

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: P367142

Luminaire Tested: **MSA-SA2A-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367142
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-SA2A-727-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6630 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

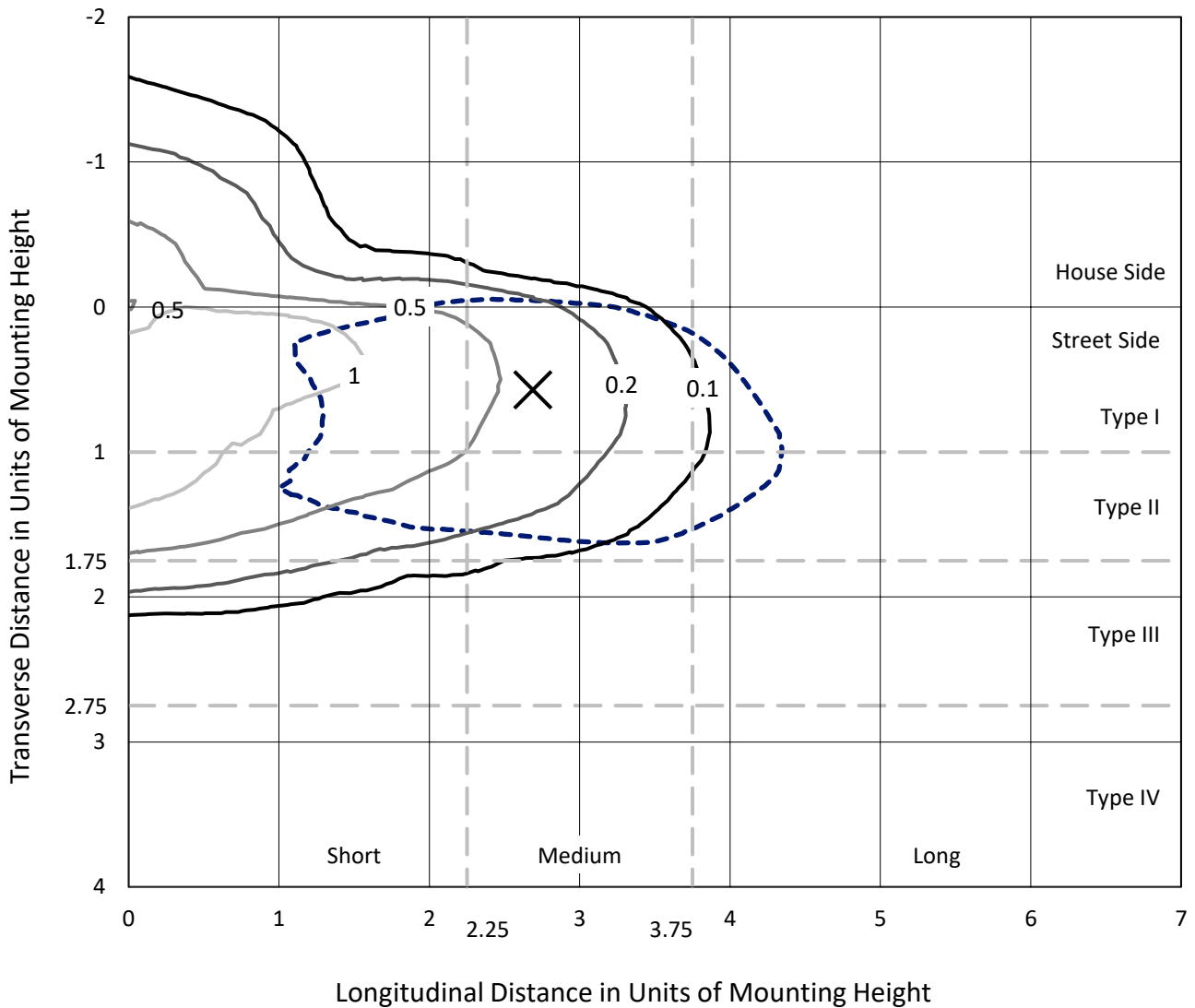
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

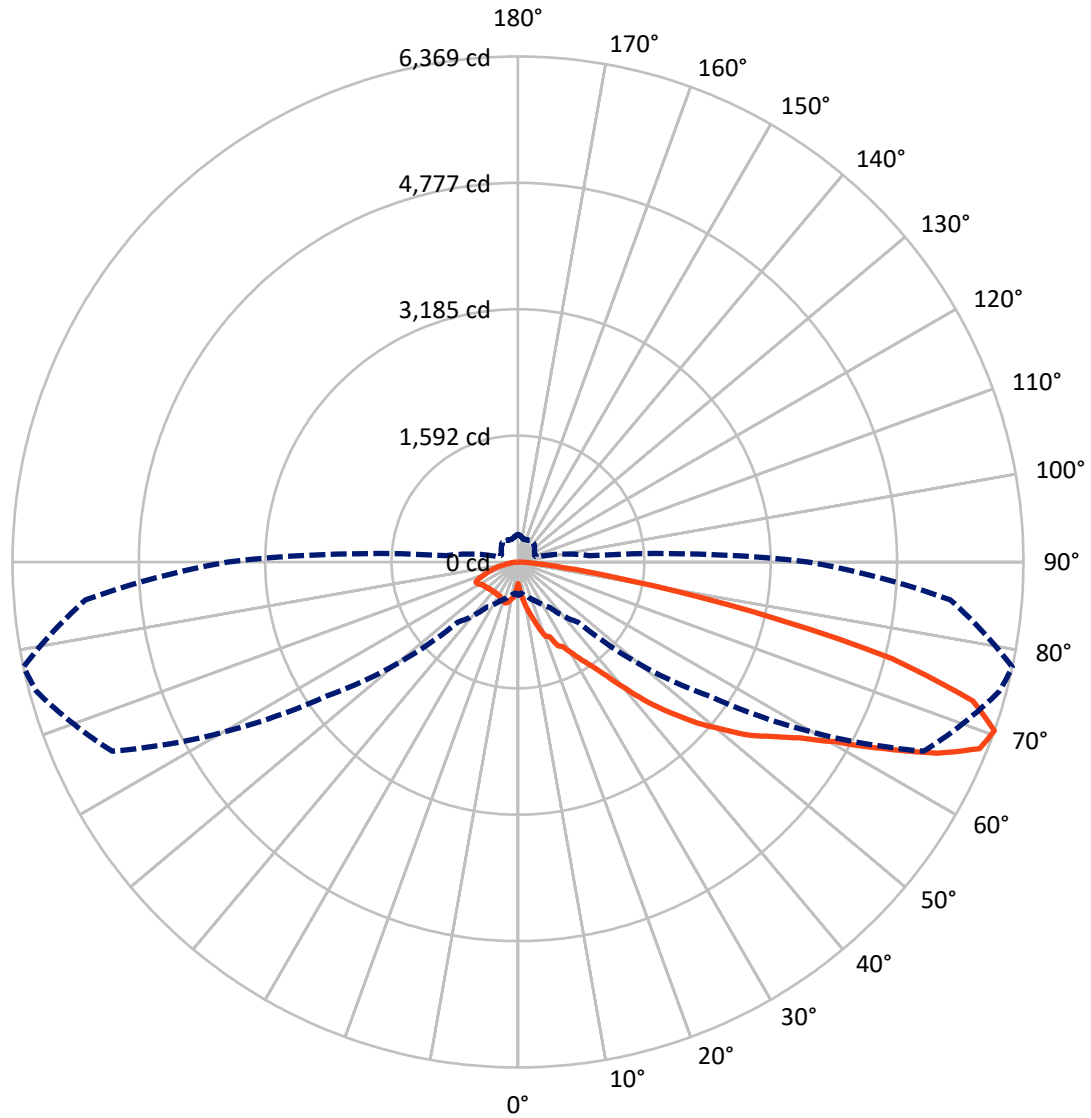
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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	1183.4	0.0	1183.4
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	5446.6	0.0	5446.6
	% Fixture	82.2	0.0	82.2
Total	Lumens	6630.0	0.0	6630.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.8	0.6
10°-20°	184.0	2.8
20°-30°	354.3	5.3
30°-40°	596.7	9.0
40°-50°	1032.5	15.6
50°-60°	1558.9	23.5
60°-70°	1726.7	26.0
70°-80°	995.5	15.0
80°-90°	139.6	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°	6630.0	100.0
0°-180°	6630.0	100.0

Coefficient of Utilization



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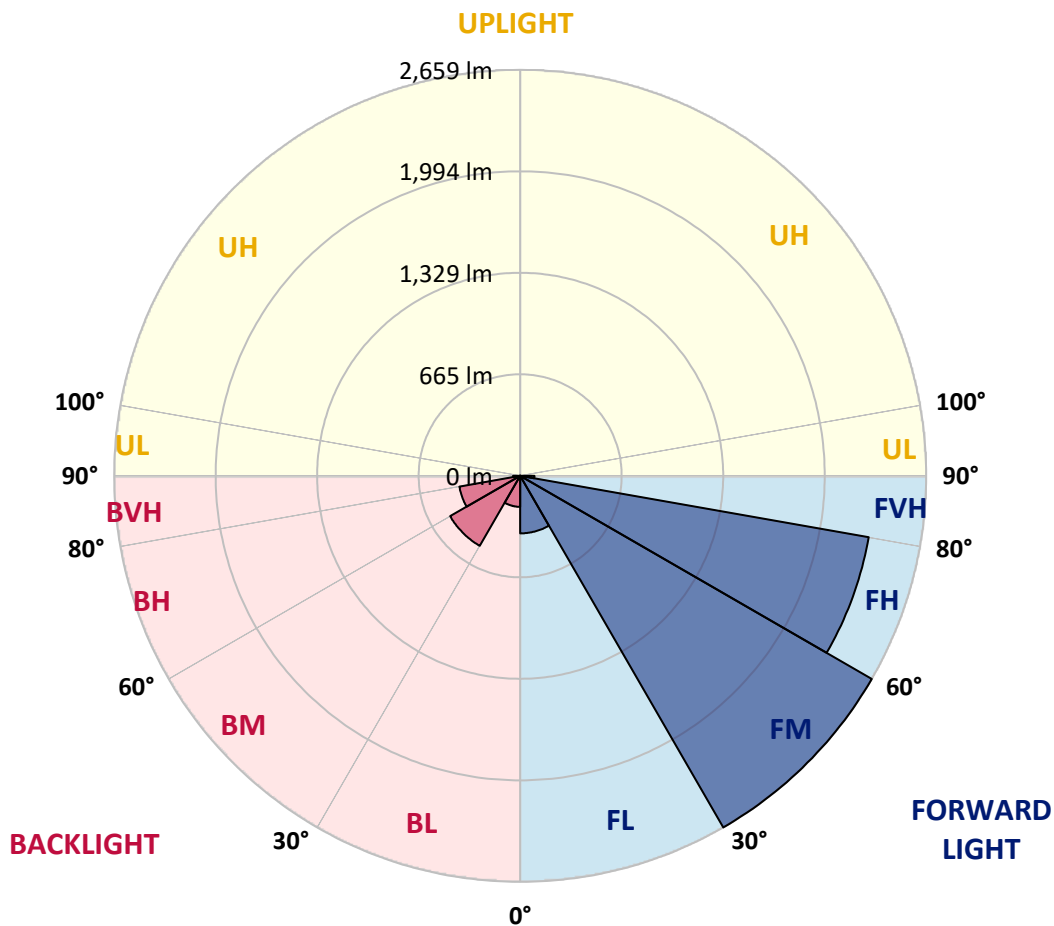
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	376.9	5.7			
FM (30°-60°)	2658.8	40.1			
FH (60°-80°)	2317.8	35.0			G2/5000
FVH (80°-90°)	93.1	1.4			G1/100
BL (0°-30°)	203.2	3.1	B1/500		
BM (30°-60°)	529.3	8.0	B1/1000		
BH (60°-80°)	404.4	6.1	B1/500		G1/500
BVH (80°-90°)	46.5	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3
2.5°	348.0	335.5	316.7	324.5	333.9	335.0	331.9	314.8	309.0	322.0	325.9
5°	487.5	466.5	453.8	449.7	435.6	406.3	427.3	416.5	418.7	412.4	424.8
7.5°	605.0	590.9	572.1	566.9	534.5	511.6	526.0	521.3	498.6	489.8	503.9
10°	664.7	649.2	650.1	638.7	630.2	632.4	625.2	604.5	587.6	575.7	541.7
12.5°	700.6	704.5	725.2	719.4	751.8	778.3	758.1	727.5	674.1	663.3	629.6
15°	786.0	800.4	781.1	789.9	803.7	854.6	846.3	839.7	783.3	762.3	700.1
17.5°	873.9	876.7	847.4	842.7	875.9	901.6	933.9	896.6	903.5	888.9	788.3
20°	892.7	911.8	869.8	840.8	909.0	959.9	1000.0	960.5	996.9	1000.8	861.0
22.5°	961.6	938.6	883.3	854.9	914.6	977.0	1042.3	1064.4	1052.8	1020.2	931.2
25°	1009.4	997.2	940.8	909.3	932.0	989.5	1103.9	1161.7	1171.9	1167.5	998.0
27.5°	1098.1	1104.2	988.1	996.9	965.4	970.7	1140.9	1290.7	1226.9	1209.2	1081.0
30°	1238.2	1211.1	1081.0	1088.1	1035.9	1027.1	1219.2	1402.1	1344.9	1323.6	1149.2
32.5°	1384.4	1386.9	1228.8	1167.5	1139.6	1130.7	1203.7	1460.4	1494.2	1466.5	1252.3
35°	1590.6	1576.2	1389.1	1308.4	1207.5	1192.1	1314.0	1629.6	1691.5	1614.1	1374.8
37.5°	1904.6	1861.2	1643.4	1456.8	1382.2	1364.5	1471.5	1781.3	1920.6	1824.4	1574.9
40°	2156.7	2068.5	1870.6	1643.4	1517.1	1538.9	1583.4	1965.4	2158.3	2104.1	1760.0
42.5°	2357.6	2279.4	2031.5	1871.7	1700.1	1673.0	1721.6	2193.4	2481.7	2428.6	1991.1
45°	2550.2	2391.0	2212.2	2068.5	1903.5	1936.4	1929.2	2426.1	2878.3	2715.0	2195.4
47.5°	2740.4	2590.9	2403.8	2210.6	2044.4	2249.3	2172.7	2599.2	3145.9	3024.8	2410.4
50°	2984.7	2820.3	2607.2	2412.9	2313.4	2463.2	2334.7	2745.6	3445.5	3303.4	2613.3
52.5°	3147.0	2986.9	2800.1	2661.3	2652.2	2594.5	2561.6	2931.1	3708.0	3621.8	2828.3
55°	3127.9	2973.7	2889.1	2904.3	3017.1	2822.2	2795.4	3205.6	3981.9	3882.2	3060.5
57.5°	2888.8	2720.5	2738.5	2828.6	3131.5	3222.1	3176.5	3498.8	4226.3	4180.9	3347.6
60°	2250.4	2163.8	2310.1	2474.8	2978.4	3339.3	3659.9	3856.5	4527.0	4599.4	3798.7
62.5°	1461.8	1346.3	1577.4	1857.1	2521.5	3261.9	4152.2	4534.7	5019.5	5183.9	4484.1
65°	757.3	738.8	900.5	1157.5	1755.3	2781.3	4325.8	5246.1	5618.2	5809.7	5138.9
67.5°	550.6	516.3	591.2	742.4	1071.6	1896.6	3996.9	5790.3	6098.8	6274.3	5519.5
70°	419.3	393.9	451.1	544.8	699.8	1071.3	2950.4	5641.9	6284.2	6369.4	5468.9
72.5°	314.0	292.1	342.2	429.5	539.2	603.1	1744.0	4638.9	5967.8	5996.8	4908.4
75°	250.7	233.8	255.4	339.1	439.5	410.4	926.5	3360.9	4848.7	4873.6	3749.2
77.5°	205.6	191.3	200.1	254.3	341.9	308.7	459.6	2137.9	3078.4	3040.3	2109.4
80°	167.8	155.3	159.5	183.8	260.4	230.5	258.1	1115.2	1468.5	1409.3	877.3
82.5°	129.1	118.6	126.9	135.2	188.5	165.6	150.6	507.4	601.4	560.2	321.7
85°	86.5	76.8	110.3	101.4	123.3	101.7	82.4	202.0	224.2	208.9	113.0
87.5°	23.8	22.4	37.0	50.6	50.6	38.4	30.1	48.9	62.5	54.7	26.5
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°	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3	270.3
2.5°	327.5	321.4	305.4	304.0	307.9	308.4	306.0	300.2	297.1	313.7	311.2
5°	421.8	400.2	387.2	375.3	358.8	346.9	349.9	358.2	361.0	373.4	374.8
7.5°	495.0	466.5	438.1	399.9	374.8	358.8	370.9	379.8	386.7	404.4	411.5
10°	526.8	495.8	455.5	415.4	408.5	411.3	404.4	406.6	417.3	418.2	421.8
12.5°	585.9	550.8	478.2	441.9	440.0	445.8	443.3	453.6	461.0	481.2	472.6
15°	642.6	597.8	495.3	458.3	450.2	461.8	475.4	492.5	508.6	527.6	518.0
17.5°	711.4	644.0	496.1	450.8	452.2	477.0	491.1	500.5	548.4	574.6	561.3
20°	754.8	648.7	477.6	432.3	452.2	474.6	494.2	504.4	558.0	597.6	606.7
22.5°	794.1	650.3	463.2	422.3	435.0	464.6	494.2	516.8	551.1	589.0	590.4
25°	815.6	649.0	444.7	423.2	434.8	449.4	475.7	496.4	521.8	574.6	576.0
27.5°	870.9	631.0	426.5	426.5	432.5	433.1	466.5	478.7	482.3	530.4	539.0
30°	886.9	634.9	424.3	425.9	429.0	423.4	438.1	446.1	451.3	492.8	494.2
32.5°	912.6	603.9	430.9	420.9	417.1	416.2	419.8	427.0	429.2	454.7	459.4
35°	943.9	591.5	433.1	419.6	411.8	407.7	418.5	409.6	416.5	446.4	449.7
37.5°	1045.6	574.3	444.4	419.6	409.6	404.9	399.7	403.8	428.4	457.1	474.8
40°	1110.5	579.6	441.7	423.7	402.1	397.7	388.9	404.1	442.2	493.1	506.3
42.5°	1224.4	582.6	445.0	421.8	404.6	387.5	393.3	409.9	450.0	479.0	499.4
45°	1342.1	592.0	442.8	416.0	399.1	407.1	399.1	414.0	433.1	433.9	449.4
47.5°	1457.7	629.9	438.1	404.1	397.7	418.7	398.3	400.8	402.1	407.1	425.4
50°	1593.4	670.2	431.4	387.5	399.7	419.3	401.3	389.2	387.8	404.1	424.5
52.5°	1747.6	715.8	422.9	371.5	388.3	414.0	411.8	390.0	378.1	393.9	414.3
55°	1929.2	767.8	412.9	355.4	375.9	414.6	417.6	384.2	378.4	395.5	417.3
57.5°	2170.5	843.0	393.6	332.2	360.7	406.0	402.7	377.5	372.0	390.3	412.9
60°	2582.3	987.5	365.9	309.3	344.4	385.0	390.5	365.7	360.1	380.3	404.1
62.5°	3133.7	1161.4	332.5	286.9	324.5	362.3	375.3	348.5	348.0	373.7	398.6
65°	3646.9	1260.1	297.9	266.4	304.0	341.3	358.2	332.5	333.6	365.9	390.8
67.5°	3860.3	1144.0	267.0	248.2	280.5	317.3	344.1	320.1	316.5	355.4	378.4
70°	3659.9	908.8	240.2	228.8	254.0	291.3	324.5	303.5	295.2	330.6	348.5
72.5°	3238.4	757.6	215.0	206.2	230.8	264.0	297.9	281.1	270.3	297.4	313.4
75°	2531.4	621.6	186.3	183.8	204.3	239.1	270.3	258.7	244.9	262.0	278.0
77.5°	1441.4	393.3	156.4	158.1	172.7	209.5	237.1	228.0	213.9	221.1	239.6
80°	576.8	198.4	125.8	126.9	139.3	172.2	196.5	193.2	178.5	184.4	197.1
82.5°	215.6	108.9	92.9	93.4	105.9	136.3	167.8	166.1	152.3	148.1	155.3
85°	85.7	53.9	56.9	59.4	71.3	98.1	134.6	119.4	103.1	90.4	94.8
87.5°	20.5	17.1	19.9	21.0	23.2	30.7	49.2	39.5	40.6	32.6	24.3
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)