

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: P367170

Luminaire Tested: **MSA-SA2A-730-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367170  
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-SA2A-730-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7340 lumens  
Efficiency: N/A  
Efficacy: 111.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

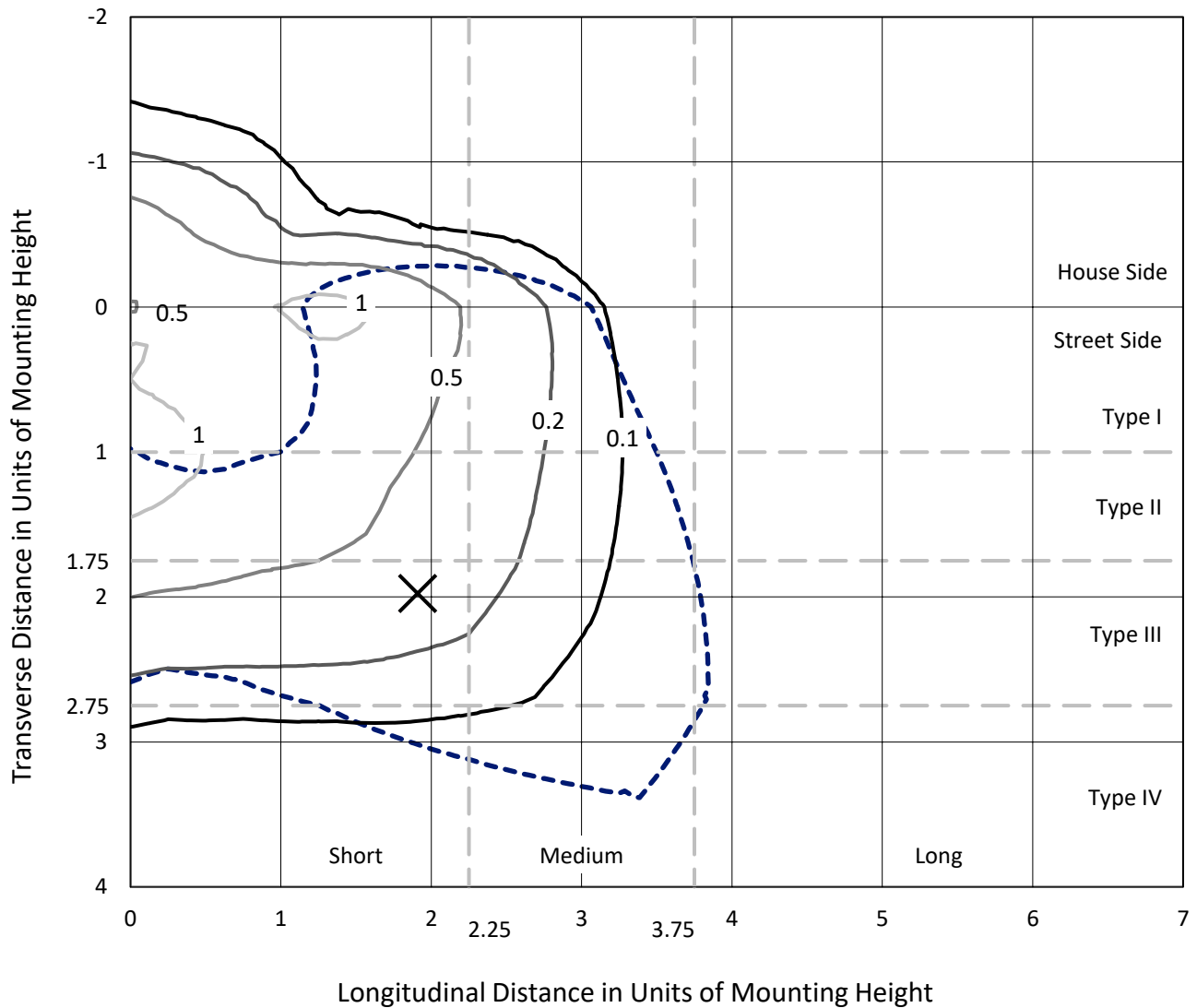
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

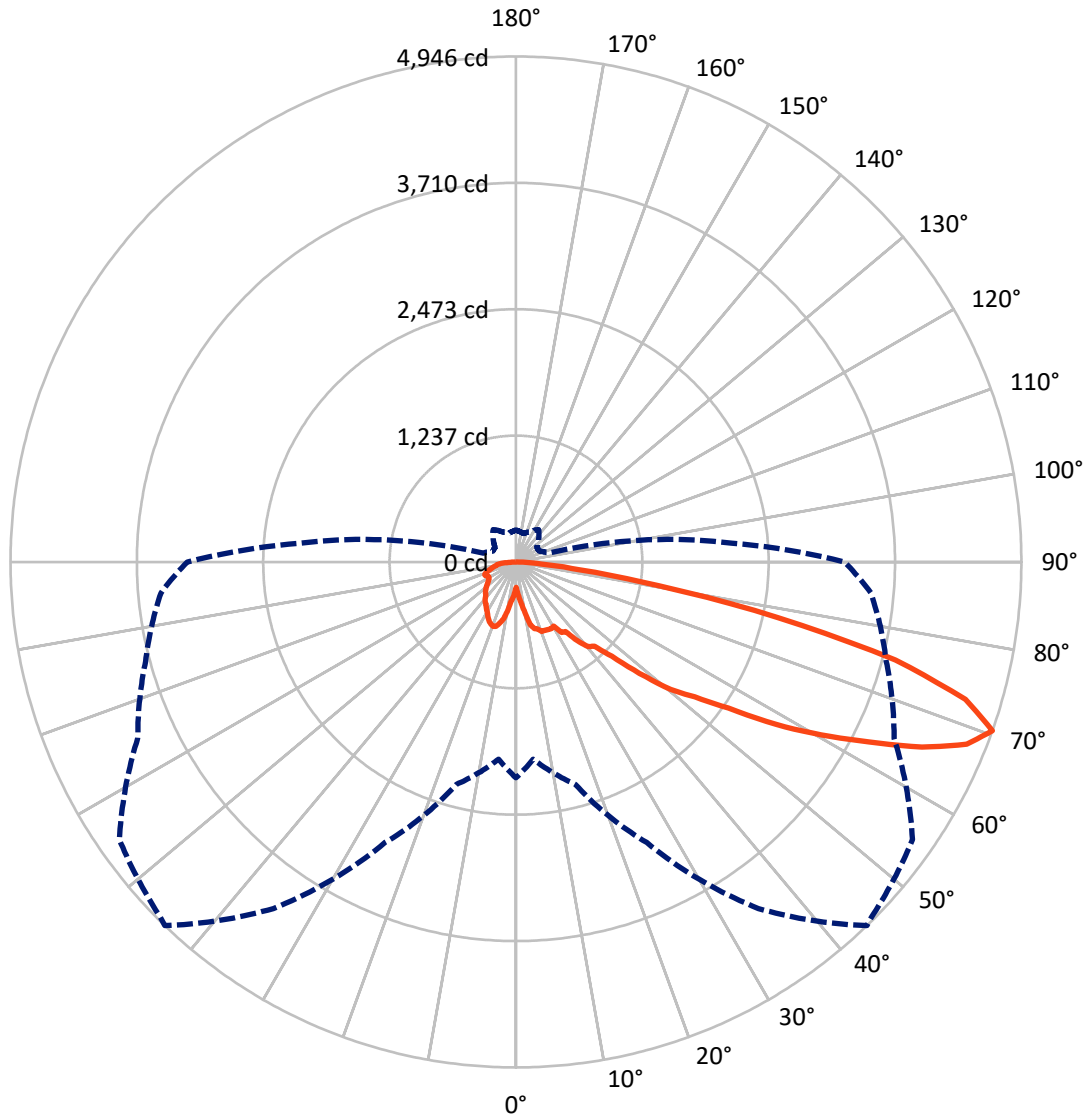
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	1619.5	0.0	1619.5
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	5720.5	0.0	5720.5
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	7340.0	0.0	7340.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.1	0.5
10°-20°	180.1	2.5
20°-30°	336.6	4.6
30°-40°	540.3	7.4
40°-50°	912.0	12.4
50°-60°	1625.3	22.1
60°-70°	2223.1	30.3
70°-80°	1307.3	17.8
80°-90°	176.0	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°	7340.0	100.0
0°-180°	7340.0	100.0

**Coefficient of Utilization**



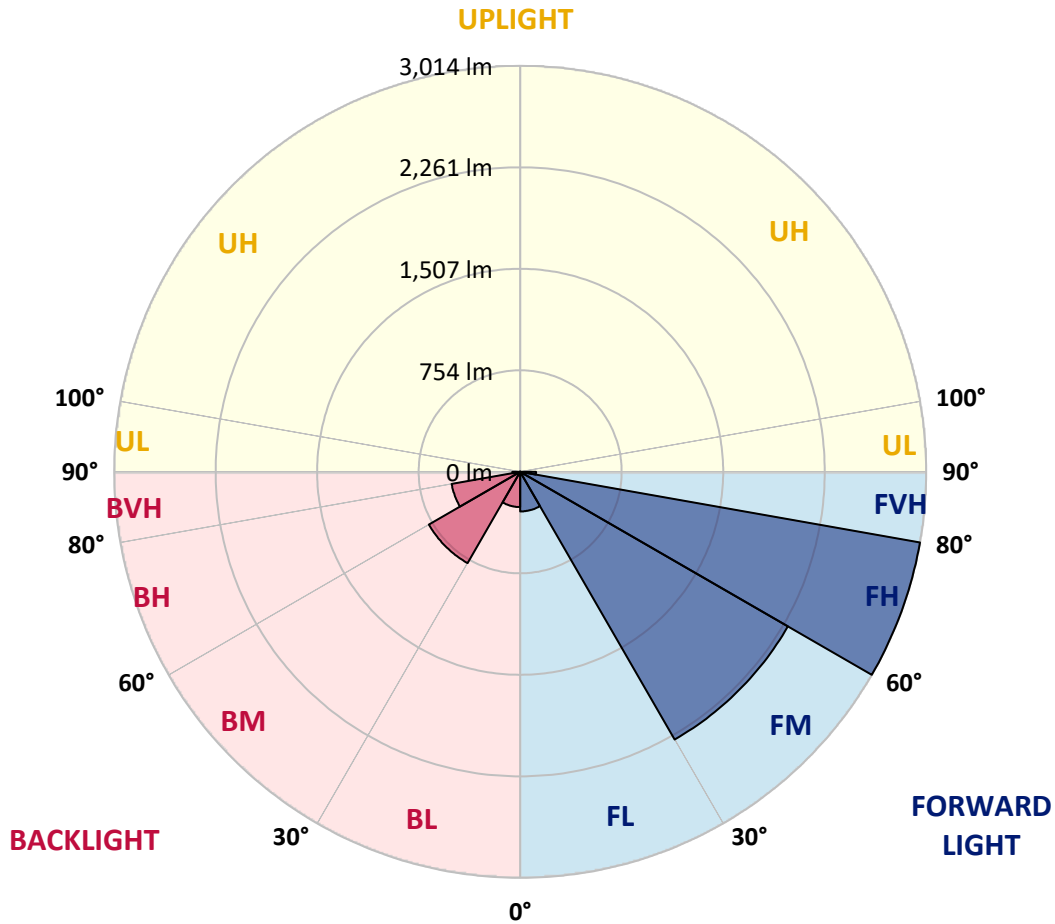
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	294.1	4.0			
FM (30°-60°)	2295.0	31.3			
FH (60°-80°)	3014.0	41.1			G2/5000
FVH (80°-90°)	117.3	1.6			G2/225
BL (0°-30°)	261.7	3.6	B1/500		
BM (30°-60°)	782.6	10.7	B1/1000		
BH (60°-80°)	516.4	7.0	B2/1000		G2/1000
BVH (80°-90°)	58.7	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5
2.5°	302.8	296.7	282.3	287.1	293.1	295.5	294.9	294.3	285.0	281.7	298.3
5°	411.4	398.2	387.6	383.4	369.6	358.7	352.1	369.6	366.9	371.4	382.8
7.5°	513.7	505.3	481.5	473.1	444.8	426.2	424.1	437.9	441.5	434.3	453.8
10°	579.6	565.2	560.4	540.2	520.7	517.7	515.8	509.5	500.8	500.2	482.7
12.5°	630.8	638.3	642.2	619.1	619.7	630.5	624.8	599.2	584.5	558.6	560.7
15°	722.6	733.4	702.4	687.7	659.4	675.7	673.5	652.2	650.1	633.2	613.7
17.5°	802.7	807.5	755.7	722.0	712.4	688.9	695.2	695.8	668.1	698.2	680.8
20°	809.3	826.4	766.8	699.7	728.6	725.6	726.5	720.5	684.1	733.7	727.1
22.5°	841.8	815.6	762.0	713.0	720.5	725.0	729.2	722.0	719.9	747.6	767.8
25°	835.8	827.3	773.2	731.6	732.5	733.4	735.5	757.2	754.8	792.4	803.0
27.5°	892.0	879.1	776.5	766.2	742.8	737.7	723.2	768.4	803.6	802.7	860.7
30°	999.2	985.9	853.5	823.7	781.3	728.9	756.6	816.8	844.5	853.8	927.6
32.5°	1166.5	1188.2	1005.2	885.1	832.5	821.0	818.0	812.0	880.6	926.7	993.8
35°	1406.7	1389.5	1184.0	1016.6	886.3	837.3	843.9	880.6	962.2	992.0	1054.0
37.5°	1681.8	1646.3	1413.0	1165.6	1041.6	980.2	958.3	993.8	1011.8	1035.3	1162.0
40°	1961.4	1874.7	1637.8	1361.5	1134.9	1088.6	1069.3	1025.7	1068.1	1115.7	1276.7
42.5°	2231.3	2164.2	1882.5	1595.4	1292.0	1126.8	1116.3	1073.5	1205.0	1255.3	1442.2
45°	2514.2	2358.6	2133.2	1859.3	1521.7	1314.3	1298.6	1221.9	1390.4	1495.2	1675.7
47.5°	2704.4	2560.3	2362.8	2073.6	1714.0	1627.9	1598.1	1466.9	1619.8	1755.8	2036.6
50°	2884.4	2736.0	2528.7	2308.1	2062.2	1963.2	1899.7	1681.2	1905.4	2126.9	2499.2
52.5°	3142.0	3009.3	2721.3	2544.3	2436.3	2192.8	2145.5	2025.5	2239.4	2538.3	3004.8
55°	3417.4	3236.5	2975.6	2877.5	2833.8	2522.0	2483.5	2407.1	2684.3	2959.3	3496.3
57.5°	3539.0	3350.3	3206.4	3147.7	3144.1	3000.6	2956.3	2903.1	3139.0	3320.5	3958.8
60°	3635.6	3433.1	3375.6	3408.4	3527.6	3433.1	3375.6	3328.6	3509.2	3677.4	4336.2
62.5°	3617.8	3414.7	3444.2	3544.1	3848.4	3876.1	3831.8	3718.1	3876.1	3970.0	4552.6
65°	3331.3	3143.5	3315.4	3552.5	4146.6	4367.8	4365.4	4067.8	4122.6	4122.6	4529.8
67.5°	2829.3	2634.9	2916.3	3478.2	4352.8	4757.6	4758.2	4438.6	4145.1	4107.2	4175.8
70°	2112.7	1936.7	2253.0	3029.2	4140.0	4946.3	4918.9	4737.7	4083.1	3751.8	3488.1
72.5°	1261.9	1148.2	1439.2	2205.1	3531.5	4599.3	4672.1	4393.1	3737.9	3120.1	2493.5
75°	573.0	523.7	676.3	1266.7	2521.1	3836.3	3915.5	3707.5	2969.0	2244.0	1441.0
77.5°	245.3	232.0	295.2	561.9	1390.1	2623.5	2785.7	2649.7	2011.6	1304.1	637.4
80°	157.7	149.3	181.5	270.3	645.6	1417.5	1557.2	1506.3	1024.8	507.1	224.5
82.5°	94.2	91.5	121.3	169.7	352.1	623.9	703.0	721.7	425.6	227.5	128.5
85°	51.5	52.1	66.5	102.9	211.3	242.9	260.0	282.9	200.4	131.8	62.3
87.5°	17.2	19.9	26.8	41.8	75.2	68.6	68.9	80.1	84.6	54.8	19.9
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°	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5
2.5°	301.0	295.5	281.7	282.6	287.7	288.9	290.4	281.7	279.9	296.4	298.0
5°	384.6	366.9	358.7	356.0	348.2	345.5	359.9	366.6	373.2	386.1	392.5
7.5°	451.7	431.9	417.1	403.6	392.2	385.5	409.9	428.6	440.0	466.5	478.5
10°	482.4	465.3	459.9	449.0	457.8	477.6	482.1	482.7	508.0	507.4	512.5
12.5°	543.5	532.4	514.6	518.6	541.4	561.9	556.2	564.9	573.9	595.6	585.7
15°	599.2	596.2	579.6	582.4	586.9	612.5	615.8	624.5	638.3	655.5	643.8
17.5°	667.8	666.6	626.3	622.7	633.2	658.2	650.4	635.0	680.8	699.1	694.3
20°	714.5	705.5	653.7	638.3	665.1	668.4	659.4	635.0	674.8	714.8	725.6
22.5°	753.3	742.8	689.5	659.4	654.0	655.5	655.5	651.0	670.5	703.3	703.0
25°	784.6	794.5	726.8	697.9	669.0	632.9	628.4	632.3	643.5	706.7	704.5
27.5°	863.2	835.8	739.5	717.8	658.5	601.6	614.0	620.0	623.6	692.8	704.2
30°	914.3	922.7	784.6	729.5	643.2	566.7	570.9	588.4	609.4	691.3	694.6
32.5°	983.2	965.2	855.0	710.0	602.2	545.6	537.8	561.3	592.6	666.9	676.0
35°	1047.3	1068.7	884.8	706.4	573.6	514.0	522.5	530.6	563.1	639.8	650.4
37.5°	1197.8	1149.1	968.5	688.9	549.9	498.1	489.1	501.4	529.1	588.4	612.8
40°	1312.2	1315.2	986.5	666.9	504.4	475.2	456.0	468.3	480.0	527.3	537.8
42.5°	1526.8	1461.2	1030.8	618.8	475.8	440.9	430.1	435.5	437.3	457.2	474.6
45°	1799.7	1646.0	1048.2	554.1	438.2	426.8	404.8	402.1	392.2	394.9	410.2
47.5°	2177.4	1934.3	1035.6	485.1	404.8	408.4	376.8	364.5	350.6	353.9	368.4
50°	2665.9	2302.6	1034.7	426.8	381.9	384.3	358.4	336.2	322.3	329.3	341.9
52.5°	3214.0	2672.2	1038.9	386.7	356.9	355.7	346.4	319.3	308.2	315.4	329.9
55°	3738.2	2990.0	1070.2	361.5	331.1	333.2	336.8	313.9	301.6	308.2	323.2
57.5°	4194.5	3241.0	1058.5	334.7	307.0	316.6	326.2	306.4	297.0	306.7	321.7
60°	4513.5	3357.5	965.8	309.1	289.2	302.5	321.1	305.5	304.3	325.0	343.1
62.5°	4630.0	3314.5	785.2	288.9	278.7	300.7	332.9	325.3	326.5	352.1	377.1
65°	4459.9	3088.2	585.7	276.0	270.6	309.4	359.9	337.1	320.5	341.6	364.5
67.5°	3976.3	2685.8	428.0	264.8	261.2	323.2	384.9	335.9	305.2	326.5	345.2
70°	3217.0	2120.0	331.4	250.7	248.9	313.9	387.3	326.8	288.6	302.5	313.0
72.5°	2204.2	1451.5	274.5	237.2	227.5	278.1	367.8	306.7	268.8	276.9	285.6
75°	1231.8	814.7	230.8	220.3	199.2	247.7	344.9	294.6	254.0	256.4	268.5
77.5°	552.9	352.4	195.9	198.0	173.7	219.1	315.1	275.4	231.4	226.0	238.1
80°	209.2	171.8	158.9	167.3	146.0	189.9	284.1	257.9	207.7	200.7	207.7
82.5°	121.3	104.1	118.0	128.8	115.9	174.6	271.2	242.0	183.0	165.5	171.5
85°	56.3	53.9	70.7	83.7	81.0	136.0	232.0	182.1	130.3	110.2	121.9
87.5°	14.7	16.6	25.0	29.5	30.1	46.6	89.4	67.7	50.9	38.5	37.0
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)