



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-935-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.

[ISSUEDATE] 10/13-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-TL-L10-935-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	819
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	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	2034	2034	2034
55	590	590	590
65	207	207	207
75	93	93	93
85	46	46	46

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CANDELA TABULATION

	<u>0</u>
0.0	1657.591
0.5	1658.819
1.0	1663.729
1.5	1668.230
2.0	1678.460
2.5	1685.006
3.0	1686.234
3.5	1686.643
4.0	1677.232
4.5	1664.547
5.0	1640.406
5.5	1609.717
6.0	1575.346
6.5	1536.883
7.0	1495.147
7.5	1451.773
8.0	1407.173
8.5	1362.981
9.0	1319.608
9.5	1277.462
10.0	1237.363
10.5	1199.718
11.0	1164.529
11.5	1131.385
12.0	1099.878
12.5	1070.417
13.0	1042.593
13.5	1015.996
14.0	990.627
14.5	967.303
15.0	946.026
15.5	927.204
16.0	911.655
16.5	897.743
17.0	884.649
17.5	873.192
18.0	862.962
18.5	854.369
19.0	848.232
19.5	842.912
20.0	838.411
20.5	833.092
21.0	827.773
21.5	822.044
22.0	815.906
22.5	808.132
23.0	798.721
23.5	787.264
24.0	772.943
24.5	754.120
25.0	732.434
25.5	709.519
26.0	687.015
26.5	662.055

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**CANDELA TABULATION - (Cont.)**

27.0	635.867
27.5	605.997
28.0	572.035
28.5	534.799
29.0	495.927
29.5	456.237
30.0	414.091
30.5	370.431
31.0	324.726
31.5	279.184
32.0	235.402
32.5	194.443
33.0	158.803
33.5	128.401
34.0	102.786
34.5	81.509
35.0	64.241
35.5	51.229
36.0	42.882
36.5	38.504
37.0	35.885
37.5	33.594
38.0	31.589
38.5	29.747
39.0	28.070
39.5	26.556
40.0	25.124
40.5	23.773
41.0	22.505
41.5	21.359
42.0	20.254
42.5	19.231
43.0	18.209
43.5	17.308
44.0	16.408
44.5	15.549
45.0	14.771
45.5	13.994
46.0	13.217
46.5	12.480
47.0	11.703
47.5	10.966
48.0	10.270
48.5	9.616
49.0	8.961
49.5	8.306
50.0	7.652
50.5	7.038
51.0	6.506
51.5	6.015
52.0	5.524
52.5	5.115
53.0	4.706
53.5	4.378
54.0	4.051
54.5	3.724

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CANDELA TABULATION - (Cont.)

55.0	3.478
55.5	3.233
56.0	2.987
56.5	2.782
57.0	2.578
57.5	2.414
58.0	2.250
58.5	2.087
59.0	1.964
59.5	1.841
60.0	1.719
60.5	1.596
61.0	1.514
61.5	1.391
62.0	1.309
62.5	1.228
63.0	1.146
63.5	1.105
64.0	1.023
64.5	0.941
65.0	0.900
65.5	0.859
66.0	0.777
66.5	0.737
67.0	0.696
67.5	0.655
68.0	0.614
68.5	0.573
69.0	0.532
69.5	0.491
70.0	0.450
70.5	0.450
71.0	0.409
71.5	0.368
72.0	0.327
72.5	0.327
73.0	0.286
73.5	0.286
74.0	0.246
74.5	0.246
75.0	0.246
75.5	0.205
76.0	0.205
76.5	0.164
77.0	0.164
77.5	0.164
78.0	0.123
78.5	0.123
79.0	0.123
79.5	0.123
80.0	0.082
80.5	0.082
81.0	0.082
81.5	0.082
82.0	0.082
82.5	0.082

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CANDELA TABULATION - (Cont.)

83.0	0.082
83.5	0.041
84.0	0.041
84.5	0.041
85.0	0.041
85.5	0.041
86.0	0.041
86.5	0.041
87.0	0.041
87.5	0.041
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
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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4DR-TL-L10-935-DIM-UNV-OM-OF-CS\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	413.21	N.A.	50.40
0-30	729.82	N.A.	89.10
0-40	802.91	N.A.	98.00
0-60	817.96	N.A.	99.80
0-80	819.16	N.A.	100.00
0-90	819.21	N.A.	100.00
10-90	677.27	N.A.	82.70
20-40	389.70	N.A.	47.60
20-50	401.33	N.A.	49.00
40-70	15.99	N.A.	2.00
60-80	1.20	N.A.	0.10
70-80	0.26	N.A.	0.00
80-90	0.05	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	819.21	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	141.94
10-20	271.27
20-30	316.61
30-40	73.09
40-50	11.63
50-60	3.42
60-70	0.94
70-80	0.26
80-90	0.05
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

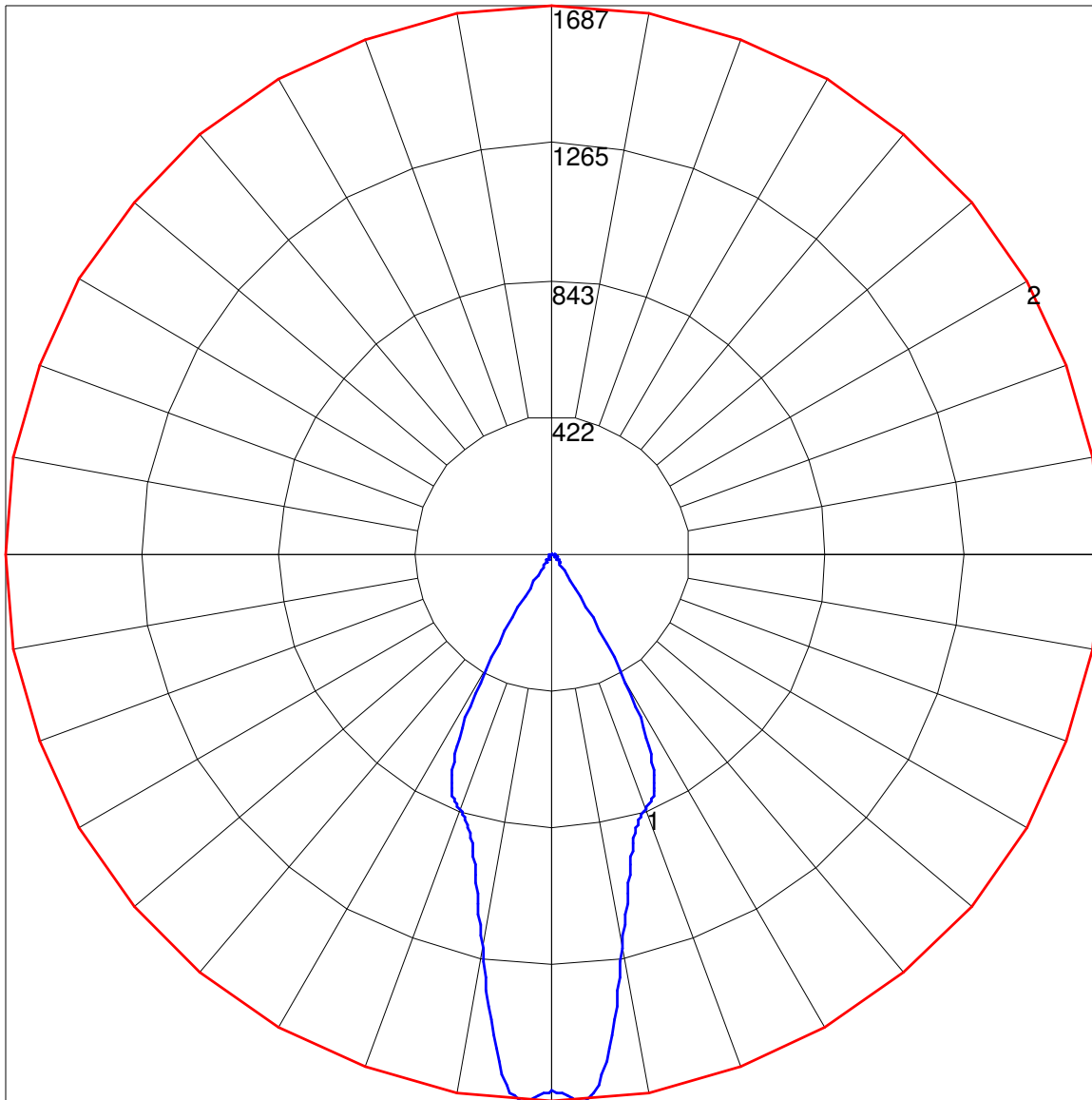
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	98	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	89	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	77
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	81	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	68	64	61	60

POLAR GRAPH



Maximum Candela = 1686.643 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.)