

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: P367715

Luminaire Tested: **MSA-SA3A-740-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367715
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-SA3A-740-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: 8663 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

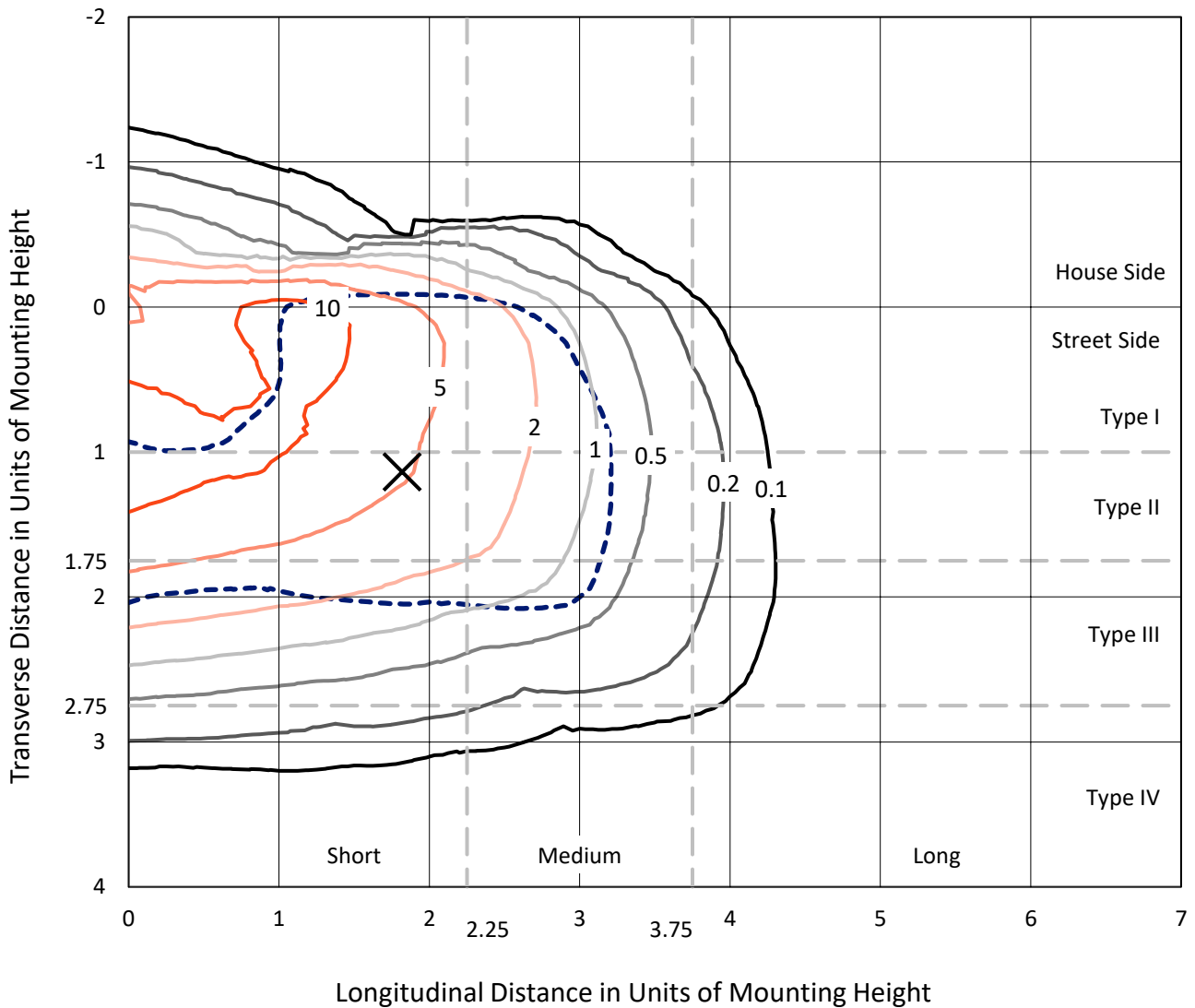
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

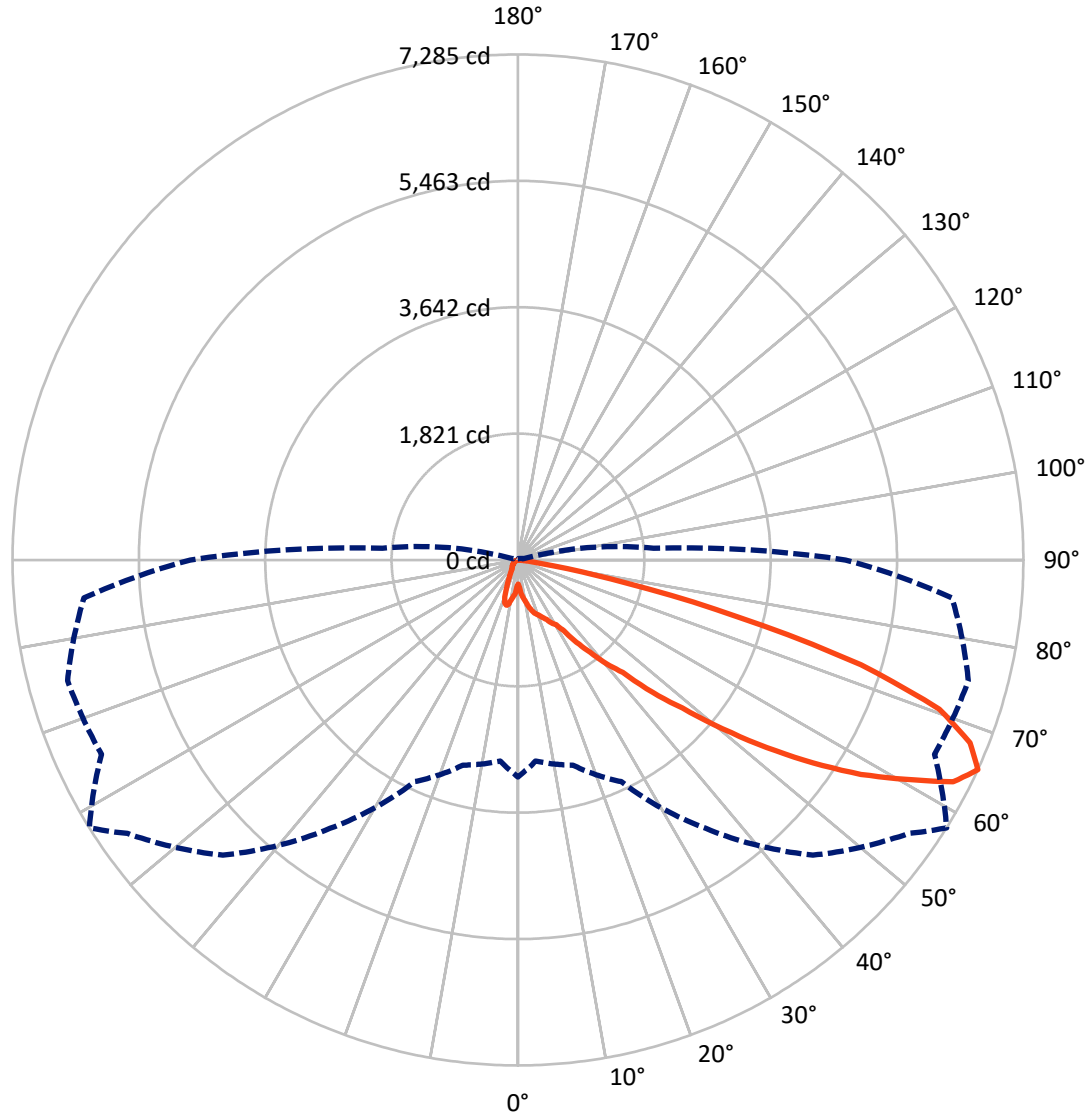
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14 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	854.8	0.0	854.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	7808.2	0.0	7808.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	8663.0	0.0	8663.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.7	0.6
10°-20°	177.8	2.1
20°-30°	344.2	4.0
30°-40°	686.7	7.9
40°-50°	1404.0	16.2
50°-60°	2490.2	28.7
60°-70°	2625.4	30.3
70°-80°	851.2	9.8
80°-90°	34.8	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°	8663.0	100.0
0°-180°	8663.0	100.0

Coefficient of Utilization



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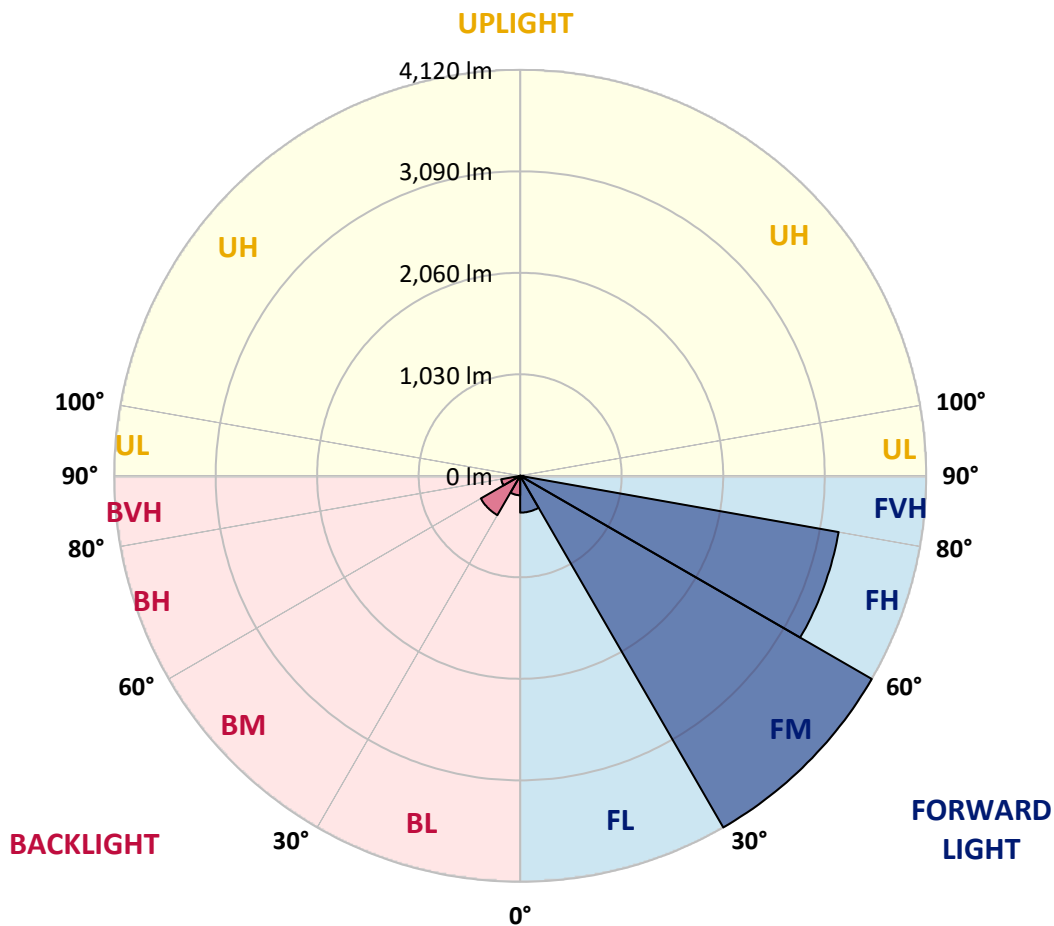
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	373.7	4.3			
FM (30°-60°)	4119.7	47.6			
FH (60°-80°)	3281.4	37.9			G2/5000
FVH (80°-90°)	33.3	0.4			G1/100
BL (0°-30°)	197.0	2.3	B1/500		
BM (30°-60°)	461.2	5.3	B1/1000		
BH (60°-80°)	195.1	2.3	B1/500		G1/500
BVH (80°-90°)	1.5	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°	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8
2.5°	423.4	410.7	390.7	394.1	398.0	405.8	399.5	393.6	387.3	379.0	410.7
5°	511.2	490.2	488.2	483.9	480.4	480.0	487.8	485.3	488.7	504.3	520.4
7.5°	543.4	534.6	518.0	524.8	514.1	505.8	540.4	551.7	573.1	580.4	622.4
10°	539.9	527.3	534.1	537.5	544.8	575.1	597.0	609.2	627.7	667.7	659.4
12.5°	555.6	566.8	574.1	574.6	612.1	667.7	683.3	693.6	726.8	742.4	783.3
15°	607.7	626.3	614.6	619.4	631.6	699.4	736.0	758.5	805.3	856.0	866.3
17.5°	682.4	694.1	669.7	652.1	685.8	722.9	789.2	812.6	842.4	960.9	982.8
20°	776.5	796.5	743.8	674.1	718.5	762.4	834.5	845.8	877.5	1032.1	1066.7
22.5°	996.5	966.7	886.2	777.5	764.3	783.8	852.6	896.5	950.1	1072.1	1152.6
25°	1213.5	1203.3	1084.8	963.3	875.5	831.6	922.8	947.2	1035.0	1167.2	1211.6
27.5°	1455.0	1475.5	1277.4	1203.8	1031.6	888.2	966.7	1027.7	1131.6	1201.8	1308.6
30°	1773.5	1740.8	1508.6	1435.0	1238.4	1043.8	1080.4	1084.3	1236.9	1316.0	1417.4
32.5°	2023.2	2044.2	1752.5	1639.3	1482.3	1283.3	1165.7	1216.5	1325.7	1501.8	1597.9
35°	2293.4	2291.5	2007.1	1854.9	1649.6	1478.9	1418.9	1455.9	1593.0	1792.5	1817.9
37.5°	2697.3	2662.7	2327.1	2104.2	1929.6	1783.7	1737.9	1688.6	1830.1	2020.3	2115.4
40°	3078.2	2958.7	2648.5	2384.1	2160.8	2101.2	1935.4	1965.6	2007.6	2258.8	2521.7
42.5°	3463.1	3388.9	2974.3	2752.9	2478.3	2336.8	2228.5	2214.4	2413.9	2711.4	2983.1
45°	3970.8	3744.0	3412.3	3217.7	2899.7	2757.8	2670.5	2722.6	2902.1	3336.7	3517.7
47.5°	4397.1	4188.3	3903.5	3607.9	3274.3	3433.8	3269.9	3187.5	3433.8	3883.0	4123.5
50°	4763.4	4530.7	4242.5	4023.5	3969.3	4122.5	3790.8	3821.1	3981.1	4508.8	4644.4
52.5°	5029.7	4784.9	4533.2	4427.3	4649.3	4726.3	4560.0	4493.2	4638.5	5042.4	5108.3
55°	5230.2	4979.5	4782.9	4928.8	5358.0	5332.6	5391.1	5162.9	5301.9	5598.9	5567.7
57.5°	5242.4	4945.3	4830.2	5064.8	5654.0	6046.7	6217.9	5829.6	5908.7	6034.0	5963.8
60°	4859.0	4563.4	4554.2	4887.3	5739.9	6231.5	6606.1	6416.9	6311.1	6404.2	6271.1
62.5°	4095.2	3888.4	3985.0	4353.2	5420.4	6129.6	6813.0	7040.7	6628.6	6649.6	6460.3
65°	3127.0	2909.9	3061.1	3525.0	4721.9	6015.5	6871.5	7284.6	6622.7	6719.3	6278.9
67.5°	2071.0	1945.2	2116.4	2627.5	3754.2	5310.2	6841.2	7028.5	6412.5	6446.6	5605.3
70°	1069.2	1038.4	1177.0	1580.3	2524.1	4079.6	6544.2	6441.8	5985.7	5553.6	4323.5
72.5°	342.4	343.9	477.0	721.9	1360.8	2483.6	5030.2	5170.7	4789.7	4062.5	2639.7
75°	151.7	149.3	199.5	302.9	567.3	1113.5	3125.0	3276.7	2982.1	2234.9	1109.6
77.5°	109.3	105.8	127.8	177.1	280.9	377.5	1465.2	1581.3	1352.1	774.6	254.1
80°	77.1	76.6	92.7	124.4	175.6	167.8	462.9	519.0	415.6	187.8	74.6
82.5°	43.4	44.9	64.4	87.8	106.8	83.9	130.2	143.4	140.0	100.0	32.7
85°	21.0	23.4	41.9	63.4	56.1	32.7	46.3	50.2	58.5	58.0	16.6
87.5°	0.0	0.0	17.1	28.8	15.1	4.9	14.1	16.1	15.6	18.5	3.9
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°	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8	346.8
2.5°	417.0	414.1	377.0	380.0	388.3	384.8	387.8	380.9	373.1	404.8	404.3
5°	527.3	505.3	493.6	482.9	484.8	462.9	475.6	481.4	480.4	498.5	503.4
7.5°	623.8	594.6	571.2	548.7	514.6	483.9	502.9	515.1	523.4	554.6	566.8
10°	669.2	645.3	636.0	592.1	567.7	548.7	525.8	509.2	516.0	507.8	516.0
12.5°	768.7	752.6	717.0	672.6	643.3	604.3	519.0	447.8	403.9	404.3	401.4
15°	859.4	858.4	805.3	731.6	646.8	535.6	402.4	312.7	271.2	259.5	255.6
17.5°	977.9	963.3	866.3	757.5	604.8	414.6	274.1	214.1	210.2	217.1	214.1
20°	1053.5	1032.1	896.5	719.9	498.5	280.5	206.8	189.7	201.4	211.2	208.8
22.5°	1129.2	1097.0	919.4	674.1	354.6	205.3	186.8	183.9	191.2	203.4	205.3
25°	1170.6	1164.3	964.3	588.2	242.9	180.0	180.0	179.0	181.4	190.2	188.8
27.5°	1291.1	1205.2	930.6	459.0	187.8	165.3	167.8	166.8	158.0	166.8	167.3
30°	1366.2	1326.7	933.1	326.8	165.3	146.3	152.7	144.9	131.7	139.0	137.5
32.5°	1517.4	1418.9	925.8	220.5	150.7	139.5	129.7	118.5	108.8	111.7	109.3
35°	1693.5	1618.4	826.7	177.1	140.5	123.4	107.8	96.6	86.3	88.8	88.3
37.5°	2043.7	1805.2	744.8	159.5	133.6	113.2	95.1	79.5	74.1	75.6	77.1
40°	2368.0	2116.9	592.1	151.7	121.9	101.0	78.5	67.3	63.9	64.9	66.3
42.5°	2852.9	2364.6	447.3	143.9	110.2	85.4	65.4	58.0	54.6	56.6	57.6
45°	3322.1	2575.3	334.1	137.1	100.5	73.7	55.1	50.2	46.3	47.8	49.8
47.5°	3790.8	2809.5	249.2	126.3	89.7	63.4	47.3	43.9	41.5	41.9	44.4
50°	4210.3	2918.7	196.1	113.2	81.0	55.1	42.9	39.5	38.5	39.0	41.0
52.5°	4518.6	2919.7	165.3	101.5	72.7	48.8	40.5	36.6	36.1	37.1	39.0
55°	4797.1	2841.7	143.4	91.2	65.4	44.4	38.5	35.1	35.1	36.1	38.0
57.5°	4981.9	2698.3	124.4	80.5	59.0	41.9	37.1	33.7	33.2	32.7	34.1
60°	5072.2	2502.7	105.4	70.7	53.2	40.5	36.1	29.8	29.3	28.3	29.3
62.5°	5015.1	2257.8	88.3	61.0	47.3	38.5	31.7	25.9	24.9	22.9	24.4
65°	4723.4	1960.3	74.6	52.2	41.0	32.7	26.8	21.9	19.5	17.1	16.6
67.5°	4126.9	1592.5	62.4	44.9	35.1	26.8	21.9	19.5	15.1	13.2	12.7
70°	3092.9	1087.2	51.7	38.5	29.3	22.9	18.5	17.6	14.1	12.7	11.7
72.5°	1814.4	586.8	43.4	33.7	24.9	19.0	15.1	16.1	14.1	11.7	10.7
75°	724.8	195.1	34.6	26.8	20.0	13.7	12.7	13.2	12.7	10.7	8.8
77.5°	165.3	61.5	26.8	21.0	15.6	8.8	10.2	11.2	11.2	8.8	6.3
80°	51.7	24.4	15.6	13.2	11.2	4.9	7.3	7.8	5.4	2.4	0.0
82.5°	16.6	6.8	5.4	5.4	4.9	1.0	1.5	1.0	0.0	0.0	0.0
85°	6.3	4.4	3.4	3.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.4	2.0	1.5	2.0	1.0	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

(END OF REPORT)