



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2DR-L5-830-DIM-UNV-RW-OF-BL-WET-CC\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 13257153.03  
[TESTLAB] UL Verification Services Inc.  
[ISSUEDATE] 03 APR 2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] 2DR-L5-830-DIM-UNV-RW-OF-BL-WET-CC  
[LUMINAIRE] 2 INCH ROUND LED DOWNLIGHT  
[MORE] WITH REGRESSED LENS, BLACK PAINTED TRIM  
[LAMP] LED  
[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	414
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	6.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.88
Spacing Criterion (90-270)	0.88
Spacing Criterion (Diagonal)	0.80
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	14849	14849	14849
55	11750	11750	11750
65	8783	8783	8783
75	4573	4573	4573
85	2771	2771	2771

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CANDELA TABULATION

	<u>0</u>
0.0	493.580
0.5	493.580
1.0	493.325
1.5	493.071
2.0	493.071
2.5	492.562
3.0	491.799
3.5	490.781
4.0	489.764
4.5	488.746
5.0	487.219
5.5	485.947
6.0	484.421
6.5	482.640
7.0	480.859
7.5	479.078
8.0	477.297
8.5	475.261
9.0	472.972
9.5	470.936
10.0	468.646
10.5	466.102
11.0	463.304
11.5	460.505
12.0	457.452
12.5	454.399
13.0	451.091
13.5	447.529
14.0	443.713
14.5	439.897
15.0	435.571
15.5	431.246
16.0	426.412
16.5	421.578
17.0	416.490
17.5	411.147
18.0	405.550
18.5	399.443
19.0	393.083
19.5	386.214
20.0	379.090
20.5	371.711
21.0	363.824
21.5	355.683
22.0	346.778
22.5	337.873
23.0	328.460
23.5	318.792
24.0	308.615
24.5	298.438
25.0	288.006
25.5	277.066
26.0	265.872
26.5	254.677

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**CANDELA TABULATION - (Cont.)**

27.0	243.559
27.5	232.390
28.0	221.119
28.5	209.899
29.0	198.424
29.5	186.873
30.0	175.424
30.5	164.153
31.0	153.035
31.5	142.299
32.0	131.969
32.5	122.199
33.0	113.142
33.5	104.746
34.0	96.935
34.5	89.786
35.0	83.298
35.5	77.344
36.0	71.951
36.5	67.117
37.0	62.817
37.5	58.975
38.0	55.490
38.5	52.386
39.0	49.663
39.5	47.272
40.0	45.135
40.5	43.277
41.0	41.624
41.5	40.148
42.0	38.825
42.5	37.655
43.0	36.586
43.5	35.645
44.0	34.754
44.5	33.940
45.0	33.177
45.5	32.439
46.0	31.752
46.5	31.065
47.0	30.429
47.5	29.793
48.0	29.157
48.5	28.546
49.0	27.936
49.5	27.325
50.0	26.740
50.5	26.180
51.0	25.595
51.5	25.035
52.0	24.501
52.5	23.941
53.0	23.407
53.5	22.873
54.0	22.338
54.5	21.804

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CANDELA TABULATION - (Cont.)

55.0	21.295
55.5	20.786
56.0	20.277
56.5	19.769
57.0	19.260
57.5	18.776
58.0	18.268
58.5	17.784
59.0	17.301
59.5	16.843
60.0	16.359
60.5	15.876
61.0	15.393
61.5	14.935
62.0	14.451
62.5	13.993
63.0	13.535
63.5	13.077
64.0	12.619
64.5	12.161
65.0	11.729
65.5	11.296
66.0	10.864
66.5	10.406
67.0	9.999
67.5	9.592
68.0	9.159
68.5	8.752
69.0	8.345
69.5	7.938
70.0	7.556
70.5	7.149
71.0	6.768
71.5	6.361
72.0	5.979
72.5	5.597
73.0	5.216
73.5	4.834
74.0	4.478
74.5	4.096
75.0	3.740
75.5	3.409
76.0	3.079
76.5	2.824
77.0	2.595
77.5	2.392
78.0	2.239
78.5	2.112
79.0	2.010
79.5	1.908
80.0	1.781
80.5	1.679
81.0	1.577
81.5	1.476
82.0	1.348
82.5	1.247

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CANDELA TABULATION - (Cont.)

83.0	1.170
83.5	1.069
84.0	0.967
84.5	0.865
85.0	0.763
85.5	0.687
86.0	0.585
86.5	0.509
87.0	0.407
87.5	0.331
88.0	0.254
88.5	0.178
89.0	0.102
89.5	0.076
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
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  
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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	166.94	N.A.	40.30
0-30	295.53	N.A.	71.40
0-40	352.11	N.A.	85.00
0-60	397.34	N.A.	95.90
0-80	413.28	N.A.	99.80
0-90	414.16	N.A.	100.00
10-90	368.25	N.A.	88.90
20-40	185.17	N.A.	44.70
20-50	211.31	N.A.	51.00
40-70	56.88	N.A.	13.70
60-80	15.94	N.A.	3.80
70-80	4.28	N.A.	1.00
80-90	0.88	N.A.	0.20
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	414.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	45.91
10-20	121.03
20-30	128.59
30-40	56.58
40-50	26.14
50-60	19.09
60-70	11.66
70-80	4.28
80-90	0.88
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	107	105	111	108	105	103	104	102	100	100	98	97	97	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79
4	96	88	82	78	94	87	81	77	85	80	76	83	79	75	81	77	74	73
5	91	82	76	72	89	81	75	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	75	70	66	73	69	65	72	68	65	63
7	82	73	66	62	81	72	66	62	71	65	61	69	65	61	68	64	61	59
8	78	68	62	58	77	68	62	58	67	61	58	66	61	57	65	60	57	56
9	75	65	59	55	73	64	58	55	63	58	54	62	58	54	62	57	54	53
10	71	61	55	52	70	61	55	51	60	55	51	59	55	51	59	54	51	50

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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	15.9	17.0	16.3	17.3	17.6	15.9	17.0	16.3	17.3	17.6
	3H	16.9	17.9	17.3	18.2	18.6	16.9	17.9	17.3	18.2	18.6
	4H	17.1	18.0	17.5	18.4	18.8	17.1	18.0	17.5	18.4	18.8
	6H	17.1	18.0	17.6	18.3	18.7	17.1	18.0	17.6	18.3	18.7
	8H	17.1	17.9	17.6	18.3	18.7	17.1	17.9	17.6	18.3	18.7
	12H	17.1	17.9	17.6	18.3	18.7	17.1	17.9	17.6	18.3	18.7

### UGR Viewed Endwise

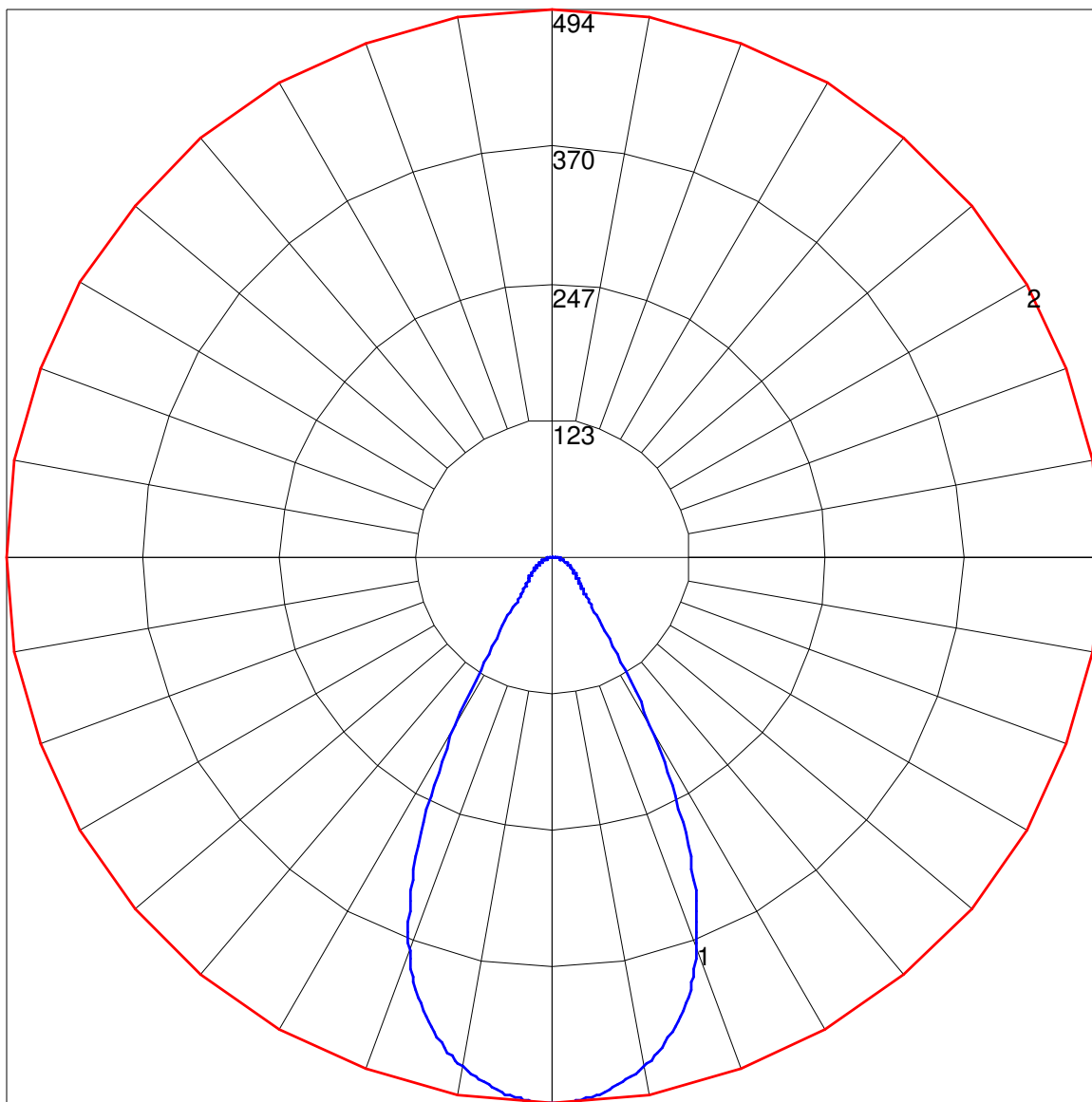
4H	2H	16.2	17.1	16.6	17.5	17.9	16.2	17.1	16.6	17.5	17.9
	3H	17.4	18.1	17.8	18.5	19.0	17.4	18.1	17.8	18.5	19.0
	4H	17.6	18.3	18.1	18.7	19.2	17.6	18.3	18.1	18.7	19.2
	6H	17.7	18.3	18.2	18.7	19.2	17.7	18.3	18.2	18.7	19.2
	8H	17.7	18.2	18.2	18.7	19.2	17.7	18.2	18.2	18.7	19.2
	12H	17.7	18.2	18.2	18.7	19.1	17.7	18.2	18.2	18.7	19.1

8H	4H	17.6	18.2	18.1	18.6	19.1	17.6	18.2	18.1	18.6	19.1
	6H	17.8	18.2	18.3	18.7	19.2	17.8	18.2	18.3	18.7	19.2
	8H	17.8	18.2	18.3	18.7	19.2	17.8	18.2	18.3	18.7	19.2
	12H	17.8	18.1	18.3	18.6	19.2	17.8	18.1	18.3	18.6	19.2

12H	4H	17.6	18.0	18.1	18.5	19.0	17.6	18.0	18.1	18.5	19.0
	6H	17.7	18.1	18.3	18.6	19.1	17.7	18.1	18.3	18.6	19.1
	8H	17.8	18.1	18.3	18.6	19.2	17.8	18.1	18.3	18.6	19.2

Maximum UGR = 19.2

POLAR GRAPH



Maximum Candela = 493.58 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)