

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: P596482

Luminaire Tested: **MSA-SA1A-827-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596482
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-827-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2915 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

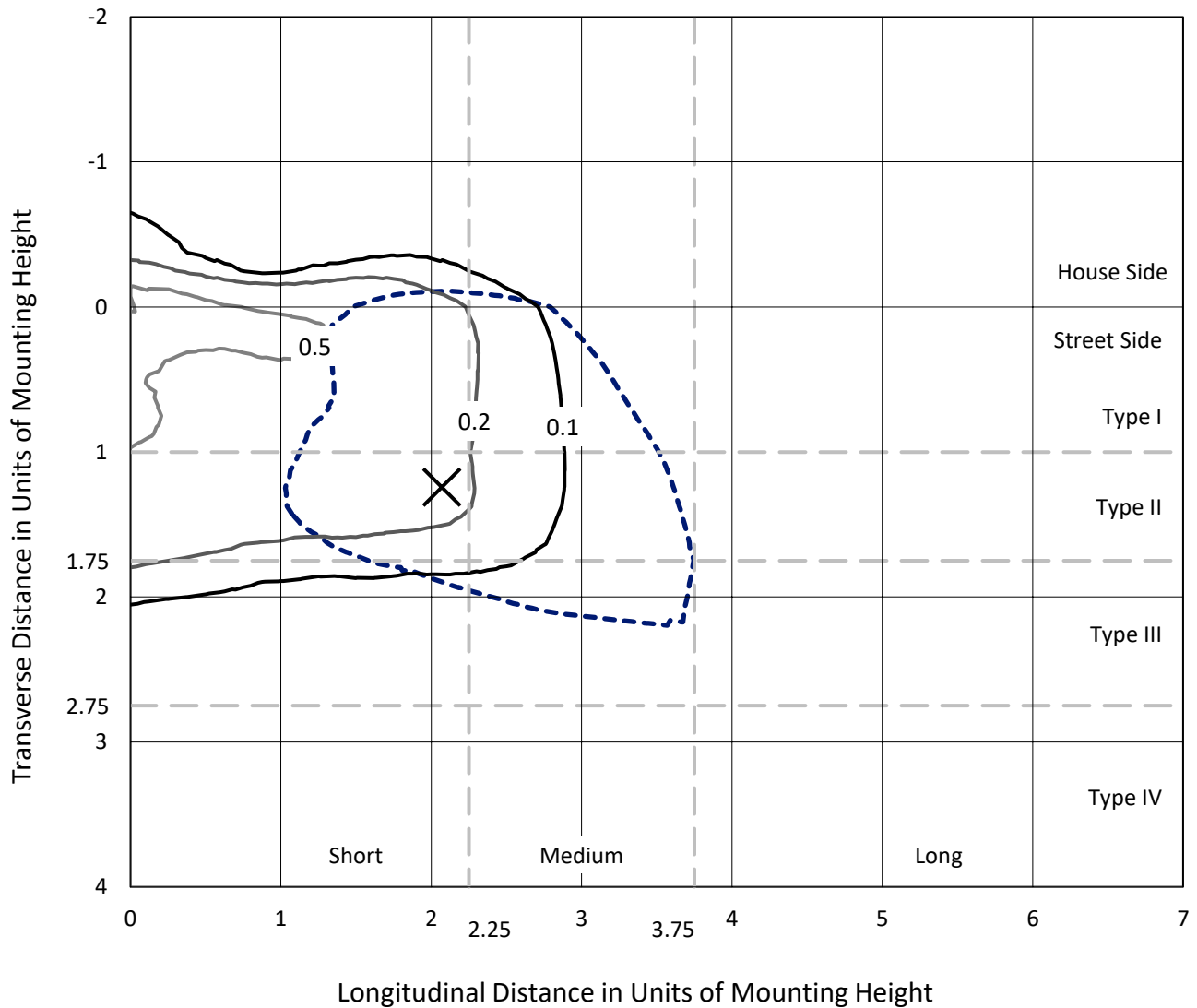
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

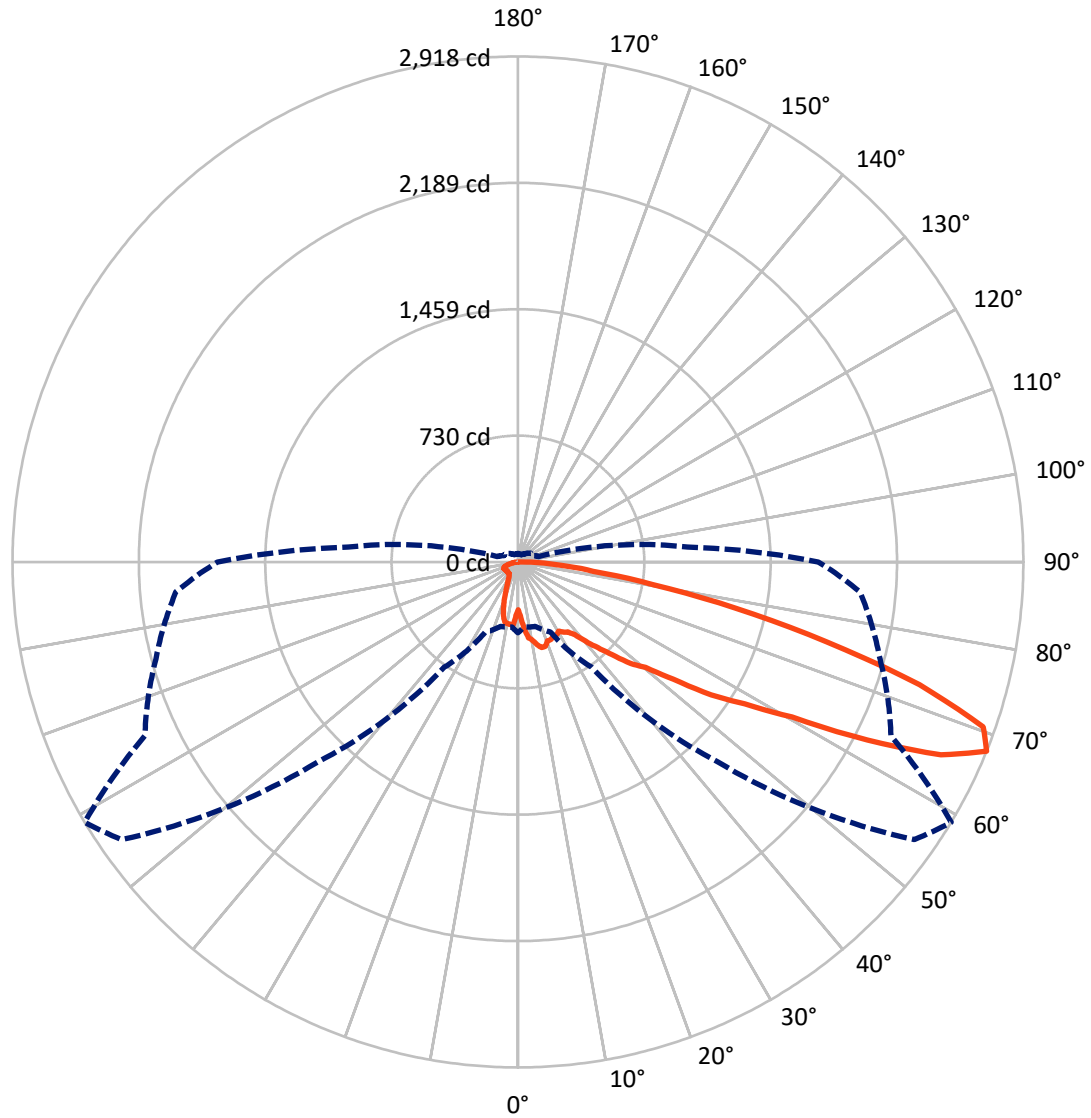
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	438.8	0.0	438.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	2476.2	0.0	2476.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	2915.0	0.0	2915.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.0	1.2
10°-20°	106.6	3.7
20°-30°	152.2	5.2
30°-40°	224.3	7.7
40°-50°	379.0	13.0
50°-60°	659.6	22.6
60°-70°	840.5	28.8
70°-80°	445.1	15.3
80°-90°	71.6	2.5
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°	2915.0	100.0
0°-180°	2915.0	100.0

Coefficient of Utilization



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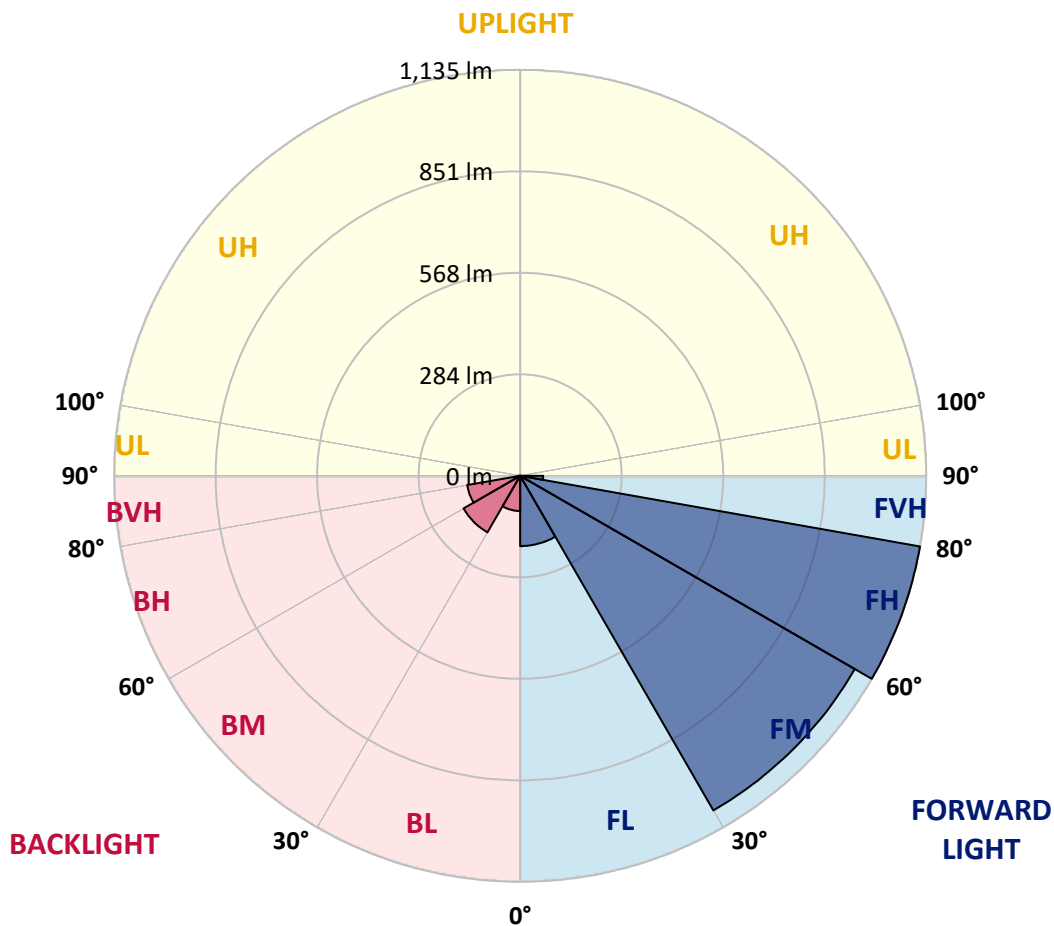
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	196.5	6.7			
FM (30°-60°)	1080.3	37.1			
FH (60°-80°)	1135.2	38.9			G1/1800
FVH (80°-90°)	64.3	2.2			G1/100
BL (0°-30°)	98.4	3.4	B0/110		
BM (30°-60°)	182.7	6.3	B0/220		
BH (60°-80°)	150.4	5.2	B1/500		G1/500
BVH (80°-90°)	7.3	0.3			G0/10
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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8
2.5°	344.4	328.3	311.3	316.1	325.9	330.3	325.5	320.8	314.7	307.6	332.0
5°	417.6	393.8	390.3	390.2	386.8	372.9	390.7	389.5	396.6	404.1	423.1
7.5°	438.5	429.6	420.0	424.6	407.1	406.4	434.1	442.0	455.8	451.2	476.8
10°	427.8	417.8	422.8	421.0	422.6	440.9	457.8	458.3	473.1	487.7	471.3
12.5°	408.9	409.6	429.8	429.0	455.0	488.9	494.0	490.0	514.2	504.4	518.4
15°	422.3	431.4	426.3	430.6	440.9	484.1	498.2	512.5	535.5	544.4	530.3
17.5°	443.8	448.7	425.9	423.6	444.7	465.2	500.2	512.4	516.0	579.3	559.5
20°	434.7	444.5	422.2	393.7	428.8	455.9	490.4	486.7	504.1	582.1	565.5
22.5°	460.6	444.5	416.2	395.9	408.3	433.2	462.5	486.8	507.4	566.1	574.3
25°	465.6	457.9	431.5	411.3	407.1	416.0	457.8	473.7	508.6	587.9	569.6
27.5°	495.7	484.2	430.4	431.0	410.1	394.4	443.0	476.4	521.2	574.4	581.1
30°	533.1	524.4	456.8	459.3	430.4	401.5	453.1	463.2	528.4	595.4	595.5
32.5°	561.2	576.6	508.8	475.2	465.0	443.3	437.5	483.1	519.9	633.4	620.2
35°	611.7	623.7	548.8	521.9	487.2	462.9	479.8	496.2	555.4	683.5	656.9
37.5°	705.2	691.4	623.2	580.8	567.9	532.8	542.2	530.7	593.9	739.7	728.8
40°	759.3	747.3	675.6	652.1	600.7	605.2	593.4	601.8	645.4	799.5	796.0
42.5°	812.7	796.6	736.0	719.7	668.4	646.7	648.8	675.9	724.9	896.1	884.6
45°	865.4	824.3	797.7	802.1	777.4	732.8	735.9	761.4	811.6	1006.5	980.1
47.5°	905.8	871.9	851.1	845.8	833.6	893.2	866.5	876.9	899.0	1104.8	1094.8
50°	982.3	942.6	915.6	907.9	949.4	1032.4	978.1	955.7	1002.8	1231.9	1226.7
52.5°	1104.7	1055.3	1010.2	1009.7	1069.7	1123.6	1161.9	1123.4	1140.6	1362.1	1377.0
55°	1211.6	1154.4	1113.8	1136.2	1221.7	1254.7	1384.7	1354.6	1340.0	1493.6	1535.9
57.5°	1251.5	1184.6	1158.2	1191.2	1317.2	1486.6	1624.1	1544.8	1530.6	1642.3	1731.1
60°	1163.9	1093.2	1094.8	1157.0	1375.2	1657.0	1885.9	1818.6	1735.3	1827.5	1914.2
62.5°	914.3	850.5	892.1	986.6	1326.6	1822.5	2236.7	2265.1	1969.1	1981.0	2015.7
65°	621.5	577.2	614.8	707.3	1075.9	1912.8	2570.8	2684.7	2182.1	2081.6	2059.6
67.5°	409.0	377.7	385.0	446.6	740.7	1630.7	2794.3	2918.4	2376.8	2164.1	1982.2
70°	316.7	291.5	288.3	320.6	439.3	1132.9	2661.9	2850.6	2495.4	2086.7	1727.8
72.5°	248.5	229.4	231.1	262.1	340.2	628.5	2059.8	2424.1	2316.7	1799.7	1327.4
75°	193.8	178.1	186.9	222.3	314.6	390.6	1421.2	1839.8	1791.1	1332.6	757.1
77.5°	140.7	130.6	143.0	189.4	295.7	335.1	884.7	1283.6	1147.4	684.2	259.8
80°	92.3	86.6	96.8	154.4	268.2	322.5	546.7	786.5	567.0	192.2	98.3
82.5°	54.4	51.9	60.4	104.5	215.6	302.3	364.7	437.0	232.0	81.3	52.3
85°	28.5	26.7	35.8	60.0	148.6	276.0	287.1	261.6	112.0	35.3	25.0
87.5°	9.5	9.3	15.2	23.2	56.2	146.5	153.2	124.3	46.2	10.3	5.4
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°	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8	275.8
2.5°	335.4	330.4	302.0	306.0	309.7	307.8	306.7	293.9	292.6	310.9	309.4
5°	422.6	402.1	377.9	376.8	360.8	344.5	347.7	342.5	344.0	351.6	352.3
7.5°	468.7	443.1	420.0	382.4	350.6	324.8	328.8	327.6	324.3	341.3	345.9
10°	467.8	445.1	419.0	373.5	352.1	331.1	305.9	282.0	275.0	266.6	267.3
12.5°	498.7	478.5	421.7	375.4	346.2	310.1	262.9	236.8	211.8	211.4	205.1
15°	508.3	493.5	427.5	364.8	305.6	253.7	204.9	176.6	158.6	155.0	149.7
17.5°	532.6	509.4	409.9	330.4	258.4	198.4	154.0	134.3	132.8	135.3	132.5
20°	534.3	496.6	378.0	279.7	207.6	150.3	125.6	115.7	121.1	127.1	126.9
22.5°	532.9	480.4	350.4	236.4	156.0	120.8	110.1	107.8	112.8	121.8	122.9
25°	519.1	475.1	316.0	194.2	126.6	103.5	100.6	101.9	108.1	118.7	118.7
27.5°	533.5	453.5	272.7	158.0	106.5	92.2	94.3	97.7	102.3	114.4	116.6
30°	528.8	460.6	237.9	127.2	93.9	84.2	88.9	92.4	97.6	110.2	111.3
32.5°	541.4	441.5	208.6	107.0	85.6	81.2	82.3	87.0	93.8	103.6	105.6
35°	560.7	448.5	175.0	96.2	81.5	77.6	79.7	83.4	90.2	99.8	101.4
37.5°	622.2	448.2	151.8	90.3	80.8	76.8	77.8	80.4	88.3	97.1	100.8
40°	661.7	473.8	130.7	88.9	79.9	76.5	75.6	78.4	84.7	95.1	97.7
42.5°	736.0	489.5	121.6	88.4	79.8	74.4	73.5	76.8	83.0	92.6	96.6
45°	814.4	511.9	114.3	88.2	79.4	74.0	71.4	75.6	80.8	90.1	94.6
47.5°	906.7	559.2	110.2	87.3	78.7	74.5	70.7	72.8	78.6	87.8	92.4
50°	1027.5	621.8	111.1	86.1	79.8	74.6	69.5	70.5	75.8	84.9	89.6
52.5°	1174.4	718.8	116.6	86.6	80.5	74.0	69.1	68.6	73.1	81.0	85.7
55°	1351.4	856.4	133.3	88.9	80.5	73.9	68.3	66.1	69.5	76.0	80.5
57.5°	1565.0	1015.8	165.9	90.1	79.9	73.1	66.7	62.8	64.9	70.2	74.5
60°	1748.4	1144.4	199.5	90.8	81.2	71.4	63.5	58.6	59.9	64.0	67.8
62.5°	1841.9	1180.4	209.6	90.2	84.5	70.3	59.7	54.1	54.2	57.7	61.1
65°	1859.5	1132.4	169.0	89.6	88.8	70.2	56.9	50.3	49.4	51.9	54.8
67.5°	1734.4	982.9	121.9	88.2	89.3	69.4	55.1	47.2	45.0	46.7	49.2
70°	1472.7	791.6	102.4	85.5	83.4	65.7	51.9	44.0	41.0	42.2	44.1
72.5°	1097.9	585.6	89.3	79.7	72.6	56.2	46.9	40.4	37.3	38.2	39.5
75°	610.0	312.4	74.7	69.3	59.3	45.5	40.0	35.8	33.1	33.5	35.0
77.5°	202.6	115.3	54.8	55.0	44.8	35.1	33.0	30.6	28.5	28.7	29.9
80°	91.8	63.7	39.3	39.5	31.3	25.4	25.3	24.6	23.2	22.9	23.7
82.5°	53.2	38.7	26.9	25.7	20.1	16.6	18.4	18.0	17.7	16.3	16.6
85°	26.2	20.8	14.1	13.3	11.1	8.3	9.9	10.3	9.9	8.4	8.3
87.5°	6.4	6.8	3.5	3.2	1.9	0.9	1.5	1.5	1.9	1.2	0.6
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)