

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: P596672

Luminaire Tested: **MSA-SA3A-827-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596672
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-827-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8743 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

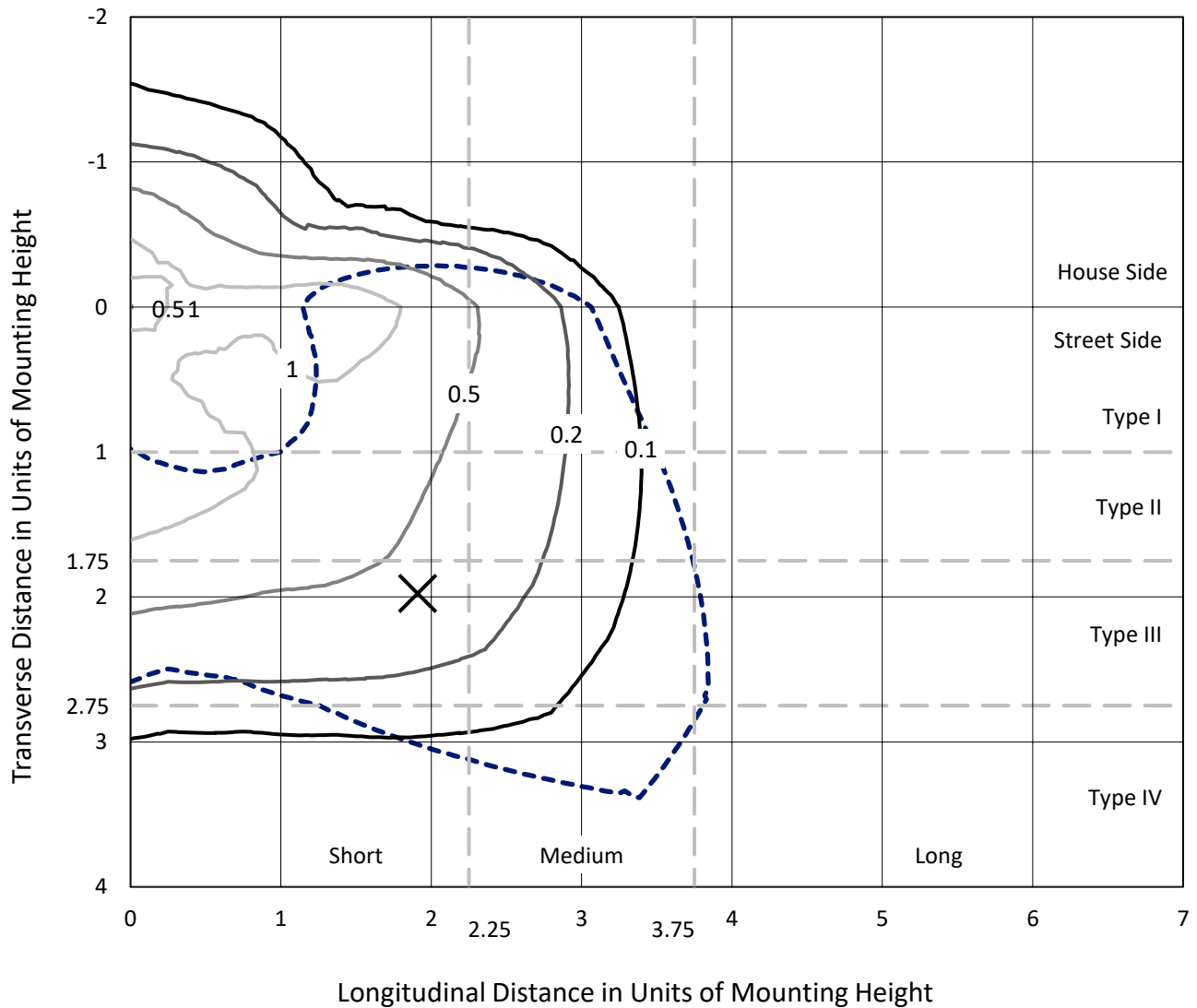
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

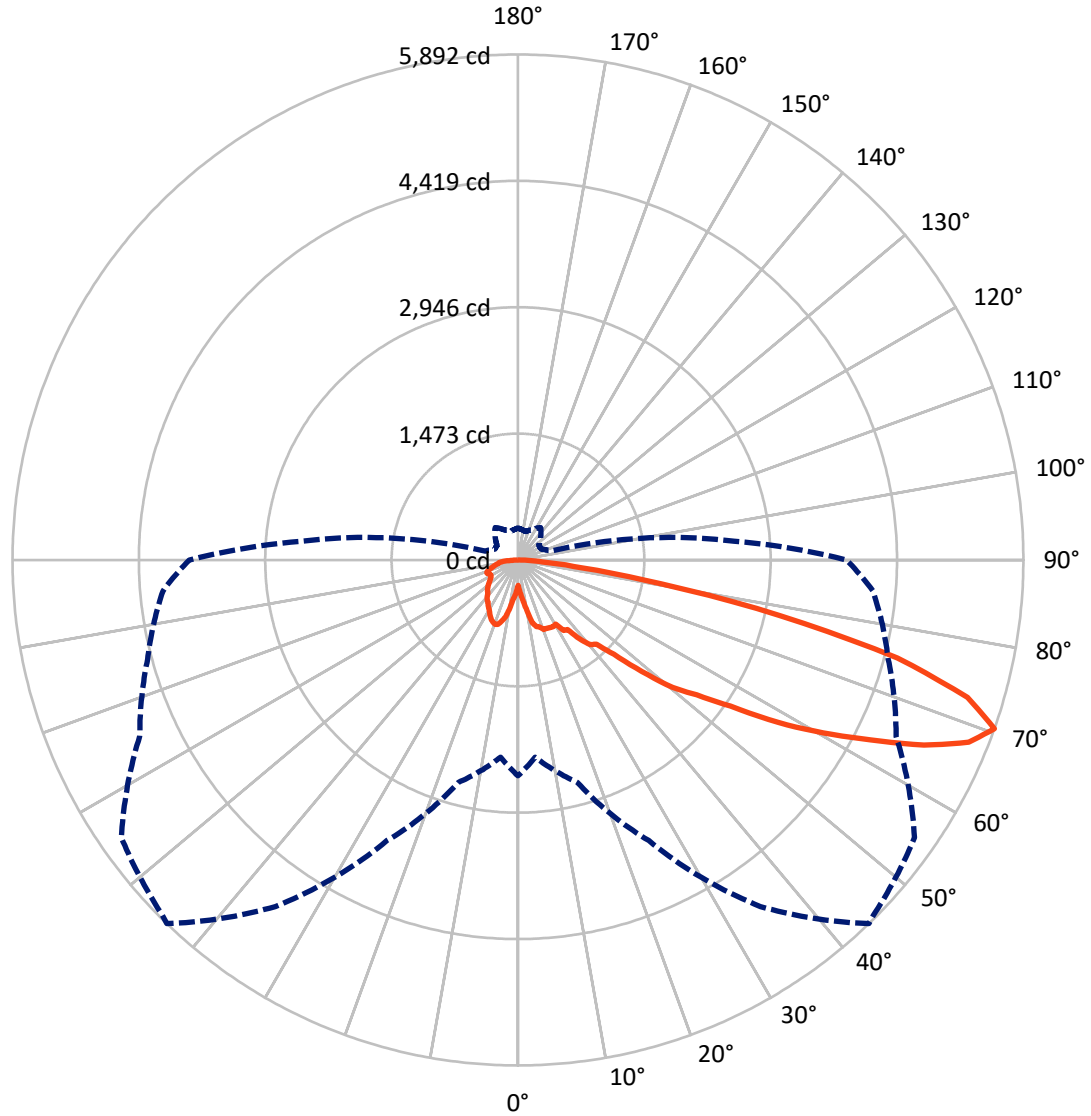
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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	1929.0	0.0	1929.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	6813.9	0.0	6813.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	8743.0	0.0	8743.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	0.5
10°-20°	214.6	2.5
20°-30°	401.0	4.6
30°-40°	643.6	7.4
40°-50°	1086.4	12.4
50°-60°	1935.9	22.1
60°-70°	2648.1	30.3
70°-80°	1557.2	17.8
80°-90°	209.7	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°	8743.0	100.0
0°-180°	8743.0	100.0

Coefficient of Utilization

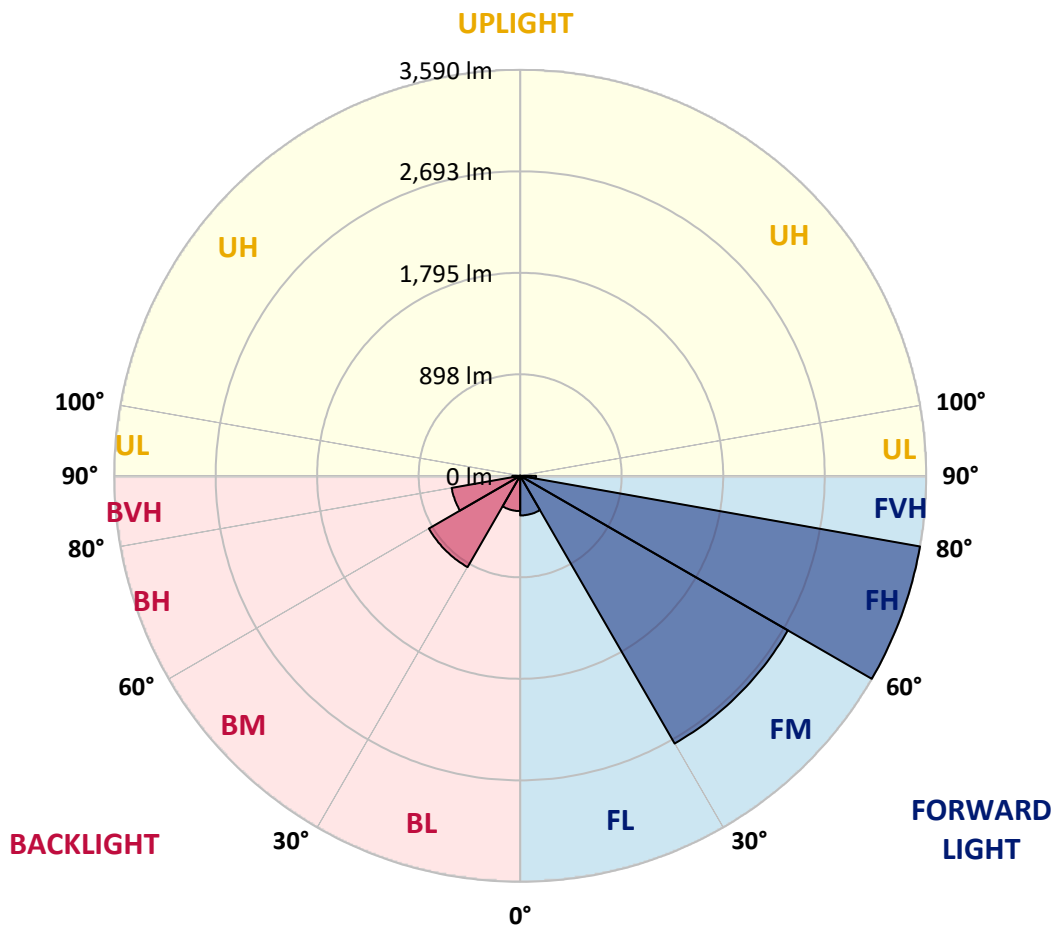


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	350.4	4.0			
FM (30°-60°)	2733.7	31.3			
FH (60°-80°)	3590.1	41.1			G2/5000
FVH (80°-90°)	139.7	1.6			G2/225
BL (0°-30°)	311.8	3.6	B1/500		
BM (30°-60°)	932.2	10.7	B1/1000		
BH (60°-80°)	615.1	7.0	B2/1000		G2/1000
BVH (80°-90°)	69.9	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°	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2
2.5°	360.6	353.5	336.3	342.0	349.2	352.0	351.3	350.6	339.5	335.5	355.3
5°	490.1	474.3	461.7	456.7	440.2	427.3	419.4	440.2	437.0	442.4	456.0
7.5°	611.9	601.9	573.6	563.5	529.8	507.6	505.1	521.6	525.9	517.3	540.6
10°	690.4	673.2	667.5	643.5	620.2	616.6	614.4	606.9	596.5	595.8	575.0
12.5°	751.4	760.4	765.0	737.4	738.1	751.0	744.2	713.7	696.2	665.4	667.9
15°	860.7	873.6	836.7	819.1	785.4	804.8	802.3	776.8	774.3	754.3	731.0
17.5°	956.1	961.8	900.2	860.0	848.5	820.6	828.1	828.8	795.8	831.7	810.9
20°	964.0	984.4	913.4	833.5	867.9	864.3	865.4	858.2	814.8	874.0	866.1
22.5°	1002.7	971.5	907.7	849.3	858.2	863.6	868.6	860.0	857.5	890.5	914.5
25°	995.5	985.5	921.0	871.5	872.6	873.6	876.1	902.0	899.1	943.9	956.4
27.5°	1062.6	1047.1	924.9	912.7	884.7	878.7	861.4	915.2	957.2	956.1	1025.3
30°	1190.2	1174.4	1016.7	981.2	930.6	868.3	901.2	972.9	1005.9	1017.0	1104.9
32.5°	1389.5	1415.3	1197.3	1054.3	991.6	978.0	974.4	967.2	1048.9	1103.8	1183.7
35°	1675.6	1655.1	1410.3	1211.0	1055.7	997.3	1005.2	1048.9	1146.1	1181.6	1255.4
37.5°	2003.2	1960.9	1683.1	1388.4	1240.7	1167.6	1141.4	1183.7	1205.2	1233.2	1384.1
40°	2336.3	2233.0	1950.9	1621.8	1351.9	1296.6	1273.7	1221.7	1272.3	1328.9	1520.7
42.5°	2657.8	2577.9	2242.3	1900.3	1539.0	1342.2	1329.6	1278.7	1435.4	1495.3	1717.9
45°	2994.8	2809.5	2541.0	2214.7	1812.5	1565.5	1546.9	1455.5	1656.2	1781.0	1996.1
47.5°	3221.4	3049.7	2814.5	2470.0	2041.6	1939.1	1903.6	1747.3	1929.4	2091.4	2425.9
50°	3435.7	3259.0	3012.0	2749.2	2456.4	2338.4	2262.8	2002.5	2269.6	2533.4	2976.9
52.5°	3742.6	3584.5	3241.4	3030.7	2902.0	2611.9	2555.7	2412.6	2667.5	3023.5	3579.1
55°	4070.6	3855.2	3544.4	3427.5	3375.5	3004.1	2958.2	2867.2	3197.3	3525.0	4164.5
57.5°	4215.5	3990.7	3819.3	3749.4	3745.1	3574.1	3521.4	3458.0	3739.0	3955.2	4715.5
60°	4330.5	4089.3	4020.8	4059.9	4201.8	4089.3	4020.8	3964.9	4180.0	4380.4	5165.1
62.5°	4309.4	4067.4	4102.5	4221.5	4584.0	4617.0	4564.3	4428.8	4617.0	4728.8	5422.8
65°	3968.1	3744.4	3949.1	4231.6	4939.2	5202.7	5199.9	4845.3	4910.6	4910.6	5395.6
67.5°	3370.1	3138.6	3473.7	4143.0	5184.8	5667.0	5667.7	5287.0	4937.4	4892.3	4974.0
70°	2516.6	2306.9	2683.6	3608.2	4931.4	5891.7	5859.1	5643.3	4863.6	4468.9	4154.9
72.5°	1503.1	1367.6	1714.3	2626.6	4206.5	5478.4	5565.2	5232.8	4452.4	3716.4	2970.1
75°	682.6	623.8	805.5	1508.9	3003.0	4569.6	4663.9	4416.2	3536.5	2672.9	1716.4
77.5°	292.2	276.4	351.7	669.3	1655.9	3124.9	3318.2	3156.1	2396.1	1553.3	759.3
80°	187.8	177.8	216.2	321.9	769.0	1688.5	1854.8	1794.2	1220.6	604.1	267.4
82.5°	112.2	109.0	144.5	202.2	419.4	743.1	837.4	859.7	506.9	271.0	153.1
85°	61.3	62.0	79.2	122.6	251.7	289.3	309.7	337.0	238.8	157.0	74.2
87.5°	20.4	23.7	31.9	49.8	89.6	81.7	82.1	95.4	100.7	65.2	23.7
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°	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2	297.2
2.5°	358.5	352.0	335.5	336.6	342.7	344.1	345.9	335.5	333.4	353.1	354.9
5°	458.1	437.0	427.3	424.1	414.8	411.5	428.8	436.6	444.5	459.9	467.5
7.5°	538.1	514.4	496.9	480.7	467.1	459.2	488.3	510.5	524.1	555.7	570.0
10°	574.7	554.2	547.8	534.9	545.3	568.9	574.3	575.0	605.1	604.4	610.5
12.5°	647.4	634.2	613.0	617.7	644.9	669.3	662.5	672.9	683.6	709.4	697.6
15°	713.7	710.2	690.4	693.7	699.1	729.5	733.5	743.9	760.4	780.8	766.8
17.5°	795.5	794.0	746.0	741.7	754.3	784.0	774.7	756.4	810.9	832.8	827.0
20°	851.0	840.3	778.6	760.4	792.3	796.2	785.4	756.4	803.7	851.4	864.3
22.5°	897.3	884.7	821.3	785.4	779.0	780.8	780.8	775.4	798.7	837.8	837.4
25°	934.6	946.4	865.7	831.3	796.9	753.9	748.5	753.2	766.4	841.7	839.2
27.5°	1028.1	995.5	880.8	855.0	784.4	716.6	731.3	738.5	742.8	825.2	838.9
30°	1089.1	1099.1	934.6	869.0	766.1	675.0	680.1	700.8	725.9	823.4	827.4
32.5°	1171.2	1149.7	1018.5	845.7	717.3	649.9	640.6	668.6	705.9	794.4	805.2
35°	1247.5	1273.0	1054.0	841.4	683.3	612.3	622.3	632.0	670.7	762.1	774.7
37.5°	1426.8	1368.7	1153.6	820.6	655.0	593.3	582.5	597.2	630.2	700.8	729.9
40°	1563.0	1566.6	1175.1	794.4	600.8	566.1	543.1	557.8	571.8	628.1	640.6
42.5°	1818.6	1740.5	1227.8	737.1	566.8	525.2	512.3	518.7	520.9	544.5	565.3
45°	2143.8	1960.6	1248.6	660.0	522.0	508.3	482.2	478.9	467.1	470.3	488.6
47.5°	2593.7	2304.0	1233.6	577.9	482.2	486.5	448.8	434.1	417.6	421.6	438.8
50°	3175.5	2742.8	1232.5	508.3	454.9	457.8	427.0	400.4	383.9	392.2	407.2
52.5°	3828.3	3183.0	1237.5	460.7	425.2	423.7	412.6	380.4	367.1	375.7	392.9
55°	4452.8	3561.6	1274.8	430.5	394.3	396.8	401.1	373.9	359.2	367.1	385.0
57.5°	4996.2	3860.6	1260.8	398.6	365.7	377.1	388.6	364.9	353.8	365.3	383.2
60°	5376.2	3999.3	1150.4	368.2	344.5	360.3	382.5	363.9	362.4	387.2	408.7
62.5°	5515.0	3948.0	935.3	344.1	332.0	358.1	396.5	387.5	389.0	419.4	449.2
65°	5312.4	3678.4	697.6	328.7	322.3	368.5	428.8	401.5	381.8	406.9	434.1
67.5°	4736.3	3199.1	509.8	315.5	311.2	385.0	458.5	400.1	363.5	389.0	411.2
70°	3831.9	2525.2	394.7	298.6	296.5	373.9	461.4	389.3	343.8	360.3	372.8
72.5°	2625.6	1729.0	326.9	282.5	271.0	331.2	438.1	365.3	320.1	329.8	340.2
75°	1467.3	970.4	275.0	262.4	237.3	295.0	410.8	351.0	302.6	305.4	319.8
77.5°	658.5	419.8	233.4	235.9	206.8	261.0	375.3	328.0	275.7	269.2	283.6
80°	249.1	204.7	189.3	199.3	173.9	226.2	338.4	307.2	247.4	239.1	247.4
82.5°	144.5	124.0	140.5	153.4	138.0	207.9	323.0	288.2	218.0	197.2	204.3
85°	67.0	64.2	84.2	99.7	96.4	162.0	276.4	216.9	155.2	131.2	145.2
87.5°	17.6	19.7	29.8	35.1	35.8	55.6	106.5	80.7	60.6	45.9	44.1
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)