

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: P596925

Luminaire Tested: **MSA-SA2A-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596925
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-SA2A-835-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 4780 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

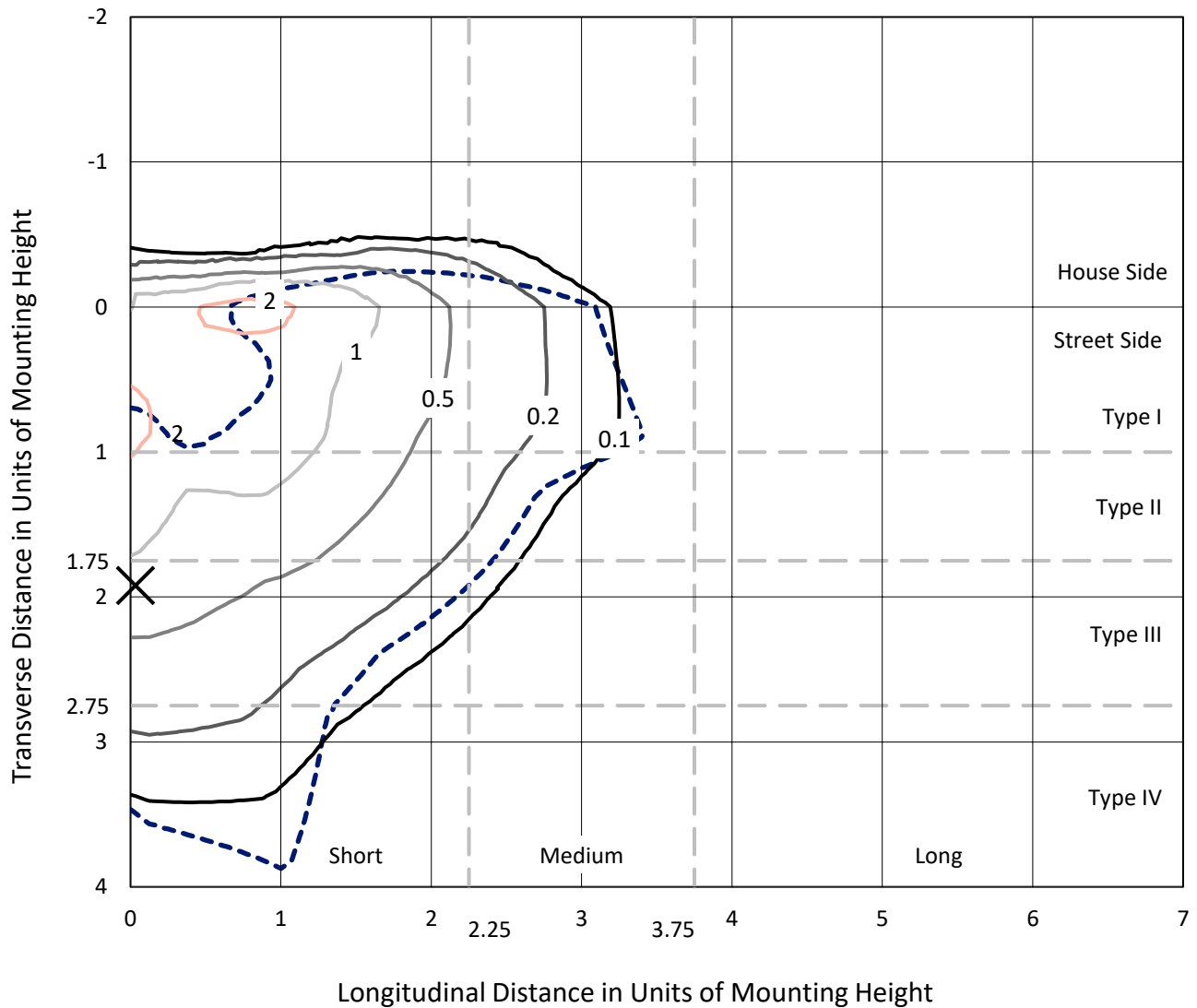
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

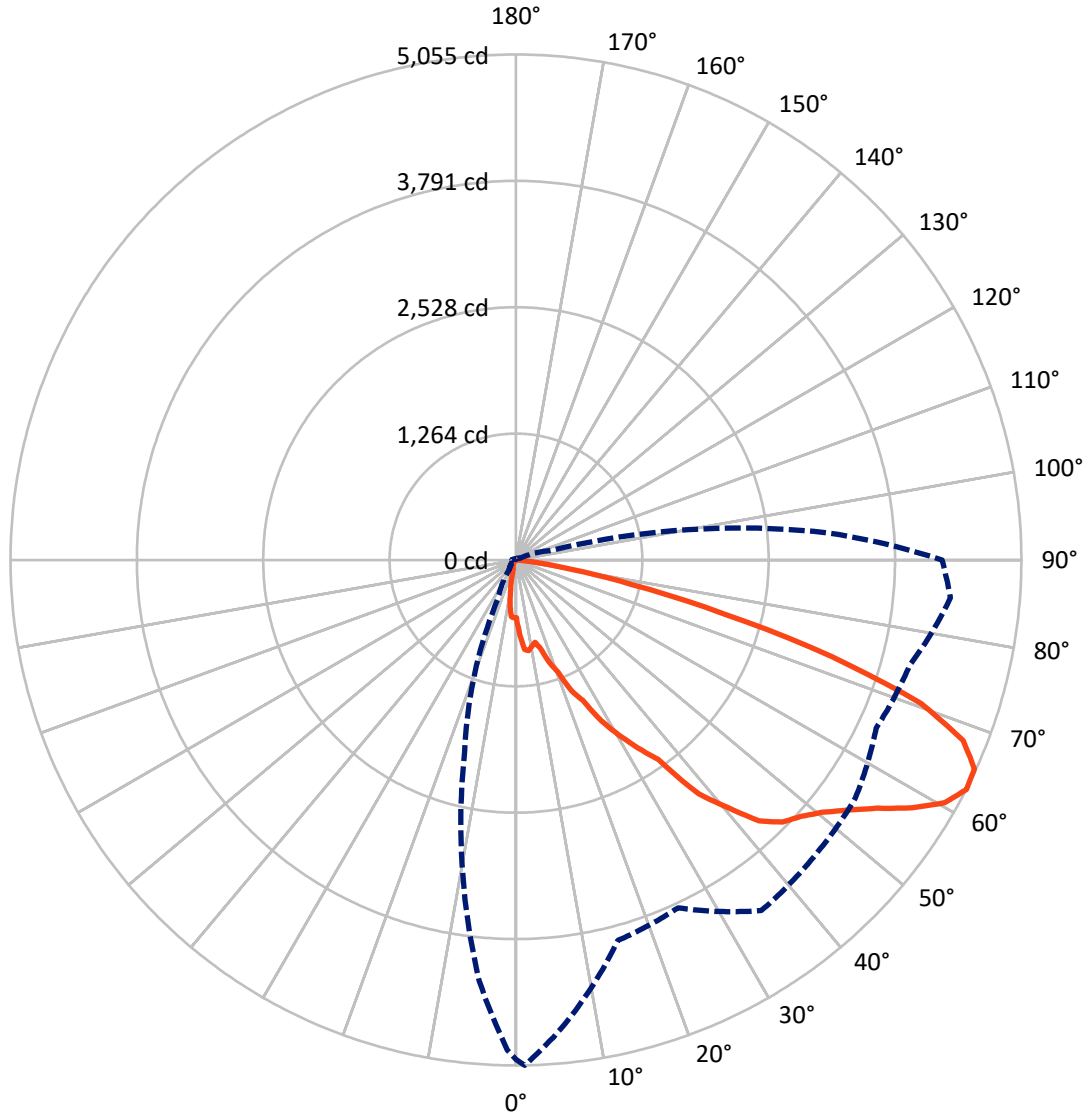
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type IV - Short - N/A

REPORT NUMBER: P596925
CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	546.6	0.0	546.6
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	4233.4	0.0	4233.4
	% Fixture	88.6	0.0	88.6
Total	Lumens	4780.0	0.0	4780.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	1.3
10°-20°	168.0	3.5
20°-30°	271.6	5.7
30°-40°	455.0	9.5
40°-50°	744.0	15.6
50°-60°	1101.4	23.0
60°-70°	1264.4	26.5
70°-80°	625.3	13.1
80°-90°	85.8	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°	4780.0	100.0
0°-180°	4780.0	100.0

Coefficient of Utilization

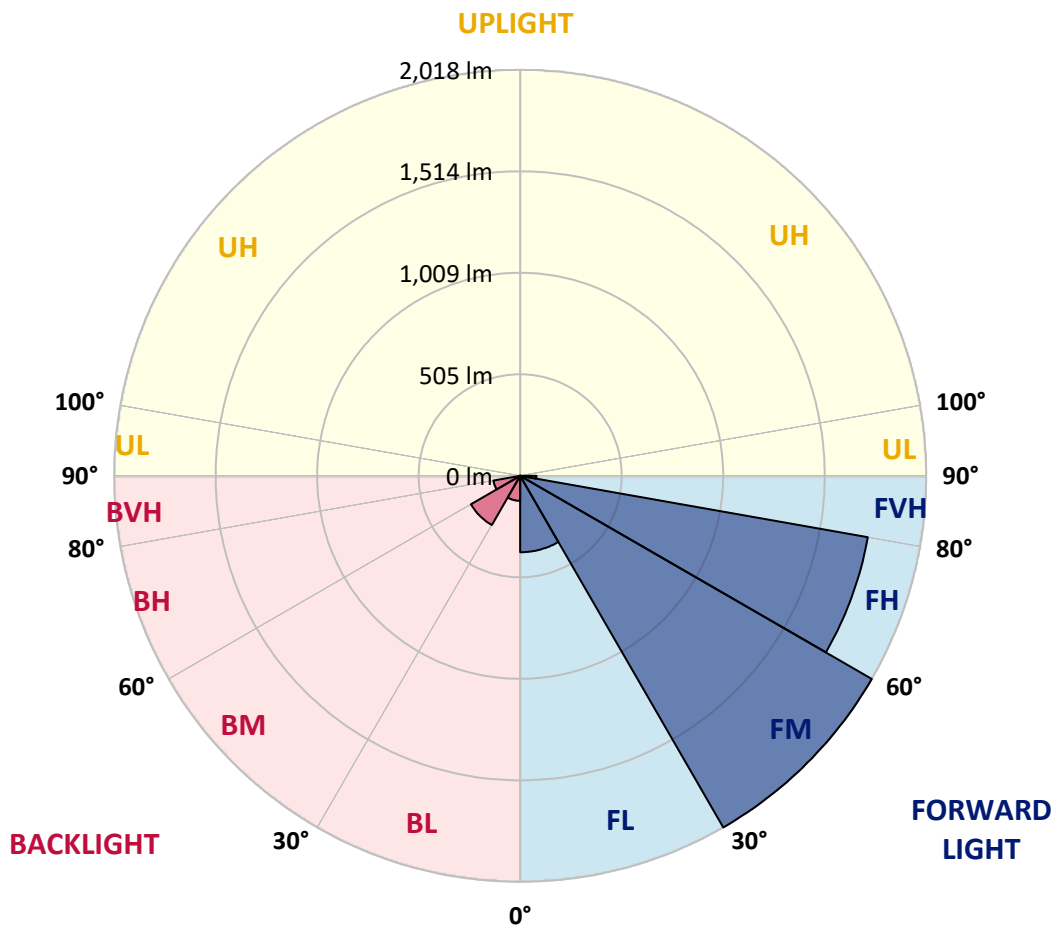


REPORT NUMBER: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	379.7	7.9			
FM (30°-60°)	2018.1	42.2			
FH (60°-80°)	1754.6	36.7			G1/1800
FVH (80°-90°)	81.1	1.7			G1/100
BL (0°-30°)	124.4	2.6	B1/500		
BM (30°-60°)	282.3	5.9	B1/1000		
BH (60°-80°)	135.2	2.8	B1/500		G1/500
BVH (80°-90°)	4.8	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
 Type IV Short





REPORT NUMBER: P596925

CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8
2.5°	742.5	746.1	729.5	727.3	688.6	736.8	738.2	743.9	708.5	639.8	735.7
5°	888.5	898.3	885.5	942.5	958.8	993.9	929.4	987.1	962.6	969.4	983.3
7.5°	906.0	916.0	943.0	1038.3	1126.3	1104.3	1097.2	1119.0	1117.1	1066.7	1091.7
10°	869.7	878.2	923.1	1096.6	1135.0	1234.2	1258.4	1208.3	1187.9	1077.6	1029.4
12.5°	830.2	844.4	901.6	1109.7	1224.9	1325.2	1405.0	1333.6	1265.8	1148.4	1104.3
15°	906.0	913.9	1003.7	1136.9	1237.7	1306.9	1372.3	1348.6	1338.2	1253.8	1104.3
17.5°	1054.4	1072.9	1138.0	1203.7	1283.2	1324.9	1309.4	1302.0	1275.6	1408.2	1253.5
20°	1160.1	1194.7	1279.9	1308.3	1245.1	1284.0	1274.5	1268.0	1247.3	1494.0	1425.1
22.5°	1388.9	1420.8	1422.4	1432.5	1285.4	1223.3	1207.5	1209.4	1303.4	1519.7	1638.7
25°	1544.7	1555.6	1641.7	1569.8	1395.4	1241.8	1181.6	1208.6	1344.0	1703.8	1839.4
27.5°	1799.7	1825.5	1879.2	1635.7	1461.4	1230.1	1134.2	1232.3	1450.7	1764.8	2062.5
30°	2007.5	2032.3	2118.6	1725.8	1518.6	1288.1	1154.7	1279.9	1517.2	1890.4	2263.0
32.5°	2176.1	2240.1	2338.2	1865.0	1516.4	1354.9	1259.0	1264.2	1598.9	2053.0	2461.3
35°	2391.6	2451.2	2520.1	1960.9	1615.5	1376.4	1289.8	1419.4	1720.4	2223.0	2728.2
37.5°	2877.2	2967.4	2831.2	2202.5	1731.0	1570.9	1411.2	1515.0	1847.6	2396.5	3095.1
40°	3173.6	3249.6	3118.0	2325.9	1931.0	1668.9	1628.1	1681.2	1972.1	2486.1	3371.6
42.5°	3465.6	3565.8	3346.0	2511.7	2120.8	1945.7	1834.0	1876.8	2152.1	2702.4	3682.7
45°	3677.0	3739.1	3395.3	2608.9	2381.8	2261.1	2186.7	2123.0	2403.3	2841.3	3883.4
47.5°	3783.2	3832.8	3492.6	2639.7	2537.0	2594.8	2757.7	2624.5	2625.5	2941.8	3991.6
50°	3930.3	3964.9	3547.0	2676.5	2705.6	3114.8	3197.0	2913.5	2879.4	3042.6	4009.3
52.5°	4137.0	4153.9	3652.7	2773.5	2958.1	3522.0	3551.7	3437.0	3133.5	3230.0	4048.5
55°	4411.9	4382.2	3841.5	2977.2	3221.5	3820.2	3860.0	3760.0	3453.1	3417.1	4170.0
57.5°	4708.2	4674.2	4121.2	3264.3	3507.3	4048.2	4071.9	4079.8	3665.2	3582.7	4376.5
60°	4920.7	4926.9	4473.4	3593.6	3684.9	4266.4	4219.0	4147.1	3879.3	3825.4	4477.0
62.5°	4995.0	5055.2	4747.7	3938.7	3837.9	4280.0	4206.5	4145.7	3975.2	4075.7	4361.7
65°	4934.3	5039.4	4811.5	4241.9	3930.6	4109.2	4032.7	3993.7	3972.2	4177.9	4106.8
67.5°	4693.0	4824.5	4629.0	4244.6	3593.9	3498.8	3589.3	3712.6	3641.3	4093.2	3749.7
70°	4152.3	4296.4	4205.4	3995.7	2993.8	2752.8	2852.4	3039.0	2988.6	3640.5	3224.3
72.5°	3115.3	3300.5	3318.5	3449.5	2376.6	2071.8	2086.2	2081.0	2167.9	2935.5	2516.0
75°	2001.2	2145.3	2340.1	2783.5	1805.4	1512.6	1374.2	1340.4	1502.5	2293.8	1801.3
77.5°	1161.7	1178.9	1268.8	2100.1	1293.0	1089.8	995.6	1043.8	1100.4	1600.8	1193.9
80°	555.7	564.4	601.4	1080.6	898.3	943.3	870.6	924.8	755.6	920.1	677.4
82.5°	176.2	178.1	184.4	530.9	557.9	624.9	400.4	536.9	467.1	556.2	451.1
85°	29.4	50.1	61.8	153.4	314.9	210.8	86.9	191.5	260.7	350.8	204.8
87.5°	0.0	0.0	0.0	2.7	25.6	12.0	1.9	10.9	40.0	78.2	9.3
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: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8
2.5°	763.5	782.3	711.5	648.0	664.1	651.3	631.9	599.0	522.7	578.8	575.0
5°	982.5	947.6	851.8	807.1	752.6	669.5	659.5	595.7	567.7	572.3	568.2
7.5°	1058.8	996.4	911.7	777.1	649.4	529.5	492.7	451.1	442.6	460.6	472.3
10°	998.8	932.7	858.6	691.3	593.0	506.4	415.7	357.4	325.8	322.0	325.2
12.5°	1026.4	955.0	802.5	674.4	571.7	493.3	392.0	304.0	235.3	240.5	226.9
15°	1045.4	963.4	789.1	639.0	527.9	423.0	301.0	213.0	156.9	140.6	130.7
17.5°	1157.4	1040.2	772.2	598.2	466.6	329.3	189.0	123.4	105.1	99.4	94.8
20°	1301.2	1134.8	771.9	555.1	376.2	205.9	117.9	89.3	85.0	88.3	84.7
22.5°	1468.4	1260.6	813.1	501.5	269.9	129.9	91.8	79.3	74.9	77.6	77.9
25°	1636.8	1449.4	846.6	450.5	187.9	99.7	81.7	73.0	68.1	70.5	69.2
27.5°	1940.8	1605.7	839.0	385.4	138.4	87.7	76.0	68.4	61.0	64.8	64.6
30°	2139.6	1881.7	868.6	294.2	109.8	76.8	70.8	62.4	54.5	58.8	58.6
32.5°	2377.4	2000.1	900.8	225.8	91.2	72.7	63.7	55.6	50.9	53.7	53.1
35°	2644.6	2234.4	841.7	187.9	79.3	65.6	56.4	50.1	46.0	47.4	47.4
37.5°	3116.7	2430.2	806.3	153.1	73.8	59.4	52.8	45.2	42.8	42.8	44.1
40°	3384.7	2729.3	700.6	121.2	75.5	54.7	49.3	41.4	38.1	37.9	39.2
42.5°	3733.3	2901.7	634.4	98.1	68.4	53.4	45.2	37.6	33.8	33.5	34.9
45°	3940.1	2998.2	541.2	77.1	61.3	62.1	41.9	34.6	28.9	27.8	30.2
47.5°	4070.6	3125.9	488.4	61.3	53.4	61.8	40.9	30.0	24.2	22.9	25.1
50°	4136.8	3189.1	478.0	52.6	46.3	55.3	46.9	25.1	20.7	18.8	20.7
52.5°	4205.7	3291.8	481.9	48.5	40.9	44.4	44.4	21.5	18.2	16.1	17.4
55°	4344.9	3443.5	473.4	46.0	37.6	33.8	28.6	19.1	16.6	14.2	15.5
57.5°	4515.9	3552.5	473.4	43.9	34.9	28.9	22.9	17.7	15.3	12.3	13.3
60°	4483.5	3437.8	450.0	41.7	32.7	27.0	20.7	16.3	14.2	11.2	12.0
62.5°	4261.0	3125.9	364.5	38.4	30.8	25.6	18.8	15.5	13.3	9.8	10.6
65°	3999.5	2794.7	253.3	34.9	28.6	23.2	16.9	14.7	12.3	8.7	9.3
67.5°	3684.6	2400.0	140.6	31.3	26.4	20.2	15.5	14.4	11.7	7.9	8.4
70°	3138.2	1811.9	75.5	28.6	24.8	18.5	14.7	14.4	11.7	7.6	7.9
72.5°	2355.9	1141.0	44.1	26.1	22.6	17.2	13.9	14.7	11.4	7.4	7.4
75°	1603.0	692.7	31.6	22.3	20.2	14.4	13.3	14.2	11.7	7.4	6.8
77.5°	1089.8	486.8	25.9	20.2	18.2	12.8	13.6	14.2	11.7	6.0	4.6
80°	680.4	251.1	19.6	16.1	15.8	11.2	13.6	12.3	7.6	1.4	0.0
82.5°	475.9	93.4	11.4	12.3	12.3	7.9	10.6	8.7	4.4	0.0	0.0
85°	199.7	16.1	6.3	8.7	7.6	4.6	8.4	6.5	2.7	0.0	0.0
87.5°	3.5	0.0	2.5	5.2	5.4	2.7	4.4	2.7	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: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8
2.5°	593.0	567.1	512.6	538.8	536.1	548.0	549.1	521.4	581.3	618.3	623.8
5°	568.7	551.3	548.3	533.3	529.5	551.6	539.6	538.8	567.7	609.9	610.1
7.5°	472.6	459.2	465.5	448.1	403.1	405.9	409.9	427.1	451.9	479.7	489.8
10°	324.4	359.0	333.7	331.5	326.9	312.4	301.0	310.0	342.1	367.7	377.3
12.5°	231.5	237.0	252.5	246.8	254.7	242.4	237.8	265.9	297.2	323.3	342.1
15°	135.4	144.6	153.9	173.5	181.4	179.0	193.1	216.5	241.9	253.9	277.0
17.5°	95.3	96.2	98.1	119.3	133.2	138.6	147.1	164.8	175.1	180.6	190.1
20°	83.4	80.9	77.6	89.6	102.7	109.5	107.0	120.9	129.4	134.8	141.6
22.5°	75.5	71.4	69.5	73.5	83.6	89.6	90.7	98.9	111.7	115.5	117.7
25°	68.1	65.4	64.0	66.2	71.6	77.4	78.4	89.1	100.5	102.1	106.5
27.5°	63.2	58.0	58.6	60.2	62.6	69.7	71.9	77.9	94.5	96.4	97.8
30°	58.0	52.6	54.2	55.8	54.7	63.5	66.7	73.5	89.6	92.6	94.2
32.5°	52.8	48.8	48.5	50.1	52.0	56.7	63.7	71.6	86.3	90.4	94.5
35°	47.1	43.9	44.4	44.7	47.1	53.1	58.3	62.4	72.5	74.6	76.0
37.5°	43.0	40.3	39.8	42.5	44.9	49.6	51.5	53.4	66.7	71.6	71.9
40°	38.1	36.5	36.5	38.4	43.9	43.3	45.8	51.8	64.6	69.7	70.3
42.5°	34.6	32.4	33.0	34.9	38.7	36.0	40.9	49.6	63.7	68.9	68.6
45°	29.1	28.6	29.7	31.3	33.0	30.5	38.1	47.4	61.0	67.8	65.9
47.5°	24.2	24.2	25.6	27.2	26.4	27.2	34.6	44.4	59.4	65.6	64.3
50°	19.9	20.2	21.5	24.2	21.8	24.0	31.1	41.4	56.7	63.5	62.4
52.5°	16.9	17.2	18.0	19.9	18.8	21.8	28.6	38.4	53.9	59.7	59.1
55°	14.7	15.3	15.3	16.3	16.9	20.4	25.9	35.4	49.8	56.1	55.0
57.5°	13.1	13.6	13.3	14.2	14.7	18.0	23.2	32.1	45.8	50.9	49.3
60°	11.7	12.3	12.0	13.1	12.8	15.5	20.2	28.6	41.4	45.5	44.1
62.5°	10.4	10.9	10.9	11.4	11.7	13.1	17.4	25.3	37.0	40.3	39.2
65°	9.3	9.8	10.1	9.8	10.4	11.2	14.7	22.9	32.1	35.4	33.8
67.5°	8.4	9.0	9.5	8.4	9.0	9.3	12.5	20.4	28.3	31.1	29.7
70°	8.2	8.4	8.4	7.4	7.1	7.4	10.9	17.4	24.8	27.5	25.6
72.5°	7.6	7.9	7.6	6.0	5.2	5.7	9.3	14.7	21.0	23.2	21.5
75°	7.1	7.4	7.1	4.9	3.3	4.1	7.6	12.8	18.0	19.1	18.2
77.5°	6.0	6.5	6.5	3.5	1.1	2.5	5.7	10.4	15.0	15.0	15.3
80°	0.5	1.6	2.7	1.9	0.0	0.3	1.9	5.4	9.5	9.3	10.1
82.5°	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.3	2.5	2.7
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: P596925
 CATALOG NUMBER: MSA-SA2A-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8	575.8
2.5°	611.0	602.5	613.1	645.6	632.5	634.9	626.2	679.9	740.6	742.5
5°	610.7	603.1	618.9	617.5	654.8	695.4	734.6	798.1	888.0	888.5
7.5°	485.1	530.3	542.1	538.5	586.5	642.3	702.8	824.2	898.1	906.0
10°	437.5	457.1	481.0	489.8	509.6	562.8	631.1	768.7	851.5	869.7
12.5°	379.2	441.8	473.7	535.5	547.0	554.6	662.4	782.0	832.4	830.2
15°	314.1	368.5	418.9	494.4	525.4	605.5	690.5	847.1	877.1	906.0
17.5°	222.3	263.4	340.8	420.0	514.8	602.0	767.9	963.4	1020.1	1054.4
20°	148.7	168.6	238.6	343.5	463.6	550.2	799.5	1068.6	1130.4	1160.1
22.5°	120.7	130.2	166.4	251.7	396.1	547.8	812.3	1183.3	1349.4	1388.9
25°	106.2	112.8	132.1	186.3	328.8	536.9	883.1	1312.4	1512.8	1544.7
27.5°	92.9	102.7	117.1	153.6	281.9	529.2	919.0	1529.2	1768.3	1799.7
30°	88.8	100.8	114.7	140.0	249.2	499.8	976.2	1724.8	1951.7	2007.5
32.5°	95.9	100.0	106.8	128.3	223.9	468.8	1076.7	1958.5	2103.4	2176.1
35°	76.0	83.4	95.3	117.7	213.3	467.1	1133.7	2108.8	2346.6	2391.6
37.5°	74.4	81.2	96.7	114.7	226.1	479.7	1218.1	2416.9	2785.2	2877.2
40°	72.2	80.9	95.6	113.3	226.1	491.9	1272.1	2663.4	3080.2	3173.6
42.5°	71.4	82.5	95.3	119.0	219.0	498.7	1353.5	2909.4	3391.8	3465.6
45°	70.8	84.2	96.2	125.8	217.4	521.1	1399.5	3029.0	3592.2	3677.0
47.5°	69.5	84.2	107.3	121.8	208.4	518.9	1459.2	3206.3	3711.8	3783.2
50°	68.4	84.7	121.5	114.1	209.7	505.6	1540.1	3372.7	3879.3	3930.3
52.5°	65.9	86.6	119.3	103.5	205.7	504.2	1660.7	3609.4	4099.7	4137.0
55°	60.5	84.2	107.9	90.4	191.2	488.7	1820.6	3917.2	4405.3	4411.9
57.5°	55.6	78.2	90.2	83.1	160.2	490.6	1958.5	4200.5	4677.7	4708.2
60°	50.7	81.2	70.0	77.4	132.7	455.7	2025.2	4308.9	4876.0	4920.7
62.5°	46.0	74.9	59.7	71.1	118.2	423.3	1978.9	4221.7	4901.3	4995.0
65°	40.9	52.0	50.4	63.7	119.6	377.8	1824.2	3966.5	4805.2	4934.3
67.5°	35.1	40.9	44.4	55.0	128.0	338.9	1558.9	3556.8	4546.7	4693.0
70°	30.8	36.8	38.7	48.2	133.2	313.2	1230.1	2988.4	4017.2	4152.3
72.5°	25.6	34.0	34.6	42.2	128.3	287.9	876.5	2145.3	3050.5	3115.3
75°	22.1	28.3	31.3	35.4	107.9	214.9	482.9	1327.9	1928.8	2001.2
77.5°	19.9	21.5	23.7	24.5	45.8	112.0	166.2	818.8	1080.0	1161.7
80°	15.3	16.9	16.3	16.9	25.1	38.7	63.2	383.8	510.2	555.7
82.5°	4.9	8.2	9.0	7.6	16.3	19.1	18.2	132.7	165.9	176.2
85°	1.1	3.0	1.4	0.0	5.4	9.8	1.4	20.2	39.8	29.4
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)