



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-9DW-XXX-DIM-UNV-RM-WH-XX_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12326812.14

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-9DW-xxx-DIM-UNV-RM-WH-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1359
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	23.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	4885	4885	4885
55	3285	3285	3285
65	2445	2445	2445
75	1688	1688	1688
85	1410	1410	1410

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CANDELA TABULATION

	<u>0</u>
0.0	3289.207
0.5	3287.681
1.0	3283.106
1.5	3275.479
2.0	3264.803
2.5	3251.838
3.0	3235.823
3.5	3217.520
4.0	3197.692
4.5	3174.813
5.0	3150.409
5.5	3123.717
6.0	3093.974
6.5	3061.181
7.0	3026.101
7.5	2987.969
8.0	2946.788
8.5	2902.555
9.0	2855.272
9.5	2804.176
10.0	2750.793
10.5	2693.596
11.0	2632.586
11.5	2568.525
12.0	2501.414
12.5	2429.727
13.0	2356.515
13.5	2279.490
14.0	2200.177
14.5	2119.338
15.0	2035.449
15.5	1951.560
16.0	1866.146
16.5	1780.732
17.0	1696.843
17.5	1616.767
18.0	1534.404
18.5	1452.803
19.0	1372.727
19.5	1296.464
20.0	1224.015
20.5	1153.853
21.0	1085.217
21.5	1019.631
22.0	956.333
22.5	896.848
23.0	840.414
23.5	787.030
24.0	736.849
24.5	689.795
25.0	645.487
25.5	603.924
26.0	565.106
26.5	528.652

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L15-9DW-XXX-DIM-UNV-RM-WH-XX_3000K.IES****CANDELA TABULATION - (Cont.)**

27.0	494.716
27.5	462.990
28.0	433.248
28.5	405.641
29.0	379.712
29.5	355.460
30.0	332.658
30.5	311.380
31.0	291.476
31.5	272.791
32.0	255.327
32.5	238.931
33.0	223.526
33.5	209.112
34.0	195.537
34.5	182.954
35.0	171.210
35.5	160.228
36.0	150.009
36.5	140.552
37.0	131.782
37.5	123.698
38.0	116.224
38.5	109.361
39.0	103.031
39.5	97.235
40.0	91.973
40.5	87.168
41.0	82.745
41.5	78.703
42.0	74.966
42.5	71.534
43.0	68.331
43.5	65.433
44.0	62.688
44.5	60.247
45.0	57.883
45.5	55.748
46.0	53.689
46.5	51.782
47.0	50.028
47.5	48.427
48.0	46.902
48.5	45.453
49.0	44.080
49.5	42.707
50.0	41.487
50.5	40.343
51.0	39.199
51.5	38.131
52.0	37.140
52.5	36.072
53.0	35.157
53.5	34.242
54.0	33.327
54.5	32.412

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55.0	31.573
55.5	30.734
56.0	29.971
56.5	29.132
57.0	28.370
57.5	27.607
58.0	26.844
58.5	26.082
59.0	25.395
59.5	24.633
60.0	23.946
60.5	23.260
61.0	22.574
61.5	21.887
62.0	21.201
62.5	20.515
63.0	19.905
63.5	19.218
64.0	18.608
64.5	17.922
65.0	17.312
65.5	16.702
66.0	16.091
66.5	15.481
67.0	14.871
67.5	14.337
68.0	13.727
68.5	13.193
69.0	12.660
69.5	12.049
70.0	11.592
70.5	11.058
71.0	10.601
71.5	10.067
72.0	9.609
72.5	9.152
73.0	8.770
73.5	8.389
74.0	8.008
74.5	7.626
75.0	7.321
75.5	6.940
76.0	6.635
76.5	6.406
77.0	6.101
77.5	5.796
78.0	5.567
78.5	5.262
79.0	5.033
79.5	4.805
80.0	4.499
80.5	4.271
81.0	3.966
81.5	3.737
82.0	3.508
82.5	3.279

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83.0	3.051
83.5	2.745
84.0	2.517
84.5	2.288
85.0	2.059
85.5	1.830
86.0	1.678
86.5	1.449
87.0	1.220
87.5	0.991
88.0	0.763
88.5	0.610
89.0	0.534
89.5	0.381
90.0	0.305
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 : 8CR-TL-L15-9DW-XXX-DIM-UNV-RM-WH-XX_3000K.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 : 8CR-TL-L15-9DW-XXX-DIM-UNV-RM-WH-XX_3000K.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	836.19	N.A.	61.50
0-30	1143.31	N.A.	84.10
0-40	1256.35	N.A.	92.40
0-60	1331.37	N.A.	98.00
0-80	1356.59	N.A.	99.80
0-90	1358.95	N.A.	100.00
10-90	1070.71	N.A.	78.80
20-40	420.16	N.A.	30.90
20-50	466.68	N.A.	34.30
40-70	92.27	N.A.	6.80
60-80	25.22	N.A.	1.90
70-80	7.97	N.A.	0.60
80-90	2.35	N.A.	0.20
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	1358.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	288.24
10-20	547.95
20-30	307.12
30-40	113.04
40-50	46.51
50-60	28.51
60-70	17.25
70-80	7.97
80-90	2.35
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	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	94	89	85	98	92	88	84	90	86	83	88	85	83	87	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	73	71	70
8	86	77	72	69	85	77	72	69	76	72	68	75	71	68	74	71	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	71	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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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	8.7	9.7	9.1	10.0	10.3	8.7	9.7	9.1	10.0	10.3
	3H	9.8	10.7	10.2	11.0	11.4	9.8	10.7	10.2	11.0	11.4
	4H	10.1	10.9	10.5	11.3	11.7	10.1	10.9	10.5	11.3	11.7
	6H	10.4	11.1	10.8	11.5	11.9	10.4	11.1	10.8	11.5	11.9
	8H	10.4	11.1	10.9	11.5	11.9	10.4	11.1	10.9	11.5	11.9
	12H	10.5	11.1	10.9	11.5	11.9	10.5	11.1	10.9	11.5	11.9

UGR Viewed Endwise

4H	2H	9.0	9.8	9.4	10.2	10.6	9.0	9.8	9.4	10.2	10.6
	3H	10.3	10.9	10.7	11.4	11.8	10.3	10.9	10.7	11.4	11.8
	4H	10.7	11.3	11.1	11.7	12.2	10.7	11.3	11.1	11.7	12.2
	6H	11.0	11.5	11.5	12.0	12.5	11.0	11.5	11.5	12.0	12.5
	8H	11.2	11.6	11.6	12.1	12.5	11.2	11.6	11.6	12.1	12.5
	12H	11.2	11.6	11.7	12.1	12.6	11.2	11.6	11.7	12.1	12.6

8H	4H	10.8	11.2	11.3	11.7	12.2	10.8	11.2	11.3	11.7	12.2
	6H	11.2	11.6	11.8	12.1	12.6	11.2	11.6	11.8	12.1	12.6
	8H	11.4	11.7	12.0	12.3	12.8	11.4	11.7	12.0	12.3	12.8
	12H	11.6	11.8	12.1	12.3	12.9	11.6	11.8	12.1	12.3	12.9

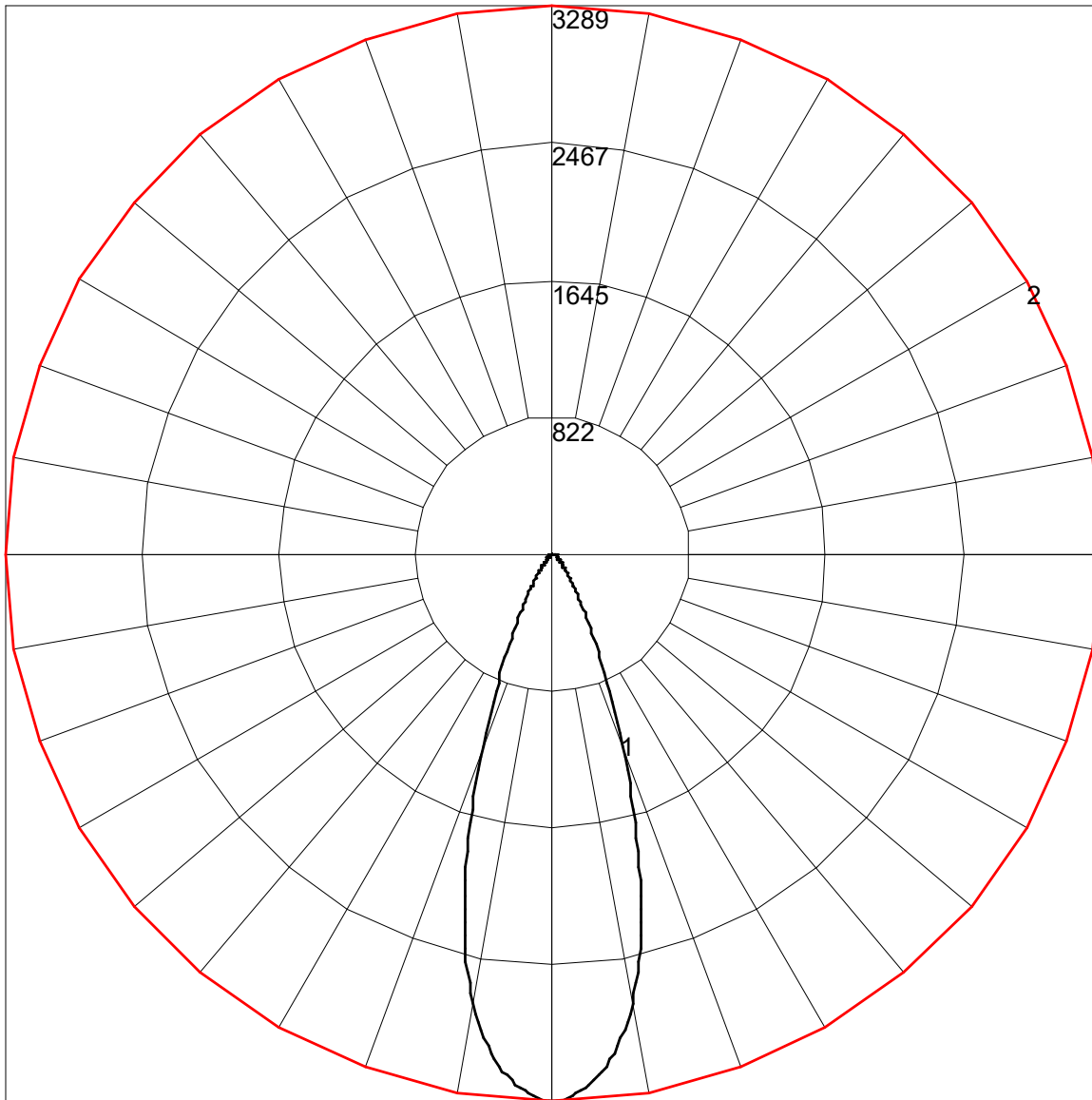
12H	4H	10.8	11.2	11.3	11.6	12.1	10.8	11.2	11.3	11.6	12.1
	6H	11.2	11.6	11.8	12.0	12.6	11.2	11.6	11.8	12.0	12.6
	8H	11.5	11.7	12.0	12.2	12.8	11.5	11.7	12.0	12.2	12.8

Maximum UGR = 12.9

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POLAR GRAPH



Maximum Candela = 3289.207 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.)