

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: P596947

Luminaire Tested: **MSA-SA2B-835-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596947  
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-SA2B-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: 5990 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

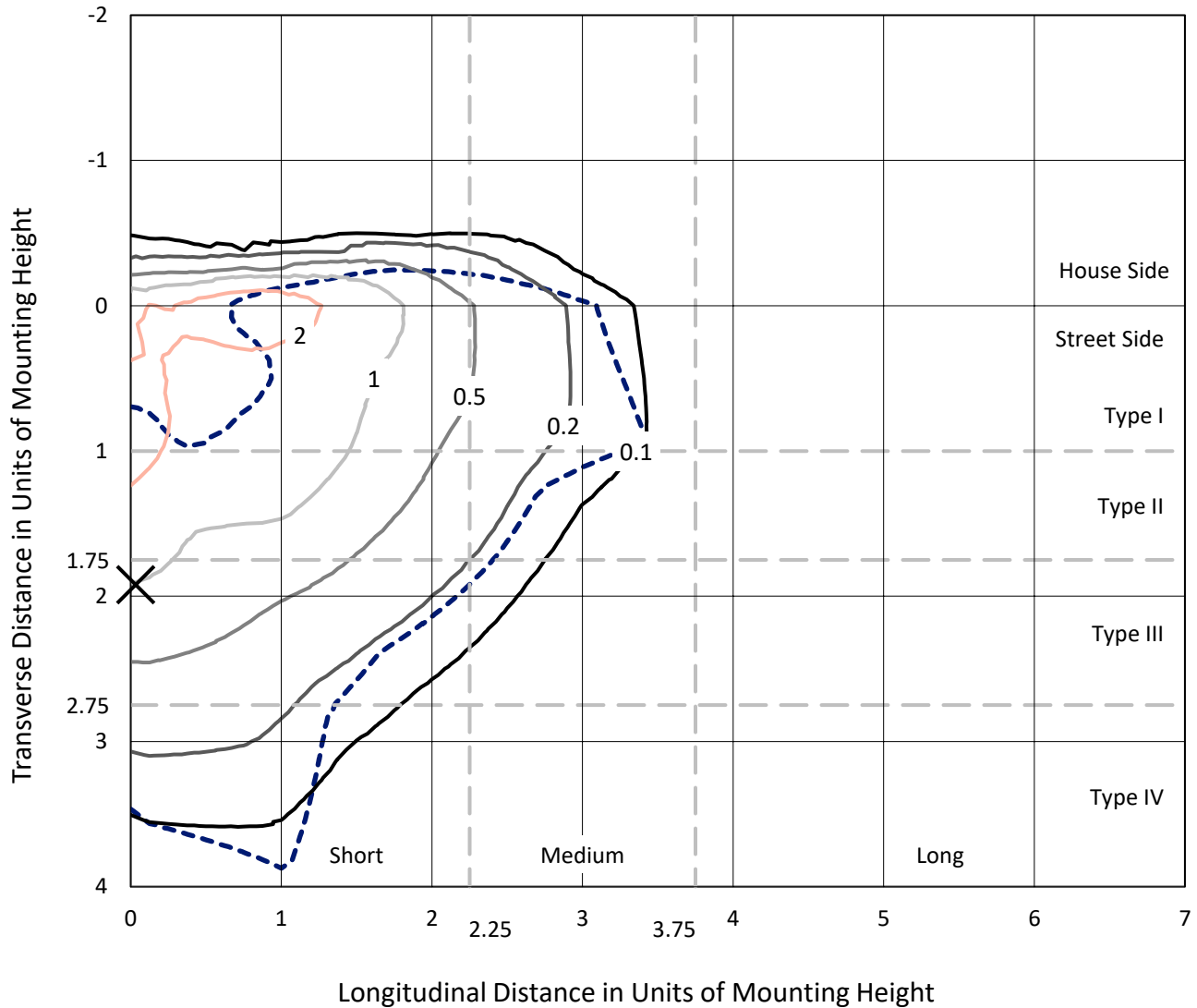
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596947  
 CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

### Iso-Footcandle Lines of Horizontal Illumination

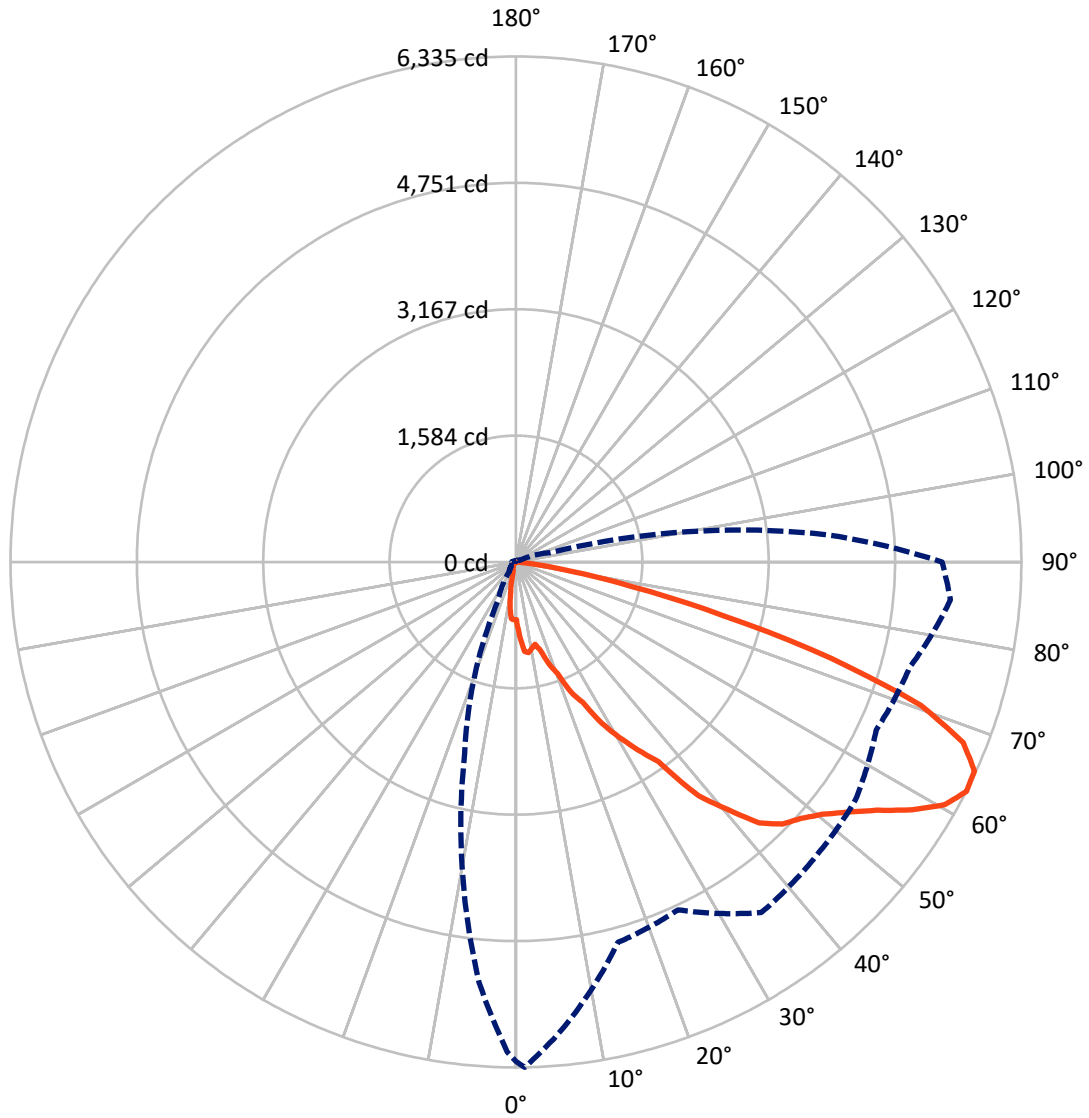
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Short - N/A

REPORT NUMBER: P596947  
CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P596947

CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

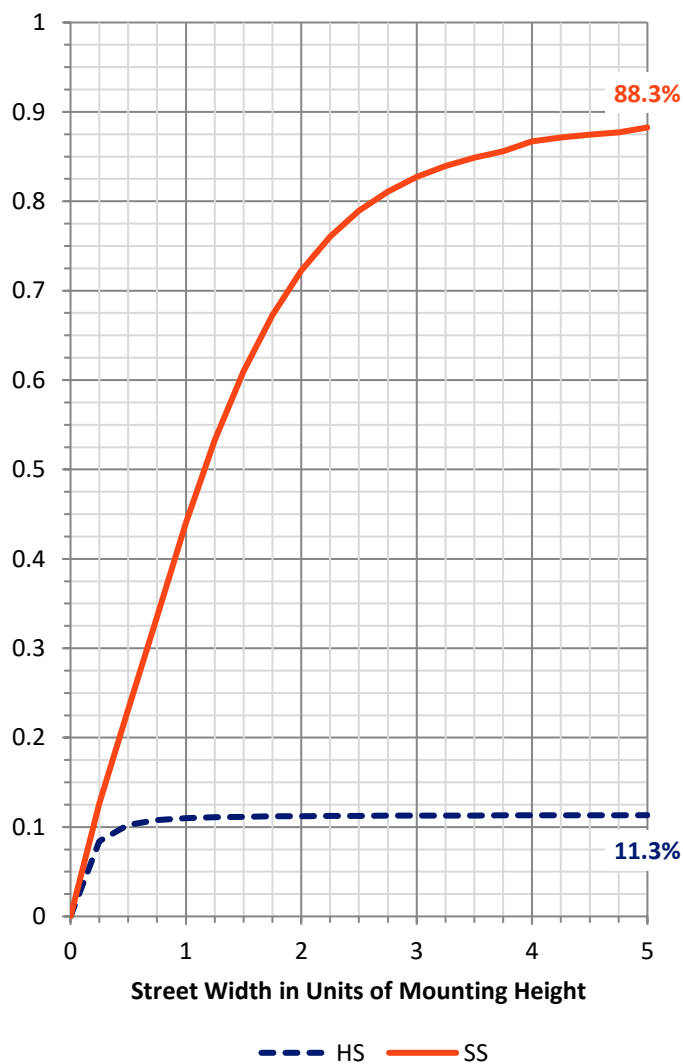
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	685.0	0.0	685.0
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	5305.0	0.0	5305.0
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	5990.0	0.0	5990.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.6	1.3
10°-20°	210.6	3.5
20°-30°	340.4	5.7
30°-40°	570.2	9.5
40°-50°	932.4	15.6
50°-60°	1380.2	23.0
60°-70°	1584.5	26.5
70°-80°	783.5	13.1
80°-90°	107.6	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°	5990.0	100.0
0°-180°	5990.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596947

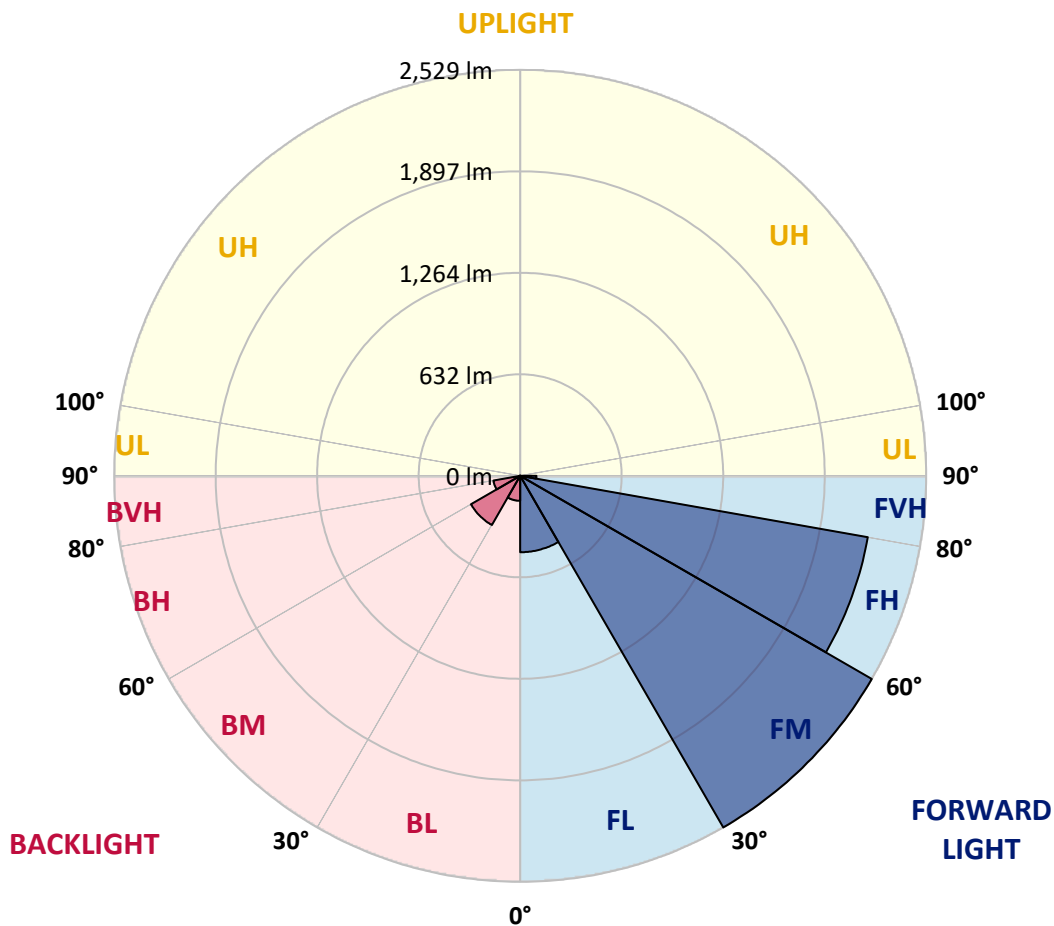
CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	475.8	7.9			
FM (30°-60°)	2528.9	42.2			
FH (60°-80°)	2198.7	36.7			G2/5000
FVH (80°-90°)	101.6	1.7			G2/225
BL (0°-30°)	155.8	2.6	B1/500		
BM (30°-60°)	353.8	5.9	B1/1000		
BH (60°-80°)	169.4	2.8	B1/500		G1/500
BVH (80°-90°)	6.0	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-G2**

Type IV Short





REPORT NUMBER: P596947

CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6
2.5°	930.5	934.9	914.1	911.4	862.9	923.3	925.0	932.2	887.8	801.8	922.0
5°	1113.4	1125.7	1109.7	1181.0	1201.5	1245.5	1164.7	1237.0	1206.3	1214.8	1232.2
7.5°	1135.3	1147.9	1181.7	1301.2	1411.4	1383.8	1374.9	1402.2	1399.8	1336.7	1368.1
10°	1089.9	1100.5	1156.8	1374.2	1422.4	1546.6	1577.0	1514.2	1488.6	1350.3	1289.9
12.5°	1040.4	1058.2	1129.8	1390.6	1535.0	1660.6	1760.6	1671.2	1586.2	1439.1	1383.8
15°	1135.3	1145.2	1257.8	1424.8	1551.0	1637.7	1719.7	1690.0	1677.0	1571.2	1383.8
17.5°	1321.3	1344.5	1426.1	1508.4	1608.0	1660.3	1640.8	1631.6	1598.5	1764.7	1570.8
20°	1453.8	1497.1	1604.0	1639.5	1560.3	1609.1	1597.1	1588.9	1563.0	1872.2	1785.9
22.5°	1740.5	1780.4	1782.5	1795.1	1610.8	1533.0	1513.2	1515.5	1633.3	1904.3	2053.5
25°	1935.7	1949.4	2057.3	1967.1	1748.7	1556.2	1480.7	1514.5	1684.2	2135.1	2305.1
27.5°	2255.2	2287.7	2354.9	2049.7	1831.3	1541.5	1421.3	1544.2	1818.0	2211.5	2584.6
30°	2515.7	2546.7	2654.9	2162.7	1903.0	1614.2	1446.9	1604.0	1901.3	2368.9	2835.8
32.5°	2727.0	2807.2	2930.1	2337.2	1900.2	1697.8	1577.7	1584.2	2003.7	2572.7	3084.3
35°	2997.0	3071.7	3158.1	2457.3	2024.5	1724.8	1616.2	1778.7	2155.9	2785.7	3418.9
37.5°	3605.6	3718.6	3547.9	2760.1	2169.2	1968.5	1768.5	1898.5	2315.3	3003.1	3878.6
40°	3976.9	4072.2	3907.3	2914.7	2419.8	2091.4	2040.2	2106.7	2471.3	3115.4	4225.1
42.5°	4342.9	4468.5	4193.0	3147.5	2657.7	2438.2	2298.2	2351.8	2696.9	3386.4	4614.9
45°	4607.7	4685.6	4254.8	3269.3	2984.7	2833.5	2740.3	2660.4	3011.6	3560.5	4866.5
47.5°	4740.9	4803.0	4376.7	3307.9	3179.2	3251.6	3455.7	3288.8	3290.2	3686.5	5002.0
50°	4925.2	4968.5	4444.9	3354.0	3390.5	3903.2	4006.3	3651.0	3608.3	3812.8	5024.2
52.5°	5184.3	5205.4	4577.4	3475.5	3706.9	4413.5	4450.7	4307.0	3926.8	4047.6	5073.3
55°	5528.7	5491.5	4813.9	3730.8	4037.0	4787.3	4837.1	4711.8	4327.2	4282.1	5225.6
57.5°	5900.1	5857.4	5164.5	4090.6	4395.1	5073.0	5102.7	5112.6	4593.1	4489.6	5484.3
60°	6166.3	6174.1	5605.8	4503.3	4617.6	5346.4	5287.0	5196.9	4861.4	4793.8	5610.3
62.5°	6259.5	6334.9	5949.5	4935.8	4809.5	5363.5	5271.3	5195.2	4981.5	5107.5	5465.9
65°	6183.4	6315.1	6029.4	5315.7	4925.5	5149.4	5053.5	5004.7	4977.8	5235.5	5146.4
67.5°	5880.9	6045.8	5800.7	5319.1	4503.6	4384.5	4497.8	4652.5	4563.0	5129.3	4698.9
70°	5203.4	5383.9	5269.9	5007.1	3751.7	3449.6	3574.5	3808.3	3745.2	4562.0	4040.4
72.5°	3903.9	4136.0	4158.5	4322.7	2978.2	2596.2	2614.3	2607.8	2716.7	3678.6	3153.0
75°	2507.8	2688.4	2932.4	3488.1	2262.4	1895.5	1722.1	1679.7	1882.8	2874.4	2257.3
77.5°	1455.8	1477.3	1590.0	2631.7	1620.3	1365.7	1247.6	1308.0	1379.0	2006.1	1496.1
80°	696.3	707.3	753.7	1354.1	1125.7	1182.1	1090.9	1158.8	946.9	1153.0	848.9
82.5°	220.8	223.2	231.1	665.3	699.1	783.0	501.8	672.8	585.4	697.0	565.3
85°	36.9	62.8	77.5	192.2	394.6	264.2	108.9	240.0	326.7	439.6	256.7
87.5°	0.0	0.0	0.0	3.4	32.1	15.0	2.4	13.7	50.2	98.0	11.6
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: P596947

CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6
2.5°	956.8	980.3	891.6	812.0	832.2	816.1	791.9	750.6	655.0	725.3	720.6
5°	1231.2	1187.5	1067.4	1011.4	943.1	839.0	826.4	746.5	711.4	717.2	712.0
7.5°	1326.8	1248.6	1142.5	973.8	813.8	663.6	617.5	565.3	554.7	577.2	591.9
10°	1251.7	1168.7	1075.9	866.3	743.1	634.5	520.9	447.8	408.2	403.5	407.6
12.5°	1286.2	1196.7	1005.6	845.2	716.5	618.2	491.2	380.9	294.9	301.4	284.3
15°	1310.1	1207.3	988.9	800.8	661.5	530.1	377.2	266.9	196.6	176.1	163.8
17.5°	1450.4	1303.6	967.7	749.6	584.7	412.7	236.9	154.6	131.8	124.6	118.8
20°	1630.6	1422.0	967.4	695.6	471.4	258.1	147.8	112.0	106.5	110.6	106.2
22.5°	1840.2	1579.7	1018.9	628.4	338.3	162.8	115.0	99.3	93.9	97.3	97.6
25°	2051.1	1816.3	1060.9	564.6	235.5	124.9	102.4	91.5	85.3	88.4	86.7
27.5°	2432.0	2012.2	1051.3	483.0	173.4	109.9	95.2	85.7	76.5	81.2	80.9
30°	2681.2	2358.0	1088.5	368.6	137.6	96.3	88.7	78.2	68.3	73.7	73.4
32.5°	2979.2	2506.5	1128.8	283.0	114.3	91.1	79.9	69.6	63.8	67.2	66.6
35°	3314.1	2800.0	1054.7	235.5	99.3	82.3	70.7	62.8	57.7	59.4	59.4
37.5°	3905.6	3045.4	1010.4	191.8	92.5	74.4	66.2	56.7	53.6	53.6	55.3
40°	4241.5	3420.2	877.9	151.9	94.6	68.6	61.8	51.9	47.8	47.4	49.2
42.5°	4678.4	3636.3	795.0	122.9	85.7	66.9	56.7	47.1	42.3	42.0	43.7
45°	4937.5	3757.1	678.2	96.6	76.8	77.8	52.6	43.4	36.2	34.8	37.9
47.5°	5101.0	3917.2	612.0	76.8	66.9	77.5	51.2	37.5	30.4	28.7	31.4
50°	5183.9	3996.4	599.1	65.9	58.0	69.3	58.7	31.4	25.9	23.6	25.9
52.5°	5270.3	4125.1	603.8	60.8	51.2	55.6	55.6	27.0	22.9	20.1	21.8
55°	5444.7	4315.2	593.2	57.7	47.1	42.3	35.8	23.9	20.8	17.7	19.5
57.5°	5659.1	4451.7	593.2	55.0	43.7	36.2	28.7	22.2	19.1	15.4	16.7
60°	5618.4	4308.0	563.9	52.2	41.0	33.8	25.9	20.5	17.7	14.0	15.0
62.5°	5339.6	3917.2	456.7	48.1	38.6	32.1	23.6	19.5	16.7	12.3	13.3
65°	5011.9	3502.1	317.4	43.7	35.8	29.0	21.2	18.4	15.4	10.9	11.6
67.5°	4617.3	3007.5	176.1	39.3	33.1	25.3	19.5	18.1	14.7	9.9	10.6
70°	3932.6	2270.6	94.6	35.8	31.1	23.2	18.4	18.1	14.7	9.6	9.9
72.5°	2952.2	1429.9	55.3	32.8	28.3	21.5	17.4	18.4	14.3	9.2	9.2
75°	2008.8	868.0	39.6	28.0	25.3	18.1	16.7	17.7	14.7	9.2	8.5
77.5°	1365.7	610.0	32.4	25.3	22.9	16.0	17.1	17.7	14.7	7.5	5.8
80°	852.7	314.7	24.6	20.1	19.8	14.0	17.1	15.4	9.6	1.7	0.0
82.5°	596.3	117.1	14.3	15.4	15.4	9.9	13.3	10.9	5.5	0.0	0.0
85°	250.2	20.1	7.9	10.9	9.6	5.8	10.6	8.2	3.4	0.0	0.0
87.5°	4.4	0.0	3.1	6.5	6.8	3.4	5.5	3.4	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: P596947  
 CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6
2.5°	743.1	710.7	642.4	675.2	671.8	686.8	688.1	653.3	728.4	774.8	781.7
5°	712.7	690.9	687.1	668.3	663.6	691.2	676.2	675.2	711.4	764.3	764.6
7.5°	592.2	575.5	583.3	561.5	505.2	508.6	513.7	535.2	566.3	601.1	613.7
10°	406.5	449.9	418.1	415.4	409.6	391.5	377.2	388.4	428.7	460.8	472.8
12.5°	290.1	297.0	316.4	309.3	319.2	303.8	298.0	333.1	372.4	405.2	428.7
15°	169.6	181.3	192.9	217.4	227.3	224.3	242.0	271.4	303.1	318.1	347.1
17.5°	119.5	120.5	122.9	149.5	166.9	173.7	184.3	206.5	219.5	226.3	238.3
20°	104.4	101.4	97.3	112.3	128.7	137.2	134.1	151.6	162.1	169.0	177.5
22.5°	94.6	89.4	87.0	92.2	104.8	112.3	113.7	123.9	139.9	144.7	147.5
25°	85.3	81.9	80.2	82.9	89.8	96.9	98.3	111.6	126.0	128.0	133.5
27.5°	79.2	72.7	73.4	75.4	78.5	87.4	90.1	97.6	118.4	120.8	122.5
30°	72.7	65.9	67.9	70.0	68.6	79.5	83.6	92.2	112.3	116.1	118.1
32.5°	66.2	61.1	60.8	62.8	65.2	71.0	79.9	89.8	108.2	113.3	118.4
35°	59.1	55.0	55.6	56.0	59.1	66.6	73.0	78.2	90.8	93.5	95.2
37.5°	53.9	50.5	49.8	53.2	56.3	62.1	64.5	66.9	83.6	89.8	90.1
40°	47.8	45.7	45.7	48.1	55.0	54.3	57.3	64.9	80.9	87.4	88.1
42.5°	43.4	40.6	41.3	43.7	48.5	45.1	51.2	62.1	79.9	86.4	86.0
45°	36.5	35.8	37.2	39.3	41.3	38.2	47.8	59.4	76.5	85.0	82.6
47.5°	30.4	30.4	32.1	34.1	33.1	34.1	43.4	55.6	74.4	82.3	80.6
50°	24.9	25.3	27.0	30.4	27.3	30.0	38.9	51.9	71.0	79.5	78.2
52.5°	21.2	21.5	22.5	24.9	23.6	27.3	35.8	48.1	67.6	74.8	74.1
55°	18.4	19.1	19.1	20.5	21.2	25.6	32.4	44.4	62.5	70.3	69.0
57.5°	16.4	17.1	16.7	17.7	18.4	22.5	29.0	40.3	57.3	63.8	61.8
60°	14.7	15.4	15.0	16.4	16.0	19.5	25.3	35.8	51.9	57.0	55.3
62.5°	13.0	13.7	13.7	14.3	14.7	16.4	21.8	31.7	46.4	50.5	49.2
65°	11.6	12.3	12.6	12.3	13.0	14.0	18.4	28.7	40.3	44.4	42.3
67.5°	10.6	11.3	11.9	10.6	11.3	11.6	15.7	25.6	35.5	38.9	37.2
70°	10.2	10.6	10.6	9.2	8.9	9.2	13.7	21.8	31.1	34.5	32.1
72.5°	9.6	9.9	9.6	7.5	6.5	7.2	11.6	18.4	26.3	29.0	27.0
75°	8.9	9.2	8.9	6.1	4.1	5.1	9.6	16.0	22.5	23.9	22.9
77.5°	7.5	8.2	8.2	4.4	1.4	3.1	7.2	13.0	18.8	18.8	19.1
80°	0.7	2.0	3.4	2.4	0.0	0.3	2.4	6.8	11.9	11.6	12.6
82.5°	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	4.1	3.1	3.4
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: P596947  
 CATALOG NUMBER: MSA-SA2B-835-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6
2.5°	765.6	755.0	768.4	809.0	792.6	795.7	784.7	852.0	928.1	930.5
5°	765.3	755.7	775.5	773.8	820.6	871.4	920.6	1000.1	1112.8	1113.4
7.5°	607.9	664.6	679.3	674.8	734.9	804.9	880.7	1032.9	1125.4	1135.3
10°	548.2	572.8	602.8	613.7	638.6	705.2	790.9	963.3	1067.0	1089.9
12.5°	475.1	553.7	593.6	671.1	685.4	695.0	830.1	980.0	1043.1	1040.4
15°	393.6	461.8	525.0	619.5	658.4	758.8	865.3	1061.6	1099.1	1135.3
17.5°	278.5	330.1	427.0	526.3	645.1	754.4	962.2	1207.3	1278.3	1321.3
20°	186.4	211.3	299.0	430.4	581.0	689.5	1001.8	1339.1	1416.6	1453.8
22.5°	151.2	163.2	208.6	315.4	496.3	686.4	1017.9	1482.8	1691.0	1740.5
25°	133.1	141.3	165.5	233.5	412.0	672.8	1106.6	1644.6	1895.8	1935.7
27.5°	116.4	128.7	146.8	192.5	353.3	663.2	1151.7	1916.3	2216.0	2255.2
30°	111.3	126.3	143.7	175.4	312.3	626.4	1223.4	2161.4	2445.7	2515.7
32.5°	120.2	125.3	133.8	160.8	280.6	587.4	1349.3	2454.2	2635.8	2727.0
35°	95.2	104.4	119.5	147.5	267.3	585.4	1420.7	2642.6	2940.6	2997.0
37.5°	93.2	101.7	121.2	143.7	283.3	601.1	1526.5	3028.7	3490.2	3605.6
40°	90.5	101.4	119.8	142.0	283.3	616.5	1594.1	3337.6	3859.9	3976.9
42.5°	89.4	103.4	119.5	149.2	274.4	625.0	1696.1	3645.8	4250.4	4342.9
45°	88.7	105.5	120.5	157.7	272.4	653.0	1753.8	3795.7	4501.6	4607.7
47.5°	87.0	105.5	134.5	152.6	261.1	650.3	1828.6	4017.9	4651.4	4740.9
50°	85.7	106.2	152.2	143.0	262.8	633.5	1929.9	4226.5	4861.4	4925.2
52.5°	82.6	108.5	149.5	129.7	257.7	631.8	2081.1	4523.1	5137.5	5184.3
55°	75.8	105.5	135.2	113.3	239.6	612.4	2281.5	4908.8	5520.5	5528.7
57.5°	69.6	98.0	113.0	104.1	200.7	614.8	2454.2	5263.8	5861.8	5900.1
60°	63.5	101.7	87.7	96.9	166.2	571.1	2537.9	5399.6	6110.3	6166.3
62.5°	57.7	93.9	74.8	89.1	148.1	530.4	2479.8	5290.4	6142.1	6259.5
65°	51.2	65.2	63.1	79.9	149.8	473.4	2286.0	4970.6	6021.6	6183.4
67.5°	44.0	51.2	55.6	69.0	160.4	424.6	1953.5	4457.2	5697.6	5880.9
70°	38.6	46.1	48.5	60.4	166.9	392.5	1541.5	3744.8	5034.1	5203.4
72.5°	32.1	42.7	43.4	52.9	160.8	360.8	1098.4	2688.4	3822.7	3903.9
75°	27.6	35.5	39.3	44.4	135.2	269.3	605.2	1664.0	2417.0	2507.8
77.5°	24.9	27.0	29.7	30.7	57.3	140.3	208.2	1026.1	1353.4	1455.8
80°	19.1	21.2	20.5	21.2	31.4	48.5	79.2	480.9	639.3	696.3
82.5°	6.1	10.2	11.3	9.6	20.5	23.9	22.9	166.2	207.9	220.8
85°	1.4	3.8	1.7	0.0	6.8	12.3	1.7	25.3	49.8	36.9
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)