

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: P367675

Luminaire Tested: **MSA-SA3A-727-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367675
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-SA3A-727-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 7396 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

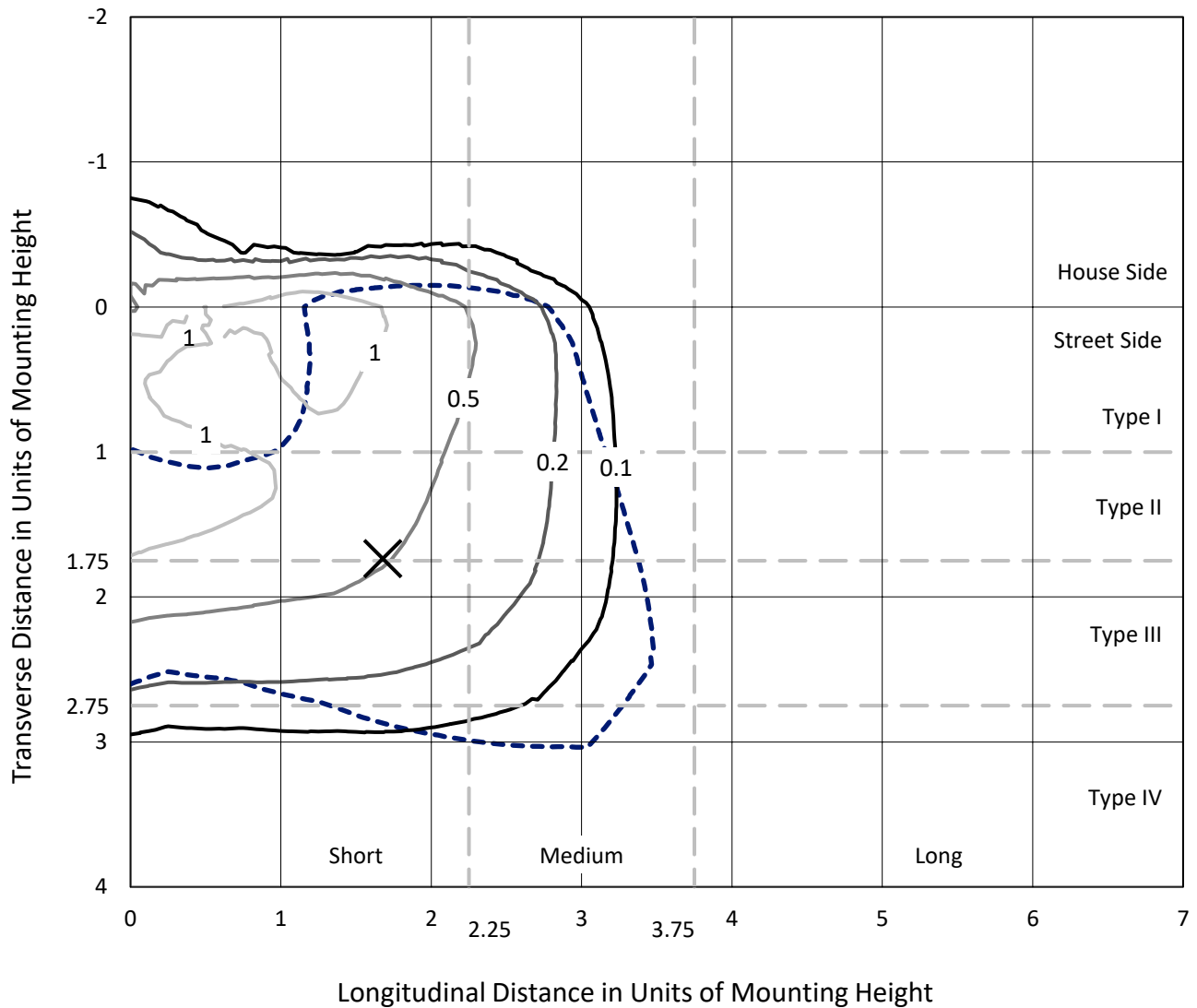
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

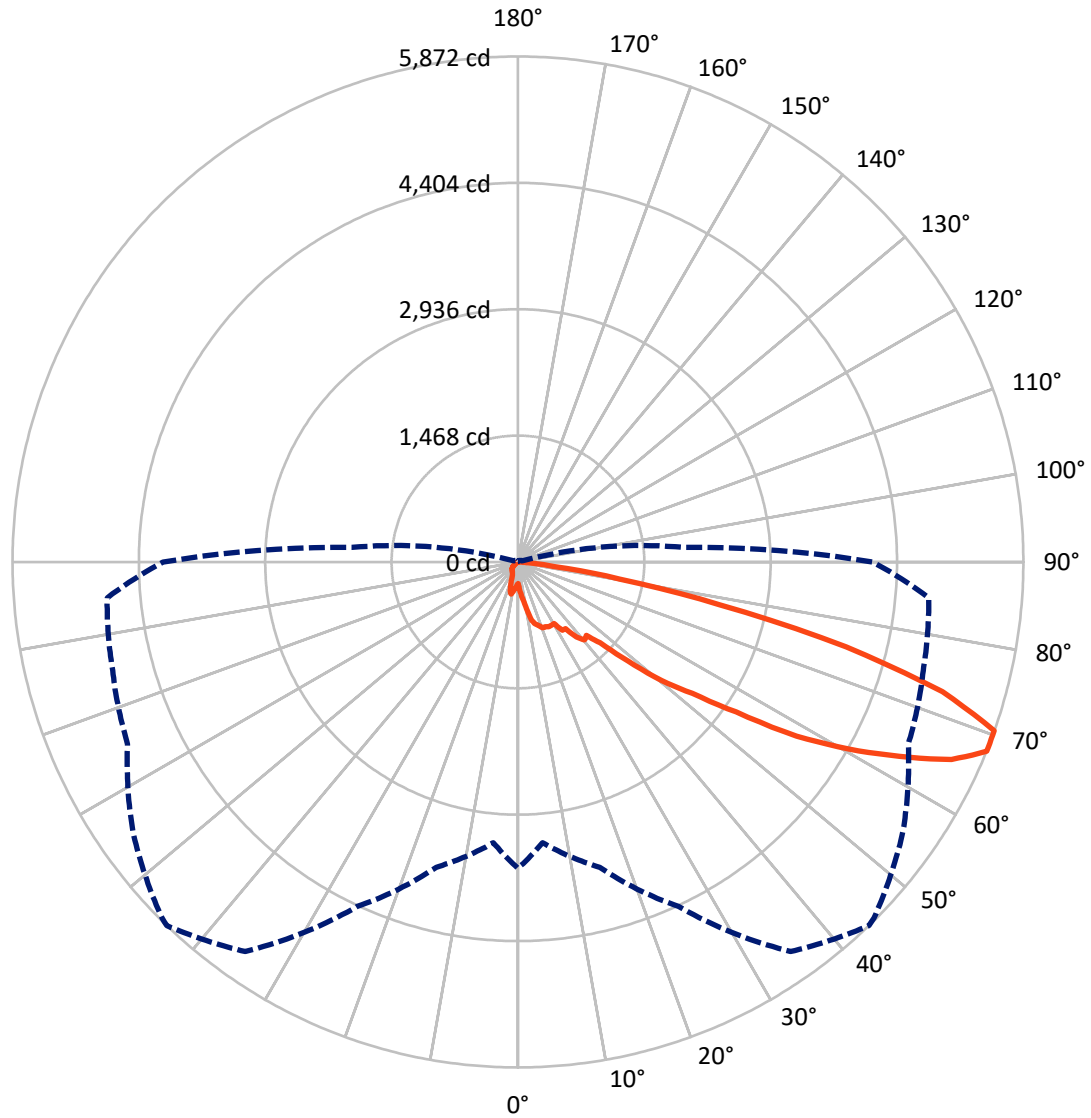
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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	751.3	0.0	751.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	6644.7	0.0	6644.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	7396.0	0.0	7396.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	0.5
10°-20°	154.6	2.1
20°-30°	273.9	3.7
30°-40°	445.2	6.0
40°-50°	890.9	12.0
50°-60°	1827.8	24.7
60°-70°	2510.9	33.9
70°-80°	1180.1	16.0
80°-90°	75.6	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°	7396.0	100.0
0°-180°	7396.0	100.0

Coefficient of Utilization

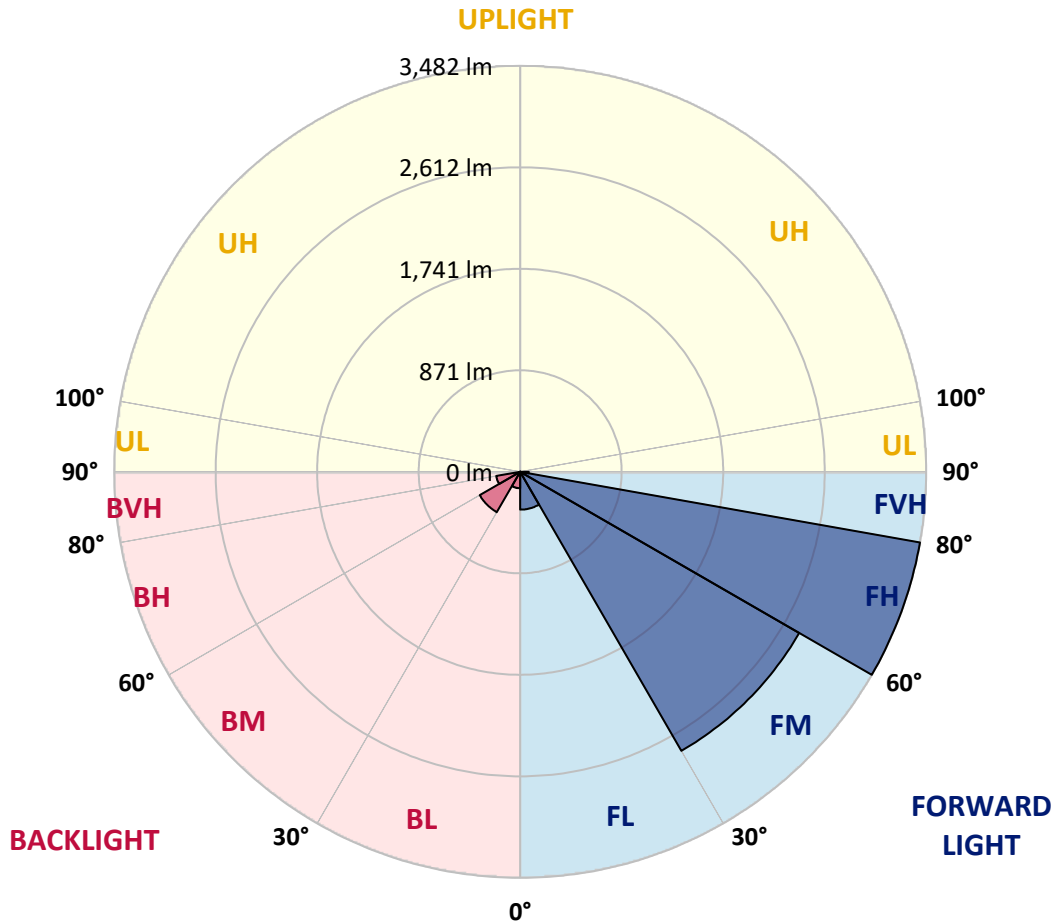


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	324.4	4.4			
FM (30°-60°)	2763.8	37.4			
FH (60°-80°)	3482.5	47.1			G2/5000
FVH (80°-90°)	74.0	1.0			G1/100
BL (0°-30°)	141.1	1.9	B1/500		
BM (30°-60°)	400.2	5.4	B1/1000		
BH (60°-80°)	208.5	2.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2
2.5°	316.9	306.7	292.0	295.3	296.9	301.4	301.8	296.1	279.8	275.3	295.3
5°	444.1	419.3	414.8	405.4	386.6	376.4	374.0	384.2	371.1	367.0	372.4
7.5°	567.3	546.1	522.8	510.2	471.0	447.0	445.8	449.8	452.3	438.0	445.4
10°	649.3	626.0	621.1	591.4	557.5	551.8	549.4	533.9	521.2	510.6	475.1
12.5°	723.5	723.1	732.1	689.2	683.9	689.6	687.6	632.1	619.5	575.0	564.8
15°	822.2	846.7	807.9	772.0	726.4	745.9	740.6	705.1	696.6	666.4	622.8
17.5°	924.6	931.1	866.2	811.2	799.4	773.7	779.0	766.3	723.1	747.1	703.9
20°	927.0	941.3	871.9	781.0	817.3	816.1	816.5	804.2	747.1	803.4	763.9
22.5°	961.3	926.2	861.8	803.8	810.4	816.5	823.0	807.9	795.7	809.5	816.9
25°	947.4	933.5	871.5	833.2	827.1	832.0	833.6	852.8	845.0	878.5	860.1
27.5°	983.3	963.3	852.4	859.3	837.7	832.0	822.2	886.2	909.1	882.6	931.5
30°	1044.9	1042.0	885.4	895.6	878.9	828.7	854.8	938.4	967.0	950.7	1010.2
32.5°	1141.1	1150.9	982.1	916.0	924.6	947.0	937.2	938.4	1010.6	1046.9	1094.2
35°	1277.7	1272.4	1076.3	993.5	948.6	952.3	966.2	1032.6	1126.0	1123.6	1173.7
37.5°	1546.1	1488.2	1243.1	1072.6	1086.1	1104.4	1094.2	1183.5	1192.5	1195.8	1315.7
40°	1941.7	1864.6	1506.1	1239.4	1109.7	1190.9	1186.0	1208.0	1268.0	1290.4	1465.3
42.5°	2462.9	2359.3	1969.0	1546.1	1223.9	1168.0	1198.2	1239.8	1441.3	1505.3	1697.0
45°	3038.8	2829.1	2430.7	1983.3	1510.2	1336.9	1359.7	1437.2	1716.6	1822.6	2034.3
47.5°	3411.9	3227.6	2887.9	2370.7	1808.7	1717.8	1719.8	1736.6	2040.0	2236.6	2520.4
50°	3736.2	3540.0	3224.7	2775.7	2336.9	2164.8	2125.6	2048.5	2451.9	2720.7	3035.5
52.5°	4193.7	3964.5	3561.6	3250.8	2939.3	2533.9	2520.0	2546.1	2937.6	3220.2	3563.6
55°	4606.5	4327.9	3943.3	3747.6	3626.0	3076.3	3088.1	3131.7	3561.2	3710.9	4033.5
57.5°	4788.8	4487.0	4289.2	4201.1	4136.2	3817.3	3777.3	3751.2	4053.0	4110.1	4525.7
60°	4908.3	4621.2	4531.4	4551.8	4748.4	4409.9	4373.6	4221.9	4460.1	4507.0	4967.0
62.5°	4832.8	4571.0	4590.2	4760.2	5196.6	4973.9	4869.1	4615.4	4792.9	4830.8	5283.9
65°	4357.7	4084.9	4331.2	4742.7	5538.4	5533.1	5484.5	4978.8	4977.2	5025.7	5308.4
67.5°	3559.6	3273.3	3671.7	4414.0	5524.1	5872.0	5849.1	5460.9	5003.7	4874.0	4790.4
70°	2474.7	2226.4	2678.2	3645.2	5031.8	5869.5	5832.8	5784.7	4794.1	4195.4	3714.1
72.5°	1285.9	1149.3	1570.2	2511.8	4011.0	5157.0	5278.2	5199.1	4093.4	3048.1	2187.2
75°	436.8	391.9	647.6	1333.2	2666.4	3938.0	4080.0	3999.6	2780.2	1635.4	865.0
77.5°	169.3	157.4	232.1	541.2	1337.7	2399.7	2553.8	2471.9	1491.0	599.1	203.5
80°	96.2	93.0	128.1	243.9	589.7	1193.7	1302.2	1181.1	537.5	201.9	53.0
82.5°	40.8	42.0	71.4	131.7	296.5	421.3	469.8	428.6	225.1	138.3	19.6
85°	9.0	11.0	33.9	73.4	124.4	120.3	126.0	139.9	138.3	101.6	8.6
87.5°	0.0	0.0	10.6	20.0	29.8	19.6	15.5	27.3	42.4	40.8	3.7
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°	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2
2.5°	298.9	294.9	269.2	267.5	269.2	264.7	264.3	254.9	255.7	276.9	278.5
5°	372.4	352.0	329.9	323.0	316.5	301.8	310.0	310.0	310.0	323.4	327.5
7.5°	438.8	411.5	380.5	354.4	329.1	310.8	323.4	332.4	337.7	355.2	363.4
10°	469.0	442.1	414.4	377.2	357.7	350.7	336.1	328.3	337.7	334.0	338.5
12.5°	533.4	509.0	461.3	422.9	408.2	384.6	341.4	311.2	291.2	287.9	287.1
15°	596.3	581.2	517.1	465.7	414.8	360.1	286.3	246.3	225.1	221.5	221.9
17.5°	675.8	654.2	560.0	486.1	399.7	301.4	221.0	186.8	185.2	194.1	194.9
20°	728.8	693.3	581.6	469.4	349.9	228.0	172.9	164.8	177.8	194.1	192.5
22.5°	779.4	741.0	610.1	454.7	271.2	172.9	159.1	159.9	170.9	188.4	192.9
25°	812.8	798.9	645.2	420.5	206.8	149.7	152.1	158.2	167.6	184.3	184.3
27.5°	913.5	848.7	641.1	354.0	159.1	139.5	145.2	152.9	157.8	177.8	179.9
30°	974.7	953.5	662.3	286.3	139.5	126.4	137.4	144.4	147.6	170.5	171.3
32.5°	1049.8	1002.9	688.0	211.3	129.7	125.6	123.2	128.5	137.8	157.8	159.1
35°	1141.1	1127.2	651.3	166.0	126.4	117.5	112.6	115.4	121.5	135.0	137.8
37.5°	1327.5	1245.1	629.3	142.3	126.4	114.6	109.3	102.0	102.8	112.2	117.5
40°	1484.5	1459.2	567.7	138.3	120.7	110.5	97.5	88.5	82.4	85.2	87.3
42.5°	1772.8	1655.8	488.2	136.2	115.4	99.9	82.8	73.4	64.0	64.8	68.1
45°	2122.8	1870.3	417.2	134.2	111.7	89.3	69.7	58.7	48.9	49.3	52.6
47.5°	2590.1	2183.1	331.2	128.1	105.2	79.5	56.3	44.9	39.2	40.4	43.2
50°	3121.1	2457.6	261.8	118.7	97.5	70.1	45.7	36.3	34.3	35.5	38.7
52.5°	3595.5	2659.9	216.2	110.1	86.5	57.1	38.3	32.2	31.4	32.2	34.7
55°	4017.2	2777.3	180.7	100.3	74.2	46.1	34.7	29.8	29.4	29.0	30.6
57.5°	4412.8	2811.2	141.1	84.8	60.4	40.0	32.2	27.7	26.9	25.7	26.9
60°	4701.1	2753.3	103.6	68.1	49.3	36.3	30.2	24.9	23.7	21.6	22.4
62.5°	4840.2	2594.6	78.3	54.6	42.0	33.0	26.9	21.6	20.0	17.5	17.9
65°	4708.0	2333.2	61.6	46.1	35.9	27.7	22.8	18.4	16.3	13.9	13.9
67.5°	4122.8	1935.6	52.2	40.0	30.2	23.7	18.8	16.7	13.5	11.4	11.0
70°	3026.1	1392.3	44.9	35.1	26.1	20.4	15.9	15.1	13.1	11.0	10.2
72.5°	1708.0	787.9	38.3	31.0	22.0	17.1	13.5	13.9	12.6	10.2	9.4
75°	651.7	265.5	31.8	25.7	17.9	13.1	11.4	11.4	11.4	8.6	7.3
77.5°	161.5	67.7	25.3	20.8	14.3	8.6	9.4	9.8	9.8	7.3	5.3
80°	44.5	22.8	15.1	15.1	10.2	4.9	6.5	6.5	5.3	2.4	0.0
82.5°	16.3	8.6	5.3	6.5	4.5	1.6	2.4	1.6	1.2	0.0	0.0
85°	6.9	4.5	3.3	3.7	2.0	0.0	0.4	0.8	0.0	0.0	0.0
87.5°	2.9	2.0	1.6	1.6	0.8	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)