



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L25-9DW-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] 8CR-TL-L25-9DW-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	2284
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	61
Total Luminaire Watts	37.7
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	10201	10201	10201
55	7469	7469	7469
65	6086	6086	6086
75	4953	4953	4953
85	3259	3259	3259

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## CANDELA TABULATION

	<u>0</u>
0.0	5392.134
0.5	5389.648
1.0	5382.190
1.5	5371.003
2.0	5356.087
2.5	5334.956
3.0	5311.339
3.5	5283.993
4.0	5251.675
4.5	5218.114
5.0	5180.824
5.5	5138.562
6.0	5092.571
6.5	5041.608
7.0	4986.916
7.5	4927.252
8.0	4861.373
8.5	4790.522
9.0	4715.942
9.5	4636.390
10.0	4550.623
10.5	4459.884
11.0	4362.930
11.5	4258.518
12.0	4150.377
12.5	4036.021
13.0	3916.693
13.5	3791.150
14.0	3661.878
14.5	3527.634
15.0	3390.904
15.5	3251.688
16.0	3112.472
16.5	2972.013
17.0	2835.283
17.5	2698.553
18.0	2560.580
18.5	2425.093
19.0	2290.849
19.5	2161.577
20.0	2036.034
20.5	1915.463
21.0	1802.350
21.5	1694.209
22.0	1586.068
22.5	1484.142
23.0	1387.188
23.5	1295.206
24.0	1209.563
24.5	1128.520
25.0	1052.821
25.5	981.473
26.0	915.345
26.5	853.444

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L25-9DW-XXX-DIM-UNV-LM-WH-XX\_3000K.IES****CANDELA TABULATION - (Cont.)**

27.0	795.893
27.5	742.568
28.0	692.848
28.5	646.857
29.0	604.222
29.5	564.446
30.0	527.654
30.5	493.347
31.0	461.526
31.5	431.943
32.0	404.348
32.5	378.742
33.0	354.877
33.5	332.627
34.0	312.117
34.5	293.099
35.0	275.325
35.5	259.041
36.0	243.877
36.5	230.079
37.0	217.276
37.5	205.592
38.0	195.027
38.5	185.207
39.0	176.257
39.5	168.054
40.0	160.596
40.5	153.635
41.0	147.296
41.5	141.453
42.0	135.984
42.5	131.012
43.0	126.289
43.5	121.938
44.0	117.961
44.5	114.107
45.0	110.503
45.5	107.147
46.0	104.039
46.5	101.056
47.0	98.197
47.5	95.462
48.0	92.976
48.5	90.490
49.0	88.129
49.5	85.891
50.0	83.778
50.5	81.665
51.0	79.676
51.5	77.688
52.0	75.823
52.5	74.083
53.0	72.218
53.5	70.478
54.0	68.862
54.5	67.246

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55.0	65.630
55.5	64.015
56.0	62.523
56.5	61.031
57.0	59.540
57.5	58.048
58.0	56.681
58.5	55.314
59.0	53.946
59.5	52.703
60.0	51.460
60.5	50.093
61.0	48.850
61.5	47.607
62.0	46.364
62.5	45.245
63.0	44.002
63.5	42.884
64.0	41.765
64.5	40.646
65.0	39.403
65.5	38.284
66.0	37.166
66.5	36.171
67.0	35.053
67.5	33.934
68.0	32.940
68.5	31.945
69.0	30.826
69.5	29.832
70.0	28.838
70.5	27.843
71.0	26.973
71.5	25.979
72.0	24.984
72.5	24.114
73.0	23.120
73.5	22.250
74.0	21.380
74.5	20.510
75.0	19.639
75.5	18.769
76.0	17.899
76.5	17.029
77.0	16.159
77.5	15.413
78.0	14.543
78.5	13.797
79.0	13.052
79.5	12.181
80.0	11.436
80.5	10.690
81.0	9.944
81.5	9.198
82.0	8.452
82.5	7.707

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L25-9DW-XXX-DIM-UNV-LM-WH-XX\_3000K.IES****CANDELA TABULATION - (Cont.)**

83.0	7.085
83.5	6.339
84.0	5.718
84.5	4.972
85.0	4.351
85.5	3.729
86.0	3.108
86.5	2.610
87.0	2.113
87.5	1.740
88.0	1.367
88.5	1.119
89.0	0.870
89.5	0.622
90.0	0.373
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-L25-9DW-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-L25-9DW-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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L25-9DW-XXX-DIM-UNV-LM-WH-XX\_3000K.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1386.78	N.A.	60.70
0-30	1889.03	N.A.	82.70
0-40	2071.66	N.A.	90.70
0-60	2218.48	N.A.	97.10
0-80	2278.55	N.A.	99.80
0-90	2283.86	N.A.	100.00
10-90	1809.02	N.A.	79.20
20-40	684.88	N.A.	30.00
20-50	772.56	N.A.	33.80
40-70	186.03	N.A.	8.10
60-80	60.08	N.A.	2.60
70-80	20.86	N.A.	0.90
80-90	5.31	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	2283.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	474.84
10-20	911.94
20-30	502.25
30-40	182.63
40-50	87.68
50-60	59.13
60-70	39.21
70-80	20.86
80-90	5.31
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	102	99	96	99	96	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	83	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	76	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	73	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	12.4	13.4	12.7	13.7	14.0	12.4	13.4	12.7	13.7	14.0
	3H	13.8	14.7	14.2	15.0	15.4	13.8	14.7	14.2	15.0	15.4
	4H	14.3	15.1	14.7	15.5	15.9	14.3	15.1	14.7	15.5	15.9
	6H	14.6	15.4	15.1	15.8	16.2	14.6	15.4	15.1	15.8	16.2
	8H	14.7	15.4	15.2	15.8	16.2	14.7	15.4	15.2	15.8	16.2
	12H	14.8	15.4	15.2	15.8	16.3	14.8	15.4	15.2	15.8	16.3

### UGR Viewed Endwise

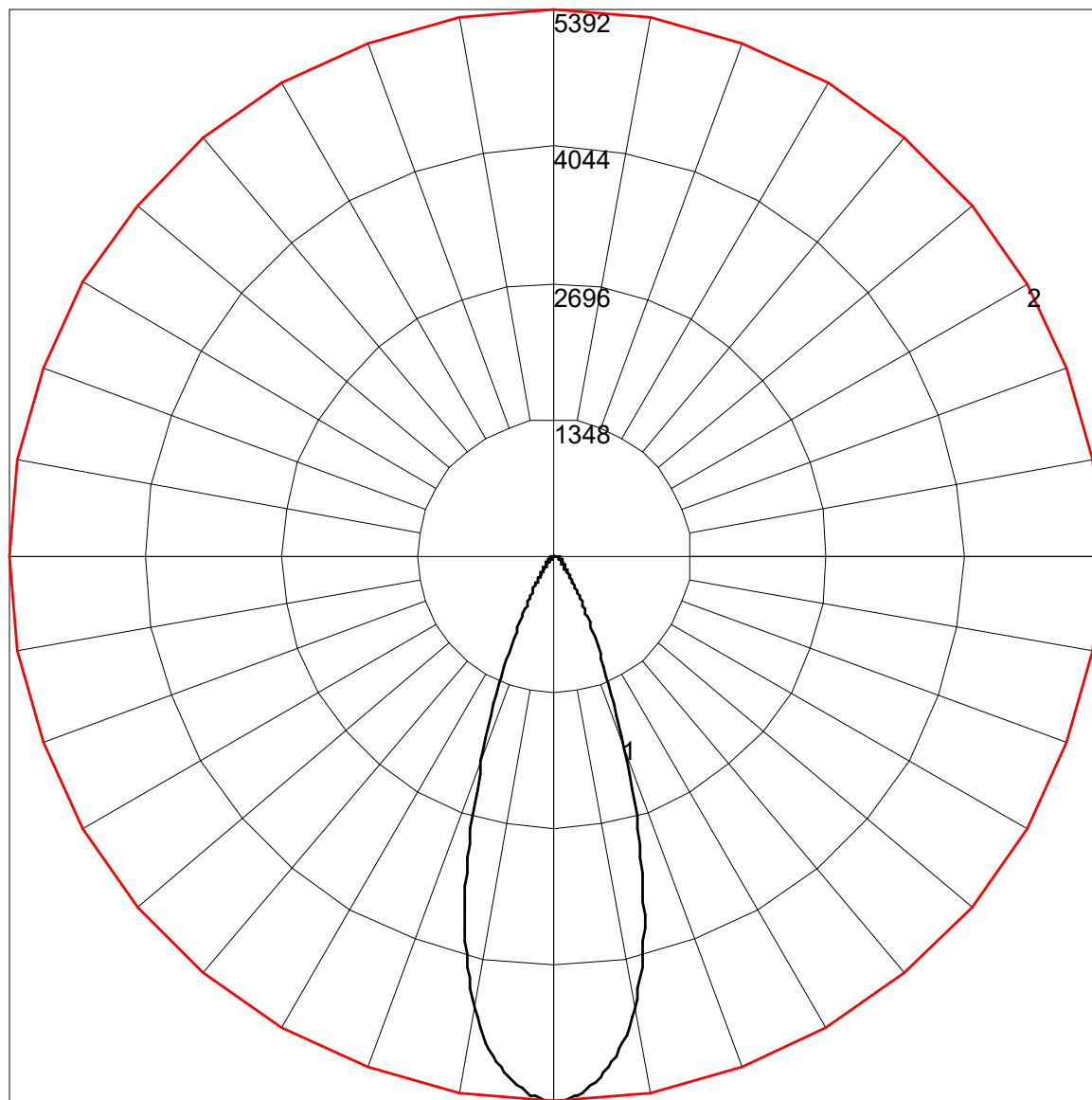
4H	2H	12.8	13.6	13.2	14.0	14.4	12.8	13.6	13.2	14.0	14.4
	3H	14.4	15.1	14.8	15.5	15.9	14.4	15.1	14.8	15.5	15.9
	4H	15.0	15.6	15.4	16.0	16.5	15.0	15.6	15.4	16.0	16.5
	6H	15.5	16.0	15.9	16.4	16.9	15.5	16.0	15.9	16.4	16.9
	8H	15.6	16.1	16.1	16.5	17.0	15.6	16.1	16.1	16.5	17.0
	12H	15.7	16.1	16.1	16.6	17.0	15.7	16.1	16.1	16.6	17.0
8H	4H	15.2	15.7	15.7	16.1	16.6	15.2	15.7	15.7	16.1	16.6
	6H	15.7	16.1	16.3	16.6	17.1	15.7	16.1	16.3	16.6	17.1
	8H	15.9	16.3	16.5	16.8	17.3	15.9	16.3	16.5	16.8	17.3
	12H	16.1	16.4	16.6	16.9	17.4	16.1	16.4	16.6	16.9	17.4
12H	4H	15.2	15.6	15.7	16.1	16.5	15.2	15.6	15.7	16.1	16.5
	6H	15.8	16.1	16.3	16.6	17.1	15.8	16.1	16.3	16.6	17.1
	8H	16.0	16.3	16.5	16.8	17.4	16.0	16.3	16.5	16.8	17.4

Maximum UGR = 17.4

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## POLAR GRAPH



Maximum Candela = 5392.134 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.)