

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: P367291

Luminaire Tested: **MSA-SA2B-730-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367291  
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-SA2B-730-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 6617 lumens  
Efficiency: N/A  
Efficacy: 77.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

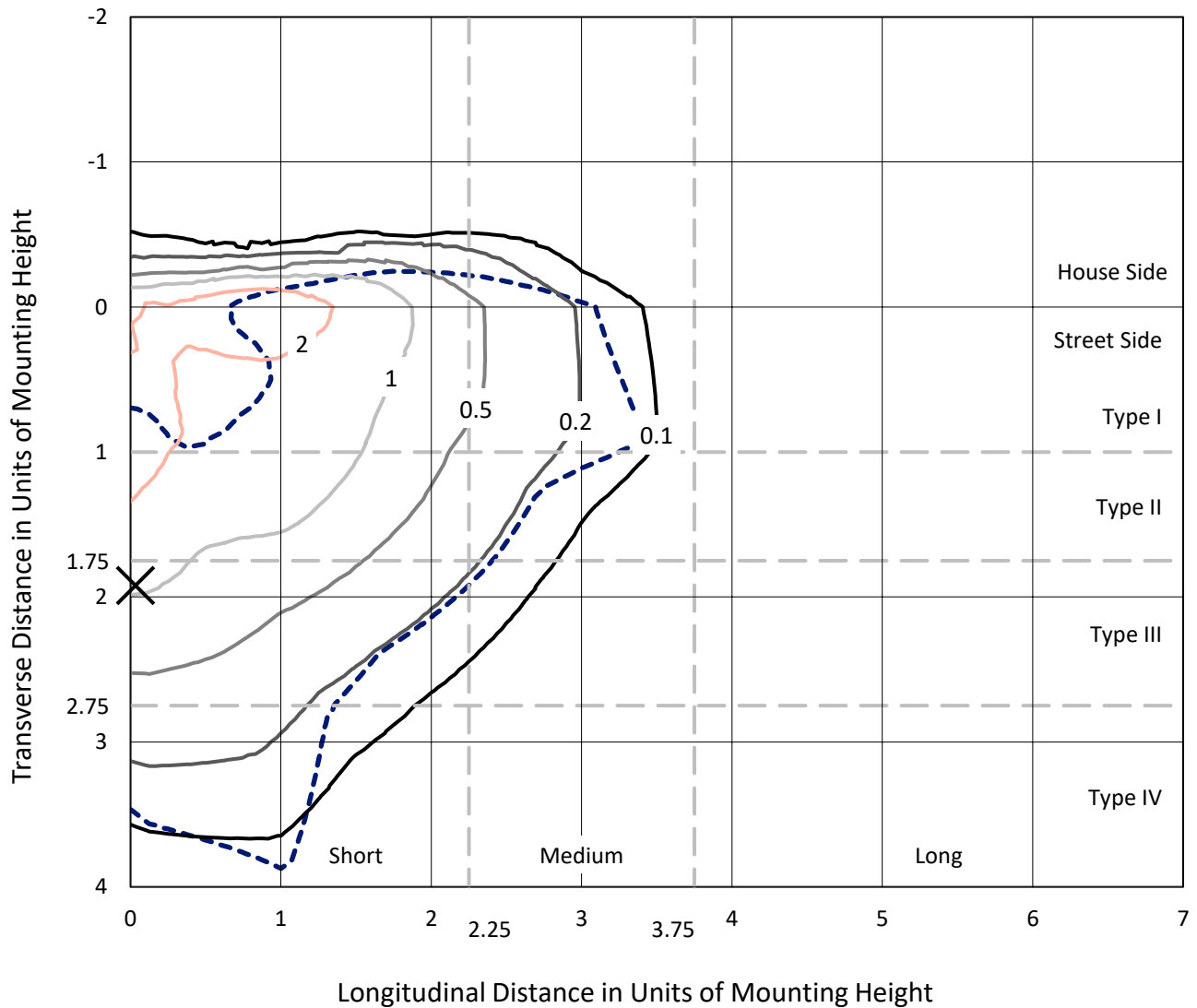
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

### Iso-Footcandle Lines of Horizontal Illumination

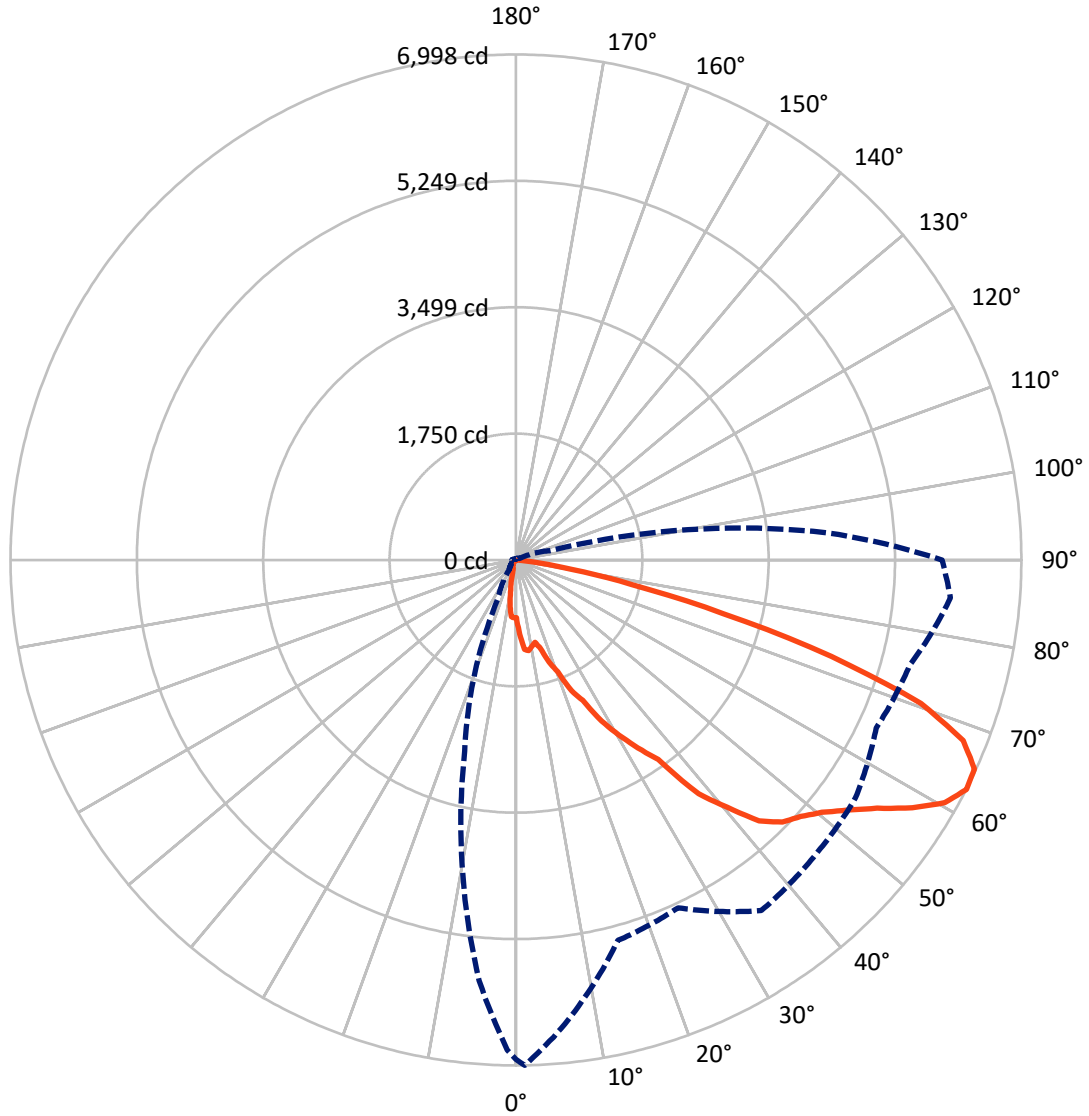
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - N/A

REPORT NUMBER: P367291  
CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

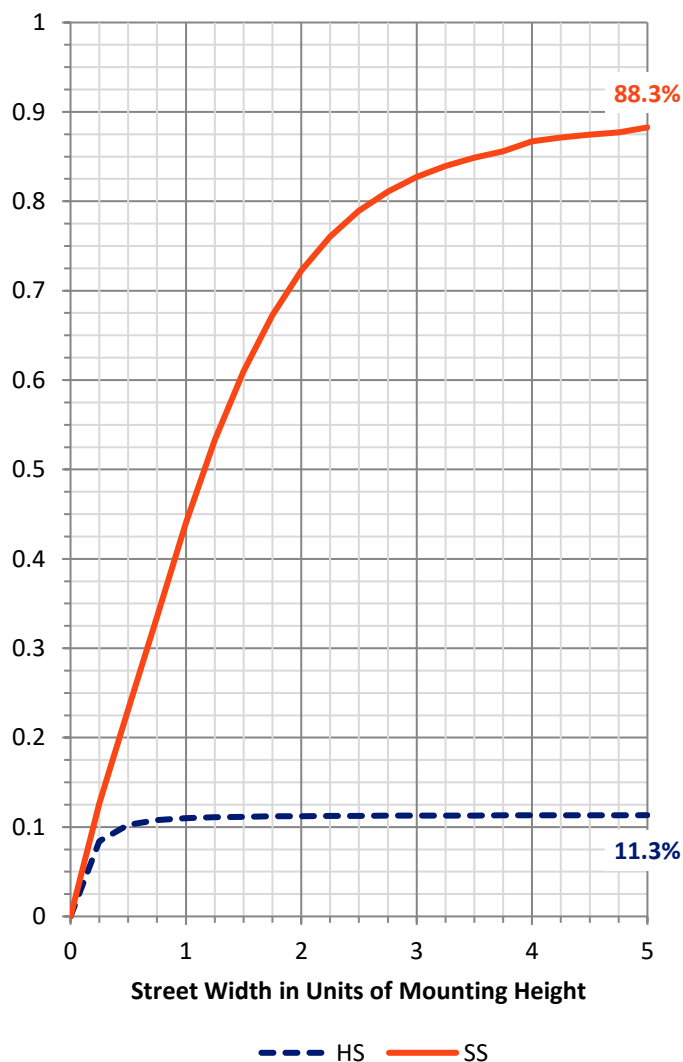
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	756.7	0.0	756.7
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	5860.3	0.0	5860.3
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	6617.0	0.0	6617.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.1	1.3
10°-20°	232.6	3.5
20°-30°	376.0	5.7
30°-40°	629.9	9.5
40°-50°	1030.0	15.6
50°-60°	1524.6	23.0
60°-70°	1750.4	26.5
70°-80°	865.6	13.1
80°-90°	118.8	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°	6617.0	100.0
0°-180°	6617.0	100.0

**Coefficient of Utilization**

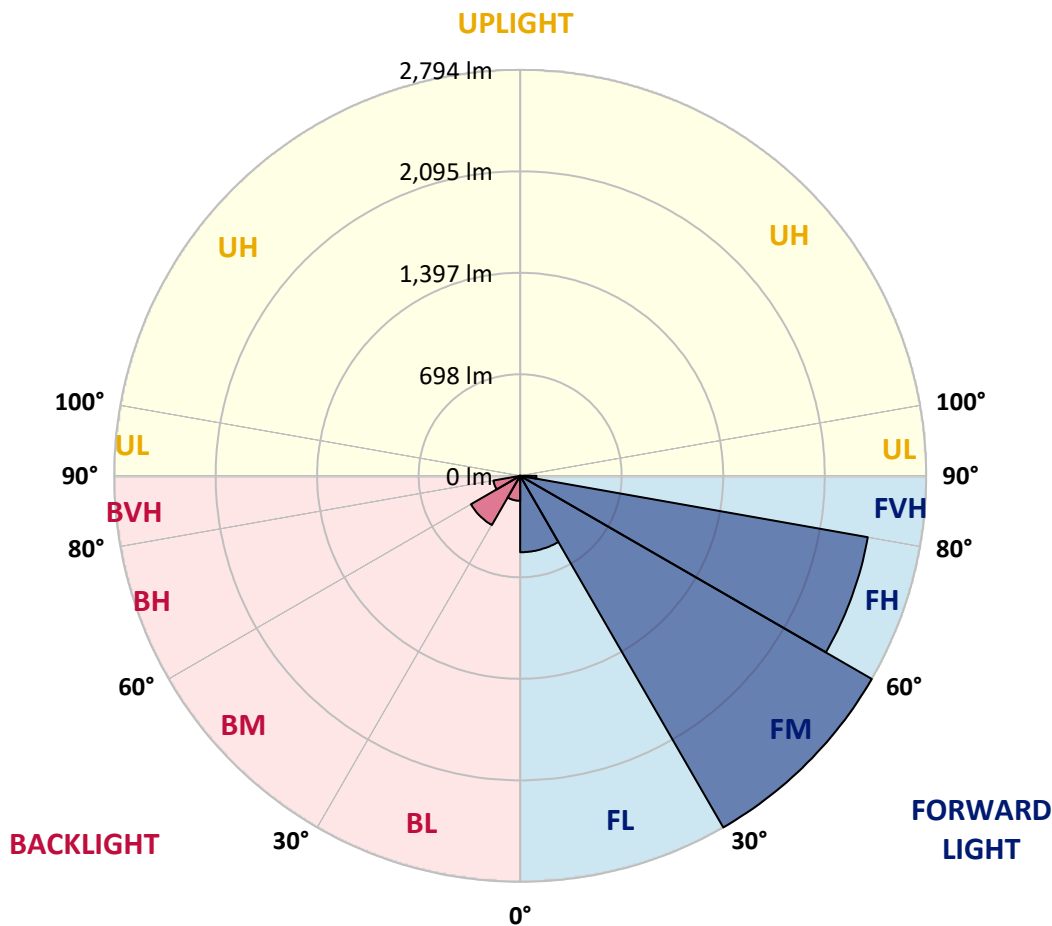


REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	525.6	7.9			
FM (30°-60°)	2793.7	42.2			
FH (60°-80°)	2428.9	36.7			G2/5000
FVH (80°-90°)	112.2	1.7			G2/225
BL (0°-30°)	172.2	2.6	B1/500		
BM (30°-60°)	390.8	5.9	B1/1000		
BH (60°-80°)	187.1	2.8	B1/500		G1/500
BVH (80°-90°)	6.6	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





REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1
2.5°	1027.9	1032.8	1009.8	1006.8	953.2	1020.0	1021.9	1029.8	980.8	885.7	1018.5
5°	1230.0	1243.6	1225.9	1304.7	1327.3	1375.9	1286.6	1366.5	1332.6	1342.0	1361.2
7.5°	1254.1	1268.1	1305.4	1437.4	1559.2	1528.6	1518.8	1549.0	1546.4	1476.6	1511.3
10°	1204.0	1215.7	1277.9	1518.1	1571.2	1708.5	1742.1	1672.7	1644.4	1491.7	1424.9
12.5°	1149.3	1168.9	1248.1	1536.2	1695.7	1834.4	1944.9	1846.1	1752.2	1589.7	1528.6
15°	1254.1	1265.1	1389.5	1573.9	1713.4	1809.2	1899.7	1866.9	1852.5	1735.6	1528.6
17.5°	1459.6	1485.3	1575.4	1666.3	1776.4	1834.1	1812.6	1802.4	1765.8	1949.4	1735.3
20°	1605.9	1653.8	1771.8	1811.1	1723.6	1777.5	1764.3	1755.3	1726.6	2068.2	1972.8
22.5°	1922.7	1966.8	1969.1	1983.0	1779.4	1693.4	1671.5	1674.2	1804.3	2103.7	2268.4
25°	2138.4	2153.4	2272.6	2173.0	1931.7	1719.1	1635.7	1673.1	1860.5	2358.6	2546.3
27.5°	2491.3	2527.1	2601.4	2264.3	2023.0	1702.8	1570.1	1705.9	2008.3	2443.0	2855.2
30°	2779.0	2813.3	2932.8	2389.1	2102.2	1783.2	1598.4	1771.8	2100.3	2616.9	3132.7
32.5°	3012.4	3101.0	3236.8	2581.8	2099.1	1875.5	1742.8	1750.0	2213.4	2842.0	3407.2
35°	3310.7	3393.2	3488.6	2714.5	2236.4	1905.3	1785.4	1964.9	2381.6	3077.3	3776.7
37.5°	3983.0	4107.8	3919.3	3049.0	2396.3	2174.6	1953.6	2097.3	2557.7	3317.5	4284.6
40°	4393.2	4498.4	4316.3	3219.8	2673.0	2310.3	2253.7	2327.3	2730.0	3441.5	4667.4
42.5°	4797.4	4936.2	4631.9	3477.0	2935.9	2693.4	2538.8	2598.0	2979.2	3740.9	5098.0
45°	5090.1	5176.0	4700.2	3611.6	3297.1	3130.0	3027.1	2938.9	3326.9	3933.2	5375.9
47.5°	5237.1	5305.7	4834.8	3654.2	3512.0	3592.0	3817.4	3633.1	3634.6	4072.3	5525.6
50°	5440.7	5488.6	4910.2	3705.1	3745.4	4311.8	4425.7	4033.1	3986.0	4211.9	5550.1
52.5°	5726.9	5750.3	5056.5	3839.3	4095.0	4875.5	4916.6	4757.9	4337.8	4471.3	5604.4
55°	6107.4	6066.3	5317.8	4121.4	4459.6	5288.4	5343.4	5205.1	4780.1	4730.3	5772.5
57.5°	6517.6	6470.5	5705.1	4518.8	4855.1	5604.0	5636.8	5647.7	5073.8	4959.6	6058.4
60°	6811.8	6820.4	6192.6	4974.7	5101.0	5906.0	5840.4	5740.9	5370.2	5295.6	6197.5
62.5°	6914.7	6998.0	6572.3	5452.4	5312.9	5924.9	5823.1	5739.0	5502.9	5642.1	6038.0
65°	6830.6	6976.2	6660.5	5872.1	5441.1	5688.5	5582.5	5528.6	5498.8	5783.5	5685.1
67.5°	6496.5	6678.6	6407.9	5875.9	4975.0	4843.5	4968.6	5139.4	5040.7	5666.2	5190.7
70°	5748.0	5947.5	5821.6	5531.2	4144.4	3810.7	3948.7	4207.0	4137.2	5039.5	4463.4
72.5°	4312.5	4568.9	4593.8	4775.2	3289.9	2868.0	2888.0	2880.8	3001.1	4063.7	3483.0
75°	2770.3	2969.8	3239.4	3853.3	2499.2	2093.9	1902.3	1855.6	2079.9	3175.3	2493.6
77.5°	1608.2	1632.0	1756.4	2907.2	1789.9	1508.7	1378.2	1444.9	1523.4	2216.0	1652.7
80°	769.2	781.3	832.6	1495.8	1243.6	1305.8	1205.1	1280.1	1046.0	1273.7	937.8
82.5°	244.0	246.6	255.3	734.9	772.2	865.0	554.3	743.2	646.7	770.0	624.4
85°	40.7	69.4	85.6	212.3	435.9	291.9	120.3	265.1	360.9	485.7	283.6
87.5°	0.0	0.0	0.0	3.8	35.4	16.6	2.6	15.1	55.4	108.2	12.8
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: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1
2.5°	1056.9	1082.9	984.9	897.0	919.3	901.6	874.8	829.2	723.6	801.3	796.0
5°	1360.1	1311.8	1179.1	1117.3	1041.8	926.8	912.9	824.6	785.8	792.2	786.6
7.5°	1465.7	1379.3	1262.0	1075.8	898.9	733.0	682.1	624.4	612.7	637.6	653.8
10°	1382.7	1291.1	1188.5	957.0	820.9	701.0	575.4	494.7	451.0	445.7	450.2
12.5°	1420.8	1322.0	1110.8	933.6	791.5	682.9	542.6	420.8	325.8	333.0	314.1
15°	1447.2	1333.7	1092.4	884.6	730.8	585.6	416.7	294.9	217.2	194.6	181.0
17.5°	1602.2	1440.0	1069.0	828.0	645.9	455.9	261.7	170.8	145.5	137.6	131.2
20°	1801.3	1570.9	1068.6	768.5	520.7	285.1	163.3	123.7	117.6	122.2	117.3
22.5°	2032.8	1745.1	1125.6	694.2	373.7	179.9	127.1	109.7	103.7	107.5	107.8
25°	2265.8	2006.4	1171.9	623.7	260.2	138.0	113.1	101.1	94.3	97.7	95.8
27.5°	2686.6	2222.8	1161.4	533.6	191.6	121.4	105.2	94.6	84.5	89.7	89.4
30°	2961.9	2604.8	1202.5	407.2	152.0	106.3	98.0	86.3	75.4	81.4	81.1
32.5°	3291.1	2768.8	1247.0	312.6	126.3	100.7	88.2	76.9	70.5	74.3	73.5
35°	3661.0	3093.1	1165.1	260.2	109.7	90.9	78.1	69.4	63.7	65.6	65.6
37.5°	4314.4	3364.2	1116.1	211.9	102.2	82.2	73.2	62.6	59.2	59.2	61.1
40°	4685.5	3778.2	969.8	167.8	104.4	75.8	68.2	57.3	52.8	52.4	54.3
42.5°	5168.1	4016.9	878.2	135.7	94.6	73.9	62.6	52.0	46.8	46.4	48.3
45°	5454.3	4150.4	749.2	106.7	84.8	86.0	58.1	47.9	40.0	38.5	41.9
47.5°	5634.9	4327.2	676.1	84.8	73.9	85.6	56.6	41.5	33.6	31.7	34.7
50°	5726.5	4414.7	661.8	72.8	64.1	76.5	64.9	34.7	28.7	26.0	28.7
52.5°	5821.9	4556.9	667.0	67.1	56.6	61.5	61.5	29.8	25.3	22.2	24.1
55°	6014.6	4766.9	655.3	63.7	52.0	46.8	39.6	26.4	23.0	19.6	21.5
57.5°	6251.4	4917.7	655.3	60.7	48.3	40.0	31.7	24.5	21.1	17.0	18.5
60°	6206.6	4759.0	622.9	57.7	45.2	37.3	28.7	22.6	19.6	15.5	16.6
62.5°	5898.5	4327.2	504.5	53.2	42.6	35.4	26.0	21.5	18.5	13.6	14.7
65°	5536.5	3868.7	350.7	48.3	39.6	32.1	23.4	20.4	17.0	12.1	12.8
67.5°	5100.6	3322.4	194.6	43.4	36.6	27.9	21.5	20.0	16.2	10.9	11.7
70°	4344.2	2508.3	104.4	39.6	34.3	25.6	20.4	20.0	16.2	10.6	10.9
72.5°	3261.3	1579.5	61.1	36.2	31.3	23.8	19.2	20.4	15.8	10.2	10.2
75°	2219.1	958.9	43.7	30.9	27.9	20.0	18.5	19.6	16.2	10.2	9.4
77.5°	1508.7	673.8	35.8	27.9	25.3	17.7	18.9	19.6	16.2	8.3	6.4
80°	941.9	347.7	27.1	22.2	21.9	15.5	18.9	17.0	10.6	1.9	0.0
82.5°	658.7	129.3	15.8	17.0	17.0	10.9	14.7	12.1	6.0	0.0	0.0
85°	276.4	22.2	8.7	12.1	10.6	6.4	11.7	9.0	3.8	0.0	0.0
87.5°	4.9	0.0	3.4	7.2	7.5	3.8	6.0	3.8	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





REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1
2.5°	820.9	785.1	709.6	745.8	742.1	758.7	760.2	721.7	804.7	855.9	863.5
5°	787.3	763.2	759.0	738.3	733.0	763.6	747.0	745.8	785.8	844.3	844.6
7.5°	654.2	635.7	644.4	620.3	558.1	561.8	567.5	591.2	625.6	664.0	678.0
10°	449.1	497.0	461.9	458.9	452.5	432.5	416.7	429.1	473.6	509.0	522.2
12.5°	320.5	328.0	349.5	341.6	352.6	335.6	329.2	368.0	411.4	447.6	473.6
15°	187.4	200.2	213.0	240.2	251.1	247.7	267.3	299.8	334.8	351.4	383.5
17.5°	132.0	133.1	135.7	165.2	184.4	191.9	203.6	228.1	242.5	250.0	263.2
20°	115.4	112.0	107.5	124.1	142.2	151.6	148.2	167.4	179.1	186.6	196.1
22.5°	104.4	98.8	96.2	101.8	115.8	124.1	125.6	136.9	154.6	159.9	162.9
25°	94.3	90.5	88.6	91.6	99.2	107.1	108.6	123.3	139.1	141.4	147.4
27.5°	87.5	80.3	81.1	83.3	86.7	96.5	99.5	107.8	130.8	133.5	135.4
30°	80.3	72.8	75.0	77.3	75.8	87.9	92.4	101.8	124.1	128.2	130.5
32.5°	73.2	67.5	67.1	69.4	72.0	78.4	88.2	99.2	119.5	125.2	130.8
35°	65.2	60.7	61.5	61.8	65.2	73.5	80.7	86.3	100.3	103.3	105.2
37.5°	59.6	55.8	55.1	58.8	62.2	68.6	71.3	73.9	92.4	99.2	99.5
40°	52.8	50.5	50.5	53.2	60.7	60.0	63.3	71.6	89.4	96.5	97.3
42.5°	47.9	44.9	45.6	48.3	53.5	49.8	56.6	68.6	88.2	95.4	95.0
45°	40.3	39.6	41.1	43.4	45.6	42.2	52.8	65.6	84.5	93.9	91.3
47.5°	33.6	33.6	35.4	37.7	36.6	37.7	47.9	61.5	82.2	90.9	89.0
50°	27.5	27.9	29.8	33.6	30.2	33.2	43.0	57.3	78.4	87.9	86.3
52.5°	23.4	23.8	24.9	27.5	26.0	30.2	39.6	53.2	74.7	82.6	81.8
55°	20.4	21.1	21.1	22.6	23.4	28.3	35.8	49.0	69.0	77.7	76.2
57.5°	18.1	18.9	18.5	19.6	20.4	24.9	32.1	44.5	63.3	70.5	68.2
60°	16.2	17.0	16.6	18.1	17.7	21.5	27.9	39.6	57.3	63.0	61.1
62.5°	14.3	15.1	15.1	15.8	16.2	18.1	24.1	35.1	51.3	55.8	54.3
65°	12.8	13.6	14.0	13.6	14.3	15.5	20.4	31.7	44.5	49.0	46.8
67.5°	11.7	12.4	13.2	11.7	12.4	12.8	17.3	28.3	39.2	43.0	41.1
70°	11.3	11.7	11.7	10.2	9.8	10.2	15.1	24.1	34.3	38.1	35.4
72.5°	10.6	10.9	10.6	8.3	7.2	7.9	12.8	20.4	29.0	32.1	29.8
75°	9.8	10.2	9.8	6.8	4.5	5.7	10.6	17.7	24.9	26.4	25.3
77.5°	8.3	9.0	9.0	4.9	1.5	3.4	7.9	14.3	20.7	20.7	21.1
80°	0.8	2.3	3.8	2.6	0.0	0.4	2.6	7.5	13.2	12.8	14.0
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	4.5	3.4	3.8
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



REPORT NUMBER: P367291  
 CATALOG NUMBER: MSA-SA2B-730-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1	797.1
2.5°	845.8	834.1	848.8	893.7	875.6	878.9	866.9	941.2	1025.3	1027.9
5°	845.4	834.8	856.7	854.8	906.5	962.7	1017.0	1104.8	1229.2	1230.0
7.5°	671.6	734.2	750.4	745.5	811.8	889.1	972.8	1141.0	1243.2	1254.1
10°	605.6	632.7	665.9	678.0	705.5	779.0	873.7	1064.1	1178.7	1204.0
12.5°	524.9	611.6	655.7	741.3	757.2	767.7	917.0	1082.6	1152.3	1149.3
15°	434.8	510.2	579.9	684.4	727.4	838.2	955.9	1172.7	1214.2	1254.1
17.5°	307.7	364.6	471.7	581.4	712.7	833.3	1063.0	1333.7	1412.1	1459.6
20°	205.9	233.4	330.3	475.5	641.8	761.7	1106.7	1479.2	1564.8	1605.9
22.5°	167.0	180.2	230.4	348.4	548.3	758.3	1124.4	1638.0	1868.0	1922.7
25°	147.1	156.1	182.9	257.9	455.1	743.2	1222.5	1816.7	2094.2	2138.4
27.5°	128.6	142.2	162.1	212.7	390.3	732.6	1272.2	2116.9	2447.9	2491.3
30°	122.9	139.5	158.7	193.8	345.0	691.9	1351.4	2387.6	2701.7	2779.0
32.5°	132.7	138.4	147.8	177.6	310.0	648.9	1490.6	2711.1	2911.7	3012.4
35°	105.2	115.4	132.0	162.9	295.2	646.7	1569.4	2919.3	3248.4	3310.7
37.5°	102.9	112.4	133.9	158.7	313.0	664.0	1686.3	3345.7	3855.5	3983.0
40°	99.9	112.0	132.4	156.9	313.0	681.0	1760.9	3687.0	4263.9	4393.2
42.5°	98.8	114.3	132.0	164.8	303.2	690.4	1873.7	4027.5	4695.3	4797.4
45°	98.0	116.5	133.1	174.2	300.9	721.3	1937.4	4193.0	4972.8	5090.1
47.5°	96.2	116.5	148.6	168.5	288.5	718.3	2020.0	4438.5	5138.3	5237.1
50°	94.6	117.3	168.2	158.0	290.3	699.8	2131.9	4668.9	5370.2	5440.7
52.5°	91.3	119.9	165.2	143.3	284.7	698.0	2299.0	4996.5	5675.3	5726.9
55°	83.7	116.5	149.3	125.2	264.7	676.5	2520.3	5422.6	6098.3	6107.4
57.5°	76.9	108.2	124.8	115.0	221.7	679.1	2711.1	5814.8	6475.4	6517.6
60°	70.1	112.4	96.9	107.1	183.6	630.8	2803.5	5964.9	6749.9	6811.8
62.5°	63.7	103.7	82.6	98.4	163.6	586.0	2739.4	5844.2	6785.0	6914.7
65°	56.6	72.0	69.8	88.2	165.5	523.0	2525.2	5490.9	6651.9	6830.6
67.5°	48.6	56.6	61.5	76.2	177.2	469.1	2158.0	4923.8	6294.0	6496.5
70°	42.6	50.9	53.5	66.7	184.4	433.6	1702.8	4136.8	5561.0	5748.0
72.5°	35.4	47.1	47.9	58.4	177.6	398.6	1213.4	2969.8	4222.8	4312.5
75°	30.5	39.2	43.4	49.0	149.3	297.5	668.5	1838.2	2670.0	2770.3
77.5°	27.5	29.8	32.8	33.9	63.3	155.0	230.0	1133.5	1495.1	1608.2
80°	21.1	23.4	22.6	23.4	34.7	53.5	87.5	531.3	706.3	769.2
82.5°	6.8	11.3	12.4	10.6	22.6	26.4	25.3	183.6	229.6	244.0
85°	1.5	4.1	1.9	0.0	7.5	13.6	1.9	27.9	55.1	40.7
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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