

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: P368347

Luminaire Tested: **MSA-SA4B-730-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368347  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-730-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 12907 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: B1 - U0 - G2

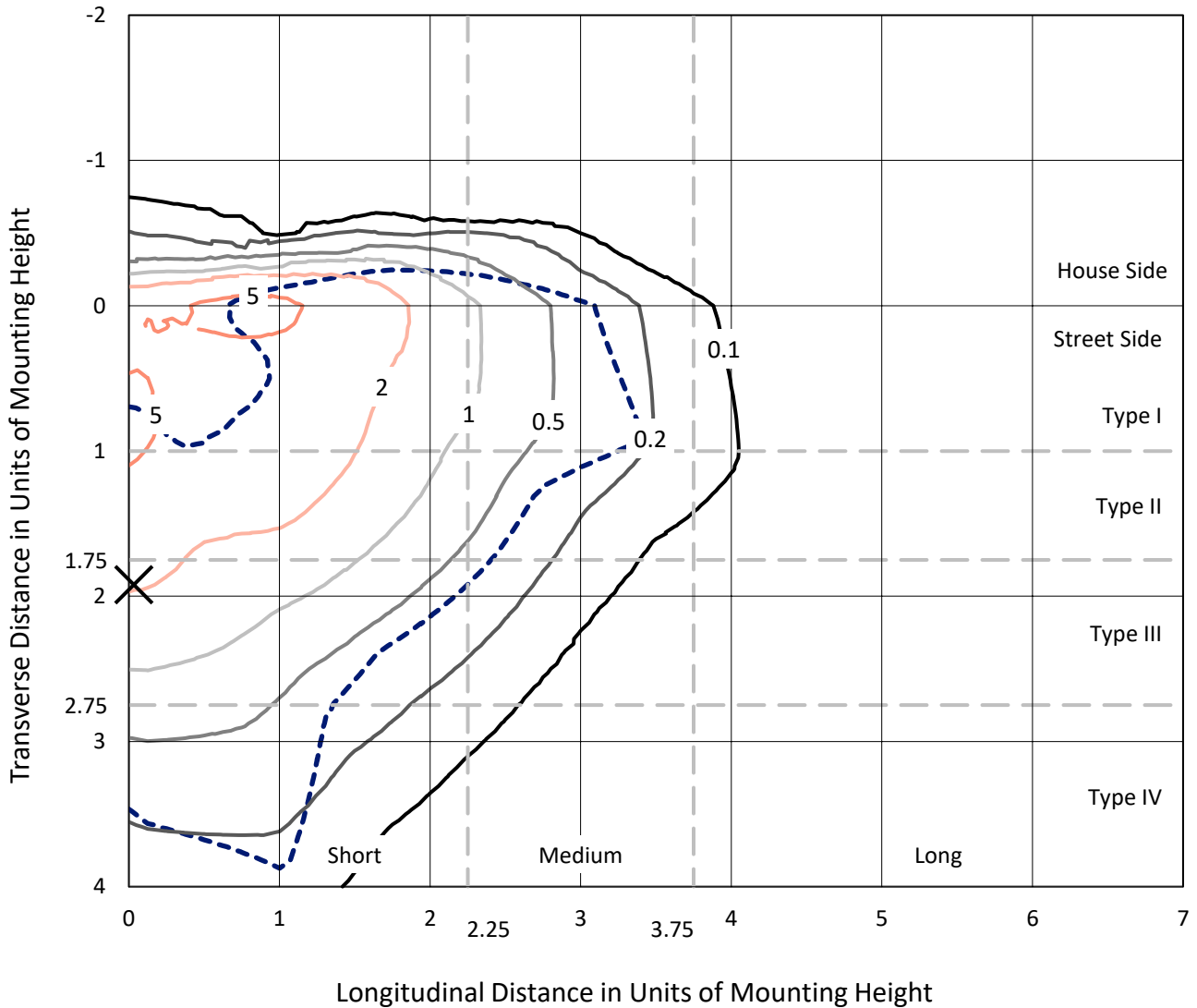
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

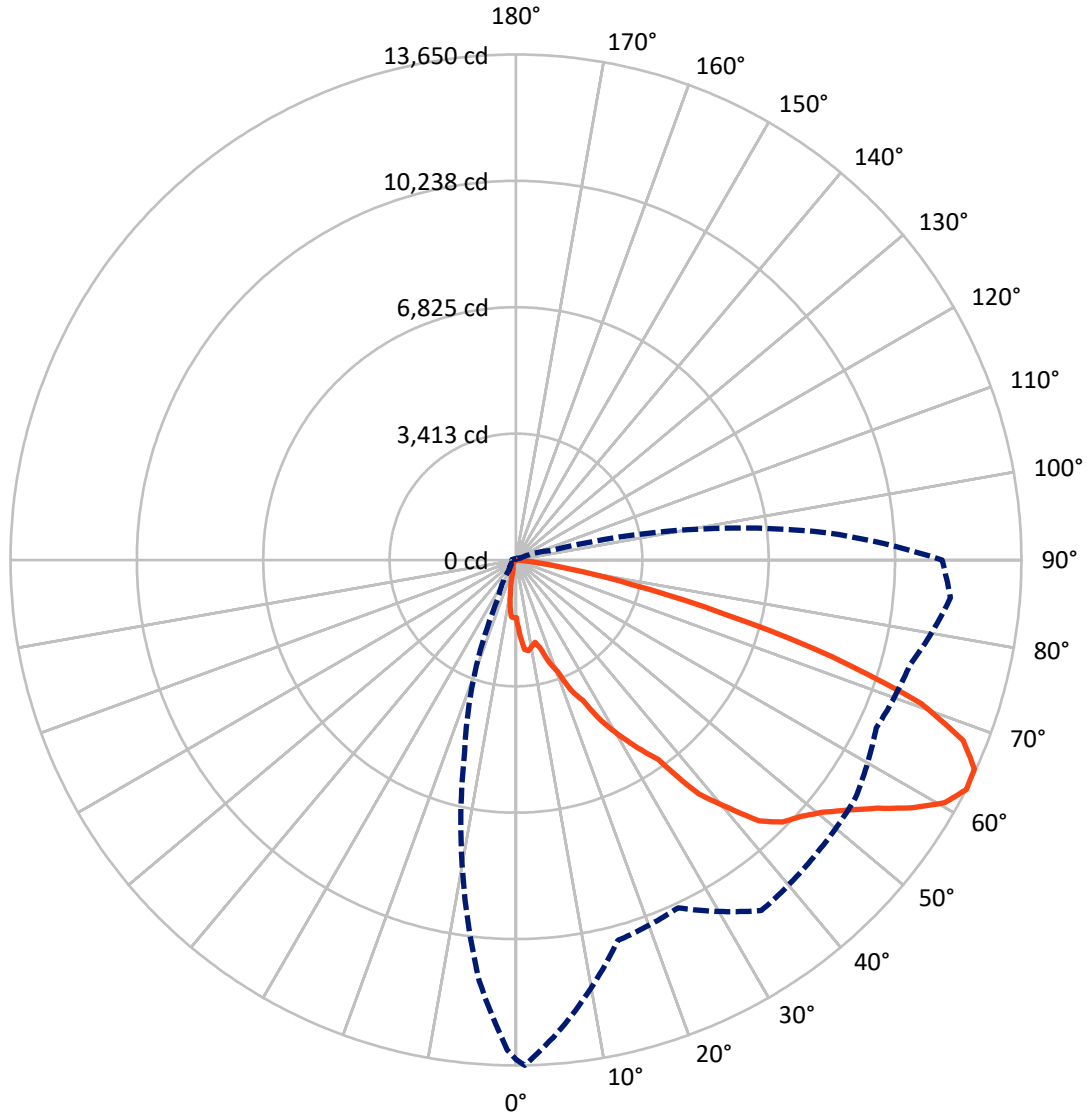
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 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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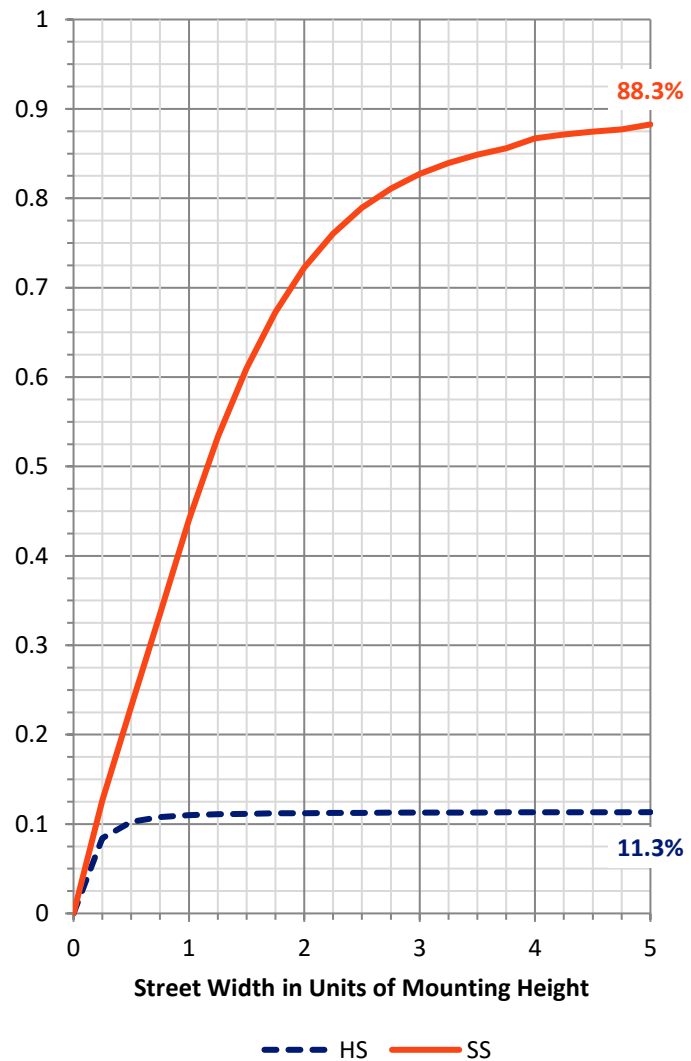
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1476.0	0.0	1476.0
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	11431.0	0.0	11431.0
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	12907.0	0.0	12907.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.7	1.3
10°-20°	453.8	3.5
20°-30°	733.5	5.7
30°-40°	1228.7	9.5
40°-50°	2009.0	15.6
50°-60°	2973.9	23.0
60°-70°	3414.3	26.5
70°-80°	1688.3	13.1
80°-90°	231.8	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°	12907.0	100.0
0°-180°	12907.0	100.0

**Coefficient of Utilization**



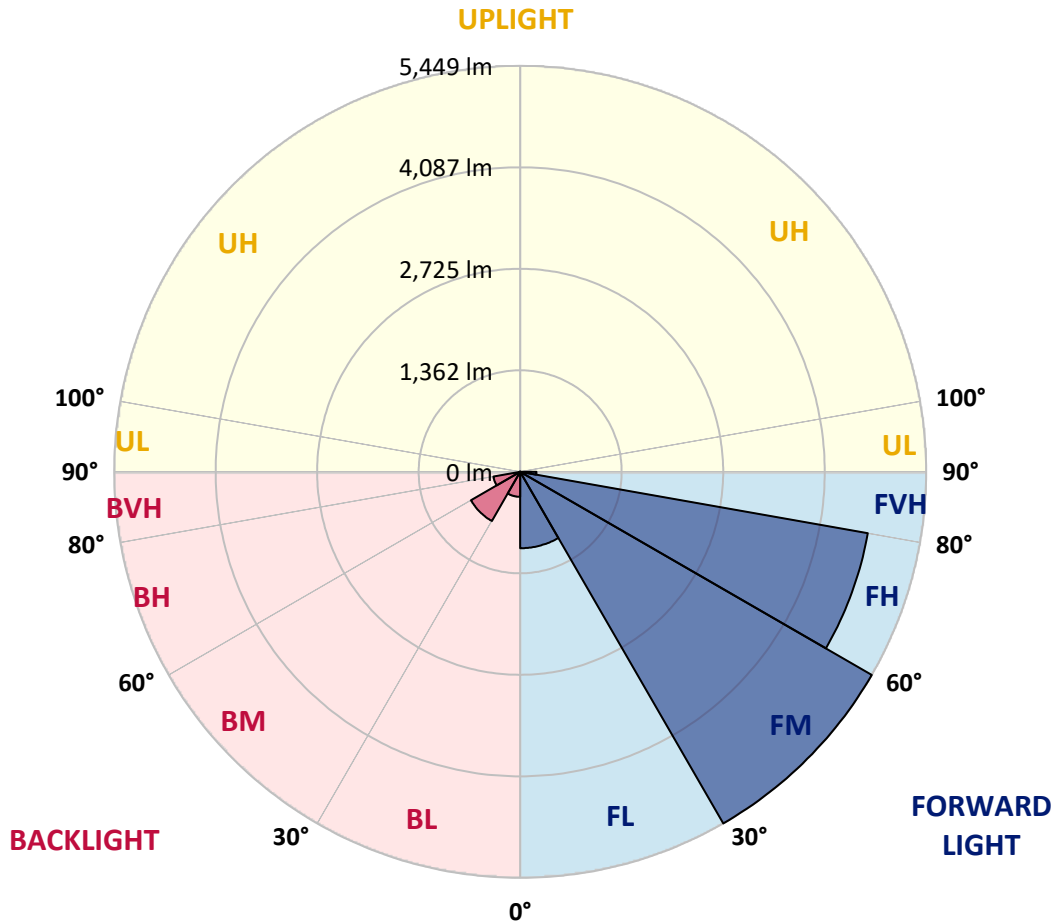
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1025.2	7.9			
FM (30°-60°)	5449.2	42.2			
FH (60°-80°)	4737.7	36.7			G2/5000
FVH (80°-90°)	218.9	1.7			G2/225
BL (0°-30°)	335.8	2.6	B1/500		
BM (30°-60°)	762.4	5.9	B1/1000		
BH (60°-80°)	364.9	2.8	B1/500		G1/500
BVH (80°-90°)	12.8	0.1			G1/100
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°	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9
2.5°	2005.0	2014.5	1969.7	1963.8	1859.4	1989.5	1993.2	2008.7	1913.0	1727.7	1986.6
5°	2399.2	2425.7	2391.1	2544.8	2589.0	2683.9	2509.5	2665.5	2599.3	2617.7	2655.2
7.5°	2446.3	2473.5	2546.3	2803.7	3041.3	2981.7	2962.6	3021.4	3016.3	2880.2	2947.9
10°	2348.5	2371.3	2492.6	2961.1	3064.8	3332.6	3398.0	3262.7	3207.5	2909.7	2779.5
12.5°	2241.8	2280.1	2434.5	2996.4	3307.6	3578.2	3793.7	3601.0	3417.9	3100.9	2981.7
15°	2446.3	2467.6	2710.3	3070.0	3342.1	3528.9	3705.5	3641.5	3613.5	3385.5	2981.7
17.5°	2847.1	2897.1	3072.9	3250.2	3465.0	3577.5	3535.6	3515.7	3444.4	3802.6	3384.8
20°	3132.5	3225.9	3456.1	3532.6	3362.0	3467.2	3441.4	3423.8	3367.9	4034.2	3848.2
22.5°	3750.3	3836.4	3840.8	3868.0	3470.8	3303.1	3260.5	3265.6	3519.4	4103.4	4424.8
25°	4171.0	4200.5	4432.9	4238.7	3768.0	3353.2	3190.6	3263.4	3629.0	4600.6	4966.9
27.5°	4859.5	4929.3	5074.2	4416.7	3946.0	3321.5	3062.6	3327.4	3917.3	4765.3	5569.2
30°	5420.7	5487.6	5720.7	4660.2	4100.4	3478.2	3117.8	3456.1	4096.8	5104.4	6110.6
32.5°	5875.9	6048.8	6313.6	5036.0	4094.5	3658.4	3399.5	3413.5	4317.4	5543.5	6646.0
35°	6457.7	6618.8	6804.9	5294.9	4362.3	3716.5	3482.6	3832.7	4645.4	6002.4	7366.8
37.5°	7769.1	8012.6	7644.8	5947.3	4674.1	4241.7	3810.6	4090.9	4988.9	6471.0	8357.5
40°	8569.4	8774.6	8419.3	6280.5	5214.0	4506.4	4396.1	4539.5	5325.0	6712.9	9104.1
42.5°	9357.8	9628.5	9034.9	6782.1	5726.6	5253.7	4952.1	5067.6	5811.2	7296.9	9944.0
45°	9928.6	10096.3	9168.1	7044.7	6431.2	6105.4	5904.6	5732.5	6489.3	7672.0	10486.1
47.5°	10215.4	10349.3	9430.6	7127.8	6850.5	7006.4	7446.2	7086.6	7089.5	7943.4	10778.1
50°	10612.6	10706.0	9577.7	7227.1	7305.8	8410.5	8632.6	7866.9	7775.0	8215.6	10825.9
52.5°	11170.8	11216.4	9863.1	7488.9	7987.6	9510.1	9590.2	9280.6	8461.2	8721.6	10931.8
55°	11913.0	11832.8	10372.8	8039.1	8698.8	10315.4	10422.8	10152.9	9324.0	9226.9	11259.8
57.5°	12713.2	12621.2	11128.2	8814.3	9470.3	10931.1	10995.0	11016.4	9896.9	9674.1	11817.3
60°	13286.9	13303.8	12079.2	9703.5	9949.9	11520.2	11392.2	11198.0	10475.0	10329.4	12088.7
62.5°	13487.7	13650.2	12819.8	10635.4	10363.2	11557.0	11358.4	11194.4	10733.9	11005.3	11777.6
65°	13323.7	13607.6	12991.9	11454.0	10613.3	11095.8	10889.1	10784.0	10725.9	11281.2	11089.2
67.5°	12672.0	13027.2	12499.2	11461.4	9704.2	9447.5	9691.7	10024.9	9832.2	11052.4	10124.9
70°	11212.0	11601.1	11355.4	10789.1	8083.9	7433.0	7702.2	8206.0	8069.9	9830.0	8706.2
72.5°	8412.0	8912.1	8960.6	9314.4	6417.3	5594.2	5633.2	5619.2	5853.9	7926.5	6793.8
75°	5403.7	5792.8	6318.7	7516.1	4874.9	4084.3	3710.6	3619.4	4057.0	6193.7	4863.9
77.5°	3136.9	3183.3	3426.0	5670.7	3491.4	2942.8	2688.3	2818.5	2971.4	4322.6	3223.7
80°	1500.4	1524.0	1624.0	2917.7	2425.7	2547.0	2350.7	2497.0	2040.3	2484.5	1829.2
82.5°	475.9	481.0	497.9	1433.5	1506.3	1687.2	1081.2	1449.7	1261.4	1501.9	1218.0
85°	79.4	135.3	167.0	414.1	850.2	569.3	234.6	517.1	703.9	947.3	553.1
87.5°	0.0	0.0	0.0	7.4	69.1	32.4	5.1	29.4	108.1	211.1	25.0
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9
2.5°	2061.6	2112.4	1921.1	1749.8	1793.2	1758.6	1706.4	1617.4	1411.4	1562.9	1552.6
5°	2653.0	2558.8	2299.9	2179.3	2032.2	1807.9	1780.7	1608.5	1532.8	1545.3	1534.3
7.5°	2858.9	2690.5	2461.7	2098.4	1753.4	1429.8	1330.5	1218.0	1195.2	1243.7	1275.4
10°	2697.1	2518.4	2318.3	1866.7	1601.2	1367.3	1122.4	965.0	879.7	869.4	878.2
12.5°	2771.4	2578.7	2166.8	1821.1	1543.8	1332.0	1058.4	820.8	635.5	649.4	612.7
15°	2822.9	2601.5	2130.8	1725.5	1425.4	1142.2	812.7	575.2	423.7	379.5	353.0
17.5°	3125.2	2808.9	2085.2	1615.2	1259.9	889.2	510.4	333.2	283.9	268.5	256.0
20°	3513.5	3064.1	2084.4	1499.0	1015.7	556.0	318.5	241.2	229.5	238.3	228.7
22.5°	3965.1	3403.9	2195.5	1354.1	728.9	350.8	247.9	214.0	202.3	209.6	210.4
25°	4419.6	3913.6	2285.9	1216.5	507.5	269.2	220.7	197.1	183.9	190.5	186.8
27.5°	5240.5	4335.8	2265.4	1040.7	373.6	236.8	205.2	184.6	164.8	175.0	174.3
30°	5777.4	5080.9	2345.5	794.3	296.4	207.4	191.2	168.4	147.1	158.9	158.1
32.5°	6419.5	5400.8	2432.3	609.7	246.4	196.4	172.1	150.0	137.5	144.9	143.4
35°	7141.0	6033.3	2272.7	507.5	214.0	177.3	152.2	135.3	124.3	128.0	128.0
37.5°	8415.6	6562.2	2177.1	413.4	199.3	160.3	142.7	122.1	115.5	115.5	119.2
40°	9139.4	7369.7	1891.7	327.3	203.7	147.8	133.1	111.8	103.0	102.2	105.9
42.5°	10080.8	7835.3	1713.0	264.8	184.6	144.2	122.1	101.5	91.2	90.5	94.1
45°	10639.1	8095.7	1461.4	208.1	165.5	167.7	113.3	93.4	78.0	75.0	81.6
47.5°	10991.4	8440.6	1318.8	165.5	144.2	167.0	110.3	80.9	65.5	61.8	67.7
50°	11170.1	8611.3	1290.8	142.0	125.0	149.3	126.5	67.7	55.9	50.7	55.9
52.5°	11356.2	8888.6	1301.1	130.9	110.3	119.9	119.9	58.1	49.3	43.4	47.1
55°	11732.0	9298.2	1278.3	124.3	101.5	91.2	77.2	51.5	44.9	38.2	41.9
57.5°	12193.9	9592.4	1278.3	118.4	94.1	78.0	61.8	47.8	41.2	33.1	36.0
60°	12106.4	9282.8	1215.1	112.5	88.3	72.8	55.9	44.1	38.2	30.2	32.4
62.5°	11505.5	8440.6	984.1	103.7	83.1	69.1	50.7	41.9	36.0	26.5	28.7
65°	10799.4	7546.3	684.0	94.1	77.2	62.5	45.6	39.7	33.1	23.5	25.0
67.5°	9949.2	6480.5	379.5	84.6	71.3	54.4	41.9	39.0	31.6	21.3	22.8
70°	8473.7	4892.6	203.7	77.2	66.9	50.0	39.7	39.0	31.6	20.6	21.3
72.5°	6361.4	3081.0	119.2	70.6	61.0	46.3	37.5	39.7	30.9	19.9	19.9
75°	4328.4	1870.4	85.3	60.3	54.4	39.0	36.0	38.2	31.6	19.9	18.4
77.5°	2942.8	1314.3	69.9	54.4	49.3	34.6	36.8	38.2	31.6	16.2	12.5
80°	1837.3	678.1	53.0	43.4	42.7	30.2	36.8	33.1	20.6	3.7	0.0
82.5°	1284.9	252.3	30.9	33.1	33.1	21.3	28.7	23.5	11.8	0.0	0.0
85°	539.1	43.4	16.9	23.5	20.6	12.5	22.8	17.7	7.4	0.0	0.0
87.5°	9.6	0.0	6.6	14.0	14.7	7.4	11.8	7.4	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





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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9
2.5°	1601.2	1531.3	1384.2	1454.8	1447.5	1479.8	1482.8	1407.8	1569.6	1669.6	1684.3
5°	1535.7	1488.7	1480.6	1440.1	1429.8	1489.4	1457.0	1454.8	1532.8	1646.8	1647.5
7.5°	1276.1	1240.1	1257.0	1209.9	1088.5	1095.9	1106.9	1153.3	1220.2	1295.2	1322.4
10°	876.0	969.4	901.0	895.1	882.6	843.6	812.7	837.0	923.8	992.9	1018.7
12.5°	625.2	639.9	681.8	666.4	687.7	654.6	642.1	717.9	802.4	873.0	923.8
15°	365.5	390.6	415.6	468.5	489.8	483.2	521.5	584.7	653.1	685.5	748.0
17.5°	257.4	259.6	264.8	322.2	359.7	374.4	397.2	445.0	472.9	487.6	513.4
20°	225.1	218.4	209.6	242.0	277.3	295.7	289.1	326.6	349.4	364.1	382.5
22.5°	203.7	192.7	187.6	198.6	225.8	242.0	244.9	267.0	301.6	311.9	317.7
25°	183.9	176.5	172.8	178.7	193.4	208.9	211.8	240.5	271.4	275.8	287.6
27.5°	170.6	156.7	158.1	162.5	169.2	188.3	194.2	210.4	255.2	260.4	264.0
30°	156.7	142.0	146.4	150.8	147.8	171.4	180.2	198.6	242.0	250.1	254.5
32.5°	142.7	131.7	130.9	135.3	140.5	153.0	172.1	193.4	233.2	244.2	255.2
35°	127.2	118.4	119.9	120.6	127.2	143.4	157.4	168.4	195.6	201.5	205.2
37.5°	116.2	108.9	107.4	114.7	121.4	133.9	139.0	144.2	180.2	193.4	194.2
40°	103.0	98.6	98.6	103.7	118.4	116.9	123.6	139.7	174.3	188.3	189.8
42.5°	93.4	87.5	89.0	94.1	104.4	97.1	110.3	133.9	172.1	186.1	185.3
45°	78.7	77.2	80.2	84.6	89.0	82.4	103.0	128.0	164.8	183.1	178.0
47.5°	65.5	65.5	69.1	73.6	71.3	73.6	93.4	119.9	160.3	177.3	173.6
50°	53.7	54.4	58.1	65.5	58.8	64.7	83.8	111.8	153.0	171.4	168.4
52.5°	45.6	46.3	48.5	53.7	50.7	58.8	77.2	103.7	145.6	161.1	159.6
55°	39.7	41.2	41.2	44.1	45.6	55.2	69.9	95.6	134.6	151.5	148.6
57.5°	35.3	36.8	36.0	38.2	39.7	48.5	62.5	86.8	123.6	137.5	133.1
60°	31.6	33.1	32.4	35.3	34.6	41.9	54.4	77.2	111.8	122.8	119.2
62.5°	27.9	29.4	29.4	30.9	31.6	35.3	47.1	68.4	100.0	108.9	105.9
65°	25.0	26.5	27.2	26.5	27.9	30.2	39.7	61.8	86.8	95.6	91.2
67.5°	22.8	24.3	25.7	22.8	24.3	25.0	33.8	55.2	76.5	83.8	80.2
70°	22.1	22.8	22.8	19.9	19.1	19.9	29.4	47.1	66.9	74.3	69.1
72.5°	20.6	21.3	20.6	16.2	14.0	15.4	25.0	39.7	56.6	62.5	58.1
75°	19.1	19.9	19.1	13.2	8.8	11.0	20.6	34.6	48.5	51.5	49.3
77.5°	16.2	17.7	17.7	9.6	2.9	6.6	15.4	27.9	40.5	40.5	41.2
80°	1.5	4.4	7.4	5.1	0.0	0.7	5.1	14.7	25.7	25.0	27.2
82.5°	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	8.8	6.6	7.4
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



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 CATALOG NUMBER: MSA-SA4B-730-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9	1554.9
2.5°	1649.7	1626.9	1655.6	1743.1	1707.8	1714.5	1690.9	1835.8	1999.8	2005.0
5°	1649.0	1628.4	1671.1	1667.4	1768.2	1877.7	1983.7	2155.0	2397.7	2399.2
7.5°	1309.9	1432.0	1463.7	1454.1	1583.5	1734.3	1897.6	2225.6	2425.0	2446.3
10°	1181.2	1234.2	1298.9	1322.4	1376.1	1519.6	1704.2	2075.6	2299.2	2348.5
12.5°	1023.8	1193.0	1279.0	1446.0	1476.9	1497.5	1788.7	2111.6	2247.7	2241.8
15°	848.0	995.1	1131.2	1334.9	1418.8	1635.0	1864.5	2287.4	2368.3	2446.3
17.5°	600.2	711.2	920.1	1134.1	1390.1	1625.5	2073.4	2601.5	2754.5	2847.1
20°	401.6	455.3	644.3	927.5	1251.8	1485.7	2158.7	2885.4	3052.3	3132.5
22.5°	325.8	351.6	449.4	679.6	1069.4	1479.1	2193.3	3195.0	3643.7	3750.3
25°	286.8	304.5	356.7	503.1	887.8	1449.7	2384.5	3543.7	4085.0	4171.0
27.5°	250.8	277.3	316.3	414.8	761.2	1429.1	2481.6	4129.1	4774.9	4859.5
30°	239.8	272.1	309.6	378.0	673.0	1349.6	2636.0	4657.2	5269.9	5420.7
32.5°	258.9	269.9	288.3	346.4	604.6	1265.8	2907.4	5288.3	5679.6	5875.9
35°	205.2	225.1	257.4	317.7	575.9	1261.4	3061.2	5694.3	6336.4	6457.7
37.5°	200.8	219.2	261.1	309.6	610.5	1295.2	3289.2	6526.1	7520.5	7769.1
40°	194.9	218.4	258.2	306.0	610.5	1328.3	3434.8	7191.8	8317.1	8569.4
42.5°	192.7	222.9	257.4	321.4	591.3	1346.7	3654.7	7855.9	9158.5	9357.8
45°	191.2	227.3	259.6	339.8	586.9	1407.0	3779.0	8178.8	9699.8	9928.6
47.5°	187.6	227.3	289.8	328.8	562.7	1401.1	3940.1	8657.6	10022.7	10215.4
50°	184.6	228.7	328.0	308.2	566.3	1365.1	4158.5	9107.0	10475.0	10612.6
52.5°	178.0	233.9	322.2	279.5	555.3	1361.4	4484.4	9746.2	11070.1	11170.8
55°	163.3	227.3	291.3	244.2	516.3	1319.5	4916.1	10577.3	11895.3	11913.0
57.5°	150.0	211.1	243.5	224.3	432.5	1324.6	5288.3	11342.2	12630.8	12713.2
60°	136.8	219.2	189.0	208.9	358.2	1230.5	5468.5	11634.9	13166.3	13286.9
62.5°	124.3	202.3	161.1	192.0	319.2	1143.0	5343.4	11399.6	13234.7	13487.7
65°	110.3	140.5	136.1	172.1	322.9	1020.1	4925.7	10710.4	12975.0	13323.7
67.5°	94.9	110.3	119.9	148.6	345.7	915.0	4209.3	9604.2	12277.0	12672.0
70°	83.1	99.3	104.4	130.2	359.7	845.8	3321.5	8069.2	10847.2	11212.0
72.5°	69.1	91.9	93.4	114.0	346.4	777.4	2366.9	5792.8	8236.9	8412.0
75°	59.6	76.5	84.6	95.6	291.3	580.3	1304.0	3585.6	5208.1	5403.7
77.5°	53.7	58.1	64.0	66.2	123.6	302.3	448.7	2210.9	2916.3	3136.9
80°	41.2	45.6	44.1	45.6	67.7	104.4	170.6	1036.3	1377.6	1500.4
82.5°	13.2	22.1	24.3	20.6	44.1	51.5	49.3	358.2	447.9	475.9
85°	2.9	8.1	3.7	0.0	14.7	26.5	3.7	54.4	107.4	79.4
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

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