

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: P597035

Luminaire Tested: **MSA-SA3B-835-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597035  
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-SA3B-835-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 8840 lumens  
Efficiency: N/A  
Efficacy: 70.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

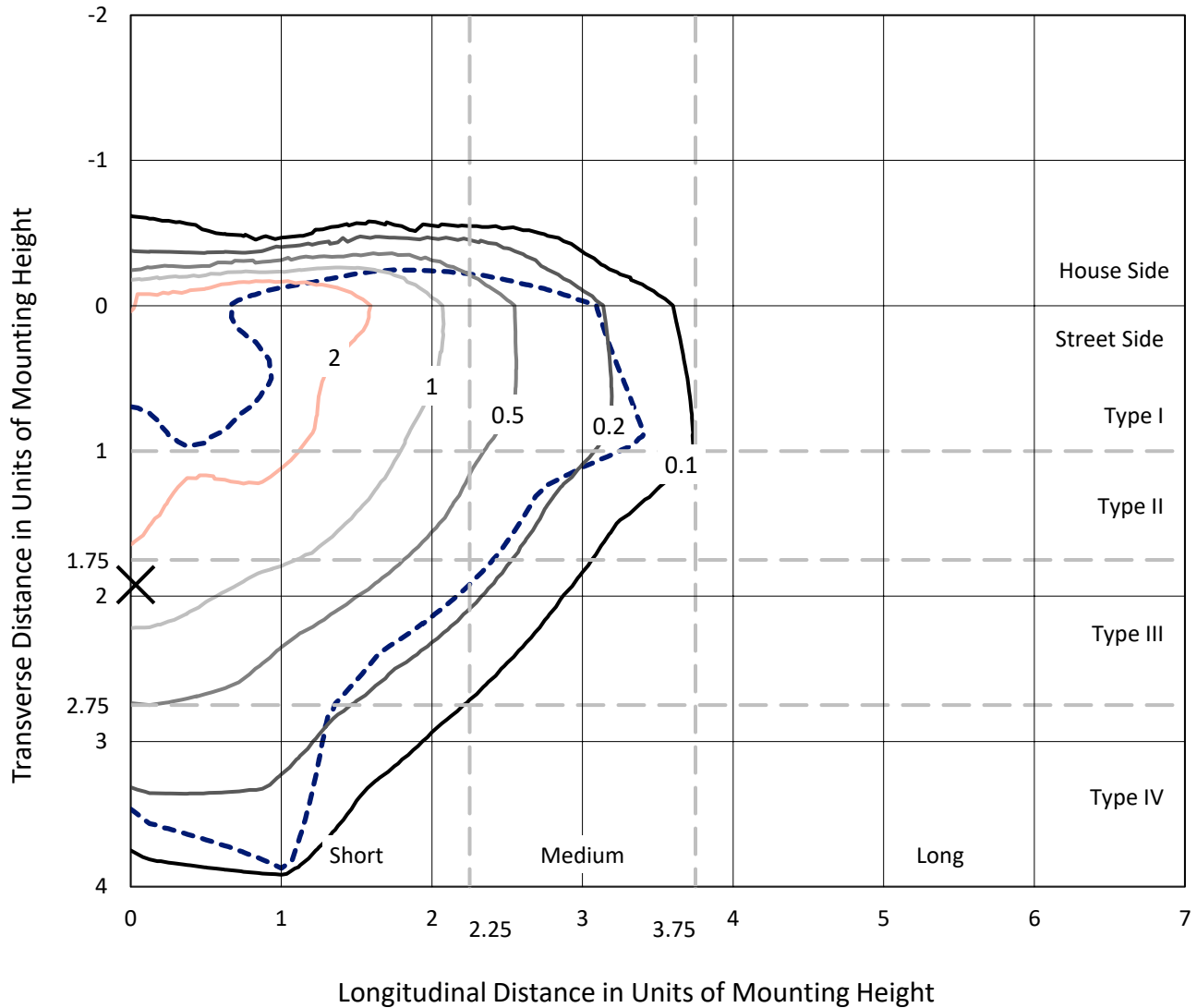
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

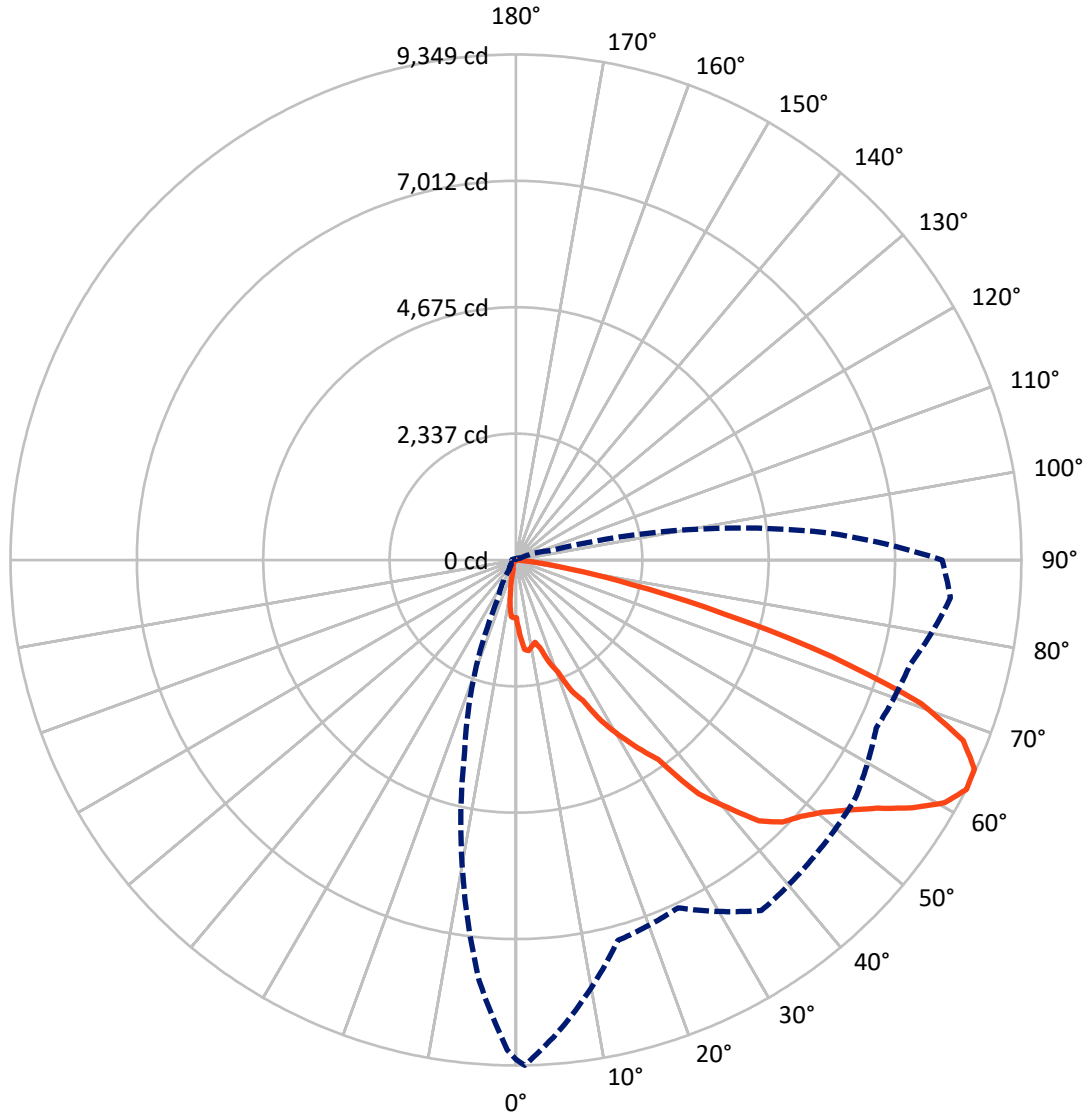
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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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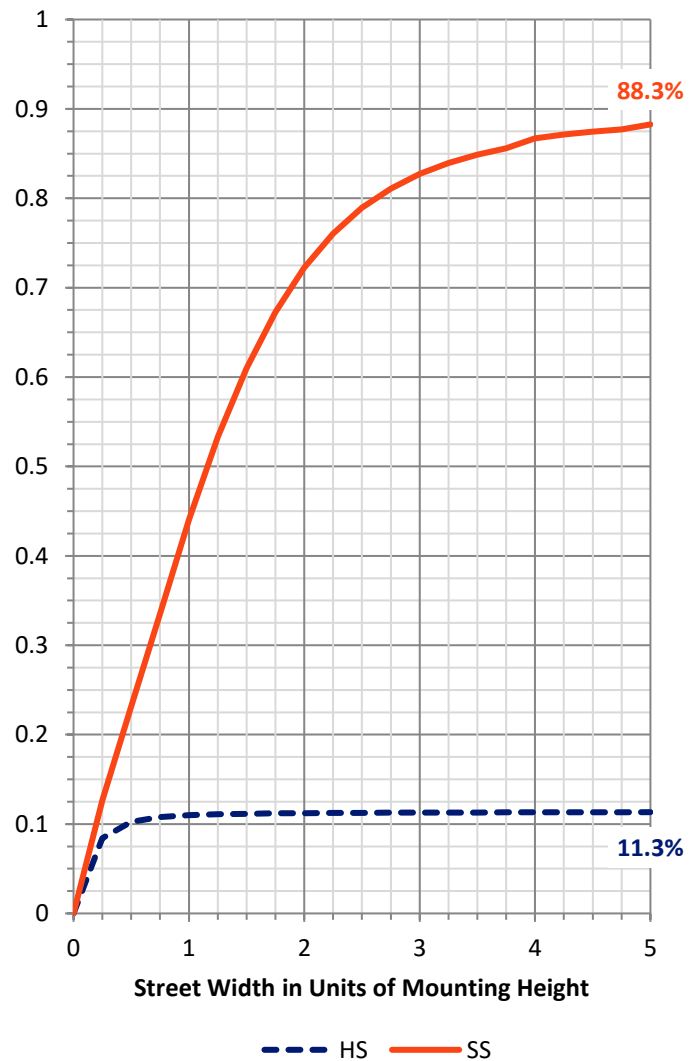
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1010.9	0.0	1010.9
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	7829.1	0.0	7829.1
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	8840.0	0.0	8840.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.0	1.3
10°-20°	310.8	3.5
20°-30°	502.4	5.7
30°-40°	841.5	9.5
40°-50°	1376.0	15.6
50°-60°	2036.8	23.0
60°-70°	2338.4	26.5
70°-80°	1156.4	13.1
80°-90°	158.7	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°	8840.0	100.0
0°-180°	8840.0	100.0

**Coefficient of Utilization**

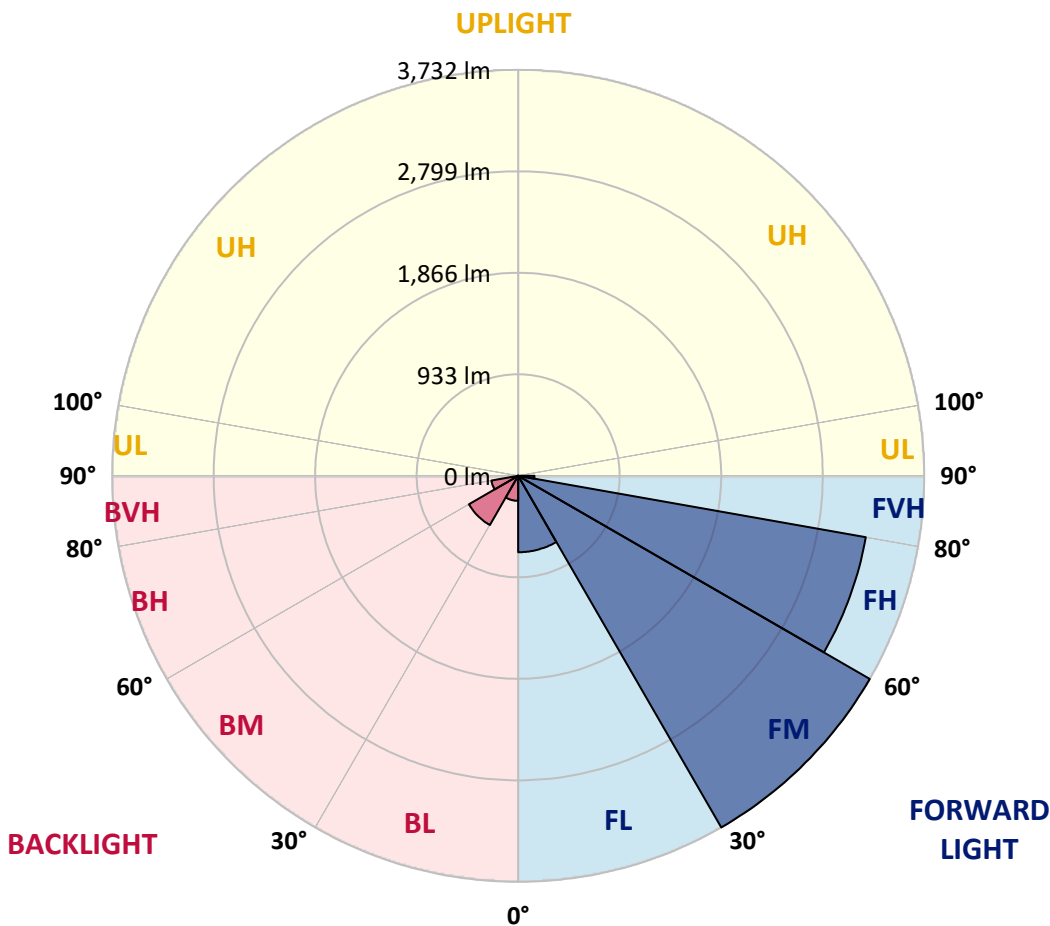


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	702.1	7.9			
FM (30°-60°)	3732.2	42.2			
FH (60°-80°)	3244.8	36.7			G2/5000
FVH (80°-90°)	149.9	1.7			G2/225
BL (0°-30°)	230.0	2.6	B1/500		
BM (30°-60°)	522.1	5.9	B1/1000		
BH (60°-80°)	250.0	2.8	B1/500		G1/500
BVH (80°-90°)	8.8	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-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9
2.5°	1373.2	1379.8	1349.0	1345.0	1273.5	1362.6	1365.2	1375.7	1310.2	1183.3	1360.6
5°	1643.2	1661.4	1637.7	1743.0	1773.2	1838.2	1718.8	1825.6	1780.2	1792.8	1818.5
7.5°	1675.5	1694.1	1744.0	1920.3	2083.0	2042.2	2029.1	2069.4	2065.9	1972.7	2019.0
10°	1608.5	1624.1	1707.2	2028.1	2099.1	2282.5	2327.3	2234.6	2196.8	1992.8	1903.7
12.5°	1535.4	1561.6	1667.4	2052.3	2265.3	2450.7	2598.3	2466.3	2340.9	2123.8	2042.2
15°	1675.5	1690.1	1856.3	2102.6	2289.0	2417.0	2537.9	2494.0	2474.9	2318.7	2042.2
17.5°	1950.0	1984.3	2104.7	2226.1	2373.1	2450.2	2421.5	2407.9	2359.0	2604.4	2318.2
20°	2145.5	2209.4	2367.1	2419.5	2302.6	2374.7	2357.0	2344.9	2306.7	2763.0	2635.6
22.5°	2568.6	2627.5	2630.6	2649.2	2377.2	2262.3	2233.1	2236.6	2410.4	2810.4	3030.5
25°	2856.7	2876.9	3036.1	2903.1	2580.7	2296.6	2185.3	2235.1	2485.5	3150.9	3401.8
27.5°	3328.3	3376.1	3475.3	3025.0	2702.6	2274.9	2097.6	2278.9	2683.0	3263.8	3814.4
30°	3712.6	3758.5	3918.1	3191.7	2808.4	2382.2	2135.4	2367.1	2805.9	3496.0	4185.1
32.5°	4024.4	4142.8	4324.2	3449.2	2804.4	2505.6	2328.3	2337.9	2957.0	3796.7	4551.9
35°	4422.9	4533.2	4660.7	3626.5	2987.7	2545.4	2385.2	2625.0	3181.7	4111.1	5045.5
37.5°	5321.1	5487.8	5235.9	4073.3	3201.3	2905.1	2609.9	2801.8	3416.9	4432.0	5724.1
40°	5869.1	6009.7	5766.4	4301.5	3571.1	3086.5	3010.9	3109.1	3647.1	4597.7	6235.4
42.5°	6409.2	6594.5	6188.0	4645.0	3922.2	3598.3	3391.7	3470.8	3980.1	4997.7	6810.7
45°	6800.1	6914.9	6279.2	4824.9	4404.8	4181.6	4044.1	3926.2	4444.6	5254.6	7181.9
47.5°	6996.5	7088.2	6459.0	4881.8	4691.9	4798.7	5099.9	4853.6	4855.6	5440.5	7381.9
50°	7268.6	7332.5	6559.8	4949.8	5003.7	5760.3	5912.5	5388.1	5325.1	5626.8	7414.6
52.5°	7650.9	7682.1	6755.2	5129.1	5470.7	6513.4	6568.3	6356.3	5795.1	5973.4	7487.2
55°	8159.2	8104.3	7104.3	5505.9	5957.8	7065.0	7138.6	6953.7	6386.0	6319.5	7711.9
57.5°	8707.3	8644.3	7621.7	6036.9	6486.2	7486.7	7530.5	7545.1	6778.4	6625.8	8093.7
60°	9100.2	9111.8	8273.0	6645.9	6814.7	7890.2	7802.5	7669.5	7174.4	7074.6	8279.6
62.5°	9237.7	9349.0	8780.3	7284.2	7097.8	7915.4	7779.4	7667.0	7351.7	7537.6	8066.5
65°	9125.4	9319.8	8898.2	7844.8	7269.1	7599.5	7458.0	7385.9	7346.1	7726.5	7595.0
67.5°	8679.0	8922.4	8560.7	7849.9	6646.4	6470.6	6637.9	6866.1	6734.1	7569.8	6934.6
70°	7679.1	7945.6	7777.3	7389.5	5536.7	5090.9	5275.2	5620.3	5527.1	6732.6	5962.8
72.5°	5761.3	6103.9	6137.1	6379.4	4395.2	3831.5	3858.2	3848.6	4009.3	5428.9	4653.1
75°	3701.0	3967.5	4327.7	5147.8	3338.8	2797.3	2541.4	2478.9	2778.7	4242.0	3331.3
77.5°	2148.5	2180.2	2346.5	3883.9	2391.3	2015.5	1841.2	1930.4	2035.1	2960.5	2207.9
80°	1027.6	1043.8	1112.3	1998.4	1661.4	1744.5	1610.0	1710.2	1397.4	1701.7	1252.8
82.5°	325.9	329.5	341.0	981.8	1031.7	1155.6	740.5	992.9	863.9	1028.6	834.2
85°	54.4	92.7	114.4	283.6	582.3	389.9	160.7	354.1	482.1	648.8	378.8
87.5°	0.0	0.0	0.0	5.0	47.4	22.2	3.5	20.1	74.1	144.6	17.1
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°	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9
2.5°	1412.0	1446.8	1315.8	1198.4	1228.1	1204.5	1168.7	1107.7	966.7	1070.5	1063.4
5°	1817.0	1752.5	1575.2	1492.6	1391.9	1238.2	1219.6	1101.7	1049.8	1058.4	1050.8
7.5°	1958.1	1842.7	1686.0	1437.2	1200.9	979.3	911.3	834.2	818.6	851.8	873.5
10°	1847.2	1724.8	1587.8	1278.5	1096.7	936.5	768.7	660.9	602.5	595.4	601.5
12.5°	1898.1	1766.1	1484.0	1247.3	1057.4	912.3	724.9	562.2	435.2	444.8	419.6
15°	1933.4	1781.8	1459.4	1181.8	976.3	782.3	556.6	393.9	290.2	259.9	241.8
17.5°	2140.4	1923.8	1428.1	1106.2	862.9	609.0	349.6	228.2	194.4	183.9	175.3
20°	2406.4	2098.6	1427.6	1026.6	695.7	380.8	218.1	165.2	157.2	163.2	156.7
22.5°	2715.7	2331.3	1503.7	927.4	499.2	240.3	169.8	146.6	138.5	143.6	144.1
25°	3027.0	2680.4	1565.6	833.2	347.6	184.4	151.1	135.0	125.9	130.5	128.0
27.5°	3589.2	2969.6	1551.5	712.8	255.9	162.2	140.5	126.4	112.8	119.9	119.4
30°	3956.9	3479.9	1606.4	544.0	203.0	142.1	131.0	115.4	100.7	108.8	108.3
32.5°	4396.7	3699.0	1665.9	417.6	168.8	134.5	117.9	102.8	94.2	99.2	98.2
35°	4890.9	4132.2	1556.6	347.6	146.6	121.4	104.3	92.7	85.1	87.7	87.7
37.5°	5763.9	4494.4	1491.1	283.1	136.5	109.8	97.7	83.6	79.1	79.1	81.6
40°	6259.6	5047.5	1295.6	224.2	139.5	101.3	91.2	76.6	70.5	70.0	72.5
42.5°	6904.3	5366.4	1173.2	181.3	126.4	98.7	83.6	69.5	62.5	62.0	64.5
45°	7286.7	5544.7	1000.9	142.6	113.3	114.9	77.6	64.0	53.4	51.4	55.9
47.5°	7528.0	5781.0	903.2	113.3	98.7	114.4	75.6	55.4	44.8	42.3	46.3
50°	7650.4	5897.9	884.1	97.2	85.6	102.3	86.6	46.3	38.3	34.8	38.3
52.5°	7777.8	6087.8	891.1	89.7	75.6	82.1	82.1	39.8	33.8	29.7	32.2
55°	8035.3	6368.4	875.5	85.1	69.5	62.5	52.9	35.3	30.7	26.2	28.7
57.5°	8351.6	6569.9	875.5	81.1	64.5	53.4	42.3	32.7	28.2	22.7	24.7
60°	8291.7	6357.8	832.2	77.1	60.4	49.9	38.3	30.2	26.2	20.7	22.2
62.5°	7880.1	5781.0	674.0	71.0	56.9	47.4	34.8	28.7	24.7	18.1	19.6
65°	7396.5	5168.4	468.5	64.5	52.9	42.8	31.2	27.2	22.7	16.1	17.1
67.5°	6814.2	4438.5	259.9	57.9	48.9	37.3	28.7	26.7	21.7	14.6	15.6
70°	5803.7	3350.9	139.5	52.9	45.8	34.3	27.2	26.7	21.7	14.1	14.6
72.5°	4356.9	2110.2	81.6	48.4	41.8	31.7	25.7	27.2	21.2	13.6	13.6
75°	2964.5	1281.0	58.4	41.3	37.3	26.7	24.7	26.2	21.7	13.6	12.6
77.5°	2015.5	900.2	47.9	37.3	33.8	23.7	25.2	26.2	21.7	11.1	8.6
80°	1258.4	464.5	36.3	29.7	29.2	20.7	25.2	22.7	14.1	2.5	0.0
82.5°	880.0	172.8	21.2	22.7	22.7	14.6	19.6	16.1	8.1	0.0	0.0
85°	369.2	29.7	11.6	16.1	14.1	8.6	15.6	12.1	5.0	0.0	0.0
87.5°	6.5	0.0	4.5	9.6	10.1	5.0	8.1	5.0	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





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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9
2.5°	1096.7	1048.8	948.1	996.4	991.4	1013.5	1015.6	964.2	1075.0	1143.5	1153.6
5°	1051.8	1019.6	1014.0	986.3	979.3	1020.1	997.9	996.4	1049.8	1127.9	1128.4
7.5°	874.0	849.3	860.9	828.7	745.5	750.6	758.1	789.9	835.7	887.1	905.7
10°	600.0	663.9	617.1	613.1	604.5	577.8	556.6	573.3	632.7	680.1	697.7
12.5°	428.2	438.3	467.0	456.4	471.0	448.3	439.8	491.7	549.6	597.9	632.7
15°	250.4	267.5	284.6	320.9	335.5	331.0	357.2	400.5	447.3	469.5	512.3
17.5°	176.3	177.8	181.3	220.6	246.3	256.4	272.0	304.8	323.9	334.0	351.6
20°	154.1	149.6	143.6	165.7	189.9	202.5	198.0	223.7	239.3	249.4	261.9
22.5°	139.5	132.0	128.5	136.0	154.7	165.7	167.7	182.9	206.5	213.6	217.6
25°	125.9	120.9	118.4	122.4	132.5	143.1	145.1	164.7	185.9	188.9	197.0
27.5°	116.9	107.3	108.3	111.3	115.9	129.0	133.0	144.1	174.8	178.3	180.8
30°	107.3	97.2	100.2	103.3	101.3	117.4	123.4	136.0	165.7	171.3	174.3
32.5°	97.7	90.2	89.7	92.7	96.2	104.8	117.9	132.5	159.7	167.2	174.8
35°	87.1	81.1	82.1	82.6	87.1	98.2	107.8	115.4	134.0	138.0	140.5
37.5°	79.6	74.6	73.5	78.6	83.1	91.7	95.2	98.7	123.4	132.5	133.0
40°	70.5	67.5	67.5	71.0	81.1	80.1	84.6	95.7	119.4	129.0	130.0
42.5°	64.0	59.9	61.0	64.5	71.5	66.5	75.6	91.7	117.9	127.4	126.9
45°	53.9	52.9	54.9	57.9	61.0	56.4	70.5	87.7	112.8	125.4	121.9
47.5°	44.8	44.8	47.4	50.4	48.9	50.4	64.0	82.1	109.8	121.4	118.9
50°	36.8	37.3	39.8	44.8	40.3	44.3	57.4	76.6	104.8	117.4	115.4
52.5°	31.2	31.7	33.2	36.8	34.8	40.3	52.9	71.0	99.7	110.3	109.3
55°	27.2	28.2	28.2	30.2	31.2	37.8	47.9	65.5	92.2	103.8	101.8
57.5°	24.2	25.2	24.7	26.2	27.2	33.2	42.8	59.4	84.6	94.2	91.2
60°	21.7	22.7	22.2	24.2	23.7	28.7	37.3	52.9	76.6	84.1	81.6
62.5°	19.1	20.1	20.1	21.2	21.7	24.2	32.2	46.8	68.5	74.6	72.5
65°	17.1	18.1	18.6	18.1	19.1	20.7	27.2	42.3	59.4	65.5	62.5
67.5°	15.6	16.6	17.6	15.6	16.6	17.1	23.2	37.8	52.4	57.4	54.9
70°	15.1	15.6	15.6	13.6	13.1	13.6	20.1	32.2	45.8	50.9	47.4
72.5°	14.1	14.6	14.1	11.1	9.6	10.6	17.1	27.2	38.8	42.8	39.8
75°	13.1	13.6	13.1	9.1	6.0	7.6	14.1	23.7	33.2	35.3	33.8
77.5°	11.1	12.1	12.1	6.5	2.0	4.5	10.6	19.1	27.7	27.7	28.2
80°	1.0	3.0	5.0	3.5	0.0	0.5	3.5	10.1	17.6	17.1	18.6
82.5°	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	6.0	4.5	5.0
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



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 CATALOG NUMBER: MSA-SA3B-835-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9	1064.9
2.5°	1129.9	1114.3	1133.9	1193.9	1169.7	1174.2	1158.1	1257.4	1369.7	1373.2
5°	1129.4	1115.3	1144.5	1142.0	1211.0	1286.1	1358.6	1476.0	1642.2	1643.2
7.5°	897.2	980.8	1002.5	995.9	1084.6	1187.8	1299.7	1524.3	1660.9	1675.5
10°	809.0	845.3	889.6	905.7	942.5	1040.7	1167.2	1421.6	1574.7	1608.5
12.5°	701.2	817.1	876.0	990.4	1011.5	1025.6	1225.1	1446.3	1539.4	1535.4
15°	580.8	681.6	774.8	914.3	971.7	1119.8	1277.0	1566.7	1622.1	1675.5
17.5°	411.1	487.1	630.2	776.8	952.1	1113.3	1420.1	1781.8	1886.5	1950.0
20°	275.0	311.8	441.3	635.2	857.4	1017.6	1478.5	1976.2	2090.5	2145.5
22.5°	223.2	240.8	307.8	465.5	732.4	1013.0	1502.2	2188.3	2495.6	2568.6
25°	196.5	208.6	244.3	344.6	608.0	992.9	1633.1	2427.0	2797.8	2856.7
27.5°	171.8	189.9	216.6	284.1	521.4	978.8	1699.6	2828.0	3270.3	3328.3
30°	164.2	186.4	212.1	258.9	460.9	924.4	1805.4	3189.7	3609.3	3712.6
32.5°	177.3	184.9	197.5	237.3	414.1	866.9	1991.3	3621.9	3889.9	4024.4
35°	140.5	154.1	176.3	217.6	394.4	863.9	2096.6	3900.0	4339.8	4422.9
37.5°	137.5	150.1	178.8	212.1	418.1	887.1	2252.8	4469.7	5150.8	5321.1
40°	133.5	149.6	176.8	209.6	418.1	909.8	2352.5	4925.6	5696.4	5869.1
42.5°	132.0	152.6	176.3	220.1	405.0	922.4	2503.1	5380.5	6272.6	6409.2
45°	131.0	155.7	177.8	232.7	402.0	963.7	2588.2	5601.7	6643.4	6800.1
47.5°	128.5	155.7	198.5	225.2	385.4	959.6	2698.6	5929.6	6864.6	6996.5
50°	126.4	156.7	224.7	211.1	387.9	935.0	2848.2	6237.4	7174.4	7268.6
52.5°	121.9	160.2	220.6	191.4	380.3	932.4	3071.3	6675.1	7581.9	7650.9
55°	111.8	155.7	199.5	167.2	353.6	903.7	3367.0	7244.4	8147.1	8159.2
57.5°	102.8	144.6	166.7	153.6	296.2	907.2	3621.9	7768.3	8650.8	8707.3
60°	93.7	150.1	129.5	143.1	245.3	842.8	3745.4	7968.8	9017.6	9100.2
62.5°	85.1	138.5	110.3	131.5	218.6	782.8	3659.7	7807.6	9064.4	9237.7
65°	75.6	96.2	93.2	117.9	221.1	698.7	3373.6	7335.6	8886.6	9125.4
67.5°	65.0	75.6	82.1	101.8	236.8	626.7	2882.9	6577.9	8408.5	8679.0
70°	56.9	68.0	71.5	89.2	246.3	579.3	2274.9	5526.6	7429.3	7679.1
72.5°	47.4	63.0	64.0	78.1	237.3	532.5	1621.1	3967.5	5641.5	5761.3
75°	40.8	52.4	57.9	65.5	199.5	397.5	893.1	2455.8	3567.0	3701.0
77.5°	36.8	39.8	43.8	45.3	84.6	207.0	307.3	1514.3	1997.4	2148.5
80°	28.2	31.2	30.2	31.2	46.3	71.5	116.9	709.8	943.5	1027.6
82.5°	9.1	15.1	16.6	14.1	30.2	35.3	33.8	245.3	306.8	325.9
85°	2.0	5.5	2.5	0.0	10.1	18.1	2.5	37.3	73.5	54.4
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)