

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-930-WH-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 4792018053.02  
[TESTLAB] UL, LLC  
[ISSUE DATE] 2025-12-10  
[TEST DATE] 11/11/2025  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] 4LDR-L20-930-WH-DIM-UNV  
[LUMINAIRE] 4" recessed downlight with textured white finish reflector  
[MORE] 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	1415
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	17
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	1.04
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	33824	33824	33824
55	22736	22736	22736
65	17126	17126	17126
75	13004	13004	13004
85	9511	9511	9511

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CANDELA TABULATION

	<u>0</u>
0.0	965.130
0.5	965.640
1.0	965.130
1.5	964.620
2.0	964.110
2.5	963.600
3.0	962.581
3.5	961.561
4.0	960.541
4.5	959.012
5.0	957.992
5.5	955.953
6.0	954.933
6.5	952.384
7.0	950.345
7.5	947.795
8.0	945.756
8.5	943.207
9.0	940.148
9.5	937.089
10.0	934.539
10.5	931.480
11.0	928.421
11.5	924.852
12.0	920.774
12.5	917.205
13.0	913.636
13.5	909.047
14.0	904.969
14.5	900.890
15.0	896.301
15.5	891.713
16.0	886.614
16.5	882.026
17.0	876.927
17.5	871.319
18.0	866.221
18.5	860.612
19.0	854.494
19.5	848.376
20.0	841.748
20.5	835.120
21.0	827.983
21.5	819.825
22.0	811.668
22.5	803.000
23.0	793.823
23.5	783.626
24.0	772.410
24.5	761.703
25.0	749.467
25.5	737.231
26.0	725.504
26.5	712.249

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**CANDELA TABULATION - (Cont.)**

27.0	698.993
27.5	684.717
28.0	670.951
28.5	657.186
29.0	643.420
29.5	630.674
30.0	617.418
30.5	603.142
31.0	588.867
31.5	574.082
32.0	559.806
32.5	545.530
33.0	531.255
33.5	517.489
34.0	503.417
34.5	489.703
35.0	476.192
35.5	462.783
36.0	449.578
36.5	436.475
37.0	423.576
37.5	410.881
38.0	398.390
38.5	385.899
39.0	373.714
39.5	361.631
40.0	349.802
40.5	338.076
41.0	326.655
41.5	315.388
42.0	304.528
42.5	293.822
43.0	283.523
43.5	273.530
44.0	263.843
44.5	254.564
45.0	245.642
45.5	237.076
46.0	228.919
46.5	221.169
47.0	213.777
47.5	206.792
48.0	200.164
48.5	193.842
49.0	187.877
49.5	182.166
50.0	176.813
50.5	171.664
51.0	166.820
51.5	162.181
52.0	157.745
52.5	153.462
53.0	149.333
53.5	145.305
54.0	141.430
54.5	137.657

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CANDELA TABULATION - (Cont.)

55.0	133.935
55.5	130.417
56.0	127.053
56.5	123.739
57.0	120.425
57.5	117.162
58.0	113.899
58.5	110.636
59.0	107.475
59.5	104.416
60.0	101.356
60.5	98.399
61.0	95.442
61.5	92.638
62.0	89.834
62.5	87.132
63.0	84.481
63.5	81.881
64.0	79.229
64.5	76.782
65.0	74.335
65.5	71.939
66.0	69.542
66.5	67.248
67.0	65.005
67.5	62.812
68.0	60.671
68.5	58.530
69.0	56.439
69.5	54.400
70.0	52.412
70.5	50.474
71.0	48.537
71.5	46.650
72.0	44.815
72.5	43.031
73.0	41.246
73.5	39.564
74.0	37.881
74.5	36.199
75.0	34.567
75.5	32.987
76.0	31.457
76.5	29.928
77.0	28.449
77.5	26.971
78.0	25.594
78.5	24.166
79.0	22.790
79.5	21.464
80.0	20.139
80.5	18.864
81.0	17.590
81.5	16.366
82.0	15.193
82.5	14.021

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CANDELA TABULATION - (Cont.)

83.0	12.848
83.5	11.726
84.0	10.656
84.5	9.534
85.0	8.514
85.5	7.495
86.0	6.475
86.5	5.506
87.0	4.538
87.5	3.620
88.0	2.753
88.5	1.886
89.0	1.122
89.5	0.510
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
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120.5	0.000
121.0	0.000
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122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
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125.5	0.000
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126.5	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
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146.5	0.000
147.0	0.000
147.5	0.000
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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
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157.0	0.000
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158.0	0.000
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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	342.60	N.A.	24.20
0-30	682.94	N.A.	48.30
0-40	980.22	N.A.	69.30
0-60	1294.28	N.A.	91.40
0-80	1405.63	N.A.	99.30
0-90	1415.38	N.A.	100.00
10-90	1324.7	N.A.	93.60
20-40	637.62	N.A.	45.00
20-50	830.62	N.A.	58.70
40-70	388.36	N.A.	27.40
60-80	111.35	N.A.	7.90
70-80	37.06	N.A.	2.60
80-90	9.75	N.A.	0.70
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	1415.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	90.68
10-20	251.92
20-30	340.34
30-40	297.28
40-50	193.00
50-60	121.06
60-70	74.30
70-80	37.06
80-90	9.75
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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	88	82	77	95	87	81	76	84	79	75	82	77	74	79	75	72	71
4	90	81	73	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	43	39	37

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**UGR TABLE - CORRECTED**

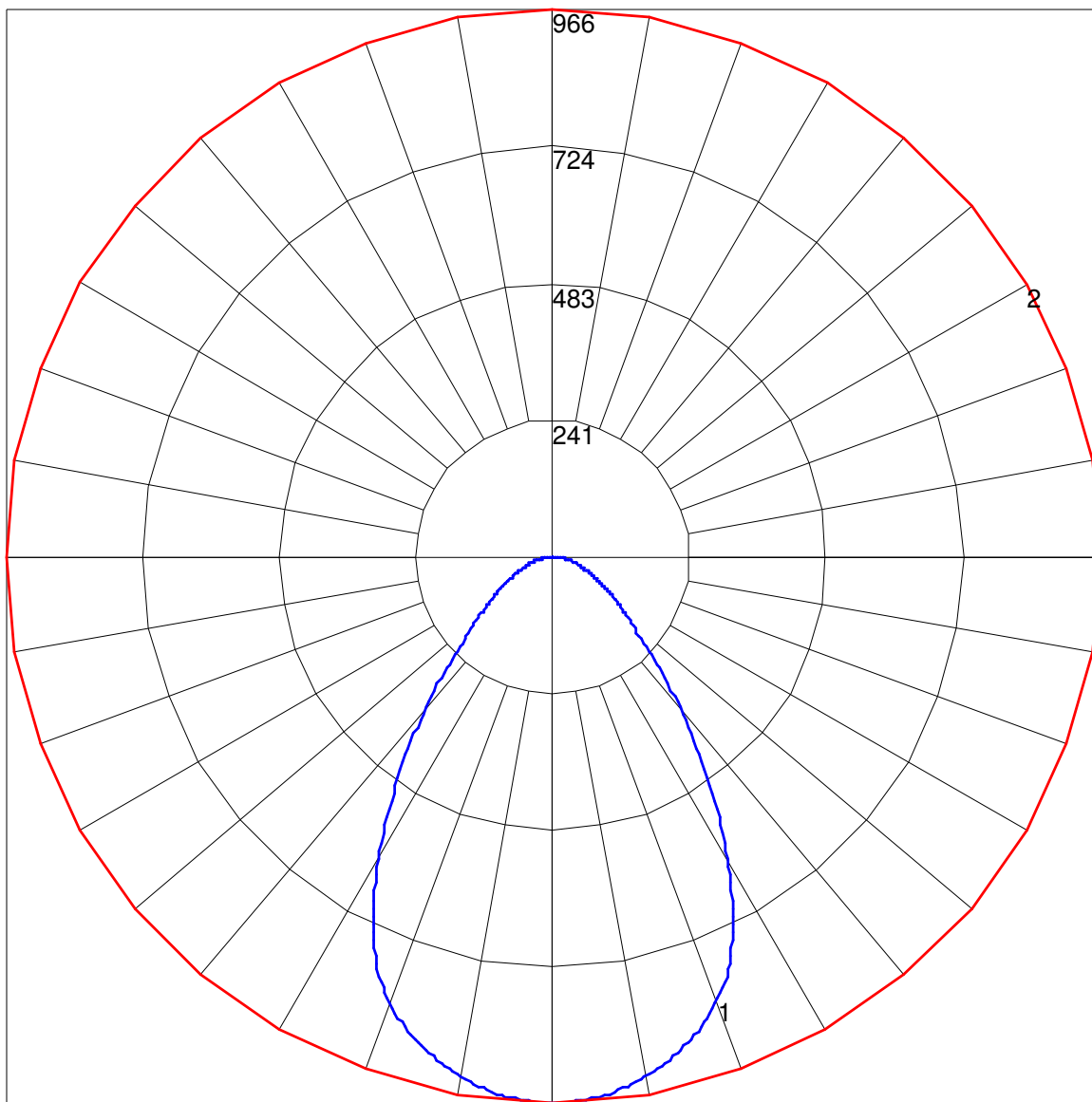
Reflectances

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	19.9	21.2	20.2	21.5	21.8	19.9	21.2	20.2	21.5	21.8
	3H	21.1	22.3	21.5	22.6	23.0	21.1	22.3	21.5	22.6	23.0
	4H	21.5	22.6	21.9	23.0	23.4	21.5	22.6	21.9	23.0	23.4
	6H	21.8	22.8	22.2	23.2	23.6	21.8	22.8	22.2	23.2	23.6
	8H	21.9	22.9	22.4	23.3	23.7	21.9	22.9	22.4	23.3	23.7
	12H	22.0	22.9	22.4	23.3	23.7	22.0	22.9	22.4	23.3	23.7
4H	2H	20.3	21.4	20.7	21.7	22.1	20.3	21.4	20.7	21.7	22.1
	3H	21.7	22.6	22.1	23.0	23.4	21.7	22.6	22.1	23.0	23.4
	4H	22.3	23.1	22.7	23.5	23.9	22.3	23.1	22.7	23.5	23.9
	6H	22.7	23.4	23.1	23.8	24.3	22.7	23.4	23.1	23.8	24.3
	8H	22.8	23.4	23.2	23.9	24.3	22.8	23.4	23.2	23.9	24.3
	12H	22.9	23.4	23.4	23.9	24.4	22.9	23.4	23.4	23.9	24.4
8H	4H	22.4	23.1	22.9	23.5	24.0	22.4	23.1	22.9	23.5	24.0
	6H	22.9	23.5	23.4	24.0	24.4	22.9	23.5	23.4	24.0	24.4
	8H	23.1	23.6	23.6	24.1	24.6	23.1	23.6	23.6	24.1	24.6
	12H	23.2	23.7	23.8	24.2	24.7	23.2	23.7	23.8	24.2	24.7
12H	4H	22.4	23.0	22.9	23.5	23.9	22.4	23.0	22.9	23.5	23.9
	6H	22.9	23.4	23.5	23.9	24.4	22.9	23.4	23.5	23.9	24.4
	8H	23.2	23.6	23.7	24.1	24.7	23.2	23.6	23.7	24.1	24.7

Maximum UGR = 24.7

POLAR GRAPH



Maximum Candela = 965.64 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.)