

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: P596781

Luminaire Tested: **MSA-SA4B-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-827-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: 10768 lumens
Efficiency: N/A
Efficacy: 63.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

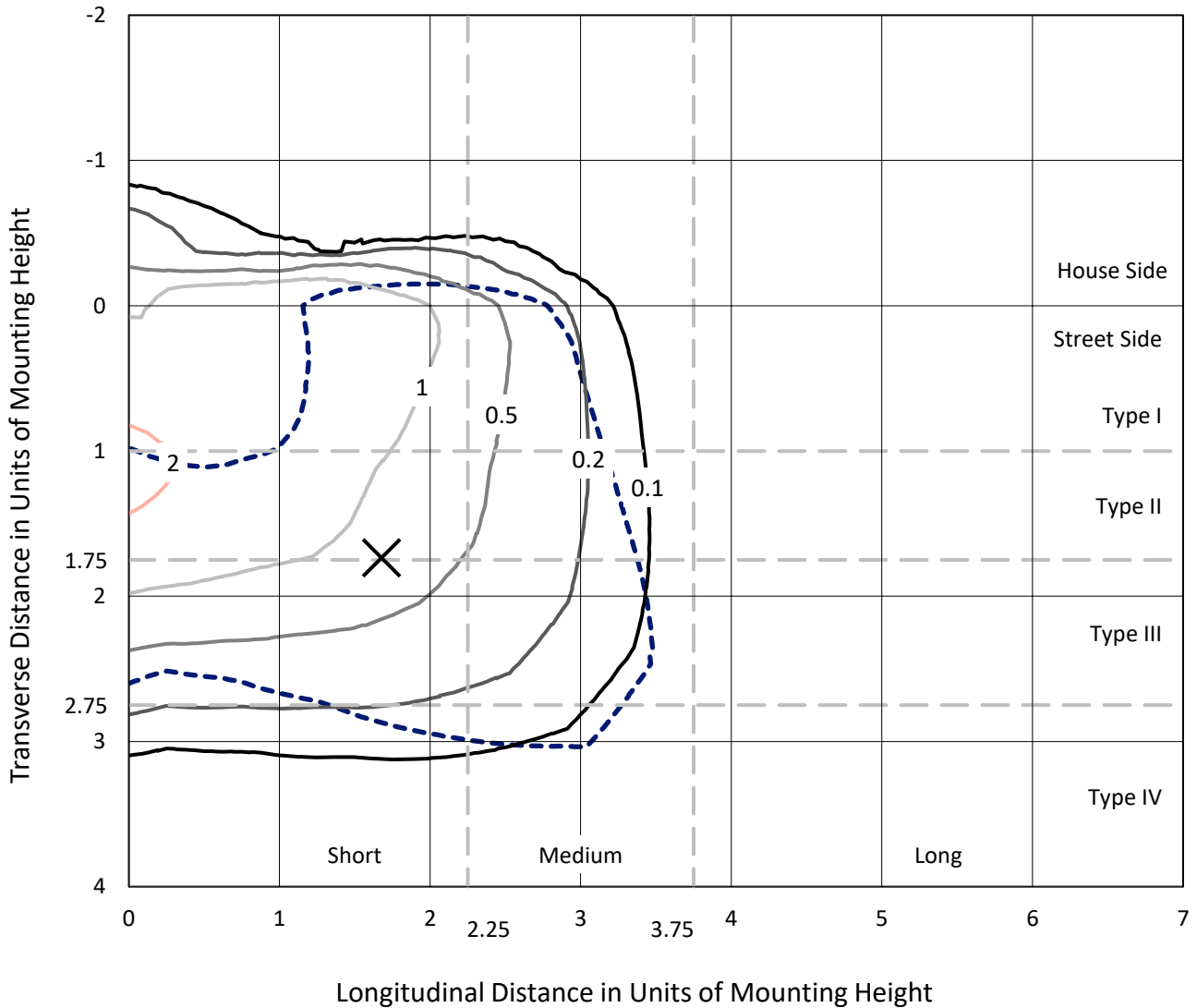
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

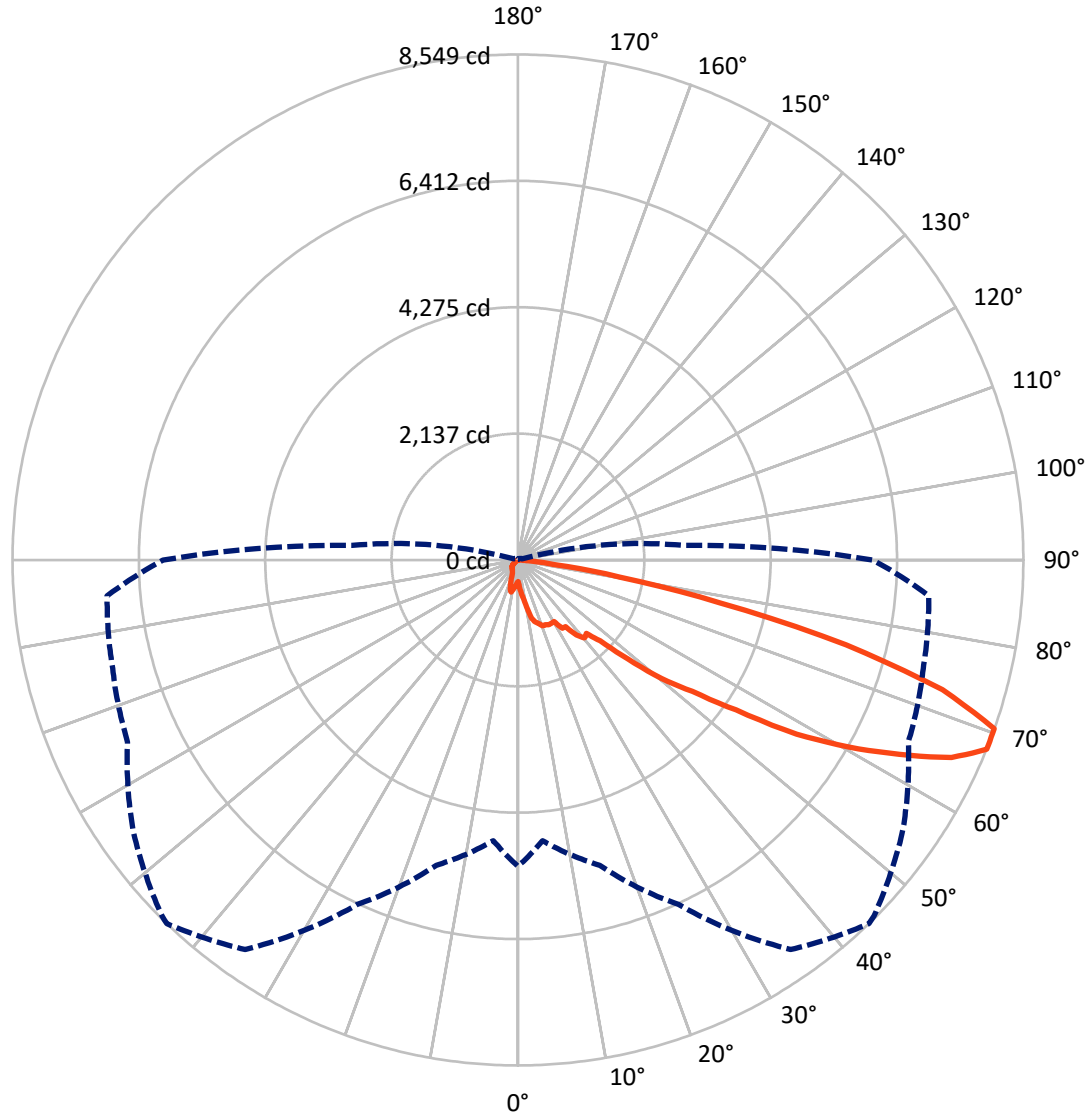
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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
House Side	Lumens	1093.8	0.0	1093.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	9674.2	0.0	9674.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	10768.0	0.0	10768.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.8	0.5
10°-20°	225.1	2.1
20°-30°	398.8	3.7
30°-40°	648.2	6.0
40°-50°	1297.1	12.0
50°-60°	2661.1	24.7
60°-70°	3655.6	33.9
70°-80°	1718.2	16.0
80°-90°	110.1	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°	10768.0	100.0
0°-180°	10768.0	100.0

Coefficient of Utilization

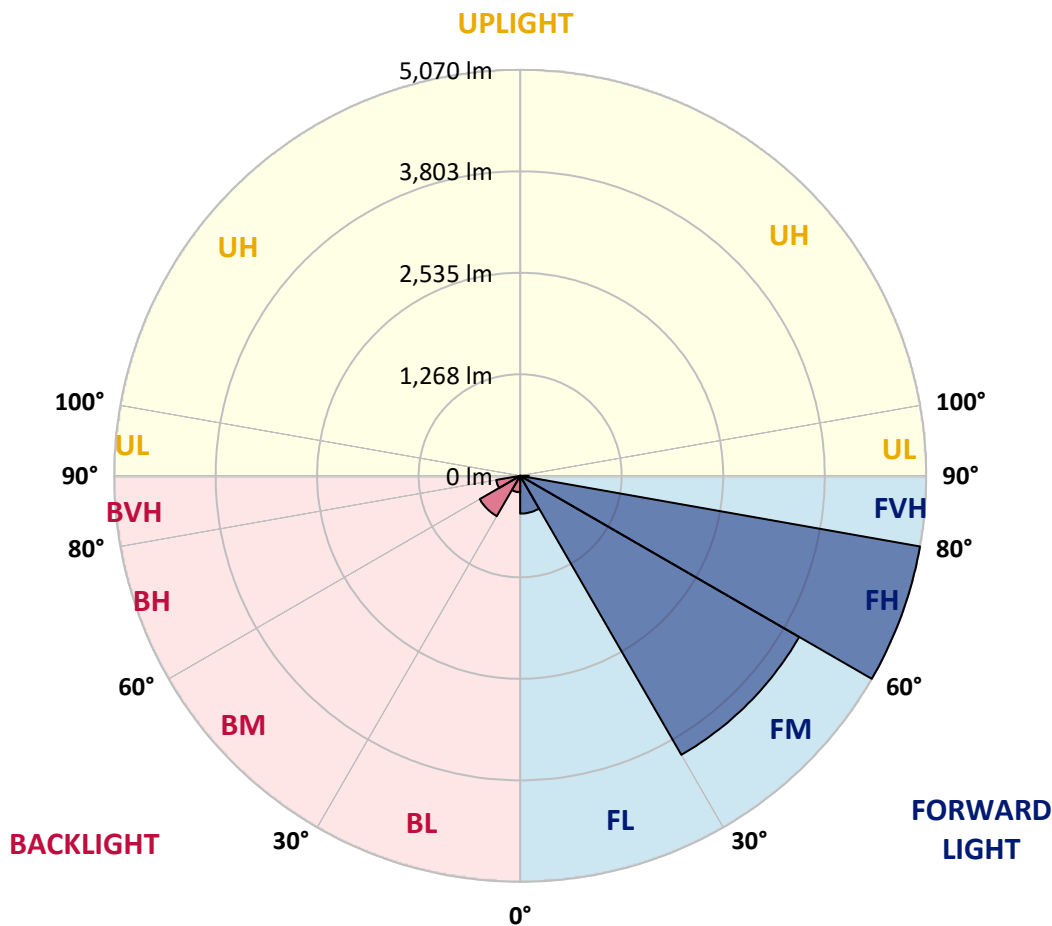


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	472.3	4.4			
FM (30°-60°)	4023.8	37.4			
FH (60°-80°)	5070.2	47.1			G3/7500
FVH (80°-90°)	107.8	1.0			G2/225
BL (0°-30°)	205.4	1.9	B1/500		
BM (30°-60°)	582.7	5.4	B1/1000		
BH (60°-80°)	303.5	2.8	B1/500		G1/500
BVH (80°-90°)	2.2	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-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8
2.5°	461.4	446.5	425.1	429.9	432.3	438.8	439.4	431.1	407.3	400.8	429.9
5°	646.6	610.4	603.9	590.2	562.9	548.1	544.5	559.3	540.3	534.4	542.1
7.5°	825.9	795.1	761.2	742.8	685.8	650.8	649.0	654.9	658.5	637.7	648.4
10°	945.3	911.4	904.3	861.0	811.7	803.4	799.8	777.2	758.8	743.4	691.7
12.5°	1053.4	1052.8	1065.8	1003.5	995.8	1004.1	1001.1	920.3	901.9	837.2	822.4
15°	1197.0	1232.7	1176.3	1124.0	1057.5	1086.0	1078.3	1026.6	1014.2	970.2	906.7
17.5°	1346.1	1355.6	1261.2	1181.0	1163.8	1126.4	1134.1	1115.7	1052.8	1087.8	1024.9
20°	1349.6	1370.4	1269.5	1137.1	1189.9	1188.1	1188.7	1170.9	1087.8	1169.7	1112.1
22.5°	1399.5	1348.5	1254.6	1170.3	1179.8	1188.7	1198.2	1176.3	1158.5	1178.6	1189.3
25°	1379.3	1359.1	1268.9	1213.1	1204.2	1211.3	1213.7	1241.6	1230.3	1279.0	1252.3
27.5°	1431.6	1402.5	1241.0	1251.1	1219.6	1211.3	1197.0	1290.3	1323.5	1284.9	1356.2
30°	1521.2	1517.1	1289.1	1303.9	1279.6	1206.5	1244.5	1366.3	1407.8	1384.1	1470.8
32.5°	1661.4	1675.6	1429.8	1333.6	1346.1	1378.7	1364.5	1366.3	1471.4	1524.2	1593.1
35°	1860.3	1852.6	1567.0	1446.4	1381.1	1386.5	1406.6	1503.4	1639.4	1635.8	1708.9
37.5°	2251.0	2166.7	1809.8	1561.6	1581.2	1607.9	1593.1	1723.1	1736.2	1740.9	1915.5
40°	2827.0	2714.7	2192.8	1804.5	1615.7	1733.8	1726.7	1758.8	1846.0	1878.7	2133.4
42.5°	3585.8	3435.0	2866.7	2251.0	1781.9	1700.6	1744.5	1805.1	2098.4	2191.6	2470.7
45°	4424.2	4119.0	3538.9	2887.5	2198.7	1946.4	1979.6	2092.5	2499.2	2653.6	2961.7
47.5°	4967.5	4699.1	4204.5	3451.6	2633.4	2501.0	2503.9	2528.3	2970.1	3256.2	3669.5
50°	5439.6	5153.9	4695.0	4041.2	3402.3	3151.7	3094.7	2982.5	3569.8	3961.1	4419.5
52.5°	6105.8	5772.1	5185.4	4733.0	4279.3	3689.1	3668.9	3706.9	4276.9	4688.4	5188.4
55°	6706.7	6301.1	5741.2	5456.2	5279.2	4478.8	4496.0	4559.6	5184.8	5402.7	5872.4
57.5°	6972.1	6532.7	6244.7	6116.5	6022.0	5557.7	5499.5	5461.5	5900.9	5984.0	6589.1
60°	7146.1	6728.0	6597.4	6627.1	6913.3	6420.5	6367.6	6146.7	6493.5	6561.8	7231.6
62.5°	7036.2	6655.0	6682.9	6930.5	7565.9	7241.7	7089.1	6719.7	6978.0	7033.2	7692.9
65°	6344.5	5947.2	6305.9	6905.0	8063.4	8055.7	7985.1	7248.8	7246.4	7317.1	7728.5
67.5°	5182.4	4765.6	5345.7	6426.4	8042.7	8549.1	8515.9	7950.6	7285.0	7096.2	6974.5
70°	3603.0	3241.4	3899.3	5307.1	7326.0	8545.6	8492.1	8422.1	6979.8	6108.1	5407.5
72.5°	1872.2	1673.3	2286.0	3657.0	5839.8	7508.3	7684.6	7569.4	5959.7	4437.9	3184.4
75°	635.9	570.6	942.9	1941.0	3882.1	5733.5	5940.1	5823.1	4047.7	2381.0	1259.4
77.5°	246.4	229.2	337.9	787.9	1947.6	3493.8	3718.2	3598.9	2170.8	872.3	296.3
80°	140.1	135.4	186.4	355.1	858.6	1738.0	1895.9	1719.6	782.6	293.9	77.2
82.5°	59.4	61.2	103.9	191.8	431.7	613.4	684.0	624.1	327.8	201.3	28.5
85°	13.1	16.0	49.3	106.9	181.1	175.2	183.5	203.7	201.3	147.8	12.5
87.5°	0.0	0.0	15.4	29.1	43.3	28.5	22.6	39.8	61.8	59.4	5.3
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°	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8	362.8
2.5°	435.2	429.3	391.9	389.5	391.9	385.4	384.8	371.1	372.3	403.2	405.5
5°	542.1	512.4	480.4	470.3	460.8	439.4	451.3	451.3	451.3	470.9	476.8
7.5°	638.9	599.1	554.0	516.0	479.2	452.5	470.9	483.9	491.6	517.2	529.1
10°	682.8	643.6	603.3	549.2	520.7	510.6	489.3	478.0	491.6	486.3	492.8
12.5°	776.7	741.0	671.6	615.7	594.4	559.9	497.0	453.0	424.0	419.2	418.0
15°	868.1	846.1	752.9	678.1	603.9	524.3	416.8	358.6	327.8	322.4	323.0
17.5°	983.9	952.4	815.2	707.8	581.9	438.8	321.8	271.9	269.6	282.6	283.8
20°	1061.1	1009.4	846.7	683.4	509.5	331.9	251.8	239.9	258.9	282.6	280.3
22.5°	1134.7	1078.9	888.3	662.1	394.9	251.8	231.6	232.8	248.8	274.3	280.9
25°	1183.4	1163.2	939.3	612.2	301.0	217.9	221.5	230.4	244.0	268.4	268.4
27.5°	1330.1	1235.6	933.4	515.4	231.6	203.1	211.4	222.7	229.8	258.9	261.9
30°	1419.1	1388.2	964.3	416.8	203.1	184.1	200.1	210.2	214.9	248.2	249.4
32.5°	1528.4	1460.1	1001.7	307.6	188.8	182.9	179.3	187.0	200.7	229.8	231.6
35°	1661.4	1641.2	948.3	241.7	184.1	171.0	163.9	168.0	176.9	196.5	200.7
37.5°	1932.7	1812.8	916.2	207.2	184.1	166.9	159.1	148.4	149.6	163.3	171.0
40°	2161.3	2124.5	826.5	201.3	175.8	160.9	141.9	128.8	119.9	124.1	127.1
42.5°	2581.1	2410.7	710.7	198.3	168.0	145.5	120.5	106.9	93.2	94.4	99.2
45°	3090.6	2723.0	607.4	195.4	162.7	130.0	101.5	85.5	71.3	71.8	76.6
47.5°	3771.1	3178.5	482.1	186.4	153.2	115.8	81.9	65.3	57.0	58.8	62.9
50°	4544.1	3578.1	381.2	172.8	141.9	102.1	66.5	52.8	49.9	51.7	56.4
52.5°	5234.7	3872.6	314.7	160.3	125.9	83.1	55.8	46.9	45.7	46.9	50.5
55°	5848.7	4043.6	263.0	146.1	108.1	67.1	50.5	43.3	42.8	42.2	44.5
57.5°	6424.6	4092.9	205.4	123.5	87.9	58.2	46.9	40.4	39.2	37.4	39.2
60°	6844.4	4008.6	150.8	99.2	71.8	52.8	43.9	36.2	34.4	31.5	32.7
62.5°	7046.9	3777.6	114.0	79.6	61.2	48.1	39.2	31.5	29.1	25.5	26.1
65°	6854.5	3397.0	89.7	67.1	52.3	40.4	33.3	26.7	23.8	20.2	20.2
67.5°	6002.4	2818.0	76.0	58.2	43.9	34.4	27.3	24.3	19.6	16.6	16.0
70°	4405.8	2027.1	65.3	51.1	38.0	29.7	23.2	22.0	19.0	16.0	14.8
72.5°	2486.7	1147.2	55.8	45.1	32.1	24.9	19.6	20.2	18.4	14.8	13.7
75°	948.8	386.5	46.3	37.4	26.1	19.0	16.6	16.6	16.6	12.5	10.7
77.5°	235.1	98.6	36.8	30.3	20.8	12.5	13.7	14.3	14.3	10.7	7.7
80°	64.7	33.3	22.0	22.0	14.8	7.1	9.5	9.5	7.7	3.6	0.0
82.5°	23.8	12.5	7.7	9.5	6.5	2.4	3.6	2.4	1.8	0.0	0.0
85°	10.1	6.5	4.8	5.3	3.0	0.0	0.6	1.2	0.0	0.0	0.0
87.5°	4.2	3.0	2.4	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)