

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: P367891

Luminaire Tested: **MSA-SA3B-760-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367891
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-760-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10856 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

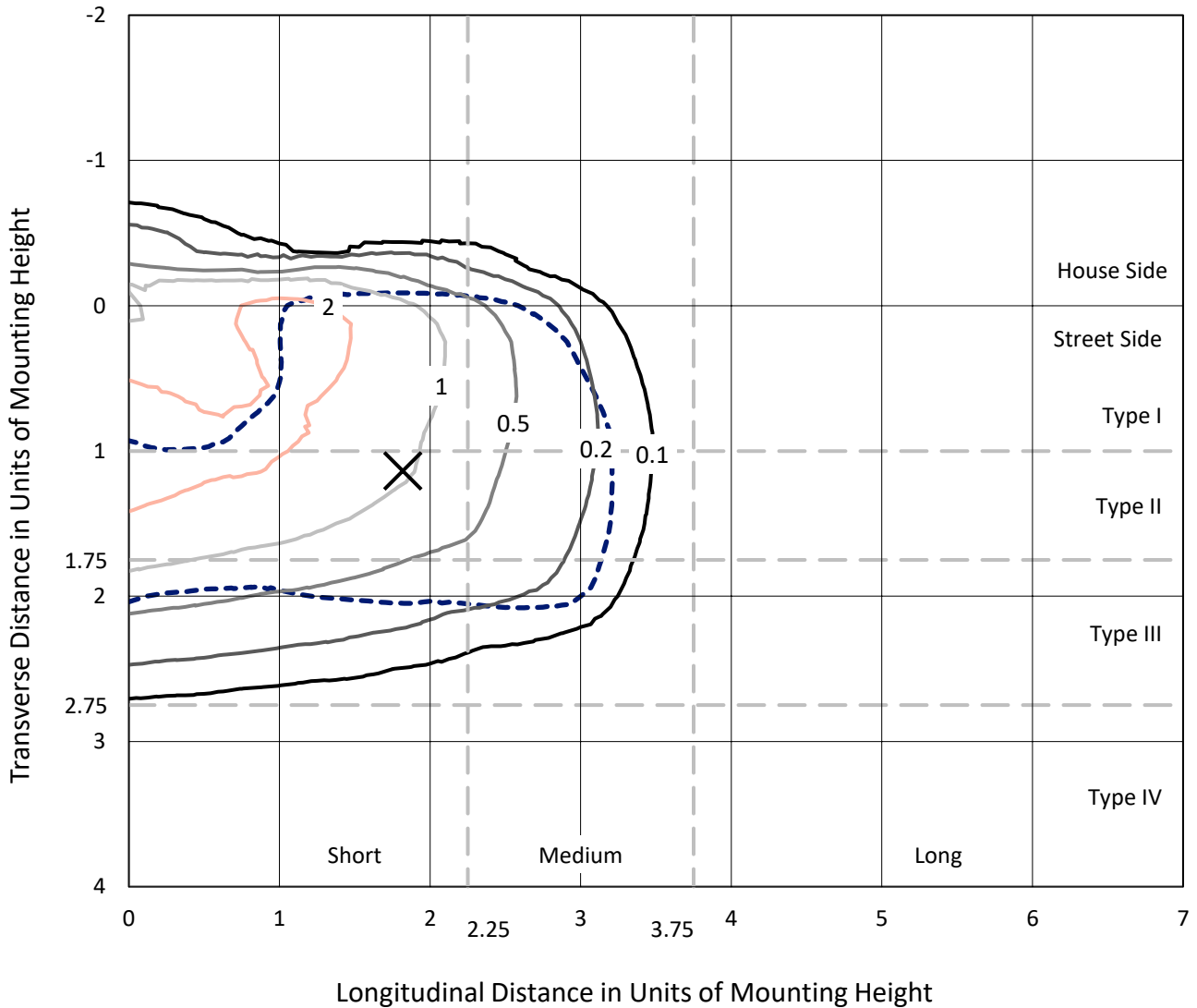
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

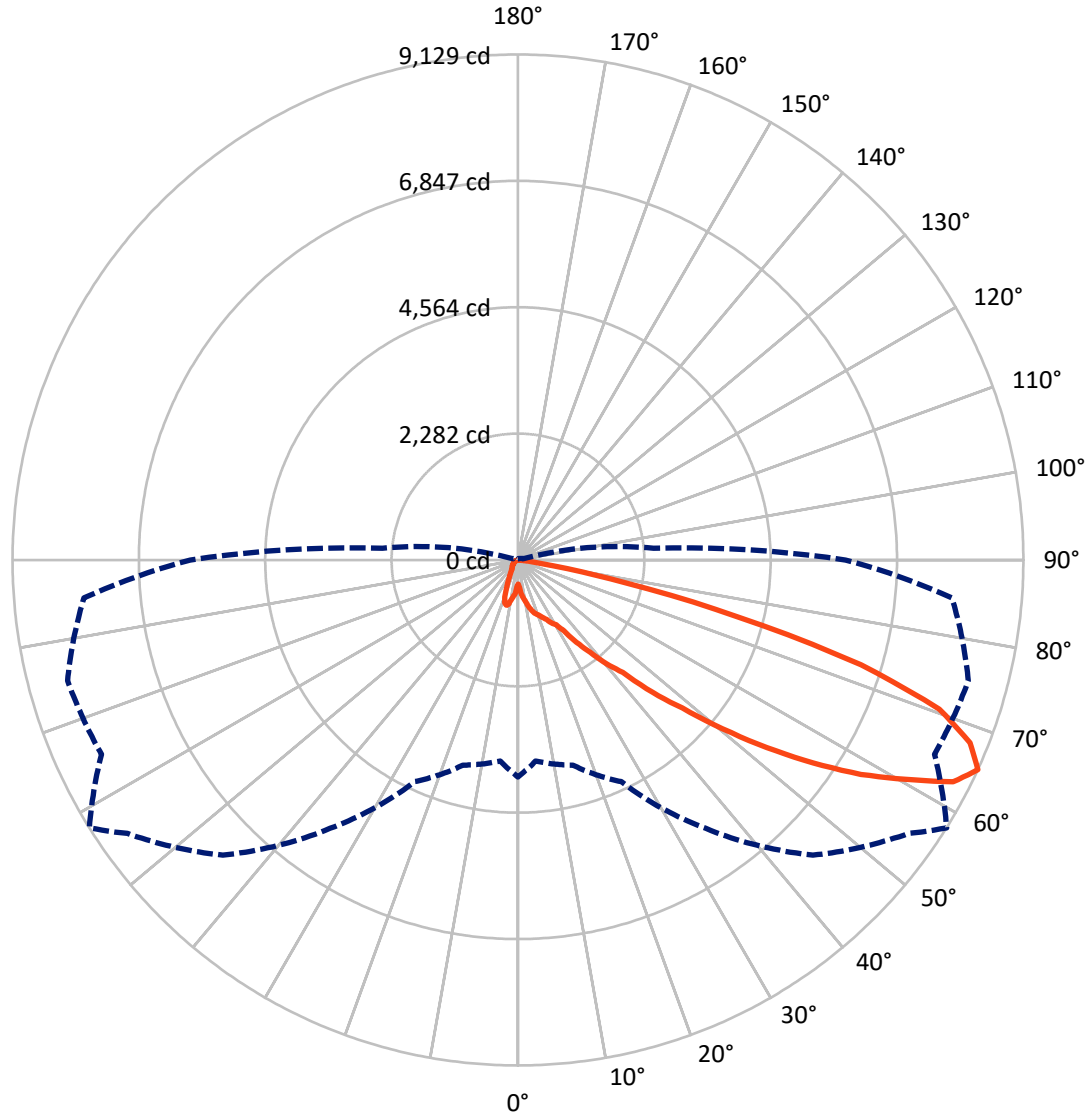
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1071.2	0.0	1071.2
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	9784.8	0.0	9784.8
	% Fixture	90.1	0.0	90.1
Total	Lumens	10856.0	0.0	10856.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	0.6
10°-20°	222.8	2.1
20°-30°	431.3	4.0
30°-40°	860.6	7.9
40°-50°	1759.4	16.2
50°-60°	3120.6	28.7
60°-70°	3290.0	30.3
70°-80°	1066.6	9.8
80°-90°	43.6	0.4
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°	10856.0	100.0
0°-180°	10856.0	100.0

Coefficient of Utilization



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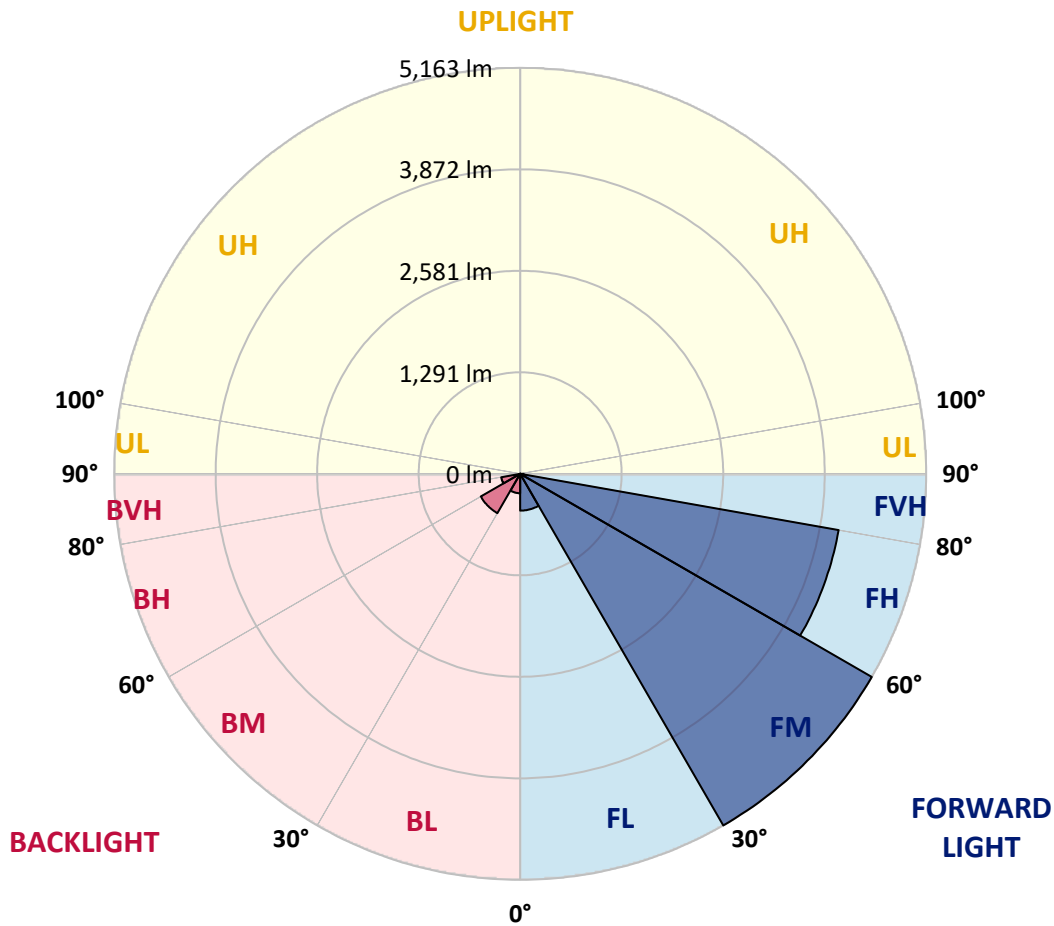
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	468.3	4.3			
FM (30°-60°)	5162.6	47.6			
FH (60°-80°)	4112.1	37.9			G2/5000
FVH (80°-90°)	41.8	0.4			G1/100
BL (0°-30°)	246.9	2.3	B1/500		
BM (30°-60°)	578.0	5.3	B1/1000		
BH (60°-80°)	244.5	2.3	B1/500		G1/500
BVH (80°-90°)	1.8	0.0			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6
2.5°	530.5	514.7	489.6	493.9	498.8	508.5	500.6	493.3	485.3	474.9	514.7
5°	640.6	614.3	611.8	606.3	602.1	601.4	611.2	608.2	612.4	632.0	652.2
7.5°	680.9	669.9	649.1	657.7	644.2	633.8	677.2	691.3	718.2	727.4	779.9
10°	676.6	660.7	669.3	673.6	682.7	720.6	748.1	763.4	786.6	836.8	826.4
12.5°	696.2	710.2	719.4	720.0	767.1	836.8	856.3	869.2	910.7	930.3	981.6
15°	761.6	784.8	770.1	776.3	791.5	876.5	922.3	950.5	1009.1	1072.7	1085.5
17.5°	855.1	869.8	839.2	817.2	859.4	905.8	989.0	1018.3	1055.6	1204.1	1231.6
20°	973.1	998.1	932.1	844.7	900.3	955.3	1045.8	1059.9	1099.6	1293.4	1336.8
22.5°	1248.7	1211.5	1110.6	974.3	957.8	982.2	1068.4	1123.4	1190.7	1343.5	1444.3
25°	1520.7	1507.9	1359.4	1207.2	1097.2	1042.1	1156.4	1187.0	1297.0	1462.7	1518.3
27.5°	1823.3	1849.0	1600.8	1508.5	1292.7	1113.0	1211.5	1287.9	1418.0	1506.1	1639.9
30°	2222.4	2181.5	1890.5	1798.2	1551.9	1308.0	1353.9	1358.8	1550.1	1649.1	1776.2
32.5°	2535.4	2561.7	2196.1	2054.3	1857.5	1608.1	1460.8	1524.4	1661.3	1882.0	2002.4
35°	2874.0	2871.5	2515.2	2324.5	2067.2	1853.2	1778.1	1824.5	1996.3	2246.3	2278.0
37.5°	3380.1	3336.7	2916.2	2636.8	2418.0	2235.3	2177.8	2116.1	2293.3	2531.7	2650.9
40°	3857.5	3707.7	3319.0	2987.7	2707.7	2633.2	2425.3	2463.2	2515.8	2830.6	3160.0
42.5°	4339.7	4246.8	3727.3	3449.8	3105.6	2928.4	2792.7	2775.0	3025.0	3397.8	3738.3
45°	4976.0	4691.8	4276.1	4032.3	3633.7	3455.9	3346.5	3411.9	3636.8	4181.4	4408.2
47.5°	5510.2	5248.6	4891.7	4521.2	4103.2	4303.0	4097.7	3994.4	4303.0	4866.0	5167.3
50°	5969.2	5677.7	5316.5	5042.0	4974.2	5166.1	4750.5	4788.4	4988.8	5650.2	5820.1
52.5°	6303.0	5996.1	5680.7	5548.1	5826.2	5922.8	5714.4	5630.6	5812.8	6318.9	6401.4
55°	6554.2	6240.0	5993.7	6176.5	6714.3	6682.5	6755.9	6469.8	6644.0	7016.3	6977.2
57.5°	6569.5	6197.2	6053.0	6347.0	7085.3	7577.4	7791.9	7305.4	7404.4	7561.5	7473.5
60°	6089.0	5718.6	5707.0	6124.5	7192.9	7809.0	8278.5	8041.3	7908.7	8025.4	7858.5
62.5°	5131.9	4872.7	4993.7	5455.2	6792.6	7681.3	8537.6	8823.1	8306.6	8332.9	8095.7
65°	3918.6	3646.6	3836.1	4417.3	5917.3	7538.3	8611.0	9128.7	8299.2	8420.3	7868.3
67.5°	2595.3	2437.6	2652.1	3292.7	4704.6	6654.4	8573.1	8807.8	8035.8	8078.6	7024.2
70°	1339.8	1301.3	1474.9	1980.4	3163.1	5112.3	8200.8	8072.5	7501.0	6959.4	5417.9
72.5°	429.1	430.9	597.8	904.6	1705.3	3112.4	6303.6	6479.6	6002.3	5090.9	3308.0
75°	190.1	187.0	250.0	379.6	710.9	1395.4	3916.1	4106.2	3737.0	2800.6	1390.5
77.5°	136.9	132.6	160.1	221.9	352.1	473.1	1836.1	1981.6	1694.3	970.6	318.4
80°	96.6	96.0	116.1	155.9	220.0	210.3	580.1	650.3	520.8	235.3	93.5
82.5°	54.4	56.2	80.7	110.0	133.9	105.1	163.2	179.7	175.4	125.3	41.0
85°	26.3	29.3	52.6	79.5	70.3	41.0	58.1	63.0	73.3	72.7	20.8
87.5°	0.0	0.0	21.4	36.1	18.9	6.1	17.7	20.2	19.6	23.2	4.9
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°	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6	434.6
2.5°	522.6	518.9	472.5	476.1	486.5	482.3	485.9	477.4	467.6	507.3	506.7
5°	660.7	633.2	618.6	605.1	607.6	580.1	595.9	603.3	602.1	624.7	630.8
7.5°	781.8	745.1	715.7	687.6	644.8	606.3	630.2	645.5	655.8	695.0	710.2
10°	838.6	808.7	797.0	742.0	711.5	687.6	658.9	638.1	646.7	636.3	646.7
12.5°	963.3	943.1	898.5	842.9	806.2	757.3	650.3	561.1	506.1	506.7	503.0
15°	1077.0	1075.8	1009.1	916.8	810.5	671.1	504.3	391.8	339.8	325.2	320.3
17.5°	1225.5	1207.2	1085.5	949.2	757.9	519.5	343.5	268.3	263.4	272.0	268.3
20°	1320.3	1293.4	1123.4	902.2	624.7	351.5	259.2	237.8	252.4	264.7	261.6
22.5°	1415.0	1374.6	1152.2	844.7	444.4	257.3	234.1	230.4	239.6	254.9	257.3
25°	1466.9	1459.0	1208.4	737.1	304.4	225.5	225.5	224.3	227.4	238.4	236.5
27.5°	1617.9	1510.3	1166.2	575.2	235.3	207.2	210.3	209.0	198.0	209.0	209.7
30°	1712.0	1662.5	1169.3	409.5	207.2	183.4	191.3	181.5	165.0	174.2	172.4
32.5°	1901.5	1778.1	1160.1	276.3	188.9	174.8	162.6	148.5	136.3	140.0	136.9
35°	2122.2	2028.1	1036.0	221.9	176.0	154.6	135.1	121.0	108.2	111.2	110.6
37.5°	2561.0	2262.2	933.3	199.9	167.5	141.8	119.2	99.6	92.9	94.7	96.6
40°	2967.5	2652.7	742.0	190.1	152.8	126.5	98.4	84.3	80.1	81.3	83.1
42.5°	3575.1	2963.2	560.5	180.3	138.1	107.0	81.9	72.7	68.5	70.9	72.1
45°	4163.1	3227.3	418.7	171.8	125.9	92.3	69.1	63.0	58.1	59.9	62.3
47.5°	4750.5	3520.7	312.3	158.3	112.5	79.5	59.3	55.0	52.0	52.6	55.6
50°	5276.1	3657.6	245.7	141.8	101.5	69.1	53.8	49.5	48.3	48.9	51.3
52.5°	5662.4	3658.8	207.2	127.1	91.1	61.1	50.7	45.8	45.2	46.5	48.9
55°	6011.4	3561.0	179.7	114.3	81.9	55.6	48.3	44.0	44.0	45.2	47.7
57.5°	6243.1	3381.3	155.9	100.9	74.0	52.6	46.5	42.2	41.6	41.0	42.8
60°	6356.2	3136.2	132.0	88.6	66.6	50.7	45.2	37.3	36.7	35.5	36.7
62.5°	6284.6	2829.4	110.6	76.4	59.3	48.3	39.7	32.4	31.2	28.7	30.6
65°	5919.1	2456.5	93.5	65.4	51.3	41.0	33.6	27.5	24.4	21.4	20.8
67.5°	5171.6	1995.7	78.2	56.2	44.0	33.6	27.5	24.4	18.9	16.5	15.9
70°	3875.8	1362.4	64.8	48.3	36.7	28.7	23.2	22.0	17.7	15.9	14.7
72.5°	2273.8	735.3	54.4	42.2	31.2	23.8	18.9	20.2	17.7	14.7	13.4
75°	908.3	244.5	43.4	33.6	25.1	17.1	15.9	16.5	15.9	13.4	11.0
77.5°	207.2	77.0	33.6	26.3	19.6	11.0	12.8	14.1	14.1	11.0	7.9
80°	64.8	30.6	19.6	16.5	14.1	6.1	9.2	9.8	6.7	3.1	0.0
82.5°	20.8	8.6	6.7	6.7	6.1	1.2	1.8	1.2	0.0	0.0	0.0
85°	7.9	5.5	4.3	4.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.1	2.4	1.8	2.4	1.2	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

(END OF REPORT)