



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-830-(L11)-xxx-DIM1-UNV-LW-CS-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	1115
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	11
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
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	18530	18530	18530
55	15427	15427	15427
65	11720	11720	11720
75	8499	8499	8499
85	5538	5538	5538

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## CANDELA TABULATION

	<u>0</u>
0.0	709.046
0.5	708.903
1.0	708.332
1.5	707.475
2.0	706.405
2.5	704.977
3.0	703.549
3.5	701.907
4.0	700.408
4.5	698.909
5.0	697.839
5.5	696.839
6.0	695.911
6.5	694.983
7.0	693.984
7.5	693.056
8.0	692.128
8.5	691.271
9.0	690.415
9.5	689.701
10.0	688.987
10.5	688.416
11.0	687.916
11.5	687.631
12.0	687.131
12.5	686.632
13.0	685.918
13.5	684.990
14.0	683.848
14.5	682.563
15.0	681.206
15.5	679.493
16.0	677.637
16.5	675.781
17.0	673.925
17.5	671.998
18.0	669.928
18.5	667.572
19.0	664.931
19.5	662.004
20.0	658.649
20.5	655.009
21.0	650.512
21.5	645.158
22.0	639.091
22.5	632.238
23.0	624.743
23.5	616.605
24.0	607.611
24.5	597.903
25.0	587.409
25.5	576.488
26.0	564.852
26.5	552.717

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-XX\_.IES****CANDELA TABULATION - (Cont.)**

27.0	539.797
27.5	526.520
28.0	512.529
28.5	497.753
29.0	482.405
29.5	466.273
30.0	449.712
30.5	432.651
31.0	415.591
31.5	398.388
32.0	381.684
32.5	365.694
33.0	350.347
33.5	335.999
34.0	322.793
34.5	310.801
35.0	300.093
35.5	290.243
36.0	281.605
36.5	273.682
37.0	266.615
37.5	260.262
38.0	254.480
38.5	249.197
39.0	244.201
39.5	239.704
40.0	235.349
40.5	231.280
41.0	227.497
41.5	223.785
42.0	220.216
42.5	216.932
43.0	213.577
43.5	210.294
44.0	207.082
44.5	203.941
45.0	200.729
45.5	197.659
46.0	194.518
46.5	191.377
47.0	188.165
47.5	185.024
48.0	181.812
48.5	178.600
49.0	175.388
49.5	172.033
50.0	168.820
50.5	165.537
51.0	162.253
51.5	158.898
52.0	155.543
52.5	152.188
53.0	148.833
53.5	145.478
54.0	142.266
54.5	138.982

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-XX\_.IES****CANDELA TABULATION - (Cont.)**

55.0	135.556
55.5	132.201
56.0	128.846
56.5	125.705
57.0	122.564
57.5	119.281
58.0	115.997
58.5	112.785
59.0	109.644
59.5	106.503
60.0	103.505
60.5	100.507
61.0	97.580
61.5	94.654
62.0	91.870
62.5	89.086
63.0	86.373
63.5	83.661
64.0	81.020
64.5	78.450
65.0	75.880
65.5	73.382
66.0	70.890
66.5	68.442
67.0	66.022
67.5	63.652
68.0	61.325
68.5	58.991
69.0	56.728
69.5	54.487
70.0	52.309
70.5	50.204
71.0	48.141
71.5	46.142
72.0	44.215
72.5	42.344
73.0	40.524
73.5	38.739
74.0	37.026
74.5	35.349
75.0	33.700
75.5	32.108
76.0	30.545
76.5	29.010
77.0	27.518
77.5	26.055
78.0	24.634
78.5	23.242
79.0	21.879
79.5	20.565
80.0	19.259
80.5	17.996
81.0	16.746
81.5	15.504
82.0	14.291
82.5	13.084

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-XX\_.IES****CANDELA TABULATION - (Cont.)**

83.0	11.907
83.5	10.750
84.0	9.608
84.5	8.487
85.0	7.395
85.5	6.339
86.0	5.318
86.5	4.333
87.0	3.376
87.5	2.577
88.0	1.970
88.5	1.442
89.0	0.999
89.5	0.628
90.0	0.400
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-L15-830-(L11)-XXX-DIM1-UNV-LW-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
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-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-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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**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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L15-830-(L11)-XXX-DIM1-UNV-LW-CS-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	258.28	N.A.	23.20
0-30	522.09	N.A.	46.80
0-40	717.71	N.A.	64.40
0-60	993.92	N.A.	89.20
0-80	1105.8	N.A.	99.20
0-90	1114.64	N.A.	100.00
10-90	1048.29	N.A.	94.00
20-40	459.43	N.A.	41.20
20-50	614.44	N.A.	55.10
40-70	351.85	N.A.	31.60
60-80	111.88	N.A.	10.00
70-80	36.24	N.A.	3.30
80-90	8.84	N.A.	0.80
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	1114.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	66.35
10-20	191.93
20-30	263.81
30-40	195.62
40-50	155.01
50-60	121.20
60-70	75.64
70-80	36.24
80-90	8.84
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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

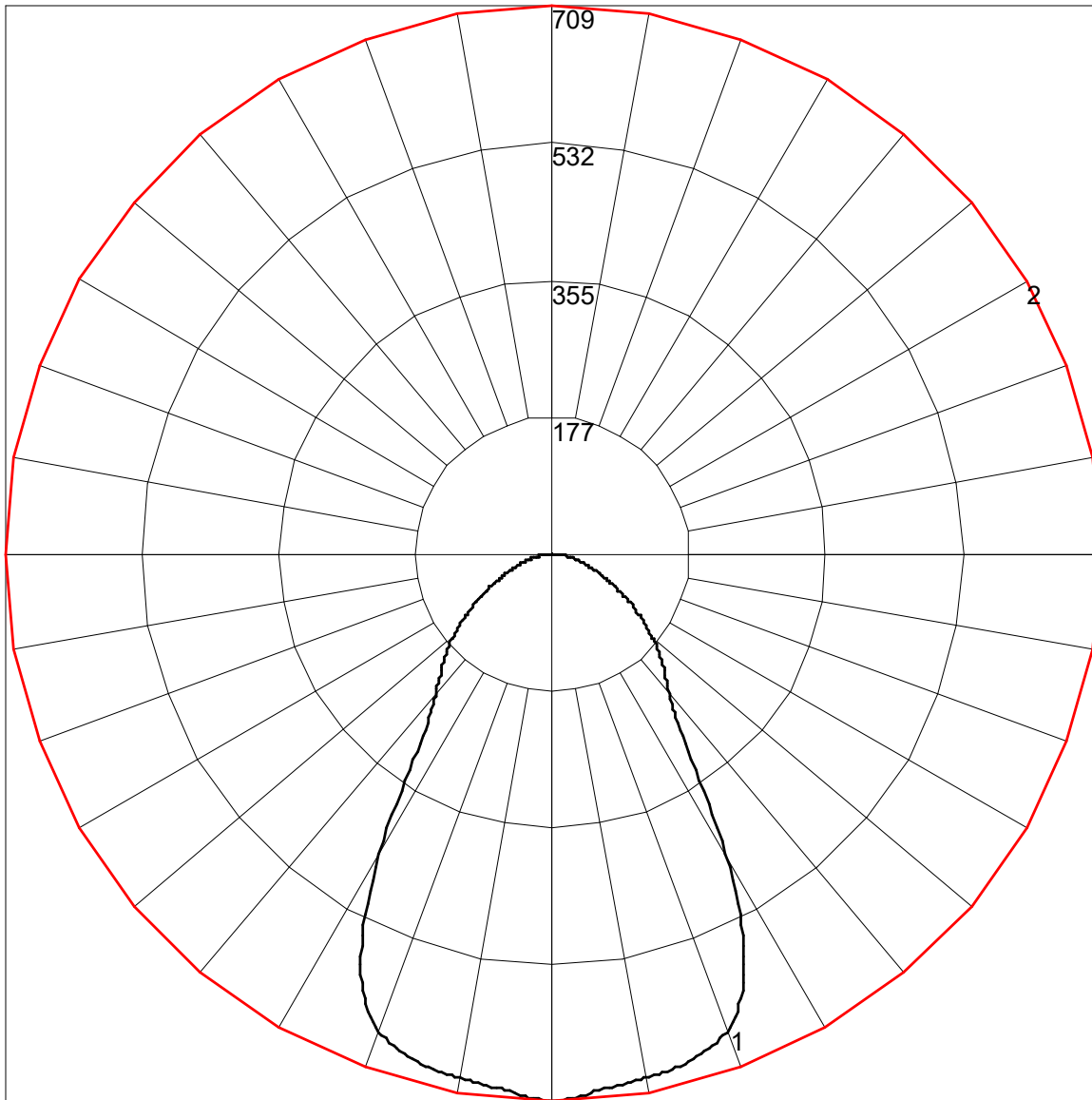
X=2H	Y=2H	19.4	20.8	19.8	21.1	21.4	19.4	20.8	19.8	21.1	21.4
	3H	20.6	21.9	21.0	22.2	22.5	20.6	21.9	21.0	22.2	22.5
	4H	21.0	22.2	21.4	22.5	22.9	21.0	22.2	21.4	22.5	22.9
	6H	21.3	22.3	21.7	22.7	23.1	21.3	22.3	21.7	22.7	23.1
	8H	21.3	22.4	21.8	22.8	23.2	21.3	22.4	21.8	22.8	23.2
	12H	21.4	22.4	21.8	22.7	23.2	21.4	22.4	21.8	22.7	23.2

### UGR Viewed Endwise

4H	2H	19.8	21.0	20.2	21.3	21.7	19.8	21.0	20.2	21.3	21.7
	3H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	4H	21.7	22.6	22.1	23.0	23.4	21.7	22.6	22.1	23.0	23.4
	6H	22.1	22.8	22.6	23.3	23.7	22.1	22.8	22.6	23.3	23.7
	8H	22.2	22.9	22.6	23.3	23.8	22.2	22.9	22.6	23.3	23.8
	12H	22.3	22.9	22.7	23.4	23.8	22.3	22.9	22.7	23.4	23.8
8H	4H	21.9	22.6	22.3	23.0	23.5	21.9	22.6	22.3	23.0	23.5
	6H	22.3	22.9	22.8	23.4	23.9	22.3	22.9	22.8	23.4	23.9
	8H	22.5	23.0	23.0	23.5	24.0	22.5	23.0	23.0	23.5	24.0
	12H	22.6	23.1	23.1	23.6	24.1	22.6	23.1	23.1	23.6	24.1
12H	4H	21.9	22.5	22.3	23.0	23.4	21.9	22.5	22.3	23.0	23.4
	6H	22.4	22.9	22.9	23.3	23.9	22.4	22.9	22.9	23.3	23.9
	8H	22.6	23.0	23.1	23.5	24.1	22.6	23.0	23.1	23.5	24.1

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 709.046 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.)