

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: P366626

Luminaire Tested: **MSA-SA1A-730-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366626  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-730-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3656 lumens  
Efficiency: N/A  
Efficacy: 107.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

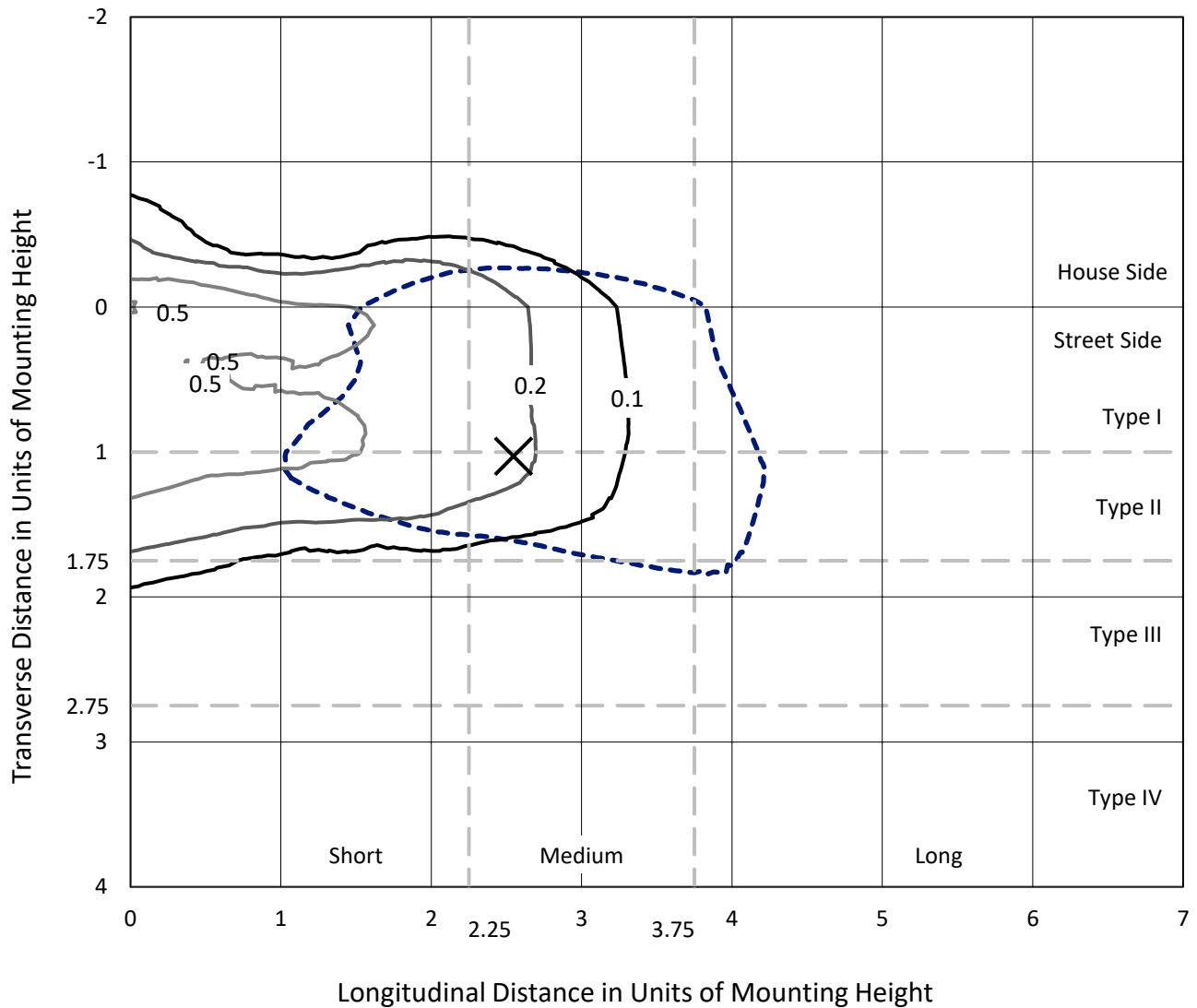
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

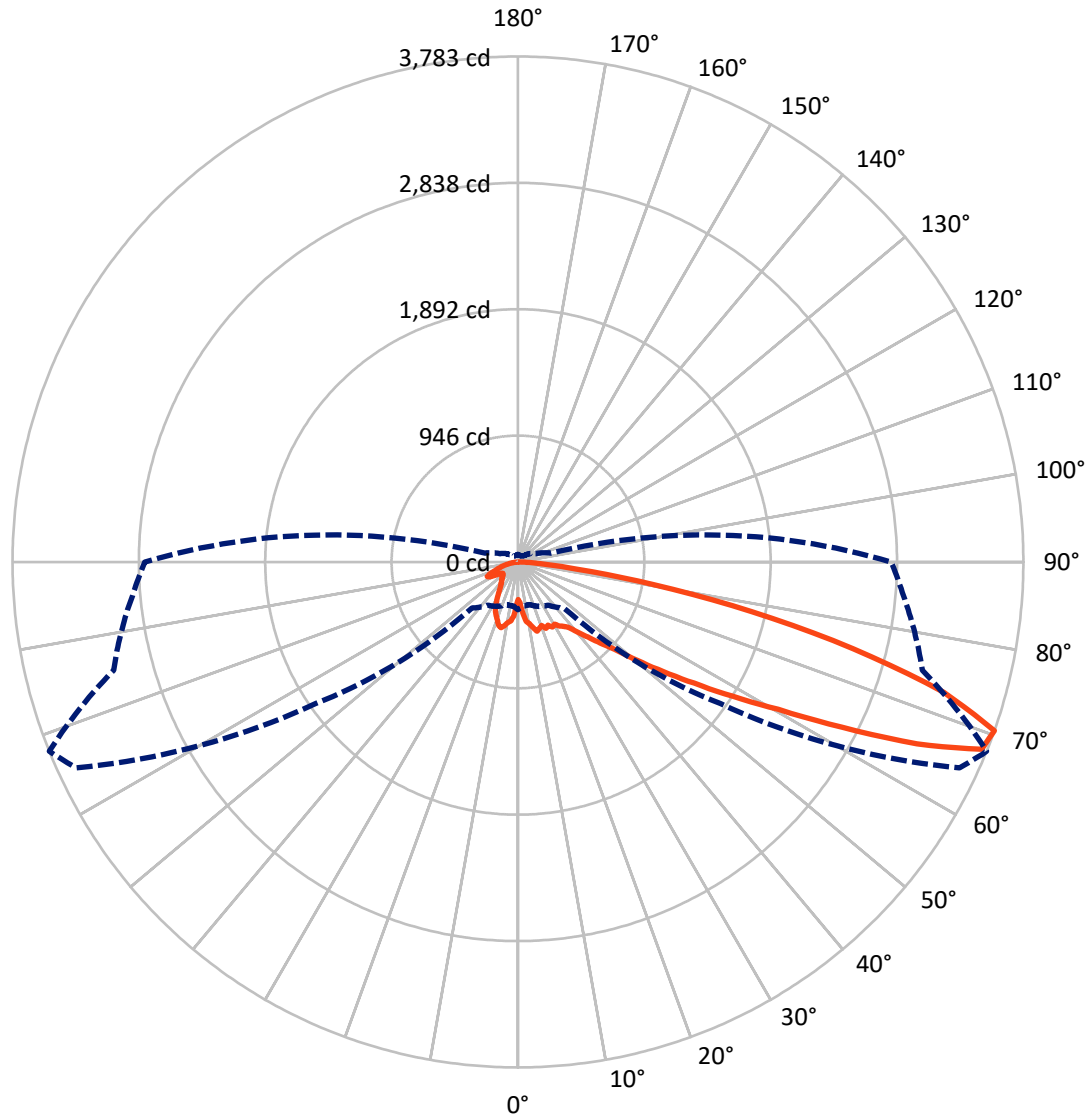
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	698.0	0.0	698.0
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	2958.0	0.0	2958.0
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	3656.0	0.0	3656.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	1.0
10°-20°	122.0	3.3
20°-30°	185.6	5.1
30°-40°	283.5	7.8
40°-50°	487.5	13.3
50°-60°	806.9	22.1
60°-70°	994.8	27.2
70°-80°	639.0	17.5
80°-90°	99.1	2.7
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°	3656.0	100.0
0°-180°	3656.0	100.0

**Coefficient of Utilization**



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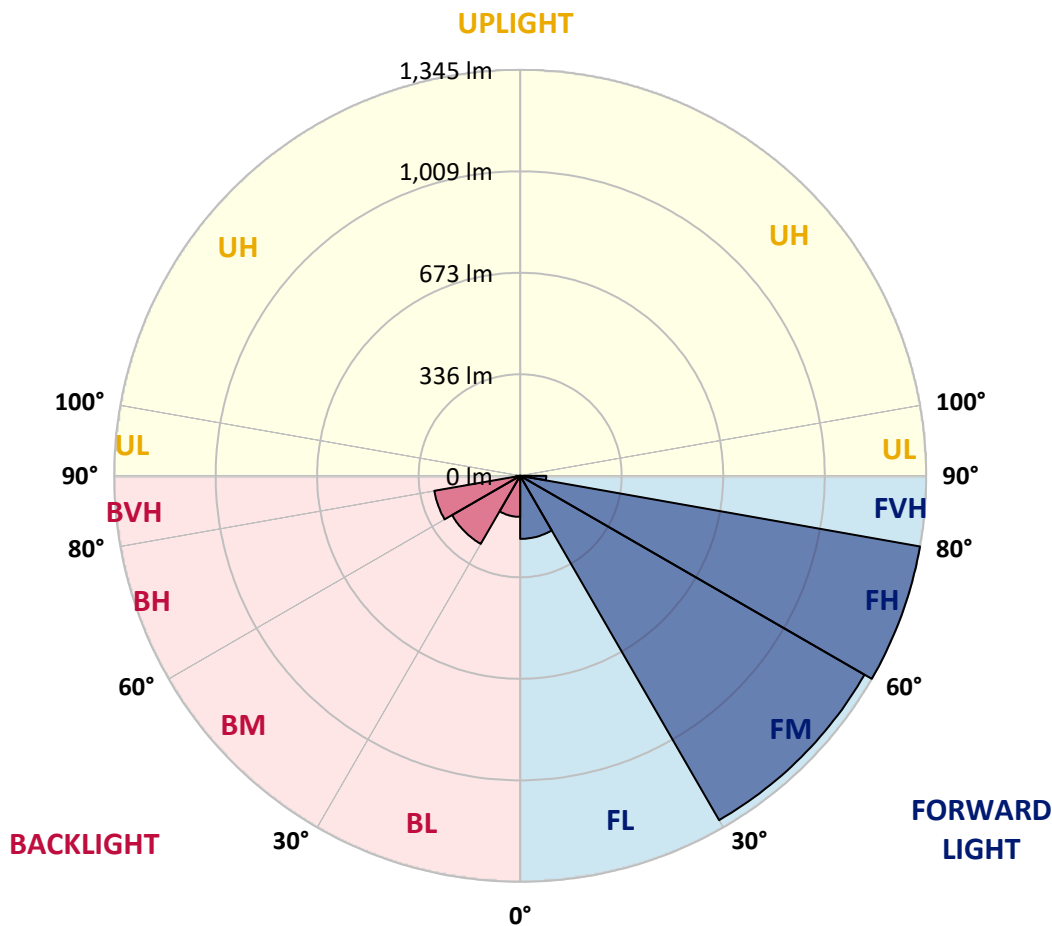
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	209.1	5.7			
FM (30°-60°)	1317.4	36.0			
FH (60°-80°)	1345.1	36.8			G1/1800
FVH (80°-90°)	86.4	2.4			G1/100
BL (0°-30°)	136.0	3.7	B1/500		
BM (30°-60°)	260.5	7.1	B1/1000		
BH (60°-80°)	288.7	7.9	B1/500		G1/500
BVH (80°-90°)	12.7	0.3			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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3
2.5°	322.1	309.1	295.9	302.4	312.6	321.6	319.8	320.9	308.5	306.8	339.4
5°	379.5	357.1	356.7	357.0	357.9	347.5	372.9	386.0	389.0	402.4	434.4
7.5°	399.4	390.3	381.2	385.7	374.1	375.2	406.4	440.7	448.8	458.6	502.3
10°	395.2	386.7	389.4	390.2	392.3	409.6	429.7	462.6	469.4	500.7	512.0
12.5°	395.8	394.3	407.2	407.6	430.6	461.6	469.6	499.9	502.6	525.6	572.9
15°	416.8	427.4	420.2	424.0	428.4	465.6	477.1	520.5	537.1	566.6	602.1
17.5°	457.7	460.7	439.1	433.5	448.0	459.3	485.5	504.3	521.6	604.1	653.1
20°	467.1	475.4	449.7	420.5	451.2	467.0	485.2	493.8	507.2	609.6	679.1
22.5°	507.8	490.7	459.6	434.2	444.3	459.6	472.8	505.1	540.4	593.8	705.1
25°	531.0	521.0	493.3	466.1	457.5	458.0	483.4	512.3	524.5	616.9	710.3
27.5°	586.8	570.9	508.6	503.4	471.1	446.0	485.0	530.0	551.5	598.9	735.7
30°	656.7	644.6	562.9	556.0	506.8	463.0	506.5	543.2	540.1	610.7	753.3
32.5°	713.3	733.5	651.1	596.7	561.7	519.8	499.7	540.9	571.3	638.1	783.1
35°	794.1	813.1	719.8	683.0	607.0	546.1	546.7	572.4	591.2	670.0	816.5
37.5°	934.0	917.3	842.2	784.2	735.5	644.6	617.4	608.4	623.5	709.2	881.8
40°	1034.8	1020.7	932.3	899.3	804.5	751.7	677.1	668.5	695.3	749.6	935.2
42.5°	1154.3	1129.2	1046.9	1019.7	920.7	825.5	750.2	755.1	768.1	825.8	1007.4
45°	1276.0	1215.1	1168.4	1166.3	1100.2	968.7	867.6	863.6	864.1	938.0	1088.5
47.5°	1372.5	1317.7	1264.3	1238.9	1205.6	1216.4	1038.0	991.4	977.3	1050.9	1210.2
50°	1437.9	1374.8	1314.4	1308.4	1397.5	1456.1	1198.1	1148.2	1156.9	1212.5	1372.4
52.5°	1439.2	1364.4	1301.4	1343.1	1552.9	1636.8	1473.8	1334.4	1362.3	1400.1	1584.0
55°	1339.2	1261.6	1220.6	1315.8	1613.7	1851.1	1861.2	1632.8	1600.7	1614.6	1836.9
57.5°	1128.2	1049.8	1025.9	1139.9	1498.4	2057.9	2329.2	1989.3	1895.1	1836.9	2096.1
60°	849.2	781.4	766.6	839.3	1242.3	1997.1	2708.0	2433.0	2241.0	2085.3	2356.1
62.5°	636.8	588.2	565.8	576.2	859.6	1799.6	2956.8	2993.7	2721.8	2356.4	2610.1
65°	517.5	478.2	458.3	444.8	534.6	1391.5	2911.8	3465.6	3283.3	2641.1	2807.8
67.5°	432.3	397.4	388.2	401.4	422.6	807.3	2559.9	3729.5	3741.9	2922.1	2923.3
70°	358.8	333.0	329.6	366.9	394.9	487.2	1849.0	3646.6	3783.4	3132.8	2896.2
72.5°	277.3	263.3	262.9	321.5	392.3	415.3	1101.1	3150.2	3334.0	3065.4	2631.2
75°	192.3	182.7	190.0	264.3	383.3	421.2	628.4	2453.7	2591.3	2608.6	2107.7
77.5°	132.4	124.2	132.2	191.1	342.3	431.3	439.6	1774.2	1789.5	1749.2	1207.3
80°	92.1	86.5	92.6	135.3	266.4	426.9	374.3	1117.0	1024.9	780.7	386.5
82.5°	57.1	55.4	62.1	96.4	187.6	388.3	354.7	576.4	440.1	215.4	138.0
85°	30.0	27.5	36.1	62.9	117.4	304.8	332.3	263.0	169.8	76.5	55.4
87.5°	8.9	8.0	13.9	25.4	49.7	136.6	190.2	111.5	63.3	22.5	17.3
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°	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3	280.3
2.5°	341.7	340.0	317.3	320.3	325.2	326.4	326.2	318.0	309.2	333.6	332.8
5°	435.2	420.0	408.7	406.2	392.3	378.4	383.3	381.6	379.5	390.5	391.9
7.5°	502.5	481.5	468.4	434.6	402.4	374.6	383.4	386.2	380.7	400.6	406.6
10°	520.2	503.7	489.5	446.0	428.3	412.1	388.0	360.6	357.0	345.5	346.9
12.5°	566.0	563.7	515.2	476.9	453.8	421.5	369.7	336.5	308.0	309.4	301.1
15°	602.1	603.3	545.0	491.5	429.5	380.2	319.2	277.9	248.6	242.8	236.9
17.5°	650.6	648.2	547.5	474.0	395.5	323.3	248.5	207.5	202.6	206.0	200.8
20°	671.7	650.1	531.9	430.7	342.4	245.6	187.7	166.0	175.5	189.0	189.3
22.5°	690.7	653.8	523.8	395.8	271.7	178.6	150.7	146.7	157.9	176.1	177.6
25°	689.9	670.8	509.2	360.6	210.7	139.4	131.0	133.9	147.2	166.2	167.2
27.5°	724.7	657.8	471.4	314.4	158.7	119.3	121.5	126.8	133.1	151.2	154.7
30°	724.4	682.0	452.5	258.3	127.5	109.4	114.9	119.5	124.7	141.2	143.2
32.5°	741.5	666.2	441.0	200.9	114.3	107.0	108.3	112.9	120.4	131.6	133.0
35°	762.2	684.1	404.3	159.6	109.4	104.8	105.9	108.5	115.4	125.6	127.0
37.5°	828.4	687.5	389.7	134.5	109.1	103.9	103.7	105.1	112.9	122.3	126.4
40°	854.3	718.2	347.3	125.6	108.0	103.9	101.8	102.5	108.9	120.9	124.1
42.5°	916.2	728.5	316.0	122.6	108.0	102.1	98.7	99.9	107.4	118.0	123.0
45°	980.0	743.0	278.6	122.0	107.9	101.9	95.5	98.2	104.4	113.2	118.7
47.5°	1070.9	795.4	241.3	120.1	106.6	102.7	94.7	94.6	99.9	107.6	112.8
50°	1219.2	877.1	212.4	117.8	106.8	102.1	93.2	91.0	94.6	101.3	106.3
52.5°	1425.6	1016.3	201.1	116.6	105.6	99.6	90.6	87.2	89.2	94.6	99.5
55°	1665.2	1204.4	212.2	116.6	103.1	95.8	86.9	82.9	84.0	87.7	92.4
57.5°	1945.2	1438.0	266.2	114.9	100.1	91.2	82.5	77.9	78.2	81.4	85.7
60°	2237.7	1699.0	387.3	113.5	97.9	86.1	77.3	72.5	72.1	75.1	79.0
62.5°	2530.5	1939.9	514.6	116.7	97.3	81.9	71.8	67.0	66.9	69.6	72.8
65°	2763.4	2104.5	546.3	129.8	101.3	77.0	66.1	61.7	61.4	63.7	67.2
67.5°	2877.7	2128.4	415.0	146.0	109.7	72.4	60.6	56.5	56.2	58.6	61.7
70°	2793.1	1965.3	256.1	147.7	109.3	67.0	54.9	51.4	50.8	53.4	55.7
72.5°	2480.0	1719.1	194.6	130.7	94.6	59.4	49.3	46.2	45.3	47.6	49.7
75°	1990.5	1364.9	155.9	105.4	74.5	50.0	43.6	40.7	39.6	41.8	43.6
77.5°	1159.5	767.8	114.0	82.3	56.3	40.9	37.2	34.6	33.4	35.7	37.0
80°	377.0	255.8	71.6	59.1	41.2	32.0	30.1	28.3	27.1	28.6	29.1
82.5°	135.4	95.2	39.6	36.3	27.4	23.0	22.8	21.7	20.2	20.8	20.8
85°	60.0	43.5	23.6	19.4	16.4	12.2	14.4	13.6	12.1	11.8	11.3
87.5°	16.8	14.4	8.6	6.6	5.4	2.0	4.6	4.1	3.4	3.1	2.1
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)