



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-840-EM10W-XXX-DIM-UNV-RN-CS-XX_ EM MODE ONLY.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-EM10W-xxx-DIM-UNV-RN-CS EM MODE ONLY

[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	1000
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	10
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	3274	3274	3274
55	2142	2142	2142
65	1457	1457	1457
75	942	942	942
85	756	756	756

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CANDELA TABULATION

	<u>0</u>
0.0	3713.576
0.5	3710.265
1.0	3699.780
1.5	3681.568
2.0	3656.181
2.5	3623.069
3.0	3583.334
3.5	3537.528
4.0	3486.203
4.5	3428.808
5.0	3366.446
5.5	3298.014
6.0	3224.062
6.5	3145.696
7.0	3062.914
7.5	2975.718
8.0	2884.658
8.5	2790.287
9.0	2692.053
9.5	2591.612
10.0	2488.411
10.5	2384.658
11.0	2279.802
11.5	2174.393
12.0	2069.537
12.5	1964.680
13.0	1862.031
13.5	1759.382
14.0	1660.044
14.5	1563.466
15.0	1469.095
15.5	1379.139
16.0	1293.598
16.5	1212.473
17.0	1134.106
17.5	1059.603
18.0	988.963
18.5	923.289
19.0	860.927
19.5	804.636
20.0	749.448
20.5	697.572
21.0	649.559
21.5	604.857
22.0	562.362
22.5	522.406
23.0	485.320
23.5	450.828
24.0	418.653
24.5	388.687
25.0	360.817
25.5	334.989
26.0	311.148
26.5	289.018

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27.0	268.598
27.5	249.834
28.0	232.561
28.5	216.667
29.0	202.042
29.5	188.631
30.0	176.214
30.5	164.845
31.0	154.415
31.5	144.757
32.0	135.872
32.5	127.649
33.0	120.088
33.5	113.079
34.0	106.623
34.5	100.607
35.0	95.033
35.5	89.901
36.0	85.155
36.5	80.684
37.0	76.600
37.5	72.737
38.0	69.205
38.5	65.949
39.0	62.914
39.5	60.044
40.0	57.450
40.5	54.967
41.0	52.704
41.5	50.552
42.0	48.565
42.5	46.689
43.0	44.923
43.5	43.267
44.0	41.667
44.5	40.177
45.0	38.797
45.5	37.472
46.0	36.203
46.5	34.989
47.0	33.830
47.5	32.671
48.0	31.623
48.5	30.574
49.0	29.636
49.5	28.698
50.0	27.815
50.5	26.932
51.0	26.104
51.5	25.331
52.0	24.559
52.5	23.841
53.0	23.124
53.5	22.461
54.0	21.799
54.5	21.192

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55.0	20.585
55.5	19.978
56.0	19.426
56.5	18.874
57.0	18.267
57.5	17.715
58.0	17.219
58.5	16.667
59.0	16.170
59.5	15.618
60.0	15.121
60.5	14.570
61.0	14.073
61.5	13.576
62.0	13.079
62.5	12.638
63.0	12.141
63.5	11.700
64.0	11.203
64.5	10.762
65.0	10.320
65.5	9.879
66.0	9.492
66.5	9.106
67.0	8.720
67.5	8.333
68.0	7.947
68.5	7.616
69.0	7.285
69.5	6.954
70.0	6.623
70.5	6.347
71.0	6.015
71.5	5.740
72.0	5.464
72.5	5.188
73.0	4.967
73.5	4.746
74.0	4.525
74.5	4.305
75.0	4.084
75.5	3.863
76.0	3.698
76.5	3.532
77.0	3.366
77.5	3.201
78.0	3.035
78.5	2.925
79.0	2.759
79.5	2.594
80.0	2.483
80.5	2.318
81.0	2.152
81.5	2.042
82.0	1.876
82.5	1.766

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83.0	1.656
83.5	1.490
84.0	1.380
84.5	1.214
85.0	1.104
85.5	0.993
86.0	0.883
86.5	0.773
87.0	0.662
87.5	0.552
88.0	0.442
88.5	0.331
89.0	0.276
89.5	0.221
90.0	0.166
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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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

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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	697.29	N.A.	69.70
0-30	872.00	N.A.	87.20
0-40	934.68	N.A.	93.50
0-60	983.97	N.A.	98.40
0-80	998.82	N.A.	99.90
0-90	1000.09	N.A.	100.00
10-90	707.27	N.A.	70.70
20-40	237.39	N.A.	23.70
20-50	268.07	N.A.	26.80
40-70	59.66	N.A.	6.00
60-80	14.85	N.A.	1.50
70-80	4.47	N.A.	0.40
80-90	1.28	N.A.	0.10
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1000.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	292.82
10-20	404.46
20-30	174.71
30-40	62.68
40-50	30.68
50-60	18.61
60-70	10.38
70-80	4.47
80-90	1.28
90-100	0.00
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

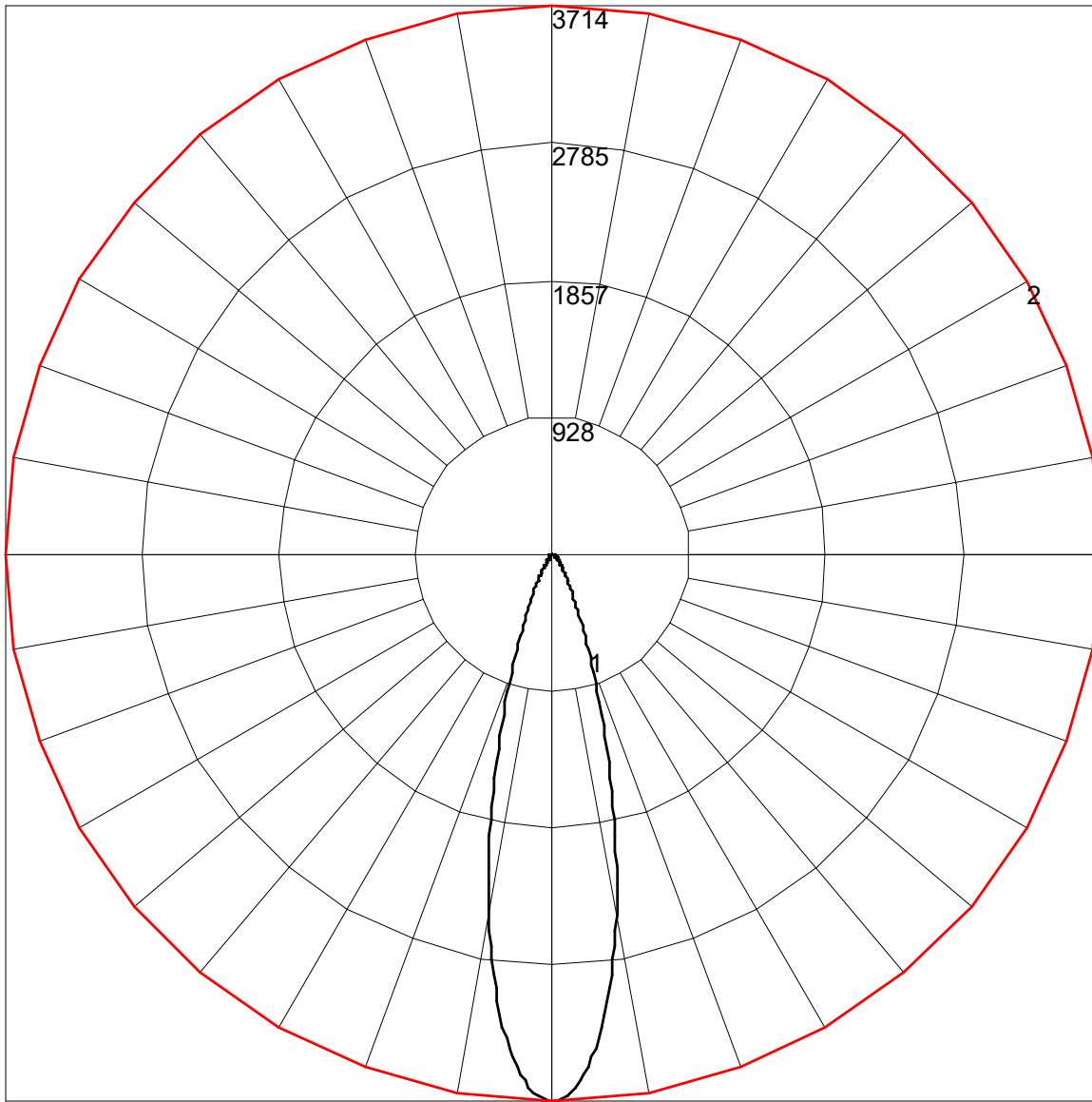
X=2H	Y=2H	6.8	7.7	7.1	8.0	8.4	UGR Viewed Endwise	6.8	7.7	7.1	8.0	8.4
	3H	7.6	8.5	8.0	8.8	9.2		7.6	8.5	8.0	8.8	9.2
	4H	7.9	8.7	8.3	9.0	9.4		7.9	8.7	8.3	9.0	9.4
	6H	8.0	8.8	8.5	9.1	9.5		8.0	8.8	8.5	9.1	9.5
	8H	8.1	8.8	8.5	9.2	9.6		8.1	8.8	8.5	9.2	9.6
	12H	8.1	8.7	8.5	9.1	9.6		8.1	8.7	8.5	9.1	9.6
4H	2H	7.0	7.8	7.4	8.1	8.5		7.0	7.8	7.4	8.1	8.5
	3H	8.0	8.7	8.4	9.1	9.5		8.0	8.7	8.4	9.1	9.5
	4H	8.3	8.9	8.8	9.3	9.8		8.3	8.9	8.8	9.3	9.8
	6H	8.6	9.1	9.1	9.5	10.0		8.6	9.1	9.1	9.5	10.0
	8H	8.7	9.1	9.2	9.6	10.1		8.7	9.1	9.2	9.6	10.1
	12H	8.7	9.1	9.2	9.6	10.1		8.7	9.1	9.2	9.6	10.1
8H	4H	8.4	8.8	8.9	9.3	9.8		8.4	8.8	8.9	9.3	9.8
	6H	8.7	9.1	9.2	9.6	10.1		8.7	9.1	9.2	9.6	10.1
	8H	8.9	9.2	9.4	9.7	10.2		8.9	9.2	9.4	9.7	10.2
	12H	9.0	9.3	9.5	9.8	10.3		9.0	9.3	9.5	9.8	10.3
12H	4H	8.4	8.7	8.8	9.2	9.7		8.4	8.7	8.8	9.2	9.7
	6H	8.7	9.1	9.3	9.5	10.1		8.7	9.1	9.3	9.5	10.1
	8H	8.9	9.2	9.4	9.7	10.3		8.9	9.2	9.4	9.7	10.3

Maximum UGR = 10.3

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POLAR GRAPH



Maximum Candela = 3713.576 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.)