



IES INDOOR REPORT

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

[LUMCAT] 8CR-TL-L15-840-xxx-DIM-UNV-OM-CS-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	1509
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	13.8
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	2723	2723	2723
55	1003	1003	1003
65	394	394	394
75	177	177	177
85	143	143	143

CANDELA TABULATION

	<u>0</u>
0.0	3053.765
0.5	3058.331
1.0	3067.463
1.5	3072.790
2.0	3085.726
2.5	3091.053
3.0	3100.184
3.5	3102.467
4.0	3095.619
4.5	3059.092
5.0	3022.566
5.5	2983.756
6.0	2921.357
6.5	2858.958
7.0	2792.753
7.5	2718.178
8.0	2631.428
8.5	2542.395
9.0	2450.318
9.5	2360.523
10.0	2277.578
10.5	2204.525
11.0	2141.365
11.5	2087.336
12.0	2034.068
12.5	1981.561
13.0	1931.337
13.5	1884.157
14.0	1841.543
14.5	1803.495
15.0	1769.251
15.5	1736.529
16.0	1704.569
16.5	1671.086
17.0	1636.843
17.5	1602.599
18.0	1571.399
18.5	1544.004
19.0	1515.849
19.5	1486.932
20.0	1454.971
20.5	1420.728
21.0	1385.723
21.5	1349.958
22.0	1311.909
22.5	1275.383
23.0	1236.573
23.5	1197.003
24.0	1155.911
24.5	1114.818
25.0	1074.487
25.5	1034.156
26.0	996.868
26.5	961.103

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CANDELA TABULATION - (Cont.)

27.0	927.620
27.5	895.660
28.0	866.743
28.5	840.870
29.0	816.519
29.5	792.929
30.0	763.251
30.5	726.116
31.0	683.502
31.5	636.626
32.0	589.065
32.5	541.201
33.0	493.336
33.5	443.112
34.0	392.127
34.5	345.632
35.0	300.963
35.5	258.805
36.0	218.246
36.5	181.947
37.0	152.194
37.5	131.267
38.0	120.005
38.5	112.395
39.0	104.785
39.5	96.719
40.0	88.120
40.5	78.989
41.0	70.237
41.5	62.095
42.0	55.170
42.5	49.691
43.0	45.430
43.5	42.158
44.0	39.418
44.5	37.211
45.0	35.157
45.5	33.407
46.0	31.732
46.5	30.210
47.0	28.689
47.5	27.243
48.0	25.797
48.5	24.351
49.0	22.905
49.5	21.611
50.0	20.394
50.5	19.176
51.0	18.035
51.5	16.893
52.0	15.752
52.5	14.763
53.0	13.774
53.5	12.860
54.0	12.023
54.5	11.262

CANDELA TABULATION - (Cont.)

55.0	10.501
55.5	9.893
56.0	9.208
56.5	8.675
57.0	8.142
57.5	7.610
58.0	7.153
58.5	6.697
59.0	6.316
59.5	5.936
60.0	5.555
60.5	5.175
61.0	4.870
61.5	4.566
62.0	4.338
62.5	4.109
63.0	3.805
63.5	3.653
64.0	3.424
64.5	3.196
65.0	3.044
65.5	2.816
66.0	2.663
66.5	2.511
67.0	2.359
67.5	2.207
68.0	2.131
68.5	1.979
69.0	1.826
69.5	1.750
70.0	1.674
70.5	1.522
71.0	1.446
71.5	1.370
72.0	1.294
72.5	1.218
73.0	1.141
73.5	1.065
74.0	0.989
74.5	0.913
75.0	0.837
75.5	0.837
76.0	0.761
76.5	0.685
77.0	0.685
77.5	0.609
78.0	0.609
78.5	0.533
79.0	0.533
79.5	0.457
80.0	0.457
80.5	0.380
81.0	0.380
81.5	0.380
82.0	0.304
82.5	0.304

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CANDELA TABULATION - (Cont.)

83.0	0.304
83.5	0.228
84.0	0.228
84.5	0.228
85.0	0.228
85.5	0.152
86.0	0.152
86.5	0.152
87.0	0.152
87.5	0.152
88.0	0.076
88.5	0.076
89.0	0.076
89.5	0.076
90.0	0.076
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
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

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
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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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	761.55	N.A.	50.50
0-30	1254.85	N.A.	83.20
0-40	1463.6	N.A.	97.00
0-60	1504.62	N.A.	99.70
0-80	1508.75	N.A.	100.00
0-90	1508.98	N.A.	100.00
10-90	1245.86	N.A.	82.60
20-40	702.05	N.A.	46.50
20-50	732.99	N.A.	48.60
40-70	44.17	N.A.	2.90
60-80	4.13	N.A.	0.30
70-80	0.98	N.A.	0.10
80-90	0.23	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	1508.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	263.12
10-20	498.43
20-30	493.30
30-40	208.75
40-50	30.94
50-60	10.08
60-70	3.15
70-80	0.98
80-90	0.23
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

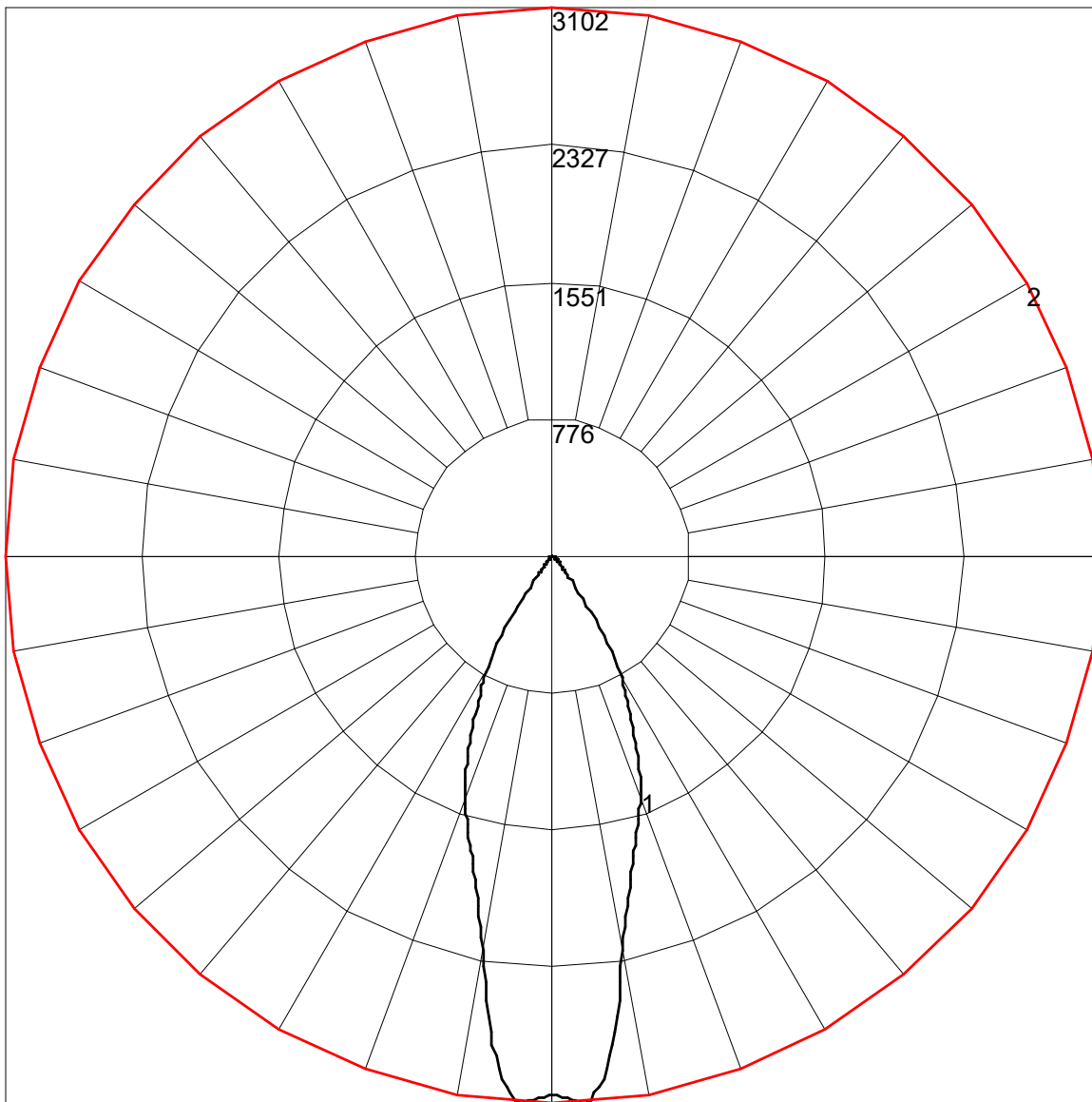
X=2H	Y=2H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	3H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

UGR Viewed Endwise

4H	2H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	3H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
8H	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
12H	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Maximum UGR = 1.5

POLAR GRAPH



Maximum Candela = 3102.467 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.)