



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12316380.05
 [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-ONCS-xx_4000k
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER
 [LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1283
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)	0.18
Spacing Criterion (90-270)	0.18
Spacing Criterion (Diagonal)	0.20
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	881	881	881
55	217	217	217
65	147	147	147
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0.0	13638.40
0.5	13542.40
1.0	13184.00
1.5	12665.60
2.0	11936.00
2.5	11084.80
3.0	10246.40
3.5	9408.00
4.0	8588.80
4.5	7763.20
5.0	6841.60
5.5	5891.84
6.0	5080.32
6.5	4488.32
7.0	4014.08
7.5	3631.36
8.0	3309.44
8.5	3034.88
9.0	2801.28
9.5	2595.20
10.0	2418.56
10.5	2264.32
11.0	2132.48
11.5	2016.64
12.0	1915.52
12.5	1827.84
13.0	1752.32
13.5	1685.12
14.0	1625.60
14.5	1569.92
15.0	1518.08
15.5	1467.52
16.0	1415.68
16.5	1364.48
17.0	1312.64
17.5	1261.44
18.0	1210.24
18.5	1157.12
19.0	1103.36
19.5	1049.60
20.0	995.20
20.5	940.80
21.0	886.40
21.5	833.28
22.0	786.56
22.5	743.68
23.0	704.64
23.5	669.44
24.0	637.44
24.5	608.00
25.0	583.68
25.5	564.48
26.0	551.04
26.5	540.80

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

27.0	531.20
27.5	519.04
28.0	501.12
28.5	479.36
29.0	454.40
29.5	426.88
30.0	396.80
30.5	364.80
31.0	326.40
31.5	284.80
32.0	241.92
32.5	200.32
33.0	162.56
33.5	131.84
34.0	103.68
34.5	79.36
35.0	56.96
35.5	39.04
36.0	25.60
36.5	17.28
37.0	14.72
37.5	14.08
38.0	13.44
38.5	12.80
39.0	12.16
39.5	11.52
40.0	10.88
40.5	10.24
41.0	10.24
41.5	9.60
42.0	8.96
42.5	8.96
43.0	8.32
43.5	7.68
44.0	7.04
44.5	7.04
45.0	6.40
45.5	6.40
46.0	5.76
46.5	5.12
47.0	5.12
47.5	4.48
48.0	4.48
48.5	3.84
49.0	3.84
49.5	3.84
50.0	3.20
50.5	3.20
51.0	2.56
51.5	2.56
52.0	2.56
52.5	1.92
53.0	1.92
53.5	1.92
54.0	1.92
54.5	1.92

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55.0	1.28
55.5	1.28
56.0	1.28
56.5	1.28
57.0	1.28
57.5	1.28
58.0	1.28
58.5	1.28
59.0	0.64
59.5	0.64
60.0	0.64
60.5	0.64
61.0	0.64
61.5	0.64
62.0	0.64
62.5	0.64
63.0	0.64
63.5	0.64
64.0	0.64
64.5	0.64
65.0	0.64
65.5	0.64
66.0	0.64
66.5	0.64
67.0	0.64
67.5	0.64
68.0	0.00
68.5	0.64
69.0	0.00
69.5	0.00
70.0	0.00
70.5	0.00
71.0	0.00
71.5	0.00
72.0	0.00
72.5	0.00
73.0	0.00
73.5	0.00
74.0	0.00
74.5	0.00
75.0	0.00
75.5	0.00
76.0	0.00
76.5	0.00
77.0	0.00
77.5	0.00
78.0	0.00
78.5	0.00
79.0	0.00
79.5	0.00
80.0	0.00
80.5	0.00
81.0	0.00
81.5	0.00
82.0	0.00
82.5	0.00

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

83.0	0.00
83.5	0.00
84.0	0.00
84.5	0.00
85.0	0.00
85.5	0.00
86.0	0.00
86.5	0.00
87.0	0.00
87.5	0.00
88.0	0.00
88.5	0.00
89.0	0.00
89.5	0.00
90.0	0.00
90.5	0.00
91.0	0.00
91.5	0.00
92.0	0.00
92.5	0.00
93.0	0.00
93.5	0.00
94.0	0.00
94.5	0.00
95.0	0.00
95.5	0.00
96.0	0.00
96.5	0.00
97.0	0.00
97.5	0.00
98.0	0.00
98.5	0.00
99.0	0.00
99.5	0.00
100.0	0.00
100.5	0.00
101.0	0.00
101.5	0.00
102.0	0.00
102.5	0.00
103.0	0.00
103.5	0.00
104.0	0.00
104.5	0.00
105.0	0.00
105.5	0.00
106.0	0.00
106.5	0.00
107.0	0.00
107.5	0.00
108.0	0.00
108.5	0.00
109.0	0.00
109.5	0.00
110.0	0.00
110.5	0.00

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

111.0	0.00
111.5	0.00
112.0	0.00
112.5	0.00
113.0	0.00
113.5	0.00
114.0	0.00
114.5	0.00
115.0	0.00
115.5	0.00
116.0	0.00
116.5	0.00
117.0	0.00
117.5	0.00
118.0	0.00
118.5	0.00
119.0	0.00
119.5	0.00
120.0	0.00
120.5	0.00
121.0	0.00
121.5	0.00
122.0	0.00
122.5	0.00
123.0	0.00
123.5	0.00
124.0	0.00
124.5	0.00
125.0	0.00
125.5	0.00
126.0	0.00
126.5	0.00
127.0	0.00
127.5	0.00
128.0	0.00
128.5	0.00
129.0	0.00
129.5	0.00
130.0	0.00
130.5	0.00
131.0	0.00
131.5	0.00
132.0	0.00
132.5	0.00
133.0	0.00
133.5	0.00
134.0	0.00
134.5	0.00
135.0	0.00
135.5	0.00
136.0	0.00
136.5	0.00
137.0	0.00
137.5	0.00
138.0	0.00
138.5	0.00

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

139.0	0.00
139.5	0.00
140.0	0.00
140.5	0.00
141.0	0.00
141.5	0.00
142.0	0.00
142.5	0.00
143.0	0.00
143.5	0.00
144.0	0.00
144.5	0.00
145.0	0.00
145.5	0.00
146.0	0.00
146.5	0.00
147.0	0.00
147.5	0.00
148.0	0.00
148.5	0.00
149.0	0.00
149.5	0.00
150.0	0.00
150.5	0.00
151.0	0.00
151.5	0.00
152.0	0.00
152.5	0.00
153.0	0.00
153.5	0.00
154.0	0.00
154.5	0.00
155.0	0.00
155.5	0.00
156.0	0.00
156.5	0.00
157.0	0.00
157.5	0.00
158.0	0.00
158.5	0.00
159.0	0.00
159.5	0.00
160.0	0.00
160.5	0.00
161.0	0.00
161.5	0.00
162.0	0.00
162.5	0.00
163.0	0.00
163.5	0.00
164.0	0.00
164.5	0.00
165.0	0.00
165.5	0.00
166.0	0.00
166.5	0.00

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

167.0	0.00
167.5	0.00
168.0	0.00
168.5	0.00
169.0	0.00
169.5	0.00
170.0	0.00
170.5	0.00
171.0	0.00
171.5	0.00
172.0	0.00
172.5	0.00
173.0	0.00
173.5	0.00
174.0	0.00
174.5	0.00
175.0	0.00
175.5	0.00
176.0	0.00
176.5	0.00
177.0	0.00
177.5	0.00
178.0	0.00
178.5	0.00
179.0	0.00
179.5	0.00
180.0	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	922.34	N.A.	71.90
0-30	1207.68	N.A.	94.20
0-40	1275.38	N.A.	99.40
0-60	1282.00	N.A.	100.00
0-80	1282.52	N.A.	100.00
0-90	1282.52	N.A.	100.00
10-90	785.09	N.A.	61.20
20-40	353.05	N.A.	27.50
20-50	358.16	N.A.	27.90
40-70	7.14	N.A.	0.60
60-80	0.52	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	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	1282.52	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	497.44
10-20	424.90
20-30	285.34
30-40	67.71
40-50	5.12
50-60	1.50
60-70	0.52
70-80	0.00
80-90	0.00
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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	97
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	95	91	88	100	94	90	87	93	89	87	91	88	86	90	87	85	84
6	98	92	88	85	97	91	87	84	90	86	84	88	85	83	87	85	83	82
7	95	89	84	82	94	88	84	81	87	84	81	86	83	81	85	82	80	79
8	93	86	82	79	92	85	81	79	85	81	78	84	80	78	83	80	78	77
9	90	83	79	76	89	83	79	76	82	79	76	81	78	76	81	78	76	75
10	88	81	77	74	87	81	77	74	80	76	74	79	76	74	79	76	74	73

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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

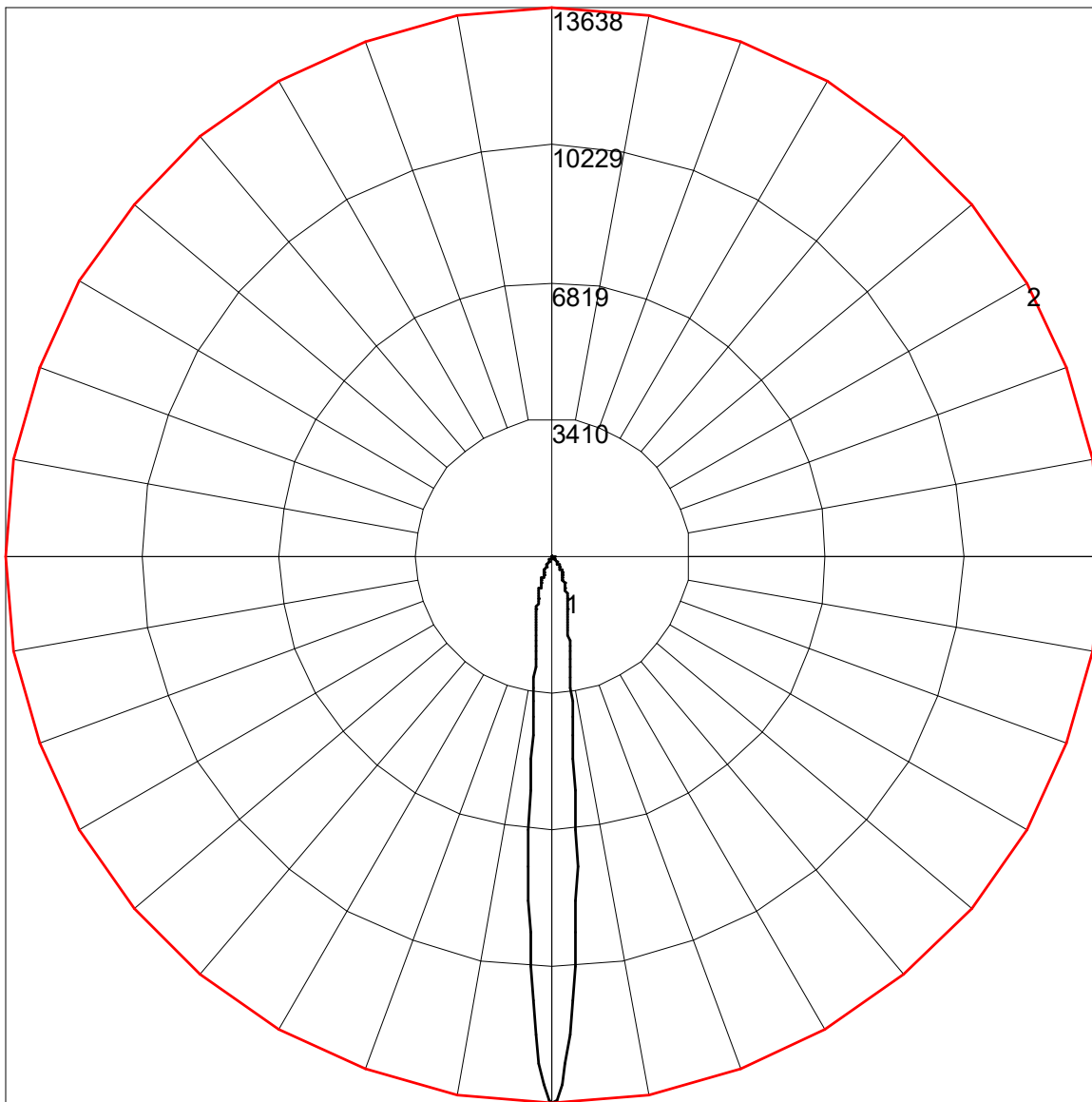
X=2H	Y=2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

UGR Viewed Endwise

4H	2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
8H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
12H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Maximum UGR = 1.1

POLAR GRAPH



Maximum Candela = 13638.4 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.)