

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-935-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-L20-935-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	1433
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
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	34237	34237	34237
55	23013	23013	23013
65	17335	17335	17335
75	13163	13163	13163
85	9628	9628	9628

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CANDELA TABULATION

	<u>0</u>
0.0	976.900
0.5	977.416
1.0	976.900
1.5	976.384
2.0	975.868
2.5	975.352
3.0	974.320
3.5	973.287
4.0	972.255
4.5	970.707
5.0	969.675
5.5	967.611
6.0	966.579
6.5	963.998
7.0	961.934
7.5	959.354
8.0	957.290
8.5	954.709
9.0	951.613
9.5	948.517
10.0	945.936
10.5	942.840
11.0	939.744
11.5	936.131
12.0	932.003
12.5	928.390
13.0	924.778
13.5	920.133
14.0	916.005
14.5	911.876
15.0	907.232
15.5	902.587
16.0	897.427
16.5	892.782
17.0	887.622
17.5	881.945
18.0	876.784
18.5	871.108
19.0	864.915
19.5	858.722
20.0	852.014
20.5	845.305
21.0	838.080
21.5	829.823
22.0	821.566
22.5	812.793
23.0	803.504
23.5	793.183
24.0	781.830
24.5	770.992
25.0	758.607
25.5	746.221
26.0	734.352
26.5	720.935

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CANDELA TABULATION - (Cont.)

27.0	707.517
27.5	693.067
28.0	679.134
28.5	665.200
29.0	651.267
29.5	638.365
30.0	624.948
30.5	610.498
31.0	596.048
31.5	581.083
32.0	566.633
32.5	552.183
33.0	537.734
33.5	523.800
34.0	509.557
34.5	495.675
35.0	481.999
35.5	468.427
36.0	455.061
36.5	441.798
37.0	428.742
37.5	415.892
38.0	403.249
38.5	390.605
39.0	378.271
39.5	366.041
40.0	354.068
40.5	342.199
41.0	330.639
41.5	319.234
42.0	308.242
42.5	297.405
43.0	286.980
43.5	276.866
44.0	267.061
44.5	257.668
45.0	248.637
45.5	239.967
46.0	231.711
46.5	223.866
47.0	216.384
47.5	209.314
48.0	202.605
48.5	196.206
49.0	190.168
49.5	184.388
50.0	178.969
50.5	173.757
51.0	168.855
51.5	164.158
52.0	159.669
52.5	155.334
53.0	151.154
53.5	147.077
54.0	143.155
54.5	139.336

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CANDELA TABULATION - (Cont.)

55.0	135.569
55.5	132.008
56.0	128.602
56.5	125.248
57.0	121.893
57.5	118.590
58.0	115.288
58.5	111.985
59.0	108.785
59.5	105.689
60.0	102.593
60.5	99.599
61.0	96.606
61.5	93.768
62.0	90.930
62.5	88.195
63.0	85.511
63.5	82.879
64.0	80.196
64.5	77.719
65.0	75.241
65.5	72.816
66.0	70.390
66.5	68.068
67.0	65.798
67.5	63.578
68.0	61.411
68.5	59.244
69.0	57.128
69.5	55.064
70.0	53.051
70.5	51.090
71.0	49.129
71.5	47.219
72.0	45.362
72.5	43.555
73.0	41.749
73.5	40.046
74.0	38.343
74.5	36.640
75.0	34.989
75.5	33.389
76.0	31.841
76.5	30.293
77.0	28.796
77.5	27.300
78.0	25.906
78.5	24.461
79.0	23.068
79.5	21.726
80.0	20.384
80.5	19.094
81.0	17.804
81.5	16.565
82.0	15.379
82.5	14.192

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CANDELA TABULATION - (Cont.)

83.0	13.005
83.5	11.869
84.0	10.786
84.5	9.650
85.0	8.618
85.5	7.586
86.0	6.554
86.5	5.573
87.0	4.593
87.5	3.664
88.0	2.787
88.5	1.909
89.0	1.135
89.5	0.516
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
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118.5	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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152.0	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	346.78	N.A.	24.20
0-30	691.27	N.A.	48.30
0-40	992.17	N.A.	69.30
0-60	1310.06	N.A.	91.40
0-80	1422.77	N.A.	99.30
0-90	1432.65	N.A.	100.00
10-90	1340.86	N.A.	93.60
20-40	645.40	N.A.	45.00
20-50	840.75	N.A.	58.70
40-70	393.09	N.A.	27.40
60-80	112.71	N.A.	7.90
70-80	37.51	N.A.	2.60
80-90	9.87	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	1432.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.79
10-20	254.99
20-30	344.49
30-40	300.91
40-50	195.35
50-60	122.54
60-70	75.20
70-80	37.51
80-90	9.87
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	101	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	94	87	81	76	84	79	75	81	77	74	79	75	72	70
4	90	81	73	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	82	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	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	42	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

X=2H	Y=2H	20.0	21.3	20.3	21.6	21.9	20.0	21.3	20.3	21.6	21.9
	3H	21.2	22.4	21.6	22.7	23.1	21.2	22.4	21.6	22.7	23.1
	4H	21.6	22.7	22.0	23.1	23.5	21.6	22.7	22.0	23.1	23.5
	6H	21.9	22.9	22.3	23.3	23.7	21.9	22.9	22.3	23.3	23.7
	8H	22.0	23.0	22.5	23.4	23.8	22.0	23.0	22.5	23.4	23.8
	12H	22.1	23.0	22.5	23.4	23.8	22.1	23.0	22.5	23.4	23.8

UGR Viewed Endwise

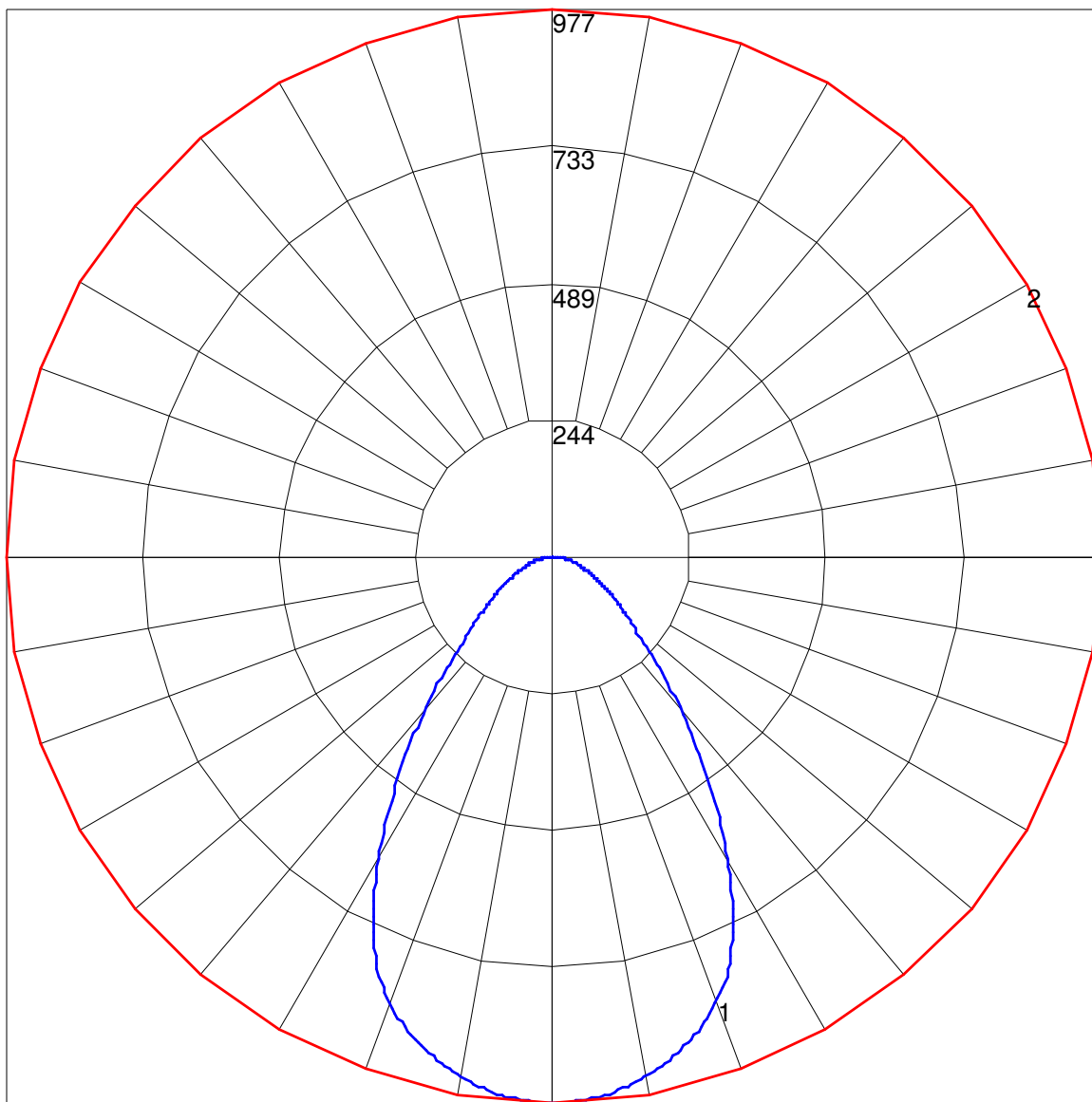
4H	2H	20.4	21.5	20.8	21.8	22.2	20.4	21.5	20.8	21.8	22.2
	3H	21.8	22.7	22.2	23.1	23.5	21.8	22.7	22.2	23.1	23.5
	4H	22.4	23.2	22.8	23.6	24.0	22.4	23.2	22.8	23.6	24.0
	6H	22.8	23.5	23.2	23.9	24.4	22.8	23.5	23.2	23.9	24.4
	8H	22.9	23.5	23.3	24.0	24.5	22.9	23.5	23.3	24.0	24.5
	12H	23.0	23.5	23.5	24.0	24.5	23.0	23.5	23.5	24.0	24.5

8H	4H	22.5	23.2	23.0	23.6	24.1	22.5	23.2	23.0	23.6	24.1
	6H	23.0	23.6	23.5	24.1	24.5	23.0	23.6	23.5	24.1	24.5
	8H	23.2	23.7	23.7	24.2	24.7	23.2	23.7	23.7	24.2	24.7
	12H	23.4	23.8	23.9	24.3	24.8	23.4	23.8	23.9	24.3	24.8

12H	4H	22.5	23.1	23.0	23.6	24.0	22.5	23.1	23.0	23.6	24.0
	6H	23.0	23.5	23.6	24.0	24.5	23.0	23.5	23.6	24.0	24.5
	8H	23.3	23.7	23.8	24.2	24.8	23.3	23.7	23.8	24.2	24.8

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 977.416 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.)