

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: P565345

Luminaire Tested: **MSA-SA4B-835-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565345  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 8/19/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-835-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14482 lumens  
Efficiency: N/A  
Efficacy: 84.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B4 - U0 - G4

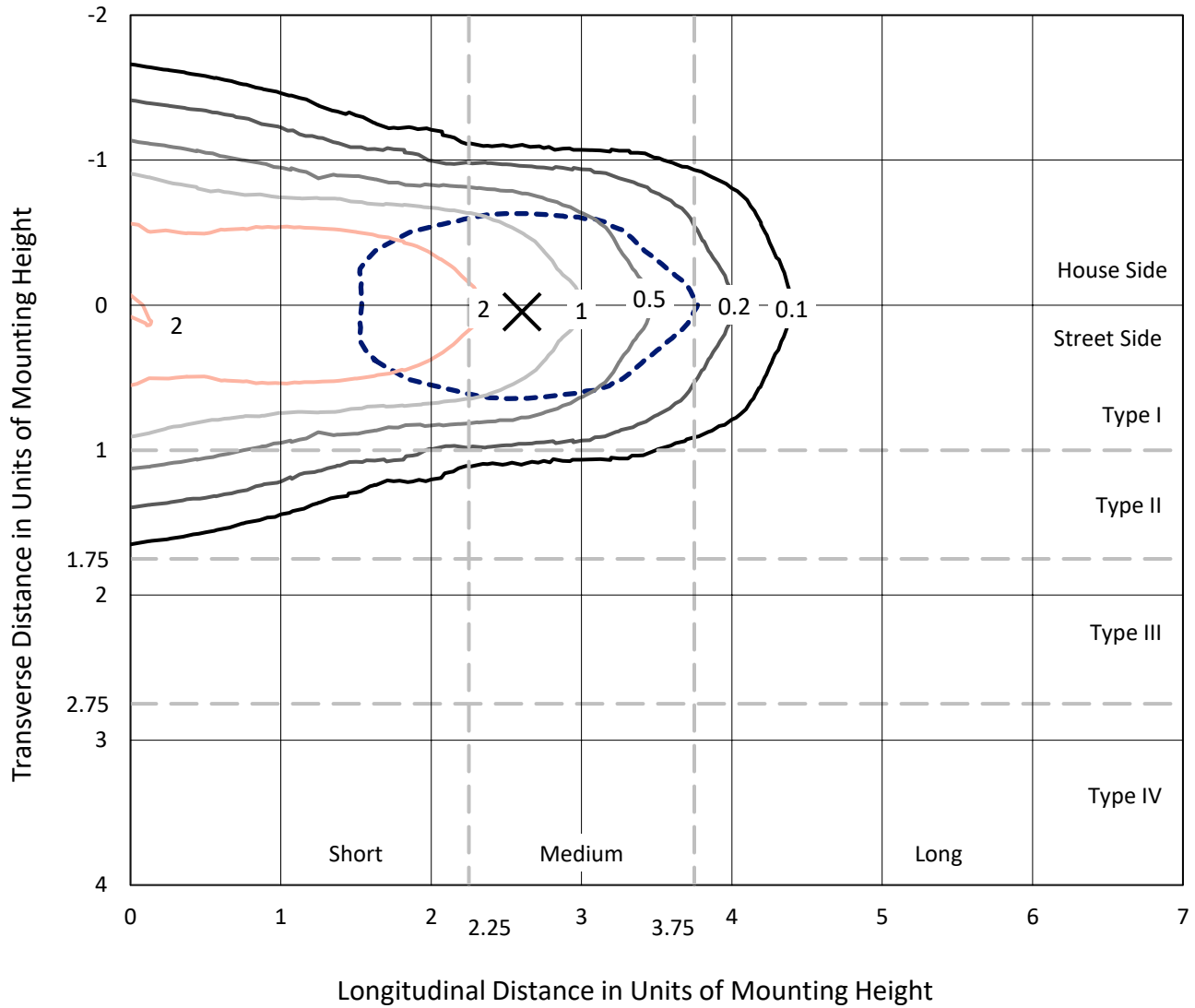
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P565345  
 CATALOG NUMBER: MSA-SA4B-835-U-T1

### Iso-Footcandle Lines of Horizontal Illumination

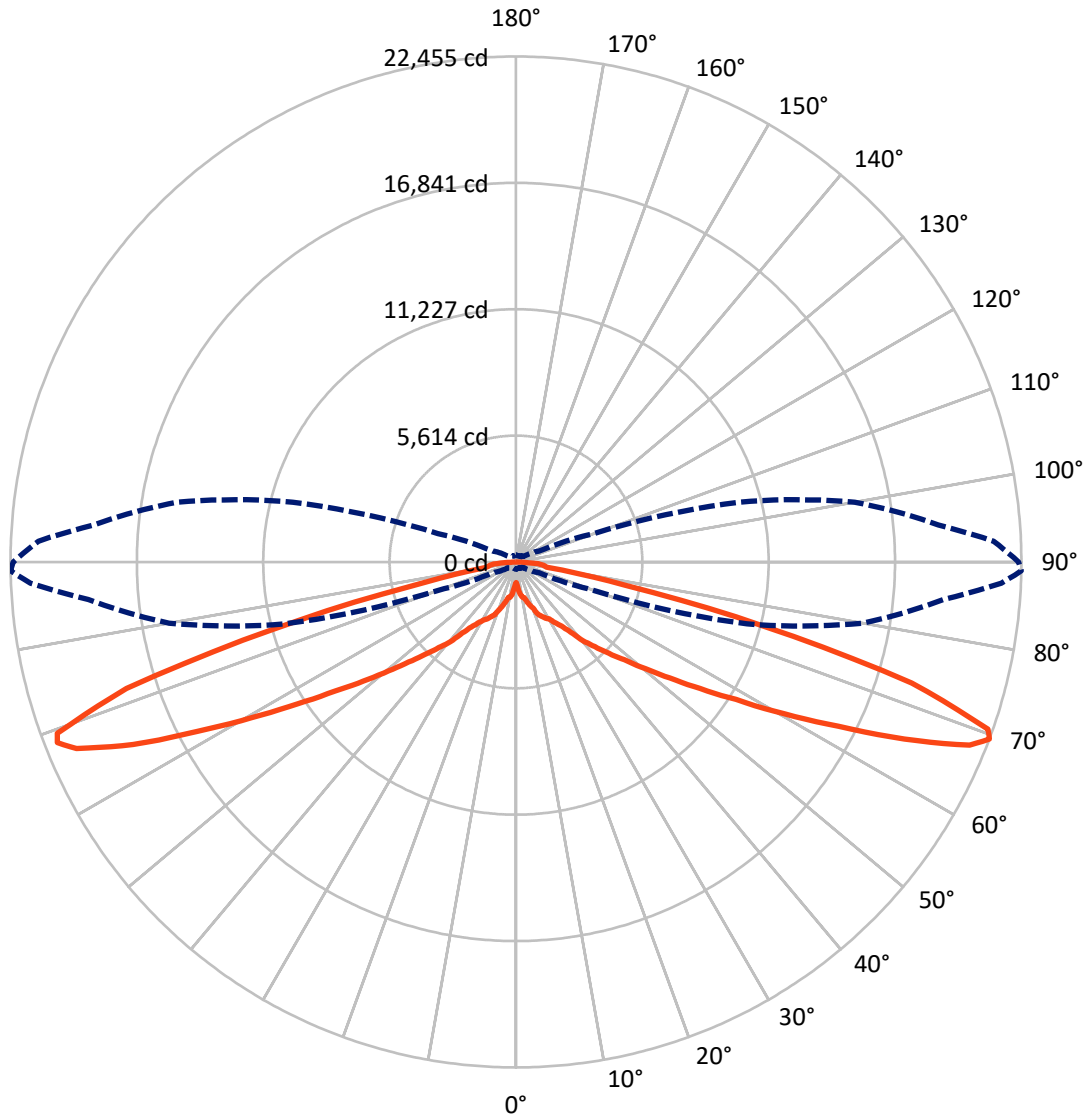
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type I - Medium - N/A

REPORT NUMBER: P565345  
CATALOG NUMBER: MSA-SA4B-835-U-T1

### Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P565345  
 CATALOG NUMBER: MSA-SA4B-835-U-T1

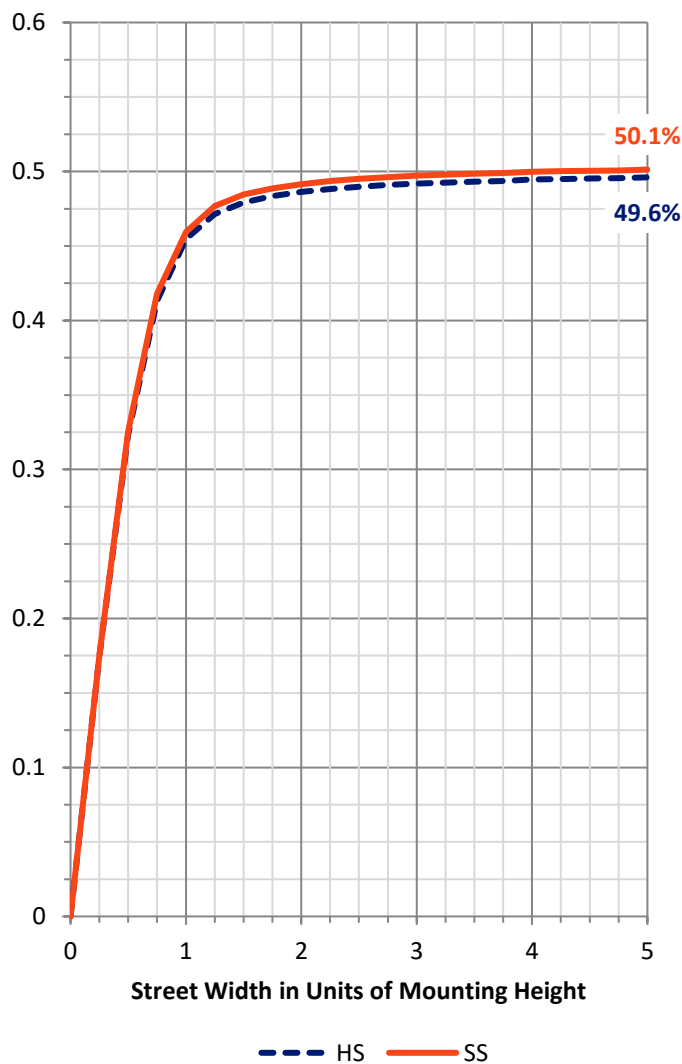
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7240.9	0.0	7240.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7241.1	0.0	7241.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	14482.0	0.0	14482.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.3	0.8
10°-20°	531.0	3.7
20°-30°	1059.4	7.3
30°-40°	1602.4	11.1
40°-50°	2326.0	16.1
50°-60°	3055.9	21.1
60°-70°	3727.8	25.7
70°-80°	1884.6	13.0
80°-90°	179.6	1.2
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°	14482.0	100.0
0°-180°	14482.0	100.0

**Coefficient of Utilization**

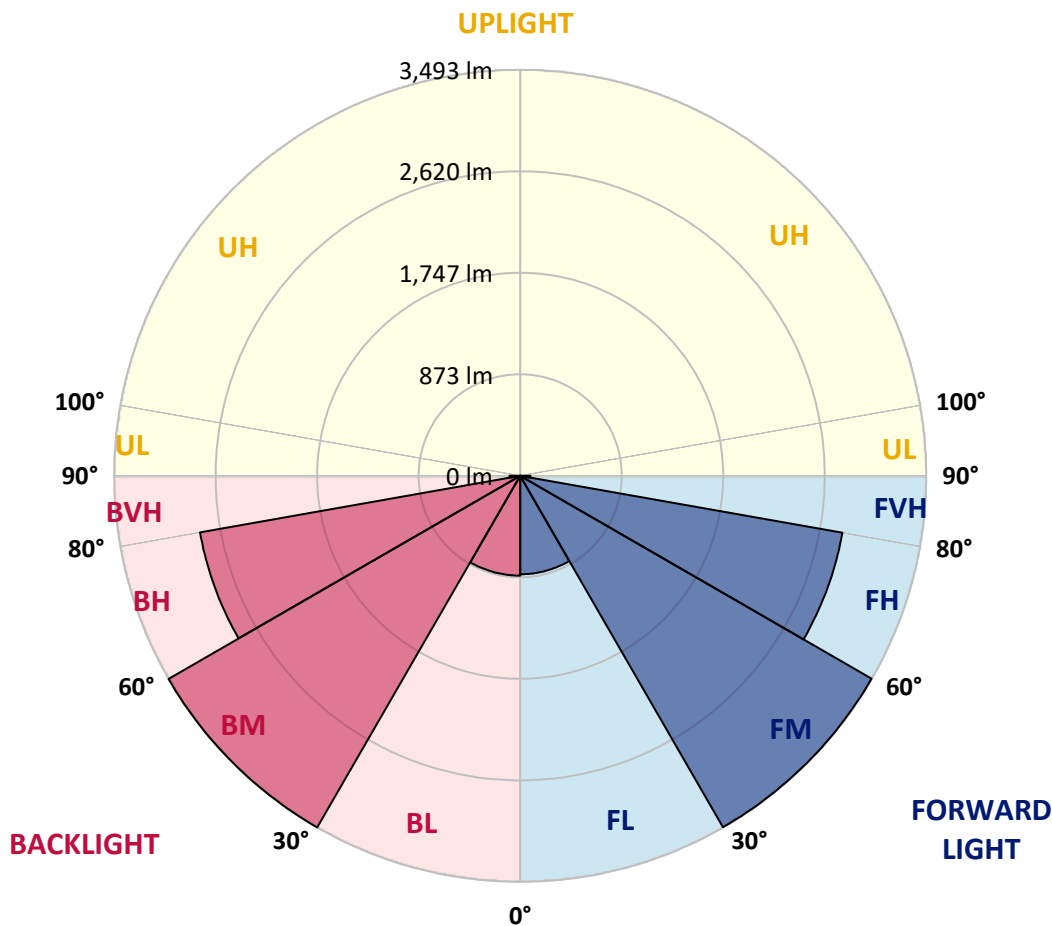


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 CATALOG NUMBER: MSA-SA4B-835-U-T1

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	846.9	5.8			
FM (30°-60°)	3490.9	24.1			
FH (60°-80°)	2815.2	19.4			G2/5000
FVH (80°-90°)	88.1	0.6			G1/100
BL (0°-30°)	858.8	5.9	B2/1000		
BM (30°-60°)	3493.3	24.1	B3/5000		
BH (60°-80°)	2797.2	19.3	B4/5000		G4/5000
BVH (80°-90°)	91.5	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**  
 Type I Medium





REPORT NUMBER: P565345

CATALOG NUMBER: MSA-SA4B-835-U-T1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	1076.5	952.4	941.6	911.9	933.5	941.6	922.7	895.7	925.4	941.6	911.9
5°	1357.0	1173.6	1111.5	1060.3	957.8	914.6	957.8	1068.4	1081.9	1149.3	1130.4
7.5°	1494.6	1465.0	1386.7	1216.8	1052.2	960.5	1076.5	1235.6	1316.6	1381.3	1448.8
10°	1597.2	1581.0	1443.4	1322.0	1254.5	1259.9	1262.6	1313.9	1384.0	1491.9	1529.7
12.5°	1621.4	1616.0	1637.6	1610.7	1616.0	1645.7	1616.0	1602.6	1643.0	1678.1	1640.3
15°	1777.9	1775.2	1783.3	1788.7	1896.6	1942.5	1896.6	1856.2	1826.5	1796.8	1858.9
17.5°	1885.8	1872.3	1875.0	1926.3	2047.7	2174.5	2150.2	2096.3	2028.8	2069.3	2120.6
20°	1945.2	1920.9	1937.1	1958.7	2163.7	2304.0	2320.2	2247.4	2206.9	2258.2	2301.3
22.5°	2001.8	1964.1	1907.4	1929.0	2117.9	2320.2	2398.4	2379.6	2409.2	2425.4	2417.3
25°	1934.4	1958.7	1896.6	1958.7	2150.2	2336.4	2492.9	2603.5	2606.2	2598.1	2657.4
27.5°	1893.9	1875.0	1769.8	1929.0	2088.2	2204.2	2603.5	2789.6	2846.3	2673.6	2789.6
30°	1823.8	1853.5	1710.5	1842.7	2045.0	2239.3	2730.3	2997.4	2913.7	2892.2	2919.1
32.5°	1780.6	1761.7	1694.3	1767.1	1920.9	2344.5	2811.2	3118.8	3224.0	3172.7	3167.3
35°	1710.5	1724.0	1618.7	1697.0	1912.8	2255.5	2865.2	3423.6	3585.5	3545.1	3512.7
37.5°	1721.3	1675.4	1599.9	1656.5	1861.6	2304.0	3000.1	3717.7	3974.0	3995.6	3847.2
40°	1640.3	1613.4	1500.0	1594.5	1764.4	2274.3	3032.5	4052.3	4486.6	4583.7	4370.6
42.5°	1524.3	1489.2	1424.5	1529.7	1707.8	2128.7	3078.3	4454.3	5007.3	5209.7	5015.4
45°	1357.0	1311.2	1278.8	1419.1	1583.7	2090.9	3029.8	4788.8	5506.4	5784.3	5778.9
47.5°	1154.7	1125.0	1108.8	1257.2	1481.2	1996.5	2929.9	4999.2	5854.5	6566.7	6458.8
50°	925.4	903.8	901.1	1057.6	1308.5	1802.2	2816.6	5104.4	6383.3	7284.4	7378.8
52.5°	741.9	725.7	723.0	849.8	1095.4	1540.5	2579.2	5185.4	6887.8	8099.1	8584.8
55°	580.1	563.9	566.6	671.8	871.4	1259.9	2217.7	5093.7	7330.2	8932.8	9852.8
57.5°	474.8	458.6	461.3	520.7	666.4	963.2	1767.1	4894.0	7529.9	9963.4	11331.2
60°	418.2	402.0	393.9	420.9	512.6	725.7	1313.9	4117.0	7562.2	10818.6	12936.5
62.5°	388.5	372.3	364.2	372.3	423.6	555.8	947.0	3261.8	7376.1	11549.8	14406.8
65°	361.5	348.0	337.2	345.3	372.3	442.5	690.7	2233.9	6402.1	11884.3	15475.2
67.5°	331.8	321.1	310.3	321.1	339.9	372.3	536.9	1413.7	4799.6	11449.9	15920.4
69°	315.7	299.5	294.1	302.2	321.1	342.6	464.0	1127.7	3650.3	10624.4	15650.6
70°	299.5	288.7	280.6	294.1	310.3	326.4	418.2	957.8	2862.5	9564.1	14981.5
72.5°	264.4	256.3	250.9	264.4	277.9	288.7	342.6	682.6	1659.2	6512.8	11881.6
75°	232.0	223.9	221.2	232.0	242.8	248.2	288.7	469.4	979.3	3407.5	7127.9
77.5°	194.2	183.5	186.2	199.6	207.7	210.4	242.8	337.2	577.4	1543.2	3302.2
80°	143.0	143.0	153.8	164.6	164.6	164.6	194.2	245.5	350.7	709.6	1370.5
82.5°	99.8	102.5	105.2	121.4	124.1	113.3	148.4	178.1	218.5	310.3	474.8
85°	56.7	59.4	62.1	72.8	75.5	67.4	97.1	113.3	126.8	153.8	248.2
87.5°	21.6	24.3	32.4	37.8	40.5	29.7	45.9	54.0	54.0	64.7	110.6
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: P565345

CATALOG NUMBER: MSA-SA4B-835-U-T1

**CANDELA DISTRIBUTION (continued):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	973.9	992.8	1027.9	1036.0	1006.3	973.9	901.1	947.0	965.9	930.8	941.6
5°	1206.0	1246.4	1289.6	1238.3	1206.0	1184.4	1149.3	1152.0	1133.1	1071.1	968.5
7.5°	1467.7	1421.8	1454.2	1489.2	1438.0	1440.7	1473.1	1405.6	1354.4	1249.1	1057.6
10°	1589.1	1589.1	1597.2	1597.2	1575.6	1575.6	1572.9	1465.0	1402.9	1357.0	1303.1
12.5°	1597.2	1594.5	1626.8	1602.6	1608.0	1613.4	1626.8	1675.4	1659.2	1599.9	1648.4
15°	1821.1	1810.3	1821.1	1818.4	1826.5	1850.8	1840.0	1829.2	1831.9	1875.0	1947.9
17.5°	2031.5	2036.9	2026.1	2045.0	2045.0	2061.2	2099.0	2061.2	2028.8	2109.8	2166.4
20°	2274.3	2255.5	2212.3	2244.7	2252.8	2255.5	2317.5	2271.6	2225.8	2255.5	2322.9
22.5°	2519.8	2517.2	2522.5	2525.2	2536.0	2495.6	2411.9	2398.4	2428.1	2387.7	2395.7
25°	2670.9	2673.6	2687.1	2689.8	2644.0	2687.1	2716.8	2627.8	2627.8	2619.7	2565.7
27.5°	2854.4	2813.9	2830.1	2851.7	2832.8	2843.6	2808.5	2679.0	2816.6	2835.5	2619.7
30°	2978.5	2959.6	2940.7	2962.3	2981.2	3029.8	2929.9	2916.4	2927.2	3027.1	2743.8
32.5°	3240.2	3267.2	3232.1	3197.0	3232.1	3221.3	3178.1	3159.3	3294.1	3162.0	2830.1
35°	3483.0	3493.8	3496.5	3491.1	3512.7	3474.9	3474.9	3545.1	3585.5	3442.5	2857.1
37.5°	4068.4	4030.7	3952.4	3914.7	3982.1	4038.8	3871.5	3955.1	3938.9	3696.1	3059.4
40°	4489.3	4575.7	4599.9	4589.1	4599.9	4438.1	4473.1	4535.2	4462.3	4060.4	2989.3
42.5°	5104.4	5158.4	5139.5	5115.2	5126.0	5096.4	4991.1	5220.5	4958.8	4467.7	3097.2
45°	5665.6	5787.0	5795.1	5711.5	5778.9	5673.7	5716.9	5797.8	5533.4	4772.6	3067.5
47.5°	6334.7	6585.6	6491.2	6491.2	6558.6	6332.0	6434.5	6542.4	5841.0	4977.6	2905.6
50°	7324.8	7459.7	7454.3	7430.0	7459.7	7338.3	7322.1	7308.6	6313.1	5171.9	2805.8
52.5°	8444.5	8627.9	8557.8	8584.8	8625.2	8395.9	8576.7	8082.9	6904.0	5244.7	2579.2
55°	9874.4	10001.2	9931.0	9793.4	9976.9	9831.2	9890.5	8927.4	7314.0	5037.0	2201.5
57.5°	11576.7	11641.5	11525.5	11512.0	11633.4	11476.9	11377.1	9877.0	7527.2	4880.5	1759.0
60°	13565.1	13767.4	13694.6	13578.6	13689.2	13551.6	12796.2	10683.7	7484.0	4149.4	1362.4
62.5°	15950.0	16155.1	16074.1	15995.9	16066.1	15707.2	14129.0	11320.4	7289.8	3288.8	995.5
65°	17919.5	18844.9	18966.3	18969.0	18629.1	17798.1	15191.9	11568.6	6264.5	2295.9	728.4
67.5°	19214.5	21138.1	21737.1	21521.2	20741.5	18844.9	15620.9	11083.0	4837.4	1451.5	545.0
69°	19066.1	21588.7	22454.7	22333.3	21238.0	18828.7	15286.4	10265.5	3696.1	1154.7	461.3
70°	18380.9	21219.1	22247.0	22300.9	20922.3	18105.7	14690.1	9326.7	2989.3	984.7	423.6
72.5°	14668.5	17485.2	18389.0	18742.4	17374.5	14498.6	12046.2	6580.2	1732.1	688.0	342.6
75°	9086.6	10602.8	11352.8	11557.8	10729.6	9029.9	7311.3	3661.1	1054.9	485.6	288.7
77.5°	4073.8	4513.6	4945.3	4945.3	4621.5	4122.4	3350.8	1769.8	598.9	345.3	242.8
80°	1365.1	1416.4	1378.6	1392.1	1338.2	1286.9	1346.3	763.5	369.6	259.0	196.9
82.5°	928.1	1165.5	1238.3	1238.3	1162.8	917.3	518.0	350.7	226.6	186.2	151.1
85°	755.4	922.7	990.1	1019.8	960.5	774.3	272.5	170.0	134.9	118.7	102.5
87.5°	253.6	237.4	223.9	218.5	229.3	240.1	134.9	72.8	62.1	56.7	54.0
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: P565345

CATALOG NUMBER: MSA-SA4B-835-U-T1

**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
0°	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	960.5	928.1	941.6	955.1	1052.2	1125.0
5°	955.1	1000.9	1103.4	1232.9	1292.3	1438.0
7.5°	982.0	1149.3	1340.9	1475.8	1529.7	1575.6
10°	1313.9	1343.6	1408.3	1537.8	1645.7	1664.6
12.5°	1697.0	1688.9	1643.0	1702.4	1648.4	1686.2
15°	1996.5	1907.4	1845.4	1837.3	1818.4	1818.4
17.5°	2161.0	2082.8	1996.5	1974.9	1918.2	1964.1
20°	2355.3	2220.4	2004.5	1983.0	1964.1	1920.9
22.5°	2317.5	2182.6	1958.7	1931.7	2031.5	2026.1
25°	2363.4	2182.6	1969.5	1939.8	1985.7	1985.7
27.5°	2250.1	2101.7	1947.9	1769.8	1910.1	1942.5
30°	2220.4	2053.1	1875.0	1715.9	1858.9	1829.2
32.5°	2376.9	1931.7	1756.3	1707.8	1813.0	1791.4
35°	2255.5	1910.1	1726.7	1637.6	1761.7	1740.2
37.5°	2306.7	1883.1	1675.4	1599.9	1699.7	1732.1
40°	2295.9	1756.3	1616.0	1518.9	1618.7	1634.9
42.5°	2115.2	1659.2	1516.2	1419.1	1470.4	1524.3
45°	2061.2	1599.9	1419.1	1284.2	1286.9	1349.0
47.5°	1961.4	1465.0	1241.0	1116.9	1116.9	1168.2
50°	1794.1	1284.2	1038.7	925.4	922.7	963.2
52.5°	1545.9	1108.8	876.8	752.7	744.6	785.1
55°	1265.3	893.0	690.7	609.7	593.5	609.7
57.5°	984.7	696.1	545.0	480.2	477.5	491.0
60°	763.5	545.0	434.4	396.6	402.0	423.6
62.5°	577.4	434.4	369.6	356.1	364.2	385.8
65°	458.6	375.0	337.2	329.1	337.2	358.8
67.5°	372.3	339.9	313.0	302.2	307.6	329.1
69°	342.6	321.1	299.5	286.0	291.4	307.6
70°	326.4	310.3	288.7	275.2	280.6	296.8
72.5°	286.0	277.9	261.7	248.2	250.9	264.4
75°	250.9	245.5	234.7	218.5	218.5	234.7
77.5°	210.4	213.1	202.3	186.2	183.5	191.6
80°	167.3	172.7	167.3	151.1	145.7	145.7
82.5°	121.4	132.2	126.8	110.6	107.9	107.9
85°	75.5	83.6	80.9	70.1	70.1	62.1
87.5°	35.1	45.9	43.2	37.8	35.1	24.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)