

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-830-DIM-UNV-OW-OF-SG\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM TEST 12316380.01

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 08-18-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 4DR-TL-L15-830-DIM-UNV-OW-OF-SG

[LUMINAIRE] Black formed aluminum housing, specular reflector, no lens

[MORE] enclosure

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1321
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	13.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	0.90
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	5200	5200	5200
55	1901	1901	1901
65	687	687	687
75	249	249	249
85	149	149	149

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CANDELA TABULATION

	<u>0</u>
0.0	1435.038
0.5	1435.701
1.0	1441.663
1.5	1448.289
2.0	1456.902
2.5	1465.514
3.0	1471.477
3.5	1472.802
4.0	1468.827
4.5	1461.539
5.0	1450.939
5.5	1431.725
6.0	1409.862
6.5	1387.998
7.0	1364.810
7.5	1342.284
8.0	1319.758
8.5	1298.557
9.0	1277.356
9.5	1258.143
10.0	1242.242
10.5	1227.666
11.0	1214.416
11.5	1202.490
12.0	1192.552
12.5	1183.940
13.0	1175.989
13.5	1168.701
14.0	1162.739
14.5	1158.101
15.0	1156.776
15.5	1158.763
16.0	1163.401
16.5	1172.014
17.0	1184.602
17.5	1199.840
18.0	1218.391
18.5	1237.604
19.0	1256.155
19.5	1278.019
20.0	1299.220
20.5	1318.433
21.0	1336.984
21.5	1351.559
22.0	1363.485
22.5	1372.098
23.0	1376.735
23.5	1377.398
24.0	1374.748
24.5	1368.123
25.0	1358.847
25.5	1346.259
26.0	1331.684
26.5	1312.470

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**CANDELA TABULATION - (Cont.)**

27.0	1284.644
27.5	1248.205
28.0	1205.140
28.5	1155.451
29.0	1101.123
29.5	1040.833
30.0	973.918
30.5	899.715
31.0	815.573
31.5	730.107
32.0	646.363
32.5	566.462
33.0	490.735
33.5	419.845
34.0	355.314
34.5	298.138
35.0	249.243
35.5	208.895
36.0	177.492
36.5	154.171
37.0	135.553
37.5	120.117
38.0	107.197
38.5	96.199
39.0	86.659
39.5	78.443
40.0	71.487
40.5	65.723
41.0	60.953
41.5	56.845
42.0	53.267
42.5	50.087
43.0	47.172
43.5	44.522
44.0	42.071
44.5	39.818
45.0	37.764
45.5	35.843
46.0	33.988
46.5	32.265
47.0	30.609
47.5	29.019
48.0	27.429
48.5	25.905
49.0	24.447
49.5	22.990
50.0	21.665
50.5	20.406
51.0	19.147
51.5	17.888
52.0	16.696
52.5	15.636
53.0	14.576
53.5	13.648
54.0	12.787
54.5	11.992

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CANDELA TABULATION - (Cont.)

55.0	11.197
55.5	10.534
56.0	9.872
56.5	9.209
57.0	8.679
57.5	8.083
58.0	7.619
58.5	7.089
59.0	6.692
59.5	6.228
60.0	5.830
60.5	5.499
61.0	5.101
61.5	4.770
62.0	4.505
62.5	4.174
63.0	3.909
63.5	3.644
64.0	3.379
64.5	3.180
65.0	2.981
65.5	2.783
66.0	2.584
66.5	2.385
67.0	2.186
67.5	2.054
68.0	1.921
68.5	1.789
69.0	1.656
69.5	1.524
70.0	1.391
70.5	1.325
71.0	1.193
71.5	1.126
72.0	1.060
72.5	0.994
73.0	0.928
73.5	0.861
74.0	0.795
74.5	0.729
75.0	0.663
75.5	0.596
76.0	0.530
76.5	0.530
77.0	0.464
77.5	0.464
78.0	0.398
78.5	0.398
79.0	0.331
79.5	0.331
80.0	0.265
80.5	0.265
81.0	0.265
81.5	0.199
82.0	0.199
82.5	0.199

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CANDELA TABULATION - (Cont.)

83.0	0.133
83.5	0.133
84.0	0.133
84.5	0.133
85.0	0.133
85.5	0.066
86.0	0.066
86.5	0.066
87.0	0.066
87.5	0.066
88.0	0.066
88.5	0.066
89.0	0.066
89.5	0.066
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

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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	470.89	N.A.	35.60
0-30	1062.98	N.A.	80.40
0-40	1276.00	N.A.	96.60
0-60	1317.45	N.A.	99.70
0-80	1321.34	N.A.	100.00
0-90	1321.48	N.A.	100.00
10-90	1191.23	N.A.	90.10
20-40	805.11	N.A.	60.90
20-50	835.86	N.A.	63.30
40-70	44.58	N.A.	3.40
60-80	3.89	N.A.	0.30
70-80	0.76	N.A.	0.10
80-90	0.14	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	1321.48	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	130.25
10-20	340.64
20-30	592.09
30-40	213.02
40-50	30.75
50-60	10.70
60-70	3.13
70-80	0.76
80-90	0.14
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	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	96	91	88	93	89	86	90	87	85	88	86	84	82
4	98	91	85	81	96	90	85	81	88	83	80	86	82	79	84	81	78	77
5	93	85	80	75	92	84	79	75	83	78	74	81	77	74	79	76	73	72
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	69	67
7	84	75	70	66	83	75	69	65	74	69	65	72	68	65	71	67	64	63
8	80	71	65	61	79	71	65	61	70	65	61	69	64	61	68	63	60	59
9	77	67	61	58	76	67	61	57	66	61	57	65	60	57	64	60	57	56
10	73	64	58	54	72	63	58	54	62	57	54	62	57	54	61	57	54	52

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## UGR TABLE - CORRECTED

### Reflectances

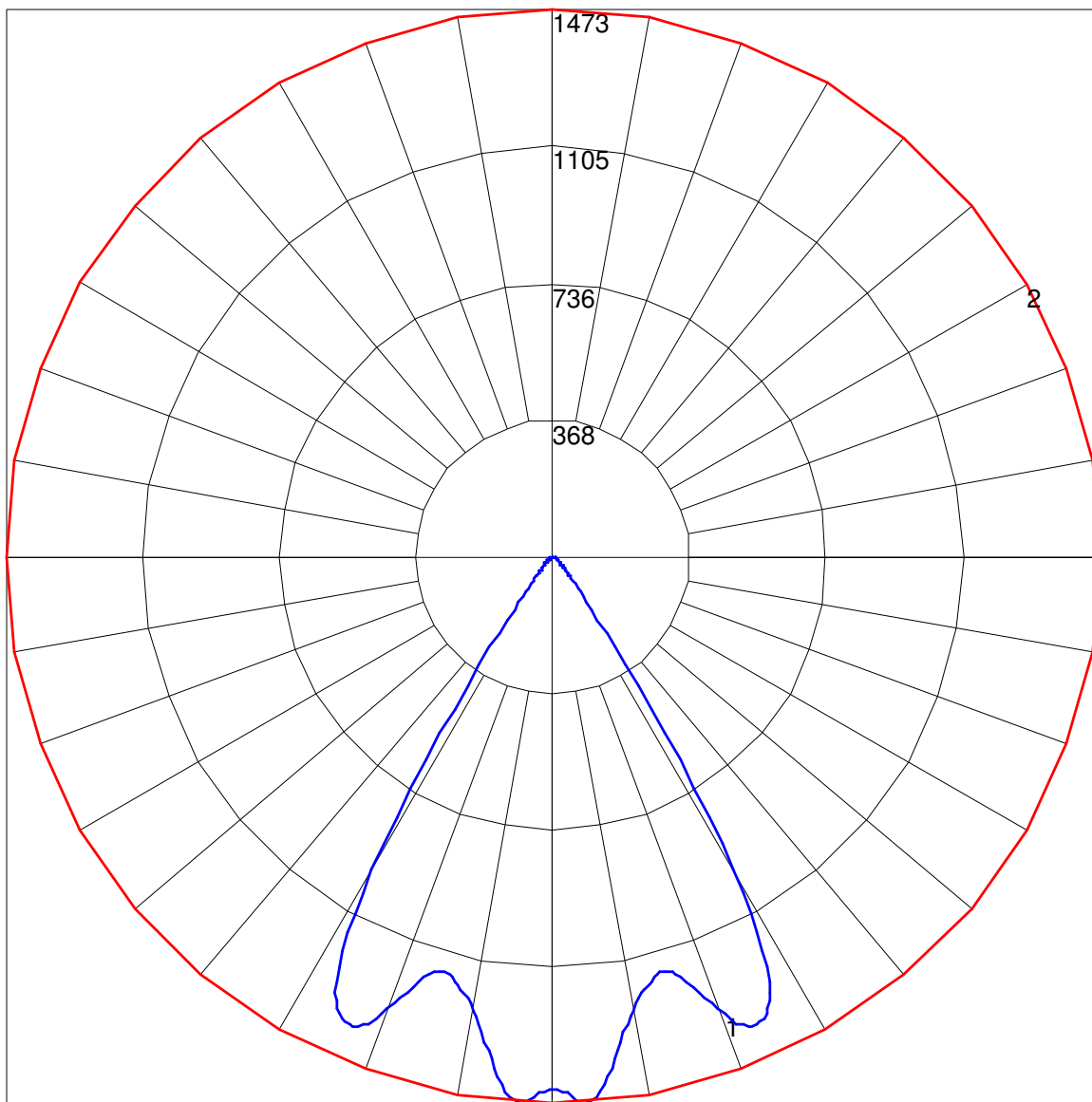
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

### Room Size UGR Viewed Crosswise

X=2H	Y=2H	2.0	2.9	2.4	3.3	3.6	2.0	2.9	2.4	3.3	3.6
	3H	2.1	2.9	2.5	3.3	3.6	2.1	2.9	2.5	3.3	3.6
	4H	2.1	2.8	2.5	3.2	3.6	2.1	2.8	2.5	3.2	3.6
	6H	2.0	2.7	2.4	3.1	3.5	2.0	2.7	2.4	3.1	3.5
	8H	2.0	2.6	2.4	3.0	3.4	2.0	2.6	2.4	3.0	3.4
	12H	1.9	2.5	2.3	2.9	3.3	1.9	2.5	2.3	2.9	3.3
4H	2H	2.0	2.7	2.4	3.0	3.4	2.0	2.7	2.4	3.0	3.4
	3H	2.1	2.7	2.5	3.1	3.5	2.1	2.7	2.5	3.1	3.5
	4H	2.1	2.6	2.5	3.0	3.5	2.1	2.6	2.5	3.0	3.5
	6H	2.0	2.5	2.5	2.9	3.4	2.0	2.5	2.5	2.9	3.4
	8H	1.9	2.4	2.4	2.8	3.3	1.9	2.4	2.4	2.8	3.3
	12H	1.9	2.2	2.4	2.7	3.2	1.9	2.2	2.4	2.7	3.2
8H	4H	1.9	2.3	2.4	2.8	3.3	1.9	2.3	2.4	2.8	3.3
	6H	1.9	2.2	2.4	2.7	3.2	1.9	2.2	2.4	2.7	3.2
	8H	1.8	2.1	2.3	2.6	3.1	1.8	2.1	2.3	2.6	3.1
	12H	1.8	2.0	2.3	2.5	3.1	1.8	2.0	2.3	2.5	3.1
12H	4H	1.9	2.2	2.3	2.7	3.2	1.9	2.2	2.3	2.7	3.2
	6H	1.8	2.1	2.3	2.6	3.1	1.8	2.1	2.3	2.6	3.1
	8H	1.8	2.0	2.3	2.5	3.1	1.8	2.0	2.3	2.5	3.1

Maximum UGR = 3.6

POLAR GRAPH



Maximum Candela = 1472.802 Located At Horizontal Angle = 0, Vertical Angle = 3.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)