

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: INVUE

Report Number: P173628

Luminaire Tested: **ENT-FXX-LED-E1-BL4-8030-ULG-BBB**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P173628
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P20107) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-FXX-LED-E1-BL4-8030-ULG-BBB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT, EMERGENCY MODE
LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1280.8 lumens
Efficiency: N/A
Efficacy: 232.9 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U3 - G0

Input Watts (W): 5.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

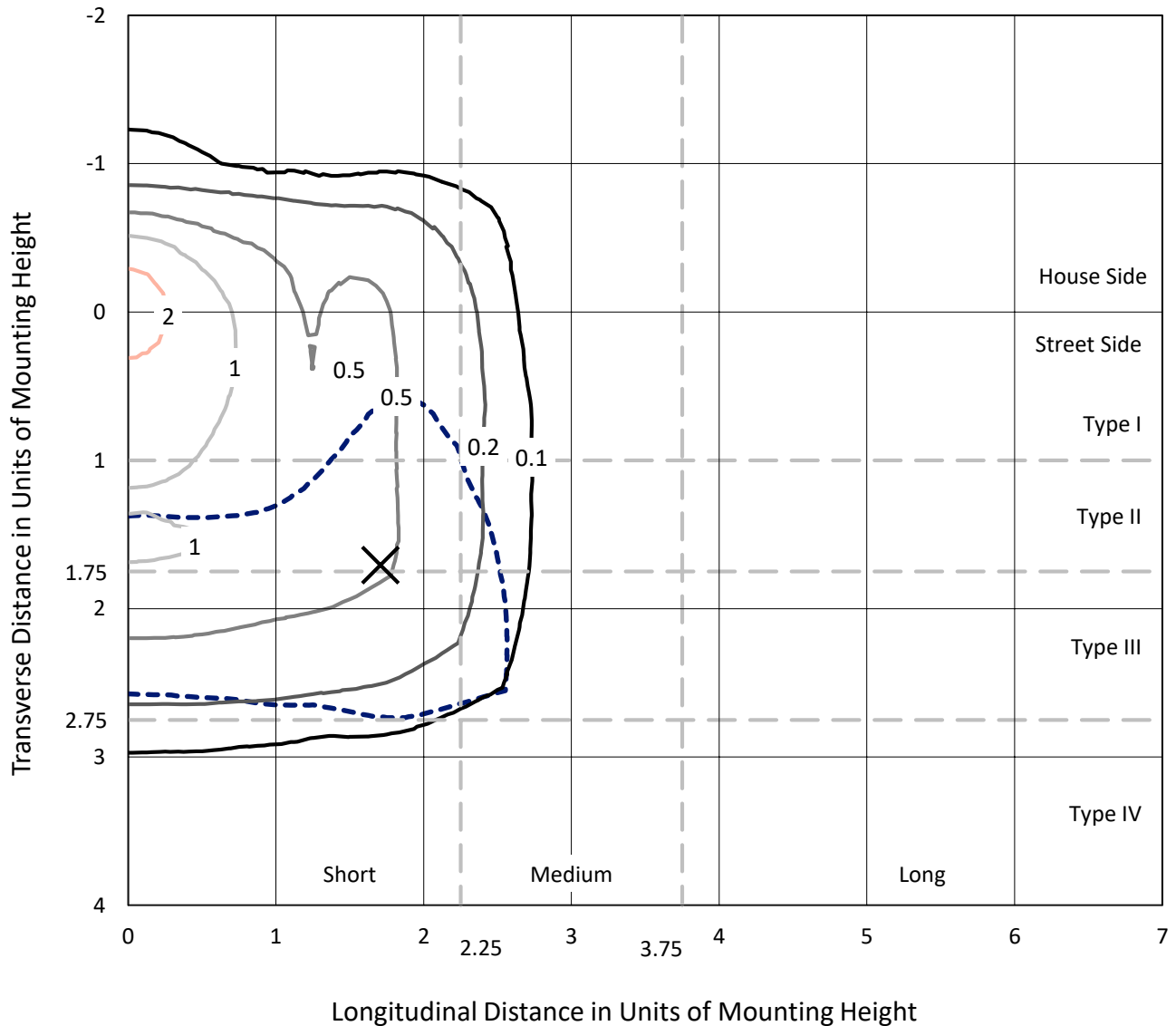


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

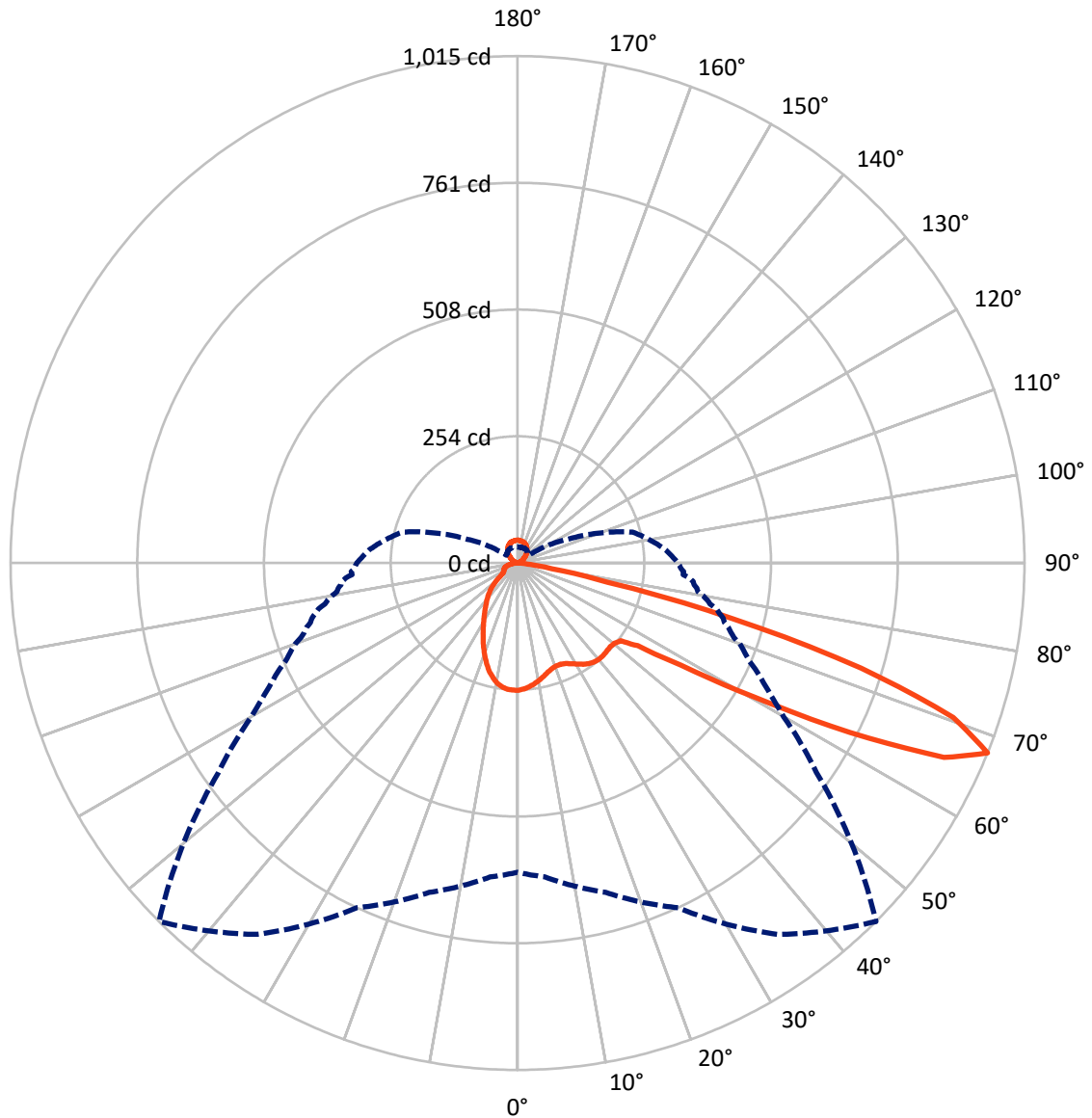


Based on 10 foot mounting height. Maximum calculated value = 2.5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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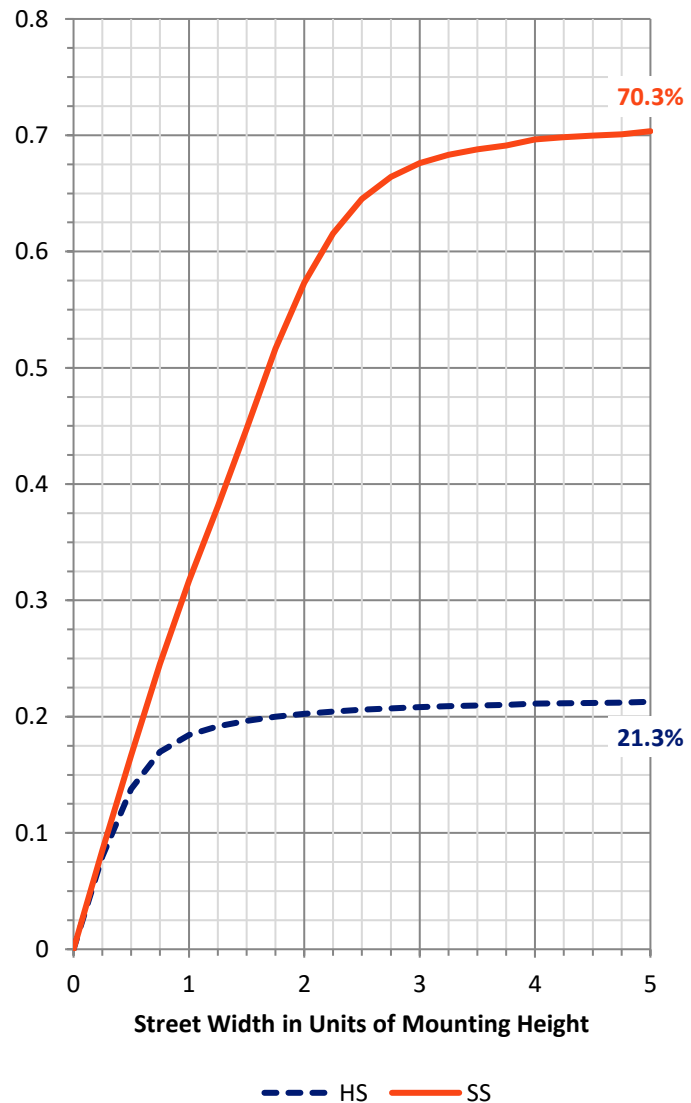
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	276.2	51.1	327.3
	% Fixture	21.6	4.0	25.6
Street Side	Lumens	902.5	51.1	953.5
	% Fixture	70.5	4.0	74.4
Total	Lumens	1178.7	102.1	1280.8
	% Fixture	92.0	8.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.7	1.8
10°-20°	63.7	5.0
20°-30°	91.8	7.2
30°-40°	117.1	9.1
40°-50°	138.2	10.8
50°-60°	221.7	17.3
60°-70°	373.1	29.1
70°-80°	138.8	10.8
80°-90°	10.6	0.8
90°-100°	0.4	0.0
100°-110°	4.0	0.3
110°-120°	8.2	0.6
120°-130°	13.9	1.1
130°-140°	19.4	1.5
140°-150°	21.2	1.7
150°-160°	18.4	1.4
160°-170°	12.4	1.0
170°-180°	4.3	0.3
0°-90°	1178.7	92.0
0°-180°	1280.8	100.0



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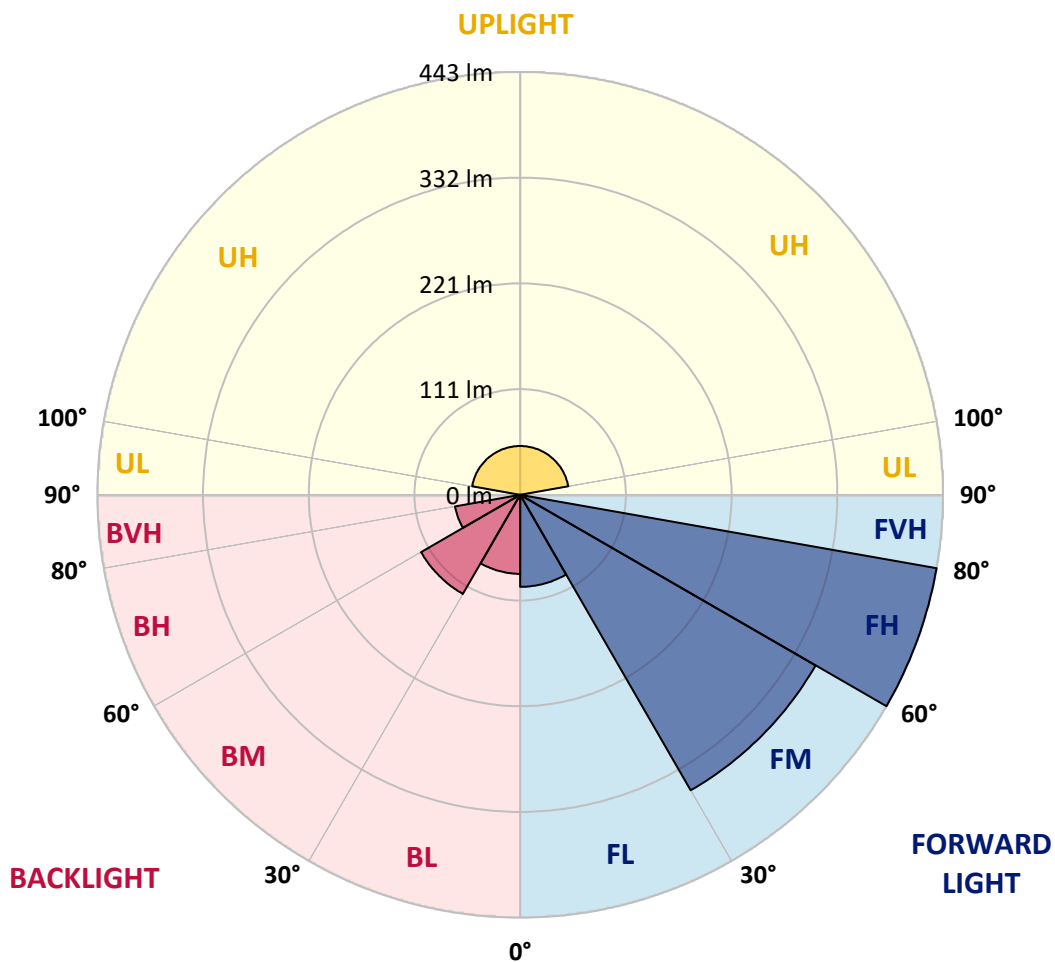
CATALOG NUMBER: ENT-FXX-LED-E1-BL4-8030-ULG-BBB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	96.3	7.5			
FM	(30°-60°)	357.2	27.9			
FH	(60°-80°)	442.7	34.6			G0/660
FVH	(80°-90°)	6.3	0.5			G0/10
BL	(0°-30°)	82.8	6.5	B0/110		
BM	(30°-60°)	119.9	9.4	B0/220		
BH	(60°-80°)	69.2	5.4	B0/110		G0/110
BVH	(80°-90°)	4.3	0.3			G0/10
UL	(90°-100°)	0.4	0.0		U1/10	
UH	(100°-180°)	51.1	4.0		U3/500	

BUG Rating: B0-U3-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7
2.5°	251.1	251.1	251.5	251.5	252.2	252.6	252.2	253.1	253.1	252.9	253.3
5°	247.5	247.5	247.7	247.7	248.1	248.8	248.4	249.3	249.0	249.3	249.3
7.5°	243.2	243.2	243.6	243.4	243.6	244.1	243.0	243.6	243.6	243.9	243.6
10°	237.8	238.2	238.6	238.4	238.4	238.6	236.9	237.5	237.3	237.3	237.1
12.5°	232.8	232.3	232.8	233.2	233.0	233.0	231.2	230.8	230.8	230.8	231.0
15°	227.6	228.1	228.7	228.1	227.6	226.7	224.9	224.5	224.5	224.5	224.7
17.5°	226.5	226.5	226.9	226.2	224.5	222.7	219.0	218.3	218.3	218.1	218.1
20°	229.6	229.4	230.1	228.7	224.7	219.9	214.3	213.2	213.2	213.2	212.9
22.5°	236.2	236.2	237.3	235.7	229.2	220.2	211.8	210.0	209.8	209.6	209.1
25°	248.8	248.6	249.3	245.2	235.7	223.1	211.1	208.4	208.2	207.8	207.3
27.5°	263.5	263.9	265.3	259.2	245.2	228.3	214.1	209.6	209.1	208.4	207.5
30°	277.9	279.3	281.7	275.2	256.0	234.8	218.6	213.4	212.5	211.6	210.0
32.5°	296.2	295.7	299.8	289.9	265.5	241.8	223.3	217.0	215.9	214.5	212.5
35°	315.6	316.5	317.4	301.4	273.4	247.5	226.2	219.0	217.7	216.3	213.4
37.5°	335.0	335.2	333.2	310.6	278.1	250.9	227.8	219.5	217.7	215.7	212.3
40°	352.8	352.1	346.0	317.6	280.8	252.6	228.5	218.6	216.3	214.3	210.5
42.5°	362.9	362.3	354.6	320.8	281.1	252.4	228.5	217.7	215.2	212.7	208.4
45°	367.2	366.8	358.0	321.2	279.5	251.1	227.2	216.8	214.3	212.0	207.5
47.5°	367.7	367.7	358.7	320.6	278.1	250.2	227.2	217.9	215.9	214.1	210.7
50°	365.7	365.9	358.9	322.3	279.3	252.2	229.4	220.6	218.6	216.8	212.9
52.5°	389.6	387.3	371.7	330.5	286.7	258.8	237.1	229.2	228.5	227.4	224.5
55°	572.3	574.1	489.0	381.2	318.1	292.4	283.3	281.7	286.7	288.5	288.5
57.5°	726.6	720.7	688.7	556.3	416.0	385.1	388.7	392.5	399.7	402.9	405.1
60°	764.2	764.7	763.8	726.1	614.0	543.6	526.0	509.3	508.7	502.8	498.3
62.5°	759.7	763.4	780.3	788.8	799.9	748.2	640.9	594.6	585.6	574.5	558.7
65°	727.0	732.4	759.5	801.2	896.4	938.8	718.2	635.4	621.5	608.2	581.5
67.5°	619.4	631.2	683.0	761.8	908.0	1015.3	730.9	615.6	597.1	579.7	548.2
70°	382.4	388.4	468.5	614.7	822.7	925.8	663.6	522.4	499.0	476.9	433.8
72.5°	246.8	244.8	258.3	346.3	604.6	719.4	456.3	347.4	328.2	310.6	282.9
75°	172.8	173.0	166.9	165.1	280.4	445.5	206.6	148.4	139.9	136.2	130.4
77.5°	112.6	113.9	112.3	116.6	112.3	185.2	95.0	69.7	66.3	64.1	60.4
80°	67.9	72.4	73.8	74.7	75.8	69.9	56.4	41.1	37.0	33.2	27.3
82.5°	11.9	11.7	16.3	21.9	28.7	32.7	23.7	14.9	14.0	13.5	12.4
85°	0.0	0.0	0.2	0.2	0.5	1.6	2.5	2.9	2.7	2.9	3.2
87.5°	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
97.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
100°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
102.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
105°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
107.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
110°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8



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CATALOG NUMBER: ENT-FXX-LED-E1-BL4-8030-ULG-BBB

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
112.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
115°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
117.5°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
120°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
122.5°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
125°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
127.5°	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
130°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
132.5°	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
135°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
137.5°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
140°	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9
142.5°	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1
145°	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
147.5°	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6
150°	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
152.5°	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
155°	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
157.5°	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1
160°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
162.5°	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
165°	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
167.5°	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4
170°	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
172.5°	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9
175°	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5
177.5°	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7
180°	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6



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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7
2.5°	253.3	253.1	252.9	252.9	253.3	253.3	253.1	253.1	253.3	253.1	253.5
5°	249.5	249.3	249.3	249.0	249.3	249.5	249.3	249.3	249.5	249.3	249.7
7.5°	243.4	243.6	243.4	243.4	243.6	243.9	243.6	243.6	243.6	243.6	243.4
10°	237.1	237.1	236.9	236.9	237.3	237.1	236.9	236.9	237.1	237.3	236.9
12.5°	230.8	231.2	231.2	230.3	230.6	230.8	230.8	230.6	230.6	231.2	230.6
15°	224.5	224.7	224.5	224.7	224.2	224.0	224.2	224.2	223.8	223.6	223.6
17.5°	218.1	217.9	217.9	217.5	217.2	217.2	217.0	217.2	216.8	217.0	216.3
20°	212.5	212.3	212.0	212.0	211.4	211.4	211.4	211.1	210.7	210.7	210.5
22.5°	209.1	208.9	208.7	208.2	208.0	207.8	207.8	207.5	207.1	206.9	206.6
25°	207.3	207.1	206.6	206.2	205.9	205.7	205.7	205.5	205.0	204.6	204.4
27.5°	207.5	207.1	206.6	206.2	205.9	205.5	205.3	205.0	204.6	204.1	203.7
30°	209.6	208.7	207.8	207.1	206.4	205.7	205.3	205.0	204.4	203.7	203.0
32.5°	211.6	210.5	209.1	207.8	206.6	205.5	204.8	204.1	203.3	202.1	201.4
35°	212.3	210.9	208.9	207.8	206.2	204.8	203.7	202.8	201.2	199.9	198.7
37.5°	210.7	209.1	207.1	205.5	203.9	202.1	200.8	199.4	198.3	196.7	195.6
40°	208.2	206.4	204.4	202.1	200.5	198.7	197.4	196.3	194.7	193.3	192.4
42.5°	206.2	204.1	201.9	200.1	198.3	196.5	194.9	193.8	192.2	190.6	189.5
45°	205.5	203.5	201.7	199.4	197.6	196.3	194.9	193.3	192.0	190.6	189.3
47.5°	209.1	207.3	205.5	203.7	202.1	200.5	199.2	197.6	196.0	194.2	192.9
50°	211.1	209.1	207.5	205.5	203.7	202.1	200.8	199.2	198.0	196.3	194.9
52.5°	225.8	223.1	223.6	221.7	221.7	219.9	221.3	219.3	220.4	219.0	221.1
55°	287.8	288.7	294.4	295.3	297.5	297.3	298.7	304.5	302.3	299.4	300.3
57.5°	399.0	401.1	404.0	401.3	403.3	403.8	407.6	406.0	404.7	403.8	400.9
60°	495.6	492.9	488.6	483.4	481.4	479.1	475.3	475.3	470.3	468.7	464.9
62.5°	552.2	544.3	538.9	530.5	524.7	520.6	513.9	508.7	501.9	496.7	490.6
65°	570.7	557.4	547.9	537.5	528.3	519.5	509.8	502.3	494.0	488.4	478.7
67.5°	534.9	521.3	505.3	494.2	484.5	473.5	458.4	449.1	441.9	431.1	426.3
70°	416.4	402.2	382.1	376.7	361.8	344.7	329.3	320.1	309.5	302.0	294.1
72.5°	264.2	248.1	239.3	232.8	223.1	208.9	195.6	190.1	180.9	178.9	173.7
75°	124.1	113.3	111.0	109.4	98.8	96.8	92.7	90.9	86.6	84.4	83.5
77.5°	55.5	53.0	49.0	47.8	44.5	41.1	37.0	35.2	32.9	31.6	29.8
80°	25.3	22.8	21.2	20.1	19.6	18.5	17.6	16.9	16.3	16.3	15.1
82.5°	12.2	11.7	11.3	11.3	10.6	10.6	9.9	9.7	9.5	9.3	9.3
85°	3.4	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.8	3.8
87.5°	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
97.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
100°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
102.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
105°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
107.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
110°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8



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CATALOG NUMBER: ENT-FXX-LED-E1-BL4-8030-ULG-BBB

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
112.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
115°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
117.5°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
120°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
122.5°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
125°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
127.5°	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
130°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
132.5°	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
135°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
137.5°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
140°	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9
142.5°	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1
145°	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
147.5°	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6
150°	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
152.5°	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
155°	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
157.5°	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1
160°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
162.5°	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
165°	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
167.5°	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4
170°	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
172.5°	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9
175°	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5
177.5°	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7
180°	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6



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CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7
2.5°	253.3	253.3	253.3	253.8	253.5	254.2	254.2	254.2	254.7	254.9	254.7
5°	249.7	249.7	249.7	249.9	249.9	250.4	250.4	250.9	250.9	251.1	251.1
7.5°	243.9	244.1	244.1	244.5	244.3	244.5	244.5	245.2	245.2	245.4	245.4
10°	237.1	237.3	237.3	237.3	237.5	237.8	237.8	238.2	238.4	238.4	238.9
12.5°	230.8	230.6	230.8	230.6	231.2	231.2	231.5	231.2	231.5	231.7	231.9
15°	223.8	223.8	223.6	223.8	223.8	223.6	223.3	223.6	224.0	224.0	224.0
17.5°	216.8	216.1	216.1	216.1	215.9	215.4	215.9	215.7	215.7	215.9	215.7
20°	210.3	210.0	209.8	209.6	209.3	208.7	208.7	208.7	208.4	208.4	208.4
22.5°	206.2	205.9	205.7	205.5	204.6	204.1	203.9	203.7	203.3	203.0	202.8
25°	203.9	203.5	203.0	202.6	201.9	201.2	200.5	200.3	199.9	199.4	198.7
27.5°	203.3	202.8	201.9	201.4	200.5	199.9	199.2	198.5	197.8	197.1	196.5
30°	202.1	201.4	200.5	199.9	199.2	198.0	197.1	196.5	195.4	194.7	193.8
32.5°	200.5	199.6	198.7	197.8	196.9	195.8	194.7	193.8	192.9	192.0	190.8
35°	197.8	196.7	195.4	194.5	193.3	192.2	191.3	189.7	189.0	187.9	186.8
37.5°	194.2	193.1	192.0	190.8	189.5	188.6	187.2	185.9	185.2	184.5	183.0
40°	191.1	189.7	188.6	187.7	186.1	185.4	184.1	182.7	181.8	181.1	179.8
42.5°	188.1	186.8	185.6	184.3	183.2	182.3	181.1	179.8	178.9	178.4	177.3
45°	188.1	186.6	185.2	184.1	183.0	181.8	180.9	179.6	178.9	178.0	177.3
47.5°	191.3	189.5	187.9	186.3	184.7	183.6	182.3	180.9	179.8	179.1	178.2
50°	193.5	191.7	190.8	189.0	188.1	186.6	185.0	184.3	183.2	182.5	182.3
52.5°	221.1	219.9	220.2	215.7	214.8	217.0	213.4	216.6	215.7	212.9	212.9
55°	305.4	305.0	307.0	301.4	298.9	303.4	305.2	298.7	300.3	300.3	299.8
57.5°	403.8	400.9	397.9	398.6	395.0	397.7	394.3	390.3	391.8	390.5	385.7
60°	462.4	460.6	456.3	452.3	448.4	444.8	441.7	438.1	436.3	433.1	429.7
62.5°	486.1	481.4	476.2	470.8	464.7	458.8	455.2	450.5	445.5	442.4	438.8
65°	473.5	466.5	460.8	452.9	446.4	439.2	434.5	429.0	424.5	419.1	414.6
67.5°	417.1	409.0	394.1	386.9	377.2	365.9	362.7	356.2	353.7	345.6	332.3
70°	284.0	275.9	266.8	252.2	242.7	233.0	222.4	214.8	213.6	207.1	197.4
72.5°	166.9	161.3	155.4	147.1	140.1	136.2	128.8	121.1	120.9	113.5	109.6
75°	79.0	76.0	70.2	68.1	61.8	61.4	56.6	55.7	56.6	54.4	53.9
77.5°	26.8	26.2	24.8	23.0	21.7	21.2	20.1	19.4	18.9	18.5	18.0
80°	14.7	14.2	14.0	13.3	12.9	12.6	11.9	11.7	11.5	11.3	11.0
82.5°	8.8	9.0	8.6	8.1	8.1	7.7	7.4	7.2	7.0	7.0	7.0
85°	3.6	3.8	3.6	3.4	3.2	3.4	3.4	3.2	2.9	3.2	3.2
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
97.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
100°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
102.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
105°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
107.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
110°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°	
112.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	0°
115°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	2.5°
117.5°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	5°
120°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	7.5°
122.5°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	10°
125°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	12.5°
127.5°	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	15°
130°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	17.5°
132.5°	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	20°
135°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	22.5°
137.5°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25°
140°	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	27.5°
142.5°	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	30°
145°	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	32.5°
147.5°	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35°
150°	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.5°
152.5°	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	40°
155°	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	42.5°
157.5°	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	45°
160°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	47.5°
162.5°	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	50°
165°	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	52.5°
167.5°	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	55°
170°	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	57.5°
172.5°	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	60°
175°	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	62.5°
177.5°	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	65°
180°	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°

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REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	
254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	254.7	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	6.9
254.2	254.0	254.0	253.8	253.5	254.0	254.4	255.1	254.7	255.1	255.4	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	8.1	
250.6	250.6	250.6	250.9	250.6	251.3	252.2	253.5	253.8	254.7	255.4	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	9.6		
244.8	244.8	245.0	245.2	245.0	245.9	247.5	249.0	250.2	251.8	253.1	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	11.3			
238.0	238.0	238.0	238.0	238.2	239.3	240.5	242.3	244.1	246.5	248.6	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	13.2				
231.9	231.2	231.5	231.9	231.5	231.5	232.6	233.9	235.1	238.2	241.8	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	15.5					
223.8	223.8	223.3	223.6	222.4	222.2	222.7	223.6	224.5	227.2	231.0	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	17.9						
215.2	215.2	215.2	214.5	213.6	211.4	211.1	211.1	211.1	213.2	217.7	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	20.4							
207.5	207.5	207.1	206.6	204.6	200.8	197.6	196.3	195.8	199.2	201.2	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	22.8								
202.1	201.9	201.0	200.5	197.4	191.3	186.3	182.5	181.4	182.5	183.2	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	25.2									
197.8	197.4	196.5	195.6	191.3	183.0	175.1	168.5	165.3	164.4	162.2	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	27.6										
195.4	194.7	193.3	192.4	186.8	176.2	165.8	157.2	151.4	147.1	143.0	140°	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	29.9											
192.6	191.5	190.1	188.8	182.5	170.8	158.8	148.2	137.8	130.4	124.5	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	32.1												
189.5	188.4	187.0	185.6	178.7	165.8	153.2	140.1	125.7	115.5	106.7	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	34.0													
185.6	184.5	183.2	181.6	174.6	161.8	149.3	132.2	114.8	101.7	90.2	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	35.6														
181.8	180.7	179.3	177.7	170.8	159.7	147.1	124.7	104.9	88.9	73.8	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	37.3															
178.9	177.7	176.4	175.1	168.7	158.8	146.0	118.4	96.1	76.2	58.9	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	38.8																
176.4	175.3	174.2	172.8	167.4	159.3	143.5	113.0	87.5	63.6	46.2	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	40.0																	
176.2	175.5	174.2	173.0	167.8	161.3	141.5	108.3	78.7	51.4	39.0	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	41.1																	
177.7	176.8	176.0	175.1	171.0	166.5	140.1	103.3	68.8	41.5	37.2	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	42.2																		
181.6	180.7	180.2	179.8	177.3	173.5	140.1	98.1	57.3	36.6	37.0	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	43.2																			
212.5	210.0	209.3	211.1	204.4	185.2	141.0	91.8	44.9	35.0	37.2	165°	167.5°	170°	172.5°	175°	177.5°	180°	44.0																				
298.9	301.4	295.0	291.9	280.2	214.3	141.6	82.3	36.6	34.7	36.8	167.5°	170°	172.5°	175°	177.5°	180°	44.4																					
386.2	386.2	383.9	379.0	364.5	263.9	144.8	67.2	33.4	34.3	36.3	170°	172.5°	175°	177.5°	180°	44.5																						
428.8	426.1	423.9	420.9	399.0	298.4	149.5	49.6	32.0	34.1	35.9	172.5°	175°	177.5°	180°	44.9																							
436.5	432.2	429.3	425.4	396.3	300.3	151.6	37.2	30.7	34.1	34.7	175°	177.5°	180°	45.5																								
411.2	406.7	402.9	396.6	361.2	271.8	141.5	30.5	29.8	33.2	33.6	177.5°	180°	45.7																									
333.2	327.8	324.8	321.7	298.2	238.6	114.4	27.3	28.7	31.6	32.5	180°	45.6																										
190.6	184.7	181.4	182.1	167.8	188.8	91.4	25.0	27.1	29.8	31.1	45.6																											
102.6	96.3	94.3	87.7	74.9	95.2	70.4	23.0	25.0	27.1	28.4	45.6																											
50.8	48.5	49.2	46.0	39.0	29.3	45.3	20.5	22.3	24.3	25.3	45.6																											
17.6	17.2	16.9	16.7	16.3	15.6	20.8	17.6	19.2	20.8	21.7	45.6																											
10.8	10.6	10.8	10.6	10.4	11.9	13.3	14.0	15.3	17.4	17.6	45.6																											
6.5	6.5	6.5	6.5	6.5	8.4	9.5	10.8	11.9	13.3	14.4	45.6																											
3.2	3.2	3.2	3.2	3.4	5.6	6.3	7.9	8.4	9.5	10.4	45.6																											
0.7	0.7	0.7	0.7	0.9	2.9	3.8	4.7	5.0	5.0	5.6	45.6																											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.6																											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.6																											
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	45.6																											
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	45.6																											
1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	45.6																											
2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	45.6																											
3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	45.6																											
4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	45.6																											
5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	45.6																											

'173628
 ENT-FXX-LED-E1-BL4-8030-ULG-BBB

REPORT NUMBER: P173628
 CATALOG NUMBER: ENT-FXX-I

TION (continued):

CANDELA DISTRIBUTION (con

88°	89°	90°	95°	105°	115°	125°	135°	145°	155°		165°	175°
6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	0°	254.7	254.7
8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	2.5°	255.1	254.7
9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	5°	255.8	255.4
11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	7.5°	254.0	254.2
13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	10°	250.2	250.9
15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	12.5°	244.1	245.4
17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	15°	233.9	236.0
20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	17.5°	220.4	222.9
22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	20°	203.5	204.6
25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	22.5°	182.7	183.2
27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25°	160.8	160.8
29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	27.5°	140.5	139.4
32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	30°	121.1	118.2
34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	32.5°	100.6	95.6
35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35°	79.8	75.8
37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.5°	62.0	57.5
38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	40°	47.6	44.2
40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	42.5°	40.1	39.5
41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	45°	38.3	39.2
42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	47.5°	38.6	39.7
43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	50°	38.8	39.9
44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	52.5°	38.8	39.5
44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	55°	38.3	38.3
44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	57.5°	37.5	37.2
44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	60°	36.8	36.8
45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	62.5°	35.6	35.6
45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	65°	33.8	34.1
45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	67.5°	32.0	32.0
										70°	29.8	29.8
										72.5°	27.5	28.4
										75°	25.9	27.5
										77.5°	22.8	24.3
										80°	18.7	18.9
										82.5°	14.9	14.4
										85°	10.6	9.9
										87.5°	5.6	5.4
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	0.2	0.2
										97.5°	0.5	0.5
										100°	1.6	1.6
										102.5°	2.8	2.8
										105°	3.8	3.8
										107.5°	4.8	4.8
										110°	5.8	5.8



REPORT NUMBER: P173628

CATALOG NUMBER: ENT-FXX-LED-E1-BL

.ED-E1-BL4-8030-ULG-BBB

tinued):

180°
254.7
254.4
255.1
254.0
251.1
246.3
235.5
222.9
203.9
182.5
159.9
138.7
117.3
95.6
74.7
56.2
44.0
39.7
39.2
39.9
40.1
39.5
38.3
37.7
36.8
35.6
34.1
32.0
30.2
28.9
28.2
25.3
18.9
13.8
9.9
5.6
0.0
0.0
0.2
0.5
1.6
2.8
3.8
4.8
5.8

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
112.5°	6.9	6.9	6.9
115°	8.1	8.1	8.1
117.5°	9.6	9.6	9.6
120°	11.3	11.3	11.3
122.5°	13.2	13.2	13.2
125°	15.5	15.5	15.5
127.5°	17.9	17.9	17.9
130°	20.4	20.4	20.4
132.5°	22.8	22.8	22.8
135°	25.2	25.2	25.2
137.5°	27.6	27.6	27.6
140°	29.9	29.9	29.9
142.5°	32.1	32.1	32.1
145°	34.0	34.0	34.0
147.5°	35.6	35.6	35.6
150°	37.3	37.3	37.3
152.5°	38.8	38.8	38.8
155°	40.0	40.0	40.0
157.5°	41.1	41.1	41.1
160°	42.2	42.2	42.2
162.5°	43.2	43.2	43.2
165°	44.0	44.0	44.0
167.5°	44.4	44.4	44.4
170°	44.5	44.5	44.5
172.5°	44.9	44.9	44.9
175°	45.5	45.5	45.5
177.5°	45.7	45.7	45.7
180°	45.6	45.6	45.6

(END OF F

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

