



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM 12316380.07
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 05-28-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC
[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	756
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	10.7
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	20877	20877	20877
55	17154	17154	17154
65	12550	12550	12550
75	8688	8688	8688
85	4736	4736	4736

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CANDELA TABULATION

	<u>0</u>
0.0	531.416
0.5	531.248
1.0	530.913
1.5	530.465
2.0	530.017
2.5	529.513
3.0	528.842
3.5	528.450
4.0	528.170
4.5	528.002
5.0	527.778
5.5	527.555
6.0	527.387
6.5	527.163
7.0	526.995
7.5	526.883
8.0	526.827
8.5	526.659
9.0	526.491
9.5	526.155
10.0	525.932
10.5	525.540
11.0	525.148
11.5	524.644
12.0	524.085
12.5	523.413
13.0	522.629
13.5	521.734
14.0	520.615
14.5	519.271
15.0	517.648
15.5	515.689
16.0	513.507
16.5	510.932
17.0	508.134
17.5	504.999
18.0	501.306
18.5	497.500
19.0	493.358
19.5	488.713
20.0	483.620
20.5	478.079
21.0	472.090
21.5	465.654
22.0	458.546
22.5	450.990
23.0	442.875
23.5	434.144
24.0	424.741
24.5	414.723
25.0	403.865
25.5	392.504
26.0	380.359
26.5	367.486

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES****CANDELA TABULATION - (Cont.)**

27.0	354.166
27.5	340.286
28.0	326.182
28.5	312.022
29.0	298.142
29.5	284.541
30.0	271.445
30.5	259.132
31.0	247.603
31.5	237.081
32.0	227.510
32.5	218.891
33.0	211.223
33.5	204.395
34.0	198.295
34.5	192.922
35.0	188.053
35.5	183.631
36.0	179.713
36.5	176.019
37.0	172.661
37.5	169.527
38.0	166.617
38.5	163.818
39.0	161.244
39.5	158.725
40.0	156.375
40.5	154.024
41.0	151.785
41.5	149.603
42.0	147.532
42.5	145.461
43.0	143.390
43.5	141.319
44.0	139.248
44.5	137.178
45.0	135.107
45.5	133.036
46.0	130.965
46.5	128.894
47.0	126.712
47.5	124.529
48.0	122.346
48.5	120.107
49.0	117.813
49.5	115.518
50.0	113.279
50.5	110.985
51.0	108.690
51.5	106.395
52.0	104.156
52.5	101.918
53.0	99.623
53.5	97.272
54.0	94.866
54.5	92.459

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55.0	90.053
55.5	87.646
56.0	85.295
56.5	83.001
57.0	80.706
57.5	78.411
58.0	76.172
58.5	73.990
59.0	71.807
59.5	69.680
60.0	67.609
60.5	65.539
61.0	63.524
61.5	61.565
62.0	59.606
62.5	57.647
63.0	55.778
63.5	53.920
64.0	52.095
64.5	50.298
65.0	48.541
65.5	46.828
66.0	45.138
66.5	43.493
67.0	41.886
67.5	40.308
68.0	38.780
68.5	37.286
69.0	35.792
69.5	34.348
70.0	32.943
70.5	31.560
71.0	30.212
71.5	28.896
72.0	27.626
72.5	26.372
73.0	25.152
73.5	23.966
74.0	22.801
74.5	21.676
75.0	20.579
75.5	19.516
76.0	18.475
76.5	17.462
77.0	16.494
77.5	15.531
78.0	14.602
78.5	13.701
79.0	12.817
79.5	11.966
80.0	11.132
80.5	10.321
81.0	9.520
81.5	8.742
82.0	7.981
82.5	7.242

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES****CANDELA TABULATION - (Cont.)**

83.0	6.509
83.5	5.798
84.0	5.104
84.5	4.427
85.0	3.778
85.5	3.151
86.0	2.552
86.5	1.987
87.0	1.489
87.5	1.075
88.0	0.750
88.5	0.476
89.0	0.297
89.5	0.201
90.0	0.140
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**PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES****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
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L15-840-(L11)-DIM-UNV-LW-OF-CS-WETCC_.IES****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	195.20	N.A.	25.80
0-30	374.41	N.A.	49.50
0-40	496.49	N.A.	65.60
0-60	681.02	N.A.	90.00
0-80	751.76	N.A.	99.40
0-90	756.49	N.A.	100.00
10-90	706.16	N.A.	93.30
20-40	301.29	N.A.	39.80
20-50	405.34	N.A.	53.60
40-70	233.07	N.A.	30.80
60-80	70.74	N.A.	9.40
70-80	22.20	N.A.	2.90
80-90	4.73	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	756.50	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	50.34
10-20	144.86
20-30	179.22
30-40	122.07
40-50	104.05
50-60	80.48
60-70	48.54
70-80	22.20
80-90	4.73
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	70	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	19.6	21.0	20.0	21.3	21.6	19.6	21.0	20.0	21.3	21.6
	3H	20.7	21.9	21.1	22.3	22.6	20.7	21.9	21.1	22.3	22.6
	4H	21.1	22.2	21.5	22.5	22.9	21.1	22.2	21.5	22.5	22.9
	6H	21.3	22.3	21.7	22.7	23.1	21.3	22.3	21.7	22.7	23.1
	8H	21.3	22.3	21.8	22.7	23.1	21.3	22.3	21.8	22.7	23.1
	12H	21.3	22.3	21.8	22.7	23.1	21.3	22.3	21.8	22.7	23.1

UGR Viewed Endwise

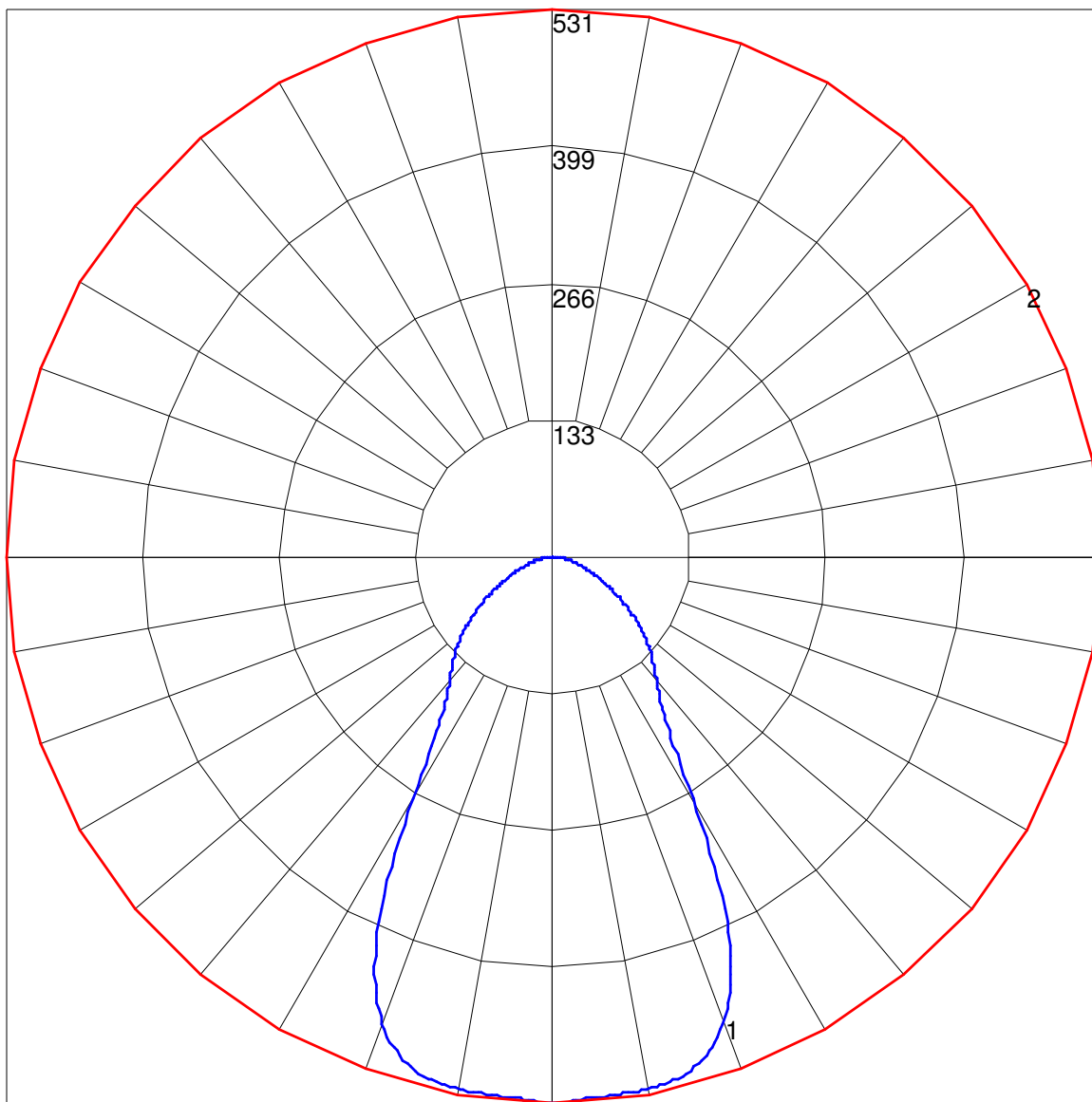
4H	2H	20.0	21.1	20.4	21.5	21.8	20.0	21.1	20.4	21.5	21.8
	3H	21.3	22.2	21.7	22.6	23.0	21.3	22.2	21.7	22.6	23.0
	4H	21.7	22.6	22.1	23.0	23.4	21.7	22.6	22.1	23.0	23.4
	6H	22.0	22.8	22.5	23.2	23.7	22.0	22.8	22.5	23.2	23.7
	8H	22.1	22.8	22.6	23.2	23.7	22.1	22.8	22.6	23.2	23.7
	12H	22.1	22.7	22.6	23.2	23.7	22.1	22.7	22.6	23.2	23.7

8H	4H	21.8	22.5	22.3	23.0	23.4	21.8	22.5	22.3	23.0	23.4
	6H	22.2	22.8	22.7	23.3	23.8	22.2	22.8	22.7	23.3	23.8
	8H	22.3	22.8	22.8	23.4	23.8	22.3	22.8	22.8	23.4	23.8
	12H	22.4	22.8	22.9	23.3	23.9	22.4	22.8	22.9	23.3	23.9

12H	4H	21.8	22.4	22.3	22.9	23.4	21.8	22.4	22.3	22.9	23.4
	6H	22.2	22.7	22.8	23.2	23.7	22.2	22.7	22.8	23.2	23.7
	8H	22.4	22.8	22.9	23.3	23.9	22.4	22.8	22.9	23.3	23.9

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 531.416 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.)