

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: P366774

Luminaire Tested: **MSA-SA1B-730-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366774  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-730-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: 4676 lumens  
Efficiency: N/A  
Efficacy: 106.3 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

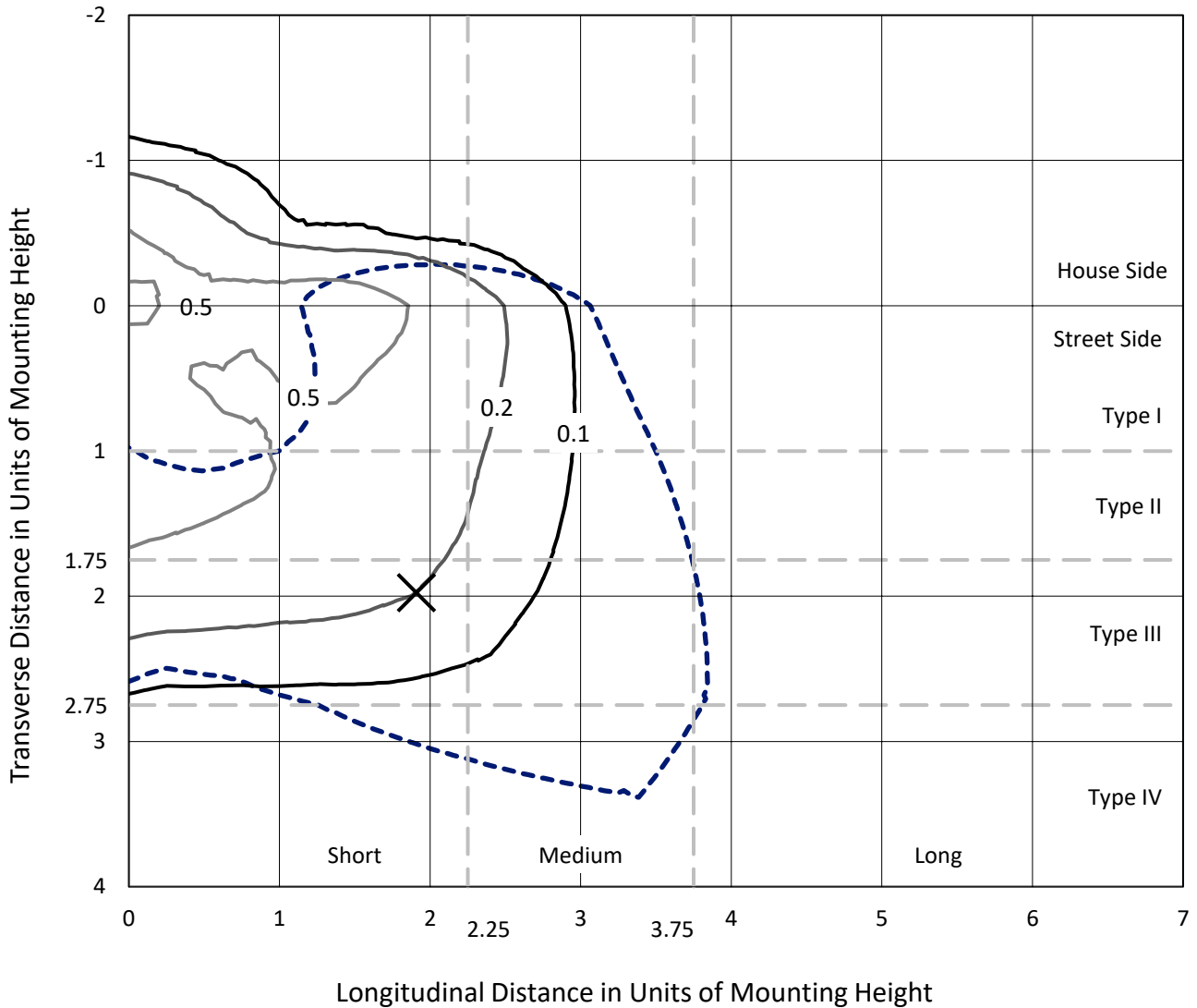
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

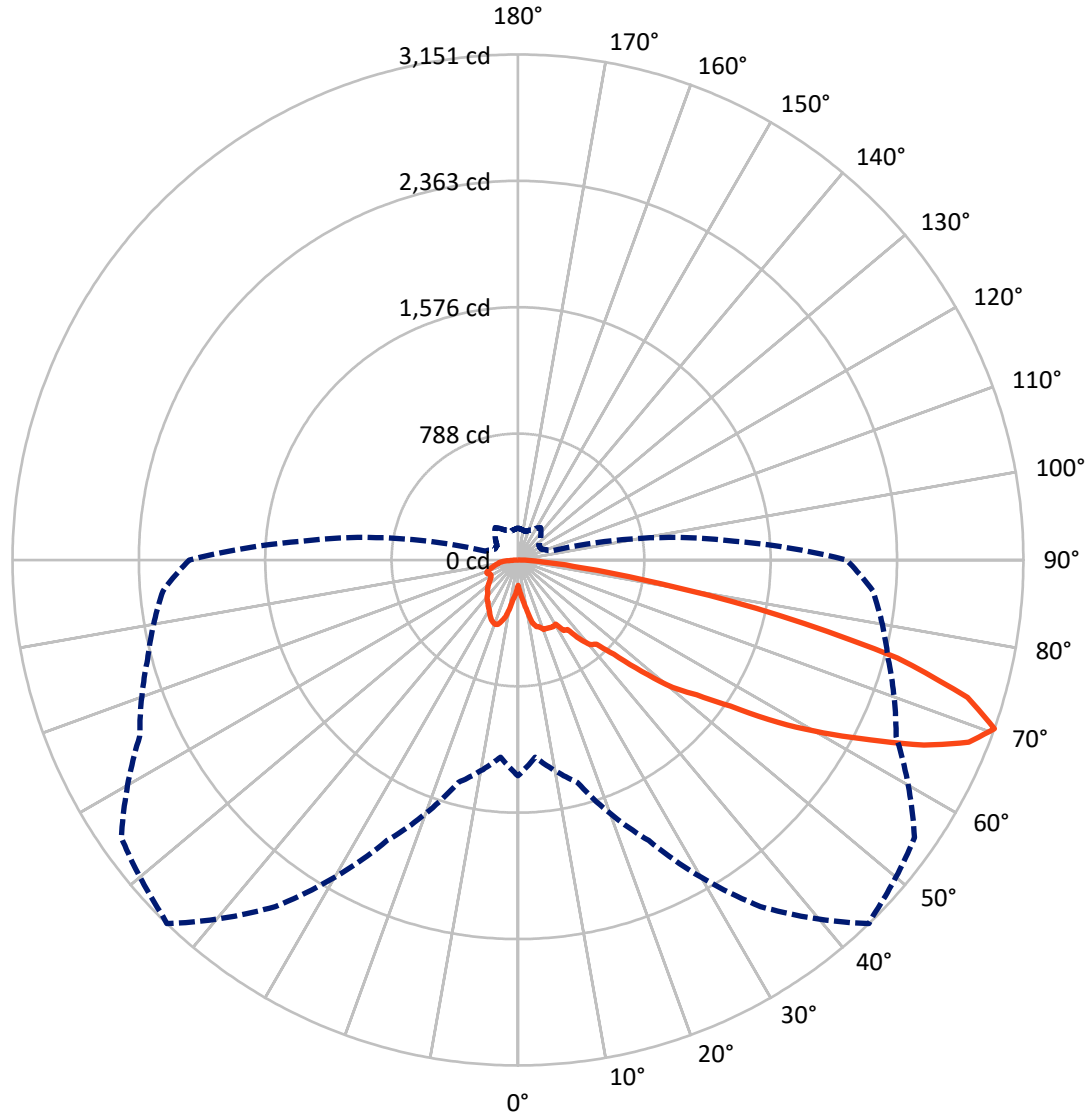
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 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
<b>House Side</b>	Lumens	1031.7	0.0	1031.7
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	3644.3	0.0	3644.3
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	4676.0	0.0	4676.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	0.5
10°-20°	114.8	2.5
20°-30°	214.5	4.6
30°-40°	344.2	7.4
40°-50°	581.0	12.4
50°-60°	1035.4	22.1
60°-70°	1416.3	30.3
70°-80°	832.8	17.8
80°-90°	112.1	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°	4676.0	100.0
0°-180°	4676.0	100.0

**Coefficient of Utilization**

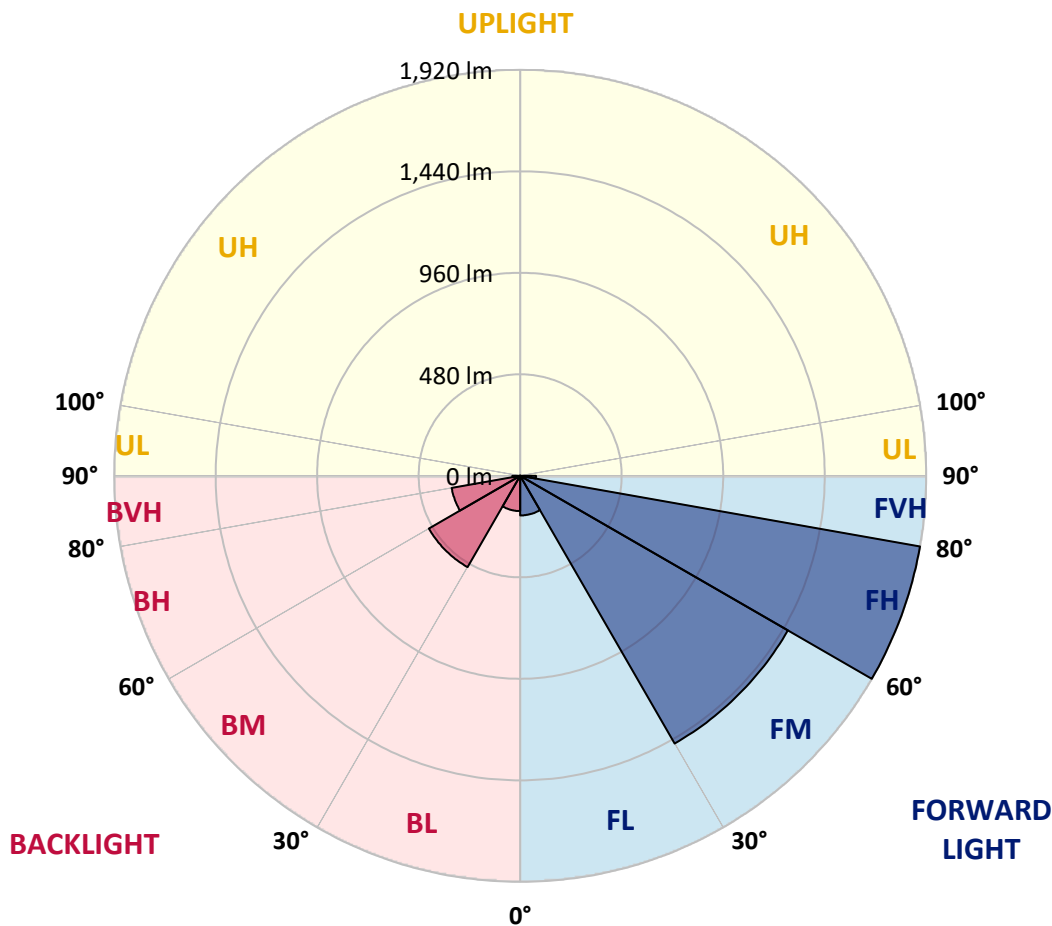


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	187.4	4.0			
FM (30°-60°)	1462.1	31.3			
FH (60°-80°)	1920.1	41.1			G2/5000
FVH (80°-90°)	74.7	1.6			G1/100
BL (0°-30°)	166.7	3.6	B1/500		
BM (30°-60°)	498.6	10.7	B1/1000		
BH (60°-80°)	329.0	7.0	B1/500		G1/500
BVH (80°-90°)	37.4	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-G2**  
 Type IV Short





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CATALOG NUMBER: MSA-SA1B-730-U-T4W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9
2.5°	192.9	189.0	179.8	182.9	186.7	188.3	187.9	187.5	181.6	179.5	190.0
5°	262.1	253.7	246.9	244.3	235.4	228.5	224.3	235.4	233.7	236.6	243.9
7.5°	327.3	321.9	306.8	301.4	283.4	271.5	270.1	279.0	281.3	276.7	289.1
10°	369.3	360.1	357.0	344.2	331.7	329.8	328.6	324.6	319.0	318.7	307.5
12.5°	401.9	406.7	409.1	394.4	394.8	401.7	398.0	381.7	372.3	355.8	357.2
15°	460.3	467.2	447.5	438.1	420.1	430.4	429.1	415.5	414.1	403.4	390.9
17.5°	511.3	514.4	481.4	460.0	453.8	438.9	442.9	443.3	425.6	444.8	433.7
20°	515.6	526.5	488.5	445.8	464.2	462.3	462.8	459.0	435.8	467.4	463.2
22.5°	536.3	519.6	485.5	454.2	459.0	461.9	464.6	460.0	458.6	476.3	489.1
25°	532.4	527.1	492.6	466.1	466.7	467.2	468.6	482.4	480.9	504.8	511.5
27.5°	568.3	560.0	494.7	488.1	473.2	469.9	460.7	489.5	511.9	511.3	548.3
30°	636.5	628.1	543.7	524.8	497.7	464.4	482.0	520.4	538.0	543.9	590.9
32.5°	743.1	756.9	640.4	563.9	530.3	523.0	521.1	517.3	561.0	590.3	633.1
35°	896.1	885.2	754.3	647.7	564.6	533.4	537.6	561.0	613.0	631.9	671.4
37.5°	1071.4	1048.8	900.2	742.6	663.6	624.5	610.5	633.1	644.6	659.5	740.3
40°	1249.5	1194.3	1043.4	867.4	723.0	693.5	681.2	653.4	680.4	710.7	813.3
42.5°	1421.5	1378.7	1199.3	1016.4	823.1	717.8	711.1	683.9	767.7	799.7	918.8
45°	1601.7	1502.6	1359.0	1184.5	969.4	837.3	827.3	778.4	885.8	952.5	1067.5
47.5°	1722.9	1631.0	1505.3	1321.0	1091.9	1037.1	1018.1	934.5	1031.9	1118.5	1297.4
50°	1837.5	1743.0	1610.9	1470.4	1313.7	1250.6	1210.2	1071.0	1213.8	1354.9	1592.1
52.5°	2001.7	1917.1	1733.6	1620.9	1552.0	1396.9	1366.8	1290.3	1426.7	1617.0	1914.2
55°	2177.1	2061.9	1895.6	1833.1	1805.3	1606.7	1582.1	1533.4	1710.0	1885.3	2227.3
57.5°	2254.5	2134.3	2042.7	2005.3	2003.0	1911.5	1883.4	1849.4	1999.7	2115.3	2522.0
60°	2316.1	2187.1	2150.4	2171.3	2247.3	2187.1	2150.4	2120.5	2235.6	2342.7	2762.4
62.5°	2304.8	2175.4	2194.1	2257.8	2451.6	2469.3	2441.1	2368.6	2469.3	2529.1	2900.3
65°	2122.2	2002.6	2112.1	2263.2	2641.6	2782.6	2781.0	2591.4	2626.3	2626.3	2885.7
67.5°	1802.4	1678.6	1857.9	2215.8	2773.0	3030.9	3031.2	2827.6	2640.7	2616.5	2660.2
70°	1345.9	1233.8	1435.3	1929.8	2637.4	3151.1	3133.6	3018.2	2601.2	2390.1	2222.1
72.5°	803.9	731.4	916.8	1404.8	2249.7	2930.0	2976.4	2798.7	2381.3	1987.7	1588.5
75°	365.1	333.6	430.8	807.0	1606.1	2444.0	2494.4	2361.9	1891.4	1429.5	918.0
77.5°	156.3	147.8	188.1	358.0	885.6	1671.3	1774.6	1688.0	1281.5	830.8	406.1
80°	100.5	95.1	115.6	172.2	411.3	903.0	992.0	959.6	652.8	323.1	143.0
82.5°	60.0	58.3	77.3	108.1	224.3	397.5	447.9	459.8	271.1	144.9	81.9
85°	32.8	33.2	42.4	65.6	134.6	154.7	165.7	180.2	127.7	84.0	39.7
87.5°	10.9	12.7	17.1	26.7	47.9	43.7	43.9	51.0	53.9	34.9	12.7
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°	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9	158.9
2.5°	191.7	188.3	179.5	180.0	183.3	184.1	185.0	179.5	178.3	188.9	189.8
5°	245.0	233.7	228.5	226.8	221.8	220.1	229.3	233.5	237.7	246.0	250.0
7.5°	287.8	275.1	265.7	257.1	249.8	245.6	261.1	273.0	280.3	297.2	304.8
10°	307.3	296.4	293.0	286.1	291.6	304.3	307.1	307.5	323.6	323.3	326.5
12.5°	346.3	339.2	327.9	330.3	344.9	358.0	354.3	359.9	365.6	379.4	373.1
15°	381.7	379.8	369.3	371.0	373.9	390.2	392.3	397.8	406.7	417.6	410.1
17.5°	425.4	424.7	399.0	396.7	403.4	419.3	414.3	404.5	433.7	445.4	442.3
20°	455.2	449.4	416.4	406.7	423.7	425.8	420.1	404.5	429.9	455.4	462.3
22.5°	479.9	473.2	439.3	420.1	416.6	417.6	417.6	414.7	427.2	448.1	447.9
25°	499.8	506.2	463.0	444.6	426.2	403.2	400.3	402.8	409.9	450.2	448.8
27.5°	549.9	532.4	471.1	457.3	419.5	383.3	391.1	395.0	397.3	441.4	448.6
30°	582.5	587.8	499.8	464.8	409.7	361.0	363.7	374.8	388.3	440.4	442.5
32.5°	626.4	614.9	544.7	452.3	383.6	347.6	342.6	357.6	377.5	424.9	430.6
35°	667.2	680.8	563.7	450.0	365.4	327.5	332.8	338.0	358.7	407.6	414.3
37.5°	763.1	732.0	617.0	438.9	350.3	317.3	311.6	319.4	337.1	374.8	390.4
40°	835.9	837.9	628.5	424.9	321.3	302.7	290.5	298.3	305.8	335.9	342.6
42.5°	972.6	930.8	656.7	394.2	303.1	280.9	274.0	277.4	278.6	291.2	302.4
45°	1146.5	1048.6	667.8	353.0	279.2	271.9	257.9	256.2	249.8	251.5	261.3
47.5°	1387.2	1232.2	659.7	309.1	257.9	260.2	240.0	232.2	223.4	225.5	234.7
50°	1698.3	1466.9	659.2	271.9	243.3	244.8	228.3	214.2	205.3	209.8	217.8
52.5°	2047.5	1702.4	661.8	246.4	227.4	226.6	220.7	203.4	196.3	200.9	210.1
55°	2381.5	1904.8	681.8	230.3	210.9	212.2	214.5	200.0	192.1	196.3	205.9
57.5°	2672.1	2064.7	674.3	213.2	195.6	201.7	207.8	195.2	189.2	195.4	205.0
60°	2875.4	2138.9	615.3	196.9	184.3	192.7	204.6	194.6	193.8	207.1	218.6
62.5°	2949.6	2111.5	500.2	184.1	177.5	191.5	212.1	207.3	208.0	224.3	240.2
65°	2841.2	1967.3	373.1	175.8	172.4	197.1	229.3	214.7	204.2	217.6	232.2
67.5°	2533.1	1711.0	272.6	168.7	166.4	205.9	245.2	214.0	194.4	208.0	219.9
70°	2049.4	1350.5	211.1	159.7	158.6	200.0	246.8	208.2	183.9	192.7	199.4
72.5°	1404.2	924.7	174.9	151.1	144.9	177.2	234.3	195.4	171.2	176.4	182.0
75°	784.7	519.0	147.1	140.3	126.9	157.8	219.7	187.7	161.8	163.4	171.0
77.5°	352.2	224.5	124.8	126.2	110.6	139.6	200.7	175.4	147.4	144.0	151.7
80°	133.3	109.5	101.2	106.6	93.0	121.0	181.0	164.3	132.3	127.9	132.3
82.5°	77.3	66.3	75.2	82.1	73.8	111.2	172.7	154.2	116.6	105.5	109.3
85°	35.9	34.3	45.1	53.3	51.6	86.7	147.8	116.0	83.0	70.2	77.7
87.5°	9.4	10.5	15.9	18.8	19.2	29.7	56.9	43.1	32.4	24.5	23.6
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)