



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-850-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-850-xxx-DIM-UNV-LW-WH-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCE TYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1201
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
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	19959	19959	19959
55	16616	16616	16616
65	12624	12624	12624
75	9155	9155	9155
85	5966	5966	5966

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CANDELA TABULATION

	<u>0</u>
0.0	763.734
0.5	763.581
1.0	762.966
1.5	762.043
2.0	760.890
2.5	759.352
3.0	757.814
3.5	756.046
4.0	754.431
4.5	752.816
5.0	751.663
5.5	750.587
6.0	749.587
6.5	748.587
7.0	747.511
7.5	746.511
8.0	745.512
8.5	744.589
9.0	743.667
9.5	742.898
10.0	742.129
10.5	741.514
11.0	740.975
11.5	740.668
12.0	740.130
12.5	739.591
13.0	738.823
13.5	737.823
14.0	736.593
14.5	735.209
15.0	733.748
15.5	731.903
16.0	729.904
16.5	727.904
17.0	725.905
17.5	723.829
18.0	721.600
18.5	719.062
19.0	716.217
19.5	713.065
20.0	709.451
20.5	705.530
21.0	700.686
21.5	694.919
22.0	688.384
22.5	681.002
23.0	672.929
23.5	664.164
24.0	654.476
24.5	644.019
25.0	632.716
25.5	620.952
26.0	608.420
26.5	595.348

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CANDELA TABULATION - (Cont.)

27.0	581.432
27.5	567.130
28.0	552.060
28.5	536.144
29.0	519.613
29.5	502.236
30.0	484.398
30.5	466.022
31.0	447.645
31.5	429.115
32.0	411.123
32.5	393.900
33.0	377.369
33.5	361.915
34.0	347.690
34.5	334.773
35.0	323.240
35.5	312.629
36.0	303.326
36.5	294.791
37.0	287.179
37.5	280.336
38.0	274.108
38.5	268.418
39.0	263.036
39.5	258.192
40.0	253.502
40.5	249.119
41.0	245.044
41.5	241.046
42.0	237.201
42.5	233.664
43.0	230.051
43.5	226.514
44.0	223.054
44.5	219.671
45.0	216.211
45.5	212.905
46.0	209.521
46.5	206.138
47.0	202.678
47.5	199.295
48.0	195.835
48.5	192.375
49.0	188.915
49.5	185.302
50.0	181.842
50.5	178.305
51.0	174.768
51.5	171.154
52.0	167.540
52.5	163.927
53.0	160.313
53.5	156.699
54.0	153.239
54.5	149.702

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L15-850-XXX-DIM-UNV-LW-WH-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	146.011
55.5	142.398
56.0	138.784
56.5	135.401
57.0	132.018
57.5	128.481
58.0	124.944
58.5	121.484
59.0	118.101
59.5	114.718
60.0	111.488
60.5	108.259
61.0	105.107
61.5	101.954
62.0	98.956
62.5	95.957
63.0	93.035
63.5	90.113
64.0	87.269
64.5	84.501
65.0	81.733
65.5	79.041
66.0	76.358
66.5	73.721
67.0	71.114
67.5	68.562
68.0	66.055
68.5	63.541
69.0	61.103
69.5	58.689
70.0	56.344
70.5	54.076
71.0	51.854
71.5	49.701
72.0	47.625
72.5	45.610
73.0	43.650
73.5	41.727
74.0	39.882
74.5	38.075
75.0	36.299
75.5	34.584
76.0	32.901
76.5	31.248
77.0	29.641
77.5	28.064
78.0	26.534
78.5	25.035
79.0	23.566
79.5	22.152
80.0	20.745
80.5	19.384
81.0	18.038
81.5	16.700
82.0	15.393
82.5	14.094

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CANDELA TABULATION - (Cont.)

83.0	12.825
83.5	11.579
84.0	10.349
84.5	9.142
85.0	7.966
85.5	6.828
86.0	5.728
86.5	4.667
87.0	3.637
87.5	2.776
88.0	2.122
88.5	1.553
89.0	1.076
89.5	0.677
90.0	0.431
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

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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
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127.0	0.000
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128.5	0.000
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130.0	0.000
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131.0	0.000
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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

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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
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151.0	0.000
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152.0	0.000
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154.0	0.000
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157.0	0.000
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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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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	278.20	N.A.	23.20
0-30	562.36	N.A.	46.80
0-40	773.07	N.A.	64.40
0-60	1070.58	N.A.	89.20
0-80	1191.09	N.A.	99.20
0-90	1200.61	N.A.	100.00
10-90	1129.14	N.A.	94.00
20-40	494.87	N.A.	41.20
20-50	661.83	N.A.	55.10
40-70	378.98	N.A.	31.60
60-80	120.51	N.A.	10.00
70-80	39.04	N.A.	3.30
80-90	9.52	N.A.	0.80
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	1200.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	71.47
10-20	206.73
20-30	284.16
30-40	210.71
40-50	166.97
50-60	130.55
60-70	81.47
70-80	39.04
80-90	9.52
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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	19.6	21.0	20.0	21.3	21.6	19.6	21.0	20.0	21.3	21.6
	3H	20.8	22.1	21.2	22.4	22.7	20.8	22.1	21.2	22.4	22.7
	4H	21.2	22.4	21.6	22.7	23.1	21.2	22.4	21.6	22.7	23.1
	6H	21.5	22.5	21.9	22.9	23.3	21.5	22.5	21.9	22.9	23.3
	8H	21.6	22.6	22.0	23.0	23.4	21.6	22.6	22.0	23.0	23.4
	12H	21.6	22.6	22.0	22.9	23.4	21.6	22.6	22.0	22.9	23.4

UGR Viewed Endwise

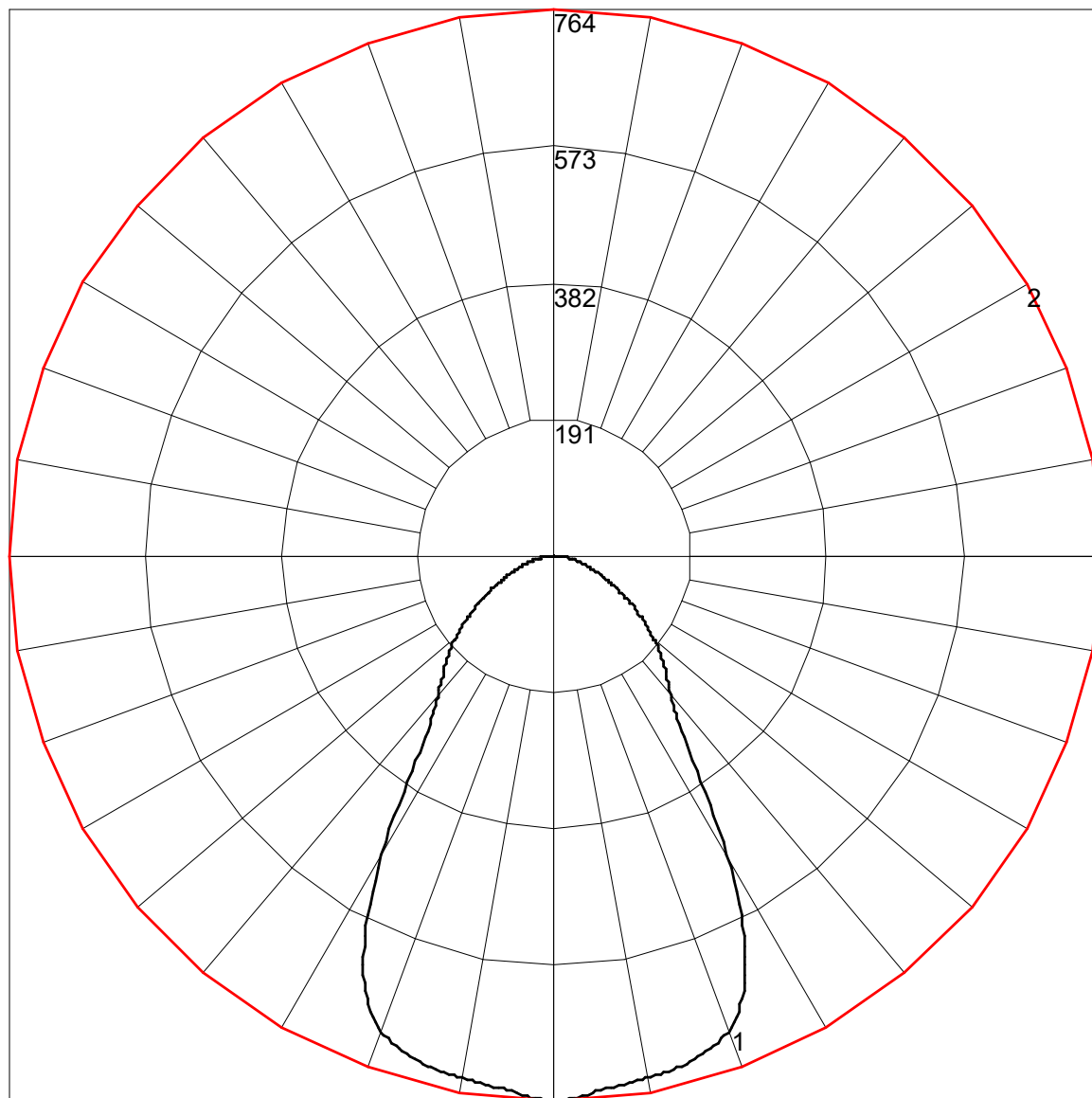
4H	2H	20.0	21.2	20.4	21.5	21.9	20.0	21.2	20.4	21.5	21.9
	3H	21.4	22.4	21.8	22.8	23.2	21.4	22.4	21.8	22.8	23.2
	4H	21.9	22.8	22.4	23.2	23.6	21.9	22.8	22.4	23.2	23.6
	6H	22.3	23.0	22.8	23.5	23.9	22.3	23.0	22.8	23.5	23.9
	8H	22.4	23.1	22.8	23.5	24.0	22.4	23.1	22.8	23.5	24.0
	12H	22.5	23.1	22.9	23.6	24.0	22.5	23.1	22.9	23.6	24.0

8H	4H	22.1	22.8	22.5	23.2	23.7	22.1	22.8	22.5	23.2	23.7
	6H	22.5	23.1	23.0	23.6	24.1	22.5	23.1	23.0	23.6	24.1
	8H	22.7	23.2	23.2	23.7	24.2	22.7	23.2	23.2	23.7	24.2
	12H	22.8	23.3	23.3	23.8	24.3	22.8	23.3	23.3	23.8	24.3

12H	4H	22.1	22.7	22.6	23.2	23.6	22.1	22.7	22.6	23.2	23.6
	6H	22.6	23.1	23.1	23.5	24.1	22.6	23.1	23.1	23.5	24.1
	8H	22.8	23.2	23.3	23.7	24.3	22.8	23.2	23.3	23.7	24.3

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 763.734 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.)