

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: P159982

Luminaire Tested: **ENT-E01-LED-E1-BL4-ULG**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P159982
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P20107) AND SCALED
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-E01-LED-E1-BL4-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2928 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U3 - G1

Input Watts (W): 32.7
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

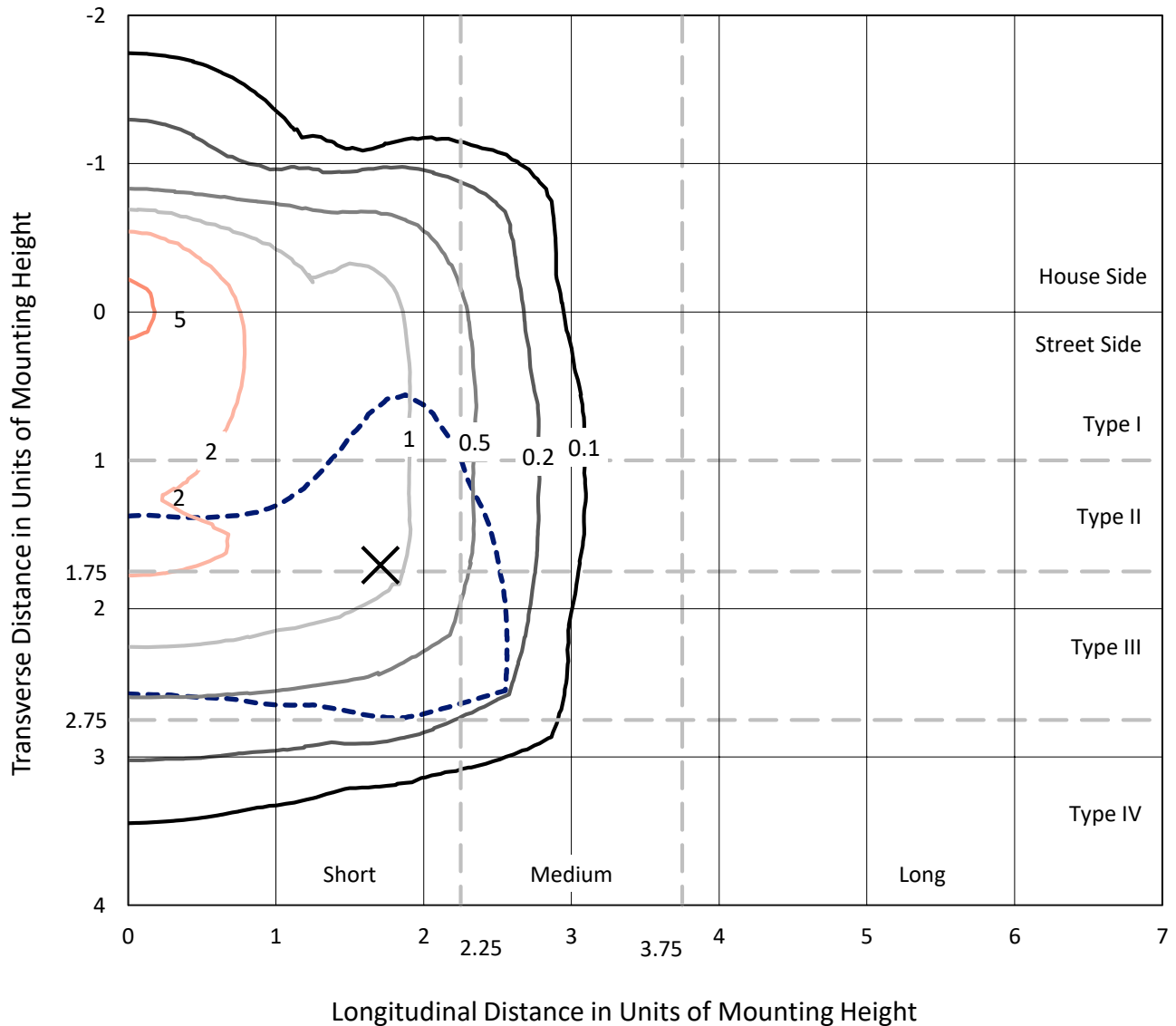


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Iso-Footcandle Lines of Horizontal Illumination

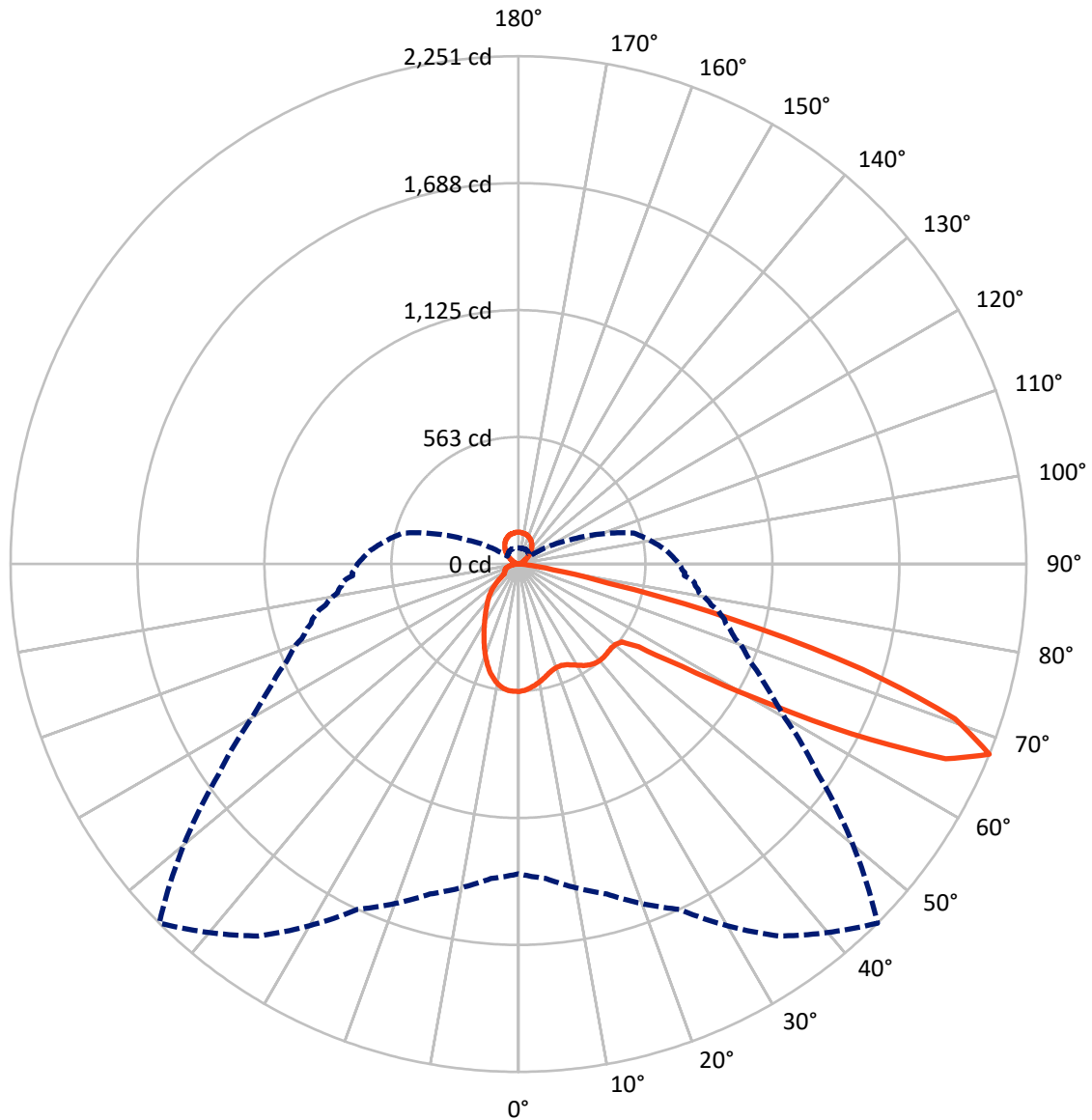
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 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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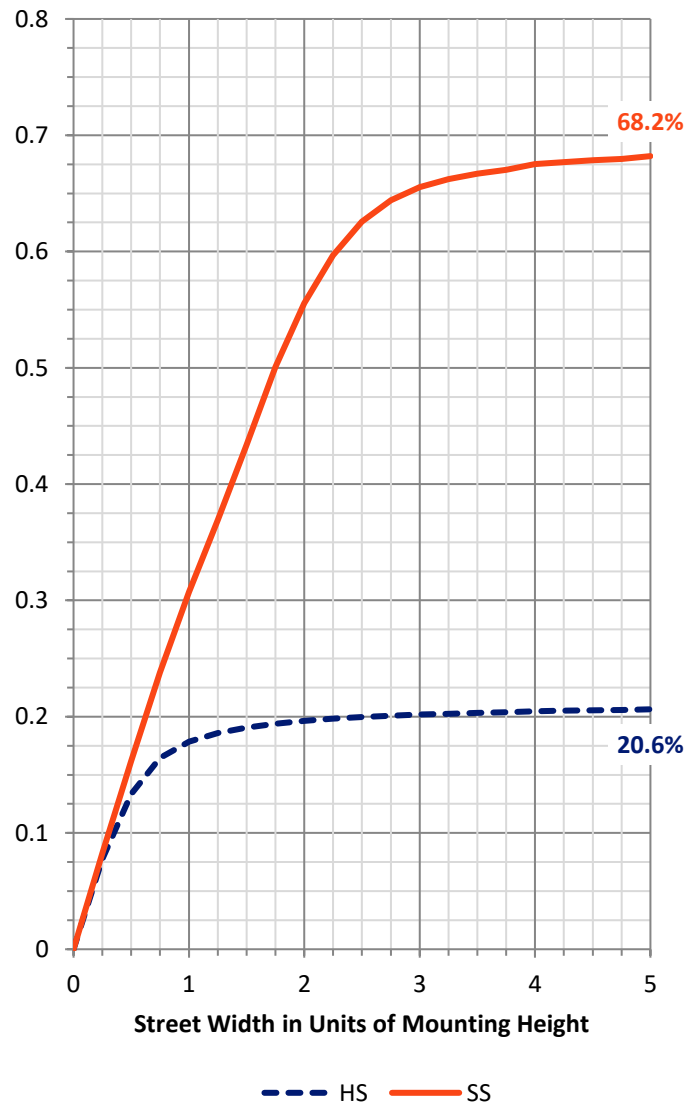
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	612.2	157.7	770.0
	% Fixture	20.9	5.4	26.3
Street Side	Lumens	2000.3	157.7	2158.1
	% Fixture	68.3	5.4	73.7
Total	Lumens	2612.5	315.5	2928.0
	% Fixture	89.2	10.8	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	1.8
10°-20°	141.2	4.8
20°-30°	203.5	6.9
30°-40°	259.6	8.9
40°-50°	306.4	10.5
50°-60°	491.4	16.8
60°-70°	827.0	28.2
70°-80°	307.6	10.5
80°-90°	23.4	0.8
90°-100°	1.3	0.0
100°-110°	12.3	0.4
110°-120°	25.2	0.9
120°-130°	43.0	1.5
130°-140°	60.0	2.0
140°-150°	65.4	2.2
150°-160°	56.9	1.9
160°-170°	38.2	1.3
170°-180°	13.3	0.5
0°-90°	2612.5	89.2
0°-180°	2928.0	100.0



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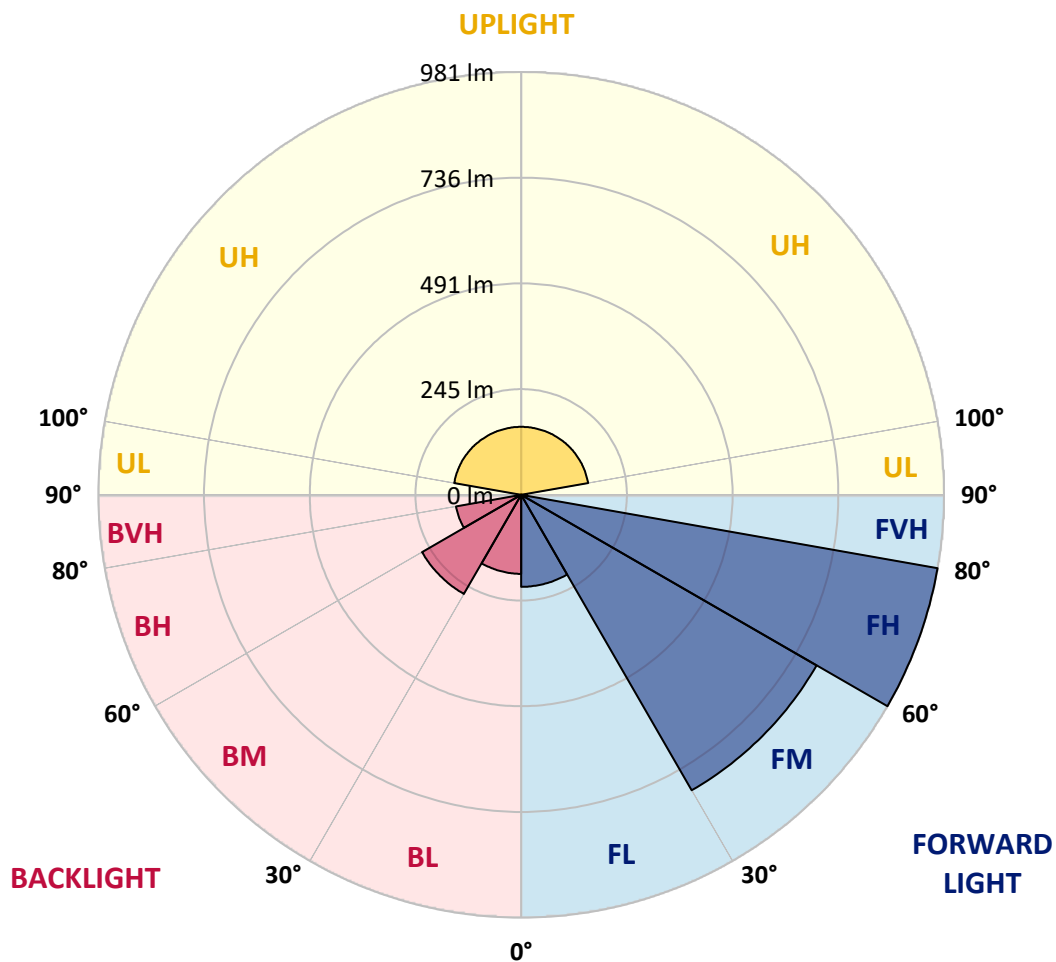
CATALOG NUMBER: ENT-E01-LED-E1-BL4-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	213.6	7.3			
FM	(30°-60°)	791.7	27.0			
FH	(60°-80°)	981.2	33.5			G1/1800
FVH	(80°-90°)	13.9	0.5			G1/100
BL	(0°-30°)	183.5	6.3	B1/500		
BM	(30°-60°)	265.8	9.1	B1/1000		
BH	(60°-80°)	153.4	5.2	B1/500		G1/500
BVH	(80°-90°)	9.5	0.3			G0/10
UL	(90°-100°)	1.3	0.0		U1/10	
UH	(100°-180°)	157.7	5.4		U3/500	

BUG Rating: B1-U3-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5
2.5°	556.5	556.5	557.5	557.5	559.0	560.0	559.0	561.0	561.0	560.5	561.5
5°	548.5	548.5	549.0	549.0	550.0	551.5	550.5	552.5	552.0	552.5	552.5
7.5°	539.0	539.0	540.0	539.5	540.0	541.0	538.5	540.0	540.0	540.5	540.0
10°	527.0	528.0	529.0	528.5	528.5	529.0	525.0	526.5	526.0	526.0	525.5
12.5°	516.0	515.0	516.0	517.0	516.5	516.5	512.5	511.5	511.5	511.5	512.0
15°	504.5	505.5	507.0	505.5	504.5	502.5	498.5	497.5	497.5	497.5	498.0
17.5°	502.0	502.0	503.0	501.5	497.5	493.5	485.5	484.0	484.0	483.5	483.5
20°	509.0	508.5	510.0	507.0	498.0	487.5	475.0	472.5	472.5	472.5	472.0
22.5°	523.5	523.5	526.0	522.5	508.0	488.0	469.5	465.5	465.0	464.5	463.5
25°	551.5	551.0	552.5	543.5	522.5	494.5	468.0	462.0	461.5	460.5	459.5
27.5°	584.0	585.0	588.0	574.5	543.5	506.0	474.5	464.5	463.5	462.0	460.0
30°	616.0	619.0	624.5	610.0	567.5	520.5	484.5	473.0	471.0	469.0	465.5
32.5°	656.5	655.5	664.5	642.5	588.5	536.0	495.0	481.0	478.5	475.5	471.0
35°	699.5	701.5	703.5	668.0	606.0	548.5	501.5	485.5	482.5	479.5	473.0
37.5°	742.5	743.0	738.5	688.5	616.5	556.0	505.0	486.5	482.5	478.0	470.5
40°	782.0	780.5	767.0	704.0	622.5	560.0	506.5	484.5	479.5	475.0	466.5
42.5°	804.5	803.0	786.0	711.0	623.0	559.5	506.5	482.5	477.0	471.5	462.0
45°	814.0	813.0	793.5	712.0	619.5	556.5	503.5	480.5	475.0	470.0	460.0
47.5°	815.0	815.0	795.0	710.5	616.5	554.5	503.5	483.0	478.5	474.5	467.0
50°	810.5	811.0	795.5	714.5	619.0	559.0	508.5	489.0	484.5	480.5	472.0
52.5°	863.5	858.5	824.0	732.5	635.5	573.5	525.5	508.0	506.5	504.0	497.5
55°	1268.5	1272.5	1084.0	845.0	705.0	648.0	628.0	624.5	635.5	639.5	639.5
57.5°	1610.5	1597.5	1526.5	1233.0	922.0	853.5	861.5	870.0	886.0	893.0	898.0
60°	1694.0	1695.0	1693.0	1609.5	1361.0	1205.0	1166.0	1129.0	1127.5	1114.5	1104.5
62.5°	1684.0	1692.0	1729.5	1748.5	1773.0	1658.5	1420.5	1318.0	1298.0	1273.5	1238.5
65°	1611.5	1623.5	1683.5	1776.0	1987.0	2081.0	1592.0	1408.5	1377.5	1348.0	1289.0
67.5°	1373.0	1399.0	1514.0	1688.5	2012.5	2250.5	1620.0	1364.5	1323.5	1285.0	1215.0
70°	847.5	861.0	1038.5	1362.5	1823.5	2052.0	1471.0	1158.0	1106.0	1057.0	961.5
72.5°	547.0	542.5	572.5	767.5	1340.0	1594.5	1011.5	770.0	727.5	688.5	627.0
75°	383.0	383.5	370.0	366.0	621.5	987.5	458.0	329.0	310.0	302.0	289.0
77.5°	249.5	252.5	249.0	258.5	249.0	410.5	210.5	154.5	147.0	142.0	134.0
80°	150.5	160.5	163.5	165.5	168.0	155.0	125.0	91.0	82.0	73.5	60.5
82.5°	26.5	26.0	36.0	48.5	63.5	72.5	52.5	33.0	31.0	30.0	27.5
85°	0.0	0.0	0.5	0.5	1.0	3.5	5.5	6.5	6.0	6.5	7.0
87.5°	0.0	0.0	0.0	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0
90°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
92.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
95°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
97.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
100°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
102.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
105°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
107.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
110°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8



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CATALOG NUMBER: ENT-E01-LED-E1-BL4-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
112.5°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
115°	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
117.5°	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
120°	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
122.5°	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9
125°	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
127.5°	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
130°	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
132.5°	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
135°	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9
137.5°	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
140°	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
142.5°	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
145°	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9
147.5°	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1
150°	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1
152.5°	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7
155°	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7
157.5°	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0
160°	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3
162.5°	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5
165°	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0
167.5°	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1
170°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
172.5°	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6
175°	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5
177.5°	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1
180°	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8



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CATALOG NUMBER: ENT-E01-LED-E1-BL4-ULG

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5
2.5°	561.5	561.0	560.5	560.5	561.5	561.5	561.0	561.0	561.5	561.0	562.0
5°	553.0	552.5	552.5	552.0	552.5	553.0	552.5	552.5	553.0	552.5	553.5
7.5°	539.5	540.0	539.5	539.5	540.0	540.5	540.0	540.0	540.0	540.0	539.5
10°	525.5	525.5	525.0	525.0	526.0	525.5	525.0	525.0	525.5	526.0	525.0
12.5°	511.5	512.5	512.5	510.5	511.0	511.5	511.5	511.0	511.0	512.5	511.0
15°	497.5	498.0	497.5	498.0	497.0	496.5	497.0	497.0	496.0	495.5	495.5
17.5°	483.5	483.0	483.0	482.0	481.5	481.5	481.0	481.5	480.5	481.0	479.5
20°	471.0	470.5	470.0	470.0	468.5	468.5	468.5	468.0	467.0	467.0	466.5
22.5°	463.5	463.0	462.5	461.5	461.0	460.5	460.5	460.0	459.0	458.5	458.0
25°	459.5	459.0	458.0	457.0	456.5	456.0	456.0	455.5	454.5	453.5	453.0
27.5°	460.0	459.0	458.0	457.0	456.5	455.5	455.0	454.5	453.5	452.5	451.5
30°	464.5	462.5	460.5	459.0	457.5	456.0	455.0	454.5	453.0	451.5	450.0
32.5°	469.0	466.5	463.5	460.5	458.0	455.5	454.0	452.5	450.5	448.0	446.5
35°	470.5	467.5	463.0	460.5	457.0	454.0	451.5	449.5	446.0	443.0	440.5
37.5°	467.0	463.5	459.0	455.5	452.0	448.0	445.0	442.0	439.5	436.0	433.5
40°	461.5	457.5	453.0	448.0	444.5	440.5	437.5	435.0	431.5	428.5	426.5
42.5°	457.0	452.5	447.5	443.5	439.5	435.5	432.0	429.5	426.0	422.5	420.0
45°	455.5	451.0	447.0	442.0	438.0	435.0	432.0	428.5	425.5	422.5	419.5
47.5°	463.5	459.5	455.5	451.5	448.0	444.5	441.5	438.0	434.5	430.5	427.5
50°	468.0	463.5	460.0	455.5	451.5	448.0	445.0	441.5	439.0	435.0	432.0
52.5°	500.5	494.5	495.5	491.5	491.5	487.5	490.5	486.0	488.5	485.5	490.0
55°	638.0	640.0	652.5	654.5	659.5	659.0	662.0	675.0	670.0	663.5	665.5
57.5°	884.5	889.0	895.5	889.5	894.0	895.0	903.5	900.0	897.0	895.0	888.5
60°	1098.5	1092.5	1083.0	1071.5	1067.0	1062.0	1053.5	1053.5	1042.5	1039.0	1030.5
62.5°	1224.0	1206.5	1194.5	1176.0	1163.0	1154.0	1139.0	1127.5	1112.5	1101.0	1087.5
65°	1265.0	1235.5	1214.5	1191.5	1171.0	1151.5	1130.0	1113.5	1095.0	1082.5	1061.0
67.5°	1185.5	1155.5	1120.0	1095.5	1074.0	1049.5	1016.0	995.5	979.5	955.5	945.0
70°	923.0	891.5	847.0	835.0	802.0	764.0	730.0	709.5	686.0	669.5	652.0
72.5°	585.5	550.0	530.5	516.0	494.5	463.0	433.5	421.5	401.0	396.5	385.0
75°	275.0	251.0	246.0	242.5	219.0	214.5	205.5	201.5	192.0	187.0	185.0
77.5°	123.0	117.5	108.5	106.0	98.5	91.0	82.0	78.0	73.0	70.0	66.0
80°	56.0	50.5	47.0	44.5	43.5	41.0	39.0	37.5	36.0	36.0	33.5
82.5°	27.0	26.0	25.0	25.0	23.5	23.5	22.0	21.5	21.0	20.5	20.5
85°	7.5	7.5	7.5	8.0	8.0	8.0	8.0	8.0	8.0	8.5	8.5
87.5°	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
90°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
92.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
95°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
97.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
100°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
102.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
105°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
107.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
110°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8



REPORT NUMBER: P159982

CATALOG NUMBER: ENT-E01-LED-E1-BL4-ULG

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
112.5°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
115°	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
117.5°	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
120°	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
122.5°	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9
125°	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
127.5°	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
130°	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
132.5°	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
135°	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9
137.5°	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
140°	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
142.5°	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
145°	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9
147.5°	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1
150°	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1
152.5°	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7
155°	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7
157.5°	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0
160°	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3
162.5°	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5
165°	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0
167.5°	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1
170°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
172.5°	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6
175°	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5
177.5°	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1
180°	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8



REPORT NUMBER: P159982

CATALOG NUMBER: ENT-E01-LED-E1-BL4-ULG

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5
2.5°	561.5	561.5	561.5	562.5	562.0	563.5	563.5	563.5	564.5	565.0	564.5
5°	553.5	553.5	553.5	554.0	554.0	555.0	555.0	556.0	556.0	556.5	556.5
7.5°	540.5	541.0	541.0	542.0	541.5	542.0	542.0	543.5	543.5	544.0	544.0
10°	525.5	526.0	526.0	526.0	526.5	527.0	527.0	528.0	528.5	528.5	529.5
12.5°	511.5	511.0	511.5	511.0	512.5	512.5	513.0	512.5	513.0	513.5	514.0
15°	496.0	496.0	495.5	496.0	496.0	495.5	495.0	495.5	496.5	496.5	496.5
17.5°	480.5	479.0	479.0	479.0	478.5	477.5	478.5	478.0	478.0	478.5	478.0
20°	466.0	465.5	465.0	464.5	464.0	462.5	462.5	462.5	462.0	462.0	462.0
22.5°	457.0	456.5	456.0	455.5	453.5	452.5	452.0	451.5	450.5	450.0	449.5
25°	452.0	451.0	450.0	449.0	447.5	446.0	444.5	444.0	443.0	442.0	440.5
27.5°	450.5	449.5	447.5	446.5	444.5	443.0	441.5	440.0	438.5	437.0	435.5
30°	448.0	446.5	444.5	443.0	441.5	439.0	437.0	435.5	433.0	431.5	429.5
32.5°	444.5	442.5	440.5	438.5	436.5	434.0	431.5	429.5	427.5	425.5	423.0
35°	438.5	436.0	433.0	431.0	428.5	426.0	424.0	420.5	419.0	416.5	414.0
37.5°	430.5	428.0	425.5	423.0	420.0	418.0	415.0	412.0	410.5	409.0	405.5
40°	423.5	420.5	418.0	416.0	412.5	411.0	408.0	405.0	403.0	401.5	398.5
42.5°	417.0	414.0	411.5	408.5	406.0	404.0	401.5	398.5	396.5	395.5	393.0
45°	417.0	413.5	410.5	408.0	405.5	403.0	401.0	398.0	396.5	394.5	393.0
47.5°	424.0	420.0	416.5	413.0	409.5	407.0	404.0	401.0	398.5	397.0	395.0
50°	429.0	425.0	423.0	419.0	417.0	413.5	410.0	408.5	406.0	404.5	404.0
52.5°	490.0	487.5	488.0	478.0	476.0	481.0	473.0	480.0	478.0	472.0	472.0
55°	677.0	676.0	680.5	668.0	662.5	672.5	676.5	662.0	665.5	665.5	664.5
57.5°	895.0	888.5	882.0	883.5	875.5	881.5	874.0	865.0	868.5	865.5	855.0
60°	1025.0	1021.0	1011.5	1002.5	994.0	986.0	979.0	971.0	967.0	960.0	952.5
62.5°	1077.5	1067.0	1055.5	1043.5	1030.0	1017.0	1009.0	998.5	987.5	980.5	972.5
65°	1049.5	1034.0	1021.5	1004.0	989.5	973.5	963.0	951.0	941.0	929.0	919.0
67.5°	924.5	906.5	873.5	857.5	836.0	811.0	804.0	789.5	784.0	766.0	736.5
70°	629.5	611.5	591.5	559.0	538.0	516.5	493.0	476.0	473.5	459.0	437.5
72.5°	370.0	357.5	344.5	326.0	310.5	302.0	285.5	268.5	268.0	251.5	243.0
75°	175.0	168.5	155.5	151.0	137.0	136.0	125.5	123.5	125.5	120.5	119.5
77.5°	59.5	58.0	55.0	51.0	48.0	47.0	44.5	43.0	42.0	41.0	40.0
80°	32.5	31.5	31.0	29.5	28.5	28.0	26.5	26.0	25.5	25.0	24.5
82.5°	19.5	20.0	19.0	18.0	18.0	17.0	16.5	16.0	15.5	15.5	15.5
85°	8.0	8.5	8.0	7.5	7.0	7.5	7.5	7.0	6.5	7.0	7.0
87.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
90°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
92.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
95°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
97.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
100°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
102.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
105°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
107.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
110°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°	
112.5°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	0°
115°	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	2.5°
117.5°	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	5°
120°	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	7.5°
122.5°	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	10°
125°	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	12.5°
127.5°	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	15°
130°	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	17.5°
132.5°	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	20°
135°	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	22.5°
137.5°	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	25°
140°	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	27.5°
142.5°	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	30°
145°	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	32.5°
147.5°	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	35°
150°	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	37.5°
152.5°	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	40°
155°	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	42.5°
157.5°	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	45°
160°	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	47.5°
162.5°	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	50°
165°	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	52.5°
167.5°	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	55°
170°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	57.5°
172.5°	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	60°
175°	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	62.5°
177.5°	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	65°
180°	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	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
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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°	180°		
564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	564.5	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°	180°		
563.5	563.0	563.0	562.5	562.0	563.0	564.0	565.5	564.5	565.5	566.0	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°	180°			
555.5	555.5	555.5	556.0	555.5	557.0	559.0	562.0	562.5	564.5	566.0	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°				
542.5	542.5	543.0	543.5	543.0	545.0	548.5	552.0	554.5	558.0	561.0	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°					
527.5	527.5	527.5	527.5	528.0	530.5	533.0	537.0	541.0	546.5	551.0	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°						
514.0	512.5	513.0	514.0	513.0	513.0	515.5	518.5	521.0	528.0	536.0	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°							
496.0	496.0	495.0	495.5	493.0	492.5	493.5	495.5	497.5	503.5	512.0	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°								
477.0	477.0	477.0	475.5	473.5	468.5	468.0	468.0	468.0	472.5	482.5	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°									
460.0	460.0	459.0	458.0	453.5	445.0	438.0	435.0	434.0	441.5	446.0	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°										
448.0	447.5	445.5	444.5	437.5	424.0	413.0	404.5	402.0	404.5	406.0	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°											
438.5	437.5	435.5	433.5	424.0	405.5	388.0	373.5	366.5	364.5	359.5	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°												
433.0	431.5	428.5	426.5	414.0	390.5	367.5	348.5	335.5	326.0	317.0	140°	142.5°	145°	147.5°	150°	152.5°	155°	180°													
427.0	424.5	421.5	418.5	404.5	378.5	352.0	328.5	305.5	289.0	276.0	142.5°	145°	147.5°	150°	152.5°	155°	180°														
420.0	417.5	414.5	411.5	396.0	367.5	339.5	310.5	278.5	256.0	236.5	145°	147.5°	150°	152.5°	155°	180°															
411.5	409.0	406.0	402.5	387.0	358.5	331.0	293.0	254.5	225.5	200.0	147.5°	150°	152.5°	155°	180°																
403.0	400.5	397.5	394.0	378.5	354.0	326.0	276.5	232.5	197.0	163.5	150°	152.5°	155°	180°																	
396.5	394.0	391.0	388.0	374.0	352.0	323.5	262.5	213.0	169.0	130.5	152.5°	155°	180°																		
391.0	388.5	386.0	383.0	371.0	353.0	318.0	250.5	194.0	141.0	102.5	155°	180°																			
390.5	389.0	386.0	383.5	372.0	357.5	313.5	240.0	174.5	114.0	86.5	157.5°	180°																			
394.0	392.0	390.0	388.0	379.0	369.0	310.5	229.0	152.5	92.0	82.5	160°	180°																			
402.5	400.5	399.5	398.5	393.0	384.5	310.5	217.5	127.0	81.0	82.0	162.5°	180°																			
471.0	465.5	464.0	468.0	453.0	410.5	312.5	203.5	99.5	77.5	82.5	165°	180°																			
662.5	668.0	654.0	647.0	621.0	475.0	314.0	182.5	81.0	77.0	81.5	167.5°	180°																			
856.0	856.0	851.0	840.0	808.0	585.0	321.0	149.0	74.0	76.0	80.5	170°	180°																			
950.5	944.5	939.5	933.0	884.5	661.5	331.5	110.0	71.0	75.5	79.5	172.5°	180°																			
967.5	958.0	951.5	943.0	878.5	665.5	336.0	82.5	68.0	75.5	77.0	175°	180°																			
911.5	901.5	893.0	879.0	800.5	602.5	313.5	67.5	66.0	73.5	74.5	177.5°	180°																			
738.5	726.5	720.0	713.0	661.0	529.0	253.5	60.5	63.5	70.0	72.0	180°																				
422.5	409.5	402.0	403.5	372.0	418.5	202.5	55.5	60.0	66.0	69.0																					
227.5	213.5	209.0	194.5	166.0	211.0	156.0	51.0	55.5	60.0	63.0																					
112.5	107.5	109.0	102.0	86.5	65.0	100.5	45.5	49.5	54.0	56.0																					
39.0	38.0	37.5	37.0	36.0	34.5	46.0	39.0	42.5	46.0	48.0																					
24.0	23.5	24.0	23.5	23.0	26.5	29.5	31.0	34.0	38.5	39.0																					
14.5	14.5	14.5	14.5	14.5	18.5	21.0	24.0	26.5	29.5	32.0																					
7.0	7.0	7.0	7.0	7.5	12.5	14.0	17.5	18.5	21.0	23.0																					
1.5	1.5	1.5	1.5	2.0	6.5	8.5	10.5	11.0	11.0	12.5																					
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																					
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																					
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5																					
1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5																					
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0																					
8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8																					
11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8																					
14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7																					
17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8																					

'159982
 ENT-E01-LED-E1-BL4-ULG

REPORT NUMBER: P159982
 CATALOG NUMBER: ENT-E01-I

TION (continued):

CANDELA DISTRIBUTION (con

88°	89°	90°	95°	105°	115°	125°	135°	145°	155°		165°	175°
21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	0°	564.5	564.5
25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	2.5°	565.5	564.5
29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	5°	567.0	566.0
34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	7.5°	563.0	563.5
40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	10°	554.5	556.0
47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	12.5°	541.0	544.0
55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	15°	518.5	523.0
63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	17.5°	488.5	494.0
70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	20°	451.0	453.5
77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	22.5°	405.0	406.0
85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	25°	356.5	356.5
92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	27.5°	311.5	309.0
99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	30°	268.5	262.0
104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	32.5°	223.0	212.0
110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	35°	177.0	168.0
115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	37.5°	137.5	127.5
119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	40°	105.5	98.0
123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	42.5°	89.0	87.5
127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	45°	85.0	87.0
130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	47.5°	85.5	88.0
133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	50°	86.0	88.5
136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	52.5°	86.0	87.5
137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	55°	85.0	85.0
137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	57.5°	83.0	82.5
138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	60°	81.5	81.5
140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	62.5°	79.0	79.0
141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	65°	75.0	75.5
140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	67.5°	71.0	71.0
										70°	66.0	66.0
										72.5°	61.0	63.0
										75°	57.5	61.0
										77.5°	50.5	54.0
										80°	41.5	42.0
										82.5°	33.0	32.0
										85°	23.5	22.0
										87.5°	12.5	12.0
										90°	0.1	0.1
										92.5°	0.1	0.1
										95°	0.5	0.5
										97.5°	1.5	1.5
										100°	5.0	5.0
										102.5°	8.8	8.8
										105°	11.8	11.8
										107.5°	14.7	14.7
										110°	17.8	17.8



REPORT NUMBER: P159982

CATALOG NUMBER: ENT-E01-LED-E1-BL4

LED-E1-BL4-ULG

tinued):

180°
564.5
564.0
565.5
563.0
556.5
546.0
522.0
494.0
452.0
404.5
354.5
307.5
260.0
212.0
165.5
124.5
97.5
88.0
87.0
88.5
89.0
87.5
85.0
83.5
81.5
79.0
75.5
71.0
67.0
64.0
62.5
56.0
42.0
30.5
22.0
12.5
0.1
0.1
0.5
1.5
5.0
8.8
11.8
14.7
17.8

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
112.5°	21.2	21.2	21.2
115°	25.0	25.0	25.0
117.5°	29.5	29.5	29.5
120°	34.8	34.8	34.8
122.5°	40.9	40.9	40.9
125°	47.8	47.8	47.8
127.5°	55.3	55.3	55.3
130°	63.0	63.0	63.0
132.5°	70.5	70.5	70.5
135°	77.9	77.9	77.9
137.5°	85.3	85.3	85.3
140°	92.5	92.5	92.5
142.5°	99.2	99.2	99.2
145°	104.9	104.9	104.9
147.5°	110.1	110.1	110.1
150°	115.1	115.1	115.1
152.5°	119.7	119.7	119.7
155°	123.7	123.7	123.7
157.5°	127.0	127.0	127.0
160°	130.3	130.3	130.3
162.5°	133.5	133.5	133.5
165°	136.0	136.0	136.0
167.5°	137.1	137.1	137.1
170°	137.4	137.4	137.4
172.5°	138.6	138.6	138.6
175°	140.5	140.5	140.5
177.5°	141.1	141.1	141.1
180°	140.8	140.8	140.8

(END OF F

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

Scaled Data Report

