



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12326812.09
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 29-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 8DR-TL-L15-9DW-xxx-DIM-UNV-LM-WH-xx
 [LUMINAIRE] 8" DIA. SURFACE CYLINDER
 [LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1397
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	23.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.60
Spacing Criterion (90-270)	0.60
Spacing Criterion (Diagonal)	0.56
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	6241	6241	6241
55	4570	4570	4570
65	3723	3723	3723
75	3030	3030	3030
85	1994	1994	1994

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CANDELA TABULATION

	<u>0</u>
0.0	3298.958
0.5	3297.437
1.0	3292.874
1.5	3286.030
2.0	3276.904
2.5	3263.976
3.0	3249.527
3.5	3232.796
4.0	3213.024
4.5	3192.491
5.0	3169.676
5.5	3143.820
6.0	3115.682
6.5	3084.503
7.0	3051.042
7.5	3014.539
8.0	2974.233
8.5	2930.886
9.0	2885.257
9.5	2836.587
10.0	2784.114
10.5	2728.599
11.0	2669.281
11.5	2605.401
12.0	2539.239
12.5	2469.275
13.0	2396.269
13.5	2319.461
14.0	2240.371
14.5	2158.239
15.0	2074.587
15.5	1989.413
16.0	1904.239
16.5	1818.305
17.0	1734.653
17.5	1651.000
18.0	1566.587
18.5	1483.694
19.0	1401.563
19.5	1322.473
20.0	1245.665
20.5	1171.898
21.0	1102.695
21.5	1036.533
22.0	970.371
22.5	908.012
23.0	848.695
23.5	792.419
24.0	740.022
24.5	690.439
25.0	644.126
25.5	600.474
26.0	560.017
26.5	522.145

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

27.0	486.935
27.5	454.310
28.0	423.891
28.5	395.753
29.0	369.669
29.5	345.334
30.0	322.823
30.5	301.834
31.0	282.366
31.5	264.266
32.0	247.384
32.5	231.718
33.0	217.117
33.5	203.504
34.0	190.956
34.5	179.321
35.0	168.446
35.5	158.484
36.0	149.206
36.5	140.765
37.0	132.932
37.5	125.783
38.0	119.319
38.5	113.311
39.0	107.836
39.5	102.817
40.0	98.254
40.5	93.995
41.0	90.117
41.5	86.543
42.0	83.196
42.5	80.154
43.0	77.265
43.5	74.603
44.0	72.169
44.5	69.812
45.0	67.607
45.5	65.553
46.0	63.652
46.5	61.827
47.0	60.078
47.5	58.405
48.0	56.884
48.5	55.363
49.0	53.918
49.5	52.549
50.0	51.256
50.5	49.963
51.0	48.747
51.5	47.530
52.0	46.389
52.5	45.325
53.0	44.184
53.5	43.119
54.0	42.131
54.5	41.142

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55.0	40.153
55.5	39.165
56.0	38.252
56.5	37.340
57.0	36.427
57.5	35.514
58.0	34.678
58.5	33.841
59.0	33.005
59.5	32.244
60.0	31.484
60.5	30.647
61.0	29.887
61.5	29.126
62.0	28.366
62.5	27.681
63.0	26.921
63.5	26.237
64.0	25.552
64.5	24.868
65.0	24.107
65.5	23.423
66.0	22.738
66.5	22.130
67.0	21.446
67.5	20.761
68.0	20.153
68.5	19.544
69.0	18.860
69.5	18.251
70.0	17.643
70.5	17.035
71.0	16.502
71.5	15.894
72.0	15.286
72.5	14.753
73.0	14.145
73.5	13.613
74.0	13.080
74.5	12.548
75.0	12.016
75.5	11.483
76.0	10.951
76.5	10.419
77.0	9.886
77.5	9.430
78.0	8.898
78.5	8.441
79.0	7.985
79.5	7.453
80.0	6.996
80.5	6.540
81.0	6.084
81.5	5.628
82.0	5.171
82.5	4.715

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83.0	4.335
83.5	3.878
84.0	3.498
84.5	3.042
85.0	2.662
85.5	2.281
86.0	1.901
86.5	1.597
87.0	1.293
87.5	1.065
88.0	0.837
88.5	0.684
89.0	0.532
89.5	0.380
90.0	0.228
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-LM-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-LM-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	848.45	N.A.	60.70
0-30	1155.73	N.A.	82.70
0-40	1267.46	N.A.	90.70
0-60	1357.28	N.A.	97.10
0-80	1394.04	N.A.	99.80
0-90	1397.29	N.A.	100.00
10-90	1106.78	N.A.	79.20
20-40	419.02	N.A.	30.00
20-50	472.66	N.A.	33.80
40-70	113.81	N.A.	8.10
60-80	36.76	N.A.	2.60
70-80	12.76	N.A.	0.90
80-90	3.25	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	1397.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	290.51
10-20	557.93
20-30	307.28
30-40	111.74
40-50	53.64
50-60	36.18
60-70	23.99
70-80	12.76
80-90	3.25
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	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	94	90	102	97	93	89	94	91	88	92	89	86	90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83	88	84	82	86	83	81	79
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75
6	92	84	79	75	90	83	78	75	82	77	74	80	77	74	79	76	73	72
7	88	80	75	71	87	79	74	71	78	74	71	77	73	70	76	73	70	69
8	85	77	71	68	84	76	71	68	75	71	67	74	70	67	73	70	67	66
9	82	74	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63
10	79	71	66	62	78	70	65	62	69	65	62	69	65	62	68	64	62	61

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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	10.7	11.7	11.0	12.0	12.3	10.7	11.7	11.0	12.0	12.3
	3H	12.1	13.0	12.5	13.3	13.7	12.1	13.0	12.5	13.3	13.7
	4H	12.6	13.4	13.0	13.8	14.2	12.6	13.4	13.0	13.8	14.2
	6H	12.9	13.7	13.4	14.1	14.5	12.9	13.7	13.4	14.1	14.5
	8H	13.0	13.7	13.5	14.1	14.5	13.0	13.7	13.5	14.1	14.5
	12H	13.1	13.7	13.5	14.1	14.6	13.1	13.7	13.5	14.1	14.6

UGR Viewed Endwise

4H	2H	11.1	11.9	11.5	12.3	12.7	11.1	11.9	11.5	12.3	12.7
	3H	12.7	13.4	13.1	13.8	14.2	12.7	13.4	13.1	13.8	14.2
	4H	13.3	13.9	13.7	14.3	14.8	13.3	13.9	13.7	14.3	14.8
	6H	13.8	14.3	14.2	14.7	15.2	13.8	14.3	14.2	14.7	15.2
	8H	13.9	14.4	14.4	14.8	15.3	13.9	14.4	14.4	14.8	15.3
	12H	14.0	14.4	14.4	14.9	15.3	14.0	14.4	14.4	14.9	15.3

8H	4H	13.5	14.0	14.0	14.4	14.9	13.5	14.0	14.0	14.4	14.9
	6H	14.0	14.4	14.6	14.9	15.4	14.0	14.4	14.6	14.9	15.4
	8H	14.2	14.6	14.8	15.1	15.6	14.2	14.6	14.8	15.1	15.6
	12H	14.4	14.7	14.9	15.2	15.7	14.4	14.7	14.9	15.2	15.7

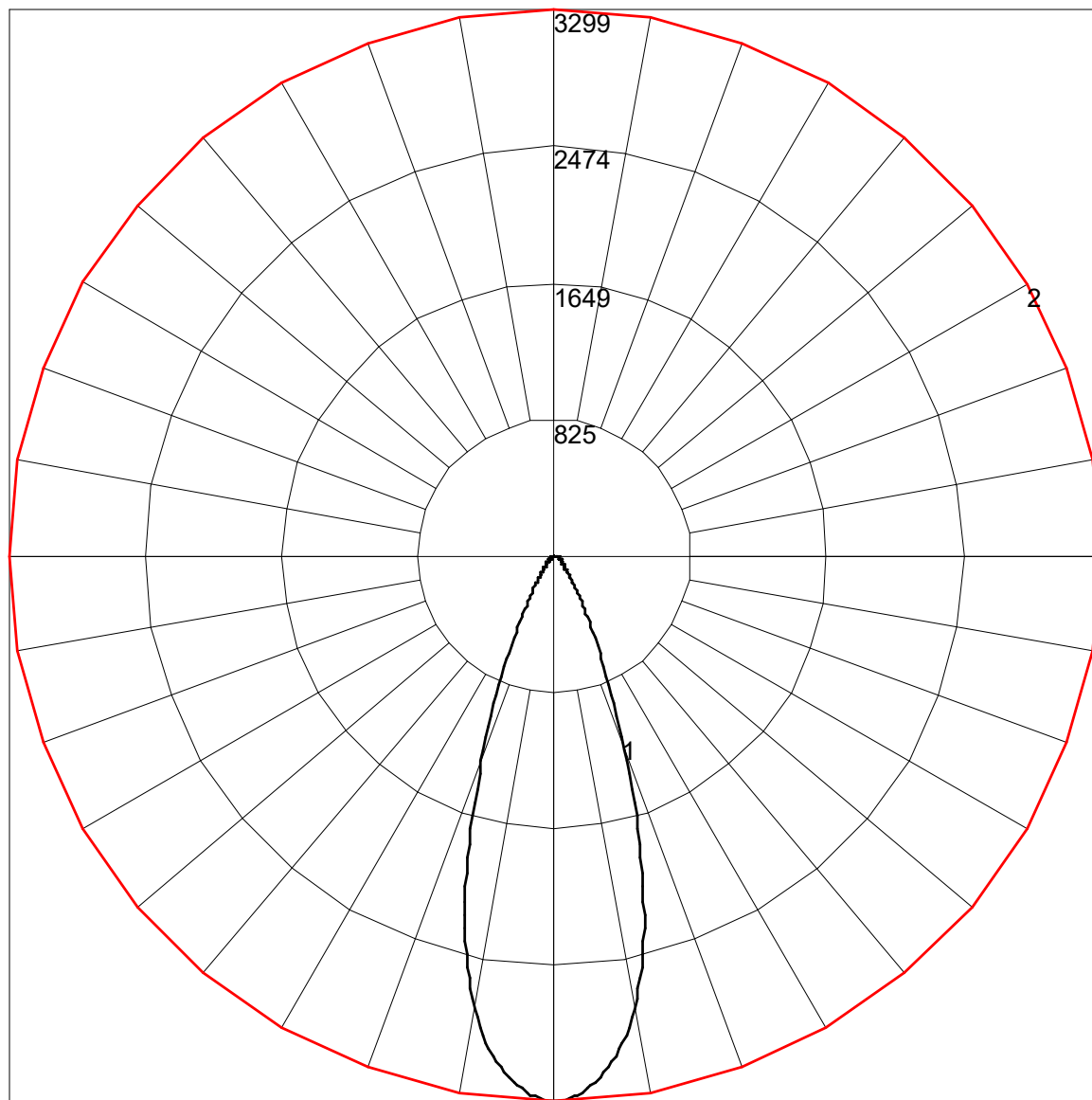
12H	4H	13.5	13.9	14.0	14.4	14.8	13.5	13.9	14.0	14.4	14.8
	6H	14.1	14.4	14.6	14.9	15.4	14.1	14.4	14.6	14.9	15.4
	8H	14.3	14.6	14.8	15.1	15.7	14.3	14.6	14.8	15.1	15.7

Maximum UGR = 15.7

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POLAR GRAPH



Maximum Candela = 3298.958 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.)