



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-840-XXX-DIM-UNV-LW-WH-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.11

[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-LW-WH-AD-xx

[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	664
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
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	11870	11870	11870
55	10819	10819	10819
65	10720	10720	10720
75	11194	11194	11194
85	9143	9143	9143

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CANDELA TABULATION

	<u>0</u>
0.0	373.744
0.5	373.644
1.0	373.394
1.5	372.942
2.0	372.291
2.5	371.489
3.0	370.537
3.5	369.485
4.0	368.282
4.5	367.029
5.0	365.776
5.5	364.373
6.0	362.870
6.5	361.316
7.0	359.612
7.5	357.858
8.0	356.004
8.5	354.050
9.0	352.045
9.5	349.941
10.0	347.786
10.5	345.531
11.0	343.175
11.5	340.670
12.0	338.114
12.5	335.408
13.0	332.651
13.5	329.745
14.0	326.738
14.5	323.681
15.0	320.474
15.5	317.217
16.0	313.909
16.5	310.552
17.0	307.194
17.5	303.786
18.0	300.379
18.5	296.921
19.0	293.513
19.5	290.055
20.0	286.547
20.5	283.090
21.0	279.531
21.5	275.923
22.0	272.265
22.5	268.507
23.0	264.698
23.5	260.839
24.0	256.930
24.5	252.971
25.0	249.013
25.5	245.054
26.0	241.095
26.5	237.186

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CANDELA TABULATION - (Cont.)

27.0	233.327
27.5	229.468
28.0	225.710
28.5	221.951
29.0	218.343
29.5	214.735
30.0	211.227
30.5	207.769
31.0	204.312
31.5	200.954
32.0	197.596
32.5	194.289
33.0	190.981
33.5	187.774
34.0	184.517
34.5	181.410
35.0	178.353
35.5	175.296
36.0	172.289
36.5	169.333
37.0	166.476
37.5	163.670
38.0	160.914
38.5	158.207
39.0	155.602
39.5	153.046
40.0	150.540
40.5	148.085
41.0	145.729
41.5	143.424
42.0	141.169
42.5	138.964
43.0	136.809
43.5	134.704
44.0	132.600
44.5	130.595
45.0	128.590
45.5	126.636
46.0	124.732
46.5	122.827
47.0	120.923
47.5	119.119
48.0	117.265
48.5	115.461
49.0	113.707
49.5	112.003
50.0	110.299
50.5	108.645
51.0	106.992
51.5	105.388
52.0	103.784
52.5	102.231
53.0	100.677
53.5	99.274
54.0	97.921
54.5	96.518

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L10-840-XXX-DIM-UNV-LW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	95.065
55.5	93.611
56.0	92.208
56.5	90.855
57.0	89.703
57.5	88.400
58.0	87.047
58.5	85.744
59.0	84.441
59.5	83.138
60.0	81.835
60.5	80.582
61.0	79.329
61.5	78.076
62.0	76.824
62.5	75.571
63.0	74.318
63.5	73.115
64.0	71.862
64.5	70.610
65.0	69.407
65.5	68.154
66.0	66.901
66.5	65.648
67.0	64.395
67.5	63.193
68.0	61.940
68.5	60.737
69.0	59.484
69.5	58.282
70.0	57.029
70.5	55.826
71.0	54.623
71.5	53.371
72.0	52.168
72.5	50.915
73.0	49.657
73.5	48.374
74.0	47.066
74.5	45.733
75.0	44.385
75.5	43.017
76.0	41.619
76.5	40.196
77.0	38.743
77.5	37.264
78.0	35.751
78.5	34.212
79.0	32.659
79.5	31.070
80.0	29.462
80.5	27.833
81.0	26.179
81.5	24.500
82.0	22.796
82.5	21.068

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CANDELA TABULATION - (Cont.)

83.0	19.319
83.5	17.560
84.0	15.781
84.5	13.997
85.0	12.208
85.5	10.424
86.0	8.655
86.5	6.966
87.0	5.467
87.5	4.250
88.0	3.192
88.5	2.255
89.0	1.423
89.5	0.797
90.0	0.406
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-XXX-DIM-UNV-LW-WH-AD-XX_.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
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130.0	0.000
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131.0	0.000
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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
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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	123.91	N.A.	18.70
0-30	238.05	N.A.	35.90
0-40	349.81	N.A.	52.70
0-60	534.73	N.A.	80.50
0-80	649.88	N.A.	97.90
0-90	663.99	N.A.	100.00
10-90	629.65	N.A.	94.80
20-40	225.91	N.A.	34.00
20-50	325.50	N.A.	49.00
40-70	253.63	N.A.	38.20
60-80	115.14	N.A.	17.30
70-80	46.43	N.A.	7.00
80-90	14.12	N.A.	2.10
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	664.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	34.34
10-20	89.57
20-30	114.14
30-40	111.77
40-50	99.60
50-60	85.32
60-70	68.71
70-80	46.43
80-90	14.12
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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	19.0	20.5	19.3	20.8	21.1	19.0	20.5	19.3	20.8	21.1
	3H	21.1	22.5	21.5	22.8	23.2	21.1	22.5	21.5	22.8	23.2
	4H	22.0	23.3	22.4	23.7	24.0	22.0	23.3	22.4	23.7	24.0
	6H	22.7	24.0	23.1	24.3	24.7	22.7	24.0	23.1	24.3	24.7
	8H	23.0	24.2	23.4	24.6	25.0	23.0	24.2	23.4	24.6	25.0
	12H	23.2	24.3	23.6	24.7	25.1	23.2	24.3	23.6	24.7	25.1

UGR Viewed Endwise

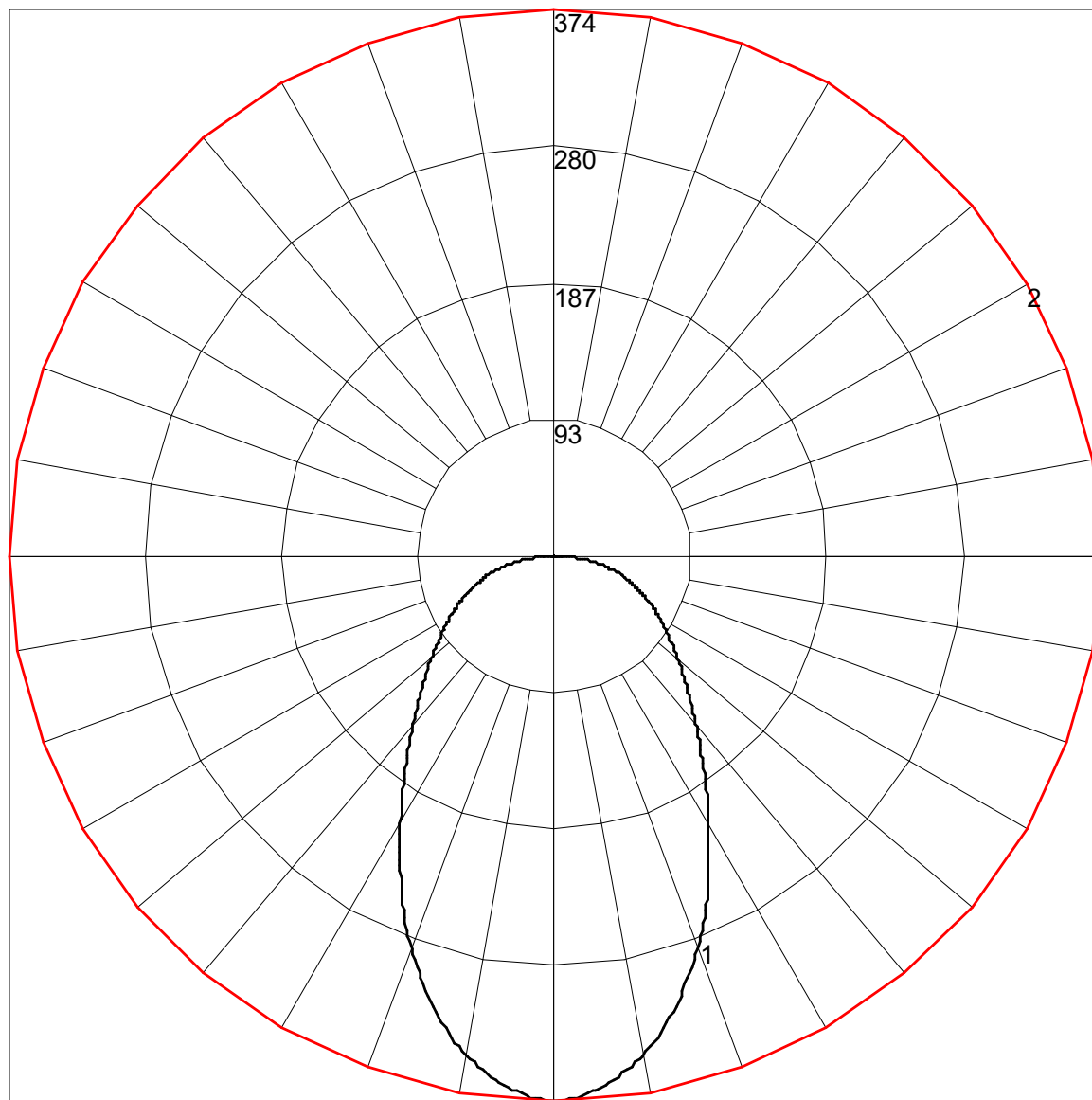
4H	2H	19.7	21.0	20.0	21.3	21.7	19.7	21.0	20.0	21.3	21.7
	3H	22.0	23.1	22.4	23.5	23.9	22.0	23.1	22.4	23.5	23.9
	4H	23.1	24.1	23.5	24.5	24.9	23.1	24.1	23.5	24.5	24.9
	6H	24.0	24.9	24.4	25.3	25.8	24.0	24.9	24.4	25.3	25.8
	8H	24.3	25.1	24.8	25.6	26.0	24.3	25.1	24.8	25.6	26.0
	12H	24.5	25.3	25.0	25.7	26.2	24.5	25.3	25.0	25.7	26.2

8H	4H	23.5	24.3	24.0	24.8	25.2	23.5	24.3	24.0	24.8	25.2
	6H	24.6	25.2	25.1	25.7	26.2	24.6	25.2	25.1	25.7	26.2
	8H	25.0	25.6	25.5	26.1	26.6	25.0	25.6	25.5	26.1	26.6
	12H	25.3	25.8	25.8	26.3	26.9	25.3	25.8	25.8	26.3	26.9

12H	4H	23.6	24.3	24.0	24.8	25.2	23.6	24.3	24.0	24.8	25.2
	6H	24.7	25.3	25.2	25.7	26.3	24.7	25.3	25.2	25.7	26.3
	8H	25.1	25.7	25.6	26.2	26.7	25.1	25.7	25.6	26.2	26.7

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 373.744 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.)