



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-840-EM7W-XXX-DIM-UNV-LM-CS-XX_(EM MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12326812.09
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 1-FEB-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 8CR-TL-L10-840-EM7W-xxx-DIM-UNV-LM-CS-xx (EM MODE)
 [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	739
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	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	3301	3301	3301
55	2417	2417	2417
65	1970	1970	1970
75	1603	1603	1603
85	1055	1055	1055

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	<u>0</u>
0.0	1745.118
0.5	1744.314
1.0	1741.900
1.5	1738.280
2.0	1733.452
2.5	1726.613
3.0	1718.970
3.5	1710.120
4.0	1699.660
4.5	1688.798
5.0	1676.730
5.5	1663.052
6.0	1648.167
6.5	1631.674
7.0	1613.973
7.5	1594.663
8.0	1573.342
8.5	1550.412
9.0	1526.275
9.5	1500.528
10.0	1472.771
10.5	1443.404
11.0	1412.025
11.5	1378.233
12.0	1343.234
12.5	1306.224
13.0	1267.604
13.5	1226.974
14.0	1185.136
14.5	1141.689
15.0	1097.437
15.5	1052.381
16.0	1007.325
16.5	961.867
17.0	917.615
17.5	873.364
18.0	828.710
18.5	784.861
19.0	741.414
19.5	699.576
20.0	658.945
20.5	619.923
21.0	583.315
21.5	548.316
22.0	513.317
22.5	480.330
23.0	448.952
23.5	419.182
24.0	391.465
24.5	365.236
25.0	340.737
25.5	317.645
26.0	296.244
26.5	276.210

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27.0	257.584
27.5	240.326
28.0	224.234
28.5	209.350
29.0	195.551
29.5	182.678
30.0	170.771
30.5	159.667
31.0	149.369
31.5	139.795
32.0	130.864
32.5	122.577
33.0	114.853
33.5	107.652
34.0	101.014
34.5	94.859
35.0	89.106
35.5	83.836
36.0	78.929
36.5	74.463
37.0	70.320
37.5	66.538
38.0	63.119
38.5	59.941
39.0	57.044
39.5	54.389
40.0	51.975
40.5	49.723
41.0	47.671
41.5	45.780
42.0	44.010
42.5	42.401
43.0	40.872
43.5	39.464
44.0	38.177
44.5	36.930
45.0	35.763
45.5	34.677
46.0	33.671
46.5	32.706
47.0	31.781
47.5	30.896
48.0	30.091
48.5	29.286
49.0	28.522
49.5	27.798
50.0	27.114
50.5	26.430
51.0	25.787
51.5	25.143
52.0	24.539
52.5	23.976
53.0	23.373
53.5	22.810
54.0	22.287
54.5	21.764

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55.0	21.241
55.5	20.718
56.0	20.235
56.5	19.752
57.0	19.270
57.5	18.787
58.0	18.344
58.5	17.902
59.0	17.459
59.5	17.057
60.0	16.655
60.5	16.212
61.0	15.810
61.5	15.408
62.0	15.005
62.5	14.643
63.0	14.241
63.5	13.879
64.0	13.517
64.5	13.155
65.0	12.752
65.5	12.390
66.0	12.028
66.5	11.707
67.0	11.344
67.5	10.982
68.0	10.661
68.5	10.339
69.0	9.977
69.5	9.655
70.0	9.333
70.5	9.011
71.0	8.730
71.5	8.408
72.0	8.086
72.5	7.804
73.0	7.483
73.5	7.201
74.0	6.919
74.5	6.638
75.0	6.356
75.5	6.075
76.0	5.793
76.5	5.511
77.0	5.230
77.5	4.988
78.0	4.707
78.5	4.465
79.0	4.224
79.5	3.942
80.0	3.701
80.5	3.460
81.0	3.218
81.5	2.977
82.0	2.736
82.5	2.494

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83.0	2.293
83.5	2.052
84.0	1.851
84.5	1.609
85.0	1.408
85.5	1.207
86.0	1.006
86.5	0.845
87.0	0.684
87.5	0.563
88.0	0.443
88.5	0.362
89.0	0.282
89.5	0.201
90.0	0.121
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-L10-840-EM7W-XXX-DIM-UNV-LM-CS-XX_(EM MODE).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

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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	448.82	N.A.	60.70
0-30	611.37	N.A.	82.70
0-40	670.48	N.A.	90.70
0-60	717.99	N.A.	97.10
0-80	737.43	N.A.	99.80
0-90	739.15	N.A.	100.00
10-90	585.47	N.A.	79.20
20-40	221.66	N.A.	30.00
20-50	250.03	N.A.	33.80
40-70	60.21	N.A.	8.10
60-80	19.44	N.A.	2.60
70-80	6.75	N.A.	0.90
80-90	1.72	N.A.	0.20
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	739.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.68
10-20	295.14
20-30	162.55
30-40	59.11
40-50	28.38
50-60	19.14
60-70	12.69
70-80	6.75
80-90	1.72
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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	103	99	96	99	97	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	84	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	77	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	74	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	8.5	9.5	8.8	9.8	10.1	8.5	9.5	8.8	9.8	10.1
	3H	9.9	10.8	10.3	11.1	11.5	9.9	10.8	10.3	11.1	11.5
	4H	10.4	11.2	10.8	11.6	12.0	10.4	11.2	10.8	11.6	12.0
	6H	10.7	11.5	11.2	11.9	12.3	10.7	11.5	11.2	11.9	12.3
	8H	10.8	11.5	11.2	11.9	12.3	10.8	11.5	11.2	11.9	12.3
	12H	10.9	11.5	11.3	11.9	12.3	10.9	11.5	11.3	11.9	12.3

UGR Viewed Endwise

4H	2H	8.9	9.7	9.3	10.1	10.5	8.9	9.7	9.3	10.1	10.5
	3H	10.5	11.2	10.9	11.6	12.0	10.5	11.2	10.9	11.6	12.0
	4H	11.1	11.7	11.5	12.1	12.6	11.1	11.7	11.5	12.1	12.6
	6H	11.6	12.1	12.0	12.5	13.0	11.6	12.1	12.0	12.5	13.0
	8H	11.7	12.2	12.2	12.6	13.1	11.7	12.2	12.2	12.6	13.1
	12H	11.8	12.2	12.2	12.7	13.1	11.8	12.2	12.2	12.7	13.1

8H	4H	11.3	11.8	11.8	12.2	12.7	11.3	11.8	11.8	12.2	12.7
	6H	11.8	12.2	12.4	12.7	13.2	11.8	12.2	12.4	12.7	13.2
	8H	12.0	12.4	12.6	12.9	13.4	12.0	12.4	12.6	12.9	13.4
	12H	12.2	12.5	12.7	13.0	13.5	12.2	12.5	12.7	13.0	13.5

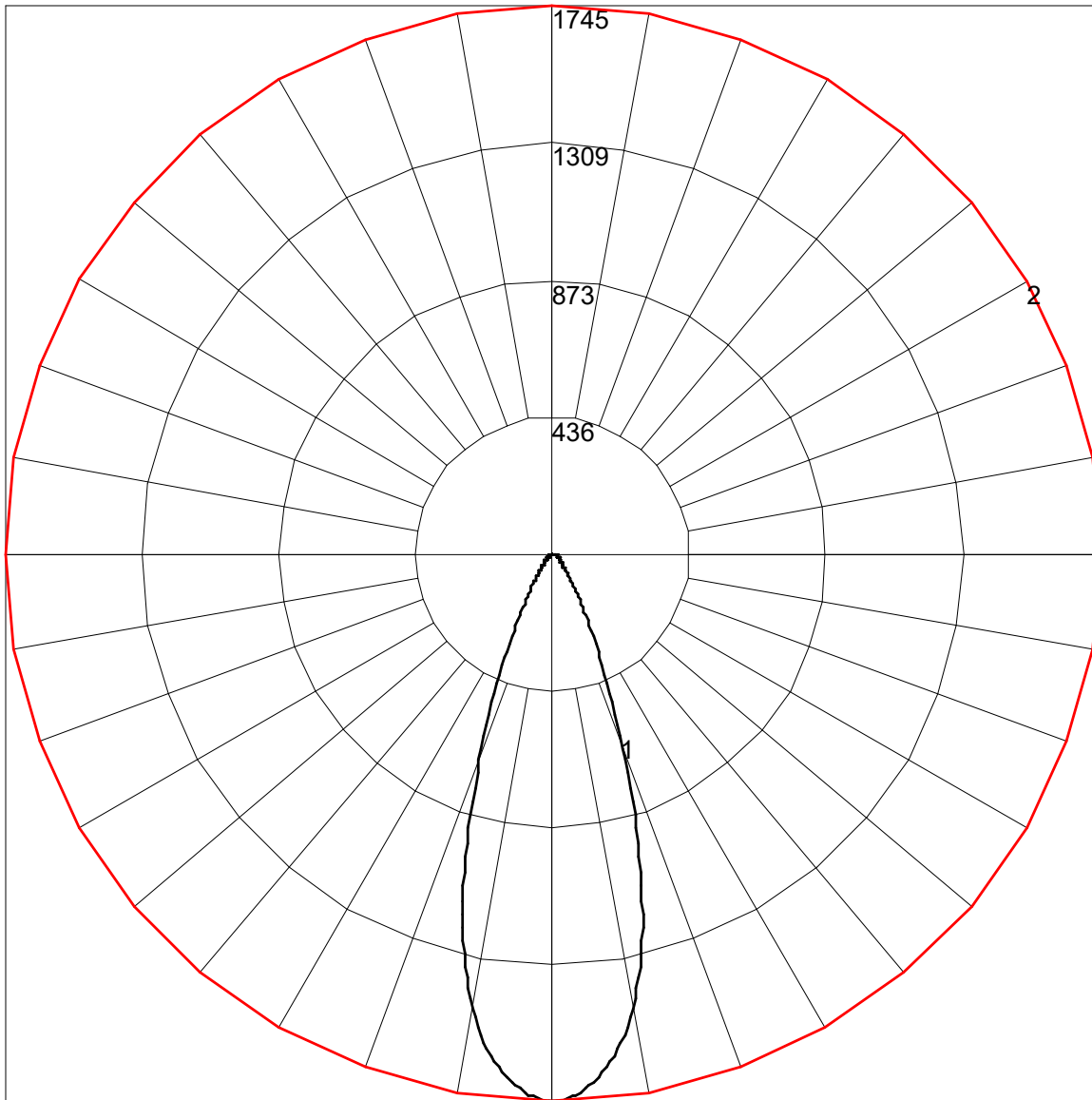
12H	4H	11.3	11.7	11.8	12.2	12.6	11.3	11.7	11.8	12.2	12.6
	6H	11.9	12.2	12.4	12.7	13.2	11.9	12.2	12.4	12.7	13.2
	8H	12.1	12.4	12.6	12.9	13.5	12.1	12.4	12.6	12.9	13.5

Maximum UGR = 13.5

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POLAR GRAPH



Maximum Candela = 1745.118 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.)