

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: P367236

Luminaire Tested: **MSA-SA2A-760-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367236
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-760-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: 8059 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

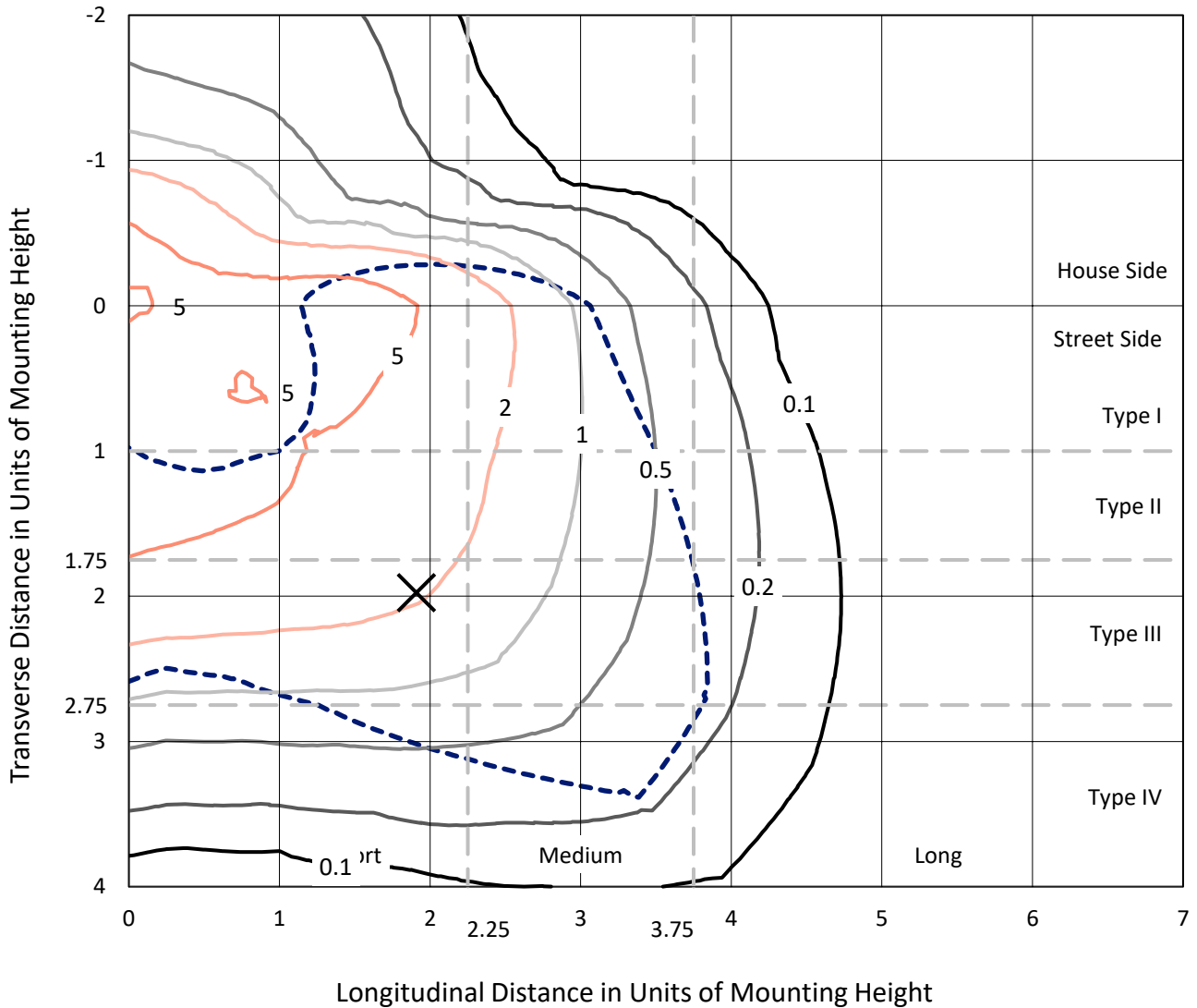
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

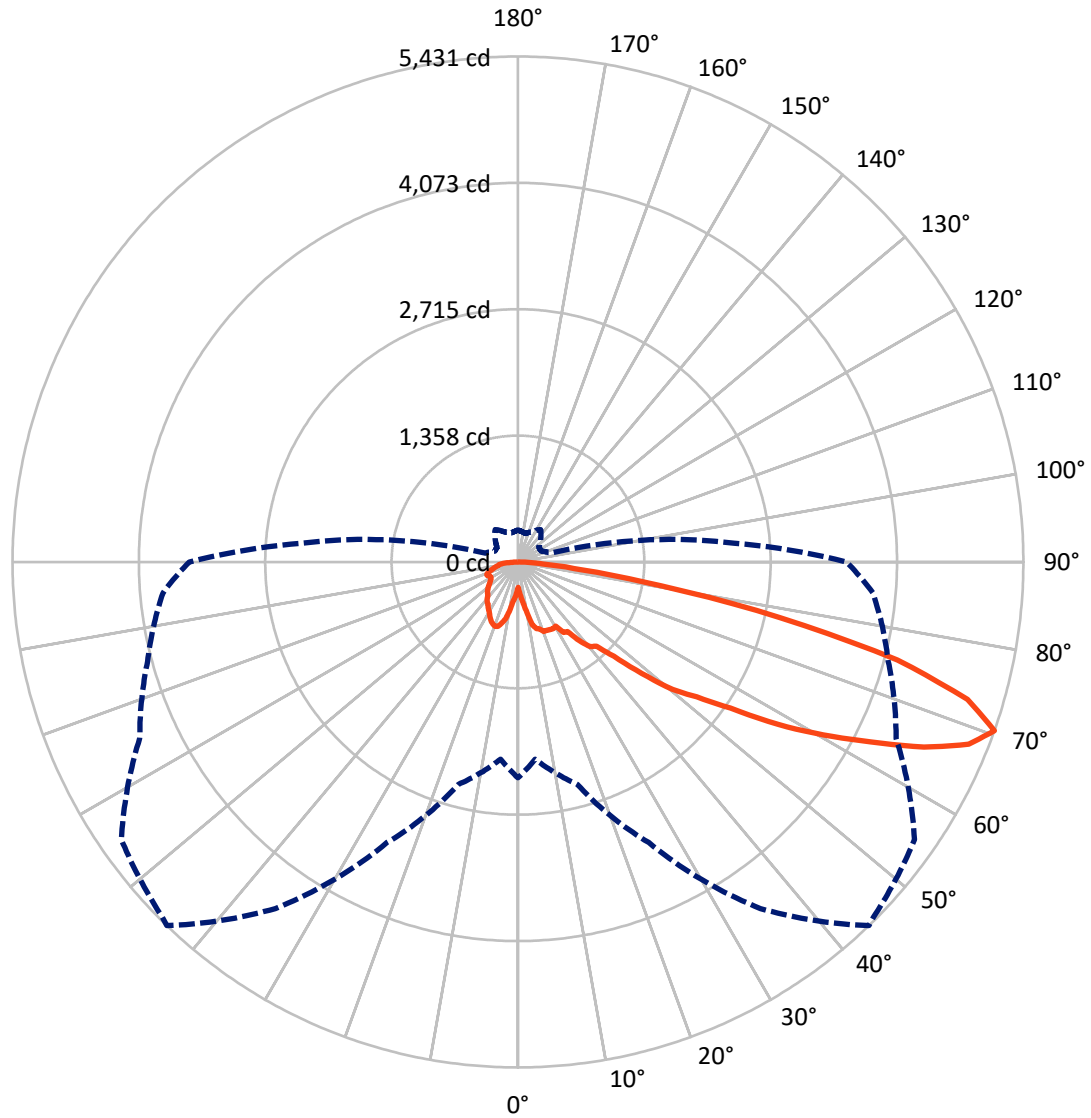
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.8 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
House Side	Lumens	1778.1	0.0	1778.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	6280.9	0.0	6280.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	8059.0	0.0	8059.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	0.5
10°-20°	197.8	2.5
20°-30°	369.6	4.6
30°-40°	593.3	7.4
40°-50°	1001.4	12.4
50°-60°	1784.5	22.1
60°-70°	2440.9	30.3
70°-80°	1435.4	17.8
80°-90°	193.3	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°	8059.0	100.0
0°-180°	8059.0	100.0

Coefficient of Utilization



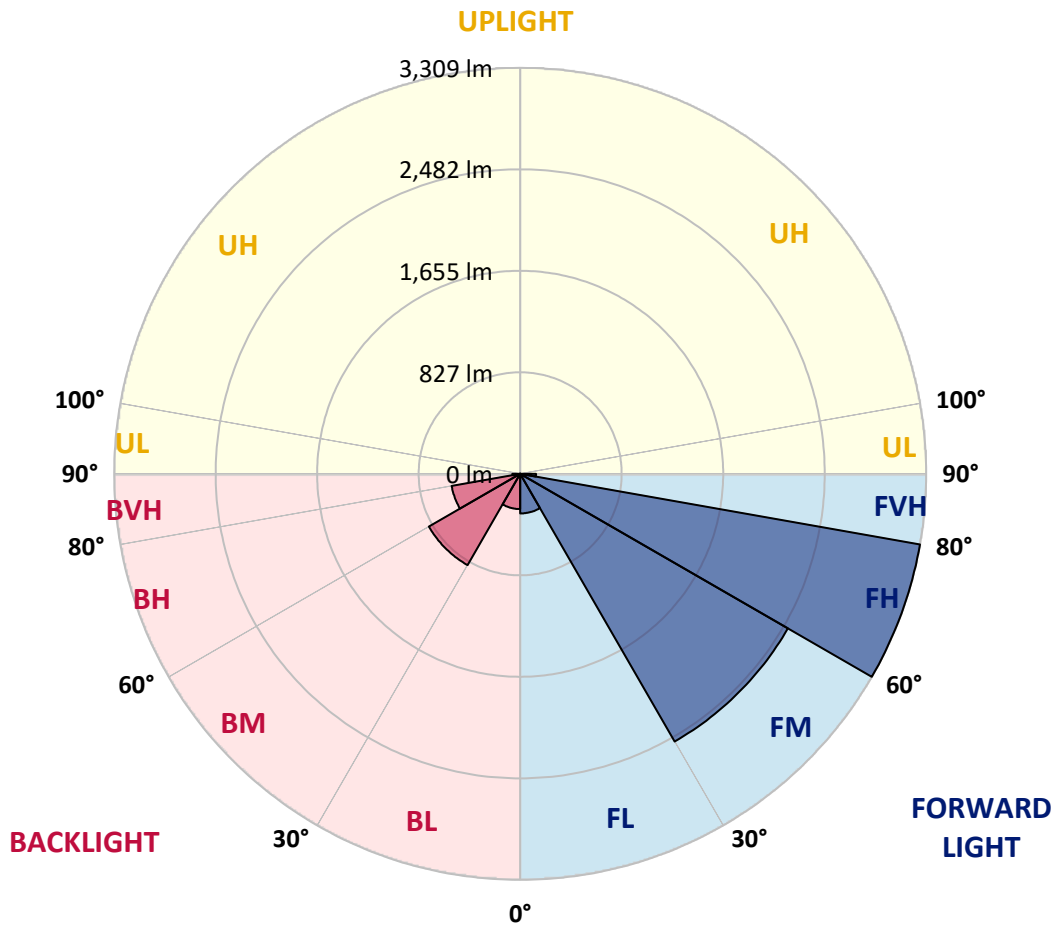
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	323.0	4.0			
FM (30°-60°)	2519.8	31.3			
FH (60°-80°)	3309.3	41.1			G2/5000
FVH (80°-90°)	128.8	1.6			G2/225
BL (0°-30°)	287.4	3.6	B1/500		
BM (30°-60°)	859.3	10.7	B1/1000		
BH (60°-80°)	567.0	7.0	B2/1000		G2/1000
BVH (80°-90°)	64.5	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°	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9
2.5°	332.4	325.8	310.0	315.2	321.9	324.5	323.8	323.2	312.9	309.3	327.5
5°	451.7	437.2	425.6	421.0	405.8	393.9	386.6	405.8	402.8	407.8	420.3
7.5°	564.1	554.8	528.7	519.5	488.4	467.9	465.6	480.8	484.8	476.8	498.3
10°	636.4	620.6	615.3	593.1	571.7	568.4	566.4	559.4	549.9	549.2	530.0
12.5°	692.6	700.9	705.2	679.7	680.4	692.3	686.0	657.9	641.7	613.3	615.6
15°	793.4	805.3	771.3	755.1	724.0	741.8	739.5	716.1	713.8	695.2	673.8
17.5°	881.3	886.6	829.7	792.7	782.2	756.4	763.3	764.0	733.6	766.6	747.5
20°	888.6	907.4	842.0	768.3	800.0	796.7	797.7	791.1	751.1	805.6	798.3
22.5°	924.2	895.5	836.7	782.8	791.1	796.0	800.7	792.7	790.4	820.8	843.0
25°	917.6	908.4	848.9	803.3	804.3	805.3	807.6	831.4	828.7	870.1	881.6
27.5°	979.4	965.2	852.5	841.3	815.5	809.9	794.1	843.6	882.3	881.3	945.1
30°	1097.1	1082.5	937.1	904.4	857.8	800.3	830.7	896.8	927.2	937.5	1018.4
32.5°	1280.8	1304.6	1103.7	971.8	914.0	901.4	898.1	891.5	966.9	1017.4	1091.1
35°	1544.5	1525.6	1300.0	1116.2	973.2	919.3	926.6	966.9	1056.4	1089.1	1157.2
37.5°	1846.5	1807.5	1551.4	1279.8	1143.7	1076.2	1052.1	1091.1	1110.9	1136.7	1275.8
40°	2153.5	2058.3	1798.3	1494.9	1246.1	1195.2	1174.1	1126.1	1172.7	1224.9	1401.7
42.5°	2449.9	2376.2	2066.9	1751.7	1418.6	1237.2	1225.6	1178.7	1323.1	1378.3	1583.5
45°	2760.5	2589.7	2342.2	2041.5	1670.7	1443.0	1425.9	1341.6	1526.6	1641.6	1839.9
47.5°	2969.3	2811.1	2594.3	2276.7	1881.9	1787.4	1754.6	1610.6	1778.4	1927.8	2236.1
50°	3167.0	3004.0	2776.4	2534.2	2264.2	2155.5	2085.7	1845.8	2092.0	2335.2	2744.0
52.5°	3449.8	3304.1	2987.9	2793.6	2674.9	2407.6	2355.7	2223.9	2458.8	2786.9	3299.1
55°	3752.2	3553.6	3267.1	3159.4	3111.4	2769.1	2726.8	2642.9	2947.2	3249.2	3838.7
57.5°	3885.7	3678.5	3520.5	3456.1	3452.1	3294.5	3245.9	3187.4	3446.5	3645.8	4346.6
60°	3991.7	3769.3	3706.2	3742.3	3873.1	3769.3	3706.2	3654.7	3852.9	4037.7	4761.0
62.5°	3972.2	3749.2	3781.6	3891.3	4225.4	4255.8	4207.2	4082.3	4255.8	4358.9	4998.6
65°	3657.7	3451.5	3640.1	3900.5	4552.8	4795.7	4793.1	4466.2	4526.4	4526.4	4973.5
67.5°	3106.5	2893.0	3202.0	3818.9	4779.2	5223.6	5224.3	4873.4	4551.2	4509.5	4584.9
70°	2319.7	2126.4	2473.7	3325.9	4545.6	5430.8	5400.7	5201.8	4483.1	4119.3	3829.8
72.5°	1385.5	1260.6	1580.2	2421.1	3877.4	5049.8	5129.8	4823.5	4104.1	3425.7	2737.7
75°	629.2	575.0	742.5	1390.8	2768.1	4212.1	4299.0	4070.7	3259.8	2463.8	1582.2
77.5°	269.3	254.8	324.2	616.9	1526.3	2880.5	3058.6	2909.2	2208.7	1431.8	699.9
80°	173.2	163.9	199.3	296.7	708.8	1556.4	1709.7	1653.9	1125.2	556.8	246.5
82.5°	103.4	100.5	133.2	186.4	386.6	685.0	771.9	792.4	467.2	249.8	141.1
85°	56.5	57.2	73.0	113.0	232.0	266.7	285.5	310.6	220.1	144.7	68.4
87.5°	18.8	21.8	29.4	45.9	82.6	75.3	75.7	87.9	92.9	60.1	21.8
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°	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9	273.9
2.5°	330.4	324.5	309.3	310.3	315.9	317.2	318.9	309.3	307.3	325.5	327.1
5°	422.3	402.8	393.9	390.9	382.3	379.3	395.2	402.5	409.7	424.0	430.9
7.5°	496.0	474.2	458.0	443.1	430.6	423.3	450.1	470.5	483.1	512.2	525.4
10°	529.7	510.9	504.9	493.0	502.6	524.4	529.4	530.0	557.8	557.1	562.7
12.5°	596.8	584.6	565.1	569.4	594.5	616.9	610.7	620.2	630.2	653.9	643.0
15°	657.9	654.6	636.4	639.4	644.4	672.4	676.1	685.7	700.9	719.7	706.8
17.5°	733.2	731.9	687.6	683.7	695.2	722.7	714.1	697.2	747.5	767.6	762.3
20°	784.5	774.6	717.7	700.9	730.3	733.9	724.0	697.2	740.8	784.8	796.7
22.5°	827.1	815.5	757.0	724.0	718.0	719.7	719.7	714.7	736.2	772.2	771.9
25°	861.5	872.4	798.0	766.3	734.6	694.9	690.0	694.3	706.5	775.9	773.6
27.5°	947.7	917.6	811.9	788.1	723.0	660.6	674.1	680.7	684.7	760.7	773.2
30°	1003.9	1013.1	861.5	801.0	706.2	622.2	626.8	646.0	669.1	759.0	762.7
32.5°	1079.6	1059.7	938.8	779.5	661.2	599.1	590.5	616.3	650.6	732.3	742.2
35°	1149.9	1173.4	971.5	775.5	629.8	564.4	573.6	582.6	618.3	702.5	714.1
37.5°	1315.2	1261.6	1063.4	756.4	603.7	546.9	537.0	550.5	580.9	646.0	672.8
40°	1440.7	1444.0	1083.2	732.3	553.8	521.8	500.6	514.2	527.1	578.9	590.5
42.5°	1676.3	1604.3	1131.8	679.4	522.4	484.1	472.2	478.1	480.1	501.9	521.1
45°	1976.0	1807.2	1150.9	608.3	481.1	468.6	444.4	441.5	430.6	433.5	450.4
47.5°	2390.7	2123.7	1137.0	532.7	444.4	448.4	413.7	400.2	385.0	388.6	404.5
50°	2927.1	2528.2	1136.1	468.6	419.3	422.0	393.6	369.1	353.9	361.5	375.4
52.5°	3528.8	2934.0	1140.7	424.6	391.9	390.6	380.3	350.6	338.4	346.3	362.2
55°	4104.4	3282.9	1175.1	396.9	363.5	365.8	369.8	344.7	331.1	338.4	354.9
57.5°	4605.4	3558.5	1162.2	367.5	337.1	347.6	358.2	336.4	326.1	336.7	353.2
60°	4955.6	3686.4	1060.4	339.4	317.6	332.1	352.6	335.4	334.1	356.9	376.7
62.5°	5083.5	3639.2	862.1	317.2	306.0	330.1	365.5	357.2	358.5	386.6	414.0
65°	4896.8	3390.7	643.0	303.0	297.1	339.7	395.2	370.1	351.9	375.1	400.2
67.5°	4365.8	2948.9	469.9	290.8	286.8	354.9	422.6	368.8	335.1	358.5	379.0
70°	3532.1	2327.6	363.8	275.3	273.3	344.7	425.3	358.9	316.9	332.1	343.7
72.5°	2420.2	1593.7	301.4	260.4	249.8	305.3	403.8	336.7	295.1	304.0	313.6
75°	1352.5	894.5	253.4	241.9	218.8	272.0	378.7	323.5	278.9	281.5	294.8
77.5°	607.0	386.9	215.1	217.4	190.7	240.6	346.0	302.4	254.1	248.2	261.4
80°	229.7	188.7	174.5	183.7	160.3	208.5	311.9	283.2	228.0	220.4	228.0
82.5°	133.2	114.3	129.5	141.4	127.2	191.7	297.7	265.7	200.9	181.7	188.4
85°	61.8	59.1	77.7	91.9	88.9	149.4	254.8	199.9	143.1	120.9	133.8
87.5°	16.2	18.2	27.4	32.4	33.0	51.2	98.1	74.3	55.8	42.3	40.6
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)