



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-927-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] 06-25-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-TL-L15-927-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	1118
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
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	2776	2776	2776
55	806	806	806
65	283	283	283
75	126	126	126
85	63	63	63

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CANDELA TABULATION

	<u>0</u>
0.0	2262.166
0.5	2263.841
1.0	2270.542
1.5	2276.685
2.0	2290.645
2.5	2299.580
3.0	2301.255
3.5	2301.814
4.0	2288.970
4.5	2271.659
5.0	2238.712
5.5	2196.831
6.0	2149.923
6.5	2097.432
7.0	2040.473
7.5	1981.280
8.0	1920.412
8.5	1860.102
9.0	1800.910
9.5	1743.392
10.0	1688.667
10.5	1637.292
11.0	1589.268
11.5	1544.036
12.0	1501.037
12.5	1460.831
13.0	1422.858
13.5	1386.561
14.0	1351.939
14.5	1320.109
15.0	1291.071
15.5	1265.383
16.0	1244.163
16.5	1225.177
17.0	1207.308
17.5	1191.672
18.0	1177.711
18.5	1165.984
19.0	1157.608
19.5	1150.349
20.0	1144.206
20.5	1136.946
21.0	1129.687
21.5	1121.869
22.0	1113.493
22.5	1102.883
23.0	1090.039
23.5	1074.403
24.0	1054.858
24.5	1029.171
25.0	999.575
25.5	968.303
26.0	937.590
26.5	903.526

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**CANDELA TABULATION - (Cont.)**

27.0	867.787
27.5	827.022
28.0	780.673
28.5	729.857
29.0	676.807
29.5	622.640
30.0	565.123
30.5	505.539
31.0	443.163
31.5	381.011
32.0	321.260
32.5	265.362
33.0	216.723
33.5	175.233
34.0	140.276
34.5	111.238
35.0	87.672
35.5	69.914
36.0	58.523
36.5	52.547
37.0	48.974
37.5	45.846
38.0	43.110
38.5	40.597
39.0	38.308
39.5	36.242
40.0	34.287
40.5	32.444
41.0	30.713
41.5	29.150
42.0	27.642
42.5	26.246
43.0	24.850
43.5	23.621
44.0	22.393
44.5	21.220
45.0	20.159
45.5	19.098
46.0	18.037
46.5	17.032
47.0	15.971
47.5	14.966
48.0	14.016
48.5	13.123
49.0	12.229
49.5	11.336
50.0	10.442
50.5	9.605
51.0	8.879
51.5	8.209
52.0	7.539
52.5	6.980
53.0	6.422
53.5	5.975
54.0	5.528
54.5	5.082

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CANDELA TABULATION - (Cont.)

55.0	4.747
55.5	4.412
56.0	4.076
56.5	3.797
57.0	3.518
57.5	3.295
58.0	3.071
58.5	2.848
59.0	2.680
59.5	2.513
60.0	2.345
60.5	2.178
61.0	2.066
61.5	1.899
62.0	1.787
62.5	1.675
63.0	1.564
63.5	1.508
64.0	1.396
64.5	1.284
65.0	1.229
65.5	1.173
66.0	1.061
66.5	1.005
67.0	0.949
67.5	0.893
68.0	0.838
68.5	0.782
69.0	0.726
69.5	0.670
70.0	0.614
70.5	0.614
71.0	0.558
71.5	0.503
72.0	0.447
72.5	0.447
73.0	0.391
73.5	0.391
74.0	0.335
74.5	0.335
75.0	0.335
75.5	0.279
76.0	0.279
76.5	0.223
77.0	0.223
77.5	0.223
78.0	0.168
78.5	0.168
79.0	0.168
79.5	0.168
80.0	0.112
80.5	0.112
81.0	0.112
81.5	0.112
82.0	0.112
82.5	0.112

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CANDELA TABULATION - (Cont.)

83.0	0.112
83.5	0.056
84.0	0.056
84.5	0.056
85.0	0.056
85.5	0.056
86.0	0.056
86.5	0.056
87.0	0.056
87.5	0.056
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

IES INDOOR REPORT  
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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
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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	563.92	N.A.	50.40
0-30	996.01	N.A.	89.10
0-40	1095.76	N.A.	98.00
0-60	1116.29	N.A.	99.80
0-80	1117.93	N.A.	100.00
0-90	1118.00	N.A.	100.00
10-90	924.29	N.A.	82.70
20-40	531.84	N.A.	47.60
20-50	547.71	N.A.	49.00
40-70	21.82	N.A.	2.00
60-80	1.64	N.A.	0.10
70-80	0.35	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	1118.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	193.71
10-20	370.21
20-30	432.09
30-40	99.74
40-50	15.87
50-60	4.66
60-70	1.29
70-80	0.35
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	109	107	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

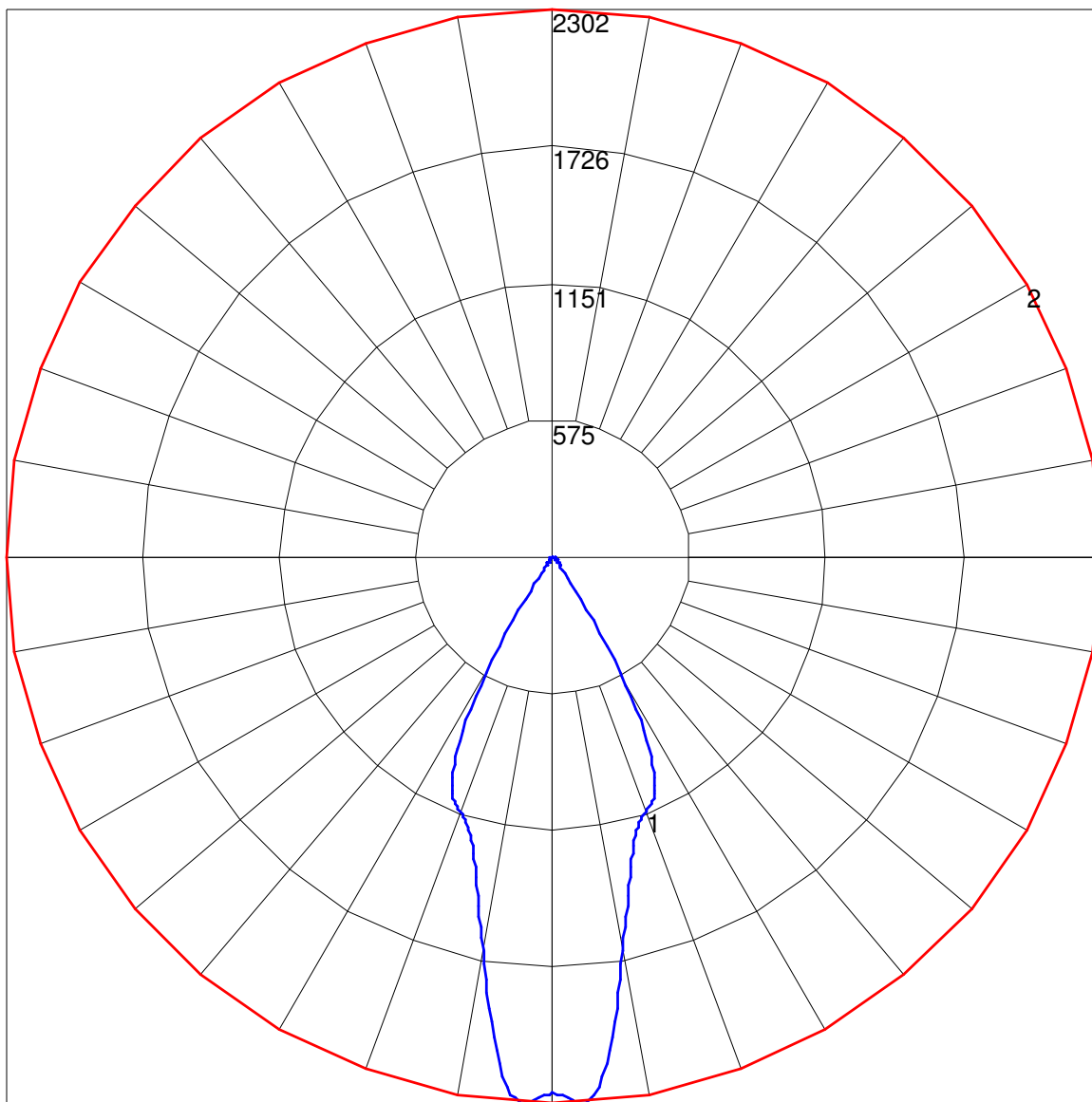
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**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	3H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
4H	2H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	3H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
8H	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	12H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
12H	4H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	6H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	8H	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Maximum UGR = 0.4

POLAR GRAPH



Maximum Candela = 2301.814 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.)