



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L50-840-XXX-DIM-UNV-RW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L50-840-xxx-DIM-UNV-RW-WH-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	3326
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	45.2
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	76928	76928	76928
55	62116	62116	62116
65	40183	40183	40183
75	22407	22407	22407
85	11511	11511	11511

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CANDELA TABULATION

	<u>0</u>
0.0	2671.496
0.5	2671.496
1.0	2668.983
1.5	2663.957
2.0	2658.931
2.5	2653.904
3.0	2646.365
3.5	2638.825
4.0	2631.286
4.5	2621.233
5.0	2613.694
5.5	2603.641
6.0	2593.588
6.5	2583.536
7.0	2573.483
7.5	2563.430
8.0	2553.378
8.5	2540.812
9.0	2530.759
9.5	2520.706
10.0	2511.156
10.5	2500.852
11.0	2490.297
11.5	2479.993
12.0	2470.192
12.5	2460.390
13.0	2450.589
13.5	2440.536
14.0	2430.484
14.5	2420.431
15.0	2410.127
15.5	2399.572
16.0	2388.514
16.5	2377.456
17.0	2366.147
17.5	2354.083
18.0	2341.266
18.5	2327.444
19.0	2314.124
19.5	2299.799
20.0	2284.217
20.5	2266.374
21.0	2245.766
21.5	2223.399
22.0	2197.764
22.5	2169.366
23.0	2137.197
23.5	2101.008
24.0	2061.299
24.5	2016.314
25.0	1966.050
25.5	1910.509
26.0	1850.445
26.5	1786.610

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CANDELA TABULATION - (Cont.)

27.0	1719.509
27.5	1651.402
28.0	1580.028
28.5	1509.408
29.0	1439.039
29.5	1368.671
30.0	1299.559
30.5	1231.703
31.0	1167.617
31.5	1105.542
32.0	1046.985
32.5	992.450
33.0	941.935
33.5	896.447
34.0	855.482
34.5	819.795
35.0	788.380
35.5	761.741
36.0	738.368
36.5	718.766
37.0	701.425
37.5	686.597
38.0	673.026
38.5	660.963
39.0	650.156
39.5	640.355
40.0	631.559
40.5	623.265
41.0	615.223
41.5	607.935
42.0	600.647
42.5	593.861
43.0	587.076
43.5	580.039
44.0	573.002
44.5	565.965
45.0	558.677
45.5	551.138
46.0	543.347
46.5	535.305
47.0	527.011
47.5	518.466
48.0	509.922
48.5	500.874
49.0	491.575
49.5	481.774
50.0	471.973
50.5	461.920
51.0	451.365
51.5	441.061
52.0	430.505
52.5	419.950
53.0	409.898
53.5	398.840
54.0	387.782
54.5	376.724

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L50-840-XXX-DIM-UNV-RW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

55.0	365.917
55.5	354.859
56.0	344.053
56.5	333.497
57.0	322.942
57.5	312.387
58.0	302.083
58.5	292.030
59.0	281.977
59.5	272.176
60.0	262.375
60.5	252.825
61.0	243.526
61.5	234.227
62.0	225.431
62.5	216.384
63.0	207.839
63.5	199.043
64.0	190.749
64.5	182.456
65.0	174.414
65.5	166.372
66.0	158.581
66.5	151.041
67.0	143.753
67.5	136.465
68.0	129.428
68.5	122.391
69.0	115.606
69.5	109.071
70.0	103.040
70.5	97.260
71.0	91.982
71.5	86.956
72.0	82.181
72.5	77.657
73.0	73.384
73.5	69.615
74.0	65.845
74.5	62.578
75.0	59.562
75.5	56.798
76.0	53.782
76.5	51.017
77.0	48.253
77.5	45.488
78.0	42.975
78.5	40.211
79.0	37.698
79.5	35.184
80.0	32.671
80.5	30.158
81.0	27.896
81.5	25.634
82.0	23.121
82.5	21.111

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CANDELA TABULATION - (Cont.)

83.0	18.849
83.5	16.587
84.0	14.576
84.5	12.315
85.0	10.304
85.5	8.545
86.0	6.786
86.5	5.529
87.0	4.272
87.5	3.267
88.0	2.262
88.5	1.508
89.0	0.754
89.5	0.251
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
PHOTOMETRIC FILENAME : 6CR-TL-L50-840-XXX-DIM-UNV-RW-WH-XX_.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

IES INDOOR REPORT
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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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PHOTOMETRIC FILENAME : 6CR-TL-L50-840-XXX-DIM-UNV-RW-WH-XX_.IES

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	924.70	N.A.	27.80
0-30	1789.41	N.A.	53.80
0-40	2316.35	N.A.	69.60
0-60	3071.83	N.A.	92.40
0-80	3312.2	N.A.	99.60
0-90	3325.8	N.A.	100.00
10-90	3079.75	N.A.	92.60
20-40	1391.65	N.A.	41.80
20-50	1820.39	N.A.	54.70
40-70	930.21	N.A.	28.00
60-80	240.37	N.A.	7.20
70-80	65.64	N.A.	2.00
80-90	13.59	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	3325.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	246.05
10-20	678.65
20-30	864.71
30-40	526.95
40-50	428.73
50-60	326.74
60-70	174.73
70-80	65.64
80-90	13.59
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

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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	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	79	69	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

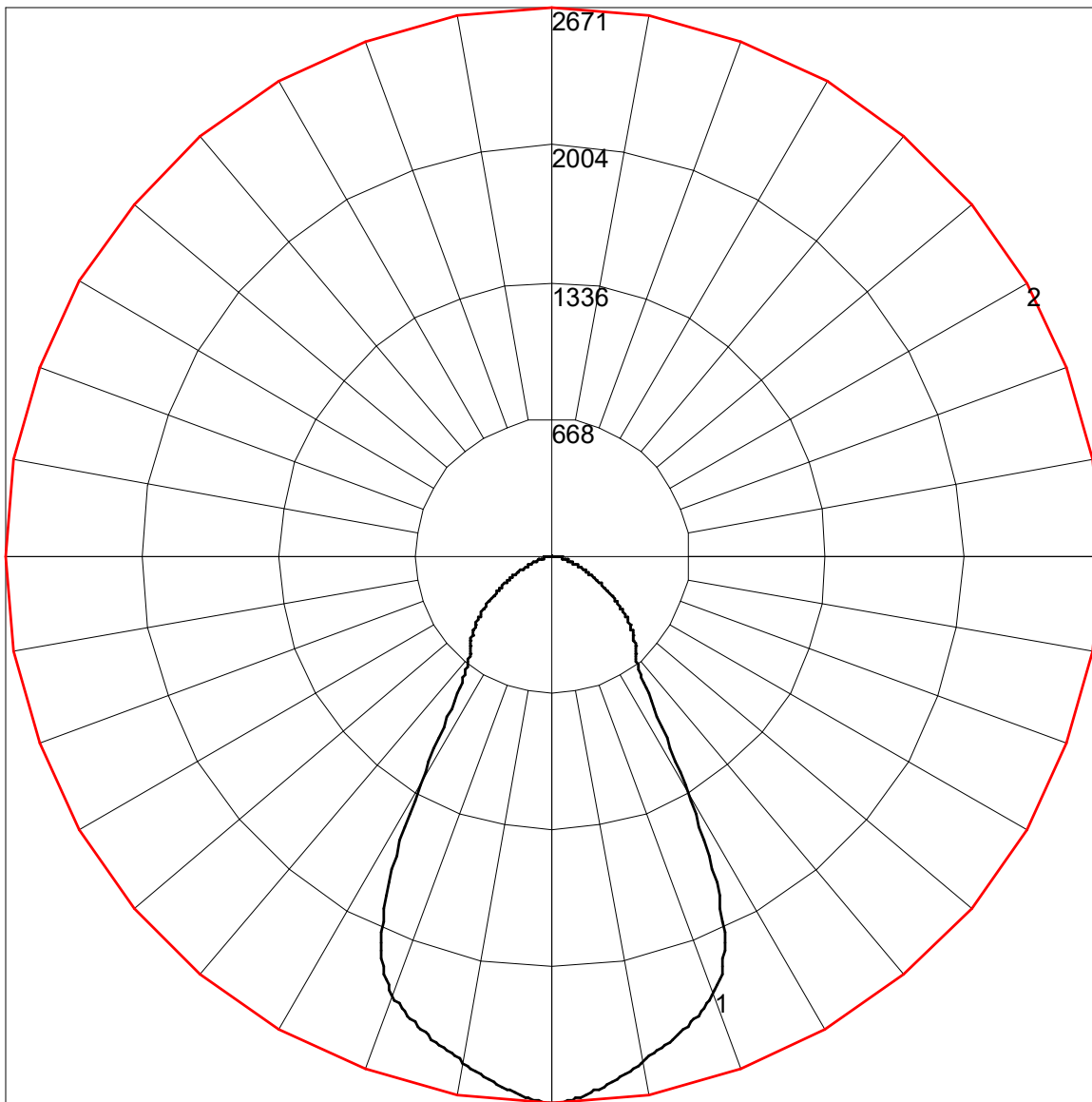
X=2H	Y=2H	23.8	25.1	24.2	25.4	25.7	23.8	25.1	24.2	25.4	25.7
	3H	24.6	25.7	24.9	26.1	26.4	24.6	25.7	24.9	26.1	26.4
	4H	24.7	25.8	25.1	26.2	26.5	24.7	25.8	25.1	26.2	26.5
	6H	24.9	25.8	25.3	26.2	26.6	24.9	25.8	25.3	26.2	26.6
	8H	24.9	25.8	25.3	26.2	26.6	24.9	25.8	25.3	26.2	26.6
	12H	24.8	25.7	25.3	26.1	26.6	24.8	25.7	25.3	26.1	26.6

UGR Viewed Endwise

4H	2H	24.1	25.2	24.5	25.5	25.9	24.1	25.2	24.5	25.5	25.9
	3H	25.0	25.9	25.4	26.3	26.7	25.0	25.9	25.4	26.3	26.7
	4H	25.2	26.0	25.6	26.4	26.9	25.2	26.0	25.6	26.4	26.9
	6H	25.4	26.1	25.9	26.5	27.0	25.4	26.1	25.9	26.5	27.0
	8H	25.4	26.1	25.9	26.5	27.0	25.4	26.1	25.9	26.5	27.0
	12H	25.4	26.0	25.9	26.5	26.9	25.4	26.0	25.9	26.5	26.9
8H	4H	25.3	25.9	25.7	26.3	26.8	25.3	25.9	25.7	26.3	26.8
	6H	25.5	26.0	26.0	26.5	27.0	25.5	26.0	26.0	26.5	27.0
	8H	25.5	26.0	26.1	26.5	27.0	25.5	26.0	26.1	26.5	27.0
	12H	25.6	26.0	26.1	26.5	27.0	25.6	26.0	26.1	26.5	27.0
12H	4H	25.2	25.8	25.7	26.3	26.7	25.2	25.8	25.7	26.3	26.7
	6H	25.5	25.9	26.0	26.4	26.9	25.5	25.9	26.0	26.4	26.9
	8H	25.6	26.0	26.1	26.4	27.0	25.6	26.0	26.1	26.4	27.0

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 2671.496 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)