

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: P596518

Luminaire Tested: **MSA-SA1B-827-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3775 lumens
Efficiency: N/A
Efficacy: 85.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

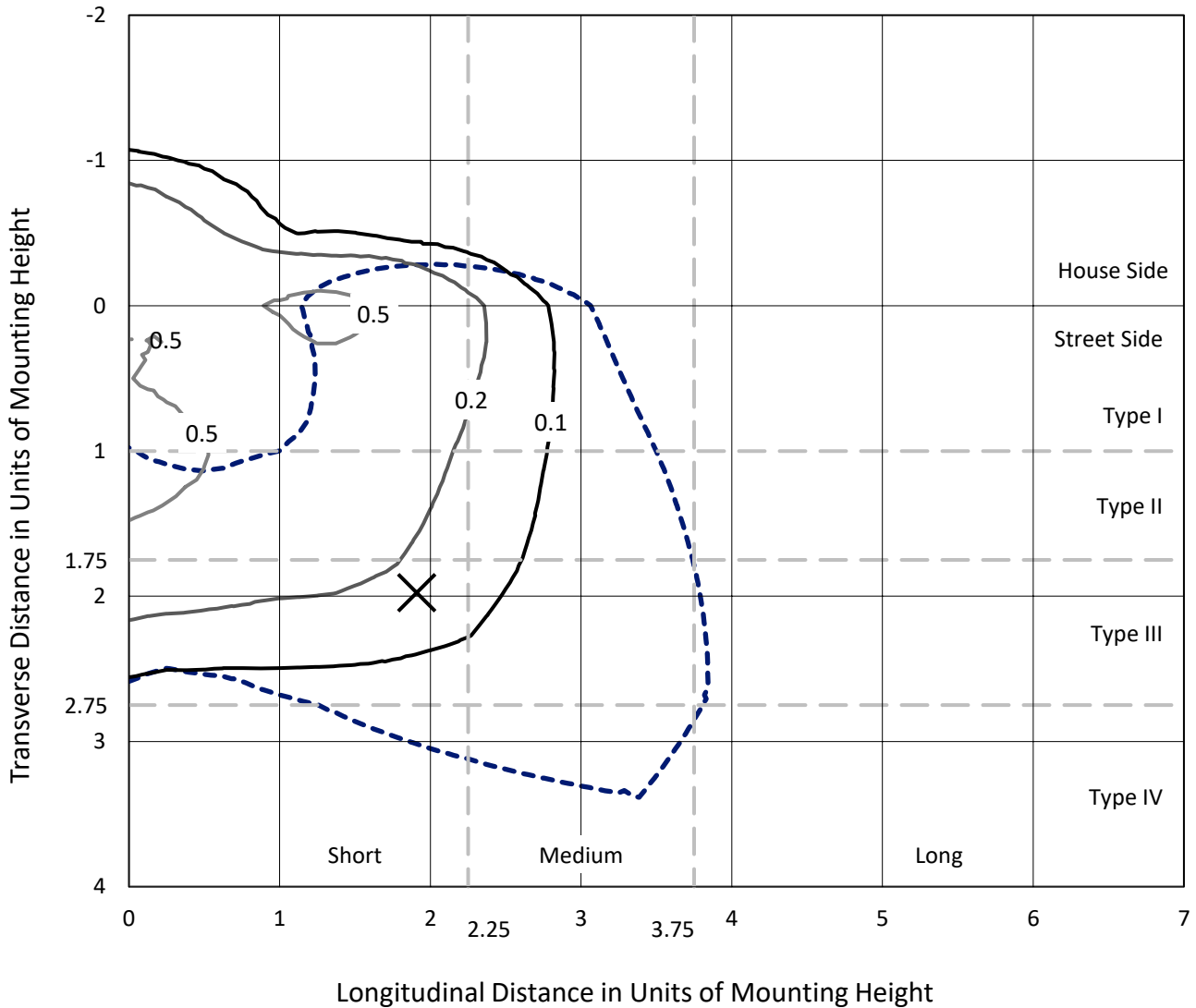
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

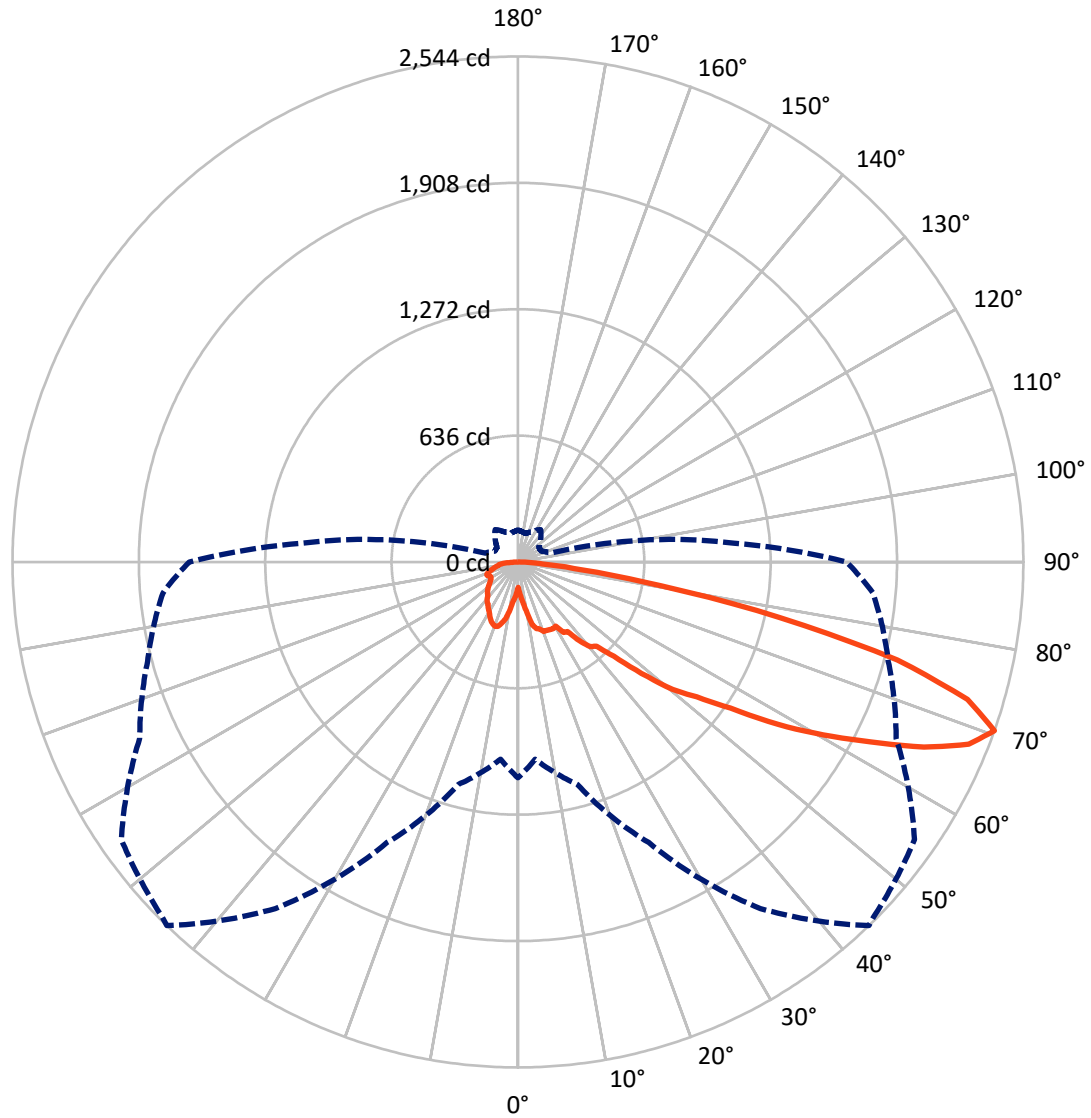
✕ Max cd
 - - - 1/2 Max cd



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 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	832.9	0.0	832.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	2942.1	0.0	2942.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	3775.0	0.0	3775.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.1	0.5
10°-20°	92.7	2.5
20°-30°	173.1	4.6
30°-40°	277.9	7.4
40°-50°	469.1	12.4
50°-60°	835.9	22.1
60°-70°	1143.4	30.3
70°-80°	672.4	17.8
80°-90°	90.5	2.4
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°	3775.0	100.0
0°-180°	3775.0	100.0

Coefficient of Utilization



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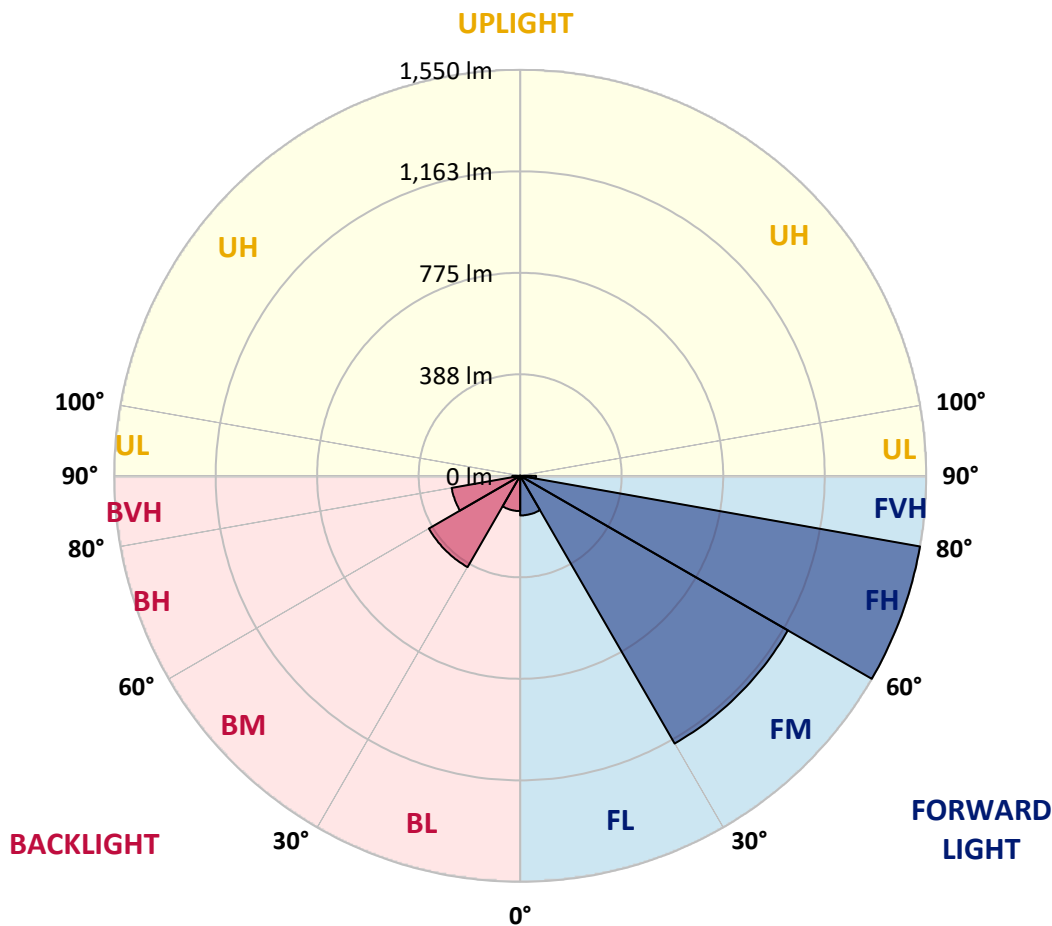
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	151.3	4.0			
FM (30°-60°)	1180.3	31.3			
FH (60°-80°)	1550.1	41.1			G1/1800
FVH (80°-90°)	60.3	1.6			G1/100
BL (0°-30°)	134.6	3.6	B1/500		
BM (30°-60°)	402.5	10.7	B1/1000		
BH (60°-80°)	265.6	7.0	B1/500		G1/500
BVH (80°-90°)	30.2	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3
2.5°	155.7	152.6	145.2	147.7	150.8	152.0	151.7	151.4	146.6	144.9	153.4
5°	211.6	204.8	199.4	197.2	190.1	184.5	181.1	190.1	188.7	191.0	196.9
7.5°	264.2	259.9	247.7	243.3	228.8	219.2	218.1	225.2	227.1	223.4	233.4
10°	298.1	290.7	288.2	277.8	267.8	266.2	265.3	262.1	257.6	257.3	248.3
12.5°	324.4	328.3	330.3	318.4	318.7	324.3	321.3	308.2	300.6	287.3	288.4
15°	371.6	377.2	361.3	353.7	339.1	347.5	346.4	335.4	334.3	325.7	315.6
17.5°	412.8	415.3	388.7	371.3	366.4	354.3	357.6	357.9	343.6	359.1	350.1
20°	416.2	425.0	394.4	359.9	374.7	373.2	373.7	370.6	351.8	377.4	374.0
22.5°	432.9	419.5	391.9	366.7	370.6	372.9	375.0	371.3	370.2	384.5	394.9
25°	429.8	425.5	397.6	376.3	376.7	377.2	378.3	389.4	388.2	407.6	413.0
27.5°	458.8	452.1	399.3	394.1	382.0	379.4	371.9	395.2	413.3	412.8	442.7
30°	513.9	507.1	439.0	423.6	401.8	374.9	389.1	420.1	434.3	439.1	477.0
32.5°	599.9	611.1	517.0	455.2	428.1	422.3	420.7	417.6	452.9	476.6	511.1
35°	723.5	714.6	608.9	522.9	455.8	430.6	434.0	452.9	494.8	510.2	542.1
37.5°	864.9	846.7	726.7	599.5	535.7	504.1	492.8	511.1	520.4	532.5	597.6
40°	1008.7	964.2	842.3	700.2	583.7	559.9	550.0	527.5	549.3	573.8	656.6
42.5°	1147.6	1113.1	968.2	820.5	664.5	579.5	574.1	552.1	619.8	645.6	741.7
45°	1293.1	1213.1	1097.1	956.3	782.6	675.9	667.9	628.4	715.1	769.0	861.8
47.5°	1390.9	1316.8	1215.2	1066.5	881.5	837.2	821.9	754.4	833.1	903.0	1047.4
50°	1483.5	1407.2	1300.5	1187.1	1060.6	1009.7	977.0	864.6	979.9	1093.9	1285.3
52.5°	1616.0	1547.7	1399.6	1308.6	1253.0	1127.8	1103.5	1041.7	1151.8	1305.5	1545.4
55°	1757.6	1664.6	1530.4	1479.9	1457.5	1297.1	1277.3	1238.0	1380.5	1522.0	1798.1
57.5°	1820.1	1723.1	1649.1	1618.9	1617.0	1543.2	1520.5	1493.1	1614.4	1707.7	2036.0
60°	1869.8	1765.6	1736.1	1752.9	1814.2	1765.6	1736.1	1711.9	1804.8	1891.3	2230.2
62.5°	1860.7	1756.2	1771.4	1822.8	1979.2	1993.5	1970.7	1912.2	1993.5	2041.8	2341.4
65°	1713.3	1616.7	1705.1	1827.1	2132.6	2246.4	2245.2	2092.1	2120.3	2120.3	2329.7
67.5°	1455.1	1355.1	1499.9	1788.9	2238.7	2446.9	2447.2	2282.8	2131.9	2112.4	2147.6
70°	1086.6	996.0	1158.7	1557.9	2129.2	2543.9	2529.8	2436.6	2100.0	1929.6	1794.0
72.5°	649.0	590.5	740.2	1134.1	1816.3	2365.4	2402.9	2259.4	1922.4	1604.7	1282.4
75°	294.7	269.3	347.8	651.5	1296.6	1973.1	2013.8	1906.8	1527.0	1154.1	741.1
77.5°	126.2	119.3	151.8	289.0	715.0	1349.3	1432.7	1362.7	1034.6	670.7	327.8
80°	81.1	76.8	93.3	139.0	332.0	729.0	800.9	774.7	527.0	260.8	115.5
82.5°	48.4	47.1	62.4	87.3	181.1	320.9	361.6	371.2	218.9	117.0	66.1
85°	26.5	26.8	34.2	52.9	108.7	124.9	133.7	145.5	103.1	67.8	32.0
87.5°	8.8	10.2	13.8	21.5	38.7	35.3	35.4	41.2	43.5	28.2	10.2
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°	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3
2.5°	154.8	152.0	144.9	145.3	148.0	148.6	149.4	144.9	144.0	152.5	153.2
5°	197.8	188.7	184.5	183.1	179.1	177.7	185.1	188.5	191.9	198.6	201.8
7.5°	232.3	222.1	214.5	207.6	201.7	198.3	210.8	220.4	226.3	239.9	246.1
10°	248.1	239.3	236.5	230.9	235.4	245.6	248.0	248.3	261.3	261.0	263.6
12.5°	279.5	273.8	264.7	266.7	278.5	289.0	286.0	290.5	295.2	306.3	301.2
15°	308.2	306.6	298.1	299.5	301.8	315.0	316.7	321.2	328.3	337.1	331.1
17.5°	343.5	342.9	322.1	320.3	325.7	338.5	334.5	326.6	350.1	359.6	357.1
20°	367.5	362.8	336.2	328.3	342.1	343.8	339.1	326.6	347.0	367.6	373.2
22.5°	387.4	382.0	354.6	339.1	336.3	337.1	337.1	334.8	344.9	361.7	361.6
25°	403.5	408.6	373.8	358.9	344.1	325.5	323.2	325.2	330.9	363.4	362.4
27.5°	443.9	429.8	380.3	369.2	338.7	309.4	315.8	318.9	320.7	356.3	362.2
30°	470.2	474.6	403.5	375.2	330.8	291.5	293.6	302.6	313.4	355.5	357.2
32.5°	505.7	496.4	439.7	365.1	309.7	280.6	276.6	288.7	304.8	343.0	347.6
35°	538.7	549.6	455.1	363.3	295.0	264.4	268.7	272.9	289.6	329.1	334.5
37.5°	616.0	591.0	498.1	354.3	282.8	256.2	251.5	257.9	272.1	302.6	315.1
40°	674.9	676.4	507.4	343.0	259.4	244.4	234.5	240.8	246.9	271.2	276.6
42.5°	785.2	751.5	530.1	318.2	244.7	226.8	221.2	224.0	224.9	235.1	244.1
45°	925.6	846.5	539.1	285.0	225.4	219.5	208.2	206.8	201.7	203.1	211.0
47.5°	1119.9	994.8	532.6	249.5	208.2	210.0	193.8	187.4	180.3	182.0	189.5
50°	1371.1	1184.3	532.2	219.5	196.4	197.7	184.3	172.9	165.8	169.3	175.8
52.5°	1653.0	1374.3	534.3	198.9	183.6	183.0	178.2	164.2	158.5	162.2	169.6
55°	1922.6	1537.8	550.4	185.9	170.3	171.3	173.2	161.4	155.1	158.5	166.2
57.5°	2157.2	1666.9	544.4	172.1	157.9	162.8	167.8	157.6	152.8	157.7	165.5
60°	2321.3	1726.8	496.7	159.0	148.7	155.6	165.2	157.1	156.5	167.2	176.5
62.5°	2381.2	1704.7	403.8	148.6	143.3	154.6	171.2	167.3	167.9	181.1	193.9
65°	2293.8	1588.3	301.2	141.9	139.2	159.1	185.1	173.4	164.8	175.7	187.4
67.5°	2045.0	1381.3	220.1	136.2	134.4	166.2	198.0	172.7	157.0	167.9	177.5
70°	1654.5	1090.3	170.4	128.9	128.0	161.4	199.2	168.1	148.4	155.6	161.0
72.5°	1133.6	746.5	141.2	122.0	117.0	143.0	189.1	157.7	138.2	142.4	146.9
75°	633.5	419.0	118.7	113.3	102.5	127.4	177.4	151.5	130.6	131.9	138.1
77.5°	284.3	181.3	100.8	101.8	89.3	112.7	162.1	141.6	119.0	116.2	122.4
80°	107.6	88.4	81.7	86.1	75.1	97.7	146.1	132.7	106.8	103.2	106.8
82.5°	62.4	53.6	60.7	66.2	59.6	89.8	139.5	124.4	94.1	85.1	88.2
85°	28.9	27.7	36.4	43.0	41.6	70.0	119.3	93.6	67.0	56.7	62.7
87.5°	7.6	8.5	12.8	15.2	15.5	24.0	46.0	34.8	26.2	19.8	19.0
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)