

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: P597146

Luminaire Tested: **MSA-SA4C-835-U-SLL**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597146  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-835-U-SLL  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 16993 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

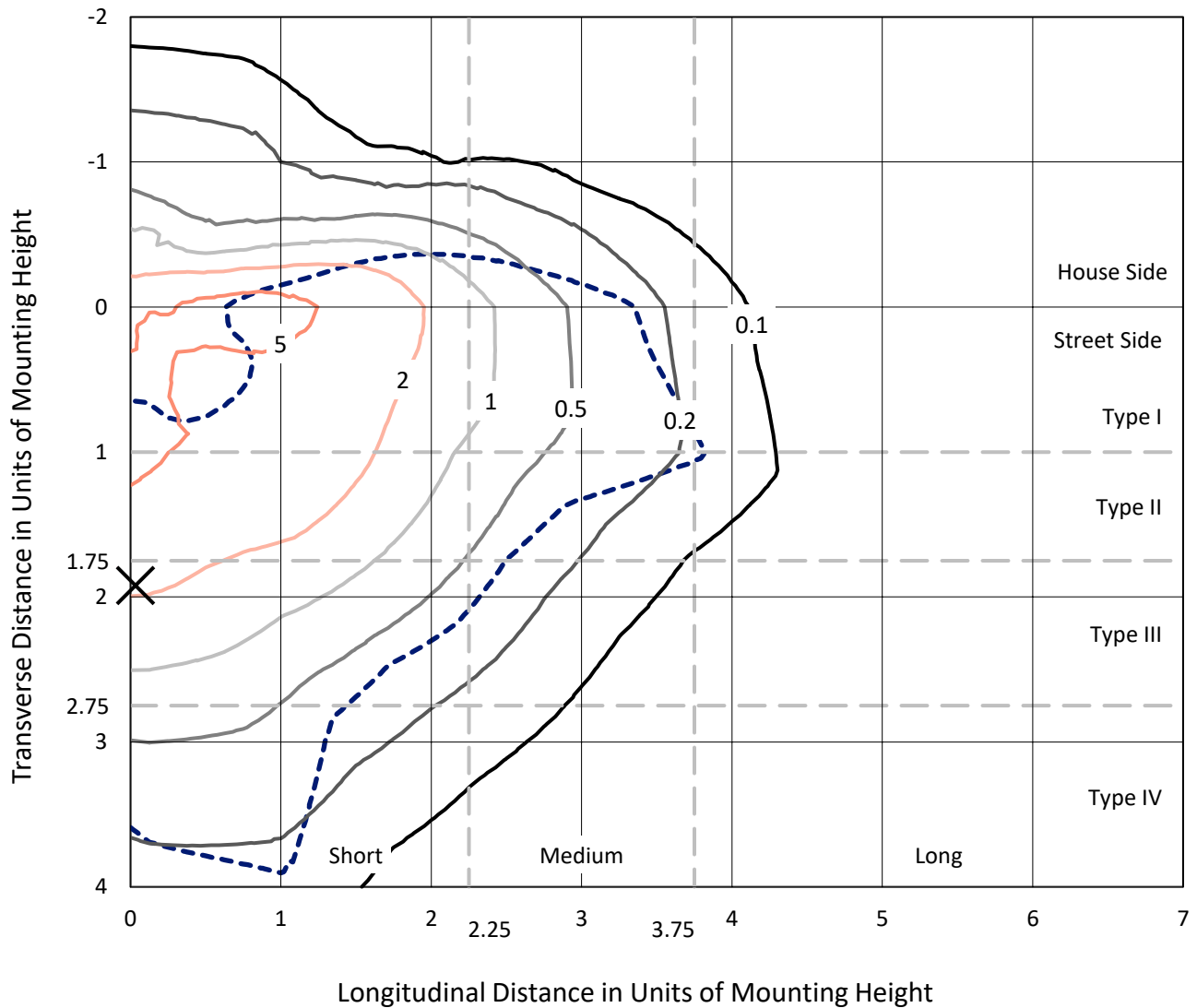
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P597146  
 CATALOG NUMBER: MSA-SA4C-835-U-SLL

### Iso-Footcandle Lines of Horizontal Illumination

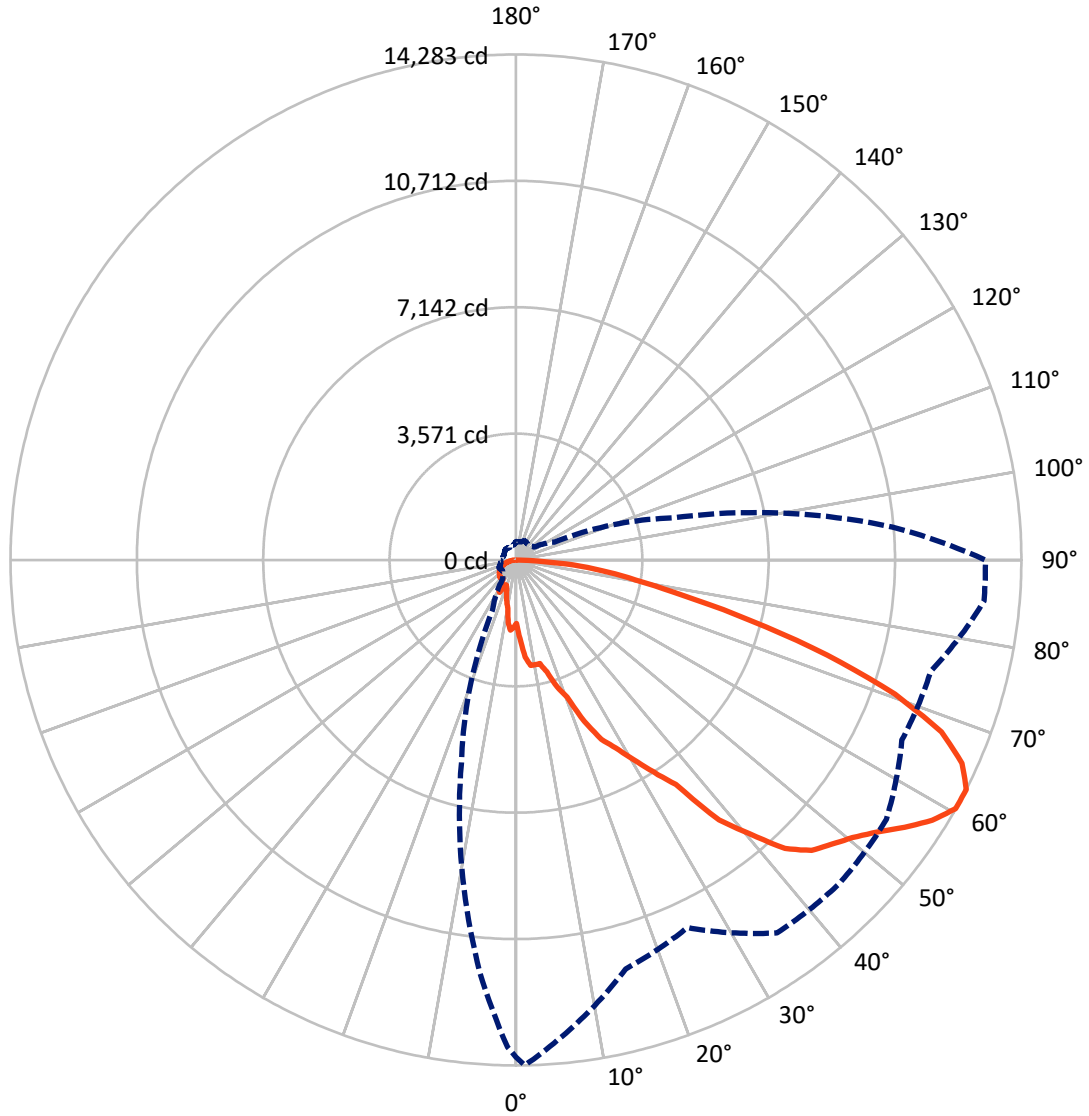
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc  
 Type IV - Short - N/A

REPORT NUMBER: P597146  
CATALOG NUMBER: MSA-SA4C-835-U-SLL

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P597146  
 CATALOG NUMBER: MSA-SA4C-835-U-SLL

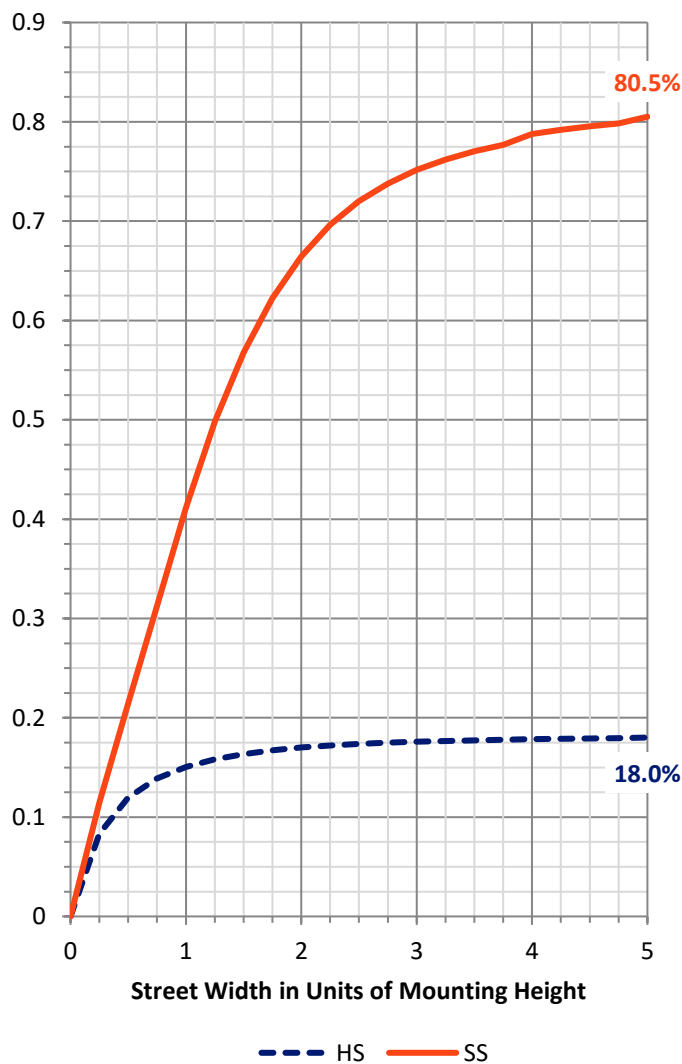
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3094.3	0.0	3094.3
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	13898.7	0.0	13898.7
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	16993.0	0.0	16993.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.4	1.2
10°-20°	596.9	3.5
20°-30°	1053.9	6.2
30°-40°	1641.5	9.7
40°-50°	2702.9	15.9
50°-60°	3857.7	22.7
60°-70°	4090.7	24.1
70°-80°	2259.5	13.3
80°-90°	584.4	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°	16993.0	100.0
0°-180°	16993.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P597146

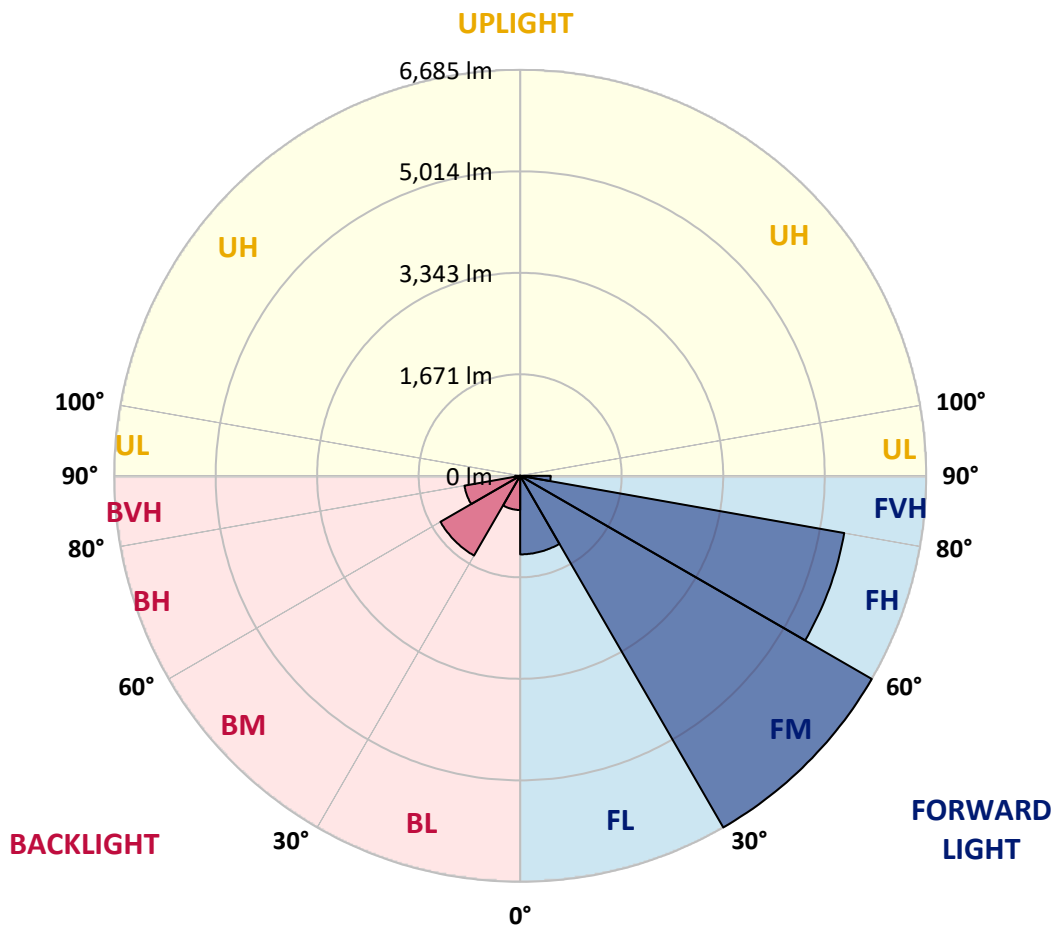
CATALOG NUMBER: MSA-SA4C-835-U-SLL

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1293.4	7.6			
FM (30°-60°)	6685.2	39.3			
FH (60°-80°)	5418.1	31.9			G3/7500
FVH (80°-90°)	502.0	3.0			G4/750
BL (0°-30°)	562.8	3.3	B2/1000		
BM (30°-60°)	1516.9	8.9	B2/2500		
BH (60°-80°)	932.2	5.5	B2/1000		G2/1000
BVH (80°-90°)	82.4	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-G4**

Type IV Short





REPORT NUMBER: P597146

CATALOG NUMBER: MSA-SA4C-835-U-SLL

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9
2.5°	2203.4	2222.3	2183.6	2139.9	1959.3	2133.3	2081.3	2177.8	2146.5	1937.0	2320.5
5°	2722.9	2757.5	2719.6	2850.7	2859.0	2892.8	2580.2	2774.8	2707.2	2689.9	2883.7
7.5°	2973.6	3009.0	3105.5	3338.9	3521.1	3356.2	3174.0	3133.5	3080.8	2943.1	3060.2
10°	2989.2	3009.0	3138.5	3633.3	3721.5	3838.6	3720.7	3442.8	3328.2	3028.8	2939.8
12.5°	2942.2	3004.1	3171.5	3774.3	4036.5	4164.3	4193.2	3884.0	3602.8	3261.4	3216.0
15°	3258.1	3280.3	3520.3	3874.9	4055.5	4163.5	4257.5	4067.0	3978.8	3708.3	3344.7
17.5°	3710.8	3772.6	3968.9	4100.0	4222.0	4242.7	4165.1	4090.9	3950.7	4311.9	3925.2
20°	4017.5	4137.1	4377.9	4402.6	4146.2	4191.5	4180.8	4185.8	4105.8	4773.7	4561.0
22.5°	4829.0	4958.4	4991.4	4847.9	4364.7	4157.7	4199.0	4318.5	4633.5	5205.8	5446.6
25°	5563.7	5614.0	5915.0	5545.6	4775.4	4324.3	4256.7	4565.9	5079.6	5933.1	6104.6
27.5°	5947.1	6012.3	6212.7	5408.7	4826.5	4109.9	3951.6	4422.4	4946.1	5590.9	6343.8
30°	6437.8	6541.7	6814.6	5545.6	4980.7	4250.1	3899.6	4349.9	4928.7	5815.2	6850.1
32.5°	6943.3	7145.3	7348.2	6028.0	4959.3	4464.5	4231.9	4268.2	5085.4	6285.2	7374.6
35°	7612.9	7791.0	7965.8	6306.7	5391.4	4643.4	4412.5	4796.8	5487.8	6830.3	8106.0
37.5°	9044.4	9326.4	8865.5	7100.0	5861.4	5449.9	5033.5	5261.1	5913.3	7284.7	9300.9
40°	9956.4	10168.4	9723.1	7640.1	6689.3	5993.3	5924.9	5943.8	6499.6	7673.9	10104.9
42.5°	10862.7	11149.7	10441.3	8381.4	7690.4	7115.6	6762.7	6738.8	7156.0	8373.2	11019.4
45°	11538.9	11707.9	10687.9	9006.5	8764.0	8337.7	8073.0	7653.3	8018.6	8857.2	11585.1
47.5°	11860.5	11998.2	11084.5	9370.1	9460.0	9482.3	9959.7	9244.0	8772.3	9184.6	11881.9
50°	12262.1	12327.2	11317.9	9690.1	10121.4	11099.4	11214.0	10001.0	9506.2	9541.7	12057.6
52.5°	12742.0	12769.2	11658.4	10059.5	10790.1	12163.1	11985.8	11284.1	10204.6	10193.9	12388.2
55°	13345.6	13329.1	12085.6	10556.8	11267.6	12795.6	12661.2	12149.9	10965.8	10734.1	12902.8
57.5°	13882.4	13872.5	12652.1	11014.4	11669.2	13120.5	13160.1	13024.8	11483.6	11120.8	13460.2
60°	14145.5	14271.7	13297.0	11515.0	11694.7	13267.3	13282.1	13066.9	12062.5	11617.2	13608.7
62.5°	14043.2	14283.2	13613.6	11965.2	11459.7	12866.5	12928.4	12779.9	12036.1	12138.4	13277.2
65°	13578.2	13855.2	13339.0	12205.2	11315.4	12195.3	12210.9	11835.7	11659.3	12483.9	12500.4
67.5°	12705.7	12965.5	12464.9	11822.5	10327.5	10386.1	10735.7	10766.2	10508.9	12223.3	11409.4
70°	11178.5	11361.6	11048.2	10877.5	8632.1	8289.1	8668.4	8830.8	8947.9	11282.4	10099.9
72.5°	8849.8	9203.6	9253.0	9364.4	6949.9	6378.4	6659.6	6418.8	7181.6	9602.7	8252.0
75°	6547.5	6846.0	7166.8	7787.7	5477.9	4775.4	4740.7	4617.9	5330.3	7722.5	6120.3
77.5°	4626.9	4817.4	5064.0	6220.9	4133.8	3677.8	3699.2	3574.7	3849.3	5836.6	4227.8
80°	3316.6	3416.4	3531.0	4098.4	3049.4	3173.1	3176.4	3058.5	2862.2	3963.9	2821.8
82.5°	2363.4	2440.9	2572.0	2703.1	2273.5	2600.8	2598.4	2590.9	2269.3	2679.2	1765.5
85°	1316.1	1420.0	1647.6	2117.6	1641.8	1859.5	1635.2	1801.0	1665.7	1783.6	893.9
87.5°	92.4	82.5	368.6	1227.0	766.1	559.9	293.6	581.4	745.5	931.8	124.5
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: P597146

CATALOG NUMBER: MSA-SA4C-835-U-SLL

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9
2.5°	2399.6	2428.5	2315.5	2145.7	2191.8	2141.5	2078.0	1979.1	1775.4	1901.6	1902.4
5°	2882.0	2772.4	2684.1	2600.8	2460.7	2248.7	2220.7	2050.8	1955.2	2005.5	1998.0
7.5°	3032.9	2877.1	2744.3	2446.6	2186.9	1857.9	1758.9	1658.3	1616.3	1738.3	1786.9
10°	2867.2	2704.7	2574.5	2212.4	2036.0	1830.7	1558.5	1419.2	1336.7	1368.9	1387.8
12.5°	3000.8	2835.0	2425.2	2223.2	1932.1	1806.7	1568.4	1363.9	1241.9	1271.6	1236.1
15°	3129.4	2906.0	2496.1	2093.7	1857.9	1676.4	1483.5	1272.4	1128.9	1077.8	1050.6
17.5°	3599.5	3228.4	2487.9	2021.1	1750.7	1542.0	1309.5	1078.6	982.9	930.2	884.8
20°	4172.6	3655.5	2532.4	1946.1	1636.9	1373.8	1120.7	906.3	839.5	804.8	792.5
22.5°	4854.5	4203.1	2787.2	1935.4	1529.7	1250.9	1016.8	883.2	808.1	770.2	754.5
25°	5396.3	4769.6	2975.2	2007.9	1523.9	1149.5	954.1	981.3	946.7	958.2	866.7
27.5°	5922.4	4923.8	2869.7	1975.8	1370.5	969.8	939.2	996.1	1025.8	1034.9	1031.6
30°	6366.9	5575.2	2892.8	1794.4	1157.8	790.0	719.1	747.1	828.7	958.2	982.9
32.5°	7017.5	5886.9	3089.8	1684.7	1034.9	706.7	627.5	616.8	635.8	682.8	723.2
35°	7778.6	6604.4	3145.1	1655.8	950.0	669.6	614.3	589.6	599.5	635.0	643.2
37.5°	9197.8	7127.2	3349.6	1620.4	918.6	647.3	604.4	595.4	616.8	645.7	662.2
40°	9980.4	8067.2	3359.5	1589.9	878.2	638.3	611.0	606.9	620.1	659.7	669.6
42.5°	11023.5	8603.2	3514.5	1554.4	864.2	650.6	624.2	622.6	634.1	657.2	675.4
45°	11659.3	8961.9	3522.8	1533.8	860.9	705.0	641.6	635.8	633.3	647.3	663.8
47.5°	12069.1	9479.0	3623.4	1510.7	880.7	719.1	662.2	637.4	629.2	635.0	647.3
50°	12457.5	9892.1	3813.9	1507.4	901.3	705.0	698.5	636.6	620.1	617.6	626.7
52.5°	12934.1	10571.6	4048.9	1538.7	896.4	684.4	725.7	633.3	603.6	597.8	606.9
55°	13627.6	11299.7	4298.7	1512.3	845.2	644.9	699.3	630.8	586.3	575.6	583.8
57.5°	14077.1	11717.0	4578.3	1490.1	767.7	615.2	675.4	632.5	588.0	564.0	569.0
60°	13927.8	11492.7	4688.0	1354.0	694.3	592.1	618.5	619.3	573.1	550.8	555.0
62.5°	13268.1	10680.5	4585.7	1195.7	639.9	559.1	559.9	594.5	530.2	514.6	521.2
65°	12346.2	9670.3	4171.7	1092.6	614.3	524.5	511.3	522.0	472.5	461.0	474.2
67.5°	11214.8	8425.1	3555.8	983.8	605.3	477.5	461.8	457.7	426.3	413.1	426.3
70°	9795.6	7054.6	2842.5	907.1	570.6	426.3	414.0	409.8	383.4	373.6	385.1
72.5°	7873.5	5508.4	2193.5	848.5	532.7	379.3	368.6	363.7	341.4	327.4	341.4
75°	5600.0	4209.7	1629.4	758.6	479.1	331.5	319.1	312.5	291.9	278.7	291.1
77.5°	3979.6	3159.9	1138.0	627.5	395.0	280.4	272.9	262.2	244.1	228.4	240.8
80°	2942.2	2257.8	733.9	484.1	301.8	224.3	220.2	212.8	195.4	176.5	185.5
82.5°	1937.0	1627.8	420.6	328.2	219.3	161.6	164.9	160.0	143.5	123.7	128.6
85°	867.5	964.0	223.5	180.6	142.7	97.3	106.4	103.1	90.7	71.7	73.4
87.5°	83.3	162.4	68.4	66.0	52.8	30.5	37.9	32.2	27.2	17.3	13.2
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: P597146

CATALOG NUMBER: MSA-SA4C-835-U-SLL

**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9
2.5°	1931.3	1815.0	1698.7	1769.6	1771.3	1790.2	1792.7	1722.6	1778.7	1821.6	1866.1
5°	1961.8	1885.9	1890.0	1821.6	1784.5	1832.3	1822.4	1803.4	1837.2	1884.3	1941.2
7.5°	1740.8	1691.3	1683.0	1617.1	1457.1	1421.6	1451.3	1463.7	1509.1	1581.6	1642.6
10°	1359.0	1457.1	1346.6	1321.0	1279.0	1196.5	1148.7	1142.9	1239.4	1297.9	1349.1
12.5°	1224.6	1199.8	1186.6	1116.5	1116.5	1029.1	1001.1	1026.6	1175.1	1217.1	1283.1
15°	1043.1	1025.0	964.0	929.3	912.9	877.4	907.1	931.8	1070.4	1073.7	1142.9
17.5°	865.8	855.1	797.4	790.8	774.3	758.6	785.9	845.2	920.3	907.1	939.2
20°	774.3	737.2	684.4	703.4	686.1	673.7	662.2	746.3	799.1	816.4	835.3
22.5°	751.2	683.6	652.3	635.0	635.8	616.0	618.5	688.6	768.5	779.3	767.7
25°	858.4	738.0	636.6	586.3	567.3	560.7	579.7	641.6	738.0	761.1	770.2
27.5°	1004.4	801.5	655.6	569.8	531.9	535.2	562.4	605.3	719.1	760.3	771.0
30°	964.0	753.7	656.4	557.4	510.4	527.8	537.7	578.9	704.2	766.1	819.7
32.5°	743.8	677.8	660.5	567.3	548.4	521.2	535.2	574.8	660.5	699.3	701.7
35°	630.0	579.7	568.2	545.1	518.7	507.1	522.8	557.4	613.5	637.4	634.1
37.5°	625.1	569.8	524.5	514.6	503.8	500.5	509.6	541.8	598.7	640.7	631.7
40°	633.3	564.9	518.7	501.4	505.5	490.6	499.7	539.3	601.1	640.7	632.5
42.5°	623.4	559.1	511.3	498.1	502.2	481.6	492.3	533.5	594.5	641.6	625.9
45°	603.6	545.9	507.1	484.9	503.8	473.3	486.5	518.7	574.8	625.9	607.7
47.5°	583.8	530.2	489.8	475.8	494.8	465.1	470.9	498.9	555.0	605.3	589.6
50°	562.4	510.4	475.8	471.7	484.9	463.4	454.4	477.5	531.1	581.4	568.2
52.5°	539.3	493.9	465.9	464.3	476.6	452.7	439.5	457.7	505.5	555.8	545.1
55°	517.0	475.8	453.5	457.7	471.7	443.6	427.2	438.7	478.3	527.8	512.9
57.5°	494.8	455.2	437.0	448.6	459.3	432.1	411.5	418.1	450.2	498.9	481.6
60°	475.0	437.0	418.9	432.9	442.8	414.8	390.9	395.0	423.9	467.6	451.9
62.5°	449.4	417.3	393.3	411.5	418.9	391.7	366.1	371.1	394.2	435.4	423.9
65°	413.1	392.5	370.3	382.6	392.5	364.5	340.6	346.3	363.7	402.4	394.2
67.5°	381.8	362.0	347.2	357.1	358.7	337.3	315.8	319.1	333.1	369.4	360.4
70°	347.2	328.2	316.7	324.1	323.3	305.1	288.6	289.4	301.0	334.0	321.6
72.5°	309.2	291.1	285.3	289.4	286.1	269.7	254.0	259.8	267.2	291.9	282.0
75°	268.8	252.3	249.0	253.2	248.2	232.5	218.5	224.3	230.9	251.5	239.1
77.5°	226.8	211.9	212.8	213.6	207.0	196.3	182.2	188.0	192.1	206.2	193.8
80°	180.6	169.0	172.3	172.3	164.9	157.5	144.3	146.0	148.4	153.4	144.3
82.5°	131.9	131.9	131.9	132.8	117.1	119.6	108.0	107.2	104.7	103.9	98.1
85°	78.3	81.6	83.3	85.8	63.5	74.2	64.3	61.8	56.9	52.0	50.3
87.5°	17.3	22.3	22.3	21.4	0.0	8.2	4.1	6.6	1.6	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: P597146

CATALOG NUMBER: MSA-SA4C-835-U-SLL

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9	1791.9
2.5°	1815.0	1765.5	1857.9	1940.3	1927.1	1975.0	1863.6	2028.6	2203.4	2203.4
5°	1926.3	1884.3	1908.2	1956.0	1992.3	2158.8	2297.4	2435.1	2719.6	2722.9
7.5°	1624.5	1715.2	1736.6	1722.6	1878.5	2092.9	2321.3	2713.8	2954.6	2973.6
10°	1518.9	1560.2	1625.3	1661.6	1725.1	1936.2	2219.9	2685.8	2941.4	2989.2
12.5°	1376.3	1528.8	1627.8	1830.7	1881.0	1923.0	2374.1	2777.3	2953.8	2942.2
15°	1220.4	1335.9	1478.5	1702.8	1830.7	2152.3	2465.6	3070.9	3170.7	3258.1
17.5°	973.0	1058.0	1247.6	1503.3	1819.9	2116.0	2691.6	3433.7	3620.1	3710.8
20°	800.7	801.5	991.2	1330.1	1674.8	1964.2	2777.3	3734.7	3971.4	4017.5
22.5°	757.0	719.1	818.8	1094.3	1514.8	2054.1	2950.5	4218.7	4712.7	4829.0
25°	733.1	686.9	749.6	965.6	1400.2	2101.1	3299.3	4884.2	5518.3	5563.7
27.5°	743.0	764.4	784.2	860.9	1255.1	2012.9	3218.5	5181.9	5861.4	5947.1
30°	809.8	844.4	799.1	825.4	1135.5	1885.1	3362.8	5665.1	6293.5	6437.8
32.5°	673.7	660.5	656.4	714.1	1015.9	1769.6	3665.4	6345.4	6761.9	6943.3
35°	607.7	587.1	595.4	661.3	957.4	1753.1	3835.3	6908.6	7501.5	7612.9
37.5°	605.3	581.4	592.1	641.6	978.0	1782.8	4107.4	7812.4	8806.1	9044.4
40°	599.5	586.3	592.1	629.2	956.6	1799.3	4264.1	8571.9	9714.8	9956.4
42.5°	598.7	592.1	597.8	639.1	934.3	1806.7	4481.0	9258.0	10672.2	10862.7
45°	596.2	602.8	602.8	647.3	924.4	1856.2	4608.8	9594.4	11303.9	11538.9
47.5°	584.7	604.4	636.6	644.9	884.0	1833.1	4789.4	10104.9	11639.5	11860.5
50°	569.8	602.0	679.5	628.4	877.4	1777.1	5000.5	10509.8	12069.9	12262.1
52.5°	550.0	597.8	669.6	596.2	865.8	1767.2	5296.5	11035.9	12572.1	12742.0
55°	522.0	583.0	639.1	564.0	837.8	1735.8	5749.2	11688.1	13229.3	13345.6
57.5°	496.4	560.7	594.5	545.9	771.0	1742.4	6064.2	12220.0	13781.0	13882.4
60°	473.3	558.3	531.1	526.9	702.6	1654.2	6166.5	12214.2	13986.3	14145.5
62.5°	448.6	526.9	486.5	501.4	642.4	1563.5	5949.6	11690.6	13764.5	14043.2
65°	416.4	451.9	449.4	483.2	644.0	1415.9	5452.4	10767.0	13211.2	13578.2
67.5°	378.5	399.9	414.0	453.5	664.6	1301.2	4652.5	9656.3	12269.5	12705.7
70°	339.7	361.2	376.9	414.8	683.6	1248.5	3703.4	8096.1	10735.7	11178.5
72.5°	300.2	322.4	334.8	367.8	658.0	1135.5	2741.0	6299.3	8617.3	8849.8
75°	258.9	280.4	290.3	320.8	571.5	939.2	1892.5	4771.2	6311.6	6547.5
77.5°	216.9	240.0	243.3	268.0	436.2	718.2	1213.0	3659.7	4469.4	4626.9
80°	173.2	196.3	196.3	209.5	306.8	493.9	726.5	2760.8	3254.8	3316.6
82.5°	124.5	149.3	147.6	148.4	211.9	305.9	420.6	2069.0	2351.8	2363.4
85°	73.4	90.7	89.9	82.5	125.3	164.9	227.6	1284.8	1312.8	1316.1
87.5°	14.0	21.4	19.0	8.2	34.6	48.7	66.0	238.3	94.8	92.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)