

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: P367798

Luminaire Tested: **MSA-SA3B-727-U-SLL**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-727-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10531 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

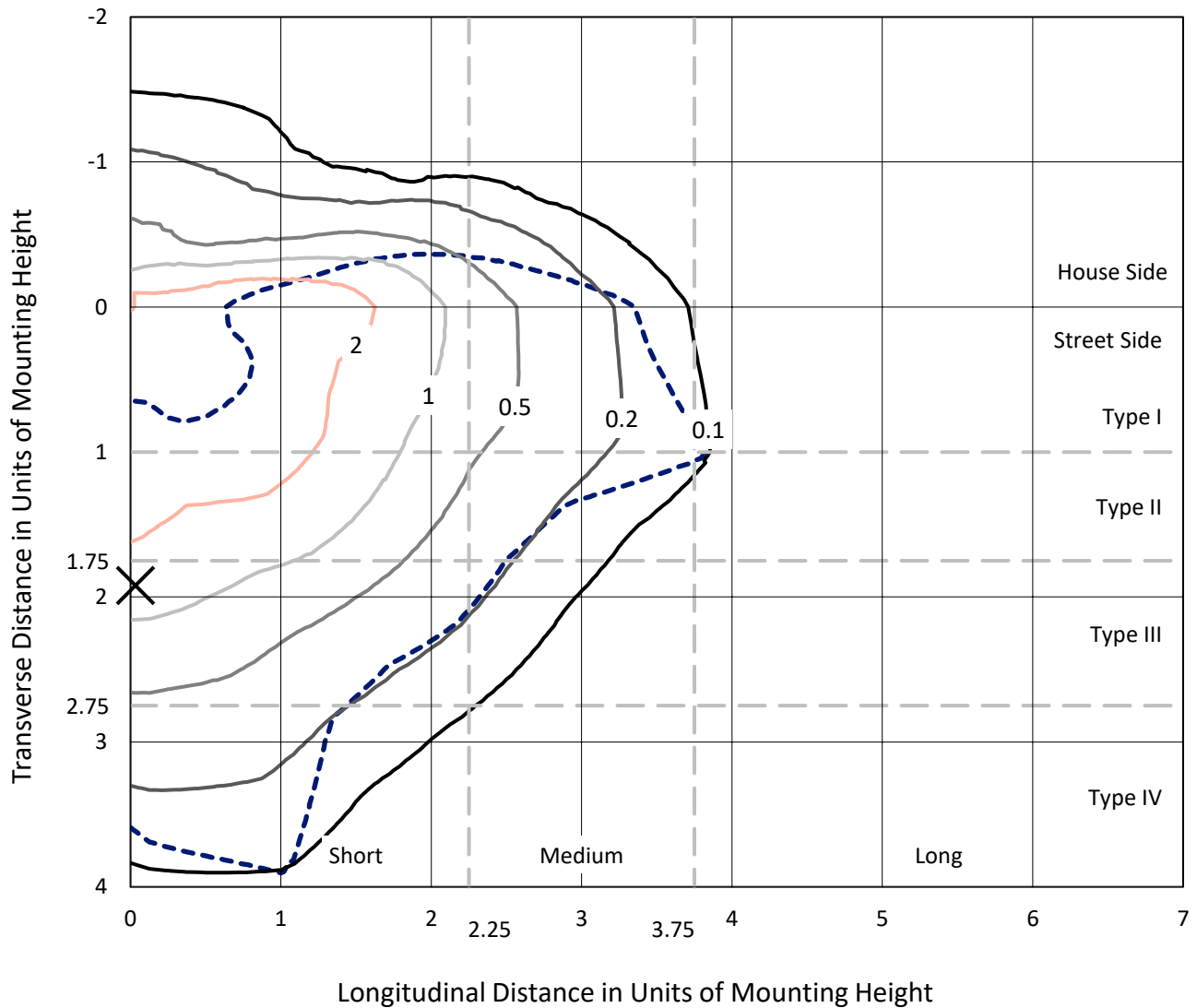
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367798
 CATALOG NUMBER: MSA-SA3B-727-U-SLL

Iso-Footcandle Lines of Horizontal Illumination

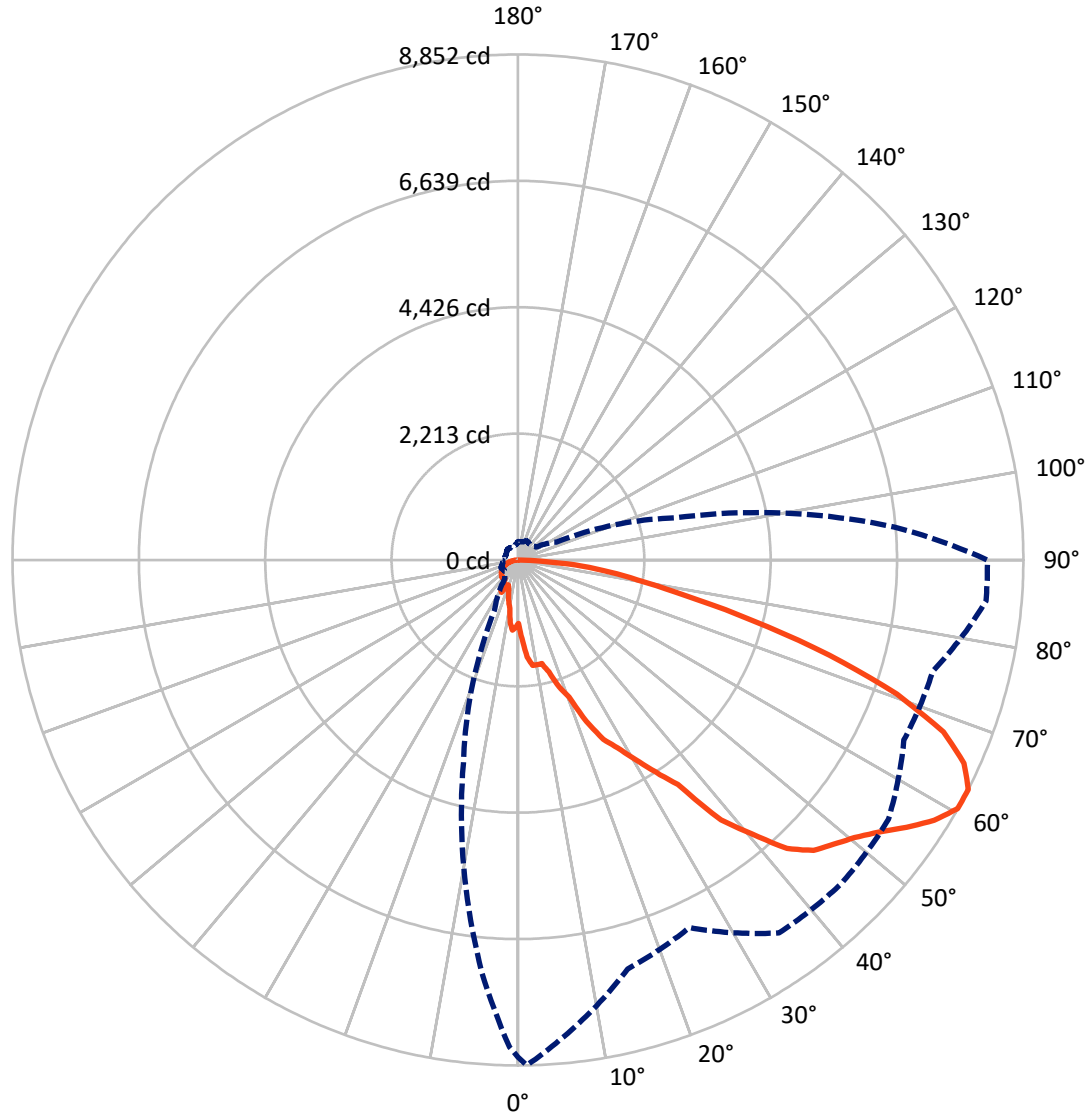
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type IV - Short - N/A

REPORT NUMBER: P367798
CATALOG NUMBER: MSA-SA3B-727-U-SLL

Luminous Intensity Polar Plot



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

REPORT NUMBER: P367798
 CATALOG NUMBER: MSA-SA3B-727-U-SLL

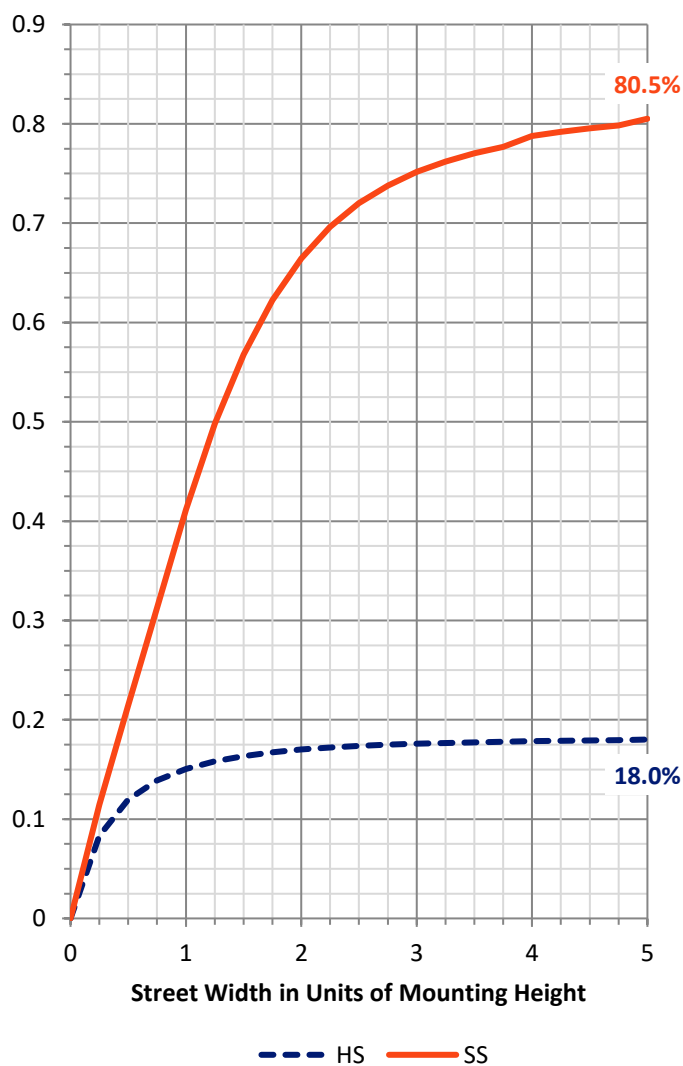
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1917.6	0.0	1917.6
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	8613.4	0.0	8613.4
	% Fixture	81.8	0.0	81.8
Total	Lumens	10531.0	0.0	10531.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	1.2
10°-20°	369.9	3.5
20°-30°	653.1	6.2
30°-40°	1017.3	9.7
40°-50°	1675.1	15.9
50°-60°	2390.7	22.7
60°-70°	2535.1	24.1
70°-80°	1400.3	13.3
80°-90°	362.2	3.4
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°	10531.0	100.0
0°-180°	10531.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367798

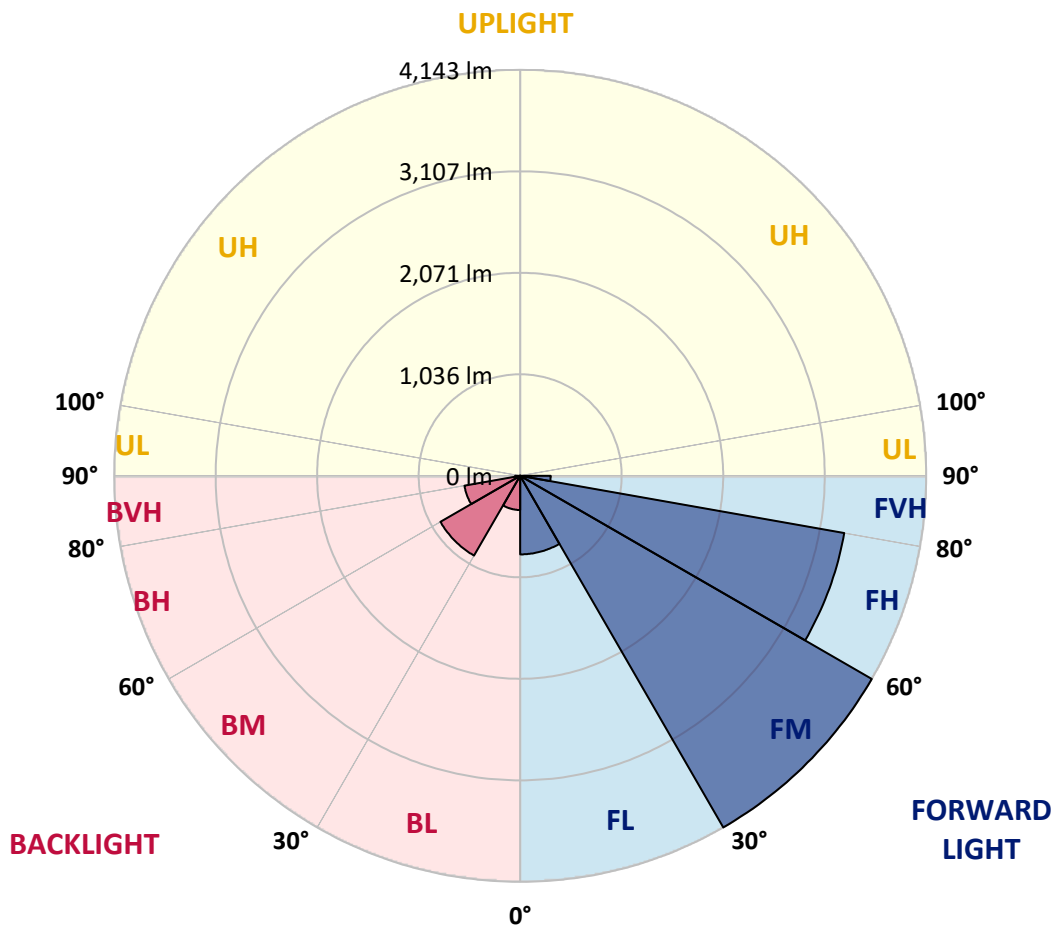
CATALOG NUMBER: MSA-SA3B-727-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	801.6	7.6			
FM (30°-60°)	4143.0	39.3			
FH (60°-80°)	3357.7	31.9			G2/5000
FVH (80°-90°)	311.1	3.0			G3/500
BL (0°-30°)	348.8	3.3	B1/500		
BM (30°-60°)	940.1	8.9	B1/1000		
BH (60°-80°)	577.7	5.5	B2/1000		G2/1000
BVH (80°-90°)	51.1	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P367798
 CATALOG NUMBER: MSA-SA3B-727-U-SLL

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5
2.5°	1365.5	1377.2	1353.2	1326.1	1214.2	1322.1	1289.9	1349.6	1330.2	1200.4	1438.1
5°	1687.4	1708.9	1685.4	1766.7	1771.8	1792.7	1599.0	1719.6	1677.7	1667.0	1787.1
7.5°	1842.8	1864.8	1924.6	2069.2	2182.1	2079.9	1967.0	1941.9	1909.2	1823.9	1896.5
10°	1852.5	1864.8	1945.0	2251.6	2306.3	2378.9	2305.8	2133.6	2062.5	1877.0	1821.8
12.5°	1823.4	1861.7	1965.4	2339.0	2501.5	2580.7	2598.6	2407.0	2232.7	2021.2	1993.0
15°	2019.1	2032.9	2181.6	2401.4	2513.3	2580.2	2638.5	2520.4	2465.8	2298.1	2072.8
17.5°	2299.7	2338.0	2459.6	2540.9	2616.5	2629.3	2581.2	2535.3	2448.4	2672.2	2432.5
20°	2489.8	2563.9	2713.1	2728.4	2569.5	2597.6	2591.0	2594.0	2544.5	2958.4	2826.5
22.5°	2992.6	3072.9	3093.3	3004.4	2704.9	2576.6	2602.2	2676.3	2871.5	3226.2	3375.4
25°	3448.0	3479.1	3665.7	3436.7	2959.4	2679.9	2638.0	2829.6	3148.0	3676.9	3783.2
27.5°	3685.6	3726.0	3850.2	3351.9	2991.1	2547.0	2448.9	2740.7	3065.2	3464.8	3931.4
30°	3989.7	4054.1	4223.2	3436.7	3086.7	2633.9	2416.7	2695.7	3054.5	3603.8	4245.2
32.5°	4302.9	4428.1	4553.9	3735.7	3073.4	2766.8	2622.6	2645.1	3151.6	3895.1	4570.2
35°	4717.9	4828.3	4936.6	3908.4	3341.2	2877.6	2734.6	2972.7	3401.0	4232.9	5023.5
37.5°	5605.1	5779.8	5494.2	4400.0	3632.5	3377.4	3119.4	3260.4	3664.6	4514.5	5764.0
40°	6170.3	6301.6	6025.6	4734.8	4145.5	3714.2	3671.8	3683.6	4028.0	4755.7	6262.2
42.5°	6731.9	6909.7	6470.8	5194.2	4765.9	4409.7	4191.0	4176.2	4434.8	5189.1	6829.0
45°	7150.9	7255.7	6623.6	5581.5	5431.3	5167.1	5003.1	4742.9	4969.3	5489.0	7179.6
47.5°	7350.2	7435.6	6869.4	5806.9	5862.6	5876.4	6172.3	5728.7	5436.4	5691.9	7363.5
50°	7599.1	7639.5	7014.0	6005.2	6272.5	6878.6	6949.6	6197.9	5891.2	5913.2	7472.4
52.5°	7896.5	7913.4	7225.0	6234.1	6686.9	7537.8	7427.9	6993.0	6324.1	6317.4	7677.3
55°	8270.6	8260.4	7489.8	6542.3	6982.8	7929.8	7846.5	7529.6	6795.8	6652.2	7996.2
57.5°	8603.3	8597.2	7840.8	6825.9	7231.7	8131.1	8155.6	8071.8	7116.7	6891.8	8341.7
60°	8766.3	8844.5	8240.5	7136.1	7247.5	8222.1	8231.3	8097.9	7475.4	7199.5	8433.6
62.5°	8703.0	8851.7	8436.7	7415.1	7101.9	7973.7	8012.0	7920.1	7459.1	7522.5	8228.2
65°	8414.7	8586.4	8266.5	7563.9	7012.4	7557.7	7567.4	7334.9	7225.6	7736.6	7746.8
67.5°	7874.1	8035.0	7724.8	7326.7	6400.2	6436.5	6653.2	6672.1	6512.7	7575.1	7070.7
70°	6927.6	7041.1	6846.9	6741.1	5349.5	5136.9	5372.0	5472.7	5545.3	6992.0	6259.2
72.5°	5484.4	5703.7	5734.3	5803.3	4307.0	3952.9	4127.1	3977.9	4450.6	5951.0	5113.9
75°	4057.6	4242.6	4441.4	4826.2	3394.8	2959.4	2938.0	2861.8	3303.3	4785.9	3792.9
77.5°	2867.4	2985.5	3138.3	3855.3	2561.8	2279.2	2292.5	2215.3	2385.5	3617.1	2620.1
80°	2055.4	2117.2	2188.3	2539.9	1889.8	1966.5	1968.5	1895.4	1773.8	2456.6	1748.8
82.5°	1464.6	1512.7	1593.9	1675.2	1408.9	1611.8	1610.3	1605.7	1406.4	1660.4	1094.1
85°	815.6	880.0	1021.1	1312.3	1017.5	1152.4	1013.4	1116.1	1032.3	1105.4	554.0
87.5°	57.2	51.1	228.4	760.4	474.8	347.0	181.9	360.3	462.0	577.5	77.2
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: P367798

CATALOG NUMBER: MSA-SA3B-727-U-SLL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5
2.5°	1487.1	1505.0	1435.0	1329.7	1358.3	1327.2	1287.8	1226.5	1100.3	1178.5	1179.0
5°	1786.1	1718.1	1663.4	1611.8	1524.9	1393.6	1376.2	1270.9	1211.7	1242.8	1238.2
7.5°	1879.6	1783.0	1700.7	1516.2	1355.3	1151.4	1090.0	1027.7	1001.6	1077.3	1107.4
10°	1776.9	1676.2	1595.5	1371.1	1261.8	1134.5	965.9	879.5	828.4	848.3	860.1
12.5°	1859.7	1756.9	1503.0	1377.8	1197.4	1119.7	972.0	845.3	769.6	788.0	766.0
15°	1939.4	1800.9	1546.9	1297.5	1151.4	1038.9	919.4	788.5	699.6	667.9	651.1
17.5°	2230.7	2000.7	1541.8	1252.6	1084.9	955.6	811.5	668.4	609.2	576.4	548.3
20°	2585.8	2265.4	1569.4	1206.0	1014.4	851.4	694.5	561.6	520.2	498.8	491.1
22.5°	3008.5	2604.8	1727.3	1199.4	948.0	775.2	630.1	547.3	500.8	477.3	467.6
25°	3344.2	2955.8	1843.8	1244.4	944.4	712.4	591.3	608.1	586.7	593.8	537.1
27.5°	3670.3	3051.4	1778.4	1224.4	849.3	601.0	582.1	617.3	635.7	641.4	639.3
30°	3945.7	3455.1	1792.7	1112.0	717.5	489.6	445.6	463.0	513.6	593.8	609.2
32.5°	4348.9	3648.3	1914.9	1044.0	641.4	438.0	388.9	382.3	394.0	423.1	448.2
35°	4820.6	4092.9	1949.1	1026.2	588.7	415.0	380.7	365.4	371.5	393.5	398.6
37.5°	5700.1	4416.9	2075.8	1004.2	569.3	401.2	374.6	369.0	382.3	400.1	410.4
40°	6185.1	4999.5	2082.0	985.3	544.3	395.5	378.7	376.1	384.3	408.8	415.0
42.5°	6831.5	5331.6	2178.0	963.3	535.6	403.2	386.9	385.8	393.0	407.3	418.5
45°	7225.6	5553.9	2183.1	950.5	533.5	436.9	397.6	394.0	392.5	401.2	411.4
47.5°	7479.5	5874.4	2245.5	936.2	545.8	445.6	410.4	395.0	389.9	393.5	401.2
50°	7720.2	6130.4	2363.5	934.2	558.6	436.9	432.8	394.5	384.3	382.8	388.4
52.5°	8015.6	6551.5	2509.2	953.6	555.5	424.2	449.7	392.5	374.1	370.5	376.1
55°	8445.4	7002.7	2664.0	937.2	523.8	399.6	433.4	390.9	363.3	356.7	361.8
57.5°	8723.9	7261.3	2837.3	923.4	475.8	381.2	418.5	392.0	364.4	349.5	352.6
60°	8631.4	7122.3	2905.2	839.1	430.3	366.9	383.3	383.8	355.2	341.4	343.9
62.5°	8222.6	6619.0	2841.9	741.0	396.6	346.5	347.0	368.5	328.6	318.9	323.0
65°	7651.2	5992.9	2585.3	677.1	380.7	325.0	316.8	323.5	292.8	285.7	293.8
67.5°	6950.1	5221.3	2203.6	609.7	375.1	295.9	286.2	283.6	264.2	256.0	264.2
70°	6070.6	4371.9	1761.5	562.1	353.6	264.2	256.5	254.0	237.6	231.5	238.7
72.5°	4879.4	3413.7	1359.4	525.9	330.1	235.1	228.4	225.4	211.6	202.9	211.6
75°	3470.5	2608.8	1009.8	470.2	296.9	205.4	197.8	193.7	180.9	172.7	180.4
77.5°	2466.3	1958.3	705.2	388.9	244.8	173.8	169.2	162.5	151.3	141.6	149.2
80°	1823.4	1399.2	454.8	300.0	187.0	139.0	136.4	131.8	121.1	109.4	115.0
82.5°	1200.4	1008.8	260.6	203.4	135.9	100.2	102.2	99.1	88.9	76.7	79.7
85°	537.6	597.4	138.5	111.9	88.4	60.3	65.9	63.9	56.2	44.5	45.5
87.5°	51.6	100.7	42.4	40.9	32.7	18.9	23.5	19.9	16.9	10.7	8.2
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: P367798

CATALOG NUMBER: MSA-SA3B-727-U-SLL

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5
2.5°	1196.8	1124.8	1052.7	1096.7	1097.7	1109.5	1111.0	1067.6	1102.3	1128.9	1156.5
5°	1215.8	1168.7	1171.3	1128.9	1105.9	1135.5	1129.4	1117.6	1138.6	1167.7	1203.0
7.5°	1078.8	1048.1	1043.0	1002.1	903.0	881.0	899.4	907.1	935.2	980.2	1018.0
10°	842.2	903.0	834.5	818.7	792.6	741.5	711.9	708.3	768.1	804.4	836.1
12.5°	758.9	743.6	735.4	691.9	691.9	637.8	620.4	636.2	728.2	754.3	795.2
15°	646.5	635.2	597.4	575.9	565.7	543.7	562.1	577.5	663.3	665.4	708.3
17.5°	536.6	529.9	494.2	490.1	479.9	470.2	487.0	523.8	570.3	562.1	582.1
20°	479.9	456.9	424.2	435.9	425.2	417.5	410.4	462.5	495.2	505.9	517.7
22.5°	465.6	423.6	404.2	393.5	394.0	381.7	383.3	426.7	476.3	482.9	475.8
25°	532.0	457.4	394.5	363.3	351.6	347.5	359.3	397.6	457.4	471.7	477.3
27.5°	622.4	496.7	406.3	353.1	329.6	331.7	348.5	375.1	445.6	471.2	477.8
30°	597.4	467.1	406.8	345.5	316.3	327.1	333.2	358.7	436.4	474.8	508.0
32.5°	461.0	420.1	409.3	351.6	339.8	323.0	331.7	356.2	409.3	433.4	434.9
35°	390.4	359.3	352.1	337.8	321.4	314.3	324.0	345.5	380.2	395.0	393.0
37.5°	387.4	353.1	325.0	318.9	312.2	310.2	315.8	335.8	371.0	397.1	391.5
40°	392.5	350.1	321.4	310.7	313.3	304.1	309.7	334.2	372.5	397.1	392.0
42.5°	386.3	346.5	316.8	308.7	311.2	298.4	305.1	330.6	368.5	397.6	387.9
45°	374.1	338.3	314.3	300.5	312.2	293.3	301.5	321.4	356.2	387.9	376.6
47.5°	361.8	328.6	303.6	294.9	306.6	288.2	291.8	309.2	343.9	375.1	365.4
50°	348.5	316.3	294.9	292.3	300.5	287.2	281.6	295.9	329.1	360.3	352.1
52.5°	334.2	306.1	288.7	287.7	295.4	280.6	272.4	283.6	313.3	344.4	337.8
55°	320.4	294.9	281.1	283.6	292.3	274.9	264.7	271.9	296.4	327.1	317.9
57.5°	306.6	282.1	270.8	278.0	284.6	267.8	255.0	259.1	279.0	309.2	298.4
60°	294.4	270.8	259.6	268.3	274.4	257.1	242.2	244.8	262.7	289.8	280.0
62.5°	278.5	258.6	243.8	255.0	259.6	242.7	226.9	230.0	244.3	269.8	262.7
65°	256.0	243.3	229.5	237.1	243.3	225.9	211.1	214.6	225.4	249.4	244.3
67.5°	236.6	224.3	215.1	221.3	222.3	209.0	195.7	197.8	206.5	228.9	223.3
70°	215.1	203.4	196.2	200.8	200.3	189.1	178.9	179.4	186.5	207.0	199.3
72.5°	191.6	180.4	176.8	179.4	177.3	167.1	157.4	161.0	165.6	180.9	174.8
75°	166.6	156.4	154.3	156.9	153.8	144.1	135.4	139.0	143.1	155.9	148.2
77.5°	140.5	131.3	131.8	132.4	128.3	121.6	112.9	116.5	119.1	127.8	120.1
80°	111.9	104.8	106.8	106.8	102.2	97.6	89.4	90.5	92.0	95.1	89.4
82.5°	81.8	81.8	81.8	82.3	72.6	74.1	66.9	66.4	64.9	64.4	60.8
85°	48.5	50.6	51.6	53.1	39.3	46.0	39.9	38.3	35.3	32.2	31.2
87.5°	10.7	13.8	13.8	13.3	0.0	5.1	2.6	4.1	1.0	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: P367798
 CATALOG NUMBER: MSA-SA3B-727-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5	1110.5
2.5°	1124.8	1094.1	1151.4	1202.5	1194.3	1223.9	1154.9	1257.2	1365.5	1365.5
5°	1193.8	1167.7	1182.5	1212.2	1234.7	1337.9	1423.7	1509.1	1685.4	1687.4
7.5°	1006.7	1063.0	1076.2	1067.6	1164.1	1297.0	1438.6	1681.8	1831.0	1842.8
10°	941.3	966.9	1007.3	1029.7	1069.1	1199.9	1375.7	1664.4	1822.9	1852.5
12.5°	852.9	947.5	1008.8	1134.5	1165.7	1191.7	1471.3	1721.2	1830.5	1823.4
15°	756.3	827.9	916.3	1055.3	1134.5	1333.8	1528.0	1903.1	1964.9	2019.1
17.5°	603.0	655.7	773.2	931.6	1127.9	1311.3	1668.0	2128.0	2243.5	2299.7
20°	496.2	496.7	614.3	824.3	1037.9	1217.3	1721.2	2314.5	2461.2	2489.8
22.5°	469.1	445.6	507.5	678.1	938.8	1273.0	1828.5	2614.5	2920.6	2992.6
25°	454.3	425.7	464.5	598.4	867.7	1302.1	2044.7	3026.9	3419.9	3448.0
27.5°	460.4	473.7	486.0	533.5	777.8	1247.4	1994.6	3211.4	3632.5	3685.6
30°	501.8	523.3	495.2	511.5	703.7	1168.2	2084.0	3510.8	3900.2	3989.7
32.5°	417.5	409.3	406.8	442.6	629.6	1096.7	2271.6	3932.4	4190.5	4302.9
35°	376.6	363.9	369.0	409.9	593.3	1086.5	2376.8	4281.5	4648.9	4717.9
37.5°	375.1	360.3	366.9	397.6	606.1	1104.9	2545.5	4841.6	5457.4	5605.1
40°	371.5	363.3	366.9	389.9	592.8	1115.1	2642.6	5312.2	6020.5	6170.3
42.5°	371.0	366.9	370.5	396.1	579.0	1119.7	2777.0	5737.4	6613.8	6731.9
45°	369.5	373.6	373.6	401.2	572.9	1150.3	2856.2	5945.9	7005.3	7150.9
47.5°	362.3	374.6	394.5	399.6	547.8	1136.0	2968.1	6262.2	7213.3	7350.2
50°	353.1	373.1	421.1	389.4	543.7	1101.3	3098.9	6513.2	7480.0	7599.1
52.5°	340.9	370.5	415.0	369.5	536.6	1095.2	3282.4	6839.2	7791.3	7896.5
55°	323.5	361.3	396.1	349.5	519.2	1075.7	3562.9	7243.4	8198.6	8270.6
57.5°	307.6	347.5	368.5	338.3	477.8	1079.8	3758.2	7573.1	8540.5	8603.3
60°	293.3	346.0	329.1	326.6	435.4	1025.1	3821.5	7569.5	8667.7	8766.3
62.5°	278.0	326.6	301.5	310.7	398.1	968.9	3687.1	7245.0	8530.2	8703.0
65°	258.1	280.0	278.5	299.5	399.1	877.5	3379.0	6672.6	8187.3	8414.7
67.5°	234.6	247.9	256.5	281.1	411.9	806.4	2883.3	5984.2	7603.7	7874.1
70°	210.5	223.8	233.5	257.1	423.6	773.7	2295.1	5017.4	6653.2	6927.6
72.5°	186.0	199.8	207.5	227.9	407.8	703.7	1698.7	3903.8	5340.3	5484.4
75°	160.5	173.8	179.9	198.8	354.1	582.1	1172.8	2956.9	3911.5	4057.6
77.5°	134.4	148.7	150.8	166.1	270.3	445.1	751.7	2268.0	2769.8	2867.4
80°	107.3	121.6	121.6	129.8	190.1	306.1	450.2	1711.0	2017.1	2055.4
82.5°	77.2	92.5	91.5	92.0	131.3	189.6	260.6	1282.2	1457.5	1464.6
85°	45.5	56.2	55.7	51.1	77.7	102.2	141.0	796.2	813.6	815.6
87.5°	8.7	13.3	11.8	5.1	21.5	30.2	40.9	147.7	58.8	57.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)