



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-927-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] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L30-927-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	1537
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	55
Total Luminaire Watts	27.8
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	42405	42405	42405
55	34844	34844	34844
65	25491	25491	25491
75	17646	17646	17646
85	9620	9620	9620

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CANDELA TABULATION

	<u>0</u>
0.0	1079.424
0.5	1079.083
1.0	1078.401
1.5	1077.491
2.0	1076.582
2.5	1075.559
3.0	1074.194
3.5	1073.399
4.0	1072.830
4.5	1072.489
5.0	1072.034
5.5	1071.580
6.0	1071.239
6.5	1070.784
7.0	1070.443
7.5	1070.216
8.0	1070.102
8.5	1069.761
9.0	1069.420
9.5	1068.738
10.0	1068.283
10.5	1067.487
11.0	1066.691
11.5	1065.668
12.0	1064.531
12.5	1063.167
13.0	1061.576
13.5	1059.757
14.0	1057.483
14.5	1054.755
15.0	1051.458
15.5	1047.479
16.0	1043.045
16.5	1037.816
17.0	1032.132
17.5	1025.765
18.0	1018.262
18.5	1010.532
19.0	1002.119
19.5	992.683
20.0	982.338
20.5	971.084
21.0	958.920
21.5	945.846
22.0	931.408
22.5	916.061
23.0	899.577
23.5	881.842
24.0	862.743
24.5	842.394
25.0	820.339
25.5	797.262
26.0	772.592
26.5	746.445

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	719.389
<b>27.5</b>	691.195
<b>28.0</b>	662.547
<b>28.5</b>	633.785
<b>29.0</b>	605.591
<b>29.5</b>	577.966
<b>30.0</b>	551.365
<b>30.5</b>	526.354
<b>31.0</b>	502.935
<b>31.5</b>	481.563
<b>32.0</b>	462.123
<b>32.5</b>	444.616
<b>33.0</b>	429.041
<b>33.5</b>	415.172
<b>34.0</b>	402.780
<b>34.5</b>	391.867
<b>35.0</b>	381.976
<b>35.5</b>	372.995
<b>36.0</b>	365.037
<b>36.5</b>	357.534
<b>37.0</b>	350.713
<b>37.5</b>	344.347
<b>38.0</b>	338.435
<b>38.5</b>	332.751
<b>39.0</b>	327.522
<b>39.5</b>	322.406
<b>40.0</b>	317.631
<b>40.5</b>	312.857
<b>41.0</b>	308.309
<b>41.5</b>	303.876
<b>42.0</b>	299.669
<b>42.5</b>	295.463
<b>43.0</b>	291.257
<b>43.5</b>	287.051
<b>44.0</b>	282.844
<b>44.5</b>	278.638
<b>45.0</b>	274.432
<b>45.5</b>	270.225
<b>46.0</b>	266.019
<b>46.5</b>	261.813
<b>47.0</b>	257.379
<b>47.5</b>	252.946
<b>48.0</b>	248.512
<b>48.5</b>	243.965
<b>49.0</b>	239.304
<b>49.5</b>	234.643
<b>50.0</b>	230.095
<b>50.5</b>	225.434
<b>51.0</b>	220.773
<b>51.5</b>	216.112
<b>52.0</b>	211.565
<b>52.5</b>	207.017
<b>53.0</b>	202.356
<b>53.5</b>	197.582
<b>54.0</b>	192.693
<b>54.5</b>	187.805

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CANDELA TABULATION - (Cont.)

55.0	182.917
55.5	178.028
56.0	173.254
56.5	168.592
57.0	163.931
57.5	159.270
58.0	154.723
58.5	150.289
59.0	145.856
59.5	141.536
60.0	137.330
60.5	133.123
61.0	129.031
61.5	125.052
62.0	121.073
62.5	117.094
63.0	113.297
63.5	109.523
64.0	105.817
64.5	102.167
65.0	98.598
65.5	95.119
66.0	91.686
66.5	88.343
67.0	85.081
67.5	81.875
68.0	78.771
68.5	75.736
69.0	72.701
69.5	69.768
70.0	66.914
70.5	64.106
71.0	61.366
71.5	58.695
72.0	56.114
72.5	53.568
73.0	51.089
73.5	48.679
74.0	46.315
74.5	44.030
75.0	41.801
75.5	39.641
76.0	37.527
76.5	35.469
77.0	33.502
77.5	31.547
78.0	29.660
78.5	27.830
79.0	26.033
79.5	24.306
80.0	22.612
80.5	20.963
81.0	19.338
81.5	17.757
82.0	16.211
82.5	14.711

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CANDELA TABULATION - (Cont.)

83.0	13.221
83.5	11.778
84.0	10.368
84.5	8.992
85.0	7.674
85.5	6.400
86.0	5.184
86.5	4.036
87.0	3.024
87.5	2.183
88.0	1.523
88.5	0.966
89.0	0.603
89.5	0.409
90.0	0.284
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
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123.5	0.000
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124.5	0.000
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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	396.49	N.A.	25.80
0-30	760.52	N.A.	49.50
0-40	1008.48	N.A.	65.60
0-60	1383.31	N.A.	90.00
0-80	1526.99	N.A.	99.40
0-90	1536.6	N.A.	100.00
10-90	1434.36	N.A.	93.30
20-40	611.99	N.A.	39.80
20-50	823.34	N.A.	53.60
40-70	473.41	N.A.	30.80
60-80	143.69	N.A.	9.40
70-80	45.10	N.A.	2.90
80-90	9.61	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	1536.61	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	102.24
10-20	294.25
20-30	364.03
30-40	247.96
40-50	211.35
50-60	163.48
60-70	98.59
70-80	45.10
80-90	9.61
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

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	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	87	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

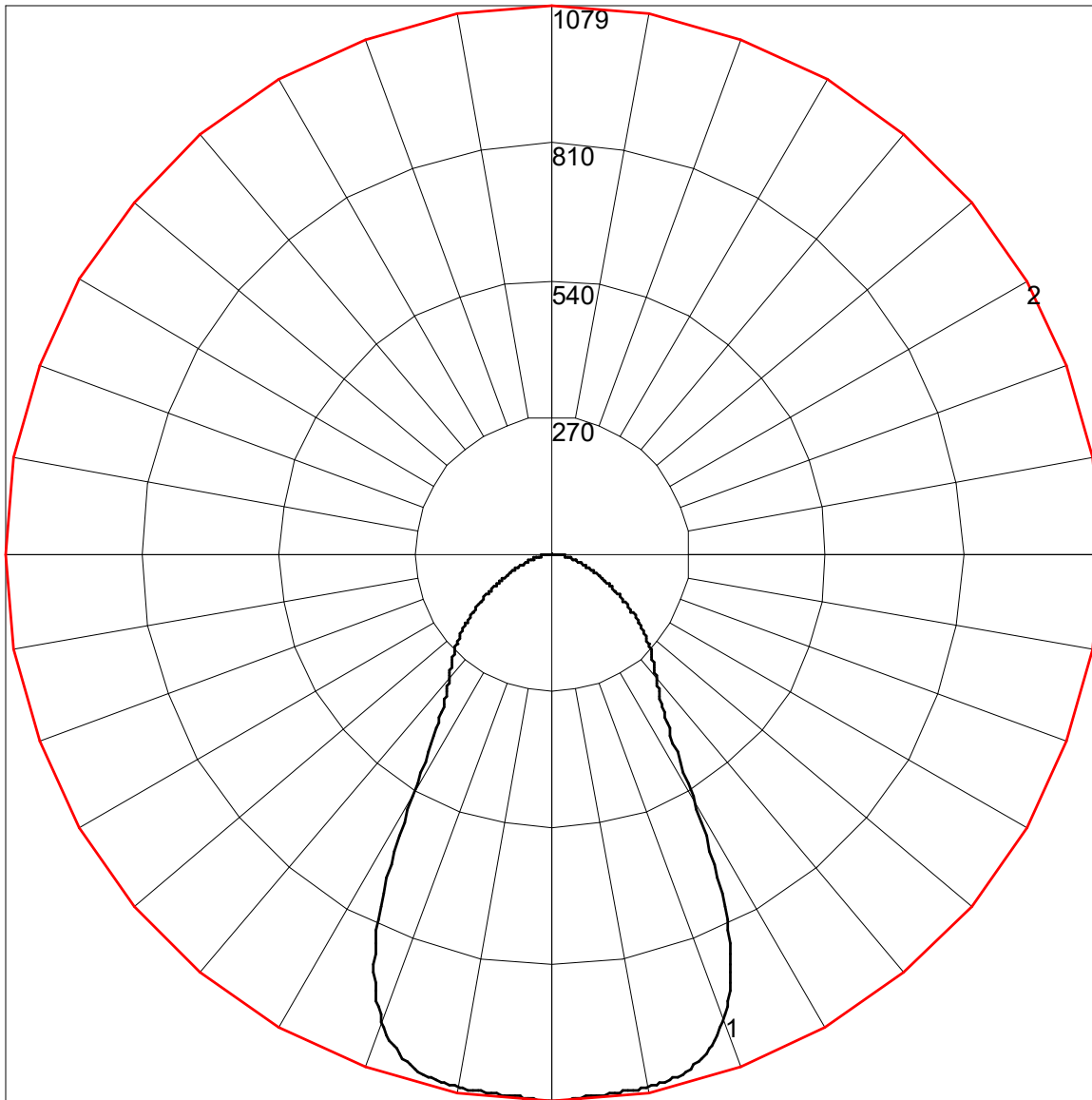
X=2H	Y=2H	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	23.2	24.4	23.6	24.8	25.1	23.2	24.4	23.6	24.8	25.1
	4H	23.6	24.7	24.0	25.1	25.4	23.6	24.7	24.0	25.1	25.4
	6H	23.8	24.8	24.2	25.2	25.6	23.8	24.8	24.2	25.2	25.6
	8H	23.8	24.8	24.3	25.2	25.6	23.8	24.8	24.3	25.2	25.6
	12H	23.8	24.8	24.3	25.2	25.6	23.8	24.8	24.3	25.2	25.6

### UGR Viewed Endwise

4H	2H	22.5	23.6	22.9	24.0	24.3	22.5	23.6	22.9	24.0	24.3
	3H	23.8	24.7	24.2	25.1	25.5	23.8	24.7	24.2	25.1	25.5
	4H	24.2	25.1	24.6	25.5	25.9	24.2	25.1	24.6	25.5	25.9
	6H	24.5	25.3	25.0	25.7	26.2	24.5	25.3	25.0	25.7	26.2
	8H	24.6	25.3	25.1	25.7	26.2	24.6	25.3	25.1	25.7	26.2
	12H	24.6	25.2	25.1	25.7	26.2	24.6	25.2	25.1	25.7	26.2
8H	4H	24.3	25.0	24.8	25.5	25.9	24.3	25.0	24.8	25.5	25.9
	6H	24.7	25.3	25.2	25.8	26.3	24.7	25.3	25.2	25.8	26.3
	8H	24.8	25.3	25.4	25.9	26.3	24.8	25.3	25.4	25.9	26.3
	12H	24.9	25.4	25.4	25.8	26.4	24.9	25.4	25.4	25.8	26.4
12H	4H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.8	25.4	25.9
	6H	24.7	25.2	25.3	25.7	26.2	24.7	25.2	25.3	25.7	26.2
	8H	24.9	25.3	25.4	25.8	26.4	24.9	25.3	25.4	25.8	26.4

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 1079.424 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.)