



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-830-DIM-UNV-OM-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.22
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 28-APR-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L15-830-DIM-UNV-OM-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white 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	1283
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
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)	0.74
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	3145	3145	3145
55	919	919	919
65	329	329	329
75	150	150	150
85	112	112	112

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CANDELA TABULATION

	<u>0</u>
0.0	2690.814
0.5	2695.462
1.0	2697.453
1.5	2696.126
2.0	2691.478
2.5	2684.839
3.0	2670.565
3.5	2653.967
4.0	2630.731
4.5	2600.191
5.0	2561.352
5.5	2514.215
6.0	2466.082
6.5	2409.318
7.0	2349.234
7.5	2285.831
8.0	2220.436
8.5	2155.042
9.0	2089.979
9.5	2025.912
10.0	1964.168
10.5	1905.745
11.0	1849.976
11.5	1798.192
12.0	1750.722
12.5	1705.909
13.0	1665.078
13.5	1627.568
14.0	1593.376
14.5	1560.845
15.0	1530.637
15.5	1502.089
16.0	1476.529
16.5	1453.956
17.0	1433.043
17.5	1413.458
18.0	1394.868
18.5	1376.279
19.0	1359.017
19.5	1342.420
20.0	1327.150
20.5	1312.212
21.0	1296.942
21.5	1281.340
22.0	1264.079
22.5	1245.489
23.0	1225.240
23.5	1203.331
24.0	1179.098
24.5	1151.878
25.0	1122.003
25.5	1088.807
26.0	1051.628
26.5	1009.802

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CANDELA TABULATION - (Cont.)

27.0	963.993
27.5	914.200
28.0	861.087
28.5	803.991
29.0	742.248
29.5	678.513
30.0	613.118
30.5	547.391
31.0	482.660
31.5	420.585
32.0	360.833
32.5	305.762
33.0	255.471
33.5	209.695
34.0	170.558
34.5	137.727
35.0	111.404
35.5	91.121
36.0	75.719
36.5	64.532
37.0	57.262
37.5	52.648
38.0	49.361
38.5	46.440
39.0	43.818
39.5	41.428
40.0	39.171
40.5	37.079
41.0	35.121
41.5	33.262
42.0	31.569
42.5	29.909
43.0	28.349
43.5	26.855
44.0	25.428
44.5	24.100
45.0	22.838
45.5	21.610
46.0	20.415
46.5	19.220
47.0	18.058
47.5	16.896
48.0	15.768
48.5	14.739
49.0	13.743
49.5	12.747
50.0	11.784
50.5	10.822
51.0	10.025
51.5	9.262
52.0	8.564
52.5	7.934
53.0	7.336
53.5	6.805
54.0	6.274
54.5	5.842

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CANDELA TABULATION - (Cont.)

55.0	5.411
55.5	5.012
56.0	4.714
56.5	4.349
57.0	4.050
57.5	3.784
58.0	3.552
58.5	3.320
59.0	3.087
59.5	2.921
60.0	2.722
60.5	2.556
61.0	2.390
61.5	2.224
62.0	2.125
62.5	1.959
63.0	1.859
63.5	1.726
64.0	1.627
64.5	1.527
65.0	1.427
65.5	1.361
66.0	1.261
66.5	1.228
67.0	1.129
67.5	1.062
68.0	0.996
68.5	0.929
69.0	0.863
69.5	0.830
70.0	0.797
70.5	0.730
71.0	0.664
71.5	0.664
72.0	0.598
72.5	0.564
73.0	0.498
73.5	0.465
74.0	0.432
74.5	0.432
75.0	0.398
75.5	0.365
76.0	0.365
76.5	0.332
77.0	0.299
77.5	0.299
78.0	0.266
78.5	0.232
79.0	0.232
79.5	0.232
80.0	0.199
80.5	0.166
81.0	0.199
81.5	0.166
82.0	0.166
82.5	0.166

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CANDELA TABULATION - (Cont.)

83.0	0.133
83.5	0.133
84.0	0.100
84.5	0.100
85.0	0.100
85.5	0.100
86.0	0.100
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	0.033
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	659.26	N.A.	51.40
0-30	1143.84	N.A.	89.10
0-40	1257.69	N.A.	98.00
0-60	1281.03	N.A.	99.80
0-80	1283.00	N.A.	100.00
0-90	1283.12	N.A.	100.00
10-90	1059.3	N.A.	82.60
20-40	598.43	N.A.	46.60
20-50	616.45	N.A.	48.00
40-70	24.86	N.A.	1.90
60-80	1.97	N.A.	0.20
70-80	0.45	N.A.	0.00
80-90	0.12	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	1283.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.82
10-20	435.44
20-30	484.58
30-40	113.85
40-50	18.02
50-60	5.32
60-70	1.52
70-80	0.45
80-90	0.12
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

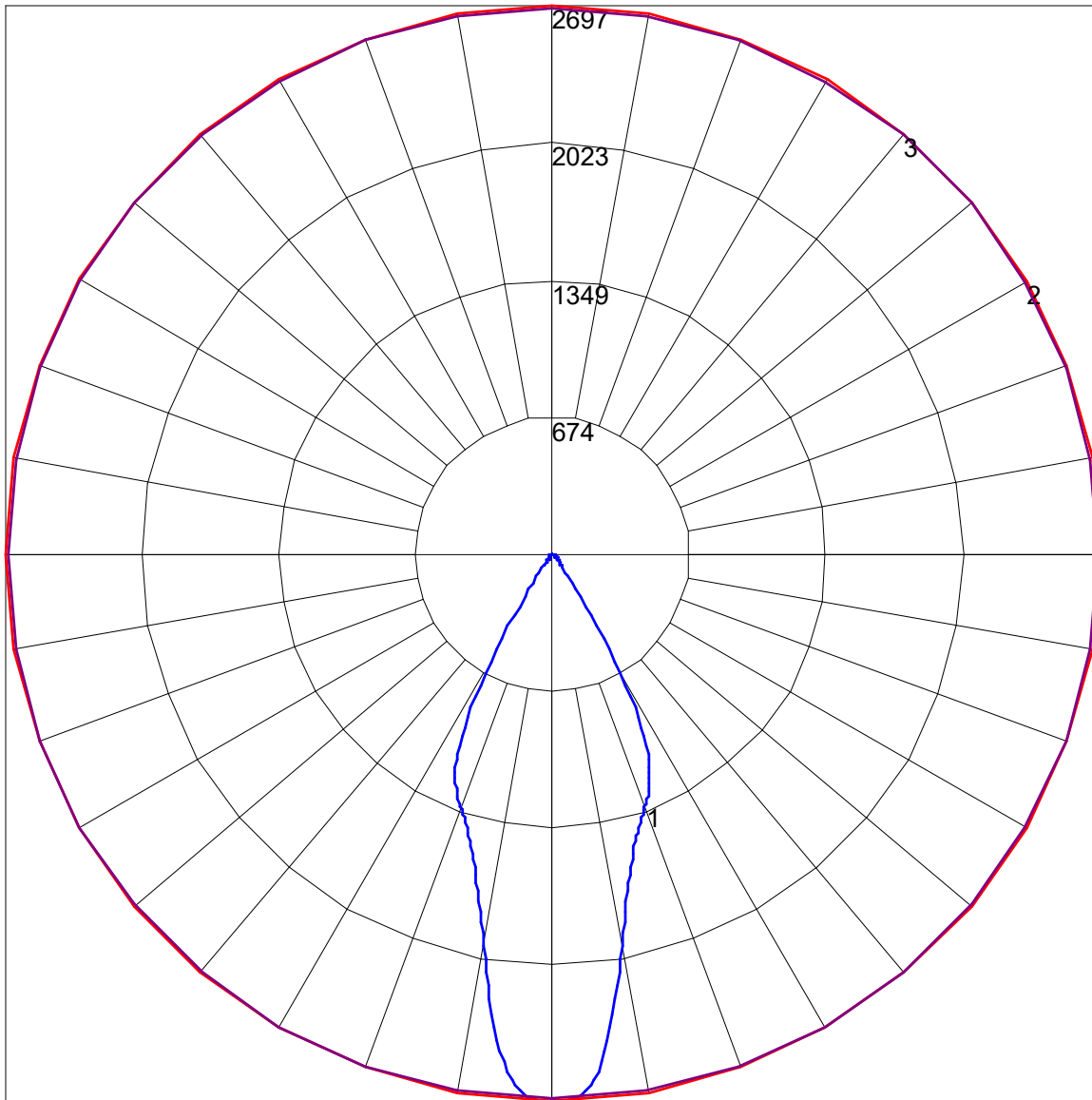
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	170	170	170	170	166	166	166	166	159	159	159	152	152	152	146	146	146	143
1	163	160	156	154	160	157	154	151	151	149	147	146	144	142	141	139	138	136
2	156	150	145	141	153	148	143	139	143	140	136	139	136	133	135	133	131	128
3	150	142	136	131	147	140	134	130	136	132	128	133	129	126	130	127	124	122
4	144	134	127	122	141	133	126	121	130	124	120	127	122	119	124	121	117	115
5	138	127	120	115	136	126	119	114	124	118	113	121	116	112	119	115	111	110
6	132	121	114	108	130	120	113	108	118	112	107	116	111	107	114	110	106	104
7	127	115	108	103	125	114	107	102	113	106	102	111	105	101	110	105	101	99
8	122	110	102	97	120	109	102	97	108	101	97	106	101	96	105	100	96	94
9	117	105	98	93	115	104	97	93	103	97	92	102	96	92	101	96	92	90
10	112	100	93	88	111	100	93	88	99	92	88	98	92	88	97	91	88	86

POLAR GRAPH



Maximum Candela = 2697.453 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)
3 - Horizontal Cone Through Vertical Angle (0)