

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-830-DIM-UNV-OW-OF-SG\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM TEST 12316380.19

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 08-18-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-TL-L30-830-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	2692
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.88
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	10422	10422	10422
55	3840	3840	3840
65	1380	1380	1380
75	504	504	504
85	236	236	236

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CANDELA TABULATION

	<u>0</u>
0.0	3093.664
0.5	3092.959
1.0	3091.550
1.5	3085.912
2.0	3080.274
2.5	3070.409
3.0	3056.314
3.5	3036.583
4.0	3015.441
4.5	2988.662
5.0	2963.293
5.5	2931.581
6.0	2897.755
6.5	2859.701
7.0	2818.828
7.5	2775.841
8.0	2732.149
8.5	2691.276
9.0	2653.927
9.5	2618.691
10.0	2586.275
10.5	2555.268
11.0	2529.194
11.5	2507.348
12.0	2489.730
12.5	2477.750
13.0	2469.293
13.5	2467.179
14.0	2468.589
14.5	2474.931
15.0	2484.797
15.5	2498.891
16.0	2517.213
16.5	2539.059
17.0	2564.429
17.5	2591.208
18.0	2620.101
18.5	2649.698
19.0	2679.296
19.5	2709.599
20.0	2739.196
20.5	2765.975
21.0	2789.935
21.5	2808.258
22.0	2822.352
22.5	2831.513
23.0	2834.332
23.5	2829.399
24.0	2817.419
24.5	2796.277
25.0	2765.975
25.5	2722.988
26.0	2665.907
26.5	2597.550

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CANDELA TABULATION - (Cont.)

27.0	2516.509
27.5	2427.716
28.0	2329.057
28.5	2221.237
29.0	2103.550
29.5	1972.475
30.0	1832.238
30.5	1685.659
31.0	1534.852
31.5	1382.635
32.0	1230.418
32.5	1087.363
33.0	952.059
33.5	826.621
34.0	715.982
34.5	614.716
35.0	522.470
35.5	441.358
36.0	373.706
36.5	320.078
37.0	278.923
37.5	247.141
38.0	219.798
38.5	196.895
39.0	177.375
39.5	161.166
40.0	147.072
40.5	134.810
41.0	124.169
41.5	115.220
42.0	107.679
42.5	100.985
43.0	94.924
43.5	89.427
44.0	84.424
44.5	79.843
45.0	75.686
45.5	71.669
46.0	68.004
46.5	64.481
47.0	61.169
47.5	57.927
48.0	54.756
48.5	51.725
49.0	48.766
49.5	46.017
50.0	43.410
50.5	40.873
51.0	38.407
51.5	36.011
52.0	33.615
52.5	31.430
53.0	29.386
53.5	27.554
54.0	25.792
54.5	24.171

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**CANDELA TABULATION - (Cont.)**

55.0	22.621
55.5	21.212
56.0	19.873
56.5	18.604
57.0	17.406
57.5	16.349
58.0	15.292
58.5	14.306
59.0	13.389
59.5	12.544
60.0	11.769
60.5	10.993
61.0	10.289
61.5	9.654
62.0	9.020
62.5	8.456
63.0	7.893
63.5	7.329
64.0	6.836
64.5	6.413
65.0	5.990
65.5	5.567
66.0	5.144
66.5	4.792
67.0	4.440
67.5	4.158
68.0	3.876
68.5	3.594
69.0	3.312
69.5	3.101
70.0	2.889
70.5	2.678
71.0	2.466
71.5	2.255
72.0	2.114
72.5	1.973
73.0	1.832
73.5	1.691
74.0	1.550
74.5	1.409
75.0	1.339
75.5	1.198
76.0	1.128
76.5	1.057
77.0	0.987
77.5	0.846
78.0	0.775
78.5	0.705
79.0	0.705
79.5	0.634
80.0	0.564
80.5	0.493
81.0	0.493
81.5	0.423
82.0	0.423
82.5	0.352

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CANDELA TABULATION - (Cont.)

83.0	0.352
83.5	0.282
84.0	0.282
84.5	0.211
85.0	0.211
85.5	0.211
86.0	0.211
86.5	0.141
87.0	0.141
87.5	0.141
88.0	0.070
88.5	0.070
89.0	0.070
89.5	0.070
90.0	0.070
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	994.71	N.A.	37.00
0-30	2183.72	N.A.	81.10
0-40	2600.04	N.A.	96.60
0-60	2683.52	N.A.	99.70
0-80	2691.35	N.A.	100.00
0-90	2691.62	N.A.	100.00
10-90	2422.06	N.A.	90.00
20-40	1605.34	N.A.	59.60
20-50	1667.27	N.A.	61.90
40-70	89.78	N.A.	3.30
60-80	7.83	N.A.	0.30
70-80	1.53	N.A.	0.10
80-90	0.27	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	2691.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	269.56
10-20	725.15
20-30	1189.01
30-40	416.33
40-50	61.94
50-60	21.54
60-70	6.30
70-80	1.53
80-90	0.27
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	97	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	91	88	85	88	86	84	82
4	98	91	86	82	96	90	85	81	88	83	80	86	82	79	84	81	78	77
5	93	85	80	76	92	84	79	75	83	78	75	81	77	74	80	76	73	72
6	89	80	75	70	88	80	74	70	78	73	70	77	73	69	75	72	69	67
7	85	76	70	66	83	75	70	66	74	69	65	73	68	65	72	68	65	63
8	81	72	66	62	80	71	65	62	70	65	61	69	64	61	68	64	61	60
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	64	60	57	56
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53

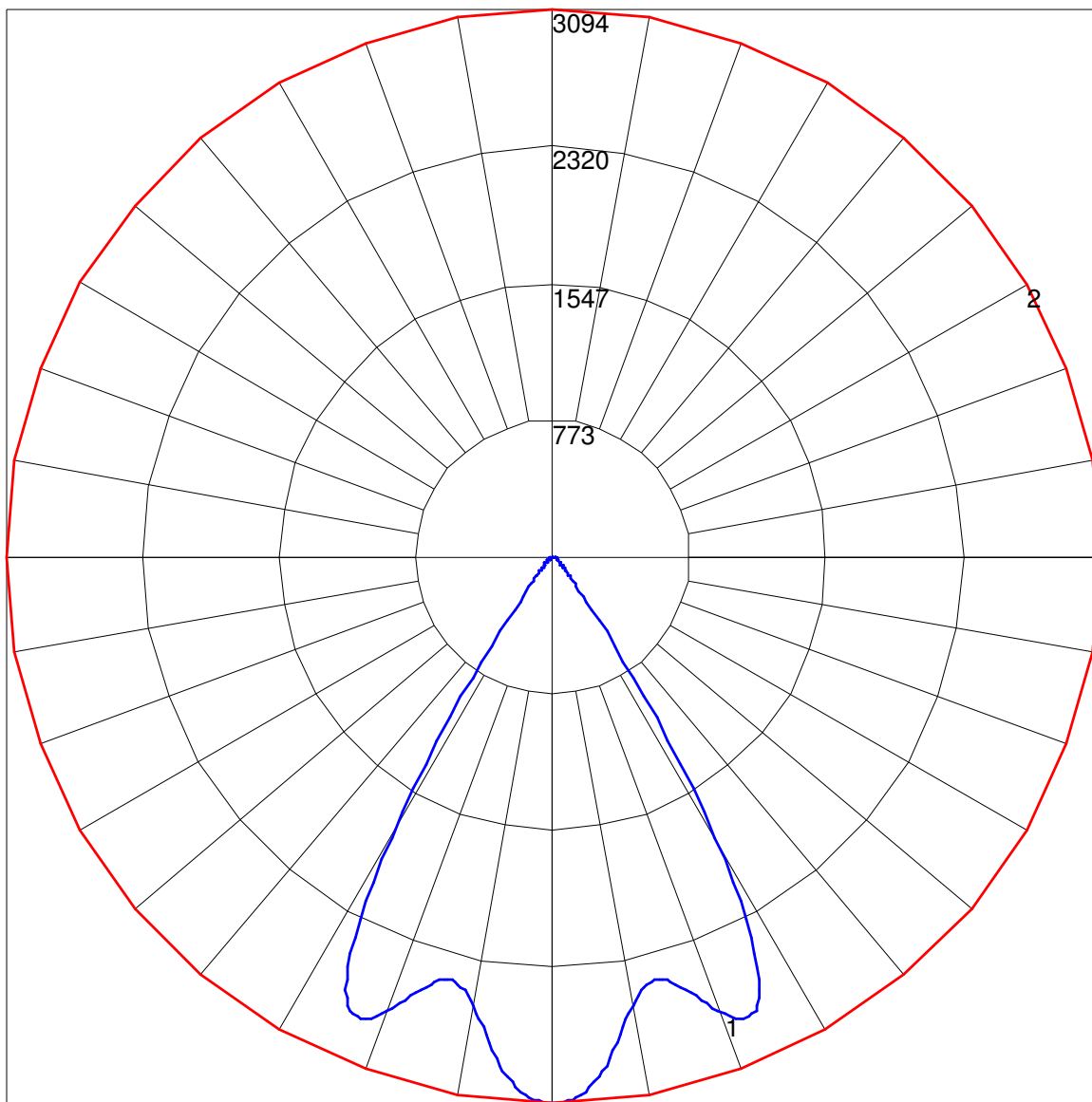
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**UGR TABLE - CORRECTED**

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	4.4	5.4	4.8	5.7	6.0	4.4	5.4	4.8	5.7	6.0
	3H	4.6	5.4	4.9	5.7	6.1	4.6	5.4	4.9	5.7	6.1
	4H	4.5	5.3	4.9	5.6	6.0	4.5	5.3	4.9	5.6	6.0
	6H	4.4	5.1	4.9	5.5	5.9	4.4	5.1	4.9	5.5	5.9
	8H	4.4	5.0	4.8	5.4	5.8	4.4	5.0	4.8	5.4	5.8
	12H	4.3	4.9	4.7	5.3	5.7	4.3	4.9	4.7	5.3	5.7
4H	2H	4.3	5.1	4.8	5.5	5.8	4.3	5.1	4.8	5.5	5.8
	3H	4.5	5.1	5.0	5.5	5.9	4.5	5.1	5.0	5.5	5.9
	4H	4.5	5.0	4.9	5.4	5.9	4.5	5.0	4.9	5.4	5.9
	6H	4.4	4.9	4.9	5.3	5.8	4.4	4.9	4.9	5.3	5.8
	8H	4.3	4.8	4.8	5.2	5.7	4.3	4.8	4.8	5.2	5.7
	12H	4.3	4.7	4.8	5.1	5.6	4.3	4.7	4.8	5.1	5.6
8H	4H	4.3	4.8	4.8	5.2	5.7	4.3	4.8	4.8	5.2	5.7
	6H	4.3	4.6	4.8	5.1	5.6	4.3	4.6	4.8	5.1	5.6
	8H	4.2	4.5	4.8	5.0	5.5	4.2	4.5	4.8	5.0	5.5
	12H	4.2	4.4	4.7	4.9	5.5	4.2	4.4	4.7	4.9	5.5
12H	4H	4.3	4.6	4.8	5.1	5.6	4.3	4.6	4.8	5.1	5.6
	6H	4.2	4.5	4.7	5.0	5.5	4.2	4.5	4.7	5.0	5.5
	8H	4.2	4.4	4.7	4.9	5.5	4.2	4.4	4.7	4.9	5.5

Maximum UGR = 6.1

POLAR GRAPH



Maximum Candela = 3093.664 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.)