

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: P228519

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29764)-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-SLL-7030-ULG
Description: IMPACT ELITE LED CYLINDER LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-90° SPILL LIGHT ELIMINATOR LEFT, 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: 3638.2 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type IV - Short - 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

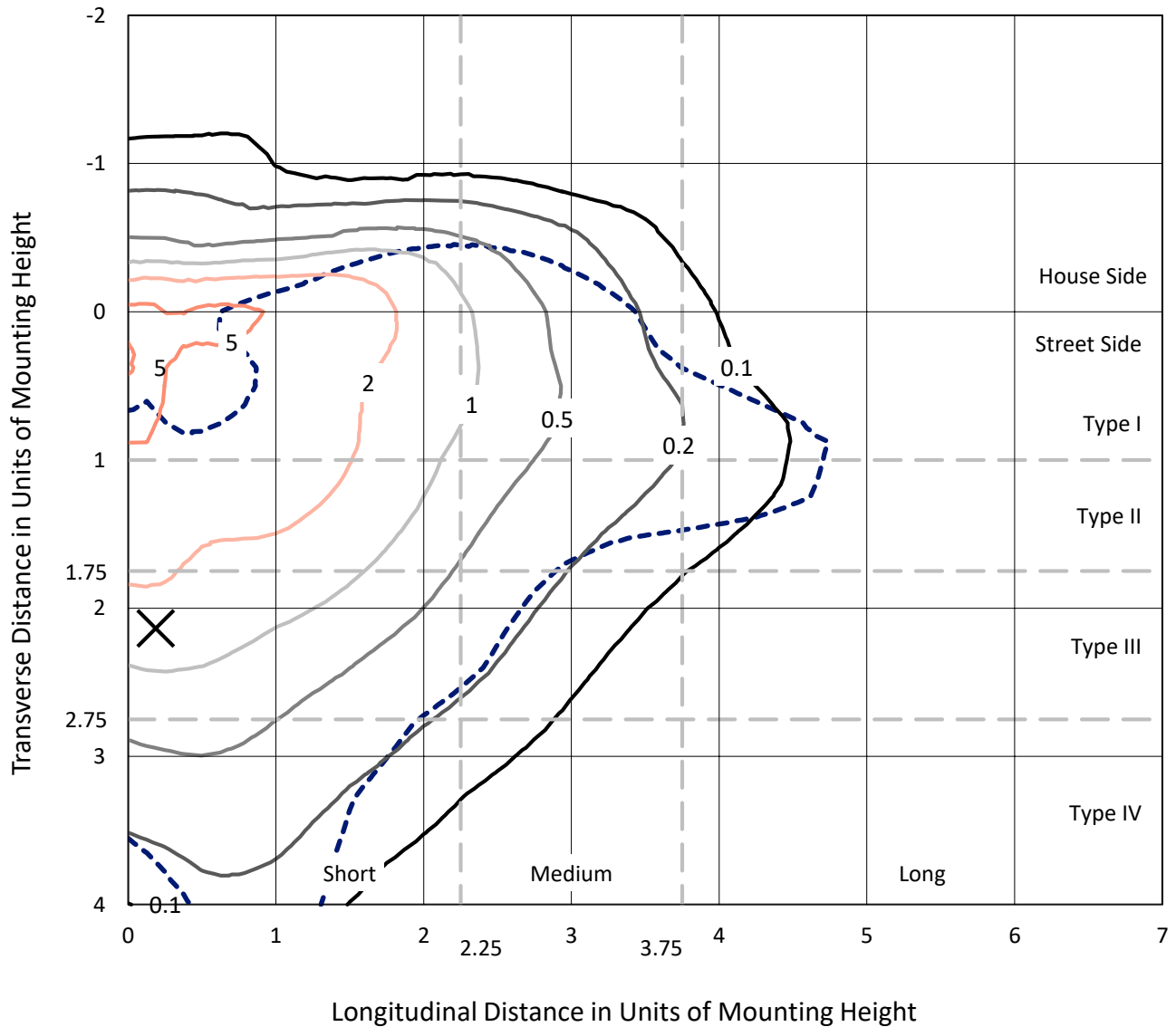


REPORT NUMBER: P228519

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

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

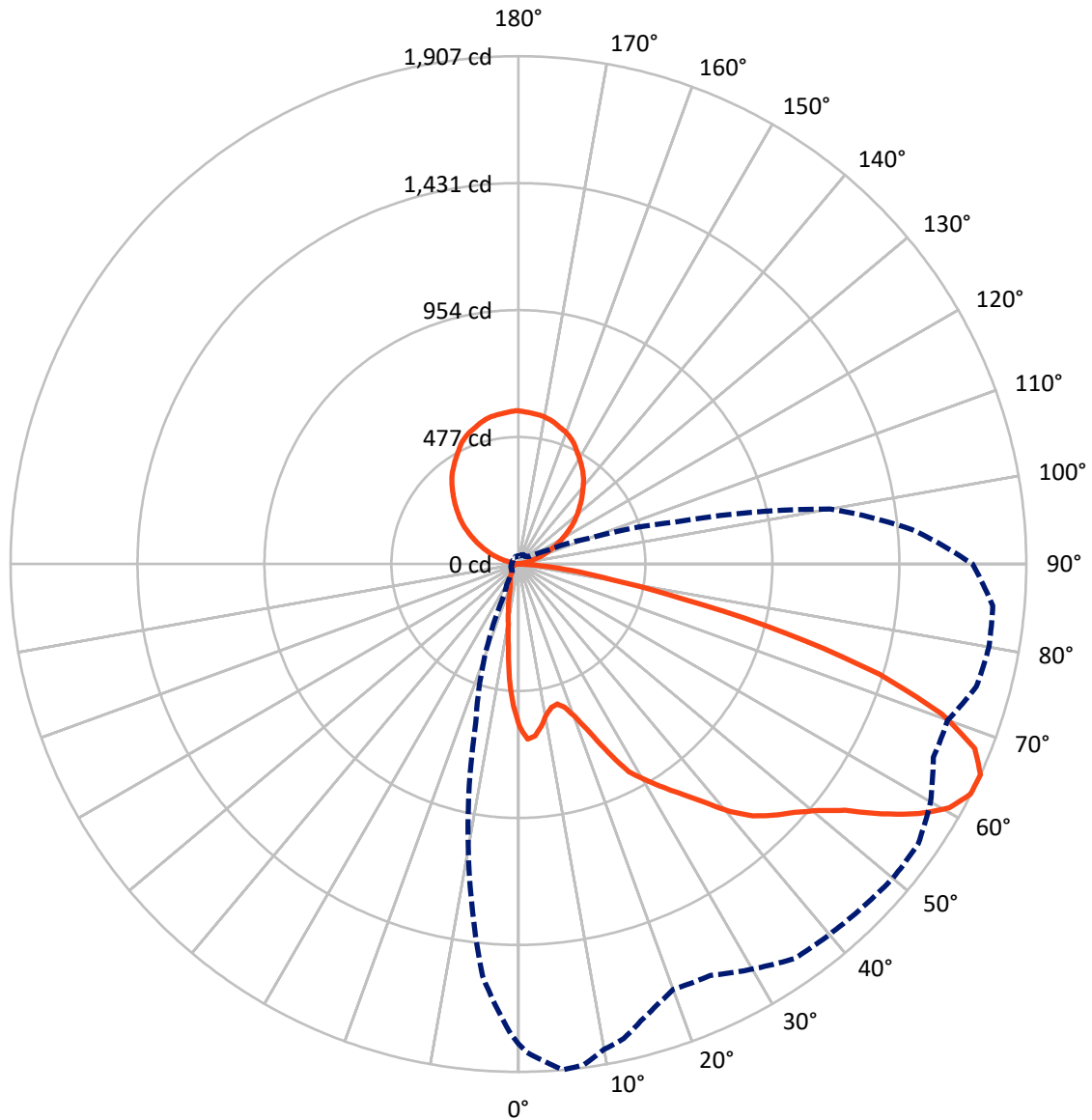


Based on 10 foot mounting height. Maximum calculated value = 8.3 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P228519

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

Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P228519

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

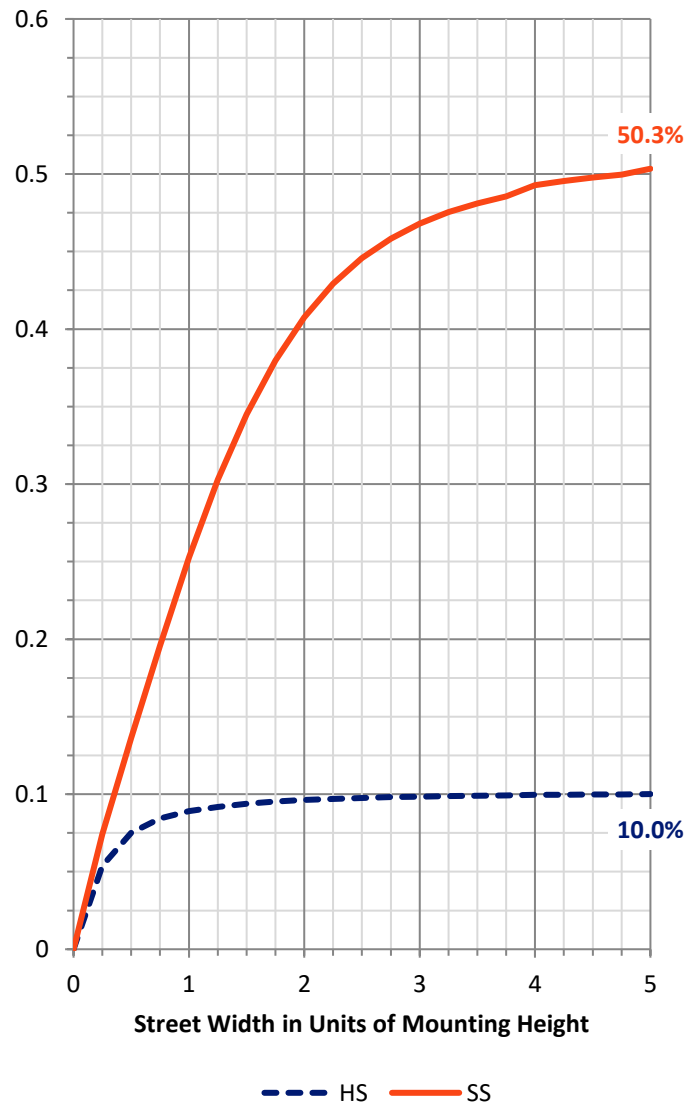
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	367.8	713.1	1080.9
	% Fixture	10.1	19.6	29.7
Street Side	Lumens	1844.2	713.1	2557.3
	% Fixture	50.7	19.6	70.3
Total	Lumens	2212.0	1426.2	3638.2
	% Fixture	60.8	39.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.0	1.3
10°-20°	96.9	2.7
20°-30°	140.8	3.9
30°-40°	208.2	5.7
40°-50°	303.4	8.3
50°-60°	454.8	12.5
60°-70°	566.8	15.6
70°-80°	332.0	9.1
80°-90°	62.1	1.7
90°-100°	4.7	0.1
100°-110°	69.0	1.9
110°-120°	153.0	4.2
120°-130°	223.9	6.2
130°-140°	265.6	7.3
140°-150°	269.3	7.4
150°-160°	231.1	6.4
160°-170°	155.1	4.3
170°-180°	54.3	1.5
0°-90°	2212.0	60.8
0°-180°	3638.2	100.0



REPORT NUMBER: P228519

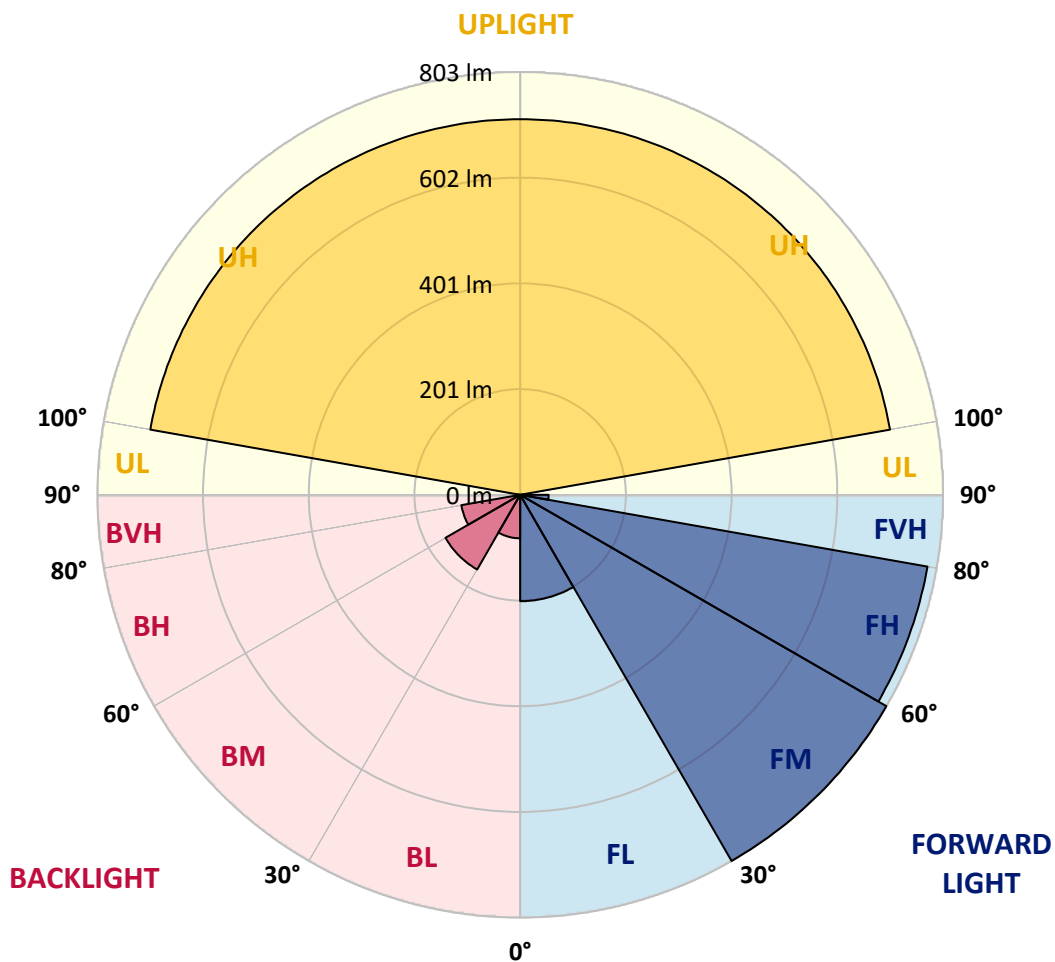
CATALOG NUMBER: ISC-AF-450-LED-E1-SLL-7030-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	202.1	5.6			
FM	(30°-60°)	802.8	22.1			
FH	(60°-80°)	785.3	21.6			G1/1800
FVH	(80°-90°)	54.1	1.5			G1/100
BL	(0°-30°)	82.6	2.3	B0/110		
BM	(30°-60°)	163.7	4.5	B0/220		
BH	(60°-80°)	113.5	3.1	B1/500		G1/500
BVH	(80°-90°)	8.0	0.2			G0/10
UL	(90°-100°)	4.7	0.1		U1/10	
UH	(100°-180°)	713.1	19.6		U4/1000	

BUG Rating: B1-U5-G1

Type IV Short





REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	7.5°	10°	12.5°	15°	17.5°	20°	25°	35°
0°	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1
2.5°	649.8	648.1	658.6	660.3	667.3	667.3	675.2	682.2	684.8	691.0	706.7
5°	628.8	634.0	648.9	663.8	674.3	684.8	696.2	710.2	721.6	740.9	781.2
7.5°	582.4	590.3	615.7	630.5	647.2	665.6	679.6	696.2	713.7	746.1	817.9
10°	536.8	543.0	575.4	593.8	617.4	636.7	656.8	675.2	694.5	734.8	817.9
12.5°	507.9	515.8	552.6	570.1	597.3	617.4	641.9	663.8	686.6	729.5	810.1
15°	501.8	510.6	545.6	567.5	591.1	610.4	632.3	655.1	677.8	719.9	791.7
17.5°	518.4	529.0	566.6	591.1	609.5	631.4	647.2	669.1	684.0	717.2	751.4
20°	557.9	570.1	614.8	638.4	653.3	667.3	679.6	692.7	698.8	706.7	700.6
22.5°	620.9	635.8	686.6	713.7	724.2	734.8	735.6	737.4	733.0	712.0	664.7
25°	711.1	726.0	783.8	810.1	810.1	810.1	800.4	793.4	773.3	733.9	655.1
27.5°	795.2	814.4	883.6	900.3	895.0	887.1	868.7	851.2	822.3	756.6	654.2
30°	858.2	877.5	941.4	954.6	941.4	922.2	893.3	867.9	833.7	768.0	660.3
32.5°	916.0	938.8	1000.1	1001.9	978.2	956.3	923.9	895.0	859.1	789.0	678.7
35°	977.3	1000.1	1062.3	1050.0	1015.9	986.1	952.8	927.4	891.5	816.2	708.5
37.5°	1062.3	1082.4	1135.0	1106.1	1062.3	1023.7	987.8	954.6	918.7	853.0	758.4
40°	1144.6	1173.5	1221.7	1175.3	1121.8	1070.2	1030.8	995.7	956.3	902.9	822.3
42.5°	1221.7	1248.8	1293.5	1233.9	1171.8	1120.1	1078.9	1041.3	1003.6	959.8	899.4
45°	1280.3	1308.4	1346.0	1283.0	1212.0	1158.6	1114.0	1080.7	1047.4	1017.6	996.6
47.5°	1337.3	1365.3	1394.2	1325.9	1255.8	1201.5	1149.0	1118.3	1092.1	1076.3	1101.7
50°	1410.8	1430.1	1454.6	1381.1	1306.6	1244.4	1191.9	1168.2	1143.7	1149.0	1233.9
52.5°	1510.7	1527.3	1536.1	1464.3	1381.1	1310.1	1252.3	1219.9	1199.8	1230.4	1374.0
55°	1651.7	1675.3	1656.0	1585.1	1480.0	1399.4	1328.5	1290.0	1277.7	1318.9	1514.2
57.5°	1773.4	1783.9	1769.9	1699.8	1592.1	1501.9	1426.6	1386.3	1372.3	1426.6	1642.0
60°	1826.8	1839.9	1859.2	1798.8	1698.1	1608.7	1543.9	1504.5	1480.9	1543.9	1744.5
62.5°	1835.6	1857.5	1904.8	1874.1	1794.4	1727.9	1669.2	1614.9	1596.5	1644.7	1811.9
65°	1801.4	1834.7	1907.4	1896.0	1851.3	1825.9	1776.9	1734.9	1699.8	1705.1	1808.4
67.5°	1724.3	1762.9	1847.8	1842.6	1847.8	1847.8	1804.9	1769.9	1724.3	1659.5	1675.3
70°	1538.7	1589.5	1687.6	1713.0	1757.6	1757.6	1720.0	1666.5	1614.0	1480.9	1400.3
72.5°	1233.1	1267.2	1417.8	1541.3	1598.2	1575.5	1538.7	1449.4	1333.8	1187.5	1078.0
75°	834.6	854.7	1039.5	1265.5	1368.8	1349.5	1289.1	1177.9	1058.8	895.9	757.5
77.5°	465.0	491.3	629.7	806.6	945.8	943.2	935.3	864.4	769.8	634.9	563.1
80°	273.2	282.0	354.7	483.4	603.4	574.5	554.3	498.3	450.1	388.8	444.0
82.5°	167.3	158.5	201.4	294.3	356.4	344.2	310.0	289.0	266.2	249.6	295.1
85°	45.5	41.2	82.3	123.5	151.5	163.8	163.8	162.0	145.4	109.5	131.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5	3.0	4.0
100°	8.0	8.0	8.0	8.5	9.0	9.5	10.0	11.0	12.0	14.0	22.0
102.5°	28.0	28.0	28.0	29.0	30.0	31.0	32.0	33.5	35.0	38.0	45.0
105°	54.0	54.0	54.0	54.5	55.0	55.5	56.0	57.2	58.5	61.0	66.0
107.5°	78.0	77.8	77.0	77.8	78.5	79.2	80.0	81.0	82.0	84.0	88.0
110°	101.0	101.2	102.0	102.2	102.5	102.8	103.0	103.8	104.5	106.0	110.0



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

	0°	1°	5°	7.5°	10°	12.5°	15°	17.5°	20°	25°	35°
112.5°	124.0	124.0	124.0	124.5	125.0	125.5	126.0	126.8	127.5	129.0	132.0
115°	146.0	146.2	147.0	147.5	148.0	148.5	149.0	149.5	150.0	151.0	154.0
117.5°	169.0	169.2	170.0	170.5	171.0	171.5	172.0	172.5	173.0	174.0	177.0
120°	193.0	193.4	195.0	195.2	195.5	195.8	196.0	196.5	197.0	198.0	201.0
122.5°	219.0	219.2	220.0	220.2	220.5	220.8	221.0	221.5	222.0	223.0	226.0
125°	244.0	244.4	246.0	246.2	246.5	246.8	247.0	247.2	247.5	248.0	251.0
127.5°	267.0	267.4	269.0	269.2	269.5	269.8	270.0	270.5	271.0	272.0	274.0
130°	290.0	290.4	292.0	292.2	292.5	292.8	293.0	293.2	293.5	294.0	298.0
132.5°	313.0	313.2	314.0	314.8	315.5	316.2	317.0	317.2	317.5	318.0	321.0
135°	336.0	336.2	337.0	337.5	338.0	338.5	339.0	339.5	340.0	341.0	345.0
137.5°	359.0	359.2	360.0	360.8	361.5	362.2	363.0	363.2	363.5	364.0	367.0
140°	382.0	382.2	383.0	383.5	384.0	384.5	385.0	385.2	385.5	386.0	388.0
142.5°	404.0	404.4	406.0	406.5	407.0	407.5	408.0	407.8	407.5	407.0	410.0
145°	425.0	425.2	426.0	426.5	427.0	427.5	428.0	428.0	428.0	428.0	431.0
147.5°	444.0	444.0	444.0	444.8	445.5	446.2	447.0	447.2	447.5	448.0	452.0
150°	461.0	461.2	462.0	462.5	463.0	463.5	464.0	464.2	464.5	465.0	469.0
152.5°	479.0	479.2	480.0	480.8	481.5	482.2	483.0	482.8	482.5	482.0	485.0
155°	499.0	499.2	500.0	500.5	501.0	501.5	502.0	501.8	501.5	501.0	503.0
157.5°	513.0	513.4	515.0	515.5	516.0	516.5	517.0	516.8	516.5	516.0	519.0
160°	525.0	525.4	527.0	527.5	528.0	528.5	529.0	529.0	529.0	529.0	532.0
162.5°	535.0	535.2	536.0	536.8	537.5	538.2	539.0	538.8	538.5	538.0	541.0
165°	546.0	546.2	547.0	547.5	548.0	548.5	549.0	548.8	548.5	548.0	552.0
167.5°	555.0	555.2	556.0	556.8	557.5	558.2	559.0	558.8	558.5	558.0	561.0
170°	562.0	562.2	563.0	563.8	564.5	565.2	566.0	565.8	565.5	565.0	567.0
172.5°	565.0	565.2	566.0	566.8	567.5	568.2	569.0	568.5	568.0	567.0	569.0
175°	567.0	567.4	569.0	569.2	569.5	569.8	570.0	569.8	569.5	569.0	572.0
177.5°	572.0	572.2	573.0	573.5	574.0	574.5	575.0	574.8	574.5	574.0	578.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
0°	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1
2.5°	712.9	713.7	711.1	717.2	710.2	706.7	696.2	696.2	687.5	680.5	672.6
5°	796.1	801.3	796.9	797.8	783.8	769.8	748.8	736.5	714.6	691.0	666.4
7.5°	852.1	860.9	857.4	842.5	820.6	790.8	755.8	722.5	686.6	648.1	612.1
10°	867.0	876.6	868.7	840.7	804.8	762.8	720.7	676.1	632.3	591.1	552.6
12.5°	846.0	853.0	836.3	805.7	770.7	728.6	684.8	646.3	594.6	550.8	506.2
15°	792.6	788.2	786.4	764.5	740.0	705.9	664.7	625.3	577.1	532.5	485.2
17.5°	734.8	729.5	731.2	722.5	719.0	703.2	672.6	639.3	596.4	542.1	491.3
20°	684.0	678.7	681.3	685.7	698.8	699.7	694.5	672.6	641.0	584.1	521.9
22.5°	640.2	641.0	649.8	662.1	684.0	712.0	733.9	738.3	716.4	649.8	571.9
25°	627.0	622.7	632.3	652.4	689.2	743.5	792.6	817.1	804.8	738.3	642.8
27.5°	622.7	616.5	627.0	653.3	712.0	788.2	858.2	895.0	899.4	831.1	719.0
30°	622.7	620.0	630.5	664.7	726.9	803.1	881.0	936.2	953.7	896.8	785.5
32.5°	630.5	632.3	650.7	694.5	758.4	836.3	916.9	976.5	1008.0	965.1	839.0
35°	648.1	651.6	677.8	728.6	797.8	876.6	950.2	1010.6	1061.4	1038.6	888.9
37.5°	685.7	691.0	723.4	775.0	838.1	909.0	980.8	1045.6	1119.2	1109.6	941.4
40°	752.3	752.3	784.7	829.3	881.0	935.3	1006.2	1082.4	1172.6	1185.8	1006.2
42.5°	836.3	832.8	853.9	886.3	922.2	967.7	1031.6	1116.6	1222.5	1251.4	1055.3
45°	951.9	934.4	945.8	953.7	971.2	999.2	1056.2	1149.0	1262.8	1300.5	1092.1
47.5°	1087.7	1063.2	1053.5	1038.6	1032.5	1043.0	1092.1	1174.4	1301.4	1342.5	1151.6
50°	1237.4	1213.8	1188.4	1148.1	1113.1	1102.6	1132.3	1208.5	1342.5	1395.1	1217.3
52.5°	1393.3	1376.7	1343.4	1280.3	1213.8	1176.1	1190.1	1265.5	1408.2	1476.5	1295.2
55°	1536.1	1541.3	1501.0	1427.5	1332.0	1274.2	1290.9	1366.2	1527.3	1607.9	1425.7
57.5°	1689.3	1675.3	1643.8	1567.6	1463.4	1401.2	1408.2	1499.3	1660.4	1721.7	1555.3
60°	1790.9	1790.9	1756.8	1699.0	1600.0	1542.2	1552.7	1636.8	1767.3	1773.4	1613.1
62.5°	1856.6	1866.2	1839.1	1797.9	1701.6	1653.4	1689.3	1748.9	1819.8	1769.0	1584.2
65°	1825.1	1835.6	1832.9	1787.4	1719.1	1715.6	1780.4	1794.4	1788.3	1705.1	1484.4
67.5°	1682.3	1661.3	1660.4	1636.8	1622.8	1695.4	1777.8	1782.1	1678.8	1579.8	1326.8
70°	1410.8	1374.9	1360.9	1367.9	1431.8	1567.6	1684.9	1651.7	1487.0	1402.1	1129.7
72.5°	1087.7	1044.8	1036.0	1063.2	1162.1	1353.0	1513.3	1466.9	1222.5	1123.6	874.9
75°	771.5	753.1	754.0	807.4	914.3	1098.2	1284.7	1280.3	905.5	775.0	602.5
77.5°	561.4	564.9	580.6	601.6	693.6	871.4	1046.5	1035.1	644.6	532.5	421.2
80°	463.3	468.5	468.5	457.1	480.8	575.4	711.1	759.3	431.7	358.2	294.3
82.5°	332.8	359.1	373.9	355.6	346.8	379.2	445.8	477.3	268.9	225.9	205.8
85°	158.5	181.3	186.5	182.2	209.3	239.1	254.8	261.0	147.1	105.1	134.9
87.5°	0.0	0.0	0.9	7.0	19.3	33.3	33.3	50.8	7.9	2.6	6.1
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°	9.0	11.0	13.0	10.0	7.0	6.0	5.0	4.5	4.0	4.0	4.0
100°	30.0	31.0	32.0	31.0	30.0	28.5	27.0	26.5	26.0	25.0	26.0
102.5°	50.0	50.5	51.0	50.5	50.0	49.0	48.0	48.5	49.0	48.0	49.0
105°	70.0	70.5	71.0	71.0	71.0	70.0	69.0	70.0	71.0	69.0	71.0
107.5°	91.0	92.0	93.0	92.5	92.0	91.5	91.0	91.5	92.0	91.0	92.0
110°	112.0	113.0	114.0	114.0	114.0	113.5	113.0	113.5	114.0	113.0	114.0



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
112.5°	134.0	135.0	136.0	136.0	136.0	135.5	135.0	136.0	137.0	135.0	137.0
115°	156.0	157.0	158.0	158.0	158.0	158.0	158.0	159.0	160.0	159.0	160.0
117.5°	179.0	179.5	180.0	180.5	181.0	180.5	180.0	181.0	182.0	180.0	182.0
120°	202.0	203.0	204.0	204.0	204.0	204.0	204.0	205.0	206.0	204.0	206.0
122.5°	227.0	227.5	228.0	228.0	228.0	228.5	229.0	231.0	233.0	232.0	233.0
125°	252.0	252.5	253.0	253.5	254.0	254.0	254.0	255.5	257.0	256.0	257.0
127.5°	276.0	277.0	278.0	277.5	277.0	277.5	278.0	279.5	281.0	278.0	281.0
130°	299.0	300.0	301.0	301.0	301.0	301.5	302.0	303.5	305.0	303.0	305.0
132.5°	322.0	323.5	325.0	325.0	325.0	325.5	326.0	327.5	329.0	327.0	329.0
135°	345.0	346.5	348.0	348.0	348.0	348.5	349.0	350.0	351.0	350.0	351.0
137.5°	367.0	368.0	369.0	369.0	369.0	369.5	370.0	372.0	374.0	372.0	374.0
140°	389.0	389.5	390.0	390.0	390.0	391.0	392.0	394.0	396.0	394.0	396.0
142.5°	410.0	411.0	412.0	412.0	412.0	412.5	413.0	414.5	416.0	415.0	416.0
145°	432.0	433.0	434.0	433.5	433.0	433.5	434.0	435.5	437.0	435.0	437.0
147.5°	453.0	453.5	454.0	453.0	452.0	452.5	453.0	454.5	456.0	453.0	456.0
150°	470.0	470.5	471.0	470.0	469.0	469.0	469.0	471.0	473.0	470.0	473.0
152.5°	486.0	486.5	487.0	486.5	486.0	486.0	486.0	487.5	489.0	486.0	489.0
155°	503.0	503.5	504.0	503.5	503.0	503.5	504.0	505.5	507.0	505.0	507.0
157.5°	519.0	519.0	519.0	518.0	517.0	517.5	518.0	520.5	523.0	520.0	523.0
160°	532.0	532.0	532.0	531.0	530.0	530.0	530.0	531.5	533.0	531.0	533.0
162.5°	541.0	541.5	542.0	541.0	540.0	539.0	538.0	539.0	540.0	537.0	540.0
165°	552.0	552.5	553.0	551.5	550.0	549.0	548.0	549.0	550.0	548.0	550.0
167.5°	560.0	560.0	560.0	559.0	558.0	558.5	559.0	561.0	563.0	561.0	563.0
170°	566.0	565.5	565.0	564.5	564.0	565.0	566.0	568.5	571.0	569.0	571.0
172.5°	568.0	568.5	569.0	568.0	567.0	567.5	568.0	569.5	571.0	568.0	571.0
175°	572.0	572.5	573.0	571.5	570.0	569.0	568.0	569.5	571.0	568.0	571.0
177.5°	577.0	577.0	577.0	575.5	574.0	574.0	574.0	575.5	577.0	574.0	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



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	115°	120°	125°	130°	135°	145°	155°	165°
0°	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1
2.5°	662.1	650.7	641.9	631.4	622.7	613.9	607.8	594.6	584.1	560.5	554.3
5°	646.3	621.8	605.1	589.4	569.2	555.2	540.3	521.9	501.8	467.6	457.1
7.5°	584.1	553.5	530.7	507.9	481.7	458.0	436.1	411.6	376.6	339.8	325.8
10°	516.7	484.3	452.8	425.6	394.1	367.8	348.5	331.0	303.0	275.0	256.6
12.5°	461.5	424.7	388.8	361.7	345.0	331.9	317.9	303.9	274.1	242.6	220.7
15°	436.1	393.2	361.7	338.9	324.0	308.3	291.6	275.9	240.8	204.0	177.8
17.5°	439.6	390.6	350.3	319.6	299.5	277.6	258.3	238.2	199.7	155.9	132.2
20°	458.9	393.2	338.0	302.1	273.2	245.2	220.7	195.3	148.0	113.8	97.2
22.5°	483.4	402.0	331.0	284.6	248.7	213.7	182.2	152.4	109.5	89.3	81.4
25°	525.4	422.1	329.3	268.9	225.1	183.0	150.6	119.1	88.5	78.8	74.4
27.5°	578.0	444.9	331.0	257.5	204.9	158.5	122.6	99.0	79.7	74.4	70.9
30°	630.5	468.5	323.2	240.0	181.3	135.7	105.1	90.2	78.8	72.7	66.6
32.5°	677.0	486.0	310.0	221.6	160.3	115.6	89.3	77.1	69.2	62.2	60.4
35°	710.2	493.9	295.1	210.2	146.2	103.3	78.8	69.2	61.3	54.3	50.8
37.5°	741.8	494.8	279.4	199.7	141.0	98.1	72.7	63.9	56.9	50.8	47.3
40°	774.2	491.3	270.6	189.2	133.1	95.5	70.1	59.6	55.2	48.2	44.7
42.5°	797.8	485.2	267.1	183.0	126.1	88.5	68.3	58.7	52.5	47.3	42.9
45°	819.7	479.0	267.1	177.8	120.9	84.1	64.8	59.6	50.8	46.4	41.2
47.5°	846.0	481.7	268.0	173.4	116.5	79.7	61.3	57.8	51.7	45.5	40.3
50°	890.6	511.4	272.4	170.8	113.0	76.2	58.7	55.2	56.9	44.7	39.4
52.5°	967.7	558.7	279.4	169.0	109.5	73.6	55.2	53.4	57.8	44.7	38.5
55°	1068.4	606.9	286.4	164.6	104.2	68.3	53.4	49.9	53.4	44.7	37.7
57.5°	1166.5	642.8	292.5	158.5	95.5	63.1	50.8	47.3	49.0	43.8	35.9
60°	1223.4	670.8	298.6	148.0	84.9	56.9	48.2	44.7	43.8	43.8	35.0
62.5°	1239.2	660.3	295.1	134.9	76.2	52.5	45.5	42.0	39.4	44.7	35.0
65°	1189.3	605.1	282.0	123.5	70.1	50.8	42.9	40.3	37.7	38.5	33.3
67.5°	1036.0	508.8	246.1	113.0	69.2	49.9	41.2	38.5	35.0	34.2	31.5
70°	845.1	399.3	204.0	105.1	68.3	49.9	39.4	35.9	33.3	30.7	28.9
72.5°	649.8	298.6	171.6	101.6	69.2	49.0	36.8	32.4	29.8	28.0	26.3
75°	457.1	211.1	142.7	91.1	64.8	46.4	34.2	28.9	26.3	24.5	22.8
77.5°	331.0	143.6	106.0	73.6	55.2	40.3	29.8	24.5	21.9	21.0	19.3
80°	211.1	88.5	70.9	54.3	40.3	31.5	22.8	19.3	17.5	15.8	14.9
82.5°	121.7	51.7	42.9	36.8	26.3	21.0	16.6	14.9	11.4	10.5	9.6
85°	74.4	32.4	23.6	19.3	16.6	13.1	9.6	8.8	6.1	5.3	4.4
87.5°	16.6	7.0	6.1	4.4	5.3	4.4	2.6	1.8	0.0	0.0	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°	4.5	5.0	6.0	7.0	10.0	13.0	11.0	9.0	4.0	3.0	2.0
100°	26.5	27.0	28.5	30.0	31.0	32.0	31.0	30.0	22.0	14.0	10.0
102.5°	48.5	48.0	49.0	50.0	50.5	51.0	50.5	50.0	45.0	38.0	32.0
105°	70.0	69.0	70.0	71.0	71.0	71.0	70.5	70.0	66.0	61.0	56.0
107.5°	91.5	91.0	91.5	92.0	92.5	93.0	92.0	91.0	88.0	84.0	80.0
110°	113.5	113.0	113.5	114.0	114.0	114.0	113.0	112.0	110.0	106.0	103.0



REPORT NUMBER: P228519
 CATALOG NUMBER: ISC-AF-450-LED-E1-SLL-7030-ULG

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	100°	105°	110°	115°	120°	125°	130°	135°	145°	155°	165°	
112.5°	136.0	135.0	135.5	136.0	136.0	136.0	135.0	134.0	132.0	129.0	126.0	0°
115°	159.0	158.0	158.0	158.0	158.0	158.0	157.0	156.0	154.0	151.0	149.0	2.5°
117.5°	181.0	180.0	180.5	181.0	180.5	180.0	179.5	179.0	177.0	174.0	172.0	5°
120°	205.0	204.0	204.0	204.0	204.0	204.0	203.0	202.0	201.0	198.0	196.0	7.5°
122.5°	231.0	229.0	228.5	228.0	228.0	228.0	227.5	227.0	226.0	223.0	221.0	10°
125°	255.5	254.0	254.0	254.0	253.5	253.0	252.5	252.0	251.0	248.0	247.0	12.5°
127.5°	279.5	278.0	277.5	277.0	277.5	278.0	277.0	276.0	274.0	272.0	270.0	15°
130°	303.5	302.0	301.5	301.0	301.0	301.0	300.0	299.0	298.0	294.0	293.0	17.5°
132.5°	327.5	326.0	325.5	325.0	325.0	325.0	323.5	322.0	321.0	318.0	317.0	20°
135°	350.0	349.0	348.5	348.0	348.0	348.0	346.5	345.0	345.0	341.0	339.0	22.5°
137.5°	372.0	370.0	369.5	369.0	369.0	369.0	368.0	367.0	367.0	364.0	363.0	25°
140°	394.0	392.0	391.0	390.0	390.0	390.0	389.5	389.0	388.0	386.0	385.0	27.5°
142.5°	414.5	413.0	412.5	412.0	412.0	412.0	411.0	410.0	410.0	407.0	408.0	30°
145°	435.5	434.0	433.5	433.0	433.5	434.0	433.0	432.0	431.0	428.0	428.0	32.5°
147.5°	454.5	453.0	452.5	452.0	453.0	454.0	453.5	453.0	452.0	448.0	447.0	35°
150°	471.0	469.0	469.0	469.0	470.0	471.0	470.5	470.0	469.0	465.0	464.0	37.5°
152.5°	487.5	486.0	486.0	486.0	486.5	487.0	486.5	486.0	485.0	482.0	483.0	40°
155°	505.5	504.0	503.5	503.0	503.5	504.0	503.5	503.0	503.0	501.0	502.0	42.5°
157.5°	520.5	518.0	517.5	517.0	518.0	519.0	519.0	519.0	519.0	516.0	517.0	45°
160°	531.5	530.0	530.0	530.0	531.0	532.0	532.0	532.0	532.0	529.0	529.0	47.5°
162.5°	539.0	538.0	539.0	540.0	541.0	542.0	541.5	541.0	541.0	538.0	539.0	50°
165°	549.0	548.0	549.0	550.0	551.5	553.0	552.5	552.0	552.0	548.0	549.0	52.5°
167.5°	561.0	559.0	558.5	558.0	559.0	560.0	560.0	560.0	561.0	558.0	559.0	55°
170°	568.5	566.0	565.0	564.0	564.5	565.0	565.5	566.0	567.0	565.0	566.0	57.5°
172.5°	569.5	568.0	567.5	567.0	568.0	569.0	568.5	568.0	569.0	567.0	569.0	60°
175°	569.5	568.0	569.0	570.0	571.5	573.0	572.5	572.0	572.0	569.0	570.0	62.5°
177.5°	575.5	574.0	574.0	574.0	575.5	577.0	577.0	577.0	578.0	574.0	575.0	65°
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	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°



NUMBER: P228519
 NUMBER: ISC-AF-450-LED-E1-SLL-7030-ULG

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

175°	180°	185°	195°	205°	215°	225°	230°	232.5°	235°	237.5°	175°	175°
612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	112.5°	124.0
544.7	531.6	532.5	529.8	522.8	511.4	507.9	501.8	502.7	506.2	502.7	115°	147.0
444.9	429.1	430.9	430.0	423.0	415.1	409.0	401.1	398.5	401.1	396.7	117.5°	170.0
315.3	304.8	308.3	316.1	315.3	310.9	305.6	296.9	295.1	296.0	288.1	120°	195.0
240.8	230.3	227.7	226.8	225.1	222.4	215.4	208.4	205.8	206.7	201.4	122.5°	220.0
201.4	192.7	182.2	172.5	163.8	160.3	151.5	147.1	146.2	146.2	143.6	125°	246.0
159.4	152.4	146.2	136.6	129.6	124.4	118.2	114.7	113.8	114.7	114.7	127.5°	269.0
119.1	115.6	113.0	112.1	108.6	105.1	101.6	99.8	99.0	99.0	99.8	130°	292.0
91.1	90.2	90.2	90.2	94.6	98.1	99.0	96.3	95.5	94.6	93.7	132.5°	314.0
78.8	77.9	78.8	84.1	81.4	78.8	78.8	78.8	78.8	78.8	79.7	135°	337.0
72.7	73.6	74.4	71.8	69.2	67.4	66.6	66.6	65.7	65.7	66.6	137.5°	360.0
69.2	68.3	67.4	65.7	63.9	61.3	60.4	59.6	59.6	59.6	59.6	140°	383.0
64.8	63.9	63.1	61.3	58.7	55.2	54.3	54.3	53.4	54.3	54.3	142.5°	406.0
59.6	58.7	57.8	56.0	53.4	51.7	50.8	49.0	49.0	49.0	49.9	145°	426.0
48.2	47.3	47.3	48.2	48.2	47.3	47.3	45.5	45.5	45.5	45.5	147.5°	444.0
44.7	43.8	43.8	42.9	43.8	44.7	43.8	42.9	42.9	42.0	42.0	150°	462.0
42.0	42.0	41.2	40.3	40.3	42.0	41.2	40.3	39.4	39.4	39.4	152.5°	480.0
40.3	39.4	39.4	38.5	38.5	38.5	37.7	36.8	35.9	35.9	35.9	155°	500.0
38.5	38.5	37.7	36.8	35.9	35.9	34.2	33.3	33.3	33.3	34.2	157.5°	515.0
37.7	36.8	36.8	35.9	35.0	33.3	32.4	31.5	31.5	31.5	31.5	160°	527.0
36.8	35.9	35.0	35.0	33.3	32.4	31.5	30.7	30.7	30.7	30.7	162.5°	536.0
35.9	35.0	34.2	33.3	32.4	31.5	30.7	29.8	29.8	29.8	29.8	165°	547.0
34.2	33.3	33.3	32.4	32.4	31.5	30.7	29.8	29.8	29.8	28.9	167.5°	556.0
33.3	32.4	31.5	31.5	31.5	30.7	29.8	28.9	28.9	28.9	28.9	170°	563.0
32.4	31.5	31.5	30.7	30.7	29.8	29.8	28.9	28.0	28.0	27.1	172.5°	566.0
31.5	30.7	30.7	29.8	30.7	29.8	28.9	28.0	27.1	27.1	26.3	175°	569.0
30.7	29.8	29.8	29.8	28.9	28.9	28.0	26.3	26.3	26.3	25.4	177.5°	573.0
28.9	28.0	28.0	28.9	28.0	27.1	27.1	25.4	25.4	24.5	24.5	180°	576.0
26.3	26.3	26.3	27.1	26.3	25.4	25.4	24.5	23.6	22.8	22.8		
24.5	23.6	24.5	24.5	24.5	23.6	24.5	22.8	21.9	21.0	21.0		
21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.1	19.3	18.4		
16.6	17.5	17.5	17.5	17.5	18.4	17.5	17.5	17.5	16.6	15.8		
12.3	12.3	13.1	14.0	13.1	14.0	13.1	14.0	13.1	13.1	13.1		
7.0	7.0	7.9	8.8	8.8	9.6	7.9	8.8	8.8	9.6	8.8		
2.6	2.6	2.6	2.6	3.5	3.5	2.6	3.5	3.5	4.4	4.4		
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	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		
2.0	2.0	2.0	2.0	3.0	4.0	9.0	11.0	12.0	13.0	11.5		
8.0	8.0	8.0	10.0	14.0	22.0	30.0	31.0	31.5	32.0	31.5		
28.0	28.0	28.0	32.0	38.0	45.0	50.0	50.5	50.8	51.0	50.8		
54.0	54.0	54.0	56.0	61.0	66.0	70.0	70.5	70.8	71.0	71.0		
77.0	78.0	77.0	80.0	84.0	88.0	91.0	92.0	92.5	93.0	92.8		
102.0	101.0	102.0	103.0	106.0	110.0	112.0	113.0	113.5	114.0	114.0		

'228519
 ISC-AF-450-LED-E1-SLL-7030-ULG

REPORT NUMBER: P228519
 CATALOG NUMBER: ISC-AF-45

TION (continued):

CANDELA DISTRIBUTION (con

180°	185°	195°	205°	215°	225°	230°	232.5°	235°	237.5°		240°	242.5°
124.0	124.0	126.0	129.0	132.0	134.0	135.0	135.5	136.0	136.0	0°	612.1	612.1
146.0	147.0	149.0	151.0	154.0	156.0	157.0	157.5	158.0	158.0	2.5°	509.7	509.7
169.0	170.0	172.0	174.0	177.0	179.0	179.5	179.8	180.0	180.2	5°	400.2	399.3
193.0	195.0	196.0	198.0	201.0	202.0	203.0	203.5	204.0	204.0	7.5°	290.7	288.1
219.0	220.0	221.0	223.0	226.0	227.0	227.5	227.8	228.0	228.0	10°	203.2	196.2
244.0	246.0	247.0	248.0	251.0	252.0	252.5	252.8	253.0	253.2	12.5°	147.1	144.5
267.0	269.0	270.0	272.0	274.0	276.0	277.0	277.5	278.0	277.8	15°	116.5	116.5
290.0	292.0	293.0	294.0	298.0	299.0	300.0	300.5	301.0	301.0	17.5°	100.7	100.7
313.0	314.0	317.0	318.0	321.0	322.0	323.5	324.2	325.0	325.0	20°	92.8	92.0
336.0	337.0	339.0	341.0	345.0	345.0	346.5	347.2	348.0	348.0	22.5°	79.7	78.8
359.0	360.0	363.0	364.0	367.0	367.0	368.0	368.5	369.0	369.0	25°	65.7	65.7
382.0	383.0	385.0	386.0	388.0	389.0	389.5	389.8	390.0	390.0	27.5°	59.6	59.6
404.0	406.0	408.0	407.0	410.0	410.0	411.0	411.5	412.0	412.0	30°	54.3	55.2
425.0	426.0	428.0	428.0	431.0	432.0	433.0	433.5	434.0	433.8	32.5°	49.9	49.9
444.0	444.0	447.0	448.0	452.0	453.0	453.5	453.8	454.0	453.5	35°	44.7	44.7
461.0	462.0	464.0	465.0	469.0	470.0	470.5	470.8	471.0	470.5	37.5°	41.2	40.3
479.0	480.0	483.0	482.0	485.0	486.0	486.5	486.8	487.0	486.8	40°	37.7	37.7
499.0	500.0	502.0	501.0	503.0	503.0	503.5	503.8	504.0	503.8	42.5°	35.0	35.0
513.0	515.0	517.0	516.0	519.0	519.0	519.0	519.0	519.0	518.5	45°	33.3	33.3
525.0	527.0	529.0	529.0	532.0	532.0	532.0	532.0	532.0	531.5	47.5°	32.4	32.4
535.0	536.0	539.0	538.0	541.0	541.0	541.5	541.8	542.0	541.5	50°	30.7	30.7
546.0	547.0	549.0	548.0	552.0	552.0	552.5	552.8	553.0	552.2	52.5°	29.8	29.8
555.0	556.0	559.0	558.0	561.0	560.0	560.0	560.0	560.0	559.5	55°	28.9	29.8
562.0	563.0	566.0	565.0	567.0	566.0	565.5	565.2	565.0	564.8	57.5°	28.0	28.0
565.0	566.0	569.0	567.0	569.0	568.0	568.5	568.8	569.0	568.5	60°	27.1	27.1
567.0	569.0	570.0	569.0	572.0	572.0	572.5	572.8	573.0	572.2	62.5°	26.3	26.3
572.0	573.0	575.0	574.0	578.0	577.0	577.0	577.0	577.0	576.2	65°	25.4	25.4
576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	67.5°	23.6	23.6
										70°	21.9	21.9
										72.5°	20.1	20.1
										75°	18.4	17.5
										77.5°	15.8	14.9
										80°	13.1	12.3
										82.5°	9.6	8.8
										85°	4.4	4.4
										87.5°	0.0	0.0
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	1.0	1.0
										97.5°	10.0	8.5
										100°	31.0	30.5
										102.5°	50.5	50.2
										105°	71.0	71.0
										107.5°	92.5	92.2
										110°	114.0	114.0

REPORT NUMBER: P228519

CATALOG NUMBER: ISC-AF-450-LED-E1-S

0-LED-E1-SLL-7030-ULG

tinued):

CANDELA DISTRIBUTION (continued):

245°	247.5°	250°	252.5°	255°	257.5°	260°	265°	270°		240°	242.5°	245°
612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	612.1	112.5°	136.0	136.0	136.0
499.2	500.9	502.7	506.2	504.4	503.6	502.7	507.9	510.6	115°	158.0	158.0	158.0
386.2	385.3	388.0	388.8	386.2	381.8	379.2	380.1	382.7	117.5°	180.5	180.8	181.0
275.9	274.1	273.2	274.1	271.5	267.1	263.6	264.5	267.1	120°	204.0	204.0	204.0
194.4	195.3	197.0	198.8	198.8	198.8	199.7	204.9	211.1	122.5°	228.0	228.0	228.0
146.2	148.0	151.5	154.1	156.8	157.6	158.5	165.5	170.8	125°	253.5	253.8	254.0
118.2	119.1	120.9	122.6	124.4	124.4	125.2	127.9	132.2	127.5°	277.5	277.2	277.0
100.7	100.7	100.7	99.8	99.0	97.2	96.3	95.5	96.3	130°	301.0	301.0	301.0
90.2	89.3	87.6	85.8	84.9	82.3	81.4	78.8	77.9	132.5°	325.0	325.0	325.0
78.8	78.8	78.8	77.9	77.1	76.2	74.4	71.8	70.1	135°	348.0	348.0	348.0
65.7	66.6	66.6	67.4	69.2	69.2	69.2	69.2	66.6	137.5°	369.0	369.0	369.0
59.6	59.6	60.4	60.4	61.3	61.3	61.3	62.2	63.1	140°	390.0	390.0	390.0
55.2	56.0	56.0	56.9	56.9	57.8	57.8	58.7	58.7	142.5°	412.0	412.0	412.0
50.8	51.7	51.7	51.7	53.4	53.4	52.5	53.4	53.4	145°	433.5	433.2	433.0
44.7	44.7	44.7	44.7	44.7	44.7	42.9	42.0	42.9	147.5°	453.0	452.5	452.0
40.3	39.4	38.5	38.5	38.5	39.4	38.5	39.4	39.4	150°	470.0	469.5	469.0
36.8	36.8	36.8	36.8	36.8	36.8	36.8	37.7	38.5	152.5°	486.5	486.2	486.0
35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.9	35.9	155°	503.5	503.2	503.0
33.3	33.3	34.2	34.2	34.2	34.2	34.2	34.2	35.0	157.5°	518.0	517.5	517.0
32.4	32.4	32.4	32.4	32.4	32.4	32.4	33.3	34.2	160°	531.0	530.5	530.0
31.5	31.5	31.5	31.5	31.5	31.5	31.5	32.4	33.3	162.5°	541.0	540.5	540.0
29.8	30.7	30.7	30.7	30.7	30.7	30.7	30.7	31.5	165°	551.5	550.8	550.0
29.8	29.8	29.8	29.8	28.9	28.9	28.9	28.9	29.8	167.5°	559.0	558.5	558.0
28.9	28.9	28.9	28.0	28.0	27.1	27.1	27.1	28.9	170°	564.5	564.2	564.0
27.1	27.1	27.1	26.3	26.3	26.3	26.3	27.1	27.1	172.5°	568.0	567.5	567.0
25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	175°	571.5	570.8	570.0
24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	177.5°	575.5	574.8	574.0
23.6	22.8	22.8	22.8	22.8	23.6	22.8	22.8	22.8	180°	576.0	576.0	576.0
21.9	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0				
20.1	20.1	19.3	19.3	19.3	19.3	19.3	19.3	19.3				
17.5	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6				
14.9	14.9	14.0	14.0	14.0	14.0	14.0	14.0	14.0				
12.3	11.4	11.4	11.4	11.4	11.4	11.4	10.5	10.5				
8.8	8.8	8.8	7.9	7.9	7.9	7.9	7.0	6.1				
3.5	4.4	4.4	5.3	4.4	4.4	4.4	3.5	1.8				
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				
7.0	6.5	6.0	5.5	5.0	4.8	4.5	4.0	4.0				
30.0	29.2	28.5	27.8	27.0	26.8	26.5	26.0	25.0				
50.0	49.5	49.0	48.5	48.0	48.2	48.5	49.0	48.0				
71.0	70.5	70.0	69.5	69.0	69.5	70.0	71.0	69.0				
92.0	91.8	91.5	91.2	91.0	91.2	91.5	92.0	91.0				
114.0	113.8	113.5	113.2	113.0	113.2	113.5	114.0	113.0				



REPORT NUMBER: P228519

CATALOG NUMBER: ISC-AF-450-LED-E1-SLL-7030-L

SLL-7030-ULG

CANDELA DISTRIBUTION (continued):

247.5°	250°	252.5°	255°	257.5°	260°	265°	270°		275°	280°	282.5°	285°
135.8	135.5	135.2	135.0	135.5	136.0	137.0	135.0	0°	612.1	612.1	612.1	612.1
158.0	158.0	158.0	158.0	158.5	159.0	160.0	159.0	2.5°	508.8	517.6	518.4	513.2
180.8	180.5	180.2	180.0	180.5	181.0	182.0	180.0	5°	379.2	390.6	389.7	382.7
204.0	204.0	204.0	204.0	204.5	205.0	206.0	204.0	7.5°	268.0	277.6	276.7	275.9
228.2	228.5	228.8	229.0	230.0	231.0	233.0	232.0	10°	217.2	225.9	228.6	234.7
254.0	254.0	254.0	254.0	254.8	255.5	257.0	256.0	12.5°	176.0	186.5	189.2	196.2
277.2	277.5	277.8	278.0	278.8	279.5	281.0	278.0	15°	135.7	144.5	147.1	152.4
301.2	301.5	301.8	302.0	302.8	303.5	305.0	303.0	17.5°	99.8	105.1	106.8	110.3
325.2	325.5	325.8	326.0	326.8	327.5	329.0	327.0	20°	77.9	79.7	80.6	81.4
348.2	348.5	348.8	349.0	349.5	350.0	351.0	350.0	22.5°	70.1	70.9	70.9	71.8
369.2	369.5	369.8	370.0	371.0	372.0	374.0	372.0	25°	64.8	65.7	65.7	66.6
390.5	391.0	391.5	392.0	393.0	394.0	396.0	394.0	27.5°	62.2	62.2	62.2	62.2
412.2	412.5	412.8	413.0	413.8	414.5	416.0	415.0	30°	59.6	59.6	59.6	60.4
433.2	433.5	433.8	434.0	434.8	435.5	437.0	435.0	32.5°	55.2	53.4	55.2	54.3
452.2	452.5	452.8	453.0	453.8	454.5	456.0	453.0	35°	42.9	42.9	43.8	44.7
469.0	469.0	469.0	469.0	470.0	471.0	473.0	470.0	37.5°	40.3	41.2	41.2	42.0
486.0	486.0	486.0	486.0	486.8	487.5	489.0	486.0	40°	38.5	39.4	40.3	41.2
503.2	503.5	503.8	504.0	504.8	505.5	507.0	505.0	42.5°	36.8	38.5	38.5	39.4
517.2	517.5	517.8	518.0	519.2	520.5	523.0	520.0	45°	35.9	36.8	37.7	38.5
530.0	530.0	530.0	530.0	530.8	531.5	533.0	531.0	47.5°	35.0	35.9	36.8	37.7
539.5	539.0	538.5	538.0	538.5	539.0	540.0	537.0	50°	33.3	35.0	35.9	36.8
549.5	549.0	548.5	548.0	548.5	549.0	550.0	548.0	52.5°	32.4	34.2	34.2	35.9
558.2	558.5	558.8	559.0	560.0	561.0	563.0	561.0	55°	30.7	32.4	32.4	34.2
564.5	565.0	565.5	566.0	567.2	568.5	571.0	569.0	57.5°	28.9	30.7	31.5	32.4
567.2	567.5	567.8	568.0	568.8	569.5	571.0	568.0	60°	28.0	28.9	29.8	30.7
569.5	569.0	568.5	568.0	568.8	569.5	571.0	568.0	62.5°	26.3	28.0	28.9	29.8
574.0	574.0	574.0	574.0	574.8	575.5	577.0	574.0	65°	25.4	27.1	27.1	28.9
576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	67.5°	23.6	25.4	25.4	26.3
								70°	21.9	22.8	23.6	24.5
								72.5°	20.1	21.0	21.0	21.9
								75°	16.6	17.5	18.4	19.3
								77.5°	14.0	14.0	15.8	15.8
								80°	10.5	10.5	11.4	12.3
								82.5°	6.1	6.1	7.0	7.0
								85°	1.8	1.8	1.8	1.8
								87.5°	0.0	0.0	0.0	0.0
								90°	0.0	0.0	0.0	0.0
								92.5°	0.0	0.0	0.0	0.0
								95°	1.0	1.0	1.0	1.0
								97.5°	4.0	4.5	4.8	5.0
								100°	26.0	26.5	26.8	27.0
								102.5°	49.0	48.5	48.2	48.0
								105°	71.0	70.0	69.5	69.0
								107.5°	92.0	91.5	91.2	91.0
								110°	114.0	113.5	113.2	113.0



REPORT NUMBER: P228519

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

JLG

CANDELA DISTRIBUTION (continued):

287.5°	290°	292.5°	295°	297.5°	300°	302.5°		275°	280°	282.5°	285°	287.5°
612.1	612.1	612.1	612.1	612.1	612.1	612.1	112.5°	137.0	136.0	135.5	135.0	135.2
523.7	525.4	522.8	522.8	524.6	531.6	531.6	115°	160.0	159.0	158.5	158.0	158.0
396.7	401.1	398.5	399.3	402.8	410.7	415.1	117.5°	182.0	181.0	180.5	180.0	180.2
284.6	288.1	289.9	292.5	303.0	303.9	309.1	120°	206.0	205.0	204.5	204.0	204.0
237.3	242.6	246.1	250.5	259.2	263.6	269.7	122.5°	233.0	231.0	230.0	229.0	228.8
199.7	205.8	209.3	218.1	223.3	228.6	236.5	125°	257.0	255.5	254.8	254.0	254.0
155.9	162.9	166.4	171.6	182.2	187.4	197.9	127.5°	281.0	279.5	278.8	278.0	277.8
113.0	115.6	122.6	131.4	137.5	146.2	151.5	130°	305.0	303.5	302.8	302.0	301.8
83.2	84.9	88.5	94.6	98.1	105.1	110.3	132.5°	329.0	327.5	326.8	326.0	325.8
71.8	72.7	74.4	76.2	77.9	80.6	83.2	135°	351.0	350.0	349.5	349.0	348.8
66.6	67.4	68.3	69.2	70.9	71.8	72.7	137.5°	374.0	372.0	371.0	370.0	369.8
63.1	63.1	63.9	65.7	65.7	67.4	68.3	140°	396.0	394.0	393.0	392.0	391.5
61.3	63.1	64.8	67.4	68.3	70.1	70.9	142.5°	416.0	414.5	413.8	413.0	412.8
52.5	52.5	53.4	55.2	55.2	56.0	56.9	145°	437.0	435.5	434.8	434.0	433.8
44.7	45.5	46.4	47.3	48.2	49.9	50.8	147.5°	456.0	454.5	453.8	453.0	452.8
42.9	42.9	43.8	45.5	46.4	47.3	48.2	150°	473.0	471.0	470.0	469.0	469.0
41.2	42.0	42.9	43.8	44.7	46.4	47.3	152.5°	489.0	487.5	486.8	486.0	486.0
40.3	41.2	42.0	42.9	44.7	45.5	46.4	155°	507.0	505.5	504.8	504.0	503.8
39.4	40.3	41.2	42.9	43.8	45.5	46.4	157.5°	523.0	520.5	519.2	518.0	517.8
38.5	39.4	40.3	42.0	43.8	45.5	47.3	160°	533.0	531.5	530.8	530.0	530.0
37.7	38.5	40.3	42.0	43.8	46.4	50.8	162.5°	540.0	539.0	538.5	538.0	538.5
36.8	38.5	40.3	42.0	44.7	48.2	52.5	165°	550.0	549.0	548.5	548.0	548.5
35.9	37.7	38.5	41.2	43.8	47.3	48.2	167.5°	563.0	561.0	560.0	559.0	558.8
34.2	35.9	36.8	39.4	42.9	43.8	42.9	170°	571.0	568.5	567.2	566.0	565.5
32.4	33.3	35.9	41.2	44.7	41.2	36.8	172.5°	571.0	569.5	568.8	568.0	567.8
31.5	32.4	34.2	37.7	38.5	34.2	33.3	175°	571.0	569.5	568.8	568.0	568.5
29.8	29.8	30.7	30.7	30.7	30.7	30.7	177.5°	577.0	575.5	574.8	574.0	574.0
27.1	27.1	28.0	28.0	28.0	28.0	28.0	180°	576.0	576.0	576.0	576.0	576.0
24.5	24.5	25.4	25.4	25.4	26.3	26.3						
21.9	22.8	22.8	23.6	23.6	23.6	24.5						
19.3	20.1	20.1	20.1	20.1	21.0	21.0						
16.6	16.6	17.5	17.5	17.5	17.5	17.5						
13.1	13.1	13.1	13.1	13.1	13.1	13.1						
7.9	7.9	8.8	7.9	7.9	7.0	7.0						
1.8	1.8	1.8	0.9	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						
1.0	1.0	1.0	1.0	1.0	1.0	1.0						
5.5	6.0	6.5	7.0	8.5	10.0	11.5						
27.8	28.5	29.2	30.0	30.5	31.0	31.5						
48.5	49.0	49.5	50.0	50.2	50.5	50.8						
69.5	70.0	70.5	71.0	71.0	71.0	71.0						
91.2	91.5	91.8	92.0	92.2	92.5	92.8						
113.2	113.5	113.8	114.0	114.0	114.0	114.0						



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

290°	292.5°	295°	297.5°	300°	302.5°		305°	307.5°	310°	312.5°	315°	317.5°
135.5	135.8	136.0	136.0	136.0	136.0	0°	612.1	612.1	612.1	612.1	612.1	612.1
158.0	158.0	158.0	158.0	158.0	158.0	2.5°	544.7	544.7	546.5	553.5	555.2	559.6
180.5	180.8	181.0	180.8	180.5	180.2	5°	430.9	434.4	439.6	448.4	453.6	463.3
204.0	204.0	204.0	204.0	204.0	204.0	7.5°	321.4	326.7	331.0	340.7	348.5	358.2
228.5	228.2	228.0	228.0	228.0	228.0	10°	278.5	282.9	289.0	295.1	303.0	307.4
254.0	254.0	254.0	253.8	253.5	253.2	12.5°	247.8	254.0	260.1	268.9	276.7	284.6
277.5	277.2	277.0	277.2	277.5	277.8	15°	210.2	217.2	224.2	233.8	245.2	253.1
301.5	301.2	301.0	301.0	301.0	301.0	17.5°	162.9	170.8	180.4	193.5	205.8	215.4
325.5	325.2	325.0	325.0	325.0	325.0	20°	120.0	127.0	135.7	147.1	155.9	172.5
348.5	348.2	348.0	348.0	348.0	348.0	22.5°	88.5	92.8	99.8	108.6	118.2	133.1
369.5	369.2	369.0	369.0	369.0	369.0	25°	74.4	76.2	78.8	84.1	90.2	100.7
391.0	390.5	390.0	390.0	390.0	390.0	27.5°	69.2	70.1	71.8	74.4	77.9	83.2
412.5	412.2	412.0	412.0	412.0	412.0	30°	72.7	72.7	72.7	73.6	75.3	77.9
433.5	433.2	433.0	433.2	433.5	433.8	32.5°	58.7	59.6	59.6	61.3	62.2	65.7
452.5	452.2	452.0	452.5	453.0	453.5	35°	52.5	53.4	54.3	55.2	56.9	57.8
469.0	469.0	469.0	469.5	470.0	470.5	37.5°	49.9	50.8	51.7	51.7	52.5	54.3
486.0	486.0	486.0	486.2	486.5	486.8	40°	49.0	49.0	49.0	49.0	50.8	52.5
503.5	503.2	503.0	503.2	503.5	503.8	42.5°	47.3	47.3	47.3	48.2	50.8	54.3
517.5	517.2	517.0	517.5	518.0	518.5	45°	47.3	47.3	48.2	51.7	52.5	52.5
530.0	530.0	530.0	530.5	531.0	531.5	47.5°	49.0	50.8	51.7	50.8	49.9	49.9
539.0	539.5	540.0	540.5	541.0	541.5	50°	53.4	52.5	49.0	48.2	48.2	46.4
549.0	549.5	550.0	550.8	551.5	552.2	52.5°	52.5	49.0	48.2	46.4	44.7	43.8
558.5	558.2	558.0	558.5	559.0	559.5	55°	47.3	46.4	43.8	42.0	41.2	42.0
565.0	564.5	564.0	564.2	564.5	564.8	57.5°	41.2	40.3	38.5	38.5	39.4	40.3
567.5	567.2	567.0	567.5	568.0	568.5	60°	35.9	35.9	35.9	36.8	37.7	38.5
569.0	569.5	570.0	570.8	571.5	572.2	62.5°	32.4	33.3	33.3	35.0	35.9	36.8
574.0	574.0	574.0	574.8	575.5	576.2	65°	30.7	31.5	32.4	32.4	33.3	34.2
576.0	576.0	576.0	576.0	576.0	576.0	67.5°	28.9	28.9	29.8	30.7	31.5	32.4
						70°	26.3	27.1	28.0	28.9	28.9	29.8
						72.5°	24.5	24.5	25.4	26.3	26.3	28.0
						75°	21.0	21.9	21.9	21.9	22.8	24.5
						77.5°	18.4	17.5	18.4	18.4	19.3	20.1
						80°	13.1	12.3	12.3	13.1	13.1	13.1
						82.5°	7.0	6.1	7.0	6.1	6.1	7.0
						85°	0.0	0.0	0.0	0.0	0.0	0.0
						87.5°	0.0	0.0	0.0	0.0	0.0	0.0
						90°	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
						95°	1.0	1.0	1.0	1.0	1.0	1.0
						97.5°	13.0	12.0	11.0	10.0	9.0	7.8
						100°	32.0	31.5	31.0	30.5	30.0	28.0
						102.5°	51.0	50.8	50.5	50.2	50.0	48.8
						105°	71.0	70.8	70.5	70.2	70.0	69.0
						107.5°	93.0	92.5	92.0	91.5	91.0	90.2
						110°	114.0	113.5	113.0	112.5	112.0	111.5



REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

320°	322.5°	325°	335°	345°		305°	307.5°	310°	312.5°	315°	317.5°	320°
612.1	612.1	612.1	612.1	612.1	112.5°	136.0	135.5	135.0	134.5	134.0	133.5	133.0
558.7	566.6	570.1	591.1	613.0	115°	158.0	157.5	157.0	156.5	156.0	155.5	155.0
461.5	477.3	479.9	518.4	556.1	117.5°	180.0	179.8	179.5	179.2	179.0	178.5	178.0
360.8	379.2	384.5	435.2	487.8	120°	204.0	203.5	203.0	202.5	202.0	201.8	201.5
314.4	323.2	329.3	366.9	427.4	122.5°	228.0	227.8	227.5	227.2	227.0	226.8	226.5
291.6	300.4	308.3	338.9	386.2	125°	253.0	252.8	252.5	252.2	252.0	251.8	251.5
261.0	270.6	280.2	317.9	373.1	127.5°	278.0	277.5	277.0	276.5	276.0	275.5	275.0
223.3	236.5	248.7	294.3	366.9	130°	301.0	300.5	300.0	299.5	299.0	298.8	298.5
181.3	197.0	211.9	268.9	358.2	132.5°	325.0	324.2	323.5	322.8	322.0	321.8	321.5
142.7	156.8	173.4	245.2	358.2	135°	348.0	347.2	346.5	345.8	345.0	345.0	345.0
110.3	124.4	141.0	224.2	367.8	137.5°	369.0	368.5	368.0	367.5	367.0	367.0	367.0
90.2	101.6	118.2	207.6	381.8	140°	390.0	389.8	389.5	389.2	389.0	388.8	388.5
81.4	88.5	99.0	183.0	391.5	142.5°	412.0	411.5	411.0	410.5	410.0	410.0	410.0
69.2	74.4	84.1	168.1	397.6	145°	434.0	433.5	433.0	432.5	432.0	431.8	431.5
61.3	67.4	77.1	158.5	396.7	147.5°	454.0	453.8	453.5	453.2	453.0	452.8	452.5
56.9	63.1	74.4	155.0	396.7	150°	471.0	470.8	470.5	470.2	470.0	469.8	469.5
56.9	63.1	72.7	151.5	399.3	152.5°	487.0	486.8	486.5	486.2	486.0	485.8	485.5
56.0	59.6	67.4	149.8	403.7	155°	504.0	503.8	503.5	503.2	503.0	503.0	503.0
53.4	56.0	63.9	149.8	412.5	157.5°	519.0	519.0	519.0	519.0	519.0	519.0	519.0
49.9	53.4	61.3	152.4	429.1	160°	532.0	532.0	532.0	532.0	532.0	532.0	532.0
47.3	50.8	60.4	152.4	463.3	162.5°	542.0	541.8	541.5	541.2	541.0	541.0	541.0
44.7	49.9	59.6	150.6	512.3	165°	553.0	552.8	552.5	552.2	552.0	552.0	552.0
43.8	48.2	57.8	148.9	572.7	167.5°	560.0	560.0	560.0	560.0	560.0	560.2	560.5
42.9	46.4	53.4	144.5	620.9	170°	565.0	565.2	565.5	565.8	566.0	566.2	566.5
41.2	43.8	49.0	136.6	653.3	172.5°	569.0	568.8	568.5	568.2	568.0	568.2	568.5
38.5	41.2	44.7	127.9	660.3	175°	573.0	572.8	572.5	572.2	572.0	572.0	572.0
36.8	39.4	44.7	120.9	617.4	177.5°	577.0	577.0	577.0	577.0	577.0	577.2	577.5
34.2	38.5	45.5	114.7	523.7	180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0
32.4	38.5	46.4	112.1	416.0								
30.7	37.7	47.3	107.7	313.5								
28.0	34.2	41.2	89.3	211.9								
22.8	26.3	30.7	56.9	112.1								
14.9	15.8	17.5	35.0	62.2								
7.0	8.8	8.8	16.6	28.0								
0.0	0.0	0.0	1.8	6.1								
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								
6.5	5.2	4.0	3.0	2.0								
26.0	24.0	22.0	14.0	10.0								
47.5	46.2	45.0	38.0	32.0								
68.0	67.0	66.0	61.0	56.0								
89.5	88.8	88.0	84.0	80.0								
111.0	110.5	110.0	106.0	103.0								

REPORT NUMBER: P228519
 CATALOG NUMBER: ISC-AF-450-LED-E1-SLL-7030-ULG

CANDELA DISTRIBUTION (continued):

322.5°	325°	335°	345°		355°	359°	360°
132.5	132.0	129.0	126.0	0°	612.1	612.1	612.1
154.5	154.0	151.0	149.0	2.5°	634.0	644.6	649.8
177.5	177.0	174.0	172.0	5°	599.9	621.8	628.8
201.2	201.0	198.0	196.0	7.5°	548.2	572.7	582.4
226.2	226.0	223.0	221.0	10°	496.5	527.2	536.8
251.2	251.0	248.0	247.0	12.5°	465.9	502.7	507.9
274.5	274.0	272.0	270.0	15°	453.6	491.3	501.8
298.2	298.0	294.0	293.0	17.5°	465.9	507.9	518.4
321.2	321.0	318.0	317.0	20°	489.5	541.2	557.9
345.0	345.0	341.0	339.0	22.5°	529.8	599.9	620.9
367.0	367.0	364.0	363.0	25°	595.5	692.7	711.1
388.2	388.0	386.0	385.0	27.5°	665.6	766.3	795.2
410.0	410.0	407.0	408.0	30°	726.9	834.6	858.2
431.2	431.0	428.0	428.0	32.5°	770.7	888.9	916.0
452.2	452.0	448.0	447.0	35°	822.3	951.1	977.3
469.2	469.0	465.0	464.0	37.5°	881.9	1026.4	1062.3
485.2	485.0	482.0	483.0	40°	947.6	1104.3	1144.6
503.0	503.0	501.0	502.0	42.5°	1007.1	1177.0	1221.7
519.0	519.0	516.0	517.0	45°	1053.5	1245.3	1280.3
532.0	532.0	529.0	529.0	47.5°	1106.9	1297.9	1337.3
541.0	541.0	538.0	539.0	50°	1180.5	1364.4	1410.8
552.0	552.0	548.0	549.0	52.5°	1288.2	1477.4	1510.7
560.8	561.0	558.0	559.0	55°	1418.7	1614.0	1651.7
566.8	567.0	565.0	566.0	57.5°	1538.7	1741.0	1773.4
568.8	569.0	567.0	569.0	60°	1615.8	1799.7	1826.8
572.0	572.0	569.0	570.0	62.5°	1616.6	1801.4	1835.6
577.8	578.0	574.0	575.0	65°	1552.7	1762.9	1801.4
576.0	576.0	576.0	576.0	67.5°	1390.7	1664.8	1724.3
				70°	1174.4	1472.1	1538.7
				72.5°	916.0	1156.9	1233.1
				75°	620.9	768.0	834.6
				77.5°	395.0	443.1	465.0
				80°	232.9	261.8	273.2
				82.5°	144.5	155.9	167.3
				85°	58.7	42.0	45.5
				87.5°	0.0	0.0	0.0
				90°	0.0	0.0	0.0
				92.5°	0.0	0.0	0.0
				95°	1.0	1.0	1.0
				97.5°	2.0	2.0	2.0
				100°	8.0	8.0	8.0
				102.5°	28.0	28.0	28.0
				105°	54.0	54.0	54.0
				107.5°	77.0	77.8	78.0
				110°	102.0	101.2	101.0

REPORT NUMBER: P228519

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

CANDELA DISTRIBUTION (continued):

	355°	359°	360°
112.5°	124.0	124.0	124.0
115°	147.0	146.2	146.0
117.5°	170.0	169.2	169.0
120°	195.0	193.4	193.0
122.5°	220.0	219.2	219.0
125°	246.0	244.4	244.0
127.5°	269.0	267.4	267.0
130°	292.0	290.4	290.0
132.5°	314.0	313.2	313.0
135°	337.0	336.2	336.0
137.5°	360.0	359.2	359.0
140°	383.0	382.2	382.0
142.5°	406.0	404.4	404.0
145°	426.0	425.2	425.0
147.5°	444.0	444.0	444.0
150°	462.0	461.2	461.0
152.5°	480.0	479.2	479.0
155°	500.0	499.2	499.0
157.5°	515.0	513.4	513.0
160°	527.0	525.4	525.0
162.5°	536.0	535.2	535.0
165°	547.0	546.2	546.0
167.5°	556.0	555.2	555.0
170°	563.0	562.2	562.0
172.5°	566.0	565.2	565.0
175°	569.0	567.4	567.0
177.5°	573.0	572.2	572.0
180°	576.0	576.0	576.0

(END OF REPORT)