



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-927-XXX-DIM-UNV-LM-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.09

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L20-927-xxx-DIM-UNV-LM-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	1363
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	19.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.54
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	10343	10343	10343
55	8061	8061	8061
65	6737	6737	6737
75	5420	5420	5420
85	3238	3238	3238

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CANDELA TABULATION

	<u>0</u>
0.0	3526.781
0.5	3525.262
1.0	3519.944
1.5	3511.586
2.0	3500.950
2.5	3486.514
3.0	3469.800
3.5	3450.046
4.0	3427.254
4.5	3402.941
5.0	3375.590
5.5	3345.200
6.0	3311.771
6.5	3274.543
7.0	3234.276
7.5	3190.210
8.0	3142.346
8.5	3090.682
9.0	3035.980
9.5	2976.719
10.0	2912.900
10.5	2844.522
11.0	2773.105
11.5	2697.889
12.0	2618.115
12.5	2535.301
13.0	2448.689
13.5	2359.038
14.0	2265.589
14.5	2169.100
15.0	2071.851
15.5	1973.083
16.0	1874.315
16.5	1774.787
17.0	1676.019
17.5	1580.290
18.0	1485.320
18.5	1394.150
19.0	1306.778
19.5	1222.445
20.0	1142.671
20.5	1065.936
21.0	994.519
21.5	926.901
22.0	863.081
22.5	803.820
23.0	747.903
23.5	695.783
24.0	647.387
24.5	602.182
25.0	560.243
25.5	521.268
26.0	484.724
26.5	450.990

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**CANDELA TABULATION - (Cont.)**

27.0	419.537
27.5	390.742
28.0	363.923
28.5	339.155
29.0	316.438
29.5	295.241
30.0	275.563
30.5	257.405
31.0	240.614
31.5	225.191
32.0	210.908
32.5	197.764
33.0	185.684
33.5	174.516
34.0	164.335
34.5	154.914
35.0	146.405
35.5	138.503
36.0	131.286
36.5	124.676
37.0	118.598
37.5	113.052
38.0	108.037
38.5	103.403
39.0	99.148
39.5	95.273
40.0	91.702
40.5	88.359
41.0	85.244
41.5	82.433
42.0	79.774
42.5	77.267
43.0	74.988
43.5	72.785
44.0	70.733
44.5	68.834
45.0	66.934
45.5	65.187
46.0	63.591
46.5	61.996
47.0	60.476
47.5	59.109
48.0	57.665
48.5	56.374
49.0	55.082
49.5	53.791
50.0	52.651
50.5	51.511
51.0	50.448
51.5	49.308
52.0	48.244
52.5	47.257
53.0	46.193
53.5	45.205
54.0	44.218
54.5	43.230

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CANDELA TABULATION - (Cont.)

55.0	42.318
55.5	41.407
56.0	40.495
56.5	39.583
57.0	38.596
57.5	37.760
58.0	36.924
58.5	36.164
59.0	35.329
59.5	34.493
60.0	33.657
60.5	32.821
61.0	32.138
61.5	31.302
62.0	30.542
62.5	29.782
63.0	29.023
63.5	28.339
64.0	27.579
64.5	26.819
65.0	26.060
65.5	25.376
66.0	24.692
66.5	24.008
67.0	23.248
67.5	22.565
68.0	21.881
68.5	21.197
69.0	20.513
69.5	19.830
70.0	19.146
70.5	18.538
71.0	17.930
71.5	17.170
72.0	16.563
72.5	15.955
73.0	15.347
73.5	14.663
74.0	14.055
74.5	13.448
75.0	12.840
75.5	12.232
76.0	11.624
76.5	11.016
77.0	10.409
77.5	9.953
78.0	9.345
78.5	8.813
79.0	8.281
79.5	7.749
80.0	7.218
80.5	6.686
81.0	6.154
81.5	5.774
82.0	5.166
82.5	4.786

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CANDELA TABULATION - (Cont.)

83.0	4.255
83.5	3.875
84.0	3.419
84.5	2.963
85.0	2.583
85.5	2.127
86.0	1.823
86.5	1.444
87.0	1.216
87.5	0.988
88.0	0.760
88.5	0.608
89.0	0.456
89.5	0.304
90.0	0.228
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
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

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	862.01	N.A.	63.20
0-30	1132.13	N.A.	83.10
0-40	1229.5	N.A.	90.20
0-60	1320.27	N.A.	96.90
0-80	1359.85	N.A.	99.80
0-90	1363.06	N.A.	100.00
10-90	1055.26	N.A.	77.40
20-40	367.49	N.A.	27.00
20-50	420.22	N.A.	30.80
40-70	116.69	N.A.	8.60
60-80	39.57	N.A.	2.90
70-80	13.66	N.A.	1.00
80-90	3.21	N.A.	0.20
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	1363.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	307.80
10-20	554.21
20-30	270.12
30-40	97.37
40-50	52.73
50-60	38.04
60-70	25.92
70-80	13.66
80-90	3.21
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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	101	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	80	94	88	83	79	86	82	79	84	81	78	83	80	77	76
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72
7	89	81	76	72	88	80	75	72	79	74	71	78	74	71	77	73	71	69
8	86	77	72	69	84	77	72	69	76	71	68	75	71	68	74	70	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	72	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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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

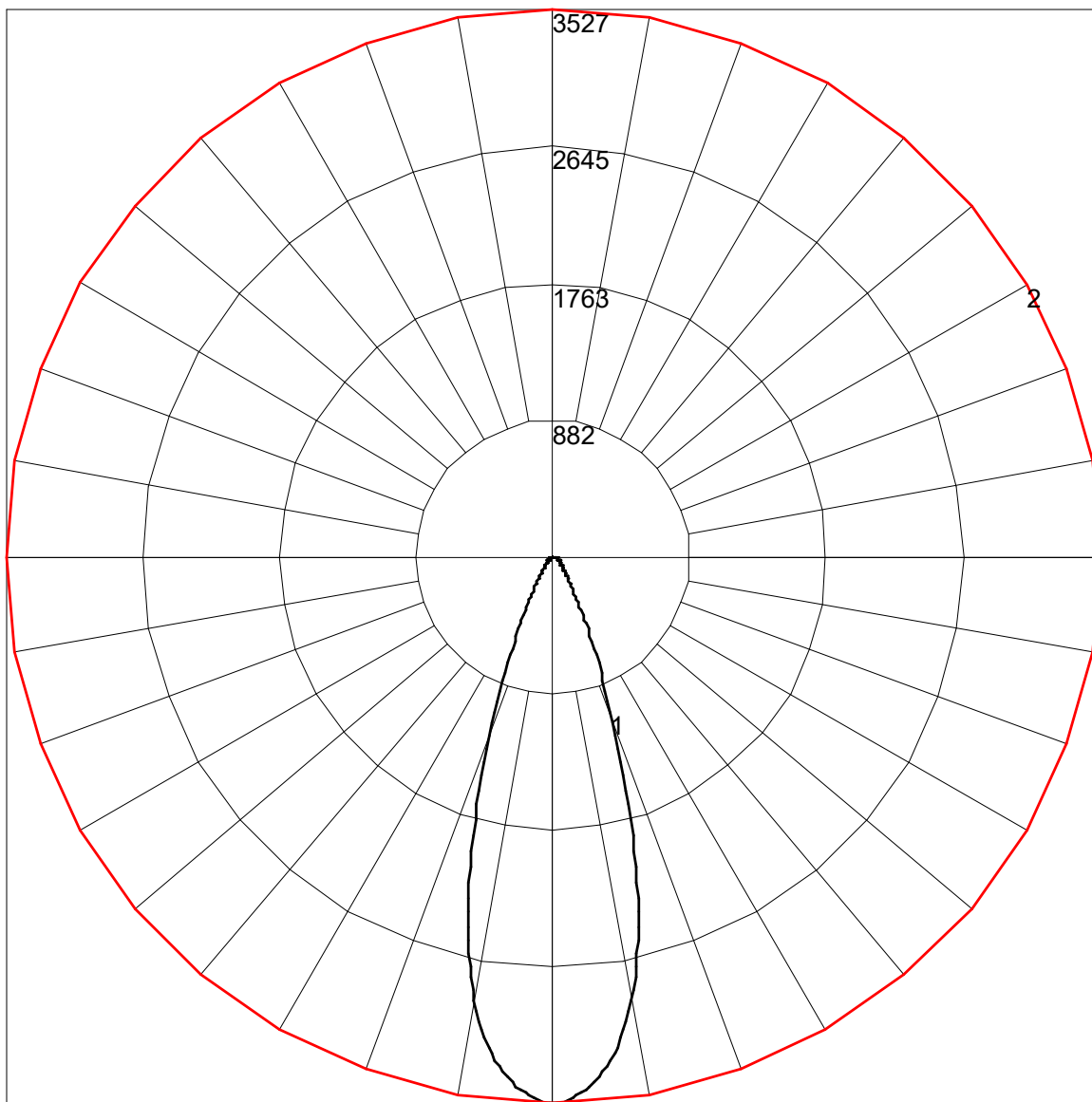
X=2H	Y=2H	12.9	14.0	13.3	14.3	14.6	12.9	14.0	13.3	14.3	14.6
	3H	14.4	15.3	14.8	15.6	16.0	14.4	15.3	14.8	15.6	16.0
	4H	14.9	15.7	15.3	16.1	16.5	14.9	15.7	15.3	16.1	16.5
	6H	15.2	16.0	15.6	16.4	16.8	15.2	16.0	15.6	16.4	16.8
	8H	15.3	16.0	15.7	16.4	16.8	15.3	16.0	15.7	16.4	16.8
	12H	15.3	16.0	15.8	16.4	16.8	15.3	16.0	15.8	16.4	16.8

### UGR Viewed Endwise

4H	2H	13.4	14.2	13.8	14.6	15.0	13.4	14.2	13.8	14.6	15.0
	3H	15.0	15.7	15.4	16.1	16.5	15.0	15.7	15.4	16.1	16.5
	4H	15.7	16.3	16.1	16.7	17.1	15.7	16.3	16.1	16.7	17.1
	6H	16.1	16.6	16.6	17.1	17.5	16.1	16.6	16.6	17.1	17.5
	8H	16.2	16.7	16.7	17.1	17.6	16.2	16.7	16.7	17.1	17.6
	12H	16.2	16.7	16.7	17.1	17.6	16.2	16.7	16.7	17.1	17.6
8H	4H	15.8	16.3	16.3	16.7	17.2	15.8	16.3	16.3	16.7	17.2
	6H	16.3	16.7	16.9	17.2	17.7	16.3	16.7	16.9	17.2	17.7
	8H	16.5	16.9	17.0	17.4	17.9	16.5	16.9	17.0	17.4	17.9
	12H	16.6	16.9	17.1	17.4	18.0	16.6	16.9	17.1	17.4	18.0
12H	4H	15.8	16.2	16.3	16.7	17.2	15.8	16.2	16.3	16.7	17.2
	6H	16.4	16.7	16.9	17.2	17.7	16.4	16.7	16.9	17.2	17.7
	8H	16.5	16.9	17.1	17.3	17.9	16.5	16.9	17.1	17.3	17.9

Maximum UGR = 18.0

POLAR GRAPH



Maximum Candela = 3526.781 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.)