

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: G1-2405-109-3

Luminaire Tested: **650-4-8LED-30-10-12-X**

Test Date: 2024-07-13

Test Information

Test Method: LM-79-08
Report Number: 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-30-10-12-X
Description: Boca with Four openings
Light Source: Sora
SM16-04-10D-930-03
Ballast/Driver: @Current

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 44.9 lumens
Efficiency: N/A
Efficacy: 7.2 lumens/watt
Luminous Opening: Circular (Dia: 0.18' x H: 0')
IES Classification: Type V - Short
BUG Rating: B0 - U1 - G0

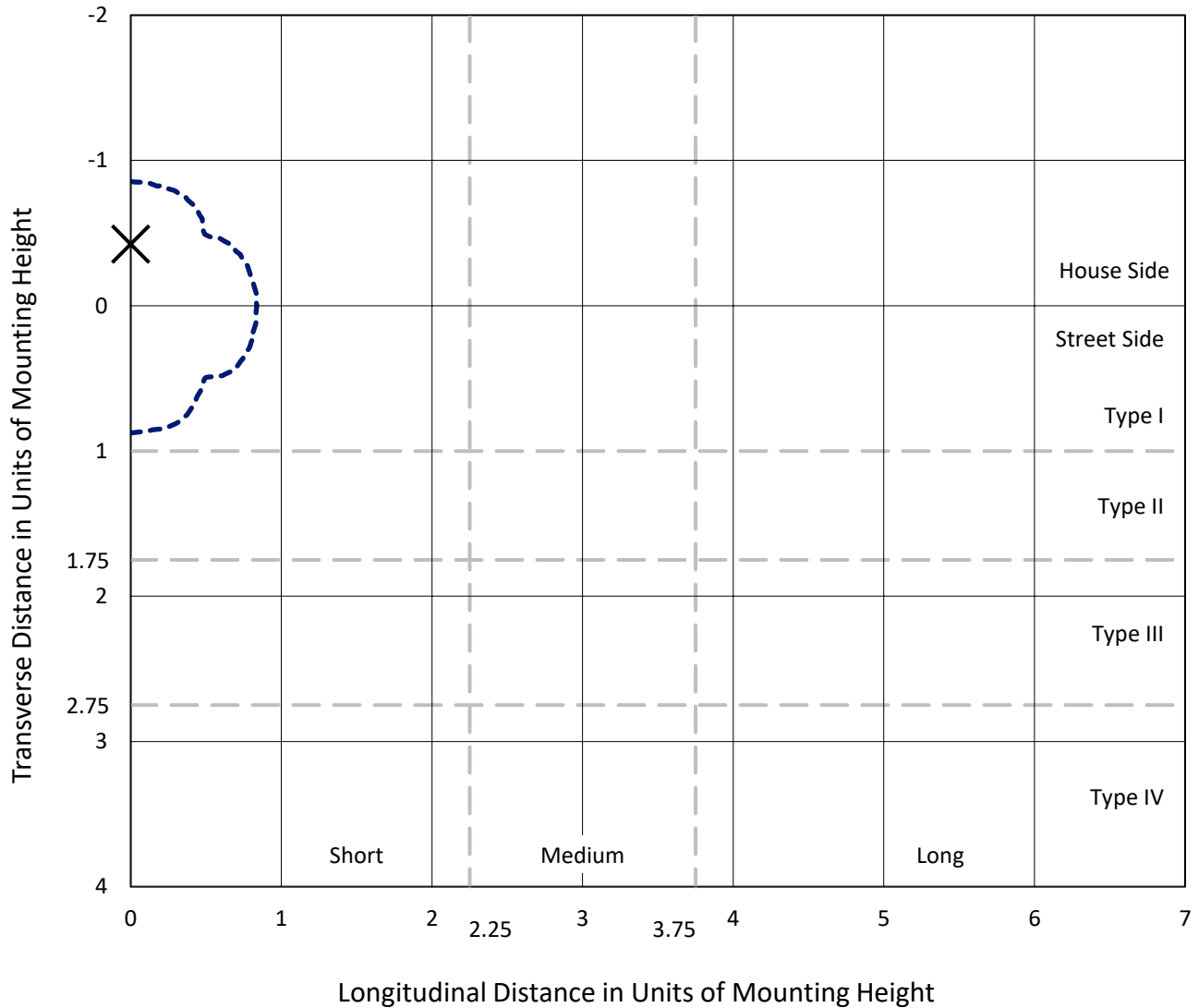
Input Watts (W): 6.22
Input Voltage (V): 12.0
Input Current (Ain): 0.518
Voltage Rise (V): NR
Power Factor: 1
Total Harmonic Distortion (THDi): 0.0%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 7.0 HR
Ambient Temperature (°C): 25.7
Test Distance: 28.75 FT



REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

Iso-Footcandle Lines of Horizontal Illumination

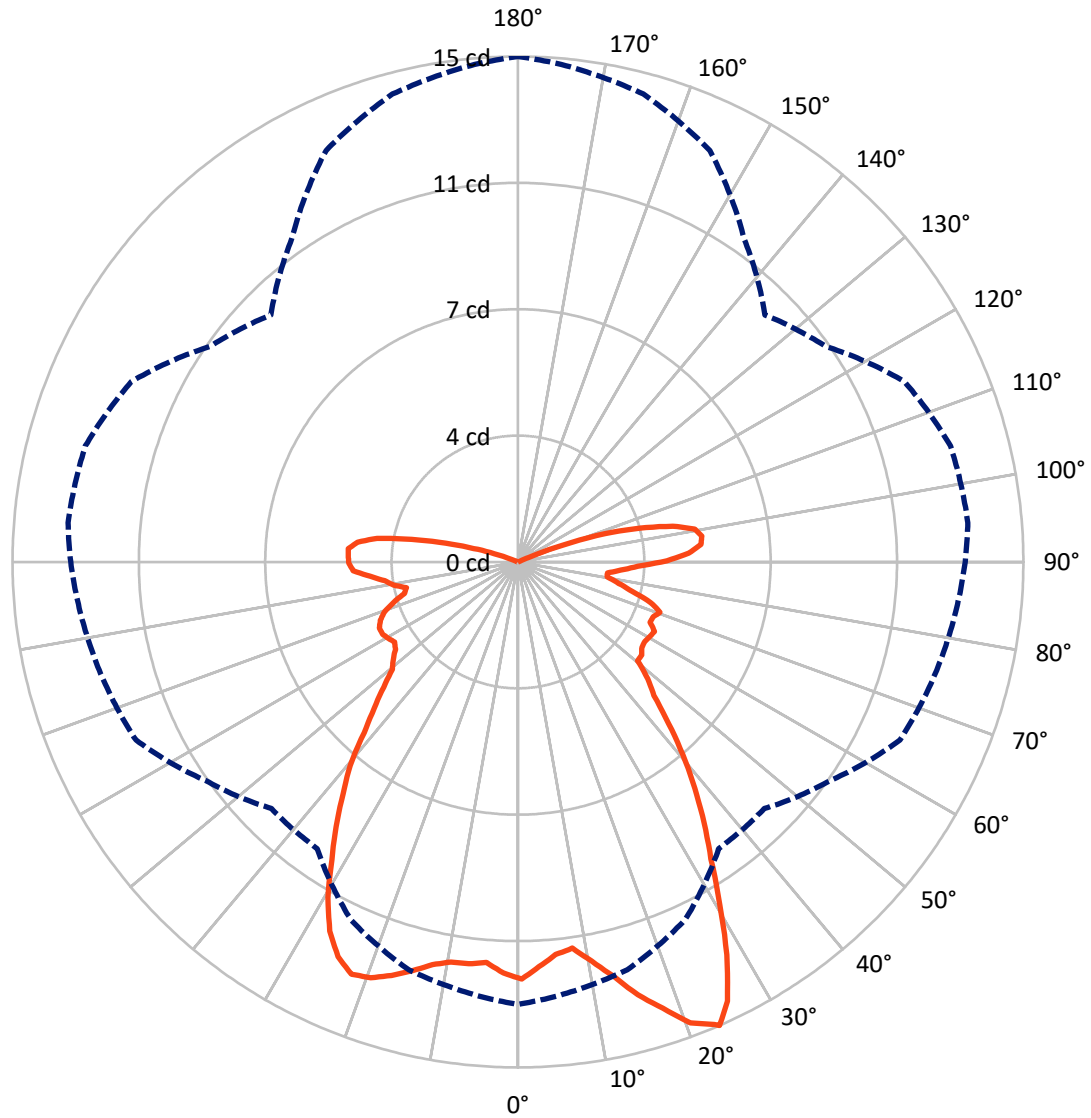
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: G1-2405-109-3
CATALOG NUMBER: 650-4-8LED-30-10-12-X

Luminous Intensity Polar Plot



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

REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

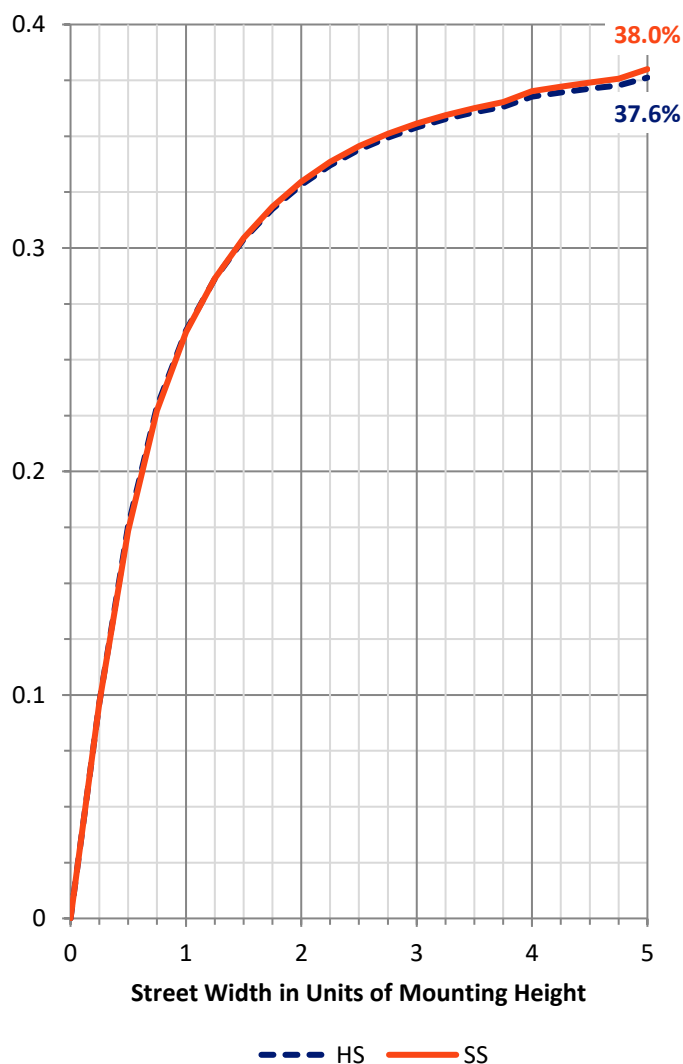
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18.1	4.5	22.6
	% Fixture	40.2	10.0	50.2
Street Side	Lumens	18.5	3.9	22.4
	% Fixture	41.1	8.7	49.8
Total	Lumens	36.5	8.4	44.9
	% Fixture	81.3	18.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.1	2.5
10°-20°	3.4	7.6
20°-30°	5.4	12.1
30°-40°	5.4	12.0
40°-50°	4.5	10.1
50°-60°	4.2	9.4
60°-70°	4.6	10.3
70°-80°	3.8	8.4
80°-90°	4.0	9.0
90°-100°	5.4	12.0
100°-110°	2.9	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°	36.5	81.3
0°-180°	44.9	100.0

Coefficient of Utilization



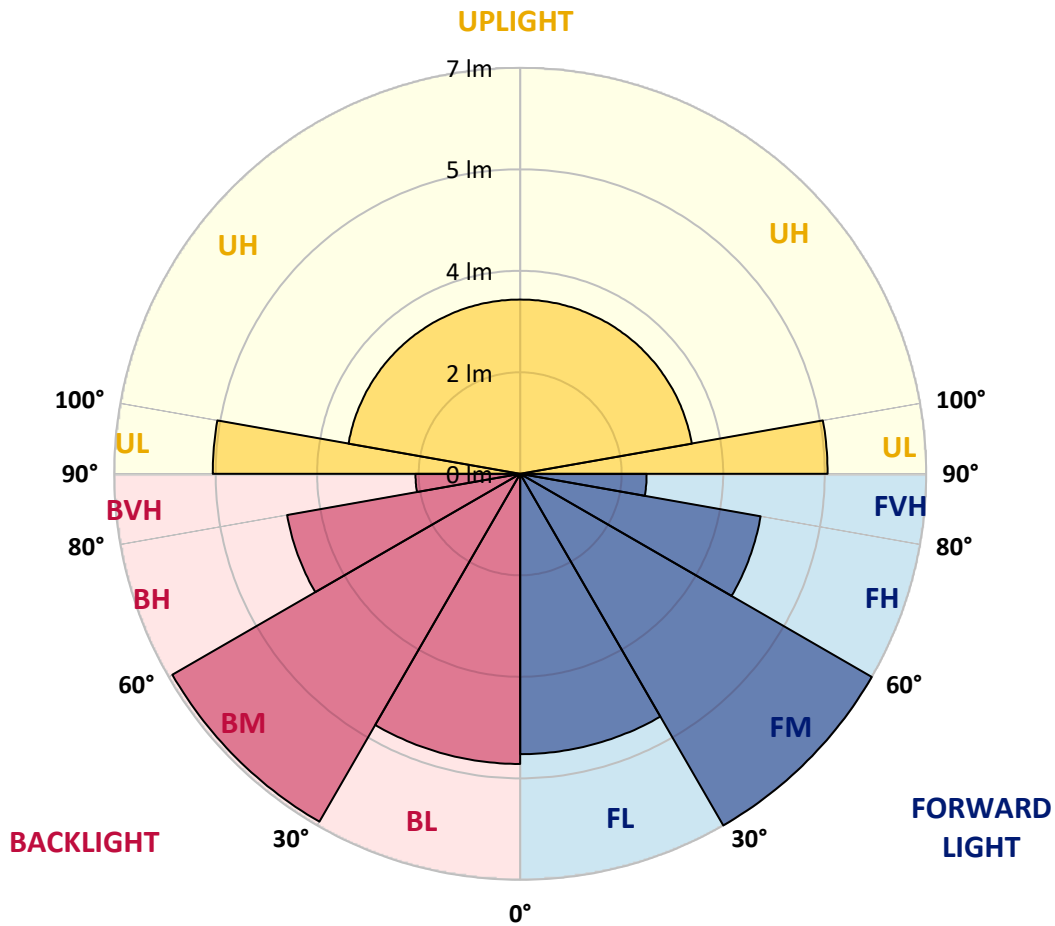
REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4.9	10.9			
FM (30°-60°)	7.1	15.8			
FH (60°-80°)	4.3	9.5			G0/660
FVH (80°-90°)	2.2	4.9			G0/10
BL (0°-30°)	5.1	11.3	B0/110		
BM (30°-60°)	7.0	15.6	B0/220		
BH (60°-80°)	4.1	9.2	B0/110		G0/660
BVH (80°-90°)	1.8	4.1			G0/10
UL (90°-100°)	5.4	12.0		U1/10	
UH (100°-180°)	3.0	6.8		U1/10	

BUG Rating: B0-U1-G0

Type V Short





REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	12.1	12.1	12.2	12.1	12.1	12.0	12.0	12.1	12.0	12.0	12.2
5°	11.9	11.9	11.8	11.6	11.7	11.6	11.6	11.5	11.7	11.7	11.7
7.5°	12.0	12.0	11.7	11.5	11.3	11.4	11.4	11.5	11.6	11.6	11.7
10°	12.0	12.1	11.8	11.5	11.2	11.3	11.4	11.7	11.9	12.0	11.9
12.5°	12.2	12.3	11.9	11.5	11.2	11.3	11.5	12.1	12.3	12.4	12.4
15°	12.5	12.5	12.2	11.7	11.0	11.1	11.5	12.2	12.7	12.8	12.7
17.5°	12.8	12.6	12.3	11.7	11.0	11.0	11.6	12.3	12.9	13.1	13.1
20°	13.0	13.0	12.6	11.7	10.8	10.7	11.6	12.7	13.1	13.4	13.4
22.5°	13.1	13.0	12.7	11.7	10.4	10.4	11.5	12.5	13.0	13.2	13.3
23°	13.1	12.9	12.5	11.7	10.3	10.3	11.3	12.4	12.8	13.1	13.2
25°	12.8	12.7	12.4	11.6	10.2	9.9	11.0	12.1	12.6	12.8	12.8
27.5°	12.2	12.2	12.0	11.0	9.6	9.3	10.3	11.3	11.8	11.8	12.1
30°	11.4	11.3	11.1	10.2	9.0	8.6	9.6	10.5	10.7	10.9	10.9
32.5°	10.4	10.2	10.1	9.6	8.3	8.0	8.9	9.7	9.7	9.9	9.8
35°	9.5	9.3	9.1	8.7	7.6	7.3	8.2	8.7	8.8	8.9	8.9
37.5°	8.6	8.5	8.4	8.2	7.2	6.9	7.6	7.9	8.0	8.1	8.2
40°	7.8	7.6	7.7	7.4	6.7	6.3	6.9	7.2	7.2	7.2	7.3
42.5°	6.8	6.8	6.9	6.7	6.3	6.0	6.4	6.6	6.6	6.5	6.4
45°	6.1	6.0	6.1	5.9	5.8	5.7	5.9	5.8	5.8	5.6	5.6
47.5°	5.4	5.5	5.4	5.5	5.4	5.4	5.6	5.4	5.3	5.2	5.2
50°	4.9	4.8	4.9	5.0	5.1	5.2	5.0	4.9	4.8	4.7	4.6
52.5°	4.7	4.6	4.6	4.7	4.9	5.1	4.9	4.8	4.5	4.5	4.4
55°	4.4	4.5	4.6	4.7	5.0	5.0	5.0	4.7	4.5	4.2	4.3
57.5°	4.3	4.4	4.5	4.8	5.1	5.0	5.0	4.6	4.4	4.3	4.2
60°	4.4	4.5	4.6	4.9	5.2	5.2	5.1	4.7	4.3	4.0	4.2
62.5°	4.5	4.6	4.7	5.1	5.3	5.2	5.3	4.8	4.5	4.2	4.1
65°	4.5	4.6	4.8	5.2	5.4	5.2	5.2	4.9	4.4	4.2	4.1
67.5°	4.4	4.4	4.7	5.0	5.0	5.0	5.1	4.9	4.4	4.2	4.0
70°	4.2	4.2	4.3	4.7	4.6	4.7	4.7	4.6	4.4	4.0	3.9
72.5°	3.9	3.8	4.0	4.2	4.1	4.0	4.2	4.2	3.9	3.7	3.6
75°	3.5	3.6	3.5	3.6	3.5	3.3	3.4	3.5	3.4	3.4	3.3
77.5°	3.4	3.3	3.4	3.3	3.1	2.8	3.1	3.1	3.2	3.1	2.9
80°	3.7	3.6	3.6	3.4	3.1	2.6	2.9	3.2	3.3	3.1	3.0
82.5°	4.0	4.1	3.9	3.9	3.4	3.1	3.2	3.4	3.5	3.5	3.4
85°	4.4	4.5	4.3	4.3	4.0	3.6	3.9	4.1	4.1	4.1	4.1
87.5°	4.9	4.9	4.8	4.6	4.3	4.1	4.3	4.5	4.7	4.8	4.7
90°	5.0	5.1	4.9	4.8	4.5	4.4	4.6	4.8	5.1	5.3	5.2
92.5°	5.0	5.1	4.9	4.8	4.7	4.6	4.6	4.9	5.3	5.4	5.4
95°	5.0	5.0	4.8	4.8	4.7	4.8	4.8	5.0	5.4	5.5	5.5
97.5°	4.8	4.7	4.6	4.7	4.6	4.6	4.8	5.0	5.2	5.4	5.6
100°	4.2	4.2	4.0	4.0	4.2	4.2	4.4	4.4	4.7	4.9	5.0
102.5°	3.2	3.2	3.0	2.9	3.0	3.0	3.3	3.5	3.8	4.0	4.0
105°	2.2	2.2	2.1	1.9	1.9	2.0	2.2	2.4	2.7	2.9	3.0
107.5°	1.4	1.4	1.2	1.2	1.0	1.0	1.1	1.3	1.7	2.0	1.9



REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.5	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: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	12.1	12.0	12.2	12.1	12.1	12.1	12.0	12.1	12.1	12.0
5°	11.7	11.7	11.6	11.6	11.5	11.6	11.6	11.7	11.5	11.6
7.5°	11.7	11.5	11.3	11.1	11.2	11.2	11.4	11.5	11.5	11.5
10°	12.0	11.8	11.4	11.0	11.0	11.2	11.4	11.8	11.9	12.0
12.5°	12.5	12.2	11.7	11.0	10.9	11.3	11.8	12.4	12.5	12.6
15°	12.7	12.6	12.0	11.1	10.8	11.5	12.3	13.1	13.2	13.3
17.5°	13.2	12.9	12.3	11.3	10.8	11.6	12.9	13.6	13.9	13.9
20°	13.6	13.3	12.6	11.5	10.8	11.9	13.3	14.3	14.5	14.5
22.5°	13.5	13.3	12.5	11.2	10.6	11.9	13.5	14.4	14.7	14.8
23°	13.3	13.2	12.6	11.1	10.3	11.6	13.4	14.3	14.7	14.9
25°	12.9	12.8	12.2	10.8	9.9	11.5	13.3	14.0	14.3	14.4
27.5°	12.1	11.9	11.3	10.1	9.3	10.6	12.3	13.0	13.1	13.1
30°	10.9	11.0	10.5	9.3	8.5	9.6	11.1	11.6	11.8	11.7
32.5°	9.9	9.9	9.5	8.6	7.8	8.8	10.0	10.5	10.5	10.5
35°	8.8	8.9	8.5	7.9	7.2	8.0	8.8	9.2	9.3	9.5
37.5°	8.0	7.9	7.8	7.3	6.8	7.4	8.0	8.1	8.4	8.5
40°	7.3	7.2	7.0	6.6	6.3	6.8	7.2	7.4	7.4	7.5
42.5°	6.4	6.3	6.4	6.2	5.8	6.3	6.5	6.6	6.6	6.5
45°	5.8	5.6	5.7	5.7	5.6	5.7	5.8	5.8	5.7	5.6
47.5°	5.1	5.3	5.3	5.3	5.3	5.3	5.4	5.2	5.1	5.2
50°	4.7	4.8	4.8	4.9	5.0	5.0	4.9	4.7	4.7	4.6
52.5°	4.6	4.5	4.7	4.9	4.9	5.0	4.8	4.6	4.6	4.6
55°	4.3	4.4	4.6	4.8	4.9	4.9	4.8	4.6	4.5	4.4
57.5°	4.3	4.4	4.6	4.7	5.0	4.9	4.7	4.5	4.4	4.4
60°	4.2	4.3	4.5	4.9	4.9	4.9	4.7	4.5	4.3	4.5
62.5°	4.1	4.2	4.6	4.9	5.0	4.9	4.7	4.5	4.4	4.5
65°	4.2	4.3	4.7	5.0	5.0	5.0	4.8	4.6	4.4	4.3
67.5°	4.1	4.4	4.7	4.9	5.0	5.0	4.9	4.6	4.5	4.3
70°	3.9	4.0	4.5	4.6	4.7	4.8	4.7	4.6	4.4	4.5
72.5°	3.6	3.7	4.0	4.0	4.1	4.3	4.2	4.0	4.0	4.1
75°	3.2	3.4	3.5	3.7	3.3	3.7	3.7	3.5	3.5	3.5
77.5°	2.9	3.0	3.1	2.9	2.5	2.8	3.0	3.1	3.0	3.0
80°	3.0	2.9	2.9	2.6	2.2	2.6	2.7	2.9	2.6	2.7
82.5°	3.4	3.2	2.9	2.5	2.1	2.4	2.6	2.8	2.7	2.7
85°	4.1	4.0	3.7	3.1	2.5	2.7	3.0	3.1	3.0	3.0
87.5°	4.7	4.7	4.4	3.6	3.3	3.3	3.6	3.5	3.6	3.5
90°	5.2	5.2	4.8	4.3	4.0	3.9	4.1	4.2	4.4	4.4
92.5°	5.5	5.2	4.9	4.8	4.5	4.4	4.5	4.8	5.0	5.1
95°	5.6	5.5	5.1	5.0	4.9	4.9	5.0	5.3	5.4	5.4
97.5°	5.5	5.3	5.2	5.2	5.1	5.1	5.3	5.3	5.4	5.5
100°	5.1	4.8	4.8	5.0	5.1	5.2	5.4	5.3	5.3	5.3
102.5°	4.1	3.8	4.0	4.0	4.2	4.5	4.7	4.5	4.7	4.7
105°	3.0	2.9	2.8	2.9	2.9	3.2	3.5	3.5	3.7	3.7
107.5°	2.1	1.9	1.8	1.8	1.8	2.1	2.3	2.5	2.7	2.7



REPORT NUMBER: G1-2405-109-3
 CATALOG NUMBER: 650-4-8LED-30-10-12-X

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.1	1.0	0.8	0.8	0.8	0.9	1.2	1.2	1.3	1.4
112.5°	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.4	0.3
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)