

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: P228565

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P228565  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29764)  
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  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-90° SPILL LIGHT ELIMINATOR LEFT  
Light Source: (16) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

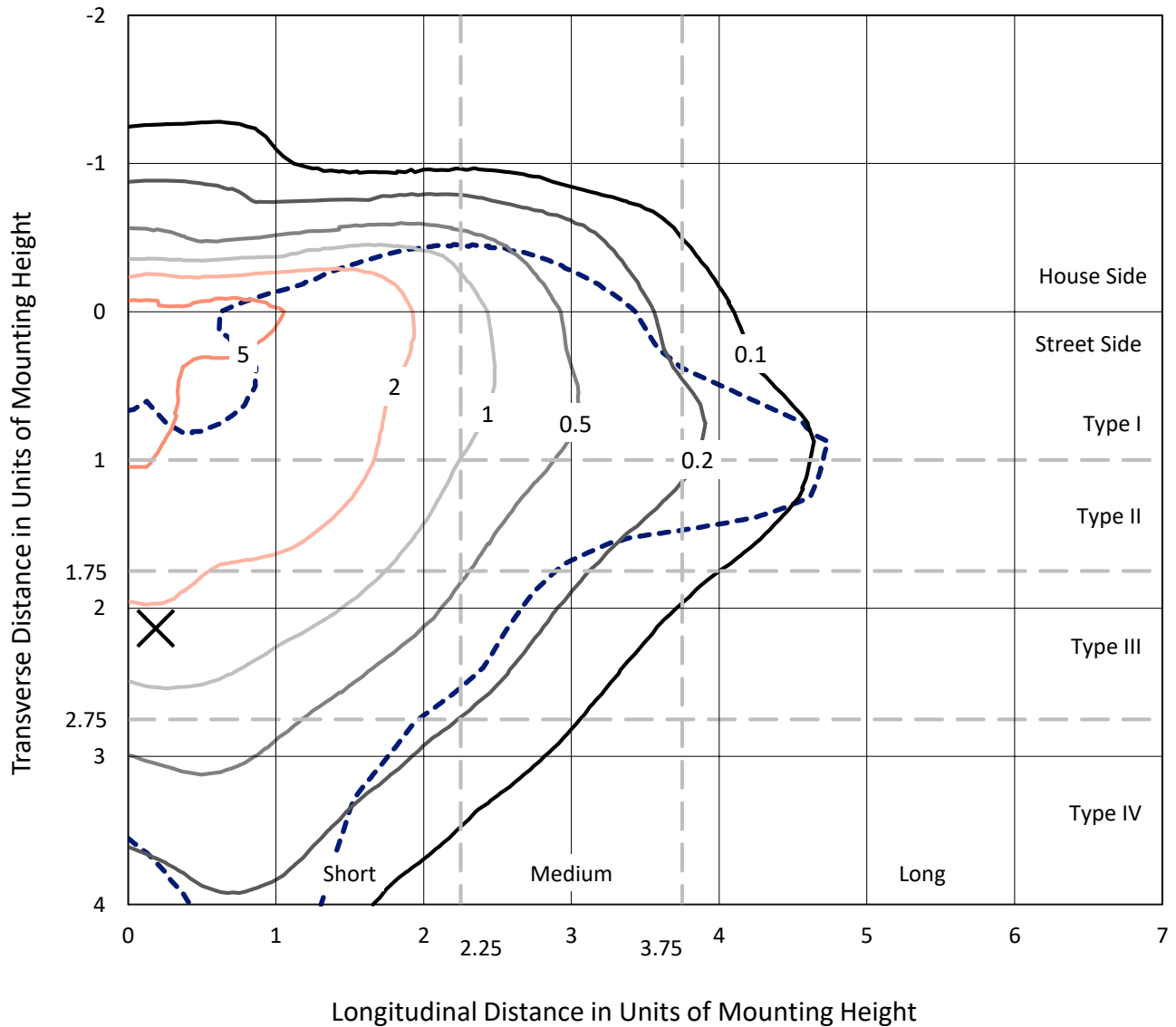
Lumens per Lamp: N/A  
Luminaire Lumens: 2555.3 lumens  
Efficiency: N/A  
Efficacy: 101.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 25.31  
Input Voltage (V): 120  
Input 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: P228565  
 CATALOG NUMBER: ISC-AF-450-LED-E1-SLL

### Iso-Footcandle Lines of Horizontal Illumination

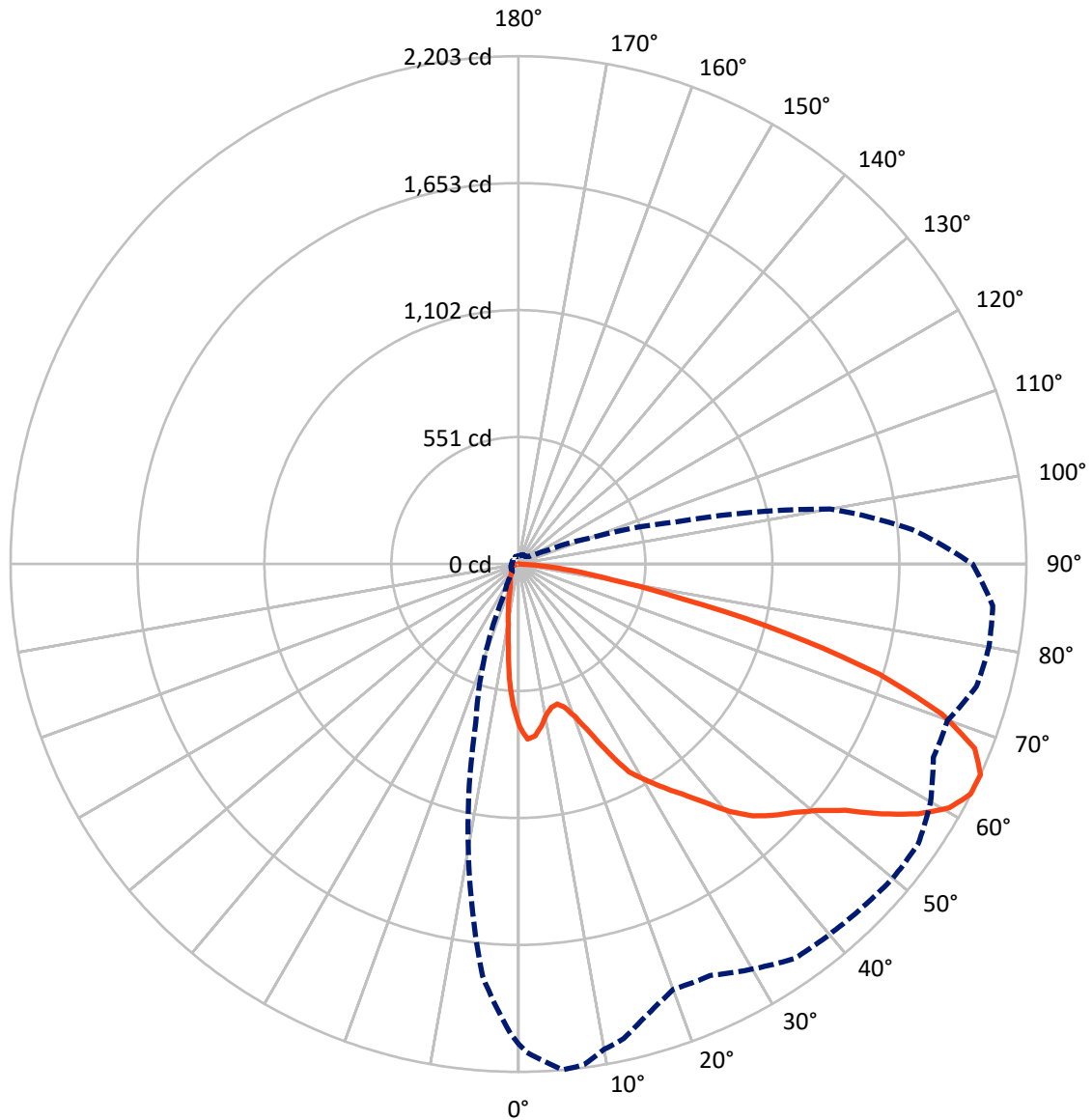
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P228565  
CATALOG NUMBER: ISC-AF-450-LED-E1-SLL

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P228565

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

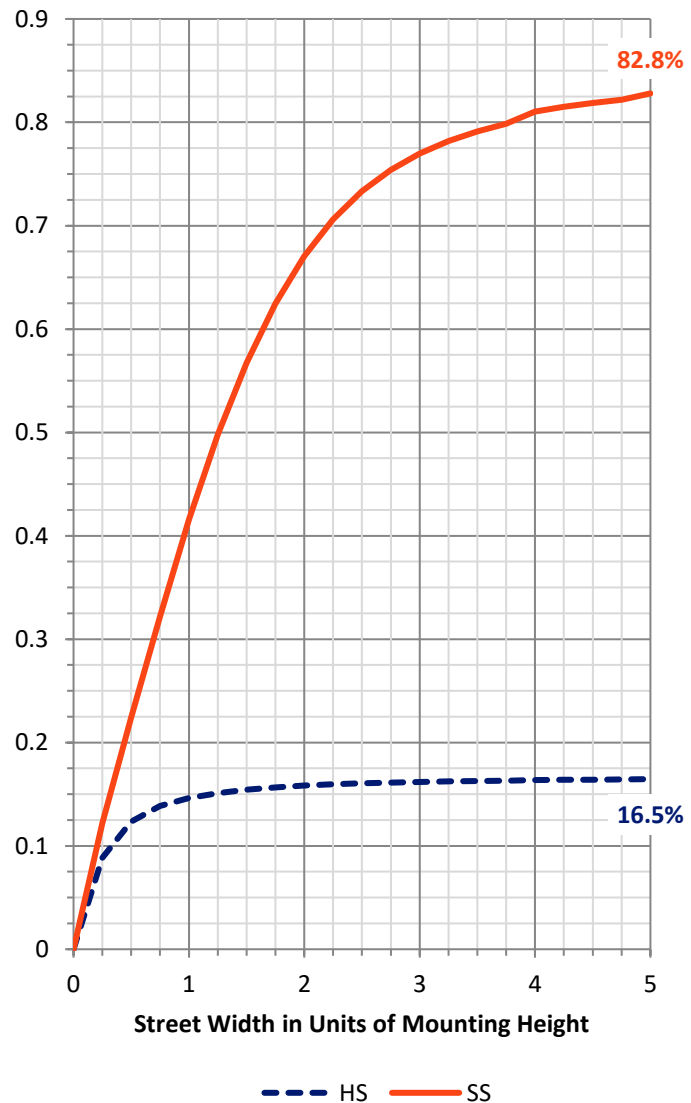
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	424.9	0.0	424.9
	% Fixture	16.6	0.0	16.6
<b>Street Side</b>	Lumens	2130.4	0.0	2130.4
	% Fixture	83.4	0.0	83.4
<b>Total</b>	Lumens	2555.3	0.0	2555.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.3	2.1
10°-20°	111.9	4.4
20°-30°	162.7	6.4
30°-40°	240.6	9.4
40°-50°	350.5	13.7
50°-60°	525.4	20.6
60°-70°	654.7	25.6
70°-80°	383.5	15.0
80°-90°	71.7	2.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2555.3	100.0
0°-180°	2555.3	100.0



REPORT NUMBER: P228565

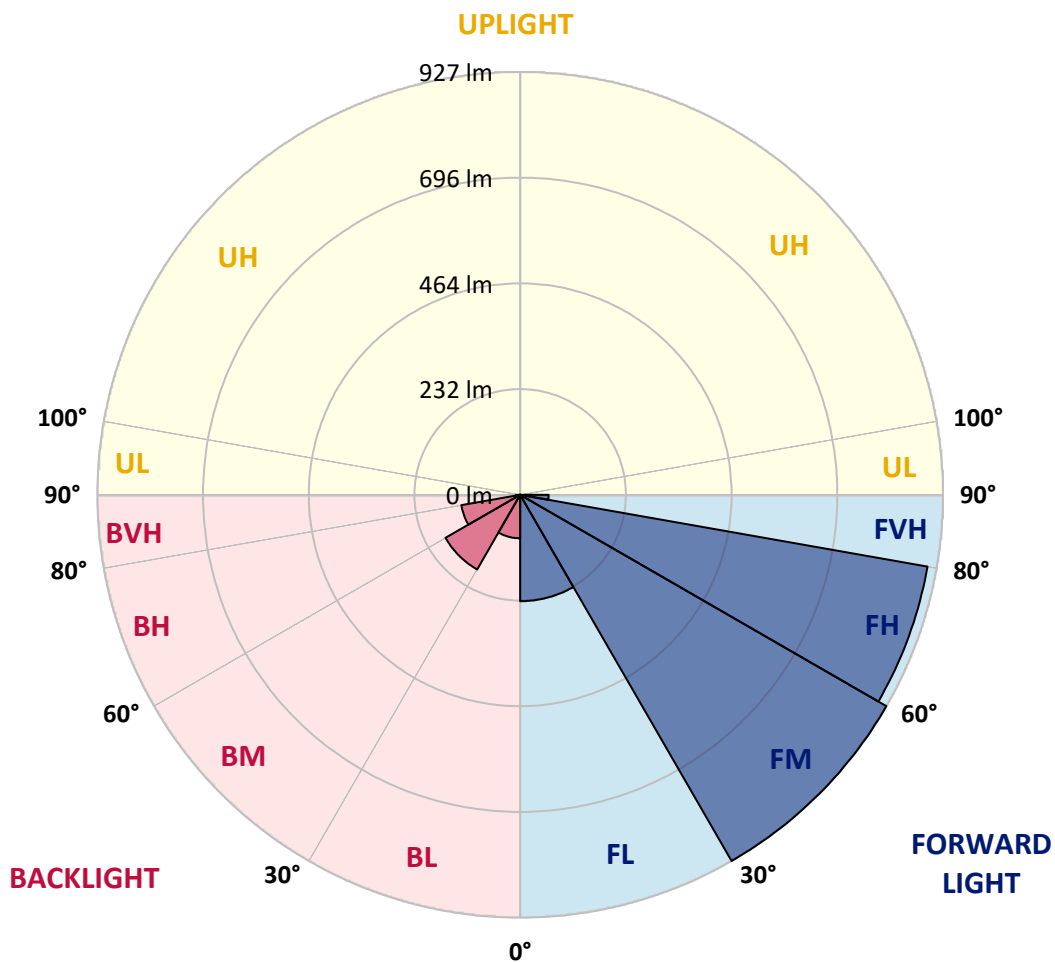
CATALOG NUMBER: ISC-AF-450-LED-E1-SLL

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	233.4	9.1			
FM	(30°-60°)	927.4	36.3			
FH	(60°-80°)	907.1	35.5			G1/1800
FVH	(80°-90°)	62.5	2.4			G1/100
BL	(0°-30°)	95.4	3.7	B0/110		
BM	(30°-60°)	189.1	7.4	B0/220		
BH	(60°-80°)	131.1	5.1	B1/500		G1/500
BVH	(80°-90°)	9.2	0.4			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type IV Short





REPORT NUMBER: P228565

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

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	7.5°	10°	12.5°	15°	17.5°	20°	25°	35°
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2
2.5°	750.6	748.6	760.8	762.8	770.9	770.9	780.0	788.1	791.2	798.2	816.4
5°	726.4	732.4	749.6	766.8	779.0	791.2	804.2	820.5	833.6	855.9	902.4
7.5°	672.8	681.9	711.3	728.4	747.7	768.8	785.0	804.2	824.5	861.9	944.9
10°	620.1	627.3	664.7	685.9	713.2	735.5	758.7	780.0	802.3	848.8	944.9
12.5°	586.8	595.9	638.3	658.6	690.0	713.2	741.5	766.8	793.2	842.7	935.8
15°	579.7	589.8	630.2	655.6	682.9	705.1	730.4	756.8	783.1	831.6	914.5
17.5°	598.9	611.0	654.6	682.9	704.1	729.5	747.7	772.9	790.1	828.6	868.0
20°	644.5	658.6	710.2	737.5	754.7	770.9	785.0	800.3	807.3	816.4	809.4
22.5°	717.3	734.5	793.2	824.5	836.7	848.8	849.8	851.8	846.8	822.5	767.8
25°	821.4	838.7	905.4	935.8	935.8	935.8	924.6	916.6	893.3	847.8	756.8
27.5°	918.6	940.8	1020.8	1040.0	1033.9	1024.8	1003.6	983.4	949.9	874.1	755.8
30°	991.4	1013.7	1087.6	1102.7	1087.6	1065.3	1032.0	1002.6	963.1	887.2	762.8
32.5°	1058.2	1084.5	1155.3	1157.4	1130.1	1104.8	1067.3	1033.9	992.5	911.6	784.1
35°	1129.0	1155.3	1227.1	1213.0	1173.5	1139.2	1100.7	1071.3	1029.9	942.9	818.5
37.5°	1227.1	1250.5	1311.1	1277.8	1227.1	1182.6	1141.2	1102.7	1061.2	985.4	876.2
40°	1322.3	1355.6	1411.3	1357.7	1296.0	1236.2	1190.7	1150.3	1104.8	1043.0	949.9
42.5°	1411.3	1442.7	1494.2	1425.5	1353.7	1293.9	1246.4	1202.9	1159.4	1108.8	1039.0
45°	1479.1	1511.4	1555.0	1482.2	1400.1	1338.4	1286.9	1248.4	1209.9	1175.6	1151.3
47.5°	1544.9	1577.2	1610.6	1531.7	1450.7	1388.0	1327.3	1291.9	1261.6	1243.4	1272.7
50°	1629.8	1652.1	1680.4	1595.4	1509.5	1437.6	1376.9	1349.6	1321.2	1327.3	1425.5
52.5°	1745.2	1764.4	1774.5	1691.6	1595.4	1513.5	1446.7	1409.2	1386.0	1421.4	1587.3
55°	1908.0	1935.3	1913.1	1831.1	1709.8	1616.7	1534.7	1490.2	1476.0	1523.6	1749.1
57.5°	2048.7	2060.7	2044.6	1963.7	1839.3	1735.0	1648.0	1601.5	1585.3	1648.0	1896.9
60°	2110.3	2125.5	2147.8	2078.0	1961.6	1858.5	1783.6	1738.1	1710.8	1783.6	2015.2
62.5°	2120.5	2145.7	2200.4	2165.0	2072.9	1996.1	1928.3	1865.6	1844.3	1899.9	2093.2
65°	2081.0	2119.5	2203.4	2190.2	2138.7	2109.3	2052.7	2004.2	1963.7	1969.7	2089.1
67.5°	1992.0	2036.5	2134.6	2128.6	2134.6	2134.6	2085.1	2044.6	1992.0	1917.1	1935.3
70°	1777.5	1836.2	1949.5	1978.8	2030.5	2030.5	1987.0	1925.2	1864.5	1710.8	1617.7
72.5°	1424.5	1463.9	1637.9	1780.5	1846.3	1820.0	1777.5	1674.4	1540.8	1371.9	1245.3
75°	964.1	987.4	1200.8	1461.9	1581.3	1559.0	1489.2	1360.7	1223.1	1034.9	875.1
77.5°	537.2	567.5	727.4	931.7	1092.6	1089.5	1080.4	998.5	889.3	733.5	650.5
80°	315.7	325.8	409.7	558.4	697.0	663.7	640.4	575.6	520.0	449.2	512.9
82.5°	193.2	183.1	232.7	339.9	411.7	397.6	358.1	333.9	307.5	288.4	340.9
85°	52.6	47.6	95.1	142.6	175.0	189.1	189.1	187.2	168.0	126.4	151.7
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



REPORT NUMBER: P228565

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

**CANDELA DISTRIBUTION (continued):**

	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2
2.5°	823.5	824.5	821.4	828.6	820.5	816.4	804.2	804.2	794.1	786.0	776.9
5°	919.6	925.7	920.7	921.7	905.4	889.3	865.0	850.8	825.5	798.2	769.9
7.5°	984.4	994.5	990.4	973.2	948.0	913.5	873.1	834.6	793.2	748.6	707.2
10°	1001.6	1012.7	1003.6	971.2	929.8	881.2	832.6	781.0	730.4	682.9	638.3
12.5°	977.3	985.4	966.2	930.8	890.3	841.7	791.2	746.7	686.9	636.4	584.7
15°	915.5	910.5	908.5	883.2	854.9	815.4	767.8	722.3	666.7	615.1	560.5
17.5°	848.8	842.7	844.8	834.6	830.6	812.3	776.9	738.6	689.0	626.3	567.5
20°	790.1	784.1	787.1	792.2	807.3	808.3	802.3	776.9	740.5	674.7	602.9
22.5°	739.5	740.5	750.6	764.9	790.1	822.5	847.8	852.8	827.6	750.6	660.6
25°	724.4	719.3	730.4	753.7	796.2	858.9	915.5	943.9	929.8	852.8	742.6
27.5°	719.3	712.2	724.4	754.7	822.5	910.5	991.4	1033.9	1039.0	960.0	830.6
30°	719.3	716.3	728.4	767.8	839.7	927.7	1017.7	1081.5	1101.7	1035.9	907.5
32.5°	728.4	730.4	751.7	802.3	876.2	966.2	1059.3	1128.0	1164.4	1114.9	969.1
35°	748.6	752.7	783.1	841.7	921.7	1012.7	1097.6	1167.5	1226.1	1199.8	1026.8
37.5°	792.2	798.2	835.6	895.3	968.2	1050.2	1133.1	1207.9	1292.9	1281.8	1087.6
40°	869.0	869.0	906.4	958.1	1017.7	1080.4	1162.4	1250.5	1354.6	1369.8	1162.4
42.5°	966.2	962.1	986.4	1023.8	1065.3	1117.9	1191.7	1289.8	1412.3	1445.6	1219.1
45°	1099.7	1079.4	1092.6	1101.7	1122.0	1154.3	1220.1	1327.3	1458.8	1502.3	1261.6
47.5°	1256.5	1228.2	1217.0	1199.8	1192.8	1204.9	1261.6	1356.6	1503.3	1550.9	1330.3
50°	1429.5	1402.2	1372.8	1326.3	1285.8	1273.7	1308.0	1396.1	1550.9	1611.6	1406.3
52.5°	1609.6	1590.4	1551.9	1479.1	1402.2	1358.7	1374.8	1461.9	1626.8	1705.7	1496.3
55°	1774.5	1780.5	1734.0	1649.0	1538.7	1472.0	1491.3	1578.2	1764.4	1857.5	1647.1
57.5°	1951.5	1935.3	1898.9	1810.9	1690.5	1618.7	1626.8	1732.0	1918.1	1988.9	1796.7
60°	2068.9	2068.9	2029.4	1962.6	1848.4	1781.6	1793.7	1890.8	2041.6	2048.7	1863.5
62.5°	2144.7	2155.9	2124.6	2077.0	1965.7	1910.1	1951.5	2020.3	2102.3	2043.5	1830.2
65°	2108.3	2120.5	2117.4	2064.8	1986.0	1981.9	2056.7	2072.9	2065.8	1969.7	1714.8
67.5°	1943.4	1919.2	1918.1	1890.8	1874.7	1958.6	2053.7	2058.8	1939.4	1825.0	1532.7
70°	1629.8	1588.3	1572.2	1580.3	1654.1	1810.9	1946.5	1908.0	1717.8	1619.7	1305.1
72.5°	1256.5	1207.0	1196.9	1228.2	1342.5	1563.1	1748.2	1694.5	1412.3	1298.0	1010.7
75°	891.3	870.0	871.0	932.7	1056.2	1268.7	1484.1	1479.1	1046.1	895.3	696.0
77.5°	648.4	652.5	670.7	695.0	801.3	1006.6	1208.9	1195.8	744.6	615.1	486.6
80°	535.2	541.2	541.2	528.0	555.4	664.7	821.4	877.1	498.8	413.8	339.9
82.5°	384.4	414.8	432.0	410.7	400.6	438.0	515.0	551.4	310.6	261.1	237.7
85°	183.1	209.4	215.5	210.4	241.8	276.2	294.4	301.5	169.9	121.4	155.8
87.5°	0.0	0.0	1.0	8.1	22.3	38.5	38.5	58.7	9.1	3.1	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





REPORT NUMBER: P228565

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

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	115°	120°	125°	130°	135°	145°	155°	165°
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2
2.5°	764.9	751.7	741.5	729.5	719.3	709.2	702.2	686.9	674.7	647.4	640.4
5°	746.7	718.3	699.1	680.9	657.6	641.4	624.2	602.9	579.7	540.2	528.0
7.5°	674.7	639.3	613.1	586.8	556.4	529.1	503.8	475.5	435.1	392.5	376.3
10°	596.9	559.5	523.0	491.6	455.2	424.9	402.6	382.4	350.1	317.6	296.5
12.5°	533.2	490.7	449.2	417.8	398.6	383.4	367.2	351.1	316.6	280.2	254.9
15°	503.8	454.3	417.8	391.5	374.3	356.1	336.9	318.6	278.2	235.7	205.4
17.5°	507.9	451.2	404.7	369.3	346.0	320.7	298.4	275.2	230.7	180.0	152.7
20°	530.1	454.3	390.5	349.0	315.7	283.3	254.9	225.6	170.9	131.6	112.3
22.5°	558.4	464.3	382.4	328.8	287.3	246.8	210.4	176.0	126.4	103.2	94.1
25°	607.0	487.6	380.4	310.6	260.0	211.4	174.0	137.6	102.2	91.0	86.0
27.5°	667.7	513.9	382.4	297.5	236.7	183.1	141.7	114.4	92.1	86.0	81.9
30°	728.4	541.2	373.3	277.2	209.4	156.8	121.4	104.2	91.0	84.0	76.9
32.5°	782.0	561.5	358.1	255.9	185.2	133.5	103.2	89.0	79.9	71.8	69.8
35°	820.5	570.6	340.9	242.8	169.0	119.4	91.0	79.9	70.8	62.7	58.7
37.5°	856.9	571.6	322.7	230.7	162.9	113.3	84.0	73.9	65.8	58.7	54.6
40°	894.4	567.5	312.6	218.5	153.7	110.3	80.9	68.8	63.7	55.6	51.6
42.5°	921.7	560.5	308.5	211.4	145.7	102.2	78.9	67.8	60.7	54.6	49.6
45°	946.9	553.4	308.5	205.4	139.6	97.1	74.9	68.8	58.7	53.6	47.6
47.5°	977.3	556.4	309.5	200.3	134.5	92.1	70.8	66.8	59.6	52.6	46.5
50°	1028.9	590.9	314.7	197.3	130.5	88.0	67.8	63.7	65.8	51.6	45.5
52.5°	1117.9	645.5	322.7	195.3	126.4	85.0	63.7	61.7	66.8	51.6	44.5
55°	1234.3	701.1	330.8	190.2	120.4	78.9	61.7	57.7	61.7	51.6	43.5
57.5°	1347.5	742.6	337.9	183.1	110.3	72.8	58.7	54.6	56.7	50.5	41.4
60°	1413.3	775.0	344.9	170.9	98.1	65.8	55.6	51.6	50.5	50.5	40.5
62.5°	1431.5	762.8	340.9	155.8	88.0	60.7	52.6	48.6	45.5	51.6	40.5
65°	1373.8	699.1	325.8	142.6	80.9	58.7	49.6	46.5	43.5	44.5	38.5
67.5°	1196.9	587.8	284.3	130.5	79.9	57.7	47.6	44.5	40.5	39.5	36.4
70°	976.3	461.4	235.7	121.4	78.9	57.7	45.5	41.4	38.5	35.4	33.3
72.5°	750.6	344.9	198.2	117.3	79.9	56.7	42.5	37.4	34.4	32.3	30.4
75°	528.0	243.8	164.9	105.3	74.9	53.6	39.5	33.3	30.4	28.3	26.3
77.5°	382.4	165.9	122.4	85.0	63.7	46.5	34.4	28.3	25.3	24.2	22.3
80°	243.8	102.2	81.9	62.7	46.5	36.4	26.3	22.3	20.3	18.2	17.2
82.5°	140.7	59.6	49.6	42.5	30.4	24.2	19.2	17.2	13.2	12.2	11.2
85°	86.0	37.4	27.3	22.3	19.2	15.1	11.2	10.1	7.1	6.0	5.0
87.5°	19.2	8.1	7.1	5.0	6.0	5.0	3.1	2.0	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



REPORT NUMBER: P228565

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

**CANDELA DISTRIBUTION (continued):**

	175°	180°	185°	195°	205°	215°	225°	230°	232.5°	235°	237.5°
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2
2.5°	629.2	614.1	615.1	612.0	604.0	590.9	586.8	579.7	580.7	584.7	580.7
5°	513.9	495.7	497.8	496.7	488.7	479.6	472.5	463.4	460.3	463.4	458.3
7.5°	364.2	352.1	356.1	365.2	364.2	359.2	353.1	343.0	340.9	342.0	332.9
10°	278.2	266.1	263.0	262.0	260.0	257.0	248.9	240.8	237.7	238.8	232.7
12.5°	232.7	222.6	210.4	199.3	189.1	185.2	175.0	169.9	169.0	169.0	165.9
15°	184.1	176.0	169.0	157.8	149.8	143.6	136.6	132.6	131.6	132.6	132.6
17.5°	137.6	133.5	130.5	129.5	125.4	121.4	117.3	115.3	114.4	114.4	115.3
20°	105.3	104.2	104.2	104.2	109.3	113.3	114.4	111.3	110.3	109.3	108.2
22.5°	91.0	90.0	91.0	97.1	94.1	91.0	91.0	91.0	91.0	91.0	92.1
25°	84.0	85.0	86.0	83.0	79.9	77.9	76.9	76.9	75.9	75.9	76.9
27.5°	79.9	78.9	77.9	75.9	73.9	70.8	69.8	68.8	68.8	68.8	68.8
30°	74.9	73.9	72.8	70.8	67.8	63.7	62.7	62.7	61.7	62.7	62.7
32.5°	68.8	67.8	66.8	64.8	61.7	59.6	58.7	56.7	56.7	56.7	57.7
35°	55.6	54.6	54.6	55.6	55.6	54.6	54.6	52.6	52.6	52.6	52.6
37.5°	51.6	50.5	50.5	49.6	50.5	51.6	50.5	49.6	49.6	48.6	48.6
40°	48.6	48.6	47.6	46.5	46.5	48.6	47.6	46.5	45.5	45.5	45.5
42.5°	46.5	45.5	45.5	44.5	44.5	44.5	43.5	42.5	41.4	41.4	41.4
45°	44.5	44.5	43.5	42.5	41.4	41.4	39.5	38.5	38.5	38.5	39.5
47.5°	43.5	42.5	42.5	41.4	40.5	38.5	37.4	36.4	36.4	36.4	36.4
50°	42.5	41.4	40.5	40.5	38.5	37.4	36.4	35.4	35.4	35.4	35.4
52.5°	41.4	40.5	39.5	38.5	37.4	36.4	35.4	34.4	34.4	34.4	34.4
55°	39.5	38.5	38.5	37.4	37.4	36.4	35.4	34.4	34.4	34.4	33.3
57.5°	38.5	37.4	36.4	36.4	36.4	35.4	34.4	33.3	33.3	33.3	33.3
60°	37.4	36.4	36.4	35.4	35.4	34.4	34.4	33.3	32.3	32.3	31.4
62.5°	36.4	35.4	35.4	34.4	35.4	34.4	33.3	32.3	31.4	31.4	30.4
65°	35.4	34.4	34.4	34.4	33.3	33.3	32.3	30.4	30.4	30.4	29.4
67.5°	33.3	32.3	32.3	33.3	32.3	31.4	31.4	29.4	29.4	28.3	28.3
70°	30.4	30.4	30.4	31.4	30.4	29.4	29.4	28.3	27.3	26.3	26.3
72.5°	28.3	27.3	28.3	28.3	28.3	27.3	28.3	26.3	25.3	24.2	24.2
75°	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	23.2	22.3	21.3
77.5°	19.2	20.3	20.3	20.3	20.3	21.3	20.3	20.3	20.3	19.2	18.2
80°	14.1	14.1	15.1	16.2	15.1	16.2	15.1	16.2	15.1	15.1	15.1
82.5°	8.1	8.1	9.1	10.1	10.1	11.2	9.1	10.1	10.1	11.2	10.1
85°	3.1	3.1	3.1	3.1	4.1	4.1	3.1	4.1	4.1	5.0	5.0
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



REPORT NUMBER: P228565

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

**CANDELA DISTRIBUTION (continued):**

	240°	242.5°	245°	247.5°	250°	252.5°	255°	257.5°	260°	265°	270°
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2
2.5°	588.8	588.8	576.6	578.7	580.7	584.7	582.8	581.8	580.7	586.8	589.8
5°	462.4	461.4	446.1	445.2	448.2	449.2	446.1	441.1	438.0	439.1	442.1
7.5°	335.8	332.9	318.6	316.6	315.7	316.6	313.6	308.5	304.5	305.6	308.5
10°	234.7	226.6	224.6	225.6	227.6	229.7	229.7	229.7	230.7	236.7	243.8
12.5°	169.9	166.9	169.0	170.9	175.0	178.1	181.1	182.1	183.1	191.2	197.3
15°	134.5	134.5	136.6	137.6	139.6	141.7	143.6	143.6	144.6	147.7	152.7
17.5°	116.3	116.3	116.3	116.3	116.3	115.3	114.4	112.3	111.3	110.3	111.3
20°	107.2	106.2	104.2	103.2	101.2	99.1	98.1	95.1	94.1	91.0	90.0
22.5°	92.1	91.0	91.0	91.0	91.0	90.0	89.0	88.0	86.0	83.0	80.9
25°	75.9	75.9	75.9	76.9	76.9	77.9	79.9	79.9	79.9	79.9	76.9
27.5°	68.8	68.8	68.8	68.8	69.8	69.8	70.8	70.8	70.8	71.8	72.8
30°	62.7	63.7	63.7	64.8	64.8	65.8	65.8	66.8	66.8	67.8	67.8
32.5°	57.7	57.7	58.7	59.6	59.6	59.6	61.7	61.7	60.7	61.7	61.7
35°	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	49.6	48.6	49.6
37.5°	47.6	46.5	46.5	45.5	44.5	44.5	44.5	45.5	44.5	45.5	45.5
40°	43.5	43.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	43.5	44.5
42.5°	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	41.4	41.4
45°	38.5	38.5	38.5	38.5	39.5	39.5	39.5	39.5	39.5	39.5	40.5
47.5°	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	38.5	39.5
50°	35.4	35.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	37.4	38.5
52.5°	34.4	34.4	34.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	36.4
55°	33.3	34.4	34.4	34.4	34.4	34.4	33.3	33.3	33.3	33.3	34.4
57.5°	32.3	32.3	33.3	33.3	33.3	32.3	32.3	31.4	31.4	31.4	33.3
60°	31.4	31.4	31.4	31.4	31.4	30.4	30.4	30.4	30.4	31.4	31.4
62.5°	30.4	30.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
65°	29.4	29.4	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3
67.5°	27.3	27.3	27.3	26.3	26.3	26.3	26.3	27.3	26.3	26.3	26.3
70°	25.3	25.3	25.3	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2
72.5°	23.2	23.2	23.2	23.2	22.3	22.3	22.3	22.3	22.3	22.3	22.3
75°	21.3	20.3	20.3	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
77.5°	18.2	17.2	17.2	17.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
80°	15.1	14.1	14.1	13.2	13.2	13.2	13.2	13.2	13.2	12.2	12.2
82.5°	11.2	10.1	10.1	10.1	10.1	9.1	9.1	9.1	9.1	8.1	7.1
85°	5.0	5.0	4.1	5.0	5.0	6.0	5.0	5.0	5.0	4.1	2.0
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



REPORT NUMBER: P228565  
 CATALOG NUMBER: ISC-AF-450-LED-E1-SLL

REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	275°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°	302.5°	
0°	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	0°
2.5°	587.8	597.9	598.9	592.8	605.0	607.0	604.0	604.0	606.0	614.1	614.1	2.5°
5°	438.0	451.2	450.2	442.1	458.3	463.4	460.3	461.4	465.3	474.4	479.6	5°
7.5°	309.5	320.7	319.7	318.6	328.8	332.9	334.9	337.9	350.1	351.1	357.1	7.5°
10°	250.9	261.1	264.0	271.1	274.2	280.2	284.3	289.3	299.4	304.5	311.6	10°
12.5°	203.4	215.5	218.5	226.6	230.7	237.7	241.8	252.0	258.0	264.0	273.1	12.5°
15°	156.8	166.9	169.9	176.0	180.0	188.1	192.2	198.2	210.4	216.5	228.6	15°
17.5°	115.3	121.4	123.5	127.5	130.5	133.5	141.7	151.7	158.9	169.0	175.0	17.5°
20°	90.0	92.1	93.1	94.1	96.2	98.1	102.2	109.3	113.3	121.4	127.5	20°
22.5°	80.9	81.9	81.9	83.0	83.0	84.0	86.0	88.0	90.0	93.1	96.2	22.5°
25°	74.9	75.9	75.9	76.9	76.9	77.9	78.9	79.9	81.9	83.0	84.0	25°
27.5°	71.8	71.8	71.8	71.8	72.8	72.8	73.9	75.9	75.9	77.9	78.9	27.5°
30°	68.8	68.8	68.8	69.8	70.8	72.8	74.9	77.9	78.9	80.9	81.9	30°
32.5°	63.7	61.7	63.7	62.7	60.7	60.7	61.7	63.7	63.7	64.8	65.8	32.5°
35°	49.6	49.6	50.5	51.6	51.6	52.6	53.6	54.6	55.6	57.7	58.7	35°
37.5°	46.5	47.6	47.6	48.6	49.6	49.6	50.5	52.6	53.6	54.6	55.6	37.5°
40°	44.5	45.5	46.5	47.6	47.6	48.6	49.6	50.5	51.6	53.6	54.6	40°
42.5°	42.5	44.5	44.5	45.5	46.5	47.6	48.6	49.6	51.6	52.6	53.6	42.5°
45°	41.4	42.5	43.5	44.5	45.5	46.5	47.6	49.6	50.5	52.6	53.6	45°
47.5°	40.5	41.4	42.5	43.5	44.5	45.5	46.5	48.6	50.5	52.6	54.6	47.5°
50°	38.5	40.5	41.4	42.5	43.5	44.5	46.5	48.6	50.5	53.6	58.7	50°
52.5°	37.4	39.5	39.5	41.4	42.5	44.5	46.5	48.6	51.6	55.6	60.7	52.5°
55°	35.4	37.4	37.4	39.5	41.4	43.5	44.5	47.6	50.5	54.6	55.6	55°
57.5°	33.3	35.4	36.4	37.4	39.5	41.4	42.5	45.5	49.6	50.5	49.6	57.5°
60°	32.3	33.3	34.4	35.4	37.4	38.5	41.4	47.6	51.6	47.6	42.5	60°
62.5°	30.4	32.3	33.3	34.4	36.4	37.4	39.5	43.5	44.5	39.5	38.5	62.5°
65°	29.4	31.4	31.4	33.3	34.4	34.4	35.4	35.4	35.4	35.4	35.4	65°
67.5°	27.3	29.4	29.4	30.4	31.4	31.4	32.3	32.3	32.3	32.3	32.3	67.5°
70°	25.3	26.3	27.3	28.3	28.3	28.3	29.4	29.4	29.4	30.4	30.4	70°
72.5°	23.2	24.2	24.2	25.3	25.3	26.3	26.3	27.3	27.3	27.3	28.3	72.5°
75°	19.2	20.3	21.3	22.3	22.3	23.2	23.2	23.2	23.2	24.2	24.2	75°
77.5°	16.2	16.2	18.2	18.2	19.2	19.2	20.3	20.3	20.3	20.3	20.3	77.5°
80°	12.2	12.2	13.2	14.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	80°
82.5°	7.1	7.1	8.1	8.1	9.1	9.1	10.1	9.1	9.1	8.1	8.1	82.5°
85°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	0.0	0.0	85°
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90°

NUMBER: P228565  
 NUMBER: ISC-AF-450-LED-E1-SLL

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	335°	345°	355°	
707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	707.2	0°	707.2
629.2	629.2	631.3	639.3	641.4	646.5	645.5	654.6	658.6	682.9	708.2	2.5°	732.4
497.8	501.8	507.9	518.0	524.1	535.2	533.2	551.4	554.4	598.9	642.4	5°	692.9
371.3	377.4	382.4	393.5	402.6	413.8	416.9	438.0	444.2	502.8	563.5	7.5°	633.3
321.7	326.7	333.9	340.9	350.1	355.1	363.1	373.3	380.4	423.9	493.7	10°	573.7
286.3	293.4	300.4	310.6	319.7	328.8	336.9	347.0	356.1	391.5	446.1	12.5°	538.2
242.8	250.9	259.0	270.2	283.3	292.4	301.5	312.6	323.8	367.2	431.0	15°	524.1
188.1	197.3	208.4	223.6	237.7	248.9	258.0	273.1	287.3	339.9	423.9	17.5°	538.2
138.6	146.7	156.8	169.9	180.0	199.3	209.4	227.6	244.8	310.6	413.8	20°	565.5
102.2	107.2	115.3	125.4	136.6	153.7	164.9	181.1	200.3	283.3	413.8	22.5°	612.0
86.0	88.0	91.0	97.1	104.2	116.3	127.5	143.6	162.9	259.0	424.9	25°	687.9
79.9	80.9	83.0	86.0	90.0	96.2	104.2	117.3	136.6	239.8	441.1	27.5°	768.8
84.0	84.0	84.0	85.0	87.1	90.0	94.1	102.2	114.4	211.4	452.2	30°	839.7
67.8	68.8	68.8	70.8	71.8	75.9	79.9	86.0	97.1	194.3	459.3	32.5°	890.3
60.7	61.7	62.7	63.7	65.8	66.8	70.8	77.9	89.0	183.1	458.3	35°	949.9
57.7	58.7	59.6	59.6	60.7	62.7	65.8	72.8	86.0	179.0	458.3	37.5°	1018.8
56.7	56.7	56.7	56.7	58.7	60.7	65.8	72.8	84.0	175.0	461.4	40°	1094.7
54.6	54.6	54.6	55.6	58.7	62.7	64.8	68.8	77.9	173.0	466.4	42.5°	1163.4
54.6	54.6	55.6	59.6	60.7	60.7	61.7	64.8	73.9	173.0	476.5	45°	1217.0
56.7	58.7	59.6	58.7	57.7	57.7	57.7	61.7	70.8	176.0	495.7	47.5°	1278.8
61.7	60.7	56.7	55.6	55.6	53.6	54.6	58.7	69.8	176.0	535.2	50°	1363.7
60.7	56.7	55.6	53.6	51.6	50.5	51.6	57.7	68.8	174.0	591.9	52.5°	1488.2
54.6	53.6	50.5	48.6	47.6	48.6	50.5	55.6	66.8	172.0	661.6	55°	1638.9
47.6	46.5	44.5	44.5	45.5	46.5	49.6	53.6	61.7	166.9	717.3	57.5°	1777.5
41.4	41.4	41.4	42.5	43.5	44.5	47.6	50.5	56.7	157.8	754.7	60°	1866.6
37.4	38.5	38.5	40.5	41.4	42.5	44.5	47.6	51.6	147.7	762.8	62.5°	1867.6
35.4	36.4	37.4	37.4	38.5	39.5	42.5	45.5	51.6	139.6	713.2	65°	1793.7
33.3	33.3	34.4	35.4	36.4	37.4	39.5	44.5	52.6	132.6	605.0	67.5°	1606.5
30.4	31.4	32.3	33.3	33.3	34.4	37.4	44.5	53.6	129.5	480.6	70°	1356.6
28.3	28.3	29.4	30.4	30.4	32.3	35.4	43.5	54.6	124.4	362.2	72.5°	1058.2
24.2	25.3	25.3	25.3	26.3	28.3	32.3	39.5	47.6	103.2	244.8	75°	717.3
21.3	20.3	21.3	21.3	22.3	23.2	26.3	30.4	35.4	65.8	129.5	77.5°	456.2
15.1	14.1	14.1	15.1	15.1	15.1	17.2	18.2	20.3	40.5	71.8	80°	269.1
8.1	7.1	8.1	7.1	7.1	8.1	8.1	10.1	10.1	19.2	32.3	82.5°	166.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	7.1	85°	67.8
0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	90°	0.0



'228565  
ISC-AF-450-LED-E1-SLL

**TION (continued):**

359°	360°
707.2	707.2
744.6	750.6
718.3	726.4
661.6	672.8
609.1	620.1
580.7	586.8
567.5	579.7
586.8	598.9
625.2	644.5
692.9	717.3
800.3	821.4
885.3	918.6
964.1	991.4
1026.8	1058.2
1098.6	1129.0
1185.7	1227.1
1275.7	1322.3
1359.7	1411.3
1438.6	1479.1
1499.3	1544.9
1576.2	1629.8
1706.7	1745.2
1864.5	1908.0
2011.2	2048.7
2078.9	2110.3
2081.0	2120.5
2036.5	2081.0
1923.1	1992.0
1700.7	1777.5
1336.4	1424.5
887.2	964.1
511.9	537.2
302.5	315.7
180.0	193.2
48.6	52.6
0.0	0.0
0.0	0.0

(END OF REPORT)