

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: P367165

Luminaire Tested: **MSA-SA2A-730-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367165
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-SA2A-730-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5346 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

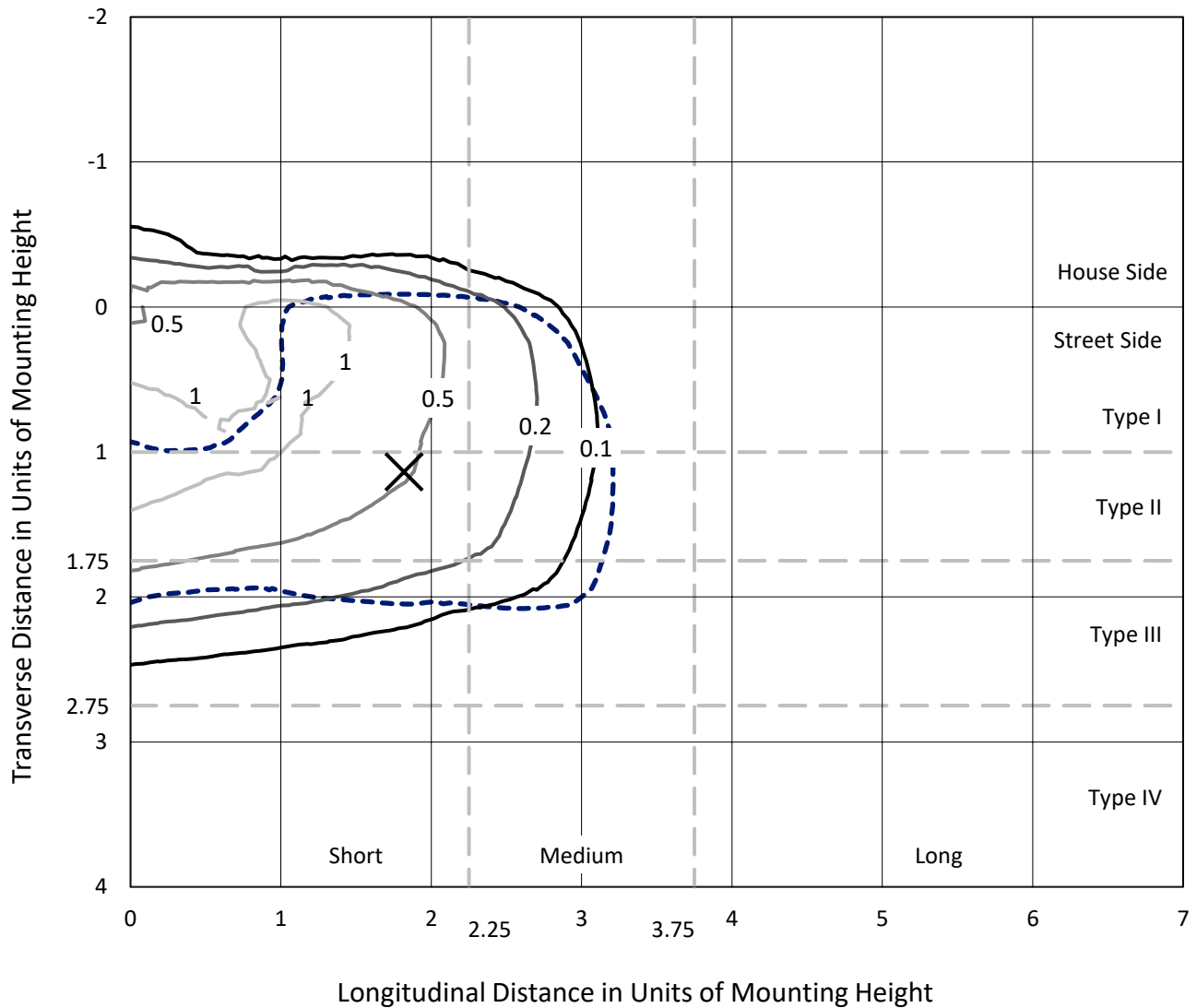
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

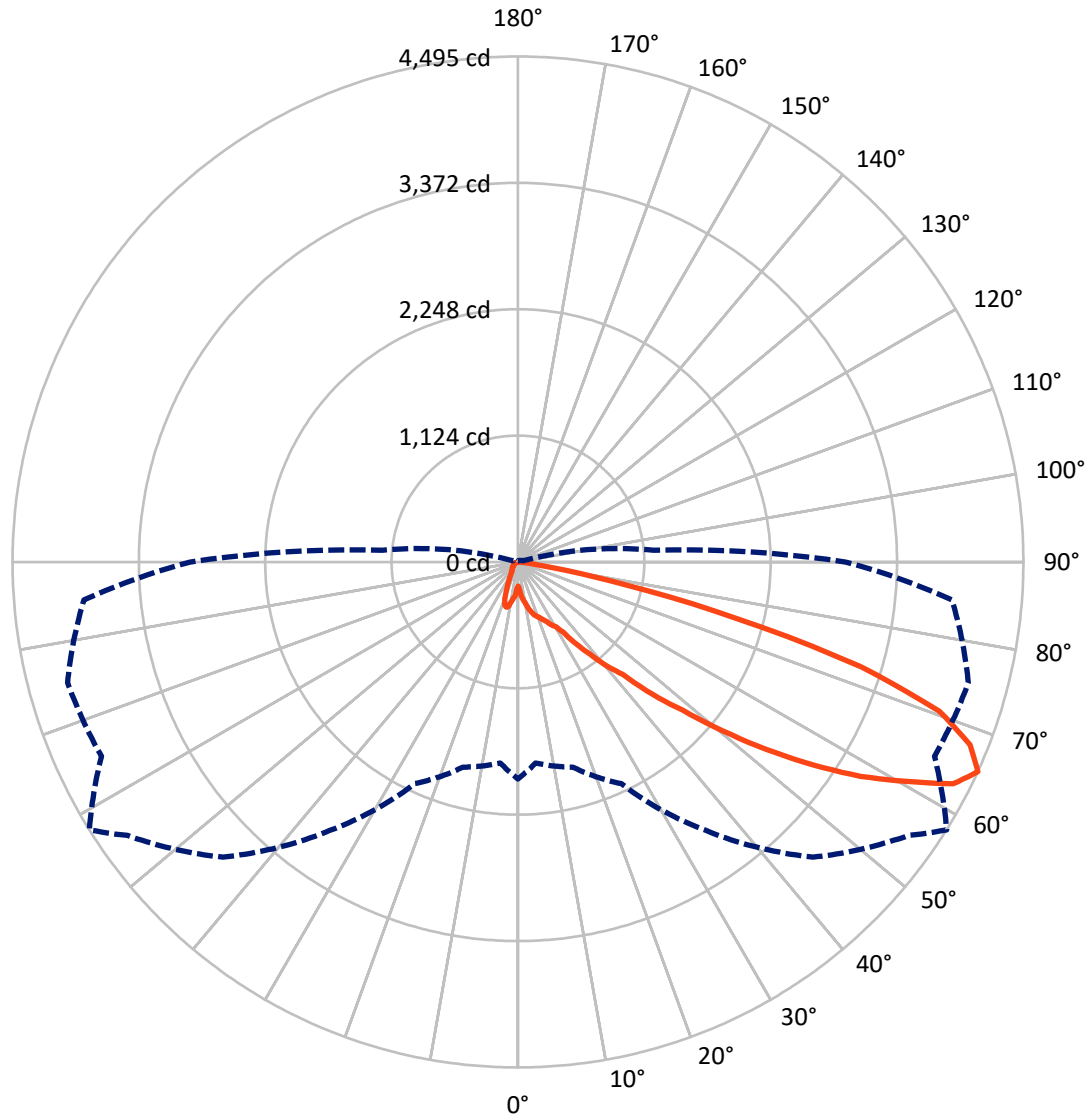
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	527.5	0.0	527.5
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	4818.5	0.0	4818.5
	% Fixture	90.1	0.0	90.1
Total	Lumens	5346.0	0.0	5346.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	0.6
10°-20°	109.7	2.1
20°-30°	212.4	4.0
30°-40°	423.8	7.9
40°-50°	866.4	16.2
50°-60°	1536.7	28.7
60°-70°	1620.1	30.3
70°-80°	525.3	9.8
80°-90°	21.5	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°	5346.0	100.0
0°-180°	5346.0	100.0

Coefficient of Utilization

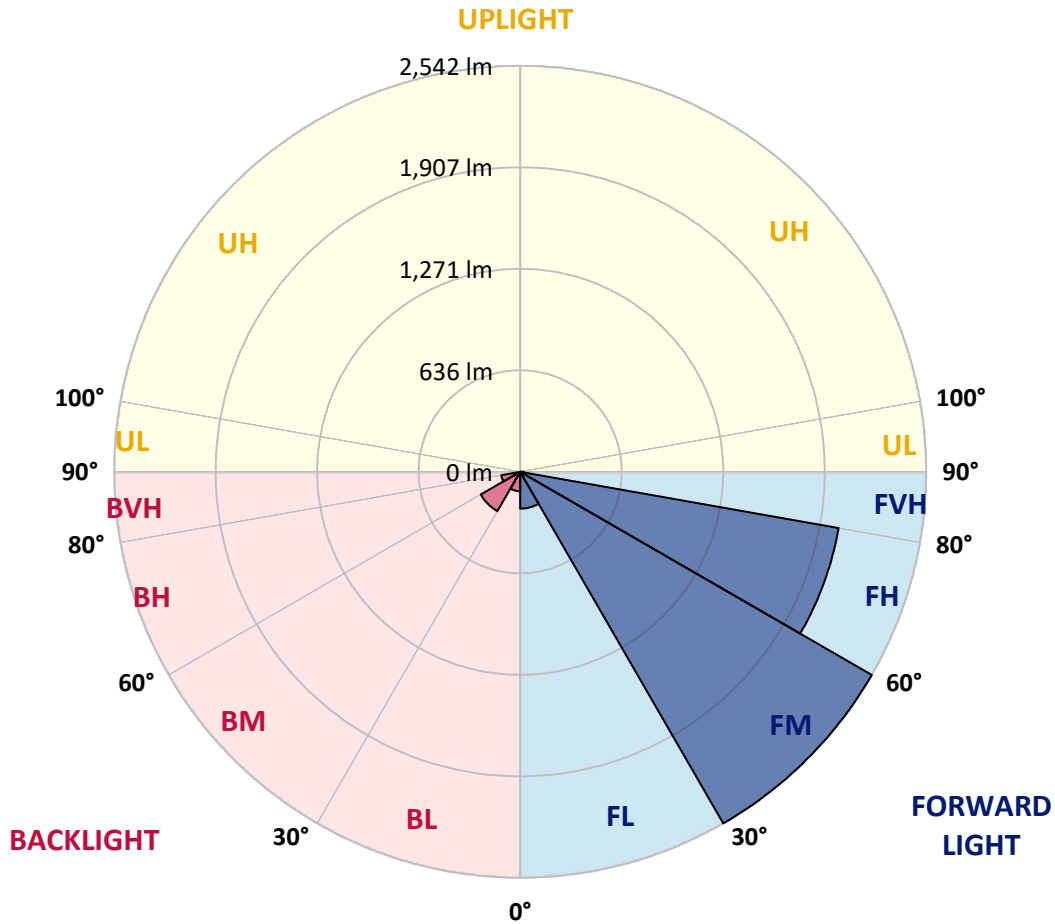


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	230.6	4.3			
FM (30°-60°)	2542.3	47.6			
FH (60°-80°)	2025.0	37.9			G2/5000
FVH (80°-90°)	20.6	0.4			G1/100
BL (0°-30°)	121.6	2.3	B1/500		
BM (30°-60°)	284.6	5.3	B1/1000		
BH (60°-80°)	120.4	2.3	B1/500		G1/500
BVH (80°-90°)	0.9	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°	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0
2.5°	261.3	253.4	241.1	243.2	245.6	250.4	246.5	242.9	239.0	233.9	253.4
5°	315.4	302.5	301.3	298.6	296.5	296.2	301.0	299.5	301.6	311.2	321.2
7.5°	335.3	329.9	319.7	323.9	317.3	312.1	333.5	340.4	353.7	358.2	384.1
10°	333.2	325.4	329.6	331.7	336.2	354.9	368.4	375.9	387.4	412.1	406.9
12.5°	342.8	349.8	354.3	354.6	377.8	412.1	421.7	428.0	448.5	458.1	483.4
15°	375.0	386.5	379.3	382.3	389.8	431.6	454.2	468.0	496.9	528.2	534.6
17.5°	421.1	428.3	413.3	402.4	423.2	446.1	487.0	501.5	519.8	593.0	606.5
20°	479.2	491.5	459.0	416.0	443.4	470.5	515.0	521.9	541.5	636.9	658.3
22.5°	614.9	596.6	546.9	479.8	471.7	483.7	526.1	553.2	586.3	661.6	711.3
25°	748.9	742.6	669.4	594.5	540.3	513.2	569.5	584.5	638.7	720.3	747.7
27.5°	897.9	910.5	788.3	742.9	636.6	548.1	596.6	634.2	698.3	741.7	807.6
30°	1094.4	1074.3	931.0	885.5	764.2	644.1	666.7	669.1	763.3	812.1	874.7
32.5°	1248.5	1261.5	1081.5	1011.6	914.7	791.9	719.4	750.7	818.1	926.8	986.1
35°	1415.3	1414.1	1238.6	1144.7	1018.0	912.6	875.6	898.5	983.1	1106.2	1121.8
37.5°	1664.5	1643.1	1436.1	1298.5	1190.7	1100.7	1072.5	1042.1	1129.3	1246.7	1305.4
40°	1899.6	1825.8	1634.4	1471.3	1333.4	1296.7	1194.4	1213.0	1238.9	1393.9	1556.2
42.5°	2137.1	2091.3	1835.5	1698.8	1529.4	1442.1	1375.3	1366.5	1489.6	1673.2	1840.9
45°	2450.4	2310.5	2105.8	1985.7	1789.4	1701.8	1648.0	1680.2	1790.9	2059.1	2170.8
47.5°	2713.5	2584.7	2408.9	2226.5	2020.6	2119.0	2017.9	1967.0	2119.0	2396.2	2544.6
50°	2939.5	2796.0	2618.1	2482.9	2449.5	2544.0	2339.3	2358.0	2456.7	2782.4	2866.1
52.5°	3103.9	2952.8	2797.5	2732.1	2869.1	2916.7	2814.0	2772.8	2862.5	3111.7	3152.3
55°	3227.6	3072.9	2951.6	3041.6	3306.4	3290.8	3326.9	3186.1	3271.8	3455.1	3435.9
57.5°	3235.1	3051.8	2980.8	3125.5	3489.2	3731.5	3837.1	3597.5	3646.3	3723.6	3680.3
60°	2998.5	2816.1	2810.4	3016.0	3542.1	3845.5	4076.7	3959.9	3894.6	3952.1	3869.9
62.5°	2527.2	2399.5	2459.1	2686.4	3345.0	3782.6	4204.3	4344.9	4090.5	4103.5	3986.7
65°	1929.7	1795.7	1889.1	2175.3	2913.9	3712.2	4240.4	4495.4	4086.9	4146.5	3874.7
67.5°	1278.0	1200.4	1306.0	1621.5	2316.8	3277.0	4221.8	4337.4	3957.2	3978.3	3459.1
70°	659.8	640.8	726.3	975.2	1557.7	2517.5	4038.5	3975.3	3693.8	3427.1	2668.0
72.5°	211.3	212.2	294.4	445.5	839.8	1532.7	3104.2	3190.9	2955.8	2507.0	1629.0
75°	93.6	92.1	123.1	186.9	350.1	687.2	1928.5	2022.1	1840.3	1379.2	684.8
77.5°	67.4	65.3	78.9	109.3	173.4	233.0	904.2	975.8	834.4	478.0	156.8
80°	47.6	47.3	57.2	76.8	108.4	103.5	285.6	320.3	256.4	115.9	46.1
82.5°	26.8	27.7	39.7	54.2	65.9	51.8	80.4	88.5	86.4	61.7	20.2
85°	12.9	14.4	25.9	39.1	34.6	20.2	28.6	31.0	36.1	35.8	10.2
87.5°	0.0	0.0	10.5	17.8	9.3	3.0	8.7	9.9	9.6	11.4	2.4
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°	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0
2.5°	257.4	255.5	232.7	234.5	239.6	237.5	239.3	235.1	230.3	249.8	249.5
5°	325.4	311.8	304.6	298.0	299.2	285.6	293.5	297.1	296.5	307.6	310.6
7.5°	385.0	366.9	352.5	338.6	317.6	298.6	310.3	317.9	323.0	342.2	349.8
10°	413.0	398.2	392.5	365.4	350.4	338.6	324.5	314.2	318.5	313.3	318.5
12.5°	474.4	464.4	442.5	415.1	397.0	372.9	320.3	276.3	249.2	249.5	247.7
15°	530.4	529.8	496.9	451.5	399.1	330.5	248.3	192.9	167.4	160.1	157.7
17.5°	603.5	594.5	534.6	467.4	373.2	255.8	169.2	132.1	129.7	133.9	132.1
20°	650.2	636.9	553.2	444.3	307.6	173.1	127.6	117.1	124.3	130.3	128.8
22.5°	696.8	676.9	567.4	416.0	218.8	126.7	115.3	113.5	118.0	125.5	126.7
25°	722.4	718.5	595.1	363.0	149.9	111.1	111.1	110.5	112.0	117.4	116.5
27.5°	796.7	743.8	574.3	283.2	115.9	102.0	103.5	102.9	97.5	102.9	103.2
30°	843.1	818.7	575.8	201.7	102.0	90.3	94.2	89.4	81.3	85.8	84.9
32.5°	936.4	875.6	571.3	136.1	93.0	86.1	80.1	73.1	67.1	68.9	67.4
35°	1045.1	998.7	510.2	109.3	86.7	76.2	66.5	59.6	53.3	54.8	54.5
37.5°	1261.2	1114.0	459.6	98.4	82.5	69.8	58.7	49.1	45.8	46.7	47.6
40°	1461.3	1306.3	365.4	93.6	75.2	62.3	48.5	41.5	39.4	40.0	40.9
42.5°	1760.5	1459.2	276.0	88.8	68.0	52.7	40.3	35.8	33.7	34.9	35.5
45°	2050.1	1589.3	206.2	84.6	62.0	45.5	34.0	31.0	28.6	29.5	30.7
47.5°	2339.3	1733.7	153.8	78.0	55.4	39.1	29.2	27.1	25.6	25.9	27.4
50°	2598.2	1801.2	121.0	69.8	50.0	34.0	26.5	24.4	23.8	24.1	25.3
52.5°	2788.4	1801.8	102.0	62.6	44.8	30.1	25.0	22.6	22.3	22.9	24.1
55°	2960.3	1753.6	88.5	56.3	40.3	27.4	23.8	21.7	21.7	22.3	23.5
57.5°	3074.4	1665.1	76.8	49.7	36.4	25.9	22.9	20.8	20.5	20.2	21.1
60°	3130.1	1544.4	65.0	43.6	32.8	25.0	22.3	18.4	18.1	17.5	18.1
62.5°	3094.8	1393.3	54.5	37.6	29.2	23.8	19.6	16.0	15.4	14.1	15.0
65°	2914.9	1209.7	46.1	32.2	25.3	20.2	16.6	13.5	12.0	10.5	10.2
67.5°	2546.7	982.8	38.5	27.7	21.7	16.6	13.5	12.0	9.3	8.1	7.8
70°	1908.6	670.9	31.9	23.8	18.1	14.1	11.4	10.8	8.7	7.8	7.2
72.5°	1119.7	362.1	26.8	20.8	15.4	11.7	9.3	9.9	8.7	7.2	6.6
75°	447.3	120.4	21.4	16.6	12.3	8.4	7.8	8.1	7.8	6.6	5.4
77.5°	102.0	37.9	16.6	12.9	9.6	5.4	6.3	6.9	6.9	5.4	3.9
80°	31.9	15.0	9.6	8.1	6.9	3.0	4.5	4.8	3.3	1.5	0.0
82.5°	10.2	4.2	3.3	3.3	3.0	0.6	0.9	0.6	0.0	0.0	0.0
85°	3.9	2.7	2.1	2.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.5	1.2	0.9	1.2	0.6	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)