



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L40-840-DIM-UNV-SW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.11

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 03-06-2024

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 6DR-TL-L40-840-DIM-UNV-SW-OF-WH

[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	2680
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	36.5
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	47915	47915	47915
55	43669	43669	43669
65	43271	43271	43271
75	45185	45185	45185
85	36905	36905	36905

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CANDELA TABULATION

	<u>0</u>
0.0	1508.619
0.5	1508.215
1.0	1507.203
1.5	1505.383
2.0	1502.753
2.5	1499.516
3.0	1495.673
3.5	1491.425
4.0	1486.570
4.5	1481.513
5.0	1476.456
5.5	1470.792
6.0	1464.724
6.5	1458.453
7.0	1451.576
7.5	1444.496
8.0	1437.011
8.5	1429.122
9.0	1421.031
9.5	1412.535
10.0	1403.837
10.5	1394.734
11.0	1385.227
11.5	1375.113
12.0	1364.797
12.5	1353.873
13.0	1342.748
13.5	1331.016
14.0	1318.879
14.5	1306.539
15.0	1293.593
15.5	1280.445
16.0	1267.094
16.5	1253.542
17.0	1239.989
17.5	1226.233
18.0	1212.478
18.5	1198.521
19.0	1184.766
19.5	1170.808
20.0	1156.648
20.5	1142.691
21.0	1128.329
21.5	1113.765
22.0	1098.998
22.5	1083.827
23.0	1068.454
23.5	1052.878
24.0	1037.100
24.5	1021.120
25.0	1005.139
25.5	989.159
26.0	973.179
26.5	957.401

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**CANDELA TABULATION - (Cont.)**

27.0	941.825
27.5	926.249
28.0	911.078
28.5	895.907
29.0	881.343
29.5	866.778
30.0	852.619
30.5	838.661
31.0	824.704
31.5	811.151
32.0	797.598
32.5	784.247
33.0	770.897
33.5	757.951
34.0	744.802
34.5	732.261
35.0	719.922
35.5	707.582
36.0	695.446
36.5	683.511
37.0	671.981
37.5	660.653
38.0	649.528
38.5	638.604
39.0	628.086
39.5	617.769
40.0	607.655
40.5	597.743
41.0	588.236
41.5	578.931
42.0	569.828
42.5	560.928
43.0	552.230
43.5	543.734
44.0	535.238
44.5	527.147
45.0	519.056
45.5	511.167
46.0	503.480
46.5	495.793
47.0	488.106
47.5	480.824
48.0	473.340
48.5	466.058
49.0	458.978
49.5	452.100
50.0	445.223
50.5	438.547
51.0	431.872
51.5	425.399
52.0	418.926
52.5	412.655
53.0	406.385
53.5	400.721
54.0	395.259
54.5	389.595

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CANDELA TABULATION - (Cont.)

55.0	383.729
55.5	377.863
56.0	372.199
56.5	366.737
57.0	362.085
57.5	356.825
58.0	351.364
58.5	346.105
59.0	340.845
59.5	335.586
60.0	330.327
60.5	325.269
61.0	320.212
61.5	315.155
62.0	310.098
62.5	305.041
63.0	299.984
63.5	295.129
64.0	290.072
64.5	285.015
65.0	280.161
65.5	275.104
66.0	270.046
66.5	264.989
67.0	259.932
67.5	255.078
68.0	250.021
68.5	245.166
69.0	240.109
69.5	235.254
70.0	230.197
70.5	225.342
71.0	220.487
71.5	215.430
72.0	210.576
72.5	205.519
73.0	200.441
73.5	195.263
74.0	189.983
74.5	184.603
75.0	179.161
75.5	173.639
76.0	167.995
76.5	162.250
77.0	156.384
77.5	150.417
78.0	144.308
78.5	138.098
79.0	131.827
79.5	125.415
80.0	118.922
80.5	112.347
81.0	105.672
81.5	98.896
82.0	92.018
82.5	85.039

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CANDELA TABULATION - (Cont.)

83.0	77.980
83.5	70.880
84.0	63.699
84.5	56.497
85.0	49.276
85.5	42.075
86.0	34.934
86.5	28.117
87.0	22.069
87.5	17.154
88.0	12.885
88.5	9.103
89.0	5.745
89.5	3.216
90.0	1.638
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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124.5	0.000
125.0	0.000
125.5	0.000
126.0	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
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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	500.16	N.A.	18.70
0-30	960.87	N.A.	35.80
0-40	1412.03	N.A.	52.70
0-60	2158.45	N.A.	80.50
0-80	2623.23	N.A.	97.90
0-90	2680.22	N.A.	100.00
10-90	2541.6	N.A.	94.80
20-40	911.87	N.A.	34.00
20-50	1313.9	N.A.	49.00
40-70	1023.79	N.A.	38.20
60-80	464.78	N.A.	17.30
70-80	187.42	N.A.	7.00
80-90	56.99	N.A.	2.10
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2680.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	138.62
10-20	361.54
20-30	460.71
30-40	451.15
40-50	402.03
50-60	344.39
60-70	277.36
70-80	187.42
80-90	56.99
90-100	0.04
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	23.7	25.3	24.1	25.6	25.9	23.7	25.3	24.1	25.6	25.9
	3H	25.9	27.3	26.2	27.6	28.0	25.9	27.3	26.2	27.6	28.0
	4H	26.8	28.1	27.2	28.5	28.8	26.8	28.1	27.2	28.5	28.8
	6H	27.5	28.8	27.9	29.1	29.5	27.5	28.8	27.9	29.1	29.5
	8H	27.8	29.0	28.2	29.4	29.8	27.8	29.0	28.2	29.4	29.8
	12H	27.9	29.1	28.4	29.5	29.9	27.9	29.1	28.4	29.5	29.9

UGR Viewed Endwise

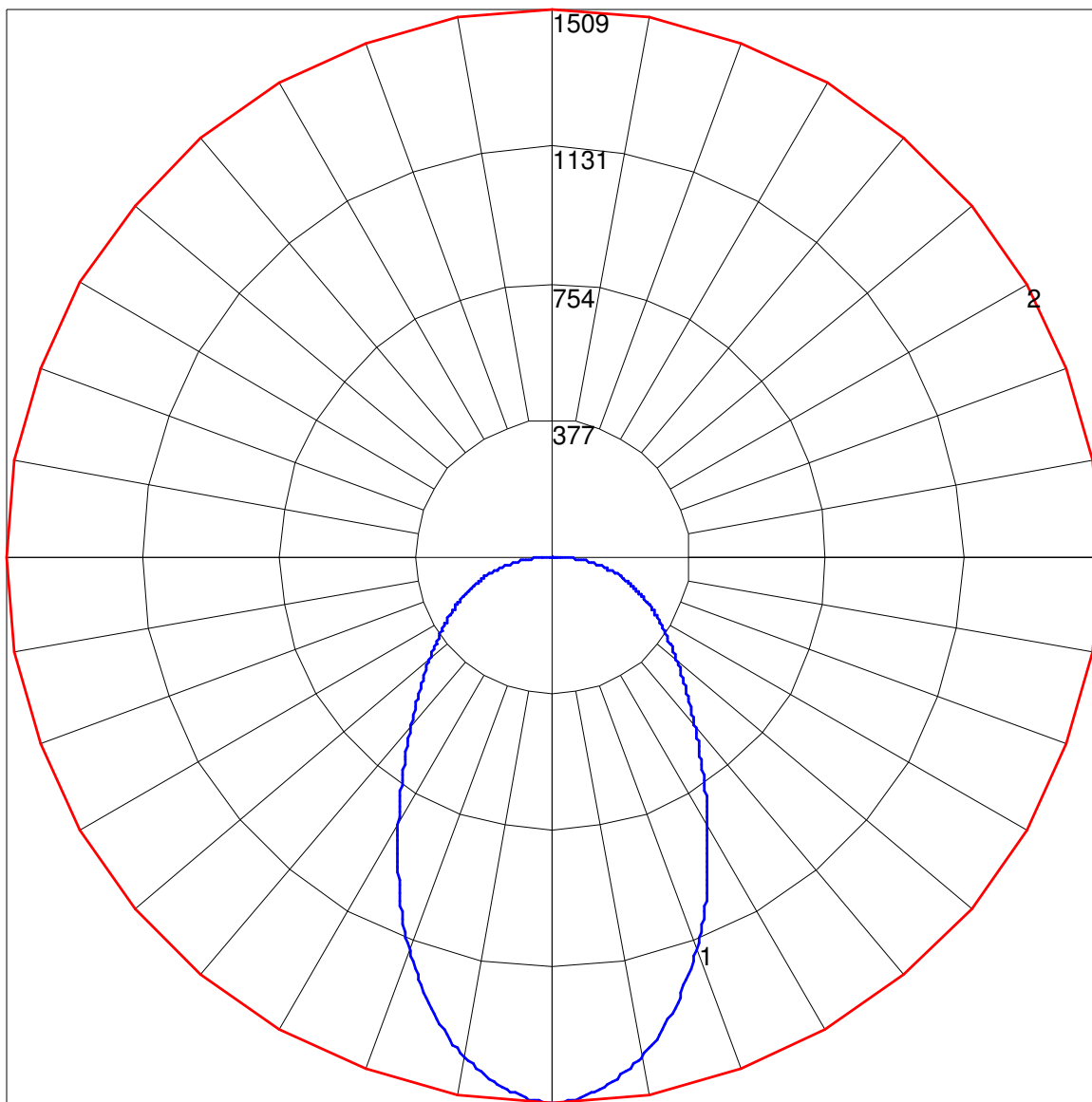
4H	2H	24.4	25.8	24.8	26.1	26.5	24.4	25.8	24.8	26.1	26.5
	3H	26.8	27.9	27.2	28.3	28.7	26.8	27.9	27.2	28.3	28.7
	4H	27.9	28.9	28.3	29.3	29.7	27.9	28.9	28.3	29.3	29.7
	6H	28.8	29.7	29.2	30.1	30.6	28.8	29.7	29.2	30.1	30.6
	8H	29.1	29.9	29.6	30.4	30.8	29.1	29.9	29.6	30.4	30.8
	12H	29.3	30.1	29.8	30.5	31.0	29.3	30.1	29.8	30.5	31.0

8H	4H	28.3	29.1	28.8	29.6	30.0	28.3	29.1	28.8	29.6	30.0
	6H	29.4	30.0	29.9	30.5	31.0	29.4	30.0	29.9	30.5	31.0
	8H	29.8	30.4	30.3	30.9	31.4	29.8	30.4	30.3	30.9	31.4
	12H	30.1	30.6	30.6	31.1	31.7	30.1	30.6	30.6	31.1	31.7

12H	4H	28.3	29.1	28.8	29.6	30.0	28.3	29.1	28.8	29.6	30.0
	6H	29.5	30.1	30.0	30.5	31.1	29.5	30.1	30.0	30.5	31.1
	8H	29.9	30.5	30.4	31.0	31.5	29.9	30.5	30.4	31.0	31.5

Maximum UGR = 31.7

POLAR GRAPH



Maximum Candela = 1508.619 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.)