



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-840-XXX-DIM-UNV-RM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.14

[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-xxx-DIM-UNV-RM-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	874
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
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	3141	3141	3141
55	2112	2112	2112
65	1572	1572	1572
75	1086	1086	1086
85	907	907	907

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CANDELA TABULATION

	<u>0</u>
0.0	2115.112
0.5	2114.132
1.0	2111.189
1.5	2106.285
2.0	2099.420
2.5	2091.083
3.0	2080.784
3.5	2069.015
4.0	2056.264
4.5	2041.552
5.0	2025.859
5.5	2008.695
6.0	1989.569
6.5	1968.482
7.0	1945.923
7.5	1921.403
8.0	1894.921
8.5	1866.478
9.0	1836.073
9.5	1803.216
10.0	1768.887
10.5	1732.107
11.0	1692.875
11.5	1651.681
12.0	1608.525
12.5	1562.427
13.0	1515.348
13.5	1465.818
14.0	1414.816
14.5	1362.833
15.0	1308.888
15.5	1254.944
16.0	1200.019
16.5	1145.093
17.0	1091.149
17.5	1039.657
18.0	986.693
18.5	934.220
19.0	882.727
19.5	833.687
20.0	787.098
20.5	741.981
21.0	697.845
21.5	655.670
22.0	614.967
22.5	576.715
23.0	540.425
23.5	506.097
24.0	473.828
24.5	443.570
25.0	415.078
25.5	388.351
26.0	363.389
26.5	339.948

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CANDELA TABULATION - (Cont.)

27.0	318.125
27.5	297.724
28.0	278.599
28.5	260.846
29.0	244.172
29.5	228.577
30.0	213.914
30.5	200.232
31.0	187.432
31.5	175.418
32.0	164.187
32.5	153.644
33.0	143.737
33.5	134.469
34.0	125.740
34.5	117.648
35.0	110.096
35.5	103.034
36.0	96.462
36.5	90.381
37.0	84.742
37.5	79.544
38.0	74.738
38.5	70.324
39.0	66.254
39.5	62.527
40.0	59.143
40.5	56.053
41.0	53.209
41.5	50.610
42.0	48.207
42.5	46.000
43.0	43.940
43.5	42.077
44.0	40.311
44.5	38.742
45.0	37.222
45.5	35.849
46.0	34.524
46.5	33.298
47.0	32.171
47.5	31.141
48.0	30.160
48.5	29.228
49.0	28.345
49.5	27.463
50.0	26.678
50.5	25.942
51.0	25.207
51.5	24.520
52.0	23.883
52.5	23.196
53.0	22.608
53.5	22.019
54.0	21.431
54.5	20.842

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CANDELA TABULATION - (Cont.)

55.0	20.303
55.5	19.763
56.0	19.273
56.5	18.733
57.0	18.243
57.5	17.753
58.0	17.262
58.5	16.772
59.0	16.330
59.5	15.840
60.0	15.399
60.5	14.957
61.0	14.516
61.5	14.075
62.0	13.633
62.5	13.192
63.0	12.800
63.5	12.358
64.0	11.966
64.5	11.524
65.0	11.132
65.5	10.740
66.0	10.348
66.5	9.955
67.0	9.563
67.5	9.220
68.0	8.827
68.5	8.484
69.0	8.141
69.5	7.748
70.0	7.454
70.5	7.111
71.0	6.817
71.5	6.473
72.0	6.179
72.5	5.885
73.0	5.640
73.5	5.394
74.0	5.149
74.5	4.904
75.0	4.708
75.5	4.463
76.0	4.267
76.5	4.119
77.0	3.923
77.5	3.727
78.0	3.580
78.5	3.384
79.0	3.237
79.5	3.090
80.0	2.893
80.5	2.746
81.0	2.550
81.5	2.403
82.0	2.256
82.5	2.109

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CANDELA TABULATION - (Cont.)

83.0	1.962
83.5	1.765
84.0	1.618
84.5	1.471
85.0	1.324
85.5	1.177
86.0	1.079
86.5	0.932
87.0	0.785
87.5	0.638
88.0	0.490
88.5	0.392
89.0	0.343
89.5	0.245
90.0	0.196
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
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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
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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	537.71	N.A.	61.50
0-30	735.20	N.A.	84.10
0-40	807.89	N.A.	92.40
0-60	856.14	N.A.	98.00
0-80	872.35	N.A.	99.80
0-90	873.87	N.A.	100.00
10-90	688.52	N.A.	78.80
20-40	270.19	N.A.	30.90
20-50	300.10	N.A.	34.30
40-70	59.34	N.A.	6.80
60-80	16.22	N.A.	1.90
70-80	5.12	N.A.	0.60
80-90	1.51	N.A.	0.20
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	873.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	185.35
10-20	352.36
20-30	197.49
30-40	72.69
40-50	29.91
50-60	18.33
60-70	11.09
70-80	5.12
80-90	1.51
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	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94
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	94	89	85	98	92	88	84	90	86	83	88	85	82	87	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	73	71	70
8	86	77	72	69	85	77	72	69	76	72	68	75	71	68	74	71	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	71	66	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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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	7.2	8.2	7.6	8.5	8.8	7.2	8.2	7.6	8.5	8.8
	3H	8.3	9.2	8.7	9.5	9.9	8.3	9.2	8.7	9.5	9.9
	4H	8.6	9.4	9.0	9.8	10.2	8.6	9.4	9.0	9.8	10.2
	6H	8.9	9.6	9.3	10.0	10.4	8.9	9.6	9.3	10.0	10.4
	8H	8.9	9.6	9.4	10.0	10.4	8.9	9.6	9.4	10.0	10.4
	12H	9.0	9.6	9.4	10.0	10.4	9.0	9.6	9.4	10.0	10.4

UGR Viewed Endwise

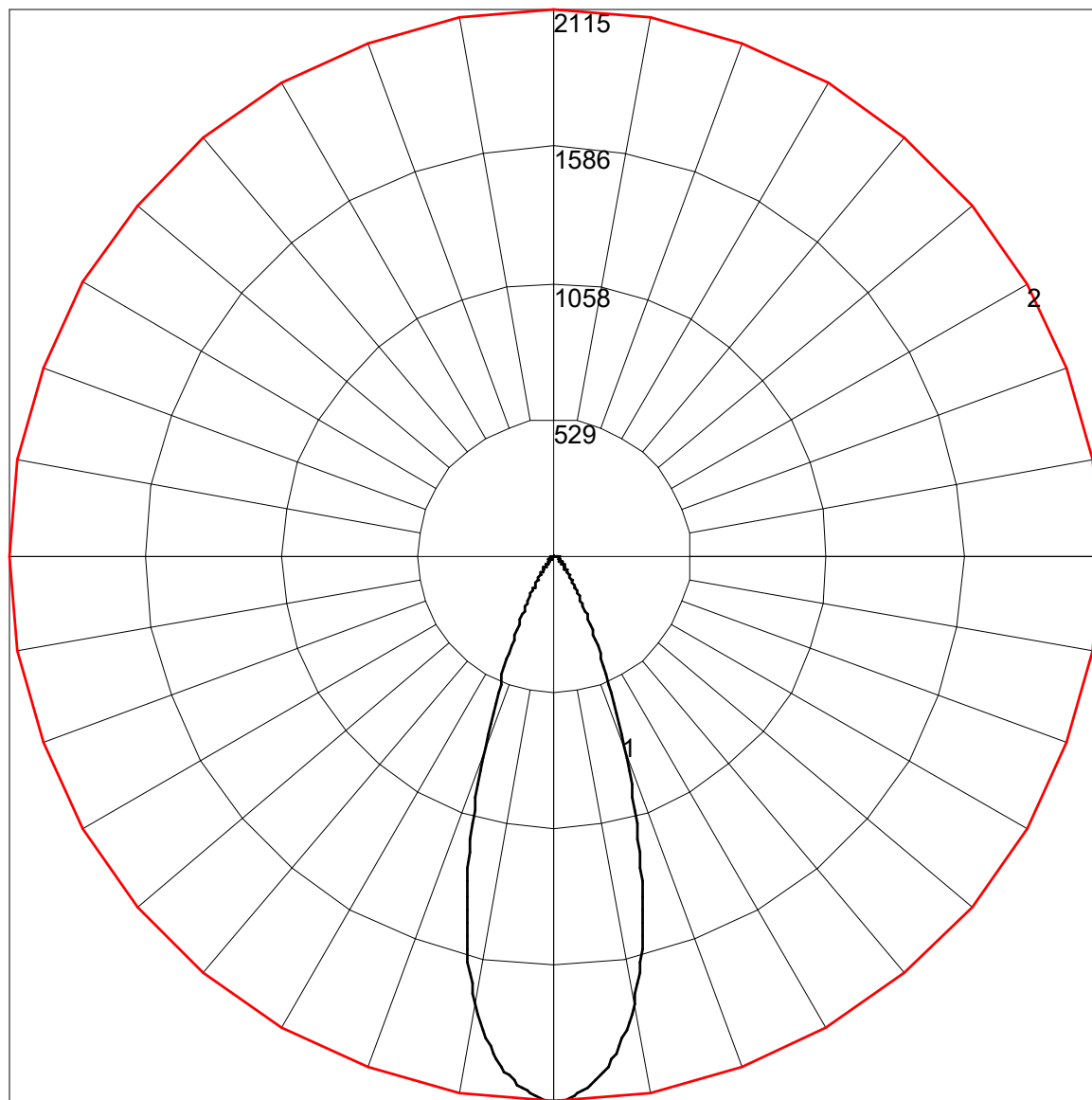
4H	2H	7.5	8.3	7.9	8.7	9.1	7.5	8.3	7.9	8.7	9.1
	3H	8.8	9.4	9.2	9.9	10.3	8.8	9.4	9.2	9.9	10.3
	4H	9.2	9.8	9.6	10.2	10.7	9.2	9.8	9.6	10.2	10.7
	6H	9.5	10.0	10.0	10.5	11.0	9.5	10.0	10.0	10.5	11.0
	8H	9.7	10.1	10.1	10.6	11.0	9.7	10.1	10.1	10.6	11.0
	12H	9.7	10.1	10.2	10.6	11.1	9.7	10.1	10.2	10.6	11.1

8H	4H	9.3	9.7	9.8	10.2	10.7	9.3	9.7	9.8	10.2	10.7
	6H	9.7	10.1	10.3	10.6	11.1	9.7	10.1	10.3	10.6	11.1
	8H	9.9	10.2	10.5	10.8	11.3	9.9	10.2	10.5	10.8	11.3
	12H	10.1	10.3	10.6	10.8	11.4	10.1	10.3	10.6	10.8	11.4

12H	4H	9.3	9.7	9.8	10.1	10.6	9.3	9.7	9.8	10.1	10.6
	6H	9.7	10.1	10.3	10.5	11.1	9.7	10.1	10.3	10.5	11.1
	8H	10.0	10.2	10.5	10.7	11.3	10.0	10.2	10.5	10.7	11.3

Maximum UGR = 11.4

POLAR GRAPH



Maximum Candela = 2115.112 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.)