

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: P159981

Luminaire Tested: **ENT-E01-LED-E1-BL4-8030-ULG**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P159981
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-BL4-8030-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (21) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2520.5 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B1 - U3 - G1

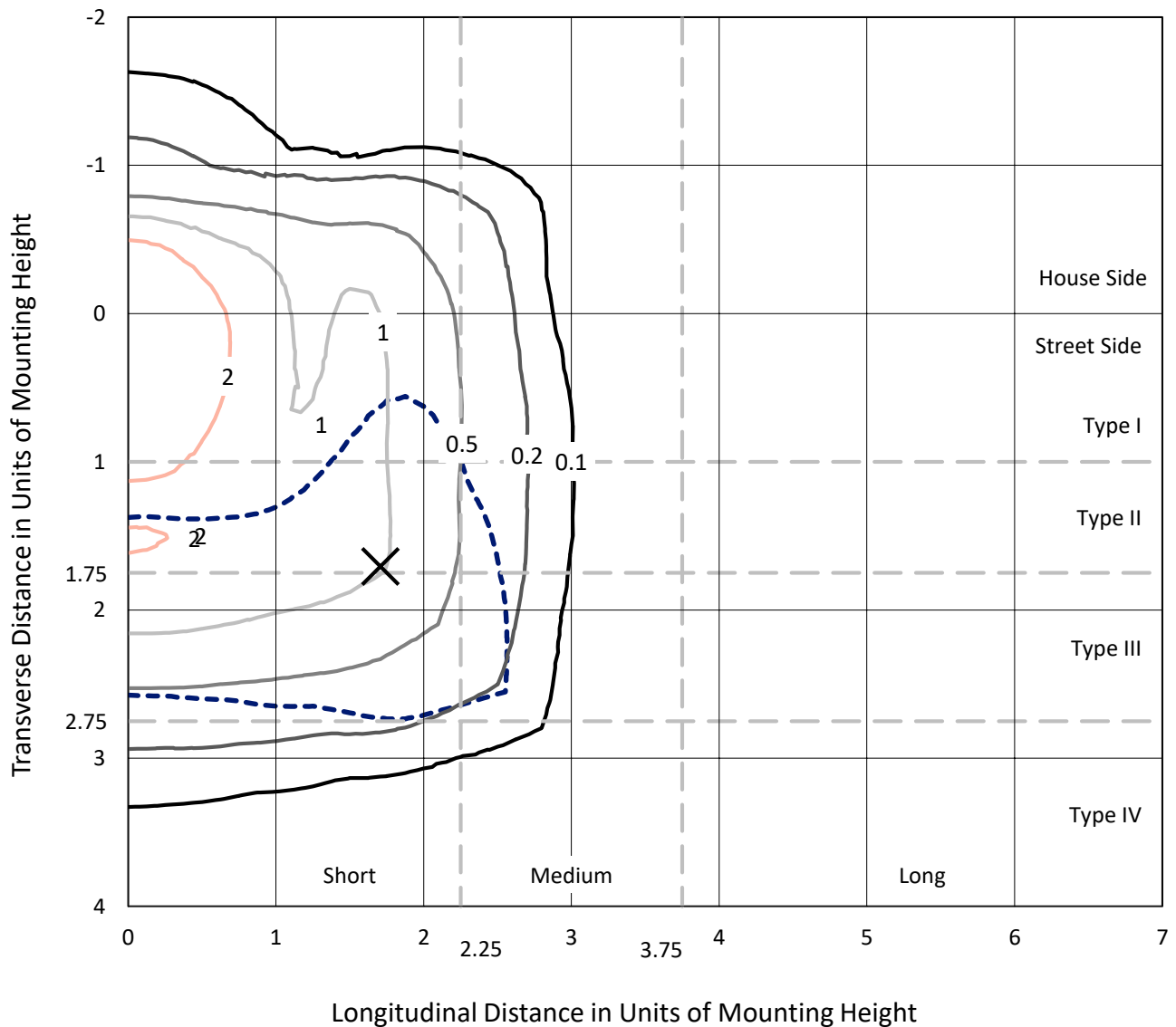
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

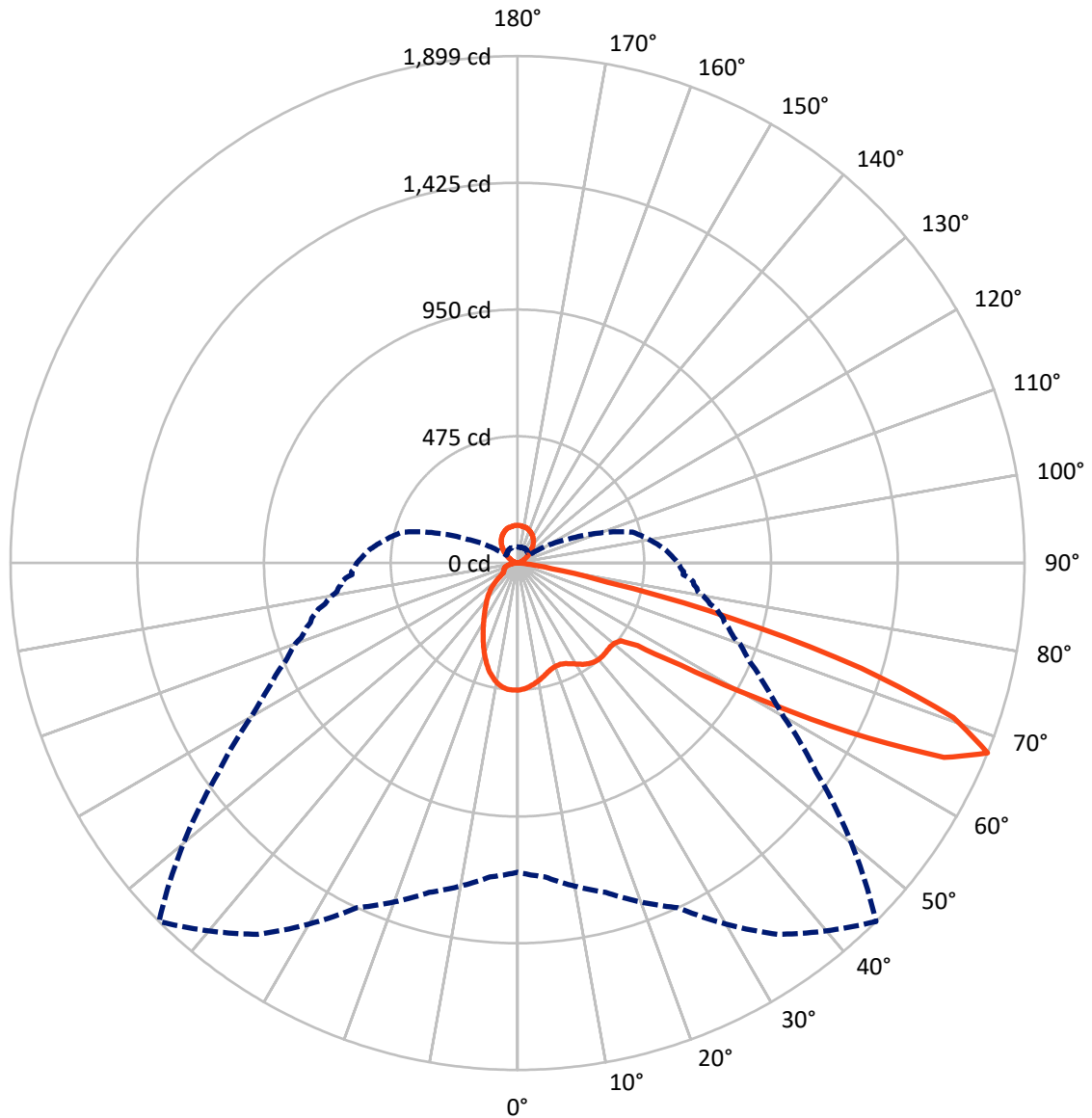
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 fc
 Type III - Short - Non-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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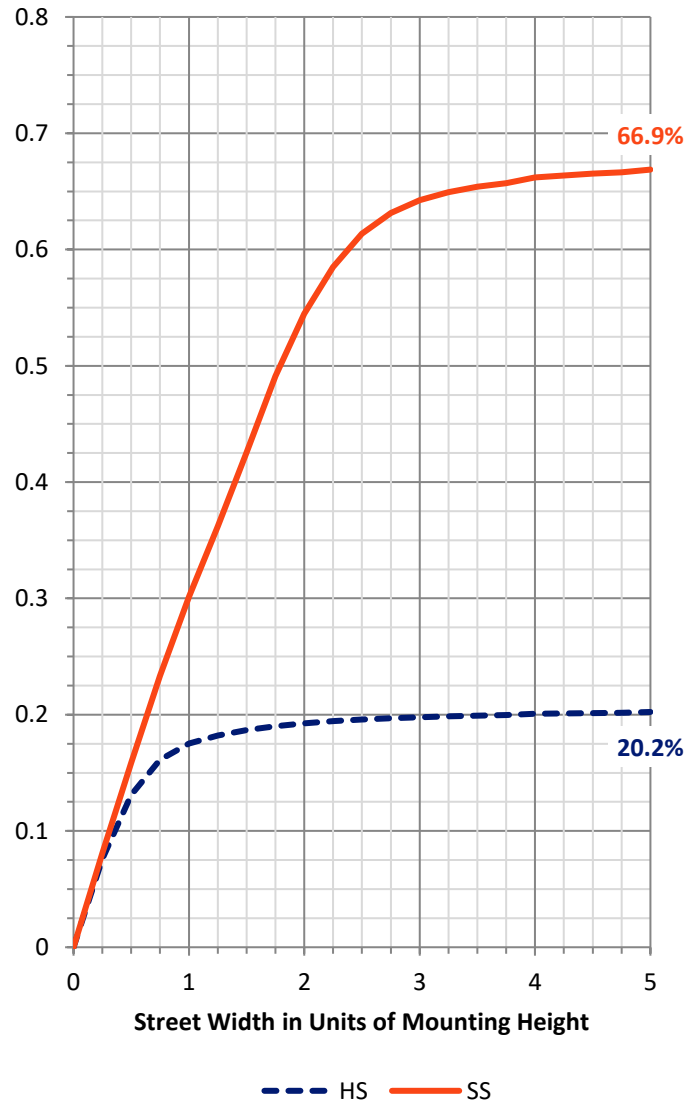
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	516.7	157.7	674.4
	% Fixture	20.5	6.3	26.8
Street Side	Lumens	1688.3	157.7	1846.0
	% Fixture	67.0	6.3	73.2
Total	Lumens	2205.0	315.5	2520.5
	% Fixture	87.5	12.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	1.8
10°-20°	119.1	4.7
20°-30°	171.7	6.8
30°-40°	219.1	8.7
40°-50°	258.6	10.3
50°-60°	414.7	16.5
60°-70°	698.0	27.7
70°-80°	259.6	10.3
80°-90°	19.7	0.8
90°-100°	1.3	0.1
100°-110°	12.3	0.5
110°-120°	25.2	1.0
120°-130°	43.0	1.7
130°-140°	60.0	2.4
140°-150°	65.4	2.6
150°-160°	56.9	2.3
160°-170°	38.2	1.5
170°-180°	13.3	0.5
0°-90°	2205.0	87.5
0°-180°	2520.5	100.0



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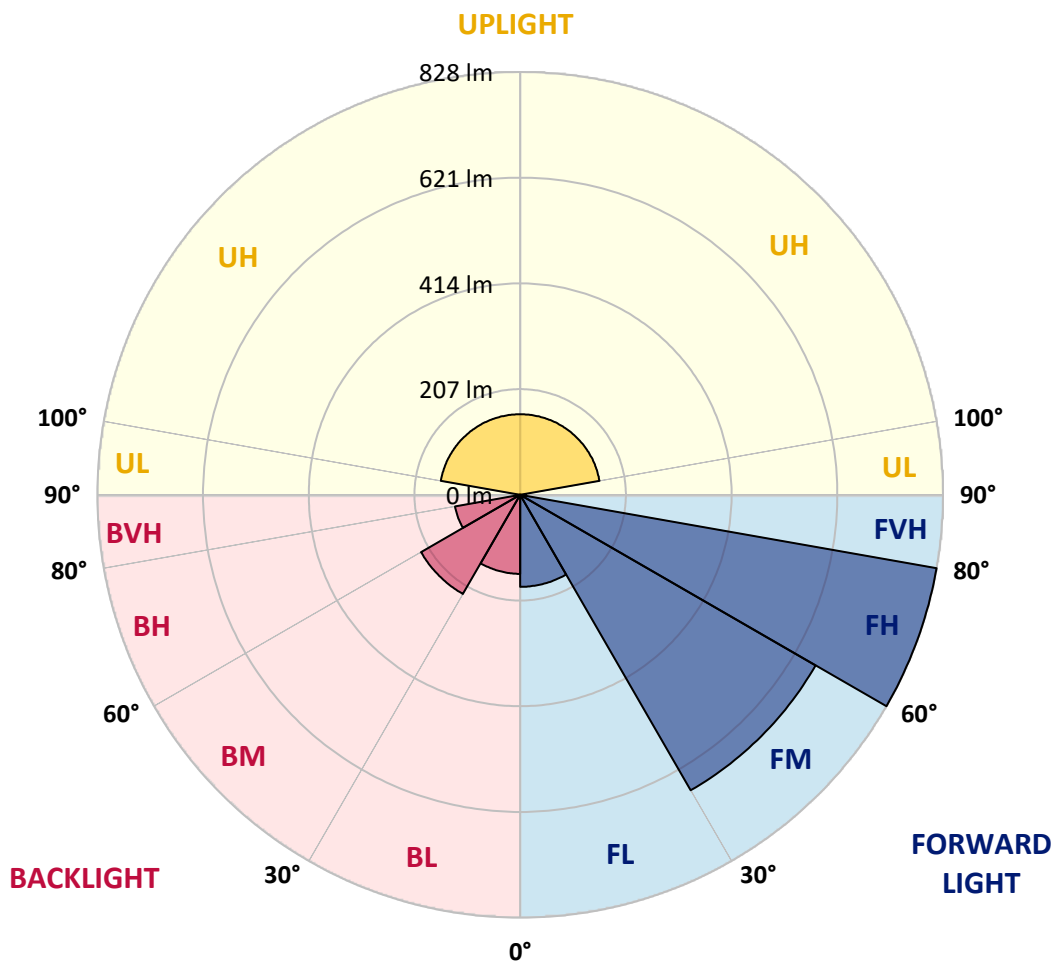
CATALOG NUMBER: ENT-E01-LED-E1-BL4-8030-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	180.2	7.2			
FM	(30°-60°)	668.2	26.5			
FH	(60°-80°)	828.2	32.9			G1/1800
FVH	(80°-90°)	11.7	0.5			G1/100
BL	(0°-30°)	154.9	6.1	B1/500		
BM	(30°-60°)	224.3	8.9	B1/1000		
BH	(60°-80°)	129.5	5.1	B1/500		G1/500
BVH	(80°-90°)	8.0	0.3			G0/10
UL	(90°-100°)	1.3	0.1		U1/10	
UH	(100°-180°)	157.7	6.3		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°	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4
2.5°	469.7	469.7	470.5	470.5	471.8	472.6	471.8	473.5	473.5	473.1	473.9
5°	462.9	462.9	463.4	463.4	464.2	465.5	464.6	466.3	465.9	466.3	466.3
7.5°	454.9	454.9	455.8	455.3	455.8	456.6	454.5	455.8	455.8	456.2	455.8
10°	444.8	445.6	446.5	446.0	446.0	446.5	443.1	444.4	443.9	443.9	443.5
12.5°	435.5	434.7	435.5	436.3	435.9	435.9	432.5	431.7	431.7	431.7	432.1
15°	425.8	426.6	427.9	426.6	425.8	424.1	420.7	419.9	419.9	419.9	420.3
17.5°	423.7	423.7	424.5	423.3	419.9	416.5	409.8	408.5	408.5	408.1	408.1
20°	429.6	429.2	430.4	427.9	420.3	411.4	400.9	398.8	398.8	398.8	398.4
22.5°	441.8	441.8	443.9	441.0	428.7	411.9	396.3	392.9	392.5	392.0	391.2
25°	465.5	465.0	466.3	458.7	441.0	417.4	395.0	389.9	389.5	388.7	387.8
27.5°	492.9	493.7	496.3	484.9	458.7	427.1	400.5	392.0	391.2	389.9	388.2
30°	519.9	522.4	527.1	514.8	479.0	439.3	408.9	399.2	397.5	395.8	392.9
32.5°	554.1	553.2	560.8	542.3	496.7	452.4	417.8	406.0	403.8	401.3	397.5
35°	590.4	592.1	593.7	563.8	511.5	462.9	423.3	409.8	407.2	404.7	399.2
37.5°	626.7	627.1	623.3	581.1	520.3	469.3	426.2	410.6	407.2	403.4	397.1
40°	660.0	658.7	647.3	594.2	525.4	472.6	427.5	408.9	404.7	400.9	393.7
42.5°	679.0	677.7	663.4	600.1	525.8	472.2	427.5	407.2	402.6	397.9	389.9
45°	687.0	686.2	669.7	600.9	522.9	469.7	424.9	405.5	400.9	396.7	388.2
47.5°	687.9	687.9	671.0	599.7	520.3	468.0	424.9	407.6	403.8	400.5	394.1
50°	684.1	684.5	671.4	603.0	522.4	471.8	429.2	412.7	408.9	405.5	398.4
52.5°	728.8	724.6	695.4	618.2	536.4	484.0	443.5	428.7	427.5	425.4	419.9
55°	1070.6	1074.0	914.9	713.2	595.0	546.9	530.0	527.1	536.4	539.7	539.7
57.5°	1359.2	1348.3	1288.4	1040.6	778.2	720.3	727.1	734.3	747.8	753.7	757.9
60°	1429.7	1430.6	1428.9	1358.4	1148.7	1017.0	984.1	952.9	951.6	940.6	932.2
62.5°	1421.3	1428.0	1459.7	1475.7	1496.4	1399.8	1198.9	1112.4	1095.5	1074.8	1045.3
65°	1360.1	1370.2	1420.9	1498.9	1677.0	1756.3	1343.6	1188.8	1162.6	1137.7	1087.9
67.5°	1158.8	1180.7	1277.8	1425.1	1698.5	1899.4	1367.3	1151.6	1117.0	1084.5	1025.4
70°	715.3	726.7	876.5	1149.9	1539.0	1731.9	1241.5	977.3	933.5	892.1	811.5
72.5°	461.7	457.9	483.2	647.8	1130.9	1345.7	853.7	649.9	614.0	581.1	529.2
75°	323.2	323.7	312.3	308.9	524.5	833.4	386.5	277.7	261.6	254.9	243.9
77.5°	210.6	213.1	210.2	218.2	210.2	346.5	177.7	130.4	124.1	119.8	113.1
80°	127.0	135.5	138.0	139.7	141.8	130.8	105.5	76.8	69.2	62.0	51.1
82.5°	22.4	21.9	30.4	40.9	53.6	61.2	44.3	27.9	26.2	25.3	23.2
85°	0.0	0.0	0.4	0.4	0.8	3.0	4.6	5.5	5.1	5.5	5.9
87.5°	0.0	0.0	0.0	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8
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-BL4-8030-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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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4
2.5°	473.9	473.5	473.1	473.1	473.9	473.9	473.5	473.5	473.9	473.5	474.3
5°	466.7	466.3	466.3	465.9	466.3	466.7	466.3	466.3	466.7	466.3	467.1
7.5°	455.3	455.8	455.3	455.3	455.8	456.2	455.8	455.8	455.8	455.8	455.3
10°	443.5	443.5	443.1	443.1	443.9	443.5	443.1	443.1	443.5	443.9	443.1
12.5°	431.7	432.5	432.5	430.9	431.3	431.7	431.7	431.3	431.3	432.5	431.3
15°	419.9	420.3	419.9	420.3	419.5	419.0	419.5	419.5	418.6	418.2	418.2
17.5°	408.1	407.6	407.6	406.8	406.4	406.4	406.0	406.4	405.5	406.0	404.7
20°	397.5	397.1	396.7	396.7	395.4	395.4	395.4	395.0	394.1	394.1	393.7
22.5°	391.2	390.8	390.3	389.5	389.1	388.7	388.7	388.2	387.4	387.0	386.5
25°	387.8	387.4	386.5	385.7	385.3	384.9	384.9	384.4	383.6	382.7	382.3
27.5°	388.2	387.4	386.5	385.7	385.3	384.4	384.0	383.6	382.7	381.9	381.1
30°	392.0	390.3	388.7	387.4	386.1	384.9	384.0	383.6	382.3	381.1	379.8
32.5°	395.8	393.7	391.2	388.7	386.5	384.4	383.2	381.9	380.2	378.1	376.8
35°	397.1	394.6	390.8	388.7	385.7	383.2	381.1	379.4	376.4	373.9	371.8
37.5°	394.1	391.2	387.4	384.4	381.5	378.1	375.6	373.0	370.9	368.0	365.9
40°	389.5	386.1	382.3	378.1	375.2	371.8	369.2	367.1	364.2	361.7	360.0
42.5°	385.7	381.9	377.7	374.3	370.9	367.6	364.6	362.5	359.5	356.6	354.5
45°	384.4	380.6	377.3	373.0	369.7	367.1	364.6	361.7	359.1	356.6	354.1
47.5°	391.2	387.8	384.4	381.1	378.1	375.2	372.6	369.7	366.7	363.3	360.8
50°	395.0	391.2	388.2	384.4	381.1	378.1	375.6	372.6	370.5	367.1	364.6
52.5°	422.4	417.4	418.2	414.8	414.8	411.4	414.0	410.2	412.3	409.8	413.6
55°	538.5	540.2	550.7	552.4	556.6	556.2	558.7	569.7	565.5	560.0	561.7
57.5°	746.5	750.3	755.8	750.7	754.5	755.4	762.5	759.6	757.1	755.4	749.9
60°	927.1	922.1	914.0	904.3	900.5	896.3	889.1	889.1	879.9	876.9	869.7
62.5°	1033.0	1018.3	1008.1	992.5	981.6	974.0	961.3	951.6	938.9	929.2	917.8
65°	1067.6	1042.8	1025.0	1005.6	988.3	971.9	953.7	939.8	924.2	913.6	895.5
67.5°	1000.6	975.2	945.3	924.6	906.4	885.8	857.5	840.2	826.7	806.4	797.6
70°	779.0	752.4	714.9	704.7	676.9	644.8	616.1	598.8	579.0	565.1	550.3
72.5°	494.2	464.2	447.7	435.5	417.4	390.8	365.9	355.7	338.4	334.6	324.9
75°	232.1	211.8	207.6	204.7	184.8	181.0	173.4	170.1	162.0	157.8	156.1
77.5°	103.8	99.2	91.6	89.5	83.1	76.8	69.2	65.8	61.6	59.1	55.7
80°	47.3	42.6	39.7	37.6	36.7	34.6	32.9	31.6	30.4	30.4	28.3
82.5°	22.8	21.9	21.1	21.1	19.8	19.8	18.6	18.1	17.7	17.3	17.3
85°	6.3	6.3	6.3	6.8	6.8	6.8	6.8	6.8	6.8	7.2	7.2
87.5°	0.8	0.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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: P159981

CATALOG NUMBER: ENT-E01-LED-E1-BL4-8030-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



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CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4
2.5°	473.9	473.9	473.9	474.7	474.3	475.6	475.6	475.6	476.4	476.9	476.4
5°	467.1	467.1	467.1	467.6	467.6	468.4	468.4	469.3	469.3	469.7	469.7
7.5°	456.2	456.6	456.6	457.4	457.0	457.4	457.4	458.7	458.7	459.1	459.1
10°	443.5	443.9	443.9	443.9	444.4	444.8	444.8	445.6	446.0	446.0	446.9
12.5°	431.7	431.3	431.7	431.3	432.5	432.5	433.0	432.5	433.0	433.4	433.8
15°	418.6	418.6	418.2	418.6	418.6	418.2	417.8	418.2	419.0	419.0	419.0
17.5°	405.5	404.3	404.3	404.3	403.8	403.0	403.8	403.4	403.4	403.8	403.4
20°	393.3	392.9	392.5	392.0	391.6	390.3	390.3	390.3	389.9	389.9	389.9
22.5°	385.7	385.3	384.9	384.4	382.7	381.9	381.5	381.1	380.2	379.8	379.4
25°	381.5	380.6	379.8	379.0	377.7	376.4	375.2	374.7	373.9	373.0	371.8
27.5°	380.2	379.4	377.7	376.8	375.2	373.9	372.6	371.4	370.1	368.8	367.6
30°	378.1	376.8	375.2	373.9	372.6	370.5	368.8	367.6	365.4	364.2	362.5
32.5°	375.2	373.5	371.8	370.1	368.4	366.3	364.2	362.5	360.8	359.1	357.0
35°	370.1	368.0	365.4	363.8	361.7	359.5	357.9	354.9	353.6	351.5	349.4
37.5°	363.3	361.2	359.1	357.0	354.5	352.8	350.3	347.7	346.5	345.2	342.2
40°	357.4	354.9	352.8	351.1	348.1	346.9	344.3	341.8	340.1	338.9	336.3
42.5°	351.9	349.4	347.3	344.8	342.7	341.0	338.9	336.3	334.6	333.8	331.7
45°	351.9	349.0	346.5	344.3	342.2	340.1	338.4	335.9	334.6	333.0	331.7
47.5°	357.9	354.5	351.5	348.6	345.6	343.5	341.0	338.4	336.3	335.1	333.4
50°	362.1	358.7	357.0	353.6	351.9	349.0	346.0	344.8	342.7	341.4	341.0
52.5°	413.6	411.4	411.9	403.4	401.7	406.0	399.2	405.1	403.4	398.4	398.4
55°	571.4	570.5	574.3	563.8	559.1	567.6	571.0	558.7	561.7	561.7	560.8
57.5°	755.4	749.9	744.4	745.7	738.9	744.0	737.6	730.1	733.0	730.5	721.6
60°	865.1	861.7	853.7	846.1	838.9	832.2	826.3	819.5	816.1	810.2	803.9
62.5°	909.4	900.5	890.8	880.7	869.3	858.3	851.6	842.7	833.4	827.5	820.8
65°	885.8	872.7	862.1	847.4	835.1	821.6	812.8	802.6	794.2	784.1	775.6
67.5°	780.3	765.1	737.2	723.7	705.6	684.5	678.6	666.3	661.7	646.5	621.6
70°	531.3	516.1	499.2	471.8	454.1	435.9	416.1	401.7	399.6	387.4	369.2
72.5°	312.3	301.7	290.8	275.1	262.1	254.9	241.0	226.6	226.2	212.3	205.1
75°	147.7	142.2	131.2	127.4	115.6	114.8	105.9	104.2	105.9	101.7	100.9
77.5°	50.2	49.0	46.4	43.0	40.5	39.7	37.6	36.3	35.4	34.6	33.8
80°	27.4	26.6	26.2	24.9	24.1	23.6	22.4	21.9	21.5	21.1	20.7
82.5°	16.5	16.9	16.0	15.2	15.2	14.3	13.9	13.5	13.1	13.1	13.1
85°	6.8	7.2	6.8	6.3	5.9	6.3	6.3	5.9	5.5	5.9	5.9
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	87°
476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	112.5°	21.2
475.6	475.2	475.2	474.7	474.3	475.2	476.0	477.3	476.4	477.3	477.7	115°	25.0
468.8	468.8	468.8	469.3	468.8	470.1	471.8	474.3	474.7	476.4	477.7	117.5°	29.5
457.9	457.9	458.3	458.7	458.3	460.0	462.9	465.9	468.0	470.9	473.5	120°	34.8
445.2	445.2	445.2	445.2	445.6	447.7	449.8	453.2	456.6	461.2	465.0	122.5°	40.9
433.8	432.5	433.0	433.8	433.0	433.0	435.1	437.6	439.7	445.6	452.4	125°	47.8
418.6	418.6	417.8	418.2	416.1	415.7	416.5	418.2	419.9	424.9	432.1	127.5°	55.3
402.6	402.6	402.6	401.3	399.6	395.4	395.0	395.0	395.0	398.8	407.2	130°	63.0
388.2	388.2	387.4	386.5	382.7	375.6	369.7	367.1	366.3	372.6	376.4	132.5°	70.5
378.1	377.7	376.0	375.2	369.2	357.9	348.6	341.4	339.3	341.4	342.7	135°	77.9
370.1	369.2	367.6	365.9	357.9	342.2	327.5	315.2	309.3	307.6	303.4	137.5°	85.3
365.4	364.2	361.7	360.0	349.4	329.6	310.2	294.1	283.2	275.1	267.5	140°	92.5
360.4	358.3	355.7	353.2	341.4	319.5	297.1	277.3	257.8	243.9	232.9	142.5°	99.2
354.5	352.4	349.8	347.3	334.2	310.2	286.5	262.1	235.1	216.1	199.6	145°	104.9
347.3	345.2	342.7	339.7	326.6	302.6	279.4	247.3	214.8	190.3	168.8	147.5°	110.1
340.1	338.0	335.5	332.5	319.5	298.8	275.1	233.4	196.2	166.3	138.0	150°	115.1
334.6	332.5	330.0	327.5	315.7	297.1	273.0	221.5	179.8	142.6	110.1	152.5°	119.7
330.0	327.9	325.8	323.2	313.1	297.9	268.4	211.4	163.7	119.0	86.5	155°	123.7
329.6	328.3	325.8	323.7	314.0	301.7	264.6	202.6	147.3	96.2	73.0	157.5°	127.0
332.5	330.8	329.2	327.5	319.9	311.4	262.1	193.3	128.7	77.6	69.6	160°	130.3
339.7	338.0	337.2	336.3	331.7	324.5	262.1	183.6	107.2	68.4	69.2	162.5°	133.5
397.5	392.9	391.6	395.0	382.3	346.5	263.7	171.8	84.0	65.4	69.6	165°	136.0
559.1	563.8	552.0	546.1	524.1	400.9	265.0	154.0	68.4	65.0	68.8	167.5°	137.1
722.5	722.5	718.2	709.0	681.9	493.7	270.9	125.8	62.5	64.1	67.9	170°	137.4
802.2	797.1	792.9	787.4	746.5	558.3	279.8	92.8	59.9	63.7	67.1	172.5°	138.6
816.6	808.5	803.1	795.9	741.4	561.7	283.6	69.6	57.4	63.7	65.0	175°	140.5
769.3	760.9	753.7	741.9	675.6	508.5	264.6	57.0	55.7	62.0	62.9	177.5°	141.1
623.3	613.2	607.7	601.8	557.9	446.5	214.0	51.1	53.6	59.1	60.8	180°	140.8
356.6	345.6	339.3	340.6	314.0	353.2	170.9	46.8	50.6	55.7	58.2		
192.0	180.2	176.4	164.2	140.1	178.1	131.7	43.0	46.8	50.6	53.2		
94.9	90.7	92.0	86.1	73.0	54.9	84.8	38.4	41.8	45.6	47.3		
32.9	32.1	31.6	31.2	30.4	29.1	38.8	32.9	35.9	38.8	40.5		
20.3	19.8	20.3	19.8	19.4	22.4	24.9	26.2	28.7	32.5	32.9		
12.2	12.2	12.2	12.2	12.2	15.6	17.7	20.3	22.4	24.9	27.0		
5.9	5.9	5.9	5.9	6.3	10.5	11.8	14.8	15.6	17.7	19.4		
1.3	1.3	1.3	1.3	1.7	5.5	7.2	8.9	9.3	9.3	10.5		
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		

'159981
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REPORT NUMBER: P159981
 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°	476.4	476.4
25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	2.5°	477.3	476.4
29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	5°	478.5	477.7
34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	7.5°	475.2	475.6
40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	10°	468.0	469.3
47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	12.5°	456.6	459.1
55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	15°	437.6	441.4
63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	17.5°	412.3	416.9
70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	20°	380.6	382.7
77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	22.5°	341.8	342.7
85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	25°	300.9	300.9
92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	27.5°	262.9	260.8
99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	30°	226.6	221.1
104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	32.5°	188.2	178.9
110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	35°	149.4	141.8
115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	37.5°	116.0	107.6
119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	40°	89.0	82.7
123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	42.5°	75.1	73.8
127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	45°	71.7	73.4
130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	47.5°	72.2	74.3
133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	50°	72.6	74.7
136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	52.5°	72.6	73.8
137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	55°	71.7	71.7
137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	57.5°	70.1	69.6
138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	60°	68.8	68.8
140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	62.5°	66.7	66.7
141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	65°	63.3	63.7
140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	67.5°	59.9	59.9
										70°	55.7	55.7
										72.5°	51.5	53.2
										75°	48.5	51.5
										77.5°	42.6	45.6
										80°	35.0	35.4
										82.5°	27.9	27.0
										85°	19.8	18.6
										87.5°	10.5	10.1
										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: P159981

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

LED-E1-BL4-8030-ULG

tinued):

180°
476.4
476.0
477.3
475.2
469.7
460.8
440.6
416.9
381.5
341.4
299.2
259.5
219.4
178.9
139.7
105.1
82.3
74.3
73.4
74.7
75.1
73.8
71.7
70.5
68.8
66.7
63.7
59.9
56.5
54.0
52.7
47.3
35.4
25.7
18.6
10.5
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

