



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L15-927-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-L15-927-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	1002
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	13.9
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	7603	7603	7603
55	5926	5926	5926
65	4953	4953	4953
75	3985	3985	3985
85	2381	2381	2381

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CANDELA TABULATION

	<u>0</u>
0.0	2592.689
0.5	2591.572
1.0	2587.662
1.5	2581.518
2.0	2573.699
2.5	2563.087
3.0	2550.799
3.5	2536.278
4.0	2519.522
4.5	2501.649
5.0	2481.542
5.5	2459.201
6.0	2434.625
6.5	2407.258
7.0	2377.655
7.5	2345.261
8.0	2310.074
8.5	2272.094
9.0	2231.880
9.5	2188.314
10.0	2141.398
10.5	2091.130
11.0	2038.629
11.5	1983.334
12.0	1924.689
12.5	1863.809
13.0	1800.137
13.5	1734.231
14.0	1665.532
14.5	1594.599
15.0	1523.107
15.5	1450.498
16.0	1377.890
16.5	1304.722
17.0	1232.114
17.5	1161.739
18.0	1091.923
18.5	1024.900
19.0	960.669
19.5	898.672
20.0	840.027
20.5	783.615
21.0	731.114
21.5	681.405
22.0	634.488
22.5	590.923
23.0	549.815
23.5	511.500
24.0	475.922
24.5	442.690
25.0	411.859
25.5	383.206
26.0	356.341
26.5	331.542

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CANDELA TABULATION - (Cont.)

27.0	308.419
27.5	287.251
28.0	267.535
28.5	249.327
29.0	232.627
29.5	217.044
30.0	202.578
30.5	189.229
31.0	176.886
31.5	165.548
32.0	155.047
32.5	145.385
33.0	136.504
33.5	128.294
34.0	120.810
34.5	113.884
35.0	107.628
35.5	101.820
36.0	96.514
36.5	91.655
37.0	87.186
37.5	83.109
38.0	79.423
38.5	76.016
39.0	72.888
39.5	70.039
40.0	67.414
40.5	64.957
41.0	62.667
41.5	60.600
42.0	58.645
42.5	56.802
43.0	55.127
43.5	53.507
44.0	51.999
44.5	50.603
45.0	49.206
45.5	47.922
46.0	46.749
46.5	45.576
47.0	44.459
47.5	43.454
48.0	42.392
48.5	41.443
49.0	40.493
49.5	39.544
50.0	38.706
50.5	37.868
51.0	37.086
51.5	36.248
52.0	35.467
52.5	34.740
53.0	33.959
53.5	33.232
54.0	32.506
54.5	31.780

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CANDELA TABULATION - (Cont.)

55.0	31.110
55.5	30.440
56.0	29.770
56.5	29.099
57.0	28.373
57.5	27.759
58.0	27.144
58.5	26.586
59.0	25.972
59.5	25.357
60.0	24.743
60.5	24.128
61.0	23.626
61.5	23.011
62.0	22.453
62.5	21.894
63.0	21.336
63.5	20.833
64.0	20.275
64.5	19.716
65.0	19.158
65.5	18.655
66.0	18.152
66.5	17.649
67.0	17.091
67.5	16.588
68.0	16.086
68.5	15.583
69.0	15.080
69.5	14.578
70.0	14.075
70.5	13.628
71.0	13.181
71.5	12.623
72.0	12.176
72.5	11.729
73.0	11.282
73.5	10.780
74.0	10.333
74.5	9.886
75.0	9.439
75.5	8.992
76.0	8.545
76.5	8.099
77.0	7.652
77.5	7.317
78.0	6.870
78.5	6.479
79.0	6.088
79.5	5.697
80.0	5.306
80.5	4.915
81.0	4.524
81.5	4.245
82.0	3.798
82.5	3.519

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CANDELA TABULATION - (Cont.)

83.0	3.128
83.5	2.848
84.0	2.513
84.5	2.178
85.0	1.899
85.5	1.564
86.0	1.340
86.5	1.061
87.0	0.894
87.5	0.726
88.0	0.559
88.5	0.447
89.0	0.335
89.5	0.223
90.0	0.168
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
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

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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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Zone	Lumens	%Lamp	%Fixt
0-20	633.70	N.A.	63.20
0-30	832.28	N.A.	83.10
0-40	903.86	N.A.	90.20
0-60	970.59	N.A.	96.90
0-80	999.68	N.A.	99.80
0-90	1002.04	N.A.	100.00
10-90	775.77	N.A.	77.40
20-40	270.16	N.A.	27.00
20-50	308.92	N.A.	30.80
40-70	85.78	N.A.	8.60
60-80	29.09	N.A.	2.90
70-80	10.04	N.A.	1.00
80-90	2.36	N.A.	0.20
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	1002.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	226.28
10-20	407.42
20-30	198.58
30-40	71.58
40-50	38.77
50-60	27.96
60-70	19.05
70-80	10.04
80-90	2.36
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	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

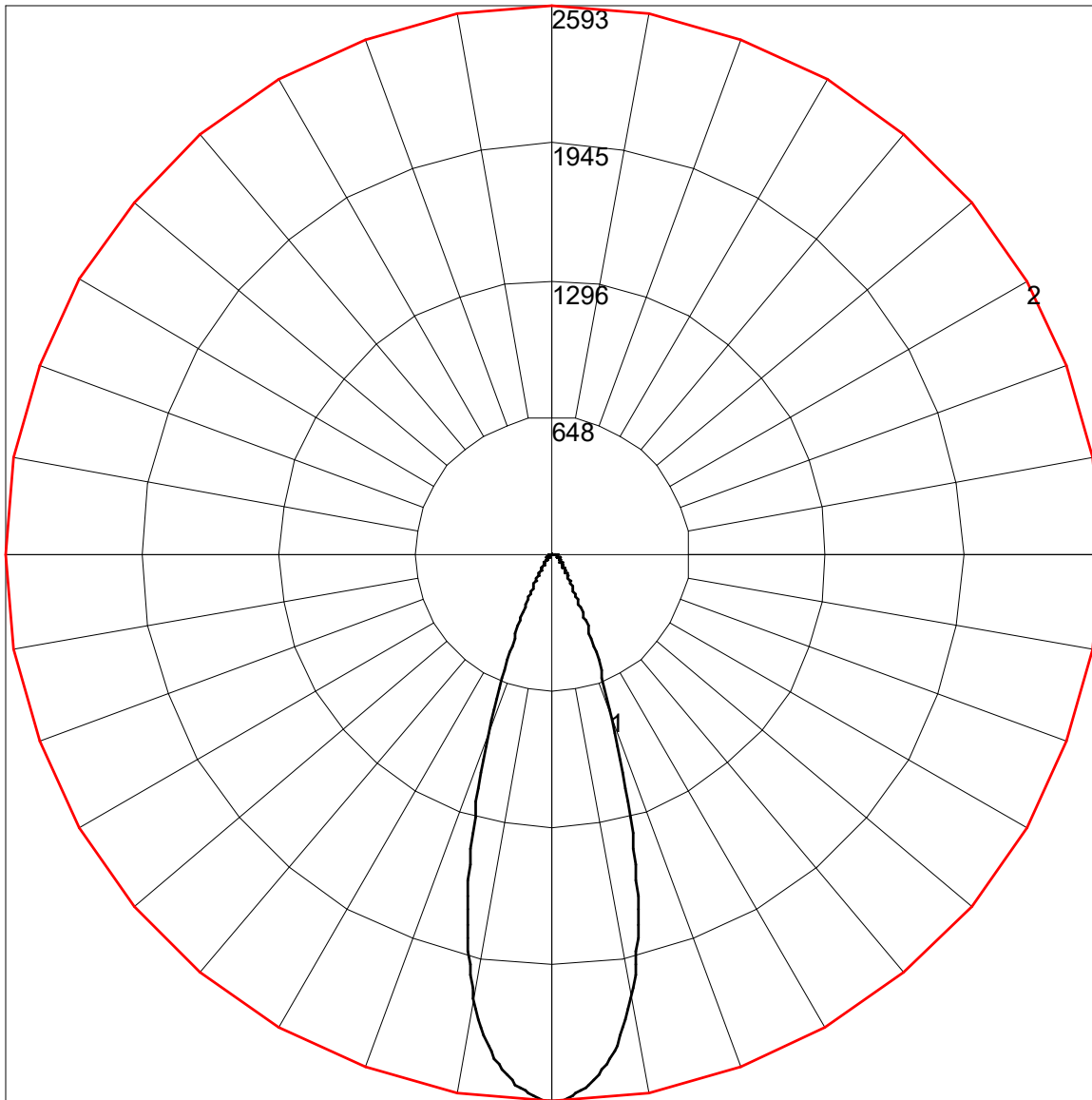
X=2H	Y=2H	12.0	13.0	12.3	13.3	13.6	12.0	13.0	12.3	13.3	13.6
	3H	13.4	14.3	13.8	14.6	15.0	13.4	14.3	13.8	14.6	15.0
	4H	13.9	14.7	14.3	15.1	15.5	13.9	14.7	14.3	15.1	15.5
	6H	14.2	15.0	14.7	15.4	15.8	14.2	15.0	14.7	15.4	15.8
	8H	14.3	15.0	14.8	15.4	15.8	14.3	15.0	14.8	15.4	15.8
	12H	14.3	15.0	14.8	15.4	15.8	14.3	15.0	14.8	15.4	15.8

UGR Viewed Endwise

4H	2H	12.4	13.2	12.8	13.6	14.0	12.4	13.2	12.8	13.6	14.0
	3H	14.0	14.7	14.4	15.1	15.5	14.0	14.7	14.4	15.1	15.5
	4H	14.7	15.3	15.1	15.7	16.1	14.7	15.3	15.1	15.7	16.1
	6H	15.1	15.6	15.6	16.1	16.5	15.1	15.6	15.6	16.1	16.5
	8H	15.2	15.7	15.7	16.1	16.6	15.2	15.7	15.7	16.1	16.6
	12H	15.2	15.7	15.7	16.1	16.6	15.2	15.7	15.7	16.1	16.6
8H	4H	14.8	15.3	15.3	15.8	16.2	14.8	15.3	15.3	15.8	16.2
	6H	15.3	15.7	15.9	16.2	16.7	15.3	15.7	15.9	16.2	16.7
	8H	15.5	15.9	16.0	16.4	16.9	15.5	15.9	16.0	16.4	16.9
	12H	15.6	15.9	16.1	16.4	17.0	15.6	15.9	16.1	16.4	17.0
12H	4H	14.8	15.2	15.3	15.7	16.2	14.8	15.2	15.3	15.7	16.2
	6H	15.4	15.7	15.9	16.2	16.7	15.4	15.7	15.9	16.2	16.7
	8H	15.5	15.9	16.1	16.3	16.9	15.5	15.9	16.1	16.3	16.9

Maximum UGR = 17.0

POLAR GRAPH



Maximum Candela = 2592.689 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.)