



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-835-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.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L10-835-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	650
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
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	11620	11620	11620
55	10590	10590	10590
65	10494	10494	10494
75	10958	10958	10958
85	8950	8950	8950

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CANDELA TABULATION

	<u>0</u>
0.0	365.864
0.5	365.766
1.0	365.521
1.5	365.079
2.0	364.441
2.5	363.657
3.0	362.724
3.5	361.694
4.0	360.517
4.5	359.291
5.0	358.064
5.5	356.691
6.0	355.219
6.5	353.698
7.0	352.030
7.5	350.313
8.0	348.498
8.5	346.585
9.0	344.623
9.5	342.562
10.0	340.453
10.5	338.245
11.0	335.940
11.5	333.487
12.0	330.985
12.5	328.336
13.0	325.638
13.5	322.792
14.0	319.849
14.5	316.857
15.0	313.717
15.5	310.528
16.0	307.291
16.5	304.004
17.0	300.717
17.5	297.381
18.0	294.045
18.5	290.660
19.0	287.324
19.5	283.940
20.0	280.506
20.5	277.121
21.0	273.638
21.5	270.106
22.0	266.524
22.5	262.845
23.0	259.117
23.5	255.340
24.0	251.513
24.5	247.638
25.0	243.762
25.5	239.887
26.0	236.011
26.5	232.185

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CANDELA TABULATION - (Cont.)

27.0	228.408
27.5	224.630
28.0	220.951
28.5	217.272
29.0	213.740
29.5	210.208
30.0	206.774
30.5	203.389
31.0	200.004
31.5	196.717
32.0	193.430
32.5	190.192
33.0	186.955
33.5	183.815
34.0	180.626
34.5	177.585
35.0	174.592
35.5	171.600
36.0	168.657
36.5	165.762
37.0	162.966
37.5	160.219
38.0	157.521
38.5	154.872
39.0	152.321
39.5	149.819
40.0	147.366
40.5	144.962
41.0	142.657
41.5	140.400
42.0	138.192
42.5	136.034
43.0	133.925
43.5	131.864
44.0	129.804
44.5	127.841
45.0	125.879
45.5	123.966
46.0	122.102
46.5	120.238
47.0	118.374
47.5	116.608
48.0	114.792
48.5	113.026
49.0	111.309
49.5	109.641
50.0	107.974
50.5	106.355
51.0	104.736
51.5	103.166
52.0	101.596
52.5	100.075
53.0	98.555
53.5	97.181
54.0	95.857
54.5	94.483

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L10-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	93.060
55.5	91.638
56.0	90.264
56.5	88.940
57.0	87.811
57.5	86.536
58.0	85.211
58.5	83.936
59.0	82.660
59.5	81.385
60.0	80.109
60.5	78.883
61.0	77.657
61.5	76.430
62.0	75.204
62.5	73.977
63.0	72.751
63.5	71.574
64.0	70.347
64.5	69.121
65.0	67.943
65.5	66.717
66.0	65.491
66.5	64.264
67.0	63.038
67.5	61.860
68.0	60.634
68.5	59.457
69.0	58.230
69.5	57.053
70.0	55.826
70.5	54.649
71.0	53.472
71.5	52.245
72.0	51.068
72.5	49.842
73.0	48.610
73.5	47.354
74.0	46.074
74.5	44.769
75.0	43.449
75.5	42.110
76.0	40.742
76.5	39.348
77.0	37.926
77.5	36.478
78.0	34.997
78.5	33.491
79.0	31.970
79.5	30.415
80.0	28.840
80.5	27.246
81.0	25.627
81.5	23.984
82.0	22.316
82.5	20.623

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CANDELA TABULATION - (Cont.)

83.0	18.911
83.5	17.189
84.0	15.448
84.5	13.702
85.0	11.950
85.5	10.204
86.0	8.472
86.5	6.819
87.0	5.352
87.5	4.160
88.0	3.125
88.5	2.208
89.0	1.393
89.5	0.780
90.0	0.397
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
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126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
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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
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	121.30	N.A.	18.70
0-30	233.03	N.A.	35.90
0-40	342.44	N.A.	52.70
0-60	523.46	N.A.	80.50
0-80	636.17	N.A.	97.90
0-90	649.99	N.A.	100.00
10-90	616.38	N.A.	94.80
20-40	221.14	N.A.	34.00
20-50	318.64	N.A.	49.00
40-70	248.28	N.A.	38.20
60-80	112.72	N.A.	17.30
70-80	45.45	N.A.	7.00
80-90	13.82	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	650.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	33.62
10-20	87.68
20-30	111.73
30-40	109.41
40-50	97.50
50-60	83.52
60-70	67.27
70-80	45.45
80-90	13.82
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	18.9	20.4	19.2	20.7	21.0	18.9	20.4	19.2	20.7	21.0
	3H	21.0	22.4	21.4	22.7	23.1	21.0	22.4	21.4	22.7	23.1
	4H	21.9	23.2	22.3	23.6	23.9	21.9	23.2	22.3	23.6	23.9
	6H	22.6	23.9	23.0	24.2	24.6	22.6	23.9	23.0	24.2	24.6
	8H	22.9	24.1	23.3	24.5	24.9	22.9	24.1	23.3	24.5	24.9
	12H	23.0	24.2	23.5	24.6	25.0	23.0	24.2	23.5	24.6	25.0

UGR Viewed Endwise

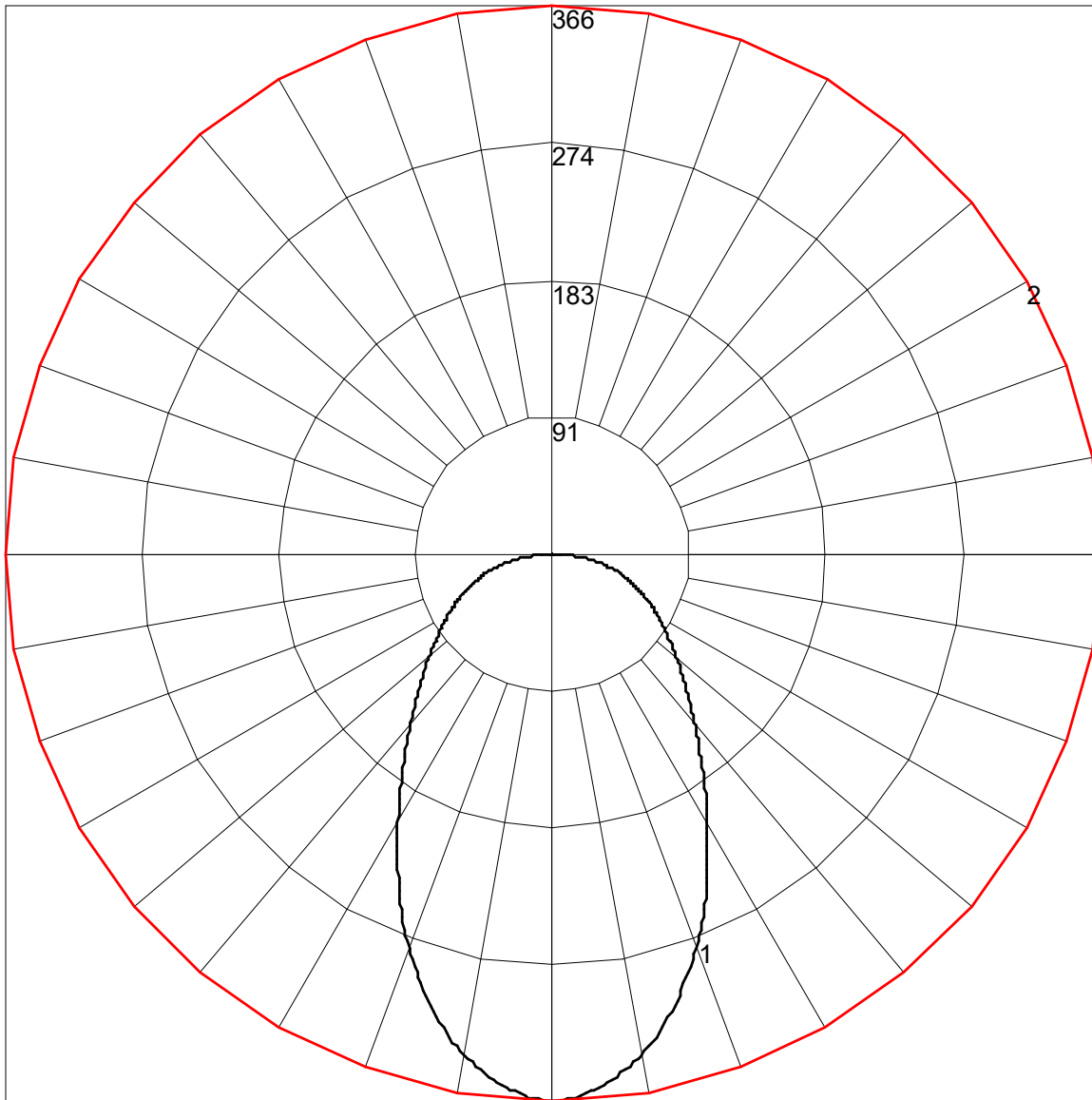
4H	2H	19.5	20.9	19.9	21.2	21.6	19.5	20.9	19.9	21.2	21.6
	3H	21.9	23.0	22.3	23.4	23.8	21.9	23.0	22.3	23.4	23.8
	4H	23.0	24.0	23.4	24.4	24.8	23.0	24.0	23.4	24.4	24.8
	6H	23.9	24.8	24.3	25.2	25.7	23.9	24.8	24.3	25.2	25.7
	8H	24.2	25.0	24.7	25.5	25.9	24.2	25.0	24.7	25.5	25.9
	12H	24.4	25.2	24.9	25.6	26.1	24.4	25.2	24.9	25.6	26.1

8H	4H	23.4	24.2	23.9	24.7	25.1	23.4	24.2	23.9	24.7	25.1
	6H	24.5	25.1	25.0	25.6	26.1	24.5	25.1	25.0	25.6	26.1
	8H	24.9	25.5	25.4	26.0	26.5	24.9	25.5	25.4	26.0	26.5
	12H	25.2	25.7	25.7	26.2	26.8	25.2	25.7	25.7	26.2	26.8

12H	4H	23.5	24.2	23.9	24.7	25.1	23.5	24.2	23.9	24.7	25.1
	6H	24.6	25.2	25.1	25.6	26.2	24.6	25.2	25.1	25.6	26.2
	8H	25.0	25.6	25.5	26.1	26.6	25.0	25.6	25.5	26.1	26.6

Maximum UGR = 26.8

POLAR GRAPH



Maximum Candela = 365.864 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.)