



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-840-XXX-DIM-UNV-RN-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.15

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-840-xxx-DIM-UNV-RN-CSxx

[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	1380
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
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	4519	4519	4519
55	2956	2956	2956
65	2011	2011	2011
75	1300	1300	1300
85	1043	1043	1043

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CANDELA TABULATION

	<u>0</u>
0.0	5124.735
0.5	5120.166
1.0	5105.695
1.5	5080.563
2.0	5045.530
2.5	4999.834
3.0	4945.000
3.5	4881.788
4.0	4810.960
4.5	4731.755
5.0	4645.695
5.5	4551.258
6.0	4449.205
6.5	4341.060
7.0	4226.821
7.5	4106.490
8.0	3980.828
8.5	3850.596
9.0	3715.033
9.5	3576.424
10.0	3434.007
10.5	3290.828
11.0	3146.126
11.5	3000.662
12.0	2855.960
12.5	2711.258
13.0	2569.603
13.5	2427.947
14.0	2290.861
14.5	2157.583
15.0	2027.351
15.5	1903.212
16.0	1785.166
16.5	1673.212
17.0	1565.066
17.5	1462.252
18.0	1364.768
18.5	1274.139
19.0	1188.079
19.5	1110.397
20.0	1034.238
20.5	962.649
21.0	896.391
21.5	834.702
22.0	776.060
22.5	720.921
23.0	669.742
23.5	622.142
24.0	577.742
24.5	536.387
25.0	497.927
25.5	462.285
26.0	429.384
26.5	398.844

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CANDELA TABULATION - (Cont.)

27.0	370.666
27.5	344.772
28.0	320.934
28.5	299.000
29.0	278.818
29.5	260.311
30.0	243.175
30.5	227.487
31.0	213.093
31.5	199.765
32.0	187.503
32.5	176.156
33.0	165.722
33.5	156.050
34.0	147.139
34.5	138.838
35.0	131.146
35.5	124.063
36.0	117.513
36.5	111.344
37.0	105.709
37.5	100.377
38.0	95.503
38.5	91.010
39.0	86.821
39.5	82.861
40.0	79.281
40.5	75.854
41.0	72.732
41.5	69.762
42.0	67.020
42.5	64.430
43.0	61.993
43.5	59.709
44.0	57.500
44.5	55.444
45.0	53.540
45.5	51.712
46.0	49.960
46.5	48.285
47.0	46.685
47.5	45.086
48.0	43.639
48.5	42.192
49.0	40.897
49.5	39.603
50.0	38.384
50.5	37.166
51.0	36.023
51.5	34.957
52.0	33.891
52.5	32.901
53.0	31.911
53.5	30.997
54.0	30.083
54.5	29.245

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CANDELA TABULATION - (Cont.)

55.0	28.407
55.5	27.570
56.0	26.808
56.5	26.046
57.0	25.209
57.5	24.447
58.0	23.762
58.5	23.000
59.0	22.315
59.5	21.553
60.0	20.868
60.5	20.106
61.0	19.421
61.5	18.735
62.0	18.050
62.5	17.440
63.0	16.755
63.5	16.146
64.0	15.460
64.5	14.851
65.0	14.242
65.5	13.632
66.0	13.099
66.5	12.566
67.0	12.033
67.5	11.500
68.0	10.967
68.5	10.510
69.0	10.053
69.5	9.596
70.0	9.139
70.5	8.758
71.0	8.301
71.5	7.921
72.0	7.540
72.5	7.159
73.0	6.854
73.5	6.550
74.0	6.245
74.5	5.940
75.0	5.636
75.5	5.331
76.0	5.103
76.5	4.874
77.0	4.646
77.5	4.417
78.0	4.189
78.5	4.036
79.0	3.808
79.5	3.579
80.0	3.427
80.5	3.199
81.0	2.970
81.5	2.818
82.0	2.589
82.5	2.437

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CANDELA TABULATION - (Cont.)

83.0	2.285
83.5	2.056
84.0	1.904
84.5	1.675
85.0	1.523
85.5	1.371
86.0	1.219
86.5	1.066
87.0	0.914
87.5	0.762
88.0	0.609
88.5	0.457
89.0	0.381
89.5	0.305
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

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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
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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
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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

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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	962.26	N.A.	69.70
0-30	1203.36	N.A.	87.20
0-40	1289.86	N.A.	93.50
0-60	1357.87	N.A.	98.40
0-80	1378.37	N.A.	99.90
0-90	1380.13	N.A.	100.00
10-90	976.03	N.A.	70.70
20-40	327.60	N.A.	23.70
20-50	369.94	N.A.	26.80
40-70	82.34	N.A.	6.00
60-80	20.50	N.A.	1.50
70-80	6.17	N.A.	0.40
80-90	1.76	N.A.	0.10
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	1380.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	404.10
10-20	558.16
20-30	241.10
30-40	86.50
40-50	42.34
50-60	25.68
60-70	14.32
70-80	6.17
80-90	1.76
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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91	94	92	89	92	90	88	87
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83
5	98	91	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77
7	92	84	80	76	91	84	79	76	83	79	76	81	78	75	80	77	75	74
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71
9	86	78	74	71	85	78	74	71	77	73	70	76	73	70	76	72	70	69
10	83	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	68	67

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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	7.9	8.8	8.2	9.1	9.5	7.9	8.8	8.2	9.1	9.5
	3H	8.7	9.6	9.1	9.9	10.3	8.7	9.6	9.1	9.9	10.3
	4H	9.0	9.8	9.4	10.1	10.5	9.0	9.8	9.4	10.1	10.5
	6H	9.1	9.9	9.5	10.2	10.6	9.1	9.9	9.5	10.2	10.6
	8H	9.2	9.9	9.6	10.3	10.7	9.2	9.9	9.6	10.3	10.7
	12H	9.2	9.8	9.6	10.2	10.7	9.2	9.8	9.6	10.2	10.7

UGR Viewed Endwise

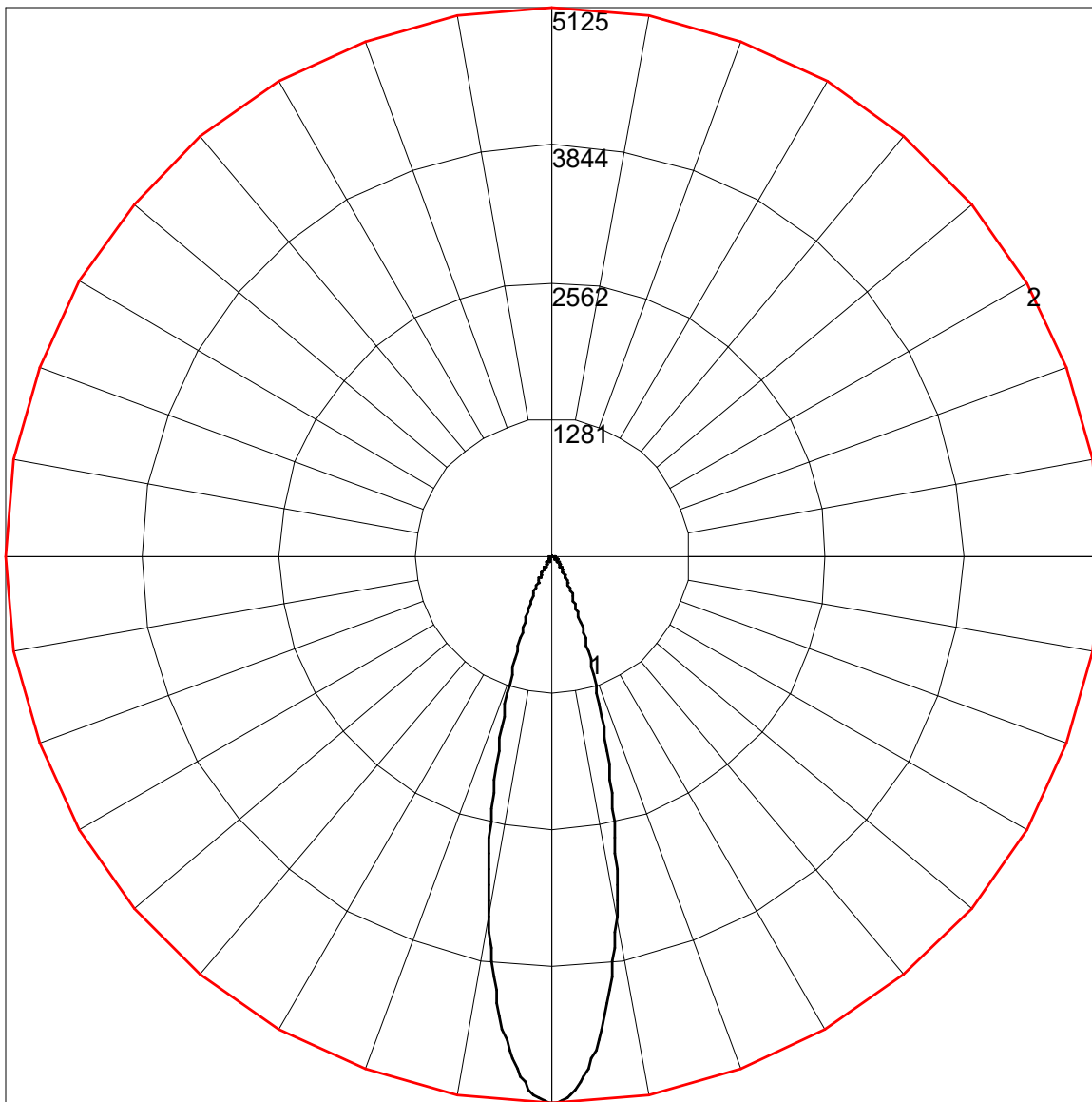
4H	2H	8.1	8.9	8.5	9.2	9.6	8.1	8.9	8.5	9.2	9.6
	3H	9.1	9.8	9.5	10.2	10.6	9.1	9.8	9.5	10.2	10.6
	4H	9.4	10.0	9.9	10.4	10.9	9.4	10.0	9.9	10.4	10.9
	6H	9.7	10.2	10.2	10.6	11.1	9.7	10.2	10.2	10.6	11.1
	8H	9.8	10.2	10.2	10.7	11.2	9.8	10.2	10.2	10.7	11.2
	12H	9.8	10.2	10.3	10.7	11.2	9.8	10.2	10.3	10.7	11.2

8H	4H	9.5	9.9	10.0	10.4	10.9	9.5	9.9	10.0	10.4	10.9
	6H	9.8	10.2	10.3	10.7	11.2	9.8	10.2	10.3	10.7	11.2
	8H	10.0	10.3	10.5	10.8	11.3	10.0	10.3	10.5	10.8	11.3
	12H	10.1	10.4	10.6	10.9	11.4	10.1	10.4	10.6	10.9	11.4

12H	4H	9.4	9.8	9.9	10.3	10.8	9.4	9.8	9.9	10.3	10.8
	6H	9.8	10.2	10.4	10.6	11.2	9.8	10.2	10.4	10.6	11.2
	8H	10.0	10.3	10.5	10.8	11.4	10.0	10.3	10.5	10.8	11.4

Maximum UGR = 11.4

POLAR GRAPH



Maximum Candela = 5124.735 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.)