



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-835-DIM1-UNV-LW-OF-CS-AD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 12316380.07
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01-06-2025
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L15-835-(15)-DIM-UNV-LW-OF-CS-AD
 [LUMINAIRE] Black formed aluminum housing, specular reflector, clear patt
 [MORE] erved glass lens 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	435
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	4.31
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	12007	12007	12007
55	9866	9866	9866
65	7218	7218	7218
75	4997	4997	4997
85	2724	2724	2724

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CANDELA TABULATION

	<u>0</u>
0.0	305.638
0.5	305.541
1.0	305.348
1.5	305.091
2.0	304.833
2.5	304.543
3.0	304.157
3.5	303.932
4.0	303.771
4.5	303.674
5.0	303.546
5.5	303.417
6.0	303.320
6.5	303.192
7.0	303.095
7.5	303.031
8.0	302.998
8.5	302.902
9.0	302.805
9.5	302.612
10.0	302.483
10.5	302.258
11.0	302.033
11.5	301.743
12.0	301.421
12.5	301.035
13.0	300.584
13.5	300.069
14.0	299.425
14.5	298.653
15.0	297.719
15.5	296.593
16.0	295.337
16.5	293.857
17.0	292.247
17.5	290.445
18.0	288.320
18.5	286.131
19.0	283.749
19.5	281.077
20.0	278.148
20.5	274.961
21.0	271.517
21.5	267.815
22.0	263.727
22.5	259.382
23.0	254.714
23.5	249.693
24.0	244.285
24.5	238.523
25.0	232.278
25.5	225.744
26.0	218.759
26.5	211.355

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CANDELA TABULATION - (Cont.)

27.0	203.694
27.5	195.711
28.0	187.600
28.5	179.456
29.0	171.473
29.5	163.651
30.0	156.118
30.5	149.037
31.0	142.406
31.5	136.354
32.0	130.850
32.5	125.893
33.0	121.483
33.5	117.556
34.0	114.047
34.5	110.957
35.0	108.156
35.5	105.613
36.0	103.360
36.5	101.236
37.0	99.304
37.5	97.502
38.0	95.828
38.5	94.218
39.0	92.738
39.5	91.289
40.0	89.937
40.5	88.585
41.0	87.298
41.5	86.042
42.0	84.851
42.5	83.660
43.0	82.469
43.5	81.278
44.0	80.087
44.5	78.896
45.0	77.705
45.5	76.514
46.0	75.323
46.5	74.132
47.0	72.877
47.5	71.621
48.0	70.366
48.5	69.078
49.0	67.759
49.5	66.439
50.0	65.151
50.5	63.831
51.0	62.512
51.5	61.192
52.0	59.904
52.5	58.617
53.0	57.297
53.5	55.945
54.0	54.561
54.5	53.177

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CANDELA TABULATION - (Cont.)

55.0	51.793
55.5	50.409
56.0	49.057
56.5	47.737
57.0	46.417
57.5	45.097
58.0	43.810
58.5	42.554
59.0	41.299
59.5	40.076
60.0	38.885
60.5	37.694
61.0	36.535
61.5	35.408
62.0	34.282
62.5	33.155
63.0	32.080
63.5	31.011
64.0	29.962
64.5	28.929
65.0	27.918
65.5	26.933
66.0	25.961
66.5	25.014
67.0	24.091
67.5	23.183
68.0	22.304
68.5	21.445
69.0	20.585
69.5	19.755
70.0	18.947
70.5	18.152
71.0	17.376
71.5	16.619
72.0	15.889
72.5	15.168
73.0	14.466
73.5	13.783
74.0	13.114
74.5	12.467
75.0	11.836
75.5	11.224
76.0	10.626
76.5	10.043
77.0	9.486
77.5	8.933
78.0	8.398
78.5	7.880
79.0	7.371
79.5	6.882
80.0	6.402
80.5	5.936
81.0	5.475
81.5	5.028
82.0	4.590
82.5	4.165

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CANDELA TABULATION - (Cont.)

83.0	3.744
83.5	3.335
84.0	2.936
84.5	2.546
85.0	2.173
85.5	1.812
86.0	1.468
86.5	1.143
87.0	0.856
87.5	0.618
88.0	0.431
88.5	0.274
89.0	0.171
89.5	0.116
90.0	0.080
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
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125.0	0.000
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127.5	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
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150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
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153.5	0.000
154.0	0.000
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155.0	0.000
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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	112.27	N.A.	25.80
0-30	215.34	N.A.	49.50
0-40	285.55	N.A.	65.60
0-60	391.68	N.A.	90.00
0-80	432.37	N.A.	99.40
0-90	435.09	N.A.	100.00
10-90	406.14	N.A.	93.30
20-40	173.28	N.A.	39.80
20-50	233.13	N.A.	53.60
40-70	134.05	N.A.	30.80
60-80	40.68	N.A.	9.30
70-80	12.77	N.A.	2.90
80-90	2.72	N.A.	0.60
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	435.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	28.95
10-20	83.32
20-30	103.07
30-40	70.21
40-50	59.84
50-60	46.29
60-70	27.92
70-80	12.77
80-90	2.72
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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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	17.7	19.1	18.1	19.4	19.7	17.7	19.1	18.1	19.4	19.7
	3H	18.8	20.0	19.2	20.4	20.7	18.8	20.0	19.2	20.4	20.7
	4H	19.2	20.3	19.6	20.7	21.0	19.2	20.3	19.6	20.7	21.0
	6H	19.4	20.4	19.8	20.8	21.2	19.4	20.4	19.8	20.8	21.2
	8H	19.4	20.4	19.9	20.8	21.2	19.4	20.4	19.9	20.8	21.2
	12H	19.4	20.4	19.9	20.8	21.2	19.4	20.4	19.9	20.8	21.2

UGR Viewed Endwise

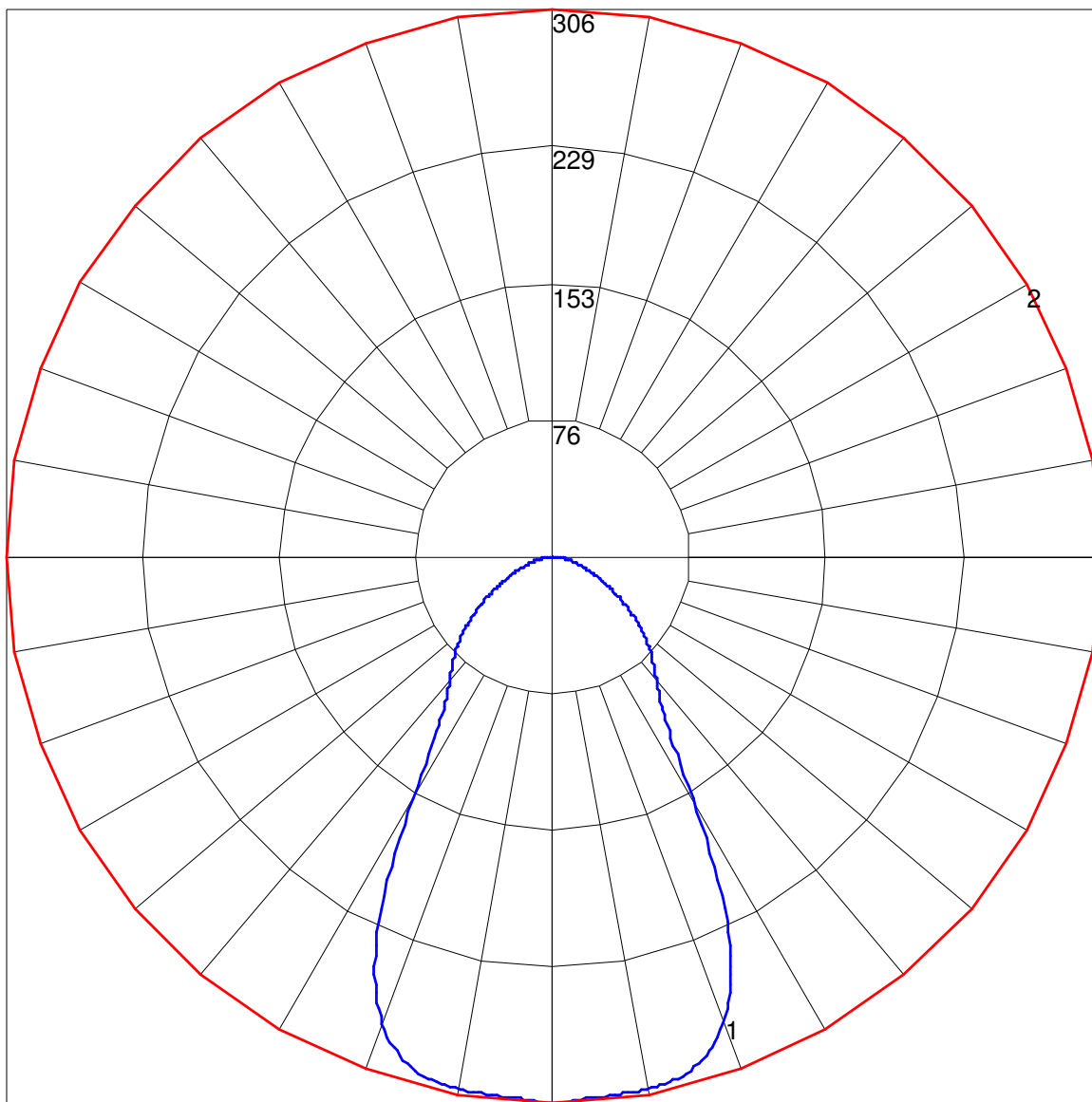
4H	2H	18.1	19.2	18.5	19.6	19.9	18.1	19.2	18.5	19.6	19.9
	3H	19.4	20.3	19.8	20.7	21.1	19.4	20.3	19.8	20.7	21.1
	4H	19.8	20.7	20.2	21.1	21.5	19.8	20.7	20.2	21.1	21.5
	6H	20.1	20.9	20.6	21.3	21.8	20.1	20.9	20.6	21.3	21.8
	8H	20.2	20.9	20.7	21.3	21.8	20.2	20.9	20.7	21.3	21.8
	12H	20.2	20.8	20.7	21.3	21.8	20.2	20.8	20.7	21.3	21.8

8H	4H	19.9	20.6	20.4	21.1	21.5	19.9	20.6	20.4	21.1	21.5
	6H	20.3	20.9	20.8	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.4	20.9	21.0	21.5	21.9	20.4	20.9	21.0	21.5	21.9
	12H	20.5	20.9	21.0	21.4	22.0	20.5	20.9	21.0	21.4	22.0

12H	4H	19.9	20.5	20.4	21.0	21.5	19.9	20.5	20.4	21.0	21.5
	6H	20.3	20.8	20.9	21.3	21.8	20.3	20.8	20.9	21.3	21.8
	8H	20.5	20.9	21.0	21.4	22.0	20.5	20.9	21.0	21.4	22.0

Maximum UGR = 22.0

POLAR GRAPH



Maximum Candela = 305.638 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.)