

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: INVUE

Report Number: P596793

Luminaire Tested: **MSA-SA4C-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596793
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-827-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12903 lumens
Efficiency: N/A
Efficacy: 57.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

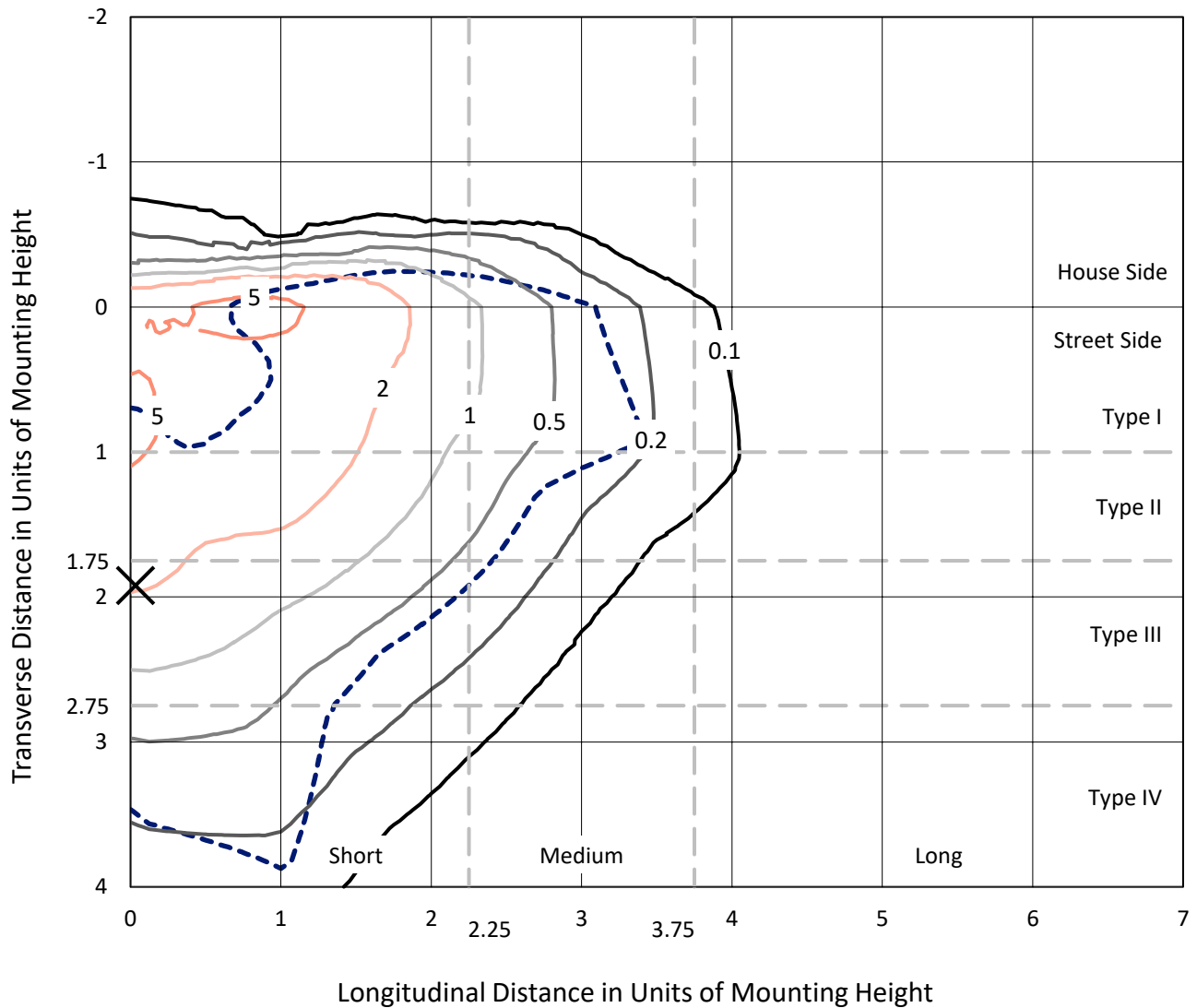
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596793
 CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

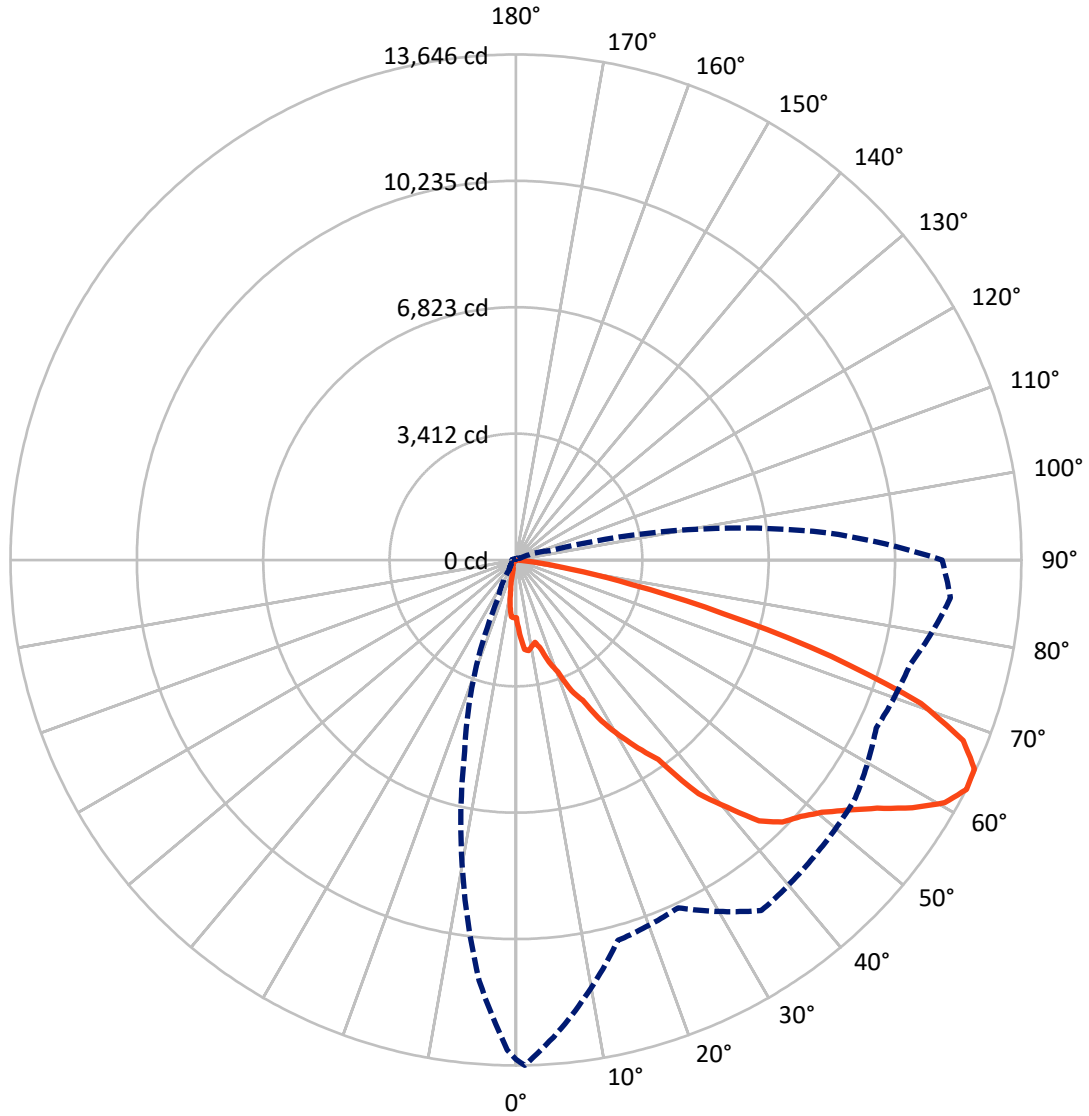
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P596793
CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P596793

CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

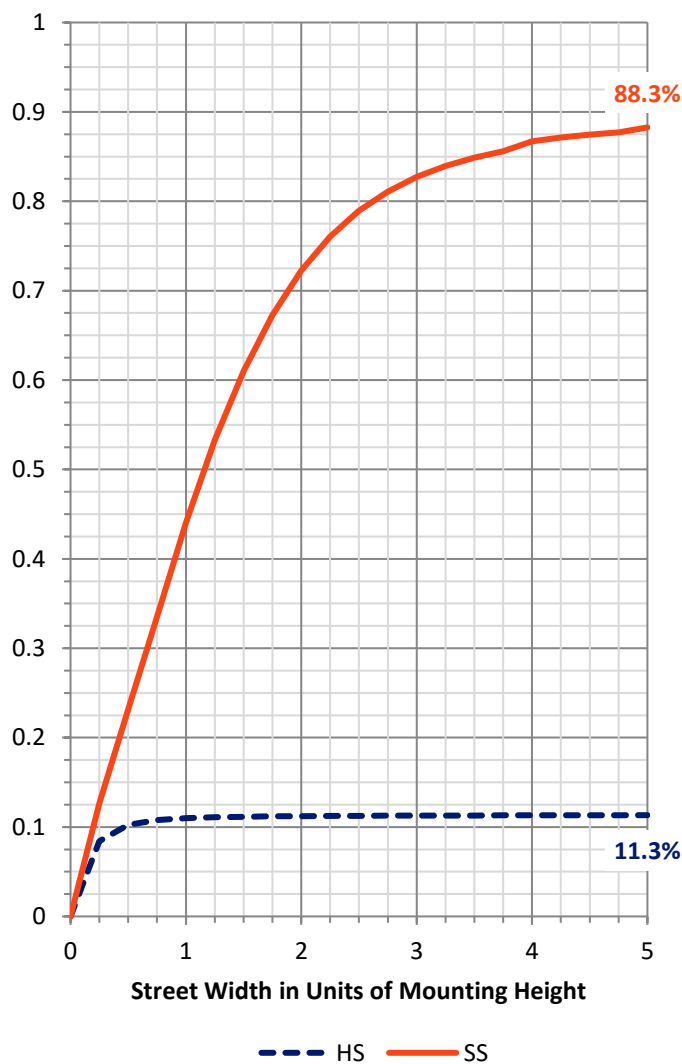
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1475.5	0.0	1475.5
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	11427.5	0.0	11427.5
	% Fixture	88.6	0.0	88.6
Total	Lumens	12903.0	0.0	12903.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.7	1.3
10°-20°	453.6	3.5
20°-30°	733.3	5.7
30°-40°	1228.3	9.5
40°-50°	2008.4	15.6
50°-60°	2973.0	23.0
60°-70°	3413.2	26.5
70°-80°	1687.8	13.1
80°-90°	231.7	1.8
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°	12903.0	100.0
0°-180°	12903.0	100.0

Coefficient of Utilization



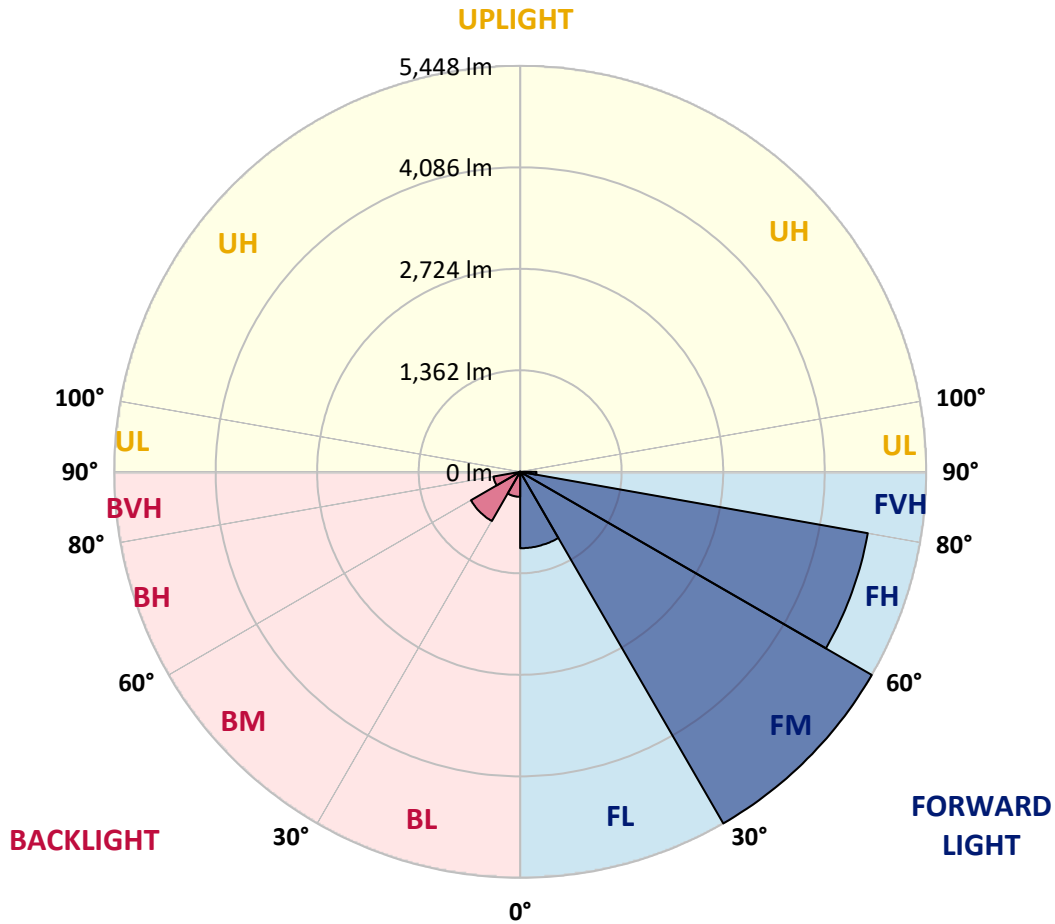
REPORT NUMBER: P596793
 CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1024.9	7.9			
FM (30°-60°)	5447.6	42.2			
FH (60°-80°)	4736.2	36.7			G2/5000
FVH (80°-90°)	218.9	1.7			G2/225
BL (0°-30°)	335.7	2.6	B1/500		
BM (30°-60°)	762.1	5.9	B1/1000		
BH (60°-80°)	364.8	2.8	B1/500		G1/500
BVH (80°-90°)	12.8	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





REPORT NUMBER: P596793

CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4
2.5°	2004.4	2013.9	1969.1	1963.2	1858.8	1988.9	1992.6	2008.0	1912.5	1727.2	1986.0
5°	2398.5	2424.9	2390.4	2544.1	2588.2	2683.0	2508.8	2664.6	2598.5	2616.8	2654.3
7.5°	2445.5	2472.7	2545.5	2802.9	3040.4	2980.8	2961.7	3020.5	3015.4	2879.3	2947.0
10°	2347.7	2370.5	2491.8	2960.2	3063.9	3331.5	3397.0	3261.7	3206.5	2908.8	2778.6
12.5°	2241.1	2279.4	2433.8	2995.5	3306.5	3577.1	3792.6	3599.9	3416.8	3099.9	2980.8
15°	2445.5	2466.9	2709.5	3069.0	3341.1	3527.9	3704.3	3640.4	3612.4	3384.5	2980.8
17.5°	2846.3	2896.3	3072.0	3249.2	3463.9	3576.4	3534.5	3514.6	3443.3	3801.4	3383.7
20°	3131.5	3224.9	3455.1	3531.5	3360.9	3466.1	3440.4	3422.7	3366.8	4033.0	3847.0
22.5°	3749.2	3835.2	3839.6	3866.8	3469.8	3302.1	3259.5	3264.6	3518.3	4102.1	4423.4
25°	4169.7	4199.2	4431.5	4237.4	3766.8	3352.1	3189.6	3262.4	3627.9	4599.2	4965.3
27.5°	4858.0	4927.8	5072.7	4415.3	3944.8	3320.5	3061.7	3326.4	3916.1	4763.9	5567.5
30°	5419.0	5485.9	5719.0	4658.7	4099.2	3477.1	3116.8	3455.1	4095.5	5102.8	6108.7
32.5°	5874.1	6046.9	6311.6	5034.4	4093.3	3657.3	3398.4	3412.4	4316.1	5541.8	6644.0
35°	6455.7	6616.7	6802.8	5293.3	4360.9	3715.3	3481.5	3831.5	4644.0	6000.6	7364.5
37.5°	7766.7	8010.1	7642.5	5945.4	4672.7	4240.3	3809.5	4089.6	4987.4	6469.0	8354.9
40°	8566.7	8771.8	8416.7	6278.5	5212.4	4505.0	4394.7	4538.1	5323.4	6710.9	9101.2
42.5°	9354.9	9625.5	9032.1	6780.0	5724.9	5252.1	4950.6	5066.1	5809.4	7294.7	9940.9
45°	9925.5	10093.1	9165.2	7042.5	6429.3	6103.5	5902.8	5730.7	6487.3	7669.7	10482.8
47.5°	10212.2	10346.1	9427.7	7125.6	6848.4	7004.2	7443.9	7084.4	7087.3	7941.0	10774.7
50°	10609.3	10702.7	9574.8	7224.8	7303.5	8407.9	8629.9	7864.5	7772.6	8213.0	10822.5
52.5°	11167.4	11213.0	9860.0	7486.6	7985.1	9507.1	9587.3	9277.7	8458.6	8718.9	10928.4
55°	11909.3	11829.1	10369.6	8036.6	8696.1	10312.2	10419.6	10149.7	9321.1	9224.0	11256.3
57.5°	12709.2	12617.3	11124.7	8811.5	9467.4	10927.7	10991.6	11013.0	9893.9	9671.1	11813.7
60°	13282.8	13299.7	12075.4	9700.5	9946.8	11516.6	11388.7	11194.6	10471.8	10326.2	12085.0
62.5°	13483.5	13646.0	12815.9	10632.1	10360.0	11553.4	11354.9	11190.9	10730.6	11001.9	11774.0
65°	13319.5	13603.3	12987.9	11450.5	10610.0	11092.4	10885.8	10780.6	10722.5	11277.7	11085.8
67.5°	12668.1	13023.2	12495.3	11457.8	9701.2	9444.6	9688.7	10021.8	9829.2	11049.0	10121.8
70°	11208.5	11597.5	11351.9	10785.8	8081.4	7430.7	7699.8	8203.5	8067.4	9827.0	8703.5
72.5°	8409.3	8909.3	8957.9	9311.5	6415.3	5592.5	5631.5	5617.5	5852.1	7924.1	6791.7
75°	5402.1	5791.0	6316.8	7513.8	4873.4	4083.0	3709.5	3618.3	4055.8	6191.8	4862.4
77.5°	3136.0	3182.3	3424.9	5669.0	3490.4	2941.8	2687.4	2817.6	2970.5	4321.2	3222.7
80°	1500.0	1523.5	1623.5	2916.8	2424.9	2546.3	2349.9	2496.3	2039.7	2483.8	1828.6
82.5°	475.7	480.9	497.8	1433.1	1505.8	1686.7	1080.9	1449.2	1261.0	1501.4	1217.6
85°	79.4	135.3	166.9	414.0	850.0	569.1	234.6	516.9	703.7	947.0	552.9
87.5°	0.0	0.0	0.0	7.4	69.1	32.4	5.1	29.4	108.1	211.0	25.0
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: P596793
 CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4
2.5°	2061.0	2111.7	1920.5	1749.2	1792.6	1758.0	1705.8	1616.9	1411.0	1562.5	1552.2
5°	2652.1	2558.0	2299.2	2178.6	2031.6	1807.3	1780.1	1608.0	1532.3	1544.8	1533.8
7.5°	2858.0	2689.6	2461.0	2097.7	1752.9	1429.4	1330.1	1217.6	1194.8	1243.4	1275.0
10°	2696.3	2517.6	2317.6	1866.1	1600.7	1366.9	1122.0	964.7	879.4	869.1	877.9
12.5°	2770.5	2577.9	2166.1	1820.5	1543.3	1331.6	1058.1	820.6	635.3	649.2	612.5
15°	2822.0	2600.7	2130.1	1725.0	1425.0	1141.9	812.5	575.0	423.5	379.4	352.9
17.5°	3124.2	2808.0	2084.5	1614.7	1259.5	888.9	510.3	333.1	283.8	268.4	255.9
20°	3512.4	3063.2	2083.8	1498.5	1015.4	555.9	318.4	241.2	229.4	238.2	228.7
22.5°	3963.9	3402.9	2194.8	1353.6	728.7	350.7	247.8	214.0	202.2	209.6	210.3
25°	4418.3	3912.4	2285.2	1216.1	507.3	269.1	220.6	197.1	183.8	190.4	186.8
27.5°	5238.8	4334.5	2264.6	1040.4	373.5	236.8	205.1	184.6	164.7	175.0	174.3
30°	5775.6	5079.3	2344.8	794.1	296.3	207.3	191.2	168.4	147.1	158.8	158.1
32.5°	6417.5	5399.1	2431.6	609.5	246.3	196.3	172.1	150.0	137.5	144.8	143.4
35°	7138.8	6031.5	2272.0	507.3	214.0	177.2	152.2	135.3	124.3	127.9	127.9
37.5°	8413.0	6560.1	2176.4	413.2	199.3	160.3	142.6	122.1	115.4	115.4	119.1
40°	9136.5	7367.5	1891.1	327.2	203.7	147.8	133.1	111.8	102.9	102.2	105.9
42.5°	10077.7	7832.9	1712.5	264.7	184.6	144.1	122.1	101.5	91.2	90.4	94.1
45°	10635.8	8093.2	1461.0	208.1	165.4	167.6	113.2	93.4	77.9	75.0	81.6
47.5°	10988.0	8438.0	1318.3	165.4	144.1	166.9	110.3	80.9	65.4	61.8	67.6
50°	11166.6	8608.6	1290.4	141.9	125.0	149.3	126.5	67.6	55.9	50.7	55.9
52.5°	11352.7	8885.8	1300.7	130.9	110.3	119.8	119.8	58.1	49.3	43.4	47.1
55°	11728.4	9295.4	1277.9	124.3	101.5	91.2	77.2	51.5	44.9	38.2	41.9
57.5°	12190.1	9589.5	1277.9	118.4	94.1	77.9	61.8	47.8	41.2	33.1	36.0
60°	12102.6	9279.9	1214.7	112.5	88.2	72.8	55.9	44.1	38.2	30.1	32.4
62.5°	11501.9	8438.0	983.8	103.7	83.1	69.1	50.7	41.9	36.0	26.5	28.7
65°	10796.1	7543.9	683.8	94.1	77.2	62.5	45.6	39.7	33.1	23.5	25.0
67.5°	9946.1	6478.5	379.4	84.6	71.3	54.4	41.9	39.0	31.6	21.3	22.8
70°	8471.1	4891.1	203.7	77.2	66.9	50.0	39.7	39.0	31.6	20.6	21.3
72.5°	6359.4	3080.1	119.1	70.6	61.0	46.3	37.5	39.7	30.9	19.9	19.9
75°	4327.1	1869.8	85.3	60.3	54.4	39.0	36.0	38.2	31.6	19.9	18.4
77.5°	2941.8	1313.9	69.9	54.4	49.3	34.6	36.8	38.2	31.6	16.2	12.5
80°	1836.7	677.9	52.9	43.4	42.6	30.1	36.8	33.1	20.6	3.7	0.0
82.5°	1284.5	252.2	30.9	33.1	33.1	21.3	28.7	23.5	11.8	0.0	0.0
85°	539.0	43.4	16.9	23.5	20.6	12.5	22.8	17.6	7.4	0.0	0.0
87.5°	9.6	0.0	6.6	14.0	14.7	7.4	11.8	7.4	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: P596793
 CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4
2.5°	1600.7	1530.8	1383.8	1454.4	1447.0	1479.4	1482.3	1407.3	1569.1	1669.1	1683.8
5°	1535.3	1488.2	1480.1	1439.7	1429.4	1488.9	1456.6	1454.4	1532.3	1646.3	1647.0
7.5°	1275.7	1239.7	1256.6	1209.5	1088.2	1095.6	1106.6	1152.9	1219.8	1294.8	1322.0
10°	875.7	969.1	900.7	894.8	882.3	843.4	812.5	836.7	923.5	992.6	1018.4
12.5°	625.0	639.7	681.6	666.2	687.5	654.4	641.9	717.6	802.2	872.8	923.5
15°	365.4	390.4	415.4	468.4	489.7	483.1	521.3	584.5	652.9	685.3	747.8
17.5°	257.3	259.6	264.7	322.1	359.5	374.3	397.0	444.8	472.8	487.5	513.2
20°	225.0	218.4	209.6	241.9	277.2	295.6	289.0	326.5	349.3	364.0	382.3
22.5°	203.7	192.6	187.5	198.5	225.7	241.9	244.8	266.9	301.5	311.8	317.6
25°	183.8	176.5	172.8	178.7	193.4	208.8	211.8	240.4	271.3	275.7	287.5
27.5°	170.6	156.6	158.1	162.5	169.1	188.2	194.1	210.3	255.1	260.3	264.0
30°	156.6	141.9	146.3	150.7	147.8	171.3	180.1	198.5	241.9	250.0	254.4
32.5°	142.6	131.6	130.9	135.3	140.4	152.9	172.1	193.4	233.1	244.1	255.1
35°	127.2	118.4	119.8	120.6	127.2	143.4	157.3	168.4	195.6	201.5	205.1
37.5°	116.2	108.8	107.4	114.7	121.3	133.8	139.0	144.1	180.1	193.4	194.1
40°	102.9	98.5	98.5	103.7	118.4	116.9	123.5	139.7	174.3	188.2	189.7
42.5°	93.4	87.5	89.0	94.1	104.4	97.1	110.3	133.8	172.1	186.0	185.3
45°	78.7	77.2	80.1	84.6	89.0	82.4	102.9	127.9	164.7	183.1	177.9
47.5°	65.4	65.4	69.1	73.5	71.3	73.5	93.4	119.8	160.3	177.2	173.5
50°	53.7	54.4	58.1	65.4	58.8	64.7	83.8	111.8	152.9	171.3	168.4
52.5°	45.6	46.3	48.5	53.7	50.7	58.8	77.2	103.7	145.6	161.0	159.6
55°	39.7	41.2	41.2	44.1	45.6	55.1	69.9	95.6	134.6	151.5	148.5
57.5°	35.3	36.8	36.0	38.2	39.7	48.5	62.5	86.8	123.5	137.5	133.1
60°	31.6	33.1	32.4	35.3	34.6	41.9	54.4	77.2	111.8	122.8	119.1
62.5°	27.9	29.4	29.4	30.9	31.6	35.3	47.1	68.4	100.0	108.8	105.9
65°	25.0	26.5	27.2	26.5	27.9	30.1	39.7	61.8	86.8	95.6	91.2
67.5°	22.8	24.3	25.7	22.8	24.3	25.0	33.8	55.1	76.5	83.8	80.1
70°	22.1	22.8	22.8	19.9	19.1	19.9	29.4	47.1	66.9	74.3	69.1
72.5°	20.6	21.3	20.6	16.2	14.0	15.4	25.0	39.7	56.6	62.5	58.1
75°	19.1	19.9	19.1	13.2	8.8	11.0	20.6	34.6	48.5	51.5	49.3
77.5°	16.2	17.6	17.6	9.6	2.9	6.6	15.4	27.9	40.4	40.4	41.2
80°	1.5	4.4	7.4	5.1	0.0	0.7	5.1	14.7	25.7	25.0	27.2
82.5°	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	8.8	6.6	7.4
85°	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
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: P596793
 CATALOG NUMBER: MSA-SA4C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4	1554.4
2.5°	1649.2	1626.4	1655.1	1742.6	1707.3	1713.9	1690.4	1835.2	1999.2	2004.4
5°	1648.5	1627.9	1670.5	1666.9	1767.6	1877.2	1983.0	2154.4	2397.0	2398.5
7.5°	1309.5	1431.6	1463.2	1453.6	1583.0	1733.8	1897.0	2224.9	2424.2	2445.5
10°	1180.9	1233.8	1298.5	1322.0	1375.7	1519.1	1703.6	2074.9	2298.5	2347.7
12.5°	1023.5	1192.6	1278.6	1445.6	1476.4	1497.0	1788.2	2111.0	2247.0	2241.1
15°	847.8	994.8	1130.9	1334.5	1418.3	1634.5	1863.9	2286.7	2367.6	2445.5
17.5°	600.0	711.0	919.8	1133.8	1389.7	1625.0	2072.7	2600.7	2753.6	2846.3
20°	401.5	455.1	644.1	927.2	1251.4	1485.3	2158.0	2884.5	3051.4	3131.5
22.5°	325.7	351.5	449.3	679.4	1069.1	1478.6	2192.6	3194.0	3642.6	3749.2
25°	286.8	304.4	356.6	502.9	887.5	1449.2	2383.8	3542.6	4083.7	4169.7
27.5°	250.7	277.2	316.2	414.7	761.0	1428.6	2480.8	4127.8	4773.4	4858.0
30°	239.7	272.1	309.6	377.9	672.8	1349.2	2635.2	4655.8	5268.3	5419.0
32.5°	258.8	269.8	288.2	346.3	604.4	1265.4	2906.5	5286.6	5677.8	5874.1
35°	205.1	225.0	257.3	317.6	575.7	1261.0	3060.2	5692.5	6334.4	6455.7
37.5°	200.7	219.1	261.0	309.6	610.3	1294.8	3288.2	6524.1	7518.2	7766.7
40°	194.8	218.4	258.1	305.9	610.3	1327.9	3433.7	7189.5	8314.5	8566.7
42.5°	192.6	222.8	257.3	321.3	591.2	1346.3	3653.6	7853.5	9155.7	9354.9
45°	191.2	227.2	259.6	339.7	586.8	1406.6	3777.8	8176.3	9696.8	9925.5
47.5°	187.5	227.2	289.7	328.7	562.5	1400.7	3938.9	8654.9	10019.6	10212.2
50°	184.6	228.7	327.9	308.1	566.2	1364.7	4157.2	9104.2	10471.8	10609.3
52.5°	177.9	233.8	322.1	279.4	555.1	1361.0	4483.0	9743.1	11066.6	11167.4
55°	163.2	227.2	291.2	244.1	516.2	1319.1	4914.6	10574.0	11891.6	11909.3
57.5°	150.0	211.0	243.4	224.3	432.3	1324.2	5286.6	11338.7	12626.9	12709.2
60°	136.8	219.1	189.0	208.8	358.1	1230.1	5466.8	11631.3	13162.2	13282.8
62.5°	124.3	202.2	161.0	191.9	319.1	1142.6	5341.8	11396.0	13230.6	13483.5
65°	110.3	140.4	136.0	172.1	322.8	1019.8	4924.1	10707.1	12971.0	13319.5
67.5°	94.9	110.3	119.8	148.5	345.6	914.7	4208.0	9601.2	12273.2	12668.1
70°	83.1	99.3	104.4	130.1	359.5	845.6	3320.5	8066.7	10843.8	11208.5
72.5°	69.1	91.9	93.4	114.0	346.3	777.2	2366.1	5791.0	8234.4	8409.3
75°	59.6	76.5	84.6	95.6	291.2	580.1	1303.6	3584.5	5206.5	5402.1
77.5°	53.7	58.1	64.0	66.2	123.5	302.2	448.5	2210.2	2915.4	3136.0
80°	41.2	45.6	44.1	45.6	67.6	104.4	170.6	1036.0	1377.2	1500.0
82.5°	13.2	22.1	24.3	20.6	44.1	51.5	49.3	358.1	447.8	475.7
85°	2.9	8.1	3.7	0.0	14.7	26.5	3.7	54.4	107.4	79.4
87.5°	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

(END OF REPORT)