

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMIERE

Report Number: P871399

Luminaire Tested: **650-2-8LED-27-10-12-X**

Test Date: 2024-07-13

**Test Information**

Test Method: LM-79-08  
Report Number: P871399  
SCALED FROM G1-2405-109-2  
Test Lab: Cooper Lighting Solutions  
Test Date: 2024-07-13  
Issue Date: 7/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 650-2-8LED-27-10-12-X  
Description: Boca with Two openings  
Light Source: Soraa  
SM16-04-10D-927-03  
Ballast/Driver: -

**Summary**

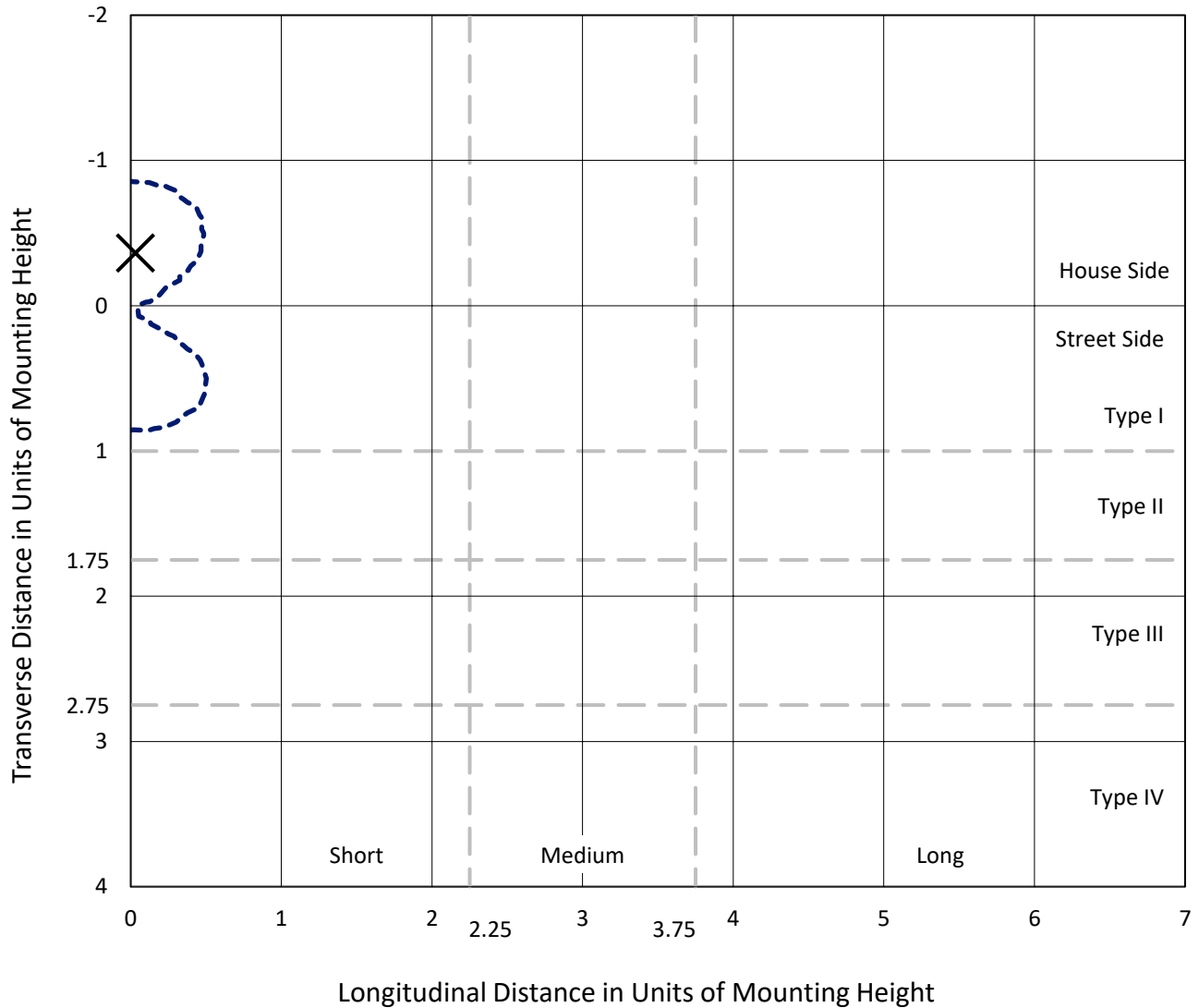
Lumens per Lamp: N/A  
Luminaire Lumens: 27.3 lumens  
Efficiency: N/A  
Efficacy: 4.4 lumens/watt  
Luminous Opening: Circular (Dia: 0.18' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B0 - U1 - G0  
  
Input Watts (W): 6.19  
Input Voltage (V): 12.0  
Input Current (Ain): 0.516  
Voltage Rise (V): NR  
Power Factor: 1  
Total Harmonic Distortion (THDi): 0.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): 25.6  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

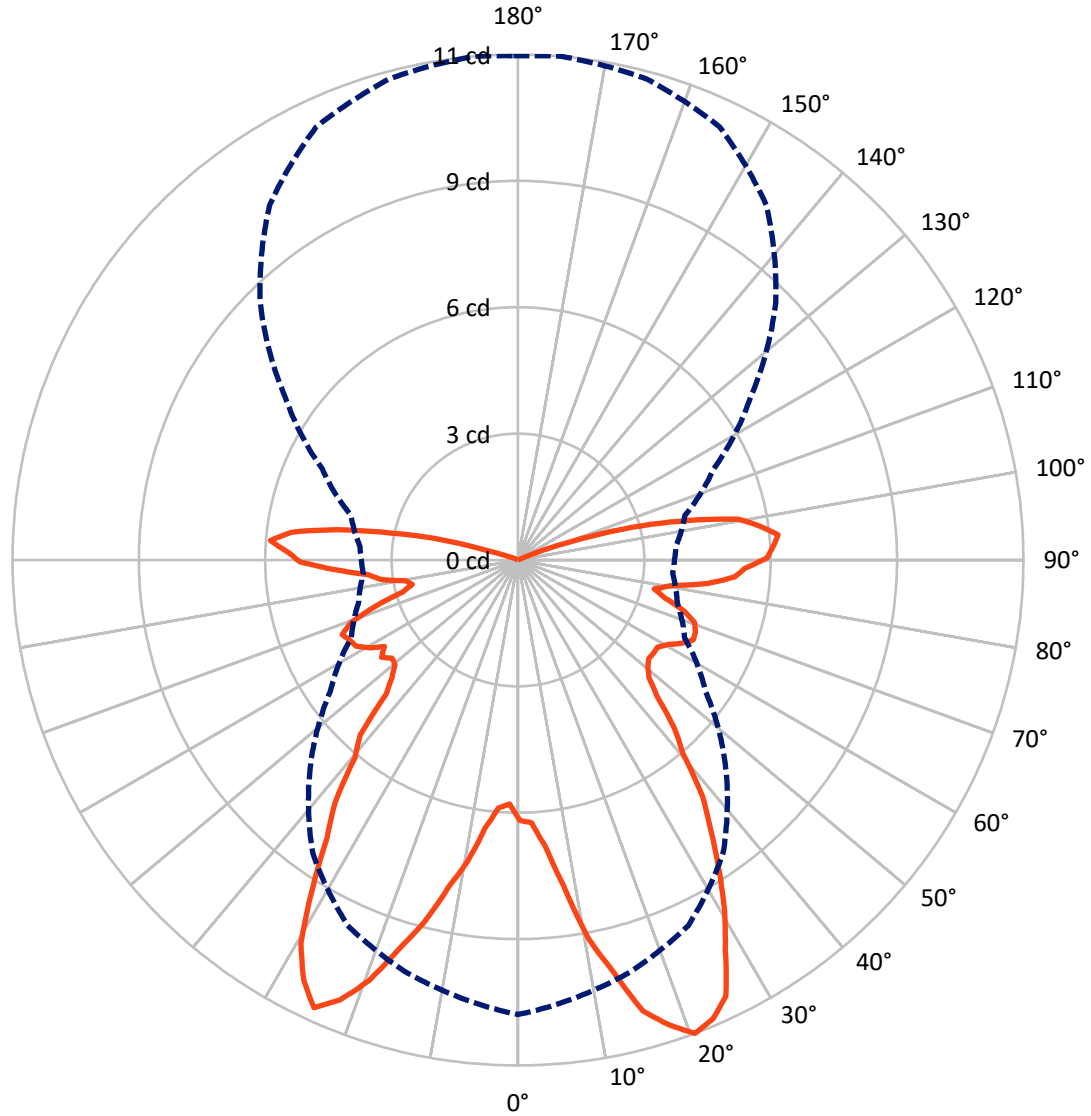
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 175-Deg Lateral      - - - Horizontal Cone Through 20-Deg Vertical

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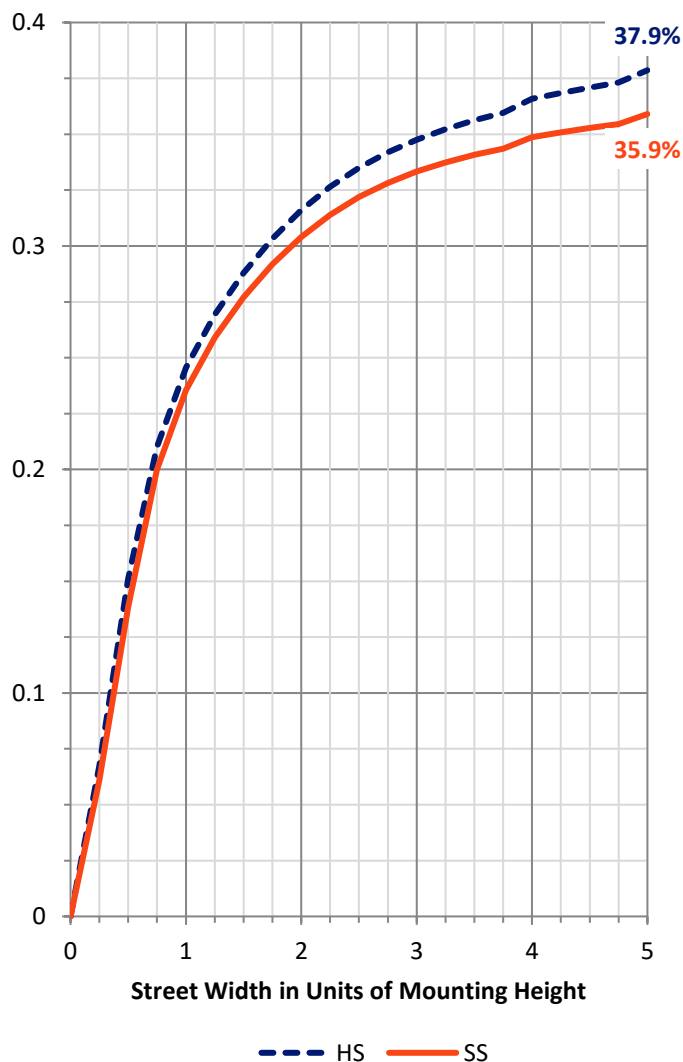
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11.6	2.7	14.3
	% Fixture	42.5	9.8	52.2
<b>Street Side</b>	Lumens	10.8	2.3	13.1
	% Fixture	39.5	8.3	47.8
<b>Total</b>	Lumens	22.4	4.9	27.3
	% Fixture	81.9	18.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.6	2.1
10°-20°	1.9	7.1
20°-30°	3.2	11.9
30°-40°	3.3	12.1
40°-50°	2.7	9.9
50°-60°	2.6	9.5
60°-70°	3.0	11.0
70°-80°	2.3	8.2
80°-90°	2.8	10.2
90°-100°	3.4	12.4
100°-110°	1.5	5.4
110°-120°	0.1	0.3
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	22.4	81.9
0°-180°	27.3	100.0

**Coefficient of Utilization**



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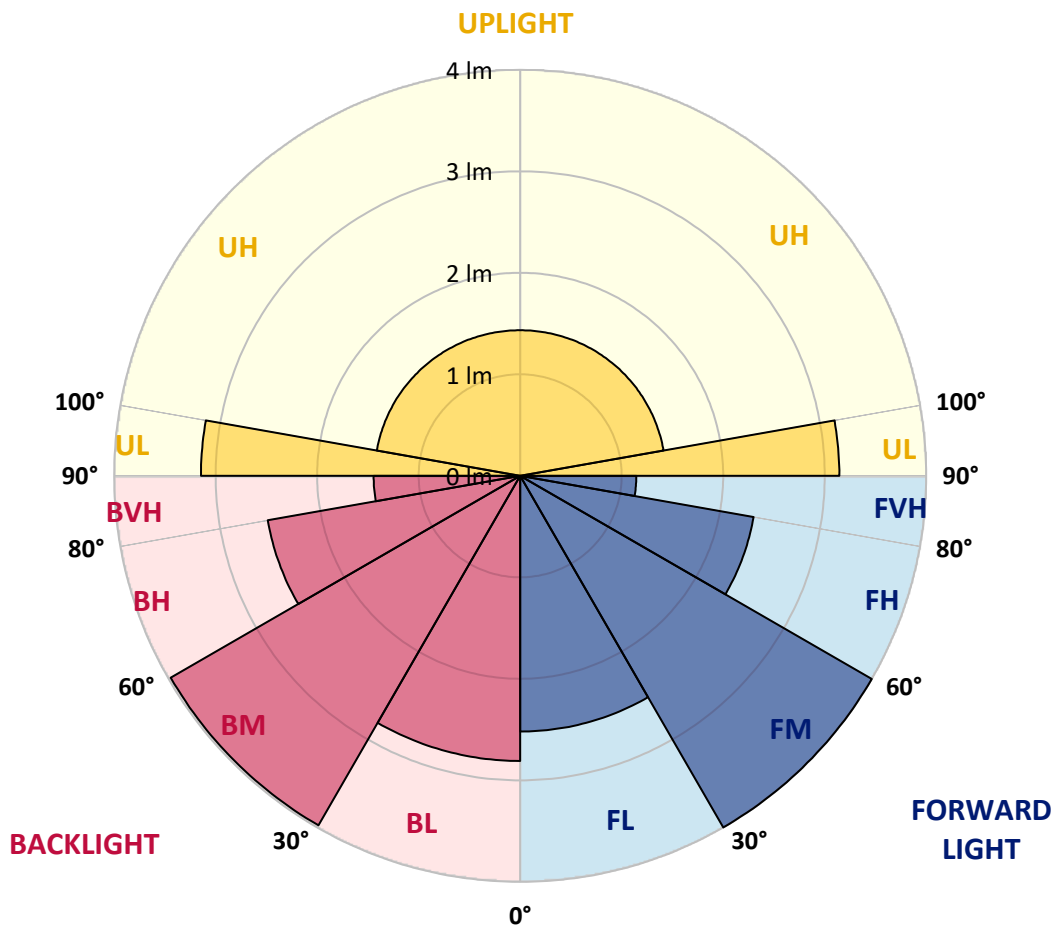
CATALOG NUMBER: 650-2-8LED-27-10-12-X

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2.7	9.9			
FM (30°-60°)	4.3	15.8			
FH (60°-80°)	2.5	9.2			G0/660
FVH (80°-90°)	1.2	4.5			G0/10
BL (0°-30°)	3.0	11.1	B0/110		
BM (30°-60°)	4.3	15.7	B0/220		
BH (60°-80°)	2.7	10.0	B0/110		G0/110
BVH (80°-90°)	1.6	5.7			G0/10
UL (90°-100°)	3.4	12.4		U1/10	
UH (100°-180°)	1.5	5.7		U1/10	

**BUG Rating: B0-U1-G0**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
2.5°	5.4	5.5	5.3	5.5	5.5	5.6	5.5	5.6	5.6	5.7	5.7
5°	5.6	5.6	5.7	5.6	5.6	5.6	5.4	5.4	5.5	5.5	5.6
7.5°	6.0	6.1	6.0	5.9	5.9	5.5	5.4	5.1	5.1	5.3	5.3
10°	6.8	6.9	6.8	6.5	6.1	5.8	5.3	5.0	4.8	4.7	4.8
12.5°	7.6	7.6	7.3	6.9	6.3	5.8	5.2	4.6	4.3	4.2	4.3
15°	8.6	8.4	8.2	7.7	7.0	6.2	5.3	4.5	4.1	4.1	4.1
17.5°	9.4	9.2	8.8	8.5	7.5	6.2	5.2	4.4	3.8	3.7	3.8
20°	10.3	10.1	9.7	9.1	8.1	6.6	5.2	4.2	3.7	3.5	3.5
22.5°	10.5	10.7	10.3	9.5	8.3	6.9	5.1	4.1	3.4	3.2	3.3
25°	11.1	11.1	10.6	9.9	8.8	7.0	5.1	3.9	3.4	3.2	3.3
27.5°	10.6	10.6	10.3	9.8	8.6	6.8	5.1	3.6	3.1	2.9	2.9
30°	9.8	9.9	9.7	9.1	8.5	6.9	5.1	3.5	2.9	2.9	2.7
32.5°	8.7	8.8	8.6	8.4	7.6	6.6	4.7	3.3	2.8	2.8	2.7
35°	7.6	7.6	7.5	7.5	6.9	5.8	4.1	3.1	2.7	2.5	2.5
37.5°	6.8	6.9	6.8	6.7	6.3	5.1	3.9	3.2	2.7	2.5	2.6
40°	5.5	5.8	5.7	5.6	5.2	4.6	3.5	2.7	2.5	2.4	2.3
42.5°	5.4	5.3	5.1	5.1	4.8	4.1	3.4	3.0	2.6	2.6	2.6
45°	4.5	4.2	4.4	4.2	3.9	3.6	2.9	2.4	2.3	2.2	2.2
47.5°	3.7	3.9	3.9	3.6	3.6	3.3	2.8	2.3	2.2	2.1	2.2
50°	3.7	3.6	3.7	3.4	3.4	3.2	2.7	2.4	2.2	2.1	2.1
52.5°	3.7	3.6	3.5	3.4	3.4	2.9	2.7	2.3	2.2	2.1	2.0
55°	4.0	3.8	3.6	3.4	3.2	3.0	2.7	2.3	2.1	2.0	1.9
57.5°	3.9	3.6	3.7	3.4	3.1	2.9	2.5	2.0	1.9	1.7	1.8
60°	3.9	3.9	3.9	3.7	3.2	3.0	2.6	2.2	1.9	1.9	1.9
62.5°	4.2	4.1	4.0	3.7	3.4	3.1	2.7	2.2	2.0	1.9	1.9
65°	4.4	4.2	4.1	3.9	3.4	3.2	2.5	2.2	1.8	1.7	1.8
67.5°	4.2	4.3	4.2	3.8	3.6	3.2	2.6	2.0	1.6	1.5	1.4
70°	4.1	4.0	3.8	3.6	3.4	2.9	2.2	1.7	1.4	1.2	1.2
72.5°	3.4	3.4	3.4	3.1	2.9	2.5	1.8	1.4	1.0	0.8	0.8
75°	2.9	2.7	2.9	2.6	2.6	2.2	1.6	1.0	0.7	0.6	0.6
77.5°	2.4	2.5	2.5	2.5	2.3	1.9	1.2	0.8	0.5	0.3	0.4
80°	2.8	2.6	2.7	2.7	2.6	2.3	1.4	0.7	0.6	0.5	0.4
82.5°	3.0	3.1	3.3	3.2	2.9	2.5	1.4	0.8	0.5	0.5	0.5
85°	3.6	3.4	3.6	3.6	3.3	2.5	1.7	0.9	0.5	0.5	0.5
87.5°	4.0	4.1	4.1	4.0	3.7	2.9	1.8	1.0	0.4	0.2	0.3
90°	4.9	4.9	4.8	4.5	4.0	3.4	2.2	1.1	0.6	0.4	0.5
92.5°	5.3	5.2	5.0	4.7	4.0	3.3	2.5	1.4	0.6	0.4	0.3
95°	5.4	5.6	5.4	4.9	4.3	3.5	2.6	1.5	0.7	0.3	0.3
97.5°	5.0	5.1	5.1	4.6	4.2	3.5	2.4	1.2	0.6	0.1	0.1
100°	4.2	4.1	4.2	4.1	3.6	2.8	1.9	1.0	0.4	0.0	0.0
102.5°	3.0	2.9	3.1	2.9	2.6	2.0	1.3	0.7	0.2	0.1	0.0
105°	2.0	2.0	2.0	1.8	1.6	1.3	0.9	0.5	0.2	0.1	0.1
107.5°	0.9	0.7	0.7	0.8	0.6	0.5	0.3	0.2	0.2	0.1	0.0
110°	0.2	0.2	0.1	0.3	0.2	0.3	0.2	0.0	0.0	0.1	0.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	0.0	0.2	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
2.5°	5.7	5.8	5.8	5.8	5.9	5.9	5.9	5.9	5.9	5.8
5°	5.6	5.7	5.9	6.0	6.2	6.3	6.5	6.4	6.5	6.4
7.5°	5.3	5.5	5.9	6.2	6.7	6.9	7.3	7.4	7.4	7.4
10°	4.9	5.2	5.6	6.4	7.0	7.7	8.2	8.5	8.7	8.6
12.5°	4.3	4.8	5.4	6.3	7.2	8.1	8.9	9.2	9.5	9.5
15°	4.2	4.5	5.4	6.5	7.8	8.9	9.9	10.3	10.6	10.5
17.5°	3.7	4.2	5.0	6.4	8.0	9.4	10.4	10.8	11.0	11.0
20°	3.6	3.9	4.9	6.4	8.2	9.8	10.8	11.2	11.4	11.4
22.5°	3.3	3.6	4.5	6.2	8.2	9.8	10.8	11.1	11.3	11.3
25°	3.2	3.6	4.3	6.0	8.1	9.7	10.4	10.7	10.9	11.0
27.5°	2.9	3.1	3.9	5.5	7.5	9.0	9.7	10.0	10.0	10.0
30°	2.8	3.1	3.7	5.2	7.0	8.3	9.0	9.2	9.2	9.1
32.5°	2.6	2.8	3.4	4.7	6.2	7.4	7.9	8.2	8.3	8.3
35°	2.5	2.8	3.2	4.1	5.5	6.5	7.1	7.4	7.5	7.4
37.5°	2.6	2.8	3.2	4.0	5.1	6.0	6.4	6.7	6.8	6.7
40°	2.3	2.5	2.9	3.5	4.4	5.1	5.4	5.6	5.7	5.7
42.5°	2.5	2.7	2.8	3.4	4.1	4.6	5.0	5.1	5.2	5.2
45°	2.2	2.3	2.5	2.9	3.5	3.9	4.1	4.2	4.4	4.5
47.5°	2.1	2.3	2.5	2.8	3.1	3.6	3.7	3.8	4.0	3.9
50°	2.2	2.2	2.5	2.8	3.1	3.4	3.6	3.7	3.8	3.8
52.5°	2.0	2.2	2.4	2.7	3.0	3.3	3.6	3.7	3.7	3.7
55°	2.0	2.1	2.3	2.6	3.0	3.3	3.5	3.6	3.7	3.7
57.5°	1.9	2.0	2.2	2.5	3.0	3.2	3.4	3.5	3.7	3.6
60°	1.9	1.9	2.3	2.7	3.1	3.4	3.7	3.9	3.9	3.9
62.5°	1.9	2.1	2.3	2.8	3.4	3.6	4.0	4.1	4.1	4.2
65°	1.7	1.9	2.3	2.8	3.3	3.7	4.1	4.2	4.4	4.4
67.5°	1.4	1.7	2.1	2.7	3.4	3.8	4.2	4.3	4.3	4.5
70°	1.1	1.3	1.7	2.5	3.2	3.5	4.0	4.2	4.2	4.2
72.5°	0.7	1.0	1.3	2.0	2.8	3.4	3.6	3.8	3.9	3.9
75°	0.6	0.8	1.1	1.7	2.5	2.9	3.1	3.4	3.4	3.4
77.5°	0.4	0.5	0.8	1.3	2.2	2.7	2.9	3.1	3.1	3.2
80°	0.5	0.6	0.9	1.5	2.6	3.1	3.4	3.5	3.5	3.5
82.5°	0.5	0.6	1.1	1.9	3.0	3.6	4.1	4.3	4.3	4.3
85°	0.6	0.7	1.4	2.3	3.4	4.1	4.6	4.8	4.9	4.8
87.5°	0.3	0.7	1.3	2.4	3.6	4.3	4.8	5.0	5.1	5.1
90°	0.5	0.9	1.6	2.6	3.8	4.6	5.1	5.5	5.6	5.7
92.5°	0.4	0.8	1.7	2.6	3.7	4.6	5.2	5.6	5.8	5.7
95°	0.4	1.0	1.7	2.8	3.8	4.5	5.2	5.6	5.9	5.9
97.5°	0.2	0.7	1.5	2.4	3.4	4.2	4.8	5.2	5.5	5.5
100°	0.1	0.6	1.3	2.3	3.1	3.9	4.4	4.8	5.1	5.0
102.5°	0.0	0.3	1.0	1.7	2.5	3.1	3.4	3.8	4.0	4.1
105°	0.2	0.3	0.7	1.3	1.7	2.3	2.5	2.8	2.9	2.9
107.5°	0.1	0.2	0.2	0.7	1.0	1.3	1.5	1.6	1.7	1.7
110°	0.1	0.2	0.2	0.3	0.5	0.6	0.7	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)