



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-835-EM10W-XXX-DIM1-UNV-OM-CS-XX_ EM MODE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 3-FEB-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836

[LUMCAT] 8CR-TL-L15-835-EM10W-xxx-DIM1-UNV-OM-CS-xx EM MODE ONLY

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] 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	1084
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.68
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	1956	1956	1956
55	720	720	720
65	283	283	283
75	127	127	127
85	103	103	103

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CANDELA TABULATION

	<u>0</u>
0.0	2193.692
0.5	2196.972
1.0	2203.532
1.5	2207.358
2.0	2216.651
2.5	2220.478
3.0	2227.038
3.5	2228.678
4.0	2223.758
4.5	2197.519
5.0	2171.280
5.5	2143.401
6.0	2098.576
6.5	2053.751
7.0	2006.193
7.5	1952.621
8.0	1890.304
8.5	1826.346
9.0	1760.202
9.5	1695.697
10.0	1636.113
10.5	1583.635
11.0	1538.263
11.5	1499.451
12.0	1461.186
12.5	1423.467
13.0	1387.389
13.5	1353.497
14.0	1322.884
14.5	1295.552
15.0	1270.953
15.5	1247.447
16.0	1224.488
16.5	1200.436
17.0	1175.837
17.5	1151.237
18.0	1128.825
18.5	1109.146
19.0	1088.920
19.5	1068.147
20.0	1045.188
20.5	1020.589
21.0	995.443
21.5	969.751
22.0	942.419
22.5	916.179
23.0	888.301
23.5	859.875
24.0	830.356
24.5	800.837
25.0	771.865
25.5	742.893
26.0	716.107
26.5	690.414

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27.0	666.362
27.5	643.403
28.0	622.630
28.5	604.044
29.0	586.552
29.5	569.606
30.0	548.286
30.5	521.610
31.0	490.998
31.5	457.324
32.0	423.159
32.5	388.775
33.0	354.391
33.5	318.312
34.0	281.687
34.5	248.287
35.0	216.199
35.5	185.914
36.0	156.778
36.5	130.703
37.0	109.329
37.5	94.297
38.0	86.206
38.5	80.740
39.0	75.273
39.5	69.479
40.0	63.302
40.5	56.742
41.0	50.455
41.5	44.606
42.0	39.632
42.5	35.696
43.0	32.635
43.5	30.284
44.0	28.316
44.5	26.731
45.0	25.255
45.5	23.998
46.0	22.795
46.5	21.702
47.0	20.609
47.5	19.570
48.0	18.531
48.5	17.493
49.0	16.454
49.5	15.525
50.0	14.650
50.5	13.775
51.0	12.956
51.5	12.136
52.0	11.316
52.5	10.605
53.0	9.894
53.5	9.238
54.0	8.637
54.5	8.090

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55.0	7.544
55.5	7.106
56.0	6.614
56.5	6.232
57.0	5.849
57.5	5.466
58.0	5.138
58.5	4.810
59.0	4.537
59.5	4.264
60.0	3.991
60.5	3.717
61.0	3.499
61.5	3.280
62.0	3.116
62.5	2.952
63.0	2.733
63.5	2.624
64.0	2.460
64.5	2.296
65.0	2.187
65.5	2.023
66.0	1.913
66.5	1.804
67.0	1.695
67.5	1.585
68.0	1.531
68.5	1.421
69.0	1.312
69.5	1.257
70.0	1.203
70.5	1.093
71.0	1.039
71.5	0.984
72.0	0.929
72.5	0.875
73.0	0.820
73.5	0.765
74.0	0.711
74.5	0.656
75.0	0.601
75.5	0.601
76.0	0.547
76.5	0.492
77.0	0.492
77.5	0.437
78.0	0.437
78.5	0.383
79.0	0.383
79.5	0.328
80.0	0.328
80.5	0.273
81.0	0.273
81.5	0.273
82.0	0.219
82.5	0.219

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83.0	0.219
83.5	0.164
84.0	0.164
84.5	0.164
85.0	0.164
85.5	0.109
86.0	0.109
86.5	0.109
87.0	0.109
87.5	0.109
88.0	0.055
88.5	0.055
89.0	0.055
89.5	0.055
90.0	0.055
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	547.07	N.A.	50.50
0-30	901.43	N.A.	83.20
0-40	1051.38	N.A.	97.00
0-60	1080.85	N.A.	99.70
0-80	1083.82	N.A.	100.00
0-90	1083.99	N.A.	100.00
10-90	894.97	N.A.	82.60
20-40	504.32	N.A.	46.50
20-50	526.55	N.A.	48.60
40-70	31.73	N.A.	2.90
60-80	2.97	N.A.	0.30
70-80	0.70	N.A.	0.10
80-90	0.17	N.A.	0.00
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	1083.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	189.01
10-20	358.05
20-30	354.37
30-40	149.95
40-50	22.23
50-60	7.24
60-70	2.26
70-80	0.70
80-90	0.17
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	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	75	73	72
7	88	80	74	70	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59

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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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	3H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	4H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	6H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	8H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	12H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

UGR Viewed Endwise

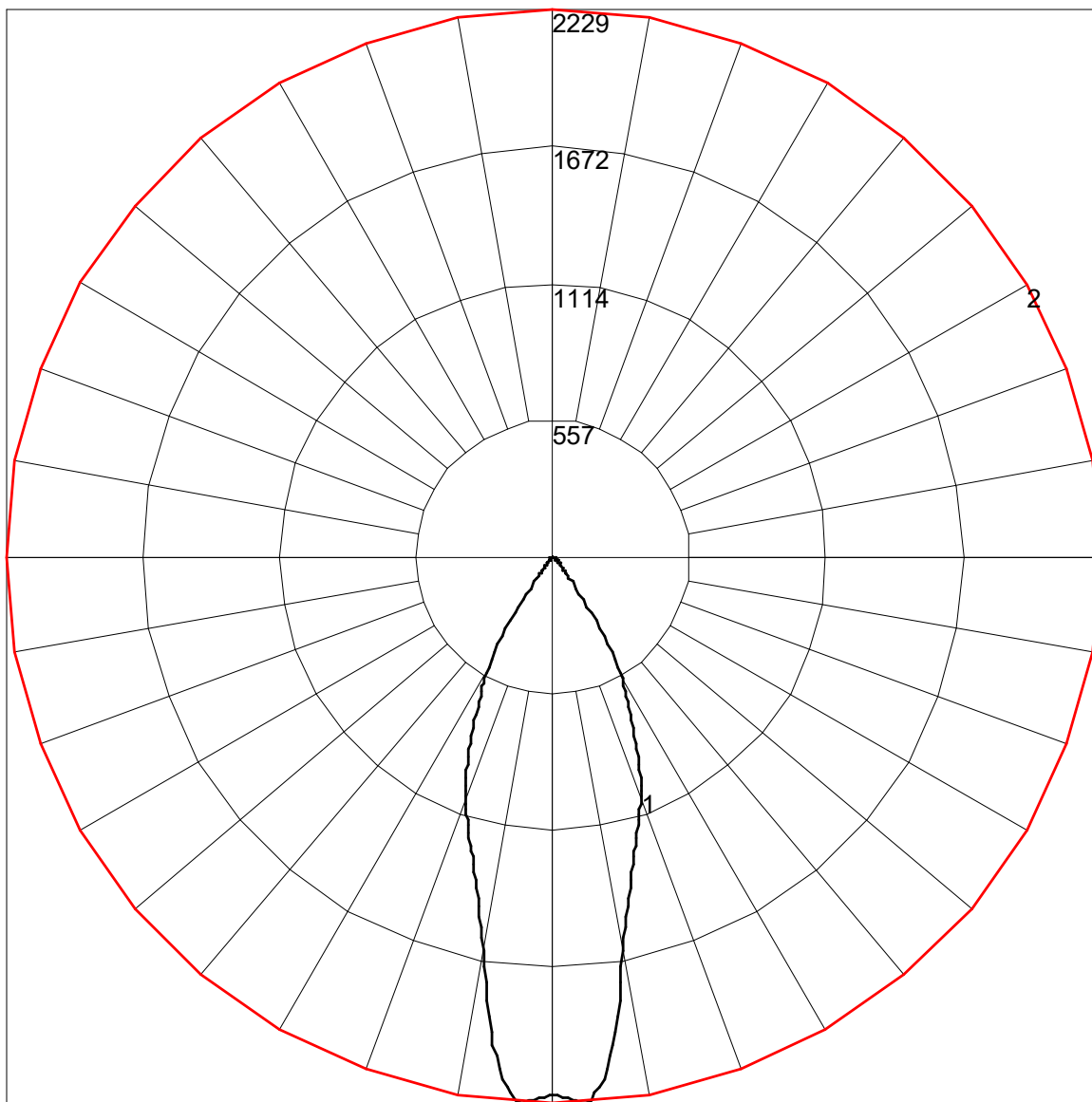
4H	2H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	3H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	4H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	6H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	8H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	12H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
8H	4H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	6H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	8H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	12H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
12H	4H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	6H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	8H	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Maximum UGR = 0.3

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POLAR GRAPH



Maximum Candela = 2228.678 Located At Horizontal Angle = 0, Vertical Angle = 3.5

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)