



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L15-840-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-L15-840-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	982
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	13.9
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	22720	22720	22720
55	18346	18346	18346
65	11868	11868	11868
75	6618	6618	6618
85	3400	3400	3400

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CANDELA TABULATION

	<u>0</u>
0.0	789.014
0.5	789.014
1.0	788.272
1.5	786.788
2.0	785.303
2.5	783.819
3.0	781.592
3.5	779.365
4.0	777.138
4.5	774.169
5.0	771.943
5.5	768.974
6.0	766.005
6.5	763.036
7.0	760.067
7.5	757.098
8.0	754.129
8.5	750.417
9.0	747.448
9.5	744.479
10.0	741.659
10.5	738.615
11.0	735.498
11.5	732.455
12.0	729.560
12.5	726.665
13.0	723.770
13.5	720.801
14.0	717.832
14.5	714.863
15.0	711.820
15.5	708.703
16.0	705.437
16.5	702.171
17.0	698.831
17.5	695.268
18.0	691.482
18.5	687.400
19.0	683.466
19.5	679.235
20.0	674.633
20.5	669.363
21.0	663.277
21.5	656.671
22.0	649.100
22.5	640.712
23.0	631.212
23.5	620.523
24.0	608.796
24.5	595.509
25.0	580.664
25.5	564.260
26.0	546.521
26.5	527.667

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**CANDELA TABULATION - (Cont.)**

27.0	507.849
27.5	487.734
28.0	466.654
28.5	445.797
29.0	425.014
29.5	404.231
30.0	383.819
30.5	363.778
31.0	344.851
31.5	326.517
32.0	309.222
32.5	293.116
33.0	278.196
33.5	264.761
34.0	252.663
34.5	242.123
35.0	232.845
35.5	224.977
36.0	218.074
36.5	212.284
37.0	207.163
37.5	202.783
38.0	198.775
38.5	195.212
39.0	192.021
39.5	189.126
40.0	186.528
40.5	184.079
41.0	181.703
41.5	179.551
42.0	177.398
42.5	175.394
43.0	173.390
43.5	171.312
44.0	169.234
44.5	167.155
45.0	165.003
45.5	162.776
46.0	160.475
46.5	158.100
47.0	155.650
47.5	153.127
48.0	150.603
48.5	147.931
49.0	145.185
49.5	142.290
50.0	139.395
50.5	136.426
51.0	133.309
51.5	130.265
52.0	127.148
52.5	124.030
53.0	121.061
53.5	117.795
54.0	114.530
54.5	111.264

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CANDELA TABULATION - (Cont.)

55.0	108.072
55.5	104.806
56.0	101.614
56.5	98.497
57.0	95.379
57.5	92.262
58.0	89.219
58.5	86.250
59.0	83.281
59.5	80.386
60.0	77.491
60.5	74.671
61.0	71.924
61.5	69.178
62.0	66.580
62.5	63.908
63.0	61.384
63.5	58.786
64.0	56.337
64.5	53.888
65.0	51.512
65.5	49.137
66.0	46.836
66.5	44.609
67.0	42.457
67.5	40.304
68.0	38.226
68.5	36.148
69.0	34.144
69.5	32.214
70.0	30.432
70.5	28.725
71.0	27.166
71.5	25.682
72.0	24.272
72.5	22.936
73.0	21.674
73.5	20.560
74.0	19.447
74.5	18.482
75.0	17.591
75.5	16.775
76.0	15.884
76.5	15.068
77.0	14.251
77.5	13.435
78.0	12.693
78.5	11.876
79.0	11.134
79.5	10.392
80.0	9.649
80.5	8.907
81.0	8.239
81.5	7.571
82.0	6.829
82.5	6.235

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CANDELA TABULATION - (Cont.)

83.0	5.567
83.5	4.899
84.0	4.305
84.5	3.637
85.0	3.043
85.5	2.524
86.0	2.004
86.5	1.633
87.0	1.262
87.5	0.965
88.0	0.668
88.5	0.445
89.0	0.223
89.5	0.074
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

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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
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119.0	0.000
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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
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156.0	0.000
156.5	0.000
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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	273.11	N.A.	27.80
0-30	528.49	N.A.	53.80
0-40	684.12	N.A.	69.60
0-60	907.25	N.A.	92.40
0-80	978.24	N.A.	99.60
0-90	982.26	N.A.	100.00
10-90	909.59	N.A.	92.60
20-40	411.02	N.A.	41.80
20-50	537.64	N.A.	54.70
40-70	274.73	N.A.	28.00
60-80	70.99	N.A.	7.20
70-80	19.39	N.A.	2.00
80-90	4.01	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	982.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	72.67
10-20	200.44
20-30	255.39
30-40	155.63
40-50	126.62
50-60	96.50
60-70	51.61
70-80	19.39
80-90	4.01
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	83	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	45	66	56	49	44	55	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	19.6	20.9	19.9	21.2	21.5	19.6	20.9	19.9	21.2	21.5
	3H	20.3	21.5	20.7	21.8	22.2	20.3	21.5	20.7	21.8	22.2
	4H	20.5	21.6	20.9	21.9	22.3	20.5	21.6	20.9	21.9	22.3
	6H	20.6	21.6	21.0	22.0	22.4	20.6	21.6	21.0	22.0	22.4
	8H	20.6	21.6	21.0	22.0	22.4	20.6	21.6	21.0	22.0	22.4
	12H	20.6	21.5	21.0	21.9	22.3	20.6	21.5	21.0	21.9	22.3

### UGR Viewed Endwise

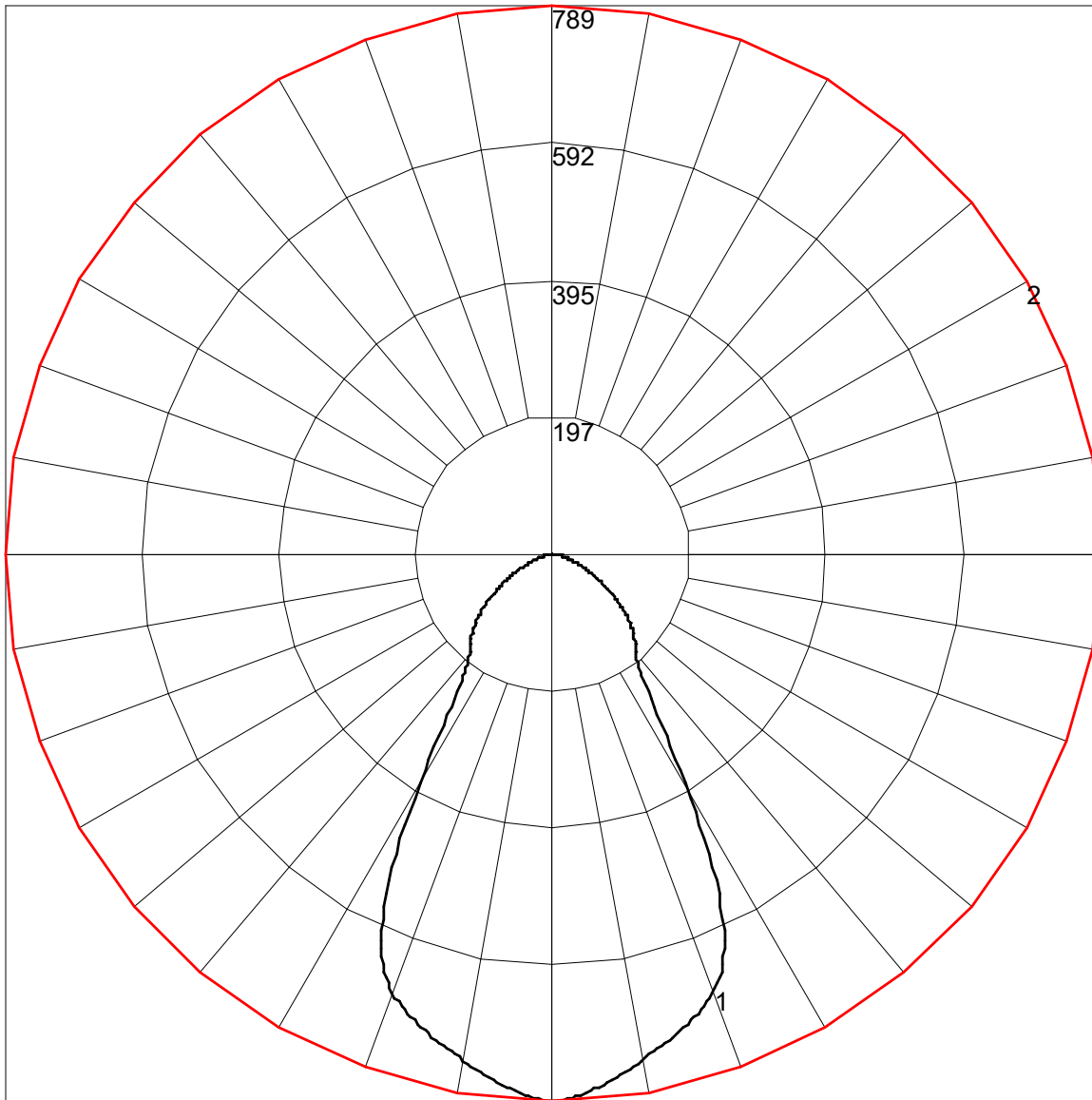
4H	2H	19.8	20.9	20.2	21.3	21.7	19.8	20.9	20.2	21.3	21.7
	3H	20.7	21.6	21.1	22.0	22.4	20.7	21.6	21.1	22.0	22.4
	4H	21.0	21.8	21.4	22.2	22.6	21.0	21.8	21.4	22.2	22.6
	6H	21.1	21.8	21.6	22.3	22.7	21.1	21.8	21.6	22.3	22.7
	8H	21.2	21.8	21.6	22.3	22.7	21.2	21.8	21.6	22.3	22.7
	12H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7

8H	4H	21.0	21.6	21.5	22.1	22.6	21.0	21.6	21.5	22.1	22.6
	6H	21.2	21.8	21.7	22.3	22.7	21.2	21.8	21.7	22.3	22.7
	8H	21.3	21.8	21.8	22.3	22.8	21.3	21.8	21.8	22.3	22.8
	12H	21.3	21.7	21.8	22.2	22.8	21.3	21.7	21.8	22.2	22.8

12H	4H	21.0	21.5	21.5	22.0	22.5	21.0	21.5	21.5	22.0	22.5
	6H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7
	8H	21.3	21.7	21.8	22.2	22.8	21.3	21.7	21.8	22.2	22.8

Maximum UGR = 22.8

POLAR GRAPH



Maximum Candela = 789.014 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.)