



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-927-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-L10-927-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	680
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	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	5160	5160	5160
55	4022	4022	4022
65	3361	3361	3361
75	2704	2704	2704
85	1616	1616	1616

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CANDELA TABULATION

	<u>0</u>
0.0	1759.510
0.5	1758.752
1.0	1756.098
1.5	1751.929
2.0	1746.622
2.5	1739.421
3.0	1731.082
3.5	1721.227
4.0	1709.855
4.5	1697.726
5.0	1684.081
5.5	1668.919
6.0	1652.241
6.5	1633.668
7.0	1613.579
7.5	1591.594
8.0	1567.715
8.5	1541.940
9.0	1514.649
9.5	1485.084
10.0	1453.244
10.5	1419.131
11.0	1383.501
11.5	1345.976
12.0	1306.176
12.5	1264.861
13.0	1221.650
13.5	1176.923
14.0	1130.301
14.5	1082.163
15.0	1033.646
15.5	984.370
16.0	935.095
16.5	885.441
17.0	836.165
17.5	788.406
18.0	741.026
18.5	695.541
19.0	651.951
19.5	609.877
20.0	570.078
20.5	531.795
21.0	496.165
21.5	462.430
22.0	430.591
22.5	401.026
23.0	373.128
23.5	347.126
24.0	322.981
24.5	300.428
25.0	279.505
25.5	260.060
26.0	241.828
26.5	224.999

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CANDELA TABULATION - (Cont.)

27.0	209.307
27.5	194.941
28.0	181.561
28.5	169.204
29.0	157.871
29.5	147.295
30.0	137.478
30.5	128.419
31.0	120.042
31.5	112.348
32.0	105.222
32.5	98.664
33.0	92.638
33.5	87.066
34.0	81.987
34.5	77.287
35.0	73.041
35.5	69.099
36.0	65.498
36.5	62.201
37.0	59.168
37.5	56.401
38.0	53.900
38.5	51.588
39.0	49.465
39.5	47.532
40.0	45.750
40.5	44.083
41.0	42.528
41.5	41.126
42.0	39.799
42.5	38.549
43.0	37.411
43.5	36.312
44.0	35.289
44.5	34.341
45.0	33.394
45.5	32.522
46.0	31.726
46.5	30.930
47.0	30.172
47.5	29.489
48.0	28.769
48.5	28.125
49.0	27.480
49.5	26.836
50.0	26.268
50.5	25.699
51.0	25.168
51.5	24.600
52.0	24.069
52.5	23.576
53.0	23.046
53.5	22.553
54.0	22.060
54.5	21.567

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CANDELA TABULATION - (Cont.)

55.0	21.113
55.5	20.658
56.0	20.203
56.5	19.748
57.0	19.255
57.5	18.838
58.0	18.421
58.5	18.042
59.0	17.625
59.5	17.208
60.0	16.792
60.5	16.375
61.0	16.033
61.5	15.617
62.0	15.237
62.5	14.858
63.0	14.479
63.5	14.138
64.0	13.759
64.5	13.380
65.0	13.001
65.5	12.660
66.0	12.319
66.5	11.978
67.0	11.599
67.5	11.258
68.0	10.916
68.5	10.575
69.0	10.234
69.5	9.893
70.0	9.552
70.5	9.249
71.0	8.945
71.5	8.566
72.0	8.263
72.5	7.960
73.0	7.657
73.5	7.315
74.0	7.012
74.5	6.709
75.0	6.406
75.5	6.103
76.0	5.799
76.5	5.496
77.0	5.193
77.5	4.965
78.0	4.662
78.5	4.397
79.0	4.132
79.5	3.866
80.0	3.601
80.5	3.336
81.0	3.070
81.5	2.881
82.0	2.577
82.5	2.388

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CANDELA TABULATION - (Cont.)

83.0	2.123
83.5	1.933
84.0	1.706
84.5	1.478
85.0	1.289
85.5	1.061
86.0	0.910
86.5	0.720
87.0	0.606
87.5	0.493
88.0	0.379
88.5	0.303
89.0	0.227
89.5	0.152
90.0	0.114
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
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124.0	0.000
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125.0	0.000
125.5	0.000
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	430.06	N.A.	63.20
0-30	564.82	N.A.	83.10
0-40	613.40	N.A.	90.20
0-60	658.68	N.A.	96.90
0-80	678.43	N.A.	99.80
0-90	680.03	N.A.	100.00
10-90	526.47	N.A.	77.40
20-40	183.34	N.A.	27.00
20-50	209.65	N.A.	30.80
40-70	58.22	N.A.	8.60
60-80	19.74	N.A.	2.90
70-80	6.81	N.A.	1.00
80-90	1.60	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	680.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.56
10-20	276.50
20-30	134.76
30-40	48.58
40-50	26.31
50-60	18.98
60-70	12.93
70-80	6.81
80-90	1.60
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

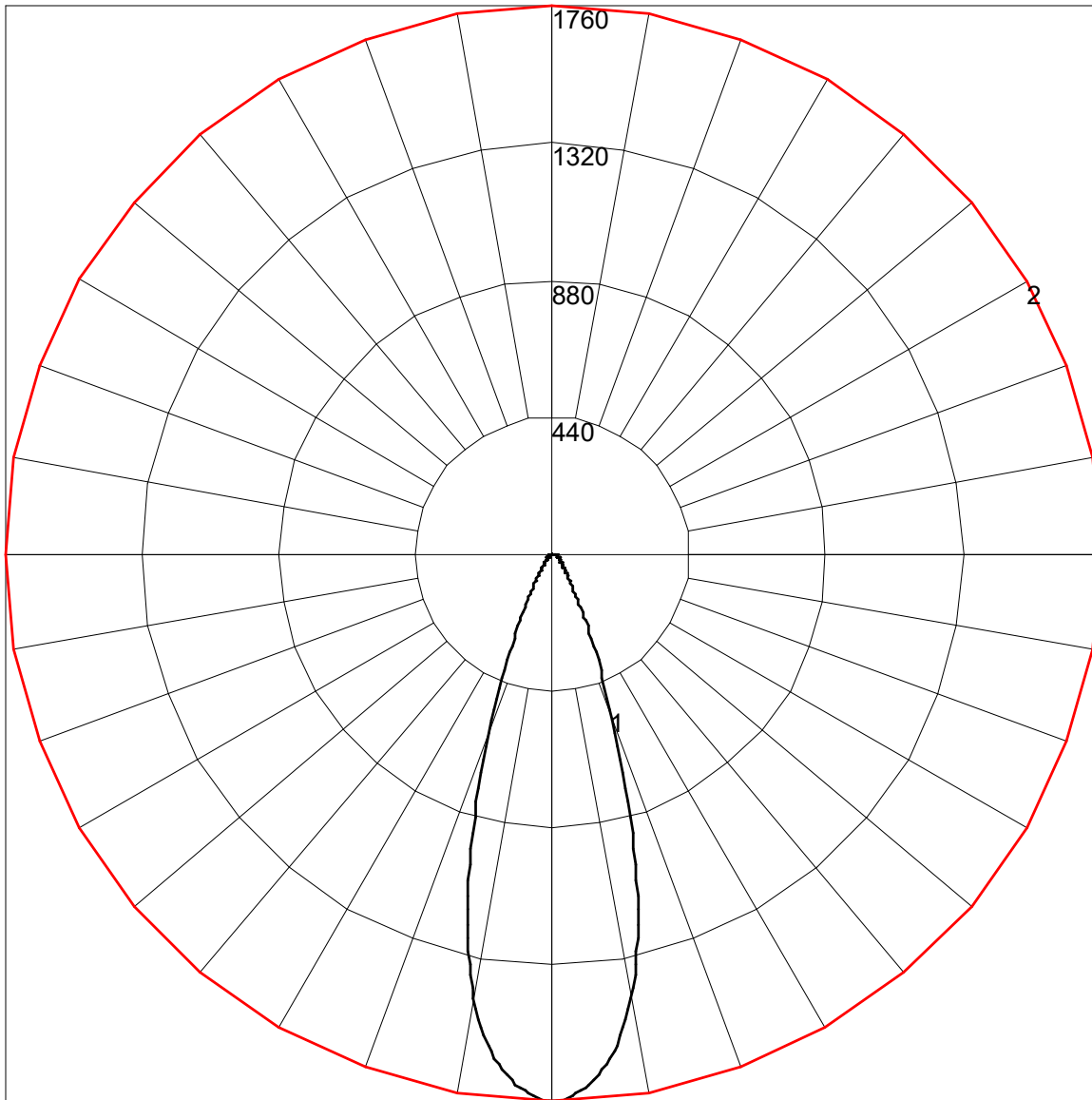
X=2H	Y=2H	10.5	11.6	10.9	11.9	12.2	10.5	11.6	10.9	11.9	12.2
	3H	12.0	12.9	12.4	13.2	13.6	12.0	12.9	12.4	13.2	13.6
	4H	12.5	13.3	12.9	13.7	14.1	12.5	13.3	12.9	13.7	14.1
	6H	12.8	13.6	13.2	14.0	14.4	12.8	13.6	13.2	14.0	14.4
	8H	12.9	13.6	13.3	14.0	14.4	12.9	13.6	13.3	14.0	14.4
	12H	12.9	13.6	13.4	14.0	14.4	12.9	13.6	13.4	14.0	14.4

UGR Viewed Endwise

4H	2H	11.0	11.8	11.4	12.2	12.6	11.0	11.8	11.4	12.2	12.6
	3H	12.6	13.3	13.0	13.7	14.1	12.6	13.3	13.0	13.7	14.1
	4H	13.2	13.9	13.7	14.3	14.7	13.2	13.9	13.7	14.3	14.7
	6H	13.7	14.2	14.2	14.7	15.1	13.7	14.2	14.2	14.7	15.1
	8H	13.8	14.3	14.3	14.7	15.2	13.8	14.3	14.3	14.7	15.2
	12H	13.8	14.3	14.3	14.7	15.2	13.8	14.3	14.3	14.7	15.2
8H	4H	13.4	13.9	13.9	14.3	14.8	13.4	13.9	13.9	14.3	14.8
	6H	13.9	14.3	14.5	14.8	15.3	13.9	14.3	14.5	14.8	15.3
	8H	14.1	14.5	14.6	15.0	15.5	14.1	14.5	14.6	15.0	15.5
	12H	14.2	14.5	14.7	15.0	15.6	14.2	14.5	14.7	15.0	15.6
12H	4H	13.4	13.8	13.9	14.3	14.8	13.4	13.8	13.9	14.3	14.8
	6H	14.0	14.3	14.5	14.8	15.3	14.0	14.3	14.5	14.8	15.3
	8H	14.1	14.5	14.7	14.9	15.5	14.1	14.5	14.7	14.9	15.5

Maximum UGR = 15.6

POLAR GRAPH



Maximum Candela = 1759.51 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.)