

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: P173632

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P173632  
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-ULG-BBB  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT, EMERGENCY MODE  
LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL  
Light Source: (14) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1498.7 lumens  
Efficiency: N/A  
Efficacy: 272.5 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 (A<sub>in</sub>): 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

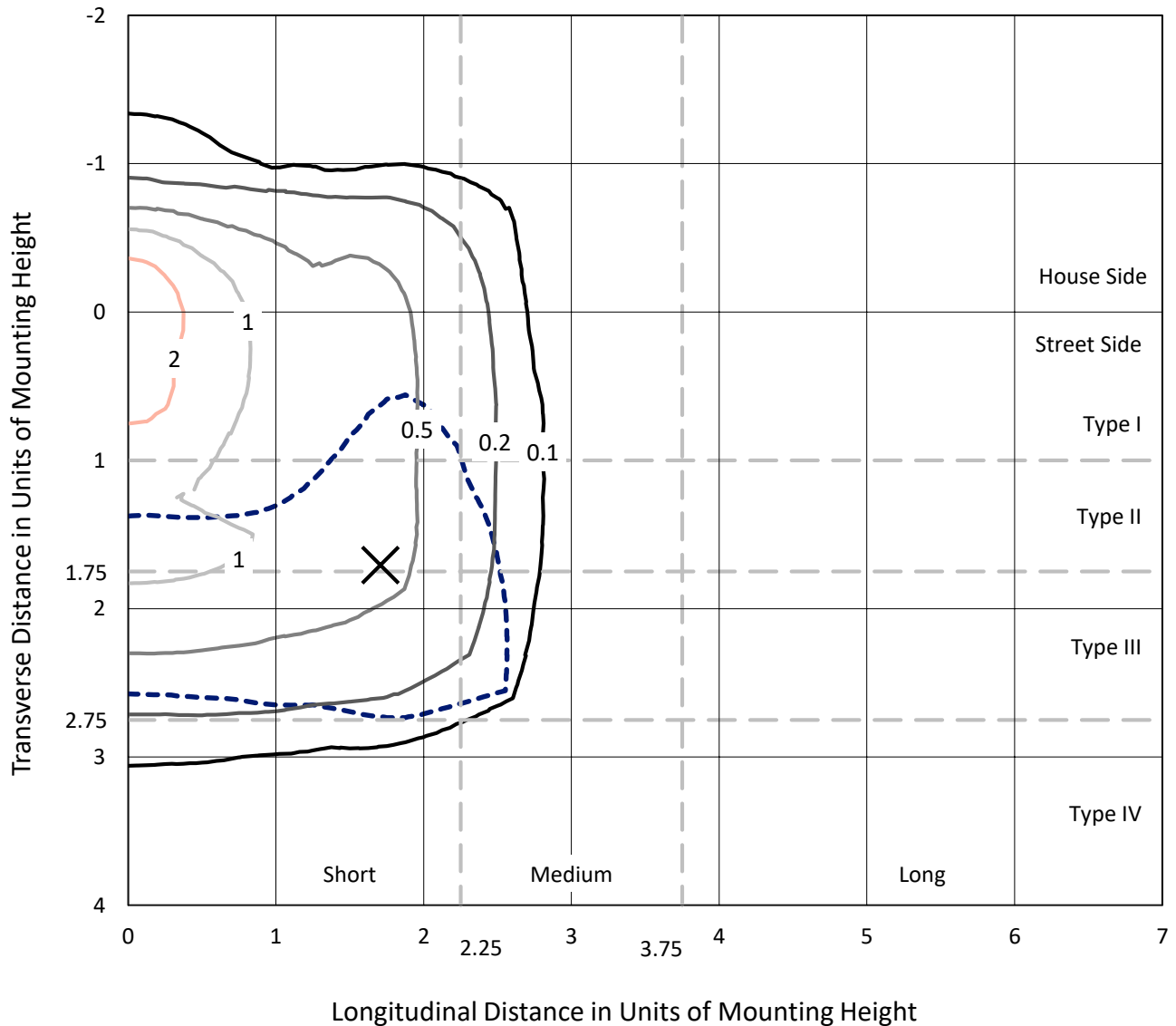


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

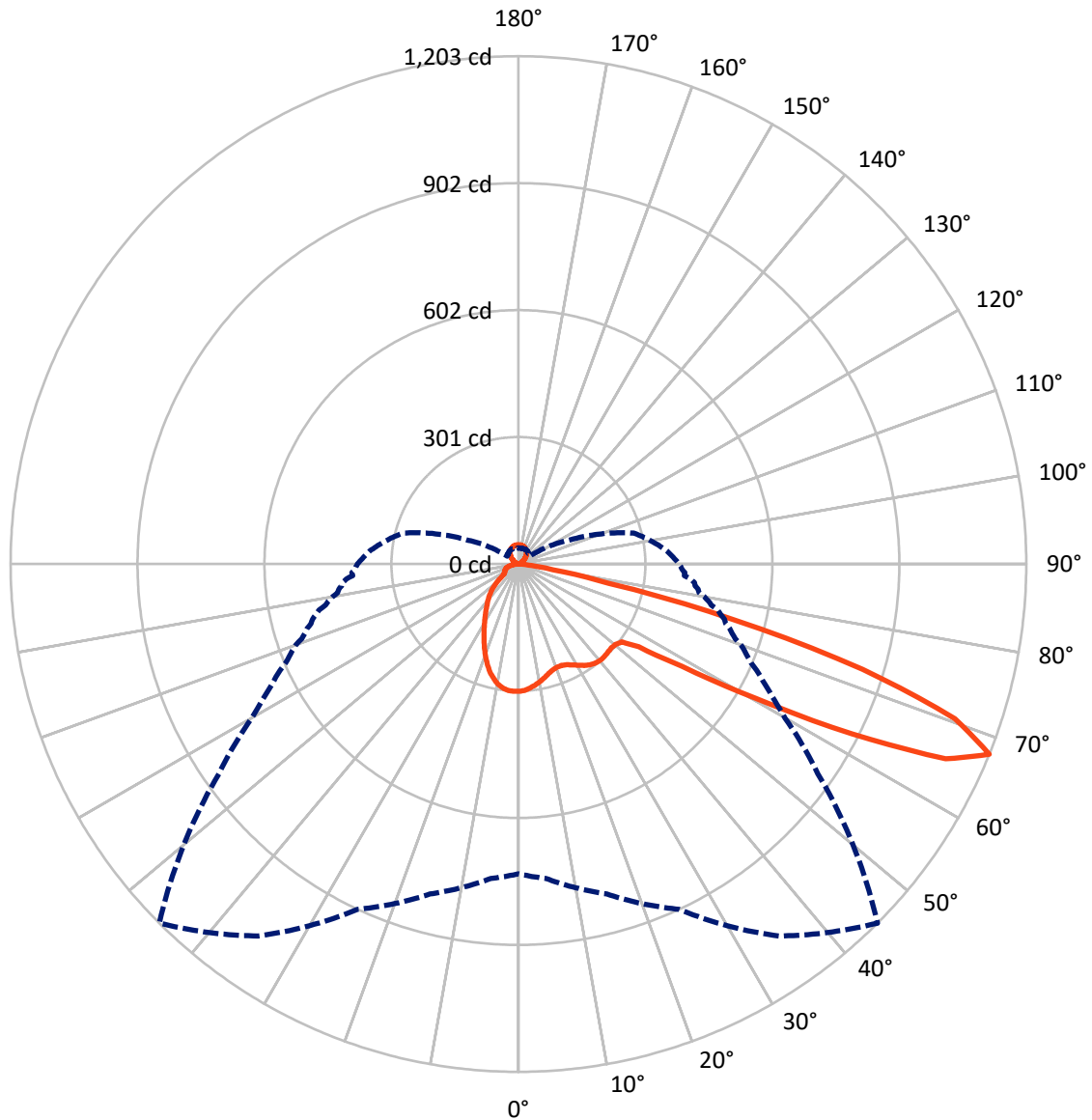


Based on 10 foot mounting height. Maximum calculated value = 3 fc  
 Type III - Short - Semi-Cutoff

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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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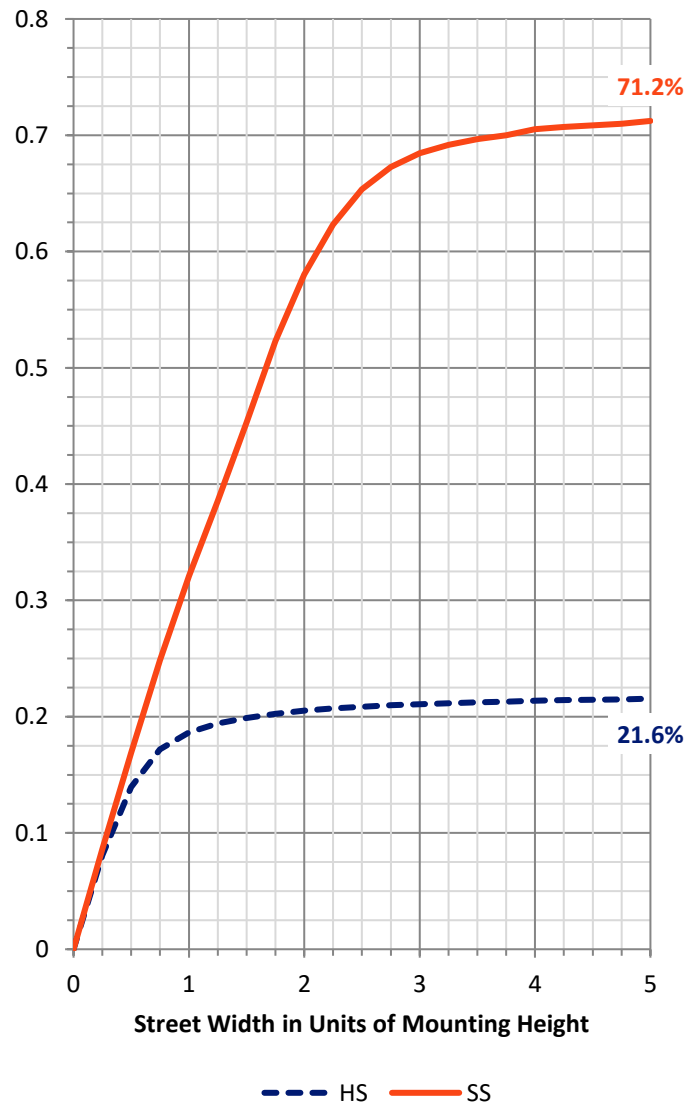
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	327.3	51.1	378.3
	% Fixture	21.8	3.4	25.2
<b>Street Side</b>	Lumens	1069.3	51.1	1120.4
	% Fixture	71.3	3.4	74.8
<b>Total</b>	Lumens	1396.5	102.1	1498.7
	% Fixture	93.2	6.8	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.0	1.9
10°-20°	75.5	5.0
20°-30°	108.8	7.3
30°-40°	138.8	9.3
40°-50°	163.8	10.9
50°-60°	262.7	17.5
60°-70°	442.1	29.5
70°-80°	164.4	11.0
80°-90°	12.5	0.8
90°-100°	0.4	0.0
100°-110°	4.0	0.3
110°-120°	8.2	0.5
120°-130°	13.9	0.9
130°-140°	19.4	1.3
140°-150°	21.2	1.4
150°-160°	18.4	1.2
160°-170°	12.4	0.8
170°-180°	4.3	0.3
0°-90°	1396.5	93.2
0°-180°	1498.7	100.0



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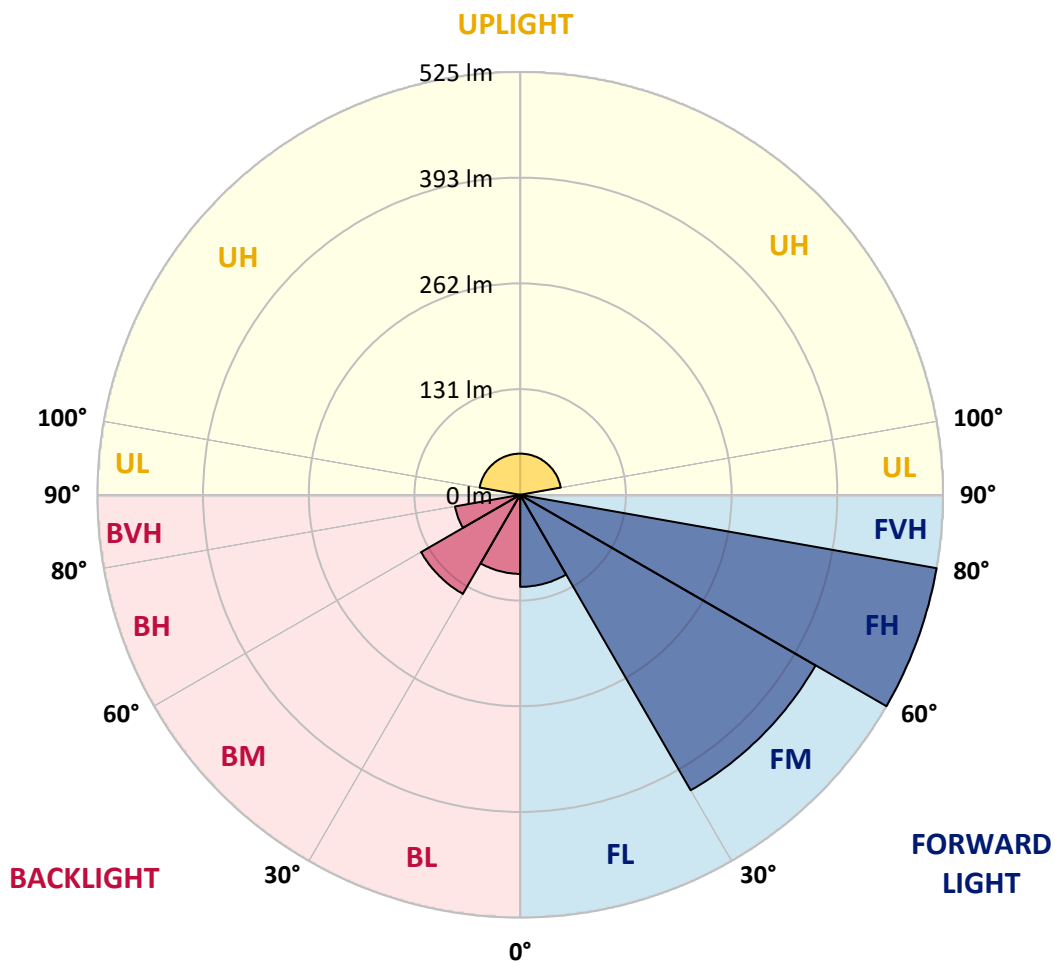
CATALOG NUMBER: ENT-FXX-LED-E1-BL4-ULG-BBB

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	114.2	7.6			
FM	(30°-60°)	423.2	28.2			
FH	(60°-80°)	524.5	35.0			G0/660
FVH	(80°-90°)	7.4	0.5			G0/10
BL	(0°-30°)	98.1	6.5	B0/110		
BM	(30°-60°)	142.1	9.5	B0/220		
BH	(60°-80°)	82.0	5.5	B0/110		G0/110
BVH	(80°-90°)	5.1	0.3			G0/10
UL	(90°-100°)	0.4	0.0		U1/10	
UH	(100°-180°)	51.1	3.4		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°	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7
2.5°	297.5	297.5	298.0	298.0	298.8	299.4	298.8	299.9	299.9	299.6	300.2
5°	293.2	293.2	293.5	293.5	294.0	294.8	294.3	295.3	295.1	295.3	295.3
7.5°	288.1	288.1	288.7	288.4	288.7	289.2	287.9	288.7	288.7	288.9	288.7
10°	281.7	282.3	282.8	282.5	282.5	282.8	280.6	281.4	281.2	281.2	280.9
12.5°	275.8	275.3	275.8	276.4	276.1	276.1	274.0	273.4	273.4	273.4	273.7
15°	269.7	270.2	271.0	270.2	269.7	268.6	266.5	265.9	265.9	265.9	266.2
17.5°	268.3	268.3	268.9	268.1	265.9	263.8	259.5	258.7	258.7	258.5	258.5
20°	272.1	271.8	272.6	271.0	266.2	260.6	253.9	252.6	252.6	252.6	252.3
22.5°	279.8	279.8	281.2	279.3	271.5	260.9	251.0	248.8	248.6	248.3	247.8
25°	294.8	294.5	295.3	290.5	279.3	264.3	250.2	247.0	246.7	246.2	245.6
27.5°	312.2	312.7	314.3	307.1	290.5	270.5	253.6	248.3	247.8	247.0	245.9
30°	329.3	330.9	333.8	326.1	303.4	278.2	259.0	252.8	251.8	250.7	248.8
32.5°	350.9	350.4	355.2	343.4	314.6	286.5	264.6	257.1	255.8	254.2	251.8
35°	373.9	375.0	376.0	357.1	323.9	293.2	268.1	259.5	257.9	256.3	252.8
37.5°	396.9	397.2	394.8	368.0	329.6	297.2	270.0	260.0	257.9	255.5	251.5
40°	418.0	417.2	410.0	376.3	332.8	299.4	270.8	259.0	256.3	253.9	249.4
42.5°	430.1	429.2	420.1	380.1	333.0	299.1	270.8	257.9	255.0	252.0	247.0
45°	435.1	434.6	424.2	380.6	331.1	297.5	269.1	256.8	253.9	251.2	245.9
47.5°	435.7	435.7	425.0	379.8	329.6	296.4	269.1	258.2	255.8	253.6	249.6
50°	433.3	433.5	425.2	381.9	330.9	298.8	271.8	261.4	259.0	256.8	252.3
52.5°	461.6	458.9	440.5	391.6	339.7	306.6	280.9	271.5	270.8	269.4	265.9
55°	678.1	680.2	579.4	451.7	376.9	346.4	335.7	333.8	339.7	341.8	341.8
57.5°	860.9	854.0	816.0	659.1	492.9	456.2	460.5	465.1	473.6	477.4	480.0
60°	905.5	906.0	905.0	860.4	727.5	644.1	623.3	603.5	602.7	595.8	590.4
62.5°	900.2	904.5	924.5	934.7	947.7	886.6	759.3	704.5	693.9	680.7	662.0
65°	861.4	867.8	899.9	949.4	1062.1	1112.4	851.0	752.9	736.3	720.6	689.0
67.5°	733.9	747.8	809.3	902.6	1075.8	1203.0	866.0	729.4	707.5	686.9	649.5
70°	453.0	460.3	555.1	728.3	974.8	1096.9	786.3	619.0	591.2	565.0	514.0
72.5°	292.4	290.0	306.0	410.3	716.3	852.3	540.7	411.6	388.9	368.0	335.2
75°	204.7	205.0	197.8	195.6	332.2	527.9	244.8	175.9	165.7	161.4	154.5
77.5°	133.4	135.0	133.1	138.2	133.1	219.4	112.5	82.6	78.6	75.9	71.6
80°	80.5	85.8	87.4	88.5	89.8	82.9	66.8	48.6	43.8	39.3	32.3
82.5°	14.2	13.9	19.2	25.9	33.9	38.8	28.1	17.6	16.6	16.0	14.7
85°	0.0	0.0	0.3	0.3	0.6	1.9	2.9	3.5	3.2	3.5	3.8
87.5°	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6
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-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°	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7
2.5°	300.2	299.9	299.6	299.6	300.2	300.2	299.9	299.9	300.2	299.9	300.4
5°	295.6	295.3	295.3	295.1	295.3	295.6	295.3	295.3	295.6	295.3	295.9
7.5°	288.4	288.7	288.4	288.4	288.7	288.9	288.7	288.7	288.7	288.7	288.4
10°	280.9	280.9	280.6	280.6	281.2	280.9	280.6	280.6	280.9	281.2	280.6
12.5°	273.4	274.0	274.0	272.9	273.2	273.4	273.4	273.2	273.2	274.0	273.2
15°	265.9	266.2	265.9	266.2	265.7	265.4	265.7	265.7	265.1	264.9	264.9
17.5°	258.5	258.2	258.2	257.6	257.4	257.4	257.1	257.4	256.8	257.1	256.3
20°	251.8	251.5	251.2	251.2	250.4	250.4	250.4	250.2	249.6	249.6	249.4
22.5°	247.8	247.5	247.2	246.7	246.4	246.2	246.2	245.9	245.3	245.1	244.8
25°	245.6	245.3	244.8	244.3	244.0	243.8	243.8	243.5	243.0	242.4	242.1
27.5°	245.9	245.3	244.8	244.3	244.0	243.5	243.2	243.0	242.4	241.9	241.3
30°	248.3	247.2	246.2	245.3	244.6	243.8	243.2	243.0	242.1	241.3	240.6
32.5°	250.7	249.4	247.8	246.2	244.8	243.5	242.7	241.9	240.8	239.5	238.7
35°	251.5	249.9	247.5	246.2	244.3	242.7	241.3	240.3	238.4	236.8	235.5
37.5°	249.6	247.8	245.3	243.5	241.6	239.5	237.9	236.3	234.9	233.1	231.7
40°	246.7	244.6	242.1	239.5	237.6	235.5	233.9	232.5	230.6	229.1	228.0
42.5°	244.3	241.9	239.2	237.1	234.9	232.8	230.9	229.6	227.7	225.9	224.5
45°	243.5	241.1	238.9	236.3	234.1	232.5	230.9	229.1	227.4	225.9	224.2
47.5°	247.8	245.6	243.5	241.3	239.5	237.6	236.0	234.1	232.3	230.1	228.5
50°	250.2	247.8	245.9	243.5	241.3	239.5	237.9	236.0	234.7	232.5	230.9
52.5°	267.6	264.3	264.9	262.7	262.7	260.6	262.2	259.8	261.1	259.5	261.9
55°	341.1	342.1	348.8	349.9	352.5	352.3	353.9	360.8	358.1	354.7	355.7
57.5°	472.8	475.2	478.7	475.5	477.9	478.4	483.0	481.1	479.5	478.4	475.0
60°	587.2	584.0	578.9	572.8	570.4	567.7	563.2	563.2	557.3	555.4	550.8
62.5°	654.3	644.9	638.5	628.6	621.7	616.9	608.8	602.7	594.7	588.5	581.3
65°	676.2	660.4	649.2	636.9	626.0	615.5	604.0	595.2	585.3	578.7	567.2
67.5°	633.7	617.7	598.7	585.6	574.1	561.0	543.1	532.1	523.6	510.8	505.1
70°	493.4	476.5	452.7	446.3	428.7	408.4	390.2	379.3	366.7	357.9	348.5
72.5°	313.0	294.0	283.6	275.8	264.3	247.5	231.7	225.3	214.4	211.9	205.8
75°	147.0	134.2	131.5	129.6	117.1	114.7	109.9	107.7	102.6	99.9	98.9
77.5°	65.8	62.8	58.0	56.7	52.6	48.6	43.8	41.7	39.0	37.4	35.3
80°	29.9	27.0	25.1	23.8	23.2	21.9	20.9	20.0	19.2	19.2	17.9
82.5°	14.4	13.9	13.4	13.4	12.6	12.6	11.8	11.5	11.2	10.9	10.9
85°	4.0	4.0	4.0	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.5
87.5°	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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



REPORT NUMBER: P173632

CATALOG NUMBER: ENT-FXX-LED-E1-BL4-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°	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7
2.5°	300.2	300.2	300.2	300.7	300.4	301.2	301.2	301.2	301.7	302.0	301.7
5°	295.9	295.9	295.9	296.1	296.1	296.7	296.7	297.2	297.2	297.5	297.5
7.5°	288.9	289.2	289.2	289.7	289.4	289.7	289.7	290.5	290.5	290.8	290.8
10°	280.9	281.2	281.2	281.2	281.4	281.7	281.7	282.3	282.5	282.5	283.0
12.5°	273.4	273.2	273.4	273.2	274.0	274.0	274.2	274.0	274.2	274.5	274.7
15°	265.1	265.1	264.9	265.1	265.1	264.9	264.6	264.9	265.4	265.4	265.4
17.5°	256.8	256.1	256.1	256.1	255.8	255.3	255.8	255.5	255.5	255.8	255.5
20°	249.1	248.8	248.6	248.3	248.0	247.2	247.2	247.2	247.0	247.0	247.0
22.5°	244.3	244.0	243.8	243.5	242.4	241.9	241.6	241.3	240.8	240.6	240.3
25°	241.6	241.1	240.6	240.0	239.2	238.4	237.6	237.4	236.8	236.3	235.5
27.5°	240.8	240.3	239.2	238.7	237.6	236.8	236.0	235.2	234.4	233.6	232.8
30°	239.5	238.7	237.6	236.8	236.0	234.7	233.6	232.8	231.5	230.6	229.6
32.5°	237.6	236.5	235.5	234.4	233.3	232.0	230.6	229.6	228.5	227.4	226.1
35°	234.4	233.1	231.5	230.4	229.1	227.7	226.6	224.8	224.0	222.7	221.3
37.5°	230.1	228.8	227.4	226.1	224.5	223.4	221.8	220.2	219.4	218.6	216.8
40°	226.4	224.8	223.4	222.4	220.5	219.7	218.1	216.5	215.4	214.6	213.0
42.5°	222.9	221.3	220.0	218.4	217.0	215.9	214.6	213.0	211.9	211.4	210.1
45°	222.9	221.0	219.4	218.1	216.8	215.4	214.4	212.7	211.9	210.9	210.1
47.5°	226.6	224.5	222.7	220.8	218.9	217.6	215.9	214.4	213.0	212.2	211.2
50°	229.3	227.2	226.1	224.0	222.9	221.0	219.2	218.4	217.0	216.2	215.9
52.5°	261.9	260.6	260.9	255.5	254.4	257.1	252.8	256.6	255.5	252.3	252.3
55°	361.9	361.4	363.7	357.1	354.1	359.5	361.6	353.9	355.7	355.7	355.2
57.5°	478.4	475.0	471.5	472.3	468.0	471.2	467.2	462.4	464.2	462.7	457.0
60°	547.9	545.8	540.7	535.9	531.3	527.1	523.3	519.1	516.9	513.2	509.1
62.5°	576.0	570.4	564.2	557.8	550.6	543.6	539.4	533.8	527.9	524.1	519.8
65°	561.0	552.7	546.0	536.7	528.9	520.4	514.8	508.3	503.0	496.6	491.2
67.5°	494.2	484.6	466.9	458.4	446.9	433.5	429.8	422.0	419.1	409.5	393.7
70°	336.5	326.9	316.2	298.8	287.6	276.1	263.5	254.4	253.1	245.3	233.9
72.5°	197.8	191.1	184.2	174.2	166.0	161.4	152.6	143.5	143.3	134.4	129.9
75°	93.5	90.1	83.1	80.7	73.2	72.7	67.1	66.0	67.1	64.4	63.9
77.5°	31.8	31.0	29.4	27.3	25.7	25.1	23.8	23.0	22.4	21.9	21.4
80°	17.4	16.8	16.6	15.8	15.2	15.0	14.2	13.9	13.6	13.4	13.1
82.5°	10.4	10.7	10.2	9.6	9.6	9.1	8.8	8.5	8.3	8.3	8.3
85°	4.3	4.5	4.3	4.0	3.8	4.0	4.0	3.8	3.5	3.8	3.8
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	
301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	301.7	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°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	6.9
301.2	300.9	300.9	300.7	300.4	300.9	301.5	302.3	301.7	302.3	302.6	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°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	8.1	
297.0	297.0	297.0	297.2	297.0	297.7	298.8	300.4	300.7	301.7	302.6	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	9.6		
290.0	290.0	290.3	290.5	290.3	291.3	293.2	295.1	296.4	298.3	299.9	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	11.3			
282.0	282.0	282.0	282.0	282.3	283.6	284.9	287.0	289.2	292.1	294.5	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	13.2				
274.7	274.0	274.2	274.7	274.2	274.2	275.6	277.2	278.5	282.3	286.5	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	15.5					
265.1	265.1	264.6	264.9	263.5	263.3	263.8	264.9	265.9	269.1	273.7	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	17.9						
255.0	255.0	255.0	254.2	253.1	250.4	250.2	250.2	250.2	252.6	257.9	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	20.4							
245.9	245.9	245.3	244.8	242.4	237.9	234.1	232.5	232.0	236.0	238.4	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	22.8								
239.5	239.2	238.1	237.6	233.9	226.6	220.8	216.2	214.9	216.2	217.0	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	25.2									
234.4	233.9	232.8	231.7	226.6	216.8	207.4	199.7	195.9	194.8	192.2	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	27.6										
231.5	230.6	229.1	228.0	221.3	208.7	196.5	186.3	179.3	174.2	169.5	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	29.9											
228.3	226.9	225.3	223.7	216.2	202.3	188.2	175.6	163.3	154.5	147.5	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	32.1												
224.5	223.2	221.6	220.0	211.7	196.5	181.5	166.0	148.9	136.9	126.4	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	34.0													
220.0	218.6	217.0	215.1	206.9	191.6	176.9	156.6	136.0	120.5	106.9	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	35.6														
215.4	214.1	212.5	210.6	202.3	189.2	174.2	147.8	124.3	105.3	87.4	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	37.3															
211.9	210.6	209.0	207.4	199.9	188.2	172.9	140.3	113.9	90.3	69.8	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	38.8																
209.0	207.7	206.3	204.7	198.3	188.7	170.0	133.9	103.7	75.4	54.8	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	40.0																	
208.7	208.0	206.3	205.0	198.9	191.1	167.6	128.3	93.3	60.9	46.2	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	41.1																		
210.6	209.5	208.5	207.4	202.6	197.2	166.0	122.4	81.5	49.2	44.1	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	42.2																			
215.1	214.1	213.6	213.0	210.1	205.5	166.0	116.3	67.9	43.3	43.8	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	43.2																				
251.8	248.8	248.0	250.2	242.1	219.4	167.1	108.8	53.2	41.4	44.1	165°	167.5°	170°	172.5°	175°	177.5°	180°	44.0																					
354.1	357.1	349.6	345.8	332.0	253.9	167.8	97.5	43.3	41.2	43.6	167.5°	170°	172.5°	175°	177.5°	180°	44.4																						
457.6	457.6	454.9	449.0	431.9	312.7	171.6	79.6	39.6	40.6	43.0	170°	172.5°	175°	177.5°	180°	44.5																							
508.1	504.9	502.2	498.7	472.8	353.6	177.2	58.8	37.9	40.4	42.5	172.5°	175°	177.5°	180°	44.9																								
517.2	512.1	508.6	504.1	469.6	355.7	179.6	44.1	36.4	40.4	41.2	175°	177.5°	180°	45.5																									
487.2	481.9	477.4	469.9	427.9	322.1	167.6	36.1	35.3	39.3	39.8	177.5°	180°	45.7																										
394.8	388.4	384.9	381.1	353.3	282.8	135.5	32.3	33.9	37.4	38.5	180°	45.6																											
225.9	218.9	214.9	215.7	198.9	223.7	108.2	29.7	32.1	35.3	36.9	45.6																												
121.6	114.1	111.7	104.0	88.7	112.8	83.4	27.3	29.7	32.1	33.7	45.6																												
60.1	57.5	58.3	54.5	46.2	34.7	53.7	24.3	26.5	28.9	29.9	45.6																												
20.9	20.3	20.0	19.8	19.2	18.5	24.6	20.9	22.7	24.6	25.7	45.6																												
12.8	12.6	12.8	12.6	12.3	14.2	15.8	16.6	18.2	20.6	20.9	45.6																												
7.7	7.7	7.7	7.7	7.7	9.9	11.2	12.8	14.2	15.8	17.1	45.6																												
3.8	3.8	3.8	3.8	4.0	6.7	7.5	9.4	9.9	11.2	12.3	45.6																												
0.8	0.8	0.8	0.8	1.1	3.5	4.5	5.6	5.9	5.9	6.7	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																												

'173632  
 ENT-FXX-LED-E1-BL4-ULG-BBB

REPORT NUMBER: P173632  
 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°	301.7	301.7
8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	2.5°	302.3	301.7
9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	5°	303.1	302.6
11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	7.5°	300.9	301.2
13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	10°	296.4	297.2
15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	12.5°	289.2	290.8
17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	15°	277.2	279.6
20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	17.5°	261.1	264.1
22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	20°	241.1	242.4
25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	22.5°	216.5	217.0
27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25°	190.6	190.6
29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	27.5°	166.5	165.2
32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	30°	143.5	140.1
34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	32.5°	119.2	113.3
35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35°	94.6	89.8
37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.5°	73.5	68.2
38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	40°	56.4	52.4
40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	42.5°	47.6	46.8
41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	45°	45.4	46.5
42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	47.5°	45.7	47.0
43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	50°	46.0	47.3
44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	52.5°	46.0	46.8
44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	55°	45.4	45.4
44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	57.5°	44.4	44.1
44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	60°	43.6	43.6
45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	62.5°	42.2	42.2
45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	65°	40.1	40.4
45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	67.5°	37.9	37.9
										70°	35.3	35.3
										72.5°	32.6	33.7
										75°	30.7	32.6
										77.5°	27.0	28.9
										80°	22.2	22.4
										82.5°	17.6	17.1
										85°	12.6	11.8
										87.5°	6.7	6.4
										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: P173632

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

.ED-E1-BL4-ULG-BBB

**tinued):**

180°
301.7
301.5
302.3
300.9
297.5
291.9
279.0
264.1
241.6
216.2
189.5
164.4
139.0
113.3
88.5
66.6
52.1
47.0
46.5
47.3
47.6
46.8
45.4
44.6
43.6
42.2
40.4
37.9
35.8
34.2
33.4
29.9
22.4
16.3
11.8
6.7
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

