



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-835-DIM-UNV-OM-OF-SG_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.04

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 11/22/2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-TL-L15-835-DIM-UNV-OM-OF-SG

[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	1353
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
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	3359	3359	3359
55	975	975	975
65	343	343	343
75	152	152	152
85	76	76	76

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CANDELA TABULATION

	<u>0</u>
0.0	2737.764
0.5	2739.791
1.0	2747.901
1.5	2755.335
2.0	2772.231
2.5	2783.044
3.0	2785.072
3.5	2785.747
4.0	2770.203
4.5	2749.253
5.0	2709.379
5.5	2658.693
6.0	2601.923
6.5	2538.396
7.0	2469.462
7.5	2397.824
8.0	2324.160
8.5	2251.170
9.0	2179.533
9.5	2109.923
10.0	2043.692
10.5	1981.517
11.0	1923.396
11.5	1868.654
12.0	1816.616
12.5	1767.956
13.0	1722.000
13.5	1678.072
14.0	1636.170
14.5	1597.648
15.0	1562.506
15.5	1531.418
16.0	1505.736
16.5	1482.758
17.0	1461.132
17.5	1442.209
18.0	1425.313
18.5	1411.121
19.0	1400.984
19.5	1392.198
20.0	1384.764
20.5	1375.978
21.0	1367.192
21.5	1357.731
22.0	1347.594
22.5	1334.753
23.0	1319.209
23.5	1300.286
24.0	1276.632
24.5	1245.544
25.0	1209.725
25.5	1171.879
26.0	1134.709
26.5	1093.484

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CANDELA TABULATION - (Cont.)

27.0	1050.231
27.5	1000.896
28.0	944.802
28.5	883.302
29.0	819.099
29.5	753.544
30.0	683.934
30.5	611.824
31.0	536.334
31.5	461.115
32.0	388.802
32.5	321.152
33.0	262.287
33.5	212.074
34.0	169.767
34.5	134.624
35.0	106.104
35.5	84.613
36.0	70.826
36.5	63.595
37.0	59.270
37.5	55.485
38.0	52.174
38.5	49.132
39.0	46.362
39.5	43.861
40.0	41.496
40.5	39.265
41.0	37.170
41.5	35.278
42.0	33.453
42.5	31.764
43.0	30.074
43.5	28.587
44.0	27.101
44.5	25.681
45.0	24.397
45.5	23.113
46.0	21.829
46.5	20.613
47.0	19.329
47.5	18.112
48.0	16.963
48.5	15.882
49.0	14.801
49.5	13.719
50.0	12.638
50.5	11.624
51.0	10.746
51.5	9.935
52.0	9.124
52.5	8.448
53.0	7.772
53.5	7.231
54.0	6.691
54.5	6.150

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CANDELA TABULATION - (Cont.)

55.0	5.745
55.5	5.339
56.0	4.934
56.5	4.596
57.0	4.258
57.5	3.987
58.0	3.717
58.5	3.447
59.0	3.244
59.5	3.041
60.0	2.838
60.5	2.636
61.0	2.501
61.5	2.298
62.0	2.163
62.5	2.027
63.0	1.892
63.5	1.825
64.0	1.690
64.5	1.554
65.0	1.487
65.5	1.419
66.0	1.284
66.5	1.216
67.0	1.149
67.5	1.081
68.0	1.014
68.5	0.946
69.0	0.879
69.5	0.811
70.0	0.743
70.5	0.743
71.0	0.676
71.5	0.608
72.0	0.541
72.5	0.541
73.0	0.473
73.5	0.473
74.0	0.405
74.5	0.405
75.0	0.405
75.5	0.338
76.0	0.338
76.5	0.270
77.0	0.270
77.5	0.270
78.0	0.203
78.5	0.203
79.0	0.203
79.5	0.203
80.0	0.135
80.5	0.135
81.0	0.135
81.5	0.135
82.0	0.135
82.5	0.135

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CANDELA TABULATION - (Cont.)

83.0	0.135
83.5	0.068
84.0	0.068
84.5	0.068
85.0	0.068
85.5	0.068
86.0	0.068
86.5	0.068
87.0	0.068
87.5	0.068
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
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122.0	0.000
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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
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132.5	0.000
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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
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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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Zone	Lumens	%Lamp	%Fixt
0-20	682.48	N.A.	50.40
0-30	1205.41	N.A.	89.10
0-40	1326.13	N.A.	98.00
0-60	1350.98	N.A.	99.80
0-80	1352.96	N.A.	100.00
0-90	1353.04	N.A.	100.00
10-90	1118.61	N.A.	82.70
20-40	643.65	N.A.	47.60
20-50	662.86	N.A.	49.00
40-70	26.41	N.A.	2.00
60-80	1.98	N.A.	0.10
70-80	0.42	N.A.	0.00
80-90	0.08	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	1353.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	234.43
10-20	448.05
20-30	522.94
30-40	120.71
40-50	19.21
50-60	5.65
60-70	1.56
70-80	0.42
80-90	0.08
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	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

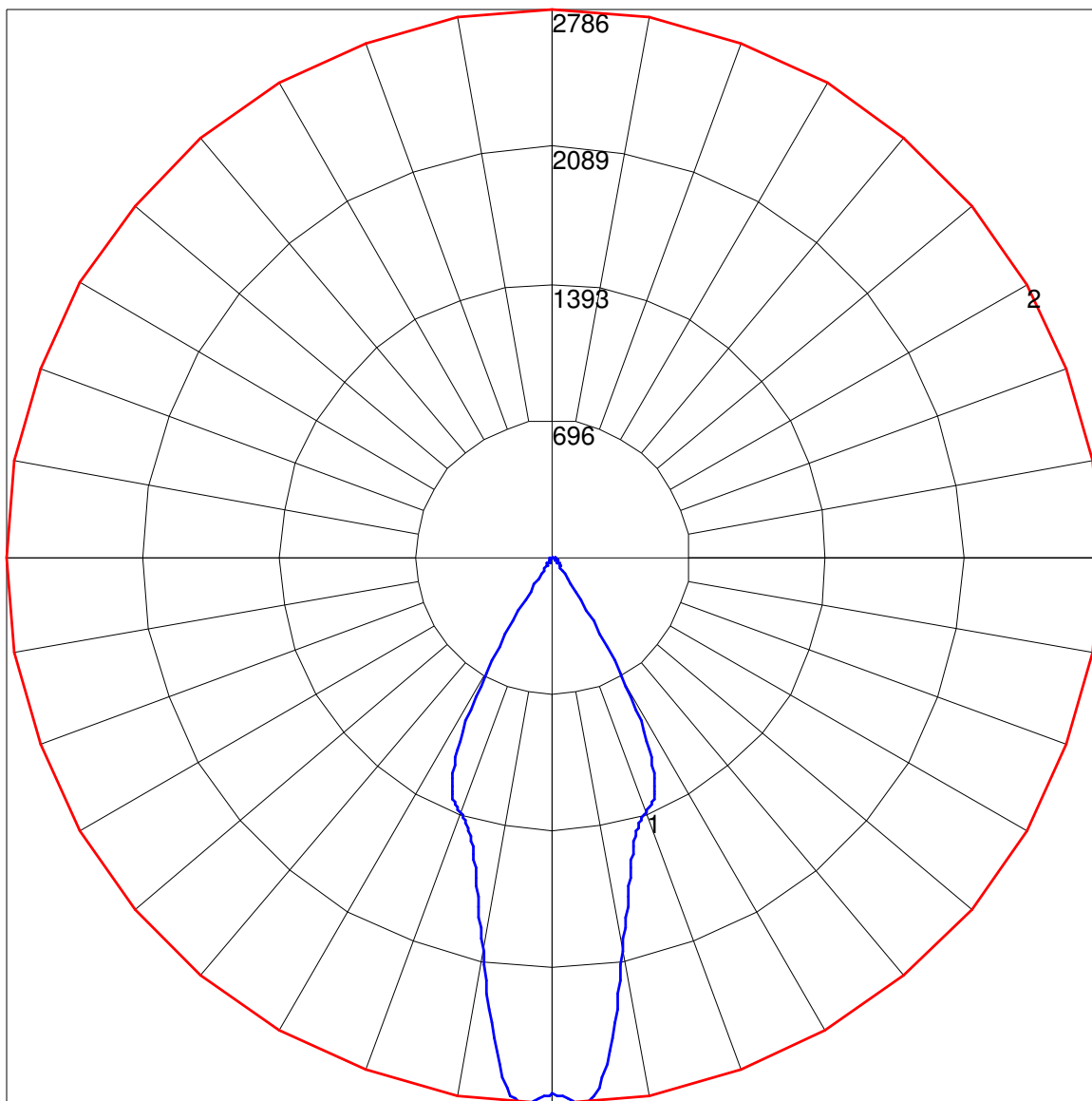
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UGR TABLE - CORRECTED

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	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
4H	2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
8H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
12H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Maximum UGR = 1.1

POLAR GRAPH



Maximum Candela = 2785.747 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.)