

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: P596643

Luminaire Tested: **MSA-SA2D-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596643
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7478 lumens
Efficiency: N/A
Efficacy: 58.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

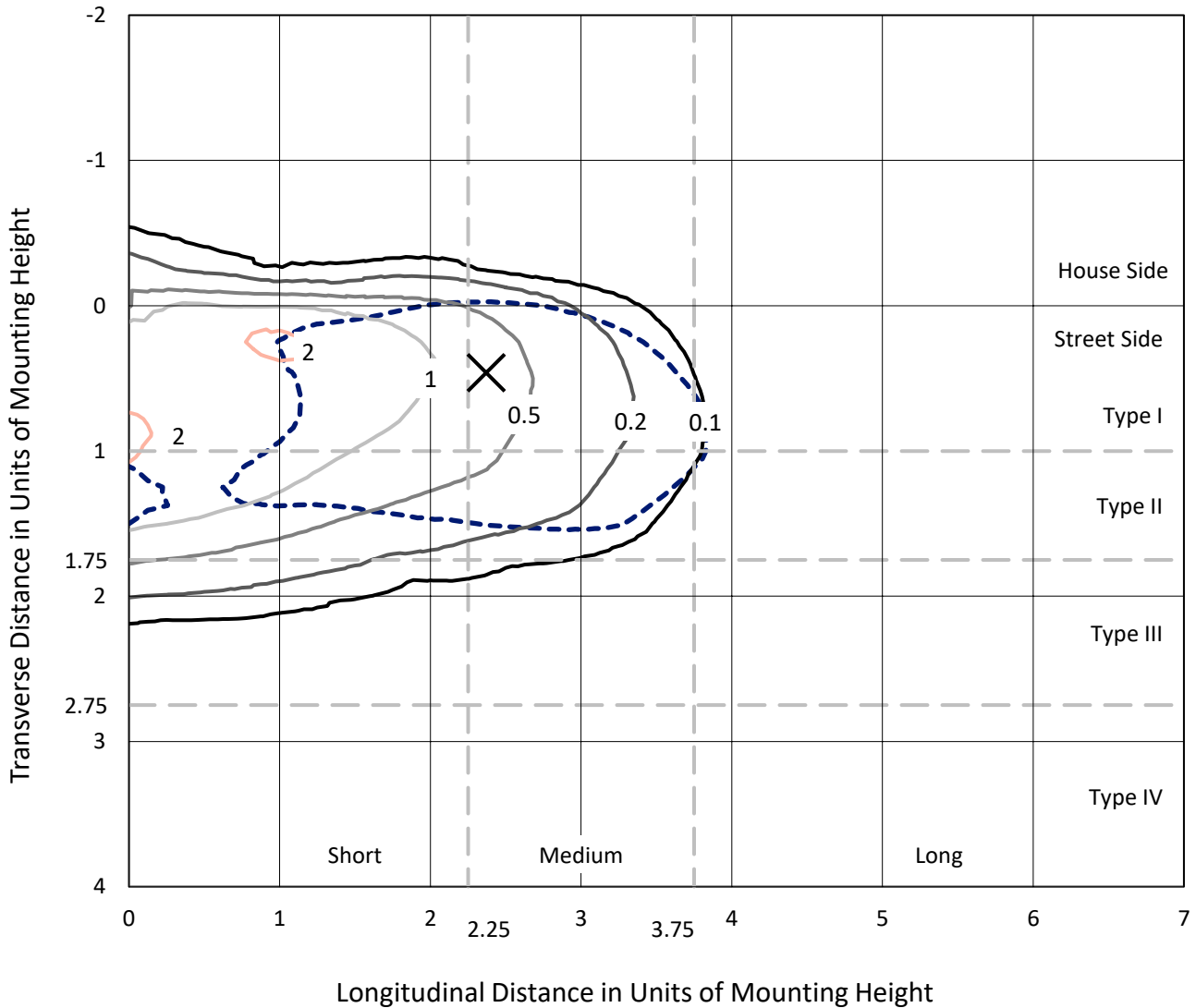
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596643
 CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

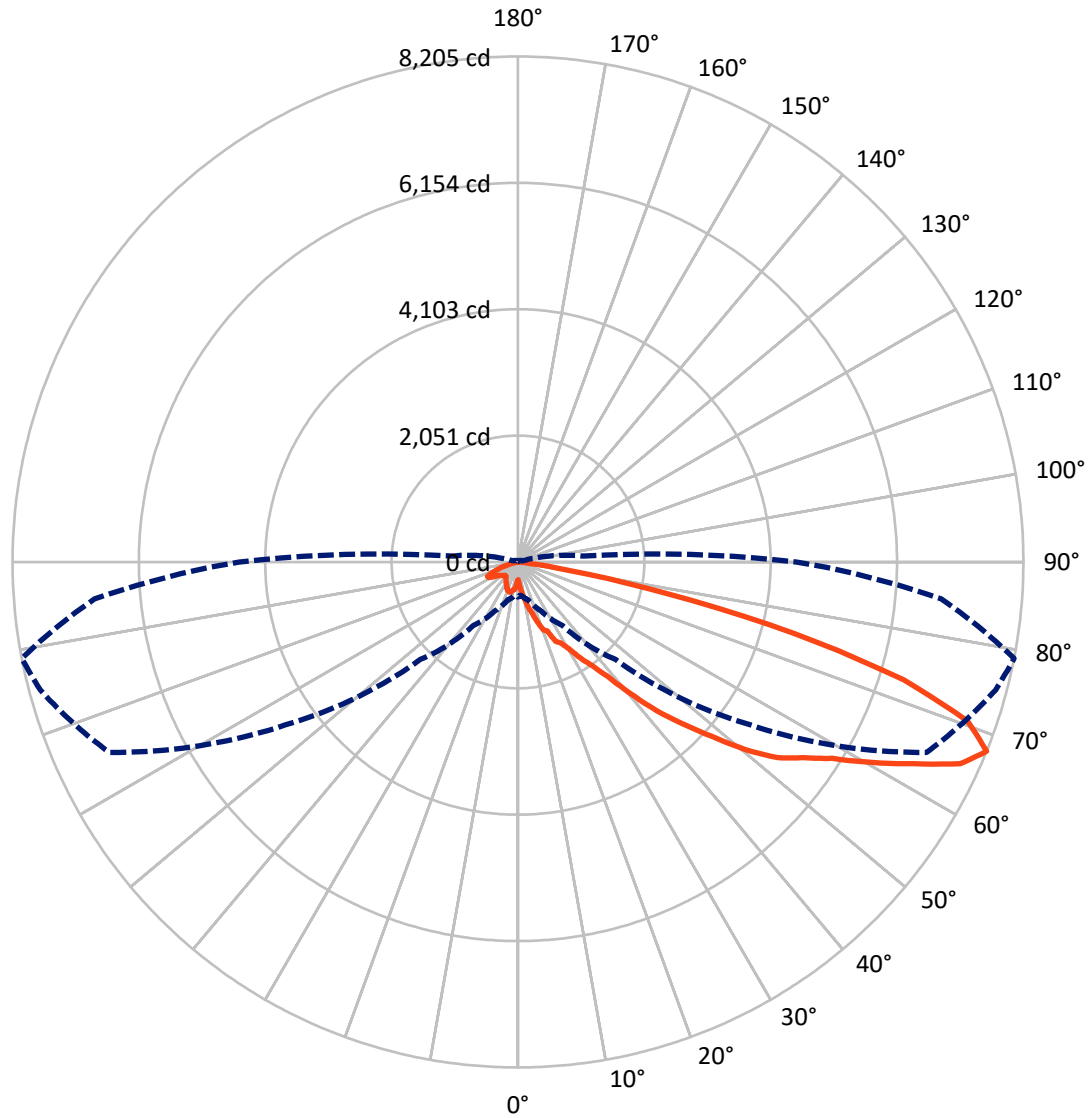
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type II - Medium - N/A

REPORT NUMBER: P596643
CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P596643
 CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	491.4	0.0	491.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6986.6	0.0	6986.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	7478.0	0.0	7478.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.9	0.6
10°-20°	167.1	2.2
20°-30°	322.4	4.3
30°-40°	633.2	8.5
40°-50°	1268.5	17.0
50°-60°	2027.6	27.1
60°-70°	2040.1	27.3
70°-80°	920.3	12.3
80°-90°	56.9	0.8
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°	7478.0	100.0
0°-180°	7478.0	100.0

Coefficient of Utilization

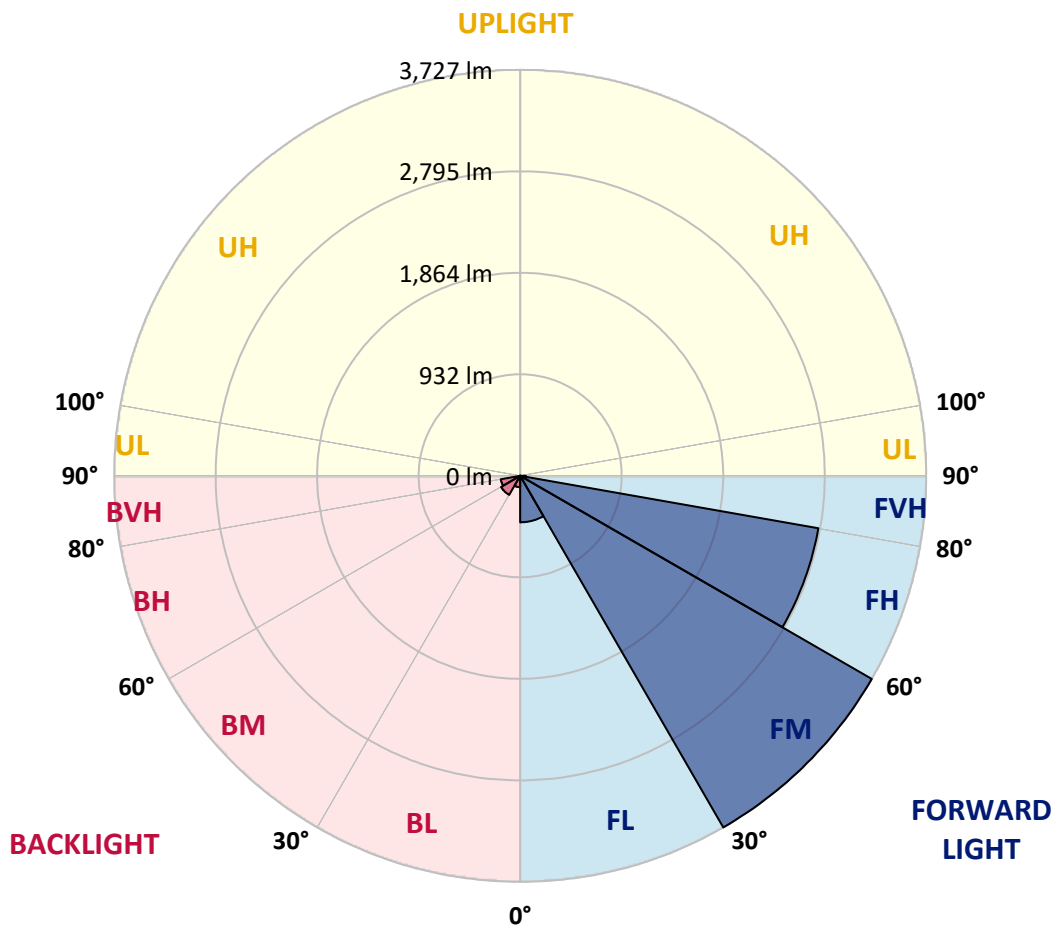


REPORT NUMBER: P596643
 CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	426.9	5.7			
FM (30°-60°)	3727.1	49.8			
FH (60°-80°)	2779.3	37.2			G2/5000
FVH (80°-90°)	53.3	0.7			G1/100
BL (0°-30°)	104.4	1.4	B0/110		
BM (30°-60°)	202.2	2.7	B0/220		
BH (60°-80°)	181.1	2.4	B1/500		G1/500
BVH (80°-90°)	3.6	0.0			G0/10
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





REPORT NUMBER: P596643

CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1
2.5°	389.1	375.1	352.5	365.2	364.4	371.0	358.6	345.0	323.2	345.0	346.7
5°	560.2	534.2	517.8	514.5	496.3	479.4	475.7	461.7	451.0	431.6	448.9
7.5°	697.9	685.9	656.7	653.4	608.9	584.1	592.0	585.8	545.0	524.8	541.7
10°	756.4	735.8	739.9	735.8	716.9	723.9	707.8	689.2	656.7	623.3	581.2
12.5°	779.1	775.8	810.0	805.9	850.4	904.0	868.2	837.2	761.8	753.6	696.3
15°	827.8	848.4	843.4	860.7	889.2	980.3	979.5	986.9	906.9	864.0	781.2
17.5°	871.0	886.3	861.6	881.3	958.8	1014.1	1087.9	1059.0	1068.1	1024.4	896.2
20°	852.5	869.8	845.1	833.1	969.6	1074.3	1172.8	1151.8	1206.2	1179.0	1002.1
22.5°	968.3	935.8	873.5	834.8	936.6	1073.0	1202.9	1290.7	1281.2	1214.4	1100.6
25°	1111.4	1091.6	1017.0	948.5	957.6	1065.6	1297.7	1426.7	1454.7	1426.3	1194.2
27.5°	1304.3	1299.8	1147.2	1117.5	1029.3	1033.0	1312.5	1598.2	1534.3	1489.8	1303.5
30°	1556.2	1520.3	1339.3	1300.6	1170.3	1106.4	1403.2	1746.2	1699.2	1638.6	1406.1
32.5°	1827.0	1832.3	1601.5	1473.7	1369.0	1293.2	1367.4	1815.4	1903.3	1854.2	1534.3
35°	2134.5	2158.4	1876.0	1726.0	1522.4	1410.6	1521.5	2028.2	2185.6	2056.6	1706.2
37.5°	2608.2	2607.3	2277.6	1978.7	1830.7	1709.5	1778.3	2221.5	2532.7	2351.3	2014.6
40°	3024.9	2934.2	2627.5	2284.2	2053.3	2020.3	1970.4	2486.1	2903.3	2794.1	2288.7
42.5°	3336.2	3272.3	2901.7	2634.5	2348.5	2243.8	2226.0	2874.0	3450.3	3297.4	2679.9
45°	3708.4	3499.0	3226.1	2985.3	2693.9	2663.4	2621.8	3267.7	4086.8	3742.2	3020.0
47.5°	4041.9	3844.8	3586.8	3277.6	2942.9	3194.3	3034.4	3613.6	4549.8	4226.2	3395.1
50°	4322.6	4113.2	3824.2	3588.8	3445.4	3616.1	3349.3	3898.4	5049.8	4787.6	3745.9
52.5°	4465.7	4228.6	4005.2	3859.7	3947.5	3909.2	3776.4	4243.5	5476.0	5279.8	4056.7
55°	4348.2	4116.5	4022.9	4095.1	4361.8	4250.9	4261.6	4778.1	5878.4	5607.9	4327.1
57.5°	3827.1	3615.6	3657.3	3854.7	4365.9	4656.1	4814.8	5297.5	6201.1	6016.9	4744.3
60°	2895.1	2724.8	2879.0	3229.4	3955.3	4575.3	5207.3	5816.9	6662.4	6604.7	5375.9
62.5°	1768.0	1675.7	1894.2	2331.1	3151.9	4179.2	5436.0	6509.5	7155.9	7217.3	6045.7
65°	902.0	860.3	1042.5	1426.7	2129.6	3433.0	5270.7	6939.8	7665.8	7892.5	6684.3
67.5°	568.0	541.3	638.5	870.2	1256.5	2239.2	4614.9	7316.2	8026.1	8205.4	6897.4
70°	393.7	376.8	460.9	597.3	792.7	1206.2	3426.4	6965.0	7740.4	7748.6	6381.7
72.5°	249.8	236.6	318.7	442.3	585.0	622.9	1964.3	5465.3	6625.7	6549.5	5168.1
75°	162.0	155.4	202.4	324.0	449.3	384.2	970.8	3687.8	4750.9	4631.4	3432.6
77.5°	116.2	112.1	135.6	216.4	319.9	268.8	435.3	2198.0	2724.0	2462.6	1666.2
80°	70.1	69.7	98.1	135.6	227.5	189.6	201.2	998.0	1056.1	861.1	509.1
82.5°	35.0	36.3	54.8	87.4	146.3	124.1	91.9	332.3	283.6	209.0	103.1
85°	8.2	10.3	28.9	60.2	73.4	49.5	43.7	87.0	77.9	58.9	30.1
87.5°	0.0	0.0	9.1	14.4	19.8	8.2	14.8	16.5	21.0	16.5	6.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596643
 CATALOG NUMBER: MSA-SA2D-827-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1	288.1
2.5°	347.1	342.1	312.1	304.2	303.4	294.7	296.8	288.6	289.0	307.5	307.5
5°	442.3	413.5	384.6	359.0	341.7	317.0	307.9	304.2	300.9	308.3	312.9
7.5°	519.4	476.9	425.0	369.4	317.8	282.4	277.4	268.4	265.1	272.5	278.3
10°	553.6	500.9	429.5	348.3	300.1	271.2	247.3	234.6	232.1	231.7	233.7
12.5°	626.2	560.6	434.5	340.5	288.1	256.4	229.2	207.8	188.0	190.0	188.0
15°	684.3	606.8	434.5	321.5	259.3	227.5	179.7	169.0	166.1	170.7	167.0
17.5°	772.1	652.6	412.6	287.7	234.6	176.8	158.7	157.9	163.7	170.2	166.1
20°	824.9	658.7	376.0	249.0	192.5	153.3	146.8	140.2	148.4	153.8	151.7
22.5°	879.7	659.2	339.3	228.4	155.0	139.7	129.0	123.7	124.9	129.9	130.7
25°	903.2	643.1	305.0	201.2	140.6	124.9	113.8	108.0	105.9	108.4	107.6
27.5°	967.1	612.2	267.9	171.5	133.6	110.9	100.6	93.6	87.4	91.5	92.3
30°	976.2	602.3	247.7	152.5	124.5	98.1	89.0	81.6	77.1	82.9	82.9
32.5°	1005.0	547.8	237.4	144.7	115.0	90.7	78.3	73.0	72.1	75.8	76.3
35°	1049.5	523.9	222.2	138.5	106.4	82.0	70.5	68.0	67.2	70.1	70.1
37.5°	1200.4	494.3	205.3	133.1	98.9	77.5	68.4	64.3	64.7	67.2	68.8
40°	1300.6	498.0	180.1	126.6	90.3	73.4	64.3	61.4	61.0	62.2	63.5
42.5°	1486.5	500.9	169.0	119.5	83.7	68.4	60.2	58.1	56.5	57.7	58.9
45°	1694.3	516.1	163.2	113.8	80.0	65.5	56.5	55.2	51.5	52.4	54.0
47.5°	1894.6	571.8	156.2	105.5	76.7	63.9	52.8	49.9	47.4	47.0	48.6
50°	2122.1	625.8	148.4	96.5	73.4	61.4	49.1	44.5	42.9	42.9	44.1
52.5°	2325.8	677.3	141.0	90.3	70.9	56.9	45.8	41.2	40.0	40.0	41.6
55°	2540.1	731.3	134.4	84.5	67.6	52.4	42.9	38.7	38.3	37.5	38.7
57.5°	2918.6	849.2	126.1	79.6	63.1	48.6	40.4	36.3	35.5	34.2	35.5
60°	3469.7	1030.2	115.4	74.6	57.7	46.2	38.3	33.4	32.2	30.1	30.5
62.5°	4008.5	1176.5	103.1	68.4	52.8	43.7	35.0	30.1	28.0	25.6	26.0
65°	4470.2	1234.2	89.9	61.0	47.8	37.9	30.5	26.4	23.5	20.2	19.8
67.5°	4524.6	1089.9	77.1	54.0	42.9	32.2	26.0	23.5	19.0	16.1	15.3
70°	4072.0	812.1	64.3	47.8	37.1	27.2	22.3	20.6	17.7	15.3	14.0
72.5°	3242.6	599.4	54.0	42.5	32.6	23.1	19.0	19.4	17.7	14.8	13.2
75°	2144.4	343.0	44.1	35.5	27.2	18.6	17.3	17.3	16.9	14.0	12.4
77.5°	1031.8	148.0	33.8	28.0	21.8	14.0	15.7	15.7	16.1	12.8	10.3
80°	292.7	44.5	21.0	19.0	16.1	9.5	12.4	12.0	10.7	7.4	4.5
82.5°	52.4	17.3	9.5	9.9	9.1	3.7	7.0	6.6	5.4	2.9	0.4
85°	14.4	6.6	5.4	5.8	4.5	1.2	2.9	3.7	2.9	1.6	0.0
87.5°	3.7	2.9	3.7	4.1	3.3	0.4	1.2	0.4	1.2	0.4	0.0
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)