



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-835-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-L15-835-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	1344
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
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)	0.56
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	4831	4831	4831
55	3249	3249	3249
65	2418	2418	2418
75	1669	1669	1669
85	1394	1394	1394

CANDELA TABULATION

	<u>0</u>
0.0	3252.902
0.5	3251.394
1.0	3246.868
1.5	3239.326
2.0	3228.767
2.5	3215.946
3.0	3200.107
3.5	3182.006
4.0	3162.397
4.5	3139.771
5.0	3115.636
5.5	3089.239
6.0	3059.825
6.5	3027.394
7.0	2992.700
7.5	2954.990
8.0	2914.262
8.5	2870.518
9.0	2823.757
9.5	2773.225
10.0	2720.431
10.5	2663.865
11.0	2603.528
11.5	2540.175
12.0	2473.804
12.5	2402.909
13.0	2330.505
13.5	2254.330
14.0	2175.892
14.5	2095.946
15.0	2012.983
15.5	1930.020
16.0	1845.549
16.5	1761.077
17.0	1678.114
17.5	1598.922
18.0	1517.468
18.5	1436.768
19.0	1357.576
19.5	1282.155
20.0	1210.505
20.5	1141.118
21.0	1073.239
21.5	1008.377
22.0	945.778
22.5	886.949
23.0	831.138
23.5	778.343
24.0	728.716
24.5	682.182
25.0	638.362
25.5	597.258
26.0	558.869
26.5	522.817

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-RM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

27.0	489.255
27.5	457.880
28.0	428.466
28.5	401.164
29.0	375.521
29.5	351.537
30.0	328.986
30.5	307.943
31.0	288.259
31.5	269.780
32.0	252.509
32.5	236.294
33.0	221.059
33.5	206.804
34.0	193.379
34.5	180.935
35.0	169.320
35.5	158.459
36.0	148.353
36.5	139.001
37.0	130.327
37.5	122.333
38.0	114.941
38.5	108.154
39.0	101.894
39.5	96.162
40.0	90.958
40.5	86.206
41.0	81.832
41.5	77.834
42.0	74.139
42.5	70.745
43.0	67.577
43.5	64.711
44.0	61.996
44.5	59.582
45.0	57.244
45.5	55.133
46.0	53.096
46.5	51.211
47.0	49.476
47.5	47.892
48.0	46.384
48.5	44.951
49.0	43.593
49.5	42.236
50.0	41.029
50.5	39.898
51.0	38.766
51.5	37.710
52.0	36.730
52.5	35.674
53.0	34.769
53.5	33.864
54.0	32.959
54.5	32.054

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-RM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

55.0	31.224
55.5	30.395
56.0	29.640
56.5	28.811
57.0	28.057
57.5	27.302
58.0	26.548
58.5	25.794
59.0	25.115
59.5	24.361
60.0	23.682
60.5	23.003
61.0	22.325
61.5	21.646
62.0	20.967
62.5	20.288
63.0	19.685
63.5	19.006
64.0	18.403
64.5	17.724
65.0	17.121
65.5	16.517
66.0	15.914
66.5	15.310
67.0	14.707
67.5	14.179
68.0	13.576
68.5	13.048
69.0	12.520
69.5	11.916
70.0	11.464
70.5	10.936
71.0	10.484
71.5	9.956
72.0	9.503
72.5	9.051
73.0	8.673
73.5	8.296
74.0	7.919
74.5	7.542
75.0	7.240
75.5	6.863
76.0	6.562
76.5	6.335
77.0	6.034
77.5	5.732
78.0	5.506
78.5	5.204
79.0	4.978
79.5	4.752
80.0	4.450
80.5	4.224
81.0	3.922
81.5	3.696
82.0	3.469
82.5	3.243

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-RM-CS-XX_.IES

CANDELA TABULATION - (Cont.)

83.0	3.017
83.5	2.715
84.0	2.489
84.5	2.263
85.0	2.036
85.5	1.810
86.0	1.659
86.5	1.433
87.0	1.207
87.5	0.980
88.0	0.754
88.5	0.603
89.0	0.528
89.5	0.377
90.0	0.302
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-L15-835-XXX-DIM-UNV-RM-CS-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
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121.0	0.000
121.5	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
143.5	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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-RM-CS-XX_.IES

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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	826.96	N.A.	61.50
0-30	1130.69	N.A.	84.10
0-40	1242.48	N.A.	92.40
0-60	1316.68	N.A.	98.00
0-80	1341.62	N.A.	99.80
0-90	1343.95	N.A.	100.00
10-90	1058.89	N.A.	78.80
20-40	415.53	N.A.	30.90
20-50	461.53	N.A.	34.30
40-70	91.26	N.A.	6.80
60-80	24.94	N.A.	1.90
70-80	7.88	N.A.	0.60
80-90	2.33	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	1343.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	285.06
10-20	541.90
20-30	303.73
30-40	111.79
40-50	46.00
50-60	28.20
60-70	17.06
70-80	7.88
80-90	2.33
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	83	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	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

IES INDOOR REPORT

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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	8.7	9.7	9.1	10.0	10.3	8.7	9.7	9.1	10.0	10.3
	3H	9.8	10.7	10.2	11.0	11.4	9.8	10.7	10.2	11.0	11.4
	4H	10.1	10.9	10.5	11.3	11.7	10.1	10.9	10.5	11.3	11.7
	6H	10.3	11.1	10.8	11.5	11.9	10.3	11.1	10.8	11.5	11.9
	8H	10.4	11.1	10.9	11.5	11.9	10.4	11.1	10.9	11.5	11.9
	12H	10.5	11.1	10.9	11.5	11.9	10.5	11.1	10.9	11.5	11.9

UGR Viewed Endwise

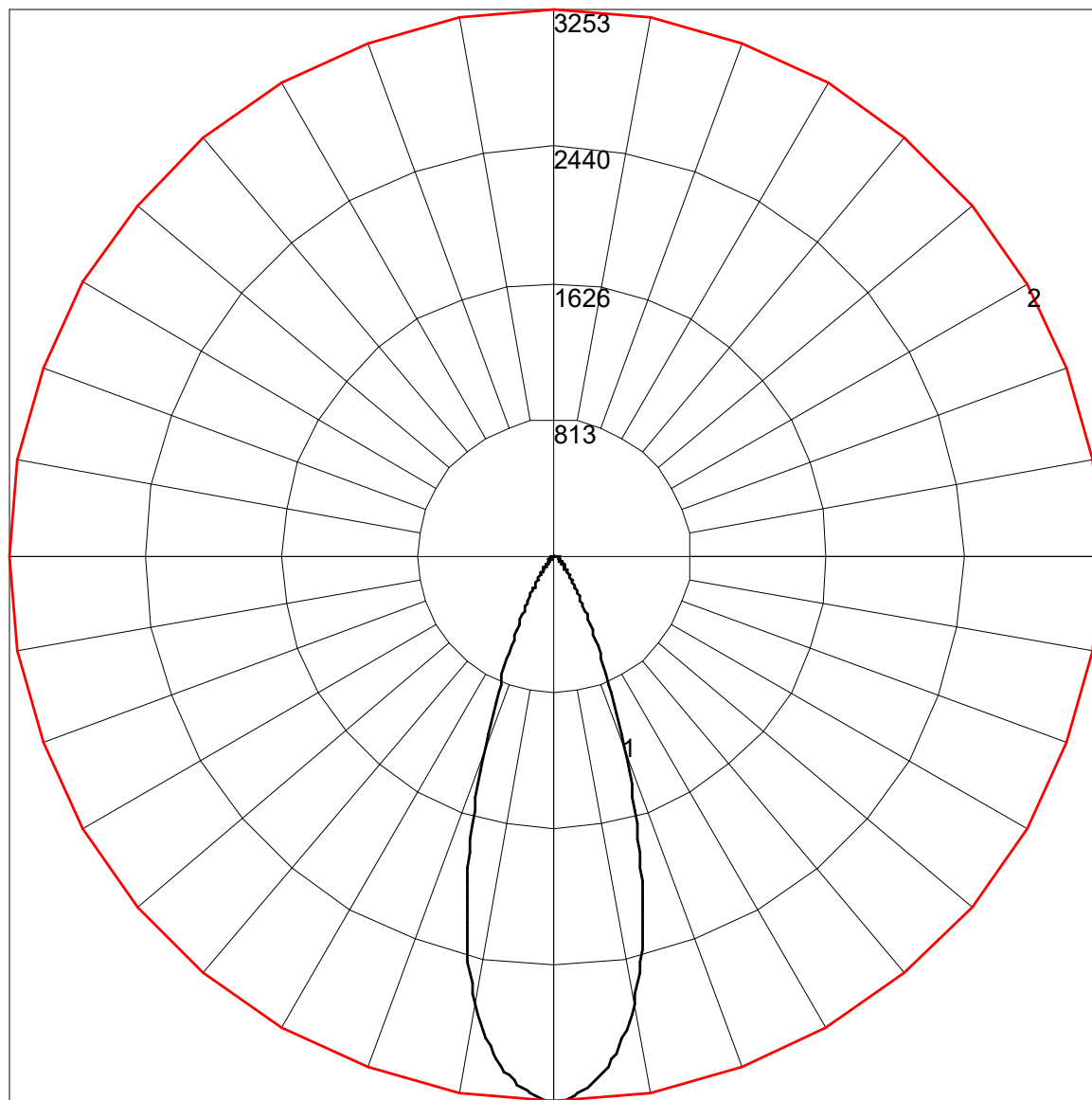
4H	2H	9.0	9.8	9.4	10.2	10.6	9.0	9.8	9.4	10.2	10.6
	3H	10.3	10.9	10.7	11.4	11.8	10.3	10.9	10.7	11.4	11.8
	4H	10.7	11.3	11.1	11.7	12.1	10.7	11.3	11.1	11.7	12.1
	6H	11.0	11.5	11.5	12.0	12.5	11.0	11.5	11.5	12.0	12.5
	8H	11.2	11.6	11.6	12.1	12.5	11.2	11.6	11.6	12.1	12.5
	12H	11.2	11.6	11.7	12.1	12.6	11.2	11.6	11.7	12.1	12.6

8H	4H	10.8	11.2	11.3	11.7	12.2	10.8	11.2	11.3	11.7	12.2
	6H	11.2	11.6	11.8	12.1	12.6	11.2	11.6	11.8	12.1	12.6
	8H	11.4	11.7	12.0	12.3	12.8	11.4	11.7	12.0	12.3	12.8
	12H	11.6	11.8	12.1	12.3	12.9	11.6	11.8	12.1	12.3	12.9

12H	4H	10.8	11.2	11.3	11.6	12.1	10.8	11.2	11.3	11.6	12.1
	6H	11.2	11.6	11.8	12.0	12.6	11.2	11.6	11.8	12.0	12.6
	8H	11.5	11.7	12.0	12.2	12.8	11.5	11.7	12.0	12.2	12.8

Maximum UGR = 12.9

POLAR GRAPH



Maximum Candela = 3252.902 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.)