

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-835-DIM-UNV-OM-OF-CS_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM 12316380.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 10/02/2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-TL-L15-835-DIM-UNV-OM-OF-CS

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

[MORE] enclosure

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1471
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	13.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
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	3652	3652	3652
55	1060	1060	1060
65	372	372	372
75	166	166	166
85	82	82	82

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CANDELA TABULATION

	<u>0</u>
0.0	2976.534
0.5	2978.738
1.0	2987.555
1.5	2995.638
2.0	3014.007
2.5	3025.763
3.0	3027.967
3.5	3028.702
4.0	3011.802
4.5	2989.025
5.0	2945.674
5.5	2890.566
6.0	2828.846
6.5	2759.778
7.0	2684.832
7.5	2606.947
8.0	2526.857
8.5	2447.503
9.0	2369.618
9.5	2293.937
10.0	2221.930
10.5	2154.331
11.0	2091.142
11.5	2031.626
12.0	1975.049
12.5	1922.146
13.0	1872.182
13.5	1824.422
14.0	1778.866
14.5	1736.985
15.0	1698.777
15.5	1664.978
16.0	1637.057
16.5	1612.075
17.0	1588.562
17.5	1567.989
18.0	1549.620
18.5	1534.190
19.0	1523.168
19.5	1513.616
20.0	1505.534
20.5	1495.982
21.0	1486.430
21.5	1476.143
22.0	1465.122
22.5	1451.161
23.0	1434.262
23.5	1413.688
24.0	1387.971
24.5	1354.172
25.0	1315.230
25.5	1274.083
26.0	1233.671
26.5	1188.850

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CANDELA TABULATION - (Cont.)

27.0	1141.825
27.5	1088.187
28.0	1027.202
28.5	960.338
29.0	890.535
29.5	819.263
30.0	743.582
30.5	665.183
31.0	583.110
31.5	501.330
32.0	422.710
32.5	349.160
33.0	285.162
33.5	230.569
34.0	184.573
34.5	146.365
35.0	115.358
35.5	91.993
36.0	77.003
36.5	69.141
37.0	64.439
37.5	60.324
38.0	56.724
38.5	53.417
39.0	50.405
39.5	47.686
40.0	45.115
40.5	42.690
41.0	40.412
41.5	38.355
42.0	36.371
42.5	34.534
43.0	32.697
43.5	31.081
44.0	29.464
44.5	27.921
45.0	26.525
45.5	25.129
46.0	23.733
46.5	22.410
47.0	21.014
47.5	19.692
48.0	18.443
48.5	17.267
49.0	16.091
49.5	14.916
50.0	13.740
50.5	12.638
51.0	11.683
51.5	10.801
52.0	9.919
52.5	9.185
53.0	8.450
53.5	7.862
54.0	7.274
54.5	6.686

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CANDELA TABULATION - (Cont.)

55.0	6.246
55.5	5.805
56.0	5.364
56.5	4.996
57.0	4.629
57.5	4.335
58.0	4.041
58.5	3.747
59.0	3.527
59.5	3.306
60.0	3.086
60.5	2.866
61.0	2.719
61.5	2.498
62.0	2.351
62.5	2.204
63.0	2.057
63.5	1.984
64.0	1.837
64.5	1.690
65.0	1.616
65.5	1.543
66.0	1.396
66.5	1.323
67.0	1.249
67.5	1.176
68.0	1.102
68.5	1.029
69.0	0.955
69.5	0.882
70.0	0.808
70.5	0.808
71.0	0.735
71.5	0.661
72.0	0.588
72.5	0.588
73.0	0.514
73.5	0.514
74.0	0.441
74.5	0.441
75.0	0.441
75.5	0.367
76.0	0.367
76.5	0.294
77.0	0.294
77.5	0.294
78.0	0.220
78.5	0.220
79.0	0.220
79.5	0.220
80.0	0.147
80.5	0.147
81.0	0.147
81.5	0.147
82.0	0.147
82.5	0.147

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CANDELA TABULATION - (Cont.)

83.0	0.147
83.5	0.073
84.0	0.073
84.5	0.073
85.0	0.073
85.5	0.073
86.0	0.073
86.5	0.073
87.0	0.073
87.5	0.073
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
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
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159.5	0.000
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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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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	742.00	N.A.	50.40
0-30	1310.54	N.A.	89.10
0-40	1441.78	N.A.	98.00
0-60	1468.81	N.A.	99.80
0-80	1470.96	N.A.	100.00
0-90	1471.05	N.A.	100.00
10-90	1216.17	N.A.	82.70
20-40	699.79	N.A.	47.60
20-50	720.67	N.A.	49.00
40-70	28.72	N.A.	2.00
60-80	2.15	N.A.	0.10
70-80	0.46	N.A.	0.00
80-90	0.09	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	1471.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	254.88
10-20	487.12
20-30	568.54
30-40	131.24
40-50	20.88
50-60	6.14
60-70	1.69
70-80	0.46
80-90	0.09
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

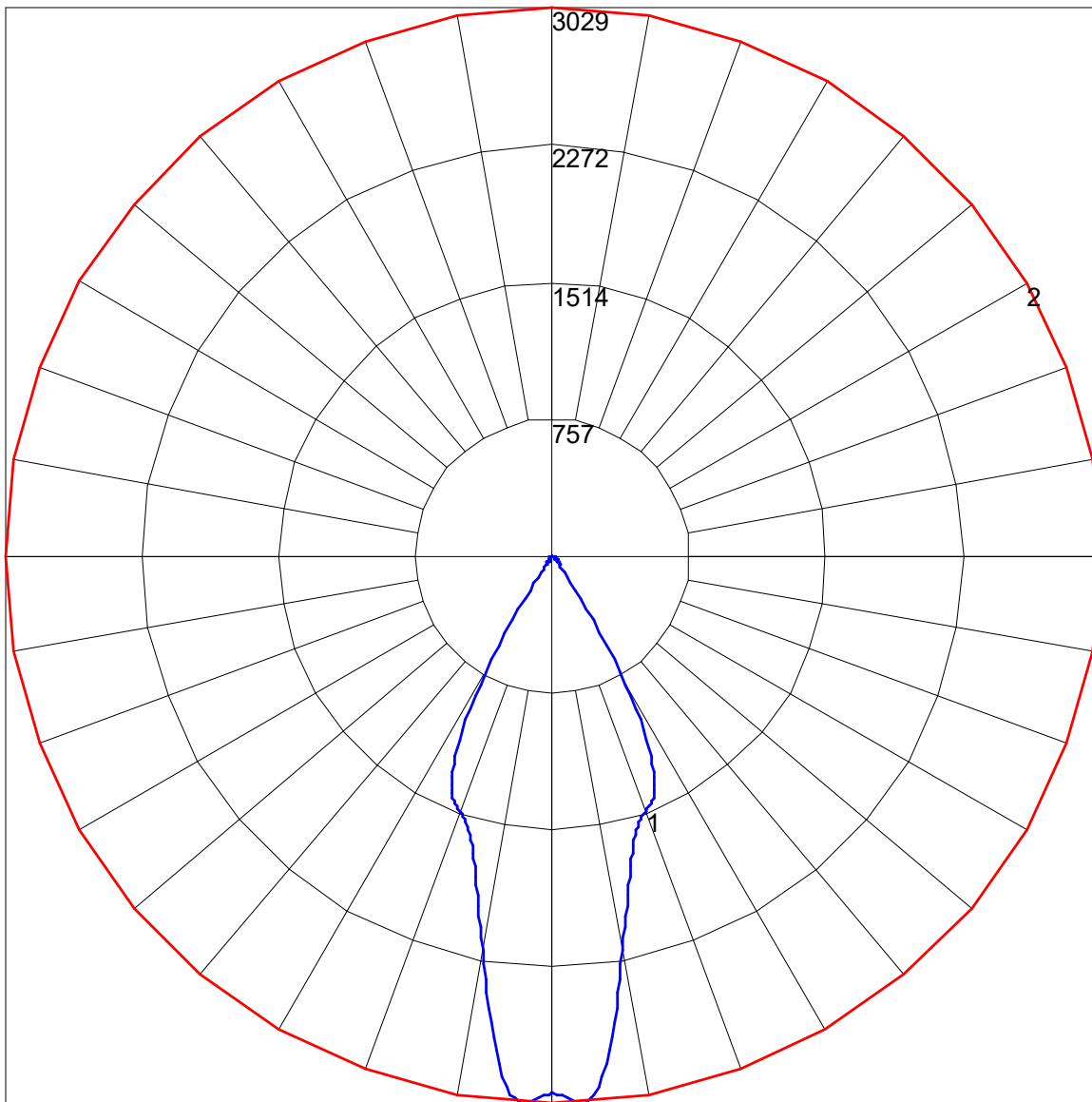
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	80	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	67	64	61	60

POLAR GRAPH



Maximum Candela = 3028.702 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.)