



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-927-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 26-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L20-927-xxx-DIM-UNV-OM-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	1568
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	20.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
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	3893	3893	3893
55	1130	1130	1130
65	397	397	397
75	177	177	177
85	87	87	87

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CANDELA TABULATION

	<u>0</u>
0.0	3172.811
0.5	3175.161
1.0	3184.559
1.5	3193.175
2.0	3212.755
2.5	3225.286
3.0	3227.636
3.5	3228.419
4.0	3210.405
4.5	3186.126
5.0	3139.916
5.5	3081.175
6.0	3015.384
6.5	2941.762
7.0	2861.874
7.5	2778.853
8.0	2693.482
8.5	2608.895
9.0	2525.874
9.5	2445.203
10.0	2368.447
10.5	2296.391
11.0	2229.035
11.5	2165.594
12.0	2105.287
12.5	2048.895
13.0	1995.636
13.5	1944.727
14.0	1896.168
14.5	1851.524
15.0	1810.797
15.5	1774.769
16.0	1745.007
16.5	1718.377
17.0	1693.315
17.5	1671.384
18.0	1651.804
18.5	1635.357
19.0	1623.608
19.5	1613.426
20.0	1604.811
20.5	1594.629
21.0	1584.447
21.5	1573.482
22.0	1561.734
22.5	1546.853
23.0	1528.839
23.5	1506.909
24.0	1479.496
24.5	1443.468
25.0	1401.958
25.5	1358.098
26.0	1315.021
26.5	1267.245

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CANDELA TABULATION - (Cont.)

27.0	1217.119
27.5	1159.944
28.0	1094.937
28.5	1023.664
29.0	949.259
29.5	873.287
30.0	792.615
30.5	709.046
31.0	621.561
31.5	534.389
32.0	450.585
32.5	372.185
33.0	303.966
33.5	245.773
34.0	196.744
34.5	156.017
35.0	122.965
35.5	98.059
36.0	82.081
36.5	73.701
37.0	68.688
37.5	64.302
38.0	60.464
38.5	56.940
39.0	53.729
39.5	50.831
40.0	48.090
40.5	45.505
41.0	43.077
41.5	40.884
42.0	38.769
42.5	36.811
43.0	34.853
43.5	33.130
44.0	31.407
44.5	29.762
45.0	28.274
45.5	26.786
46.0	25.298
46.5	23.888
47.0	22.400
47.5	20.990
48.0	19.659
48.5	18.406
49.0	17.152
49.5	15.899
50.0	14.646
50.5	13.471
51.0	12.453
51.5	11.513
52.0	10.573
52.5	9.790
53.0	9.007
53.5	8.380
54.0	7.754
54.5	7.127

CANDELA TABULATION - (Cont.)

55.0	6.657
55.5	6.187
56.0	5.717
56.5	5.326
57.0	4.934
57.5	4.621
58.0	4.308
58.5	3.994
59.0	3.759
59.5	3.524
60.0	3.290
60.5	3.055
61.0	2.898
61.5	2.663
62.0	2.506
62.5	2.350
63.0	2.193
63.5	2.115
64.0	1.958
64.5	1.801
65.0	1.723
65.5	1.645
66.0	1.488
66.5	1.410
67.0	1.331
67.5	1.253
68.0	1.175
68.5	1.097
69.0	1.018
69.5	0.940
70.0	0.862
70.5	0.862
71.0	0.783
71.5	0.705
72.0	0.627
72.5	0.627
73.0	0.548
73.5	0.548
74.0	0.470
74.5	0.470
75.0	0.470
75.5	0.392
76.0	0.392
76.5	0.313
77.0	0.313
77.5	0.313
78.0	0.235
78.5	0.235
79.0	0.235
79.5	0.235
80.0	0.157
80.5	0.157
81.0	0.157
81.5	0.157
82.0	0.157
82.5	0.157

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CANDELA TABULATION - (Cont.)

83.0	0.157
83.5	0.078
84.0	0.078
84.5	0.078
85.0	0.078
85.5	0.078
86.0	0.078
86.5	0.078
87.0	0.078
87.5	0.078
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
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

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
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118.5	0.000
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123.5	0.000
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125.5	0.000
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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

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
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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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Zone	Lumens	%Lamp	%Fixt
0-20	790.93	N.A.	50.40
0-30	1396.96	N.A.	89.10
0-40	1536.86	N.A.	98.00
0-60	1565.66	N.A.	99.80
0-80	1567.96	N.A.	100.00
0-90	1568.05	N.A.	100.00
10-90	1296.37	N.A.	82.70
20-40	745.93	N.A.	47.60
20-50	768.19	N.A.	49.00
40-70	30.61	N.A.	2.00
60-80	2.29	N.A.	0.10
70-80	0.49	N.A.	0.00
80-90	0.09	N.A.	0.00
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	1568.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	271.68
10-20	519.24
20-30	606.04
30-40	139.90
40-50	22.26
50-60	6.54
60-70	1.81
70-80	0.49
80-90	0.09
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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	80	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	67	64	61	60

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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	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	3H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	4H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	6H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	8H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	12H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

UGR Viewed Endwise

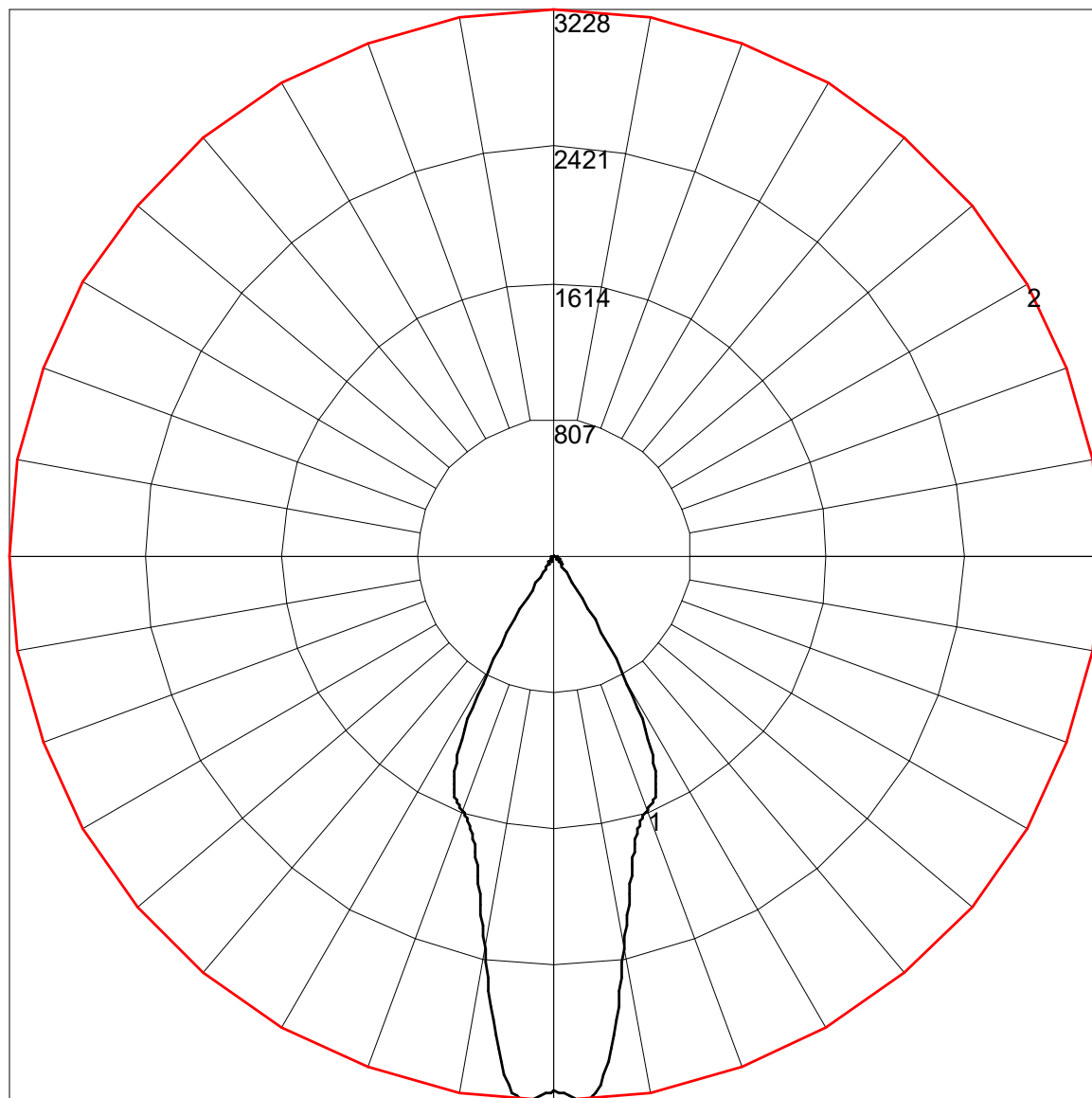
4H	2H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	3H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	4H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	6H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	8H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	12H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

8H	4H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	6H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	8H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	12H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

12H	4H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	6H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	8H	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

Maximum UGR = 1.6

POLAR GRAPH



Maximum Candela = 3228.419 Located At Horizontal Angle = 0, Vertical Angle = 3.5

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)