

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2DR-L12-830-DIM-UNV-OW-OF-SG_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN TEST FROM 13131414.01
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 08/18/2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 2DR-L12-830-DIM-UNV-OW-OF-SG
[LUMINAIRE] Aluminum housing and reflector, no enclosure
[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	1142
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	14.3
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	30998	30998	30998
55	8823	8823	8823
65	4003	4003	4003
75	1240	1240	1240
85	334	334	334

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CANDELA TABULATION

	<u>0</u>
0.0	926.672
0.5	926.672
1.0	926.672
1.5	927.133
2.0	927.594
2.5	928.054
3.0	928.515
3.5	929.898
4.0	931.741
4.5	934.045
5.0	936.810
5.5	940.035
6.0	942.800
6.5	946.486
7.0	950.173
7.5	953.859
8.0	958.007
8.5	961.232
9.0	963.997
9.5	965.840
10.0	967.683
10.5	969.066
11.0	969.987
11.5	970.448
12.0	969.987
12.5	969.527
13.0	968.144
13.5	966.762
14.0	964.919
14.5	963.536
15.0	961.693
15.5	959.850
16.0	957.546
16.5	956.163
17.0	954.320
17.5	952.938
18.0	952.016
18.5	950.634
19.0	948.330
19.5	944.182
20.0	940.035
20.5	934.506
21.0	928.054
21.5	921.142
22.0	914.230
22.5	905.936
23.0	897.181
23.5	887.504
24.0	877.827
24.5	867.689
25.0	856.630
25.5	844.649
26.0	831.747
26.5	817.462

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CANDELA TABULATION - (Cont.)

27.0	802.256
27.5	784.745
28.0	768.156
28.5	750.646
29.0	733.596
29.5	716.546
30.0	698.575
30.5	680.143
31.0	661.250
31.5	641.897
32.0	623.465
32.5	604.111
33.0	584.296
33.5	564.482
34.0	543.746
34.5	523.010
35.0	501.813
35.5	479.694
36.0	456.793
36.5	432.785
37.0	407.118
37.5	379.885
38.0	351.730
38.5	323.022
39.0	294.452
39.5	266.758
40.0	240.400
40.5	215.609
41.0	192.477
41.5	170.865
42.0	150.682
42.5	132.158
43.0	115.431
43.5	100.685
44.0	88.244
44.5	77.875
45.0	69.258
45.5	62.116
46.0	56.172
46.5	51.103
47.0	46.817
47.5	43.131
48.0	39.905
48.5	37.048
49.0	34.514
49.5	32.256
50.0	30.136
50.5	28.247
51.0	26.496
51.5	24.883
52.0	23.409
52.5	21.980
53.0	20.644
53.5	19.354
54.0	18.156
54.5	17.004

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CANDELA TABULATION - (Cont.)

55.0	15.990
55.5	15.068
56.0	14.239
56.5	13.455
57.0	12.764
57.5	12.119
58.0	11.520
58.5	10.967
59.0	10.460
59.5	9.907
60.0	9.446
60.5	8.940
61.0	8.525
61.5	8.064
62.0	7.649
62.5	7.235
63.0	6.866
63.5	6.451
64.0	6.083
64.5	5.714
65.0	5.345
65.5	5.023
66.0	4.700
66.5	4.332
67.0	4.055
67.5	3.732
68.0	3.456
68.5	3.226
69.0	2.949
69.5	2.719
70.0	2.488
70.5	2.304
71.0	2.120
71.5	1.935
72.0	1.751
72.5	1.613
73.0	1.475
73.5	1.336
74.0	1.244
74.5	1.106
75.0	1.014
75.5	0.922
76.0	0.829
76.5	0.783
77.0	0.691
77.5	0.599
78.0	0.553
78.5	0.507
79.0	0.461
79.5	0.415
80.0	0.369
80.5	0.323
81.0	0.276
81.5	0.276
82.0	0.230
82.5	0.184

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CANDELA TABULATION - (Cont.)

83.0	0.184
83.5	0.138
84.0	0.138
84.5	0.138
85.0	0.092
85.5	0.092
86.0	0.092
86.5	0.046
87.0	0.046
87.5	0.046
88.0	0.046
88.5	0.046
89.0	0.046
89.5	0.046
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
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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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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	362.34	N.A.	31.70
0-30	749.05	N.A.	65.60
0-40	1050.63	N.A.	92.00
0-60	1135.48	N.A.	99.40
0-80	1142.16	N.A.	100.00
0-90	1142.3	N.A.	100.00
10-90	1051.7	N.A.	92.10
20-40	688.29	N.A.	60.30
20-50	757.79	N.A.	66.30
40-70	90.32	N.A.	7.90
60-80	6.68	N.A.	0.60
70-80	1.21	N.A.	0.10
80-90	0.15	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	1142.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	90.60
10-20	271.74
20-30	386.71
30-40	301.58
40-50	69.50
50-60	15.36
60-70	5.46
70-80	1.21
80-90	0.15
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	101	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	89	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	82	72	66	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	65	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	53	61	56	52	60	55	52	51
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47

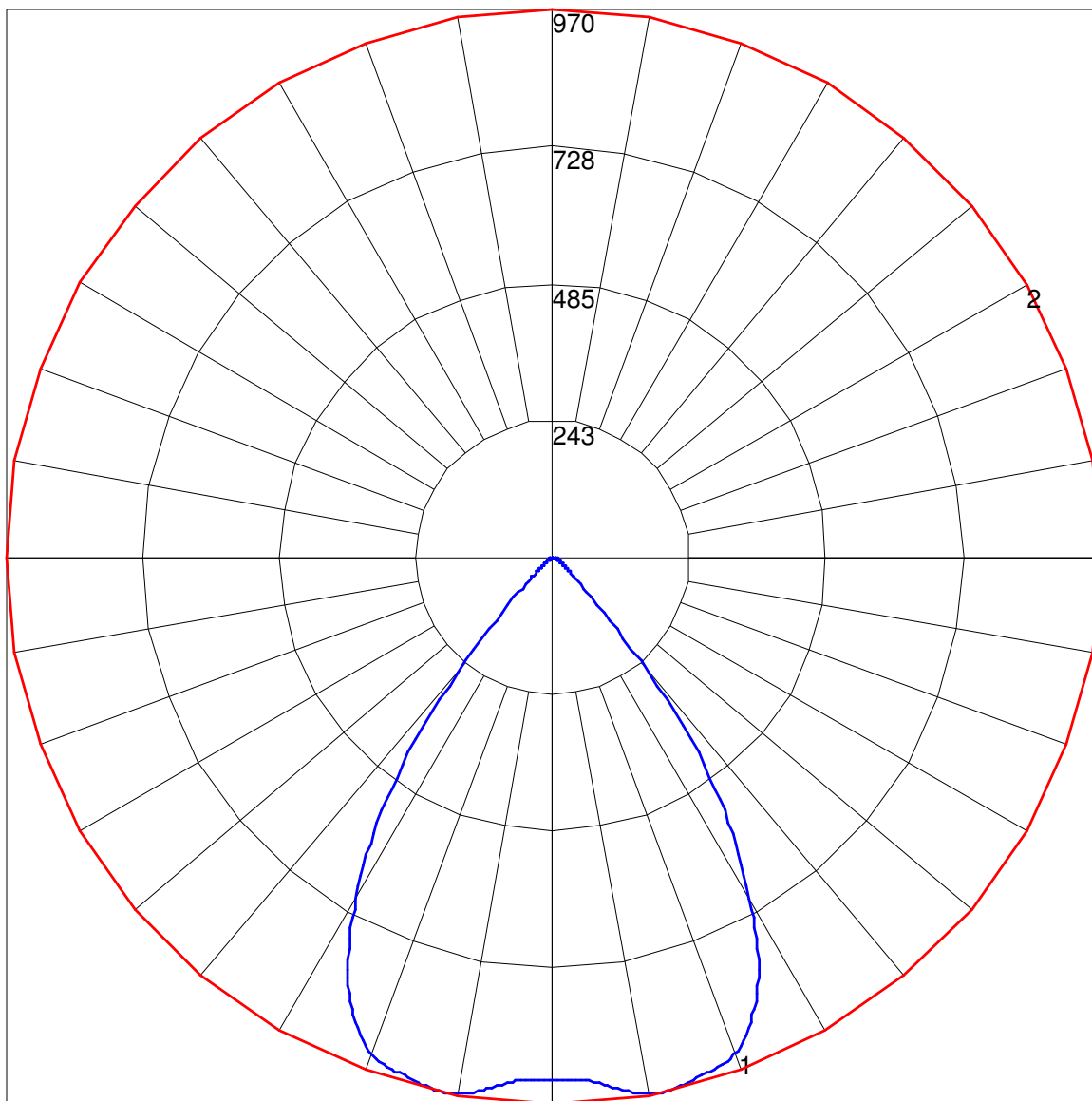
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	9.3	10.3	9.7	10.7	11.0	9.3	10.3	9.7	10.7	11.0
	3H	9.6	10.5	10.0	10.8	11.2	9.6	10.5	10.0	10.8	11.2
	4H	9.6	10.4	10.0	10.7	11.1	9.6	10.4	10.0	10.7	11.1
	6H	9.5	10.2	9.9	10.6	11.0	9.5	10.2	9.9	10.6	11.0
	8H	9.4	10.1	9.9	10.5	10.9	9.4	10.1	9.9	10.5	10.9
	12H	9.4	10.0	9.8	10.4	10.9	9.4	10.0	9.8	10.4	10.9
4H	2H	9.4	10.2	9.8	10.6	10.9	9.4	10.2	9.8	10.6	10.9
	3H	9.7	10.4	10.1	10.8	11.2	9.7	10.4	10.1	10.8	11.2
	4H	9.7	10.3	10.1	10.7	11.1	9.7	10.3	10.1	10.7	11.1
	6H	9.6	10.1	10.0	10.5	11.0	9.6	10.1	10.0	10.5	11.0
	8H	9.5	10.0	10.0	10.4	10.9	9.5	10.0	10.0	10.4	10.9
	12H	9.5	9.9	10.0	10.4	10.8	9.5	9.9	10.0	10.4	10.8
8H	4H	9.5	10.0	10.0	10.4	10.9	9.5	10.0	10.0	10.4	10.9
	6H	9.4	9.8	10.0	10.3	10.8	9.4	9.8	10.0	10.3	10.8
	8H	9.4	9.7	9.9	10.2	10.7	9.4	9.7	9.9	10.2	10.7
	12H	9.3	9.6	9.8	10.1	10.7	9.3	9.6	9.8	10.1	10.7
12H	4H	9.5	9.9	10.0	10.4	10.8	9.5	9.9	10.0	10.4	10.8
	6H	9.4	9.7	9.9	10.2	10.7	9.4	9.7	9.9	10.2	10.7
	8H	9.3	9.6	9.8	10.1	10.7	9.3	9.6	9.8	10.1	10.7

Maximum UGR = 11.2

POLAR GRAPH



Maximum Candela = 970.448 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.)