



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L40-840-XXX-DIM-UNV-RW-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.12  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 05-30-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6CR-TL-L40-840-xxx-DIM-UNV-RW-CS-xx  
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight  
 [\_SEARCH\_MOUNTING] Surface

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2612
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	38
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	60410	60410	60410
55	48778	48778	48778
65	31555	31555	31555
75	17596	17596	17596
85	9040	9040	9040

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CANDELA TABULATION

	<u>0</u>
0.0	2097.878
0.5	2097.878
1.0	2095.905
1.5	2091.958
2.0	2088.011
2.5	2084.063
3.0	2078.143
3.5	2072.222
4.0	2066.302
4.5	2058.407
5.0	2052.487
5.5	2044.593
6.0	2036.698
6.5	2028.804
7.0	2020.910
7.5	2013.016
8.0	2005.122
8.5	1995.254
9.0	1987.360
9.5	1979.466
10.0	1971.966
10.5	1963.875
11.0	1955.586
11.5	1947.494
12.0	1939.797
12.5	1932.101
13.0	1924.404
13.5	1916.509
14.0	1908.615
14.5	1900.721
15.0	1892.630
15.5	1884.341
16.0	1875.657
16.5	1866.974
17.0	1858.093
17.5	1848.620
18.0	1838.554
18.5	1827.700
19.0	1817.240
19.5	1805.991
20.0	1793.755
20.5	1779.743
21.0	1763.560
21.5	1745.995
22.0	1725.865
22.5	1703.564
23.0	1678.303
23.5	1649.884
24.0	1618.702
24.5	1583.375
25.0	1543.904
25.5	1500.289
26.0	1453.121
26.5	1402.993

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CANDELA TABULATION - (Cont.)

27.0	1350.299
27.5	1296.816
28.0	1240.768
28.5	1185.311
29.0	1130.052
29.5	1074.793
30.0	1020.520
30.5	967.234
31.0	916.909
31.5	868.162
32.0	822.179
32.5	779.353
33.0	739.685
33.5	703.964
34.0	671.795
34.5	643.770
35.0	619.101
35.5	598.181
36.0	579.827
36.5	564.434
37.0	550.816
37.5	539.173
38.0	528.515
38.5	519.042
39.0	510.556
39.5	502.859
40.0	495.952
40.5	489.439
41.0	483.124
41.5	477.401
42.0	471.677
42.5	466.349
43.0	461.020
43.5	455.494
44.0	449.968
44.5	444.442
45.0	438.719
45.5	432.798
46.0	426.680
46.5	420.365
47.0	413.852
47.5	407.142
48.0	400.432
48.5	393.328
49.0	386.025
49.5	378.329
50.0	370.632
50.5	362.738
51.0	354.449
51.5	346.357
52.0	338.068
52.5	329.779
53.0	321.885
53.5	313.202
54.0	304.518
54.5	295.834

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CANDELA TABULATION - (Cont.)

55.0	287.348
55.5	278.665
56.0	270.178
56.5	261.889
57.0	253.601
57.5	245.312
58.0	237.220
58.5	229.326
59.0	221.432
59.5	213.735
60.0	206.038
60.5	198.539
61.0	191.237
61.5	183.934
62.0	177.027
62.5	169.922
63.0	163.212
63.5	156.305
64.0	149.792
64.5	143.279
65.0	136.964
65.5	130.649
66.0	124.531
66.5	118.610
67.0	112.887
67.5	107.163
68.0	101.638
68.5	96.112
69.0	90.783
69.5	85.652
70.0	80.915
70.5	76.376
71.0	72.232
71.5	68.285
72.0	64.535
72.5	60.983
73.0	57.628
73.5	54.667
74.0	51.707
74.5	49.141
75.0	46.773
75.5	44.602
76.0	42.234
76.5	40.063
77.0	37.892
77.5	35.721
78.0	33.748
78.5	31.577
79.0	29.603
79.5	27.630
80.0	25.656
80.5	23.683
81.0	21.906
81.5	20.130
82.0	18.157
82.5	16.578

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CANDELA TABULATION - (Cont.)

83.0	14.802
83.5	13.025
84.0	11.447
84.5	9.670
85.0	8.092
85.5	6.710
86.0	5.329
86.5	4.342
87.0	3.355
87.5	2.566
88.0	1.776
88.5	1.184
89.0	0.592
89.5	0.197
90.0	0.000
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  
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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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123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
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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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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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6CR-TL-L40-840-XXX-DIM-UNV-RW-CS-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	726.15	N.A.	27.80
0-30	1405.19	N.A.	53.80
0-40	1818.99	N.A.	69.60
0-60	2412.25	N.A.	92.40
0-80	2601.01	N.A.	99.60
0-90	2611.69	N.A.	100.00
10-90	2418.47	N.A.	92.60
20-40	1092.84	N.A.	41.80
20-50	1429.52	N.A.	54.70
40-70	730.48	N.A.	28.00
60-80	188.76	N.A.	7.20
70-80	51.55	N.A.	2.00
80-90	10.67	N.A.	0.40
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2611.69	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	193.22
10-20	532.93
20-30	679.04
30-40	413.80
40-50	336.68
50-60	256.59
60-70	137.21
70-80	51.55
80-90	10.67
90-100	0.00
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

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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

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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

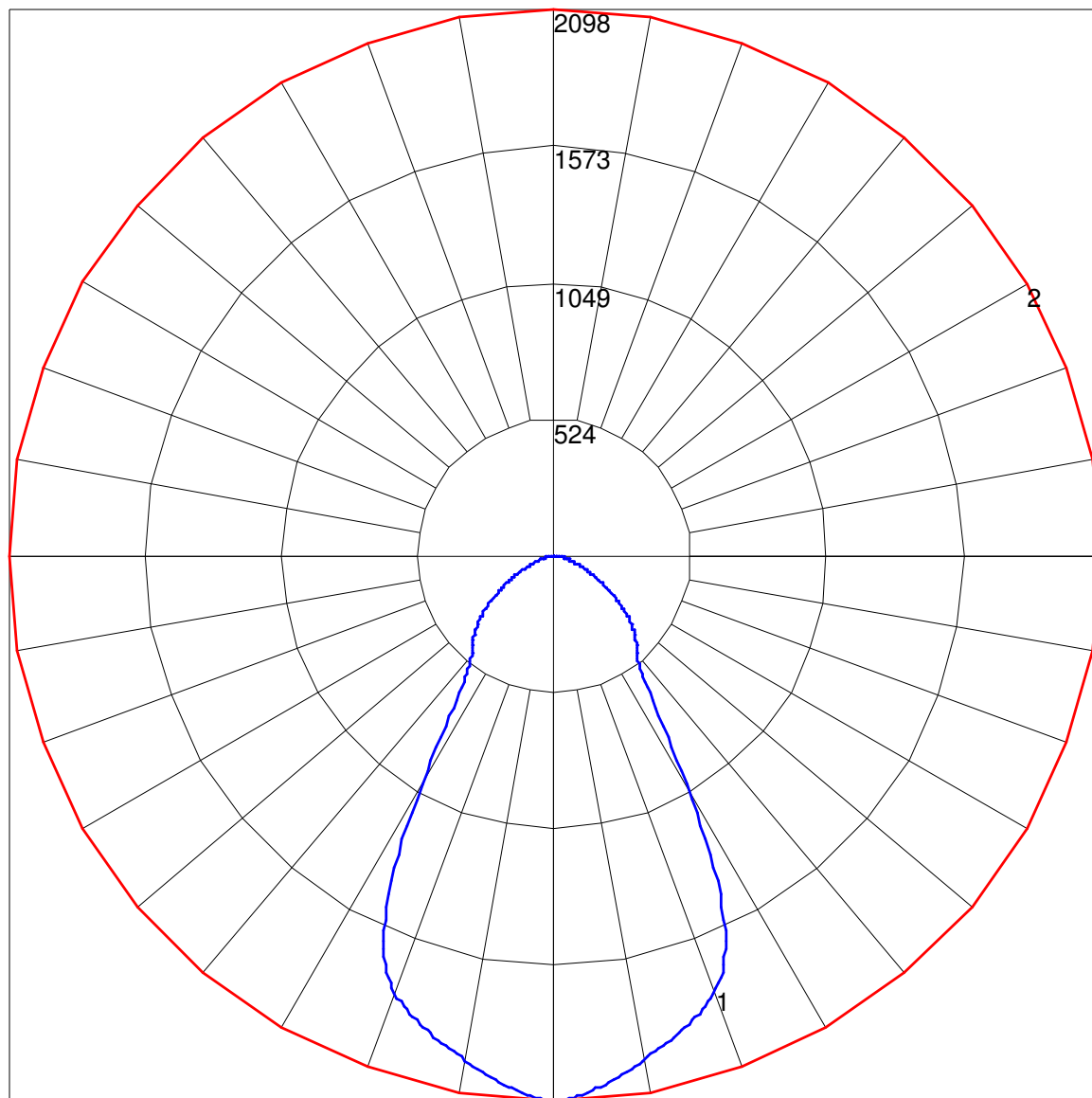
X=2H	Y=2H	23.0	24.3	23.4	24.6	24.9	23.0	24.3	23.4	24.6	24.9
	3H	23.8	24.9	24.1	25.3	25.6	23.8	24.9	24.1	25.3	25.6
	4H	24.0	25.0	24.4	25.4	25.8	24.0	25.0	24.4	25.4	25.8
	6H	24.1	25.0	24.5	25.4	25.8	24.1	25.0	24.5	25.4	25.8
	8H	24.1	25.0	24.5	25.4	25.8	24.1	25.0	24.5	25.4	25.8
	12H	24.0	24.9	24.5	25.3	25.8	24.0	24.9	24.5	25.3	25.8

### UGR Viewed Endwise

4H	2H	23.3	24.4	23.7	24.7	25.1	23.3	24.4	23.7	24.7	25.1
	3H	24.2	25.1	24.6	25.5	25.9	24.2	25.1	24.6	25.5	25.9
	4H	24.4	25.2	24.8	25.6	26.1	24.4	25.2	24.8	25.6	26.1
	6H	24.6	25.3	25.1	25.7	26.2	24.6	25.3	25.1	25.7	26.2
	8H	24.6	25.3	25.1	25.7	26.2	24.6	25.3	25.1	25.7	26.2
	12H	24.6	25.2	25.1	25.7	26.1	24.6	25.2	25.1	25.7	26.1
8H	4H	24.5	25.1	24.9	25.5	26.0	24.5	25.1	24.9	25.5	26.0
	6H	24.7	25.2	25.2	25.7	26.2	24.7	25.2	25.2	25.7	26.2
	8H	24.7	25.2	25.3	25.7	26.2	24.7	25.2	25.3	25.7	26.2
	12H	24.8	25.2	25.3	25.7	26.2	24.8	25.2	25.3	25.7	26.2
12H	4H	24.4	25.0	24.9	25.5	25.9	24.4	25.0	24.9	25.5	25.9
	6H	24.7	25.1	25.2	25.6	26.1	24.7	25.1	25.2	25.6	26.1
	8H	24.8	25.2	25.3	25.6	26.2	24.8	25.2	25.3	25.6	26.2

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 2097.878 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.)