
	4H	10.4	11.3	10.8	11.6	12.0	10.4	11.3	10.8	11.6	12.0
	6H	10.3	11.1	10.7	11.5	11.8	10.3	11.1	10.7	11.5	11.8
	8H	10.2	11.0	10.7	11.4	11.8	10.2	11.0	10.7	11.4	11.8
	12H	10.2	10.9	10.6	11.3	11.7	10.2	10.9	10.6	11.3	11.7
4H	2H	10.4	11.3	10.8	11.6	12.0	10.4	11.3	10.8	11.6	12.0
	3H	10.2	10.9	10.6	11.3	11.7	10.2	10.9	10.6	11.3	11.7
	4H	10.1	10.7	10.5	11.1	11.6	10.1	10.7	10.5	11.1	11.6
	6H	10.0	10.5	10.5	11.0	11.4	10.0	10.5	10.5	11.0	11.4
	8H	9.9	10.4	10.4	10.9	11.3	9.9	10.4	10.4	10.9	11.3
	12H	9.9	10.3	10.4	10.8	11.3	9.9	10.3	10.4	10.8	11.3
8H	4H	9.9	10.4	10.4	10.9	11.3	9.9	10.4	10.4	10.9	11.3
	6H	9.8	10.2	10.3	10.7	11.2	9.8	10.2	10.3	10.7	11.2
	8H	9.7	10.1	10.3	10.6	11.1	9.7	10.1	10.3	10.6	11.1
	12H	9.7	10.0	10.2	10.5	11.1	9.7	10.0	10.2	10.5	11.1
12H	4H	9.9	10.3	10.3	10.8	11.3	9.9	10.3	10.3	10.8	11.3
	6H	9.7	10.1	10.3	10.6	11.1	9.7	10.1	10.3	10.6	11.1
	8H	9.7	10.0	10.2	10.5	11.1	9.7	10.0	10.2	10.5	11.1

Maximum UGR = 12.3

POLAR GRAPH



Maximum Candela = 1855.13 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.)