

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: P227786

Luminaire Tested: **ISC-AF-600-LED-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P227786  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29759)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISC-AF-600-LED-E1-T3  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III  
Light Source: (16) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3995.6 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 33.7  
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

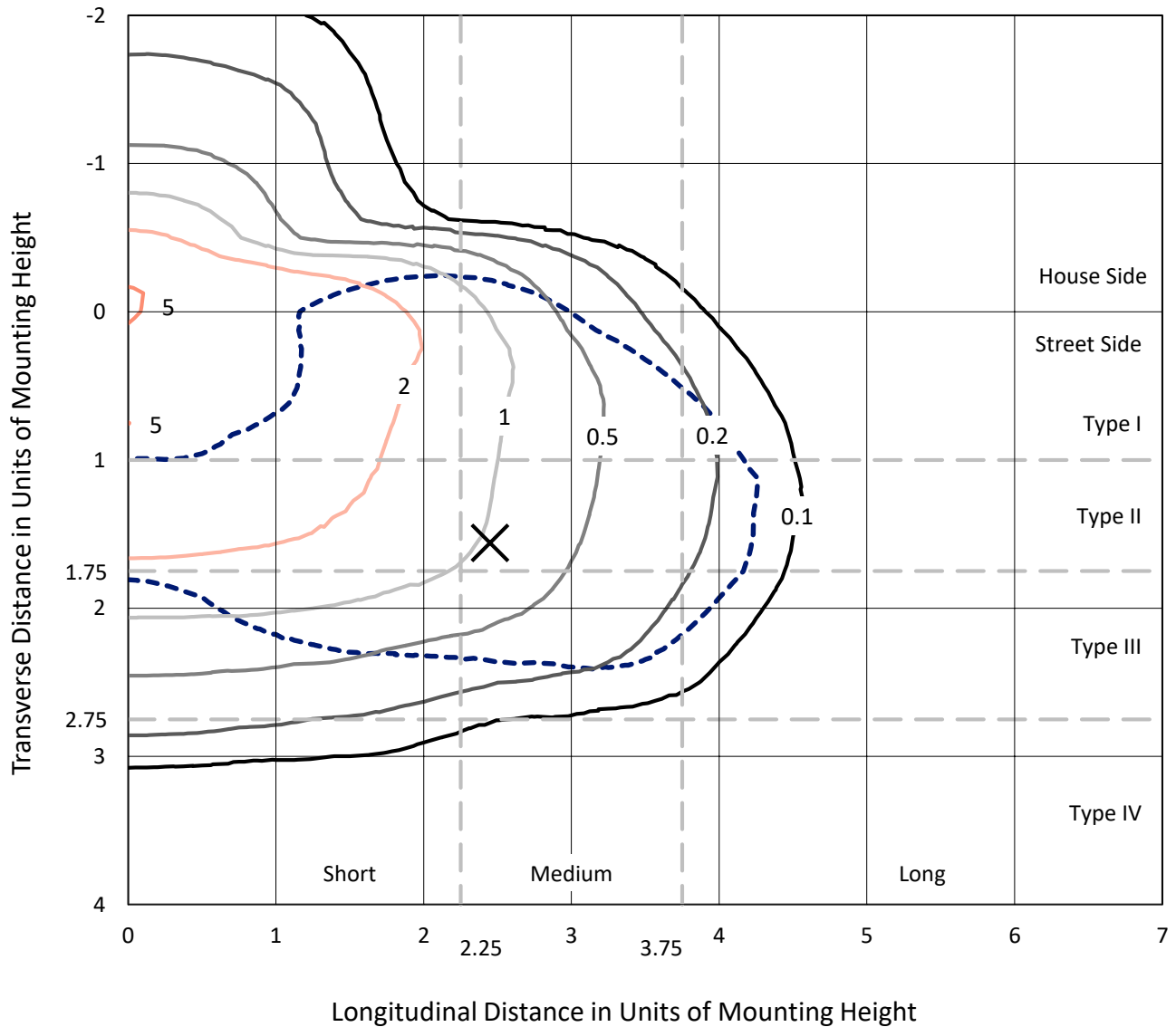


REPORT NUMBER: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

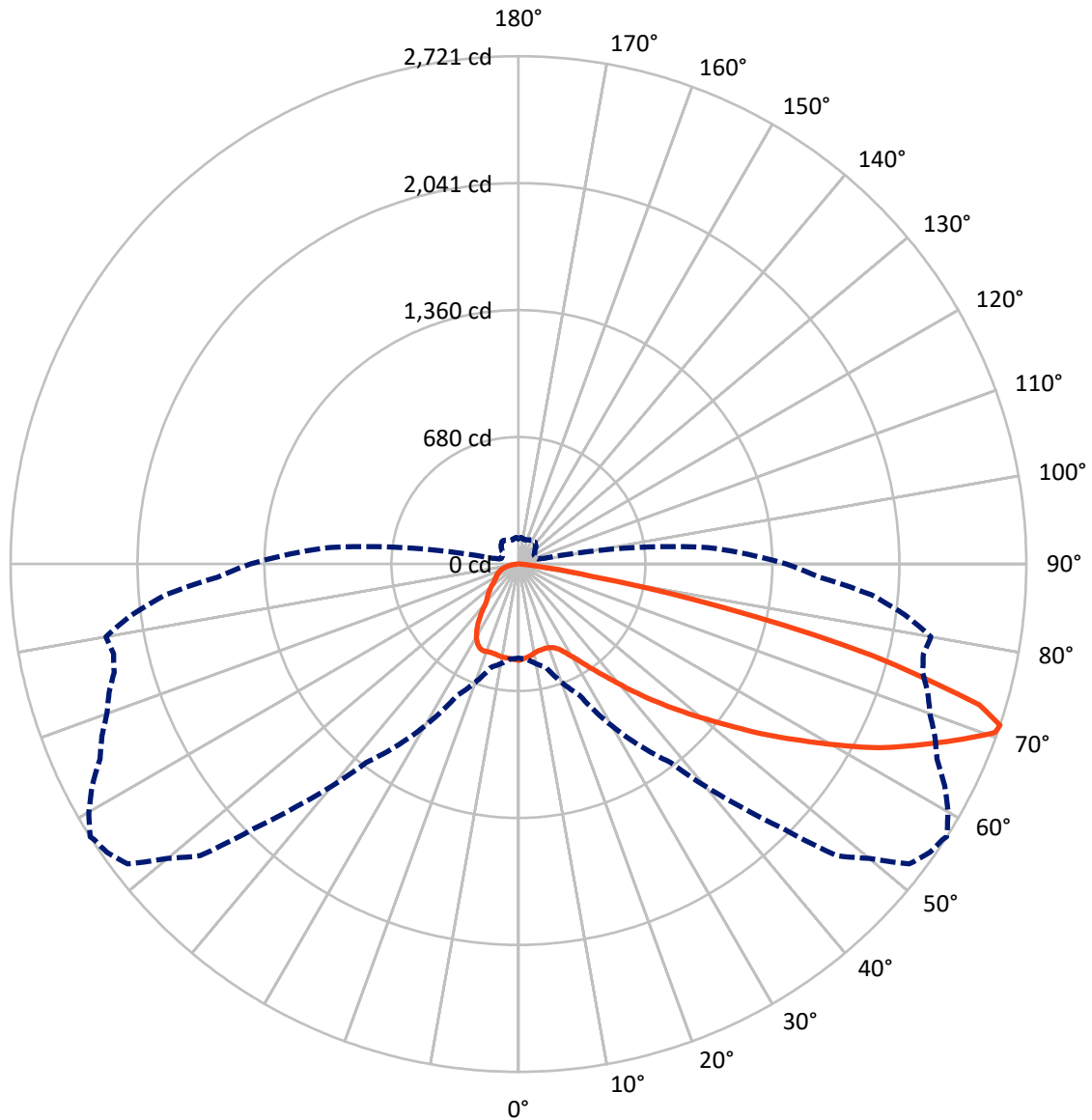


Based on 10 foot mounting height. Maximum calculated value = 5.2 fc  
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

### Luminous Intensity Polar Plot



— Vertical Plane Through 57.5-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

REPORT NUMBER: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

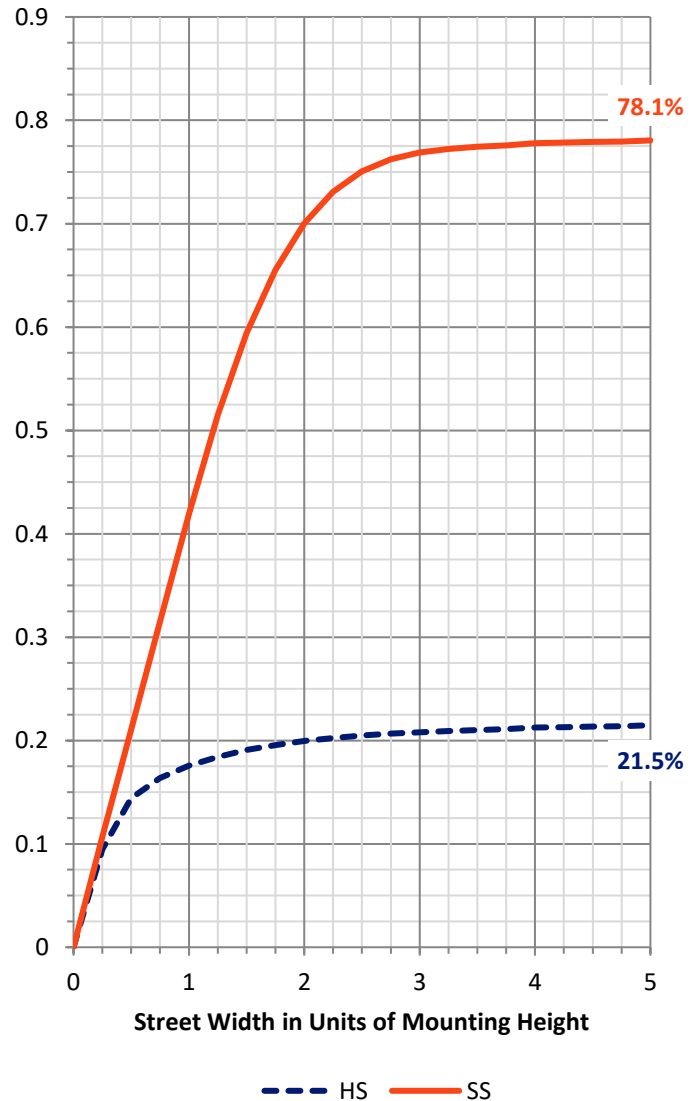
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	869.9	0.0	869.9
	% Fixture	21.8	0.0	21.8
<b>Street Side</b>	Lumens	3125.8	0.0	3125.8
	% Fixture	78.2	0.0	78.2
<b>Total</b>	Lumens	3995.6	0.0	3995.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.6	1.2
10°-20°	140.0	3.5
20°-30°	232.4	5.8
30°-40°	369.9	9.3
40°-50°	601.0	15.0
50°-60°	901.0	22.6
60°-70°	1074.9	26.9
70°-80°	580.6	14.5
80°-90°	47.3	1.2
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°	3995.6	100.0
0°-180°	3995.6	100.0



REPORT NUMBER: P227786

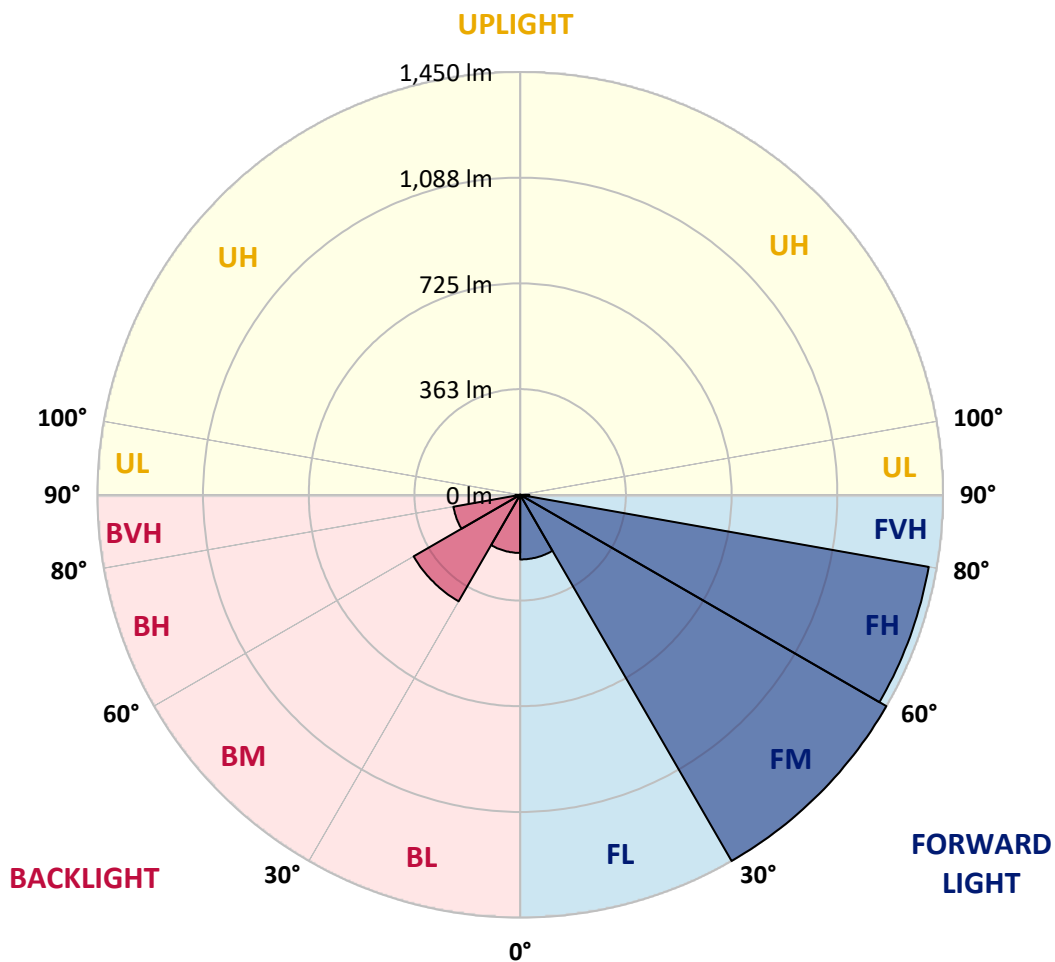
CATALOG NUMBER: ISC-AF-600-LED-E1-T3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	221.7	5.5			
FM	(30°-60°)	1450.2	36.3			
FH	(60°-80°)	1422.8	35.6			G1/1800
FVH	(80°-90°)	31.1	0.8			G1/100
BL	(0°-30°)	199.3	5.0	B1/500		
BM	(30°-60°)	421.8	10.6	B1/1000		
BH	(60°-80°)	232.7	5.8	B1/500		G1/500
BVH	(80°-90°)	16.1	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type III Medium





REPORT NUMBER: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	516.2	514.9	513.5	513.5	513.5	512.2	508.3	509.5	513.5	510.9	514.9
5°	514.9	512.2	510.9	510.9	510.9	507.0	505.6	504.3	512.2	505.6	510.9
7.5°	500.3	500.3	497.7	500.3	503.0	499.0	496.3	497.7	504.3	497.7	504.3
10°	489.8	487.1	485.8	485.8	488.5	483.1	480.6	483.1	491.1	483.1	492.4
12.5°	485.8	487.1	483.1	483.1	481.8	475.3	475.3	475.3	481.8	475.3	483.1
15°	492.4	491.1	487.1	484.5	480.6	475.3	473.9	475.3	480.6	472.6	481.8
17.5°	501.7	501.7	495.0	488.5	484.5	479.3	479.3	476.6	480.6	475.3	481.8
20°	525.4	521.5	512.2	501.7	491.1	488.5	483.1	483.1	485.8	480.6	484.5
22.5°	566.3	562.4	546.6	526.7	509.5	503.0	500.3	499.0	496.3	493.8	493.8
25°	620.4	613.9	595.4	571.6	542.6	537.3	532.0	528.0	518.8	518.8	512.2
27.5°	678.5	672.0	652.1	625.7	590.1	582.2	575.6	570.3	554.4	554.4	542.6
30°	744.6	736.6	712.9	683.8	642.9	640.3	631.1	623.1	602.0	600.7	584.8
32.5°	821.1	810.6	786.9	748.5	704.9	706.2	691.7	686.5	658.8	660.1	638.9
35°	908.3	896.4	872.6	822.5	777.5	781.5	768.3	759.1	724.8	724.8	702.4
37.5°	1000.7	1000.7	970.3	912.3	858.1	867.4	851.5	842.3	807.9	813.2	777.5
40°	1103.7	1110.2	1077.3	1011.2	955.7	959.7	947.9	937.3	896.4	905.6	867.4
42.5°	1211.9	1223.8	1194.7	1126.1	1064.1	1077.3	1057.4	1046.9	1003.3	1023.2	978.2
45°	1369.0	1371.7	1317.5	1251.5	1200.0	1211.9	1184.2	1180.2	1126.1	1147.2	1102.3
47.5°	1468.0	1461.4	1421.8	1382.2	1351.8	1375.6	1350.5	1344.0	1281.9	1296.4	1233.1
50°	1535.3	1539.3	1509.0	1505.0	1510.3	1555.1	1551.2	1538.0	1464.0	1453.5	1374.2
52.5°	1596.0	1578.9	1573.6	1610.5	1667.3	1720.2	1741.3	1724.1	1643.6	1614.5	1538.0
55°	1585.5	1560.4	1588.1	1677.9	1790.2	1872.0	1874.6	1862.7	1790.2	1778.2	1695.0
57.5°	1514.2	1519.5	1576.3	1704.3	1894.4	1978.9	1993.4	1978.9	1919.5	1930.1	1861.4
60°	1415.2	1425.8	1515.5	1680.5	1977.6	2050.2	2056.7	2073.9	2034.3	2062.1	2014.5
62.5°	1267.3	1281.9	1396.7	1621.2	1919.5	2027.7	2088.5	2128.0	2120.2	2183.5	2158.4
65°	1164.3	1164.3	1276.5	1552.5	1862.7	2005.3	2096.4	2170.3	2180.9	2281.2	2272.0
67.5°	972.9	979.6	1075.9	1361.0	1794.1	1955.2	2092.4	2217.9	2281.2	2439.6	2447.5
70°	673.3	678.5	741.9	971.6	1449.5	1586.8	1788.8	1993.4	2183.5	2422.4	2546.5
71°	504.3	510.9	573.0	774.9	1227.7	1341.3	1551.2	1763.7	2002.6	2312.9	2452.8
72.5°	246.8	250.8	311.6	497.7	854.2	999.3	1120.8	1324.1	1577.6	1932.7	2130.7
75°	114.9	116.2	129.4	179.5	326.1	388.1	442.2	573.0	730.1	1041.6	1281.9
77.5°	84.5	84.5	92.4	117.5	169.0	171.7	169.0	173.0	208.6	298.4	448.9
80°	62.1	62.1	67.3	79.2	112.2	112.2	108.2	109.6	105.6	109.6	124.1
82.5°	40.9	40.9	43.6	47.6	68.6	68.6	66.0	66.0	63.3	62.1	67.3
85°	23.7	25.1	26.4	22.4	29.1	27.7	25.1	27.7	26.4	23.7	29.1
87.5°	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.0	1.3
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: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

**CANDELA DISTRIBUTION (continued):**

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	509.5	513.5	513.5	508.3	512.2	508.3	510.9	507.0	510.9	504.3	512.2
5°	505.6	509.5	509.5	501.7	509.5	501.7	508.3	499.0	508.3	497.7	508.3
7.5°	495.0	504.3	504.3	493.8	503.0	495.0	503.0	493.8	501.7	489.8	503.0
10°	483.1	492.4	493.8	483.1	493.8	484.5	496.3	484.5	496.3	483.1	497.7
12.5°	475.3	485.8	488.5	476.6	489.8	477.9	492.4	479.3	492.4	477.9	495.0
15°	473.9	483.1	485.8	475.3	487.1	473.9	491.1	475.3	492.4	476.6	496.3
17.5°	475.3	483.1	485.8	473.9	485.8	475.3	489.8	476.6	492.4	477.9	496.3
20°	479.3	484.5	484.5	477.9	487.1	477.9	489.8	476.6	493.8	480.6	497.7
22.5°	491.1	492.4	492.4	487.1	492.4	485.8	495.0	485.8	497.7	487.1	503.0
25°	510.9	509.5	507.0	505.6	507.0	503.0	508.3	501.7	513.5	504.3	520.2
27.5°	545.2	539.9	537.3	537.3	536.0	537.3	537.3	534.7	539.9	537.3	547.9
30°	587.5	578.3	574.3	578.3	573.0	578.3	576.9	575.6	580.8	578.3	587.5
32.5°	642.9	627.1	624.4	632.4	621.7	631.1	623.1	627.1	631.1	633.7	638.9
35°	707.6	689.2	686.5	694.4	682.5	695.7	686.5	691.7	694.4	701.0	704.9
37.5°	784.2	761.7	757.8	768.3	752.5	767.0	753.8	769.7	765.7	774.9	778.9
40°	876.6	850.2	841.0	855.5	837.0	848.8	835.6	852.8	848.8	867.4	871.2
42.5°	990.1	951.9	942.5	957.1	929.4	933.3	922.8	942.5	940.0	965.1	968.9
45°	1107.7	1061.4	1048.2	1062.7	1031.0	1038.9	1023.2	1044.2	1042.9	1062.7	1078.6
47.5°	1238.3	1181.5	1164.3	1180.2	1141.9	1151.1	1135.4	1157.8	1159.1	1181.5	1197.4
50°	1374.2	1314.9	1292.4	1306.9	1271.3	1277.9	1262.0	1289.7	1288.5	1318.8	1330.8
52.5°	1522.2	1461.4	1444.2	1450.9	1408.6	1416.5	1403.3	1437.7	1429.7	1448.2	1471.9
55°	1685.8	1615.9	1596.0	1615.9	1565.7	1576.3	1559.1	1590.8	1577.6	1601.3	1608.0
57.5°	1853.5	1784.8	1769.0	1783.5	1735.9	1743.9	1721.4	1747.9	1737.3	1753.1	1763.7
60°	2031.7	1969.7	1953.8	1969.7	1923.5	1924.8	1886.5	1914.2	1898.4	1918.1	1914.2
62.5°	2202.0	2149.2	2145.2	2167.6	2109.6	2103.0	2056.7	2076.6	2054.2	2067.4	2051.5
65°	2347.3	2316.9	2322.1	2340.6	2289.2	2273.3	2220.5	2231.1	2198.0	2198.0	2178.3
67.5°	2537.3	2504.3	2504.3	2520.1	2455.5	2414.6	2341.9	2332.7	2278.5	2268.0	2221.8
70°	2695.8	2705.0	2694.5	2707.6	2631.0	2547.9	2451.5	2405.3	2334.1	2299.7	2245.6
71°	2639.0	2691.8	2710.3	2720.8	2657.4	2574.3	2473.9	2414.6	2345.9	2299.7	2241.6
72.5°	2381.5	2509.6	2582.2	2582.2	2590.1	2537.3	2441.0	2376.2	2298.4	2237.6	2183.5
75°	1668.6	1877.2	1971.0	1960.4	2029.0	2052.9	2060.7	2033.0	1989.4	1902.3	1864.0
77.5°	743.3	979.6	1120.8	1122.1	1196.0	1260.8	1312.2	1366.4	1346.5	1304.3	1301.7
80°	169.0	306.3	392.1	396.1	463.4	522.7	558.4	612.5	619.2	558.4	524.1
82.5°	72.6	85.8	97.7	96.4	118.8	142.6	169.0	183.5	176.9	146.5	138.6
85°	30.4	39.6	42.2	39.6	48.8	54.1	63.3	64.7	75.3	67.3	71.3
87.5°	0.0	1.3	1.3	0.0	2.7	0.0	2.7	1.3	6.6	2.7	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





REPORT NUMBER: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

**CANDELA DISTRIBUTION (continued):**

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	507.0	513.5	507.0	513.5	509.5	513.5	512.2	513.5	507.0	513.5	505.6
5°	497.7	508.3	499.0	507.0	499.0	508.3	508.3	508.3	499.0	509.5	500.3
7.5°	489.8	501.7	489.8	501.7	493.8	503.0	503.0	507.0	496.3	508.3	495.0
10°	481.8	496.3	481.8	499.0	485.8	500.3	501.7	504.3	489.8	505.6	492.4
12.5°	477.9	496.3	479.3	496.3	480.6	500.3	501.7	504.3	488.5	508.3	491.1
15°	477.9	497.7	479.3	497.7	480.6	500.3	503.0	505.6	488.5	509.5	491.1
17.5°	477.9	497.7	481.8	499.0	483.1	501.7	504.3	507.0	491.1	509.5	493.8
20°	481.8	500.3	484.5	503.0	487.1	505.6	507.0	510.9	493.8	510.9	496.3
22.5°	491.1	507.0	493.8	510.9	499.0	513.5	514.9	518.8	505.6	520.2	508.3
25°	507.0	524.1	513.5	526.7	520.2	532.0	534.7	534.7	529.4	538.6	534.7
27.5°	539.9	553.1	545.2	557.1	553.1	562.4	562.4	563.7	567.6	570.3	574.3
30°	582.2	591.5	588.8	595.4	596.7	602.0	602.0	609.9	625.7	609.9	608.6
32.5°	638.9	644.3	645.6	648.1	653.5	657.5	662.7	672.0	685.2	648.1	636.3
35°	708.9	710.2	714.2	718.1	727.4	730.1	747.2	740.6	740.6	682.5	657.5
37.5°	785.5	785.5	796.1	796.1	818.5	819.8	837.0	802.6	782.9	707.6	670.6
40°	881.9	880.6	892.4	895.1	925.5	926.8	924.1	848.8	806.6	714.2	664.0
42.5°	983.5	987.5	1003.3	1008.6	1031.0	1038.9	1006.0	880.6	817.1	710.2	641.6
45°	1094.4	1102.3	1122.1	1136.6	1160.4	1151.1	1072.0	895.1	805.3	686.5	598.0
47.5°	1215.9	1223.8	1239.6	1267.3	1277.9	1267.3	1126.1	900.3	786.9	649.5	534.7
50°	1338.6	1351.8	1374.2	1413.9	1419.1	1392.7	1192.0	920.1	772.3	611.2	462.1
52.5°	1477.2	1490.4	1516.8	1582.8	1569.6	1515.5	1270.0	957.1	776.2	587.5	400.0
55°	1623.7	1642.2	1693.7	1758.5	1729.4	1644.9	1355.8	1011.2	792.1	562.4	331.3
57.5°	1778.2	1798.0	1865.4	1942.0	1885.2	1771.6	1442.9	1053.4	800.0	510.9	256.1
60°	1931.3	1959.1	2046.2	2109.6	2021.1	1879.9	1520.8	1081.2	778.9	413.2	198.0
62.5°	2071.3	2116.2	2213.9	2248.2	2107.0	1948.5	1563.1	1061.4	693.0	285.2	159.8
65°	2170.3	2228.4	2291.8	2287.8	2091.1	1926.1	1531.4	970.3	516.2	188.7	136.0
67.5°	2212.5	2266.7	2281.2	2213.9	1977.6	1827.1	1417.8	781.5	297.1	141.3	118.8
70°	2228.4	2274.6	2192.8	2030.4	1755.8	1584.1	1159.1	497.7	162.3	114.9	103.0
71°	2221.8	2244.3	2088.5	1898.4	1614.5	1435.0	1016.5	378.9	138.6	106.9	97.7
72.5°	2132.0	2100.3	1860.1	1648.9	1369.0	1186.8	790.7	239.0	113.5	96.4	91.0
75°	1742.6	1600.0	1369.0	1169.6	932.0	745.8	429.0	122.8	91.0	83.2	79.2
77.5°	1139.3	1015.2	825.1	670.6	509.5	386.8	175.5	84.5	72.6	70.0	68.6
80°	406.6	326.1	246.8	216.5	163.7	134.6	85.8	64.7	56.8	58.1	56.8
82.5°	114.9	105.6	91.0	84.5	74.0	72.6	55.4	48.8	44.9	47.6	46.2
85°	56.8	48.8	35.6	34.4	26.4	30.4	27.7	33.0	29.1	30.4	27.7
87.5°	4.0	5.3	1.3	4.0	0.0	4.0	5.3	6.6	1.3	5.3	4.0
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: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

**CANDELA DISTRIBUTION (continued):**

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	514.9	509.5	516.2	509.5	516.2	512.2	516.2	512.2	516.2	518.8	518.8
5°	512.2	503.0	514.9	508.3	516.2	509.5	514.9	510.9	517.5	520.2	522.7
7.5°	510.9	501.7	513.5	504.3	516.2	507.0	514.9	509.5	517.5	520.2	525.4
10°	509.5	497.7	513.5	500.3	514.9	505.6	514.9	507.0	516.2	518.8	520.2
12.5°	509.5	496.3	513.5	499.0	514.9	501.7	513.5	501.7	514.9	513.5	509.5
15°	510.9	493.8	513.5	496.3	513.5	497.7	512.2	496.3	509.5	505.6	503.0
17.5°	510.9	493.8	512.2	495.0	510.9	496.3	508.3	493.8	505.6	504.3	500.3
20°	513.5	496.3	512.2	500.3	512.2	497.7	507.0	493.8	503.0	495.0	479.3
22.5°	521.5	509.5	521.5	509.5	514.9	501.7	505.6	489.8	488.5	475.3	450.2
25°	539.9	534.7	532.0	517.5	513.5	496.3	491.1	472.6	466.1	446.2	411.8
27.5°	563.7	551.8	536.0	518.8	501.7	480.6	466.1	451.5	437.0	411.8	368.4
30°	579.5	562.4	529.4	505.6	473.9	456.7	431.7	415.8	394.8	363.0	320.8
32.5°	590.1	563.7	513.5	485.8	443.6	421.1	388.1	370.9	340.6	310.3	279.9
35°	592.7	558.4	492.4	462.1	406.6	381.6	338.0	319.5	290.4	269.3	257.5
37.5°	582.2	539.9	459.4	419.8	359.1	330.0	289.1	275.9	258.7	250.8	245.5
40°	561.1	504.3	408.0	361.7	299.6	277.2	256.1	256.1	246.8	243.0	233.6
42.5°	522.7	451.5	341.9	297.1	254.8	250.8	239.0	244.2	237.6	235.0	221.8
45°	463.4	376.2	275.9	249.5	229.8	232.3	224.4	229.8	225.8	224.4	208.6
47.5°	386.8	299.6	232.3	223.1	209.9	213.9	207.2	213.9	209.9	211.2	199.4
50°	308.9	243.0	205.9	200.7	191.4	194.1	190.1	196.7	195.4	200.7	194.1
52.5°	246.8	207.2	183.5	179.5	174.2	175.5	174.2	180.9	182.2	192.7	192.7
55°	204.6	178.2	165.0	163.7	158.5	159.8	161.0	167.7	173.0	186.2	192.7
57.5°	175.5	159.8	150.5	149.1	146.5	147.8	150.5	158.5	163.7	180.9	195.4
60°	154.5	145.3	138.6	138.6	136.0	138.6	141.3	149.1	155.8	175.5	190.1
62.5°	138.6	132.1	128.1	129.4	128.1	130.7	133.3	141.3	149.1	167.7	182.2
65°	124.1	120.1	117.5	118.8	118.8	122.8	125.4	133.3	139.9	157.1	175.5
67.5°	112.2	109.6	108.2	109.6	110.9	114.9	118.8	124.1	129.4	145.3	166.3
70°	103.0	100.4	100.4	100.4	101.7	105.6	110.9	113.5	118.8	136.0	155.8
71°	97.7	96.4	96.4	96.4	97.7	101.7	106.9	109.6	114.9	132.1	150.5
72.5°	91.0	91.0	92.4	91.0	93.7	95.0	100.4	103.0	109.6	126.7	143.9
75°	80.5	80.5	81.8	81.8	84.5	84.5	88.5	91.0	99.0	113.5	129.4
77.5°	71.3	71.3	74.0	72.6	72.6	70.0	75.3	77.8	84.5	99.0	114.9
80°	60.8	59.4	62.1	58.1	56.8	54.1	58.1	62.1	72.6	81.8	84.5
82.5°	47.6	43.6	44.9	40.9	40.9	38.3	42.2	43.6	50.1	59.4	64.7
85°	29.1	23.7	26.4	22.4	25.1	22.4	23.7	25.1	30.4	36.9	35.6
87.5°	6.6	4.0	5.3	1.3	4.0	0.0	4.0	1.3	4.0	1.3	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: P227786

CATALOG NUMBER: ISC-AF-600-LED-E1-T3

**CANDELA DISTRIBUTION (continued):**

	155°	165°	175°	180°
0°	516.2	516.2	516.2	516.2
2.5°	521.5	520.2	521.5	520.2
5°	528.0	528.0	529.4	530.7
7.5°	529.4	532.0	534.7	533.4
10°	520.2	517.5	520.2	517.5
12.5°	505.6	503.0	505.6	505.6
15°	504.3	503.0	504.3	504.3
17.5°	495.0	488.5	485.8	484.5
20°	468.6	456.7	454.1	450.2
22.5°	431.7	414.5	409.3	405.3
25°	386.8	363.0	353.8	348.5
27.5°	338.0	314.1	304.9	304.9
30°	299.6	281.2	271.9	271.9
32.5°	271.9	261.4	254.8	256.1
35°	249.5	243.0	239.0	240.3
37.5°	235.0	224.4	215.2	215.2
40°	220.4	207.2	195.4	195.4
42.5°	207.2	194.1	186.2	184.8
45°	194.1	184.8	178.2	176.9
47.5°	187.5	179.5	173.0	171.7
50°	184.8	176.9	167.7	167.7
52.5°	187.5	180.9	163.7	163.7
55°	192.7	188.7	163.7	161.0
57.5°	187.5	180.9	165.0	161.0
60°	175.5	165.0	162.3	159.8
62.5°	167.7	157.1	162.3	161.0
65°	161.0	153.1	165.0	162.3
67.5°	154.5	146.5	165.0	159.8
70°	146.5	138.6	150.5	141.3
71°	142.6	133.3	142.6	134.6
72.5°	136.0	125.4	128.1	122.8
75°	122.8	112.2	109.6	108.2
77.5°	101.7	89.8	85.8	84.5
80°	77.8	70.0	70.0	66.0
82.5°	58.1	51.5	50.1	43.6
85°	30.4	23.7	19.8	19.8
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)