

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: P871401

Luminaire Tested: **650-1-8LED-40-10-12-X**

Test Date: 2024-07-12

**Test Information**

Test Method: LM-79-08  
Report Number: P871401  
SCALED FROM G1-2405-109-1  
Test Lab: Cooper Lighting Solutions  
Test Date: 2024-07-12  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 650-1-8LED-40-10-12-X  
Description: Boca with Single opening  
Light Source: Soraa  
SM16-04-10D-940-03  
Ballast/Driver: -

**Summary**

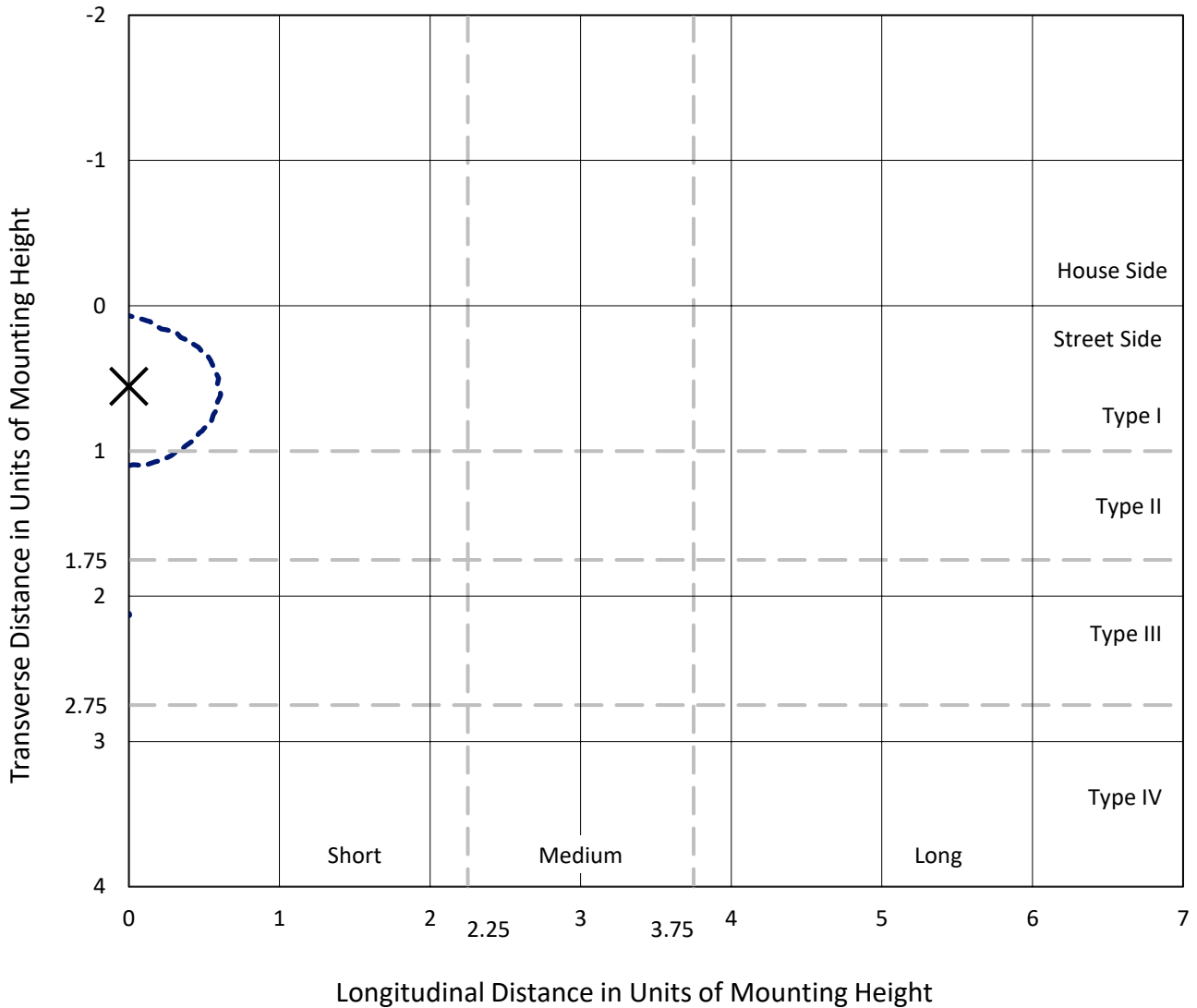
Lumens per Lamp: N/A  
Luminaire Lumens: 20.3 lumens  
Efficiency: N/A  
Efficacy: 3.3 lumens/watt  
Luminous Opening: Circular (Dia: 0.18' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B0 - U1 - G0  
  
Input Watts (W): 6.13  
Input Voltage (V): 12.0  
Input Current (Ain): 0.511  
Voltage Rise (V): NR  
Power Factor: 1  
Total Harmonic Distortion (THDi): 0.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

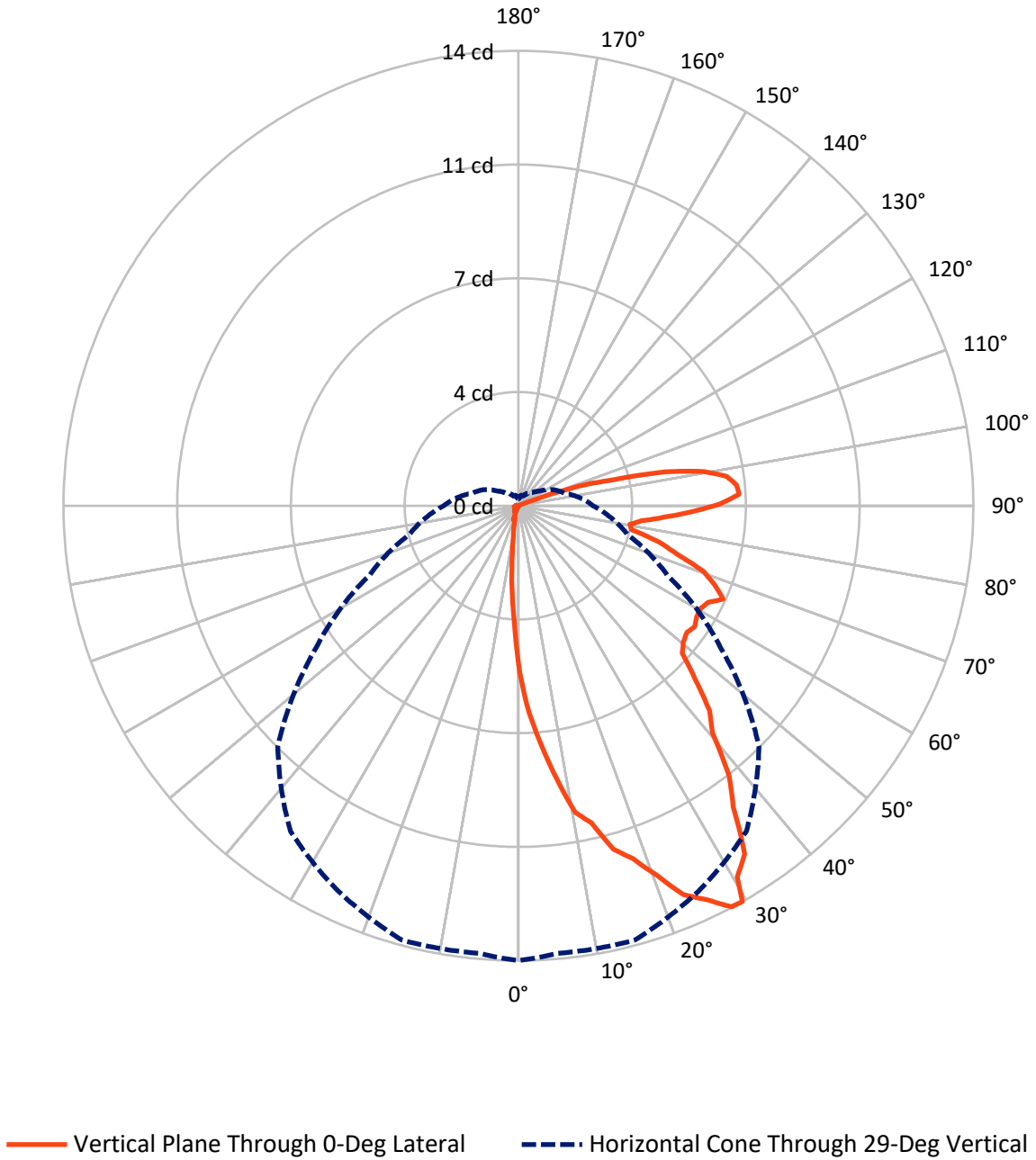
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



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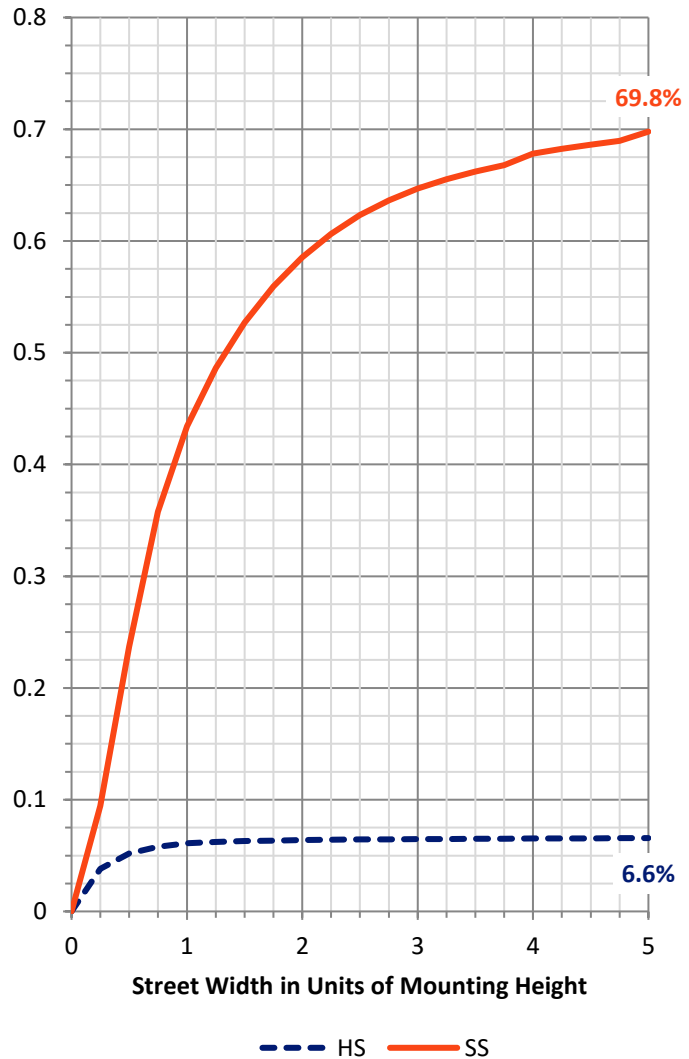
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1.3	0.1	1.4
	% Fixture	6.7	0.2	6.9
<b>Street Side</b>	Lumens	15.4	3.4	18.9
	% Fixture	76.1	17.0	93.1
<b>Total</b>	Lumens	16.8	3.5	20.3
	% Fixture	82.8	17.2	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.4	2.2
10°-20°	1.3	6.4
20°-30°	2.3	11.2
30°-40°	2.6	12.7
40°-50°	2.3	11.2
50°-60°	2.2	10.7
60°-70°	2.4	11.7
70°-80°	1.7	8.3
80°-90°	1.7	8.4
90°-100°	2.3	11.4
100°-110°	1.1	5.6
110°-120°	0.0	0.2
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°	16.8	82.8
0°-180°	20.3	100.0

**Coefficient of Utilization**



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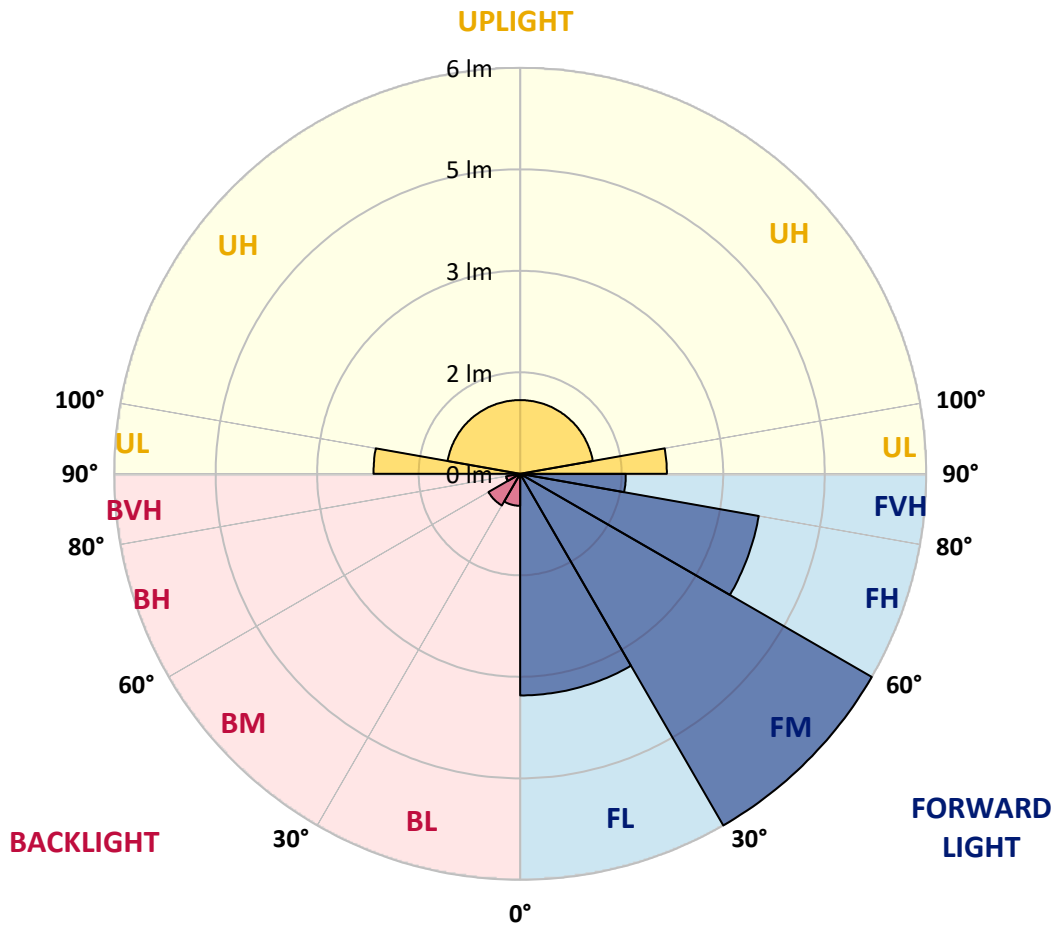
CATALOG NUMBER: 650-1-8LED-40-10-12-X

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3.5	17.3			
FM (30°-60°)	6.4	31.7			
FH (60°-80°)	3.8	18.9			G0/660
FVH (80°-90°)	1.7	8.2			G0/10
BL (0°-30°)	0.5	2.5	B0/110		
BM (30°-60°)	0.6	2.9	B0/220		
BH (60°-80°)	0.2	1.1	B0/110		G0/110
BVH (80°-90°)	0.0	0.2			G0/10
UL (90°-100°)	2.3	11.4		U1/10	
UH (100°-180°)	1.2	5.8		U1/10	

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

Type II Short





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 CATALOG NUMBER: 650-1-8LED-40-10-12-X

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
2.5°	6.4	6.3	6.2	6.1	6.0	5.8	5.5	5.4	5.1	4.9	4.7
5°	7.4	7.5	7.5	7.3	7.0	6.4	6.2	5.8	5.1	4.7	4.5
7.5°	8.5	8.4	8.2	8.0	7.6	7.0	6.3	5.7	5.0	4.3	4.1
10°	9.6	9.3	9.2	8.8	8.4	7.4	6.5	5.6	4.7	4.0	3.8
12.5°	10.0	10.0	10.1	9.7	8.9	8.1	6.7	5.5	4.5	3.8	3.4
15°	11.0	10.7	10.5	10.1	9.7	8.3	7.0	5.3	4.3	3.5	3.0
17.5°	11.4	11.4	11.3	10.9	10.4	9.0	7.2	5.3	4.1	3.2	2.8
20°	12.2	12.3	12.2	11.8	11.2	9.8	7.5	5.4	4.1	3.2	2.8
22.5°	13.0	12.9	12.9	12.4	11.7	10.2	7.6	5.4	3.7	2.9	2.5
25°	13.5	13.4	13.4	13.1	12.2	10.6	7.7	5.1	3.5	2.7	2.3
27.5°	14.0	13.8	13.7	13.0	12.4	10.5	7.7	5.0	3.5	2.6	2.3
29°	14.0	13.9	13.9	13.1	12.3	10.5	7.6	5.1	3.5	2.7	2.3
30°	13.3	13.5	13.4	12.8	12.0	10.2	7.5	4.8	3.3	2.6	2.3
32.5°	12.8	12.7	12.5	11.9	11.1	9.6	7.0	4.7	3.3	2.6	2.1
35°	11.4	11.2	11.2	10.7	9.8	8.6	6.5	4.3	3.1	2.3	2.1
37.5°	10.5	10.2	10.2	9.7	8.9	7.9	6.1	4.1	3.1	2.3	2.1
40°	9.2	9.2	8.9	8.6	8.1	7.0	5.4	3.8	2.9	2.2	1.8
42.5°	8.6	8.4	8.2	7.7	7.2	6.5	5.2	3.7	2.9	2.2	1.9
45°	7.6	7.5	7.3	6.9	6.6	5.7	4.7	3.6	2.8	2.1	2.0
47.5°	6.8	7.0	6.8	6.4	6.0	5.3	4.5	3.5	2.7	2.2	1.9
50°	6.6	6.4	6.2	5.9	5.3	4.9	4.1	3.4	2.7	2.0	1.8
52.5°	6.5	6.1	6.2	5.5	5.2	4.6	3.9	3.2	2.6	1.9	1.6
55°	6.6	6.6	6.2	6.0	5.3	4.9	4.1	3.2	2.6	2.0	1.7
57.5°	6.5	6.4	6.3	5.9	5.2	4.6	3.9	3.3	2.5	1.8	1.6
60°	6.4	6.4	6.1	5.8	5.2	4.7	4.0	3.1	2.6	1.8	1.5
62.5°	6.6	6.6	6.4	6.0	5.5	4.9	4.2	3.4	2.6	2.0	1.7
65°	6.9	6.4	6.4	6.0	5.3	4.7	4.1	3.3	2.6	1.8	1.6
67.5°	6.5	6.7	6.5	6.1	5.5	4.8	3.9	3.2	2.4	1.7	1.4
70°	6.0	5.9	5.8	5.6	5.0	4.4	3.7	2.8	2.2	1.5	1.1
72.5°	5.1	5.2	5.1	4.7	4.4	3.9	3.3	2.3	1.8	1.2	0.9
75°	4.5	4.3	4.1	3.9	3.7	3.3	2.7	1.9	1.2	0.9	0.7
77.5°	3.6	3.8	3.6	3.5	3.3	3.1	2.5	1.5	1.0	0.6	0.6
80°	3.5	3.3	3.4	3.4	3.2	2.8	2.2	1.4	0.7	0.4	0.4
82.5°	3.8	3.8	3.8	3.7	3.5	3.3	2.6	1.5	0.9	0.5	0.4
85°	4.5	4.6	4.3	4.5	4.1	3.5	2.9	1.8	1.0	0.6	0.4
87.5°	5.3	5.1	5.3	5.1	4.8	4.1	3.2	1.9	1.1	0.5	0.4
90°	6.2	5.9	6.1	5.7	5.4	4.6	3.6	2.4	1.3	0.7	0.5
92.5°	6.8	6.7	6.6	6.3	5.8	4.9	3.8	2.7	1.6	0.8	0.6
95°	6.8	6.6	6.6	6.2	5.9	4.8	3.8	2.6	1.4	0.6	0.4
97.5°	6.5	6.6	6.5	6.1	5.7	5.0	3.7	2.6	1.6	0.6	0.4
100°	5.8	5.8	5.6	5.4	5.0	4.5	3.6	2.5	1.5	0.5	0.3
102.5°	4.6	4.5	4.5	4.2	4.1	3.6	2.9	1.9	1.1	0.5	0.2
105°	2.9	3.2	3.2	3.0	2.8	2.3	2.0	1.2	0.6	0.2	0.1
107.5°	2.0	1.8	1.8	1.8	1.7	1.5	0.9	0.7	0.2	0.0	0.0



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 CATALOG NUMBER: 650-1-8LED-40-10-12-X

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.5	0.5	0.7	0.6	0.7	0.3	0.3	0.1	0.0	0.0	0.0
112.5°	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	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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 CATALOG NUMBER: 650-1-8LED-40-10-12-X

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
2.5°	4.8	4.5	4.3	4.1	4.0	3.7	3.6	3.7	3.5	3.6
5°	4.3	3.9	3.5	3.3	3.0	2.7	2.6	2.6	2.5	2.5
7.5°	3.7	3.3	3.0	2.5	2.3	2.0	1.7	1.6	1.5	1.5
10°	3.4	2.8	2.4	2.0	1.6	1.4	1.2	1.1	0.9	0.9
12.5°	3.2	2.5	2.0	1.6	1.3	1.0	0.9	0.7	0.7	0.6
15°	2.7	2.2	1.7	1.3	1.1	0.7	0.5	0.4	0.4	0.4
17.5°	2.5	1.9	1.5	1.2	0.8	0.6	0.5	0.3	0.4	0.4
20°	2.5	2.0	1.5	1.0	0.9	0.6	0.5	0.4	0.4	0.5
22.5°	2.2	1.6	1.3	0.8	0.7	0.4	0.2	0.3	0.3	0.1
25°	2.1	1.5	1.1	0.7	0.5	0.4	0.2	0.2	0.3	0.1
27.5°	1.9	1.5	1.1	0.7	0.5	0.3	0.2	0.2	0.1	0.0
29°	2.0	1.5	1.2	0.8	0.6	0.5	0.3	0.3	0.2	0.2
30°	1.9	1.4	0.9	0.7	0.4	0.3	0.2	0.1	0.2	0.1
32.5°	2.0	1.5	1.1	0.7	0.5	0.3	0.3	0.2	0.3	0.2
35°	1.7	1.2	0.9	0.6	0.3	0.2	0.1	0.0	0.1	0.0
37.5°	1.8	1.3	0.9	0.6	0.4	0.3	0.2	0.2	0.2	0.2
40°	1.7	1.1	0.8	0.4	0.2	0.1	0.0	0.1	0.1	0.0
42.5°	1.6	1.2	0.8	0.5	0.3	0.3	0.2	0.2	0.2	0.2
45°	1.6	1.1	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.0
47.5°	1.6	1.1	0.7	0.5	0.2	0.3	0.1	0.1	0.2	0.1
50°	1.6	1.0	0.6	0.3	0.2	0.2	0.1	0.1	0.2	0.2
52.5°	1.4	0.9	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0
55°	1.4	1.0	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.0
57.5°	1.3	0.9	0.5	0.1	0.0	0.0	0.0	0.0	0.1	0.0
60°	1.3	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	1.4	0.9	0.4	0.2	0.1	0.2	0.1	0.0	0.2	0.1
65°	1.1	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	1.1	0.6	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1
70°	0.9	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
72.5°	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.6	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0
77.5°	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
87.5°	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
92.5°	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0
95°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
105°	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P871401  
 CATALOG NUMBER: 650-1-8LED-40-10-12-X

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
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)