



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L50-927-XXX-DIM-UNV-LW-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 28-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L50-927-xxx-DIM-UNV-LW-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	2556
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	45.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	70546	70546	70546
55	57968	57968	57968
65	42407	42407	42407
75	29357	29357	29357
85	16004	16004	16004

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CANDELA TABULATION

	<u>0</u>
0.0	1795.763
0.5	1795.195
1.0	1794.061
1.5	1792.548
2.0	1791.035
2.5	1789.332
3.0	1787.063
3.5	1785.739
4.0	1784.793
4.5	1784.226
5.0	1783.469
5.5	1782.713
6.0	1782.146
6.5	1781.389
7.0	1780.822
7.5	1780.443
8.0	1780.254
8.5	1779.687
9.0	1779.120
9.5	1777.985
10.0	1777.228
10.5	1775.904
11.0	1774.580
11.5	1772.878
12.0	1770.987
12.5	1768.718
13.0	1766.070
13.5	1763.044
14.0	1759.261
14.5	1754.722
15.0	1749.237
15.5	1742.618
16.0	1735.242
16.5	1726.542
17.0	1717.086
17.5	1706.495
18.0	1694.012
18.5	1681.152
19.0	1667.156
19.5	1651.459
20.0	1634.248
20.5	1615.524
21.0	1595.288
21.5	1573.538
22.0	1549.519
22.5	1523.987
23.0	1496.563
23.5	1467.060
24.0	1435.286
24.5	1401.433
25.0	1364.742
25.5	1326.349
26.0	1285.308
26.5	1241.809

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1196.797
<b>27.5</b>	1149.893
<b>28.0</b>	1102.233
<b>28.5</b>	1054.384
<b>29.0</b>	1007.481
<b>29.5</b>	961.523
<b>30.0</b>	917.267
<b>30.5</b>	875.659
<b>31.0</b>	836.699
<b>31.5</b>	801.143
<b>32.0</b>	768.802
<b>32.5</b>	739.676
<b>33.0</b>	713.766
<b>33.5</b>	690.693
<b>34.0</b>	670.078
<b>34.5</b>	651.921
<b>35.0</b>	635.467
<b>35.5</b>	620.526
<b>36.0</b>	607.287
<b>36.5</b>	594.805
<b>37.0</b>	583.457
<b>37.5</b>	572.866
<b>38.0</b>	563.032
<b>38.5</b>	553.575
<b>39.0</b>	544.875
<b>39.5</b>	536.365
<b>40.0</b>	528.421
<b>40.5</b>	520.478
<b>41.0</b>	512.913
<b>41.5</b>	505.537
<b>42.0</b>	498.539
<b>42.5</b>	491.542
<b>43.0</b>	484.544
<b>43.5</b>	477.546
<b>44.0</b>	470.548
<b>44.5</b>	463.551
<b>45.0</b>	456.553
<b>45.5</b>	449.555
<b>46.0</b>	442.558
<b>46.5</b>	435.560
<b>47.0</b>	428.184
<b>47.5</b>	420.808
<b>48.0</b>	413.432
<b>48.5</b>	405.867
<b>49.0</b>	398.113
<b>49.5</b>	390.359
<b>50.0</b>	382.793
<b>50.5</b>	375.039
<b>51.0</b>	367.285
<b>51.5</b>	359.531
<b>52.0</b>	351.966
<b>52.5</b>	344.401
<b>53.0</b>	336.646
<b>53.5</b>	328.703
<b>54.0</b>	320.571
<b>54.5</b>	312.438

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CANDELA TABULATION - (Cont.)

55.0	304.306
55.5	296.173
56.0	288.230
56.5	280.476
57.0	272.721
57.5	264.967
58.0	257.402
58.5	250.026
59.0	242.650
59.5	235.463
60.0	228.466
60.5	221.468
61.0	214.659
61.5	208.040
62.0	201.420
62.5	194.801
63.0	188.484
63.5	182.205
64.0	176.040
64.5	169.969
65.0	164.030
65.5	158.243
66.0	152.531
66.5	146.971
67.0	141.543
67.5	136.209
68.0	131.046
68.5	125.997
69.0	120.947
69.5	116.067
70.0	111.320
70.5	106.649
71.0	102.091
71.5	97.646
72.0	93.353
72.5	89.117
73.0	84.994
73.5	80.984
74.0	77.050
74.5	73.249
75.0	69.542
75.5	65.949
76.0	62.431
76.5	59.008
77.0	55.736
77.5	52.483
78.0	49.343
78.5	46.298
79.0	43.310
79.5	40.435
80.0	37.617
80.5	34.875
81.0	32.171
81.5	29.542
82.0	26.970
82.5	24.473

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CANDELA TABULATION - (Cont.)

83.0	21.995
83.5	19.594
84.0	17.248
84.5	14.960
85.0	12.766
85.5	10.648
86.0	8.624
86.5	6.714
87.0	5.031
87.5	3.631
88.0	2.534
88.5	1.608
89.0	1.002
89.5	0.681
90.0	0.473
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
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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	659.62	N.A.	25.80
0-30	1265.22	N.A.	49.50
0-40	1677.74	N.A.	65.60
0-60	2301.31	N.A.	90.00
0-80	2540.35	N.A.	99.40
0-90	2556.34	N.A.	100.00
10-90	2386.25	N.A.	93.30
20-40	1018.12	N.A.	39.80
20-50	1369.73	N.A.	53.60
40-70	787.59	N.A.	30.80
60-80	239.04	N.A.	9.40
70-80	75.03	N.A.	2.90
80-90	15.99	N.A.	0.60
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	2556.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	170.09
10-20	489.53
20-30	605.60
30-40	412.52
40-50	351.61
50-60	271.97
60-70	164.01
70-80	75.03
80-90	15.99
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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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

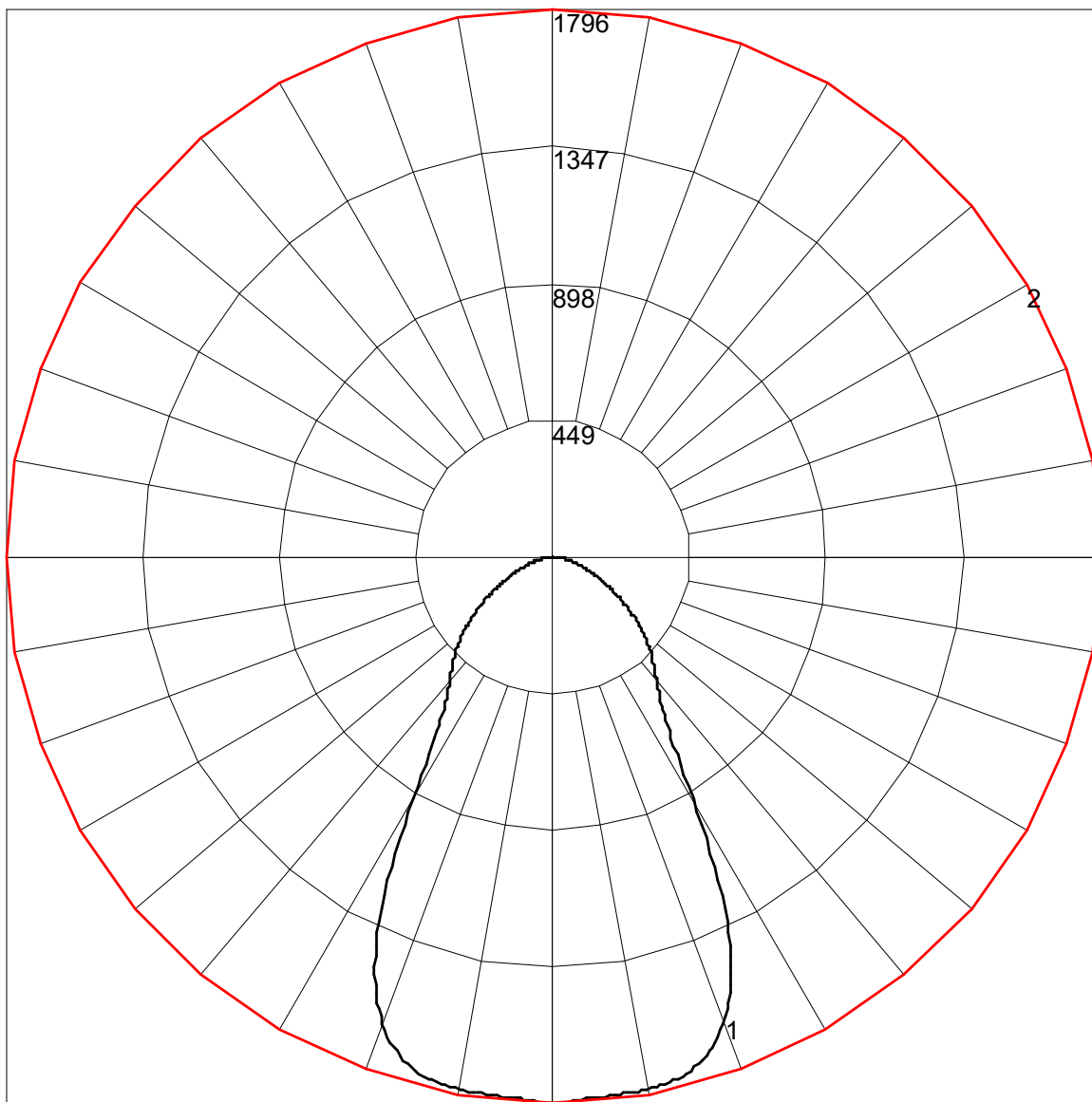
X=2H	Y=2H	23.9	25.3	24.3	25.6	25.9	23.9	25.3	24.3	25.6	25.9
	3H	25.0	26.2	25.4	26.6	26.9	25.0	26.2	25.4	26.6	26.9
	4H	25.4	26.5	25.8	26.9	27.2	25.4	26.5	25.8	26.9	27.2
	6H	25.6	26.6	26.0	27.0	27.4	25.6	26.6	26.0	27.0	27.4
	8H	25.6	26.6	26.1	27.0	27.4	25.6	26.6	26.1	27.0	27.4
	12H	25.6	26.6	26.1	27.0	27.4	25.6	26.6	26.1	27.0	27.4

### UGR Viewed Endwise

4H	2H	24.3	25.4	24.7	25.8	26.1	24.3	25.4	24.7	25.8	26.1
	3H	25.6	26.5	26.0	26.9	27.3	25.6	26.5	26.0	26.9	27.3
	4H	26.0	26.9	26.4	27.3	27.7	26.0	26.9	26.4	27.3	27.7
	6H	26.3	27.1	26.8	27.5	28.0	26.3	27.1	26.8	27.5	28.0
	8H	26.4	27.1	26.9	27.5	28.0	26.4	27.1	26.9	27.5	28.0
	12H	26.4	27.0	26.9	27.5	28.0	26.4	27.0	26.9	27.5	28.0
8H	4H	26.1	26.8	26.6	27.3	27.7	26.1	26.8	26.6	27.3	27.7
	6H	26.5	27.1	27.0	27.6	28.1	26.5	27.1	27.0	27.6	28.1
	8H	26.6	27.1	27.2	27.7	28.1	26.6	27.1	27.2	27.7	28.1
	12H	26.7	27.2	27.2	27.6	28.2	26.7	27.2	27.2	27.6	28.2
12H	4H	26.1	26.7	26.6	27.2	27.7	26.1	26.7	26.6	27.2	27.7
	6H	26.5	27.0	27.1	27.5	28.0	26.5	27.0	27.1	27.5	28.0
	8H	26.7	27.1	27.2	27.6	28.2	26.7	27.1	27.2	27.6	28.2

Maximum UGR = 28.2

POLAR GRAPH



Maximum Candela = 1795.763 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.)