

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: P160038

Luminaire Tested: **ENT-F01-LED-E1-BL4-7030-ULG**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P160038
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-F01-LED-E1-BL4-7030-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (7) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2285.3 lumens
Efficiency: N/A
Efficacy: 67.4 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

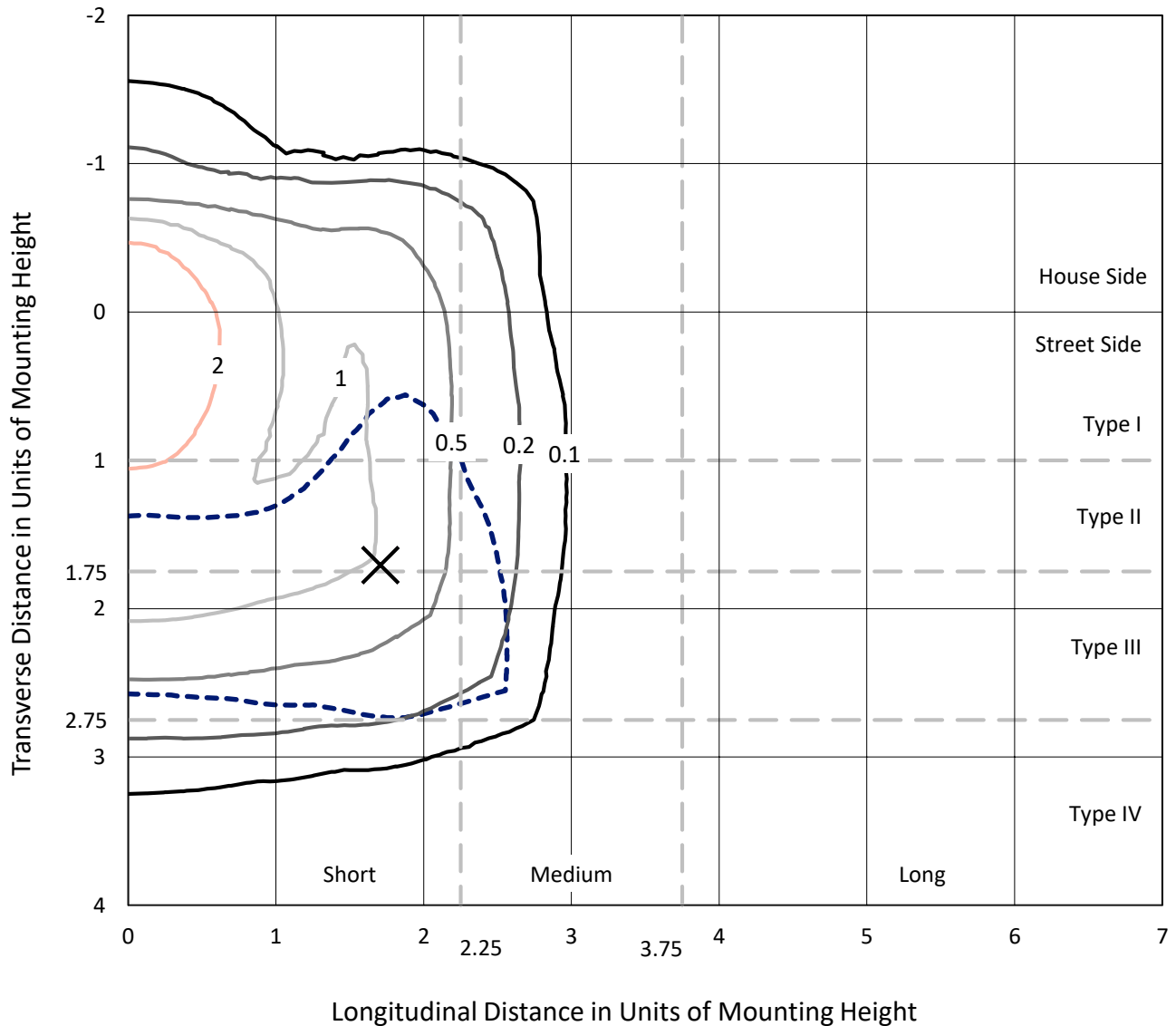
Input Watts (W): 33.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

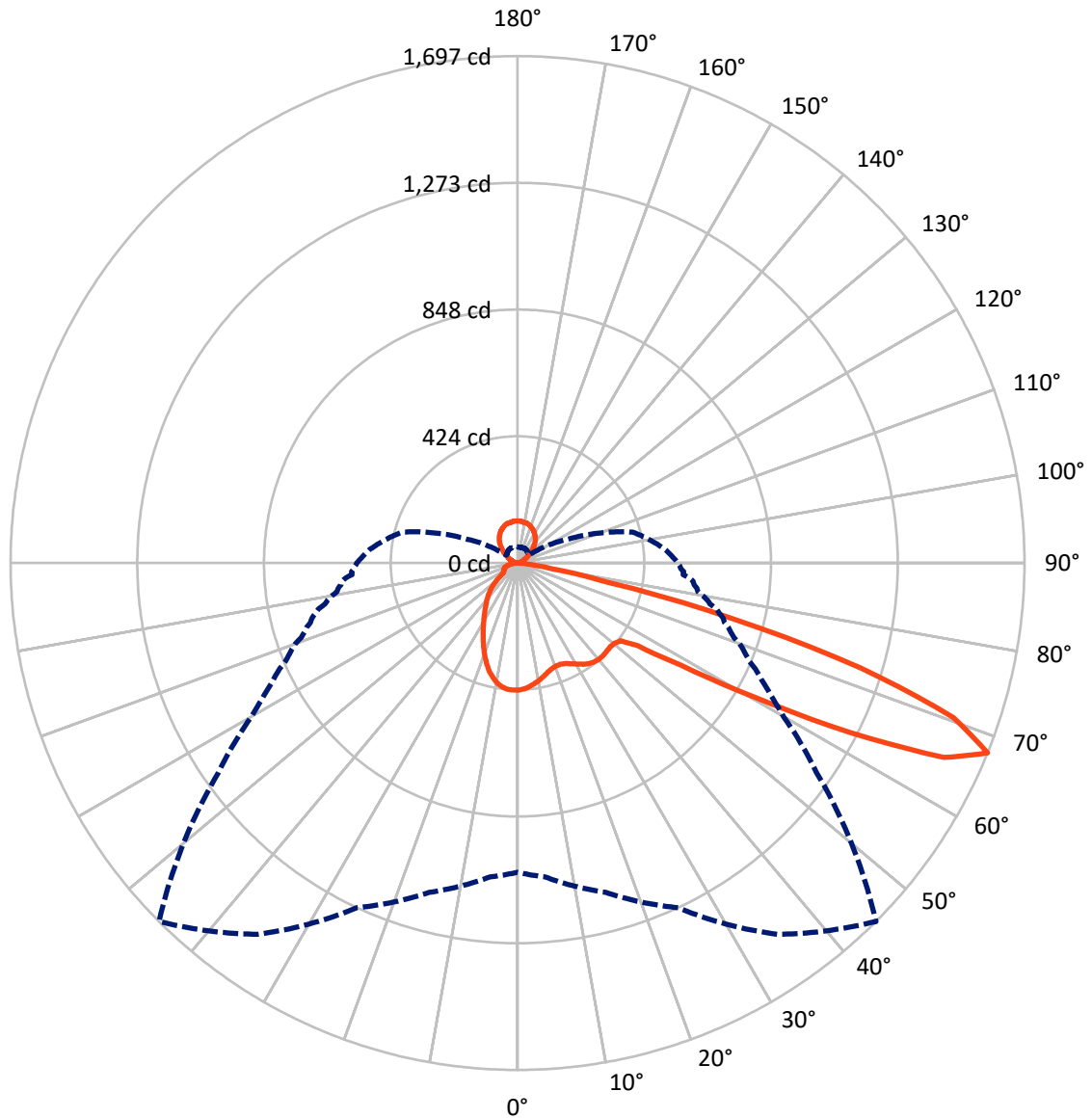
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 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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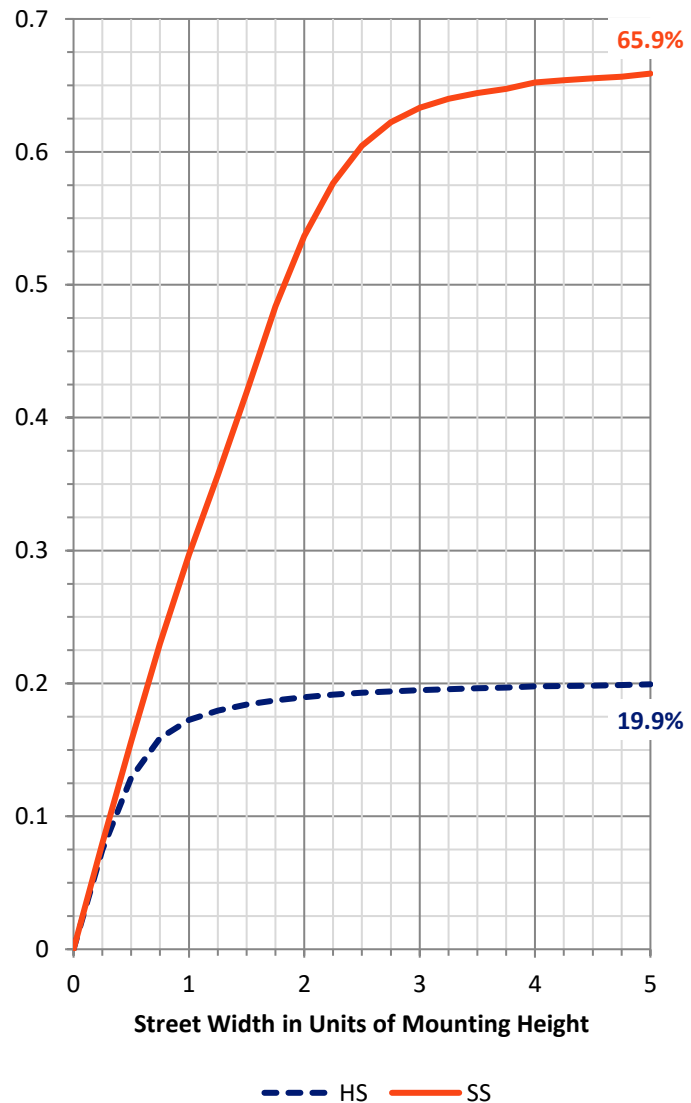
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	461.6	157.7	619.3
	% Fixture	20.2	6.9	27.1
Street Side	Lumens	1508.2	157.7	1666.0
	% Fixture	66.0	6.9	72.9
Total	Lumens	1969.8	315.5	2285.3
	% Fixture	86.2	13.8	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	1.7
10°-20°	106.4	4.7
20°-30°	153.4	6.7
30°-40°	195.7	8.6
40°-50°	231.0	10.1
50°-60°	370.5	16.2
60°-70°	623.6	27.3
70°-80°	231.9	10.1
80°-90°	17.6	0.8
90°-100°	1.3	0.1
100°-110°	12.3	0.5
110°-120°	25.2	1.1
120°-130°	43.0	1.9
130°-140°	60.0	2.6
140°-150°	65.4	2.9
150°-160°	56.9	2.5
160°-170°	38.2	1.7
170°-180°	13.3	0.6
0°-90°	1969.8	86.2
0°-180°	2285.3	100.0



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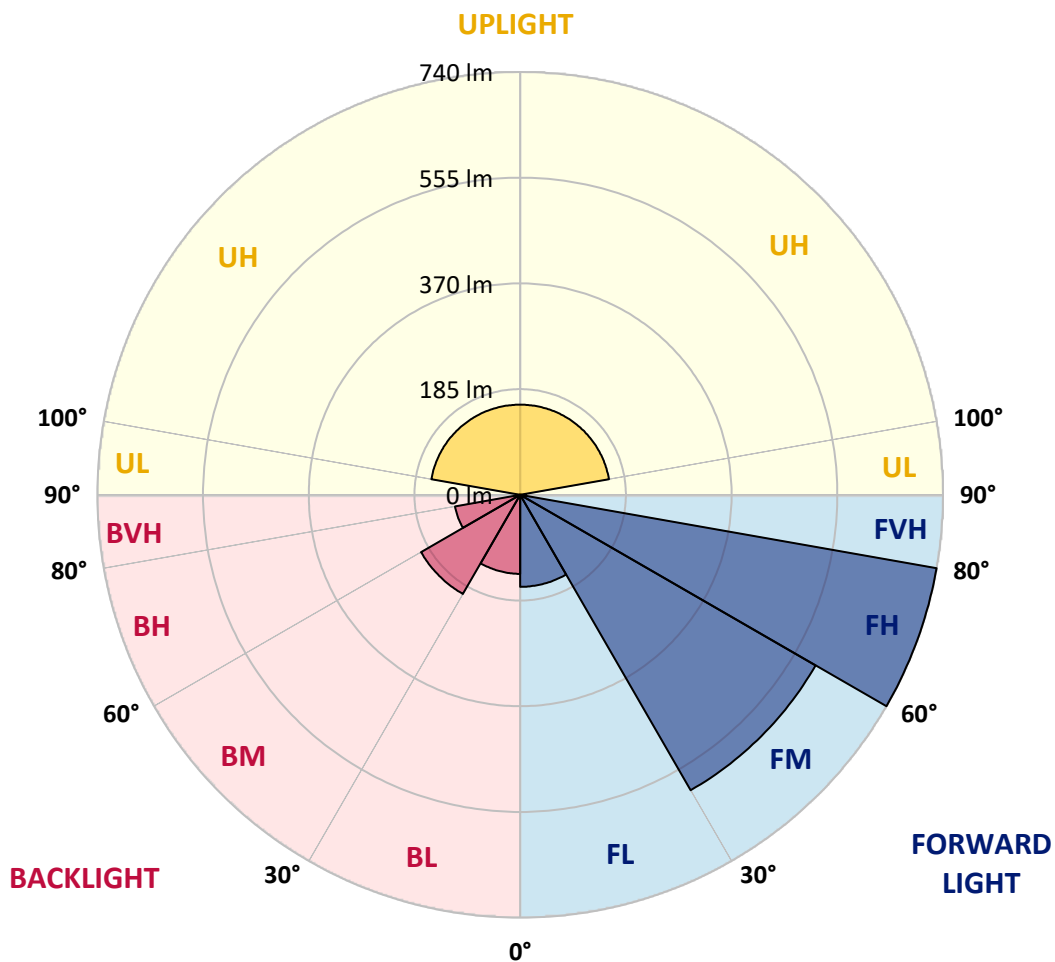
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	161.0	7.0			
FM (30°-60°)	596.9	26.1			
FH (60°-80°)	739.8	32.4			G1/1800
FVH (80°-90°)	10.5	0.5			G1/100
BL (0°-30°)	138.4	6.1	B1/500		
BM (30°-60°)	200.4	8.8	B0/220		
BH (60°-80°)	115.7	5.1	B1/500		G1/500
BVH (80°-90°)	7.2	0.3			G0/10
UL (90°-100°)	1.3	0.1		U1/10	
UH (100°-180°)	157.7	6.9		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°	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6
2.5°	419.6	419.6	420.4	420.4	421.5	422.2	421.5	423.0	423.0	422.6	423.4
5°	413.6	413.6	413.9	413.9	414.7	415.8	415.1	416.6	416.2	416.6	416.6
7.5°	406.4	406.4	407.2	406.8	407.2	407.9	406.0	407.2	407.2	407.5	407.2
10°	397.4	398.1	398.9	398.5	398.5	398.9	395.8	397.0	396.6	396.6	396.2
12.5°	389.1	388.3	389.1	389.8	389.4	389.4	386.4	385.7	385.7	385.7	386.0
15°	380.4	381.1	382.3	381.1	380.4	378.9	375.9	375.1	375.1	375.1	375.5
17.5°	378.5	378.5	379.3	378.1	375.1	372.1	366.1	364.9	364.9	364.6	364.6
20°	383.8	383.4	384.5	382.3	375.5	367.6	358.1	356.3	356.3	356.3	355.9
22.5°	394.7	394.7	396.6	394.0	383.0	367.9	354.0	351.0	350.6	350.2	349.5
25°	415.8	415.5	416.6	409.8	394.0	372.8	352.9	348.3	348.0	347.2	346.5
27.5°	440.3	441.1	443.3	433.2	409.8	381.5	357.8	350.2	349.5	348.3	346.8
30°	464.5	466.7	470.9	459.9	427.9	392.5	365.3	356.6	355.1	353.6	351.0
32.5°	495.0	494.2	501.0	484.4	443.7	404.1	373.2	362.7	360.8	358.5	355.1
35°	527.4	528.9	530.4	503.7	456.9	413.6	378.1	366.1	363.8	361.5	356.6
37.5°	559.8	560.2	556.8	519.1	464.8	419.2	380.8	366.8	363.8	360.4	354.8
40°	589.6	588.5	578.3	530.8	469.4	422.2	381.9	365.3	361.5	358.1	351.7
42.5°	606.6	605.5	592.6	536.1	469.7	421.9	381.9	363.8	359.7	355.5	348.3
45°	613.8	613.0	598.3	536.8	467.1	419.6	379.6	362.3	358.1	354.4	346.8
47.5°	614.5	614.5	599.4	535.7	464.8	418.1	379.6	364.2	360.8	357.8	352.1
50°	611.1	611.5	599.8	538.7	466.7	421.5	383.4	368.7	365.3	362.3	355.9
52.5°	651.1	647.3	621.3	552.3	479.2	432.4	396.2	383.0	381.9	380.0	375.1
55°	956.4	959.5	817.3	637.1	531.6	488.6	473.5	470.9	479.2	482.2	482.2
57.5°	1214.3	1204.5	1151.0	929.7	695.2	643.5	649.6	656.0	668.0	673.3	677.1
60°	1277.3	1278.0	1276.5	1213.6	1026.2	908.6	879.2	851.3	850.1	840.3	832.8
62.5°	1269.7	1275.8	1304.0	1318.4	1336.8	1250.5	1071.0	993.8	978.7	960.2	933.8
65°	1215.1	1224.1	1269.3	1339.1	1498.2	1569.1	1200.4	1062.0	1038.6	1016.4	971.9
67.5°	1035.2	1054.8	1141.5	1273.1	1517.4	1696.9	1221.5	1028.8	997.9	968.9	916.1
70°	639.0	649.2	783.0	1027.3	1374.9	1547.2	1109.1	873.1	833.9	797.0	725.0
72.5°	412.4	409.0	431.7	578.7	1010.4	1202.2	762.7	580.6	548.5	519.1	472.8
75°	288.8	289.2	279.0	276.0	468.6	744.6	345.3	248.1	233.7	227.7	217.9
77.5°	188.1	190.4	187.7	194.9	187.7	309.5	158.7	116.5	110.8	107.1	101.0
80°	113.5	121.0	123.3	124.8	126.7	116.9	94.2	68.6	61.8	55.4	45.6
82.5°	20.0	19.6	27.1	36.6	47.9	54.7	39.6	24.9	23.4	22.6	20.7
85°	0.0	0.0	0.4	0.4	0.8	2.6	4.1	4.9	4.5	4.9	5.3
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-F01-LED-E1-BL4-7030-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-F01-LED-E1-BL4-7030-ULG

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6
2.5°	423.4	423.0	422.6	422.6	423.4	423.4	423.0	423.0	423.4	423.0	423.7
5°	417.0	416.6	416.6	416.2	416.6	417.0	416.6	416.6	417.0	416.6	417.3
7.5°	406.8	407.2	406.8	406.8	407.2	407.5	407.2	407.2	407.2	407.2	406.8
10°	396.2	396.2	395.8	395.8	396.6	396.2	395.8	395.8	396.2	396.6	395.8
12.5°	385.7	386.4	386.4	384.9	385.3	385.7	385.7	385.3	385.3	386.4	385.3
15°	375.1	375.5	375.1	375.5	374.7	374.4	374.7	374.7	374.0	373.6	373.6
17.5°	364.6	364.2	364.2	363.4	363.0	363.0	362.7	363.0	362.3	362.7	361.5
20°	355.1	354.8	354.4	354.4	353.2	353.2	353.2	352.9	352.1	352.1	351.7
22.5°	349.5	349.1	348.7	348.0	347.6	347.2	347.2	346.8	346.1	345.7	345.3
25°	346.5	346.1	345.3	344.6	344.2	343.8	343.8	343.4	342.7	341.9	341.6
27.5°	346.8	346.1	345.3	344.6	344.2	343.4	343.1	342.7	341.9	341.2	340.4
30°	350.2	348.7	347.2	346.1	345.0	343.8	343.1	342.7	341.6	340.4	339.3
32.5°	353.6	351.7	349.5	347.2	345.3	343.4	342.3	341.2	339.7	337.8	336.7
35°	354.8	352.5	349.1	347.2	344.6	342.3	340.4	338.9	336.3	334.0	332.1
37.5°	352.1	349.5	346.1	343.4	340.8	337.8	335.5	333.3	331.4	328.7	326.9
40°	348.0	345.0	341.6	337.8	335.2	332.1	329.9	328.0	325.3	323.1	321.6
42.5°	344.6	341.2	337.4	334.4	331.4	328.4	325.7	323.8	321.2	318.6	316.7
45°	343.4	340.1	337.0	333.3	330.2	328.0	325.7	323.1	320.8	318.6	316.3
47.5°	349.5	346.5	343.4	340.4	337.8	335.2	332.9	330.2	327.6	324.6	322.3
50°	352.9	349.5	346.8	343.4	340.4	337.8	335.5	332.9	331.0	328.0	325.7
52.5°	377.4	372.8	373.6	370.6	370.6	367.6	369.8	366.4	368.3	366.1	369.5
55°	481.0	482.6	492.0	493.5	497.3	496.9	499.1	508.9	505.2	500.3	501.8
57.5°	666.9	670.3	675.2	670.7	674.1	674.8	681.2	678.6	676.3	674.8	669.9
60°	828.3	823.7	816.6	807.9	804.5	800.7	794.3	794.3	786.0	783.4	777.0
62.5°	922.9	909.7	900.6	886.7	876.9	870.1	858.8	850.1	838.8	830.1	820.0
65°	953.8	931.6	915.7	898.4	882.9	868.2	852.0	839.6	825.6	816.2	800.0
67.5°	893.9	871.2	844.5	826.0	809.8	791.3	766.1	750.6	738.5	720.4	712.5
70°	695.9	672.2	638.6	629.6	604.7	576.1	550.4	535.0	517.2	504.8	491.6
72.5°	441.5	414.7	400.0	389.1	372.8	349.1	326.9	317.8	302.4	299.0	290.3
75°	207.3	189.3	185.5	182.8	165.1	161.7	154.9	151.9	144.8	141.0	139.5
77.5°	92.7	88.6	81.8	79.9	74.3	68.6	61.8	58.8	55.0	52.8	49.8
80°	42.2	38.1	35.4	33.6	32.8	30.9	29.4	28.3	27.1	27.1	25.3
82.5°	20.4	19.6	18.8	18.8	17.7	17.7	16.6	16.2	15.8	15.5	15.5
85°	5.7	5.7	5.7	6.0	6.0	6.0	6.0	6.0	6.0	6.4	6.4
87.5°	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P160038

CATALOG NUMBER: ENT-F01-LED-E1-BL4-7030-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: P160038

CATALOG NUMBER: ENT-F01-LED-E1-BL4-7030-ULG

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6	425.6
2.5°	423.4	423.4	423.4	424.1	423.7	424.9	424.9	424.9	425.6	426.0	425.6
5°	417.3	417.3	417.3	417.7	417.7	418.5	418.5	419.2	419.2	419.6	419.6
7.5°	407.5	407.9	407.9	408.7	408.3	408.7	408.7	409.8	409.8	410.2	410.2
10°	396.2	396.6	396.6	396.6	397.0	397.4	397.4	398.1	398.5	398.5	399.2
12.5°	385.7	385.3	385.7	385.3	386.4	386.4	386.8	386.4	386.8	387.2	387.6
15°	374.0	374.0	373.6	374.0	374.0	373.6	373.2	373.6	374.4	374.4	374.4
17.5°	362.3	361.2	361.2	361.2	360.8	360.0	360.8	360.4	360.4	360.8	360.4
20°	351.4	351.0	350.6	350.2	349.9	348.7	348.7	348.7	348.3	348.3	348.3
22.5°	344.6	344.2	343.8	343.4	341.9	341.2	340.8	340.4	339.7	339.3	338.9
25°	340.8	340.1	339.3	338.5	337.4	336.3	335.2	334.8	334.0	333.3	332.1
27.5°	339.7	338.9	337.4	336.7	335.2	334.0	332.9	331.8	330.6	329.5	328.4
30°	337.8	336.7	335.2	334.0	332.9	331.0	329.5	328.4	326.5	325.3	323.8
32.5°	335.2	333.6	332.1	330.6	329.1	327.2	325.3	323.8	322.3	320.8	318.9
35°	330.6	328.7	326.5	325.0	323.1	321.2	319.7	317.1	315.9	314.0	312.2
37.5°	324.6	322.7	320.8	318.9	316.7	315.2	312.9	310.6	309.5	308.4	305.7
40°	319.3	317.1	315.2	313.7	311.0	309.9	307.6	305.4	303.9	302.7	300.5
42.5°	314.4	312.2	310.3	308.0	306.1	304.6	302.7	300.5	299.0	298.2	296.3
45°	314.4	311.8	309.5	307.6	305.7	303.9	302.4	300.1	299.0	297.5	296.3
47.5°	319.7	316.7	314.0	311.4	308.8	306.9	304.6	302.4	300.5	299.3	297.8
50°	323.5	320.4	318.9	315.9	314.4	311.8	309.1	308.0	306.1	305.0	304.6
52.5°	369.5	367.6	367.9	360.4	358.9	362.7	356.6	361.9	360.4	355.9	355.9
55°	510.5	509.7	513.1	503.7	499.5	507.1	510.1	499.1	501.8	501.8	501.0
57.5°	674.8	669.9	665.0	666.2	660.1	664.6	659.0	652.2	654.8	652.6	644.7
60°	772.8	769.8	762.7	755.9	749.5	743.4	738.2	732.1	729.1	723.8	718.2
62.5°	812.4	804.5	795.8	786.8	776.6	766.8	760.8	752.9	744.6	739.3	733.3
65°	791.3	779.6	770.2	757.0	746.1	734.0	726.1	717.0	709.5	700.5	692.9
67.5°	697.1	683.5	658.6	646.5	630.3	611.5	606.2	595.3	591.1	577.6	555.3
70°	474.6	461.1	446.0	421.5	405.6	389.4	371.7	358.9	357.0	346.1	329.9
72.5°	279.0	269.6	259.8	245.8	234.1	227.7	215.3	202.4	202.1	189.6	183.2
75°	131.9	127.0	117.2	113.9	103.3	102.5	94.6	93.1	94.6	90.9	90.1
77.5°	44.9	43.7	41.5	38.5	36.2	35.4	33.6	32.4	31.7	30.9	30.2
80°	24.5	23.8	23.4	22.2	21.5	21.1	20.0	19.6	19.2	18.8	18.5
82.5°	14.7	15.1	14.3	13.6	13.6	12.8	12.4	12.1	11.7	11.7	11.7
85°	6.0	6.4	6.0	5.7	5.3	5.7	5.7	5.3	4.9	5.3	5.3
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P160038
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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°

'160038
 ENT-F01-LED-E1-BL4-7030-ULG

REPORT NUMBER: P160038
 CATALOG NUMBER: ENT-F01-L

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°	425.6	425.6
25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	2.5°	426.4	425.6
29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	5°	427.5	426.8
34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	7.5°	424.5	424.9
40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	10°	418.1	419.2
47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	12.5°	407.9	410.2
55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	15°	390.9	394.3
63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	17.5°	368.3	372.5
70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	20°	340.1	341.9
77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	22.5°	305.4	306.1
85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	25°	268.8	268.8
92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	27.5°	234.9	233.0
99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	30°	202.4	197.5
104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	32.5°	168.1	159.8
110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	110.1	35°	133.5	126.7
115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	37.5°	103.7	96.1
119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7	40°	79.5	73.9
123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	42.5°	67.1	66.0
127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	127.0	45°	64.1	65.6
130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	47.5°	64.5	66.4
133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	133.5	50°	64.8	66.7
136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	52.5°	64.8	66.0
137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	137.1	55°	64.1	64.1
137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	57.5°	62.6	62.2
138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	60°	61.5	61.5
140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	140.5	62.5°	59.6	59.6
141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	65°	56.5	56.9
140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	140.8	67.5°	53.5	53.5
										70°	49.8	49.8
										72.5°	46.0	47.5
										75°	43.4	46.0
										77.5°	38.1	40.7
										80°	31.3	31.7
										82.5°	24.9	24.1
										85°	17.7	16.6
										87.5°	9.4	9.0
										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: P160038

CATALOG NUMBER: ENT-F01-LED-E1-BL

.ED-E1-BL4-7030-ULG

tinued):

180°
425.6
425.3
426.4
424.5
419.6
411.7
393.6
372.5
340.8
305.0
267.3
231.9
196.0
159.8
124.8
93.9
73.5
66.4
65.6
66.7
67.1
66.0
64.1
63.0
61.5
59.6
56.9
53.5
50.5
48.3
47.1
42.2
31.7
23.0
16.6
9.4
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

