

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: P227704

Luminaire Tested: **ISS-AF-600-LED-E1-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227704
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: ISS-AF-600-LED-E1-T3-7030
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III
Light Source: (16) 3000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3457 lumens
Efficiency: N/A
Efficacy: 102.6 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

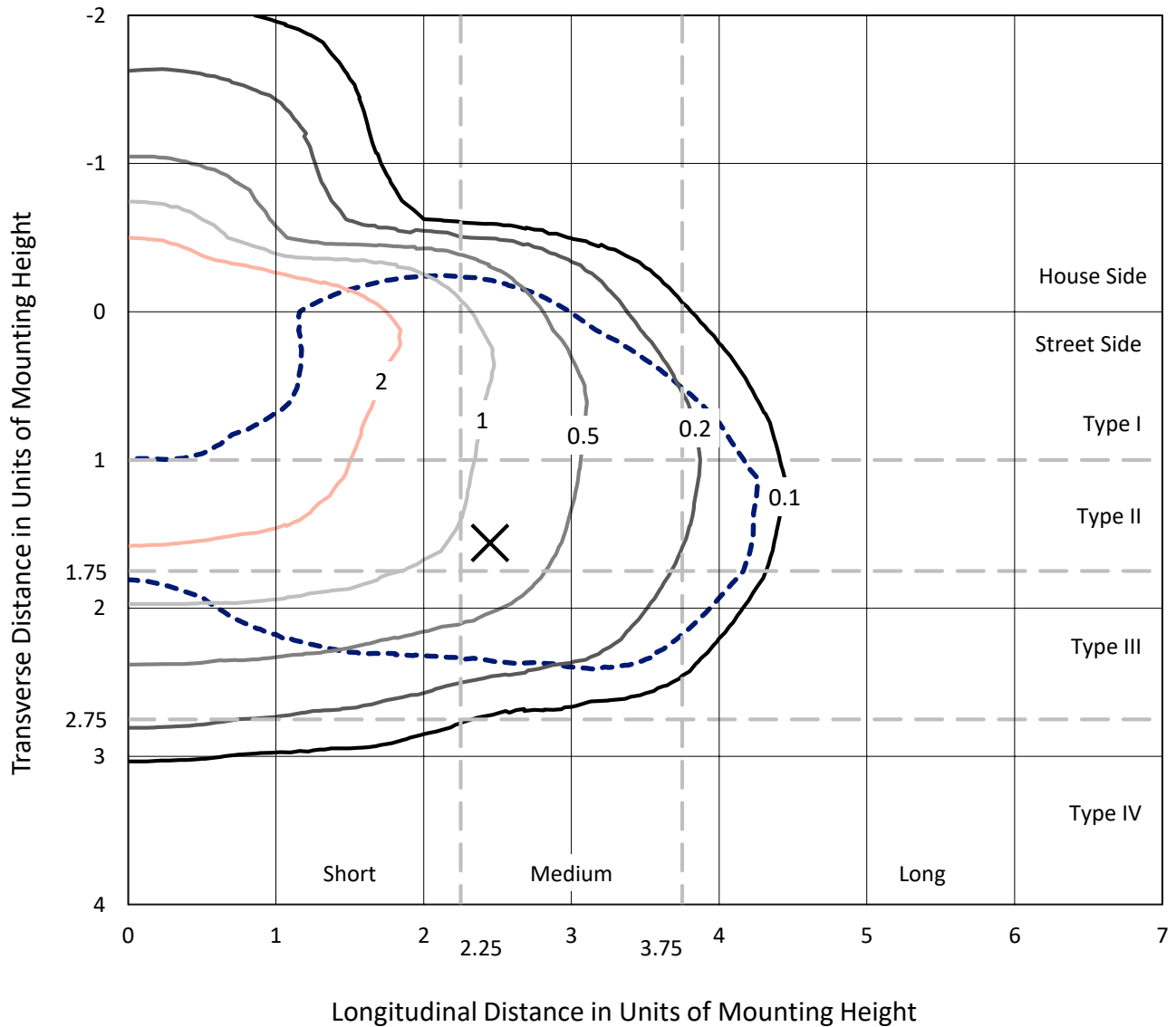
Input Watts (W): 33.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P227704
 CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

Iso-Footcandle Lines of Horizontal Illumination

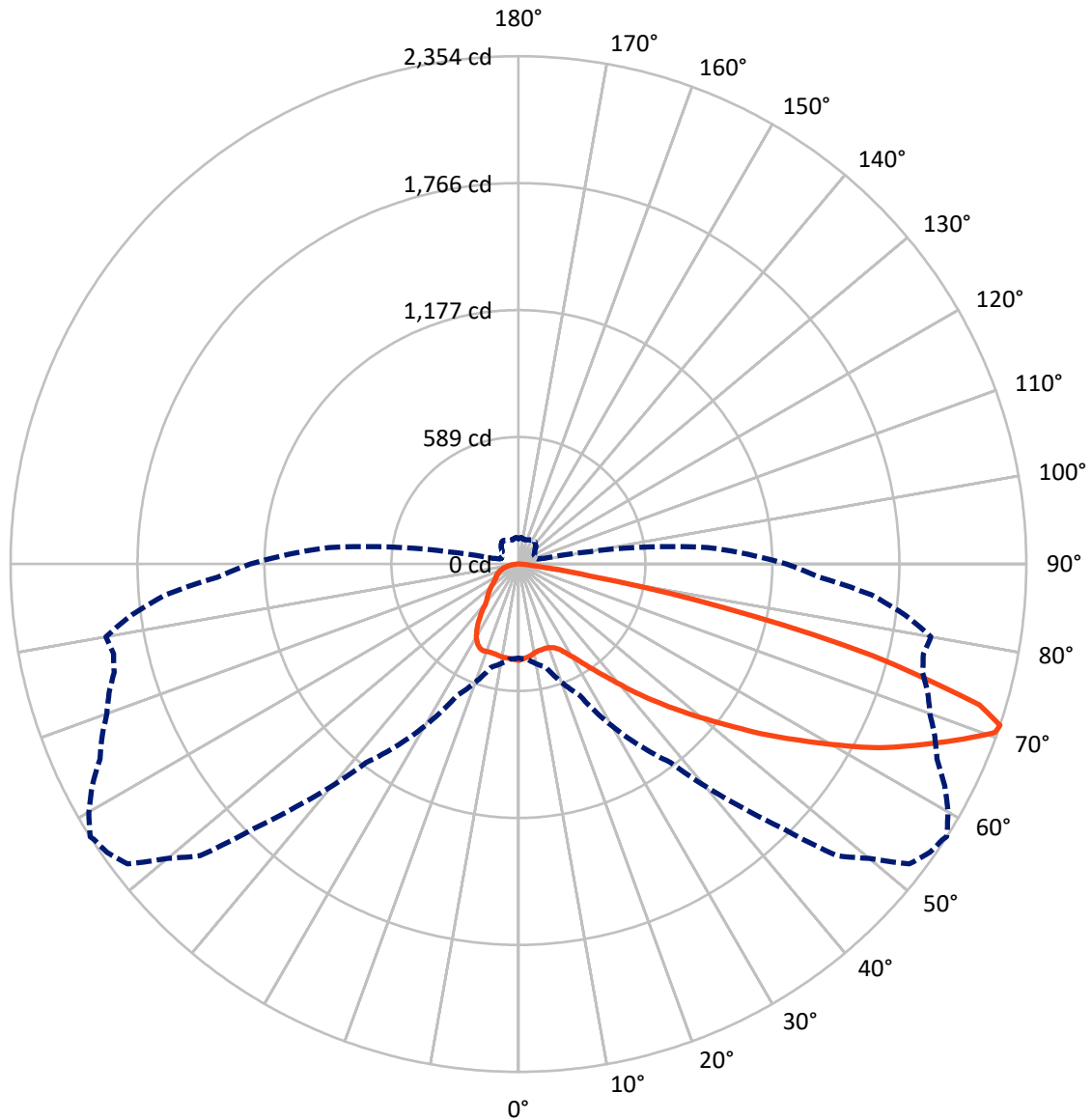
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P227704
CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	752.6	0.0	752.6
	% Fixture	21.8	0.0	21.8
Street Side	Lumens	2704.4	0.0	2704.4
	% Fixture	78.2	0.0	78.2
Total	Lumens	3457.0	0.0	3457.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.2
10°-20°	121.1	3.5
20°-30°	201.1	5.8
30°-40°	320.1	9.3
40°-50°	520.0	15.0
50°-60°	779.6	22.6
60°-70°	930.0	26.9
70°-80°	502.3	14.5
80°-90°	40.9	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°	3457.0	100.0
0°-180°	3457.0	100.0



REPORT NUMBER: P227704

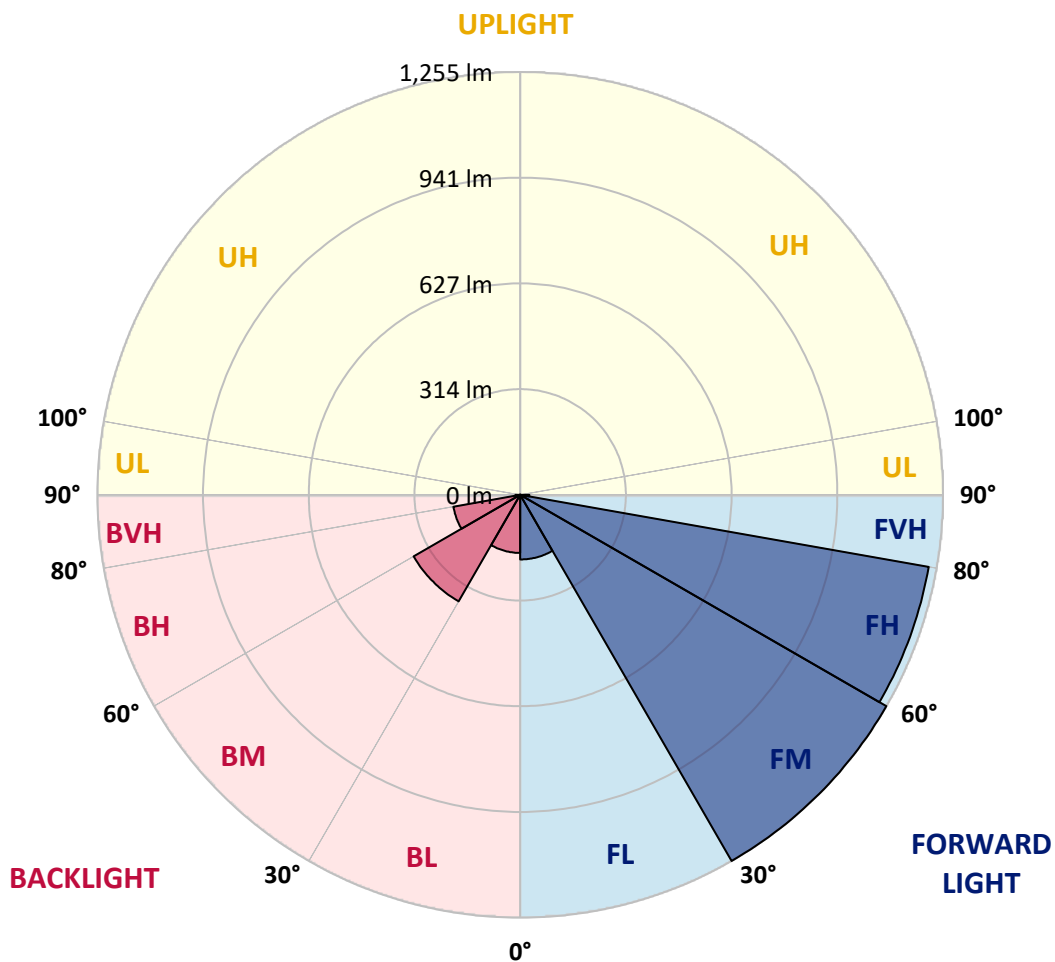
CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	191.8	5.5			
FM	(30°-60°)	1254.7	36.3			
FH	(60°-80°)	1231.0	35.6			G1/1800
FVH	(80°-90°)	26.9	0.8			G1/100
BL	(0°-30°)	172.4	5.0	B1/500		
BM	(30°-60°)	364.9	10.6	B1/1000		
BH	(60°-80°)	201.3	5.8	B1/500		G1/500
BVH	(80°-90°)	14.0	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: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6
2.5°	446.6	445.4	444.3	444.3	444.3	443.2	439.7	440.9	444.3	442.0	445.4
5°	445.4	443.2	442.0	442.0	442.0	438.6	437.5	436.3	443.2	437.5	442.0
7.5°	432.9	432.9	430.6	432.9	435.2	431.7	429.5	430.6	436.3	430.6	436.3
10°	423.7	421.5	420.3	420.3	422.6	418.0	415.8	418.0	424.9	418.0	426.0
12.5°	420.3	421.5	418.0	418.0	416.9	411.2	411.2	411.2	416.9	411.2	418.0
15°	426.0	424.9	421.5	419.2	415.8	411.2	410.0	411.2	415.8	408.9	416.9
17.5°	434.0	434.0	428.3	422.6	419.2	414.6	414.6	412.3	415.8	411.2	416.9
20°	454.6	451.2	443.2	434.0	424.9	422.6	418.0	418.0	420.3	415.8	419.2
22.5°	490.0	486.6	472.9	455.7	440.9	435.2	432.9	431.7	429.5	427.2	427.2
25°	536.8	531.1	515.1	494.6	469.4	464.9	460.3	456.9	448.9	448.9	443.2
27.5°	587.1	581.4	564.2	541.4	510.6	503.7	498.0	493.4	479.7	479.7	469.4
30°	644.2	637.3	616.8	591.6	556.2	554.0	546.0	539.1	520.8	519.7	506.0
32.5°	710.4	701.3	680.7	647.6	609.9	611.1	598.5	593.9	569.9	571.1	552.8
35°	785.8	775.5	755.0	711.6	672.7	676.2	664.7	656.8	627.1	627.1	607.6
37.5°	865.8	865.8	839.5	789.2	742.4	750.4	736.7	728.7	699.0	703.6	672.7
40°	954.9	960.6	932.0	874.9	826.9	830.4	820.1	810.9	775.5	783.5	750.4
42.5°	1048.5	1058.8	1033.7	974.3	920.6	932.0	914.9	905.7	868.1	885.2	846.4
45°	1184.4	1186.7	1139.9	1082.8	1038.2	1048.5	1024.5	1021.1	974.3	992.6	953.7
47.5°	1270.1	1264.4	1230.1	1195.9	1169.6	1190.2	1168.4	1162.7	1109.1	1121.6	1066.8
50°	1328.4	1331.8	1305.5	1302.1	1306.7	1345.5	1342.1	1330.6	1266.7	1257.5	1189.0
52.5°	1380.9	1366.0	1361.5	1393.5	1442.6	1488.3	1506.5	1491.7	1422.0	1396.9	1330.6
55°	1371.8	1350.1	1374.0	1451.7	1548.8	1619.6	1621.9	1611.6	1548.8	1538.5	1466.6
57.5°	1310.1	1314.6	1363.8	1474.6	1639.0	1712.1	1724.7	1712.1	1660.7	1669.9	1610.5
60°	1224.4	1233.6	1311.2	1454.0	1711.0	1773.8	1779.5	1794.4	1760.1	1784.1	1743.0
62.5°	1096.5	1109.1	1208.4	1402.6	1660.7	1754.4	1806.9	1841.2	1834.3	1889.2	1867.5
65°	1007.4	1007.4	1104.5	1343.2	1611.6	1735.0	1813.8	1877.7	1886.9	1973.7	1965.7
67.5°	841.8	847.5	930.9	1177.6	1552.2	1691.6	1810.4	1918.9	1973.7	2110.7	2117.6
70°	582.5	587.1	641.9	840.6	1254.1	1372.9	1547.7	1724.7	1889.2	2095.9	2203.3
71°	436.3	442.0	495.7	670.5	1062.2	1160.5	1342.1	1526.0	1732.7	2001.1	2122.2
72.5°	213.6	217.0	269.6	430.6	739.0	864.6	969.7	1145.6	1364.9	1672.2	1843.5
75°	99.4	100.5	111.9	155.3	282.1	335.8	382.6	495.7	631.6	901.2	1109.1
77.5°	73.1	73.1	80.0	101.7	146.2	148.5	146.2	149.6	180.5	258.1	388.3
80°	53.7	53.7	58.3	68.5	97.1	97.1	93.7	94.8	91.4	94.8	107.4
82.5°	35.4	35.4	37.7	41.1	59.4	59.4	57.1	57.1	54.8	53.7	58.3
85°	20.6	21.7	22.8	19.4	25.1	24.0	21.7	24.0	22.8	20.6	25.1
87.5°	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1	0.0	1.1
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: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

CANDELA DISTRIBUTION (continued):

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6
2.5°	440.9	444.3	444.3	439.7	443.2	439.7	442.0	438.6	442.0	436.3	443.2
5°	437.5	440.9	440.9	434.0	440.9	434.0	439.7	431.7	439.7	430.6	439.7
7.5°	428.3	436.3	436.3	427.2	435.2	428.3	435.2	427.2	434.0	423.7	435.2
10°	418.0	426.0	427.2	418.0	427.2	419.2	429.5	419.2	429.5	418.0	430.6
12.5°	411.2	420.3	422.6	412.3	423.7	413.5	426.0	414.6	426.0	413.5	428.3
15°	410.0	418.0	420.3	411.2	421.5	410.0	424.9	411.2	426.0	412.3	429.5
17.5°	411.2	418.0	420.3	410.0	420.3	411.2	423.7	412.3	426.0	413.5	429.5
20°	414.6	419.2	419.2	413.5	421.5	413.5	423.7	412.3	427.2	415.8	430.6
22.5°	424.9	426.0	426.0	421.5	426.0	420.3	428.3	420.3	430.6	421.5	435.2
25°	442.0	440.9	438.6	437.5	438.6	435.2	439.7	434.0	444.3	436.3	450.0
27.5°	471.7	467.2	464.9	464.9	463.7	464.9	464.9	462.6	467.2	464.9	474.0
30°	508.3	500.3	496.8	500.3	495.7	500.3	499.1	498.0	502.6	500.3	508.3
32.5°	556.2	542.5	540.3	547.1	538.0	546.0	539.1	542.5	546.0	548.2	552.8
35°	612.2	596.2	593.9	600.8	590.5	601.9	593.9	598.5	600.8	606.5	609.9
37.5°	678.5	659.0	655.6	664.7	651.0	663.6	652.2	665.9	662.5	670.5	673.9
40°	758.4	735.6	727.6	740.1	724.1	734.4	723.0	737.8	734.4	750.4	753.8
42.5°	856.6	823.5	815.5	828.1	804.1	807.5	798.4	815.5	813.2	834.9	838.4
45°	958.3	918.3	906.9	919.5	892.0	898.9	885.2	903.5	902.3	919.5	933.2
47.5°	1071.4	1022.3	1007.4	1021.1	988.0	996.0	982.3	1001.7	1002.8	1022.3	1036.0
50°	1189.0	1137.6	1118.2	1130.8	1099.9	1105.6	1091.9	1115.9	1114.8	1141.0	1151.3
52.5°	1316.9	1264.4	1249.5	1255.3	1218.7	1225.6	1214.1	1243.8	1237.0	1253.0	1273.5
55°	1458.6	1398.0	1380.9	1398.0	1354.6	1363.8	1348.9	1376.3	1364.9	1385.5	1391.2
57.5°	1603.6	1544.2	1530.5	1543.1	1502.0	1508.8	1489.4	1512.2	1503.1	1516.8	1526.0
60°	1757.8	1704.1	1690.4	1704.1	1664.2	1665.3	1632.2	1656.2	1642.5	1659.6	1656.2
62.5°	1905.2	1859.5	1856.0	1875.5	1825.2	1819.5	1779.5	1796.6	1777.2	1788.7	1774.9
65°	2030.8	2004.5	2009.1	2025.1	1980.5	1966.8	1921.1	1930.3	1901.7	1901.7	1884.6
67.5°	2195.3	2166.7	2166.7	2180.4	2124.5	2089.0	2026.2	2018.2	1971.4	1962.3	1922.3
70°	2332.3	2340.3	2331.2	2342.6	2276.4	2204.4	2121.0	2081.1	2019.4	1989.7	1942.8
71°	2283.2	2328.9	2344.9	2354.0	2299.2	2227.2	2140.4	2089.0	2029.7	1989.7	1939.4
72.5°	2060.5	2171.3	2234.1	2234.1	2241.0	2195.3	2111.9	2055.9	1988.5	1936.0	1889.2
75°	1443.7	1624.2	1705.3	1696.1	1755.5	1776.1	1782.9	1759.0	1721.3	1645.9	1612.8
77.5°	643.0	847.5	969.7	970.9	1034.8	1090.8	1135.3	1182.2	1165.0	1128.5	1126.2
80°	146.2	265.0	339.2	342.7	400.9	452.3	483.1	530.0	535.7	483.1	453.4
82.5°	62.8	74.2	84.5	83.4	102.8	123.4	146.2	158.8	153.1	126.8	119.9
85°	26.3	34.3	36.5	34.3	42.3	46.8	54.8	56.0	65.1	58.3	61.7
87.5°	0.0	1.1	1.1	0.0	2.3	0.0	2.3	1.1	5.7	2.3	6.9
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: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

CANDELA DISTRIBUTION (continued):

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6
2.5°	438.6	444.3	438.6	444.3	440.9	444.3	443.2	444.3	438.6	444.3	437.5
5°	430.6	439.7	431.7	438.6	431.7	439.7	439.7	439.7	431.7	440.9	432.9
7.5°	423.7	434.0	423.7	434.0	427.2	435.2	435.2	438.6	429.5	439.7	428.3
10°	416.9	429.5	416.9	431.7	420.3	432.9	434.0	436.3	423.7	437.5	426.0
12.5°	413.5	429.5	414.6	429.5	415.8	432.9	434.0	436.3	422.6	439.7	424.9
15°	413.5	430.6	414.6	430.6	415.8	432.9	435.2	437.5	422.6	440.9	424.9
17.5°	413.5	430.6	416.9	431.7	418.0	434.0	436.3	438.6	424.9	440.9	427.2
20°	416.9	432.9	419.2	435.2	421.5	437.5	438.6	442.0	427.2	442.0	429.5
22.5°	424.9	438.6	427.2	442.0	431.7	444.3	445.4	448.9	437.5	450.0	439.7
25°	438.6	453.4	444.3	455.7	450.0	460.3	462.6	462.6	458.0	466.0	462.6
27.5°	467.2	478.6	471.7	482.0	478.6	486.6	486.6	487.7	491.1	493.4	496.8
30°	503.7	511.7	509.4	515.1	516.3	520.8	520.8	527.7	541.4	527.7	526.5
32.5°	552.8	557.4	558.5	560.8	565.4	568.8	573.4	581.4	592.8	560.8	550.5
35°	613.4	614.5	617.9	621.3	629.3	631.6	646.5	640.8	640.8	590.5	568.8
37.5°	679.6	679.6	688.7	688.7	708.2	709.3	724.1	694.4	677.3	612.2	580.2
40°	763.0	761.8	772.1	774.4	800.7	801.8	799.5	734.4	697.9	617.9	574.5
42.5°	850.9	854.4	868.1	872.6	892.0	898.9	870.3	761.8	707.0	614.5	555.1
45°	946.9	953.7	970.9	983.4	1004.0	996.0	927.4	774.4	696.7	593.9	517.4
47.5°	1051.9	1058.8	1072.5	1096.5	1105.6	1096.5	974.3	779.0	680.7	562.0	462.6
50°	1158.2	1169.6	1189.0	1223.3	1227.8	1205.0	1031.4	796.1	668.2	528.8	399.8
52.5°	1278.1	1289.5	1312.4	1369.5	1358.1	1311.2	1098.8	828.1	671.6	508.3	346.1
55°	1404.9	1420.9	1465.4	1521.4	1496.3	1423.2	1173.0	874.9	685.3	486.6	286.7
57.5°	1538.5	1555.6	1613.9	1680.1	1631.0	1532.8	1248.4	911.5	692.2	442.0	221.6
60°	1671.0	1695.0	1770.4	1825.2	1748.7	1626.5	1315.8	935.4	673.9	357.5	171.3
62.5°	1792.1	1830.9	1915.4	1945.1	1822.9	1685.9	1352.3	918.3	599.6	246.7	138.2
65°	1877.7	1928.0	1982.8	1979.4	1809.2	1666.4	1324.9	839.5	446.6	163.3	117.6
67.5°	1914.3	1961.1	1973.7	1915.4	1711.0	1580.8	1226.7	676.2	257.0	122.2	102.8
70°	1928.0	1968.0	1897.2	1756.7	1519.1	1370.6	1002.8	430.6	140.5	99.4	89.1
71°	1922.3	1941.7	1806.9	1642.5	1396.9	1241.5	879.5	327.8	119.9	92.5	84.5
72.5°	1844.6	1817.2	1609.3	1426.6	1184.4	1026.8	684.2	206.7	98.2	83.4	78.8
75°	1507.7	1384.3	1184.4	1012.0	806.4	645.3	371.2	106.2	78.8	72.0	68.5
77.5°	985.7	878.3	713.9	580.2	440.9	334.7	151.9	73.1	62.8	60.5	59.4
80°	351.8	282.1	213.6	187.3	141.6	116.5	74.2	56.0	49.1	50.3	49.1
82.5°	99.4	91.4	78.8	73.1	64.0	62.8	48.0	42.3	38.8	41.1	40.0
85°	49.1	42.3	30.8	29.7	22.8	26.3	24.0	28.6	25.1	26.3	24.0
87.5°	3.4	4.6	1.1	3.4	0.0	3.4	4.6	5.7	1.1	4.6	3.4
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: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°
0°	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6	446.6
2.5°	445.4	440.9	446.6	440.9	446.6	443.2	446.6	443.2	446.6	448.9	448.9
5°	443.2	435.2	445.4	439.7	446.6	440.9	445.4	442.0	447.7	450.0	452.3
7.5°	442.0	434.0	444.3	436.3	446.6	438.6	445.4	440.9	447.7	450.0	454.6
10°	440.9	430.6	444.3	432.9	445.4	437.5	445.4	438.6	446.6	448.9	450.0
12.5°	440.9	429.5	444.3	431.7	445.4	434.0	444.3	434.0	445.4	444.3	440.9
15°	442.0	427.2	444.3	429.5	444.3	430.6	443.2	429.5	440.9	437.5	435.2
17.5°	442.0	427.2	443.2	428.3	442.0	429.5	439.7	427.2	437.5	436.3	432.9
20°	444.3	429.5	443.2	432.9	443.2	430.6	438.6	427.2	435.2	428.3	414.6
22.5°	451.2	440.9	451.2	440.9	445.4	434.0	437.5	423.7	422.6	411.2	389.5
25°	467.2	462.6	460.3	447.7	444.3	429.5	424.9	408.9	403.2	386.1	356.4
27.5°	487.7	477.4	463.7	448.9	434.0	415.8	403.2	390.6	378.1	356.4	318.7
30°	501.4	486.6	458.0	437.5	410.0	395.2	373.5	359.8	341.5	314.1	277.5
32.5°	510.6	487.7	444.3	420.3	383.8	364.4	335.8	321.0	294.7	268.4	242.1
35°	512.8	483.1	426.0	399.8	351.8	330.1	292.4	276.4	251.3	233.0	222.7
37.5°	503.7	467.2	397.5	363.2	310.7	285.5	250.1	238.7	223.9	217.0	212.4
40°	485.4	436.3	352.9	313.0	259.3	239.9	221.6	221.6	213.6	210.2	202.2
42.5°	452.3	390.6	295.8	257.0	220.4	217.0	206.7	211.3	205.6	203.3	191.9
45°	400.9	325.5	238.7	215.9	198.7	201.0	194.2	198.7	195.3	194.2	180.5
47.5°	334.7	259.3	201.0	193.0	181.6	185.0	179.3	185.0	181.6	182.7	172.5
50°	267.3	210.2	178.2	173.6	165.6	167.9	164.5	170.2	169.0	173.6	167.9
52.5°	213.6	179.3	158.8	155.3	150.8	151.9	150.8	156.5	157.6	166.8	166.8
55°	177.0	154.2	142.8	141.6	137.1	138.2	139.3	145.1	149.6	161.0	166.8
57.5°	151.9	138.2	130.2	129.1	126.8	127.9	130.2	137.1	141.6	156.5	169.0
60°	133.6	125.6	119.9	119.9	117.6	119.9	122.2	129.1	134.8	151.9	164.5
62.5°	119.9	114.2	110.8	111.9	110.8	113.1	115.4	122.2	129.1	145.1	157.6
65°	107.4	103.9	101.7	102.8	102.8	106.2	108.5	115.4	121.1	135.9	151.9
67.5°	97.1	94.8	93.7	94.8	95.9	99.4	102.8	107.4	111.9	125.6	143.9
70°	89.1	86.8	86.8	86.8	87.9	91.4	95.9	98.2	102.8	117.6	134.8
71°	84.5	83.4	83.4	83.4	84.5	87.9	92.5	94.8	99.4	114.2	130.2
72.5°	78.8	78.8	80.0	78.8	81.1	82.2	86.8	89.1	94.8	109.6	124.5
75°	69.7	69.7	70.8	70.8	73.1	73.1	76.5	78.8	85.7	98.2	111.9
77.5°	61.7	61.7	64.0	62.8	62.8	60.5	65.1	67.4	73.1	85.7	99.4
80°	52.5	51.4	53.7	50.3	49.1	46.8	50.3	53.7	62.8	70.8	73.1
82.5°	41.1	37.7	38.8	35.4	35.4	33.1	36.5	37.7	43.4	51.4	56.0
85°	25.1	20.6	22.8	19.4	21.7	19.4	20.6	21.7	26.3	32.0	30.8
87.5°	5.7	3.4	4.6	1.1	3.4	0.0	3.4	1.1	3.4	1.1	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: P227704

CATALOG NUMBER: ISS-AF-600-LED-E1-T3-7030

CANDELA DISTRIBUTION (continued):

	155°	165°	175°	180°
0°	446.6	446.6	446.6	446.6
2.5°	451.2	450.0	451.2	450.0
5°	456.9	456.9	458.0	459.2
7.5°	458.0	460.3	462.6	461.4
10°	450.0	447.7	450.0	447.7
12.5°	437.5	435.2	437.5	437.5
15°	436.3	435.2	436.3	436.3
17.5°	428.3	422.6	420.3	419.2
20°	405.5	395.2	392.9	389.5
22.5°	373.5	358.6	354.1	350.6
25°	334.7	314.1	306.1	301.5
27.5°	292.4	271.8	263.8	263.8
30°	259.3	243.3	235.3	235.3
32.5°	235.3	226.2	220.4	221.6
35°	215.9	210.2	206.7	207.9
37.5°	203.3	194.2	186.2	186.2
40°	190.7	179.3	169.0	169.0
42.5°	179.3	167.9	161.0	159.9
45°	167.9	159.9	154.2	153.1
47.5°	162.2	155.3	149.6	148.5
50°	159.9	153.1	145.1	145.1
52.5°	162.2	156.5	141.6	141.6
55°	166.8	163.3	141.6	139.3
57.5°	162.2	156.5	142.8	139.3
60°	151.9	142.8	140.5	138.2
62.5°	145.1	135.9	140.5	139.3
65°	139.3	132.5	142.8	140.5
67.5°	133.6	126.8	142.8	138.2
70°	126.8	119.9	130.2	122.2
71°	123.4	115.4	123.4	116.5
72.5°	117.6	108.5	110.8	106.2
75°	106.2	97.1	94.8	93.7
77.5°	87.9	77.7	74.2	73.1
80°	67.4	60.5	60.5	57.1
82.5°	50.3	44.5	43.4	37.7
85°	26.3	20.6	17.1	17.1
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)