

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 13131414.01
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 07-05-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY)
[LUMINAIRE] Aluminum housing and reflector, no enclosure
[LAMP] One white LED
[OTHER] This test was performed using the calibrated photodetector method of absolute photometry.
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Indoor, Downlight
[SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	385
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.04
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 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	10449	10449	10449
55	2974	2974	2974
65	1349	1349	1349
75	418	418	418
85	113	113	113

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CANDELA TABULATION

	<u>0</u>
0.0	312.378
0.5	312.378
1.0	312.378
1.5	312.533
2.0	312.689
2.5	312.844
3.0	312.999
3.5	313.465
4.0	314.087
4.5	314.863
5.0	315.795
5.5	316.883
6.0	317.815
6.5	319.057
7.0	320.300
7.5	321.543
8.0	322.941
8.5	324.028
9.0	324.960
9.5	325.582
10.0	326.203
10.5	326.669
11.0	326.980
11.5	327.135
12.0	326.980
12.5	326.824
13.0	326.358
13.5	325.892
14.0	325.271
14.5	324.805
15.0	324.184
15.5	323.562
16.0	322.785
16.5	322.319
17.0	321.698
17.5	321.232
18.0	320.921
18.5	320.455
19.0	319.679
19.5	318.281
20.0	316.883
20.5	315.019
21.0	312.844
21.5	310.514
22.0	308.184
22.5	305.388
23.0	302.437
23.5	299.175
24.0	295.913
24.5	292.495
25.0	288.767
25.5	284.728
26.0	280.379
26.5	275.564

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY).IES****CANDELA TABULATION - (Cont.)**

27.0	270.438
27.5	264.535
28.0	258.943
28.5	253.040
29.0	247.293
29.5	241.545
30.0	235.487
30.5	229.274
31.0	222.905
31.5	216.381
32.0	210.168
32.5	203.644
33.0	196.964
33.5	190.285
34.0	183.295
34.5	176.305
35.0	169.159
35.5	161.703
36.0	153.983
36.5	145.890
37.0	137.238
37.5	128.058
38.0	118.567
38.5	108.890
39.0	99.259
39.5	89.923
40.0	81.038
40.5	72.681
41.0	64.883
41.5	57.598
42.0	50.794
42.5	44.550
43.0	38.911
43.5	33.941
44.0	29.747
44.5	26.252
45.0	23.347
45.5	20.939
46.0	18.935
46.5	17.227
47.0	15.782
47.5	14.539
48.0	13.452
48.5	12.489
49.0	11.635
49.5	10.873
50.0	10.159
50.5	9.522
51.0	8.932
51.5	8.388
52.0	7.891
52.5	7.409
53.0	6.959
53.5	6.524
54.0	6.120
54.5	5.732

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55.0	5.390
55.5	5.079
56.0	4.800
56.5	4.536
57.0	4.303
57.5	4.085
58.0	3.883
58.5	3.697
59.0	3.526
59.5	3.340
60.0	3.184
60.5	3.013
61.0	2.874
61.5	2.718
62.0	2.579
62.5	2.439
63.0	2.314
63.5	2.175
64.0	2.050
64.5	1.926
65.0	1.802
65.5	1.693
66.0	1.584
66.5	1.460
67.0	1.367
67.5	1.258
68.0	1.165
68.5	1.087
69.0	0.994
69.5	0.916
70.0	0.839
70.5	0.777
71.0	0.715
71.5	0.652
72.0	0.590
72.5	0.544
73.0	0.497
73.5	0.450
74.0	0.419
74.5	0.373
75.0	0.342
75.5	0.311
76.0	0.280
76.5	0.264
77.0	0.233
77.5	0.202
78.0	0.186
78.5	0.171
79.0	0.155
79.5	0.140
80.0	0.124
80.5	0.109
81.0	0.093
81.5	0.093
82.0	0.078
82.5	0.062

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83.0	0.062
83.5	0.047
84.0	0.047
84.5	0.047
85.0	0.031
85.5	0.031
86.0	0.031
86.5	0.016
87.0	0.016
87.5	0.016
88.0	0.016
88.5	0.016
89.0	0.016
89.5	0.016
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 : 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY).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 : 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY).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 : 2DR-L5-835-EM5W-DIM-UNV-OW-OF-CS (EMER MODE ONLY).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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Zone	Lumens	%Lamp	%Fixt
0-20	122.14	N.A.	31.70
0-30	252.50	N.A.	65.60
0-40	354.16	N.A.	92.00
0-60	382.77	N.A.	99.40
0-80	385.02	N.A.	100.00
0-90	385.07	N.A.	100.00
10-90	354.53	N.A.	92.10
20-40	232.02	N.A.	60.30
20-50	255.45	N.A.	66.30
40-70	30.45	N.A.	7.90
60-80	2.25	N.A.	0.60
70-80	0.41	N.A.	0.10
80-90	0.05	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	385.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	30.54
10-20	91.60
20-30	130.36
30-40	101.66
40-50	23.43
50-60	5.18
60-70	1.84
70-80	0.41
80-90	0.05
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	113	110	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	73
5	91	82	76	72	89	81	76	71	79	75	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	74	69	65	73	68	65	72	68	64	63
7	81	72	65	61	80	71	65	61	70	64	61	69	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	64	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51
10	70	59	53	49	68	59	53	49	58	53	49	57	52	49	57	52	49	47

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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	5.5	6.5	5.9	6.9	7.2	5.5	6.5	5.9	6.9	7.2
	3H	5.8	6.7	6.2	7.0	7.4	5.8	6.7	6.2	7.0	7.4
	4H	5.8	6.6	6.2	6.9	7.3	5.8	6.6	6.2	6.9	7.3
	6H	5.7	6.4	6.1	6.8	7.2	5.7	6.4	6.1	6.8	7.2
	8H	5.6	6.3	6.1	6.7	7.1	5.6	6.3	6.1	6.7	7.1
	12H	5.6	6.2	6.0	6.6	7.1	5.6	6.2	6.0	6.6	7.1

UGR Viewed Endwise

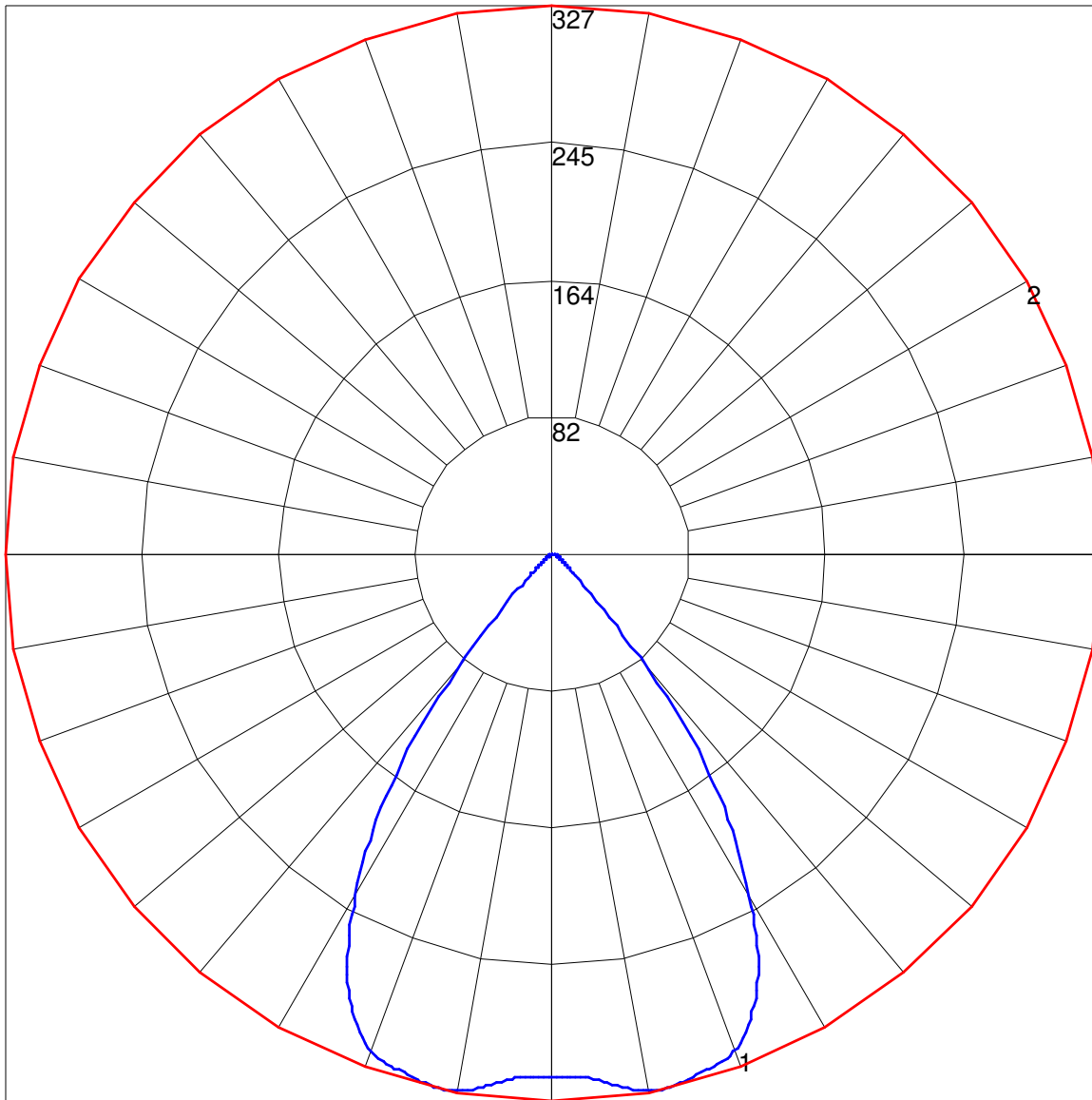
4H	2H	5.6	6.4	6.0	6.8	7.1	5.6	6.4	6.0	6.8	7.1
	3H	5.9	6.6	6.3	7.0	7.4	5.9	6.6	6.3	7.0	7.4
	4H	5.9	6.5	6.3	6.9	7.3	5.9	6.5	6.3	6.9	7.3
	6H	5.8	6.3	6.2	6.7	7.2	5.8	6.3	6.2	6.7	7.2
	8H	5.7	6.2	6.2	6.6	7.1	5.7	6.2	6.2	6.6	7.1
	12H	5.7	6.1	6.2	6.6	7.0	5.7	6.1	6.2	6.6	7.0
8H	4H	5.7	6.2	6.2	6.6	7.1	5.7	6.2	6.2	6.6	7.1
	6H	5.6	6.0	6.2	6.5	7.0	5.6	6.0	6.2	6.5	7.0
	8H	5.6	5.9	6.1	6.4	6.9	5.6	5.9	6.1	6.4	6.9
	12H	5.5	5.8	6.0	6.3	6.9	5.5	5.8	6.0	6.3	6.9
12H	4H	5.7	6.1	6.2	6.6	7.0	5.7	6.1	6.2	6.6	7.0
	6H	5.6	5.9	6.1	6.4	6.9	5.6	5.9	6.1	6.4	6.9
	8H	5.5	5.8	6.0	6.3	6.9	5.5	5.8	6.0	6.3	6.9

Maximum UGR = 7.4

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POLAR GRAPH



Maximum Candela = 327.135 Located At Horizontal Angle = 0, Vertical Angle = 11.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (11.5) (Through Max. Cd.)