

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-940-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
[MANUFACT] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC.
[LUMCAT] 4LDR-L20-940-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	1748
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
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	38030	38030	38030
55	11835	11835	11835
65	459	459	459
75	182	182	182
85	361	361	361

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

CANDELA TABULATION

	<u>0</u>
0.0	1605.600
0.5	1605.600
1.0	1605.600
1.5	1606.139
2.0	1606.678
2.5	1607.217
3.0	1608.833
3.5	1609.911
4.0	1609.911
4.5	1610.988
5.0	1611.527
5.5	1610.988
6.0	1609.372
6.5	1607.755
7.0	1604.523
7.5	1599.673
8.0	1594.824
8.5	1589.436
9.0	1582.432
9.5	1574.889
10.0	1566.268
10.5	1556.570
11.0	1546.333
11.5	1534.480
12.0	1522.087
12.5	1509.156
13.0	1495.687
13.5	1481.678
14.0	1467.131
14.5	1451.506
15.0	1435.342
15.5	1418.639
16.0	1401.398
16.5	1384.695
17.0	1367.993
17.5	1351.290
18.0	1335.127
18.5	1318.424
19.0	1302.260
19.5	1287.174
20.0	1271.010
20.5	1255.924
21.0	1240.299
21.5	1224.674
22.0	1209.049
22.5	1192.886
23.0	1176.183
23.5	1158.942
24.0	1141.161
24.5	1122.843
25.0	1103.985
25.5	1084.588
26.0	1064.653
26.5	1043.640

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

27.0	1022.627
27.5	1001.076
28.0	978.446
28.5	955.817
29.0	933.188
29.5	910.020
30.0	886.313
30.5	863.145
31.0	839.438
31.5	815.731
32.0	792.563
32.5	769.395
33.0	746.227
33.5	723.598
34.0	700.968
34.5	679.417
35.0	657.865
35.5	637.391
36.0	615.300
36.5	593.749
37.0	572.197
37.5	551.184
38.0	530.548
38.5	509.967
39.0	489.654
39.5	469.665
40.0	449.999
40.5	430.656
41.0	411.637
41.5	393.103
42.0	374.891
42.5	357.219
43.0	339.978
43.5	323.221
44.0	307.111
44.5	291.325
45.0	276.185
45.5	261.530
46.0	247.467
46.5	233.943
47.0	220.959
47.5	208.513
48.0	196.551
48.5	185.129
49.0	174.138
49.5	163.577
50.0	153.448
50.5	143.804
51.0	134.482
51.5	125.539
52.0	116.864
52.5	108.513
53.0	100.485
53.5	92.564
54.0	84.914
54.5	77.317

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

55.0	69.720
55.5	62.015
56.0	54.256
56.5	46.659
57.0	39.440
57.5	32.705
58.0	26.562
58.5	21.013
59.0	16.110
59.5	12.015
60.0	8.836
60.5	6.519
61.0	4.957
61.5	4.095
62.0	3.502
62.5	3.125
63.0	2.802
63.5	2.586
64.0	2.371
64.5	2.155
65.0	1.994
65.5	1.832
66.0	1.724
66.5	1.616
67.0	1.455
67.5	1.401
68.0	1.293
68.5	1.185
69.0	1.131
69.5	1.024
70.0	0.970
70.5	0.916
71.0	0.862
71.5	0.808
72.0	0.754
72.5	0.700
73.0	0.647
73.5	0.593
74.0	0.593
74.5	0.539
75.0	0.485
75.5	0.485
76.0	0.431
76.5	0.431
77.0	0.431
77.5	0.377
78.0	0.377
78.5	0.323
79.0	0.323
79.5	0.323
80.0	0.323
80.5	0.323
81.0	0.323
81.5	0.323
82.0	0.323
82.5	0.269

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

83.0	0.323
83.5	0.323
84.0	0.323
84.5	0.323
85.0	0.323
85.5	0.323
86.0	0.323
86.5	0.323
87.0	0.323
87.5	0.377
88.0	0.377
88.5	0.377
89.0	0.377
89.5	0.323
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

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
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	552.96	N.A.	31.60
0-30	1054.24	N.A.	60.30
0-40	1463.98	N.A.	83.70
0-60	1744.82	N.A.	99.80
0-80	1747.94	N.A.	100.00
0-90	1748.29	N.A.	100.00
10-90	1595.78	N.A.	91.30
20-40	911.02	N.A.	52.10
20-50	1128.35	N.A.	64.50
40-70	283.37	N.A.	16.20
60-80	3.11	N.A.	0.20
70-80	0.58	N.A.	0.00
80-90	0.35	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	1748.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	152.50
10-20	400.46
20-30	501.27
30-40	409.75
40-50	217.33
50-60	63.51
60-70	2.53
70-80	0.58
80-90	0.35
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-940-CS-DIM-UNV_.IES

UGR TABLE - CORRECTED

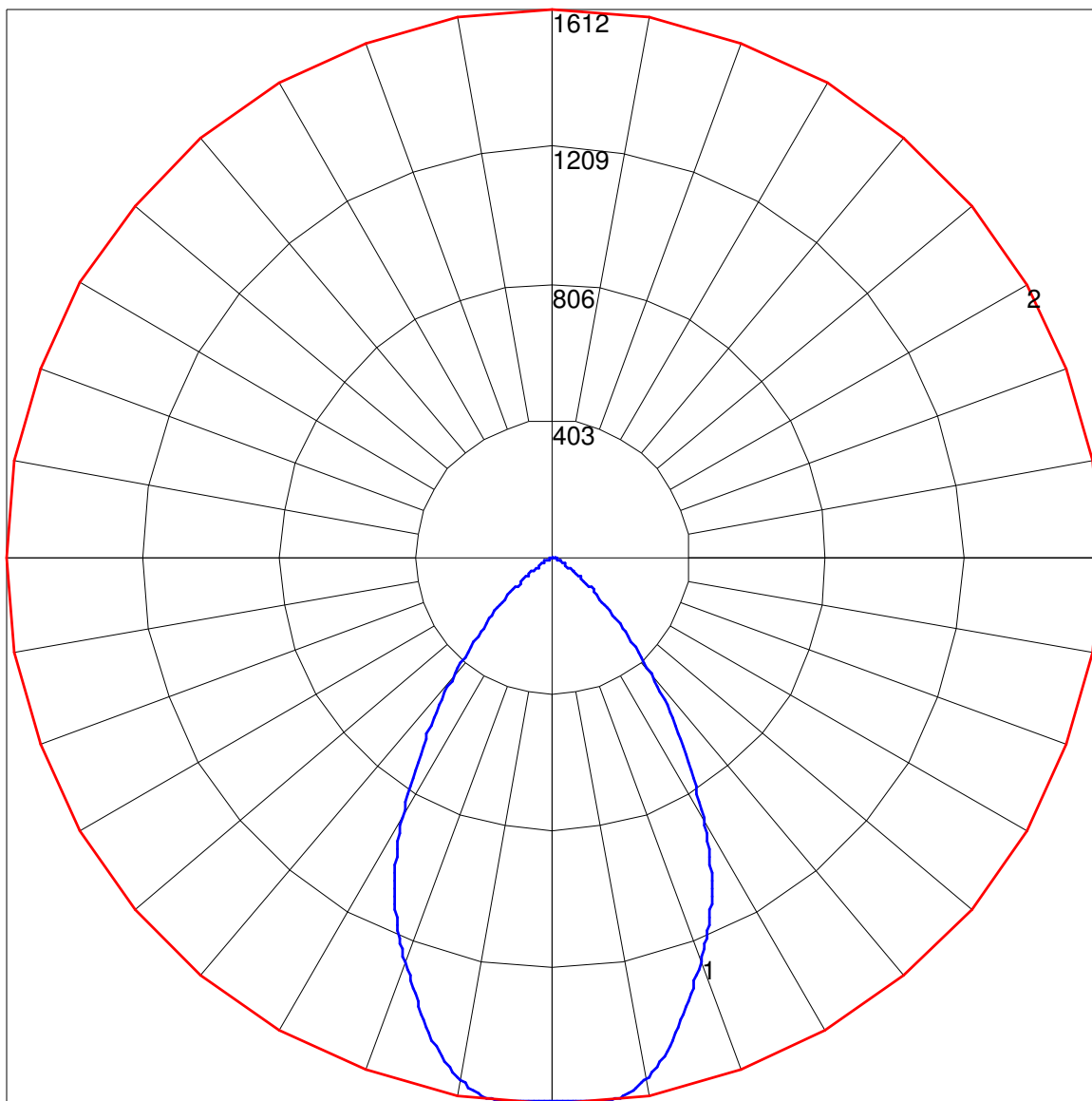
Reflectances

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	10.2	11.3	10.6	11.6	11.9	10.2	11.3	10.6	11.6	11.9
	3H	10.1	11.0	10.5	11.3	11.7	10.1	11.0	10.5	11.3	11.7
	4H	10.0	10.9	10.4	11.2	11.6	10.0	10.9	10.4	11.2	11.6
	6H	9.9	10.7	10.3	11.0	11.4	9.9	10.7	10.3	11.0	11.4
	8H	9.8	10.6	10.3	11.0	11.4	9.8	10.6	10.3	11.0	11.4
	12H	9.8	10.5	10.2	10.9	11.3	9.8	10.5	10.2	10.9	11.3
4H	2H	10.0	10.8	10.4	11.2	11.6	10.0	10.8	10.4	11.2	11.6
	3H	9.8	10.5	10.2	10.9	11.3	9.8	10.5	10.2	10.9	11.3
	4H	9.7	10.3	10.1	10.7	11.2	9.7	10.3	10.1	10.7	11.2
	6H	9.6	10.1	10.1	10.6	11.0	9.6	10.1	10.1	10.6	11.0
	8H	9.5	10.0	10.0	10.5	10.9	9.5	10.0	10.0	10.5	10.9
	12H	9.5	9.9	10.0	10.4	10.9	9.5	9.9	10.0	10.4	10.9
8H	4H	9.5	10.0	10.0	10.5	10.9	9.5	10.0	10.0	10.5	10.9
	6H	9.4	9.8	9.9	10.3	10.8	9.4	9.8	9.9	10.3	10.8
	8H	9.3	9.7	9.9	10.2	10.7	9.3	9.7	9.9	10.2	10.7
	12H	9.3	9.6	9.8	10.1	10.7	9.3	9.6	9.8	10.1	10.7
12H	4H	9.5	9.9	9.9	10.4	10.9	9.5	9.9	9.9	10.4	10.9
	6H	9.3	9.7	9.9	10.2	10.7	9.3	9.7	9.9	10.2	10.7
	8H	9.3	9.6	9.8	10.1	10.7	9.3	9.6	9.8	10.1	10.7

Maximum UGR = 11.9

POLAR GRAPH



Maximum Candela = 1611.527 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.)