



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-835-DIM-UNV-SW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.11
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 05/26/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L10-835-DIM-UNV-SW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, frosted pl
 [MORE] astic lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Commercial, Corridor, Hotel, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	573
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
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	20680	20680	20680
55	17651	17651	17651
65	15056	15056	15056
75	12450	12450	12450
85	7705	7705	7705

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CANDELA TABULATION

	<u>0</u>
0.0	241.107
0.5	241.064
1.0	240.935
1.5	240.806
2.0	240.548
2.5	240.290
3.0	239.946
3.5	239.602
4.0	239.259
4.5	238.915
5.0	238.614
5.5	238.270
6.0	237.926
6.5	237.582
7.0	237.196
7.5	236.766
8.0	236.336
8.5	235.906
9.0	235.433
9.5	234.961
10.0	234.445
10.5	233.929
11.0	233.371
11.5	232.769
12.0	232.167
12.5	231.522
13.0	230.835
13.5	230.104
14.0	229.331
14.5	228.514
15.0	227.654
15.5	226.795
16.0	225.892
16.5	225.033
17.0	224.087
17.5	223.142
18.0	222.196
18.5	221.251
19.0	220.305
19.5	219.360
20.0	218.414
20.5	217.469
21.0	216.480
21.5	215.449
22.0	214.374
22.5	213.171
23.0	211.967
23.5	210.635
24.0	209.303
24.5	207.885
25.0	206.423
25.5	204.962
26.0	203.415
26.5	201.868

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CANDELA TABULATION - (Cont.)

27.0	200.277
27.5	198.644
28.0	197.011
28.5	195.421
29.0	193.831
29.5	192.198
30.0	190.607
30.5	188.931
31.0	187.212
31.5	185.536
32.0	183.817
32.5	182.098
33.0	180.336
33.5	178.531
34.0	176.769
34.5	174.963
35.0	173.158
35.5	171.310
36.0	169.462
36.5	167.571
37.0	165.680
37.5	163.789
38.0	161.855
38.5	159.878
39.0	157.987
39.5	156.010
40.0	154.033
40.5	152.099
41.0	150.079
41.5	148.145
42.0	146.125
42.5	144.148
43.0	142.128
43.5	140.065
44.0	138.002
44.5	135.939
45.0	133.833
45.5	131.771
46.0	129.665
46.5	127.559
47.0	125.453
47.5	123.304
48.0	121.198
48.5	119.049
49.0	116.943
49.5	114.837
50.0	112.731
50.5	110.668
51.0	108.605
51.5	106.542
52.0	104.522
52.5	102.503
53.0	100.526
53.5	98.549
54.0	96.572
54.5	94.638

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CANDELA TABULATION - (Cont.)

55.0	92.661
55.5	90.727
56.0	88.964
56.5	87.073
57.0	85.268
57.5	83.463
58.0	81.658
58.5	79.853
59.0	78.134
59.5	76.415
60.0	74.696
60.5	73.063
61.0	71.386
61.5	69.667
62.0	67.991
62.5	66.315
63.0	64.682
63.5	63.049
64.0	61.416
64.5	59.825
65.0	58.235
65.5	56.645
66.0	55.055
66.5	53.508
67.0	52.003
67.5	50.499
68.0	48.995
68.5	47.534
69.0	46.072
69.5	44.611
70.0	43.150
70.5	41.732
71.0	40.322
71.5	38.921
72.0	37.537
72.5	36.175
73.0	34.816
73.5	33.471
74.0	32.139
74.5	30.807
75.0	29.492
75.5	28.194
76.0	26.896
76.5	25.611
77.0	24.343
77.5	23.079
78.0	21.833
78.5	20.608
79.0	19.392
79.5	18.188
80.0	17.015
80.5	15.859
81.0	14.716
81.5	13.581
82.0	12.468
82.5	11.372

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CANDELA TABULATION - (Cont.)

83.0	10.289
83.5	9.219
84.0	8.174
84.5	7.147
85.0	6.146
85.5	5.187
86.0	4.294
86.5	3.511
87.0	2.798
87.5	2.157
88.0	1.607
88.5	1.173
89.0	0.817
89.5	0.529
90.0	0.327
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
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118.5	0.000
119.0	0.000
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126.5	0.000
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128.0	0.000
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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
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159.5	0.000
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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	86.81	N.A.	15.20
0-30	181.64	N.A.	31.70
0-40	289.76	N.A.	50.60
0-60	475.96	N.A.	83.10
0-80	565.08	N.A.	98.70
0-90	572.68	N.A.	100.00
10-90	550.03	N.A.	96.00
20-40	202.95	N.A.	35.40
20-50	306.01	N.A.	53.40
40-70	244.03	N.A.	42.60
60-80	89.12	N.A.	15.60
70-80	31.29	N.A.	5.50
80-90	7.60	N.A.	1.30
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	572.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	22.65
10-20	64.16
20-30	94.83
30-40	108.11
40-50	103.07
50-60	83.14
60-70	57.83
70-80	31.29
80-90	7.60
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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	44	39	50	44	39	49	43	39	37
8	63	49	41	36	61	49	41	35	47	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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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	20.8	22.4	21.2	22.7	23.0	20.8	22.4	21.2	22.7	23.0
	3H	22.4	23.8	22.8	24.2	24.5	22.4	23.8	22.8	24.2	24.5
	4H	23.0	24.3	23.4	24.7	25.0	23.0	24.3	23.4	24.7	25.0
	6H	23.4	24.6	23.8	25.0	25.4	23.4	24.6	23.8	25.0	25.4
	8H	23.5	24.7	23.9	25.1	25.5	23.5	24.7	23.9	25.1	25.5
	12H	23.6	24.7	24.0	25.1	25.5	23.6	24.7	24.0	25.1	25.5

UGR Viewed Endwise

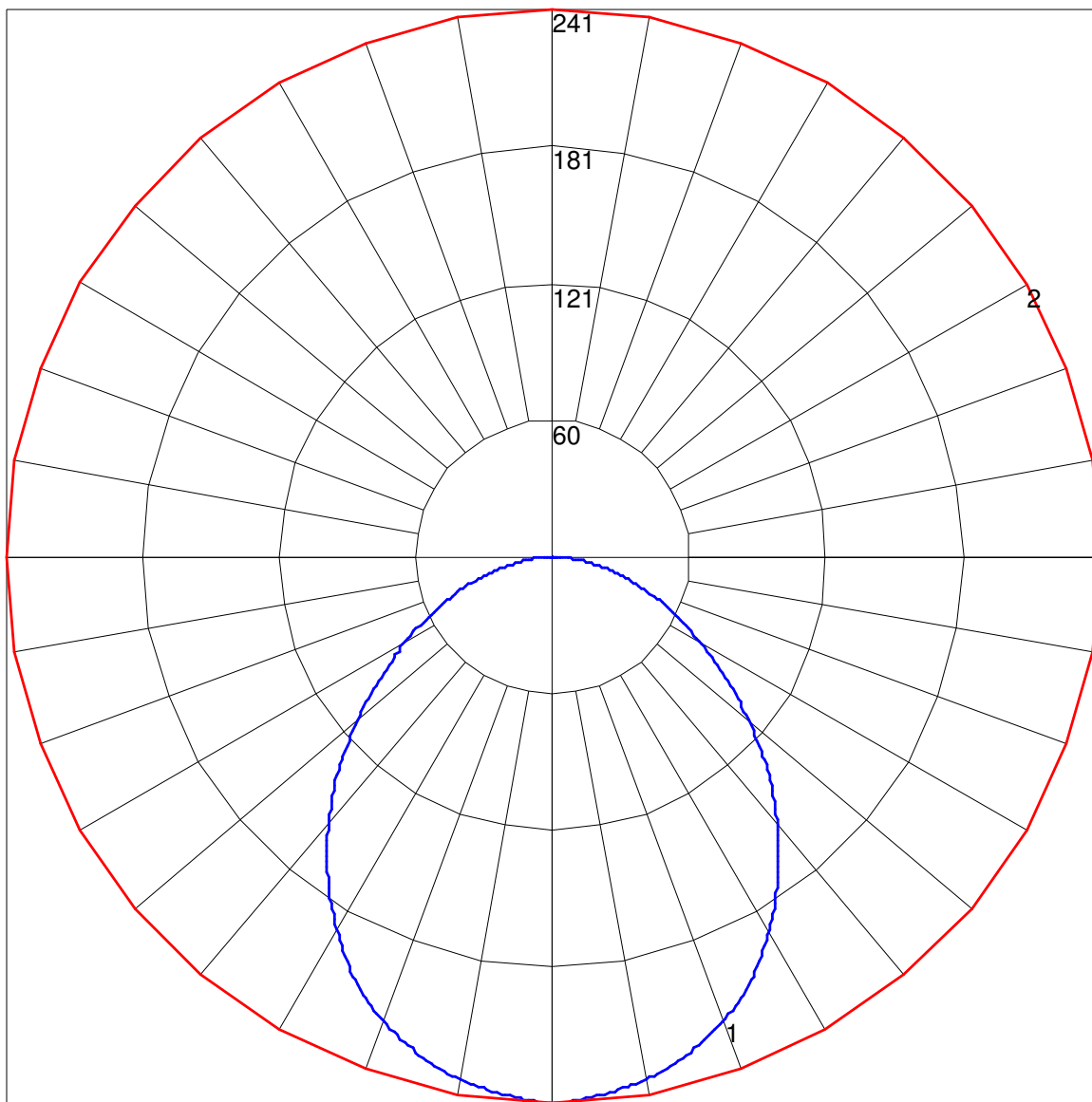
4H	2H	21.4	22.7	21.8	23.1	23.4	21.4	22.7	21.8	23.1	23.4
	3H	23.2	24.3	23.6	24.7	25.1	23.2	24.3	23.6	24.7	25.1
	4H	23.9	24.9	24.3	25.3	25.7	23.9	24.9	24.3	25.3	25.7
	6H	24.4	25.3	24.8	25.7	26.2	24.4	25.3	24.8	25.7	26.2
	8H	24.5	25.4	25.0	25.8	26.3	24.5	25.4	25.0	25.8	26.3
	12H	24.6	25.4	25.1	25.8	26.3	24.6	25.4	25.1	25.8	26.3

8H	4H	24.1	24.9	24.6	25.4	25.8	24.1	24.9	24.6	25.4	25.8
	6H	24.7	25.4	25.2	25.9	26.4	24.7	25.4	25.2	25.9	26.4
	8H	25.0	25.6	25.5	26.1	26.6	25.0	25.6	25.5	26.1	26.6
	12H	25.1	25.6	25.6	26.1	26.7	25.1	25.6	25.6	26.1	26.7

12H	4H	24.1	24.9	24.6	25.4	25.8	24.1	24.9	24.6	25.4	25.8
	6H	24.8	25.4	25.3	25.9	26.4	24.8	25.4	25.3	25.9	26.4
	8H	25.0	25.6	25.6	26.1	26.6	25.0	25.6	25.6	26.1	26.6

Maximum UGR = 26.7

POLAR GRAPH



Maximum Candela = 241.107 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.)