

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: P596529

Luminaire Tested: **MSA-SA1C-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596529
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-SA1C-827-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 3363 lumens
Efficiency: N/A
Efficacy: 57.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

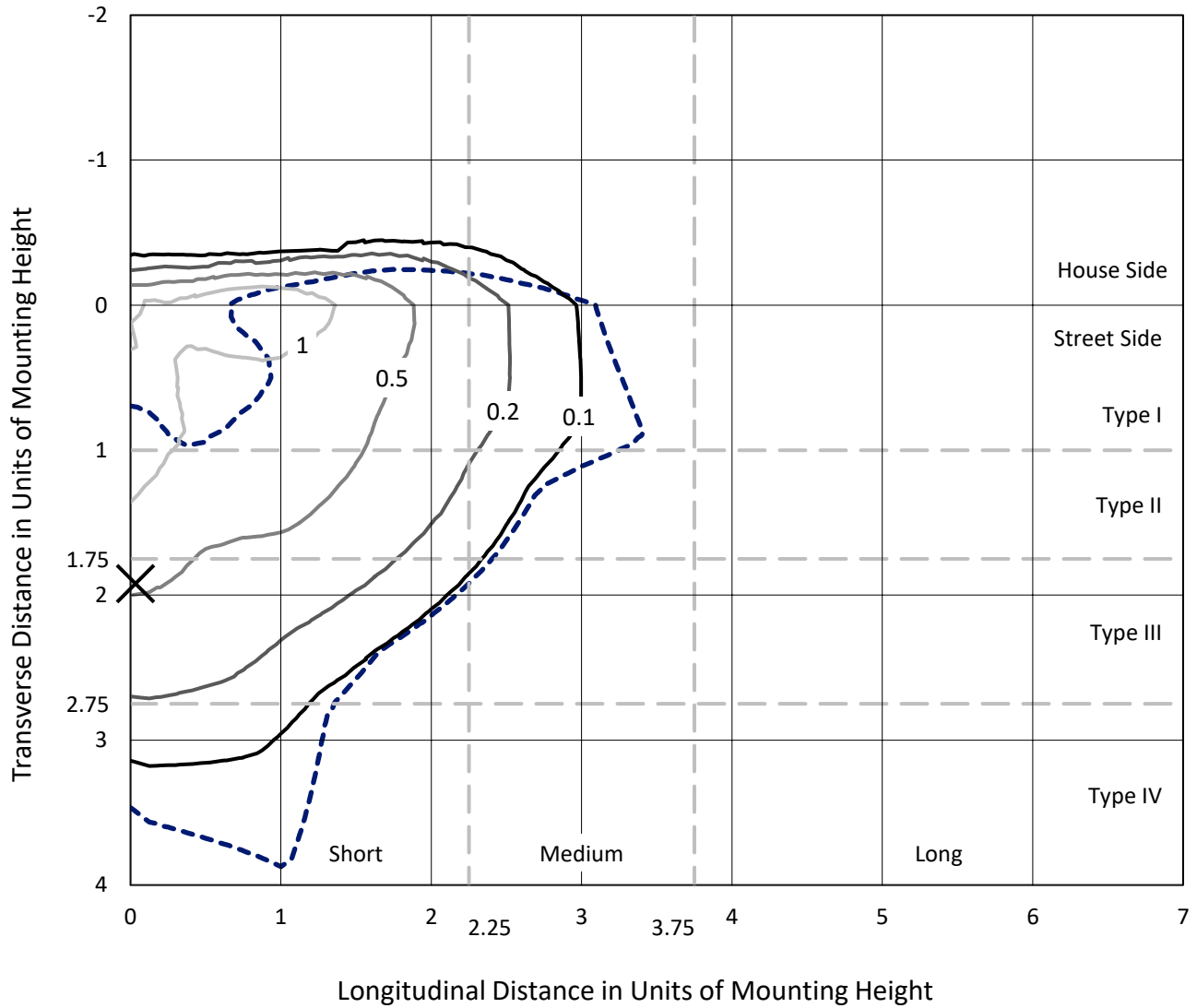
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596529
 CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

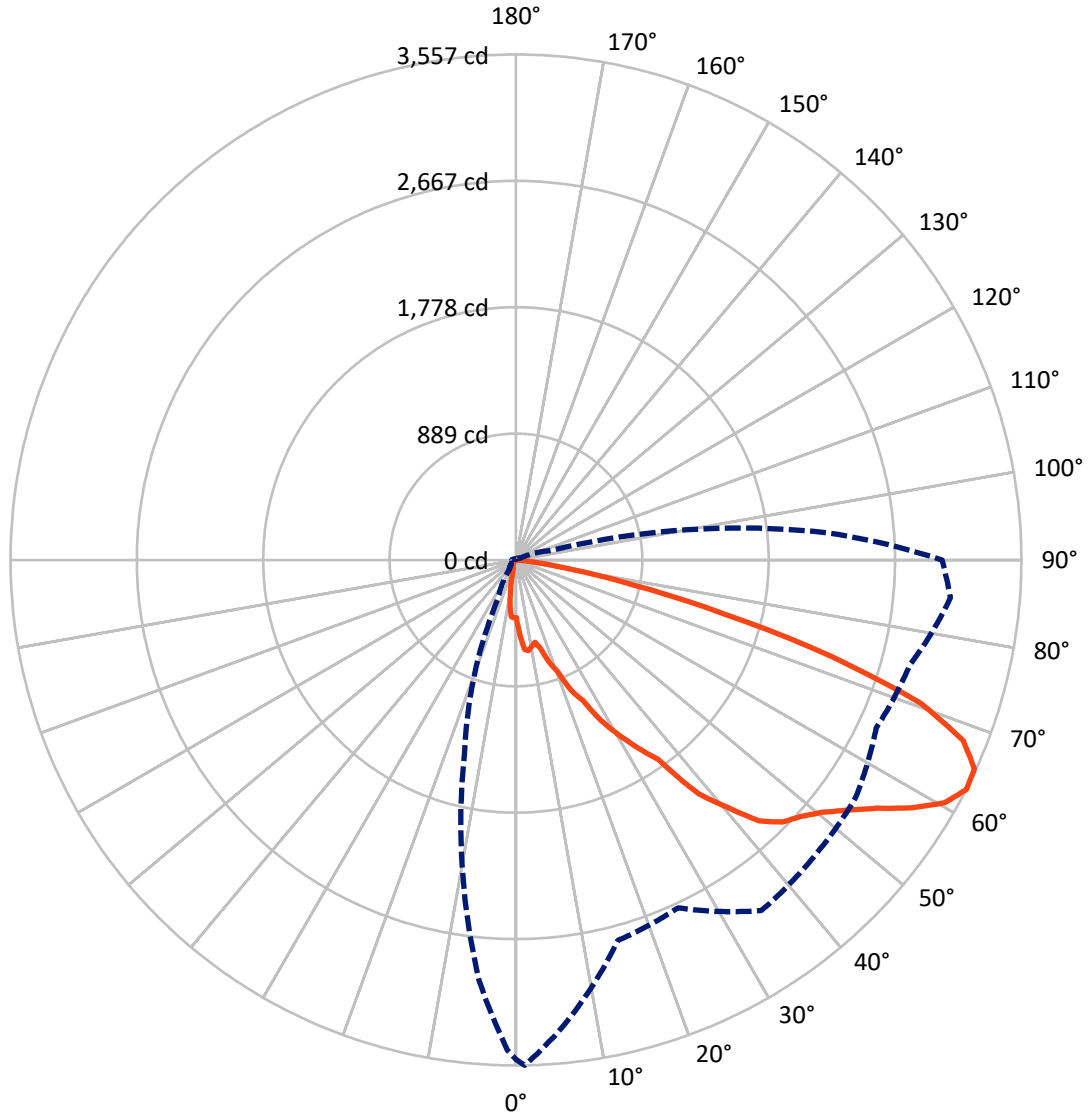
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P596529
CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596529
 CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

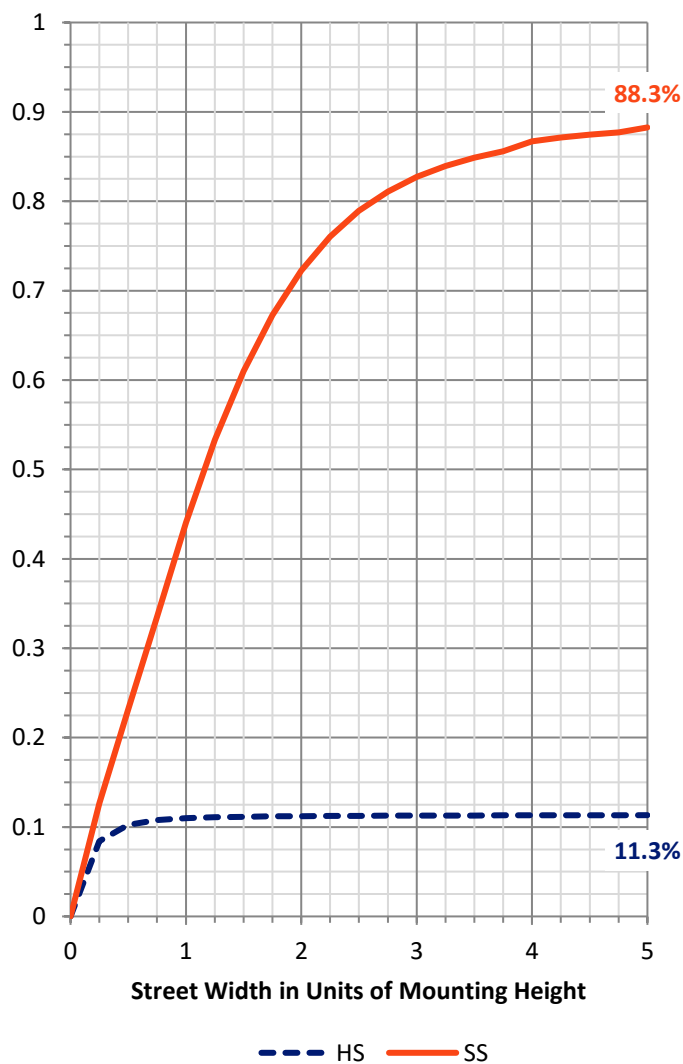
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	384.6	0.0	384.6
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	2978.4	0.0	2978.4
	% Fixture	88.6	0.0	88.6
Total	Lumens	3363.0	0.0	3363.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	1.3
10°-20°	118.2	3.5
20°-30°	191.1	5.7
30°-40°	320.1	9.5
40°-50°	523.5	15.6
50°-60°	774.9	23.0
60°-70°	889.6	26.5
70°-80°	439.9	13.1
80°-90°	60.4	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°	3363.0	100.0
0°-180°	3363.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596529

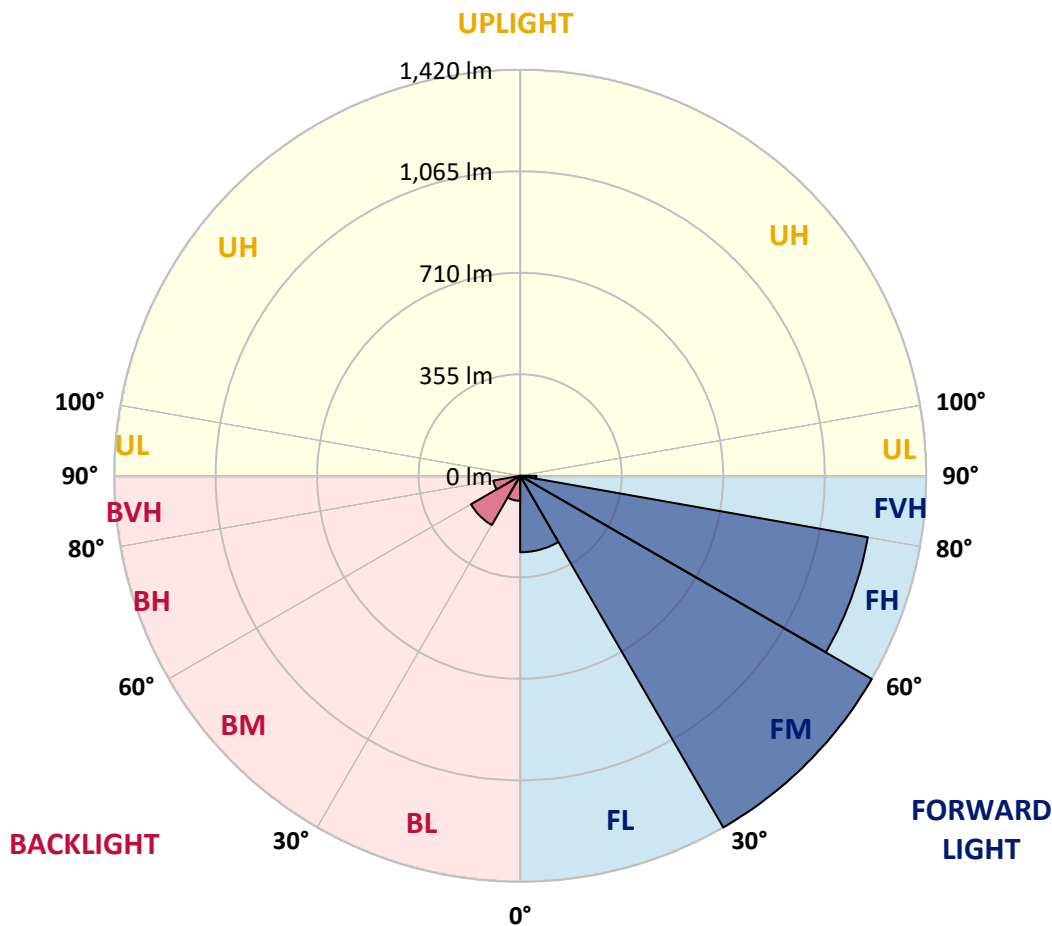
CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	267.1	7.9			
FM (30°-60°)	1419.8	42.2			
FH (60°-80°)	1234.4	36.7			G1/1800
FVH (80°-90°)	57.0	1.7			G1/100
BL (0°-30°)	87.5	2.6	B0/110		
BM (30°-60°)	198.6	5.9	B0/220		
BH (60°-80°)	95.1	2.8	B0/110		G0/110
BVH (80°-90°)	3.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





REPORT NUMBER: P596529

CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	522.4	524.9	513.2	511.7	484.5	518.4	519.3	523.4	498.5	450.2	517.6
5°	625.1	632.0	623.0	663.1	674.6	699.3	653.9	694.5	677.3	682.0	691.8
7.5°	637.4	644.5	663.5	730.5	792.4	776.9	771.9	787.3	785.9	750.5	768.1
10°	611.9	617.8	649.5	771.5	798.6	868.3	885.4	850.1	835.7	758.1	724.2
12.5°	584.1	594.1	634.3	780.7	861.8	932.3	988.5	938.3	890.6	808.0	776.9
15°	637.4	643.0	706.2	799.9	870.8	919.5	965.5	948.8	941.5	882.1	776.9
17.5°	741.8	754.9	800.7	846.9	902.8	932.1	921.2	916.0	897.5	990.8	881.9
20°	816.2	840.5	900.5	920.4	876.0	903.4	896.7	892.1	877.5	1051.1	1002.7
22.5°	977.2	999.6	1000.7	1007.8	904.3	860.7	849.5	850.9	917.0	1069.2	1152.9
25°	1086.8	1094.5	1155.0	1104.4	981.8	873.7	831.3	850.3	945.6	1198.7	1294.1
27.5°	1266.2	1284.4	1322.1	1150.8	1028.1	865.4	798.0	867.0	1020.7	1241.6	1451.1
30°	1412.4	1429.8	1490.6	1214.2	1068.4	906.3	812.4	900.5	1067.4	1330.0	1592.1
32.5°	1531.0	1576.0	1645.0	1312.2	1066.9	953.2	885.8	889.4	1124.9	1444.4	1731.7
35°	1682.6	1724.6	1773.1	1379.6	1136.6	968.4	907.4	998.6	1210.4	1564.0	1919.5
37.5°	2024.3	2087.7	1991.9	1549.6	1217.9	1105.2	992.9	1065.9	1299.9	1686.0	2177.6
40°	2232.8	2286.3	2193.7	1636.4	1358.5	1174.2	1145.4	1182.8	1387.5	1749.1	2372.1
42.5°	2438.2	2508.8	2354.1	1767.1	1492.1	1368.9	1290.3	1320.4	1514.1	1901.3	2591.0
45°	2587.0	2630.6	2388.8	1835.5	1675.7	1590.8	1538.5	1493.6	1690.8	1999.0	2732.2
47.5°	2661.7	2696.6	2457.2	1857.2	1784.9	1825.6	1940.2	1846.5	1847.2	2069.7	2808.3
50°	2765.2	2789.5	2495.5	1883.1	1903.6	2191.4	2249.3	2049.8	2025.8	2140.6	2820.8
52.5°	2910.6	2922.5	2569.9	1951.3	2081.2	2477.9	2498.8	2418.1	2204.6	2272.5	2848.3
55°	3104.0	3083.1	2702.7	2094.6	2266.5	2687.8	2715.7	2645.4	2429.4	2404.1	2933.8
57.5°	3312.5	3288.5	2899.5	2296.6	2467.6	2848.2	2864.8	2870.4	2578.7	2520.6	3079.1
60°	3462.0	3466.4	3147.3	2528.3	2592.5	3001.7	2968.3	2917.7	2729.3	2691.4	3149.8
62.5°	3514.3	3556.6	3340.3	2771.1	2700.2	3011.2	2959.5	2916.8	2796.8	2867.5	3068.7
65°	3471.6	3545.5	3385.1	2984.4	2765.4	2891.1	2837.2	2809.8	2794.7	2939.4	2889.4
67.5°	3301.8	3394.3	3256.7	2986.3	2528.5	2461.6	2525.2	2612.1	2561.8	2879.8	2638.1
70°	2921.4	3022.7	2958.7	2811.2	2106.3	1936.7	2006.9	2138.1	2102.7	2561.3	2268.4
72.5°	2191.8	2322.1	2334.8	2426.9	1672.1	1457.6	1467.8	1464.1	1525.3	2065.3	1770.2
75°	1408.0	1509.4	1646.4	1958.4	1270.2	1064.2	966.8	943.1	1057.1	1613.8	1267.3
77.5°	817.3	829.4	892.7	1477.5	909.7	766.8	700.4	734.4	774.2	1126.3	840.0
80°	390.9	397.1	423.1	760.2	632.0	663.6	612.5	650.6	531.6	647.4	476.6
82.5°	124.0	125.3	129.7	373.5	392.5	439.6	281.7	377.7	328.7	391.3	317.4
85°	20.7	35.3	43.5	107.9	221.5	148.3	61.1	134.7	183.4	246.8	144.1
87.5°	0.0	0.0	0.0	1.9	18.0	8.4	1.3	7.7	28.2	55.0	6.5
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: P596529
 CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	537.2	550.4	500.6	455.9	467.2	458.2	444.6	421.4	367.8	407.2	404.6
5°	691.2	666.7	599.3	567.8	529.5	471.1	464.0	419.1	399.4	402.6	399.8
7.5°	744.9	701.0	641.4	546.7	456.9	372.5	346.7	317.4	311.4	324.1	332.3
10°	702.7	656.2	604.0	486.4	417.2	356.3	292.4	251.4	229.2	226.5	228.8
12.5°	722.1	671.9	564.6	474.5	402.3	347.1	275.8	213.9	165.6	169.2	159.6
15°	735.5	677.8	555.2	449.6	371.4	297.6	211.8	149.9	110.4	98.9	92.0
17.5°	814.3	731.9	543.3	420.8	328.3	231.7	133.0	86.8	74.0	69.9	66.7
20°	915.5	798.4	543.1	390.6	264.7	144.9	83.0	62.9	59.8	62.1	59.6
22.5°	1033.1	886.9	572.0	352.8	189.9	91.4	64.6	55.8	52.7	54.6	54.8
25°	1151.6	1019.7	595.6	317.0	132.2	70.1	57.5	51.4	47.9	49.6	48.7
27.5°	1365.4	1129.7	590.3	271.2	97.4	61.7	53.5	48.1	42.9	45.6	45.4
30°	1505.3	1323.9	611.1	207.0	77.2	54.0	49.8	43.9	38.3	41.4	41.2
32.5°	1672.6	1407.2	633.8	158.9	64.2	51.2	44.8	39.1	35.8	37.8	37.4
35°	1860.6	1572.0	592.2	132.2	55.8	46.2	39.7	35.3	32.4	33.3	33.3
37.5°	2192.7	1709.8	567.3	107.7	51.9	41.8	37.2	31.8	30.1	30.1	31.0
40°	2381.3	1920.2	492.9	85.3	53.1	38.5	34.7	29.1	26.8	26.6	27.6
42.5°	2626.6	2041.5	446.3	69.0	48.1	37.6	31.8	26.4	23.8	23.6	24.5
45°	2772.1	2109.4	380.8	54.2	43.1	43.7	29.5	24.3	20.3	19.5	21.3
47.5°	2863.9	2199.3	343.6	43.1	37.6	43.5	28.7	21.1	17.1	16.1	17.6
50°	2910.4	2243.7	336.3	37.0	32.6	38.9	33.0	17.6	14.6	13.2	14.6
52.5°	2958.9	2316.0	339.0	34.1	28.7	31.2	31.2	15.1	12.8	11.3	12.3
55°	3056.9	2422.7	333.1	32.4	26.4	23.8	20.1	13.4	11.7	10.0	10.9
57.5°	3177.2	2499.4	333.1	30.9	24.5	20.3	16.1	12.5	10.7	8.6	9.4
60°	3154.4	2418.7	316.6	29.3	23.0	19.0	14.6	11.5	10.0	7.9	8.4
62.5°	2997.8	2199.3	256.4	27.0	21.7	18.0	13.2	10.9	9.4	6.9	7.5
65°	2813.9	1966.2	178.2	24.5	20.1	16.3	11.9	10.3	8.6	6.1	6.5
67.5°	2592.3	1688.5	98.9	22.0	18.6	14.2	10.9	10.2	8.2	5.6	5.9
70°	2207.9	1274.8	53.1	20.1	17.4	13.0	10.3	10.2	8.2	5.4	5.6
72.5°	1657.5	802.8	31.0	18.4	15.9	12.1	9.8	10.3	8.0	5.2	5.2
75°	1127.8	487.3	22.2	15.7	14.2	10.2	9.4	10.0	8.2	5.2	4.8
77.5°	766.8	342.5	18.2	14.2	12.8	9.0	9.6	10.0	8.2	4.2	3.3
80°	478.7	176.7	13.8	11.3	11.1	7.9	9.6	8.6	5.4	1.0	0.0
82.5°	334.8	65.7	8.0	8.6	8.6	5.6	7.5	6.1	3.1	0.0	0.0
85°	140.5	11.3	4.4	6.1	5.4	3.3	5.9	4.6	1.9	0.0	0.0
87.5°	2.5	0.0	1.7	3.6	3.8	1.9	3.1	1.9	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: P596529
 CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	417.2	399.0	360.7	379.1	377.1	385.6	386.3	366.8	409.0	435.0	438.9
5°	400.1	387.9	385.8	375.2	372.5	388.1	379.6	379.1	399.4	429.1	429.3
7.5°	332.5	323.1	327.5	315.2	283.6	285.5	288.4	300.5	317.9	337.5	344.6
10°	228.2	252.6	234.8	233.2	230.0	219.8	211.8	218.1	240.7	258.7	265.4
12.5°	162.9	166.7	177.7	173.6	179.2	170.6	167.3	187.0	209.1	227.5	240.7
15°	95.2	101.8	108.3	122.1	127.6	125.9	135.9	152.4	170.2	178.6	194.9
17.5°	67.1	67.6	69.0	83.9	93.7	97.5	103.5	115.9	123.2	127.1	133.8
20°	58.6	56.9	54.6	63.0	72.2	77.0	75.3	85.1	91.0	94.9	99.7
22.5°	53.1	50.2	48.9	51.7	58.8	63.0	63.8	69.6	78.6	81.3	82.8
25°	47.9	46.0	45.0	46.6	50.4	54.4	55.2	62.7	70.7	71.9	74.9
27.5°	44.5	40.8	41.2	42.4	44.1	49.1	50.6	54.8	66.5	67.8	68.8
30°	40.8	37.0	38.1	39.3	38.5	44.7	47.0	51.7	63.0	65.2	66.3
32.5°	37.2	34.3	34.1	35.3	36.6	39.9	44.8	50.4	60.7	63.6	66.5
35°	33.2	30.9	31.2	31.4	33.2	37.4	41.0	43.9	51.0	52.5	53.5
37.5°	30.3	28.4	28.0	29.9	31.6	34.9	36.2	37.6	47.0	50.4	50.6
40°	26.8	25.7	25.7	27.0	30.9	30.5	32.2	36.4	45.4	49.1	49.4
42.5°	24.3	22.8	23.2	24.5	27.2	25.3	28.7	34.9	44.8	48.5	48.3
45°	20.5	20.1	20.9	22.0	23.2	21.5	26.8	33.3	42.9	47.7	46.4
47.5°	17.1	17.1	18.0	19.2	18.6	19.2	24.3	31.2	41.8	46.2	45.2
50°	14.0	14.2	15.1	17.1	15.3	16.9	21.8	29.1	39.9	44.7	43.9
52.5°	11.9	12.1	12.6	14.0	13.2	15.3	20.1	27.0	37.9	42.0	41.6
55°	10.3	10.7	10.7	11.5	11.9	14.4	18.2	24.9	35.1	39.5	38.7
57.5°	9.2	9.6	9.4	10.0	10.3	12.6	16.3	22.6	32.2	35.8	34.7
60°	8.2	8.6	8.4	9.2	9.0	10.9	14.2	20.1	29.1	32.0	31.0
62.5°	7.3	7.7	7.7	8.0	8.2	9.2	12.3	17.8	26.1	28.4	27.6
65°	6.5	6.9	7.1	6.9	7.3	7.9	10.3	16.1	22.6	24.9	23.8
67.5°	5.9	6.3	6.7	5.9	6.3	6.5	8.8	14.4	19.9	21.8	20.9
70°	5.7	5.9	5.9	5.2	5.0	5.2	7.7	12.3	17.4	19.4	18.0
72.5°	5.4	5.6	5.4	4.2	3.6	4.0	6.5	10.3	14.8	16.3	15.1
75°	5.0	5.2	5.0	3.4	2.3	2.9	5.4	9.0	12.6	13.4	12.8
77.5°	4.2	4.6	4.6	2.5	0.8	1.7	4.0	7.3	10.5	10.5	10.7
80°	0.4	1.1	1.9	1.3	0.0	0.2	1.3	3.8	6.7	6.5	7.1
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.3	1.7	1.9
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: P596529
 CATALOG NUMBER: MSA-SA1C-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1	405.1
2.5°	429.8	423.9	431.4	454.2	445.0	446.7	440.6	478.3	521.1	522.4
5°	429.7	424.3	435.4	434.4	460.7	489.3	516.9	561.5	624.7	625.1
7.5°	341.3	373.1	381.4	378.9	412.6	451.9	494.4	579.9	631.8	637.4
10°	307.8	321.6	338.4	344.6	358.6	395.9	444.0	540.8	599.1	611.9
12.5°	266.8	310.8	333.3	376.8	384.8	390.2	466.1	550.2	585.7	584.1
15°	221.0	259.3	294.7	347.8	369.7	426.0	485.8	596.0	617.1	637.4
17.5°	156.4	185.3	239.7	295.5	362.2	423.5	540.2	677.8	717.7	741.8
20°	104.6	118.6	167.9	241.7	326.2	387.1	562.5	751.8	795.3	816.2
22.5°	84.9	91.6	117.1	177.1	278.6	385.4	571.5	832.5	949.4	977.2
25°	74.7	79.3	92.9	131.1	231.3	377.7	621.3	923.3	1064.4	1086.8
27.5°	65.3	72.2	82.4	108.1	198.3	372.4	646.6	1075.9	1244.1	1266.2
30°	62.5	70.9	80.7	98.5	175.4	351.7	686.8	1213.5	1373.1	1412.4
32.5°	67.5	70.3	75.1	90.3	157.5	329.8	757.6	1377.9	1479.8	1531.0
35°	53.5	58.6	67.1	82.8	150.1	328.7	797.6	1483.7	1651.0	1682.6
37.5°	52.3	57.1	68.0	80.7	159.1	337.5	857.0	1700.4	1959.5	2024.3
40°	50.8	56.9	67.3	79.7	159.1	346.1	895.0	1873.9	2167.1	2232.8
42.5°	50.2	58.1	67.1	83.7	154.1	350.9	952.3	2046.9	2386.3	2438.2
45°	49.8	59.2	67.6	88.5	152.9	366.6	984.6	2131.0	2527.4	2587.0
47.5°	48.9	59.2	75.5	85.7	146.6	365.1	1026.6	2255.8	2611.5	2661.7
50°	48.1	59.6	85.5	80.3	147.6	355.7	1083.5	2372.9	2729.3	2765.2
52.5°	46.4	60.9	83.9	72.8	144.7	354.7	1168.4	2539.4	2884.4	2910.6
55°	42.5	59.2	75.9	63.6	134.5	343.8	1280.9	2756.0	3099.4	3104.0
57.5°	39.1	55.0	63.4	58.5	112.7	345.1	1377.9	2955.3	3291.0	3312.5
60°	35.6	57.1	49.3	54.4	93.3	320.6	1424.8	3031.6	3430.6	3462.0
62.5°	32.4	52.7	42.0	50.0	83.2	297.8	1392.3	2970.2	3448.4	3514.3
65°	28.7	36.6	35.5	44.8	84.1	265.8	1283.4	2790.7	3380.7	3471.6
67.5°	24.7	28.7	31.2	38.7	90.1	238.4	1096.8	2502.4	3198.9	3301.8
70°	21.7	25.9	27.2	33.9	93.7	220.4	865.4	2102.5	2826.3	2921.4
72.5°	18.0	24.0	24.3	29.7	90.3	202.6	616.7	1509.4	2146.2	2191.8
75°	15.5	19.9	22.0	24.9	75.9	151.2	339.8	934.2	1357.0	1408.0
77.5°	14.0	15.1	16.7	17.2	32.2	78.8	116.9	576.1	759.9	817.3
80°	10.7	11.9	11.5	11.9	17.6	27.2	44.5	270.0	358.9	390.9
82.5°	3.4	5.7	6.3	5.4	11.5	13.4	12.8	93.3	116.7	124.0
85°	0.8	2.1	1.0	0.0	3.8	6.9	1.0	14.2	28.0	20.7
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

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