

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: P596041

Luminaire Tested: **MSA-SA1A-AMB-U-SLL-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596041
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-24)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-AMB-U-SLL-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 523 lumens
Efficiency: N/A
Efficacy: 25.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

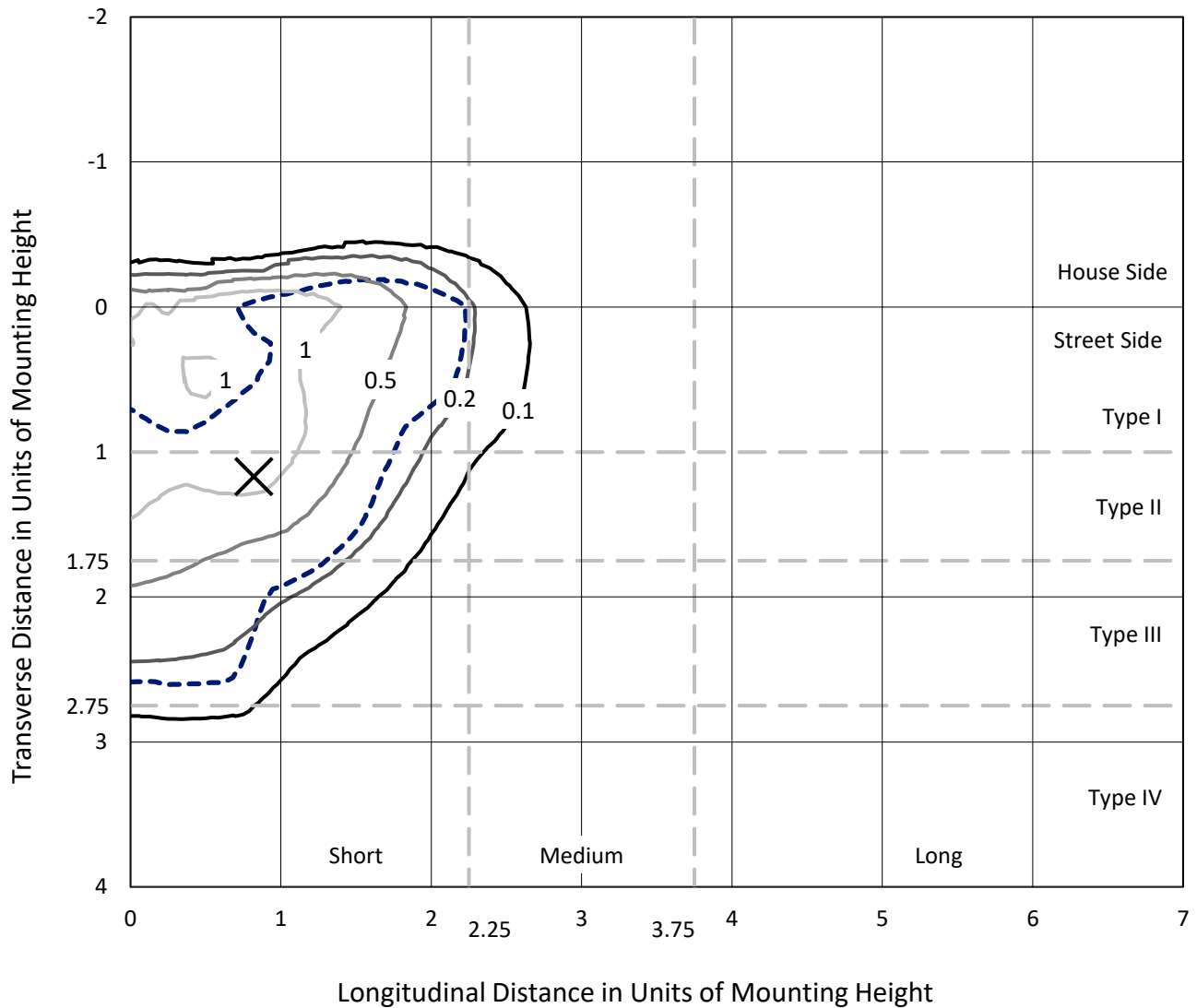
Input Watts (W): 20.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

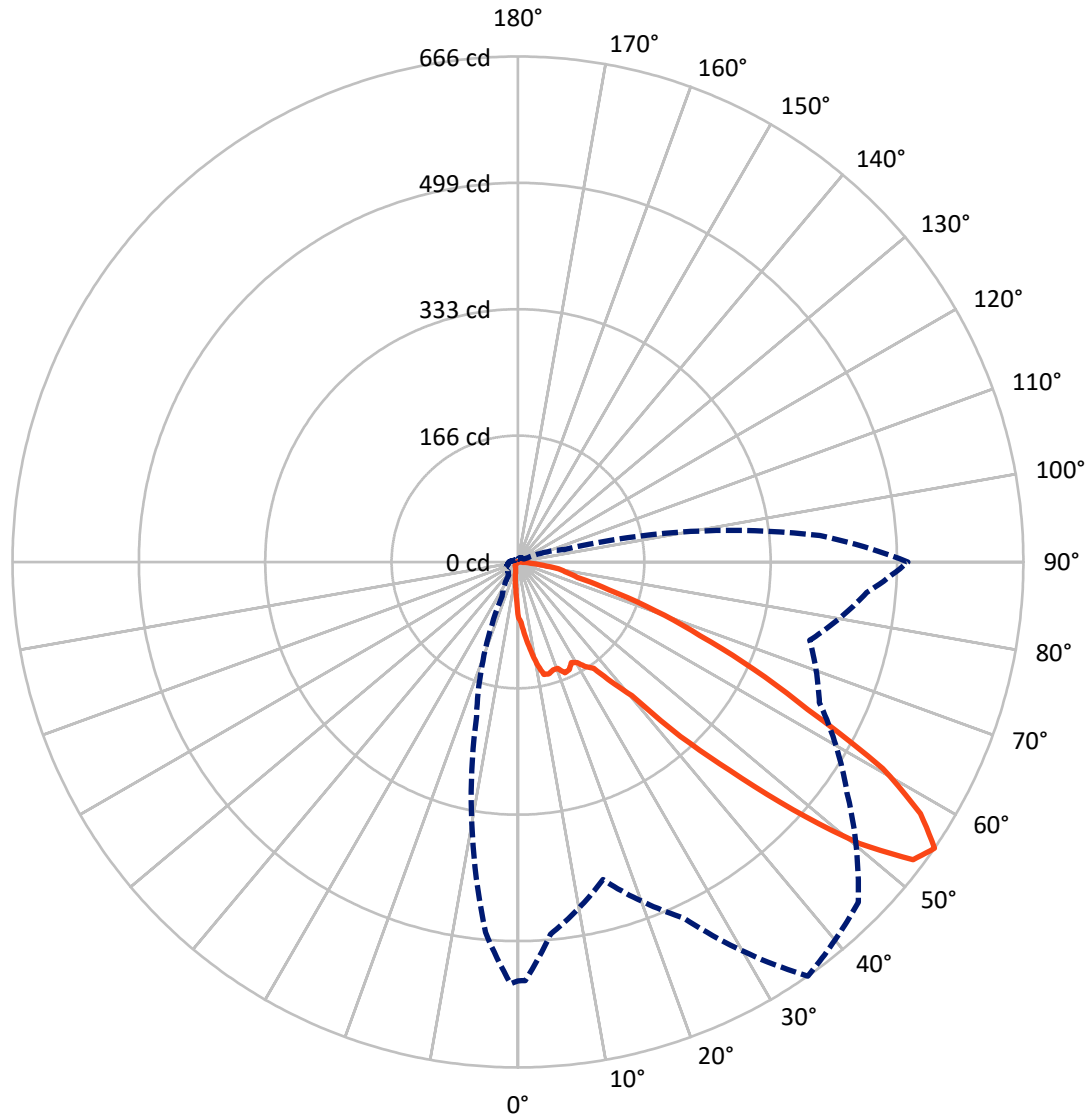
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P596041
CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

REPORT NUMBER: P596041

CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

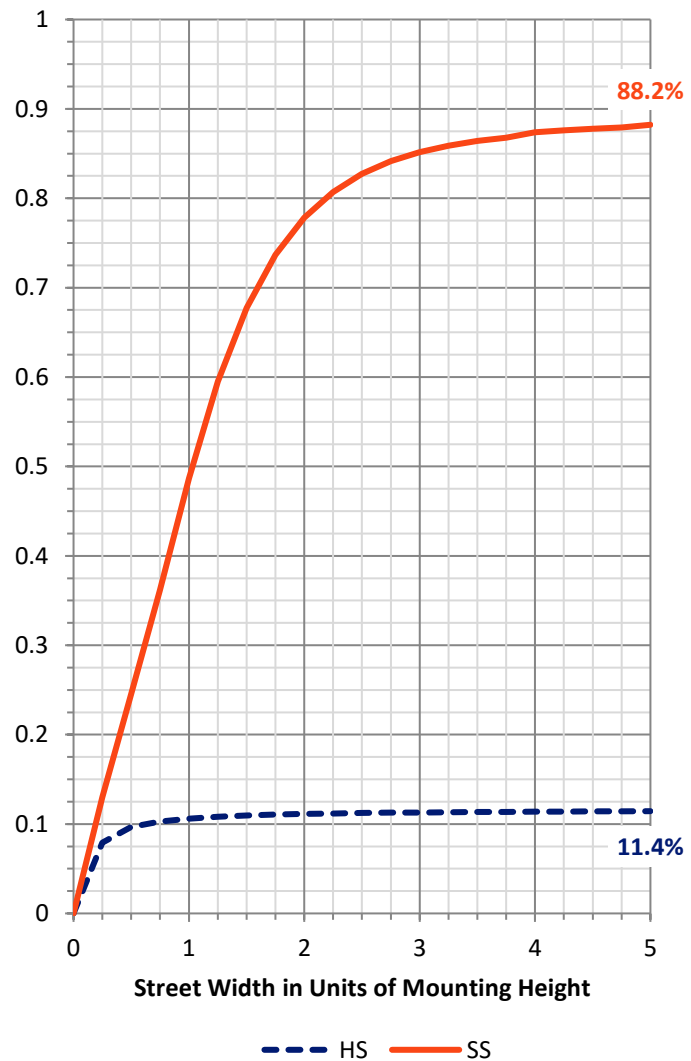
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	60.6	0.0	60.6
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	462.4	0.0	462.4
	% Fixture	88.4	0.0	88.4
Total	Lumens	523.0	0.0	523.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.5	1.2
10°-20°	16.9	3.2
20°-30°	37.2	7.1
30°-40°	55.9	10.7
40°-50°	100.9	19.3
50°-60°	146.0	27.9
60°-70°	113.5	21.7
70°-80°	40.3	7.7
80°-90°	5.8	1.1
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°	523.0	100.0
0°-180°	523.0	100.0

Coefficient of Utilization



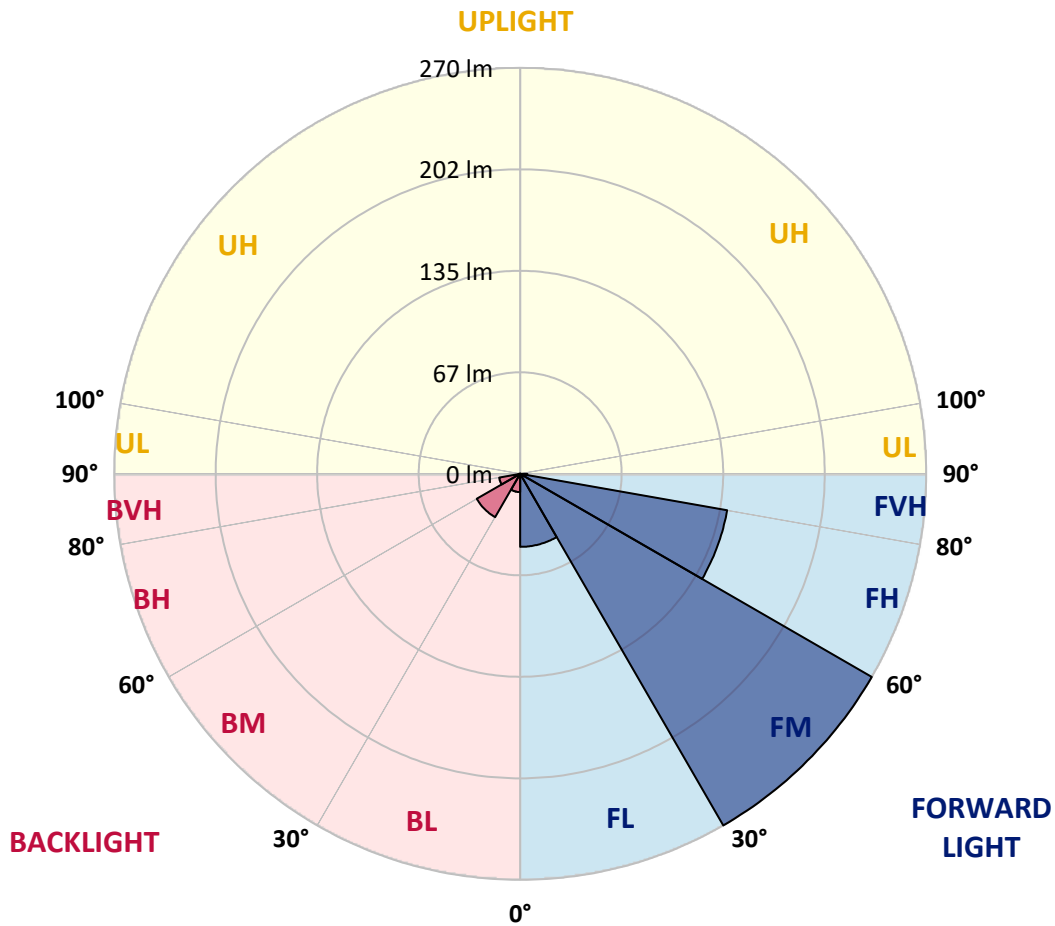
REPORT NUMBER: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	48.5	9.3			
FM (30°-60°)	269.6	51.5			
FH (60°-80°)	139.5	26.7			G0/660
FVH (80°-90°)	4.7	0.9			G0/10
BL (0°-30°)	12.1	2.3	B0/110		
BM (30°-60°)	33.3	6.4	B0/220		
BH (60°-80°)	14.2	2.7	B0/110		G0/110
BVH (80°-90°)	1.1	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type III Short





REPORT NUMBER: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	101.4	100.5	97.5	93.9	81.9	79.5	80.7	79.2	75.6	79.5	78.6
5°	119.1	116.1	112.2	111.6	103.5	96.9	87.0	86.7	95.7	117.9	109.8
7.5°	113.1	116.1	111.9	126.3	124.5	115.5	117.9	119.1	124.8	123.9	112.5
10°	105.0	104.7	105.6	117.3	122.1	136.2	142.2	129.9	126.0	123.0	102.0
12.5°	95.1	93.9	99.9	127.5	141.0	152.0	157.4	147.2	133.2	117.3	100.8
15°	108.0	107.4	114.3	129.6	145.7	152.9	153.2	146.6	138.6	123.0	103.8
17.5°	132.0	131.1	141.9	144.8	152.0	149.6	147.5	147.2	141.9	144.5	127.8
20°	163.4	160.7	172.7	164.6	148.1	149.6	144.8	145.7	150.5	177.2	170.3
22.5°	234.5	234.8	239.9	199.4	170.9	158.6	159.2	158.9	188.3	239.6	220.7
25°	290.6	289.4	302.0	248.0	187.7	157.1	154.1	165.8	213.2	268.1	260.6
27.5°	262.1	260.3	266.9	231.8	194.6	149.9	136.2	152.3	212.3	225.8	243.8
30°	262.7	259.7	266.9	215.0	185.9	153.8	137.1	156.2	191.3	220.7	260.6
32.5°	291.2	291.8	282.8	232.7	189.2	164.6	144.3	153.2	197.0	238.1	283.7
35°	316.4	315.2	300.8	251.9	207.8	172.1	156.8	174.2	212.6	263.9	304.4
37.5°	363.5	365.9	338.0	278.0	223.1	200.0	179.9	195.8	230.3	284.0	349.7
40°	407.3	413.0	370.4	304.4	264.2	231.2	227.9	230.6	257.3	294.5	387.2
42.5°	450.1	451.9	414.8	344.9	310.4	314.0	295.4	280.7	289.1	313.1	413.0
45°	480.1	481.3	432.8	357.8	363.5	390.8	400.7	352.1	333.5	337.1	430.7
47.5°	508.3	510.4	443.8	379.1	422.6	487.6	490.6	422.9	370.4	349.4	440.5
50°	519.4	524.8	459.7	396.8	462.4	582.4	576.1	464.8	395.9	363.8	434.5
52.5°	532.9	535.0	473.2	415.1	506.8	651.7	627.4	506.2	418.1	375.2	442.9
55°	551.8	551.5	492.4	433.1	517.6	665.8	634.0	529.0	438.1	398.0	461.2
57.5°	562.0	564.4	508.3	449.8	502.6	625.3	576.1	516.7	430.1	404.6	466.9
60°	548.5	546.7	510.7	447.4	460.6	552.1	493.9	451.6	407.0	404.3	447.7
62.5°	509.2	502.9	485.5	434.2	381.5	428.6	410.3	366.5	352.7	384.8	417.5
65°	445.3	446.5	434.8	409.1	332.9	341.3	330.8	295.1	285.5	344.3	350.3
67.5°	377.6	375.2	377.3	373.7	276.5	258.8	248.6	227.9	217.1	284.0	285.8
70°	286.7	278.9	298.7	316.1	216.5	191.9	169.7	152.0	160.4	223.4	214.1
72.5°	179.6	188.0	211.1	256.7	159.5	125.4	94.8	95.7	112.8	175.4	153.8
75°	105.0	107.1	129.0	186.2	107.4	81.0	67.8	67.8	84.3	130.5	108.0
77.5°	64.8	66.0	72.0	119.7	71.7	65.4	55.8	59.7	61.2	84.9	72.3
80°	33.3	33.0	35.4	57.6	50.4	54.3	41.1	47.1	42.3	48.3	48.6
82.5°	12.6	11.7	13.2	26.4	28.8	28.5	17.1	25.2	25.2	34.5	29.4
85°	0.6	0.6	0.9	12.9	10.8	9.6	5.1	8.1	10.5	13.2	9.3
87.5°	0.3	0.3	0.6	0.6	1.2	1.2	0.9	1.8	1.8	2.7	1.5
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: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	94.8	83.4	95.1	79.8	77.4	81.0	77.7	69.0	71.7	60.0	69.3
5°	114.0	101.7	94.2	84.3	72.0	62.7	60.0	57.6	60.9	54.6	61.2
7.5°	113.4	96.6	85.5	68.7	56.7	49.8	48.3	47.4	47.7	45.3	46.8
10°	96.9	82.8	71.4	59.1	54.3	47.4	41.4	36.0	33.6	29.4	27.9
12.5°	90.3	80.1	69.3	58.5	51.0	41.7	32.4	24.3	20.4	18.3	16.2
15°	93.0	82.8	69.3	55.8	42.0	30.3	20.7	15.9	13.2	12.0	11.4
17.5°	109.5	94.5	69.9	49.5	33.6	21.0	15.3	11.7	10.2	10.2	9.6
20°	149.0	115.8	67.5	40.5	24.0	15.9	11.7	10.2	9.6	9.3	9.0
22.5°	190.1	146.3	68.1	32.7	18.0	12.3	10.2	9.0	9.0	9.0	9.0
25°	222.8	163.7	67.8	26.1	14.4	10.8	9.3	8.7	8.4	8.4	8.4
27.5°	224.6	164.9	63.9	22.5	12.3	9.9	9.0	8.4	7.8	7.8	7.8
30°	247.4	203.0	64.5	19.2	11.1	9.0	8.4	7.8	7.2	7.5	7.2
32.5°	288.8	218.6	64.5	15.9	10.2	8.7	7.8	7.2	6.9	6.9	6.9
35°	317.0	244.1	60.0	14.7	9.6	8.4	7.5	6.9	6.6	6.3	6.3
37.5°	360.5	261.2	57.3	13.8	9.3	8.1	7.5	6.6	6.3	6.0	6.0
40°	391.1	280.1	53.4	12.3	9.6	8.1	7.2	6.3	5.7	5.4	5.4
42.5°	429.8	304.7	51.3	11.1	9.0	7.8	6.9	6.3	5.4	5.1	5.1
45°	466.0	323.9	50.4	10.2	8.4	8.4	6.9	6.0	5.1	4.8	4.5
47.5°	475.6	340.4	52.2	9.3	8.1	8.4	6.6	5.7	4.8	4.5	4.2
50°	481.9	365.6	55.8	9.0	7.8	8.1	6.9	5.4	4.8	4.2	3.9
52.5°	492.4	386.9	61.5	9.0	7.8	7.8	7.2	5.7	4.8	4.2	3.9
55°	513.7	399.2	63.0	9.3	7.8	7.2	6.9	5.7	4.8	3.9	3.6
57.5°	518.8	395.0	59.1	9.3	7.8	7.2	6.6	5.7	4.8	3.9	3.3
60°	483.4	367.1	50.7	9.0	7.5	6.9	6.3	5.4	4.5	3.6	3.0
62.5°	428.3	324.5	37.8	8.4	7.2	6.6	5.7	4.8	3.9	3.0	2.7
65°	357.5	257.9	26.1	7.5	6.6	6.0	5.1	4.5	3.6	2.7	2.4
67.5°	271.7	198.8	17.7	6.9	6.3	5.7	5.1	4.5	3.6	2.7	2.1
70°	198.8	132.3	11.7	6.3	6.0	5.7	4.8	3.9	3.3	2.4	2.1
72.5°	139.5	76.2	8.4	5.7	5.1	4.5	4.2	3.9	3.3	2.4	1.8
75°	96.0	48.6	6.9	5.1	4.5	3.9	3.9	3.9	3.6	3.0	2.1
77.5°	66.6	36.0	5.7	4.8	4.2	3.6	3.9	3.9	3.0	2.1	1.5
80°	46.8	20.4	4.2	3.9	3.6	3.3	3.0	3.0	2.4	1.5	0.9
82.5°	28.8	9.3	3.0	3.0	2.7	1.8	2.7	2.7	2.4	1.5	0.9
85°	7.5	2.4	2.1	2.4	2.1	1.5	2.1	2.4	2.1	1.8	0.9
87.5°	1.5	1.5	1.8	2.1	1.8	1.8	2.4	2.4	2.1	1.8	1.2
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: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	66.9	59.7	50.4	48.9	45.6	45.0	42.6	52.5	52.5	63.6	63.0
5°	57.3	53.1	46.5	35.1	30.3	32.4	38.1	46.2	49.2	56.4	54.6
7.5°	42.0	39.0	34.5	27.0	19.8	19.5	26.4	33.0	36.9	40.5	41.7
10°	26.1	25.5	22.2	20.4	19.2	16.8	17.1	22.5	26.7	29.7	30.6
12.5°	16.5	16.2	15.9	15.3	15.3	14.4	14.7	17.4	20.1	22.2	22.5
15°	11.4	11.4	11.7	12.3	12.9	12.9	12.9	14.1	15.3	15.9	16.8
17.5°	9.6	9.9	9.6	10.2	11.4	11.4	12.0	12.6	14.4	14.4	15.3
20°	9.0	8.7	8.7	9.3	9.9	10.5	11.4	14.7	16.8	16.5	15.9
22.5°	8.7	8.1	8.1	8.4	9.0	9.9	14.7	22.5	25.2	22.5	18.9
25°	8.1	7.8	7.5	7.8	8.4	9.6	20.7	29.7	38.4	34.5	28.8
27.5°	7.8	7.2	7.2	7.2	7.8	9.6	22.8	36.0	51.9	58.5	54.9
30°	7.2	6.6	6.6	6.9	6.9	8.4	19.5	36.9	62.1	73.5	80.7
32.5°	6.6	6.3	6.0	6.3	6.9	7.5	10.5	20.1	30.9	37.2	35.1
35°	6.3	5.7	5.7	5.7	6.3	6.9	8.1	10.5	14.1	14.7	15.0
37.5°	5.7	5.4	5.4	5.7	6.0	6.6	7.5	9.0	12.3	13.5	14.1
40°	5.4	5.1	5.1	5.1	5.7	6.0	7.2	8.7	11.7	13.8	14.1
42.5°	4.8	4.5	4.5	4.8	5.1	5.4	6.6	8.4	11.4	13.5	14.1
45°	4.5	4.2	4.2	4.5	4.8	5.1	6.3	7.8	11.4	13.2	14.1
47.5°	4.2	3.9	3.9	4.2	4.5	4.8	6.0	7.8	11.1	13.5	14.4
50°	3.9	3.6	3.6	3.9	4.2	4.5	5.4	7.5	11.1	13.2	14.1
52.5°	3.6	3.6	3.3	3.6	4.2	4.5	5.4	7.2	10.5	12.3	12.9
55°	3.6	3.3	3.3	3.6	3.9	4.5	5.1	6.9	9.9	11.4	12.3
57.5°	3.3	3.3	3.0	3.3	3.6	4.2	4.8	6.6	9.6	11.1	11.7
60°	3.0	3.0	3.0	3.0	3.6	3.9	4.5	6.3	9.0	10.5	11.4
62.5°	2.7	2.7	2.7	2.7	3.3	3.6	4.2	5.7	8.1	9.6	10.2
65°	2.4	2.4	2.4	2.4	3.0	3.0	3.6	5.4	7.5	8.4	9.0
67.5°	2.4	2.4	2.4	2.4	2.7	2.7	3.3	4.8	7.2	7.8	8.1
70°	2.4	2.4	2.1	2.1	2.4	2.7	3.3	4.5	6.6	7.2	7.5
72.5°	2.4	2.4	2.4	1.8	1.8	2.4	3.0	4.2	6.0	6.3	6.6
75°	2.7	2.7	2.4	1.8	1.5	2.1	2.7	3.9	5.4	5.4	5.7
77.5°	1.8	2.1	2.1	1.8	1.2	1.8	2.7	3.6	4.8	4.5	5.1
80°	1.5	1.8	1.8	1.5	0.9	1.5	2.1	3.0	3.6	3.6	3.9
82.5°	1.5	1.8	1.5	1.2	0.3	0.9	1.5	1.8	2.4	2.4	2.7
85°	1.5	1.5	1.5	0.9	0.0	0.9	1.2	1.5	1.8	1.5	2.1
87.5°	1.8	1.8	1.5	1.2	0.3	0.9	0.9	1.2	1.2	0.6	1.5
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: P596041
 CATALOG NUMBER: MSA-SA1A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	66.3	63.6	67.8	70.5	68.4	66.3	77.4	78.6	98.4	101.4
5°	60.9	58.8	56.7	55.2	60.9	74.1	88.2	91.2	111.9	119.1
7.5°	43.8	46.2	47.4	47.1	51.3	69.6	90.0	99.9	113.4	113.1
10°	34.5	39.0	43.2	47.4	50.7	58.5	78.9	93.0	101.7	105.0
12.5°	26.4	33.0	38.4	47.1	53.4	59.7	77.4	85.2	91.8	95.1
15°	19.2	22.8	29.4	39.9	48.0	59.1	76.8	95.4	102.9	108.0
17.5°	16.8	18.3	21.3	30.9	44.1	60.0	81.0	117.9	126.6	132.0
20°	16.2	17.4	20.1	26.4	39.6	54.3	94.5	141.6	150.5	163.4
22.5°	17.7	18.6	21.6	26.7	37.5	59.4	118.8	195.2	223.1	234.5
25°	21.0	23.4	33.3	42.6	52.5	73.8	136.8	245.3	274.4	290.6
27.5°	54.3	58.2	63.9	60.9	63.6	70.2	117.6	222.8	251.6	262.1
30°	78.3	66.0	51.9	42.0	42.0	46.2	109.2	229.1	254.9	262.7
32.5°	30.0	22.8	20.4	21.0	28.8	39.6	113.4	264.2	281.3	291.2
35°	14.7	15.6	17.1	19.8	27.0	41.4	119.7	288.5	311.0	316.4
37.5°	14.4	15.0	17.1	19.5	27.6	44.1	121.2	337.1	360.2	363.5
40°	15.0	15.3	16.8	19.5	27.0	48.0	129.6	373.4	409.1	407.3
42.5°	15.3	16.2	17.4	19.2	25.8	50.1	138.0	402.8	445.9	450.1
45°	15.9	16.8	18.0	19.5	24.3	51.3	146.9	426.8	484.9	480.1
47.5°	16.5	17.7	18.9	19.5	22.8	51.3	162.8	450.7	509.2	508.3
50°	16.5	17.7	19.5	18.9	22.2	48.6	182.0	469.3	526.0	519.4
52.5°	15.3	17.1	19.5	18.6	21.9	48.3	195.5	482.2	538.0	532.9
55°	14.1	17.1	19.2	17.7	21.6	49.5	211.1	489.7	555.7	551.8
57.5°	14.1	16.8	18.6	17.4	21.6	53.7	218.3	483.7	560.8	562.0
60°	13.5	17.1	16.8	16.8	23.1	54.6	215.9	442.3	535.6	548.5
62.5°	12.3	16.8	15.3	15.9	23.1	54.9	203.0	392.0	481.9	509.2
65°	11.1	13.5	14.4	14.4	22.2	52.5	171.8	330.2	423.5	445.3
67.5°	9.6	11.7	12.9	12.6	21.0	49.2	134.1	253.4	352.1	377.6
70°	8.7	10.2	11.1	11.1	18.6	45.0	99.3	179.0	260.9	286.7
72.5°	7.5	9.0	9.0	8.7	15.6	35.4	72.0	103.8	153.8	179.6
75°	6.3	7.2	7.2	6.6	10.5	23.4	38.7	67.2	93.9	105.0
77.5°	5.7	6.0	5.4	5.1	7.2	12.3	20.1	48.6	62.7	64.8
80°	4.8	4.5	4.2	3.9	5.1	6.3	9.0	24.6	31.5	33.3
82.5°	3.0	3.0	2.7	2.4	3.6	4.2	4.5	10.8	11.1	12.6
85°	2.1	1.8	1.8	0.9	2.1	2.4	1.8	0.6	0.6	0.6
87.5°	1.5	1.2	1.2	0.3	0.9	0.9	0.6	0.6	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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