

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: P368203

Luminaire Tested: **MSA-SA4A-727-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368203  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-727-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9775 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

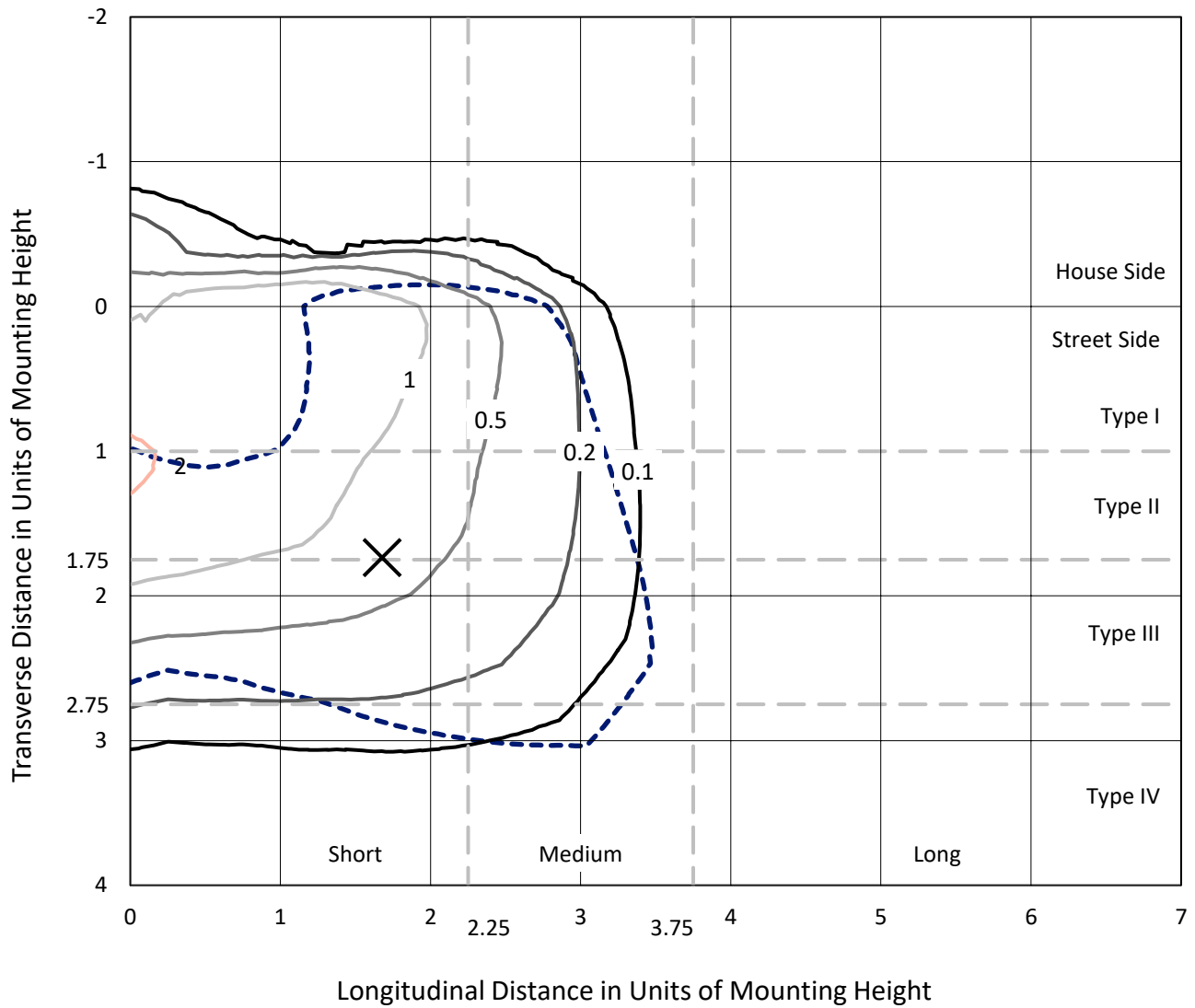
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

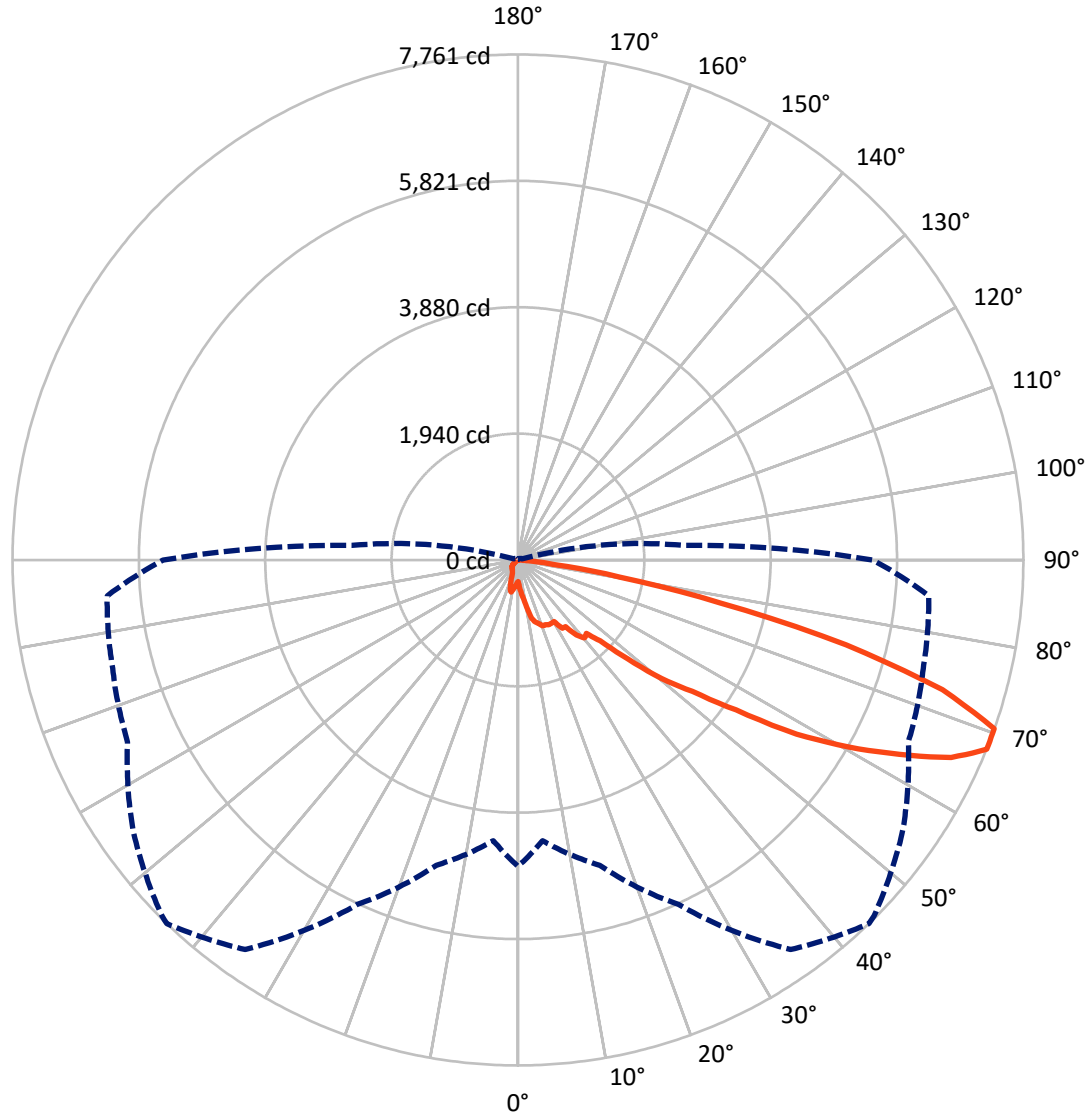
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	993.0	0.0	993.0
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	8782.0	0.0	8782.0
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	9775.0	0.0	9775.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.8	0.5
10°-20°	204.4	2.1
20°-30°	362.0	3.7
30°-40°	588.4	6.0
40°-50°	1177.5	12.0
50°-60°	2415.7	24.7
60°-70°	3318.5	33.9
70°-80°	1559.7	16.0
80°-90°	99.9	1.0
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°	9775.0	100.0
0°-180°	9775.0	100.0

**Coefficient of Utilization**

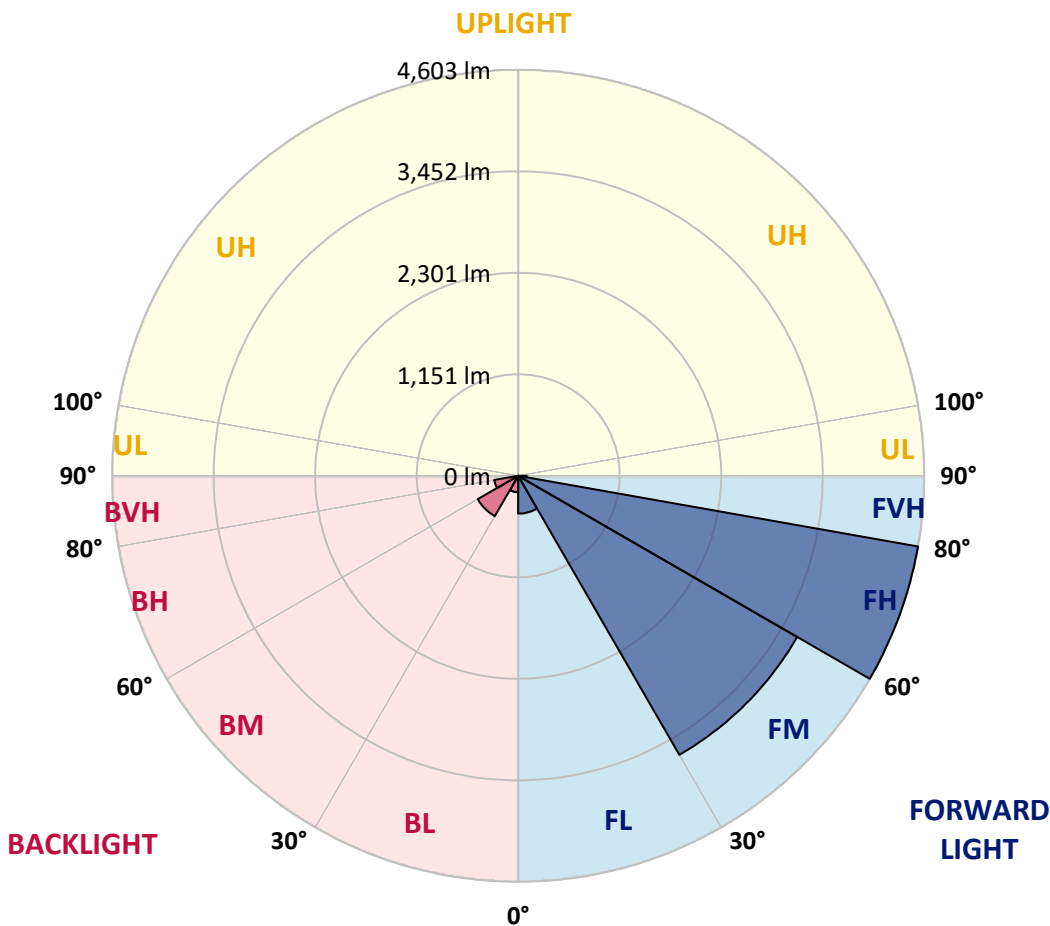


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	428.8	4.4			
FM (30°-60°)	3652.8	37.4			
FH (60°-80°)	4602.7	47.1			G2/5000
FVH (80°-90°)	97.9	1.0			G1/100
BL (0°-30°)	186.4	1.9	B1/500		
BM (30°-60°)	528.9	5.4	B1/1000		
BH (60°-80°)	275.5	2.8	B1/500		G1/500
BVH (80°-90°)	2.0	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3
2.5°	418.8	405.3	385.9	390.2	392.4	398.3	398.9	391.3	369.8	363.8	390.2
5°	587.0	554.1	548.2	535.8	511.0	497.5	494.3	507.8	490.5	485.1	492.1
7.5°	749.8	721.7	691.0	674.3	622.6	590.8	589.1	594.5	597.8	578.9	588.6
10°	858.1	827.4	820.9	781.6	736.8	729.3	726.1	705.6	688.9	674.8	628.0
12.5°	956.2	955.7	967.5	910.9	903.9	911.5	908.8	835.5	818.8	760.0	746.5
15°	1086.7	1119.0	1067.8	1020.4	960.0	985.9	978.9	932.0	920.6	880.8	823.1
17.5°	1222.0	1230.6	1144.9	1072.1	1056.5	1022.5	1029.5	1012.8	955.7	987.5	930.3
20°	1225.2	1244.0	1152.4	1032.2	1080.2	1078.6	1079.1	1062.9	987.5	1061.9	1009.6
22.5°	1270.5	1224.1	1138.9	1062.4	1071.0	1079.1	1087.7	1067.8	1051.6	1069.9	1079.6
25°	1252.1	1233.8	1151.9	1101.2	1093.1	1099.6	1101.7	1127.1	1116.8	1161.0	1136.8
27.5°	1299.6	1273.2	1126.5	1135.7	1107.1	1099.6	1086.7	1171.3	1201.5	1166.4	1231.1
30°	1381.0	1377.2	1170.2	1183.7	1161.6	1095.3	1129.8	1240.3	1278.0	1256.4	1335.1
32.5°	1508.2	1521.1	1298.0	1210.6	1222.0	1251.6	1238.7	1240.3	1335.7	1383.7	1446.2
35°	1688.7	1681.7	1422.5	1313.0	1253.8	1258.6	1276.9	1364.8	1488.2	1485.0	1551.3
37.5°	2043.4	1966.9	1642.9	1417.6	1435.4	1459.7	1446.2	1564.2	1576.1	1580.4	1738.9
40°	2566.3	2464.4	1990.6	1638.1	1466.7	1573.9	1567.5	1596.6	1675.8	1705.4	1936.7
42.5°	3255.1	3118.2	2602.4	2043.4	1617.6	1543.7	1583.6	1638.6	1904.9	1989.5	2242.8
45°	4016.2	3739.2	3212.5	2621.2	1996.0	1766.9	1797.1	1899.5	2268.7	2408.9	2688.6
47.5°	4509.4	4265.8	3816.8	3133.3	2390.5	2270.3	2273.0	2295.1	2696.2	2956.0	3331.1
50°	4937.9	4678.7	4262.0	3668.5	3088.6	2861.1	2809.4	2707.5	3240.6	3595.8	4011.9
52.5°	5542.7	5239.8	4707.2	4296.5	3884.7	3348.9	3330.6	3365.1	3882.5	4256.1	4709.9
55°	6088.2	5720.0	5211.7	4953.0	4792.4	4065.8	4081.4	4139.1	4706.7	4904.5	5330.9
57.5°	6329.1	5930.3	5668.8	5552.4	5466.7	5045.2	4992.4	4957.9	5356.7	5432.2	5981.5
60°	6487.1	6107.6	5989.0	6016.0	6275.8	5828.4	5780.4	5579.9	5894.7	5956.7	6564.7
62.5°	6387.3	6041.3	6066.6	6291.4	6868.1	6573.8	6435.3	6100.0	6334.5	6384.6	6983.5
65°	5759.4	5398.8	5724.4	6268.2	7319.8	7312.8	7248.7	6580.3	6578.2	6642.3	7015.8
67.5°	4704.5	4326.1	4852.8	5833.8	7301.0	7760.8	7730.6	7217.4	6613.2	6441.8	6331.3
70°	3270.8	2942.5	3539.7	4817.7	6650.4	7757.5	7709.0	7645.4	6336.1	5544.9	4908.8
72.5°	1699.5	1518.9	2075.2	3319.8	5301.2	6815.9	6975.9	6871.4	5410.1	4028.6	2890.7
75°	577.3	518.0	856.0	1762.0	3524.1	5204.7	5392.3	5286.1	3674.5	2161.5	1143.3
77.5°	223.7	208.1	306.7	715.3	1768.0	3171.6	3375.3	3267.0	1970.6	791.8	269.0
80°	127.2	122.9	169.3	322.3	779.4	1577.7	1721.1	1561.0	710.4	266.8	70.1
82.5°	53.9	55.5	94.3	174.1	391.9	556.8	620.9	566.5	297.5	182.7	25.9
85°	11.9	14.6	44.7	97.0	164.4	159.0	166.6	184.9	182.7	134.2	11.3
87.5°	0.0	0.0	14.0	26.4	39.3	25.9	20.5	36.1	56.1	53.9	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°	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3	329.3
2.5°	395.1	389.7	355.8	353.6	355.8	349.8	349.3	336.9	338.0	366.0	368.1
5°	492.1	465.2	436.1	426.9	418.3	398.9	409.7	409.7	409.7	427.4	432.8
7.5°	580.0	543.9	502.9	468.4	435.0	410.7	427.4	439.3	446.3	469.5	480.3
10°	619.9	584.3	547.6	498.6	472.7	463.6	444.1	433.9	446.3	441.5	447.4
12.5°	705.0	672.7	609.6	559.0	539.6	508.3	451.2	411.3	384.9	380.5	379.5
15°	788.0	768.1	683.5	615.6	548.2	476.0	378.4	325.6	297.5	292.7	293.2
17.5°	893.2	864.6	740.1	642.5	528.2	398.3	292.1	246.9	244.7	256.6	257.6
20°	963.2	916.3	768.6	620.4	462.5	301.3	228.5	217.8	235.0	256.6	254.4
22.5°	1030.1	979.4	806.4	601.0	358.4	228.5	210.2	211.3	225.8	249.0	255.0
25°	1074.3	1055.9	852.7	555.7	273.3	197.8	201.1	209.1	221.5	243.6	243.6
27.5°	1207.4	1121.7	847.3	467.9	210.2	184.3	191.9	202.1	208.6	235.0	237.7
30°	1288.2	1260.2	875.4	378.4	184.3	167.1	181.6	190.8	195.1	225.3	226.4
32.5°	1387.4	1325.4	909.3	279.2	171.4	166.0	162.8	169.8	182.2	208.6	210.2
35°	1508.2	1489.8	860.8	219.4	167.1	155.2	148.8	152.5	160.6	178.4	182.2
37.5°	1754.5	1645.6	831.7	188.1	167.1	151.5	144.5	134.8	135.8	148.2	155.2
40°	1962.0	1928.6	750.3	182.7	159.5	146.1	128.8	117.0	108.9	112.7	115.3
42.5°	2343.1	2188.4	645.2	180.0	152.5	132.1	109.4	97.0	84.6	85.7	90.0
45°	2805.6	2471.9	551.4	177.3	147.7	118.0	92.2	77.6	64.7	65.2	69.5
47.5°	3423.3	2885.4	437.7	169.3	139.1	105.1	74.4	59.3	51.7	53.4	57.1
50°	4125.1	3248.1	346.0	156.9	128.8	92.7	60.4	48.0	45.3	46.9	51.2
52.5°	4752.0	3515.5	285.7	145.5	114.3	75.5	50.7	42.6	41.5	42.6	45.8
55°	5309.3	3670.7	238.8	132.6	98.1	60.9	45.8	39.3	38.8	38.3	40.4
57.5°	5832.2	3715.4	186.5	112.1	79.8	52.8	42.6	36.7	35.6	34.0	35.6
60°	6213.2	3638.9	136.9	90.0	65.2	48.0	39.9	32.9	31.3	28.6	29.6
62.5°	6397.0	3429.2	103.5	72.2	55.5	43.7	35.6	28.6	26.4	23.2	23.7
65°	6222.4	3083.7	81.4	60.9	47.4	36.7	30.2	24.3	21.6	18.3	18.3
67.5°	5448.9	2558.2	69.0	52.8	39.9	31.3	24.8	22.1	17.8	15.1	14.6
70°	3999.5	1840.2	59.3	46.4	34.5	27.0	21.0	19.9	17.2	14.6	13.5
72.5°	2257.4	1041.4	50.7	41.0	29.1	22.6	17.8	18.3	16.7	13.5	12.4
75°	861.3	350.9	42.0	34.0	23.7	17.2	15.1	15.1	15.1	11.3	9.7
77.5°	213.5	89.5	33.4	27.5	18.9	11.3	12.4	12.9	12.9	9.7	7.0
80°	58.8	30.2	19.9	19.9	13.5	6.5	8.6	8.6	7.0	3.2	0.0
82.5°	21.6	11.3	7.0	8.6	5.9	2.2	3.2	2.2	1.6	0.0	0.0
85°	9.2	5.9	4.3	4.9	2.7	0.0	0.5	1.1	0.0	0.0	0.0
87.5°	3.8	2.7	2.2	2.2	1.1	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)