



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L15-835-DIM-UNV-LW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM 12326812.07  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 09/30/2019  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6DR-TL-L15-835-DIM-UNV-LW-OF-WH  
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas  
 [MORE] s patterned lens enclosure  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1178
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	19577	19577	19577
55	16298	16298	16298
65	12382	12382	12382
75	8979	8979	8979
85	5851	5851	5851

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CANDELA TABULATION

	<u>0</u>
0.0	749.109
0.5	748.958
1.0	748.354
1.5	747.449
2.0	746.318
2.5	744.810
3.0	743.301
3.5	741.567
4.0	739.983
4.5	738.399
5.0	737.268
5.5	736.212
6.0	735.232
6.5	734.252
7.0	733.196
7.5	732.215
8.0	731.235
8.5	730.330
9.0	729.425
9.5	728.671
10.0	727.917
10.5	727.313
11.0	726.785
11.5	726.484
12.0	725.956
12.5	725.428
13.0	724.674
13.5	723.693
14.0	722.487
14.5	721.129
15.0	719.696
15.5	717.886
16.0	715.925
16.5	713.965
17.0	712.004
17.5	709.968
18.0	707.780
18.5	705.292
19.0	702.501
19.5	699.409
20.0	695.865
20.5	692.019
21.0	687.267
21.5	681.611
22.0	675.201
22.5	667.961
23.0	660.042
23.5	651.445
24.0	641.942
24.5	631.686
25.0	620.599
25.5	609.061
26.0	596.768
26.5	583.947

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**CANDELA TABULATION - (Cont.)**

27.0	570.297
27.5	556.269
28.0	541.488
28.5	525.877
29.0	509.662
29.5	492.618
30.0	475.122
30.5	457.097
31.0	439.073
31.5	420.897
32.0	403.250
32.5	386.357
33.0	370.142
33.5	354.984
34.0	341.032
34.5	328.362
35.0	317.049
35.5	306.642
36.0	297.517
36.5	289.145
37.0	281.679
37.5	274.967
38.0	268.859
38.5	263.278
39.0	257.999
39.5	253.247
40.0	248.647
40.5	244.348
41.0	240.351
41.5	236.430
42.0	232.659
42.5	229.190
43.0	225.645
43.5	222.176
44.0	218.782
44.5	215.464
45.0	212.070
45.5	208.827
46.0	205.509
46.5	202.191
47.0	198.797
47.5	195.479
48.0	192.085
48.5	188.691
49.0	185.297
49.5	181.753
50.0	178.359
50.5	174.890
51.0	171.421
51.5	167.876
52.0	164.332
52.5	160.787
53.0	157.243
53.5	153.698
54.0	150.304
54.5	146.835

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**CANDELA TABULATION - (Cont.)**

55.0	143.215
55.5	139.671
56.0	136.126
56.5	132.808
57.0	129.490
57.5	126.020
58.0	122.551
58.5	119.158
59.0	115.839
59.5	112.521
60.0	109.353
60.5	106.186
61.0	103.094
61.5	100.002
62.0	97.061
62.5	94.119
63.0	91.254
63.5	88.388
64.0	85.597
64.5	82.882
65.0	80.167
65.5	77.528
66.0	74.896
66.5	72.309
67.0	69.752
67.5	67.249
68.0	64.790
68.5	62.324
69.0	59.933
69.5	57.565
70.0	55.265
70.5	53.040
71.0	50.861
71.5	48.749
72.0	46.713
72.5	44.737
73.0	42.814
73.5	40.928
74.0	39.118
74.5	37.346
75.0	35.604
75.5	33.922
76.0	32.271
76.5	30.649
77.0	29.073
77.5	27.527
78.0	26.026
78.5	24.555
79.0	23.115
79.5	21.727
80.0	20.347
80.5	19.012
81.0	17.693
81.5	16.380
82.0	15.098
82.5	13.824

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CANDELA TABULATION - (Cont.)

83.0	12.579
83.5	11.358
84.0	10.151
84.5	8.967
85.0	7.813
85.5	6.697
86.0	5.619
86.5	4.578
87.0	3.567
87.5	2.723
88.0	2.081
88.5	1.523
89.0	1.056
89.5	0.664
90.0	0.422
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
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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
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152.0	0.000
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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	272.88	N.A.	23.20
0-30	551.59	N.A.	46.80
0-40	758.26	N.A.	64.40
0-60	1050.08	N.A.	89.20
0-80	1168.28	N.A.	99.20
0-90	1177.62	N.A.	100.00
10-90	1107.52	N.A.	94.00
20-40	485.39	N.A.	41.20
20-50	649.16	N.A.	55.10
40-70	371.73	N.A.	31.60
60-80	118.20	N.A.	10.00
70-80	38.29	N.A.	3.30
80-90	9.34	N.A.	0.80
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1177.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	70.10
10-20	202.78
20-30	278.72
30-40	206.67
40-50	163.77
50-60	128.05
60-70	79.91
70-80	38.29
80-90	9.34
90-100	0.01
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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

X=2H	Y=2H	19.6	21.0	20.0	21.3	21.6	19.6	21.0	20.0	21.3	21.6
	3H	20.8	22.1	21.2	22.4	22.7	20.8	22.1	21.2	22.4	22.7
	4H	21.2	22.4	21.6	22.7	23.1	21.2	22.4	21.6	22.7	23.1
	6H	21.5	22.5	21.9	22.9	23.3	21.5	22.5	21.9	22.9	23.3
	8H	21.6	22.6	22.0	23.0	23.4	21.6	22.6	22.0	23.0	23.4
	12H	21.6	22.6	22.0	22.9	23.4	21.6	22.6	22.0	22.9	23.4

### UGR Viewed Endwise

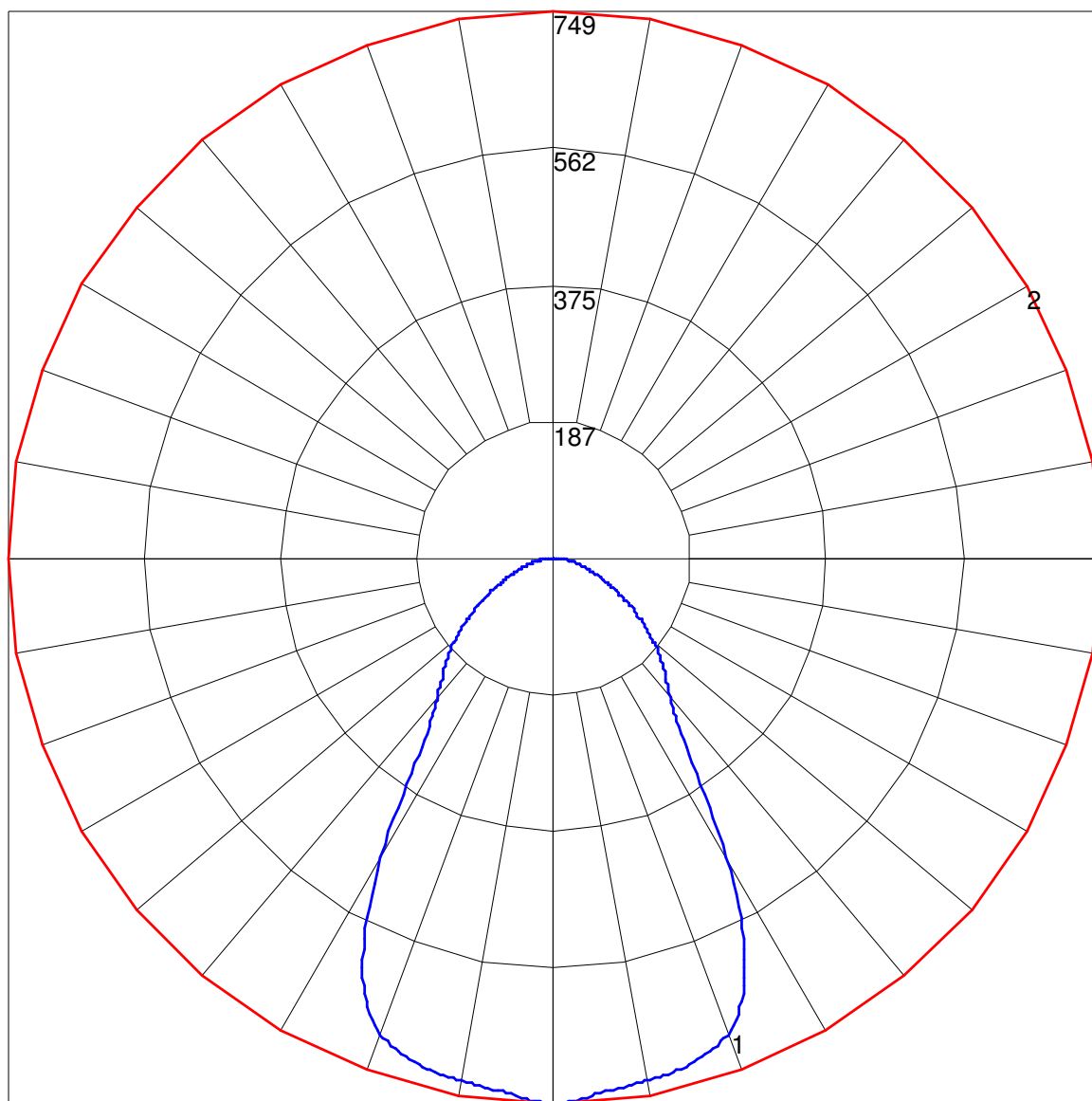
4H	2H	20.0	21.2	20.4	21.5	21.9	20.0	21.2	20.4	21.5	21.9
	3H	21.4	22.4	21.8	22.8	23.2	21.4	22.4	21.8	22.8	23.2
	4H	21.9	22.8	22.4	23.2	23.6	21.9	22.8	22.4	23.2	23.6
	6H	22.3	23.0	22.8	23.5	23.9	22.3	23.0	22.8	23.5	23.9
	8H	22.4	23.1	22.8	23.5	24.0	22.4	23.1	22.8	23.5	24.0
	12H	22.5	23.1	22.9	23.6	24.0	22.5	23.1	22.9	23.6	24.0

8H	4H	22.1	22.8	22.5	23.2	23.7	22.1	22.8	22.5	23.2	23.7
	6H	22.5	23.1	23.0	23.6	24.1	22.5	23.1	23.0	23.6	24.1
	8H	22.7	23.2	23.2	23.7	24.2	22.7	23.2	23.2	23.7	24.2
	12H	22.8	23.3	23.3	23.8	24.3	22.8	23.3	23.3	23.8	24.3

12H	4H	22.1	22.7	22.6	23.2	23.6	22.1	22.7	22.6	23.2	23.6
	6H	22.6	23.1	23.1	23.5	24.1	22.6	23.1	23.1	23.5	24.1
	8H	22.8	23.2	23.3	23.7	24.3	22.8	23.2	23.3	23.7	24.3

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 749.109 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)