

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: P596683

Luminaire Tested: **MSA-SA3B-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596683
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-827-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: 7883 lumens
Efficiency: N/A
Efficacy: 62.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

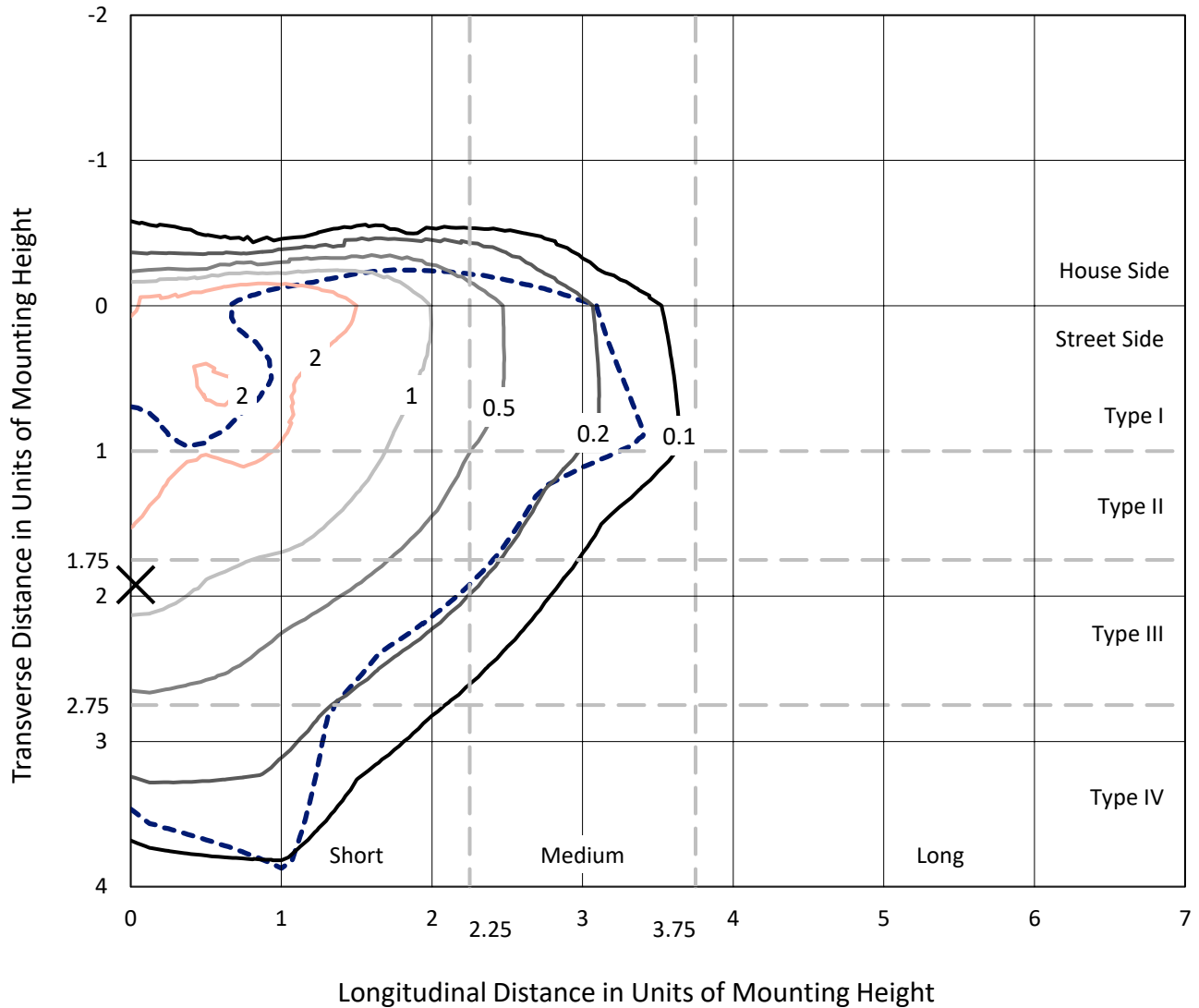
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596683
 CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

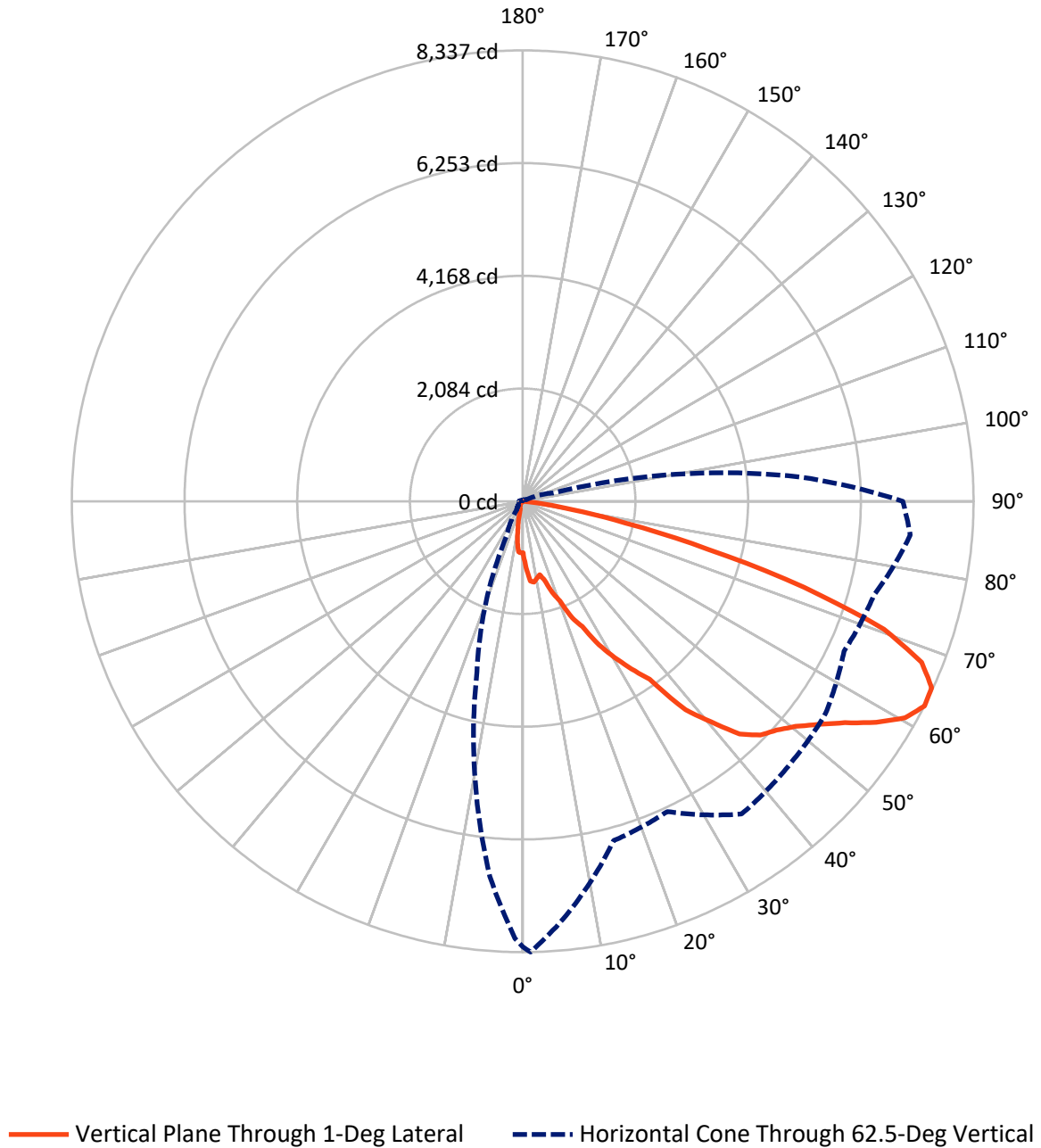
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - N/A

REPORT NUMBER: P596683
CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	901.5	0.0	901.5
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	6981.5	0.0	6981.5
	% Fixture	88.6	0.0	88.6
Total	Lumens	7883.0	0.0	7883.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	1.3
10°-20°	277.1	3.5
20°-30°	448.0	5.7
30°-40°	750.4	9.5
40°-50°	1227.0	15.6
50°-60°	1816.3	23.0
60°-70°	2085.3	26.5
70°-80°	1031.2	13.1
80°-90°	141.6	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°	7883.0	100.0
0°-180°	7883.0	100.0

Coefficient of Utilization

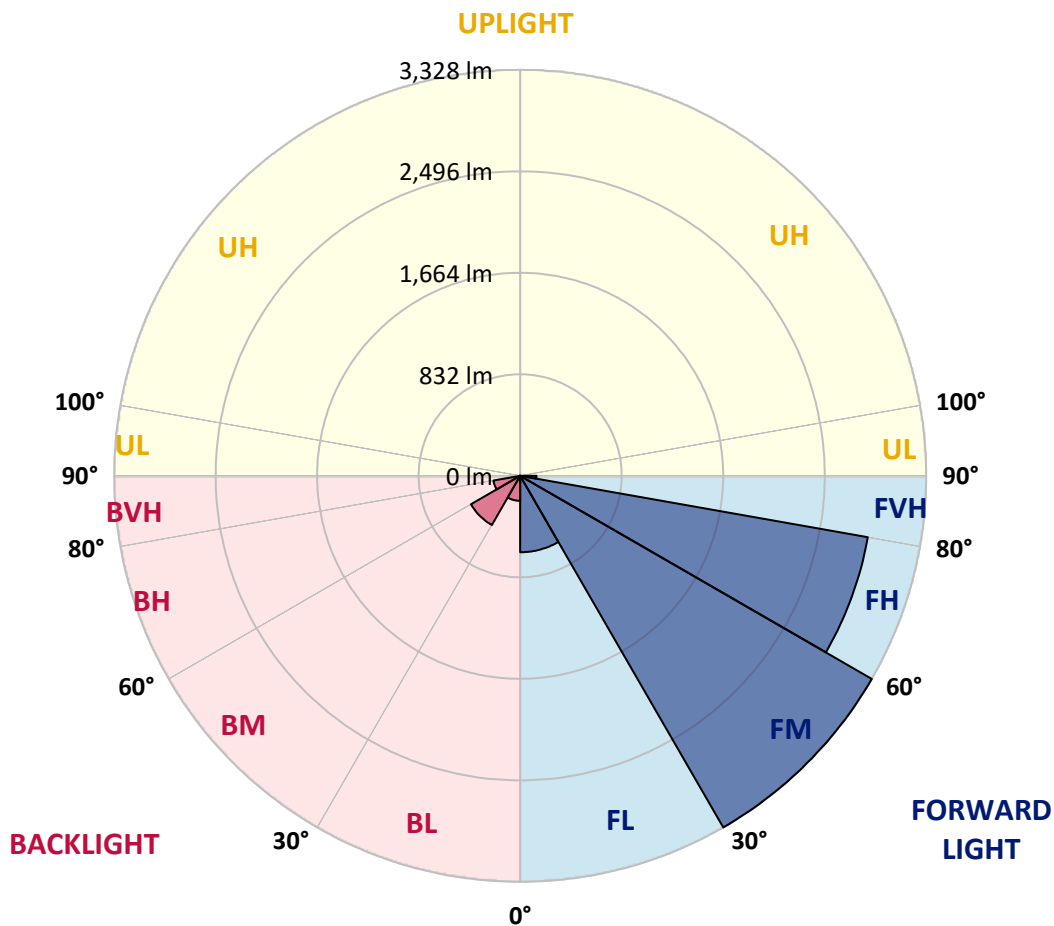


REPORT NUMBER: P596683
 CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	626.1	7.9			
FM (30°-60°)	3328.1	42.2			
FH (60°-80°)	2893.6	36.7			G2/5000
FVH (80°-90°)	133.7	1.7			G2/225
BL (0°-30°)	205.1	2.6	B1/500		
BM (30°-60°)	465.6	5.9	B1/1000		
BH (60°-80°)	222.9	2.8	B1/500		G1/500
BVH (80°-90°)	7.8	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





REPORT NUMBER: P596683

CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	1224.6	1230.4	1203.0	1199.4	1135.6	1215.1	1217.4	1226.8	1168.4	1055.2	1213.3
5°	1465.3	1481.5	1460.4	1554.3	1581.2	1639.2	1532.7	1627.9	1587.5	1598.7	1621.7
7.5°	1494.1	1510.7	1555.2	1712.4	1857.5	1821.1	1809.4	1845.4	1842.2	1759.1	1800.4
10°	1434.3	1448.3	1522.4	1808.5	1871.9	2035.4	2075.4	1992.7	1959.0	1777.1	1697.6
12.5°	1369.2	1392.6	1486.9	1830.1	2020.1	2185.4	2317.0	2199.3	2087.5	1893.9	1821.1
15°	1494.1	1507.1	1655.3	1875.0	2041.2	2155.3	2263.1	2224.0	2207.0	2067.7	1821.1
17.5°	1738.9	1769.4	1876.8	1985.1	2116.2	2185.0	2159.4	2147.2	2103.7	2322.4	2067.3
20°	1913.2	1970.2	2110.8	2157.6	2053.3	2117.6	2101.9	2091.1	2056.9	2463.9	2350.3
22.5°	2290.5	2343.1	2345.8	2362.4	2119.8	2017.4	1991.4	1994.5	2149.5	2506.2	2702.5
25°	2547.5	2565.4	2707.4	2588.8	2301.3	2048.0	1948.7	1993.2	2216.4	2809.8	3033.5
27.5°	2967.9	3010.6	3099.1	2697.5	2410.0	2028.6	1870.5	2032.2	2392.5	2910.4	3401.4
30°	3310.7	3351.6	3494.0	2846.2	2504.4	2124.3	1904.2	2110.8	2502.1	3117.5	3732.1
32.5°	3588.8	3694.3	3856.0	3075.8	2500.8	2234.4	2076.3	2084.8	2636.9	3385.7	4059.1
35°	3944.1	4042.5	4156.1	3233.9	2664.3	2269.9	2127.0	2340.8	2837.2	3666.0	4499.3
37.5°	4745.0	4893.7	4669.1	3632.3	2854.7	2590.6	2327.4	2498.5	3047.0	3952.2	5104.4
40°	5233.8	5359.1	5142.1	3835.8	3184.5	2752.3	2684.9	2772.5	3252.3	4100.0	5560.3
42.5°	5715.3	5880.6	5518.1	4142.2	3497.6	3208.7	3024.5	3095.1	3549.2	4456.6	6073.3
45°	6063.9	6166.3	5599.4	4302.6	3927.9	3728.9	3606.3	3501.2	3963.4	4685.7	6404.4
47.5°	6239.1	6320.9	5759.8	4353.3	4184.0	4279.2	4547.8	4328.2	4330.0	4851.5	6582.7
50°	6481.7	6538.7	5849.6	4414.0	4462.0	5136.7	5272.4	4804.8	4748.6	5017.7	6611.9
52.5°	6822.6	6850.5	6023.9	4573.9	4878.4	5808.3	5857.3	5668.2	5167.7	5326.8	6676.6
55°	7275.9	7226.9	6335.2	4909.9	5312.8	6300.2	6365.8	6200.9	5694.7	5635.4	6877.0
57.5°	7764.6	7708.5	6796.6	5383.4	5784.1	6676.2	6715.3	6728.3	6044.6	5908.5	7217.5
60°	8115.0	8125.3	7377.4	5926.5	6076.9	7036.0	6957.8	6839.2	6397.7	6308.7	7383.2
62.5°	8237.6	8336.9	7829.8	6495.6	6329.4	7058.5	6937.2	6837.0	6555.8	6721.6	7193.2
65°	8137.5	8310.9	7934.9	6995.6	6482.1	6776.8	6650.6	6586.3	6550.9	6890.0	6772.8
67.5°	7739.5	7956.4	7633.9	7000.1	5926.9	5770.1	5919.3	6122.8	6005.1	6750.3	6183.8
70°	6847.8	7085.4	6935.4	6589.5	4937.3	4539.7	4704.1	5011.9	4928.8	6003.7	5317.3
72.5°	5137.6	5443.1	5472.7	5688.8	3919.4	3416.7	3440.5	3432.0	3575.3	4841.2	4149.4
75°	3300.4	3538.0	3859.2	4590.5	2977.4	2494.5	2266.3	2210.6	2477.9	3782.8	2970.6
77.5°	1915.9	1944.2	2092.4	3463.4	2132.4	1797.3	1641.9	1721.4	1814.8	2640.0	1968.9
80°	916.4	930.8	991.9	1782.0	1481.5	1555.6	1435.7	1525.1	1246.1	1517.4	1117.2
82.5°	290.6	293.8	304.1	875.5	920.0	1030.5	660.3	885.4	770.4	917.3	743.9
85°	48.5	82.7	102.0	252.9	519.3	347.7	143.3	315.8	429.9	578.6	337.8
87.5°	0.0	0.0	0.0	4.5	42.2	19.8	3.1	18.0	66.0	128.9	15.3
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: P596683
 CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	1259.1	1290.1	1173.3	1068.7	1095.2	1074.1	1042.2	987.8	862.0	954.6	948.3
5°	1620.3	1562.8	1404.7	1331.0	1241.2	1104.2	1087.5	982.4	936.2	943.8	937.1
7.5°	1746.1	1643.2	1503.5	1281.6	1070.9	873.3	812.6	743.9	730.0	759.6	778.9
10°	1647.3	1538.1	1415.9	1140.1	977.9	835.1	685.5	589.4	537.3	531.0	536.4
12.5°	1692.6	1574.9	1323.4	1112.2	942.9	813.5	646.4	501.3	388.1	396.7	374.2
15°	1724.1	1588.9	1301.4	1053.9	870.6	697.6	496.4	351.3	258.7	231.8	215.6
17.5°	1908.7	1715.5	1273.5	986.5	769.5	543.1	311.8	203.5	173.4	164.0	156.3
20°	2145.9	1871.4	1273.1	915.5	620.4	339.6	194.5	147.3	140.2	145.5	139.7
22.5°	2421.7	2079.0	1340.9	827.0	445.2	214.3	151.4	130.7	123.5	128.0	128.5
25°	2699.3	2390.3	1396.2	743.0	310.0	164.4	134.8	120.4	112.3	116.3	114.1
27.5°	3200.6	2648.1	1383.6	635.6	228.2	144.6	125.3	112.8	100.6	106.9	106.5
30°	3528.6	3103.2	1432.5	485.1	181.0	126.7	116.8	102.9	89.8	97.0	96.6
32.5°	3920.7	3298.6	1485.5	372.4	150.5	119.9	105.1	91.6	84.0	88.5	87.6
35°	4361.4	3684.9	1388.1	310.0	130.7	108.3	93.0	82.7	75.9	78.2	78.2
37.5°	5139.9	4007.9	1329.7	252.5	121.7	97.9	87.1	74.6	70.5	70.5	72.8
40°	5581.9	4501.1	1155.4	199.9	124.4	90.3	81.3	68.3	62.9	62.4	64.7
42.5°	6156.9	4785.5	1046.2	161.7	112.8	88.0	74.6	62.0	55.7	55.3	57.5
45°	6497.8	4944.5	892.6	127.1	101.1	102.4	69.2	57.0	47.6	45.8	49.9
47.5°	6713.0	5155.2	805.4	101.1	88.0	102.0	67.4	49.4	40.0	37.7	41.3
50°	6822.2	5259.4	788.4	86.7	76.4	91.2	77.3	41.3	34.1	31.0	34.1
52.5°	6935.8	5428.7	794.7	80.0	67.4	73.2	73.2	35.5	30.1	26.5	28.7
55°	7165.4	5678.9	780.7	75.9	62.0	55.7	47.2	31.4	27.4	23.4	25.6
57.5°	7447.5	5858.6	780.7	72.3	57.5	47.6	37.7	29.2	25.2	20.2	22.0
60°	7394.0	5669.5	742.1	68.7	53.9	44.5	34.1	27.0	23.4	18.4	19.8
62.5°	7027.0	5155.2	601.0	63.3	50.8	42.2	31.0	25.6	22.0	16.2	17.5
65°	6595.8	4608.9	417.8	57.5	47.2	38.2	27.9	24.3	20.2	14.4	15.3
67.5°	6076.5	3958.0	231.8	51.7	43.6	33.2	25.6	23.8	19.3	13.0	13.9
70°	5175.4	2988.2	124.4	47.2	40.9	30.5	24.3	23.8	19.3	12.6	13.0
72.5°	3885.2	1881.7	72.8	43.1	37.3	28.3	22.9	24.3	18.9	12.1	12.1
75°	2643.6	1142.3	52.1	36.8	33.2	23.8	22.0	23.4	19.3	12.1	11.2
77.5°	1797.3	802.7	42.7	33.2	30.1	21.1	22.5	23.4	19.3	9.9	7.6
80°	1122.1	414.2	32.3	26.5	26.1	18.4	22.5	20.2	12.6	2.2	0.0
82.5°	784.8	154.1	18.9	20.2	20.2	13.0	17.5	14.4	7.2	0.0	0.0
85°	329.3	26.5	10.3	14.4	12.6	7.6	13.9	10.8	4.5	0.0	0.0
87.5°	5.8	0.0	4.0	8.5	9.0	4.5	7.2	4.5	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: P596683
 CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	977.9	935.3	845.4	888.5	884.0	903.8	905.6	859.8	958.6	1019.7	1028.7
5°	938.0	909.2	904.3	879.6	873.3	909.7	889.9	888.5	936.2	1005.8	1006.2
7.5°	779.4	757.4	767.7	739.0	664.8	669.3	676.1	704.4	745.2	791.1	807.7
10°	535.0	592.1	550.3	546.7	539.1	515.2	496.4	511.2	564.2	606.4	622.2
12.5°	381.8	390.8	416.4	407.0	420.0	399.8	392.2	438.4	490.1	533.2	564.2
15°	223.3	238.5	253.8	286.1	299.2	295.1	318.5	357.1	398.9	418.7	456.8
17.5°	157.2	158.6	161.7	196.8	219.7	228.6	242.6	271.8	288.8	297.8	313.5
20°	137.5	133.4	128.0	147.8	169.4	180.6	176.5	199.5	213.4	222.4	233.6
22.5°	124.4	117.7	114.5	121.3	137.9	147.8	149.6	163.1	184.2	190.5	194.1
25°	112.3	107.8	105.6	109.2	118.1	127.6	129.4	146.9	165.8	168.5	175.6
27.5°	104.2	95.7	96.6	99.3	103.3	115.0	118.6	128.5	155.9	159.0	161.3
30°	95.7	86.7	89.4	92.1	90.3	104.7	110.1	121.3	147.8	152.7	155.4
32.5°	87.1	80.4	80.0	82.7	85.8	93.4	105.1	118.1	142.4	149.1	155.9
35°	77.7	72.3	73.2	73.7	77.7	87.6	96.1	102.9	119.5	123.1	125.3
37.5°	71.0	66.5	65.6	70.1	74.1	81.8	84.9	88.0	110.1	118.1	118.6
40°	62.9	60.2	60.2	63.3	72.3	71.4	75.5	85.4	106.5	115.0	115.9
42.5°	57.0	53.5	54.4	57.5	63.8	59.3	67.4	81.8	105.1	113.7	113.2
45°	48.1	47.2	49.0	51.7	54.4	50.3	62.9	78.2	100.6	111.9	108.7
47.5°	40.0	40.0	42.2	44.9	43.6	44.9	57.0	73.2	97.9	108.3	106.0
50°	32.8	33.2	35.5	40.0	35.9	39.5	51.2	68.3	93.4	104.7	102.9
52.5°	27.9	28.3	29.6	32.8	31.0	35.9	47.2	63.3	88.9	98.4	97.5
55°	24.3	25.2	25.2	27.0	27.9	33.7	42.7	58.4	82.2	92.5	90.7
57.5°	21.6	22.5	22.0	23.4	24.3	29.6	38.2	53.0	75.5	84.0	81.3
60°	19.3	20.2	19.8	21.6	21.1	25.6	33.2	47.2	68.3	75.0	72.8
62.5°	17.1	18.0	18.0	18.9	19.3	21.6	28.7	41.8	61.1	66.5	64.7
65°	15.3	16.2	16.6	16.2	17.1	18.4	24.3	37.7	53.0	58.4	55.7
67.5°	13.9	14.8	15.7	13.9	14.8	15.3	20.7	33.7	46.7	51.2	49.0
70°	13.5	13.9	13.9	12.1	11.7	12.1	18.0	28.7	40.9	45.4	42.2
72.5°	12.6	13.0	12.6	9.9	8.5	9.4	15.3	24.3	34.6	38.2	35.5
75°	11.7	12.1	11.7	8.1	5.4	6.7	12.6	21.1	29.6	31.4	30.1
77.5°	9.9	10.8	10.8	5.8	1.8	4.0	9.4	17.1	24.7	24.7	25.2
80°	0.9	2.7	4.5	3.1	0.0	0.4	3.1	9.0	15.7	15.3	16.6
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	5.4	4.0	4.5
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: P596683
 CATALOG NUMBER: MSA-SA3B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	1007.6	993.7	1011.2	1064.6	1043.1	1047.1	1032.7	1121.2	1221.4	1224.6
5°	1007.1	994.6	1020.6	1018.4	1079.9	1146.8	1211.5	1316.2	1464.4	1465.3
7.5°	800.0	874.6	893.9	888.1	967.2	1059.2	1159.0	1359.3	1481.1	1494.1
10°	721.4	753.8	793.3	807.7	840.5	928.1	1040.8	1267.7	1404.2	1434.3
12.5°	625.3	728.6	781.2	883.2	902.0	914.6	1092.5	1289.7	1372.8	1369.2
15°	517.9	607.8	690.9	815.3	866.5	998.6	1138.8	1397.0	1446.5	1494.1
17.5°	366.6	434.4	562.0	692.7	849.0	992.8	1266.3	1588.9	1682.3	1738.9
20°	245.3	278.1	393.5	566.5	764.6	907.4	1318.4	1762.3	1864.2	1913.2
22.5°	199.0	214.7	274.5	415.1	653.2	903.4	1339.5	1951.4	2225.4	2290.5
25°	175.2	186.0	217.9	307.3	542.2	885.4	1456.3	2164.3	2494.9	2547.5
27.5°	153.2	169.4	193.2	253.4	464.9	872.8	1515.6	2521.9	2916.3	2967.9
30°	146.4	166.2	189.1	230.9	411.0	824.3	1610.0	2844.4	3218.6	3310.7
32.5°	158.1	164.9	176.1	211.6	369.3	773.1	1775.7	3229.8	3468.8	3588.8
35°	125.3	137.5	157.2	194.1	351.7	770.4	1869.6	3477.8	3870.0	3944.1
37.5°	122.6	133.9	159.5	189.1	372.8	791.1	2008.9	3985.9	4593.2	4745.0
40°	119.0	133.4	157.7	186.9	372.8	811.3	2097.8	4392.4	5079.7	5233.8
42.5°	117.7	136.1	157.2	196.3	361.2	822.5	2232.1	4798.0	5593.6	5715.3
45°	116.8	138.8	158.6	207.5	358.5	859.3	2308.1	4995.2	5924.2	6063.9
47.5°	114.5	138.8	177.0	200.8	343.6	855.7	2406.4	5287.7	6121.4	6239.1
50°	112.8	139.7	200.3	188.2	345.9	833.7	2539.8	5562.1	6397.7	6481.7
52.5°	108.7	142.8	196.8	170.7	339.2	831.5	2738.8	5952.5	6761.1	6822.6
55°	99.7	138.8	177.9	149.1	315.3	805.9	3002.5	6460.1	7265.1	7275.9
57.5°	91.6	128.9	148.7	137.0	264.1	809.0	3229.8	6927.3	7714.3	7764.6
60°	83.6	133.9	115.4	127.6	218.8	751.5	3339.9	7106.1	8041.3	8115.0
62.5°	75.9	123.5	98.4	117.2	195.0	698.1	3263.5	6962.3	8083.1	8237.6
65°	67.4	85.8	83.1	105.1	197.2	623.1	3008.4	6541.4	7924.5	8137.5
67.5°	57.9	67.4	73.2	90.7	211.1	558.8	2570.8	5865.8	7498.2	7739.5
70°	50.8	60.6	63.8	79.5	219.7	516.6	2028.6	4928.3	6625.0	6847.8
72.5°	42.2	56.2	57.0	69.6	211.6	474.8	1445.6	3538.0	5030.7	5137.6
75°	36.4	46.7	51.7	58.4	177.9	354.4	796.5	2189.9	3180.9	3300.4
77.5°	32.8	35.5	39.1	40.4	75.5	184.6	274.0	1350.3	1781.1	1915.9
80°	25.2	27.9	27.0	27.9	41.3	63.8	104.2	632.9	841.4	916.4
82.5°	8.1	13.5	14.8	12.6	27.0	31.4	30.1	218.8	273.6	290.6
85°	1.8	4.9	2.2	0.0	9.0	16.2	2.2	33.2	65.6	48.5
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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