



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-835-XXX-DIM-UNV-LW-WH-AD-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.11

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L10-835-xxx-DIM-UNV-LW-WH-AD-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	660
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
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	23824	23824	23824
55	20335	20335	20335
65	17345	17345	17345
75	14343	14343	14343
85	8876	8876	8876

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CANDELA TABULATION

	<u>0</u>
0.0	277.764
0.5	277.715
1.0	277.566
1.5	277.418
2.0	277.121
2.5	276.824
3.0	276.428
3.5	276.032
4.0	275.635
4.5	275.239
5.0	274.893
5.5	274.497
6.0	274.101
6.5	273.704
7.0	273.259
7.5	272.764
8.0	272.269
8.5	271.773
9.0	271.229
9.5	270.684
10.0	270.090
10.5	269.496
11.0	268.852
11.5	268.159
12.0	267.466
12.5	266.723
13.0	265.931
13.5	265.089
14.0	264.198
14.5	263.257
15.0	262.267
15.5	261.277
16.0	260.237
16.5	259.247
17.0	258.158
17.5	257.068
18.0	255.979
18.5	254.890
19.0	253.800
19.5	252.711
20.0	251.622
20.5	250.533
21.0	249.394
21.5	248.206
22.0	246.968
22.5	245.581
23.0	244.195
23.5	242.660
24.0	241.125
24.5	239.491
25.0	237.808
25.5	236.125
26.0	234.342
26.5	232.560

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	230.728
<b>27.5</b>	228.846
<b>28.0</b>	226.965
<b>28.5</b>	225.133
<b>29.0</b>	223.301
<b>29.5</b>	221.419
<b>30.0</b>	219.587
<b>30.5</b>	217.656
<b>31.0</b>	215.676
<b>31.5</b>	213.745
<b>32.0</b>	211.764
<b>32.5</b>	209.784
<b>33.0</b>	207.754
<b>33.5</b>	205.674
<b>34.0</b>	203.644
<b>34.5</b>	201.565
<b>35.0</b>	199.485
<b>35.5</b>	197.356
<b>36.0</b>	195.227
<b>36.5</b>	193.049
<b>37.0</b>	190.870
<b>37.5</b>	188.692
<b>38.0</b>	186.464
<b>38.5</b>	184.186
<b>39.0</b>	182.008
<b>39.5</b>	179.730
<b>40.0</b>	177.452
<b>40.5</b>	175.224
<b>41.0</b>	172.897
<b>41.5</b>	170.669
<b>42.0</b>	168.342
<b>42.5</b>	166.065
<b>43.0</b>	163.737
<b>43.5</b>	161.361
<b>44.0</b>	158.984
<b>44.5</b>	156.608
<b>45.0</b>	154.182
<b>45.5</b>	151.805
<b>46.0</b>	149.379
<b>46.5</b>	146.953
<b>47.0</b>	144.527
<b>47.5</b>	142.051
<b>48.0</b>	139.625
<b>48.5</b>	137.149
<b>49.0</b>	134.723
<b>49.5</b>	132.297
<b>50.0</b>	129.871
<b>50.5</b>	127.494
<b>51.0</b>	125.118
<b>51.5</b>	122.741
<b>52.0</b>	120.414
<b>52.5</b>	118.087
<b>53.0</b>	115.809
<b>53.5</b>	113.532
<b>54.0</b>	111.254
<b>54.5</b>	109.026

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CANDELA TABULATION - (Cont.)

55.0	106.749
55.5	104.521
56.0	102.491
56.5	100.312
57.0	98.233
57.5	96.153
58.0	94.074
58.5	91.994
59.0	90.014
59.5	88.033
60.0	86.053
60.5	84.171
61.0	82.240
61.5	80.260
62.0	78.329
62.5	76.398
63.0	74.516
63.5	72.635
64.0	70.753
64.5	68.921
65.0	67.089
65.5	65.257
66.0	63.425
66.5	61.643
67.0	59.910
67.5	58.177
68.0	56.444
68.5	54.761
69.0	53.077
69.5	51.394
70.0	49.710
70.5	48.077
71.0	46.453
71.5	44.838
72.0	43.244
72.5	41.675
73.0	40.110
73.5	38.560
74.0	37.025
74.5	35.490
75.0	33.975
75.5	32.480
76.0	30.985
76.5	29.504
77.0	28.044
77.5	26.588
78.0	25.152
78.5	23.741
79.0	22.340
79.5	20.954
80.0	19.602
80.5	18.270
81.0	16.953
81.5	15.646
82.0	14.364
82.5	13.101

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CANDELA TABULATION - (Cont.)

83.0	11.853
83.5	10.620
84.0	9.417
84.5	8.234
85.0	7.080
85.5	5.976
86.0	4.946
86.5	4.045
87.0	3.223
87.5	2.486
88.0	1.852
88.5	1.352
89.0	0.941
89.5	0.609
90.0	0.376
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
119.5	0.000
120.0	0.000
120.5	0.000
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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
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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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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
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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

IES INDOOR REPORT  
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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-L10-835-XXX-DIM-UNV-LW-WH-AD-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	100.01	N.A.	15.20
0-30	209.26	N.A.	31.70
0-40	333.81	N.A.	50.60
0-60	548.32	N.A.	83.10
0-80	651.00	N.A.	98.70
0-90	659.75	N.A.	100.00
10-90	633.66	N.A.	96.00
20-40	233.80	N.A.	35.40
20-50	352.54	N.A.	53.40
40-70	281.13	N.A.	42.60
60-80	102.67	N.A.	15.60
70-80	36.05	N.A.	5.50
80-90	8.75	N.A.	1.30
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	659.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	26.09
10-20	73.92
20-30	109.25
30-40	124.55
40-50	118.74
50-60	95.78
60-70	66.62
70-80	36.05
80-90	8.75
90-100	0.01
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	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53
5	78	66	57	51	76	65	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	44	39	50	44	39	49	43	39	37
8	63	49	41	36	61	49	41	35	47	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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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	21.3	22.9	21.7	23.2	23.5	21.3	22.9	21.7	23.2	23.5
	3H	22.9	24.3	23.3	24.7	25.0	22.9	24.3	23.3	24.7	25.0
	4H	23.5	24.8	23.9	25.2	25.5	23.5	24.8	23.9	25.2	25.5
	6H	23.9	25.1	24.3	25.5	25.9	23.9	25.1	24.3	25.5	25.9
	8H	24.0	25.2	24.4	25.6	26.0	24.0	25.2	24.4	25.6	26.0
	12H	24.1	25.2	24.5	25.6	26.0	24.1	25.2	24.5	25.6	26.0

### UGR Viewed Endwise

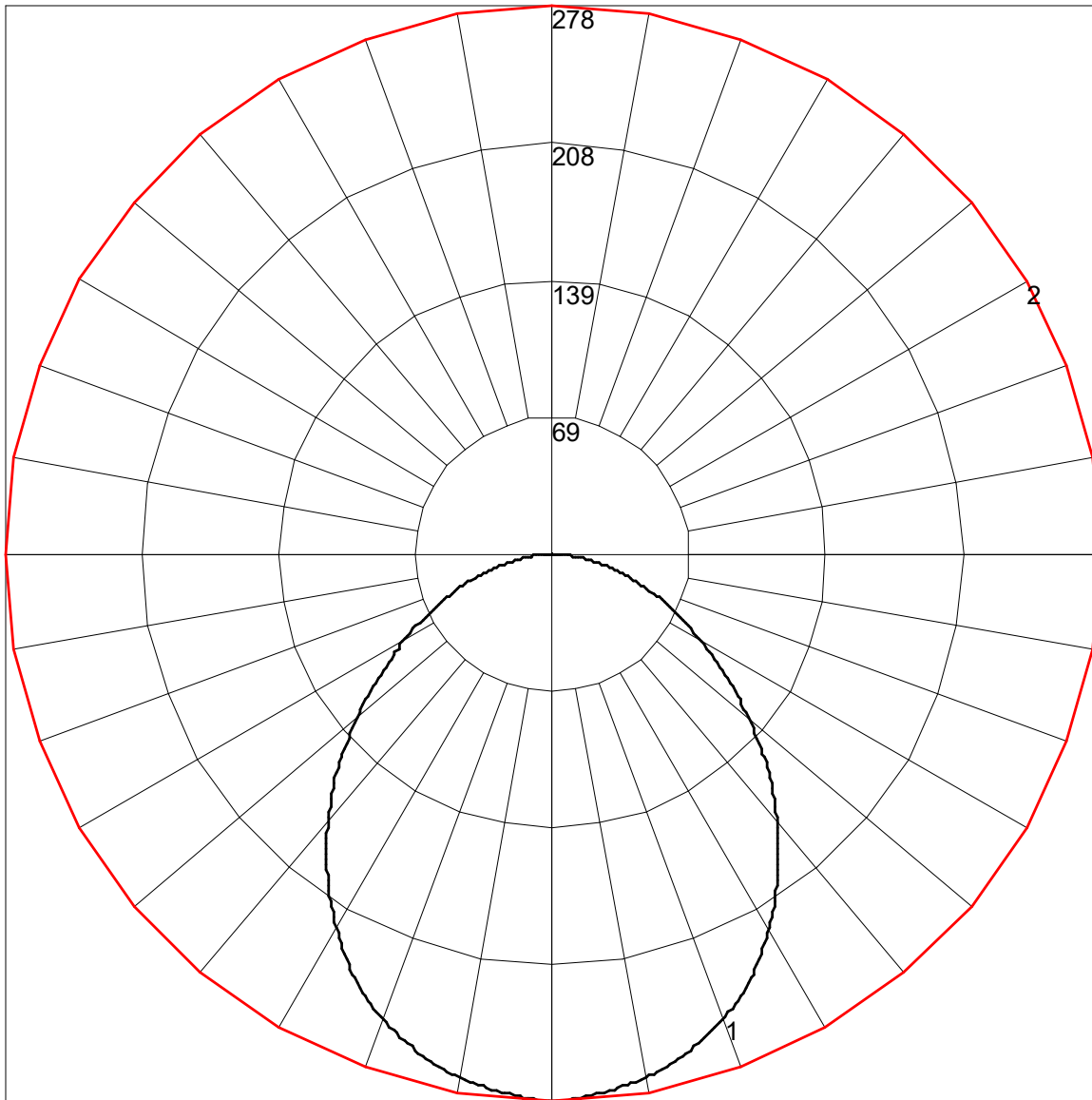
4H	2H	21.9	23.2	22.3	23.6	23.9	21.9	23.2	22.3	23.6	23.9
	3H	23.7	24.8	24.1	25.2	25.6	23.7	24.8	24.1	25.2	25.6
	4H	24.4	25.4	24.8	25.8	26.2	24.4	25.4	24.8	25.8	26.2
	6H	24.9	25.8	25.4	26.2	26.7	24.9	25.8	25.4	26.2	26.7
	8H	25.0	25.9	25.5	26.3	26.8	25.0	25.9	25.5	26.3	26.8
	12H	25.1	25.9	25.6	26.3	26.8	25.1	25.9	25.6	26.3	26.8

8H	4H	24.6	25.4	25.1	25.9	26.4	24.6	25.4	25.1	25.9	26.4
	6H	25.2	25.9	25.7	26.4	26.9	25.2	25.9	25.7	26.4	26.9
	8H	25.5	26.1	26.0	26.6	27.1	25.5	26.1	26.0	26.6	27.1
	12H	25.6	26.1	26.1	26.6	27.2	25.6	26.1	26.1	26.6	27.2

12H	4H	24.7	25.4	25.1	25.9	26.3	24.7	25.4	25.1	25.9	26.3
	6H	25.3	25.9	25.8	26.4	26.9	25.3	25.9	25.8	26.4	26.9
	8H	25.5	26.1	26.1	26.6	27.1	25.5	26.1	26.1	26.6	27.1

Maximum UGR = 27.2

POLAR GRAPH



Maximum Candela = 277.764 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.)