

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: P366861

Luminaire Tested: **MSA-SA1B-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366861
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-SA1B-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: 3034 lumens
Efficiency: N/A
Efficacy: 69.0 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

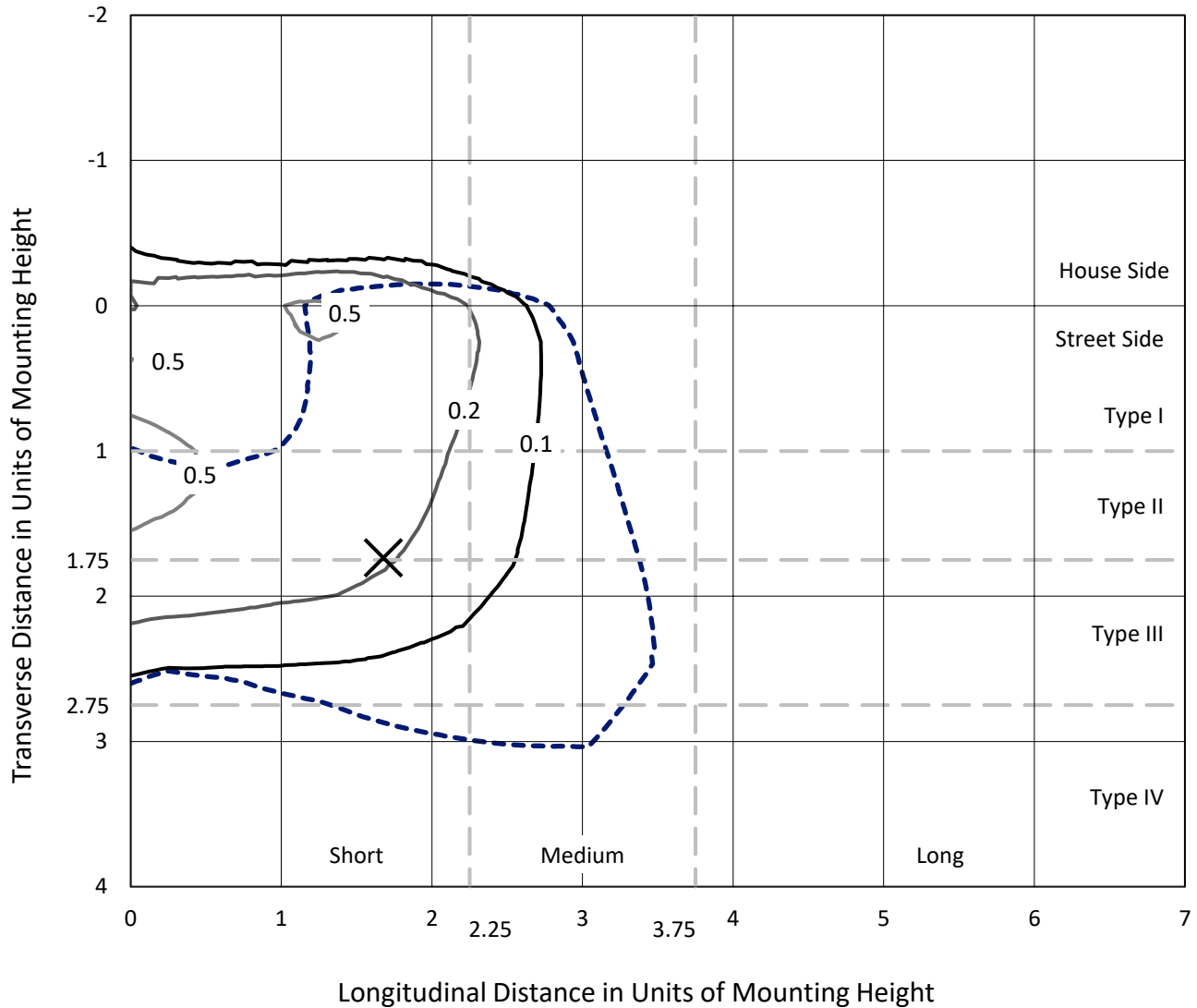
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

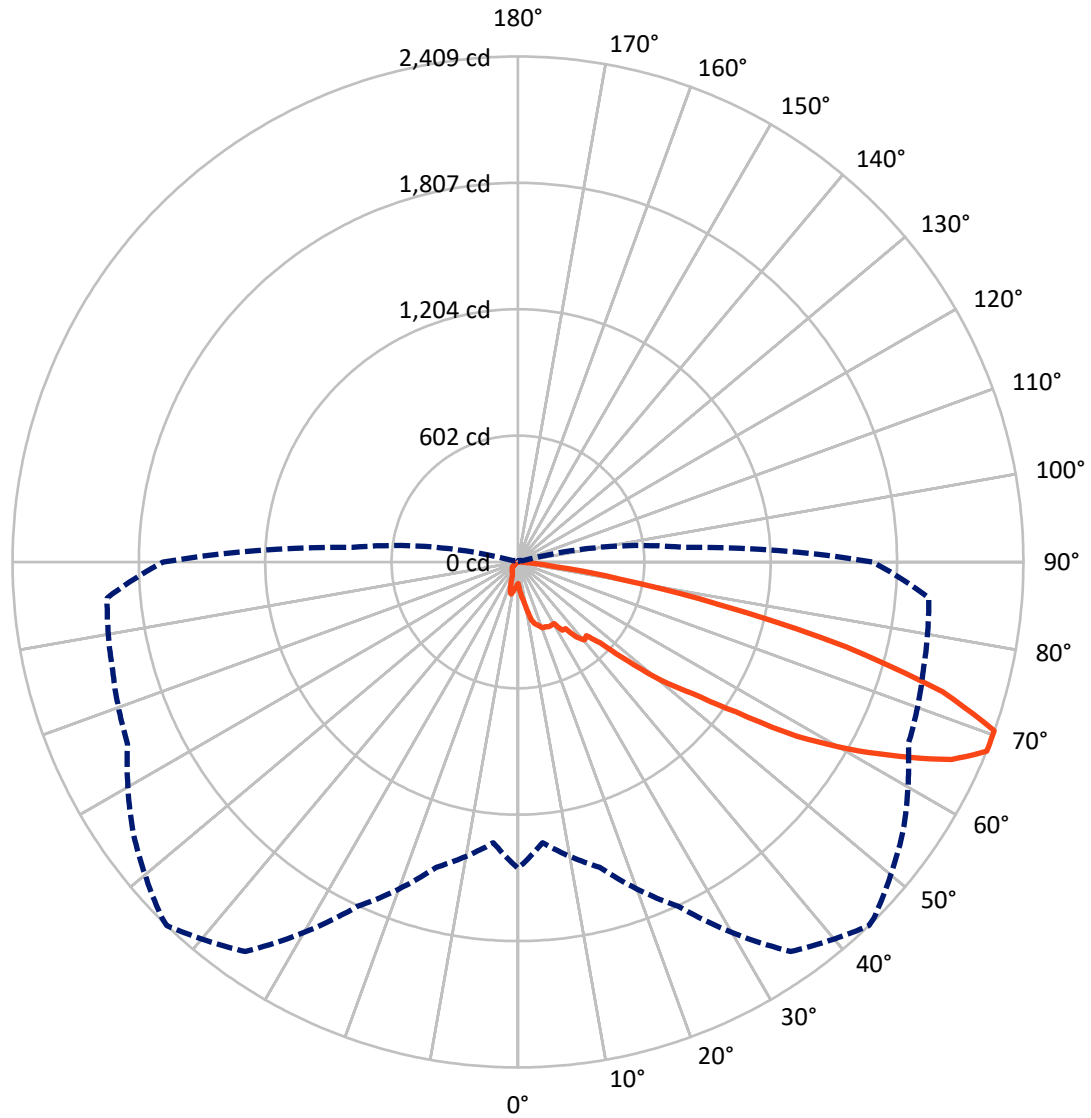
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 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	308.2	0.0	308.2
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2725.8	0.0	2725.8
	% Fixture	89.8	0.0	89.8
Total	Lumens	3034.0	0.0	3034.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.1	0.5
10°-20°	63.4	2.1
20°-30°	112.4	3.7
30°-40°	182.6	6.0
40°-50°	365.5	12.0
50°-60°	749.8	24.7
60°-70°	1030.0	33.9
70°-80°	484.1	16.0
80°-90°	31.0	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°	3034.0	100.0
0°-180°	3034.0	100.0

Coefficient of Utilization

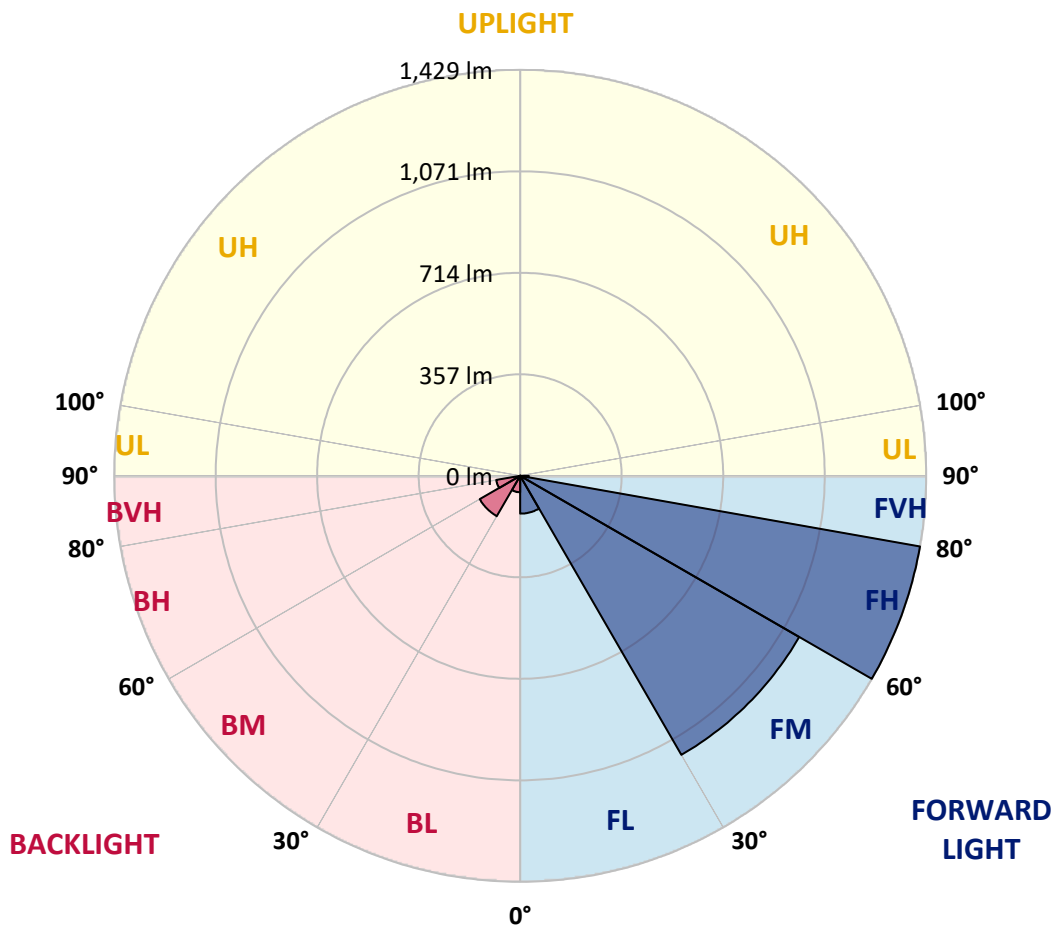


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	133.1	4.4			
FM (30°-60°)	1133.8	37.4			
FH (60°-80°)	1428.6	47.1			G1/1800
FVH (80°-90°)	30.4	1.0			G1/100
BL (0°-30°)	57.9	1.9	B0/110		
BM (30°-60°)	164.2	5.4	B0/220		
BH (60°-80°)	85.5	2.8	B0/110		G0/110
BVH (80°-90°)	0.6	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°	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
2.5°	130.0	125.8	119.8	121.1	121.8	123.6	123.8	121.5	114.8	112.9	121.1
5°	182.2	172.0	170.1	166.3	158.6	154.4	153.4	157.6	152.2	150.6	152.7
7.5°	232.7	224.0	214.5	209.3	193.2	183.4	182.9	184.5	185.5	179.7	182.7
10°	266.3	256.8	254.8	242.6	228.7	226.4	225.4	219.0	213.8	209.5	194.9
12.5°	296.8	296.6	300.3	282.7	280.6	282.9	282.1	259.3	254.1	235.9	231.7
15°	337.3	347.3	331.4	316.7	298.0	306.0	303.8	289.3	285.8	273.4	255.5
17.5°	379.3	382.0	355.3	332.8	327.9	317.4	319.5	314.4	296.6	306.5	288.8
20°	380.3	386.1	357.7	320.4	335.3	334.8	334.9	329.9	306.5	329.6	313.4
22.5°	394.3	379.9	353.5	329.8	332.4	334.9	337.6	331.4	326.4	332.1	335.1
25°	388.6	383.0	357.5	341.8	339.3	341.3	342.0	349.8	346.6	360.4	352.8
27.5°	403.4	395.2	349.7	352.5	343.6	341.3	337.3	363.5	372.9	362.0	382.1
30°	428.6	427.5	363.2	367.4	360.5	340.0	350.7	385.0	396.7	390.0	414.4
32.5°	468.1	472.1	402.9	375.8	379.3	388.5	384.5	385.0	414.6	429.5	448.9
35°	524.2	522.0	441.5	407.5	389.1	390.6	396.3	423.6	461.9	460.9	481.5
37.5°	634.2	610.5	509.9	440.0	445.5	453.1	448.9	485.5	489.2	490.5	539.7
40°	796.5	764.9	617.8	508.4	455.2	488.5	486.5	495.5	520.1	529.3	601.1
42.5°	1010.3	967.8	807.7	634.2	502.1	479.2	491.5	508.6	591.2	617.5	696.1
45°	1246.6	1160.6	997.1	813.6	619.5	548.4	557.8	589.6	704.2	747.7	834.5
47.5°	1399.6	1324.0	1184.7	972.5	742.0	704.7	705.5	712.4	836.8	917.5	1033.9
50°	1532.7	1452.2	1322.9	1138.7	958.6	888.0	872.0	840.4	1005.8	1116.1	1245.2
52.5°	1720.4	1626.3	1461.0	1333.6	1205.7	1039.4	1033.8	1044.5	1205.1	1321.0	1461.9
55°	1889.7	1775.4	1617.6	1537.3	1487.5	1262.0	1266.8	1284.7	1460.9	1522.3	1654.6
57.5°	1964.5	1840.7	1759.5	1723.4	1696.8	1565.9	1549.5	1538.8	1662.6	1686.1	1856.5
60°	2013.5	1895.7	1858.9	1867.3	1947.9	1809.0	1794.1	1731.9	1829.6	1848.9	2037.6
62.5°	1982.5	1875.1	1883.0	1952.7	2131.8	2040.4	1997.4	1893.4	1966.1	1981.7	2167.6
65°	1787.6	1675.7	1776.7	1945.6	2272.0	2269.8	2249.9	2042.4	2041.8	2061.7	2177.6
67.5°	1460.2	1342.8	1506.2	1810.7	2266.1	2408.8	2399.4	2240.2	2052.6	1999.4	1965.1
70°	1015.2	913.3	1098.7	1495.3	2064.2	2407.8	2392.8	2373.0	1966.6	1721.0	1523.6
72.5°	527.5	471.5	644.1	1030.4	1645.4	2115.5	2165.2	2132.8	1679.2	1250.4	897.2
75°	179.2	160.8	265.7	546.9	1093.8	1615.5	1673.7	1640.7	1140.5	670.9	354.8
77.5°	69.4	64.6	95.2	222.0	548.8	984.4	1047.6	1014.0	611.7	245.8	83.5
80°	39.5	38.1	52.5	100.0	241.9	489.7	534.2	484.5	220.5	82.8	21.7
82.5°	16.7	17.2	29.3	54.0	121.6	172.8	192.7	175.8	92.4	56.7	8.0
85°	3.7	4.5	13.9	30.1	51.0	49.4	51.7	57.4	56.7	41.7	3.5
87.5°	0.0	0.0	4.3	8.2	12.2	8.0	6.4	11.2	17.4	16.7	1.5
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°	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
2.5°	122.6	121.0	110.4	109.8	110.4	108.6	108.4	104.6	104.9	113.6	114.3
5°	152.7	144.4	135.3	132.5	129.8	123.8	127.1	127.1	127.1	132.7	134.3
7.5°	180.0	168.8	156.1	145.4	135.0	127.5	132.7	136.4	138.5	145.7	149.1
10°	192.4	181.4	170.0	154.8	146.7	143.9	137.9	134.7	138.5	137.0	138.9
12.5°	218.8	208.8	189.2	173.5	167.5	157.8	140.0	127.7	119.5	118.1	117.8
15°	244.6	238.4	212.1	191.1	170.1	147.7	117.4	101.1	92.4	90.8	91.0
17.5°	277.2	268.4	229.7	199.4	164.0	123.6	90.7	76.6	76.0	79.6	80.0
20°	299.0	284.4	238.6	192.6	143.5	93.5	70.9	67.6	72.9	79.6	79.0
22.5°	319.7	304.0	250.3	186.5	111.3	70.9	65.2	65.6	70.1	77.3	79.1
25°	333.4	327.7	264.7	172.5	84.8	61.4	62.4	64.9	68.8	75.6	75.6
27.5°	374.8	348.2	263.0	145.2	65.2	57.2	59.6	62.7	64.7	72.9	73.8
30°	399.9	391.2	271.7	117.4	57.2	51.9	56.4	59.2	60.6	69.9	70.3
32.5°	430.6	411.4	282.2	86.7	53.2	51.5	50.5	52.7	56.5	64.7	65.2
35°	468.1	462.4	267.2	68.1	51.9	48.2	46.2	47.3	49.9	55.4	56.5
37.5°	544.6	510.8	258.1	58.4	51.9	47.0	44.8	41.8	42.2	46.0	48.2
40°	609.0	598.6	232.9	56.7	49.5	45.3	40.0	36.3	33.8	35.0	35.8
42.5°	727.3	679.2	200.3	55.9	47.3	41.0	34.0	30.1	26.3	26.6	27.9
45°	870.8	767.2	171.1	55.0	45.8	36.6	28.6	24.1	20.1	20.2	21.6
47.5°	1062.5	895.6	135.8	52.5	43.2	32.6	23.1	18.4	16.1	16.6	17.7
50°	1280.4	1008.2	107.4	48.7	40.0	28.8	18.7	14.9	14.1	14.6	15.9
52.5°	1474.9	1091.1	88.7	45.2	35.5	23.4	15.7	13.2	12.9	13.2	14.2
55°	1647.9	1139.3	74.1	41.2	30.4	18.9	14.2	12.2	12.0	11.9	12.5
57.5°	1810.2	1153.2	57.9	34.8	24.8	16.4	13.2	11.4	11.0	10.5	11.0
60°	1928.5	1129.5	42.5	27.9	20.2	14.9	12.4	10.2	9.7	8.9	9.2
62.5°	1985.5	1064.4	32.1	22.4	17.2	13.6	11.0	8.9	8.2	7.2	7.4
65°	1931.3	957.1	25.3	18.9	14.7	11.4	9.4	7.5	6.7	5.7	5.7
67.5°	1691.3	794.0	21.4	16.4	12.4	9.7	7.7	6.9	5.5	4.7	4.5
70°	1241.4	571.2	18.4	14.4	10.7	8.4	6.5	6.2	5.4	4.5	4.2
72.5°	700.7	323.2	15.7	12.7	9.0	7.0	5.5	5.7	5.2	4.2	3.8
75°	267.3	108.9	13.0	10.5	7.4	5.4	4.7	4.7	4.7	3.5	3.0
77.5°	66.3	27.8	10.4	8.5	5.9	3.5	3.8	4.0	4.0	3.0	2.2
80°	18.2	9.4	6.2	6.2	4.2	2.0	2.7	2.7	2.2	1.0	0.0
82.5°	6.7	3.5	2.2	2.7	1.8	0.7	1.0	0.7	0.5	0.0	0.0
85°	2.8	1.8	1.3	1.5	0.8	0.0	0.2	0.3	0.0	0.0	0.0
87.5°	1.2	0.8	0.7	0.7	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)