

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: P271508

Luminaire Tested: **ISS-AF-450-LED-E1-T3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271508
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-450-LED-E1-T3-7027
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III
Light Source: (16) 2700K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2600.9 lumens
Efficiency: N/A
Efficacy: 102.8 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

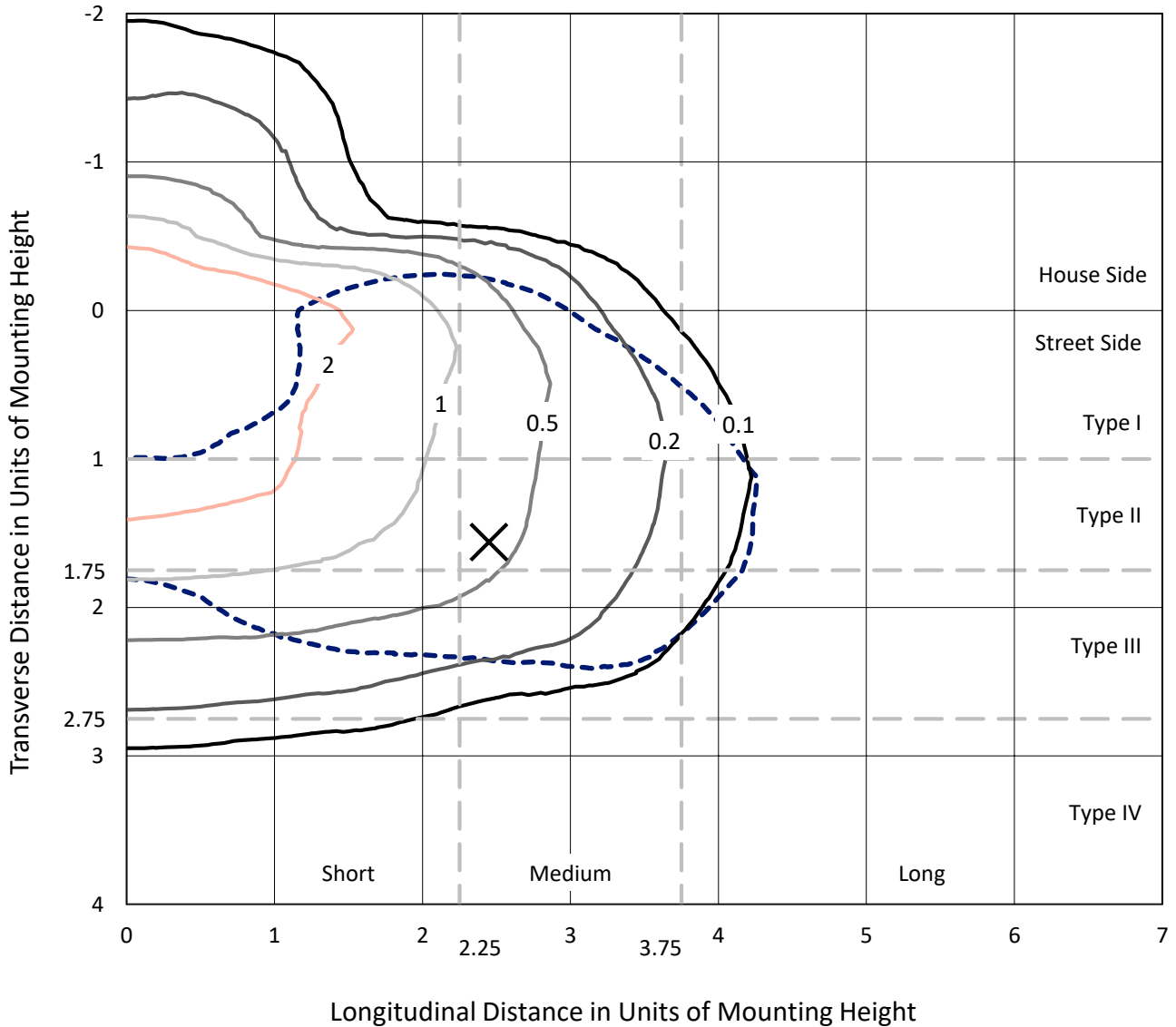
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P271508
 CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

Iso-Footcandle Lines of Horizontal Illumination

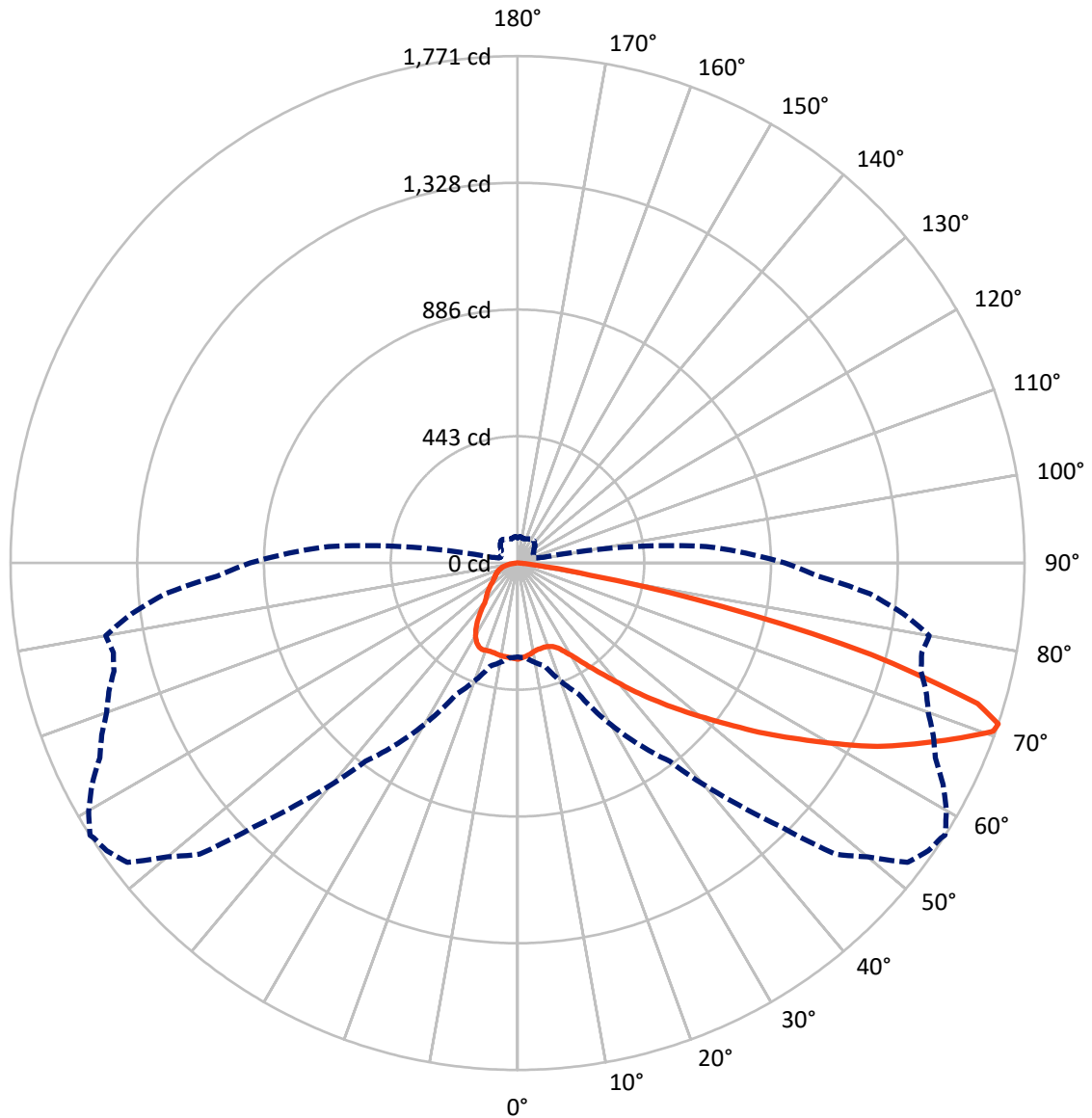
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P271508
CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

Luminous Intensity Polar Plot



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

REPORT NUMBER: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	566.2	0.0	566.2
	% Fixture	21.8	0.0	21.8
Street Side	Lumens	2034.7	0.0	2034.7
	% Fixture	78.2	0.0	78.2
Total	Lumens	2600.9	0.0	2600.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.6	1.2
10°-20°	91.1	3.5
20°-30°	151.3	5.8
30°-40°	240.8	9.3
40°-50°	391.2	15.0
50°-60°	586.5	22.6
60°-70°	699.7	26.9
70°-80°	377.9	14.5
80°-90°	30.8	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°	2600.9	100.0
0°-180°	2600.9	100.0



REPORT NUMBER: P271508

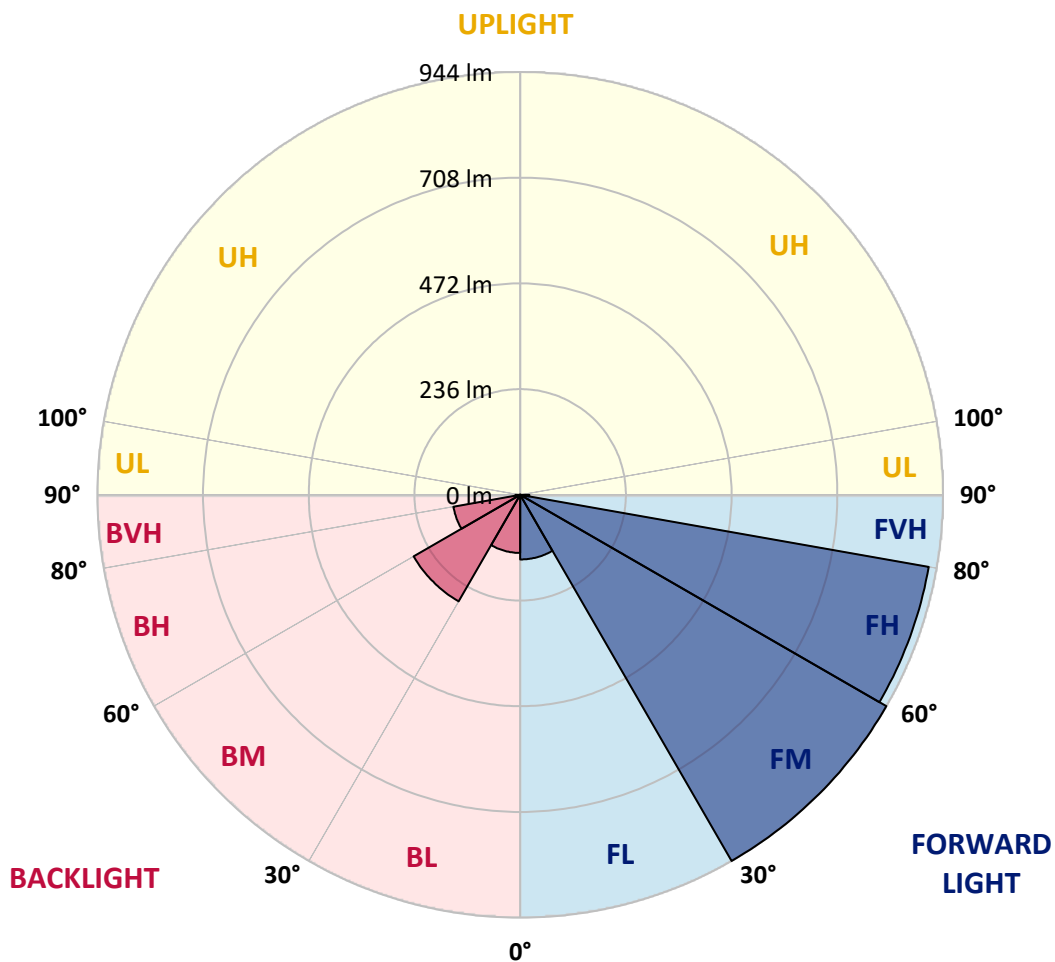
CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	144.3	5.5			
FM	(30°-60°)	944.0	36.3			
FH	(60°-80°)	926.2	35.6			G1/1800
FVH	(80°-90°)	20.3	0.8			G1/100
BL	(0°-30°)	129.7	5.0	B1/500		
BM	(30°-60°)	274.6	10.6	B1/1000		
BH	(60°-80°)	151.5	5.8	B1/500		G1/500
BVH	(80°-90°)	10.5	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: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	336.0	335.2	334.3	334.3	334.3	333.5	330.8	331.7	334.3	332.6	335.2
5°	335.2	333.5	332.6	332.6	332.6	329.9	329.0	328.3	333.5	329.0	332.6
7.5°	325.6	325.6	324.0	325.6	327.4	324.8	323.1	324.0	328.3	324.0	328.3
10°	318.8	317.1	316.2	316.2	318.0	314.6	312.8	314.6	319.7	314.6	320.5
12.5°	316.2	317.1	314.6	314.6	313.7	309.4	309.4	309.4	313.7	309.4	314.6
15°	320.5	319.7	317.1	315.3	312.8	309.4	308.5	309.4	312.8	307.6	313.7
17.5°	326.5	326.5	322.2	318.0	315.3	311.9	311.9	310.3	312.8	309.4	313.7
20°	342.1	339.4	333.5	326.5	319.7	318.0	314.6	314.6	316.2	312.8	315.3
22.5°	368.7	366.1	355.8	342.8	331.7	327.4	325.6	324.8	323.1	321.4	321.4
25°	403.9	399.6	387.6	372.1	353.2	349.7	346.3	343.7	337.8	337.8	333.5
27.5°	441.7	437.5	424.4	407.3	384.1	378.9	374.6	371.2	360.8	360.8	353.2
30°	484.6	479.5	464.1	445.1	418.5	416.7	410.7	405.7	391.9	391.0	380.7
32.5°	534.5	527.7	512.1	487.2	458.9	459.8	450.3	446.9	428.9	429.7	415.9
35°	591.3	583.4	568.0	535.4	506.1	508.7	500.2	494.1	471.8	471.8	457.1
37.5°	651.5	651.5	631.6	593.8	558.6	564.6	554.3	548.2	525.9	529.3	506.1
40°	718.5	722.7	701.1	658.3	622.2	624.7	617.0	610.1	583.4	589.5	564.6
42.5°	788.9	796.5	777.8	732.9	692.6	701.1	688.3	681.5	653.1	666.0	636.8
45°	891.1	892.8	857.6	814.7	781.2	788.9	770.8	768.2	732.9	746.9	717.6
47.5°	955.5	951.2	925.5	899.7	880.0	895.4	879.1	874.8	834.4	843.9	802.6
50°	999.5	1002.0	982.3	979.6	983.0	1012.3	1009.8	1001.1	953.0	946.2	894.5
52.5°	1038.9	1027.8	1024.3	1048.4	1085.3	1119.6	1133.4	1122.3	1069.9	1050.9	1001.1
55°	1032.1	1015.7	1033.8	1092.2	1165.2	1218.6	1220.3	1212.5	1165.2	1157.6	1103.4
57.5°	985.7	989.1	1026.0	1109.4	1233.1	1288.1	1297.6	1288.1	1249.5	1256.4	1211.6
60°	921.2	928.1	986.5	1094.0	1287.3	1334.5	1338.8	1350.1	1324.2	1342.2	1311.3
62.5°	824.9	834.4	909.2	1055.3	1249.5	1319.9	1359.5	1385.3	1380.1	1421.4	1404.9
65°	757.9	757.9	831.0	1010.5	1212.5	1305.3	1364.6	1412.8	1419.6	1484.9	1478.9
67.5°	633.3	637.7	700.4	886.0	1167.9	1272.7	1362.0	1443.7	1484.9	1588.0	1593.2
70°	438.2	441.7	483.0	632.5	943.6	1032.9	1164.5	1297.6	1421.4	1576.9	1657.6
71°	328.3	332.6	373.0	504.4	799.2	873.2	1009.8	1148.0	1303.6	1505.6	1596.6
72.5°	160.7	163.3	202.7	324.0	556.1	650.6	729.5	861.9	1026.9	1258.1	1386.9
75°	74.8	75.5	84.2	116.9	212.3	252.6	287.9	373.0	475.2	678.0	834.4
77.5°	55.0	55.0	60.2	76.4	110.0	111.7	110.0	112.6	135.7	194.2	292.2
80°	40.4	40.4	43.8	51.6	73.0	73.0	70.4	71.3	68.7	71.3	80.8
82.5°	26.6	26.6	28.4	30.9	44.6	44.6	43.0	43.0	41.2	40.4	43.8
85°	15.5	16.3	17.2	14.6	19.0	18.1	16.3	18.1	17.2	15.5	19.0
87.5°	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.9
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: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

CANDELA DISTRIBUTION (continued):

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	331.7	334.3	334.3	330.8	333.5	330.8	332.6	329.9	332.6	328.3	333.5
5°	329.0	331.7	331.7	326.5	331.7	326.5	330.8	324.8	330.8	324.0	330.8
7.5°	322.2	328.3	328.3	321.4	327.4	322.2	327.4	321.4	326.5	318.8	327.4
10°	314.6	320.5	321.4	314.6	321.4	315.3	323.1	315.3	323.1	314.6	324.0
12.5°	309.4	316.2	318.0	310.3	318.8	311.0	320.5	311.9	320.5	311.0	322.2
15°	308.5	314.6	316.2	309.4	317.1	308.5	319.7	309.4	320.5	310.3	323.1
17.5°	309.4	314.6	316.2	308.5	316.2	309.4	318.8	310.3	320.5	311.0	323.1
20°	311.9	315.3	315.3	311.0	317.1	311.0	318.8	310.3	321.4	312.8	324.0
22.5°	319.7	320.5	320.5	317.1	320.5	316.2	322.2	316.2	324.0	317.1	327.4
25°	332.6	331.7	329.9	329.0	329.9	327.4	330.8	326.5	334.3	328.3	338.6
27.5°	354.9	351.5	349.7	349.7	348.9	349.7	349.7	348.0	351.5	349.7	356.6
30°	382.4	376.4	373.9	376.4	373.0	376.4	375.5	374.6	378.1	376.4	382.4
32.5°	418.5	408.2	406.4	411.6	404.8	410.7	405.7	408.2	410.7	412.5	415.9
35°	460.7	448.5	446.9	451.9	444.3	452.8	446.9	450.3	451.9	456.2	458.9
37.5°	510.5	495.9	493.3	500.2	489.8	499.3	490.7	501.0	498.4	504.4	507.0
40°	570.6	553.4	547.3	556.9	544.8	552.5	543.9	555.2	552.5	564.6	567.2
42.5°	644.5	619.7	613.5	623.1	605.0	607.5	600.7	613.5	611.8	628.2	630.8
45°	721.0	690.9	682.4	691.8	671.1	676.3	666.0	679.7	678.8	691.8	702.0
47.5°	806.0	769.1	757.9	768.2	743.3	749.4	739.0	753.7	754.5	769.1	779.4
50°	894.5	855.8	841.4	850.8	827.6	831.8	821.5	839.6	838.7	858.5	866.2
52.5°	990.8	951.2	940.2	944.4	916.9	922.1	913.5	935.9	930.6	942.7	958.1
55°	1097.4	1051.8	1038.9	1051.8	1019.1	1026.0	1014.8	1035.5	1026.9	1042.3	1046.6
57.5°	1206.5	1161.8	1151.4	1161.0	1130.0	1135.2	1120.5	1137.7	1130.9	1141.2	1148.0
60°	1322.6	1282.2	1271.8	1282.2	1252.1	1253.0	1228.1	1245.9	1235.7	1248.6	1245.9
62.5°	1433.3	1399.0	1396.4	1411.1	1373.1	1368.9	1338.8	1351.7	1337.1	1345.8	1335.4
65°	1527.8	1508.2	1511.6	1523.5	1490.1	1479.8	1445.5	1452.3	1430.8	1430.8	1418.0
67.5°	1651.6	1630.2	1630.2	1640.5	1598.4	1571.8	1524.4	1518.5	1483.2	1476.4	1446.3
70°	1754.7	1760.8	1753.9	1762.6	1712.7	1658.5	1595.7	1565.7	1519.3	1496.9	1461.7
71°	1717.8	1752.1	1764.2	1771.1	1729.9	1675.7	1610.4	1571.8	1527.1	1496.9	1459.2
72.5°	1550.3	1633.6	1680.9	1680.9	1686.0	1651.6	1588.9	1546.8	1496.0	1456.6	1421.4
75°	1086.2	1222.0	1283.0	1276.1	1320.8	1336.3	1341.3	1323.3	1295.1	1238.3	1213.4
77.5°	483.7	637.7	729.5	730.4	778.5	820.6	854.2	889.4	876.6	849.0	847.3
80°	110.0	199.3	255.2	257.8	301.7	340.3	363.5	398.8	403.0	363.5	341.2
82.5°	47.3	55.9	63.6	62.7	77.3	92.9	110.0	119.5	115.2	95.4	90.2
85°	19.8	25.8	27.5	25.8	31.8	35.2	41.2	42.1	49.0	43.8	46.4
87.5°	0.0	0.9	0.9	0.0	1.8	0.0	1.8	0.9	4.3	1.8	5.2
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: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

CANDELA DISTRIBUTION (continued):

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	329.9	334.3	329.9	334.3	331.7	334.3	333.5	334.3	329.9	334.3	329.0
5°	324.0	330.8	324.8	329.9	324.8	330.8	330.8	330.8	324.8	331.7	325.6
7.5°	318.8	326.5	318.8	326.5	321.4	327.4	327.4	329.9	323.1	330.8	322.2
10°	313.7	323.1	313.7	324.8	316.2	325.6	326.5	328.3	318.8	329.0	320.5
12.5°	311.0	323.1	311.9	323.1	312.8	325.6	326.5	328.3	318.0	330.8	319.7
15°	311.0	324.0	311.9	324.0	312.8	325.6	327.4	329.0	318.0	331.7	319.7
17.5°	311.0	324.0	313.7	324.8	314.6	326.5	328.3	329.9	319.7	331.7	321.4
20°	313.7	325.6	315.3	327.4	317.1	329.0	329.9	332.6	321.4	332.6	323.1
22.5°	319.7	329.9	321.4	332.6	324.8	334.3	335.2	337.8	329.0	338.6	330.8
25°	329.9	341.2	334.3	342.8	338.6	346.3	348.0	348.0	344.6	350.6	348.0
27.5°	351.5	360.1	354.9	362.6	360.1	366.1	366.1	367.0	369.6	371.2	373.9
30°	378.9	384.9	383.3	387.6	388.3	391.9	391.9	397.1	407.3	397.1	396.2
32.5°	415.9	419.4	420.1	421.9	425.3	428.0	431.4	437.5	446.0	421.9	414.2
35°	461.5	462.3	465.0	467.5	473.5	475.2	486.4	482.1	482.1	444.3	428.0
37.5°	511.3	511.3	518.2	518.2	532.8	533.6	544.8	522.5	509.6	460.7	436.6
40°	574.1	573.2	580.9	582.6	602.4	603.2	601.5	552.5	525.1	465.0	432.3
42.5°	640.2	642.7	653.1	656.5	671.1	676.3	654.9	573.2	532.0	462.3	417.6
45°	712.4	717.6	730.4	739.8	755.4	749.4	697.7	582.6	524.3	446.9	389.2
47.5°	791.5	796.5	806.9	824.9	831.8	824.9	732.9	586.1	512.1	422.8	348.0
50°	871.4	880.0	894.5	920.3	923.7	906.6	776.0	599.0	502.7	397.9	300.8
52.5°	961.5	970.2	987.3	1030.4	1021.7	986.5	826.7	623.1	505.3	382.4	260.4
55°	1056.9	1069.1	1102.5	1144.6	1125.8	1070.7	882.6	658.3	515.5	366.1	215.8
57.5°	1157.6	1170.4	1214.3	1264.1	1227.2	1153.2	939.3	685.8	520.7	332.6	166.7
60°	1257.2	1275.2	1332.0	1373.1	1315.7	1223.7	989.9	703.8	507.0	269.0	128.9
62.5°	1348.3	1377.6	1441.2	1463.5	1371.5	1268.4	1017.5	690.9	451.2	185.6	103.9
65°	1412.8	1450.5	1491.8	1489.2	1361.2	1253.8	996.8	631.6	336.0	122.9	88.6
67.5°	1440.3	1475.5	1484.9	1441.2	1287.3	1189.4	922.9	508.7	193.3	92.0	77.3
70°	1450.5	1480.7	1427.4	1321.7	1142.9	1031.3	754.5	324.0	105.7	74.8	67.0
71°	1446.3	1460.8	1359.5	1235.7	1050.9	934.1	661.7	246.7	90.2	69.6	63.6
72.5°	1387.8	1367.2	1210.7	1073.4	891.1	772.5	514.8	155.6	73.9	62.7	59.3
75°	1134.3	1041.6	891.1	761.3	606.6	485.5	279.4	79.9	59.3	54.2	51.6
77.5°	741.6	660.8	537.1	436.6	331.7	251.7	114.3	55.0	47.3	45.5	44.6
80°	264.7	212.3	160.7	140.9	106.6	87.7	55.9	42.1	36.9	37.8	36.9
82.5°	74.8	68.7	59.3	55.0	48.1	47.3	36.1	31.8	29.3	30.9	30.0
85°	36.9	31.8	23.2	22.4	17.2	19.8	18.1	21.5	19.0	19.8	18.1
87.5°	2.5	3.4	0.9	2.5	0.0	2.5	3.4	4.3	0.9	3.4	2.5
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: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	335.2	331.7	336.0	331.7	336.0	333.5	336.0	333.5	336.0	337.8	337.8
5°	333.5	327.4	335.2	330.8	336.0	331.7	335.2	332.6	336.9	338.6	340.3
7.5°	332.6	326.5	334.3	328.3	336.0	329.9	335.2	331.7	336.9	338.6	342.1
10°	331.7	324.0	334.3	325.6	335.2	329.0	335.2	329.9	336.0	337.8	338.6
12.5°	331.7	323.1	334.3	324.8	335.2	326.5	334.3	326.5	335.2	334.3	331.7
15°	332.6	321.4	334.3	323.1	334.3	324.0	333.5	323.1	331.7	329.0	327.4
17.5°	332.6	321.4	333.5	322.2	332.6	323.1	330.8	321.4	329.0	328.3	325.6
20°	334.3	323.1	333.5	325.6	333.5	324.0	329.9	321.4	327.4	322.2	311.9
22.5°	339.4	331.7	339.4	331.7	335.2	326.5	329.0	318.8	318.0	309.4	293.0
25°	351.5	348.0	346.3	336.9	334.3	323.1	319.7	307.6	303.4	290.4	268.1
27.5°	367.0	359.2	348.9	337.8	326.5	312.8	303.4	293.8	284.4	268.1	239.8
30°	377.3	366.1	344.6	329.0	308.5	297.2	281.0	270.7	256.9	236.3	208.9
32.5°	384.1	367.0	334.3	316.2	288.7	274.2	252.6	241.5	221.7	202.0	182.2
35°	385.8	363.5	320.5	300.8	264.7	248.3	219.9	208.0	189.0	175.3	167.5
37.5°	378.9	351.5	299.0	273.3	233.6	214.9	188.1	179.6	168.4	163.3	159.9
40°	365.3	328.3	265.4	235.4	195.0	180.5	166.7	166.7	160.7	158.1	152.2
42.5°	340.3	293.8	222.6	193.3	165.8	163.3	155.6	159.0	154.7	152.9	144.4
45°	301.7	244.9	179.6	162.4	149.5	151.3	146.1	149.5	147.0	146.1	135.7
47.5°	251.7	195.0	151.3	145.3	136.6	139.1	134.9	139.1	136.6	137.5	129.7
50°	201.1	158.1	134.0	130.6	124.7	126.3	123.8	128.1	127.2	130.6	126.3
52.5°	160.7	134.9	119.5	116.9	113.5	114.3	113.5	117.8	118.6	125.4	125.4
55°	133.2	116.0	107.3	106.6	103.1	103.9	104.8	109.1	112.6	121.2	125.4
57.5°	114.3	103.9	97.9	97.1	95.4	96.3	97.9	103.1	106.6	117.8	127.2
60°	100.5	94.5	90.2	90.2	88.6	90.2	92.0	97.1	101.4	114.3	123.8
62.5°	90.2	86.0	83.4	84.2	83.4	85.1	86.8	92.0	97.1	109.1	118.6
65°	80.8	78.2	76.4	77.3	77.3	79.9	81.7	86.8	91.1	102.2	114.3
67.5°	73.0	71.3	70.4	71.3	72.1	74.8	77.3	80.8	84.2	94.5	108.2
70°	67.0	65.3	65.3	65.3	66.1	68.7	72.1	73.9	77.3	88.6	101.4
71°	63.6	62.7	62.7	62.7	63.6	66.1	69.6	71.3	74.8	86.0	97.9
72.5°	59.3	59.3	60.2	59.3	61.1	61.8	65.3	67.0	71.3	82.6	93.6
75°	52.4	52.4	53.3	53.3	55.0	55.0	57.6	59.3	64.5	73.9	84.2
77.5°	46.4	46.4	48.1	47.3	47.3	45.5	49.0	50.8	55.0	64.5	74.8
80°	39.5	38.6	40.4	37.8	36.9	35.2	37.8	40.4	47.3	53.3	55.0
82.5°	30.9	28.4	29.3	26.6	26.6	25.0	27.5	28.4	32.7	38.6	42.1
85°	19.0	15.5	17.2	14.6	16.3	14.6	15.5	16.3	19.8	24.1	23.2
87.5°	4.3	2.5	3.4	0.9	2.5	0.0	2.5	0.9	2.5	0.9	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: P271508

CATALOG NUMBER: ISS-AF-450-LED-E1-T3-7027

CANDELA DISTRIBUTION (continued):

	155°	165°	175°	180°
0°	336.0	336.0	336.0	336.0
2.5°	339.4	338.6	339.4	338.6
5°	343.7	343.7	344.6	345.5
7.5°	344.6	346.3	348.0	347.1
10°	338.6	336.9	338.6	336.9
12.5°	329.0	327.4	329.0	329.0
15°	328.3	327.4	328.3	328.3
17.5°	322.2	318.0	316.2	315.3
20°	305.1	297.2	295.6	293.0
22.5°	281.0	269.9	266.3	263.8
25°	251.7	236.3	230.2	226.8
27.5°	219.9	204.5	198.5	198.5
30°	195.0	183.1	177.1	177.1
32.5°	177.1	170.2	165.8	166.7
35°	162.4	158.1	155.6	156.5
37.5°	152.9	146.1	140.0	140.0
40°	143.5	134.9	127.2	127.2
42.5°	134.9	126.3	121.2	120.4
45°	126.3	120.4	116.0	115.2
47.5°	122.0	116.9	112.6	111.7
50°	120.4	115.2	109.1	109.1
52.5°	122.0	117.8	106.6	106.6
55°	125.4	122.9	106.6	104.8
57.5°	122.0	117.8	107.3	104.8
60°	114.3	107.3	105.7	103.9
62.5°	109.1	102.2	105.7	104.8
65°	104.8	99.7	107.3	105.7
67.5°	100.5	95.4	107.3	103.9
70°	95.4	90.2	97.9	92.0
71°	92.9	86.8	92.9	87.7
72.5°	88.6	81.7	83.4	79.9
75°	79.9	73.0	71.3	70.4
77.5°	66.1	58.4	55.9	55.0
80°	50.8	45.5	45.5	43.0
82.5°	37.8	33.5	32.7	28.4
85°	19.8	15.5	12.8	12.8
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)