

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: P368287

Luminaire Tested: **MSA-SA4A-760-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368287
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-SA4A-760-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 11449 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

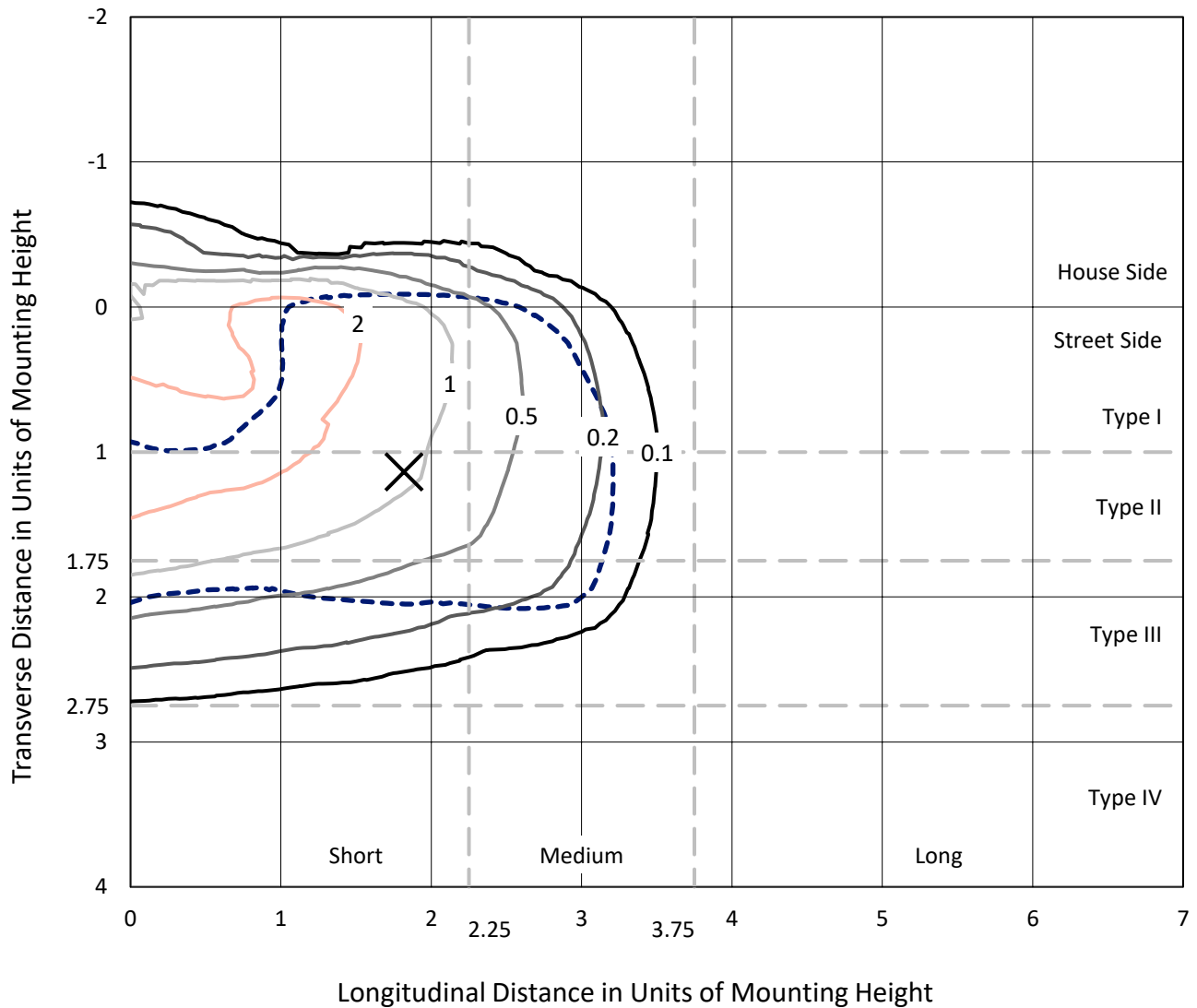
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

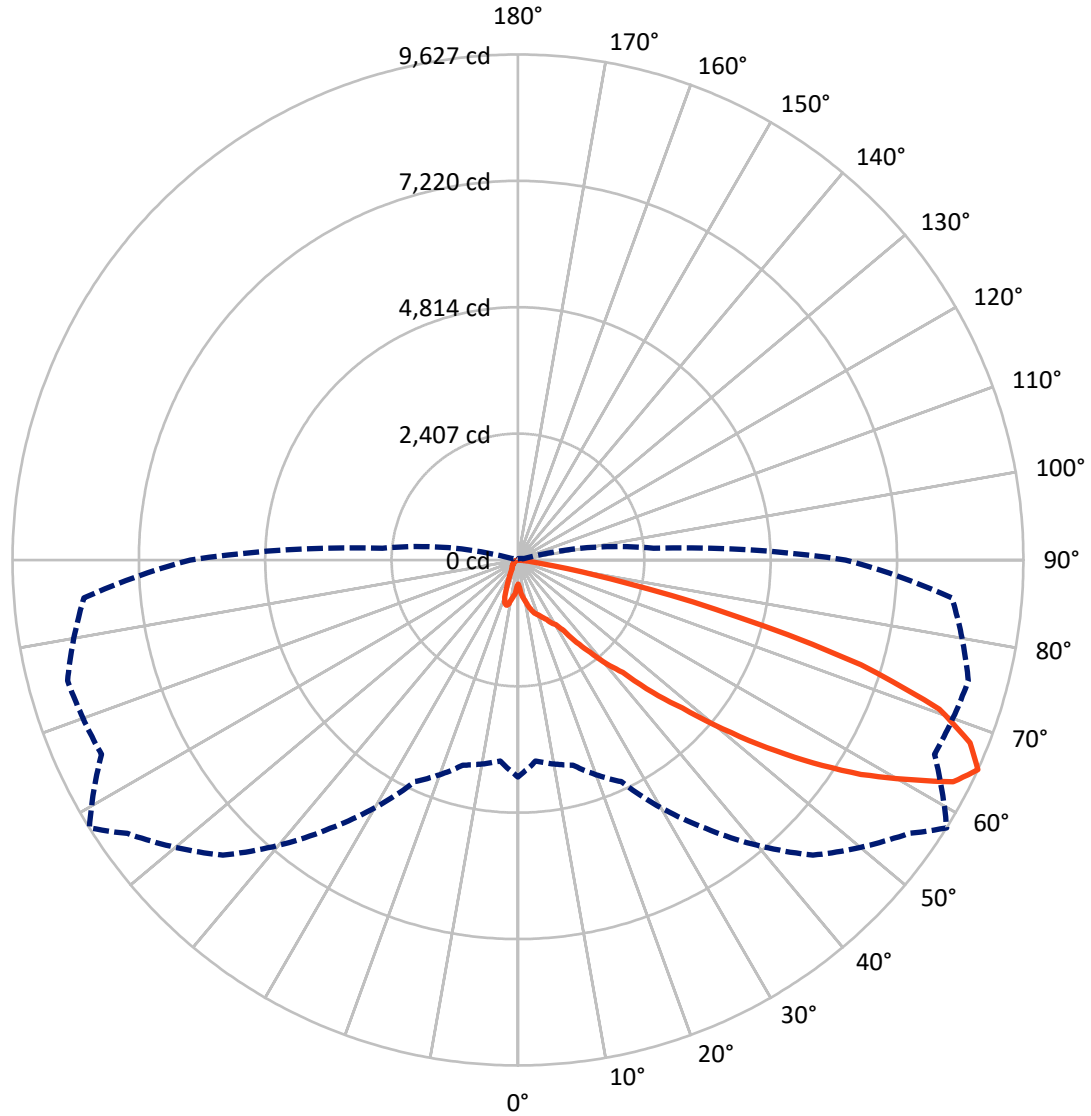
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	1129.7	0.0	1129.7
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	10319.3	0.0	10319.3
	% Fixture	90.1	0.0	90.1
Total	Lumens	11449.0	0.0	11449.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.4	0.6
10°-20°	235.0	2.1
20°-30°	454.9	4.0
30°-40°	907.6	7.9
40°-50°	1855.5	16.2
50°-60°	3291.1	28.7
60°-70°	3469.7	30.3
70°-80°	1124.9	9.8
80°-90°	46.0	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°	11449.0	100.0
0°-180°	11449.0	100.0

Coefficient of Utilization



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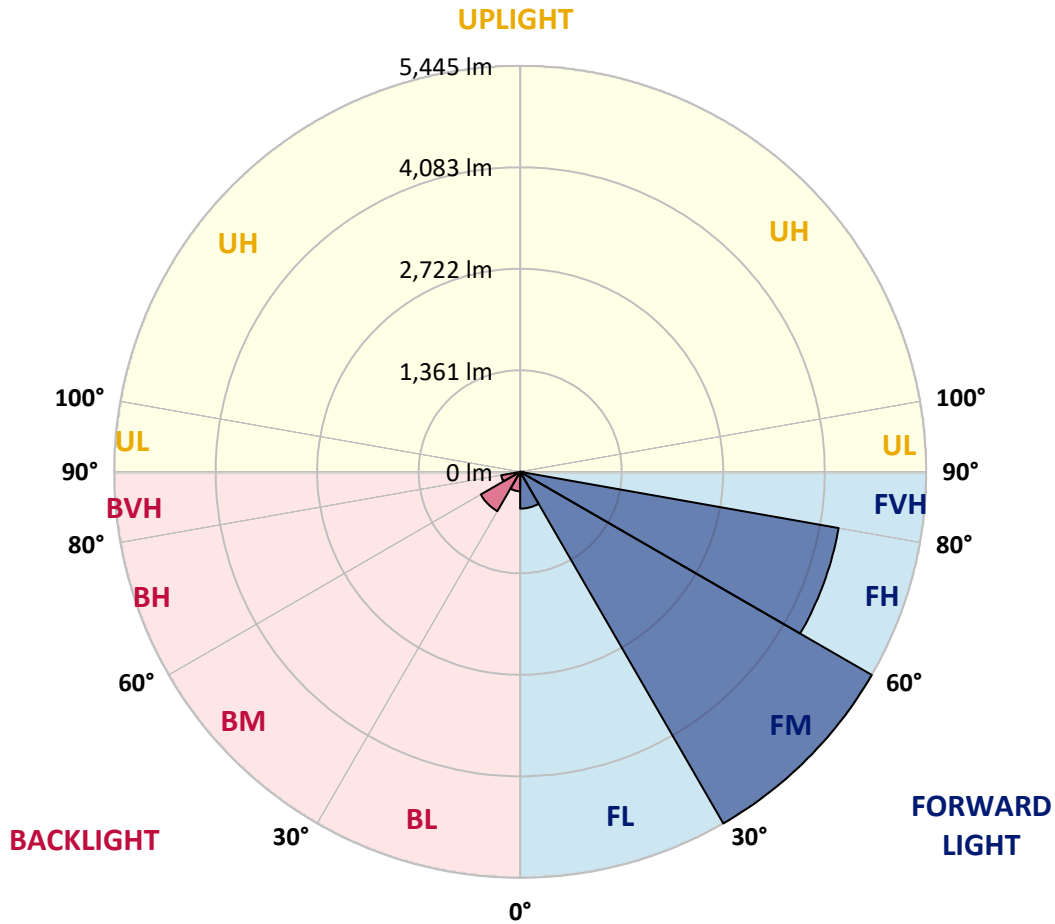
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	493.9	4.3			
FM (30°-60°)	5444.6	47.6			
FH (60°-80°)	4336.7	37.9			G2/5000
FVH (80°-90°)	44.0	0.4			G1/100
BL (0°-30°)	260.4	2.3	B1/500		
BM (30°-60°)	609.5	5.3	B1/1000		
BH (60°-80°)	257.8	2.3	B1/500		G1/500
BVH (80°-90°)	1.9	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°	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3
2.5°	559.5	542.8	516.3	520.8	526.0	536.3	527.9	520.2	511.8	500.9	542.8
5°	675.6	647.8	645.3	639.5	634.9	634.3	644.6	641.4	645.9	666.5	687.8
7.5°	718.1	706.5	684.6	693.6	679.4	668.5	714.2	729.1	757.4	767.1	822.5
10°	713.6	696.8	705.9	710.4	720.0	760.0	789.0	805.1	829.6	882.5	871.5
12.5°	734.2	749.0	758.7	759.4	809.0	882.5	903.1	916.6	960.5	981.1	1035.3
15°	803.2	827.7	812.2	818.7	834.8	924.4	972.7	1002.4	1064.3	1131.3	1144.8
17.5°	901.8	917.3	885.1	861.9	906.3	955.3	1043.0	1073.9	1113.2	1269.9	1298.9
20°	1026.2	1052.7	983.0	890.9	949.5	1007.5	1102.9	1117.8	1159.7	1364.0	1409.8
22.5°	1316.9	1277.6	1171.3	1027.5	1010.1	1035.9	1126.8	1184.8	1255.7	1416.9	1523.2
25°	1603.8	1590.3	1433.6	1273.1	1157.1	1099.1	1219.6	1251.8	1367.9	1542.6	1601.2
27.5°	1922.9	1950.0	1688.2	1590.9	1363.4	1173.8	1277.6	1358.2	1495.5	1588.3	1729.5
30°	2343.8	2300.6	1993.8	1896.5	1636.7	1379.5	1427.8	1433.0	1634.7	1739.2	1873.3
32.5°	2673.9	2701.6	2316.1	2166.6	1959.0	1696.0	1540.6	1607.7	1752.1	1984.8	2111.8
35°	3031.0	3028.4	2652.6	2451.5	2180.1	1954.5	1875.2	1924.2	2105.3	2369.0	2402.5
37.5°	3564.7	3519.0	3075.5	2780.9	2550.1	2357.4	2296.8	2231.7	2418.6	2670.0	2795.7
40°	4068.2	3910.2	3500.3	3150.9	2855.6	2777.0	2557.8	2597.8	2653.2	2985.2	3332.7
42.5°	4576.8	4478.8	3930.9	3638.2	3275.3	3088.4	2945.2	2926.6	3190.2	3583.4	3942.5
45°	5247.8	4948.1	4509.7	4252.5	3832.2	3644.7	3529.3	3598.2	3835.5	4409.8	4649.0
47.5°	5811.2	5535.3	5158.9	4768.2	4327.3	4538.1	4321.5	4212.6	4538.1	5131.8	5449.6
50°	6295.3	5987.8	5606.9	5317.4	5245.9	5448.3	5009.9	5049.9	5261.3	5958.8	6138.0
52.5°	6647.3	6323.7	5991.1	5851.2	6144.5	6246.3	6026.5	5938.2	6130.3	6664.0	6751.1
55°	6912.2	6580.9	6321.1	6513.8	7081.1	7047.6	7124.9	6823.2	7007.0	7399.5	7358.3
57.5°	6928.3	6535.8	6383.6	6693.7	7472.4	7991.3	8217.6	7704.4	7808.9	7974.5	7881.7
60°	6421.7	6031.0	6018.8	6459.0	7585.8	8235.6	8730.7	8480.6	8340.7	8463.8	8287.8
62.5°	5412.2	5138.9	5266.5	5753.2	7163.6	8100.9	9004.0	9305.0	8760.3	8788.0	8537.9
65°	4132.6	3845.8	4045.6	4658.6	6240.5	7950.0	9081.3	9627.3	8752.6	8880.2	8298.1
67.5°	2737.0	2570.7	2797.0	3472.5	4961.6	7017.9	9041.4	9288.9	8474.8	8519.9	7407.9
70°	1413.0	1372.4	1555.5	2088.6	3335.9	5391.6	8648.8	8513.4	7910.7	7339.6	5713.9
72.5°	452.5	454.5	630.4	954.0	1798.5	3282.4	6647.9	6833.6	6330.1	5369.0	3488.7
75°	200.5	197.3	263.6	400.3	749.7	1471.7	4130.0	4330.5	3941.2	2953.6	1466.5
77.5°	144.4	139.9	168.9	234.0	371.3	498.9	1936.4	2089.8	1786.9	1023.6	335.8
80°	101.8	101.2	122.5	164.4	232.1	221.7	611.7	685.9	549.2	248.2	98.6
82.5°	57.4	59.3	85.1	116.0	141.2	110.9	172.1	189.5	185.0	132.1	43.2
85°	27.7	30.9	55.4	83.8	74.1	43.2	61.2	66.4	77.4	76.7	21.9
87.5°	0.0	0.0	22.6	38.0	20.0	6.4	18.7	21.3	20.6	24.5	5.2
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°	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3	458.3
2.5°	551.1	547.3	498.3	502.2	513.1	508.6	512.5	503.4	493.1	535.0	534.4
5°	696.8	667.8	652.4	638.2	640.7	611.7	628.5	636.2	634.9	658.8	665.2
7.5°	824.5	785.8	754.8	725.2	680.1	639.5	664.6	680.7	691.7	732.9	749.0
10°	884.4	852.8	840.6	782.6	750.3	725.2	694.9	673.0	682.0	671.0	682.0
12.5°	1015.9	994.6	947.6	888.9	850.2	798.7	685.9	591.8	533.7	534.4	530.5
15°	1135.8	1134.5	1064.3	966.9	854.8	707.8	531.8	413.2	358.4	342.9	337.8
17.5°	1292.5	1273.1	1144.8	1001.1	799.3	547.9	362.3	283.0	277.8	286.9	283.0
20°	1392.4	1364.0	1184.8	951.5	658.8	370.7	273.3	250.8	266.2	279.1	275.9
22.5°	1492.3	1449.7	1215.1	890.9	468.6	271.4	246.9	243.0	252.7	268.8	271.4
25°	1547.1	1538.7	1274.4	777.4	321.0	237.9	237.9	236.6	239.8	251.4	249.5
27.5°	1706.3	1592.8	1229.9	606.6	248.2	218.5	221.7	220.5	208.9	220.5	221.1
30°	1805.6	1753.4	1233.1	431.9	218.5	193.4	201.8	191.5	174.0	183.7	181.8
32.5°	2005.4	1875.2	1223.5	291.4	199.2	184.4	171.5	156.6	143.7	147.6	144.4
35°	2238.1	2138.8	1092.6	234.0	185.6	163.1	142.5	127.6	114.1	117.3	116.7
37.5°	2700.9	2385.7	984.3	210.8	176.6	149.6	125.7	105.1	98.0	99.9	101.8
40°	3129.6	2797.6	782.6	200.5	161.2	133.4	103.8	89.0	84.4	85.7	87.7
42.5°	3770.4	3125.1	591.1	190.2	145.7	112.8	86.4	76.7	72.2	74.8	76.1
45°	4390.5	3403.6	441.6	181.1	132.8	97.3	72.8	66.4	61.2	63.2	65.8
47.5°	5009.9	3713.0	329.4	167.0	118.6	83.8	62.5	58.0	54.8	55.4	58.7
50°	5564.3	3857.4	259.1	149.6	107.0	72.8	56.7	52.2	50.9	51.6	54.1
52.5°	5971.7	3858.7	218.5	134.1	96.0	64.5	53.5	48.3	47.7	49.0	51.6
55°	6339.8	3755.5	189.5	120.5	86.4	58.7	50.9	46.4	46.4	47.7	50.3
57.5°	6584.1	3566.0	164.4	106.4	78.0	55.4	49.0	44.5	43.8	43.2	45.1
60°	6703.4	3307.5	139.2	93.5	70.3	53.5	47.7	39.3	38.7	37.4	38.7
62.5°	6627.9	2983.9	116.7	80.6	62.5	50.9	41.9	34.2	32.9	30.3	32.2
65°	6242.5	2590.7	98.6	69.0	54.1	43.2	35.5	29.0	25.8	22.6	21.9
67.5°	5454.1	2104.7	82.5	59.3	46.4	35.5	29.0	25.8	20.0	17.4	16.8
70°	4087.5	1436.8	68.3	50.9	38.7	30.3	24.5	23.2	18.7	16.8	15.5
72.5°	2398.0	775.5	57.4	44.5	32.9	25.1	20.0	21.3	18.7	15.5	14.2
75°	957.9	257.8	45.8	35.5	26.4	18.0	16.8	17.4	16.8	14.2	11.6
77.5°	218.5	81.2	35.5	27.7	20.6	11.6	13.5	14.8	14.8	11.6	8.4
80°	68.3	32.2	20.6	17.4	14.8	6.4	9.7	10.3	7.1	3.2	0.0
82.5°	21.9	9.0	7.1	7.1	6.4	1.3	1.9	1.3	0.0	0.0	0.0
85°	8.4	5.8	4.5	4.5	2.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.2	2.6	1.9	2.6	1.3	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)