



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-935-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] 02-24-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6DR-TL-L20-935-EM10W-DIM-UNV-SW-OF-WH(EMER 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	560
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	56
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	10011	10011	10011
55	9124	9124	9124
65	9041	9041	9041
75	9441	9441	9441
85	7711	7711	7711

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	<u>0</u>
0.0	315.206
0.5	315.121
1.0	314.910
1.5	314.530
2.0	313.980
2.5	313.304
3.0	312.501
3.5	311.614
4.0	310.599
4.5	309.543
5.0	308.486
5.5	307.303
6.0	306.035
6.5	304.725
7.0	303.288
7.5	301.808
8.0	300.245
8.5	298.596
9.0	296.906
9.5	295.131
10.0	293.313
10.5	291.411
11.0	289.425
11.5	287.312
12.0	285.156
12.5	282.874
13.0	280.549
13.5	278.098
14.0	275.562
14.5	272.984
15.0	270.279
15.5	267.532
16.0	264.743
16.5	261.911
17.0	259.079
17.5	256.205
18.0	253.331
18.5	250.415
19.0	247.541
19.5	244.625
20.0	241.666
20.5	238.750
21.0	235.749
21.5	232.706
22.0	229.621
22.5	226.451
23.0	223.239
23.5	219.985
24.0	216.688
24.5	213.349
25.0	210.011
25.5	206.672
26.0	203.333
26.5	200.036

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6DR-TL-L20-935-EM10W-DIM-UNV-SW-OF-WH_(EMER MODE).IES****CANDELA TABULATION - (Cont.)**

27.0	196.782
27.5	193.528
28.0	190.358
28.5	187.188
29.0	184.145
29.5	181.102
30.0	178.143
30.5	175.227
31.0	172.311
31.5	169.479
32.0	166.648
32.5	163.858
33.0	161.069
33.5	158.364
34.0	155.617
34.5	152.996
35.0	150.418
35.5	147.840
36.0	145.304
36.5	142.811
37.0	140.402
37.5	138.035
38.0	135.710
38.5	133.428
39.0	131.230
39.5	129.075
40.0	126.962
40.5	124.891
41.0	122.904
41.5	120.960
42.0	119.058
42.5	117.198
43.0	115.381
43.5	113.606
44.0	111.831
44.5	110.140
45.0	108.450
45.5	106.802
46.0	105.195
46.5	103.589
47.0	101.983
47.5	100.462
48.0	98.898
48.5	97.377
49.0	95.897
49.5	94.460
50.0	93.023
50.5	91.629
51.0	90.234
51.5	88.882
52.0	87.529
52.5	86.219
53.0	84.909
53.5	83.725
54.0	82.584
54.5	81.401

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55.0	80.175
55.5	78.949
56.0	77.766
56.5	76.625
57.0	75.653
57.5	74.554
58.0	73.413
58.5	72.314
59.0	71.215
59.5	70.116
60.0	69.017
60.5	67.961
61.0	66.904
61.5	65.848
62.0	64.791
62.5	63.734
63.0	62.678
63.5	61.663
64.0	60.607
64.5	59.550
65.0	58.536
65.5	57.479
66.0	56.423
66.5	55.366
67.0	54.309
67.5	53.295
68.0	52.238
68.5	51.224
69.0	50.168
69.5	49.153
70.0	48.097
70.5	47.082
71.0	46.068
71.5	45.011
72.0	43.997
72.5	42.940
73.0	41.880
73.5	40.798
74.0	39.694
74.5	38.570
75.0	37.433
75.5	36.280
76.0	35.100
76.5	33.900
77.0	32.674
77.5	31.428
78.0	30.151
78.5	28.854
79.0	27.544
79.5	26.204
80.0	24.847
80.5	23.474
81.0	22.079
81.5	20.663
82.0	19.226
82.5	17.768

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83.0	16.293
83.5	14.809
84.0	13.309
84.5	11.804
85.0	10.296
85.5	8.791
86.0	7.299
86.5	5.875
87.0	4.611
87.5	3.584
88.0	2.692
88.5	1.902
89.0	1.200
89.5	0.672
90.0	0.342
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-L20-935-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

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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	104.50	N.A.	18.70
0-30	200.76	N.A.	35.80
0-40	295.02	N.A.	52.70
0-60	450.98	N.A.	80.50
0-80	548.09	N.A.	97.90
0-90	560.00	N.A.	100.00
10-90	531.03	N.A.	94.80
20-40	190.52	N.A.	34.00
20-50	274.52	N.A.	49.00
40-70	213.91	N.A.	38.20
60-80	97.11	N.A.	17.30
70-80	39.16	N.A.	7.00
80-90	11.91	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	560.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	28.96
10-20	75.54
20-30	96.26
30-40	94.26
40-50	84.00
50-60	71.96
60-70	57.95
70-80	39.16
80-90	11.91
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	106	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	50	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	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	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	18.3	19.9	18.7	20.2	20.5
	3H	20.5	21.9	20.8	22.2	22.6
	4H	21.4	22.7	21.8	23.1	23.4
	6H	22.1	23.4	22.5	23.7	24.1
	8H	22.4	23.6	22.8	24.0	24.4
	12H	22.5	23.7	23.0	24.1	24.5

UGR Viewed Endwise

18.3	19.9	18.7	20.2	20.5
20.5	21.9	20.8	22.2	22.6
21.4	22.7	21.8	23.1	23.4
22.1	23.4	22.5	23.7	24.1
22.4	23.6	22.8	24.0	24.4
22.5	23.7	23.0	24.1	24.5

4H	2H	19.0	20.4	19.4	20.7	21.1	19.0	20.4	19.4	20.7	21.1
	3H	21.4	22.5	21.8	22.9	23.3	21.4	22.5	21.8	22.9	23.3
	4H	22.5	23.5	22.9	23.9	24.3	22.5	23.5	22.9	23.9	24.3
	6H	23.4	24.3	23.8	24.7	25.2	23.4	24.3	23.8	24.7	25.2
	8H	23.7	24.5	24.2	25.0	25.4	23.7	24.5	24.2	25.0	25.4
	12H	23.9	24.7	24.4	25.1	25.6	23.9	24.7	24.4	25.1	25.6

8H	4H	22.9	23.7	23.3	24.2	24.6	22.9	23.7	23.3	24.2	24.6
	6H	24.0	24.6	24.5	25.1	25.6	24.0	24.6	24.5	25.1	25.6
	8H	24.4	25.0	24.9	25.5	26.0	24.4	25.0	24.9	25.5	26.0
	12H	24.6	25.2	25.1	25.7	26.3	24.6	25.2	25.1	25.7	26.3

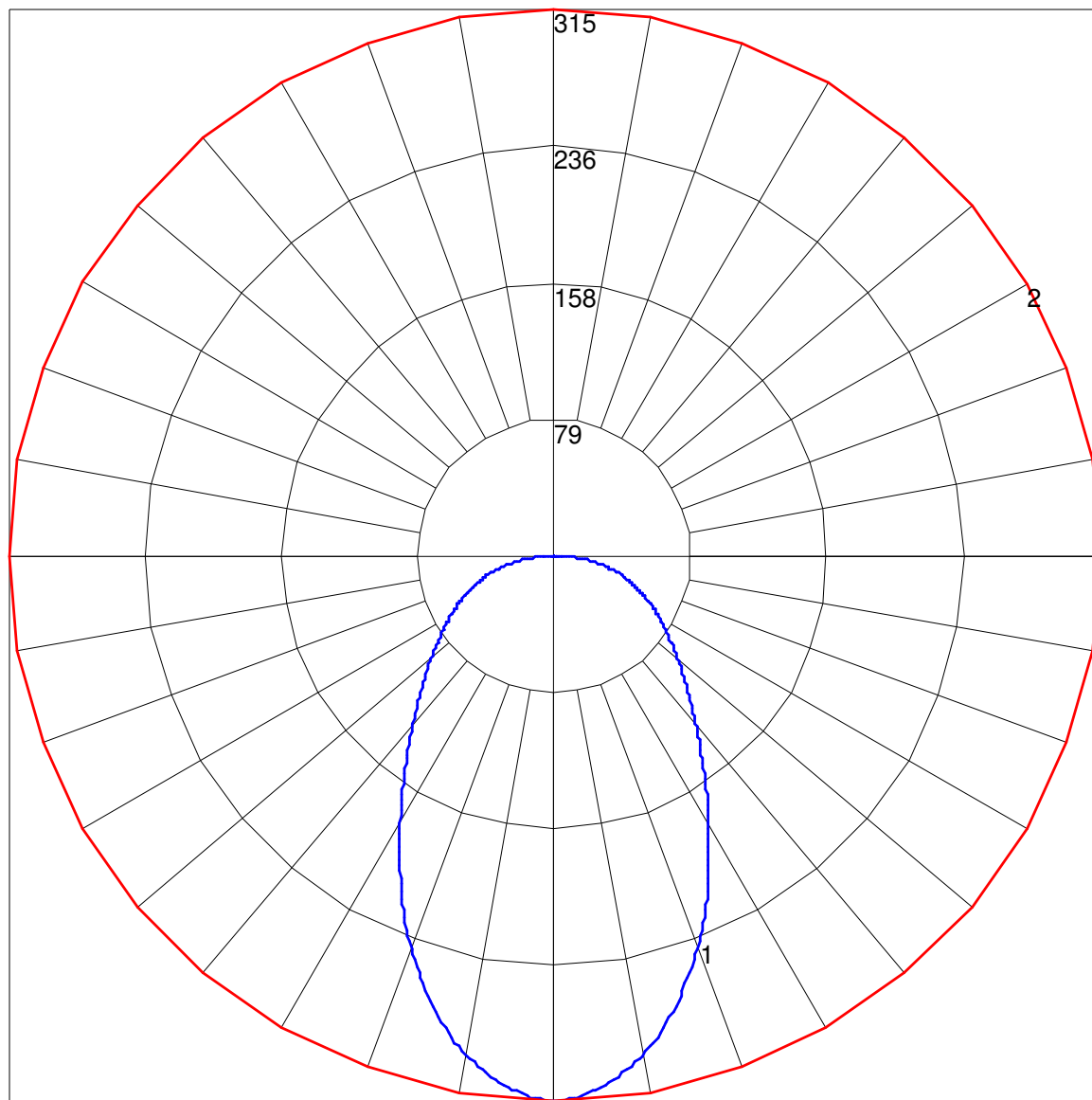
12H	4H	22.9	23.7	23.4	24.2	24.6	22.9	23.7	23.4	24.2	24.6
	6H	24.1	24.7	24.6	25.1	25.7	24.1	24.7	24.6	25.1	25.7
	8H	24.5	25.1	25.0	25.6	26.1	24.5	25.1	25.0	25.6	26.1

Maximum UGR = 26.3

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POLAR GRAPH



Maximum Candela = 315.206 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.)