

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: P871403

Luminaire Tested: **650-4-8LED-40-10-12-X**

Test Date: 2024-07-13

Test Information

Test Method: LM-79-08
Report Number: P871403
SCALED FROM G1-2405-109-3
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: 650-4-8LED-40-10-12-X
Description: Boca with Four openings
Light Source: Soraa
SM16-04-10D-940-03
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 47.2 lumens
Efficiency: N/A
Efficacy: 7.6 lumens/watt
Luminous Opening: Circular (Dia: 0.18' x H: 0')
IES Classification: Type V - Short
BUG Rating: B0 - U1 - G0

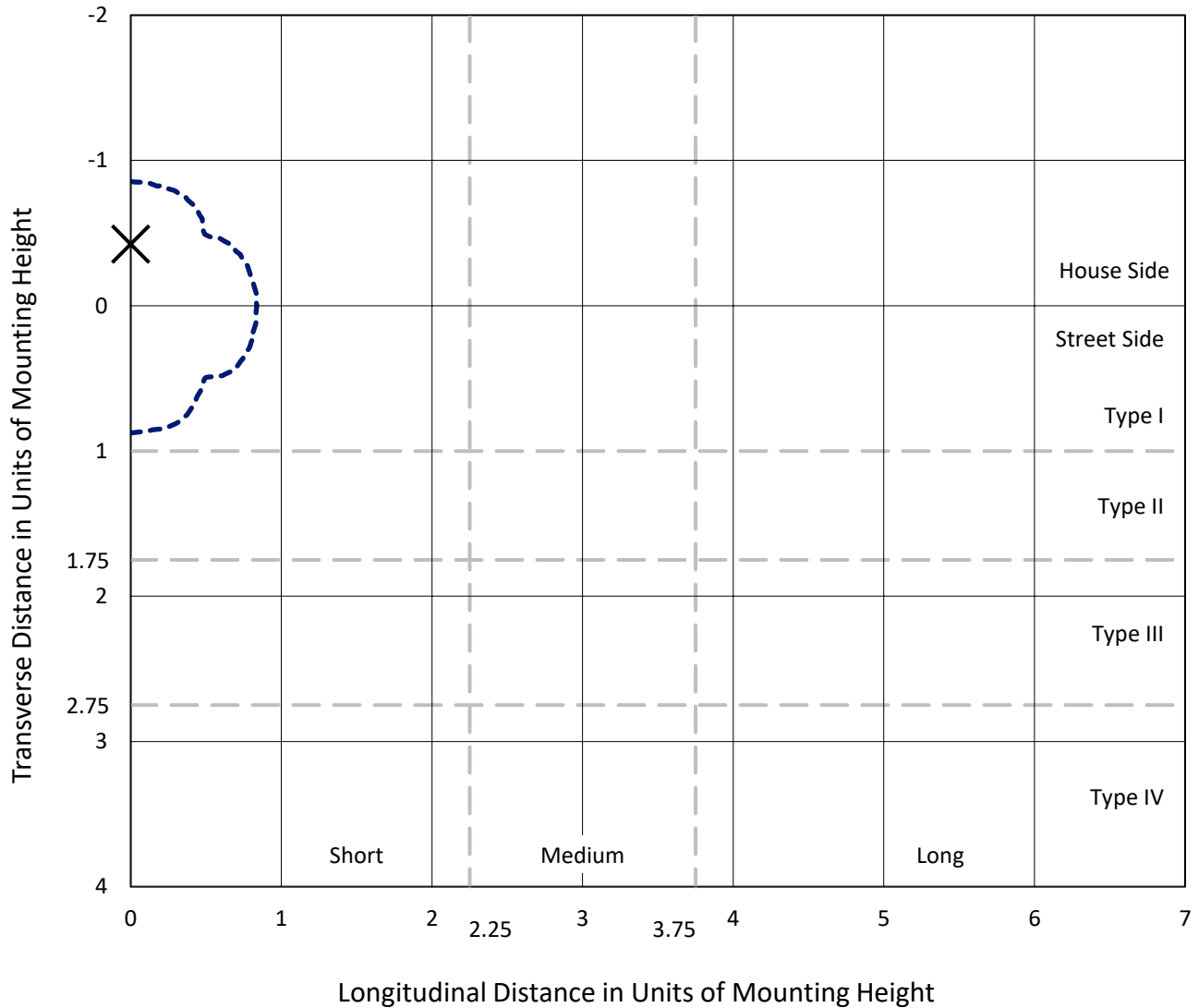
Input Watts (W): 6.22
Input Voltage (V): 12.0
Input Current (Ain): 0.518
Voltage Rise (V): NR
Power Factor: 1
Total Harmonic Distortion (THDi): 0.0%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

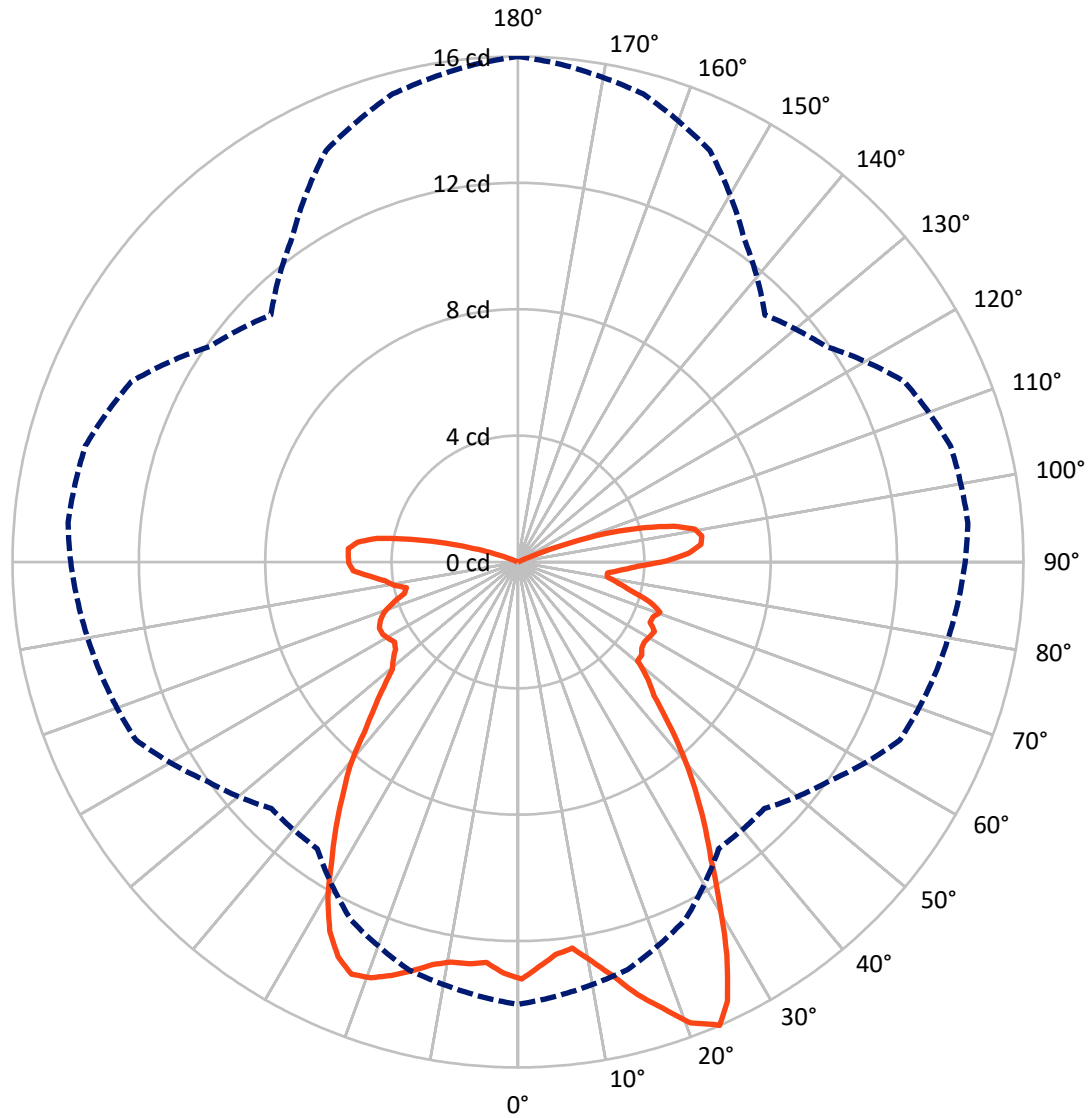
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 180-Deg Lateral - - - Horizontal Cone Through 23-Deg Vertical

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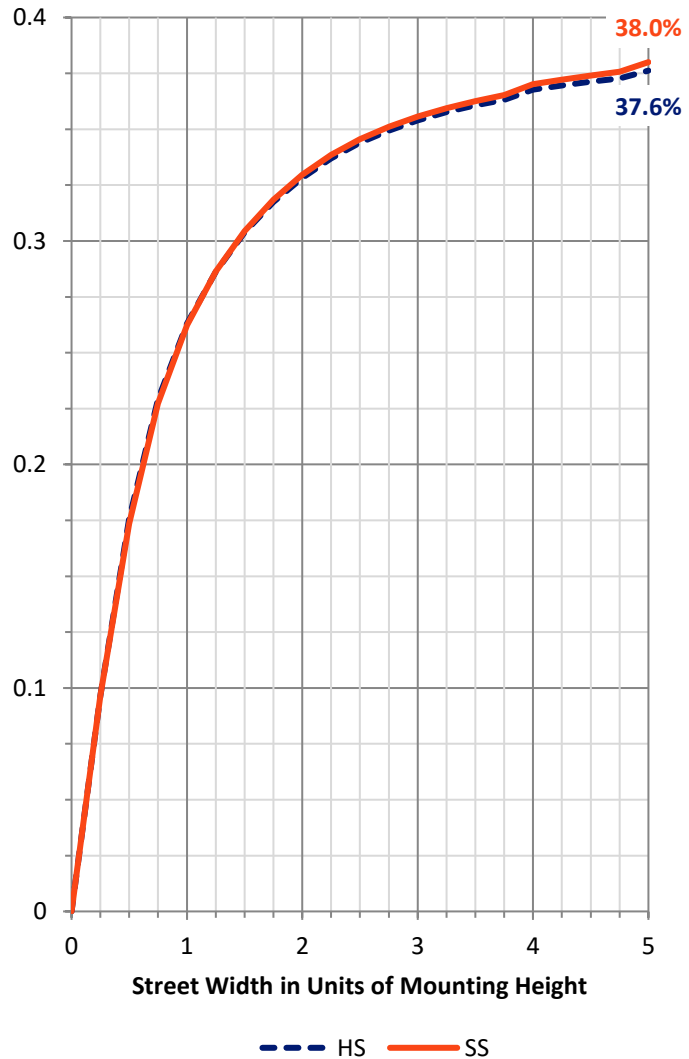
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	19.0	4.7	23.7
	% Fixture	40.2	10.0	50.2
Street Side	Lumens	19.4	4.1	23.5
	% Fixture	41.1	8.7	49.8
Total	Lumens	38.3	8.8	47.2
	% Fixture	81.3	18.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	2.5
10°-20°	3.6	7.6
20°-30°	5.7	12.1
30°-40°	5.6	12.0
40°-50°	4.8	10.1
50°-60°	4.4	9.4
60°-70°	4.9	10.3
70°-80°	3.9	8.4
80°-90°	4.2	9.0
90°-100°	5.6	12.0
100°-110°	3.1	6.5
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°	38.3	81.3
0°-180°	47.2	100.0

Coefficient of Utilization



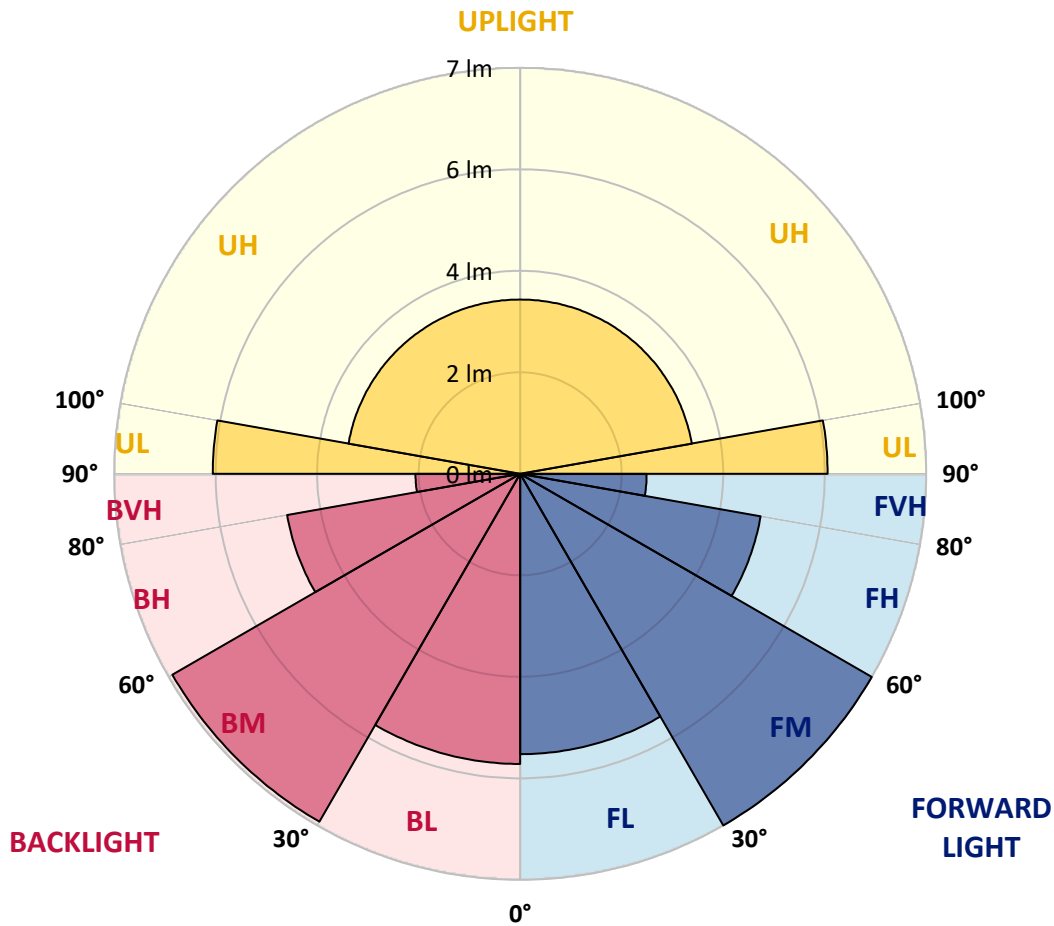
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5.1	10.9			
FM (30°-60°)	7.4	15.8			
FH (60°-80°)	4.5	9.5			G0/660
FVH (80°-90°)	2.3	4.9			G0/10
BL (0°-30°)	5.3	11.3	B0/110		
BM (30°-60°)	7.4	15.6	B0/220		
BH (60°-80°)	4.3	9.2	B0/110		G0/660
BVH (80°-90°)	1.9	4.1			G0/10
UL (90°-100°)	5.6	12.0		U1/10	
UH (100°-180°)	3.2	6.8		U1/10	

BUG Rating: B0-U1-G0

Type V Short





REPORT NUMBER: P871403
 CATALOG NUMBER: 650-4-8LED-40-10-12-X

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
2.5°	12.7	12.7	12.8	12.7	12.7	12.6	12.5	12.7	12.6	12.6	12.8
5°	12.5	12.5	12.4	12.2	12.2	12.2	12.2	12.0	12.2	12.3	12.3
7.5°	12.5	12.6	12.3	12.1	11.8	12.0	12.0	12.1	12.1	12.2	12.3
10°	12.6	12.7	12.4	12.1	11.8	11.9	12.0	12.3	12.5	12.6	12.5
12.5°	12.8	12.9	12.5	12.1	11.7	11.8	12.1	12.7	12.9	13.0	13.0
15°	13.1	13.1	12.8	12.3	11.5	11.7	12.1	12.9	13.3	13.5	13.3
17.5°	13.4	13.3	12.9	12.3	11.5	11.5	12.2	12.9	13.5	13.7	13.8
20°	13.7	13.7	13.2	12.3	11.3	11.2	12.2	13.3	13.7	14.0	14.0
22.5°	13.8	13.6	13.3	12.2	10.9	10.9	12.0	13.1	13.6	13.8	14.0
23°	13.7	13.5	13.1	12.2	10.8	10.8	11.8	13.1	13.4	13.7	13.9
25°	13.4	13.4	13.0	12.1	10.7	10.4	11.5	12.7	13.2	13.4	13.5
27.5°	12.8	12.8	12.6	11.6	10.1	9.8	10.9	11.9	12.4	12.4	12.7
30°	12.0	11.9	11.6	10.7	9.4	9.1	10.1	11.0	11.3	11.5	11.4
32.5°	10.9	10.7	10.6	10.0	8.7	8.4	9.3	10.2	10.2	10.4	10.3
35°	10.0	9.8	9.6	9.1	8.0	7.6	8.6	9.2	9.3	9.3	9.3
37.5°	9.0	9.0	8.9	8.6	7.5	7.2	8.0	8.3	8.4	8.5	8.6
40°	8.2	8.0	8.0	7.8	7.0	6.6	7.3	7.6	7.6	7.6	7.7
42.5°	7.1	7.1	7.2	7.0	6.6	6.3	6.7	6.9	6.9	6.8	6.7
45°	6.4	6.3	6.4	6.2	6.1	6.0	6.2	6.1	6.1	5.8	5.9
47.5°	5.7	5.7	5.7	5.8	5.7	5.7	5.9	5.6	5.5	5.4	5.5
50°	5.1	5.1	5.1	5.2	5.3	5.4	5.3	5.1	5.1	4.9	4.8
52.5°	4.9	4.8	4.9	5.0	5.2	5.4	5.1	5.0	4.7	4.8	4.6
55°	4.7	4.7	4.8	4.9	5.2	5.2	5.2	4.9	4.7	4.5	4.5
57.5°	4.6	4.6	4.7	5.0	5.3	5.3	5.2	4.9	4.6	4.5	4.5
60°	4.7	4.7	4.8	5.2	5.5	5.4	5.3	4.9	4.5	4.2	4.4
62.5°	4.8	4.8	4.9	5.4	5.6	5.5	5.5	5.0	4.7	4.4	4.3
65°	4.8	4.9	5.0	5.4	5.6	5.4	5.5	5.1	4.6	4.4	4.3
67.5°	4.6	4.7	4.9	5.2	5.3	5.2	5.4	5.1	4.6	4.4	4.2
70°	4.4	4.4	4.6	4.9	4.9	4.9	4.9	4.8	4.6	4.1	4.1
72.5°	4.1	4.0	4.2	4.4	4.3	4.2	4.4	4.4	4.1	3.9	3.7
75°	3.6	3.7	3.7	3.8	3.7	3.5	3.6	3.7	3.6	3.5	3.4
77.5°	3.5	3.5	3.6	3.4	3.2	3.0	3.3	3.3	3.4	3.3	3.0
80°	3.9	3.8	3.8	3.6	3.2	2.7	3.0	3.3	3.5	3.3	3.2
82.5°	4.2	4.3	4.1	4.1	3.6	3.3	3.4	3.6	3.6	3.6	3.6
85°	4.6	4.7	4.5	4.5	4.2	3.8	4.1	4.3	4.3	4.3	4.3
87.5°	5.1	5.1	5.0	4.8	4.5	4.3	4.5	4.7	4.9	5.0	4.9
90°	5.2	5.3	5.1	5.0	4.7	4.6	4.9	5.0	5.3	5.6	5.5
92.5°	5.3	5.3	5.1	5.0	5.0	4.8	4.9	5.1	5.5	5.6	5.6
95°	5.3	5.2	5.1	5.1	4.9	5.0	5.0	5.2	5.6	5.8	5.8
97.5°	5.0	4.9	4.8	4.9	4.9	4.9	5.0	5.2	5.4	5.6	5.9
100°	4.4	4.4	4.2	4.2	4.4	4.4	4.6	4.6	4.9	5.1	5.3
102.5°	3.4	3.3	3.1	3.0	3.1	3.2	3.5	3.6	3.9	4.2	4.2
105°	2.3	2.3	2.2	2.0	2.0	2.0	2.3	2.5	2.8	3.1	3.2
107.5°	1.4	1.4	1.2	1.2	1.0	1.0	1.2	1.4	1.8	2.0	2.0



REPORT NUMBER: P871403
 CATALOG NUMBER: 650-4-8LED-40-10-12-X

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.6	0.8	0.9	1.0
112.5°	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	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	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



REPORT NUMBER: P871403
 CATALOG NUMBER: 650-4-8LED-40-10-12-X

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
2.5°	12.7	12.6	12.8	12.7	12.7	12.7	12.6	12.7	12.7	12.6
5°	12.3	12.3	12.2	12.1	12.1	12.2	12.1	12.3	12.1	12.2
7.5°	12.3	12.1	11.9	11.7	11.7	11.7	11.9	12.1	12.0	12.1
10°	12.6	12.3	12.0	11.5	11.5	11.7	12.0	12.3	12.5	12.6
12.5°	13.1	12.8	12.3	11.6	11.5	11.8	12.4	13.0	13.1	13.2
15°	13.3	13.2	12.6	11.7	11.4	12.1	13.0	13.8	13.9	13.9
17.5°	13.9	13.5	12.9	11.8	11.3	12.2	13.5	14.3	14.6	14.5
20°	14.2	14.0	13.2	12.0	11.3	12.5	14.0	15.0	15.2	15.2
22.5°	14.2	14.0	13.1	11.8	11.2	12.5	14.1	15.1	15.5	15.6
23°	14.0	13.9	13.2	11.6	10.8	12.2	14.1	15.0	15.5	15.7
25°	13.5	13.4	12.8	11.3	10.4	12.1	13.9	14.7	15.0	15.1
27.5°	12.7	12.5	11.9	10.6	9.8	11.1	12.9	13.7	13.8	13.8
30°	11.4	11.5	11.0	9.8	9.0	10.1	11.6	12.2	12.4	12.3
32.5°	10.4	10.4	10.0	9.0	8.2	9.2	10.5	11.0	11.0	11.0
35°	9.2	9.4	8.9	8.3	7.6	8.4	9.2	9.6	9.8	9.9
37.5°	8.4	8.3	8.1	7.6	7.1	7.7	8.4	8.5	8.8	8.9
40°	7.7	7.6	7.3	6.9	6.6	7.2	7.6	7.8	7.8	7.9
42.5°	6.8	6.7	6.7	6.5	6.1	6.6	6.9	6.9	6.9	6.8
45°	6.0	5.9	6.0	6.0	5.9	6.0	6.1	6.1	6.0	5.9
47.5°	5.3	5.6	5.6	5.6	5.6	5.5	5.7	5.5	5.4	5.4
50°	4.9	5.1	5.1	5.1	5.3	5.2	5.1	4.9	4.9	4.8
52.5°	4.8	4.7	5.0	5.1	5.2	5.3	5.0	4.9	4.8	4.8
55°	4.6	4.6	4.8	5.0	5.2	5.2	5.1	4.8	4.7	4.7
57.5°	4.5	4.6	4.9	4.9	5.2	5.2	5.0	4.7	4.6	4.6
60°	4.5	4.5	4.7	5.1	5.1	5.2	4.9	4.7	4.6	4.7
62.5°	4.3	4.4	4.8	5.1	5.2	5.2	4.9	4.7	4.6	4.7
65°	4.5	4.5	4.9	5.2	5.3	5.3	5.0	4.8	4.7	4.5
67.5°	4.3	4.6	4.9	5.2	5.2	5.3	5.1	4.8	4.8	4.5
70°	4.1	4.2	4.7	4.8	5.0	5.0	4.9	4.8	4.6	4.7
72.5°	3.8	3.9	4.2	4.2	4.3	4.5	4.4	4.2	4.2	4.3
75°	3.4	3.6	3.7	3.8	3.4	3.8	3.8	3.7	3.6	3.7
77.5°	3.0	3.1	3.2	3.0	2.6	3.0	3.2	3.2	3.1	3.2
80°	3.1	3.0	3.1	2.7	2.3	2.7	2.9	3.0	2.8	2.8
82.5°	3.6	3.3	3.0	2.6	2.2	2.5	2.8	2.9	2.8	2.8
85°	4.3	4.1	3.9	3.2	2.6	2.9	3.1	3.2	3.2	3.2
87.5°	5.0	4.9	4.6	3.8	3.5	3.5	3.8	3.7	3.8	3.7
90°	5.4	5.4	5.1	4.5	4.2	4.1	4.3	4.4	4.6	4.6
92.5°	5.8	5.5	5.2	5.0	4.7	4.7	4.8	5.1	5.2	5.3
95°	5.9	5.8	5.4	5.3	5.2	5.1	5.2	5.5	5.7	5.7
97.5°	5.8	5.5	5.5	5.5	5.3	5.4	5.5	5.6	5.7	5.8
100°	5.4	5.1	5.1	5.3	5.4	5.5	5.7	5.5	5.6	5.6
102.5°	4.3	4.0	4.2	4.2	4.4	4.7	5.0	4.7	5.0	4.9
105°	3.1	3.0	2.9	3.0	3.1	3.3	3.6	3.7	3.9	3.9
107.5°	2.2	2.0	1.8	1.9	1.9	2.2	2.4	2.6	2.8	2.8



REPORT NUMBER: P871403
 CATALOG NUMBER: 650-4-8LED-40-10-12-X

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.1	1.0	0.9	0.9	0.8	0.9	1.3	1.3	1.4	1.5
112.5°	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.4	0.4
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)