

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-940-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-L20-940-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	1484
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
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	35474	35474	35474
55	23845	23845	23845
65	17961	17961	17961
75	13638	13638	13638
85	9976	9976	9976

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CANDELA TABULATION

	<u>0</u>
0.0	1012.209
0.5	1012.744
1.0	1012.209
1.5	1011.675
2.0	1011.140
2.5	1010.605
3.0	1009.536
3.5	1008.466
4.0	1007.397
4.5	1005.793
5.0	1004.723
5.5	1002.585
6.0	1001.515
6.5	998.842
7.0	996.703
7.5	994.029
8.0	991.890
8.5	989.217
9.0	986.009
9.5	982.800
10.0	980.127
10.5	976.918
11.0	973.710
11.5	969.967
12.0	965.689
12.5	961.946
13.0	958.204
13.5	953.391
14.0	949.113
14.5	944.836
15.0	940.023
15.5	935.211
16.0	929.864
16.5	925.051
17.0	919.704
17.5	913.822
18.0	908.475
18.5	902.593
19.0	896.177
19.5	889.760
20.0	882.809
20.5	875.858
21.0	868.372
21.5	859.817
22.0	851.261
22.5	842.171
23.0	832.546
23.5	821.852
24.0	810.088
24.5	798.859
25.0	786.026
25.5	773.193
26.0	760.895
26.5	746.992

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CANDELA TABULATION - (Cont.)

27.0	733.090
27.5	718.118
28.0	703.681
28.5	689.243
29.0	674.806
29.5	661.438
30.0	647.536
30.5	632.564
31.0	617.592
31.5	602.085
32.0	587.114
32.5	572.142
33.0	557.170
33.5	542.732
34.0	527.974
34.5	513.591
35.0	499.421
35.5	485.358
36.0	471.509
36.5	457.767
37.0	444.239
37.5	430.924
38.0	417.824
38.5	404.723
39.0	391.944
39.5	379.271
40.0	366.866
40.5	354.567
41.0	342.590
41.5	330.773
42.0	319.383
42.5	308.154
43.0	297.353
43.5	286.873
44.0	276.713
44.5	266.982
45.0	257.624
45.5	248.641
46.0	240.086
46.5	231.958
47.0	224.205
47.5	216.879
48.0	209.928
48.5	203.297
49.0	197.041
49.5	191.053
50.0	185.438
50.5	180.037
51.0	174.958
51.5	170.092
52.0	165.440
52.5	160.948
53.0	156.617
53.5	152.393
54.0	148.329
54.5	144.372

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CANDELA TABULATION - (Cont.)

55.0	140.469
55.5	136.779
56.0	133.250
56.5	129.775
57.0	126.299
57.5	122.877
58.0	119.455
58.5	116.032
59.0	112.717
59.5	109.509
60.0	106.301
60.5	103.199
61.0	100.098
61.5	97.157
62.0	94.216
62.5	91.382
63.0	88.602
63.5	85.875
64.0	83.094
64.5	80.528
65.0	77.961
65.5	75.448
66.0	72.935
66.5	70.528
67.0	68.176
67.5	65.876
68.0	63.631
68.5	61.385
69.0	59.193
69.5	57.054
70.0	54.968
70.5	52.936
71.0	50.905
71.5	48.926
72.0	47.001
72.5	45.130
73.0	43.258
73.5	41.494
74.0	39.729
74.5	37.965
75.0	36.253
75.5	34.596
76.0	32.992
76.5	31.388
77.0	29.837
77.5	28.286
78.0	26.843
78.5	25.345
79.0	23.902
79.5	22.511
80.0	21.121
80.5	19.784
81.0	18.448
81.5	17.164
82.0	15.934
82.5	14.705

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CANDELA TABULATION - (Cont.)

83.0	13.475
83.5	12.298
84.0	11.175
84.5	9.999
85.0	8.930
85.5	7.860
86.0	6.791
86.5	5.775
87.0	4.759
87.5	3.796
88.0	2.887
88.5	1.978
89.0	1.176
89.5	0.535
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
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120.5	0.000
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123.5	0.000
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124.5	0.000
125.0	0.000
125.5	0.000
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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
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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
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

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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	359.31	N.A.	24.20
0-30	716.25	N.A.	48.30
0-40	1028.04	N.A.	69.30
0-60	1357.42	N.A.	91.40
0-80	1474.2	N.A.	99.30
0-90	1484.43	N.A.	100.00
10-90	1389.32	N.A.	93.60
20-40	668.72	N.A.	45.00
20-50	871.14	N.A.	58.70
40-70	407.30	N.A.	27.40
60-80	116.78	N.A.	7.90
70-80	38.86	N.A.	2.60
80-90	10.23	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	1484.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.10
10-20	264.21
20-30	356.94
30-40	311.78
40-50	202.41
50-60	126.97
60-70	77.92
70-80	38.86
80-90	10.23
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	105	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

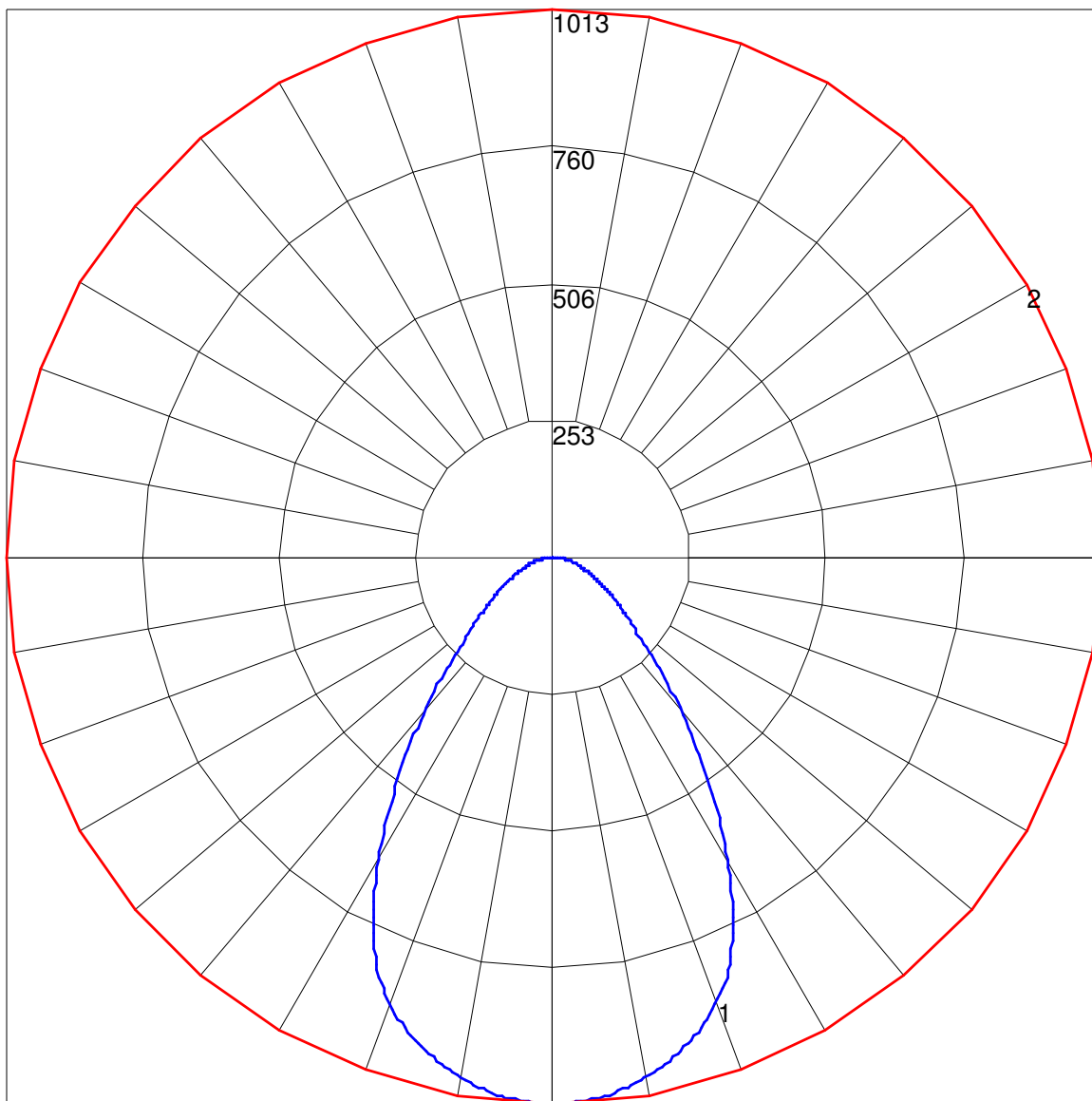
X=2H	Y=2H	20.1	21.4	20.4	21.7	22.0	20.1	21.4	20.4	21.7	22.0
	3H	21.3	22.5	21.7	22.8	23.2	21.3	22.5	21.7	22.8	23.2
	4H	21.7	22.8	22.1	23.2	23.6	21.7	22.8	22.1	23.2	23.6
	6H	22.0	23.0	22.4	23.4	23.8	22.0	23.0	22.4	23.4	23.8
	8H	22.1	23.1	22.6	23.5	23.9	22.1	23.1	22.6	23.5	23.9
	12H	22.2	23.1	22.6	23.5	23.9	22.2	23.1	22.6	23.5	23.9

UGR Viewed Endwise

4H	2H	20.5	21.6	20.9	21.9	22.3	20.5	21.6	20.9	21.9	22.3
	3H	21.9	22.8	22.3	23.2	23.6	21.9	22.8	22.3	23.2	23.6
	4H	22.5	23.3	22.9	23.7	24.1	22.5	23.3	22.9	23.7	24.1
	6H	22.9	23.6	23.3	24.0	24.5	22.9	23.6	23.3	24.0	24.5
	8H	23.0	23.6	23.4	24.1	24.6	23.0	23.6	23.4	24.1	24.6
	12H	23.1	23.6	23.6	24.1	24.6	23.1	23.6	23.6	24.1	24.6
8H	4H	22.6	23.3	23.1	23.7	24.2	22.6	23.3	23.1	23.7	24.2
	6H	23.1	23.7	23.6	24.2	24.6	23.1	23.7	23.6	24.2	24.6
	8H	23.3	23.8	23.8	24.3	24.8	23.3	23.8	23.8	24.3	24.8
	12H	23.5	23.9	24.0	24.4	24.9	23.5	23.9	24.0	24.4	24.9
12H	4H	22.6	23.2	23.1	23.7	24.1	22.6	23.2	23.1	23.7	24.1
	6H	23.1	23.6	23.7	24.1	24.6	23.1	23.6	23.7	24.1	24.6
	8H	23.4	23.8	23.9	24.3	24.9	23.4	23.8	23.9	24.3	24.9

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 1012.744 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.)