

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: P173497

Luminaire Tested: **ENT-EXX-LED-E1-BL4-7030-ULG-CWB**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P173497
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-EXX-LED-E1-BL4-7030-ULG-CWB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT, EMERGENCY MODE
LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1647.2 lumens
Efficiency: N/A
Efficacy: 299.5 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 (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

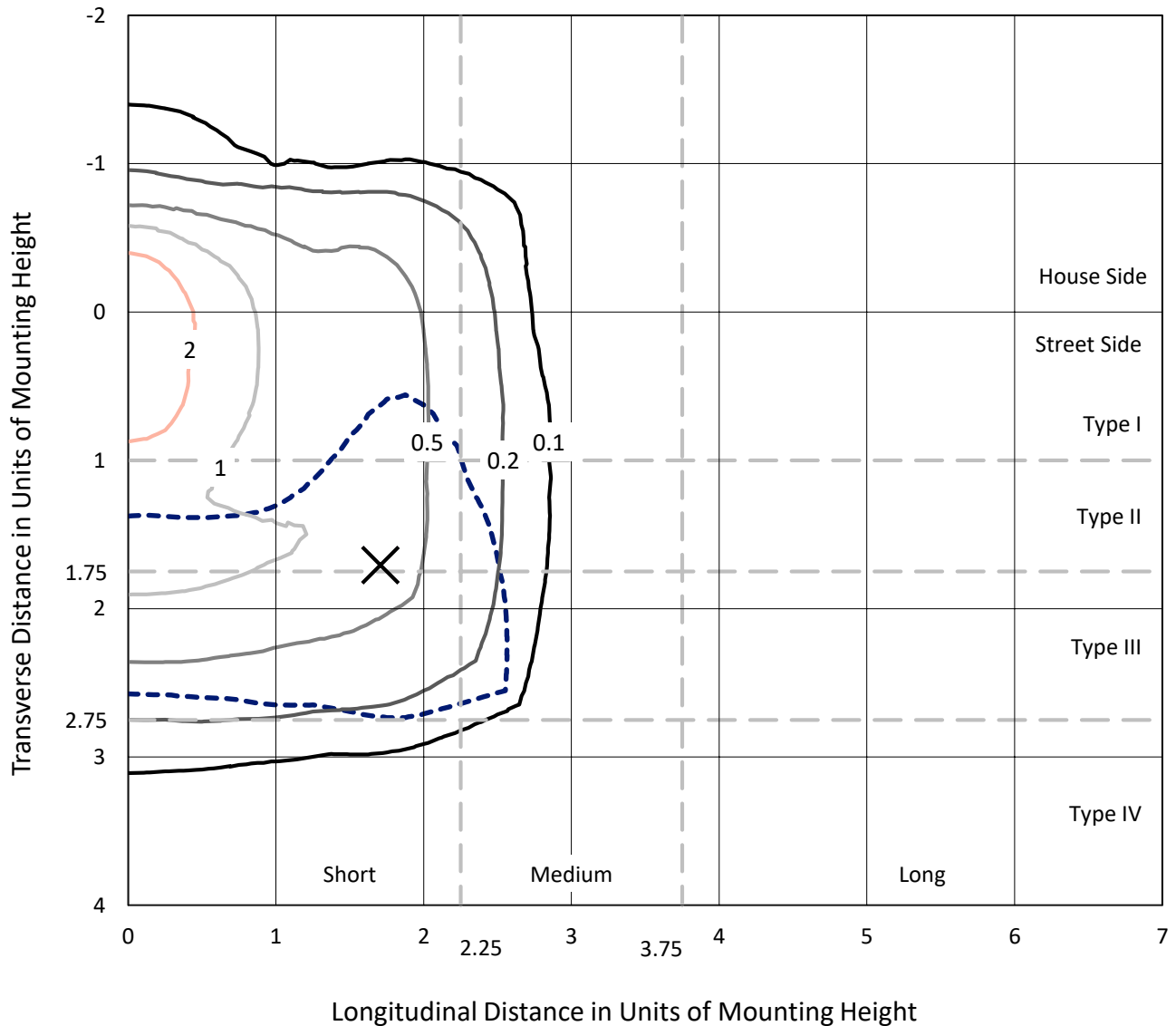


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

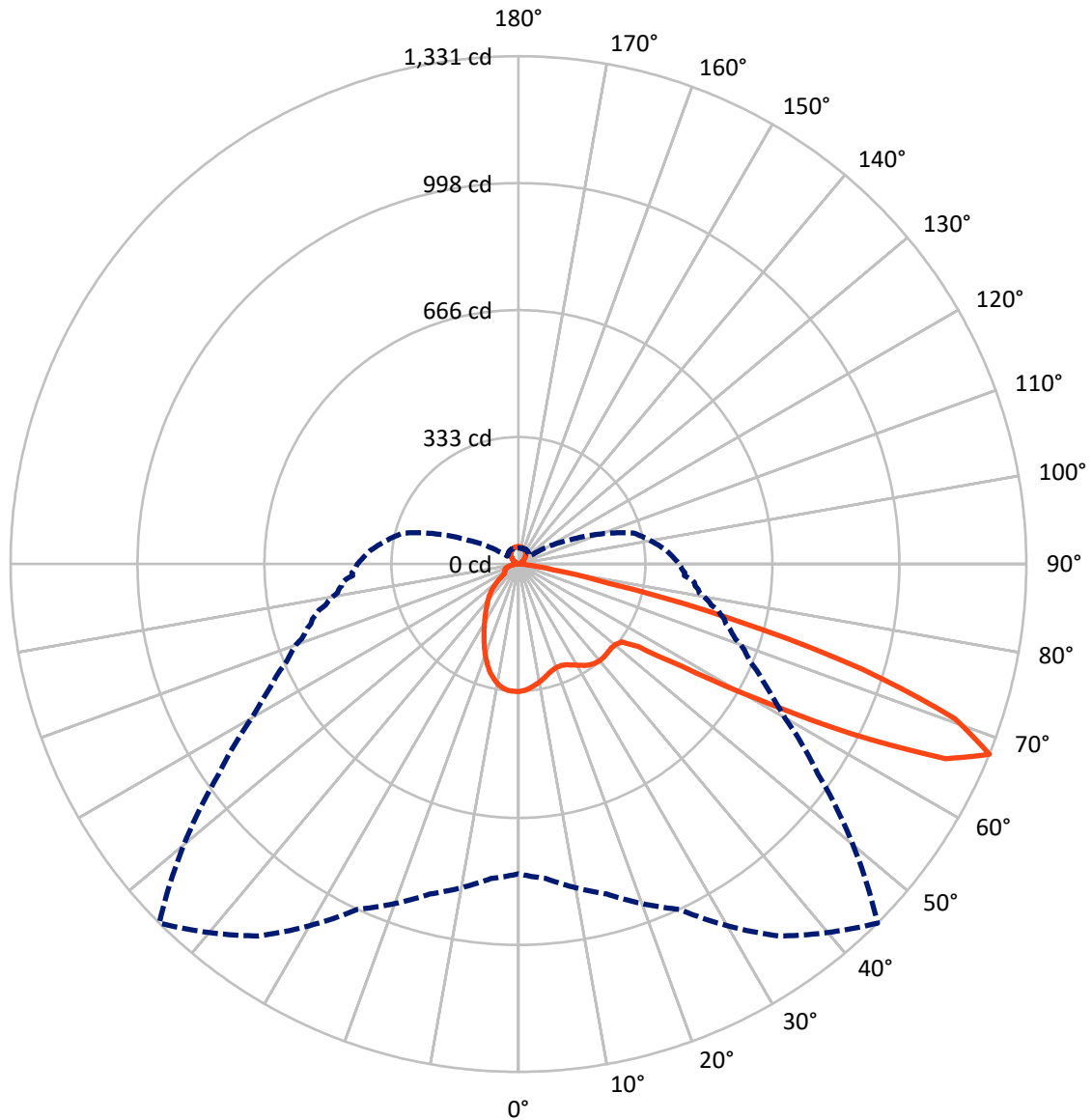


Based on 10 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - Semi-Cutoff

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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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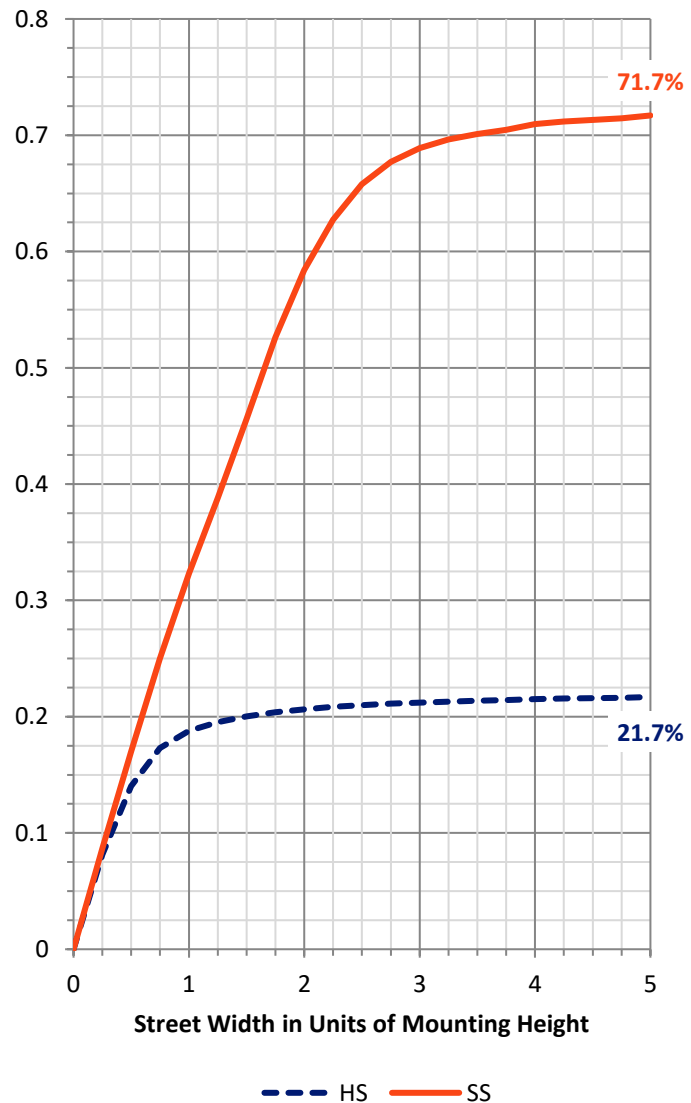
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	362.1	51.1	413.1
	% Fixture	22.0	3.1	25.1
Street Side	Lumens	1183.0	51.1	1234.1
	% Fixture	71.8	3.1	74.9
Total	Lumens	1545.1	102.1	1647.2
	% Fixture	93.8	6.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.0	1.9
10°-20°	83.5	5.1
20°-30°	120.3	7.3
30°-40°	153.5	9.3
40°-50°	181.2	11.0
50°-60°	290.6	17.6
60°-70°	489.1	29.7
70°-80°	181.9	11.0
80°-90°	13.8	0.8
90°-100°	0.4	0.0
100°-110°	4.0	0.2
110°-120°	8.2	0.5
120°-130°	13.9	0.8
130°-140°	19.4	1.2
140°-150°	21.2	1.3
150°-160°	18.4	1.1
160°-170°	12.4	0.8
170°-180°	4.3	0.3
0°-90°	1545.1	93.8
0°-180°	1647.2	100.0



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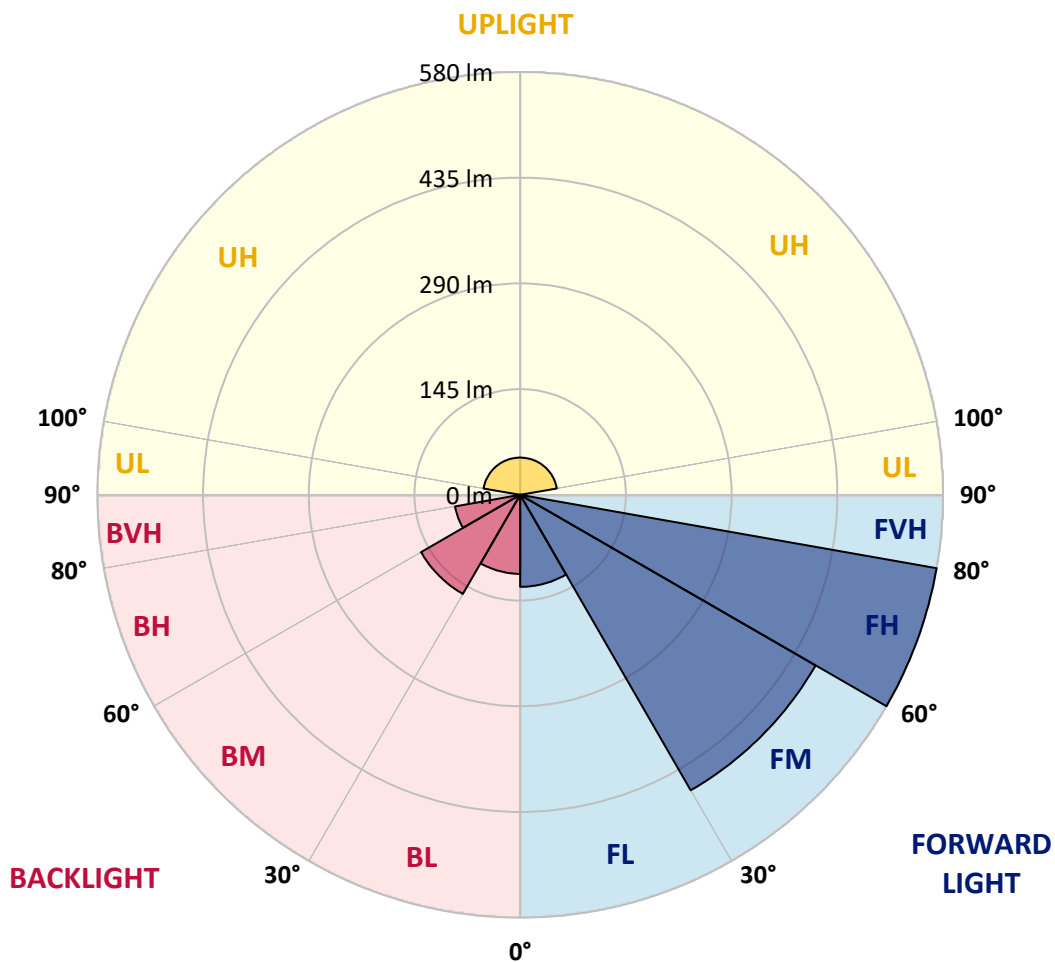
CATALOG NUMBER: ENT-EXX-LED-E1-BL4-7030-ULG-CWB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	126.3	7.7			
FM	(30°-60°)	468.2	28.4			
FH	(60°-80°)	580.3	35.2			G0/660
FVH	(80°-90°)	8.2	0.5			G0/10
BL	(0°-30°)	108.5	6.6	B0/110		
BM	(30°-60°)	157.2	9.5	B0/220		
BH	(60°-80°)	90.7	5.5	B0/110		G0/110
BVH	(80°-90°)	5.6	0.3			G0/10
UL	(90°-100°)	0.4	0.0		U1/10	
UH	(100°-180°)	51.1	3.1		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°	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9
2.5°	329.1	329.1	329.7	329.7	330.6	331.2	330.6	331.8	331.8	331.5	332.1
5°	324.4	324.4	324.7	324.7	325.3	326.2	325.6	326.8	326.4	326.8	326.8
7.5°	318.8	318.8	319.4	319.1	319.4	319.9	318.5	319.4	319.4	319.7	319.4
10°	311.7	312.3	312.9	312.6	312.6	312.9	310.5	311.4	311.1	311.1	310.8
12.5°	305.2	304.6	305.2	305.8	305.5	305.5	303.1	302.5	302.5	302.5	302.8
15°	298.4	299.0	299.8	299.0	298.4	297.2	294.8	294.2	294.2	294.2	294.5
17.5°	296.9	296.9	297.5	296.6	294.2	291.9	287.1	286.2	286.2	285.9	285.9
20°	301.0	300.7	301.6	299.8	294.5	288.3	280.9	279.4	279.4	279.4	279.1
22.5°	309.6	309.6	311.1	309.0	300.5	288.6	277.7	275.3	275.0	274.7	274.1
25°	326.2	325.9	326.8	321.4	309.0	292.5	276.8	273.2	272.9	272.3	271.8
27.5°	345.4	346.0	347.8	339.8	321.4	299.3	280.6	274.7	274.1	273.2	272.1
30°	364.3	366.1	369.3	360.8	335.6	307.8	286.5	279.7	278.6	277.4	275.3
32.5°	388.3	387.7	393.0	380.0	348.0	317.0	292.7	284.5	283.0	281.2	278.6
35°	413.7	414.9	416.1	395.1	358.4	324.4	296.6	287.1	285.4	283.6	279.7
37.5°	439.1	439.4	436.8	407.2	364.6	328.8	298.7	287.7	285.4	282.7	278.3
40°	462.5	461.6	453.6	416.4	368.2	331.2	299.5	286.5	283.6	280.9	275.9
42.5°	475.8	474.9	464.9	420.5	368.4	330.9	299.5	285.4	282.1	278.9	273.2
45°	481.4	480.8	469.3	421.1	366.4	329.1	297.8	284.2	280.9	277.9	272.1
47.5°	482.0	482.0	470.2	420.2	364.6	327.9	297.8	285.7	283.0	280.6	276.2
50°	479.3	479.7	470.5	422.6	366.1	330.6	300.7	289.2	286.5	284.2	279.1
52.5°	510.7	507.7	487.3	433.2	375.9	339.2	310.8	300.5	299.5	298.1	294.2
55°	750.2	752.6	641.1	499.8	416.9	383.2	371.4	369.3	375.9	378.2	378.2
57.5°	952.5	944.8	902.8	729.2	545.3	504.8	509.5	514.5	524.0	528.1	531.1
60°	1001.8	1002.5	1001.3	951.9	804.9	712.7	689.6	667.7	666.8	659.1	653.2
62.5°	996.0	1000.7	1022.9	1034.1	1048.6	980.9	840.1	779.5	767.7	753.2	732.5
65°	953.1	960.1	995.7	1050.3	1175.2	1230.7	941.5	833.0	814.7	797.2	762.3
67.5°	812.0	827.4	895.4	998.6	1190.2	1331.0	958.1	807.0	782.7	760.0	718.6
70°	501.2	509.2	614.2	805.8	1078.5	1213.6	870.0	684.9	654.1	625.1	568.7
72.5°	323.5	320.8	338.6	453.9	792.5	943.0	598.2	455.4	430.2	407.2	370.8
75°	226.5	226.8	218.8	216.5	367.6	584.0	270.9	194.6	183.3	178.6	170.9
77.5°	147.6	149.3	147.2	152.9	147.2	242.8	124.5	91.4	86.9	84.0	79.3
80°	89.0	94.9	96.7	97.9	99.4	91.7	73.9	53.8	48.5	43.5	35.8
82.5°	15.7	15.4	21.3	28.7	37.6	42.9	31.0	19.5	18.3	17.7	16.3
85°	0.0	0.0	0.3	0.3	0.6	2.1	3.2	3.9	3.6	3.9	4.1
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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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°	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9
2.5°	332.1	331.8	331.5	331.5	332.1	332.1	331.8	331.8	332.1	331.8	332.4
5°	327.1	326.8	326.8	326.4	326.8	327.1	326.8	326.8	327.1	326.8	327.4
7.5°	319.1	319.4	319.1	319.1	319.4	319.7	319.4	319.4	319.4	319.4	319.1
10°	310.8	310.8	310.5	310.5	311.1	310.8	310.5	310.5	310.8	311.1	310.5
12.5°	302.5	303.1	303.1	301.9	302.2	302.5	302.5	302.2	302.2	303.1	302.2
15°	294.2	294.5	294.2	294.5	293.9	293.7	293.9	293.9	293.3	293.0	293.0
17.5°	285.9	285.7	285.7	285.1	284.8	284.8	284.5	284.8	284.2	284.5	283.6
20°	278.6	278.3	277.9	277.9	277.1	277.1	277.1	276.8	276.2	276.2	275.9
22.5°	274.1	273.8	273.5	272.9	272.6	272.3	272.3	272.1	271.5	271.2	270.9
25°	271.8	271.5	270.9	270.3	270.0	269.7	269.7	269.4	268.8	268.2	267.9
27.5°	272.1	271.5	270.9	270.3	270.0	269.4	269.1	268.8	268.2	267.6	267.0
30°	274.7	273.5	272.3	271.5	270.6	269.7	269.1	268.8	267.9	267.0	266.1
32.5°	277.4	275.9	274.1	272.3	270.9	269.4	268.5	267.6	266.4	265.0	264.1
35°	278.3	276.5	273.8	272.3	270.3	268.5	267.0	265.8	263.8	262.0	260.5
37.5°	276.2	274.1	271.5	269.4	267.3	265.0	263.2	261.4	259.9	257.8	256.4
40°	272.9	270.6	267.9	265.0	262.9	260.5	258.8	257.3	255.2	253.4	252.2
42.5°	270.3	267.6	264.6	262.3	259.9	257.6	255.5	254.0	252.0	249.9	248.4
45°	269.4	266.7	264.4	261.4	259.0	257.3	255.5	253.4	251.7	249.9	248.1
47.5°	274.1	271.8	269.4	267.0	265.0	262.9	261.1	259.0	257.0	254.6	252.8
50°	276.8	274.1	272.1	269.4	267.0	265.0	263.2	261.1	259.6	257.3	255.5
52.5°	296.0	292.5	293.0	290.7	290.7	288.3	290.1	287.4	288.9	287.1	289.8
55°	377.3	378.5	385.9	387.1	390.0	389.7	391.5	399.2	396.3	392.4	393.6
57.5°	523.1	525.8	529.6	526.1	528.7	529.3	534.3	532.3	530.5	529.3	525.5
60°	649.7	646.1	640.5	633.7	631.0	628.1	623.0	623.0	616.5	614.5	609.5
62.5°	723.9	713.5	706.4	695.5	687.8	682.5	673.6	666.8	657.9	651.2	643.2
65°	748.1	730.7	718.3	704.7	692.6	681.0	668.3	658.5	647.6	640.2	627.5
67.5°	701.1	683.4	662.4	647.9	635.2	620.7	600.9	588.8	579.3	565.1	558.9
70°	545.9	527.2	500.9	493.8	474.3	451.8	431.7	419.6	405.7	396.0	385.6
72.5°	346.3	325.3	313.8	305.2	292.5	273.8	256.4	249.3	237.2	234.5	227.7
75°	162.6	148.4	145.5	143.4	129.5	126.9	121.5	119.2	113.5	110.6	109.4
77.5°	72.7	69.5	64.2	62.7	58.2	53.8	48.5	46.1	43.2	41.4	39.0
80°	33.1	29.9	27.8	26.3	25.7	24.2	23.1	22.2	21.3	21.3	19.8
82.5°	16.0	15.4	14.8	14.8	13.9	13.9	13.0	12.7	12.4	12.1	12.1
85°	4.4	4.4	4.4	4.7	4.7	4.7	4.7	4.7	4.7	5.0	5.0
87.5°	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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-EXX-LED-E1-BL4-7030-ULG-CWB

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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CATALOG NUMBER: ENT-EXX-LED-E1-BL4-7030-ULG-CWB

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9
2.5°	332.1	332.1	332.1	332.7	332.4	333.2	333.2	333.2	333.9	334.2	333.9
5°	327.4	327.4	327.4	327.6	327.6	328.2	328.2	328.8	328.8	329.1	329.1
7.5°	319.7	319.9	319.9	320.6	320.3	320.6	320.6	321.4	321.4	321.7	321.7
10°	310.8	311.1	311.1	311.1	311.4	311.7	311.7	312.3	312.6	312.6	313.1
12.5°	302.5	302.2	302.5	302.2	303.1	303.1	303.4	303.1	303.4	303.7	304.0
15°	293.3	293.3	293.0	293.3	293.3	293.0	292.7	293.0	293.7	293.7	293.7
17.5°	284.2	283.3	283.3	283.3	283.0	282.4	283.0	282.7	282.7	283.0	282.7
20°	275.6	275.3	275.0	274.7	274.4	273.5	273.5	273.5	273.2	273.2	273.2
22.5°	270.3	270.0	269.7	269.4	268.2	267.6	267.3	267.0	266.4	266.1	265.8
25°	267.3	266.7	266.1	265.5	264.6	263.8	262.9	262.6	262.0	261.4	260.5
27.5°	266.4	265.8	264.6	264.1	262.9	262.0	261.1	260.2	259.3	258.5	257.6
30°	265.0	264.1	262.9	262.0	261.1	259.6	258.5	257.6	256.1	255.2	254.0
32.5°	262.9	261.7	260.5	259.3	258.2	256.7	255.2	254.0	252.8	251.7	250.2
35°	259.3	257.8	256.1	254.9	253.4	252.0	250.8	248.7	247.8	246.3	244.9
37.5°	254.6	253.1	251.7	250.2	248.4	247.2	245.4	243.7	242.8	241.9	239.8
40°	250.5	248.7	247.2	246.0	244.0	243.1	241.3	239.5	238.4	237.4	235.7
42.5°	246.6	244.9	243.4	241.6	240.1	238.9	237.4	235.7	234.5	233.9	232.4
45°	246.6	244.5	242.8	241.3	239.8	238.4	237.2	235.4	234.5	233.3	232.4
47.5°	250.8	248.4	246.3	244.2	242.2	240.7	238.9	237.2	235.7	234.8	233.6
50°	253.7	251.3	250.2	247.8	246.6	244.5	242.5	241.6	240.1	239.2	238.9
52.5°	289.8	288.3	288.6	282.7	281.5	284.5	279.7	283.9	282.7	279.1	279.1
55°	400.4	399.8	402.5	395.1	391.8	397.7	400.1	391.5	393.6	393.6	393.0
57.5°	529.3	525.5	521.6	522.5	517.8	521.3	516.9	511.6	513.6	511.9	505.7
60°	606.2	603.8	598.2	592.9	587.9	583.1	579.0	574.3	571.9	567.7	563.3
62.5°	637.3	631.0	624.2	617.2	609.2	601.5	596.7	590.5	584.0	579.9	575.2
65°	620.7	611.5	604.1	593.8	585.2	575.7	569.5	562.4	556.5	549.4	543.5
67.5°	546.8	536.1	516.6	507.1	494.4	479.7	475.5	466.9	463.7	453.0	435.6
70°	372.3	361.6	349.8	330.6	318.2	305.5	291.6	281.5	280.0	271.5	258.8
72.5°	218.8	211.4	203.7	192.8	183.6	178.6	168.8	158.8	158.5	148.7	143.7
75°	103.5	99.7	92.0	89.3	81.0	80.4	74.2	73.0	74.2	71.3	70.7
77.5°	35.2	34.3	32.5	30.2	28.4	27.8	26.3	25.4	24.8	24.2	23.7
80°	19.2	18.6	18.3	17.5	16.9	16.5	15.7	15.4	15.1	14.8	14.5
82.5°	11.5	11.8	11.2	10.7	10.7	10.1	9.7	9.5	9.2	9.2	9.2
85°	4.7	5.0	4.7	4.4	4.1	4.4	4.4	4.1	3.9	4.1	4.1
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	
333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	333.9	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
333.2	333.0	333.0	332.7	332.4	333.0	333.6	334.4	333.9	334.4	334.7	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	
328.5	328.5	328.5	328.8	328.5	329.4	330.6	332.4	332.7	333.9	334.7	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		
320.8	320.8	321.1	321.4	321.1	322.3	324.4	326.4	327.9	330.0	331.8	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			
312.0	312.0	312.0	312.0	312.3	313.8	315.2	317.6	319.9	323.2	325.9	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				
304.0	303.1	303.4	304.0	303.4	303.4	304.9	306.6	308.1	312.3	317.0	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					
293.3	293.3	292.7	293.0	291.6	291.3	291.9	293.0	294.2	297.8	302.8	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						
282.1	282.1	282.1	281.2	280.0	277.1	276.8	276.8	276.8	279.4	285.4	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							
272.1	272.1	271.5	270.9	268.2	263.2	259.0	257.3	256.7	261.1	263.8	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								
265.0	264.6	263.5	262.9	258.8	250.8	244.2	239.2	237.7	239.2	240.1	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									
259.3	258.8	257.6	256.4	250.8	239.8	229.5	220.9	216.8	215.6	212.6	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										
256.1	255.2	253.4	252.2	244.9	230.9	217.3	206.1	198.4	192.8	187.5	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											
252.5	251.0	249.3	247.5	239.2	223.8	208.2	194.3	180.7	170.9	163.2	142.5°	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	32.1												
248.4	246.9	245.2	243.4	234.2	217.3	200.8	183.6	164.7	151.4	139.9	145°	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	34.0													
243.4	241.9	240.1	238.0	228.9	212.0	195.7	173.3	150.5	133.4	118.3	147.5°	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	35.6														
238.4	236.9	235.1	233.0	223.8	209.4	192.8	163.5	137.5	116.5	96.7	150°	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	37.3															
234.5	233.0	231.2	229.5	221.2	208.2	191.3	155.2	126.0	99.9	77.2	152.5°	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	38.8																
231.2	229.8	228.3	226.5	219.4	208.8	188.1	148.2	114.7	83.4	60.6	155°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	40.0																	
230.9	230.1	228.3	226.8	220.0	211.4	185.4	141.9	103.2	67.4	51.2	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	41.1																	
233.0	231.8	230.6	229.5	224.1	218.2	183.6	135.4	90.2	54.4	48.8	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	42.2																		
238.0	236.9	236.3	235.7	232.4	227.4	183.6	128.6	75.1	47.9	48.5	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	43.2																			
278.6	275.3	274.4	276.8	267.9	242.8	184.8	120.3	58.9	45.8	48.8	165°	167.5°	170°	172.5°	175°	177.5°	180°	44.0																				
391.8	395.1	386.8	382.7	367.3	280.9	185.7	107.9	47.9	45.6	48.2	167.5°	170°	172.5°	175°	177.5°	180°	44.4																					
506.3	506.3	503.3	496.8	477.9	346.0	189.9	88.1	43.8	44.9	47.6	170°	172.5°	175°	177.5°	180°	44.5																						
562.1	558.6	555.6	551.8	523.1	391.2	196.1	65.0	42.0	44.6	47.0	172.5°	175°	177.5°	180°	44.9																							
572.2	566.6	562.7	557.7	519.6	393.6	198.7	48.8	40.2	44.6	45.6	175°	177.5°	180°	45.5																								
539.1	533.2	528.1	519.9	473.4	356.3	185.4	39.9	39.0	43.5	44.1	177.5°	180°	45.7																									
436.8	429.7	425.8	421.7	390.9	312.9	149.9	35.8	37.6	41.4	42.6	180°	45.6																										
249.9	242.2	237.7	238.6	220.0	247.5	119.8	32.8	35.5	39.0	40.8	45.6																											
134.6	126.3	123.6	115.0	98.2	124.8	92.3	30.2	32.8	35.5	37.3	40.8																											
66.5	63.6	64.5	60.3	51.2	38.4	59.4	26.9	29.3	31.9	33.1	37.3																											
23.1	22.5	22.2	21.9	21.3	20.4	27.2	23.1	25.1	27.2	28.4	33.1																											
14.2	13.9	14.2	13.9	13.6	15.7	17.5	18.3	20.1	22.8	23.1	28.4																											
8.6	8.6	8.6	8.6	8.6	10.9	12.4	14.2	15.7	17.5	18.9	23.1																											
4.1	4.1	4.1	4.1	4.4	7.4	8.3	10.4	10.9	12.4	13.6	18.9																											
0.9	0.9	0.9	0.9	1.2	3.9	5.0	6.2	6.5	6.5	7.4	13.6																											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4																											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6																											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4																											
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	13.6																											
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7.4																											
1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	13.6																											
2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	7.4																											
3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	13.6																											
4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	7.4																											
5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	13.6																											

'173497
 ENT-EXX-LED-E1-BL4-7030-ULG-CWB

REPORT NUMBER: P173497
 CATALOG NUMBER: ENT-EXX-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°	333.9	333.9
8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	2.5°	334.4	333.9
9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	5°	335.3	334.7
11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	7.5°	333.0	333.2
13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	10°	327.9	328.8
15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	12.5°	319.9	321.7
17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	15°	306.6	309.3
20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	17.5°	288.9	292.2
22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	20°	266.7	268.2
25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	22.5°	239.5	240.1
27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25°	210.8	210.8
29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	27.5°	184.2	182.8
32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	30°	158.8	155.0
34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	32.5°	131.9	125.4
35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35°	104.7	99.4
37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.5°	81.3	75.4
38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	40°	62.4	58.0
40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	42.5°	52.6	51.7
41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	45°	50.3	51.4
42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	47.5°	50.6	52.0
43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	50°	50.9	52.4
44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	52.5°	50.9	51.7
44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	55°	50.3	50.3
44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	57.5°	49.1	48.8
44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	60°	48.2	48.2
45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	62.5°	46.7	46.7
45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	65°	44.4	44.6
45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	67.5°	42.0	42.0
										70°	39.0	39.0
										72.5°	36.1	37.3
										75°	34.0	36.1
										77.5°	29.9	31.9
										80°	24.5	24.8
										82.5°	19.5	18.9
										85°	13.9	13.0
										87.5°	7.4	7.1
										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: P173497

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

LED-E1-BL4-7030-ULG-CWB

tinued):

180°
333.9
333.6
334.4
333.0
329.1
322.9
308.7
292.2
267.3
239.2
209.7
181.9
153.8
125.4
97.9
73.6
57.7
52.0
51.4
52.4
52.6
51.7
50.3
49.4
48.2
46.7
44.6
42.0
39.6
37.8
37.0
33.1
24.8
18.0
13.0
7.4
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

