

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: P597102

Luminaire Tested: **MSA-SA4A-835-U-SLL**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597102  
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-SA4A-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: 10949 lumens  
Efficiency: N/A  
Efficacy: 84.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

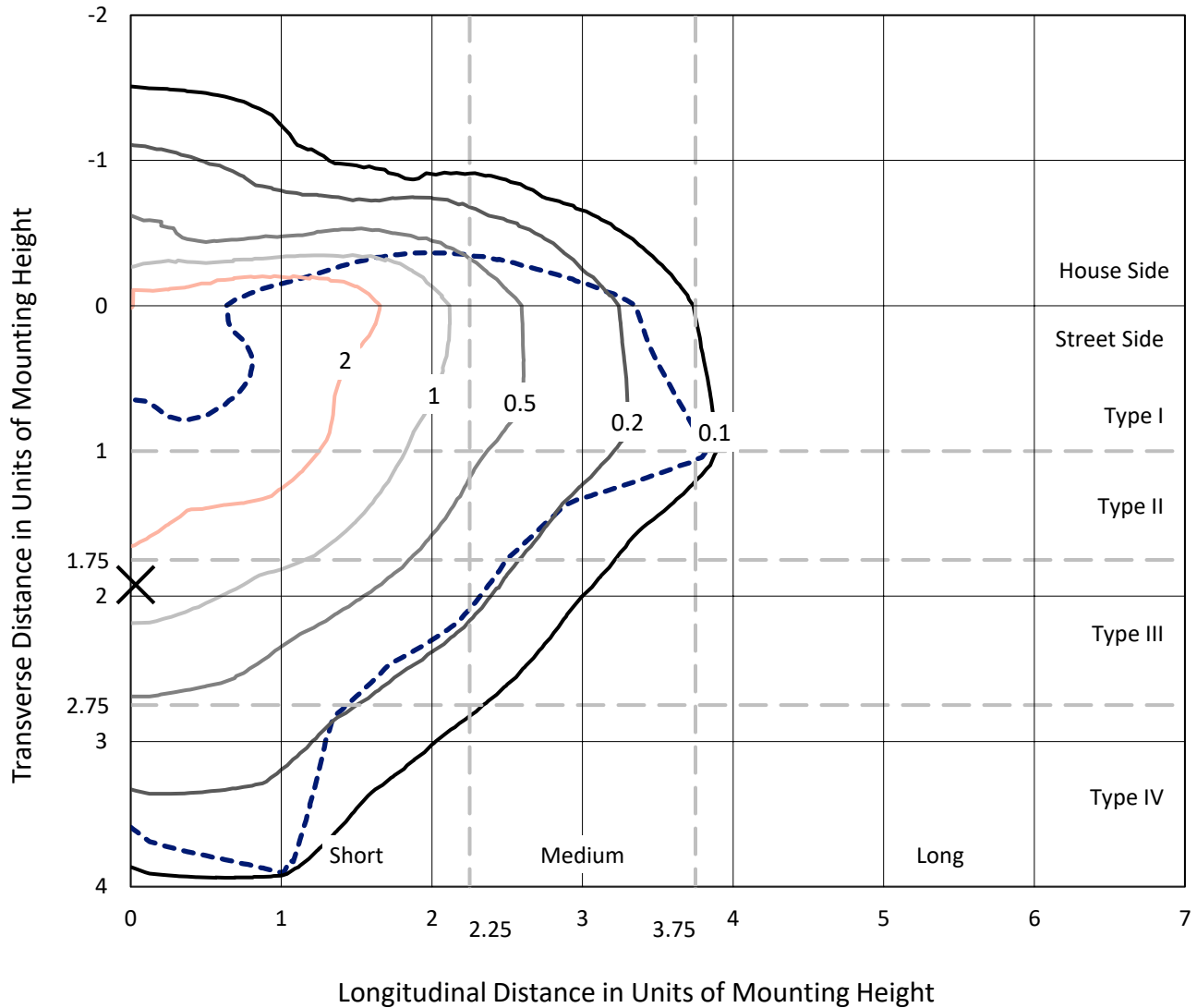
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

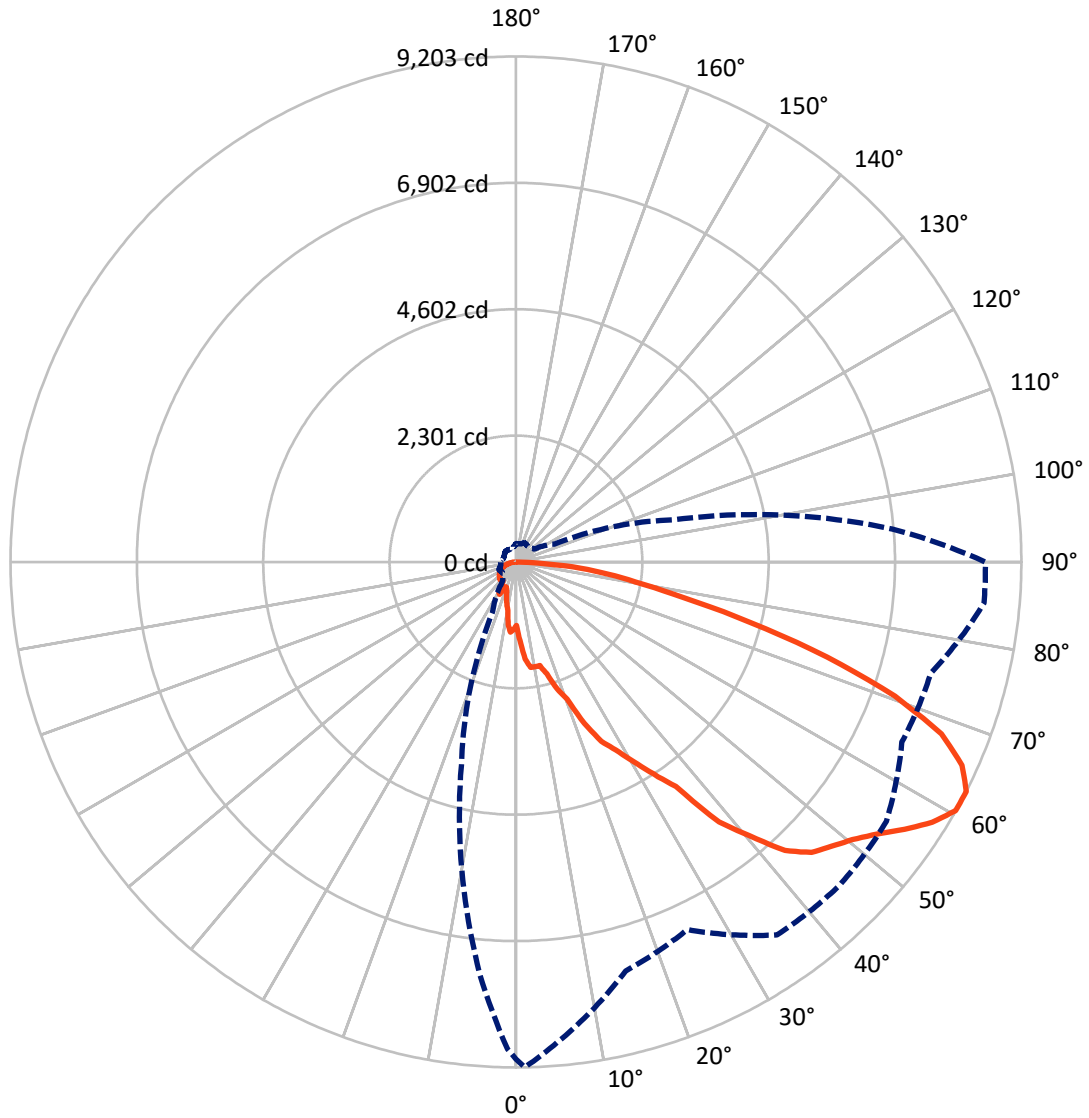
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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

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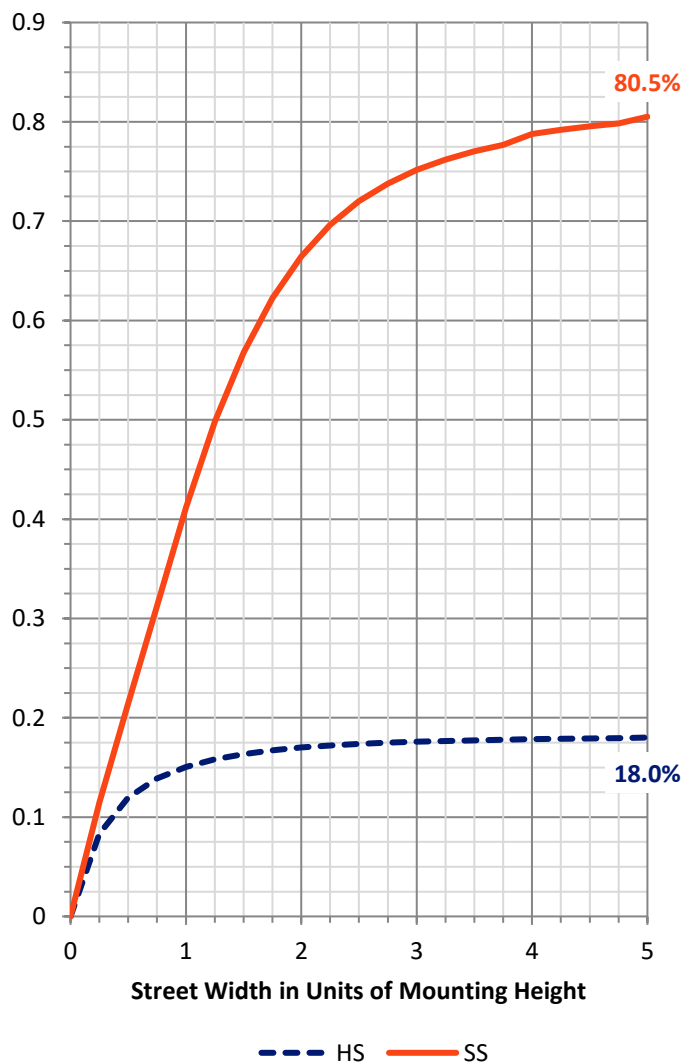
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1993.7	0.0	1993.7
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	8955.3	0.0	8955.3
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	10949.0	0.0	10949.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.4	1.2
10°-20°	384.6	3.5
20°-30°	679.0	6.2
30°-40°	1057.6	9.7
40°-50°	1741.5	15.9
50°-60°	2485.6	22.7
60°-70°	2635.8	24.1
70°-80°	1455.9	13.3
80°-90°	376.6	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°	10949.0	100.0
0°-180°	10949.0	100.0

**Coefficient of Utilization**



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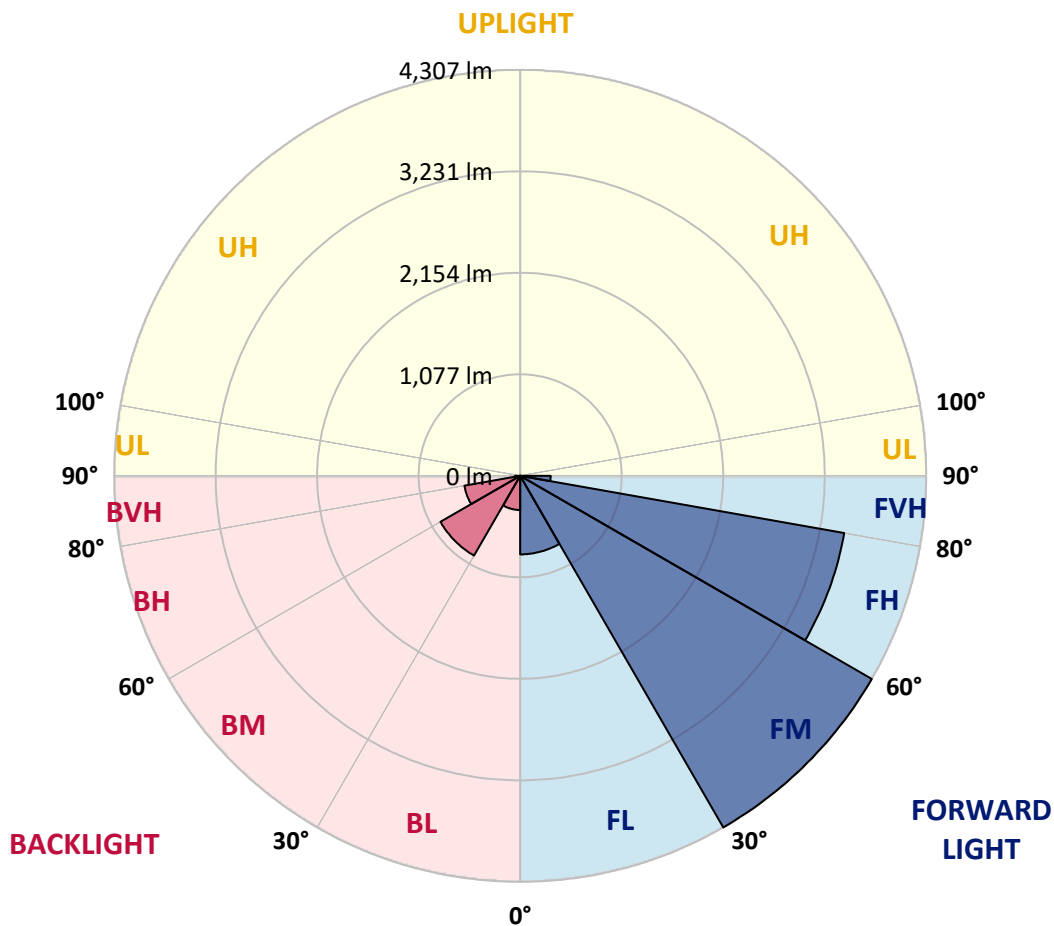
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	833.4	7.6			
FM (30°-60°)	4307.4	39.3			
FH (60°-80°)	3491.0	31.9			G2/5000
FVH (80°-90°)	323.5	3.0			G3/500
BL (0°-30°)	362.6	3.3	B1/500		
BM (30°-60°)	977.4	8.9	B1/1000		
BH (60°-80°)	600.7	5.5	B2/1000		G2/1000
BVH (80°-90°)	53.1	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6
2.5°	1419.7	1431.9	1406.9	1378.8	1262.4	1374.5	1341.1	1403.2	1383.0	1248.1	1495.1
5°	1754.4	1776.7	1752.3	1836.8	1842.1	1863.9	1662.5	1787.9	1744.3	1733.2	1858.0
7.5°	1915.9	1938.8	2001.0	2151.3	2268.7	2162.5	2045.1	2019.0	1985.0	1896.3	1971.7
10°	1926.0	1938.8	2022.2	2341.0	2397.9	2473.3	2397.3	2218.3	2144.4	1951.5	1894.2
12.5°	1895.8	1935.6	2043.5	2431.9	2600.8	2683.2	2701.8	2502.5	2321.3	2101.4	2072.2
15°	2099.3	2113.6	2268.2	2496.7	2613.0	2682.6	2743.2	2620.5	2563.6	2389.4	2155.0
17.5°	2390.9	2430.8	2557.2	2641.7	2720.4	2733.6	2683.7	2635.9	2545.6	2778.3	2529.1
20°	2588.6	2665.6	2820.8	2836.7	2671.5	2700.7	2693.8	2697.0	2645.4	3075.8	2938.7
22.5°	3111.4	3194.8	3216.1	3123.6	2812.3	2678.9	2705.5	2782.5	2985.5	3354.2	3509.4
25°	3584.8	3617.2	3811.2	3573.1	3076.9	2786.2	2742.7	2941.9	3272.9	3822.9	3933.4
27.5°	3831.9	3873.9	4003.0	3484.9	3109.8	2648.1	2546.1	2849.5	3186.9	3602.4	4087.5
30°	4148.0	4215.0	4390.8	3573.1	3209.2	2738.4	2512.6	2802.7	3175.7	3746.9	4413.7
32.5°	4473.7	4603.9	4734.6	3884.0	3195.4	2876.6	2726.7	2750.1	3276.7	4049.7	4751.6
35°	4905.2	5019.9	5132.6	4063.5	3473.8	2991.9	2843.1	3090.7	3535.9	4400.9	5222.9
37.5°	5827.5	6009.2	5712.2	4574.7	3776.6	3511.5	3243.2	3389.8	3810.1	4693.7	5992.8
40°	6415.2	6551.7	6264.8	4922.7	4310.1	3861.6	3817.5	3829.8	4187.9	4944.5	6510.8
42.5°	6999.1	7184.0	6727.6	5400.3	4955.1	4584.8	4357.4	4342.0	4610.8	5395.0	7100.0
45°	7434.8	7543.7	6886.5	5803.1	5646.9	5372.2	5201.6	4931.2	5166.6	5706.9	7464.5
47.5°	7642.0	7730.7	7142.0	6037.4	6095.3	6109.7	6417.3	5956.1	5652.2	5917.9	7655.8
50°	7900.7	7942.7	7292.4	6243.6	6521.4	7151.6	7225.4	6443.9	6125.1	6147.9	7769.0
52.5°	8210.0	8227.5	7511.8	6481.6	6952.3	7837.0	7722.8	7270.6	6575.1	6568.2	7982.0
55°	8598.9	8588.3	7787.0	6802.0	7260.0	8244.5	8157.9	7828.5	7065.5	6916.2	8313.6
57.5°	8944.8	8938.4	8152.1	7096.9	7518.7	8453.9	8479.4	8392.2	7399.2	7165.4	8672.8
60°	9114.3	9195.6	8567.6	7419.4	7535.2	8548.4	8558.0	8419.3	7772.2	7485.3	8768.4
62.5°	9048.4	9203.0	8771.6	7709.5	7383.8	8290.2	8330.1	8234.4	7755.2	7821.0	8554.8
65°	8748.7	8927.3	8594.7	7864.1	7290.8	7857.7	7867.8	7626.1	7512.4	8043.7	8054.3
67.5°	8186.6	8354.0	8031.5	7617.6	6654.3	6692.0	6917.3	6936.9	6771.2	7875.8	7351.4
70°	7202.6	7320.5	7118.6	7008.7	5561.9	5340.8	5585.2	5689.9	5765.4	7269.5	6507.6
72.5°	5702.1	5930.1	5962.0	6033.7	4478.0	4109.8	4291.0	4135.8	4627.3	6187.2	5316.9
75°	4218.7	4411.0	4617.7	5017.8	3529.6	3076.9	3054.6	2975.4	3434.5	4975.8	3943.5
77.5°	2981.2	3104.0	3262.8	4008.3	2663.5	2369.7	2383.5	2303.3	2480.2	3760.7	2724.1
80°	2137.0	2201.3	2275.1	2640.7	1964.8	2044.5	2046.6	1970.7	1844.2	2554.1	1818.2
82.5°	1522.8	1572.7	1657.2	1741.7	1464.9	1675.8	1674.2	1669.4	1462.2	1726.3	1137.6
85°	848.0	914.9	1061.6	1364.4	1057.9	1198.1	1053.6	1160.4	1073.3	1149.2	576.0
87.5°	59.5	53.1	237.5	790.6	493.6	360.8	189.2	374.6	480.3	600.4	80.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6
2.5°	1546.1	1564.7	1492.0	1382.5	1412.3	1379.8	1338.9	1275.2	1143.9	1225.2	1225.8
5°	1857.0	1786.3	1729.5	1675.8	1585.5	1448.9	1430.8	1321.4	1259.8	1292.2	1287.4
7.5°	1954.2	1853.8	1768.2	1576.4	1409.1	1197.1	1133.3	1068.5	1041.4	1120.0	1151.4
10°	1847.4	1742.7	1658.8	1425.5	1311.8	1179.5	1004.2	914.4	861.3	882.0	894.2
12.5°	1933.5	1826.7	1562.6	1432.4	1244.9	1164.1	1010.6	878.8	800.2	819.3	796.5
15°	2016.4	1872.4	1608.3	1349.0	1197.1	1080.2	955.8	819.8	727.4	694.4	676.9
17.5°	2319.2	2080.1	1603.0	1302.3	1128.0	993.6	843.7	695.0	633.3	599.3	570.1
20°	2688.5	2355.3	1631.7	1253.9	1054.7	885.2	722.1	583.9	540.9	518.6	510.6
22.5°	3127.9	2708.1	1795.9	1247.0	985.6	806.0	655.1	569.0	520.7	496.3	486.2
25°	3477.0	3073.2	1917.0	1293.8	981.9	740.7	614.7	632.3	610.0	617.4	558.4
27.5°	3815.9	3172.5	1849.0	1273.0	883.1	624.8	605.2	641.8	661.0	666.8	664.7
30°	4102.3	3592.3	1863.9	1156.2	746.0	509.0	463.3	481.4	534.0	617.4	633.3
32.5°	4521.5	3793.1	1990.9	1085.5	666.8	455.3	404.3	397.4	409.6	439.9	466.0
35°	5012.0	4255.4	2026.5	1066.9	612.1	431.4	395.8	379.9	386.3	409.1	414.4
37.5°	5926.4	4592.2	2158.2	1044.0	591.9	417.1	389.5	383.6	397.4	416.0	426.7
40°	6430.6	5197.9	2164.6	1024.4	565.9	411.2	393.7	391.1	399.6	425.1	431.4
42.5°	7102.7	5543.3	2264.5	1001.5	556.8	419.2	402.2	401.1	408.6	423.5	435.2
45°	7512.4	5774.4	2269.8	988.3	554.7	454.3	413.4	409.6	408.1	417.1	427.7
47.5°	7776.4	6107.5	2334.6	973.4	567.5	463.3	426.7	410.7	405.4	409.1	417.1
50°	8026.7	6373.7	2457.4	971.3	580.7	454.3	450.0	410.2	399.6	398.0	403.8
52.5°	8333.8	6811.5	2608.8	991.4	577.5	441.0	467.6	408.1	388.9	385.2	391.1
55°	8780.6	7280.7	2769.8	974.4	544.6	415.5	450.6	406.5	377.8	370.9	376.2
57.5°	9070.2	7549.5	2949.9	960.1	494.7	396.4	435.2	407.5	378.8	363.4	366.6
60°	8974.0	7405.0	3020.6	872.4	447.4	381.5	398.5	399.0	369.3	354.9	357.6
62.5°	8549.0	6881.7	2954.7	770.4	412.3	360.2	360.8	383.1	341.6	331.5	335.8
65°	7954.9	6230.8	2688.0	704.0	395.8	337.9	329.4	336.3	304.4	297.0	305.5
67.5°	7226.0	5428.5	2291.1	633.9	390.0	307.6	297.5	294.9	274.7	266.2	274.7
70°	6311.6	4545.5	1831.5	584.5	367.7	274.7	266.7	264.1	247.1	240.7	248.1
72.5°	5073.1	3549.2	1413.3	546.7	343.2	244.4	237.5	234.3	220.0	210.9	220.0
75°	3608.2	2712.4	1049.9	488.8	308.7	213.6	205.6	201.4	188.1	179.6	187.6
77.5°	2564.2	2036.0	733.2	404.3	254.5	180.6	175.9	169.0	157.3	147.2	155.1
80°	1895.8	1454.8	472.9	311.9	194.5	144.5	141.9	137.1	125.9	113.7	119.5
82.5°	1248.1	1048.8	271.0	211.5	141.3	104.1	106.3	103.1	92.4	79.7	82.9
85°	558.9	621.1	144.0	116.4	91.9	62.7	68.5	66.4	58.4	46.2	47.3
87.5°	53.7	104.7	44.1	42.5	34.0	19.7	24.4	20.7	17.5	11.2	8.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6
2.5°	1244.4	1169.4	1094.5	1140.2	1141.3	1153.5	1155.1	1109.9	1146.1	1173.7	1202.4
5°	1264.0	1215.1	1217.8	1173.7	1149.8	1180.6	1174.2	1162.0	1183.8	1214.1	1250.7
7.5°	1121.6	1089.7	1084.4	1041.9	938.8	916.0	935.1	943.1	972.3	1019.1	1058.4
10°	875.6	938.8	867.6	851.2	824.1	770.9	740.1	736.4	798.6	836.3	869.2
12.5°	789.0	773.1	764.6	719.4	719.4	663.1	645.0	661.5	757.1	784.2	826.7
15°	672.1	660.4	621.1	598.8	588.2	565.3	584.5	600.4	689.7	691.8	736.4
17.5°	557.9	551.0	513.8	509.5	498.9	488.8	506.3	544.6	593.0	584.5	605.2
20°	498.9	475.0	441.0	453.2	442.1	434.1	426.7	480.8	514.9	526.0	538.2
22.5°	484.0	440.5	420.3	409.1	409.6	396.9	398.5	443.7	495.2	502.1	494.7
25°	553.1	475.5	410.2	377.8	365.5	361.3	373.5	413.4	475.5	490.4	496.3
27.5°	647.1	516.4	422.4	367.1	342.7	344.8	362.4	390.0	463.3	489.9	496.8
30°	621.1	485.6	422.9	359.2	328.9	340.0	346.4	373.0	453.7	493.6	528.1
32.5°	479.3	436.7	425.6	365.5	353.3	335.8	344.8	370.3	425.6	450.6	452.2
35°	405.9	373.5	366.1	351.2	334.2	326.8	336.9	359.2	395.3	410.7	408.6
37.5°	402.7	367.1	337.9	331.5	324.6	322.5	328.4	349.1	385.7	412.8	407.0
40°	408.1	364.0	334.2	323.0	325.7	316.1	322.0	347.5	387.3	412.8	407.5
42.5°	401.7	360.2	329.4	320.9	323.6	310.3	317.2	343.8	383.1	413.4	403.3
45°	388.9	351.7	326.8	312.4	324.6	305.0	313.5	334.2	370.3	403.3	391.6
47.5°	376.2	341.6	315.6	306.6	318.8	299.7	303.4	321.4	357.6	390.0	379.9
50°	362.4	328.9	306.6	303.9	312.4	298.6	292.8	307.6	342.2	374.6	366.1
52.5°	347.5	318.3	300.2	299.1	307.1	291.7	283.2	294.9	325.7	358.1	351.2
55°	333.1	306.6	292.2	294.9	303.9	285.9	275.2	282.7	308.2	340.0	330.5
57.5°	318.8	293.3	281.6	289.0	295.9	278.4	265.1	269.4	290.1	321.4	310.3
60°	306.0	281.6	269.9	278.9	285.3	267.3	251.8	254.5	273.1	301.3	291.2
62.5°	289.6	268.8	253.4	265.1	269.9	252.4	235.9	239.1	254.0	280.5	273.1
65°	266.2	252.9	238.6	246.5	252.9	234.8	219.4	223.2	234.3	259.3	254.0
67.5°	246.0	233.3	223.7	230.1	231.1	217.3	203.5	205.6	214.7	238.0	232.2
70°	223.7	211.5	204.0	208.8	208.3	196.6	186.0	186.5	193.9	215.2	207.2
72.5°	199.2	187.6	183.8	186.5	184.4	173.7	163.6	167.4	172.1	188.1	181.7
75°	173.2	162.6	160.5	163.1	159.9	149.8	140.8	144.5	148.8	162.1	154.1
77.5°	146.1	136.5	137.1	137.6	133.4	126.5	117.4	121.1	123.8	132.8	124.9
80°	116.4	108.9	111.0	111.0	106.3	101.5	93.0	94.0	95.6	98.8	93.0
82.5°	85.0	85.0	85.0	85.5	75.4	77.0	69.6	69.1	67.5	66.9	63.2
85°	50.5	52.6	53.7	55.3	40.9	47.8	41.4	39.8	36.7	33.5	32.4
87.5°	11.2	14.3	14.3	13.8	0.0	5.3	2.7	4.3	1.1	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



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CATALOG NUMBER: MSA-SA4A-835-U-SLL

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6	1154.6
2.5°	1169.4	1137.6	1197.1	1250.2	1241.7	1272.5	1200.8	1307.1	1419.7	1419.7
5°	1241.2	1214.1	1229.5	1260.3	1283.7	1391.0	1480.3	1569.0	1752.3	1754.4
7.5°	1046.7	1105.1	1119.0	1109.9	1210.3	1348.5	1495.7	1748.6	1903.7	1915.9
10°	978.7	1005.3	1047.2	1070.6	1111.5	1247.5	1430.3	1730.5	1895.2	1926.0
12.5°	886.8	985.1	1048.8	1179.5	1211.9	1239.0	1529.7	1789.5	1903.2	1895.8
15°	786.4	860.7	952.7	1097.2	1179.5	1386.7	1588.7	1978.6	2042.9	2099.3
17.5°	627.0	681.7	803.9	968.6	1172.6	1363.4	1734.2	2212.4	2332.5	2390.9
20°	515.9	516.4	638.6	857.0	1079.1	1265.6	1789.5	2406.4	2558.8	2588.6
22.5°	487.8	463.3	527.6	705.1	976.0	1323.5	1901.1	2718.2	3036.5	3111.4
25°	472.3	442.6	483.0	622.2	902.2	1353.8	2125.8	3147.0	3555.6	3584.8
27.5°	478.7	492.5	505.3	554.7	808.7	1297.0	2073.7	3338.8	3776.6	3831.9
30°	521.8	544.1	514.9	531.9	731.6	1214.6	2166.7	3650.2	4055.0	4148.0
32.5°	434.1	425.6	422.9	460.1	654.6	1140.2	2361.7	4088.5	4356.8	4473.7
35°	391.6	378.3	383.6	426.1	616.9	1129.6	2471.2	4451.4	4833.4	4905.2
37.5°	390.0	374.6	381.5	413.4	630.1	1148.7	2646.5	5033.7	5674.0	5827.5
40°	386.3	377.8	381.5	405.4	616.3	1159.3	2747.5	5523.1	6259.5	6415.2
42.5°	385.7	381.5	385.2	411.8	602.0	1164.1	2887.2	5965.1	6876.4	6999.1
45°	384.1	388.4	388.4	417.1	595.6	1196.0	2969.6	6181.9	7283.4	7434.8
47.5°	376.7	389.5	410.2	415.5	569.6	1181.1	3085.9	6510.8	7499.6	7642.0
50°	367.1	387.9	437.8	404.9	565.3	1145.0	3221.9	6771.7	7776.9	7900.7
52.5°	354.4	385.2	431.4	384.1	557.9	1138.6	3412.7	7110.7	8100.5	8210.0
55°	336.3	375.6	411.8	363.4	539.8	1118.4	3704.4	7530.9	8524.0	8598.9
57.5°	319.9	361.3	383.1	351.7	496.8	1122.7	3907.3	7873.6	8879.4	8944.8
60°	305.0	359.7	342.2	339.5	452.7	1065.8	3973.2	7869.9	9011.7	9114.3
62.5°	289.0	339.5	313.5	323.0	413.9	1007.4	3833.5	7532.5	8868.8	9048.4
65°	268.3	291.2	289.6	311.4	415.0	912.3	3513.1	6937.5	8512.3	8748.7
67.5°	243.9	257.7	266.7	292.2	428.2	838.4	2997.7	6221.8	7905.5	8186.6
70°	218.9	232.7	242.8	267.3	440.5	804.4	2386.2	5216.5	6917.3	7202.6
72.5°	193.4	207.7	215.7	237.0	424.0	731.6	1766.1	4058.8	5552.3	5702.1
75°	166.8	180.6	187.0	206.7	368.2	605.2	1219.4	3074.2	4066.7	4218.7
77.5°	139.7	154.6	156.7	172.7	281.1	462.8	781.6	2358.0	2879.8	2981.2
80°	111.6	126.5	126.5	135.0	197.7	318.3	468.1	1778.9	2097.1	2137.0
82.5°	80.2	96.2	95.1	95.6	136.5	197.1	271.0	1333.1	1515.3	1522.8
85°	47.3	58.4	57.9	53.1	80.8	106.3	146.6	827.8	845.9	848.0
87.5°	9.0	13.8	12.2	5.3	22.3	31.3	42.5	153.6	61.1	59.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)