



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12326812.11
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 06-25-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-W_(EM MODE)
 [LUMINAIRE] Black formed aluminum housing, white reflector, frosted pl
 [MORE] astic lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	677
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	12108	12108	12108
55	11035	11035	11035
65	10934	10934	10934
75	11418	11418	11418
85	9325	9325	9325

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CANDELA TABULATION

	<u>0</u>
0.0	381.209
0.5	381.106
1.0	380.851
1.5	380.391
2.0	379.726
2.5	378.908
3.0	377.937
3.5	376.864
4.0	375.637
4.5	374.359
5.0	373.081
5.5	371.650
6.0	370.117
6.5	368.532
7.0	366.794
7.5	365.005
8.0	363.114
8.5	361.121
9.0	359.076
9.5	356.929
10.0	354.732
10.5	352.431
11.0	350.029
11.5	347.473
12.0	344.867
12.5	342.106
13.0	339.295
13.5	336.330
14.0	333.264
14.5	330.146
15.0	326.874
15.5	323.552
16.0	320.178
16.5	316.754
17.0	313.329
17.5	309.853
18.0	306.378
18.5	302.851
19.0	299.375
19.5	295.848
20.0	292.270
20.5	288.743
21.0	285.114
21.5	281.434
22.0	277.703
22.5	273.869
23.0	269.984
23.5	266.049
24.0	262.062
24.5	258.024
25.0	253.986
25.5	249.948
26.0	245.910
26.5	241.923

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).IES****CANDELA TABULATION - (Cont.)**

27.0	237.987
27.5	234.051
28.0	230.218
28.5	226.384
29.0	222.704
29.5	219.024
30.0	215.446
30.5	211.919
31.0	208.392
31.5	204.967
32.0	201.543
32.5	198.169
33.0	194.796
33.5	191.524
34.0	188.202
34.5	185.033
35.0	181.915
35.5	178.797
36.0	175.730
36.5	172.714
37.0	169.801
37.5	166.938
38.0	164.127
38.5	161.367
39.0	158.709
39.5	156.102
40.0	153.547
40.5	151.042
41.0	148.640
41.5	146.288
42.0	143.988
42.5	141.739
43.0	139.541
43.5	137.395
44.0	135.248
44.5	133.203
45.0	131.159
45.5	129.165
46.0	127.223
46.5	125.281
47.0	123.338
47.5	121.498
48.0	119.607
48.5	117.767
49.0	115.978
49.5	114.240
50.0	112.502
50.5	110.815
51.0	109.129
51.5	107.493
52.0	105.857
52.5	104.273
53.0	102.688
53.5	101.257
54.0	99.877
54.5	98.446

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55.0	96.963
55.5	95.481
56.0	94.050
56.5	92.670
57.0	91.494
57.5	90.165
58.0	88.785
58.5	87.456
59.0	86.127
59.5	84.798
60.0	83.469
60.5	82.191
61.0	80.914
61.5	79.636
62.0	78.358
62.5	77.080
63.0	75.802
63.5	74.575
64.0	73.298
64.5	72.020
65.0	70.793
65.5	69.515
66.0	68.237
66.5	66.959
67.0	65.682
67.5	64.455
68.0	63.177
68.5	61.950
69.0	60.672
69.5	59.446
70.0	58.168
70.5	56.941
71.0	55.714
71.5	54.436
72.0	53.210
72.5	51.932
73.0	50.649
73.5	49.340
74.0	48.006
74.5	46.647
75.0	45.272
75.5	43.876
76.0	42.450
76.5	40.999
77.0	39.516
77.5	38.008
78.0	36.465
78.5	34.896
79.0	33.311
79.5	31.691
80.0	30.050
80.5	28.389
81.0	26.702
81.5	24.990
82.0	23.252
82.5	21.488

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).IES****CANDELA TABULATION - (Cont.)**

83.0	19.704
83.5	17.910
84.0	16.096
84.5	14.276
85.0	12.451
85.5	10.632
86.0	8.827
86.5	7.105
87.0	5.577
87.5	4.334
88.0	3.256
88.5	2.300
89.0	1.452
89.5	0.813
90.0	0.414
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 : 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).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 : 6DR-TL-L20-840-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).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

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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	126.38	N.A.	18.70
0-30	242.80	N.A.	35.80
0-40	356.80	N.A.	52.70
0-60	545.41	N.A.	80.50
0-80	662.86	N.A.	97.90
0-90	677.26	N.A.	100.00
10-90	642.23	N.A.	94.80
20-40	230.42	N.A.	34.00
20-50	332.01	N.A.	49.00
40-70	258.70	N.A.	38.20
60-80	117.44	N.A.	17.30
70-80	47.36	N.A.	7.00
80-90	14.40	N.A.	2.10
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	677.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	35.03
10-20	91.36
20-30	116.42
30-40	114.00
40-50	101.59
50-60	87.02
60-70	70.09
70-80	47.36
80-90	14.40
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	100	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	42	35	31	41	35	31	29

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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	19.1	20.6	19.4	20.9	21.2	19.1	20.6	19.4	20.9	21.2
	3H	21.2	22.6	21.6	22.9	23.3	21.2	22.6	21.6	22.9	23.3
	4H	22.1	23.4	22.5	23.8	24.1	22.1	23.4	22.5	23.8	24.1
	6H	22.8	24.1	23.2	24.4	24.8	22.8	24.1	23.2	24.4	24.8
	8H	23.1	24.3	23.5	24.7	25.1	23.1	24.3	23.5	24.7	25.1
	12H	23.3	24.4	23.7	24.8	25.2	23.3	24.4	23.7	24.8	25.2

UGR Viewed Endwise

4H	2H	19.8	21.1	20.2	21.4	21.8	19.8	21.1	20.2	21.4	21.8
	3H	22.1	23.2	22.5	23.6	24.0	22.1	23.2	22.5	23.6	24.0
	4H	23.2	24.2	23.6	24.6	25.0	23.2	24.2	23.6	24.6	25.0
	6H	24.1	25.0	24.5	25.4	25.9	24.1	25.0	24.5	25.4	25.9
	8H	24.4	25.2	24.9	25.7	26.1	24.4	25.2	24.9	25.7	26.1
	12H	24.6	25.4	25.1	25.8	26.3	24.6	25.4	25.1	25.8	26.3

8H	4H	23.6	24.4	24.1	24.9	25.3	23.6	24.4	24.1	24.9	25.3
	6H	24.7	25.4	25.2	25.8	26.3	24.7	25.4	25.2	25.8	26.3
	8H	25.1	25.7	25.6	26.2	26.7	25.1	25.7	25.6	26.2	26.7
	12H	25.4	25.9	25.9	26.4	27.0	25.4	25.9	25.9	26.4	27.0

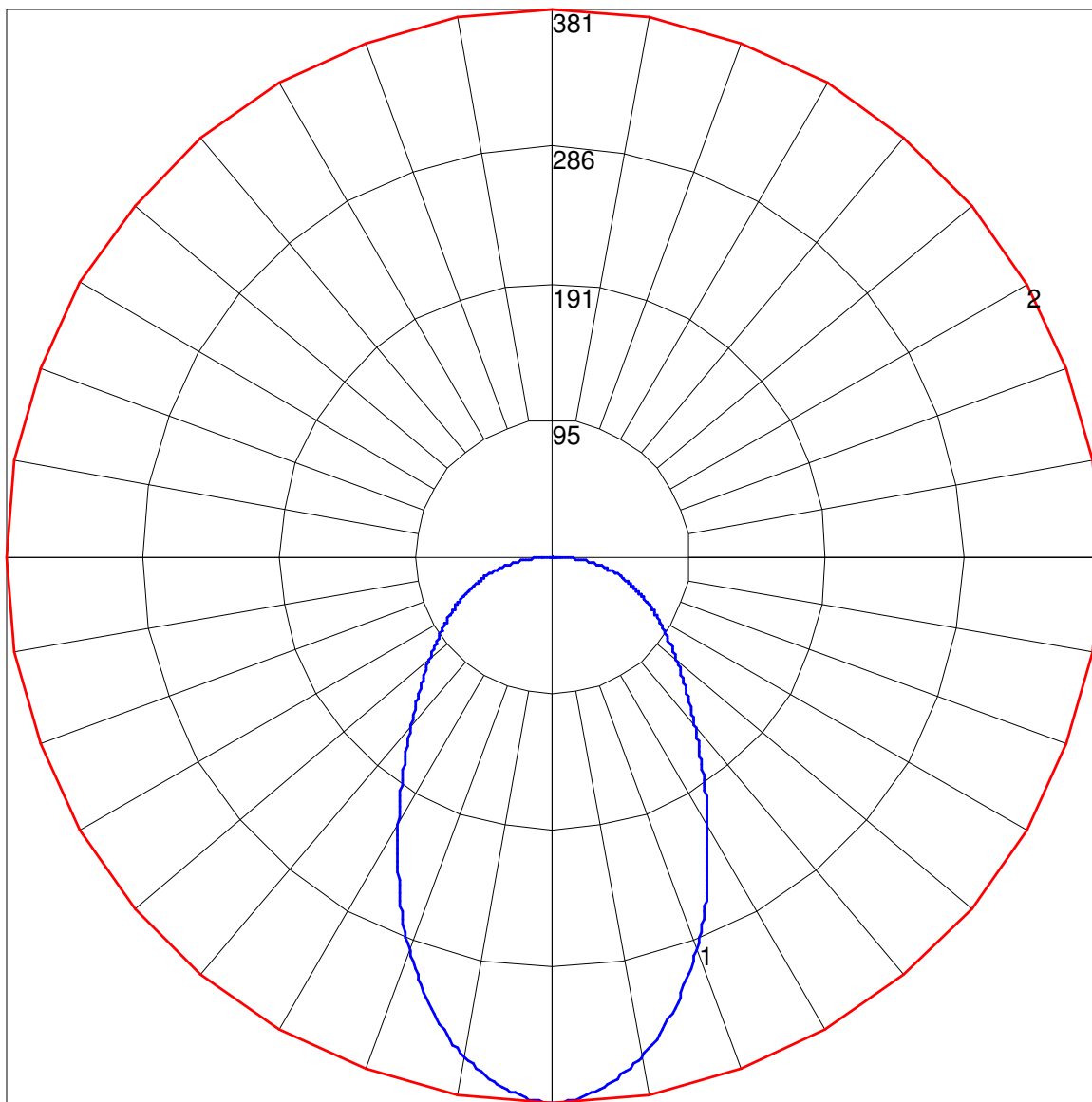
12H	4H	23.7	24.4	24.1	24.9	25.3	23.7	24.4	24.1	24.9	25.3
	6H	24.8	25.4	25.3	25.8	26.4	24.8	25.4	25.3	25.8	26.4
	8H	25.2	25.8	25.7	26.3	26.8	25.2	25.8	25.7	26.3	26.8

Maximum UGR = 27.0

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POLAR GRAPH



Maximum Candela = 381.209 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.)