

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: P366632

Luminaire Tested: **MSA-SA1A-730-U-SLL**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366632
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-730-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 3153 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

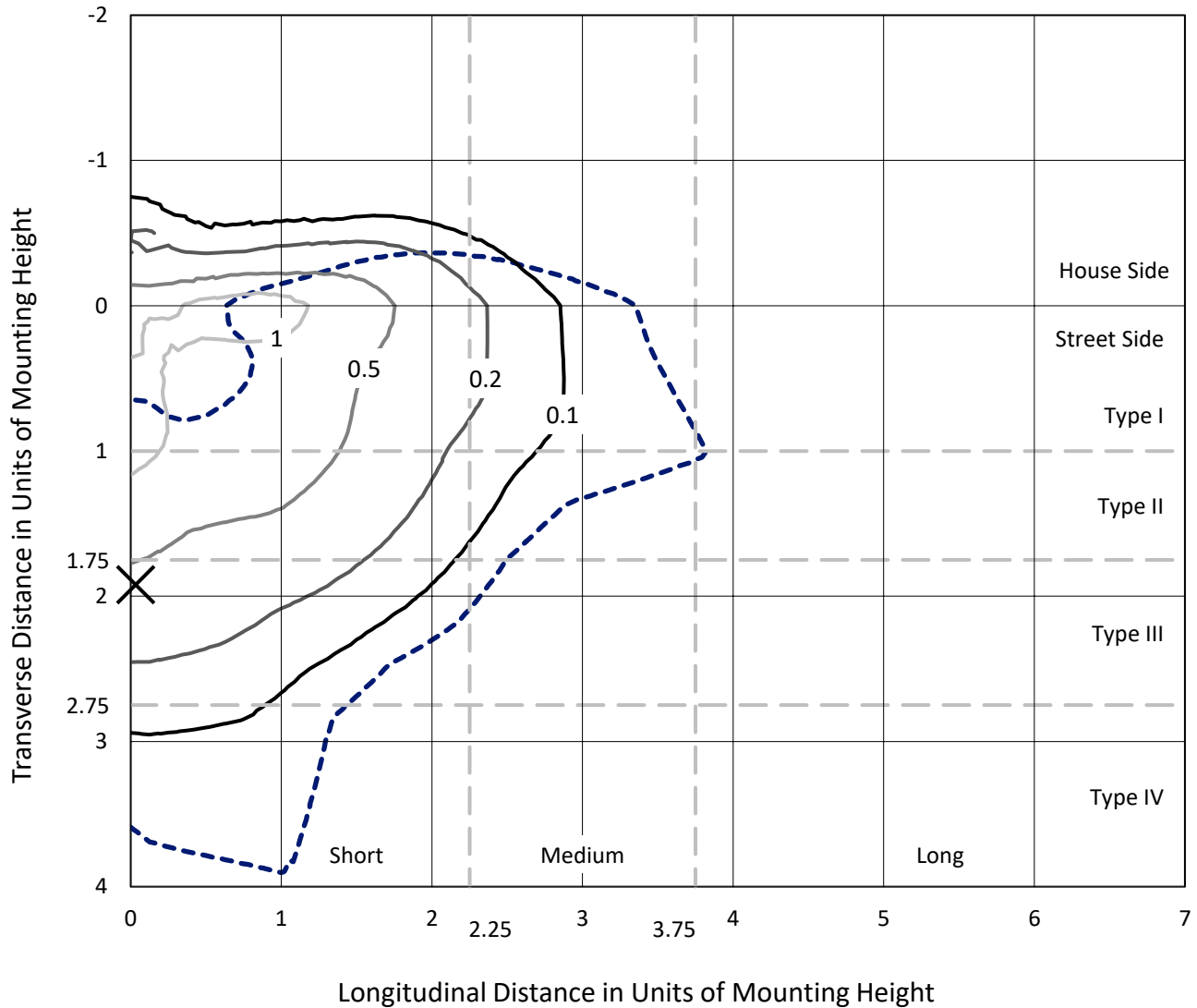
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366632
 CATALOG NUMBER: MSA-SA1A-730-U-SLL

Iso-Footcandle Lines of Horizontal Illumination

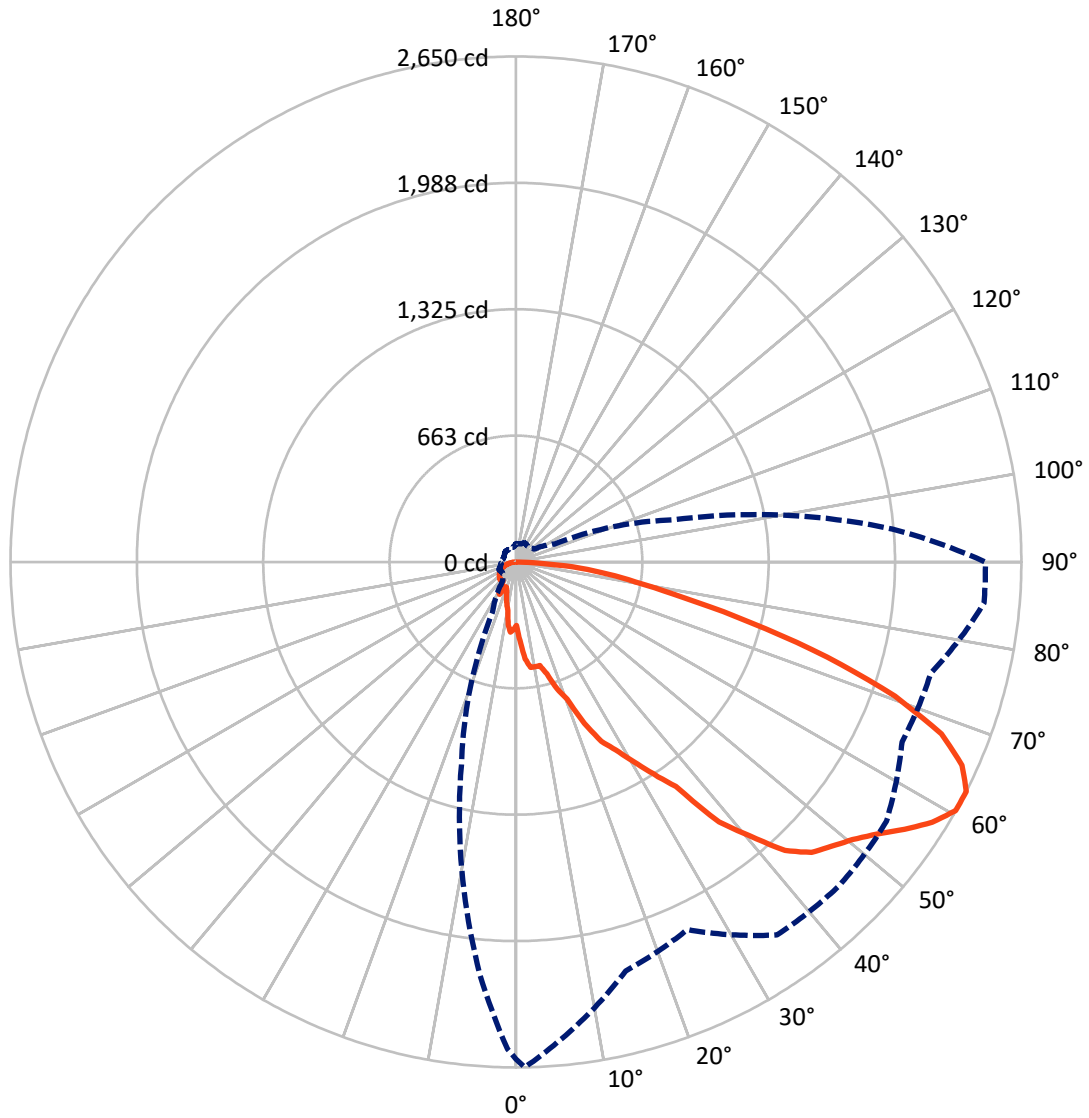
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type IV - Short - N/A

REPORT NUMBER: P366632
CATALOG NUMBER: MSA-SA1A-730-U-SLL

Luminous Intensity Polar Plot



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

REPORT NUMBER: P366632
 CATALOG NUMBER: MSA-SA1A-730-U-SLL

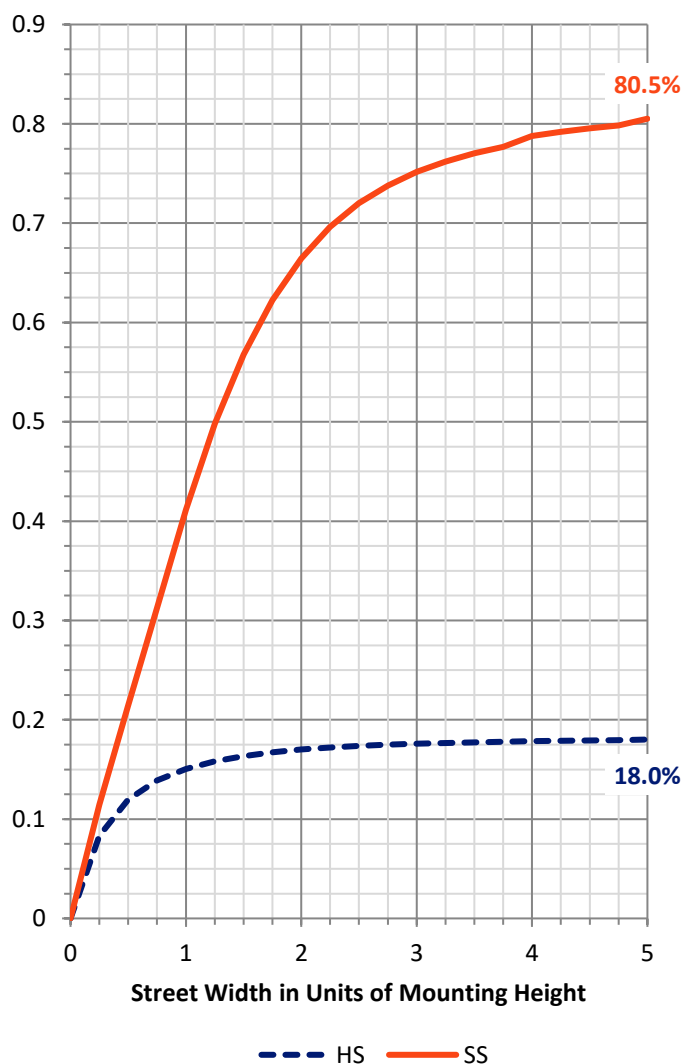
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	574.1	0.0	574.1
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	2578.9	0.0	2578.9
	% Fixture	81.8	0.0	81.8
Total	Lumens	3153.0	0.0	3153.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	1.2
10°-20°	110.8	3.5
20°-30°	195.5	6.2
30°-40°	304.6	9.7
40°-50°	501.5	15.9
50°-60°	715.8	22.7
60°-70°	759.0	24.1
70°-80°	419.2	13.3
80°-90°	108.4	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°	3153.0	100.0
0°-180°	3153.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366632

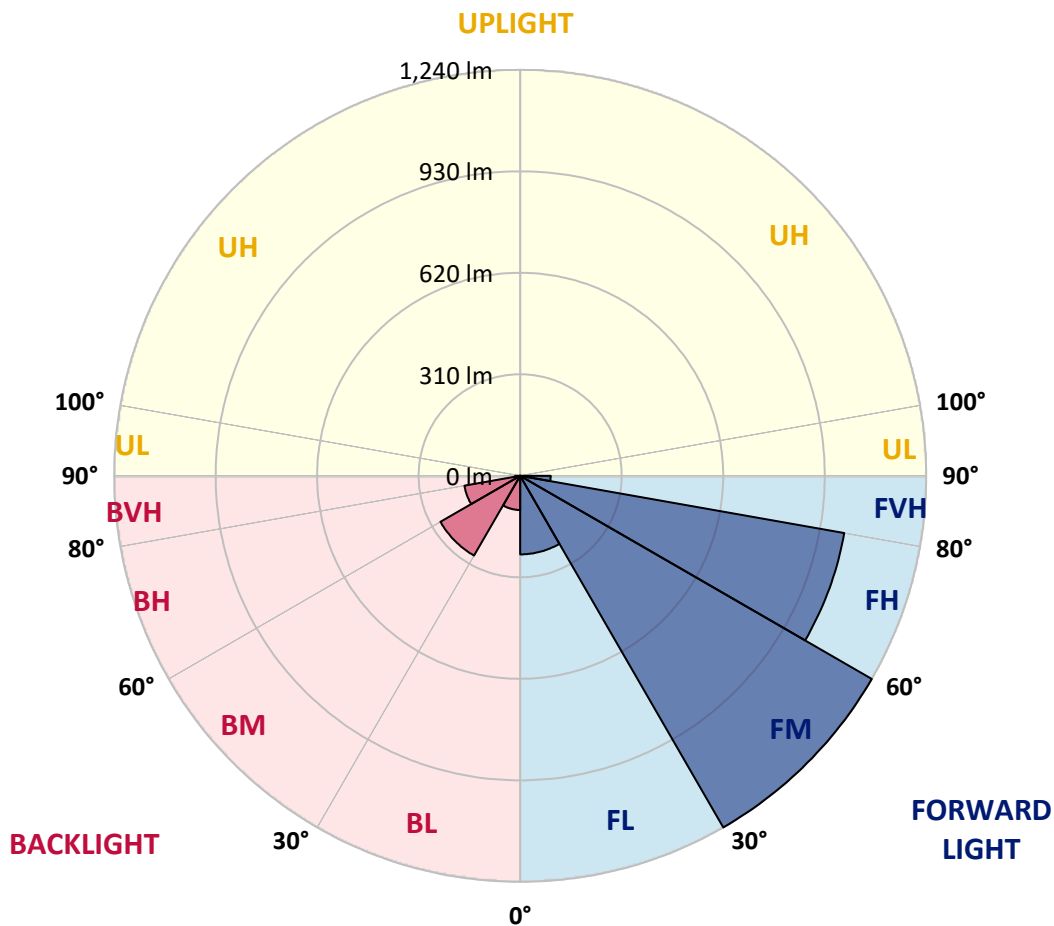
CATALOG NUMBER: MSA-SA1A-730-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	240.0	7.6			
FM (30°-60°)	1240.4	39.3			
FH (60°-80°)	1005.3	31.9			G1/1800
FVH (80°-90°)	93.1	3.0			G1/100
BL (0°-30°)	104.4	3.3	B0/110		
BM (30°-60°)	281.5	8.9	B1/1000		
BH (60°-80°)	173.0	5.5	B1/500		G1/500
BVH (80°-90°)	15.3	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





REPORT NUMBER: P366632

CATALOG NUMBER: MSA-SA1A-730-U-SLL

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5
2.5°	408.8	412.3	405.2	397.0	363.5	395.8	386.2	404.1	398.3	359.4	430.6
5°	505.2	511.6	504.6	528.9	530.5	536.7	478.8	514.9	502.3	499.1	535.1
7.5°	551.7	558.3	576.2	619.5	653.3	622.7	588.9	581.4	571.6	546.1	567.8
10°	554.6	558.3	582.3	674.1	690.5	712.2	690.4	638.8	617.5	562.0	545.5
12.5°	545.9	557.4	588.5	700.3	749.0	772.7	778.0	720.7	668.5	605.1	596.7
15°	604.5	608.7	653.2	719.0	752.5	772.5	790.0	754.6	738.3	688.1	620.6
17.5°	688.5	700.0	736.4	760.7	783.4	787.2	772.8	759.1	733.0	800.1	728.3
20°	745.4	767.6	812.3	816.9	769.3	777.7	775.7	776.7	761.8	885.7	846.3
22.5°	896.0	920.0	926.1	899.5	809.9	771.5	779.1	801.3	859.7	965.9	1010.6
25°	1032.3	1041.7	1097.5	1029.0	886.1	802.4	789.8	847.2	942.5	1100.9	1132.7
27.5°	1103.5	1115.6	1152.7	1003.6	895.5	762.6	733.2	820.6	917.7	1037.4	1177.1
30°	1194.5	1213.8	1264.4	1029.0	924.2	788.6	723.6	807.1	914.5	1079.0	1271.0
32.5°	1288.3	1325.8	1363.4	1118.5	920.2	828.4	785.2	792.0	943.6	1166.2	1368.3
35°	1412.5	1445.6	1478.0	1170.2	1000.3	861.6	818.7	890.0	1018.3	1267.3	1504.0
37.5°	1678.2	1730.5	1645.0	1317.4	1087.6	1011.2	933.9	976.2	1097.2	1351.6	1725.7
40°	1847.4	1886.7	1804.1	1417.6	1241.2	1112.0	1099.3	1102.9	1206.0	1423.9	1874.9
42.5°	2015.5	2068.8	1937.4	1555.1	1426.9	1320.3	1254.8	1250.4	1327.8	1553.6	2044.6
45°	2141.0	2172.4	1983.1	1671.1	1626.1	1547.0	1497.9	1420.0	1487.8	1643.4	2149.6
47.5°	2200.7	2226.2	2056.7	1738.6	1755.3	1759.4	1848.0	1715.2	1627.7	1704.2	2204.7
50°	2275.2	2287.3	2100.0	1798.0	1878.0	2059.5	2080.7	1855.6	1763.8	1770.4	2237.2
52.5°	2364.2	2369.3	2163.2	1866.5	2002.1	2256.8	2223.9	2093.7	1893.4	1891.5	2298.6
55°	2476.2	2473.2	2242.4	1958.8	2090.7	2374.2	2349.2	2254.4	2034.7	1991.7	2394.1
57.5°	2575.8	2574.0	2347.6	2043.7	2165.2	2434.5	2441.8	2416.7	2130.8	2063.4	2497.5
60°	2624.7	2648.1	2467.2	2136.6	2169.9	2461.7	2464.5	2424.5	2238.2	2155.5	2525.0
62.5°	2605.7	2650.2	2526.0	2220.1	2126.3	2387.3	2398.8	2371.3	2233.3	2252.2	2463.5
65°	2519.4	2570.8	2475.0	2264.6	2099.5	2262.8	2265.7	2196.1	2163.3	2316.3	2319.4
67.5°	2357.5	2405.7	2312.8	2193.6	1916.2	1927.1	1992.0	1997.6	1949.9	2268.0	2117.0
70°	2074.1	2108.1	2050.0	2018.3	1601.7	1538.0	1608.4	1638.5	1660.3	2093.4	1874.0
72.5°	1642.1	1707.7	1716.9	1737.5	1289.5	1183.5	1235.7	1191.0	1332.5	1781.7	1531.1
75°	1214.9	1270.3	1329.8	1445.0	1016.4	886.1	879.6	856.8	989.0	1432.9	1135.6
77.5°	858.5	893.9	939.6	1154.3	767.0	682.4	686.4	663.3	714.2	1083.0	784.5
80°	615.4	633.9	655.2	760.4	565.8	588.8	589.4	567.5	531.1	735.5	523.6
82.5°	438.5	452.9	477.2	501.6	421.8	482.6	482.1	480.7	421.1	497.1	327.6
85°	244.2	263.5	305.7	392.9	304.6	345.0	303.4	334.2	309.1	331.0	165.9
87.5°	17.1	15.3	68.4	227.7	142.1	103.9	54.5	107.9	138.3	172.9	23.1
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: P366632
 CATALOG NUMBER: MSA-SA1A-730-U-SLL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5
2.5°	445.2	450.6	429.6	398.1	406.7	397.4	385.6	367.2	329.4	352.8	353.0
5°	534.8	514.4	498.0	482.6	456.6	417.2	412.0	380.5	362.8	372.1	370.7
7.5°	562.8	533.8	509.2	454.0	405.8	344.7	326.4	307.7	299.9	322.5	331.6
10°	532.0	501.9	477.7	410.5	377.8	339.7	289.2	263.3	248.0	254.0	257.5
12.5°	556.8	526.0	450.0	412.5	358.5	335.2	291.0	253.1	230.4	235.9	229.4
15°	580.7	539.2	463.1	388.5	344.7	311.1	275.3	236.1	209.5	200.0	194.9
17.5°	667.9	599.0	461.6	375.0	324.8	286.1	243.0	200.1	182.4	172.6	164.2
20°	774.2	678.3	469.9	361.1	303.7	254.9	207.9	168.2	155.8	149.3	147.0
22.5°	900.7	779.9	517.2	359.1	283.8	232.1	188.7	163.9	149.9	142.9	140.0
25°	1001.3	885.0	552.0	372.6	282.8	213.3	177.0	182.1	175.7	177.8	160.8
27.5°	1098.9	913.6	532.5	366.6	254.3	179.9	174.3	184.8	190.3	192.0	191.4
30°	1181.4	1034.5	536.7	332.9	214.8	146.6	133.4	138.6	153.8	177.8	182.4
32.5°	1302.1	1092.3	573.3	312.6	192.0	131.1	116.4	114.4	118.0	126.7	134.2
35°	1443.3	1225.4	583.6	307.2	176.3	124.2	114.0	109.4	111.2	117.8	119.3
37.5°	1706.6	1322.4	621.5	300.7	170.4	120.1	112.2	110.5	114.4	119.8	122.9
40°	1851.8	1496.9	623.3	295.0	163.0	118.4	113.4	112.6	115.1	122.4	124.2
42.5°	2045.4	1596.3	652.1	288.4	160.3	120.7	115.8	115.5	117.7	121.9	125.3
45°	2163.3	1662.9	653.6	284.6	159.7	130.8	119.0	118.0	117.5	120.1	123.2
47.5°	2239.4	1758.8	672.3	280.3	163.4	133.4	122.9	118.3	116.7	117.8	120.1
50°	2311.5	1835.5	707.6	279.7	167.2	130.8	129.6	118.1	115.1	114.6	116.3
52.5°	2399.9	1961.5	751.3	285.5	166.3	127.0	134.6	117.5	112.0	110.9	112.6
55°	2528.6	2096.6	797.6	280.6	156.8	119.7	129.7	117.0	108.8	106.8	108.3
57.5°	2612.0	2174.1	849.5	276.5	142.4	114.1	125.3	117.4	109.1	104.7	105.6
60°	2584.3	2132.4	869.8	251.2	128.8	109.9	114.8	114.9	106.3	102.2	103.0
62.5°	2461.9	1981.7	850.9	221.9	118.7	103.7	103.9	110.3	98.4	95.5	96.7
65°	2290.8	1794.3	774.1	202.7	114.0	97.3	94.9	96.9	87.7	85.5	88.0
67.5°	2080.9	1563.3	659.8	182.5	112.3	88.6	85.7	84.9	79.1	76.7	79.1
70°	1817.6	1309.0	527.4	168.3	105.9	79.1	76.8	76.0	71.1	69.3	71.5
72.5°	1460.9	1022.1	407.0	157.4	98.8	70.4	68.4	67.5	63.3	60.7	63.3
75°	1039.1	781.1	302.3	140.8	88.9	61.5	59.2	58.0	54.2	51.7	54.0
77.5°	738.4	586.3	211.1	116.4	73.3	52.0	50.6	48.7	45.3	42.4	44.7
80°	545.9	418.9	136.2	89.8	56.0	41.6	40.9	39.5	36.3	32.7	34.4
82.5°	359.4	302.0	78.0	60.9	40.7	30.0	30.6	29.7	26.6	23.0	23.9
85°	161.0	178.9	41.5	33.5	26.5	18.1	19.7	19.1	16.8	13.3	13.6
87.5°	15.5	30.1	12.7	12.2	9.8	5.7	7.0	6.0	5.0	3.2	2.4
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: P366632
 CATALOG NUMBER: MSA-SA1A-730-U-SLL

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5
2.5°	358.3	336.8	315.2	328.3	328.7	332.2	332.6	319.6	330.0	338.0	346.3
5°	364.0	349.9	350.7	338.0	331.1	340.0	338.1	334.6	340.9	349.6	360.2
7.5°	323.0	313.8	312.3	300.0	270.4	263.8	269.3	271.6	280.0	293.5	304.8
10°	252.2	270.4	249.9	245.1	237.3	222.0	213.1	212.1	230.0	240.8	250.3
12.5°	227.2	222.6	220.2	207.2	207.2	191.0	185.7	190.5	218.0	225.8	238.1
15°	193.6	190.2	178.9	172.4	169.4	162.8	168.3	172.9	198.6	199.2	212.1
17.5°	160.7	158.7	148.0	146.7	143.7	140.8	145.8	156.8	170.8	168.3	174.3
20°	143.7	136.8	127.0	130.5	127.3	125.0	122.9	138.5	148.3	151.5	155.0
22.5°	139.4	126.8	121.0	117.8	118.0	114.3	114.8	127.8	142.6	144.6	142.4
25°	159.3	136.9	118.1	108.8	105.3	104.0	107.6	119.0	136.9	141.2	142.9
27.5°	186.4	148.7	121.6	105.7	98.7	99.3	104.3	112.3	133.4	141.1	143.1
30°	178.9	139.8	121.8	103.4	94.7	97.9	99.8	107.4	130.7	142.1	152.1
32.5°	138.0	125.8	122.6	105.3	101.7	96.7	99.3	106.6	122.6	129.7	130.2
35°	116.9	107.6	105.4	101.1	96.2	94.1	97.0	103.4	113.8	118.3	117.7
37.5°	116.0	105.7	97.3	95.5	93.5	92.9	94.6	100.5	111.1	118.9	117.2
40°	117.5	104.8	96.2	93.0	93.8	91.0	92.7	100.1	111.5	118.9	117.4
42.5°	115.7	103.7	94.9	92.4	93.2	89.4	91.3	99.0	110.3	119.0	116.1
45°	112.0	101.3	94.1	90.0	93.5	87.8	90.3	96.2	106.6	116.1	112.8
47.5°	108.3	98.4	90.9	88.3	91.8	86.3	87.4	92.6	103.0	112.3	109.4
50°	104.3	94.7	88.3	87.5	90.0	86.0	84.3	88.6	98.5	107.9	105.4
52.5°	100.1	91.7	86.4	86.1	88.4	84.0	81.6	84.9	93.8	103.1	101.1
55°	95.9	88.3	84.2	84.9	87.5	82.3	79.3	81.4	88.7	97.9	95.2
57.5°	91.8	84.5	81.1	83.2	85.2	80.2	76.3	77.6	83.5	92.6	89.4
60°	88.1	81.1	77.7	80.3	82.2	77.0	72.5	73.3	78.6	86.8	83.8
62.5°	83.4	77.4	73.0	76.3	77.7	72.7	67.9	68.9	73.1	80.8	78.6
65°	76.7	72.8	68.7	71.0	72.8	67.6	63.2	64.3	67.5	74.7	73.1
67.5°	70.8	67.2	64.4	66.3	66.6	62.6	58.6	59.2	61.8	68.5	66.9
70°	64.4	60.9	58.8	60.1	60.0	56.6	53.6	53.7	55.8	62.0	59.7
72.5°	57.4	54.0	52.9	53.7	53.1	50.0	47.1	48.2	49.6	54.2	52.3
75°	49.9	46.8	46.2	47.0	46.1	43.1	40.5	41.6	42.8	46.7	44.4
77.5°	42.1	39.3	39.5	39.6	38.4	36.4	33.8	34.9	35.7	38.3	36.0
80°	33.5	31.4	32.0	32.0	30.6	29.2	26.8	27.1	27.5	28.5	26.8
82.5°	24.5	24.5	24.5	24.6	21.7	22.2	20.0	19.9	19.4	19.3	18.2
85°	14.5	15.1	15.5	15.9	11.8	13.8	11.9	11.5	10.6	9.6	9.3
87.5°	3.2	4.1	4.1	4.0	0.0	1.5	0.8	1.2	0.3	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: P366632
 CATALOG NUMBER: MSA-SA1A-730-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5
2.5°	336.8	327.6	344.7	360.0	357.6	366.4	345.8	376.4	408.8	408.8
5°	357.4	349.6	354.1	362.9	369.7	400.6	426.3	451.8	504.6	505.2
7.5°	301.4	318.3	322.2	319.6	348.5	388.3	430.7	503.5	548.2	551.7
10°	281.8	289.5	301.6	308.3	320.1	359.3	411.9	498.3	545.8	554.6
12.5°	255.4	283.7	302.0	339.7	349.0	356.8	440.5	515.3	548.1	545.9
15°	226.4	247.9	274.3	316.0	339.7	399.3	457.5	569.8	588.3	604.5
17.5°	180.5	196.3	231.5	278.9	337.7	392.6	499.4	637.1	671.7	688.5
20°	148.6	148.7	183.9	246.8	310.8	364.5	515.3	693.0	736.9	745.4
22.5°	140.5	133.4	151.9	203.0	281.1	381.1	547.5	782.8	874.4	896.0
25°	136.0	127.5	139.1	179.2	259.8	389.9	612.2	906.3	1023.9	1032.3
27.5°	137.9	141.8	145.5	159.7	232.9	373.5	597.2	961.5	1087.6	1103.5
30°	150.3	156.7	148.3	153.2	210.7	349.8	624.0	1051.1	1167.7	1194.5
32.5°	125.0	122.6	121.8	132.5	188.5	328.3	680.1	1177.4	1254.6	1288.3
35°	112.8	108.9	110.5	122.7	177.6	325.3	711.6	1281.9	1391.9	1412.5
37.5°	112.3	107.9	109.9	119.0	181.5	330.8	762.1	1449.6	1633.9	1678.2
40°	111.2	108.8	109.9	116.7	177.5	333.9	791.2	1590.5	1802.6	1847.4
42.5°	111.1	109.9	110.9	118.6	173.4	335.2	831.4	1717.8	1980.2	2015.5
45°	110.6	111.8	111.8	120.1	171.5	344.4	855.1	1780.2	2097.4	2141.0
47.5°	108.5	112.2	118.1	119.7	164.0	340.1	888.7	1874.9	2159.7	2200.7
50°	105.7	111.7	126.1	116.6	162.8	329.7	927.8	1950.1	2239.5	2275.2
52.5°	102.1	110.9	124.2	110.6	160.7	327.9	982.8	2047.7	2332.7	2364.2
55°	96.9	108.2	118.6	104.7	155.5	322.1	1066.8	2168.7	2454.7	2476.2
57.5°	92.1	104.0	110.3	101.3	143.1	323.3	1125.2	2267.4	2557.0	2575.8
60°	87.8	103.6	98.5	97.8	130.4	306.9	1144.2	2266.3	2595.1	2624.7
62.5°	83.2	97.8	90.3	93.0	119.2	290.1	1103.9	2169.2	2554.0	2605.7
65°	77.3	83.8	83.4	89.7	119.5	262.7	1011.7	1997.8	2451.3	2519.4
67.5°	70.2	74.2	76.8	84.2	123.3	241.4	863.3	1791.7	2276.6	2357.5
70°	63.0	67.0	69.9	77.0	126.8	231.7	687.1	1502.2	1992.0	2074.1
72.5°	55.7	59.8	62.1	68.2	122.1	210.7	508.6	1168.8	1598.9	1642.1
75°	48.0	52.0	53.9	59.5	106.0	174.3	351.1	885.3	1171.1	1214.9
77.5°	40.2	44.5	45.1	49.7	80.9	133.3	225.1	679.0	829.3	858.5
80°	32.1	36.4	36.4	38.9	56.9	91.7	134.8	512.3	603.9	615.4
82.5°	23.1	27.7	27.4	27.5	39.3	56.8	78.0	383.9	436.4	438.5
85°	13.6	16.8	16.7	15.3	23.3	30.6	42.2	238.4	243.6	244.2
87.5°	2.6	4.0	3.5	1.5	6.4	9.0	12.2	44.2	17.6	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)