

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: P366729

Luminaire Tested: **MSA-SA1A-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366729
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-SA1A-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: 2421 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

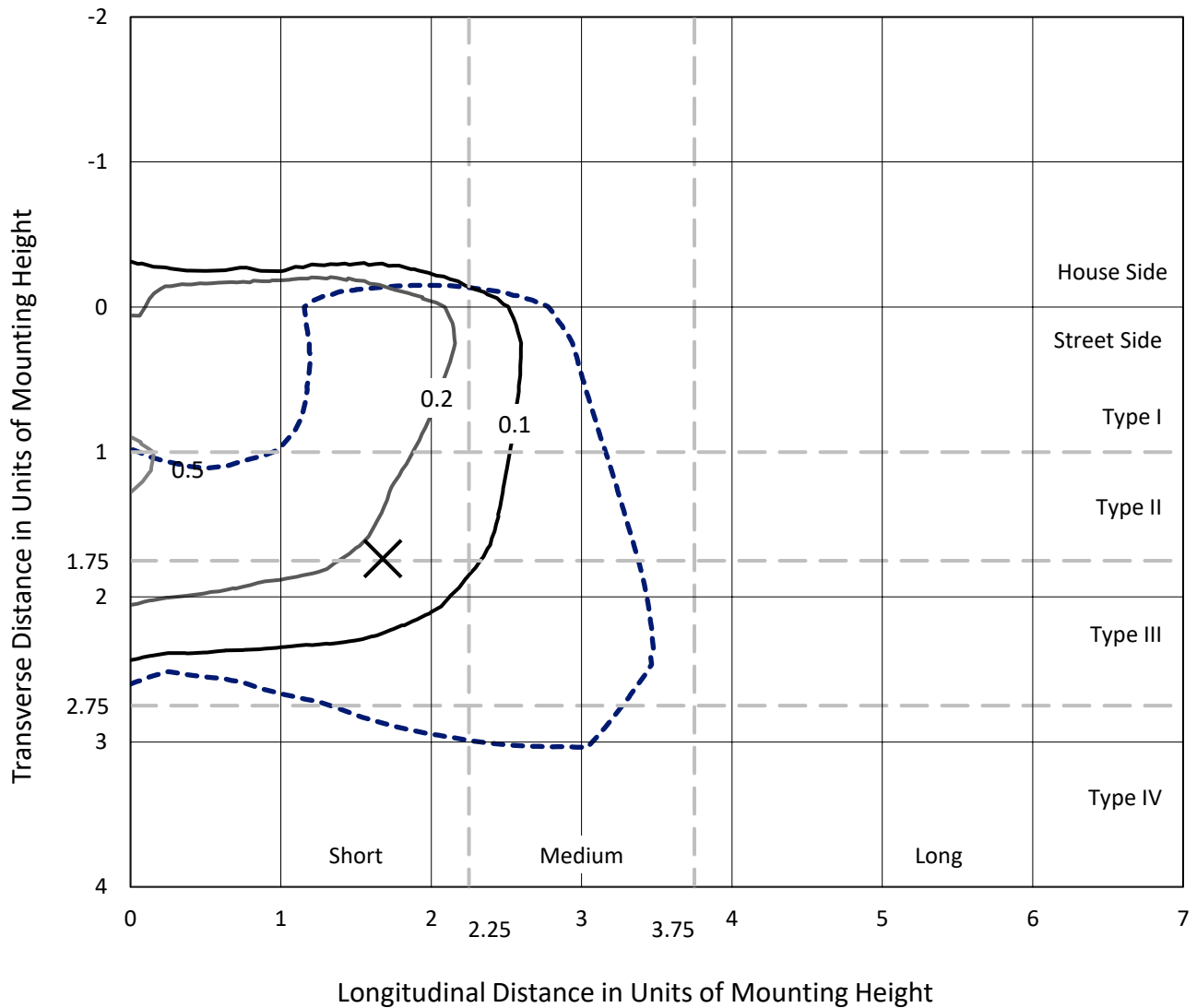
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

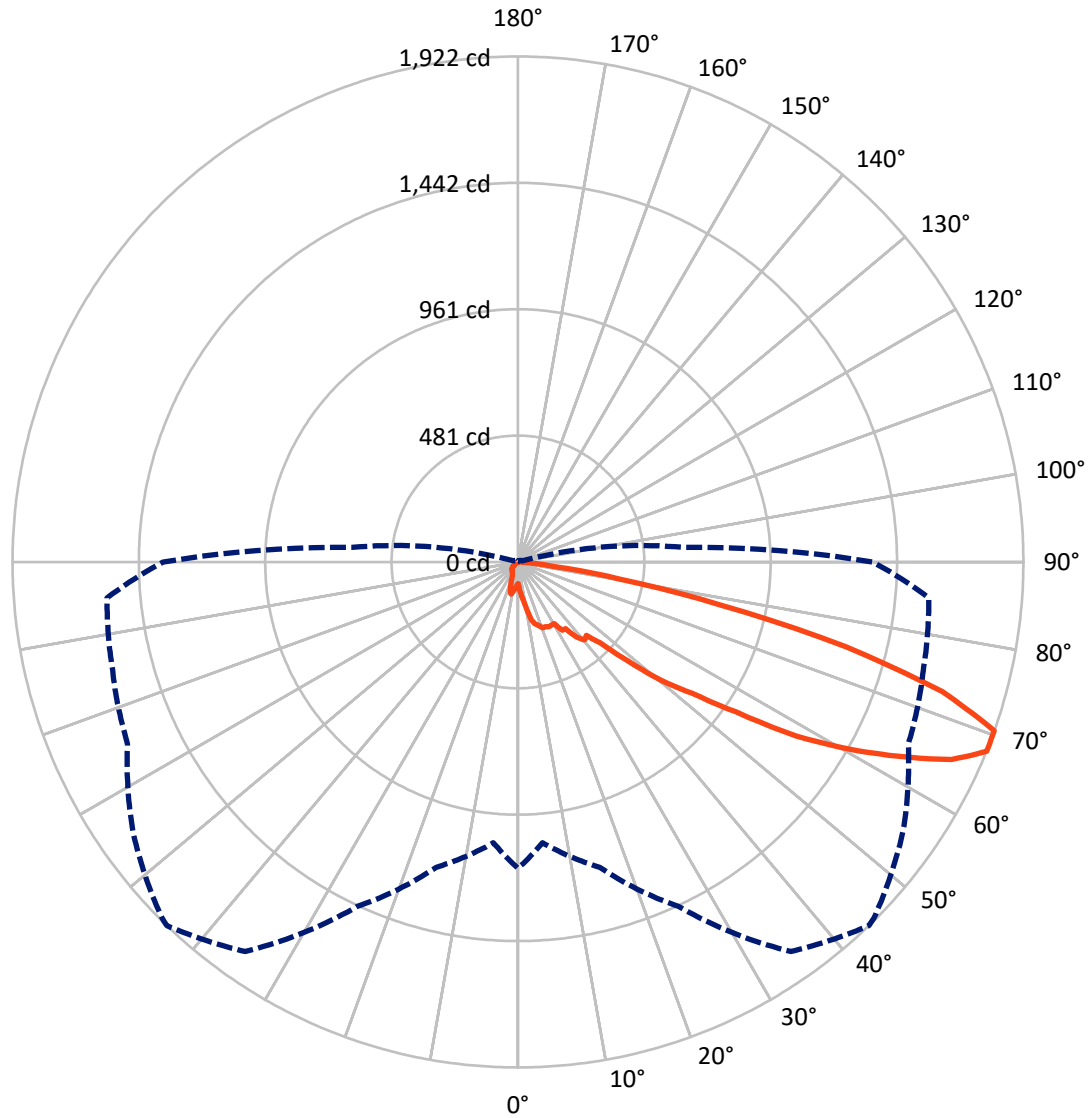
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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	245.9	0.0	245.9
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2175.1	0.0	2175.1
	% Fixture	89.8	0.0	89.8
Total	Lumens	2421.0	0.0	2421.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.1	0.5
10°-20°	50.6	2.1
20°-30°	89.7	3.7
30°-40°	145.7	6.0
40°-50°	291.6	12.0
50°-60°	598.3	24.7
60°-70°	821.9	33.9
70°-80°	386.3	16.0
80°-90°	24.7	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°	2421.0	100.0
0°-180°	2421.0	100.0

Coefficient of Utilization



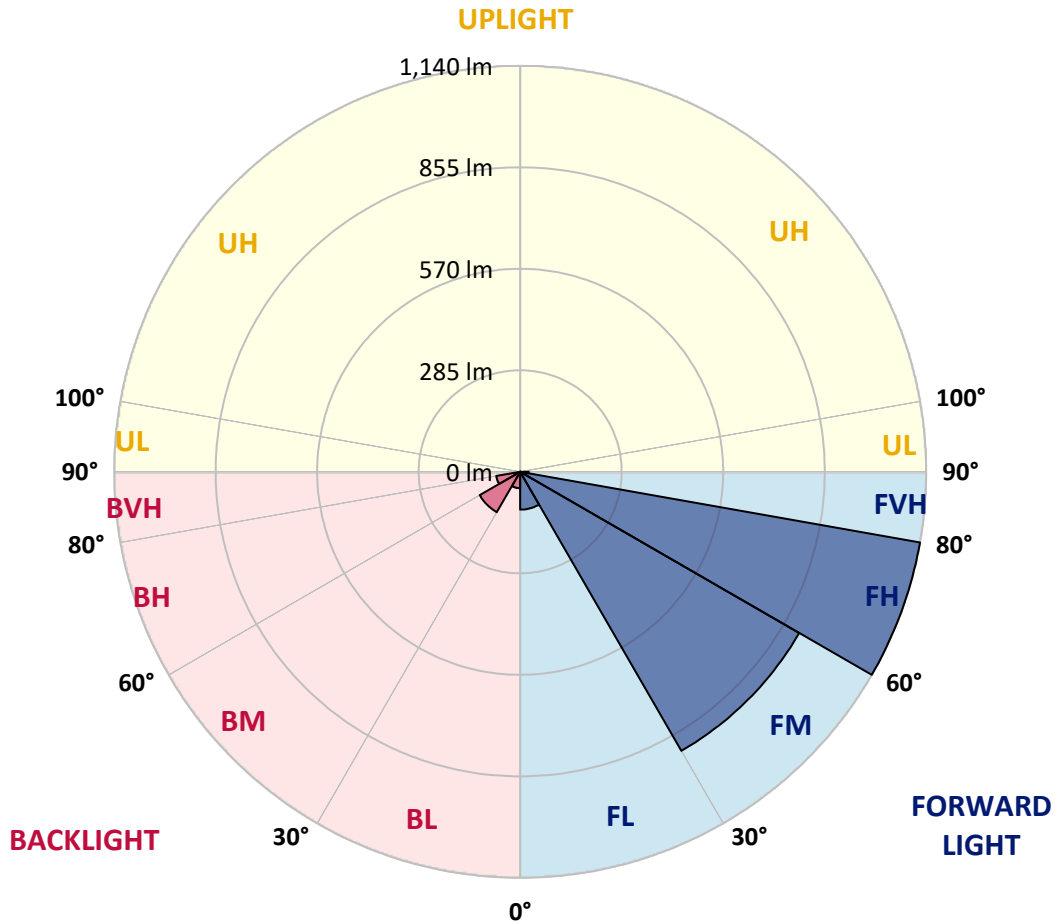
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	106.2	4.4			
FM (30°-60°)	904.7	37.4			
FH (60°-80°)	1140.0	47.1			G1/1800
FVH (80°-90°)	24.2	1.0			G1/100
BL (0°-30°)	46.2	1.9	B0/110		
BM (30°-60°)	131.0	5.4	B0/220		
BH (60°-80°)	68.2	2.8	B0/110		G0/110
BVH (80°-90°)	0.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
2.5°	103.7	100.4	95.6	96.7	97.2	98.7	98.8	96.9	91.6	90.1	96.7
5°	145.4	137.2	135.8	132.7	126.6	123.2	122.4	125.8	121.5	120.1	121.9
7.5°	185.7	178.8	171.1	167.0	154.2	146.3	145.9	147.3	148.1	143.4	145.8
10°	212.5	204.9	203.3	193.6	182.5	180.6	179.8	174.8	170.6	167.1	155.5
12.5°	236.8	236.7	239.6	225.6	223.9	225.7	225.1	206.9	202.8	188.2	184.9
15°	269.1	277.1	264.5	252.7	237.8	244.2	242.4	230.8	228.0	218.1	203.9
17.5°	302.6	304.8	283.6	265.5	261.7	253.2	255.0	250.8	236.7	244.6	230.4
20°	303.4	308.1	285.4	255.7	267.5	267.1	267.3	263.3	244.6	263.0	250.0
22.5°	314.7	303.2	282.1	263.1	265.3	267.3	269.4	264.5	260.5	265.0	267.4
25°	310.1	305.6	285.3	272.7	270.7	272.3	272.9	279.1	276.6	287.6	281.6
27.5°	321.9	315.3	279.0	281.3	274.2	272.3	269.1	290.1	297.6	288.9	304.9
30°	342.0	341.1	289.8	293.2	287.7	271.3	279.8	307.2	316.5	311.2	330.7
32.5°	373.5	376.7	321.5	299.8	302.6	310.0	306.8	307.2	330.8	342.7	358.2
35°	418.3	416.5	352.3	325.2	310.5	311.7	316.3	338.0	368.6	367.8	384.2
37.5°	506.1	487.1	406.9	351.1	355.5	361.5	358.2	387.4	390.4	391.4	430.7
40°	635.6	610.4	493.0	405.7	363.3	389.8	388.2	395.4	415.1	422.4	479.7
42.5°	806.2	772.3	644.5	506.1	400.6	382.3	392.2	405.8	471.8	492.7	555.5
45°	994.7	926.1	795.7	649.2	494.3	437.6	445.1	470.5	561.9	596.6	665.9
47.5°	1116.9	1056.5	945.3	776.0	592.1	562.3	563.0	568.4	667.8	732.1	825.0
50°	1223.0	1158.8	1055.6	908.6	765.0	708.6	695.8	670.6	802.6	890.6	993.6
52.5°	1372.8	1297.7	1165.9	1064.1	962.1	829.4	824.9	833.4	961.6	1054.1	1166.5
55°	1507.9	1416.7	1290.8	1226.7	1186.9	1007.0	1010.9	1025.1	1165.7	1214.7	1320.3
57.5°	1567.6	1468.8	1404.0	1375.2	1354.0	1249.6	1236.5	1227.9	1326.7	1345.4	1481.4
60°	1606.7	1512.7	1483.3	1490.0	1554.3	1443.5	1431.6	1382.0	1460.0	1475.3	1625.9
62.5°	1582.0	1496.3	1502.5	1558.2	1701.1	1628.2	1593.9	1510.8	1568.9	1581.3	1729.6
65°	1426.4	1337.1	1417.8	1552.5	1812.9	1811.2	1795.3	1629.8	1629.2	1645.1	1737.6
67.5°	1165.2	1071.5	1201.9	1444.9	1808.3	1922.1	1914.7	1787.6	1637.9	1595.5	1568.1
70°	810.1	728.8	876.7	1193.2	1647.1	1921.3	1909.3	1893.6	1569.3	1373.3	1215.8
72.5°	420.9	376.2	514.0	822.2	1313.0	1688.1	1727.8	1701.9	1339.9	997.8	716.0
75°	143.0	128.3	212.0	436.4	872.8	1289.1	1335.5	1309.2	910.1	535.3	283.2
77.5°	55.4	51.5	76.0	177.2	437.9	785.5	836.0	809.1	488.1	196.1	66.6
80°	31.5	30.4	41.9	79.8	193.0	390.8	426.3	386.6	176.0	66.1	17.4
82.5°	13.3	13.8	23.4	43.1	97.1	137.9	153.8	140.3	73.7	45.3	6.4
85°	2.9	3.6	11.1	24.0	40.7	39.4	41.3	45.8	45.3	33.2	2.8
87.5°	0.0	0.0	3.5	6.5	9.7	6.4	5.1	8.9	13.9	13.3	1.2
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°	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
2.5°	97.9	96.5	88.1	87.6	88.1	86.6	86.5	83.4	83.7	90.6	91.2
5°	121.9	115.2	108.0	105.7	103.6	98.8	101.5	101.5	101.5	105.9	107.2
7.5°	143.6	134.7	124.6	116.0	107.7	101.7	105.9	108.8	110.5	116.3	118.9
10°	153.5	144.7	135.6	123.5	117.1	114.8	110.0	107.5	110.5	109.3	110.8
12.5°	174.6	166.6	151.0	138.4	133.6	125.9	111.7	101.9	95.3	94.3	94.0
15°	195.2	190.2	169.3	152.5	135.8	117.9	93.7	80.6	73.7	72.5	72.6
17.5°	221.2	214.1	183.3	159.1	130.8	98.7	72.4	61.1	60.6	63.5	63.8
20°	238.6	226.9	190.4	153.7	114.5	74.6	56.6	53.9	58.2	63.5	63.0
22.5°	255.1	242.6	199.7	148.9	88.8	56.6	52.1	52.3	55.9	61.7	63.1
25°	266.1	261.5	211.2	137.6	67.7	49.0	49.8	51.8	54.9	60.3	60.3
27.5°	299.0	277.8	209.9	115.9	52.1	45.7	47.5	50.1	51.7	58.2	58.9
30°	319.1	312.1	216.8	93.7	45.7	41.4	45.0	47.3	48.3	55.8	56.1
32.5°	343.6	328.3	225.2	69.2	42.5	41.1	40.3	42.1	45.1	51.7	52.1
35°	373.5	369.0	213.2	54.3	41.4	38.4	36.8	37.8	39.8	44.2	45.1
37.5°	434.5	407.6	206.0	46.6	41.4	37.5	35.8	33.4	33.6	36.7	38.4
40°	485.9	477.7	185.8	45.3	39.5	36.2	31.9	29.0	27.0	27.9	28.6
42.5°	580.3	542.0	159.8	44.6	37.8	32.7	27.1	24.0	21.0	21.2	22.3
45°	694.9	612.2	136.6	43.9	36.6	29.2	22.8	19.2	16.0	16.2	17.2
47.5°	847.9	714.6	108.4	41.9	34.4	26.0	18.4	14.7	12.8	13.2	14.2
50°	1021.7	804.5	85.7	38.8	31.9	23.0	15.0	11.9	11.2	11.6	12.7
52.5°	1176.9	870.7	70.8	36.0	28.3	18.7	12.5	10.5	10.3	10.5	11.3
55°	1315.0	909.1	59.1	32.8	24.3	15.1	11.3	9.7	9.6	9.5	10.0
57.5°	1444.5	920.2	46.2	27.8	19.8	13.1	10.5	9.1	8.8	8.4	8.8
60°	1538.8	901.3	33.9	22.3	16.2	11.9	9.9	8.1	7.7	7.1	7.3
62.5°	1584.4	849.3	25.6	17.9	13.8	10.8	8.8	7.1	6.5	5.7	5.9
65°	1541.1	763.8	20.2	15.1	11.7	9.1	7.5	6.0	5.3	4.5	4.5
67.5°	1349.5	633.6	17.1	13.1	9.9	7.7	6.1	5.5	4.4	3.7	3.6
70°	990.6	455.8	14.7	11.5	8.5	6.7	5.2	4.9	4.3	3.6	3.3
72.5°	559.1	257.9	12.5	10.1	7.2	5.6	4.4	4.5	4.1	3.3	3.1
75°	213.3	86.9	10.4	8.4	5.9	4.3	3.7	3.7	3.7	2.8	2.4
77.5°	52.9	22.2	8.3	6.8	4.7	2.8	3.1	3.2	3.2	2.4	1.7
80°	14.6	7.5	4.9	4.9	3.3	1.6	2.1	2.1	1.7	0.8	0.0
82.5°	5.3	2.8	1.7	2.1	1.5	0.5	0.8	0.5	0.4	0.0	0.0
85°	2.3	1.5	1.1	1.2	0.7	0.0	0.1	0.3	0.0	0.0	0.0
87.5°	0.9	0.7	0.5	0.5	0.3	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)