



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L13-8TW-XXX-DIM-UNV-OM-CS-XX_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12316380.04
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 28-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-L13-8TW-xxx-DIM-UNV-OM-CS-xx_4000k
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER
 [MORE] enclosure
 [LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1281
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	14.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
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	3181	3181	3181
55	923	923	923
65	324	324	324
75	144	144	144
85	71	71	71

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CANDELA TABULATION

	<u>0</u>
0.0	2592.640
0.5	2594.560
1.0	2602.240
1.5	2609.280
2.0	2625.280
2.5	2635.520
3.0	2637.440
3.5	2638.080
4.0	2623.360
4.5	2603.520
5.0	2565.760
5.5	2517.760
6.0	2464.000
6.5	2403.840
7.0	2338.560
7.5	2270.720
8.0	2200.960
8.5	2131.840
9.0	2064.000
9.5	1998.080
10.0	1935.360
10.5	1876.480
11.0	1821.440
11.5	1769.600
12.0	1720.320
12.5	1674.240
13.0	1630.720
13.5	1589.120
14.0	1549.440
14.5	1512.960
15.0	1479.680
15.5	1450.240
16.0	1425.920
16.5	1404.160
17.0	1383.680
17.5	1365.760
18.0	1349.760
18.5	1336.320
19.0	1326.720
19.5	1318.400
20.0	1311.360
20.5	1303.040
21.0	1294.720
21.5	1285.760
22.0	1276.160
22.5	1264.000
23.0	1249.280
23.5	1231.360
24.0	1208.960
24.5	1179.520
25.0	1145.600
25.5	1109.760
26.0	1074.560
26.5	1035.520

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L13-8TW-XXX-DIM-UNV-OM-CS-XX_4000K.IES****CANDELA TABULATION - (Cont.)**

27.0	994.560
27.5	947.840
28.0	894.720
28.5	836.480
29.0	775.680
29.5	713.600
30.0	647.680
30.5	579.392
31.0	507.904
31.5	436.672
32.0	368.192
32.5	304.128
33.0	248.384
33.5	200.832
34.0	160.768
34.5	127.488
35.0	100.480
35.5	80.128
36.0	67.072
36.5	60.224
37.0	56.128
37.5	52.544
38.0	49.408
38.5	46.528
39.0	43.904
39.5	41.536
40.0	39.296
40.5	37.184
41.0	35.200
41.5	33.408
42.0	31.680
42.5	30.080
43.0	28.480
43.5	27.072
44.0	25.664
44.5	24.320
45.0	23.104
45.5	21.888
46.0	20.672
46.5	19.520
47.0	18.304
47.5	17.152
48.0	16.064
48.5	15.040
49.0	14.016
49.5	12.992
50.0	11.968
50.5	11.008
51.0	10.176
51.5	9.408
52.0	8.640
52.5	8.000
53.0	7.360
53.5	6.848
54.0	6.336
54.5	5.824

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55.0	5.440
55.5	5.056
56.0	4.672
56.5	4.352
57.0	4.032
57.5	3.776
58.0	3.520
58.5	3.264
59.0	3.072
59.5	2.880
60.0	2.688
60.5	2.496
61.0	2.368
61.5	2.176
62.0	2.048
62.5	1.920
63.0	1.792
63.5	1.728
64.0	1.600
64.5	1.472
65.0	1.408
65.5	1.344
66.0	1.216
66.5	1.152
67.0	1.088
67.5	1.024
68.0	0.960
68.5	0.896
69.0	0.832
69.5	0.768
70.0	0.704
70.5	0.704
71.0	0.640
71.5	0.576
72.0	0.512
72.5	0.512
73.0	0.448
73.5	0.448
74.0	0.384
74.5	0.384
75.0	0.384
75.5	0.320
76.0	0.320
76.5	0.256
77.0	0.256
77.5	0.256
78.0	0.192
78.5	0.192
79.0	0.192
79.5	0.192
80.0	0.128
80.5	0.128
81.0	0.128
81.5	0.128
82.0	0.128
82.5	0.128

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L13-8TW-XXX-DIM-UNV-OM-CS-XX_4000K.IES****CANDELA TABULATION - (Cont.)**

83.0	0.128
83.5	0.064
84.0	0.064
84.5	0.064
85.0	0.064
85.5	0.064
86.0	0.064
86.5	0.064
87.0	0.064
87.5	0.064
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
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**PHOTOMETRIC FILENAME : 6CR-TL-L13-8TW-XXX-DIM-UNV-OM-CS-XX_4000K.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
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**PHOTOMETRIC FILENAME : 6CR-TL-L13-8TW-XXX-DIM-UNV-OM-CS-XX_4000K.IES****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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Zone	Lumens	%Lamp	%Fixt
0-20	646.30	N.A.	50.40
0-30	1141.52	N.A.	89.10
0-40	1255.83	N.A.	98.00
0-60	1279.37	N.A.	99.80
0-80	1281.24	N.A.	100.00
0-90	1281.32	N.A.	100.00
10-90	1059.32	N.A.	82.70
20-40	609.53	N.A.	47.60
20-50	627.72	N.A.	49.00
40-70	25.01	N.A.	2.00
60-80	1.87	N.A.	0.10
70-80	0.40	N.A.	0.00
80-90	0.08	N.A.	0.00
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	1281.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	222.00
10-20	424.30
20-30	495.22
30-40	114.32
40-50	18.19
50-60	5.35
60-70	1.48
70-80	0.40
80-90	0.08
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	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	109	105	102	99	107	103	100	98	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	89	87	85
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	77
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	81	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	68	64	61	60

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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

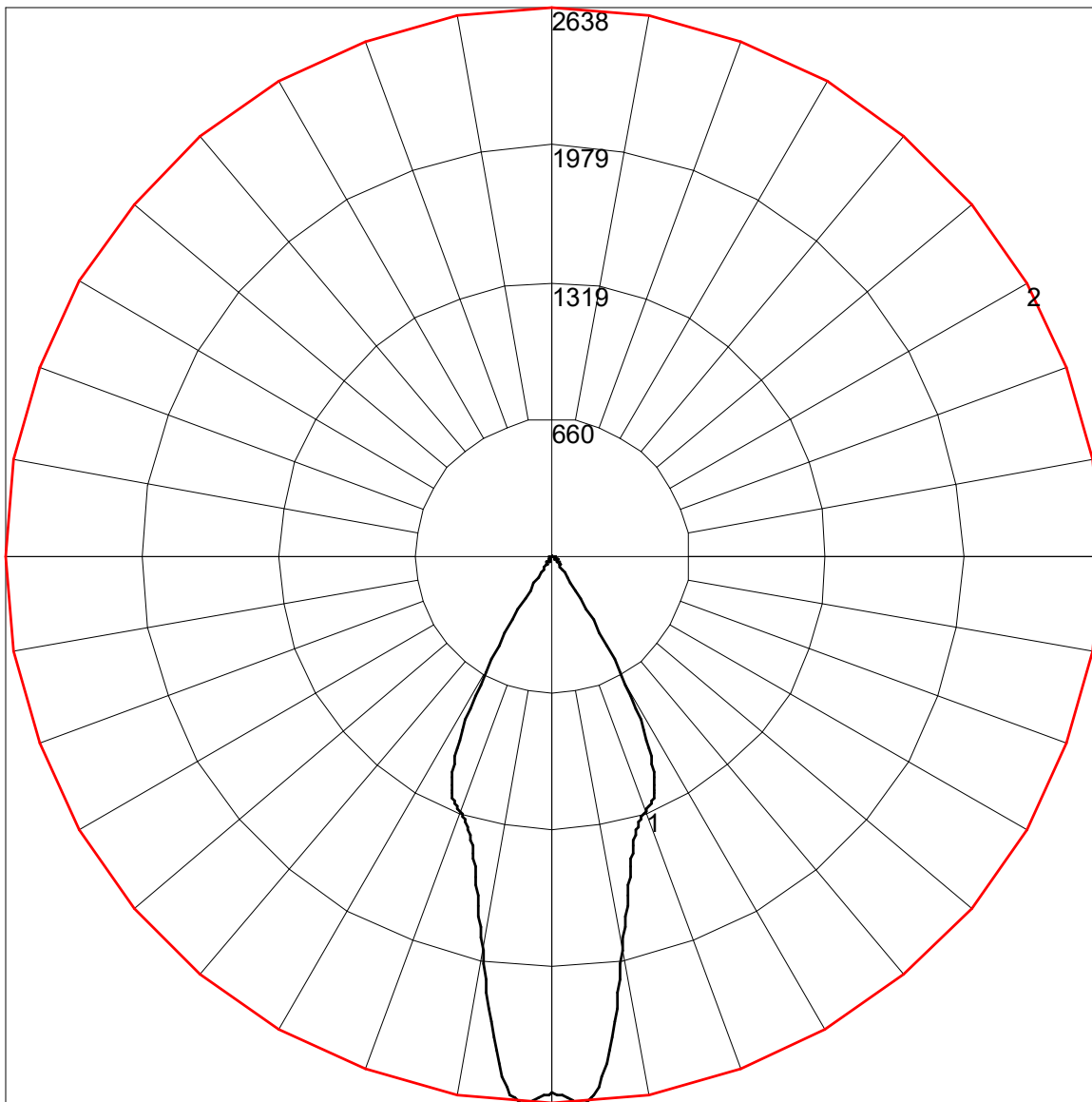
X=2H	Y=2H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	3H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	4H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	6H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	8H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	12H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

UGR Viewed Endwise

4H	2H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	3H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	4H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	6H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	8H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	12H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
8H	4H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	6H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	8H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	12H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
12H	4H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	6H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	8H	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Maximum UGR = 0.9

POLAR GRAPH



Maximum Candela = 2638.08 Located At Horizontal Angle = 0, Vertical Angle = 3.5

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)