

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: P366658

Luminaire Tested: **MSA-SA1A-740-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366658
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-740-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4031 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

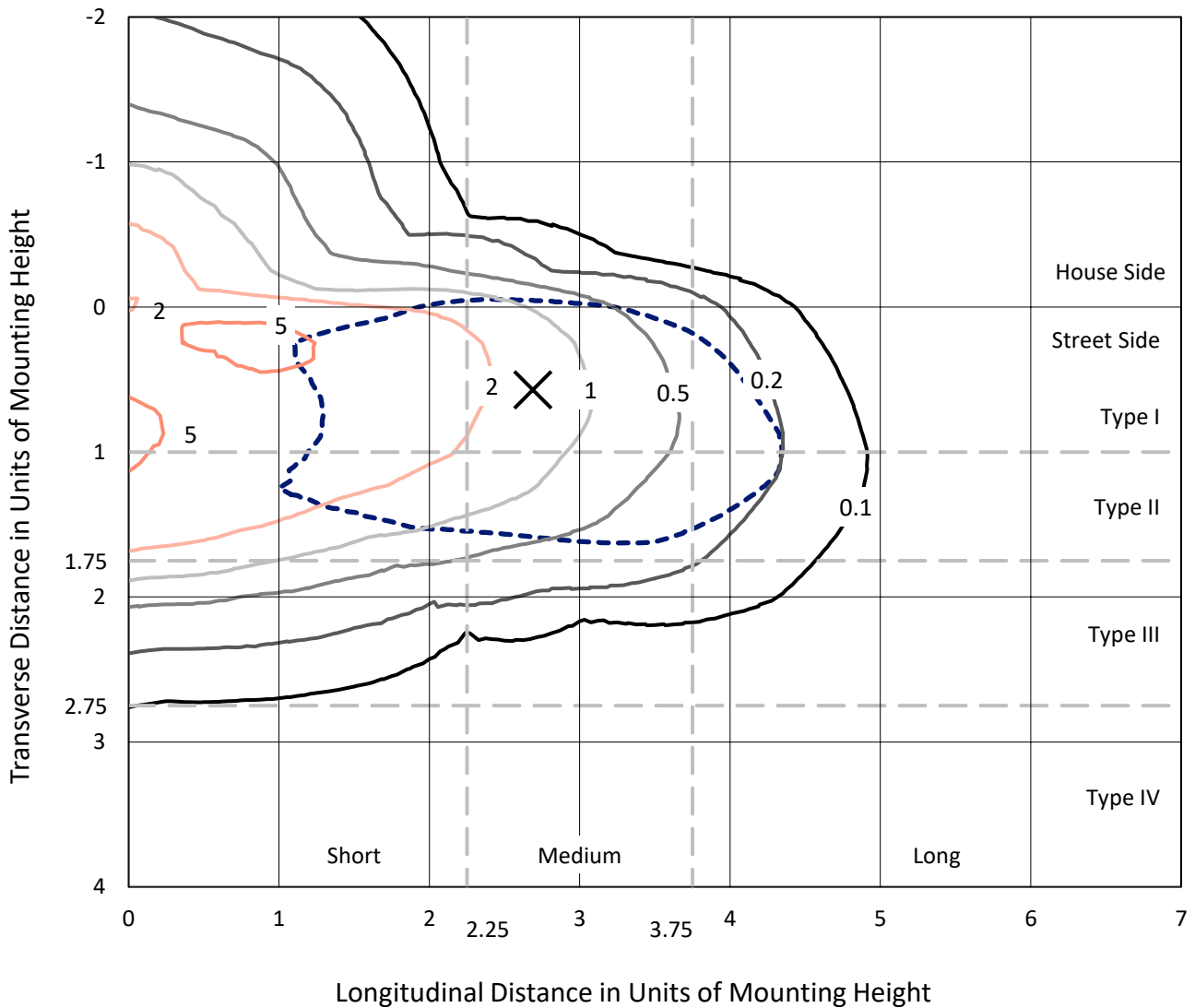
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

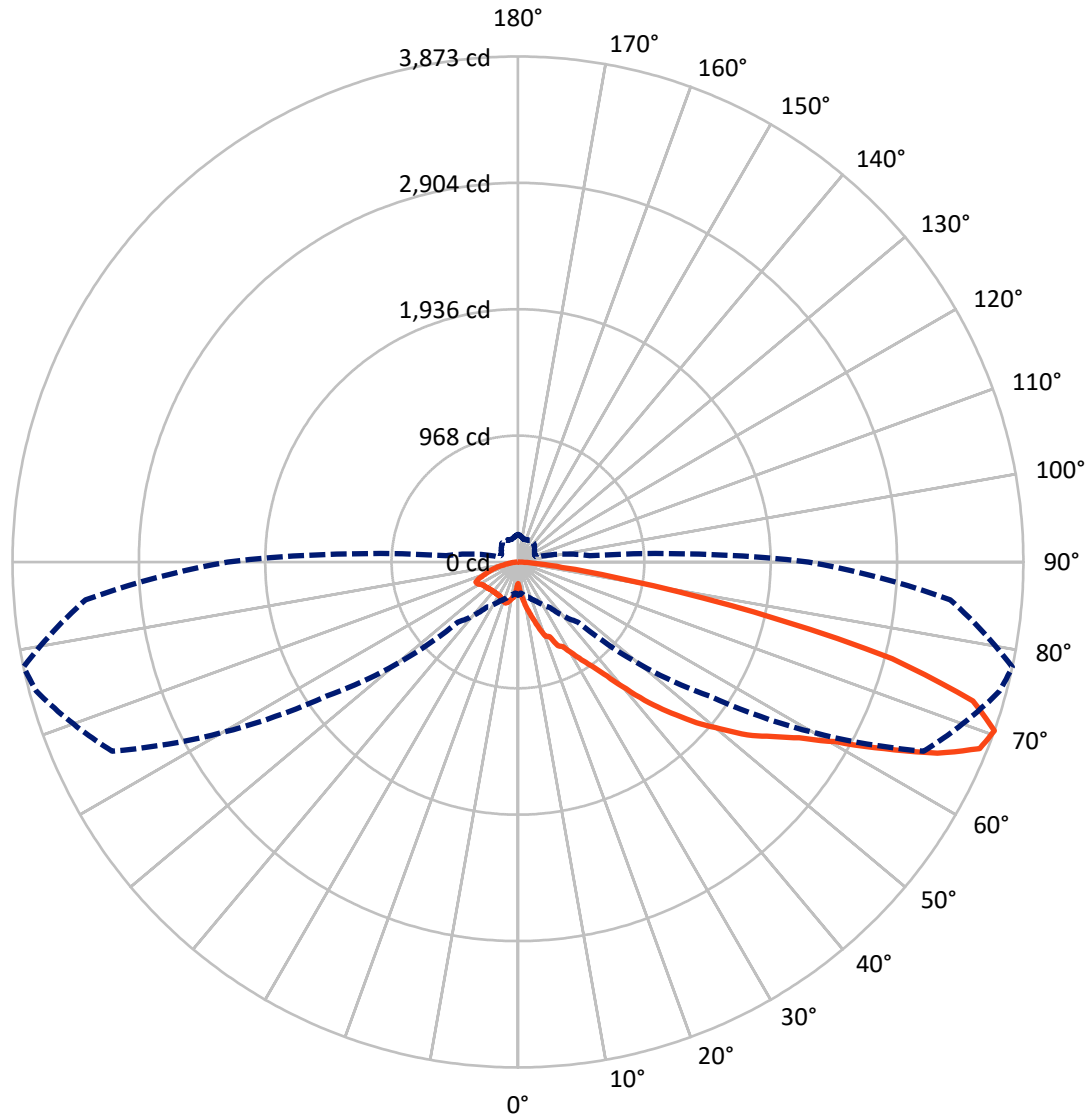
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	719.5	0.0	719.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	3311.5	0.0	3311.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	4031.0	0.0	4031.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.4	0.6
10°-20°	111.9	2.8
20°-30°	215.4	5.3
30°-40°	362.8	9.0
40°-50°	627.7	15.6
50°-60°	947.8	23.5
60°-70°	1049.8	26.0
70°-80°	605.3	15.0
80°-90°	84.9	2.1
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°	4031.0	100.0
0°-180°	4031.0	100.0

Coefficient of Utilization



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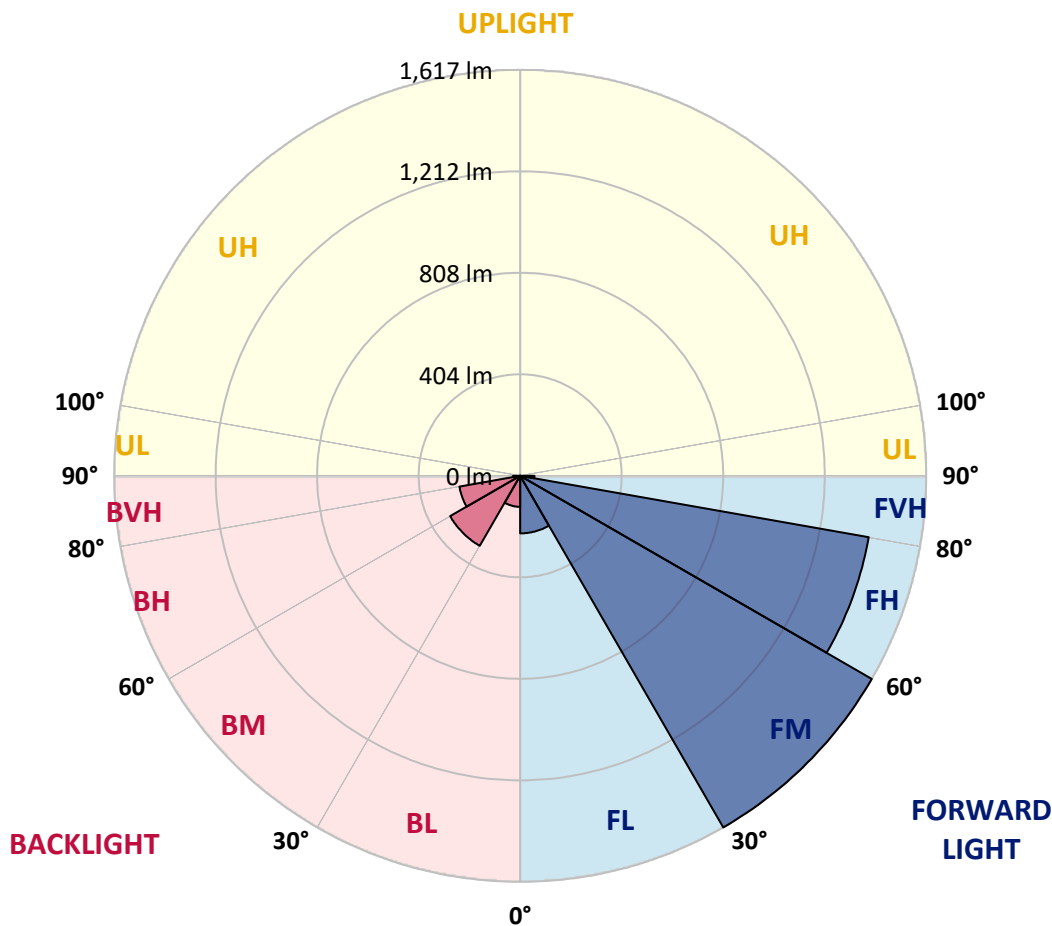
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	229.2	5.7			
FM (30°-60°)	1616.5	40.1			
FH (60°-80°)	1409.2	35.0			G1/1800
FVH (80°-90°)	56.6	1.4			G1/100
BL (0°-30°)	123.5	3.1	B1/500		
BM (30°-60°)	321.8	8.0	B1/1000		
BH (60°-80°)	245.9	6.1	B1/500		G1/500
BVH (80°-90°)	28.3	0.7			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	211.6	204.0	192.6	197.3	203.0	203.7	201.8	191.4	187.9	195.8	198.1
5°	296.4	283.7	275.9	273.4	264.8	247.0	259.8	253.2	254.6	250.7	258.3
7.5°	367.8	359.3	347.8	344.7	325.0	311.0	319.8	316.9	303.1	297.8	306.3
10°	404.1	394.7	395.2	388.3	383.1	384.5	380.1	367.5	357.3	350.0	329.4
12.5°	426.0	428.3	440.9	437.4	457.1	473.2	460.9	442.3	409.9	403.3	382.8
15°	477.9	486.7	474.9	480.3	488.7	519.6	514.5	510.5	476.2	463.5	425.7
17.5°	531.4	533.0	515.2	512.4	532.5	548.2	567.8	545.1	549.3	540.4	479.3
20°	542.8	554.4	528.8	511.2	552.7	583.6	608.0	583.9	606.1	608.5	523.5
22.5°	584.6	570.7	537.1	519.8	556.1	594.0	633.7	647.1	640.1	620.2	566.1
25°	613.7	606.3	572.0	552.9	566.6	601.6	671.2	706.3	712.5	709.8	606.8
27.5°	667.6	671.3	600.8	606.1	587.0	590.2	693.7	784.8	745.9	735.2	657.2
30°	752.8	736.4	657.2	661.6	629.8	624.4	741.2	852.5	817.7	804.8	698.7
32.5°	841.7	843.2	747.1	709.8	692.8	687.5	731.8	887.9	908.4	891.6	761.4
35°	967.1	958.3	844.6	795.5	734.2	724.8	798.9	990.8	1028.4	981.4	835.8
37.5°	1158.0	1131.6	999.2	885.8	840.4	829.6	894.7	1083.0	1167.7	1109.2	957.5
40°	1311.2	1257.6	1137.3	999.2	922.4	935.7	962.7	1195.0	1312.2	1279.3	1070.1
42.5°	1433.4	1385.8	1235.1	1138.0	1033.6	1017.2	1046.7	1333.6	1508.9	1476.6	1210.6
45°	1550.5	1453.7	1345.0	1257.6	1157.3	1177.3	1172.9	1475.1	1750.0	1650.7	1334.8
47.5°	1666.1	1575.2	1461.5	1344.0	1243.0	1367.5	1321.0	1580.3	1912.7	1839.1	1465.5
50°	1814.7	1714.7	1585.1	1467.0	1406.5	1497.6	1419.5	1669.3	2094.8	2008.4	1588.8
52.5°	1913.3	1816.0	1702.4	1618.1	1612.5	1577.4	1557.4	1782.1	2254.5	2202.0	1719.6
55°	1901.7	1808.0	1756.5	1765.8	1834.4	1715.9	1699.6	1949.0	2421.0	2360.3	1860.7
57.5°	1756.4	1654.0	1665.0	1719.7	1903.9	1959.0	1931.3	2127.3	2569.5	2542.0	2035.3
60°	1368.2	1315.6	1404.5	1504.7	1810.8	2030.3	2225.2	2344.7	2752.4	2796.4	2309.6
62.5°	888.8	818.5	959.0	1129.1	1533.1	1983.2	2524.5	2757.1	3051.8	3151.8	2726.3
65°	460.4	449.2	547.5	703.8	1067.2	1691.0	2630.0	3189.6	3415.8	3532.3	3124.4
67.5°	334.7	313.9	359.4	451.4	651.5	1153.1	2430.1	3520.5	3708.0	3814.7	3355.8
70°	254.9	239.5	274.2	331.2	425.5	651.3	1793.9	3430.3	3820.8	3872.5	3325.1
72.5°	190.9	177.6	208.0	261.1	327.9	366.7	1060.3	2820.4	3628.4	3646.0	2984.3
75°	152.4	142.2	155.3	206.2	267.2	249.5	563.3	2043.4	2948.0	2963.1	2279.5
77.5°	125.0	116.3	121.7	154.6	207.9	187.7	279.5	1299.8	1871.7	1848.5	1282.5
80°	102.0	94.4	97.0	111.7	158.3	140.1	157.0	678.1	892.8	856.8	533.4
82.5°	78.5	72.1	77.1	82.2	114.6	100.7	91.6	308.5	365.7	340.6	195.6
85°	52.6	46.7	67.0	61.7	74.9	61.8	50.1	122.8	136.3	127.0	68.7
87.5°	14.5	13.6	22.5	30.8	30.8	23.4	18.3	29.7	38.0	33.3	16.1
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°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	199.1	195.4	185.7	184.8	187.2	187.5	186.0	182.5	180.6	190.7	189.2
5°	256.4	243.3	235.4	228.2	218.1	210.9	212.7	217.8	219.5	227.0	227.9
7.5°	301.0	283.7	266.3	243.2	227.9	218.1	225.5	230.9	235.1	245.8	250.2
10°	320.3	301.5	276.9	252.6	248.4	250.0	245.8	247.2	253.7	254.2	256.4
12.5°	356.3	334.9	290.7	268.7	267.5	271.1	269.5	275.8	280.3	292.6	287.4
15°	390.7	363.5	301.1	278.6	273.7	280.8	289.0	299.5	309.2	320.8	314.9
17.5°	432.5	391.5	301.6	274.1	274.9	290.0	298.6	304.3	333.4	349.4	341.3
20°	458.9	394.4	290.4	262.8	274.9	288.5	300.5	306.7	339.3	363.3	368.9
22.5°	482.8	395.4	281.6	256.8	264.5	282.5	300.5	314.2	335.1	358.1	358.9
25°	495.9	394.6	270.4	257.3	264.3	273.2	289.2	301.8	317.3	349.4	350.2
27.5°	529.5	383.6	259.3	259.3	263.0	263.3	283.7	291.0	293.2	322.5	327.7
30°	539.2	386.0	257.9	259.0	260.8	257.4	266.3	271.2	274.4	299.6	300.5
32.5°	554.9	367.2	262.0	255.9	253.6	253.1	255.3	259.6	261.0	276.4	279.3
35°	573.9	359.6	263.3	255.1	250.4	247.9	254.4	249.0	253.2	271.4	273.4
37.5°	635.7	349.2	270.2	255.1	249.0	246.2	243.0	245.5	260.5	277.9	288.7
40°	675.2	352.4	268.5	257.6	244.5	241.8	236.4	245.7	268.9	299.8	307.9
42.5°	744.4	354.2	270.5	256.4	246.0	235.6	239.1	249.2	273.6	291.2	303.7
45°	816.0	359.9	269.2	252.9	242.7	247.5	242.7	251.7	263.3	263.8	273.2
47.5°	886.3	383.0	266.3	245.7	241.8	254.6	242.1	243.7	244.5	247.5	258.6
50°	968.8	407.5	262.3	235.6	243.0	254.9	244.0	236.6	235.8	245.7	258.1
52.5°	1062.5	435.2	257.1	225.8	236.1	251.7	250.4	237.1	229.9	239.5	251.9
55°	1172.9	466.8	251.1	216.1	228.5	252.1	253.9	233.6	230.1	240.5	253.7
57.5°	1319.6	512.5	239.3	202.0	219.3	246.9	244.8	229.5	226.2	237.3	251.1
60°	1570.0	600.4	222.5	188.0	209.4	234.1	237.4	222.3	219.0	231.2	245.7
62.5°	1905.3	706.1	202.2	174.4	197.3	220.3	228.2	211.9	211.6	227.2	242.3
65°	2217.3	766.1	181.1	162.0	184.8	207.5	217.8	202.2	202.8	222.5	237.6
67.5°	2347.1	695.5	162.3	150.9	170.6	192.9	209.2	194.6	192.4	216.1	230.1
70°	2225.2	552.5	146.0	139.1	154.4	177.1	197.3	184.5	179.5	201.0	211.9
72.5°	1969.0	460.6	130.7	125.4	140.3	160.5	181.1	170.9	164.3	180.8	190.6
75°	1539.1	377.9	113.3	111.7	124.2	145.4	164.3	157.3	148.9	159.3	169.1
77.5°	876.3	239.1	95.1	96.1	105.0	127.4	144.2	138.6	130.1	134.4	145.7
80°	350.7	120.7	76.5	77.1	84.7	104.7	119.5	117.5	108.6	112.1	119.8
82.5°	131.1	66.2	56.5	56.8	64.4	82.8	102.0	101.0	92.6	90.1	94.4
85°	52.1	32.8	34.6	36.1	43.4	59.7	81.8	72.6	62.7	54.9	57.6
87.5°	12.4	10.4	12.1	12.8	14.1	18.7	29.9	24.0	24.7	19.8	14.8
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)