



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L20-935-EM10W-DIM-UNV-OM-OF-WH\_EM MODE ONLY.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM 12316380.22  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 09-28-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-TL-L20-935-EM10W-DIM-UNV-OM-OF-WH (EM MODE)  
 [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	740
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	10
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	1814	1814	1814
55	530	530	530
65	190	190	190
75	87	87	87
85	64	64	64

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## CANDELA TABULATION

	<u>0</u>
0.0	1551.989
0.5	1554.670
1.0	1555.819
1.5	1555.053
2.0	1552.372
2.5	1548.543
3.0	1540.310
3.5	1530.737
4.0	1517.335
4.5	1499.720
5.0	1477.319
5.5	1450.132
6.0	1422.370
6.5	1389.630
7.0	1354.975
7.5	1318.406
8.0	1280.688
8.5	1242.970
9.0	1205.444
9.5	1168.491
10.0	1132.879
10.5	1099.182
11.0	1067.017
11.5	1037.149
12.0	1009.770
12.5	983.922
13.0	960.372
13.5	938.737
14.0	919.017
14.5	900.253
15.0	882.830
15.5	866.365
16.0	851.622
16.5	838.603
17.0	826.541
17.5	815.244
18.0	804.522
18.5	793.801
19.0	783.845
19.5	774.272
20.0	765.464
20.5	756.849
21.0	748.041
21.5	739.043
22.0	729.087
22.5	718.365
23.0	706.686
23.5	694.049
24.0	680.072
24.5	664.372
25.0	647.141
25.5	627.995
26.0	606.551
26.5	582.427

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4DR-TL-L20-935-EM10W-DIM-UNV-OM-OF-WH\_EM MODE ONLY.IES****CANDELA TABULATION - (Cont.)**

27.0	556.005
27.5	527.286
28.0	496.652
28.5	463.720
29.0	428.109
29.5	391.348
30.0	353.630
30.5	315.721
31.0	278.385
31.5	242.582
32.0	208.119
32.5	176.355
33.0	147.349
33.5	120.946
34.0	98.373
34.5	79.438
35.0	64.255
35.5	52.556
36.0	43.672
36.5	37.220
37.0	33.027
37.5	30.366
38.0	28.470
38.5	26.786
39.0	25.273
39.5	23.894
40.0	22.592
40.5	21.386
41.0	20.257
41.5	19.184
42.0	18.208
42.5	17.251
43.0	16.351
43.5	15.489
44.0	14.666
44.5	13.900
45.0	13.173
45.5	12.464
46.0	11.775
46.5	11.086
47.0	10.416
47.5	9.745
48.0	9.094
48.5	8.501
49.0	7.927
49.5	7.352
50.0	6.797
50.5	6.242
51.0	5.782
51.5	5.342
52.0	4.940
52.5	4.576
53.0	4.231
53.5	3.925
54.0	3.619
54.5	3.370

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55.0	3.121
55.5	2.891
56.0	2.719
56.5	2.508
57.0	2.336
57.5	2.183
58.0	2.049
58.5	1.915
59.0	1.781
59.5	1.685
60.0	1.570
60.5	1.474
61.0	1.379
61.5	1.283
62.0	1.225
62.5	1.130
63.0	1.072
63.5	0.996
64.0	0.938
64.5	0.881
65.0	0.823
65.5	0.785
66.0	0.728
66.5	0.708
67.0	0.651
67.5	0.613
68.0	0.574
68.5	0.536
69.0	0.498
69.5	0.479
70.0	0.460
70.5	0.421
71.0	0.383
71.5	0.383
72.0	0.345
72.5	0.325
73.0	0.287
73.5	0.268
74.0	0.249
74.5	0.249
75.0	0.230
75.5	0.211
76.0	0.211
76.5	0.191
77.0	0.172
77.5	0.172
78.0	0.153
78.5	0.134
79.0	0.134
79.5	0.134
80.0	0.115
80.5	0.096
81.0	0.115
81.5	0.096
82.0	0.096
82.5	0.096

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83.0	0.077
83.5	0.077
84.0	0.057
84.5	0.057
85.0	0.057
85.5	0.057
86.0	0.057
86.5	0.038
87.0	0.038
87.5	0.038
88.0	0.038
88.5	0.038
89.0	0.038
89.5	0.038
90.0	0.019
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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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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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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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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Zone	Lumens	%Lamp	%Fixt
0-20	380.24	N.A.	51.40
0-30	659.74	N.A.	89.10
0-40	725.40	N.A.	98.00
0-60	738.86	N.A.	99.80
0-80	740.00	N.A.	100.00
0-90	740.07	N.A.	100.00
10-90	610.98	N.A.	82.60
20-40	345.16	N.A.	46.60
20-50	355.55	N.A.	48.00
40-70	14.34	N.A.	1.90
60-80	1.14	N.A.	0.20
70-80	0.26	N.A.	0.00
80-90	0.07	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	740.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	129.09
10-20	251.15
20-30	279.49
30-40	65.66
40-50	10.39
50-60	3.07
60-70	0.88
70-80	0.26
80-90	0.07
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

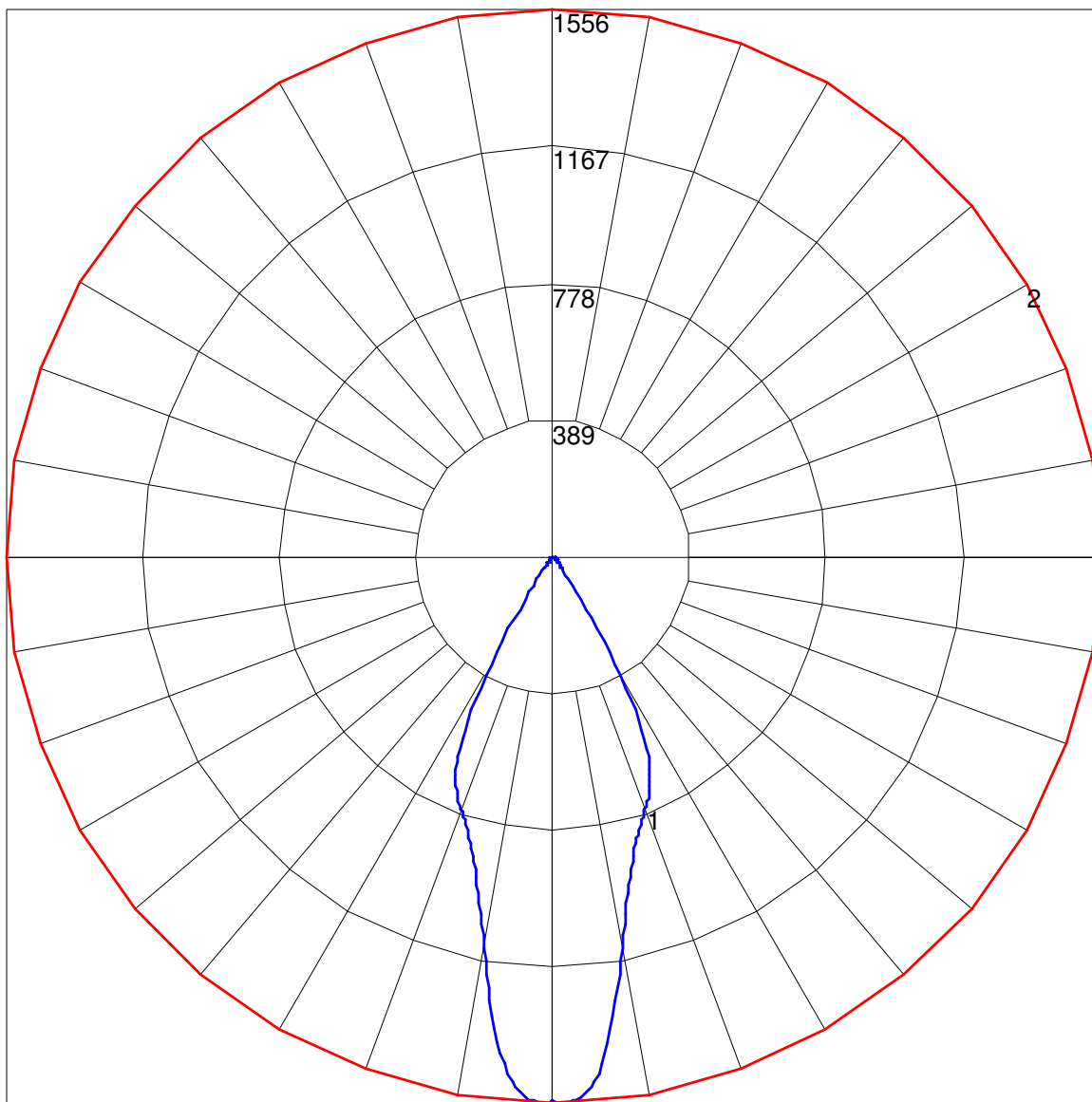
Effective Floor Cavity Reflectance 0.20

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	101	94	89	86	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	84	80	87	82	79	85	81	79	83	80	78	77
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	75	72	87	80	75	72	79	74	71	78	74	71	77	73	71	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	68	65	71	67	64	71	67	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60

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## POLAR GRAPH



Maximum Candela = 1555.819 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.)