



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.12  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 16, JUNE 2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-TL-L10-840-DIM-UNV-RW-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, 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	667
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
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	15432	15432	15432
55	12461	12461	12461
65	8061	8061	8061
75	4495	4495	4495
85	2309	2309	2309

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

CANDELA TABULATION

	<u>0</u>
0.0	535.919
0.5	535.919
1.0	535.415
1.5	534.407
2.0	533.398
2.5	532.390
3.0	530.878
3.5	529.365
4.0	527.853
4.5	525.836
5.0	524.323
5.5	522.307
6.0	520.290
6.5	518.274
7.0	516.257
7.5	514.240
8.0	512.224
8.5	509.703
9.0	507.686
9.5	505.670
10.0	503.754
10.5	501.687
11.0	499.569
11.5	497.502
12.0	495.536
12.5	493.570
13.0	491.604
13.5	489.587
14.0	487.570
14.5	485.554
15.0	483.487
15.5	481.369
16.0	479.151
16.5	476.933
17.0	474.664
17.5	472.244
18.0	469.673
18.5	466.900
19.0	464.228
19.5	461.354
20.0	458.228
20.5	454.649
21.0	450.515
21.5	446.028
22.0	440.885
22.5	435.188
23.0	428.735
23.5	421.475
24.0	413.510
24.5	404.485
25.0	394.402
25.5	383.260
26.0	371.211
26.5	358.405

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

27.0	344.944
27.5	331.282
28.0	316.964
28.5	302.797
29.0	288.680
29.5	274.564
30.0	260.700
30.5	247.087
31.0	234.231
31.5	221.779
32.0	210.032
32.5	199.092
33.0	188.958
33.5	179.833
34.0	171.615
34.5	164.456
35.0	158.154
35.5	152.810
36.0	148.121
36.5	144.189
37.0	140.710
37.5	137.736
38.0	135.013
38.5	132.593
39.0	130.425
39.5	128.459
40.0	126.695
40.5	125.031
41.0	123.418
41.5	121.956
42.0	120.494
42.5	119.132
43.0	117.771
43.5	116.359
44.0	114.948
44.5	113.536
45.0	112.074
45.5	110.562
46.0	108.999
46.5	107.385
47.0	105.722
47.5	104.008
48.0	102.293
48.5	100.479
49.0	98.613
49.5	96.647
50.0	94.681
50.5	92.664
51.0	90.547
51.5	88.480
52.0	86.362
52.5	84.245
53.0	82.228
53.5	80.010
54.0	77.791
54.5	75.573

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

55.0	73.405
55.5	71.187
56.0	69.019
56.5	66.902
57.0	64.784
57.5	62.667
58.0	60.600
58.5	58.583
59.0	56.566
59.5	54.600
60.0	52.634
60.5	50.718
61.0	48.853
61.5	46.987
62.0	45.223
62.5	43.408
63.0	41.694
63.5	39.929
64.0	38.266
64.5	36.602
65.0	34.989
65.5	33.375
66.0	31.812
66.5	30.300
67.0	28.838
67.5	27.376
68.0	25.964
68.5	24.552
69.0	23.191
69.5	21.880
70.0	20.670
70.5	19.511
71.0	18.452
71.5	17.444
72.0	16.486
72.5	15.578
73.0	14.721
73.5	13.965
74.0	13.209
74.5	12.554
75.0	11.949
75.5	11.394
76.0	10.789
76.5	10.234
77.0	9.680
77.5	9.125
78.0	8.621
78.5	8.067
79.0	7.562
79.5	7.058
80.0	6.554
80.5	6.050
81.0	5.596
81.5	5.142
82.0	4.638
82.5	4.235

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

83.0	3.781
83.5	3.327
84.0	2.924
84.5	2.470
85.0	2.067
85.5	1.714
86.0	1.361
86.5	1.109
87.0	0.857
87.5	0.655
88.0	0.454
88.5	0.302
89.0	0.151
89.5	0.050
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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.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-L10-840-DIM-UNV-RW-OF-WH\_.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-L10-840-DIM-UNV-RW-OF-WH\_.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



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	185.50	N.A.	27.80
0-30	358.97	N.A.	53.80
0-40	464.67	N.A.	69.60
0-60	616.23	N.A.	92.40
0-80	664.45	N.A.	99.60
0-90	667.18	N.A.	100.00
10-90	617.82	N.A.	92.60
20-40	279.17	N.A.	41.80
20-50	365.18	N.A.	54.70
40-70	186.61	N.A.	28.00
60-80	48.22	N.A.	7.20
70-80	13.17	N.A.	2.00
80-90	2.73	N.A.	0.40
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	667.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	49.36
10-20	136.14
20-30	173.47
30-40	105.71
40-50	86.01
50-60	65.55
60-70	35.05
70-80	13.17
80-90	2.73
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

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES

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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-TL-L10-840-DIM-UNV-RW-OF-WH\_.IES**

**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

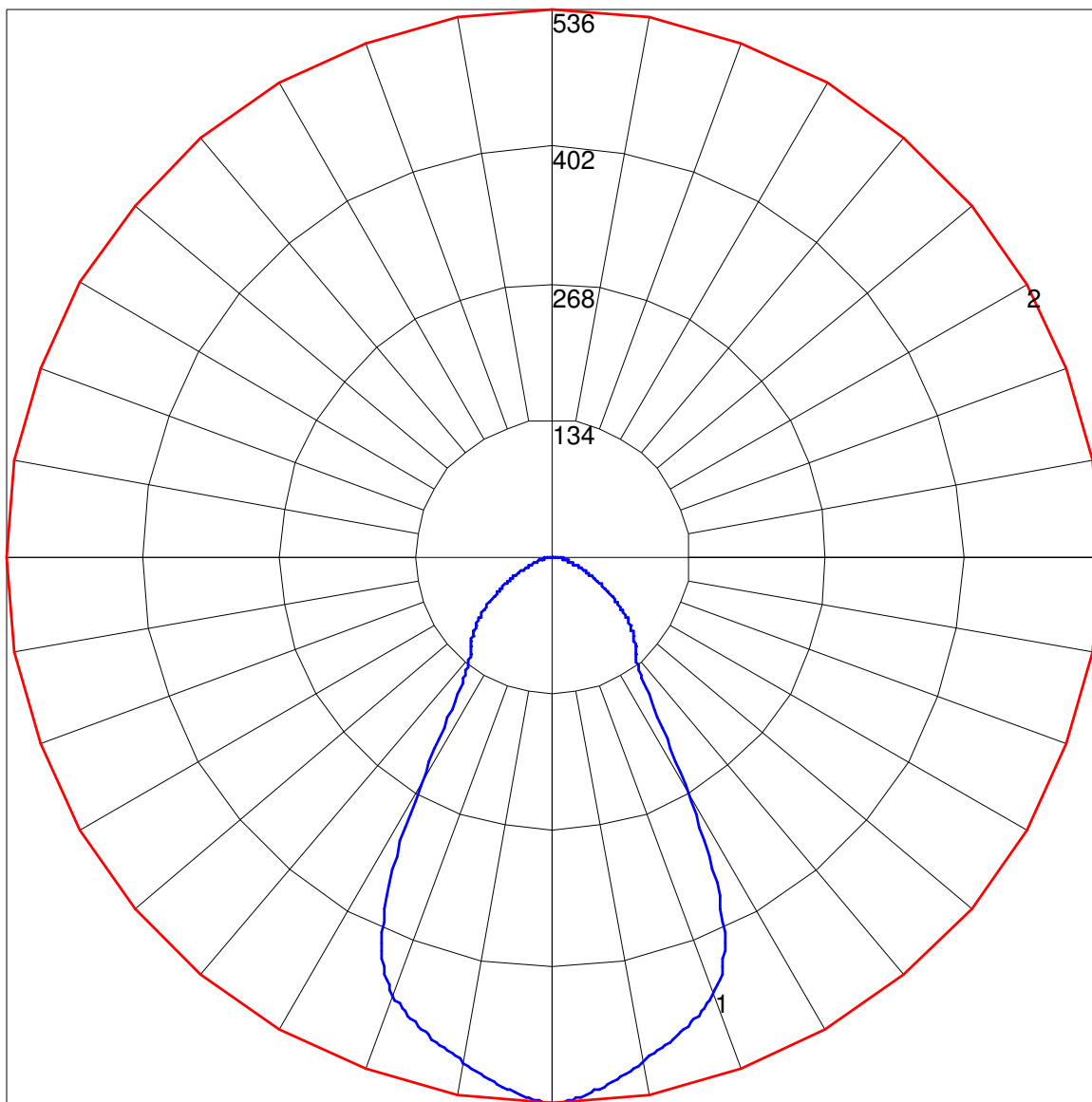
X=2H	Y=2H	18.2	19.5	18.6	19.8	20.1	18.2	19.5	18.6	19.8	20.1
	3H	19.0	20.1	19.3	20.5	20.8	19.0	20.1	19.3	20.5	20.8
	4H	19.1	20.2	19.5	20.6	20.9	19.1	20.2	19.5	20.6	20.9
	6H	19.2	20.2	19.7	20.6	21.0	19.2	20.2	19.7	20.6	21.0
	8H	19.3	20.2	19.7	20.6	21.0	19.3	20.2	19.7	20.6	21.0
	12H	19.2	20.1	19.7	20.5	20.9	19.2	20.1	19.7	20.5	20.9

UGR Viewed Endwise

4H	2H	18.5	19.5	18.9	19.9	20.3	18.5	19.5	18.9	19.9	20.3
	3H	19.4	20.2	19.8	20.7	21.1	19.4	20.2	19.8	20.7	21.1
	4H	19.6	20.4	20.0	20.8	21.3	19.6	20.4	20.0	20.8	21.3
	6H	19.8	20.5	20.2	20.9	21.4	19.8	20.5	20.2	20.9	21.4
	8H	19.8	20.4	20.3	20.9	21.4	19.8	20.4	20.3	20.9	21.4
	12H	19.8	20.4	20.3	20.9	21.3	19.8	20.4	20.3	20.9	21.3
8H	4H	19.7	20.3	20.1	20.7	21.2	19.7	20.3	20.1	20.7	21.2
	6H	19.9	20.4	20.4	20.9	21.4	19.9	20.4	20.4	20.9	21.4
	8H	19.9	20.4	20.5	20.9	21.4	19.9	20.4	20.5	20.9	21.4
	12H	20.0	20.4	20.5	20.9	21.4	20.0	20.4	20.5	20.9	21.4
12H	4H	19.6	20.2	20.1	20.7	21.1	19.6	20.2	20.1	20.7	21.1
	6H	19.9	20.3	20.4	20.8	21.3	19.9	20.3	20.4	20.8	21.3
	8H	19.9	20.3	20.5	20.8	21.4	19.9	20.3	20.5	20.8	21.4

Maximum UGR = 21.4

POLAR GRAPH



Maximum Candela = 535.919 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.)