



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L60-835-XXX-DIM-UNV-LW-WH-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.07  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUE DATE] 28-JAN-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6CR-TL-L60-835-xxx-DIM-UNV-LW-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	4041
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	58.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	111516	111516	111516
55	91633	91633	91633
65	67036	67036	67036
75	46407	46407	46407
85	25298	25298	25298

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CANDELA TABULATION

	<u>0</u>
0.0	2838.668
0.5	2837.771
1.0	2835.977
1.5	2833.586
2.0	2831.194
2.5	2828.503
3.0	2824.916
3.5	2822.823
4.0	2821.328
4.5	2820.431
5.0	2819.235
5.5	2818.039
6.0	2817.142
6.5	2815.947
7.0	2815.050
7.5	2814.452
8.0	2814.153
8.5	2813.256
9.0	2812.359
9.5	2810.565
10.0	2809.369
10.5	2807.277
11.0	2805.184
11.5	2802.493
12.0	2799.504
12.5	2795.916
13.0	2791.731
13.5	2786.947
14.0	2780.968
14.5	2773.793
15.0	2765.123
15.5	2754.659
16.0	2742.999
16.5	2729.247
17.0	2714.299
17.5	2697.557
18.0	2677.825
18.5	2657.495
19.0	2635.372
19.5	2610.558
20.0	2583.352
20.5	2553.755
21.0	2521.766
21.5	2487.385
22.0	2449.416
22.5	2409.056
23.0	2365.706
23.5	2319.068
24.0	2268.842
24.5	2215.327
25.0	2157.328
25.5	2096.638
26.0	2031.763
26.5	1963.001

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CANDELA TABULATION - (Cont.)

27.0	1891.847
27.5	1817.704
28.0	1742.365
28.5	1666.727
29.0	1592.584
29.5	1519.936
30.0	1449.978
30.5	1384.206
31.0	1322.619
31.5	1266.414
32.0	1215.291
32.5	1169.250
33.0	1128.292
33.5	1091.818
34.0	1059.231
34.5	1030.531
35.0	1004.521
35.5	980.903
36.0	959.975
36.5	940.243
37.0	922.305
37.5	905.563
38.0	890.017
38.5	875.069
39.0	861.317
39.5	847.863
40.0	835.307
40.5	822.750
41.0	810.792
41.5	799.132
42.0	788.070
42.5	777.009
43.0	765.947
43.5	754.885
44.0	743.824
44.5	732.762
45.0	721.700
45.5	710.639
46.0	699.577
46.5	688.515
47.0	676.856
47.5	665.196
48.0	653.536
48.5	641.578
49.0	629.320
49.5	617.063
50.0	605.104
50.5	592.847
51.0	580.589
51.5	568.332
52.0	556.373
52.5	544.414
53.0	532.157
53.5	519.600
54.0	506.745
54.5	493.889

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CANDELA TABULATION - (Cont.)

55.0	481.034
55.5	468.178
56.0	455.622
56.5	443.364
57.0	431.107
57.5	418.849
58.0	406.891
58.5	395.231
59.0	383.571
59.5	372.211
60.0	361.149
60.5	350.087
61.0	339.325
61.5	328.861
62.0	318.397
62.5	307.933
63.0	297.948
63.5	288.022
64.0	278.276
64.5	268.679
65.0	259.292
65.5	250.144
66.0	241.115
66.5	232.325
67.0	223.745
67.5	215.314
68.0	207.153
68.5	199.170
69.0	191.188
69.5	183.475
70.0	175.971
70.5	168.586
71.0	161.381
71.5	154.355
72.0	147.569
72.5	140.872
73.0	134.355
73.5	128.017
74.0	121.798
74.5	115.789
75.0	109.929
75.5	104.249
76.0	98.688
76.5	93.277
77.0	88.105
77.5	82.963
78.0	78.000
78.5	73.187
79.0	68.463
79.5	63.919
80.0	59.464
80.5	55.129
81.0	50.854
81.5	46.698
82.0	42.632
82.5	38.686

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CANDELA TABULATION - (Cont.)

83.0	34.770
83.5	30.973
84.0	27.266
84.5	23.648
85.0	20.180
85.5	16.832
86.0	13.633
86.5	10.613
87.0	7.952
87.5	5.740
88.0	4.006
88.5	2.541
89.0	1.585
89.5	1.076
90.0	0.747
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-L60-835-XXX-DIM-UNV-LW-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
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122.0	0.000
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123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
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125.5	0.000
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130.5	0.000
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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



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1042.7	N.A.	25.80
0-30	2000.01	N.A.	49.50
0-40	2652.1	N.A.	65.60
0-60	3637.82	N.A.	90.00
0-80	4015.68	N.A.	99.40
0-90	4040.96	N.A.	100.00
10-90	3772.08	N.A.	93.30
20-40	1609.4	N.A.	39.80
20-50	2165.21	N.A.	53.60
40-70	1244.98	N.A.	30.80
60-80	377.86	N.A.	9.40
70-80	118.60	N.A.	2.90
80-90	25.27	N.A.	0.60
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	4040.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	268.88
10-20	773.82
20-30	957.31
30-40	652.09
40-50	555.80
50-60	429.91
60-70	259.27
70-80	118.60
80-90	25.27
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	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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

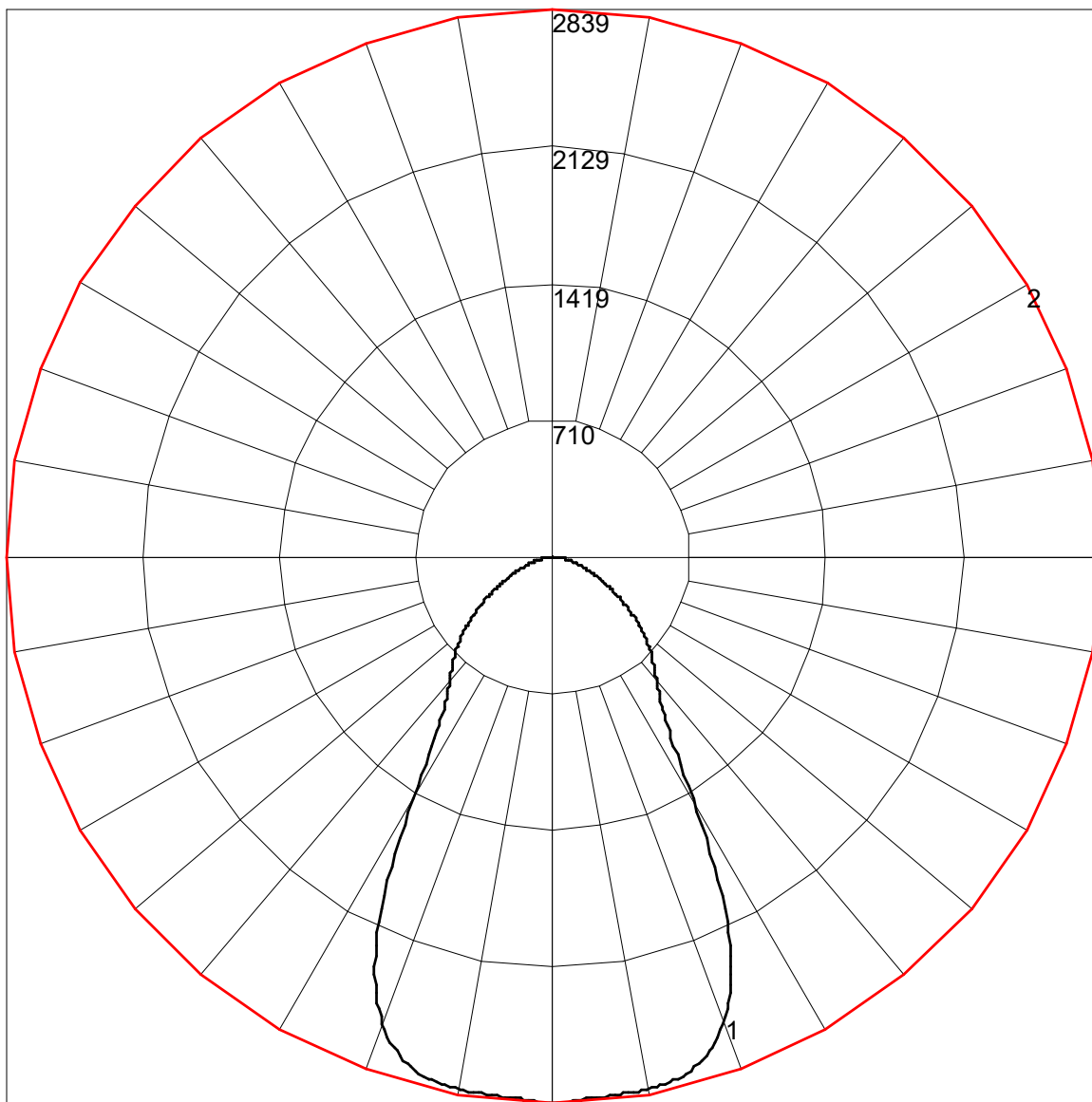
X=2H	Y=2H	25.5	26.9	25.9	27.2	27.5	25.5	26.9	25.9	27.2	27.5
	3H	26.6	27.8	27.0	28.2	28.5	26.6	27.8	27.0	28.2	28.5
	4H	27.0	28.1	27.4	28.5	28.8	27.0	28.1	27.4	28.5	28.8
	6H	27.2	28.2	27.6	28.6	29.0	27.2	28.2	27.6	28.6	29.0
	8H	27.2	28.2	27.7	28.6	29.0	27.2	28.2	27.7	28.6	29.0
	12H	27.2	28.2	27.7	28.6	29.0	27.2	28.2	27.7	28.6	29.0

### UGR Viewed Endwise

4H	2H	25.9	27.0	26.3	27.4	27.7	25.9	27.0	26.3	27.4	27.7
	3H	27.2	28.1	27.6	28.5	28.9	27.2	28.1	27.6	28.5	28.9
	4H	27.6	28.5	28.0	28.9	29.3	27.6	28.5	28.0	28.9	29.3
	6H	27.9	28.7	28.4	29.1	29.6	27.9	28.7	28.4	29.1	29.6
	8H	28.0	28.7	28.5	29.1	29.6	28.0	28.7	28.5	29.1	29.6
	12H	28.0	28.6	28.5	29.1	29.6	28.0	28.6	28.5	29.1	29.6
8H	4H	27.7	28.4	28.2	28.9	29.3	27.7	28.4	28.2	28.9	29.3
	6H	28.1	28.7	28.6	29.2	29.7	28.1	28.7	28.6	29.2	29.7
	8H	28.2	28.7	28.8	29.3	29.7	28.2	28.7	28.8	29.3	29.7
	12H	28.3	28.8	28.8	29.2	29.8	28.3	28.8	28.8	29.2	29.8
12H	4H	27.7	28.3	28.2	28.8	29.3	27.7	28.3	28.2	28.8	29.3
	6H	28.1	28.6	28.7	29.1	29.6	28.1	28.6	28.7	29.1	29.6
	8H	28.3	28.7	28.8	29.2	29.8	28.3	28.7	28.8	29.2	29.8

Maximum UGR = 29.8

POLAR GRAPH



Maximum Candela = 2838.668 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.)