



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-840-DIM-UNV-LW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12326812.07  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 06/06/2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6DR-TL-L20-840-DIM-UNV-LW-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, Architectural, Classroom, Commercial, Healthcare, Office, Downlight  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1578
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	19.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
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	26224	26224	26224
55	21832	21832	21832
65	16586	16586	16586
75	12028	12028	12028
85	7838	7838	7838

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CANDELA TABULATION

	<u>0</u>
0.0	1003.474
0.5	1003.272
1.0	1002.464
1.5	1001.252
2.0	999.737
2.5	997.716
3.0	995.696
3.5	993.372
4.0	991.250
4.5	989.129
5.0	987.614
5.5	986.199
6.0	984.886
6.5	983.573
7.0	982.158
7.5	980.845
8.0	979.532
8.5	978.319
9.0	977.107
9.5	976.097
10.0	975.087
10.5	974.278
11.0	973.571
11.5	973.167
12.0	972.460
12.5	971.753
13.0	970.743
13.5	969.429
14.0	967.813
14.5	965.994
15.0	964.075
15.5	961.650
16.0	959.024
16.5	956.397
17.0	953.770
17.5	951.043
18.0	948.113
18.5	944.779
19.0	941.041
19.5	936.899
20.0	932.151
20.5	926.999
21.0	920.634
21.5	913.058
22.0	904.471
22.5	894.772
23.0	884.165
23.5	872.648
24.0	859.919
24.5	846.180
25.0	831.329
25.5	815.872
26.0	799.405
26.5	782.231

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CANDELA TABULATION - (Cont.)

27.0	763.946
27.5	745.155
28.0	725.355
28.5	704.442
29.0	682.722
29.5	659.891
30.0	636.453
30.5	612.308
31.0	588.164
31.5	563.817
32.0	540.177
32.5	517.548
33.0	495.827
33.5	475.521
34.0	456.832
34.5	439.860
35.0	424.706
35.5	410.765
36.0	398.541
36.5	387.327
37.0	377.326
37.5	368.335
38.0	360.152
38.5	352.676
39.0	345.604
39.5	339.240
40.0	333.077
40.5	327.319
41.0	321.964
41.5	316.711
42.0	311.660
42.5	307.013
43.0	302.265
43.5	297.618
44.0	293.072
44.5	288.626
45.0	284.080
45.5	279.736
46.0	275.291
46.5	270.846
47.0	266.300
47.5	261.855
48.0	257.309
48.5	252.763
49.0	248.217
49.5	243.469
50.0	238.922
50.5	234.275
51.0	229.628
51.5	224.880
52.0	220.132
52.5	215.384
53.0	210.636
53.5	205.888
54.0	201.341
54.5	196.694

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CANDELA TABULATION - (Cont.)

55.0	191.845
55.5	187.097
56.0	182.349
56.5	177.904
57.0	173.459
57.5	168.812
58.0	164.164
58.5	159.618
59.0	155.173
59.5	150.728
60.0	146.485
60.5	142.242
61.0	138.100
61.5	133.958
62.0	130.018
62.5	126.078
63.0	122.239
63.5	118.400
64.0	114.663
64.5	111.026
65.0	107.389
65.5	103.853
66.0	100.327
66.5	96.862
67.0	93.437
67.5	90.083
68.0	86.790
68.5	83.486
69.0	80.284
69.5	77.112
70.0	74.031
70.5	71.050
71.0	68.131
71.5	65.302
72.0	62.574
72.5	59.928
73.0	57.351
73.5	54.826
74.0	52.401
74.5	50.027
75.0	47.694
75.5	45.441
76.0	43.228
76.5	41.056
77.0	38.945
77.5	36.874
78.0	34.863
78.5	32.894
79.0	30.964
79.5	29.105
80.0	27.256
80.5	25.468
81.0	23.700
81.5	21.942
82.0	20.225
82.5	18.518

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CANDELA TABULATION - (Cont.)

83.0	16.851
83.5	15.214
84.0	13.598
84.5	12.012
85.0	10.466
85.5	8.971
86.0	7.526
86.5	6.132
87.0	4.778
87.5	3.647
88.0	2.788
88.5	2.041
89.0	1.414
89.5	0.889
90.0	0.566
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
118.0	0.000
118.5	0.000
119.0	0.000
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131.5	0.000
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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
147.5	0.000
148.0	0.000
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150.0	0.000
150.5	0.000
151.0	0.000
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152.0	0.000
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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
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158.5	0.000
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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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	365.53	N.A.	23.20
0-30	738.89	N.A.	46.80
0-40	1015.74	N.A.	64.40
0-60	1406.64	N.A.	89.20
0-80	1564.98	N.A.	99.20
0-90	1577.49	N.A.	100.00
10-90	1483.59	N.A.	94.00
20-40	650.21	N.A.	41.20
20-50	869.58	N.A.	55.10
40-70	497.95	N.A.	31.60
60-80	158.34	N.A.	10.00
70-80	51.29	N.A.	3.30
80-90	12.51	N.A.	0.80
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1577.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	93.90
10-20	271.63
20-30	373.36
30-40	276.85
40-50	219.38
50-60	171.53
60-70	107.04
70-80	51.29
80-90	12.51
90-100	0.02
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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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	20.6	22.0	21.0	22.3	22.6	20.6	22.0	21.0	22.3	22.6
	3H	21.8	23.1	22.2	23.4	23.7	21.8	23.1	22.2	23.4	23.7
	4H	22.2	23.4	22.6	23.7	24.1	22.2	23.4	22.6	23.7	24.1
	6H	22.5	23.5	22.9	23.9	24.3	22.5	23.5	22.9	23.9	24.3
	8H	22.6	23.6	23.0	24.0	24.4	22.6	23.6	23.0	24.0	24.4
	12H	22.6	23.6	23.0	23.9	24.4	22.6	23.6	23.0	23.9	24.4

### UGR Viewed Endwise

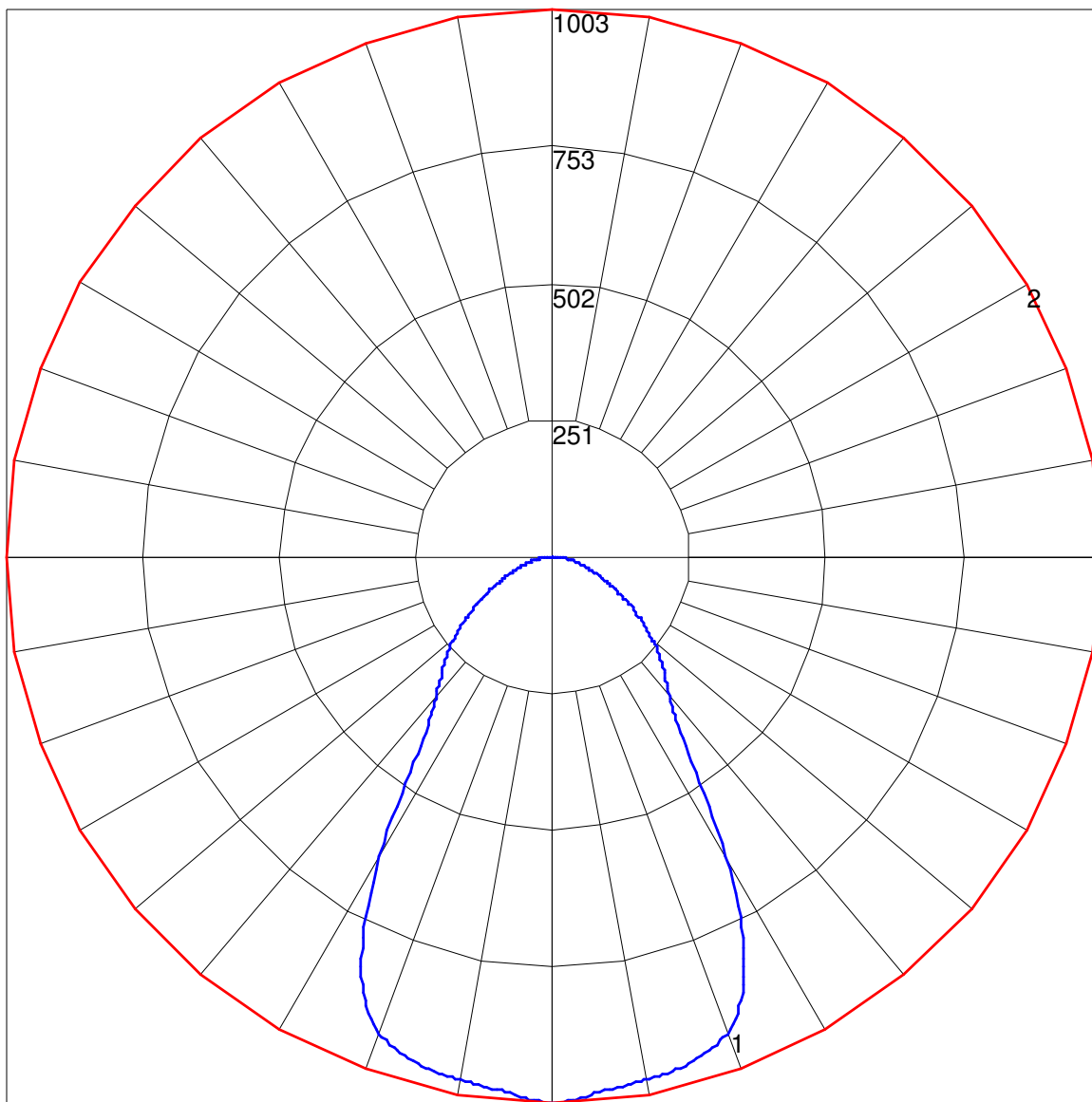
4H	2H	21.0	22.2	21.4	22.5	22.9	21.0	22.2	21.4	22.5	22.9
	3H	22.4	23.4	22.8	23.8	24.2	22.4	23.4	22.8	23.8	24.2
	4H	22.9	23.8	23.4	24.2	24.6	22.9	23.8	23.4	24.2	24.6
	6H	23.3	24.0	23.8	24.5	24.9	23.3	24.0	23.8	24.5	24.9
	8H	23.4	24.1	23.8	24.5	25.0	23.4	24.1	23.8	24.5	25.0
	12H	23.5	24.1	23.9	24.6	25.0	23.5	24.1	23.9	24.6	25.0

8H	4H	23.1	23.8	23.5	24.2	24.7	23.1	23.8	23.5	24.2	24.7
	6H	23.5	24.1	24.0	24.6	25.1	23.5	24.1	24.0	24.6	25.1
	8H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
	12H	23.8	24.3	24.3	24.8	25.3	23.8	24.3	24.3	24.8	25.3

12H	4H	23.1	23.7	23.6	24.2	24.6	23.1	23.7	23.6	24.2	24.6
	6H	23.6	24.1	24.1	24.5	25.1	23.6	24.1	24.1	24.5	25.1
	8H	23.8	24.2	24.3	24.7	25.3	23.8	24.2	24.3	24.7	25.3

Maximum UGR = 25.3

POLAR GRAPH



Maximum Candela = 1003.474 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.)