



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-835-XXX-DIM-UNV-LM-BL-XX_.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-L10-835-xxx-DIM-UNV-LM-BL-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	910
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	8.7
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	4065	4065	4065
55	2977	2977	2977
65	2425	2425	2425
75	1974	1974	1974
85	1299	1299	1299

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CANDELA TABULATION

	<u>0</u>
0.0	2148.928
0.5	2147.937
1.0	2144.965
1.5	2140.506
2.0	2134.562
2.5	2126.140
3.0	2116.728
3.5	2105.830
4.0	2092.950
4.5	2079.575
5.0	2064.714
5.5	2047.872
6.0	2029.543
6.5	2009.232
7.0	1987.436
7.5	1963.658
8.0	1937.403
8.5	1909.167
9.0	1879.445
9.5	1847.741
10.0	1813.560
10.5	1777.398
11.0	1738.759
11.5	1697.148
12.0	1654.050
12.5	1608.476
13.0	1560.920
13.5	1510.887
14.0	1459.369
14.5	1405.868
15.0	1351.377
15.5	1295.895
16.0	1240.414
16.5	1184.437
17.0	1129.946
17.5	1075.455
18.0	1020.468
18.5	966.473
19.0	912.972
19.5	861.453
20.0	811.421
20.5	763.370
21.0	718.291
21.5	675.193
22.0	632.096
22.5	591.475
23.0	552.836
23.5	516.179
24.0	482.047
24.5	449.749
25.0	419.581
25.5	391.146
26.0	364.793
26.5	340.123

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CANDELA TABULATION - (Cont.)

27.0	317.187
27.5	295.936
28.0	276.121
28.5	257.792
29.0	240.801
29.5	224.949
30.0	210.286
30.5	196.614
31.0	183.932
31.5	172.142
32.0	161.145
32.5	150.940
33.0	141.429
33.5	132.562
34.0	124.388
34.5	116.809
35.0	109.725
35.5	103.236
36.0	97.192
36.5	91.694
37.0	86.591
37.5	81.935
38.0	77.724
38.5	73.811
39.0	70.244
39.5	66.974
40.0	64.002
40.5	61.228
41.0	58.702
41.5	56.373
42.0	54.194
42.5	52.212
43.0	50.330
43.5	48.596
44.0	47.011
44.5	45.475
45.0	44.039
45.5	42.701
46.0	41.463
46.5	40.274
47.0	39.134
47.5	38.045
48.0	37.054
48.5	36.063
49.0	35.122
49.5	34.230
50.0	33.388
50.5	32.546
51.0	31.753
51.5	30.961
52.0	30.218
52.5	29.524
53.0	28.781
53.5	28.088
54.0	27.444
54.5	26.800

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CANDELA TABULATION - (Cont.)

55.0	26.156
55.5	25.512
56.0	24.917
56.5	24.323
57.0	23.728
57.5	23.134
58.0	22.589
58.5	22.044
59.0	21.499
59.5	21.004
60.0	20.508
60.5	19.964
61.0	19.468
61.5	18.973
62.0	18.477
62.5	18.032
63.0	17.536
63.5	17.090
64.0	16.645
64.5	16.199
65.0	15.703
65.5	15.257
66.0	14.812
66.5	14.415
67.0	13.970
67.5	13.524
68.0	13.127
68.5	12.731
69.0	12.285
69.5	11.889
70.0	11.493
70.5	11.096
71.0	10.750
71.5	10.353
72.0	9.957
72.5	9.610
73.0	9.214
73.5	8.867
74.0	8.520
74.5	8.174
75.0	7.827
75.5	7.480
76.0	7.133
76.5	6.787
77.0	6.440
77.5	6.143
78.0	5.796
78.5	5.499
79.0	5.201
79.5	4.855
80.0	4.557
80.5	4.260
81.0	3.963
81.5	3.666
82.0	3.369
82.5	3.071

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CANDELA TABULATION - (Cont.)

83.0	2.824
83.5	2.526
84.0	2.279
84.5	1.981
85.0	1.734
85.5	1.486
86.0	1.238
86.5	1.040
87.0	0.842
87.5	0.694
88.0	0.545
88.5	0.446
89.0	0.347
89.5	0.248
90.0	0.149
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-L10-835-XXX-DIM-UNV-LM-BL-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
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L10-835-XXX-DIM-UNV-LM-BL-XX_.IES****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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	552.67	N.A.	60.70
0-30	752.84	N.A.	82.70
0-40	825.62	N.A.	90.70
0-60	884.13	N.A.	97.10
0-80	908.07	N.A.	99.80
0-90	910.19	N.A.	100.00
10-90	720.95	N.A.	79.20
20-40	272.95	N.A.	30.00
20-50	307.89	N.A.	33.80
40-70	74.14	N.A.	8.10
60-80	23.94	N.A.	2.60
70-80	8.31	N.A.	0.90
80-90	2.12	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	910.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	189.24
10-20	363.44
20-30	200.16
30-40	72.78
40-50	34.94
50-60	23.57
60-70	15.63
70-80	8.31
80-90	2.12
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	9.2	10.2	9.5	10.5	10.8	UGR Viewed Endwise	9.2	10.2	9.5	10.5	10.8
	3H	10.6	11.5	11.0	11.8	12.2		10.6	11.5	11.0	11.8	12.2
	4H	11.1	11.9	11.5	12.3	12.7		11.1	11.9	11.5	12.3	12.7
	6H	11.4	12.2	11.9	12.6	13.0		11.4	12.2	11.9	12.6	13.0
	8H	11.5	12.2	11.9	12.6	13.0		11.5	12.2	11.9	12.6	13.0
	12H	11.6	12.2	12.0	12.6	13.0		11.6	12.2	12.0	12.6	13.0

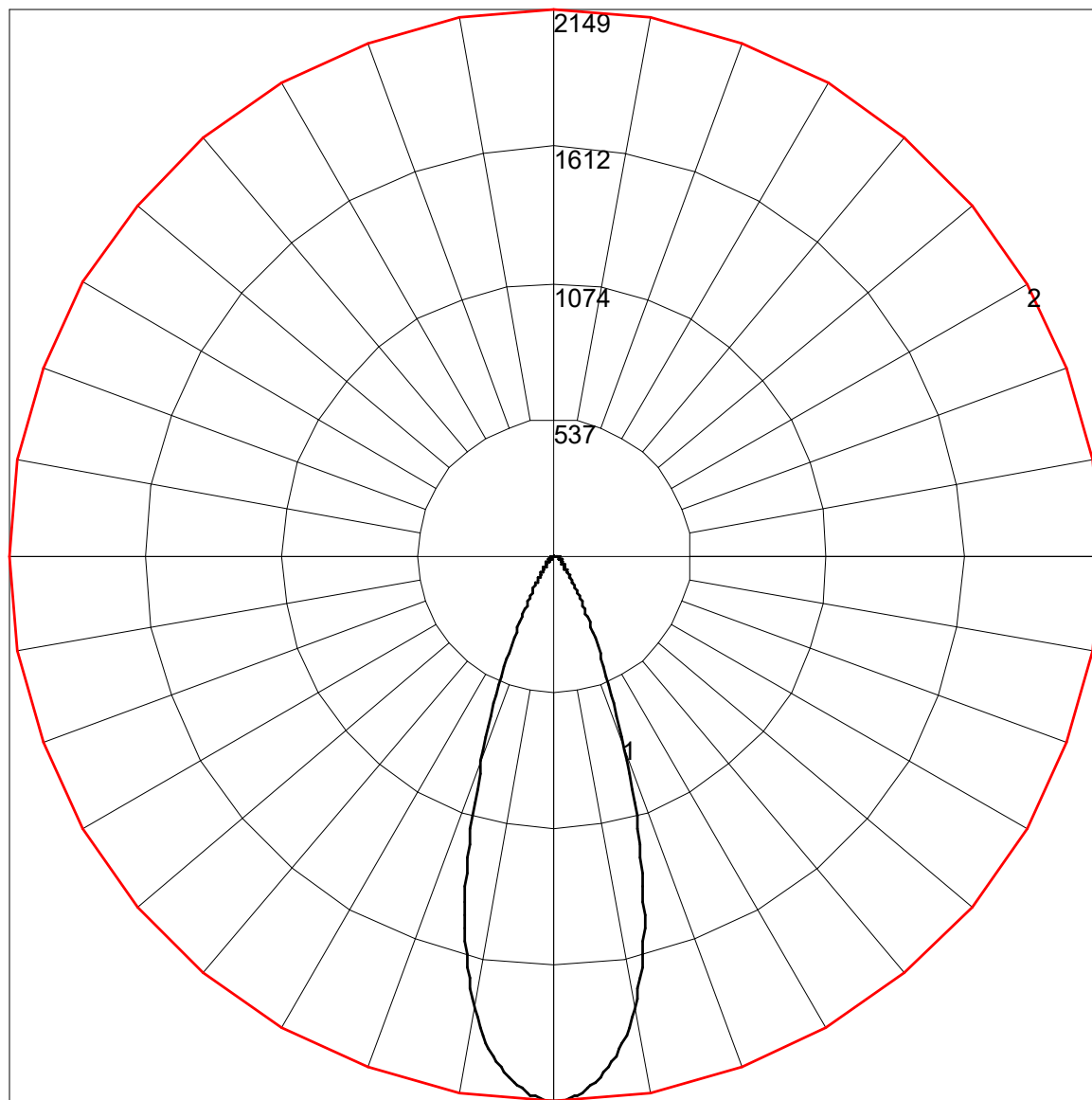
4H	2H	9.6	10.4	10.0	10.8	11.2	9.6	10.4	10.0	10.8	11.2
	3H	11.2	11.9	11.6	12.3	12.7	11.2	11.9	11.6	12.3	12.7
	4H	11.8	12.4	12.2	12.8	13.3	11.8	12.4	12.2	12.8	13.3
	6H	12.3	12.8	12.7	13.2	13.7	12.3	12.8	12.7	13.2	13.7
	8H	12.4	12.9	12.9	13.3	13.8	12.4	12.9	12.9	13.3	13.8
	12H	12.5	12.9	12.9	13.4	13.8	12.5	12.9	12.9	13.4	13.8

8H	4H	12.0	12.5	12.5	12.9	13.4	12.0	12.5	12.5	12.9	13.4
	6H	12.5	12.9	13.1	13.4	13.9	12.5	12.9	13.1	13.4	13.9
	8H	12.7	13.1	13.3	13.6	14.1	12.7	13.1	13.3	13.6	14.1
	12H	12.9	13.2	13.4	13.7	14.2	12.9	13.2	13.4	13.7	14.2

12H	4H	12.0	12.4	12.5	12.9	13.3	12.0	12.4	12.5	12.9	13.3
	6H	12.6	12.9	13.1	13.4	13.9	12.6	12.9	13.1	13.4	13.9
	8H	12.8	13.1	13.3	13.6	14.2	12.8	13.1	13.3	13.6	14.2

Maximum UGR = 14.2

POLAR GRAPH



Maximum Candela = 2148.928 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.)