

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: McGRAW-EDISON

Report Number: P228129

Luminaire Tested: **ISC-AF-450-LED-E1-SL2-7030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228129
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29761)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISC-AF-450-LED-E1-SL2-7030-ULG
Description: IMPACT ELITE LED CYLINDER LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II W/SPILL CONTROL, WITH UPLIGHT
GLOW
Light Source: (16) 3000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3934.2 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G1

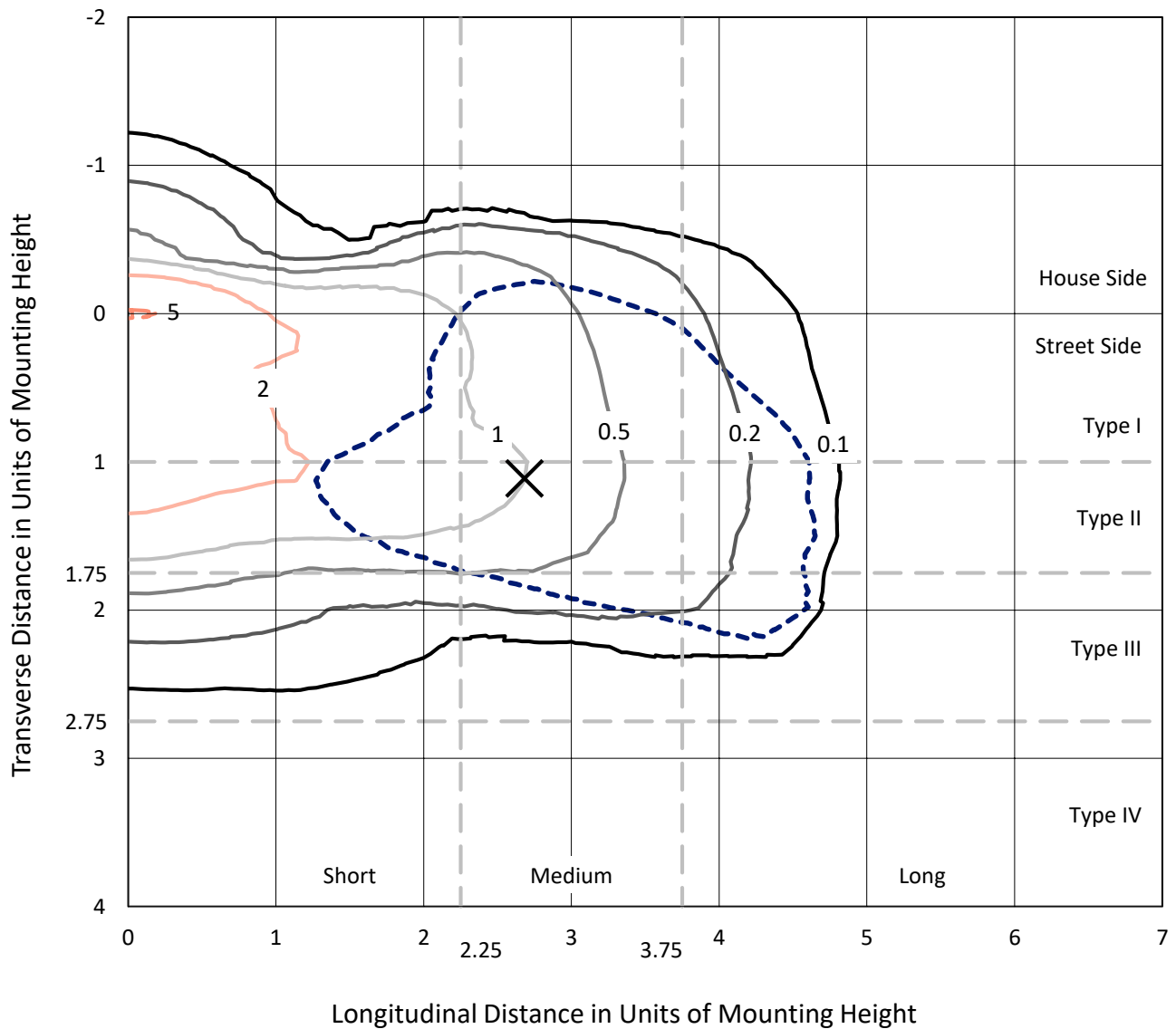
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

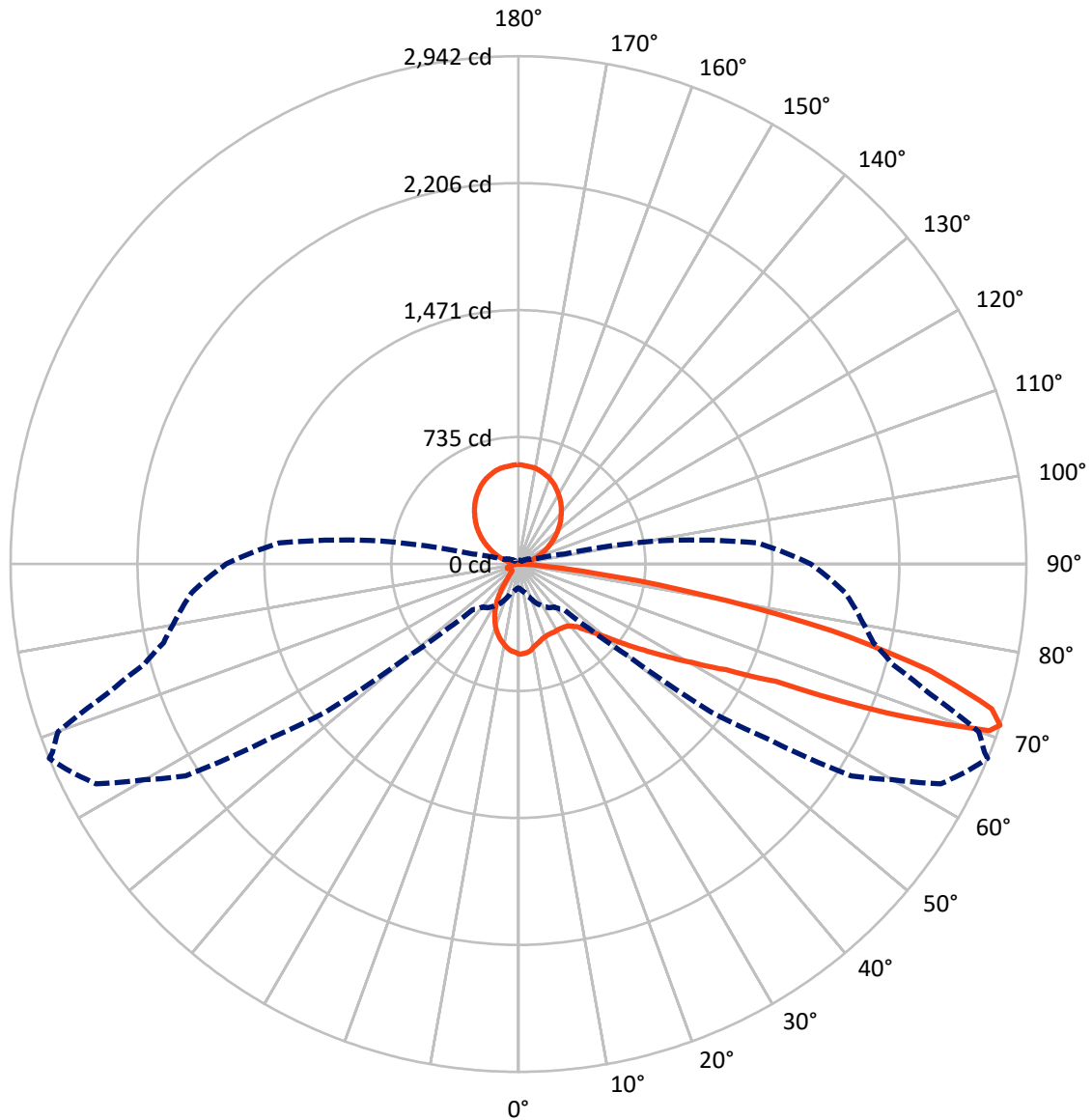
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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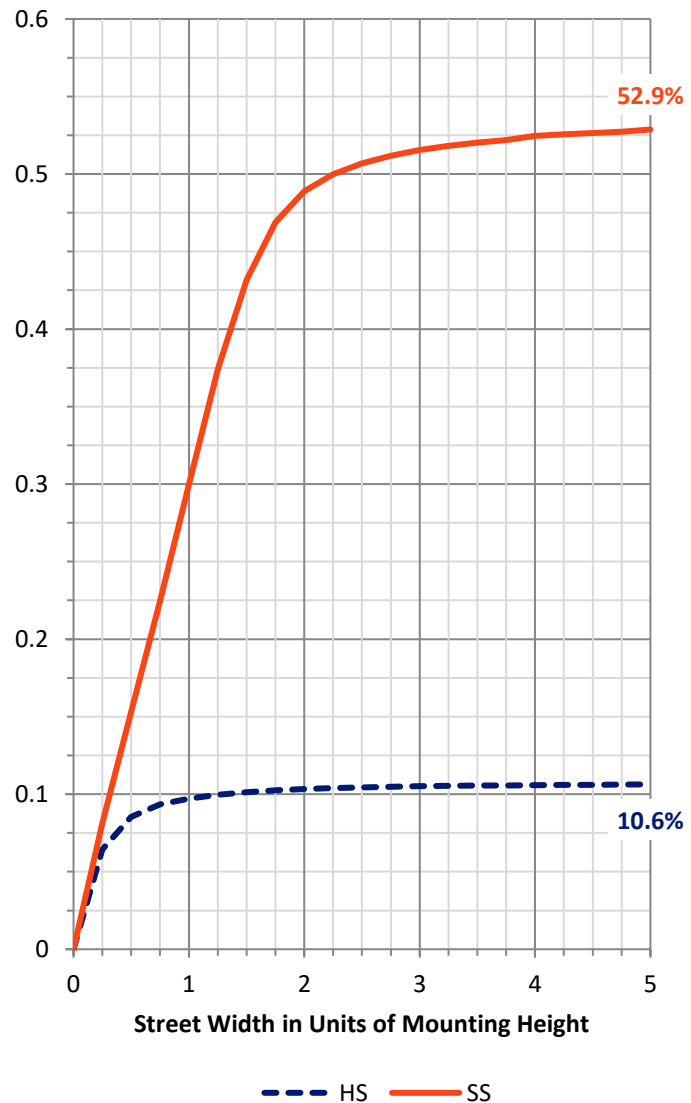
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	422.6	713.1	1135.7
	% Fixture	10.7	18.1	28.9
Street Side	Lumens	2085.4	713.1	2798.5
	% Fixture	53.0	18.1	71.1
Total	Lumens	2508.0	1426.2	3934.2
	% Fixture	63.7	36.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.6	1.2
10°-20°	109.1	2.8
20°-30°	148.4	3.8
30°-40°	202.8	5.2
40°-50°	305.6	7.8
50°-60°	484.2	12.3
60°-70°	641.1	16.3
70°-80°	510.7	13.0
80°-90°	60.5	1.5
90°-100°	4.7	0.1
100°-110°	69.0	1.8
110°-120°	153.0	3.9
120°-130°	223.9	5.7
130°-140°	265.6	6.8
140°-150°	269.3	6.8
150°-160°	231.1	5.9
160°-170°	155.1	3.9
170°-180°	54.3	1.4
0°-90°	2508.0	63.7
0°-180°	3934.2	100.0



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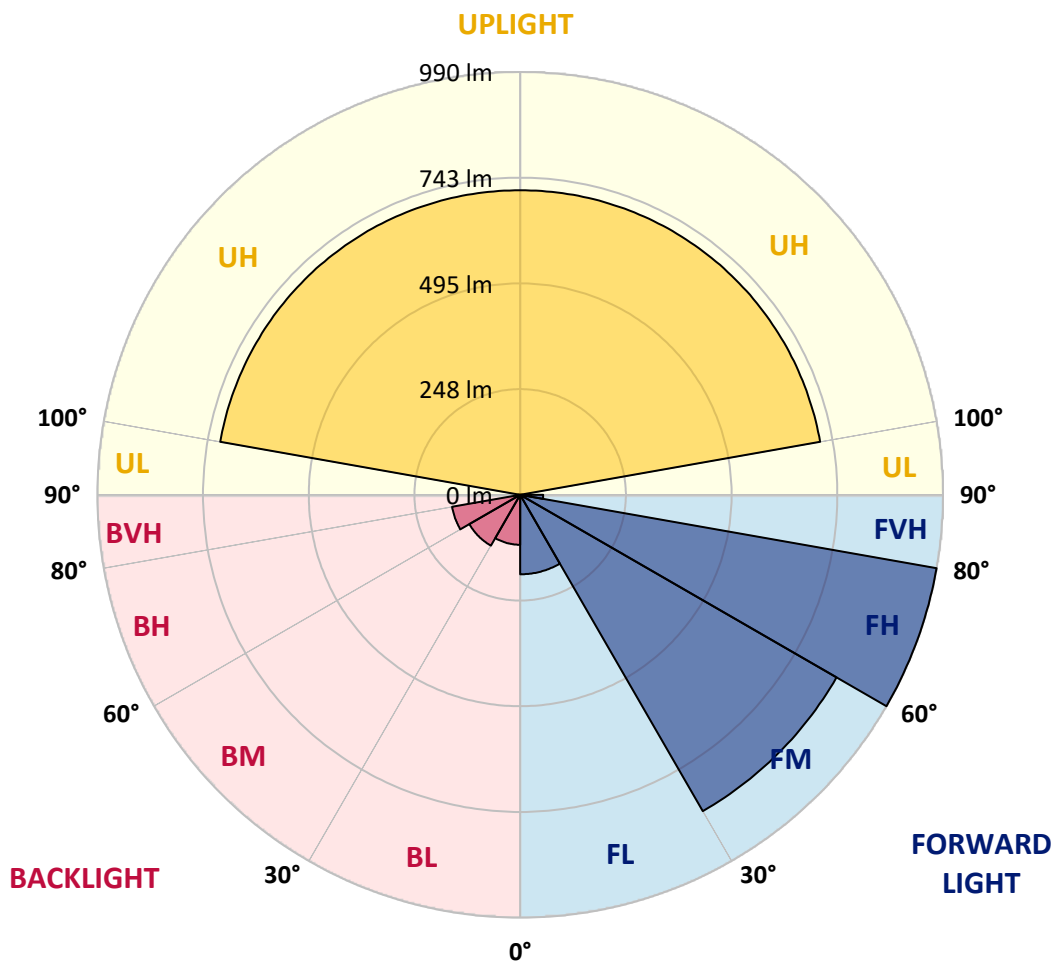
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	186.1	4.7			
FM (30°-60°)	855.3	21.7			
FH (60°-80°)	990.0	25.2			G1/1800
FVH (80°-90°)	54.0	1.4			G1/100
BL (0°-30°)	117.0	3.0	B1/500		
BM (30°-60°)	137.3	3.5	B0/220		
BH (60°-80°)	161.8	4.1	B1/500		G1/500
BVH (80°-90°)	6.6	0.2			G0/10
UL (90°-100°)	4.7	0.1		U1/10	
UH (100°-180°)	713.1	18.1		U4/1000	

BUG Rating: B1-U5-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6
2.5°	513.0	511.3	511.3	513.9	518.3	514.8	517.4	517.4	518.3	520.9	521.8
5°	475.4	471.9	475.4	478.9	488.5	486.7	489.4	492.0	497.3	498.1	505.1
7.5°	441.2	439.5	442.1	449.1	461.4	457.9	461.4	464.9	471.0	473.6	480.6
10°	415.0	412.3	415.8	421.1	433.3	432.5	434.2	438.6	445.6	447.4	456.1
12.5°	395.7	395.7	397.5	404.5	415.0	414.1	419.3	422.0	428.1	429.8	439.5
15°	386.1	383.4	386.9	393.1	403.6	403.6	407.1	409.7	418.5	419.3	428.1
17.5°	377.3	378.2	379.1	386.1	395.7	393.9	398.3	400.1	409.7	408.0	418.5
20°	377.3	379.1	378.2	382.6	389.6	386.1	391.3	392.2	402.7	400.1	411.5
22.5°	387.8	389.6	386.9	386.1	388.7	386.1	388.7	390.4	398.3	396.6	407.1
25°	406.2	409.7	406.2	400.1	397.5	390.4	392.2	394.8	401.0	396.6	406.2
27.5°	435.1	437.7	431.6	425.5	413.2	405.3	402.7	401.8	408.8	401.8	409.7
30°	468.4	471.9	466.6	455.2	437.7	424.6	419.3	416.7	421.1	410.6	418.5
32.5°	504.3	507.8	504.3	495.5	471.9	452.6	445.6	439.5	443.0	429.0	432.5
35°	541.0	544.5	548.0	542.8	512.1	490.2	478.9	473.6	472.7	455.2	456.1
37.5°	573.4	576.9	588.3	593.5	565.5	535.8	525.3	513.9	514.8	490.2	490.2
40°	612.8	617.2	632.1	644.3	625.9	590.0	577.8	565.5	565.5	533.1	534.0
42.5°	666.2	671.5	681.1	697.7	691.6	654.8	641.7	625.1	626.8	588.3	587.4
45°	741.5	745.0	745.0	755.5	756.4	721.4	712.6	696.0	699.5	650.5	653.1
47.5°	839.5	835.2	817.7	823.8	830.8	794.0	786.1	775.6	780.0	727.5	732.7
50°	930.6	927.1	891.2	892.9	918.3	880.7	878.1	864.9	871.1	818.5	826.4
52.5°	964.7	958.6	922.7	942.0	1012.9	991.9	996.3	990.1	993.6	937.6	935.8
55°	926.2	926.2	904.3	939.3	1083.8	1095.2	1131.1	1145.1	1160.0	1103.9	1091.7
57.5°	819.4	826.4	829.9	892.1	1072.4	1121.4	1189.7	1249.3	1325.4	1321.9	1340.3
60°	642.6	654.8	675.0	776.5	1023.4	1103.9	1192.4	1281.6	1386.7	1454.1	1553.9
62.5°	450.9	461.4	478.0	548.0	880.7	1019.0	1146.8	1284.3	1418.2	1524.1	1655.5
65°	306.4	316.9	351.9	390.4	531.4	732.7	928.0	1155.6	1359.6	1556.5	1733.4
67.5°	220.6	226.7	253.9	318.7	353.7	390.4	463.1	731.0	982.2	1378.8	1637.1
70°	165.5	171.6	196.1	267.9	310.8	320.4	337.9	385.2	449.1	774.8	1113.6
71°	138.3	147.1	176.8	252.1	309.0	316.9	324.8	352.8	373.8	548.0	826.4
72.5°	97.2	103.3	131.3	232.9	296.8	315.2	333.5	332.7	330.9	373.8	499.9
75°	62.2	62.2	62.2	131.3	316.9	305.5	312.5	350.2	330.9	314.3	329.2
77.5°	49.0	48.1	45.5	65.7	247.7	309.9	328.3	337.9	356.3	328.3	313.4
80°	36.8	35.9	35.9	41.1	114.7	200.5	277.5	308.2	321.3	349.3	318.7
82.5°	19.3	19.3	21.0	24.5	42.9	70.0	143.6	236.4	264.4	266.1	268.8
85°	6.1	5.3	7.0	11.4	18.4	22.8	40.3	95.4	141.8	171.6	181.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.5	6.1	7.9
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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.0	4.0	5.2	6.5	7.8	9.0	10.0	11.0
100°	8.0	8.0	10.0	14.0	22.0	24.0	26.0	28.0	30.0	30.5	31.0
102.5°	28.0	28.0	32.0	38.0	45.0	46.2	47.5	48.8	50.0	50.2	50.5
105°	54.0	54.0	56.0	61.0	66.0	67.0	68.0	69.0	70.0	70.2	70.5
107.5°	78.0	77.0	80.0	84.0	88.0	88.8	89.5	90.2	91.0	91.5	92.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
110°	101.0	102.0	103.0	106.0	110.0	110.5	111.0	111.5	112.0	112.5	113.0
112.5°	124.0	124.0	126.0	129.0	132.0	132.5	133.0	133.5	134.0	134.5	135.0
115°	146.0	147.0	149.0	151.0	154.0	154.5	155.0	155.5	156.0	156.5	157.0
117.5°	169.0	170.0	172.0	174.0	177.0	177.5	178.0	178.5	179.0	179.2	179.5
120°	193.0	195.0	196.0	198.0	201.0	201.2	201.5	201.8	202.0	202.5	203.0
122.5°	219.0	220.0	221.0	223.0	226.0	226.2	226.5	226.8	227.0	227.2	227.5
125°	244.0	246.0	247.0	248.0	251.0	251.2	251.5	251.8	252.0	252.2	252.5
127.5°	267.0	269.0	270.0	272.0	274.0	274.5	275.0	275.5	276.0	276.5	277.0
130°	290.0	292.0	293.0	294.0	298.0	298.2	298.5	298.8	299.0	299.5	300.0
132.5°	313.0	314.0	317.0	318.0	321.0	321.2	321.5	321.8	322.0	322.8	323.5
135°	336.0	337.0	339.0	341.0	345.0	345.0	345.0	345.0	345.0	345.8	346.5
137.5°	359.0	360.0	363.0	364.0	367.0	367.0	367.0	367.0	367.0	367.5	368.0
140°	382.0	383.0	385.0	386.0	388.0	388.2	388.5	388.8	389.0	389.2	389.5
142.5°	404.0	406.0	408.0	407.0	410.0	410.0	410.0	410.0	410.0	410.5	411.0
145°	425.0	426.0	428.0	428.0	431.0	431.2	431.5	431.8	432.0	432.5	433.0
147.5°	444.0	444.0	447.0	448.0	452.0	452.2	452.5	452.8	453.0	453.2	453.5
150°	461.0	462.0	464.0	465.0	469.0	469.2	469.5	469.8	470.0	470.2	470.5
152.5°	479.0	480.0	483.0	482.0	485.0	485.2	485.5	485.8	486.0	486.2	486.5
155°	499.0	500.0	502.0	501.0	503.0	503.0	503.0	503.0	503.0	503.2	503.5
157.5°	513.0	515.0	517.0	516.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0
160°	525.0	527.0	529.0	529.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0
162.5°	535.0	536.0	539.0	538.0	541.0	541.0	541.0	541.0	541.0	541.2	541.5
165°	546.0	547.0	549.0	548.0	552.0	552.0	552.0	552.0	552.0	552.2	552.5
167.5°	555.0	556.0	559.0	558.0	561.0	560.8	560.5	560.2	560.0	560.0	560.0
170°	562.0	563.0	566.0	565.0	567.0	566.8	566.5	566.2	566.0	565.8	565.5
172.5°	565.0	566.0	569.0	567.0	569.0	568.8	568.5	568.2	568.0	568.2	568.5
175°	567.0	569.0	570.0	569.0	572.0	572.0	572.0	572.0	572.0	572.2	572.5
177.5°	572.0	573.0	575.0	574.0	578.0	577.8	577.5	577.2	577.0	577.0	577.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



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CANDELA DISTRIBUTION (continued):

	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	68°	70°	72.5°	75°
0°	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6
2.5°	519.1	522.6	520.0	523.5	519.1	524.4	520.0	522.6	523.5	520.0	524.4
5°	500.8	511.3	507.8	515.6	512.1	519.1	515.6	522.6	522.6	520.0	526.1
7.5°	478.0	488.5	489.4	497.3	497.3	506.0	506.0	513.0	516.5	516.5	525.3
10°	455.2	464.9	466.6	475.4	477.1	487.6	487.6	497.3	504.3	506.9	517.4
12.5°	437.7	450.0	450.0	459.6	457.9	473.6	475.4	484.1	491.1	497.3	511.3
15°	427.2	438.6	438.6	448.2	446.5	462.2	464.9	473.6	484.1	487.6	506.9
17.5°	416.7	428.1	425.5	438.6	437.7	455.2	453.5	466.6	475.4	480.6	502.5
20°	408.0	421.1	419.3	432.5	429.0	448.2	448.2	461.4	470.1	474.5	499.9
22.5°	403.6	417.6	414.1	427.2	424.6	443.8	443.8	457.0	466.6	473.6	499.0
25°	403.6	415.8	412.3	427.2	422.8	443.8	443.0	456.1	465.7	471.9	499.9
27.5°	405.3	417.6	415.0	429.0	425.5	443.8	445.6	457.0	466.6	473.6	501.6
30°	411.5	422.8	416.7	429.8	427.2	444.7	443.8	456.1	465.7	474.5	501.6
32.5°	424.6	430.7	422.8	434.2	429.0	446.5	446.5	455.2	466.6	477.1	501.6
35°	443.0	447.4	435.1	443.0	433.3	450.9	450.0	459.6	468.4	477.1	503.4
37.5°	469.2	474.5	455.2	462.2	446.5	460.5	457.0	468.4	477.1	482.4	512.1
40°	508.6	510.4	485.0	490.2	468.4	480.6	471.9	487.6	492.0	495.5	525.3
42.5°	556.8	558.5	526.1	529.6	501.6	512.1	497.3	513.9	520.0	519.1	551.5
45°	616.3	617.2	580.4	583.0	550.7	559.4	541.0	555.0	559.4	556.8	590.0
47.5°	681.1	688.1	647.0	650.5	616.3	620.7	597.9	613.7	613.7	611.1	645.2
50°	766.9	777.4	729.2	734.5	695.1	698.6	672.3	689.0	687.2	680.2	718.7
52.5°	873.7	883.3	832.5	839.5	797.5	799.3	766.9	786.1	780.9	769.5	814.2
55°	1004.1	1005.0	957.7	963.9	921.8	919.2	878.9	902.6	894.7	878.9	920.1
57.5°	1213.4	1188.0	1110.1	1108.3	1062.8	1059.3	1007.6	1036.5	1023.4	990.1	1044.4
60°	1550.4	1558.3	1359.6	1328.9	1244.0	1228.2	1160.0	1193.2	1177.5	1123.2	1176.6
62.5°	1740.4	1865.6	1853.3	1743.0	1524.1	1464.6	1349.1	1388.4	1347.3	1267.6	1317.5
65°	1881.3	2051.2	2149.2	2255.1	2157.1	1913.7	1640.6	1695.7	1595.1	1443.6	1491.8
67.5°	1933.8	2138.7	2345.3	2495.9	2598.3	2616.7	2300.7	2315.5	2067.8	1764.9	1771.0
70°	1659.0	1961.0	2365.4	2556.3	2759.4	2859.2	2892.5	2876.7	2716.5	2287.5	2123.8
71°	1406.0	1771.9	2284.9	2497.6	2757.6	2853.9	2941.5	2911.7	2837.3	2495.0	2243.8
72.5°	952.5	1412.1	2049.4	2319.0	2665.7	2735.8	2867.1	2814.5	2798.8	2650.0	2355.8
75°	448.2	703.9	1333.3	1741.3	2256.0	2323.4	2460.9	2396.1	2354.9	2405.7	2241.1
77.5°	330.0	384.3	731.9	1082.0	1640.6	1736.0	1854.2	1774.5	1722.0	1772.8	1658.1
80°	300.3	302.0	379.1	570.8	978.7	1035.6	1080.3	1015.5	935.8	932.3	826.4
82.5°	276.6	261.8	246.0	302.0	501.6	477.1	441.2	408.8	317.8	254.8	183.8
85°	176.0	192.6	175.1	165.5	199.6	164.6	130.4	125.2	88.4	59.5	55.2
87.5°	12.3	14.0	16.6	19.3	23.6	19.3	12.3	14.9	8.8	0.0	4.4
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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	12.0	13.0	11.5	10.0	8.5	7.0	6.5	6.4	6.0	5.5	5.0
100°	31.5	32.0	31.5	31.0	30.5	30.0	29.2	29.1	28.5	27.8	27.0
102.5°	50.8	51.0	50.8	50.5	50.2	50.0	49.5	49.4	49.0	48.5	48.0
105°	70.8	71.0	71.0	71.0	71.0	71.0	70.5	70.4	70.0	69.5	69.0
107.5°	92.5	93.0	92.8	92.5	92.2	92.0	91.8	91.7	91.5	91.2	91.0



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CATALOG NUMBER: ISC-AF-450-LED-E1-SL2-7030-ULG

CANDELA DISTRIBUTION (continued):

	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	68°	70°	72.5°	75°
110°	113.5	114.0	114.0	114.0	114.0	114.0	113.8	113.7	113.5	113.2	113.0
112.5°	135.5	136.0	136.0	136.0	136.0	136.0	135.8	135.7	135.5	135.2	135.0
115°	157.5	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0
117.5°	179.8	180.0	180.2	180.5	180.8	181.0	180.8	180.7	180.5	180.2	180.0
120°	203.5	204.0	204.0	204.0	204.0	204.0	204.0	204.0	204.0	204.0	204.0
122.5°	227.8	228.0	228.0	228.0	228.0	228.0	228.2	228.3	228.5	228.8	229.0
125°	252.8	253.0	253.2	253.5	253.8	254.0	254.0	254.0	254.0	254.0	254.0
127.5°	277.5	278.0	277.8	277.5	277.2	277.0	277.2	277.3	277.5	277.8	278.0
130°	300.5	301.0	301.0	301.0	301.0	301.0	301.2	301.3	301.5	301.8	302.0
132.5°	324.2	325.0	325.0	325.0	325.0	325.0	325.2	325.3	325.5	325.8	326.0
135°	347.2	348.0	348.0	348.0	348.0	348.0	348.2	348.3	348.5	348.8	349.0
137.5°	368.5	369.0	369.0	369.0	369.0	369.0	369.2	369.3	369.5	369.8	370.0
140°	389.8	390.0	390.0	390.0	390.0	390.0	390.5	390.6	391.0	391.5	392.0
142.5°	411.5	412.0	412.0	412.0	412.0	412.0	412.2	412.3	412.5	412.8	413.0
145°	433.5	434.0	433.8	433.5	433.2	433.0	433.2	433.3	433.5	433.8	434.0
147.5°	453.8	454.0	453.5	453.0	452.5	452.0	452.2	452.3	452.5	452.8	453.0
150°	470.8	471.0	470.5	470.0	469.5	469.0	469.0	469.0	469.0	469.0	469.0
152.5°	486.8	487.0	486.8	486.5	486.2	486.0	486.0	486.0	486.0	486.0	486.0
155°	503.8	504.0	503.8	503.5	503.2	503.0	503.2	503.3	503.5	503.8	504.0
157.5°	519.0	519.0	518.5	518.0	517.5	517.0	517.2	517.3	517.5	517.8	518.0
160°	532.0	532.0	531.5	531.0	530.5	530.0	530.0	530.0	530.0	530.0	530.0
162.5°	541.8	542.0	541.5	541.0	540.5	540.0	539.5	539.4	539.0	538.5	538.0
165°	552.8	553.0	552.2	551.5	550.8	550.0	549.5	549.4	549.0	548.5	548.0
167.5°	560.0	560.0	559.5	559.0	558.5	558.0	558.2	558.3	558.5	558.8	559.0
170°	565.2	565.0	564.8	564.5	564.2	564.0	564.5	564.6	565.0	565.5	566.0
172.5°	568.8	569.0	568.5	568.0	567.5	567.0	567.2	567.3	567.5	567.8	568.0
175°	572.8	573.0	572.2	571.5	570.8	570.0	569.5	569.4	569.0	568.5	568.0
177.5°	577.0	577.0	576.2	575.5	574.8	574.0	574.0	574.0	574.0	574.0	574.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



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CATALOG NUMBER: ISC-AF-450-LED-E1-SL2-7030-ULG

CANDELA DISTRIBUTION (continued):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6
2.5°	518.3	522.6	524.4	523.5	521.8	520.0	513.9	518.3	512.1	516.5	511.3
5°	520.9	527.0	527.9	526.1	524.4	520.9	510.4	516.5	509.5	513.0	505.1
7.5°	520.0	529.6	530.5	528.8	525.3	519.1	508.6	513.0	501.6	504.3	493.7
10°	515.6	529.6	530.5	526.1	520.9	511.3	499.0	500.8	489.4	489.4	475.4
12.5°	511.3	527.9	532.3	526.1	517.4	504.3	490.2	488.5	475.4	474.5	458.7
15°	511.3	529.6	535.8	527.9	514.8	496.4	479.7	476.2	461.4	457.0	439.5
17.5°	510.4	529.6	538.4	527.9	512.1	488.5	467.5	464.0	444.7	437.7	417.6
20°	509.5	531.4	540.1	526.1	504.3	478.9	455.2	448.2	427.2	415.8	392.2
22.5°	508.6	534.9	541.9	524.4	499.0	466.6	442.1	429.8	405.3	390.4	362.4
25°	513.0	539.3	542.8	522.6	491.1	453.5	427.2	410.6	383.4	364.2	330.9
27.5°	514.8	543.6	544.5	519.1	481.5	439.5	411.5	388.7	358.1	334.4	296.8
30°	520.0	544.5	541.9	512.1	470.1	422.0	393.1	365.1	330.9	300.3	255.6
32.5°	521.8	547.2	540.1	504.3	458.7	404.5	372.1	339.7	298.5	262.6	208.4
35°	525.3	548.9	538.4	499.9	446.5	386.1	350.2	313.4	266.1	220.6	158.5
37.5°	530.5	556.8	542.8	498.1	440.3	370.3	325.7	286.3	227.6	174.2	105.1
40°	543.6	572.5	550.7	500.8	436.0	357.2	302.0	258.3	183.8	128.7	72.7
42.5°	569.9	599.7	570.8	513.9	438.6	345.8	277.5	228.5	139.2	91.9	60.4
45°	609.3	634.7	604.1	535.8	449.1	339.7	254.8	197.8	99.8	73.5	55.2
47.5°	667.1	691.6	653.1	570.8	467.5	337.0	231.1	165.5	77.0	66.5	53.4
50°	743.2	772.1	724.0	625.9	501.6	339.7	205.7	134.8	67.4	64.8	52.5
52.5°	836.9	864.9	816.8	707.4	557.7	354.6	178.6	117.3	63.9	63.9	51.7
55°	942.8	982.2	935.0	820.3	644.3	386.9	162.0	111.2	63.9	64.8	50.8
57.5°	1068.0	1101.3	1059.3	928.8	748.5	440.3	163.7	117.3	63.9	64.8	49.9
60°	1190.6	1231.7	1183.6	1067.2	867.6	520.9	199.6	148.8	66.5	67.4	49.9
62.5°	1318.4	1349.9	1310.5	1188.0	1002.4	620.7	271.4	215.4	77.0	79.7	53.4
65°	1458.5	1510.1	1469.0	1368.3	1193.2	780.0	408.0	323.0	113.8	92.8	58.7
67.5°	1701.0	1722.0	1701.9	1609.9	1416.5	911.3	485.9	328.3	113.8	90.2	65.7
70°	2029.3	1982.0	1891.8	1720.2	1440.1	817.7	348.4	200.5	97.2	85.8	69.2
71°	2105.4	2032.8	1899.7	1693.1	1391.1	738.0	270.5	158.5	91.0	84.0	69.2
72.5°	2151.8	2043.3	1841.9	1613.4	1294.8	581.3	178.6	124.3	83.2	79.7	66.5
75°	2091.4	1891.0	1626.6	1396.3	1060.2	302.0	112.1	94.5	70.9	69.2	57.8
77.5°	1660.7	1484.7	1200.2	1014.6	682.0	133.9	80.5	71.8	56.0	54.3	44.6
80°	774.8	621.6	364.2	312.5	214.5	78.8	55.2	49.0	40.3	38.5	31.5
82.5°	140.9	105.9	82.3	79.7	71.8	46.4	32.4	29.8	25.4	24.5	20.1
85°	48.1	46.4	35.0	35.0	35.9	24.5	18.4	17.5	13.1	13.1	8.8
87.5°	0.9	4.4	4.4	6.1	5.3	4.4	1.8	2.6	0.9	2.6	0.0
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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.8	4.5	4.0	4.0	4.0	4.5	4.8	5.0	5.5	6.0	6.5
100°	26.8	26.5	26.0	25.0	26.0	26.5	26.8	27.0	27.8	28.5	29.2
102.5°	48.2	48.5	49.0	48.0	49.0	48.5	48.2	48.0	48.5	49.0	49.5
105°	69.5	70.0	71.0	69.0	71.0	70.0	69.5	69.0	69.5	70.0	70.5
107.5°	91.2	91.5	92.0	91.0	92.0	91.5	91.2	91.0	91.2	91.5	91.8



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°	
110°	113.2	113.5	114.0	113.0	114.0	113.5	113.2	113.0	113.2	113.5	113.8	0°
112.5°	135.5	136.0	137.0	135.0	137.0	136.0	135.5	135.0	135.2	135.5	135.8	2.5°
115°	158.5	159.0	160.0	159.0	160.0	159.0	158.5	158.0	158.0	158.0	158.0	5°
117.5°	180.5	181.0	182.0	180.0	182.0	181.0	180.5	180.0	180.2	180.5	180.8	7.5°
120°	204.5	205.0	206.0	204.0	206.0	205.0	204.5	204.0	204.0	204.0	204.0	10°
122.5°	230.0	231.0	233.0	232.0	233.0	231.0	230.0	229.0	228.8	228.5	228.2	12.5°
125°	254.8	255.5	257.0	256.0	257.0	255.5	254.8	254.0	254.0	254.0	254.0	15°
127.5°	278.8	279.5	281.0	278.0	281.0	279.5	278.8	278.0	277.8	277.5	277.2	17.5°
130°	302.8	303.5	305.0	303.0	305.0	303.5	302.8	302.0	301.8	301.5	301.2	20°
132.5°	326.8	327.5	329.0	327.0	329.0	327.5	326.8	326.0	325.8	325.5	325.2	22.5°
135°	349.5	350.0	351.0	350.0	351.0	350.0	349.5	349.0	348.8	348.5	348.2	25°
137.5°	371.0	372.0	374.0	372.0	374.0	372.0	371.0	370.0	369.8	369.5	369.2	27.5°
140°	393.0	394.0	396.0	394.0	396.0	394.0	393.0	392.0	391.5	391.0	390.5	30°
142.5°	413.8	414.5	416.0	415.0	416.0	414.5	413.8	413.0	412.8	412.5	412.2	32.5°
145°	434.8	435.5	437.0	435.0	437.0	435.5	434.8	434.0	433.8	433.5	433.2	35°
147.5°	453.8	454.5	456.0	453.0	456.0	454.5	453.8	453.0	452.8	452.5	452.2	37.5°
150°	470.0	471.0	473.0	470.0	473.0	471.0	470.0	469.0	469.0	469.0	469.0	40°
152.5°	486.8	487.5	489.0	486.0	489.0	487.5	486.8	486.0	486.0	486.0	486.0	42.5°
155°	504.8	505.5	507.0	505.0	507.0	505.5	504.8	504.0	503.8	503.5	503.2	45°
157.5°	519.2	520.5	523.0	520.0	523.0	520.5	519.2	518.0	517.8	517.5	517.2	47.5°
160°	530.8	531.5	533.0	531.0	533.0	531.5	530.8	530.0	530.0	530.0	530.0	50°
162.5°	538.5	539.0	540.0	537.0	540.0	539.0	538.5	538.0	538.5	539.0	539.5	52.5°
165°	548.5	549.0	550.0	548.0	550.0	549.0	548.5	548.0	548.5	549.0	549.5	55°
167.5°	560.0	561.0	563.0	561.0	563.0	561.0	560.0	559.0	558.8	558.5	558.2	57.5°
170°	567.2	568.5	571.0	569.0	571.0	568.5	567.2	566.0	565.5	565.0	564.5	60°
172.5°	568.8	569.5	571.0	568.0	571.0	569.5	568.8	568.0	567.8	567.5	567.2	62.5°
175°	568.8	569.5	571.0	568.0	571.0	569.5	568.8	568.0	568.5	569.0	569.5	65°
177.5°	574.8	575.5	577.0	574.0	577.0	575.5	574.8	574.0	574.0	574.0	574.0	67.5°
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	70°
												71°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°

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REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°	110°	115°
522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	522.6	110°	114.0
515.6	508.6	514.8	508.6	512.1	505.1	509.5	506.9	506.9	504.3	502.5	112.5°	136.0
507.8	499.0	503.4	496.4	499.9	489.4	492.0	487.6	478.9	473.6	466.6	115°	158.0
496.4	483.2	486.7	476.2	478.9	464.9	467.5	459.6	443.0	432.5	422.0	117.5°	181.0
476.2	464.0	464.9	451.7	450.9	436.8	434.2	423.7	399.2	381.7	367.7	120°	204.0
456.1	442.1	440.3	424.6	422.0	405.3	401.8	385.2	349.3	315.2	293.3	122.5°	228.0
435.1	417.6	412.3	395.7	386.1	372.1	362.4	337.9	286.3	241.6	212.7	125°	254.0
411.5	388.7	380.8	361.6	347.5	326.5	312.5	279.3	212.7	164.6	144.4	127.5°	277.0
380.8	356.3	342.3	317.8	299.4	274.0	256.5	213.6	141.8	117.3	114.7	130°	301.0
346.7	317.8	300.3	269.6	246.9	219.7	191.7	144.4	100.7	95.4	98.9	132.5°	325.0
310.8	274.9	252.1	214.5	183.8	152.3	126.1	96.3	82.3	81.4	86.7	135°	348.0
267.9	226.7	194.3	149.7	121.7	97.2	85.8	76.2	70.0	70.9	76.2	137.5°	369.0
220.6	167.2	133.1	93.7	81.4	70.9	69.2	65.7	63.0	64.8	68.3	140°	390.0
164.6	106.8	85.8	67.4	66.5	60.4	62.2	60.4	59.5	60.4	63.0	142.5°	412.0
111.2	70.9	67.4	57.8	59.5	55.2	57.8	56.9	56.0	56.0	57.8	145°	433.0
77.0	58.7	60.4	53.4	56.0	52.5	55.2	54.3	53.4	52.5	53.4	147.5°	452.0
63.9	53.4	56.0	50.8	53.4	49.9	52.5	51.7	50.8	49.0	49.0	150°	469.0
58.7	50.8	53.4	48.1	51.7	47.3	50.8	49.0	47.3	45.5	46.4	152.5°	486.0
56.9	49.0	51.7	46.4	49.9	45.5	48.1	47.3	43.8	42.9	43.8	155°	503.0
55.2	48.1	50.8	45.5	48.1	43.8	46.4	44.6	41.1	40.3	41.1	157.5°	517.0
54.3	46.4	49.0	43.8	46.4	42.9	44.6	42.9	39.4	38.5	38.5	160°	530.0
53.4	45.5	48.1	42.0	44.6	39.4	42.0	40.3	36.8	35.9	35.9	162.5°	540.0
53.4	44.6	46.4	40.3	42.9	37.6	39.4	37.6	35.9	34.1	34.1	165°	550.0
52.5	42.9	45.5	38.5	40.3	35.9	37.6	35.9	33.3	32.4	32.4	167.5°	558.0
52.5	42.0	44.6	37.6	39.4	34.1	35.9	34.1	31.5	30.6	30.6	170°	564.0
55.2	43.8	45.5	38.5	39.4	34.1	35.0	32.4	29.8	29.8	28.9	172.5°	567.0
60.4	49.0	49.0	40.3	40.3	34.1	35.0	31.5	28.0	28.0	28.0	175°	570.0
65.7	54.3	53.4	42.9	42.0	34.1	34.1	29.8	26.3	26.3	26.3	177.5°	574.0
69.2	56.9	55.2	43.8	42.0	33.3	32.4	28.0	24.5	24.5	24.5	180°	576.0
68.3	56.9	54.3	42.9	40.3	31.5	31.5	27.1	23.6	23.6	22.8		
64.8	53.4	50.8	40.3	38.5	29.8	29.8	25.4	21.9	21.9	21.0		
55.2	45.5	42.9	34.1	32.4	26.3	25.4	21.0	19.3	18.4	18.4		
42.9	35.9	33.3	27.1	26.3	21.0	20.1	17.5	15.8	15.8	14.9		
30.6	25.4	23.6	18.4	16.6	14.0	14.9	13.1	12.3	12.3	11.4		
18.4	13.1	13.1	10.5	11.4	8.8	9.6	9.6	8.8	7.0	7.0		
9.6	6.1	7.9	4.4	6.1	2.6	4.4	3.5	3.5	2.6	2.6		
1.8	0.0	0.9	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
7.0	8.5	10.0	11.5	13.0	12.0	11.0	9.0	4.0	3.0	2.0		
30.0	30.5	31.0	31.5	32.0	31.5	31.0	30.0	22.0	14.0	10.0		
50.0	50.2	50.5	50.8	51.0	50.8	50.5	50.0	45.0	38.0	32.0		
71.0	71.0	71.0	71.0	71.0	70.8	70.5	70.0	66.0	61.0	56.0		
92.0	92.2	92.5	92.8	93.0	92.5	92.0	91.0	88.0	84.0	80.0		

'228129
 ISC-AF-450-LED-E1-SL2-7030-ULG

REPORT NUMBER: P228129
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TION (continued):

CANDELA DISTRIBUTION (con

117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°		175°	180°
114.0	114.0	114.0	114.0	113.5	113.0	112.0	110.0	106.0	103.0	0°	522.6	522.6
136.0	136.0	136.0	136.0	135.5	135.0	134.0	132.0	129.0	126.0	2.5°	497.3	498.1
158.0	158.0	158.0	158.0	157.5	157.0	156.0	154.0	151.0	149.0	5°	463.1	464.9
180.8	180.5	180.2	180.0	179.8	179.5	179.0	177.0	174.0	172.0	7.5°	414.1	416.7
204.0	204.0	204.0	204.0	203.5	203.0	202.0	201.0	198.0	196.0	10°	355.4	357.2
228.0	228.0	228.0	228.0	227.8	227.5	227.0	226.0	223.0	221.0	12.5°	280.1	280.1
253.8	253.5	253.2	253.0	252.8	252.5	252.0	251.0	248.0	247.0	15°	196.1	197.8
277.2	277.5	277.8	278.0	277.5	277.0	276.0	274.0	272.0	270.0	17.5°	137.4	138.3
301.0	301.0	301.0	301.0	300.5	300.0	299.0	298.0	294.0	293.0	20°	115.6	116.4
325.0	325.0	325.0	325.0	324.2	323.5	322.0	321.0	318.0	317.0	22.5°	103.3	104.2
348.0	348.0	348.0	348.0	347.2	346.5	345.0	345.0	341.0	339.0	25°	91.9	92.8
369.0	369.0	369.0	369.0	368.5	368.0	367.0	367.0	364.0	363.0	27.5°	79.7	80.5
390.0	390.0	390.0	390.0	389.8	389.5	389.0	388.0	386.0	385.0	30°	71.8	72.7
412.0	412.0	412.0	412.0	411.5	411.0	410.0	410.0	407.0	408.0	32.5°	64.8	65.7
433.2	433.5	433.8	434.0	433.5	433.0	432.0	431.0	428.0	428.0	35°	58.7	58.7
452.5	453.0	453.5	454.0	453.8	453.5	453.0	452.0	448.0	447.0	37.5°	54.3	54.3
469.5	470.0	470.5	471.0	470.8	470.5	470.0	469.0	465.0	464.0	40°	49.9	49.9
486.2	486.5	486.8	487.0	486.8	486.5	486.0	485.0	482.0	483.0	42.5°	47.3	47.3
503.2	503.5	503.8	504.0	503.8	503.5	503.0	503.0	501.0	502.0	45°	44.6	44.6
517.5	518.0	518.5	519.0	519.0	519.0	519.0	519.0	516.0	517.0	47.5°	42.0	42.0
530.5	531.0	531.5	532.0	532.0	532.0	532.0	532.0	529.0	529.0	50°	39.4	40.3
540.5	541.0	541.5	542.0	541.8	541.5	541.0	541.0	538.0	539.0	52.5°	36.8	36.8
550.8	551.5	552.2	553.0	552.8	552.5	552.0	552.0	548.0	549.0	55°	34.1	34.1
558.5	559.0	559.5	560.0	560.0	560.0	560.0	561.0	558.0	559.0	57.5°	31.5	32.4
564.2	564.5	564.8	565.0	565.2	565.5	566.0	567.0	565.0	566.0	60°	29.8	29.8
567.5	568.0	568.5	569.0	568.8	568.5	568.0	569.0	567.0	569.0	62.5°	28.0	28.0
570.8	571.5	572.2	573.0	572.8	572.5	572.0	572.0	569.0	570.0	65°	27.1	27.1
574.8	575.5	576.2	577.0	577.0	577.0	577.0	578.0	574.0	575.0	67.5°	25.4	25.4
576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	70°	23.6	23.6
										71°	22.8	22.8
										72.5°	21.0	21.0
										75°	18.4	17.5
										77.5°	14.9	14.9
										80°	11.4	10.5
										82.5°	7.0	6.1
										85°	2.6	1.8
										87.5°	0.0	0.0
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	1.0	1.0
										97.5°	2.0	2.0
										100°	8.0	8.0
										102.5°	28.0	28.0
										105°	54.0	54.0
										107.5°	77.0	78.0



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CANDELA DISTRIBUTION (continued):

	175°	180°
110°	102.0	101.0
112.5°	124.0	124.0
115°	147.0	146.0
117.5°	170.0	169.0
120°	195.0	193.0
122.5°	220.0	219.0
125°	246.0	244.0
127.5°	269.0	267.0
130°	292.0	290.0
132.5°	314.0	313.0
135°	337.0	336.0
137.5°	360.0	359.0
140°	383.0	382.0
142.5°	406.0	404.0
145°	426.0	425.0
147.5°	444.0	444.0
150°	462.0	461.0
152.5°	480.0	479.0
155°	500.0	499.0
157.5°	515.0	513.0
160°	527.0	525.0
162.5°	536.0	535.0
165°	547.0	546.0
167.5°	556.0	555.0
170°	563.0	562.0
172.5°	566.0	565.0
175°	569.0	567.0
177.5°	573.0	572.0
180°	576.0	576.0

(END OF REPORT)

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

Scaled Data Report

