

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-830-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-L10-830-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	926
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	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	3643	3643	3643
55	1332	1332	1332
65	481	481	481
75	175	175	175
85	104	104	104

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CANDELA TABULATION

	<u>0</u>
0.0	1005.310
0.5	1005.774
1.0	1009.951
1.5	1014.592
2.0	1020.626
2.5	1026.660
3.0	1030.837
3.5	1031.765
4.0	1028.980
4.5	1023.875
5.0	1016.449
5.5	1002.989
6.0	987.673
6.5	972.356
7.0	956.112
7.5	940.331
8.0	924.551
8.5	909.699
9.0	894.846
9.5	881.386
10.0	870.247
10.5	860.036
11.0	850.754
11.5	842.399
12.0	835.437
12.5	829.404
13.0	823.834
13.5	818.729
14.0	814.551
14.5	811.303
15.0	810.374
15.5	811.767
16.0	815.016
16.5	821.049
17.0	829.868
17.5	840.543
18.0	853.539
18.5	866.998
19.0	879.994
19.5	895.310
20.0	910.163
20.5	923.622
21.0	936.618
21.5	946.829
22.0	955.183
22.5	961.217
23.0	964.466
23.5	964.930
24.0	963.074
24.5	958.432
25.0	951.935
25.5	943.116
26.0	932.905
26.5	919.445

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CANDELA TABULATION - (Cont.)

27.0	899.952
27.5	874.424
28.0	844.256
28.5	809.446
29.0	771.387
29.5	729.151
30.0	682.274
30.5	630.291
31.0	571.346
31.5	511.473
32.0	452.807
32.5	396.833
33.0	343.782
33.5	294.120
34.0	248.914
34.5	208.859
35.0	174.606
35.5	146.341
36.0	124.341
36.5	108.003
37.0	94.961
37.5	84.147
38.0	75.097
38.5	67.392
39.0	60.708
39.5	54.953
40.0	50.080
40.5	46.042
41.0	42.700
41.5	39.823
42.0	37.316
42.5	35.088
43.0	33.046
43.5	31.190
44.0	29.472
44.5	27.894
45.0	26.456
45.5	25.110
46.0	23.810
46.5	22.603
47.0	21.443
47.5	20.329
48.0	19.215
48.5	18.148
49.0	17.126
49.5	16.105
50.0	15.177
50.5	14.295
51.0	13.413
51.5	12.532
52.0	11.696
52.5	10.954
53.0	10.211
53.5	9.561
54.0	8.958
54.5	8.401

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CANDELA TABULATION - (Cont.)

55.0	7.844
55.5	7.380
56.0	6.916
56.5	6.451
57.0	6.080
57.5	5.662
58.0	5.338
58.5	4.966
59.0	4.688
59.5	4.363
60.0	4.084
60.5	3.852
61.0	3.574
61.5	3.342
62.0	3.156
62.5	2.924
63.0	2.738
63.5	2.553
64.0	2.367
64.5	2.228
65.0	2.089
65.5	1.949
66.0	1.810
66.5	1.671
67.0	1.532
67.5	1.439
68.0	1.346
68.5	1.253
69.0	1.160
69.5	1.068
70.0	0.975
70.5	0.928
71.0	0.835
71.5	0.789
72.0	0.743
72.5	0.696
73.0	0.650
73.5	0.603
74.0	0.557
74.5	0.511
75.0	0.464
75.5	0.418
76.0	0.371
76.5	0.371
77.0	0.325
77.5	0.325
78.0	0.278
78.5	0.278
79.0	0.232
79.5	0.232
80.0	0.186
80.5	0.186
81.0	0.186
81.5	0.139
82.0	0.139
82.5	0.139

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

83.0	0.093
83.5	0.093
84.0	0.093
84.5	0.093
85.0	0.093
85.5	0.046
86.0	0.046
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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PHOTOMETRIC FILENAME : 4DR-TL-L10-830-DIM-UNV-OW-OF-SG_.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
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133.5	0.000
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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 : 4DR-TL-L10-830-DIM-UNV-OW-OF-SG_.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 : 4DR-TL-L10-830-DIM-UNV-OW-OF-SG_.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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	329.88	N.A.	35.60
0-30	744.66	N.A.	80.40
0-40	893.90	N.A.	96.60
0-60	922.93	N.A.	99.70
0-80	925.66	N.A.	100.00
0-90	925.76	N.A.	100.00
10-90	834.51	N.A.	90.10
20-40	564.02	N.A.	60.90
20-50	585.55	N.A.	63.30
40-70	31.23	N.A.	3.40
60-80	2.73	N.A.	0.30
70-80	0.54	N.A.	0.10
80-90	0.10	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	925.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.25
10-20	238.63
20-30	414.78
30-40	149.23
40-50	21.54
50-60	7.50
60-70	2.19
70-80	0.54
80-90	0.10
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	101	101	100	98	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	95	91	87	93	89	86	90	87	85	88	86	83	82
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	93	85	80	75	92	84	79	75	82	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	68	67
7	84	75	70	65	83	75	69	65	73	69	65	72	68	65	71	67	64	63
8	80	71	65	61	79	71	65	61	69	64	61	68	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

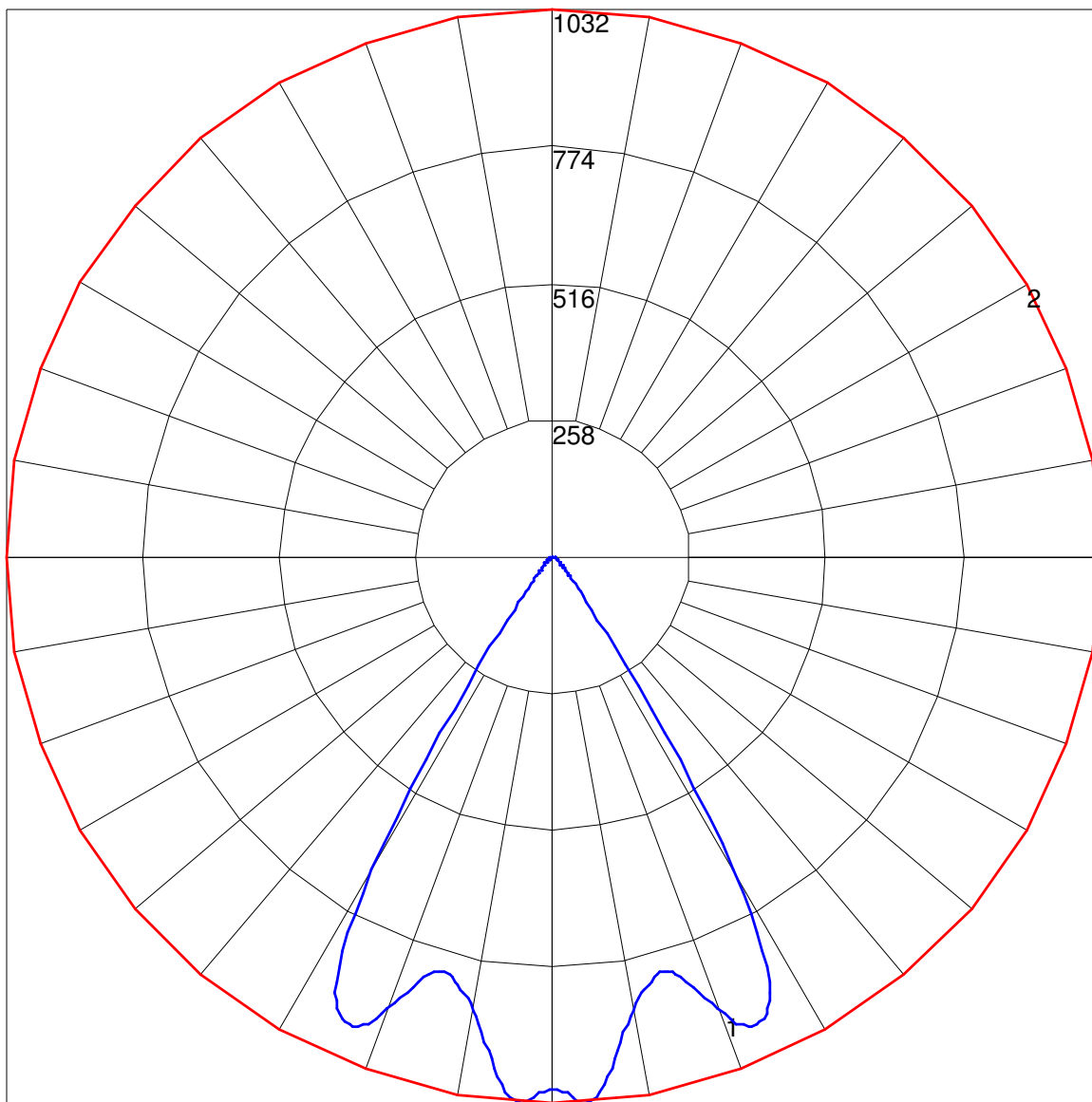
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	0.8	1.7	1.2	2.1	2.4	0.8	1.7	1.2	2.1	2.4
	3H	0.9	1.7	1.3	2.1	2.5	0.9	1.7	1.3	2.1	2.5
	4H	0.9	1.6	1.3	2.0	2.4	0.9	1.6	1.3	2.0	2.4
	6H	0.8	1.5	1.2	1.9	2.3	0.8	1.5	1.2	1.9	2.3
	8H	0.8	1.4	1.2	1.8	2.2	0.8	1.4	1.2	1.8	2.2
	12H	0.7	1.3	1.1	1.7	2.1	0.7	1.3	1.1	1.7	2.1
4H	2H	0.8	1.5	1.2	1.8	2.2	0.8	1.5	1.2	1.8	2.2
	3H	0.9	1.5	1.3	1.9	2.3	0.9	1.5	1.3	1.9	2.3
	4H	0.9	1.4	1.3	1.8	2.3	0.9	1.4	1.3	1.8	2.3
	6H	0.8	1.3	1.3	1.7	2.2	0.8	1.3	1.3	1.7	2.2
	8H	0.7	1.2	1.2	1.6	2.1	0.7	1.2	1.2	1.6	2.1
	12H	0.7	1.0	1.2	1.5	2.0	0.7	1.0	1.2	1.5	2.0
8H	4H	0.7	1.1	1.2	1.6	2.1	0.7	1.1	1.2	1.6	2.1
	6H	0.7	1.0	1.2	1.5	2.0	0.7	1.0	1.2	1.5	2.0
	8H	0.6	0.9	1.1	1.4	1.9	0.6	0.9	1.1	1.4	1.9
	12H	0.6	0.8	1.1	1.3	1.9	0.6	0.8	1.1	1.3	1.9
12H	4H	0.7	1.0	1.2	1.5	2.0	0.7	1.0	1.2	1.5	2.0
	6H	0.6	0.9	1.1	1.4	1.9	0.6	0.9	1.1	1.4	1.9
	8H	0.6	0.8	1.1	1.3	1.9	0.6	0.8	1.1	1.3	1.9

Maximum UGR = 2.5

POLAR GRAPH



Maximum Candela = 1031.765 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.)