



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-LW-WH-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-L30-830-xxx-DIM-UNV-LW-WH-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	1941
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
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	53551	53551	53551
55	44003	44003	44003
65	32191	32191	32191
75	22285	22285	22285
85	12149	12149	12149

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CANDELA TABULATION

	<u>0</u>
0.0	1363.151
0.5	1362.720
1.0	1361.858
1.5	1360.710
2.0	1359.561
2.5	1358.269
3.0	1356.547
3.5	1355.542
4.0	1354.824
4.5	1354.393
5.0	1353.819
5.5	1353.245
6.0	1352.814
6.5	1352.240
7.0	1351.809
7.5	1351.522
8.0	1351.378
8.5	1350.948
9.0	1350.517
9.5	1349.655
10.0	1349.081
10.5	1348.076
11.0	1347.071
11.5	1345.779
12.0	1344.344
12.5	1342.621
13.0	1340.611
13.5	1338.314
14.0	1335.443
14.5	1331.997
15.0	1327.834
15.5	1322.809
16.0	1317.210
16.5	1310.606
17.0	1303.427
17.5	1295.388
18.0	1285.913
18.5	1276.150
19.0	1265.526
19.5	1253.610
20.0	1240.546
20.5	1226.333
21.0	1210.972
21.5	1194.462
22.0	1176.229
22.5	1156.848
23.0	1136.031
23.5	1113.634
24.0	1089.516
24.5	1063.817
25.0	1035.966
25.5	1006.822
26.0	975.668
26.5	942.648

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	908.480
<b>27.5</b>	872.876
<b>28.0</b>	836.697
<b>28.5</b>	800.375
<b>29.0</b>	764.771
<b>29.5</b>	729.885
<b>30.0</b>	696.291
<b>30.5</b>	664.706
<b>31.0</b>	635.132
<b>31.5</b>	608.142
<b>32.0</b>	583.592
<b>32.5</b>	561.483
<b>33.0</b>	541.815
<b>33.5</b>	524.300
<b>34.0</b>	508.651
<b>34.5</b>	494.869
<b>35.0</b>	482.379
<b>35.5</b>	471.037
<b>36.0</b>	460.988
<b>36.5</b>	451.512
<b>37.0</b>	442.898
<b>37.5</b>	434.859
<b>38.0</b>	427.393
<b>38.5</b>	420.215
<b>39.0</b>	413.611
<b>39.5</b>	407.151
<b>40.0</b>	401.121
<b>40.5</b>	395.091
<b>41.0</b>	389.349
<b>41.5</b>	383.749
<b>42.0</b>	378.438
<b>42.5</b>	373.126
<b>43.0</b>	367.814
<b>43.5</b>	362.502
<b>44.0</b>	357.190
<b>44.5</b>	351.878
<b>45.0</b>	346.566
<b>45.5</b>	341.254
<b>46.0</b>	335.942
<b>46.5</b>	330.630
<b>47.0</b>	325.031
<b>47.5</b>	319.432
<b>48.0</b>	313.833
<b>48.5</b>	308.091
<b>49.0</b>	302.205
<b>49.5</b>	296.318
<b>50.0</b>	290.576
<b>50.5</b>	284.690
<b>51.0</b>	278.803
<b>51.5</b>	272.917
<b>52.0</b>	267.175
<b>52.5</b>	261.432
<b>53.0</b>	255.546
<b>53.5</b>	249.516
<b>54.0</b>	243.343
<b>54.5</b>	237.170

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CANDELA TABULATION - (Cont.)

55.0	230.996
55.5	224.823
56.0	218.793
56.5	212.907
57.0	207.021
57.5	201.135
58.0	195.392
58.5	189.793
59.0	184.194
59.5	178.739
60.0	173.427
60.5	168.115
61.0	162.946
61.5	157.922
62.0	152.897
62.5	147.872
63.0	143.077
63.5	138.311
64.0	133.630
64.5	129.022
65.0	124.514
65.5	120.121
66.0	115.785
66.5	111.564
67.0	107.444
67.5	103.396
68.0	99.476
68.5	95.643
69.0	91.810
69.5	88.106
70.0	84.502
70.5	80.956
71.0	77.496
71.5	74.123
72.0	70.864
72.5	67.648
73.0	64.518
73.5	61.475
74.0	58.488
74.5	55.603
75.0	52.789
75.5	50.061
76.0	47.391
76.5	44.792
77.0	42.309
77.5	39.839
78.0	37.456
78.5	35.145
79.0	32.876
79.5	30.694
80.0	28.555
80.5	26.473
81.0	24.420
81.5	22.425
82.0	20.472
82.5	18.577

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CANDELA TABULATION - (Cont.)

83.0	16.697
83.5	14.873
84.0	13.093
84.5	11.356
85.0	9.691
85.5	8.083
86.0	6.547
86.5	5.097
87.0	3.819
87.5	2.756
88.0	1.924
88.5	1.220
89.0	0.761
89.5	0.517
90.0	0.359
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****PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-LW-WH-XX\_.IES****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
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120.5	0.000
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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
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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
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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
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157.5	0.000
158.0	0.000
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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

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	500.71	N.A.	25.80
0-30	960.42	N.A.	49.50
0-40	1273.56	N.A.	65.60
0-60	1746.91	N.A.	90.00
0-80	1928.36	N.A.	99.40
0-90	1940.5	N.A.	100.00
10-90	1811.38	N.A.	93.30
20-40	772.85	N.A.	39.80
20-50	1039.75	N.A.	53.60
40-70	597.85	N.A.	30.80
60-80	181.45	N.A.	9.40
70-80	56.95	N.A.	2.90
80-90	12.14	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	1940.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	129.12
10-20	371.60
20-30	459.71
30-40	313.14
40-50	266.90
50-60	206.45
60-70	124.50
70-80	56.95
80-90	12.14
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	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	22.9	24.3	23.3	24.6	24.9	22.9	24.3	23.3	24.6	24.9
	3H	24.0	25.2	24.4	25.6	25.9	24.0	25.2	24.4	25.6	25.9
	4H	24.4	25.5	24.8	25.9	26.2	24.4	25.5	24.8	25.9	26.2
	6H	24.6	25.6	25.0	26.0	26.4	24.6	25.6	25.0	26.0	26.4
	8H	24.6	25.6	25.1	26.0	26.4	24.6	25.6	25.1	26.0	26.4
	12H	24.6	25.6	25.1	26.0	26.4	24.6	25.6	25.1	26.0	26.4

### UGR Viewed Endwise

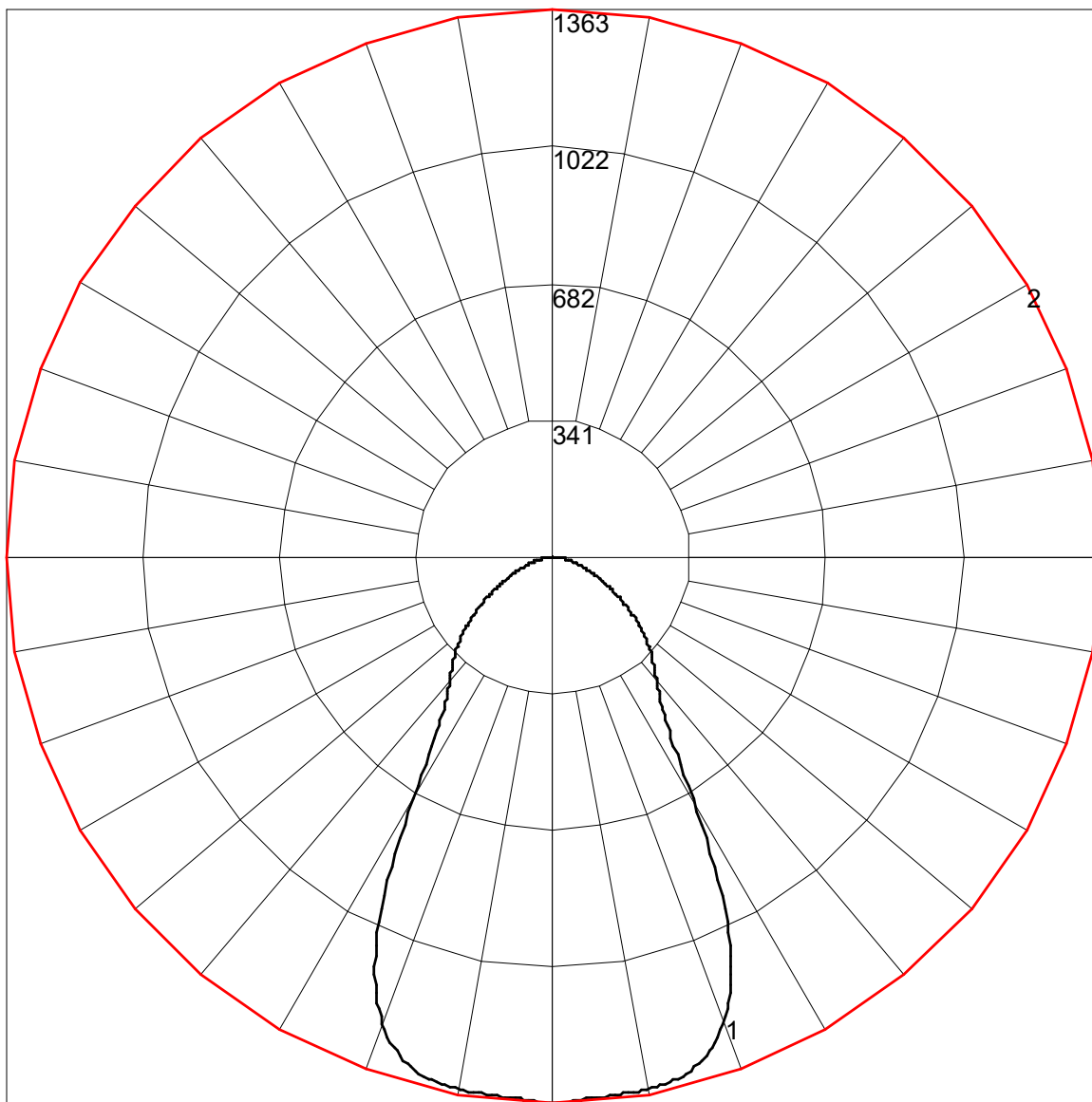
4H	2H	23.3	24.4	23.7	24.8	25.1	23.3	24.4	23.7	24.8	25.1
	3H	24.6	25.5	25.0	25.9	26.3	24.6	25.5	25.0	25.9	26.3
	4H	25.0	25.9	25.4	26.3	26.7	25.0	25.9	25.4	26.3	26.7
	6H	25.3	26.1	25.8	26.5	27.0	25.3	26.1	25.8	26.5	27.0
	8H	25.4	26.1	25.9	26.5	27.0	25.4	26.1	25.9	26.5	27.0
	12H	25.4	26.0	25.9	26.5	27.0	25.4	26.0	25.9	26.5	27.0

8H	4H	25.1	25.8	25.6	26.3	26.7	25.1	25.8	25.6	26.3	26.7
	6H	25.5	26.1	26.0	26.6	27.1	25.5	26.1	26.0	26.6	27.1
	8H	25.6	26.1	26.2	26.7	27.1	25.6	26.1	26.2	26.7	27.1
	12H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2

12H	4H	25.1	25.7	25.6	26.2	26.7	25.1	25.7	25.6	26.2	26.7
	6H	25.5	26.0	26.1	26.5	27.0	25.5	26.0	26.1	26.5	27.0
	8H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2

Maximum UGR = 27.2

POLAR GRAPH



Maximum Candela = 1363.151 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.)