

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-930-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-L20-930-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	1667
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
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	36261	36261	36261
55	11285	11285	11285
65	438	438	438
75	174	174	174
85	344	344	344

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CANDELA TABULATION

	<u>0</u>
0.0	1530.921
0.5	1530.921
1.0	1530.921
1.5	1531.435
2.0	1531.949
2.5	1532.462
3.0	1534.003
3.5	1535.031
4.0	1535.031
4.5	1536.058
5.0	1536.572
5.5	1536.058
6.0	1534.517
6.5	1532.976
7.0	1529.894
7.5	1525.270
8.0	1520.646
8.5	1515.509
9.0	1508.831
9.5	1501.638
10.0	1493.419
10.5	1484.171
11.0	1474.411
11.5	1463.108
12.0	1451.293
12.5	1438.963
13.0	1426.120
13.5	1412.763
14.0	1398.892
14.5	1383.994
15.0	1368.582
15.5	1352.656
16.0	1336.217
16.5	1320.291
17.0	1304.365
17.5	1288.440
18.0	1273.028
18.5	1257.102
19.0	1241.690
19.5	1227.306
20.0	1211.894
20.5	1197.509
21.0	1182.611
21.5	1167.713
22.0	1152.814
22.5	1137.402
23.0	1121.477
23.5	1105.037
24.0	1088.084
24.5	1070.617
25.0	1052.637
25.5	1034.142
26.0	1015.134
26.5	995.099

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CANDELA TABULATION - (Cont.)

27.0	975.063
27.5	954.514
28.0	932.937
28.5	911.360
29.0	889.784
29.5	867.693
30.0	845.089
30.5	822.998
31.0	800.394
31.5	777.790
32.0	755.700
32.5	733.609
33.0	711.519
33.5	689.942
34.0	668.365
34.5	647.816
35.0	627.267
35.5	607.745
36.0	586.682
36.5	566.133
37.0	545.583
37.5	525.548
38.0	505.872
38.5	486.247
39.0	466.880
39.5	447.820
40.0	429.069
40.5	410.626
41.0	392.491
41.5	374.819
42.0	357.455
42.5	340.604
43.0	324.165
43.5	308.188
44.0	292.827
44.5	277.775
45.0	263.339
45.5	249.365
46.0	235.957
46.5	223.062
47.0	210.681
47.5	198.814
48.0	187.409
48.5	176.518
49.0	166.038
49.5	155.969
50.0	146.311
50.5	137.115
51.0	128.227
51.5	119.700
52.0	111.428
52.5	103.466
53.0	95.811
53.5	88.259
54.0	80.964
54.5	73.721

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CANDELA TABULATION - (Cont.)

55.0	66.477
55.5	59.131
56.0	51.733
56.5	44.489
57.0	37.605
57.5	31.184
58.0	25.327
58.5	20.036
59.0	15.361
59.5	11.456
60.0	8.425
60.5	6.216
61.0	4.726
61.5	3.904
62.0	3.339
62.5	2.980
63.0	2.671
63.5	2.466
64.0	2.260
64.5	2.055
65.0	1.901
65.5	1.747
66.0	1.644
66.5	1.541
67.0	1.387
67.5	1.336
68.0	1.233
68.5	1.130
69.0	1.079
69.5	0.976
70.0	0.925
70.5	0.873
71.0	0.822
71.5	0.771
72.0	0.719
72.5	0.668
73.0	0.616
73.5	0.565
74.0	0.565
74.5	0.514
75.0	0.462
75.5	0.462
76.0	0.411
76.5	0.411
77.0	0.411
77.5	0.360
78.0	0.360
78.5	0.308
79.0	0.308
79.5	0.308
80.0	0.308
80.5	0.308
81.0	0.308
81.5	0.308
82.0	0.308
82.5	0.257

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CANDELA TABULATION - (Cont.)

83.0	0.308
83.5	0.308
84.0	0.308
84.5	0.308
85.0	0.308
85.5	0.308
86.0	0.308
86.5	0.308
87.0	0.308
87.5	0.360
88.0	0.360
88.5	0.360
89.0	0.360
89.5	0.308
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
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
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
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151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
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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
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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	527.24	N.A.	31.60
0-30	1005.2	N.A.	60.30
0-40	1395.89	N.A.	83.70
0-60	1663.67	N.A.	99.80
0-80	1666.64	N.A.	100.00
0-90	1666.97	N.A.	100.00
10-90	1521.56	N.A.	91.30
20-40	868.65	N.A.	52.10
20-50	1075.87	N.A.	64.50
40-70	270.19	N.A.	16.20
60-80	2.97	N.A.	0.20
70-80	0.55	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	1666.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	145.41
10-20	381.83
20-30	477.96
30-40	390.69
40-50	207.22
50-60	60.56
60-70	2.41
70-80	0.55
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	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

X=2H	Y=2H	10.0	11.1	10.4	11.4	11.7	UGR Viewed Endwise	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	10.8	11.2		9.7	10.5	10.1	10.8	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

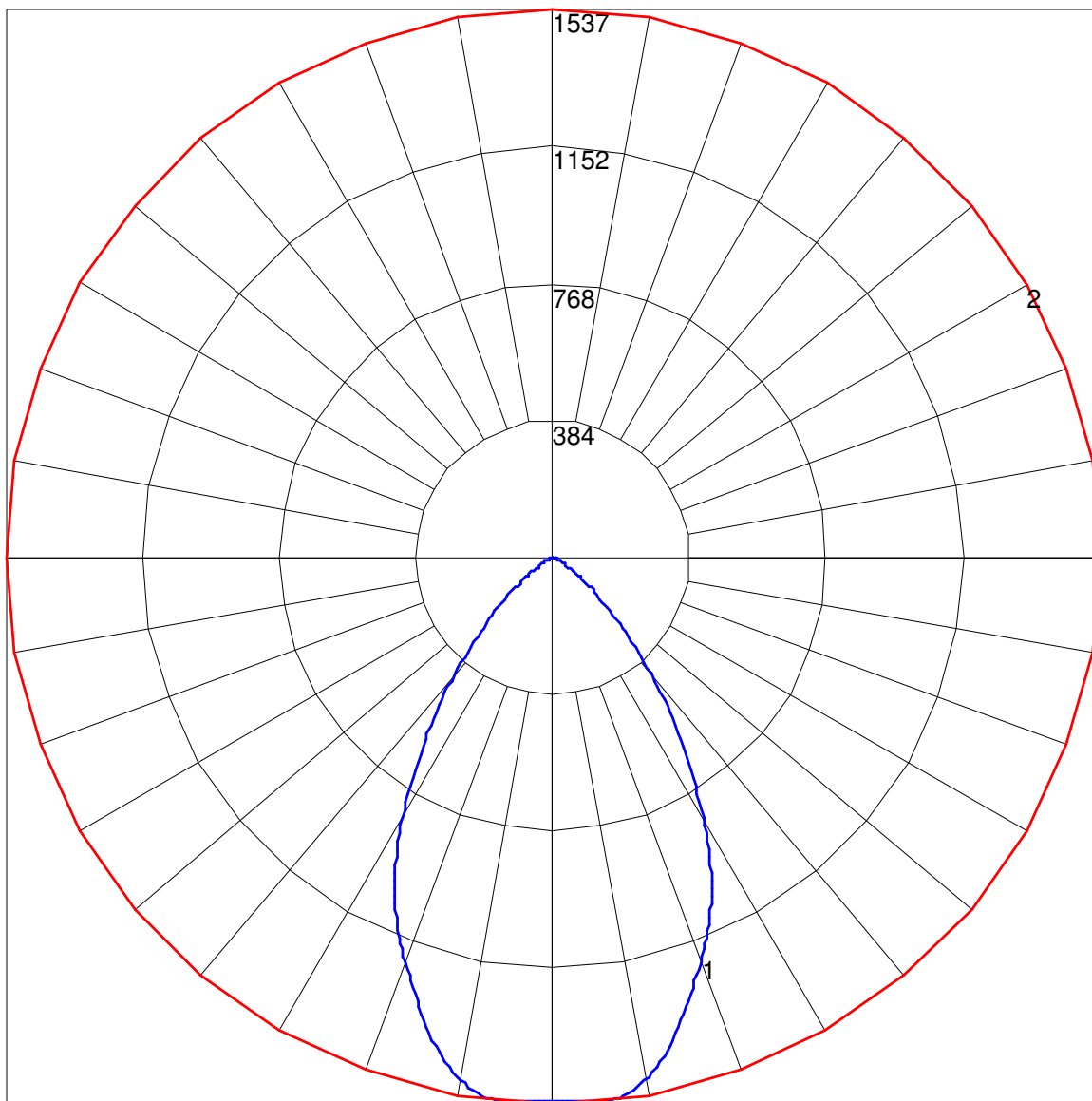
4H	2H	9.8	10.6	10.2	11.0	11.4	9.8	10.6	10.2	11.0	11.4
	3H	9.6	10.3	10.0	10.7	11.1	9.6	10.3	10.0	10.7	11.1
	4H	9.5	10.1	9.9	10.5	11.0	9.5	10.1	9.9	10.5	11.0
	6H	9.4	9.9	9.9	10.4	10.8	9.4	9.9	9.9	10.4	10.8
	8H	9.3	9.8	9.8	10.3	10.7	9.3	9.8	9.8	10.3	10.7
	12H	9.3	9.7	9.8	10.2	10.7	9.3	9.7	9.8	10.2	10.7

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 = 1536.572 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.)