

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4LDR-L20-840-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-L20-840-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	1778
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
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	42487	42487	42487
55	28559	28559	28559
65	21512	21512	21512
75	16334	16334	16334
85	11948	11948	11948

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CANDELA TABULATION

	<u>0</u>
0.0	1212.297
0.5	1212.938
1.0	1212.297
1.5	1211.657
2.0	1211.017
2.5	1210.376
3.0	1209.095
3.5	1207.815
4.0	1206.534
4.5	1204.613
5.0	1203.332
5.5	1200.770
6.0	1199.489
6.5	1196.287
7.0	1193.726
7.5	1190.524
8.0	1187.962
8.5	1184.760
9.0	1180.917
9.5	1177.075
10.0	1173.873
10.5	1170.030
11.0	1166.188
11.5	1161.705
12.0	1156.582
12.5	1152.099
13.0	1147.616
13.5	1141.852
14.0	1136.729
14.5	1131.606
15.0	1125.842
15.5	1120.078
16.0	1113.674
16.5	1107.911
17.0	1101.506
17.5	1094.462
18.0	1088.058
18.5	1081.013
19.0	1073.328
19.5	1065.643
20.0	1057.318
20.5	1048.993
21.0	1040.027
21.5	1029.780
22.0	1019.534
22.5	1008.647
23.0	997.119
23.5	984.311
24.0	970.222
24.5	956.774
25.0	941.404
25.5	926.034
26.0	911.304
26.5	894.654

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-840-WH-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

27.0	878.003
27.5	860.072
28.0	842.781
28.5	825.489
29.0	808.198
29.5	792.188
30.0	775.537
30.5	757.606
31.0	739.674
31.5	721.102
32.0	703.171
32.5	685.239
33.0	667.308
33.5	650.017
34.0	632.342
34.5	615.114
35.0	598.144
35.5	581.301
36.0	564.714
36.5	548.256
37.0	532.053
37.5	516.107
38.0	500.417
38.5	484.727
39.0	469.421
39.5	454.243
40.0	439.386
40.5	424.656
41.0	410.311
41.5	396.158
42.0	382.517
42.5	369.069
43.0	356.132
43.5	343.580
44.0	331.413
44.5	319.757
45.0	308.550
45.5	297.791
46.0	287.544
46.5	277.810
47.0	268.524
47.5	259.751
48.0	251.425
48.5	243.484
49.0	235.991
49.5	228.819
50.0	222.094
50.5	215.626
51.0	209.542
51.5	203.715
52.0	198.143
52.5	192.764
53.0	187.576
53.5	182.517
54.0	177.650
54.5	172.911

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-840-WH-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

55.0	168.236
55.5	163.817
56.0	159.590
56.5	155.428
57.0	151.265
57.5	147.166
58.0	143.068
58.5	138.969
59.0	134.999
59.5	131.156
60.0	127.314
60.5	123.599
61.0	119.885
61.5	116.363
62.0	112.840
62.5	109.446
63.0	106.116
63.5	102.850
64.0	99.520
64.5	96.446
65.0	93.372
65.5	90.362
66.0	87.352
66.5	84.470
67.0	81.652
67.5	78.899
68.0	76.209
68.5	73.519
69.0	70.893
69.5	68.332
70.0	65.834
70.5	63.401
71.0	60.967
71.5	58.598
72.0	56.292
72.5	54.051
73.0	51.809
73.5	49.696
74.0	47.583
74.5	45.469
75.0	43.420
75.5	41.435
76.0	39.513
76.5	37.592
77.0	35.735
77.5	33.878
78.0	32.149
78.5	30.355
79.0	28.626
79.5	26.961
80.0	25.296
80.5	23.695
81.0	22.094
81.5	20.557
82.0	19.084
82.5	17.611

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4LDR-L20-840-WH-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

83.0	16.138
83.5	14.729
84.0	13.385
84.5	11.976
85.0	10.695
85.5	9.414
86.0	8.133
86.5	6.916
87.0	5.700
87.5	4.547
88.0	3.458
88.5	2.370
89.0	1.409
89.5	0.640
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
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98.0	0.000
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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-L20-840-WH-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
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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-L20-840-WH-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
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160.0	0.000
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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-L20-840-WH-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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	430.34	N.A.	24.20
0-30	857.84	N.A.	48.30
0-40	1231.25	N.A.	69.30
0-60	1625.74	N.A.	91.40
0-80	1765.61	N.A.	99.30
0-90	1777.86	N.A.	100.00
10-90	1663.96	N.A.	93.60
20-40	800.91	N.A.	45.00
20-50	1043.34	N.A.	58.70
40-70	487.81	N.A.	27.40
60-80	139.87	N.A.	7.90
70-80	46.54	N.A.	2.60
80-90	12.25	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	1777.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	113.90
10-20	316.44
20-30	427.50
30-40	373.42
40-50	242.42
50-60	152.06
60-70	93.33
70-80	46.54
80-90	12.25
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	94	87	81	76	84	79	75	81	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	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	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	42	39	37

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UGR TABLE - CORRECTED

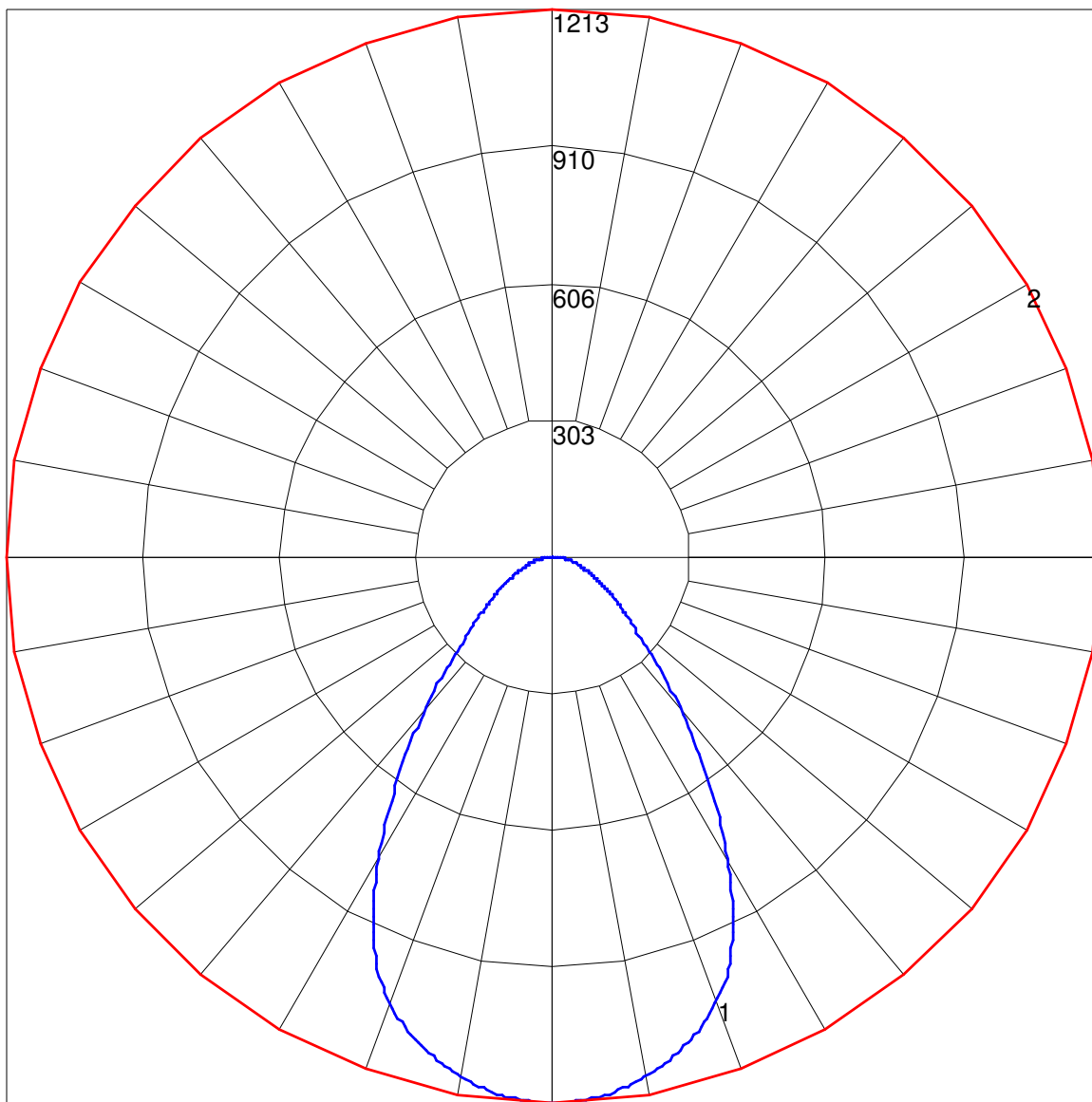
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	20.7	22.0	21.0	22.3	22.6	20.7	22.0	21.0	22.3	22.6
	3H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	4H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	6H	22.6	23.6	23.0	24.0	24.4	22.6	23.6	23.0	24.0	24.4
	8H	22.7	23.7	23.2	24.1	24.5	22.7	23.7	23.2	24.1	24.5
	12H	22.8	23.7	23.2	24.1	24.5	22.8	23.7	23.2	24.1	24.5
4H	2H	21.1	22.2	21.5	22.5	22.9	21.1	22.2	21.5	22.5	22.9
	3H	22.5	23.4	22.9	23.8	24.2	22.5	23.4	22.9	23.8	24.2
	4H	23.1	23.9	23.5	24.3	24.7	23.1	23.9	23.5	24.3	24.7
	6H	23.5	24.2	23.9	24.6	25.1	23.5	24.2	23.9	24.6	25.1
	8H	23.6	24.2	24.0	24.7	25.1	23.6	24.2	24.0	24.7	25.1
	12H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
8H	4H	23.2	23.9	23.7	24.3	24.8	23.2	23.9	23.7	24.3	24.8
	6H	23.7	24.3	24.2	24.8	25.2	23.7	24.3	24.2	24.8	25.2
	8H	23.9	24.4	24.4	24.9	25.4	23.9	24.4	24.4	24.9	25.4
	12H	24.0	24.5	24.6	25.0	25.5	24.0	24.5	24.6	25.0	25.5
12H	4H	23.2	23.8	23.7	24.3	24.7	23.2	23.8	23.7	24.3	24.7
	6H	23.7	24.2	24.3	24.7	25.2	23.7	24.2	24.3	24.7	25.2
	8H	24.0	24.4	24.5	24.9	25.5	24.0	24.4	24.5	24.9	25.5

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 1212.938 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.)