



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-835-DIM-UNV-RW-OF-CS-IP.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 12316380.12
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 6/12/2018
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L15-835-DIM-UNV-RW-OF-CS-IP
 [LUMINAIRE] Black formed aluminum housing, semi-spec reflector, diffuse lens
 [LAMP] One white LED
 [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	922
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	66
Total Luminaire Watts	13.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
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	21327	21327	21327
55	17220	17220	17220
65	11140	11140	11140
75	6212	6212	6212
85	3192	3192	3192

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CANDELA TABULATION

	<u>0</u>
0.0	740.614
0.5	740.614
1.0	739.917
1.5	738.524
2.0	737.131
2.5	735.737
3.0	733.647
3.5	731.557
4.0	729.467
4.5	726.680
5.0	724.590
5.5	721.803
6.0	719.016
6.5	716.229
7.0	713.442
7.5	710.655
8.0	707.868
8.5	704.385
9.0	701.598
9.5	698.811
10.0	696.163
10.5	693.307
11.0	690.381
11.5	687.524
12.0	684.807
12.5	682.090
13.0	679.372
13.5	676.586
14.0	673.799
14.5	671.012
15.0	668.155
15.5	665.229
16.0	662.163
16.5	659.098
17.0	655.963
17.5	652.618
18.0	649.065
18.5	645.233
19.0	641.540
19.5	637.569
20.0	633.250
20.5	628.303
21.0	622.590
21.5	616.389
22.0	609.282
22.5	601.409
23.0	592.491
23.5	582.459
24.0	571.450
24.5	558.979
25.0	545.045
25.5	529.647
26.0	512.996
26.5	495.299

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CANDELA TABULATION - (Cont.)

27.0	476.696
27.5	457.815
28.0	438.028
28.5	418.450
29.0	398.942
29.5	379.434
30.0	360.274
30.5	341.463
31.0	323.696
31.5	306.487
32.0	290.254
32.5	275.135
33.0	261.131
33.5	248.520
34.0	237.164
34.5	227.270
35.0	218.561
35.5	211.176
36.0	204.697
36.5	199.262
37.0	194.455
37.5	190.344
38.0	186.582
38.5	183.238
39.0	180.242
39.5	177.524
40.0	175.086
40.5	172.787
41.0	170.557
41.5	168.537
42.0	166.516
42.5	164.635
43.0	162.754
43.5	160.803
44.0	158.852
44.5	156.902
45.0	154.881
45.5	152.791
46.0	150.631
46.5	148.402
47.0	146.102
47.5	143.733
48.0	141.365
48.5	138.856
49.0	136.279
49.5	133.561
50.0	130.844
50.5	128.057
51.0	125.131
51.5	122.274
52.0	119.348
52.5	116.422
53.0	113.635
53.5	110.570
54.0	107.504
54.5	104.438

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CANDELA TABULATION - (Cont.)

55.0	101.443
55.5	98.377
56.0	95.381
56.5	92.455
57.0	89.529
57.5	86.602
58.0	83.746
58.5	80.959
59.0	78.172
59.5	75.455
60.0	72.738
60.5	70.090
61.0	67.512
61.5	64.934
62.0	62.496
62.5	59.988
63.0	57.619
63.5	55.180
64.0	52.881
64.5	50.582
65.0	48.352
65.5	46.123
66.0	43.963
66.5	41.873
67.0	39.852
67.5	37.832
68.0	35.881
68.5	33.930
69.0	32.049
69.5	30.238
70.0	28.566
70.5	26.963
71.0	25.500
71.5	24.107
72.0	22.783
72.5	21.529
73.0	20.344
73.5	19.299
74.0	18.254
74.5	17.348
75.0	16.512
75.5	15.746
76.0	14.910
76.5	14.143
77.0	13.377
77.5	12.611
78.0	11.914
78.5	11.148
79.0	10.451
79.5	9.754
80.0	9.057
80.5	8.361
81.0	7.734
81.5	7.107
82.0	6.410
82.5	5.852

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CANDELA TABULATION - (Cont.)

83.0	5.225
83.5	4.598
84.0	4.041
84.5	3.414
85.0	2.857
85.5	2.369
86.0	1.881
86.5	1.533
87.0	1.184
87.5	0.906
88.0	0.627
88.5	0.418
89.0	0.209
89.5	0.070
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
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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
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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	256.35	N.A.	27.80
0-30	496.07	N.A.	53.80
0-40	642.16	N.A.	69.60
0-60	851.60	N.A.	92.40
0-80	918.24	N.A.	99.60
0-90	922.00	N.A.	100.00
10-90	853.79	N.A.	92.60
20-40	385.81	N.A.	41.80
20-50	504.66	N.A.	54.70
40-70	257.88	N.A.	28.00
60-80	66.64	N.A.	7.20
70-80	18.20	N.A.	2.00
80-90	3.77	N.A.	0.40
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	922.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	68.21
10-20	188.14
20-30	239.72
30-40	146.08
40-50	118.86
50-60	90.58
60-70	48.44
70-80	18.20
80-90	3.77
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

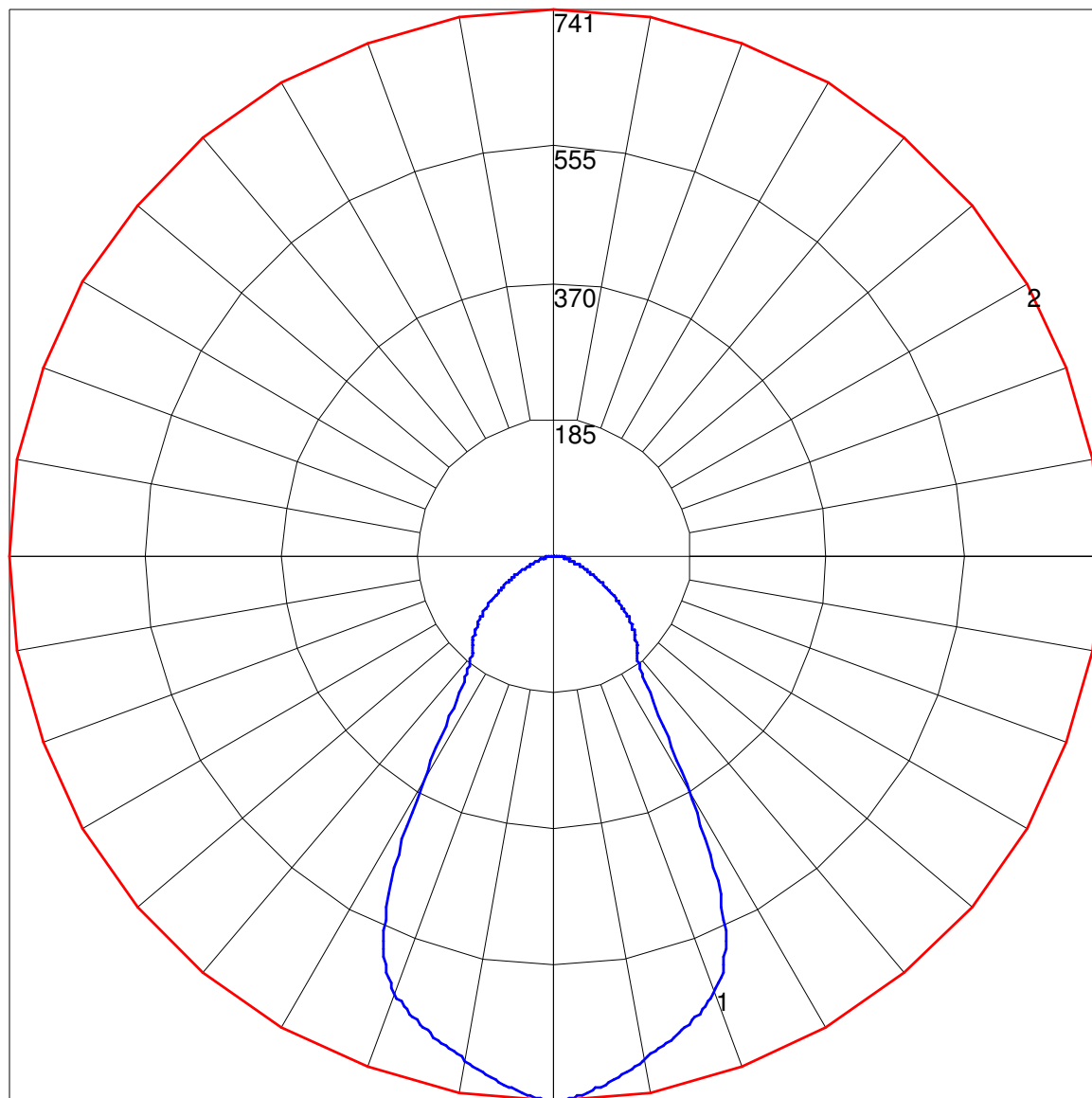
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	86	86	86	86	84	84	84	84	81	81	81	77	77	77	74	74	74	73
1	81	79	76	74	79	77	75	73	74	72	71	71	70	69	69	68	67	65
2	76	71	68	64	74	70	67	64	67	65	62	65	63	61	63	61	60	58
3	71	65	60	57	69	64	60	56	62	58	55	60	57	54	58	56	53	52
4	66	59	54	50	65	58	54	50	57	53	50	55	52	49	54	51	48	47
5	62	55	49	45	61	54	49	45	52	48	45	51	47	44	50	47	44	43
6	58	50	45	41	57	50	45	41	49	44	41	47	44	41	46	43	40	39
7	55	47	41	38	54	46	41	38	45	41	37	44	40	37	43	40	37	36
8	52	44	38	35	51	43	38	35	42	38	35	41	37	34	41	37	34	33
9	49	41	36	32	48	40	36	32	40	35	32	39	35	32	38	35	32	31
10	46	38	33	30	46	38	33	30	37	33	30	37	33	30	36	32	30	29

POLAR GRAPH



Maximum Candela = 740.614 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.)