



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L40-827-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] 05/14/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6DR-TL-L40-827-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	2441
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
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	43638	43638	43638
55	39771	39771	39771
65	39409	39409	39409
75	41151	41151	41151
85	33611	33611	33611

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CANDELA TABULATION

	<u>0</u>
0.0	1373.961
0.5	1373.592
1.0	1372.671
1.5	1371.013
2.0	1368.618
2.5	1365.670
3.0	1362.170
3.5	1358.301
4.0	1353.880
4.5	1349.274
5.0	1344.669
5.5	1339.510
6.0	1333.983
6.5	1328.272
7.0	1322.009
7.5	1315.561
8.0	1308.744
8.5	1301.560
9.0	1294.190
9.5	1286.453
10.0	1278.531
10.5	1270.241
11.0	1261.582
11.5	1252.371
12.0	1242.976
12.5	1233.027
13.0	1222.895
13.5	1212.210
14.0	1201.156
14.5	1189.918
15.0	1178.128
15.5	1166.153
16.0	1153.994
16.5	1141.651
17.0	1129.308
17.5	1116.780
18.0	1104.253
18.5	1091.541
19.0	1079.014
19.5	1066.302
20.0	1053.407
20.5	1040.695
21.0	1027.615
21.5	1014.351
22.0	1000.902
22.5	987.085
23.0	973.084
23.5	958.898
24.0	944.529
24.5	929.975
25.0	915.421
25.5	900.867
26.0	886.313
26.5	871.944

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	857.758
<b>27.5</b>	843.573
<b>28.0</b>	829.756
<b>28.5</b>	815.939
<b>29.0</b>	802.674
<b>29.5</b>	789.410
<b>30.0</b>	776.514
<b>30.5</b>	763.803
<b>31.0</b>	751.091
<b>31.5</b>	738.748
<b>32.0</b>	726.405
<b>32.5</b>	714.246
<b>33.0</b>	702.087
<b>33.5</b>	690.296
<b>34.0</b>	678.322
<b>34.5</b>	666.900
<b>35.0</b>	655.662
<b>35.5</b>	644.424
<b>36.0</b>	633.370
<b>36.5</b>	622.501
<b>37.0</b>	612.000
<b>37.5</b>	601.683
<b>38.0</b>	591.551
<b>38.5</b>	581.603
<b>39.0</b>	572.023
<b>39.5</b>	562.627
<b>40.0</b>	553.416
<b>40.5</b>	544.389
<b>41.0</b>	535.730
<b>41.5</b>	527.256
<b>42.0</b>	518.966
<b>42.5</b>	510.860
<b>43.0</b>	502.938
<b>43.5</b>	495.201
<b>44.0</b>	487.463
<b>44.5</b>	480.094
<b>45.0</b>	472.725
<b>45.5</b>	465.540
<b>46.0</b>	458.540
<b>46.5</b>	451.539
<b>47.0</b>	444.538
<b>47.5</b>	437.906
<b>48.0</b>	431.090
<b>48.5</b>	424.458
<b>49.0</b>	418.010
<b>49.5</b>	411.746
<b>50.0</b>	405.482
<b>50.5</b>	399.403
<b>51.0</b>	393.323
<b>51.5</b>	387.428
<b>52.0</b>	381.533
<b>52.5</b>	375.822
<b>53.0</b>	370.111
<b>53.5</b>	364.953
<b>54.0</b>	359.978
<b>54.5</b>	354.820

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PHOTOMETRIC FILENAME : 6DR-TL-L40-827-DIM-UNV-SW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

55.0	349.477
55.5	344.135
56.0	338.977
56.5	334.002
57.0	329.765
57.5	324.975
58.0	320.001
58.5	315.211
59.0	310.421
59.5	305.632
60.0	300.842
60.5	296.236
61.0	291.630
61.5	287.025
62.0	282.419
62.5	277.813
63.0	273.208
63.5	268.786
64.0	264.181
64.5	259.575
65.0	255.154
65.5	250.548
66.0	245.942
66.5	241.337
67.0	236.731
67.5	232.309
68.0	227.704
68.5	223.282
69.0	218.677
69.5	214.255
70.0	209.650
70.5	205.228
71.0	200.807
71.5	196.201
72.0	191.780
72.5	187.174
73.0	182.550
73.5	177.834
74.0	173.025
74.5	168.125
75.0	163.169
75.5	158.140
76.0	153.000
76.5	147.768
77.0	142.425
77.5	136.991
78.0	131.427
78.5	125.771
79.0	120.060
79.5	114.220
80.0	108.307
80.5	102.319
81.0	96.240
81.5	90.068
82.0	83.805
82.5	77.449

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CANDELA TABULATION - (Cont.)

83.0	71.019
83.5	64.553
84.0	58.013
84.5	51.454
85.0	44.878
85.5	38.319
86.0	31.816
86.5	25.607
87.0	20.099
87.5	15.622
88.0	11.735
88.5	8.290
89.0	5.232
89.5	2.929
90.0	1.492
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
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127.0	0.000
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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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PHOTOMETRIC FILENAME : 6DR-TL-L40-827-DIM-UNV-SW-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
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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	455.51	N.A.	18.70
0-30	875.11	N.A.	35.90
0-40	1285.99	N.A.	52.70
0-60	1965.79	N.A.	80.50
0-80	2389.08	N.A.	97.90
0-90	2440.98	N.A.	100.00
10-90	2314.74	N.A.	94.80
20-40	830.47	N.A.	34.00
20-50	1196.62	N.A.	49.00
40-70	932.40	N.A.	38.20
60-80	423.29	N.A.	17.30
70-80	170.69	N.A.	7.00
80-90	51.90	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	2441.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	126.24
10-20	329.27
20-30	419.59
30-40	410.88
40-50	366.15
50-60	313.65
60-70	252.61
70-80	170.69
80-90	51.90
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	23.4	25.0	23.8	25.3	25.6	23.4	25.0	23.8	25.3	25.6
	3H	25.6	27.0	25.9	27.3	27.7	25.6	27.0	25.9	27.3	27.7
	4H	26.5	27.8	26.9	28.2	28.5	26.5	27.8	26.9	28.2	28.5
	6H	27.2	28.5	27.6	28.8	29.2	27.2	28.5	27.6	28.8	29.2
	8H	27.5	28.7	27.9	29.1	29.5	27.5	28.7	27.9	29.1	29.5
	12H	27.6	28.8	28.1	29.2	29.6	27.6	28.8	28.1	29.2	29.6

UGR Viewed Endwise

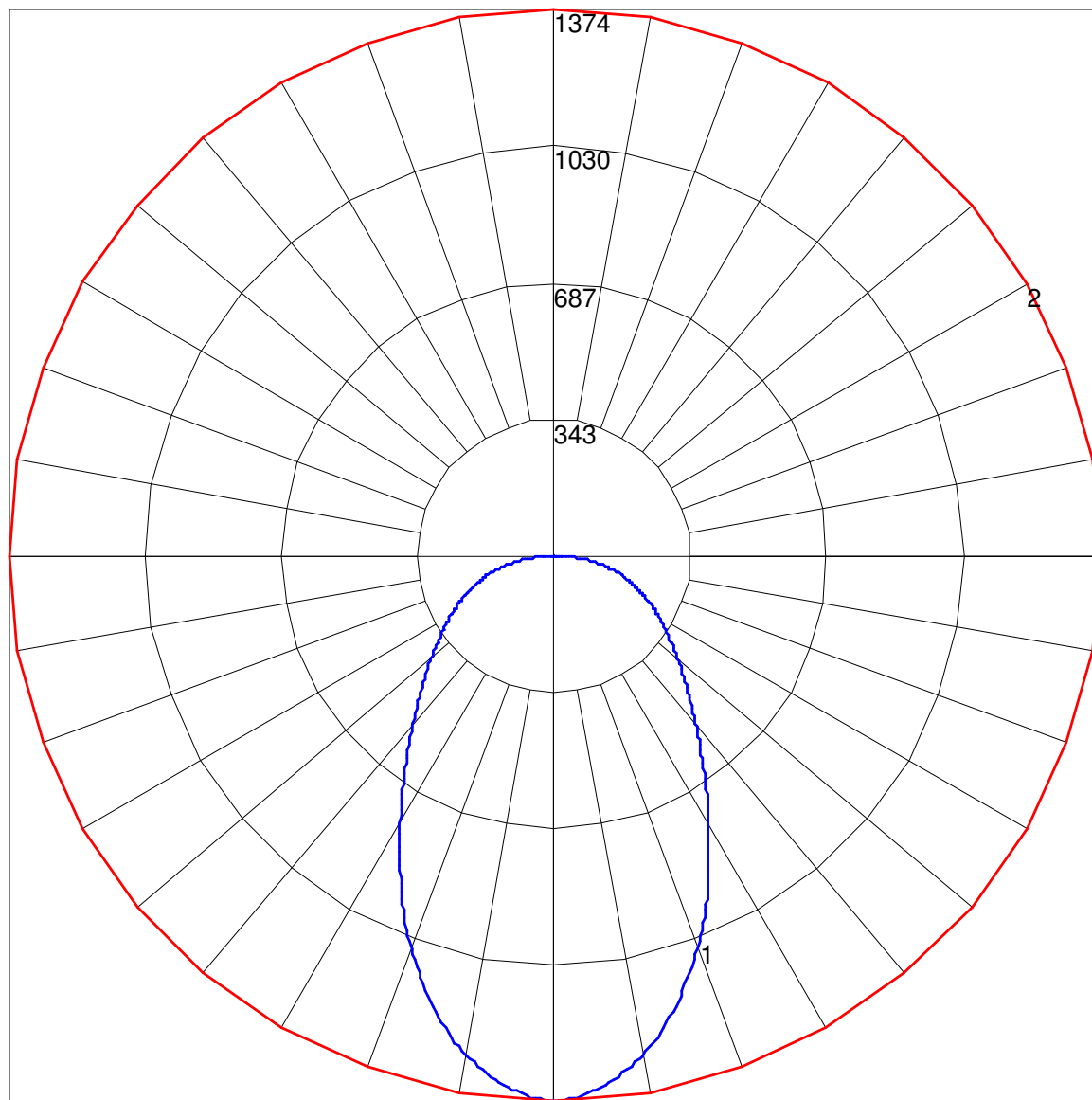
4H	2H	24.1	25.5	24.5	25.8	26.2	24.1	25.5	24.5	25.8	26.2
	3H	26.5	27.6	26.9	28.0	28.4	26.5	27.6	26.9	28.0	28.4
	4H	27.6	28.6	28.0	29.0	29.4	27.6	28.6	28.0	29.0	29.4
	6H	28.5	29.4	28.9	29.8	30.3	28.5	29.4	28.9	29.8	30.3
	8H	28.8	29.6	29.3	30.1	30.5	28.8	29.6	29.3	30.1	30.5
	12H	29.0	29.8	29.5	30.2	30.7	29.0	29.8	29.5	30.2	30.7

8H	4H	28.0	28.8	28.5	29.3	29.7	28.0	28.8	28.5	29.3	29.7
	6H	29.1	29.7	29.6	30.2	30.7	29.1	29.7	29.6	30.2	30.7
	8H	29.5	30.1	30.0	30.6	31.1	29.5	30.1	30.0	30.6	31.1
	12H	29.8	30.3	30.3	30.8	31.4	29.8	30.3	30.3	30.8	31.4

12H	4H	28.0	28.8	28.5	29.3	29.7	28.0	28.8	28.5	29.3	29.7
	6H	29.2	29.8	29.7	30.2	30.8	29.2	29.8	29.7	30.2	30.8
	8H	29.6	30.2	30.1	30.7	31.2	29.6	30.2	30.1	30.7	31.2

Maximum UGR = 31.4

POLAR GRAPH



Maximum Candela = 1373.961 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.)