

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: P367125

Luminaire Tested: **MSA-SA1D-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367125
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-SA1D-830-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 4108 lumens
Efficiency: N/A
Efficacy: 61.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

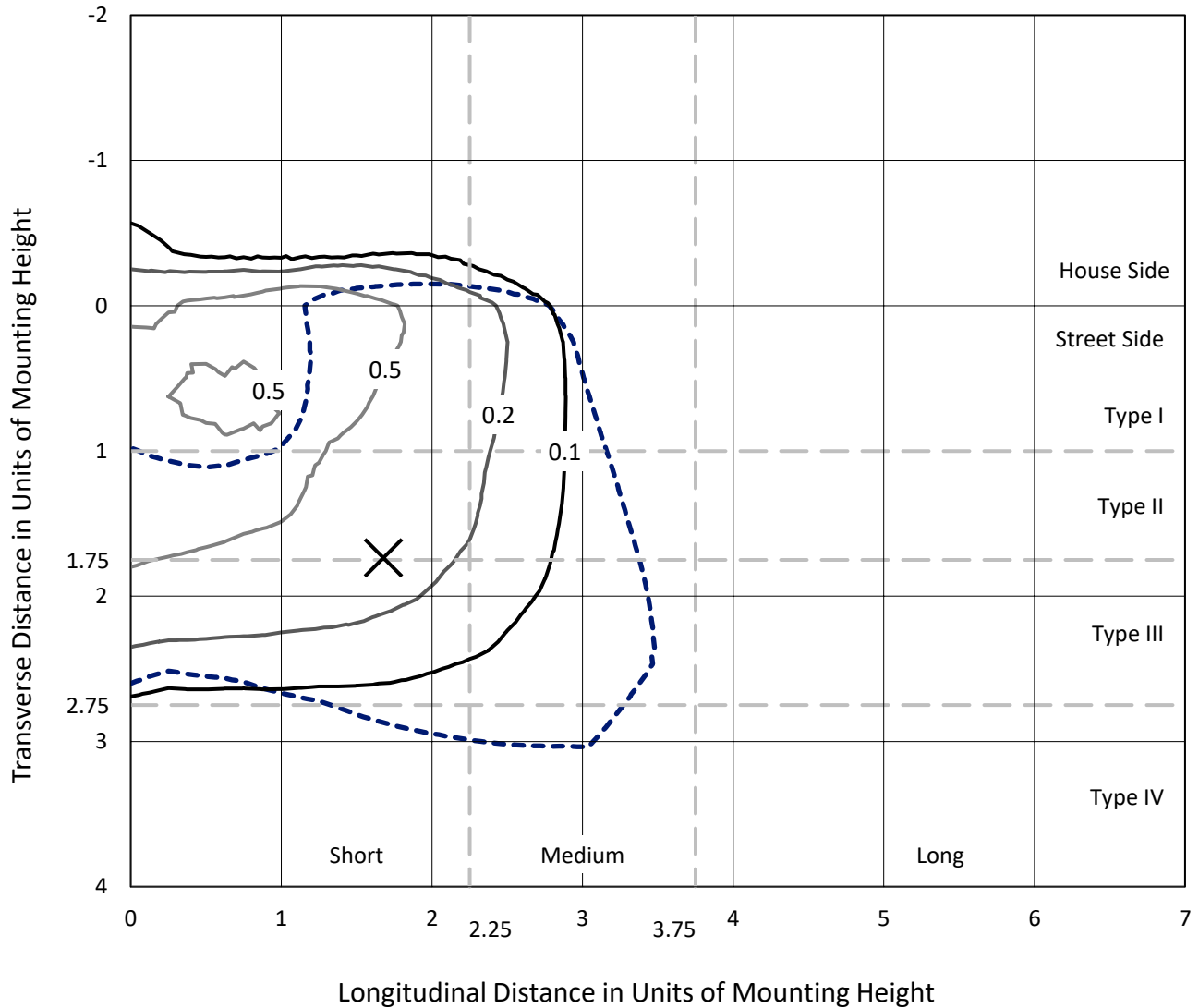
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

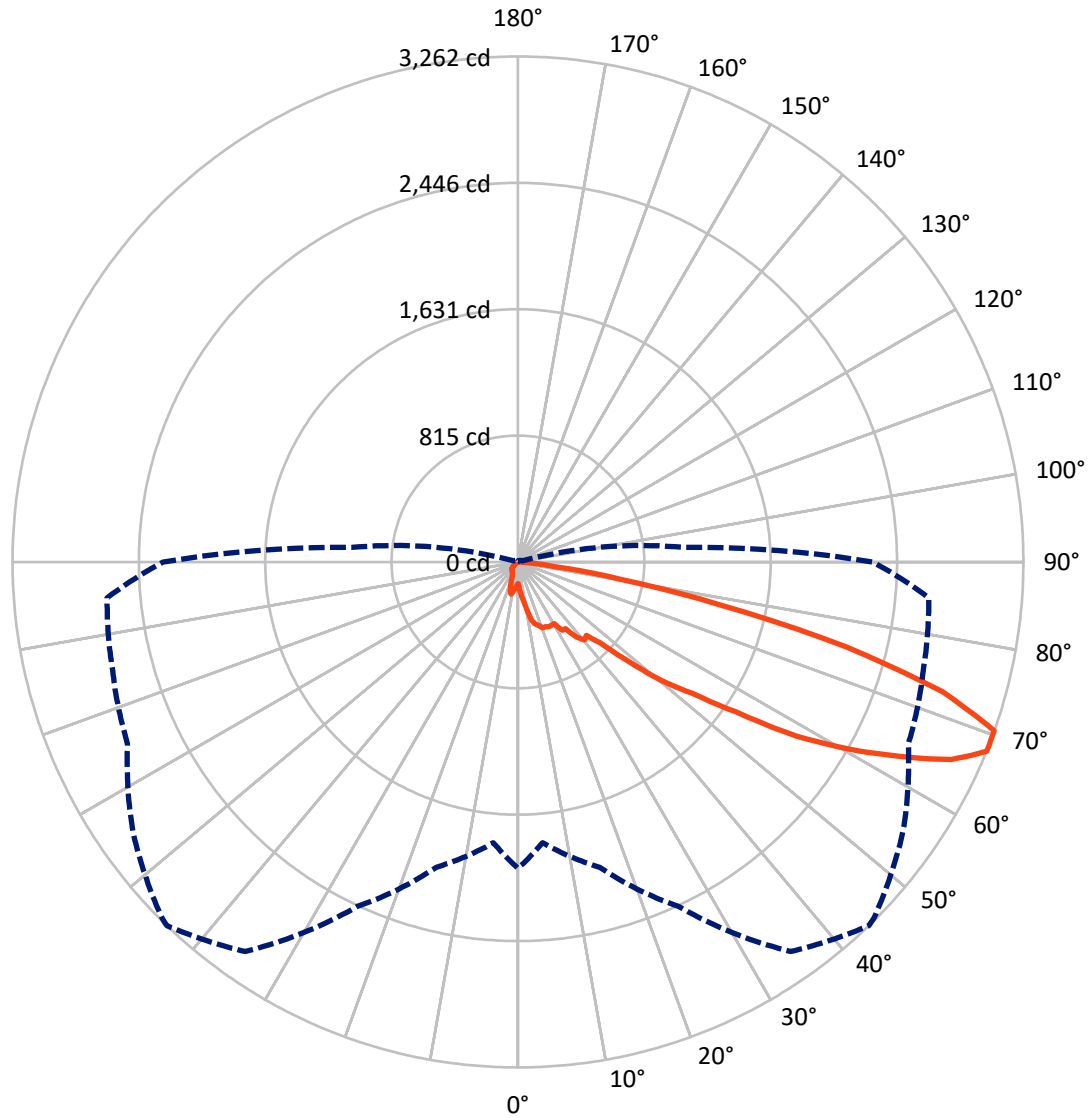
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 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	417.3	0.0	417.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	3690.7	0.0	3690.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	4108.0	0.0	4108.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.5	0.5
10°-20°	85.9	2.1
20°-30°	152.1	3.7
30°-40°	247.3	6.0
40°-50°	494.9	12.0
50°-60°	1015.2	24.7
60°-70°	1394.6	33.9
70°-80°	655.5	16.0
80°-90°	42.0	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°	4108.0	100.0
0°-180°	4108.0	100.0

Coefficient of Utilization



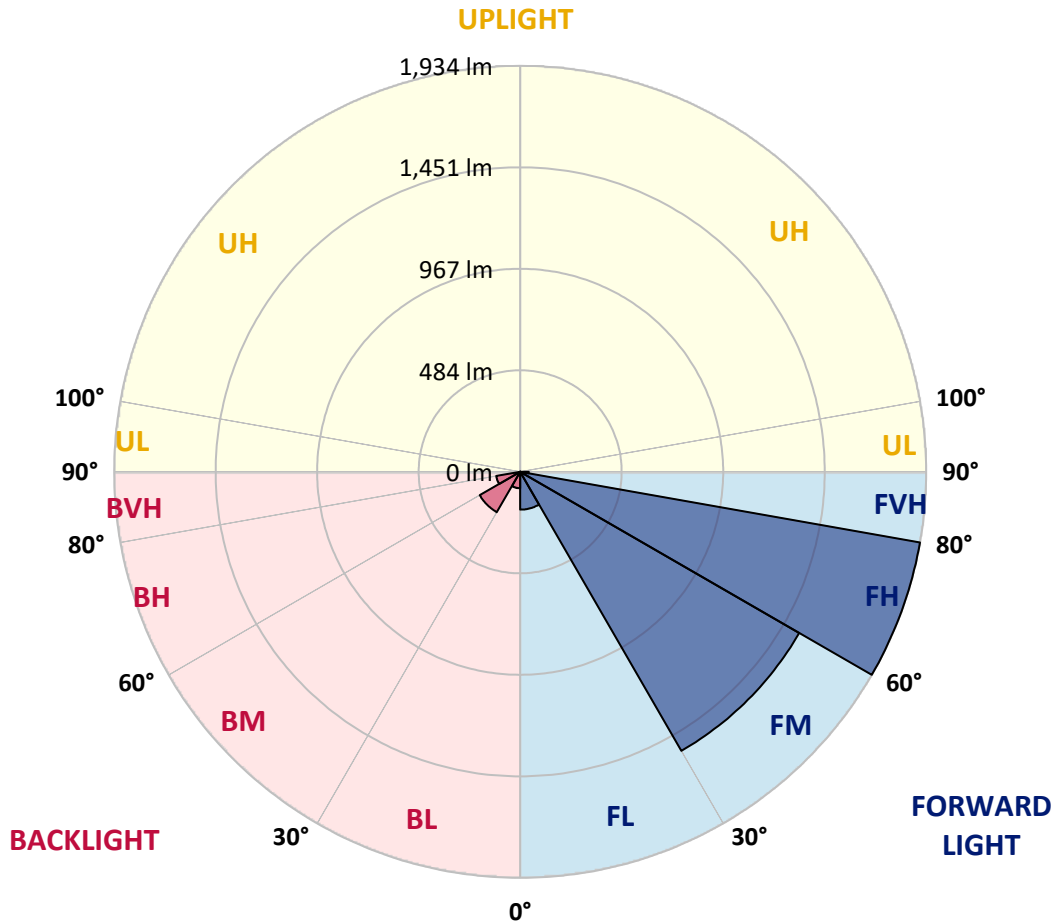
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.2	4.4			
FM (30°-60°)	1535.1	37.4			
FH (60°-80°)	1934.3	47.1			G2/5000
FVH (80°-90°)	41.1	1.0			G1/100
BL (0°-30°)	78.3	1.9	B0/110		
BM (30°-60°)	222.3	5.4	B1/1000		
BH (60°-80°)	115.8	2.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4
2.5°	176.0	170.3	162.2	164.0	164.9	167.4	167.6	164.5	155.4	152.9	164.0
5°	246.7	232.9	230.4	225.2	214.7	209.1	207.7	213.4	206.1	203.9	206.8
7.5°	315.1	303.3	290.4	283.4	261.6	248.3	247.6	249.9	251.2	243.3	247.4
10°	360.6	347.7	345.0	328.5	309.7	306.5	305.1	296.5	289.5	283.6	263.9
12.5°	401.9	401.6	406.6	382.8	379.9	383.1	381.9	351.1	344.1	319.4	313.7
15°	456.7	470.3	448.7	428.8	403.4	414.3	411.4	391.7	386.9	370.1	345.9
17.5°	513.5	517.2	481.1	450.6	444.0	429.7	432.7	425.6	401.6	415.0	391.0
20°	514.9	522.8	484.3	433.8	454.0	453.3	453.5	446.7	415.0	446.3	424.3
22.5°	533.9	514.4	478.6	446.5	450.1	453.5	457.1	448.7	441.9	449.7	453.7
25°	526.2	518.5	484.1	462.8	459.4	462.1	463.0	473.7	469.4	487.9	477.7
27.5°	546.2	535.1	473.4	477.3	465.3	462.1	456.7	492.2	504.9	490.2	517.4
30°	580.4	578.8	491.8	497.4	488.2	460.3	474.8	521.2	537.1	528.0	561.1
32.5°	633.8	639.3	545.5	508.8	513.5	526.0	520.6	521.2	561.3	581.5	607.8
35°	709.7	706.8	597.8	551.8	526.9	528.9	536.6	573.6	625.4	624.1	651.9
37.5°	858.8	826.6	690.4	595.8	603.2	613.4	607.8	657.4	662.4	664.2	730.8
40°	1078.5	1035.7	836.6	688.4	616.4	661.5	658.7	671.0	704.3	716.7	813.9
42.5°	1368.0	1310.4	1093.7	858.8	679.8	648.8	665.5	688.6	800.5	836.1	942.6
45°	1687.8	1571.4	1350.1	1101.6	838.8	742.5	755.2	798.3	953.4	1012.3	1129.9
47.5°	1895.1	1792.7	1604.0	1316.8	1004.6	954.1	955.3	964.5	1133.1	1242.3	1399.9
50°	2075.2	1966.2	1791.1	1541.7	1298.0	1202.4	1180.6	1137.8	1361.9	1511.1	1686.0
52.5°	2329.4	2202.0	1978.2	1805.6	1632.6	1407.4	1399.7	1414.2	1631.7	1788.6	1979.4
55°	2558.6	2403.9	2190.3	2081.5	2014.0	1708.7	1715.2	1739.5	1978.0	2061.1	2240.3
57.5°	2659.9	2492.2	2382.4	2333.4	2297.4	2120.3	2098.1	2083.6	2251.2	2282.9	2513.7
60°	2726.2	2566.8	2516.9	2528.2	2637.4	2449.4	2429.3	2345.0	2477.3	2503.3	2758.8
62.5°	2684.3	2538.9	2549.5	2644.0	2886.4	2762.7	2704.5	2563.6	2662.1	2683.2	2934.9
65°	2420.4	2268.9	2405.7	2634.3	3076.2	3073.3	3046.3	2765.4	2764.5	2791.5	2948.4
67.5°	1977.1	1818.1	2039.4	2451.7	3068.3	3261.5	3248.8	3033.2	2779.2	2707.2	2660.8
70°	1374.6	1236.6	1487.6	2024.7	2794.9	3260.1	3239.8	3213.0	2662.8	2330.3	2063.0
72.5°	714.2	638.3	872.1	1395.2	2227.9	2864.4	2931.7	2887.7	2273.6	1693.0	1214.9
75°	242.6	217.7	359.7	740.5	1481.0	2187.3	2266.2	2221.5	1544.2	908.4	480.5
77.5°	94.0	87.4	128.9	300.6	743.0	1332.9	1418.5	1373.0	828.2	332.8	113.0
80°	53.5	51.6	71.1	135.5	327.6	663.0	723.3	656.0	298.6	112.1	29.4
82.5°	22.7	23.3	39.6	73.2	164.7	234.0	261.0	238.1	125.0	76.8	10.9
85°	5.0	6.1	18.8	40.8	69.1	66.8	70.0	77.7	76.8	56.4	4.8
87.5°	0.0	0.0	5.9	11.1	16.5	10.9	8.6	15.2	23.6	22.7	2.0
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°	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.4
2.5°	166.0	163.8	149.5	148.6	149.5	147.0	146.8	141.6	142.0	153.8	154.7
5°	206.8	195.5	183.3	179.4	175.8	167.6	172.2	172.2	172.2	179.6	181.9
7.5°	243.7	228.6	211.3	196.8	182.8	172.6	179.6	184.6	187.6	197.3	201.8
10°	260.5	245.6	230.1	209.5	198.7	194.8	186.7	182.4	187.6	185.5	188.0
12.5°	296.3	282.7	256.2	234.9	226.8	213.6	189.6	172.8	161.7	159.9	159.5
15°	331.2	322.8	287.2	258.7	230.4	200.0	159.0	136.8	125.0	123.0	123.2
17.5°	375.4	363.3	311.0	270.0	222.0	167.4	122.8	103.7	102.8	107.8	108.3
20°	404.8	385.1	323.0	260.7	194.4	126.6	96.0	91.5	98.8	107.8	106.9
22.5°	432.9	411.6	338.9	252.6	150.6	96.0	88.3	88.8	94.9	104.7	107.1
25°	451.5	443.8	358.4	233.5	114.8	83.1	84.5	87.9	93.1	102.4	102.4
27.5°	507.4	471.4	356.1	196.6	88.3	77.5	80.6	84.9	87.7	98.8	99.9
30°	541.4	529.6	367.9	159.0	77.5	70.2	76.3	80.2	82.0	94.7	95.1
32.5°	583.1	557.0	382.1	117.3	72.0	69.8	68.4	71.4	76.6	87.7	88.3
35°	633.8	626.1	361.8	92.2	70.2	65.2	62.5	64.1	67.5	75.0	76.6
37.5°	737.3	691.6	349.5	79.1	70.2	63.7	60.7	56.6	57.1	62.3	65.2
40°	824.6	810.5	315.3	76.8	67.1	61.4	54.1	49.2	45.8	47.3	48.5
42.5°	984.7	919.7	271.2	75.7	64.1	55.5	46.0	40.8	35.6	36.0	37.8
45°	1179.1	1038.8	231.7	74.5	62.1	49.6	38.7	32.6	27.2	27.4	29.2
47.5°	1438.7	1212.6	183.9	71.1	58.4	44.2	31.3	24.9	21.7	22.4	24.0
50°	1733.6	1365.0	145.4	65.9	54.1	39.0	25.4	20.2	19.0	19.7	21.5
52.5°	1997.0	1477.4	120.1	61.2	48.0	31.7	21.3	17.9	17.4	17.9	19.3
55°	2231.3	1542.6	100.4	55.7	41.2	25.6	19.3	16.5	16.3	16.1	17.0
57.5°	2451.0	1561.4	78.4	47.1	33.5	22.2	17.9	15.4	15.0	14.3	15.0
60°	2611.2	1529.3	57.5	37.8	27.4	20.2	16.8	13.8	13.1	12.0	12.5
62.5°	2688.4	1441.2	43.5	30.4	23.3	18.3	15.0	12.0	11.1	9.7	10.0
65°	2615.0	1295.9	34.2	25.6	19.9	15.4	12.7	10.2	9.1	7.7	7.7
67.5°	2289.9	1075.1	29.0	22.2	16.8	13.1	10.4	9.3	7.5	6.3	6.1
70°	1680.8	773.4	24.9	19.5	14.5	11.3	8.8	8.4	7.2	6.1	5.7
72.5°	948.7	437.6	21.3	17.2	12.2	9.5	7.5	7.7	7.0	5.7	5.2
75°	362.0	147.5	17.7	14.3	10.0	7.2	6.3	6.3	6.3	4.8	4.1
77.5°	89.7	37.6	14.0	11.6	7.9	4.8	5.2	5.4	5.4	4.1	2.9
80°	24.7	12.7	8.4	8.4	5.7	2.7	3.6	3.6	2.9	1.4	0.0
82.5°	9.1	4.8	2.9	3.6	2.5	0.9	1.4	0.9	0.7	0.0	0.0
85°	3.9	2.5	1.8	2.0	1.1	0.0	0.2	0.5	0.0	0.0	0.0
87.5°	1.6	1.1	0.9	0.9	0.5	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)