



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2DR-L7-840-DIM-UNV-ON-OF-CS-WET-CC\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 13131414.09  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 06/04/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836  
 [LUMCAT] 2DR-L7-840-DIM-UNV-ON-OF-CS-WET-CC  
 [LUMINAIRE] Aluminum housing and reflector, no lens enclosure  
 [LAMP] One white 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	490
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	56
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.28
Spacing Criterion (90-270)	0.28
Spacing Criterion (Diagonal)	0.32
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	2129	2129	2129
55	1105	1105	1105
65	938	938	938
75	1225	1225	1225
85	2727	2727	2727

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CANDELA TABULATION

	<u>0</u>
0.0	3237.455
0.5	3229.943
1.0	3199.897
1.5	3157.332
2.0	3099.744
2.5	3024.629
3.0	2934.491
3.5	2829.330
4.0	2714.154
4.5	2593.970
5.0	2473.285
5.5	2342.836
6.0	2204.874
6.5	2064.660
7.0	1923.944
7.5	1783.480
8.0	1649.775
8.5	1524.333
9.0	1406.402
9.5	1295.983
10.0	1192.826
10.5	1097.930
11.0	1011.548
11.5	934.680
12.0	867.578
12.5	807.987
13.0	753.904
13.5	705.079
14.0	661.012
14.5	621.201
15.0	585.396
15.5	553.096
16.0	524.803
16.5	499.014
17.0	476.229
17.5	455.447
18.0	436.418
18.5	418.390
19.0	401.615
19.5	386.341
20.0	372.320
20.5	358.549
21.0	345.278
21.5	332.008
22.0	318.738
22.5	304.967
23.0	291.196
23.5	276.924
24.0	262.402
24.5	247.379
25.0	231.855
25.5	216.331
26.0	200.557
26.5	185.033

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**CANDELA TABULATION - (Cont.)**

27.0	169.259
27.5	153.735
28.0	138.462
28.5	123.940
29.0	109.668
29.5	96.147
30.0	83.628
30.5	71.610
31.0	61.094
31.5	51.829
32.0	43.567
32.5	36.556
33.0	30.797
33.5	25.789
34.0	21.533
34.5	18.028
35.0	15.273
35.5	13.020
36.0	11.768
36.5	10.766
37.0	10.266
37.5	9.765
38.0	9.264
38.5	8.763
39.0	8.513
39.5	8.263
40.0	7.762
40.5	7.511
41.0	7.261
41.5	6.760
42.0	6.510
42.5	6.260
43.0	6.009
43.5	5.508
44.0	5.258
44.5	5.008
45.0	4.757
45.5	4.507
46.0	4.507
46.5	4.006
47.0	4.006
47.5	3.756
48.0	3.505
48.5	3.255
49.0	3.255
49.5	3.005
50.0	3.005
50.5	2.754
51.0	2.754
51.5	2.504
52.0	2.504
52.5	2.504
53.0	2.253
53.5	2.253
54.0	2.253
54.5	2.003

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CANDELA TABULATION - (Cont.)

55.0	2.003
55.5	2.003
56.0	2.003
56.5	1.753
57.0	1.753
57.5	1.753
58.0	1.753
58.5	1.753
59.0	1.502
59.5	1.502
60.0	1.502
60.5	1.502
61.0	1.502
61.5	1.252
62.0	1.502
62.5	1.252
63.0	1.252
63.5	1.252
64.0	1.252
64.5	1.252
65.0	1.252
65.5	1.252
66.0	1.252
66.5	1.252
67.0	1.002
67.5	1.252
68.0	1.252
68.5	1.252
69.0	1.002
69.5	1.002
70.0	1.002
70.5	1.002
71.0	1.002
71.5	1.002
72.0	1.002
72.5	1.002
73.0	1.002
73.5	1.002
74.0	1.002
74.5	1.002
75.0	1.002
75.5	1.002
76.0	0.751
76.5	0.751
77.0	0.751
77.5	1.002
78.0	0.751
78.5	0.751
79.0	1.002
79.5	1.002
80.0	1.002
80.5	0.751
81.0	1.002
81.5	1.002
82.0	1.002
82.5	0.751

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CANDELA TABULATION - (Cont.)

83.0	0.751
83.5	1.002
84.0	0.751
84.5	1.002
85.0	0.751
85.5	0.751
86.0	0.751
86.5	0.751
87.0	0.751
87.5	1.002
88.0	1.002
88.5	0.751
89.0	1.002
89.5	0.751
90.0	0.751
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

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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	363.91	N.A.	74.30
0-30	465.89	N.A.	95.10
0-40	481.13	N.A.	98.20
0-60	486.81	N.A.	99.30
0-80	489.04	N.A.	99.80
0-90	489.98	N.A.	100.00
10-90	298.38	N.A.	60.90
20-40	117.22	N.A.	23.90
20-50	121.04	N.A.	24.70
40-70	6.92	N.A.	1.40
60-80	2.23	N.A.	0.50
70-80	0.99	N.A.	0.20
80-90	0.94	N.A.	0.20
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	490.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	191.60
10-20	172.31
20-30	101.98
30-40	15.24
40-50	3.82
50-60	1.86
60-70	1.24
70-80	0.99
80-90	0.94
90-100	0.02
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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	94	93
3	108	103	99	96	106	101	98	95	99	96	94	97	94	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	95	91	88	100	94	90	88	93	89	87	91	88	86	90	87	85	84
6	98	92	88	85	97	91	87	84	90	86	84	89	86	83	87	85	83	82
7	95	89	85	82	94	88	84	82	87	84	81	86	83	81	85	83	80	79
8	93	86	82	79	92	86	82	79	85	81	79	84	81	79	83	80	78	77
9	90	84	80	77	90	83	79	77	83	79	77	82	79	76	81	78	76	75
10	88	81	77	75	87	81	77	75	80	77	75	80	77	74	79	76	74	73

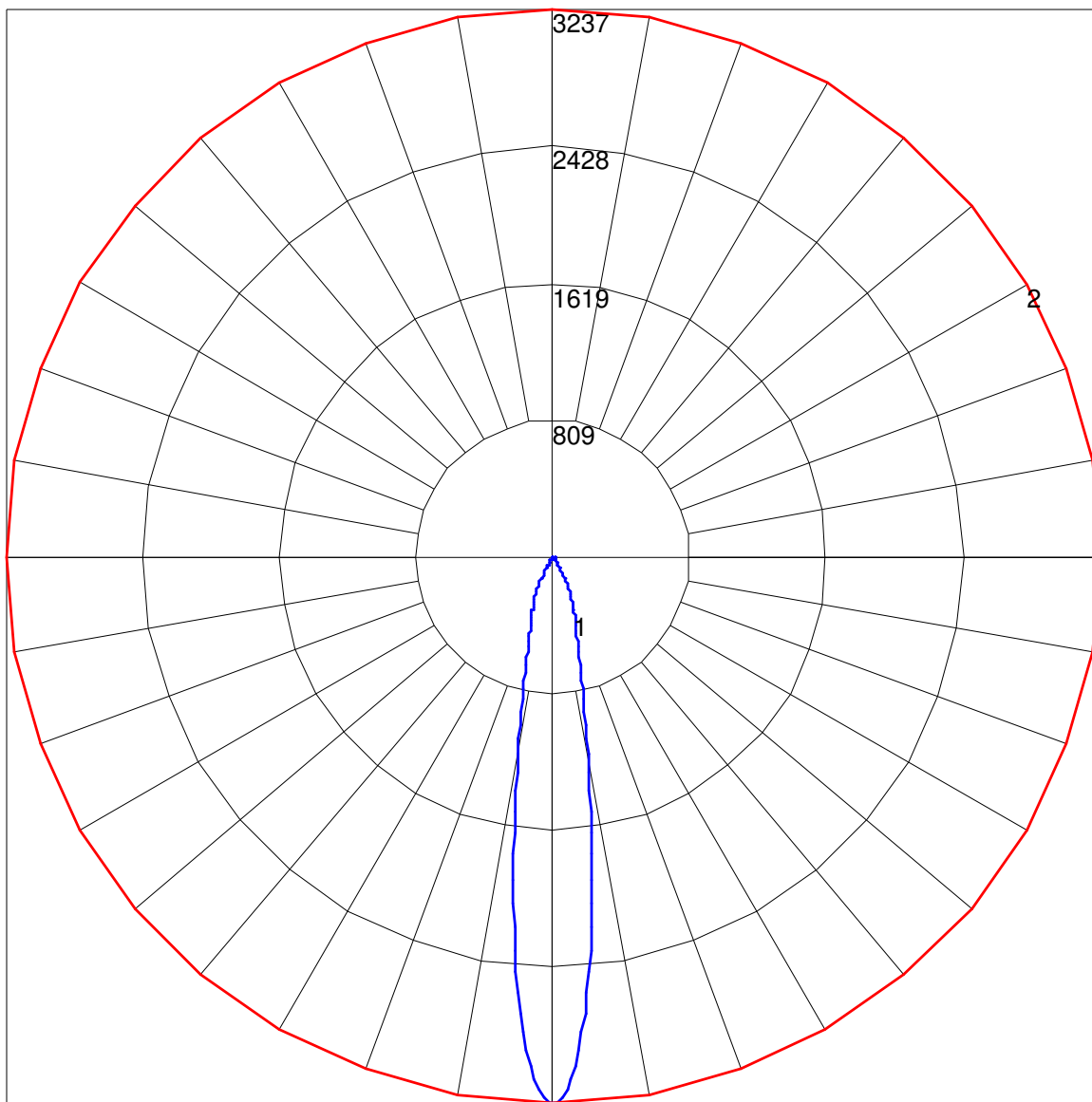
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**UGR TABLE - CORRECTED**

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											
X=2H Y=2H		UGR Viewed Crosswise					UGR Viewed Endwise				
		0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.3	0.6
	3H	1.3	2.1	1.6	2.4	2.8	1.3	2.1	1.6	2.4	2.8
	4H	2.2	3.0	2.7	3.3	3.7	2.2	3.0	2.7	3.3	3.7
	6H	3.7	4.3	4.1	4.7	5.1	3.7	4.3	4.1	4.7	5.1
	8H	4.4	5.0	4.8	5.4	5.8	4.4	5.0	4.8	5.4	5.8
	12H	5.2	5.8	5.7	6.2	6.7	5.2	5.8	5.7	6.2	6.7
4H	2H	0.0	0.3	0.0	0.6	1.0	0.0	0.3	0.0	0.6	1.0
	3H	1.9	2.5	2.3	2.9	3.3	1.9	2.5	2.3	2.9	3.3
	4H	3.1	3.7	3.6	4.1	4.6	3.1	3.7	3.6	4.1	4.6
	6H	4.7	5.2	5.2	5.6	6.1	4.7	5.2	5.2	5.6	6.1
	8H	5.6	6.0	6.1	6.5	6.9	5.6	6.0	6.1	6.5	6.9
	12H	6.6	7.0	7.1	7.5	8.0	6.6	7.0	7.1	7.5	8.0
8H	4H	3.5	3.9	4.0	4.3	4.8	3.5	3.9	4.0	4.3	4.8
	6H	5.4	5.7	5.9	6.2	6.7	5.4	5.7	5.9	6.2	6.7
	8H	6.5	6.8	7.0	7.3	7.8	6.5	6.8	7.0	7.3	7.8
	12H	7.8	8.1	8.3	8.6	9.1	7.8	8.1	8.3	8.6	9.1
12H	4H	3.6	4.0	4.1	4.5	4.9	3.6	4.0	4.1	4.5	4.9
	6H	5.7	6.0	6.2	6.4	7.0	5.7	6.0	6.2	6.4	7.0
	8H	6.9	7.1	7.4	7.6	8.2	6.9	7.1	7.4	7.6	8.2

Maximum UGR = 9.1

POLAR GRAPH



Maximum Candela = 3237.455 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.)