



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L40-830-XXX-DIM-UNV-RW-WH-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L40-830-xxx-DIM-UNV-RW-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	2533
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	38
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	58594	58594	58594
55	47312	47312	47312
65	30606	30606	30606
75	17067	17067	17067
85	8767	8767	8767

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CANDELA TABULATION

	<u>0</u>
0.0	2034.805
0.5	2034.805
1.0	2032.891
1.5	2029.063
2.0	2025.234
2.5	2021.406
3.0	2015.663
3.5	2009.920
4.0	2004.178
4.5	1996.521
5.0	1990.778
5.5	1983.122
6.0	1975.465
6.5	1967.808
7.0	1960.151
7.5	1952.494
8.0	1944.837
8.5	1935.266
9.0	1927.609
9.5	1919.953
10.0	1912.679
10.5	1904.830
11.0	1896.791
11.5	1888.942
12.0	1881.477
12.5	1874.012
13.0	1866.546
13.5	1858.889
14.0	1851.232
14.5	1843.576
15.0	1835.727
15.5	1827.688
16.0	1819.265
16.5	1810.843
17.0	1802.229
17.5	1793.040
18.0	1783.278
18.5	1772.750
19.0	1762.605
19.5	1751.694
20.0	1739.825
20.5	1726.235
21.0	1710.538
21.5	1693.502
22.0	1673.977
22.5	1652.346
23.0	1627.844
23.5	1600.280
24.0	1570.035
24.5	1535.771
25.0	1497.486
25.5	1455.182
26.0	1409.433
26.5	1360.812

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CANDELA TABULATION - (Cont.)

27.0	1309.702
27.5	1257.827
28.0	1203.464
28.5	1149.675
29.0	1096.077
29.5	1042.479
30.0	989.838
30.5	938.154
31.0	889.342
31.5	842.061
32.0	797.460
32.5	755.922
33.0	717.446
33.5	682.799
34.0	651.597
34.5	624.415
35.0	600.488
35.5	580.197
36.0	562.395
36.5	547.464
37.0	534.256
37.5	522.962
38.0	512.625
38.5	503.437
39.0	495.206
39.5	487.741
40.0	481.041
40.5	474.724
41.0	468.599
41.5	463.047
42.0	457.496
42.5	452.328
43.0	447.159
43.5	441.800
44.0	436.440
44.5	431.080
45.0	425.529
45.5	419.786
46.0	413.852
46.5	407.727
47.0	401.410
47.5	394.902
48.0	388.393
48.5	381.502
49.0	374.419
49.5	366.954
50.0	359.489
50.5	351.832
51.0	343.792
51.5	335.944
52.0	327.904
52.5	319.864
53.0	312.208
53.5	303.785
54.0	295.363
54.5	286.940

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CANDELA TABULATION - (Cont.)

55.0	278.709
55.5	270.286
56.0	262.055
56.5	254.016
57.0	245.976
57.5	237.936
58.0	230.088
58.5	222.431
59.0	214.774
59.5	207.309
60.0	199.844
60.5	192.570
61.0	185.487
61.5	178.404
62.0	171.705
62.5	164.813
63.0	158.305
63.5	151.605
64.0	145.289
64.5	138.972
65.0	132.846
65.5	126.721
66.0	120.787
66.5	115.044
67.0	109.493
67.5	103.942
68.0	98.582
68.5	93.222
69.0	88.054
69.5	83.077
70.0	78.483
70.5	74.080
71.0	70.060
71.5	66.232
72.0	62.595
72.5	59.149
73.0	55.895
73.5	53.024
74.0	50.152
74.5	47.664
75.0	45.367
75.5	43.261
76.0	40.964
76.5	38.858
77.0	36.753
77.5	34.647
78.0	32.733
78.5	30.627
79.0	28.713
79.5	26.799
80.0	24.885
80.5	22.971
81.0	21.248
81.5	19.525
82.0	17.611
82.5	16.079

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CANDELA TABULATION - (Cont.)

83.0	14.357
83.5	12.634
84.0	11.102
84.5	9.380
85.0	7.848
85.5	6.508
86.0	5.168
86.5	4.211
87.0	3.254
87.5	2.488
88.0	1.723
88.5	1.149
89.0	0.574
89.5	0.191
90.0	0.000
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
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

IES INDOOR REPORT  
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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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6CR-TL-L40-830-XXX-DIM-UNV-RW-WH-XX\_.IES****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	704.32	N.A.	27.80
0-30	1362.94	N.A.	53.80
0-40	1764.3	N.A.	69.60
0-60	2339.73	N.A.	92.40
0-80	2522.81	N.A.	99.60
0-90	2533.17	N.A.	100.00
10-90	2345.76	N.A.	92.60
20-40	1059.98	N.A.	41.80
20-50	1386.54	N.A.	54.70
40-70	708.52	N.A.	28.00
60-80	183.09	N.A.	7.20
70-80	50.00	N.A.	2.00
80-90	10.35	N.A.	0.40
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	2533.17	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	187.41
10-20	516.91
20-30	658.62
30-40	401.36
40-50	326.56
50-60	248.87
60-70	133.09
70-80	50.00
80-90	10.35
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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

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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

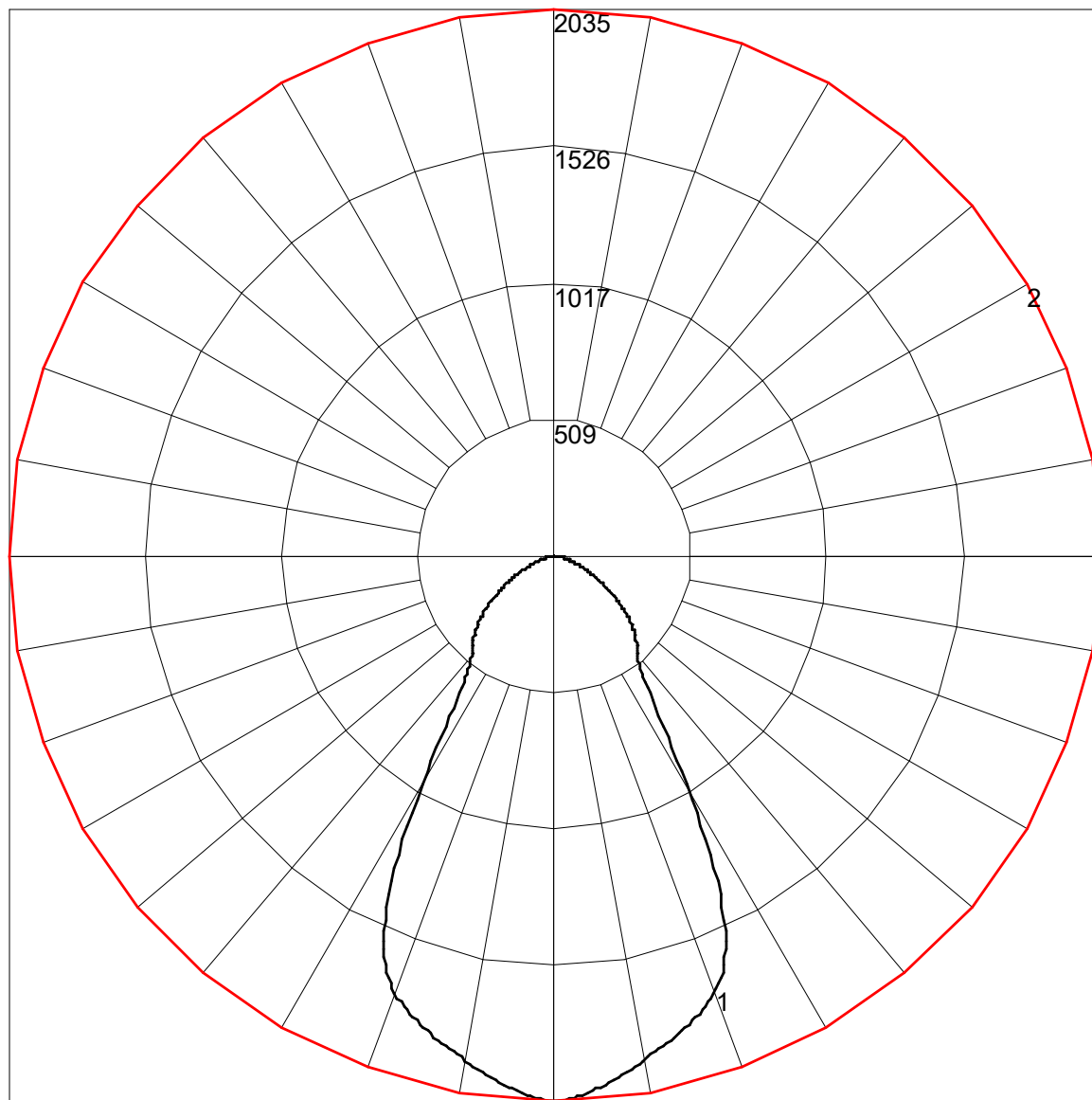
X=2H	Y=2H	22.8	24.1	23.2	24.4	24.7	22.8	24.1	23.2	24.4	24.7
	3H	23.6	24.7	23.9	25.1	25.4	23.6	24.7	23.9	25.1	25.4
	4H	23.8	24.8	24.2	25.2	25.6	23.8	24.8	24.2	25.2	25.6
	6H	23.9	24.8	24.3	25.2	25.6	23.9	24.8	24.3	25.2	25.6
	8H	23.9	24.8	24.3	25.2	25.6	23.9	24.8	24.3	25.2	25.6
	12H	23.8	24.7	24.3	25.1	25.6	23.8	24.7	24.3	25.1	25.6

### UGR Viewed Endwise

4H	2H	23.1	24.2	23.5	24.5	24.9	23.1	24.2	23.5	24.5	24.9
	3H	24.0	24.9	24.4	25.3	25.7	24.0	24.9	24.4	25.3	25.7
	4H	24.2	25.0	24.6	25.4	25.9	24.2	25.0	24.6	25.4	25.9
	6H	24.4	25.1	24.9	25.5	26.0	24.4	25.1	24.9	25.5	26.0
	8H	24.4	25.1	24.9	25.5	26.0	24.4	25.1	24.9	25.5	26.0
	12H	24.4	25.0	24.9	25.5	25.9	24.4	25.0	24.9	25.5	25.9
8H	4H	24.3	24.9	24.7	25.3	25.8	24.3	24.9	24.7	25.3	25.8
	6H	24.5	25.0	25.0	25.5	26.0	24.5	25.0	25.0	25.5	26.0
	8H	24.5	25.0	25.1	25.5	26.0	24.5	25.0	25.1	25.5	26.0
	12H	24.6	25.0	25.1	25.5	26.0	24.6	25.0	25.1	25.5	26.0
12H	4H	24.2	24.8	24.7	25.3	25.7	24.2	24.8	24.7	25.3	25.7
	6H	24.5	24.9	25.0	25.4	25.9	24.5	24.9	25.0	25.4	25.9
	8H	24.6	25.0	25.1	25.4	26.0	24.6	25.0	25.1	25.4	26.0

Maximum UGR = 26.0

POLAR GRAPH



Maximum Candela = 2034.805 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.)