



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-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-L10-935-xxx-DIM-UNV-LW-WH-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	635
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	8.7
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	10553	10553	10553
55	8786	8786	8786
65	6674	6674	6674
75	4840	4840	4840
85	3155	3155	3155

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES

CANDELA TABULATION

	<u>0</u>
0.0	403.806
0.5	403.725
1.0	403.400
1.5	402.912
2.0	402.302
2.5	401.489
3.0	400.676
3.5	399.741
4.0	398.887
4.5	398.034
5.0	397.424
5.5	396.855
6.0	396.326
6.5	395.798
7.0	395.229
7.5	394.700
8.0	394.172
8.5	393.684
9.0	393.196
9.5	392.789
10.0	392.383
10.5	392.058
11.0	391.773
11.5	391.610
12.0	391.326
12.5	391.041
13.0	390.635
13.5	390.106
14.0	389.456
14.5	388.724
15.0	387.952
15.5	386.976
16.0	385.919
16.5	384.862
17.0	383.805
17.5	382.707
18.0	381.529
18.5	380.187
19.0	378.683
19.5	377.016
20.0	375.105
20.5	373.032
21.0	370.471
21.5	367.422
22.0	363.966
22.5	360.064
23.0	355.795
23.5	351.161
24.0	346.038
24.5	340.510
25.0	334.534
25.5	328.314
26.0	321.687
26.5	314.776

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	307.418
<b>27.5</b>	299.857
<b>28.0</b>	291.889
<b>28.5</b>	283.473
<b>29.0</b>	274.733
<b>29.5</b>	265.545
<b>30.0</b>	256.114
<b>30.5</b>	246.398
<b>31.0</b>	236.682
<b>31.5</b>	226.884
<b>32.0</b>	217.372
<b>32.5</b>	208.265
<b>33.0</b>	199.525
<b>33.5</b>	191.354
<b>34.0</b>	183.833
<b>34.5</b>	177.003
<b>35.0</b>	170.905
<b>35.5</b>	165.295
<b>36.0</b>	160.376
<b>36.5</b>	155.864
<b>37.0</b>	151.839
<b>37.5</b>	148.221
<b>38.0</b>	144.928
<b>38.5</b>	141.920
<b>39.0</b>	139.074
<b>39.5</b>	136.513
<b>40.0</b>	134.033
<b>40.5</b>	131.716
<b>41.0</b>	129.561
<b>41.5</b>	127.447
<b>42.0</b>	125.415
<b>42.5</b>	123.545
<b>43.0</b>	121.634
<b>43.5</b>	119.764
<b>44.0</b>	117.934
<b>44.5</b>	116.146
<b>45.0</b>	114.316
<b>45.5</b>	112.568
<b>46.0</b>	110.779
<b>46.5</b>	108.991
<b>47.0</b>	107.161
<b>47.5</b>	105.373
<b>48.0</b>	103.543
<b>48.5</b>	101.714
<b>49.0</b>	99.884
<b>49.5</b>	97.974
<b>50.0</b>	96.144
<b>50.5</b>	94.274
<b>51.0</b>	92.404
<b>51.5</b>	90.494
<b>52.0</b>	88.583
<b>52.5</b>	86.672
<b>53.0</b>	84.762
<b>53.5</b>	82.851
<b>54.0</b>	81.021
<b>54.5</b>	79.151

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES

CANDELA TABULATION - (Cont.)

55.0	77.200
55.5	75.289
56.0	73.379
56.5	71.590
57.0	69.801
57.5	67.931
58.0	66.061
58.5	64.232
59.0	62.443
59.5	60.654
60.0	58.947
60.5	57.239
61.0	55.573
61.5	53.906
62.0	52.320
62.5	50.735
63.0	49.190
63.5	47.645
64.0	46.141
64.5	44.678
65.0	43.214
65.5	41.791
66.0	40.373
66.5	38.978
67.0	37.600
67.5	36.250
68.0	34.925
68.5	33.596
69.0	32.307
69.5	31.030
70.0	29.791
70.5	28.591
71.0	27.416
71.5	26.278
72.0	25.180
72.5	24.115
73.0	23.079
73.5	22.062
74.0	21.087
74.5	20.131
75.0	19.192
75.5	18.286
76.0	17.395
76.5	16.521
77.0	15.672
77.5	14.838
78.0	14.029
78.5	13.237
79.0	12.460
79.5	11.712
80.0	10.968
80.5	10.249
81.0	9.537
81.5	8.830
82.0	8.139
82.5	7.452

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES

CANDELA TABULATION - (Cont.)

83.0	6.781
83.5	6.122
84.0	5.472
84.5	4.834
85.0	4.212
85.5	3.610
86.0	3.029
86.5	2.468
87.0	1.923
87.5	1.468
88.0	1.122
88.5	0.821
89.0	0.569
89.5	0.358
90.0	0.228
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-L10-935-XXX-DIM-UNV-LW-WH-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-L10-935-XXX-DIM-UNV-LW-WH-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

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-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	147.09	N.A.	23.20
0-30	297.34	N.A.	46.80
0-40	408.74	N.A.	64.40
0-60	566.05	N.A.	89.20
0-80	629.76	N.A.	99.20
0-90	634.80	N.A.	100.00
10-90	597.01	N.A.	94.00
20-40	261.65	N.A.	41.20
20-50	349.93	N.A.	55.10
40-70	200.38	N.A.	31.60
60-80	63.72	N.A.	10.00
70-80	20.64	N.A.	3.30
80-90	5.04	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	634.80	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	37.79
10-20	109.31
20-30	150.24
30-40	111.41
40-50	88.28
50-60	69.02
60-70	43.08
70-80	20.64
80-90	5.04
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

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES

## 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

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LW-WH-XX\_.IES

## 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

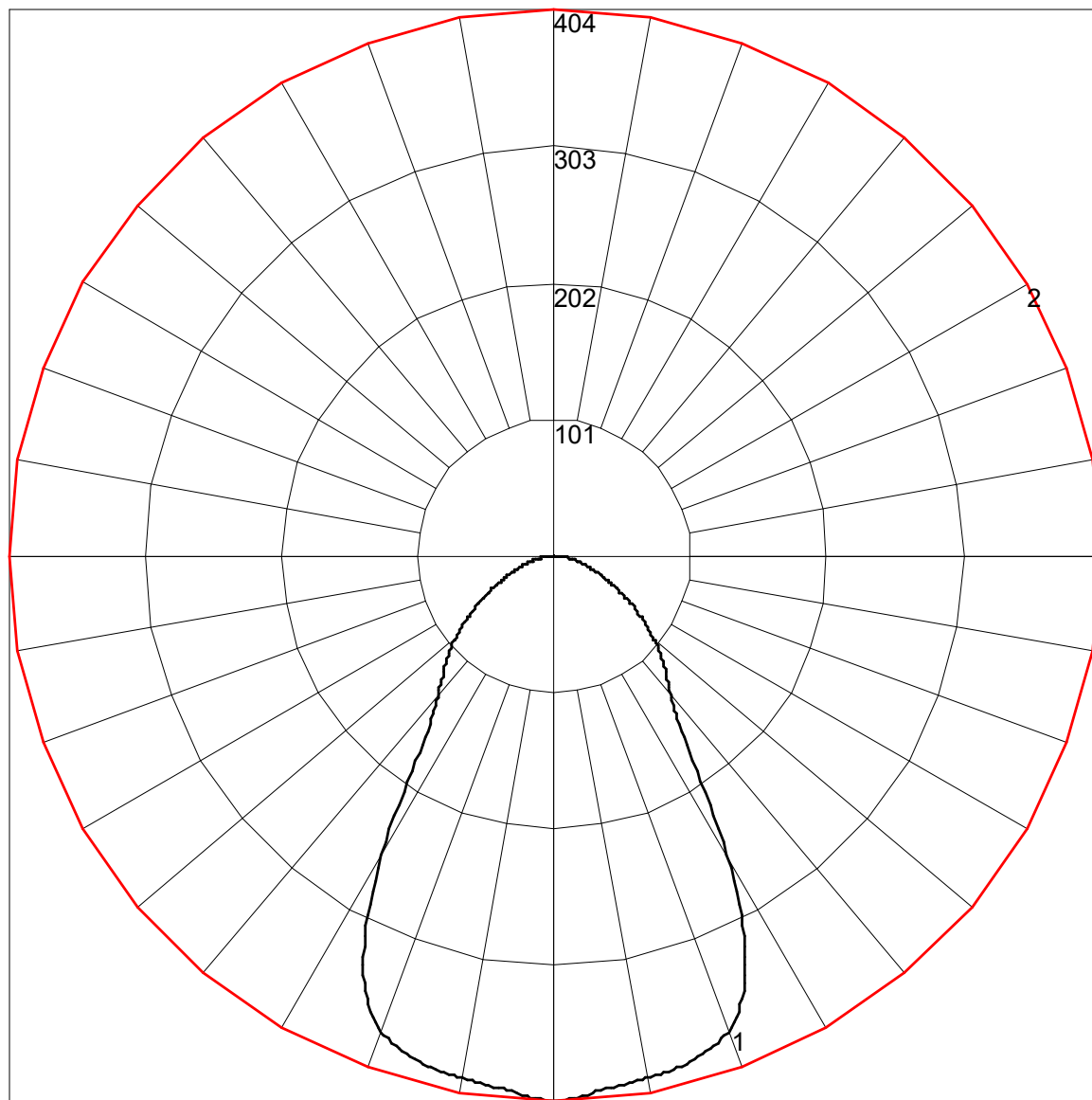
X=2H	Y=2H	17.4	18.8	17.8	19.1	19.4	17.4	18.8	17.8	19.1	19.4
	3H	18.6	19.9	19.0	20.2	20.5	18.6	19.9	19.0	20.2	20.5
	4H	19.0	20.2	19.4	20.5	20.9	19.0	20.2	19.4	20.5	20.9
	6H	19.3	20.3	19.7	20.7	21.1	19.3	20.3	19.7	20.7	21.1
	8H	19.4	20.4	19.8	20.8	21.2	19.4	20.4	19.8	20.8	21.2
	12H	19.4	20.4	19.8	20.7	21.2	19.4	20.4	19.8	20.7	21.2

### UGR Viewed Endwise

4H	2H	17.8	19.0	18.2	19.3	19.7	17.8	19.0	18.2	19.3	19.7
	3H	19.2	20.2	19.6	20.6	21.0	19.2	20.2	19.6	20.6	21.0
	4H	19.7	20.6	20.2	21.0	21.4	19.7	20.6	20.2	21.0	21.4
	6H	20.1	20.8	20.6	21.3	21.7	20.1	20.8	20.6	21.3	21.7
	8H	20.2	20.9	20.6	21.3	21.8	20.2	20.9	20.6	21.3	21.8
	12H	20.3	20.9	20.7	21.4	21.8	20.3	20.9	20.7	21.4	21.8
8H	4H	19.9	20.6	20.3	21.0	21.5	19.9	20.6	20.3	21.0	21.5
	6H	20.3	20.9	20.8	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.5	21.0	21.0	21.5	22.0	20.5	21.0	21.0	21.5	22.0
	12H	20.6	21.1	21.1	21.6	22.1	20.6	21.1	21.1	21.6	22.1
12H	4H	19.9	20.5	20.4	21.0	21.4	19.9	20.5	20.4	21.0	21.4
	6H	20.4	20.9	20.9	21.3	21.9	20.4	20.9	20.9	21.3	21.9
	8H	20.6	21.0	21.1	21.5	22.1	20.6	21.0	21.1	21.5	22.1

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 403.806 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.)