

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: P367143

Luminaire Tested: **MSA-SA2A-727-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-727-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4909 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

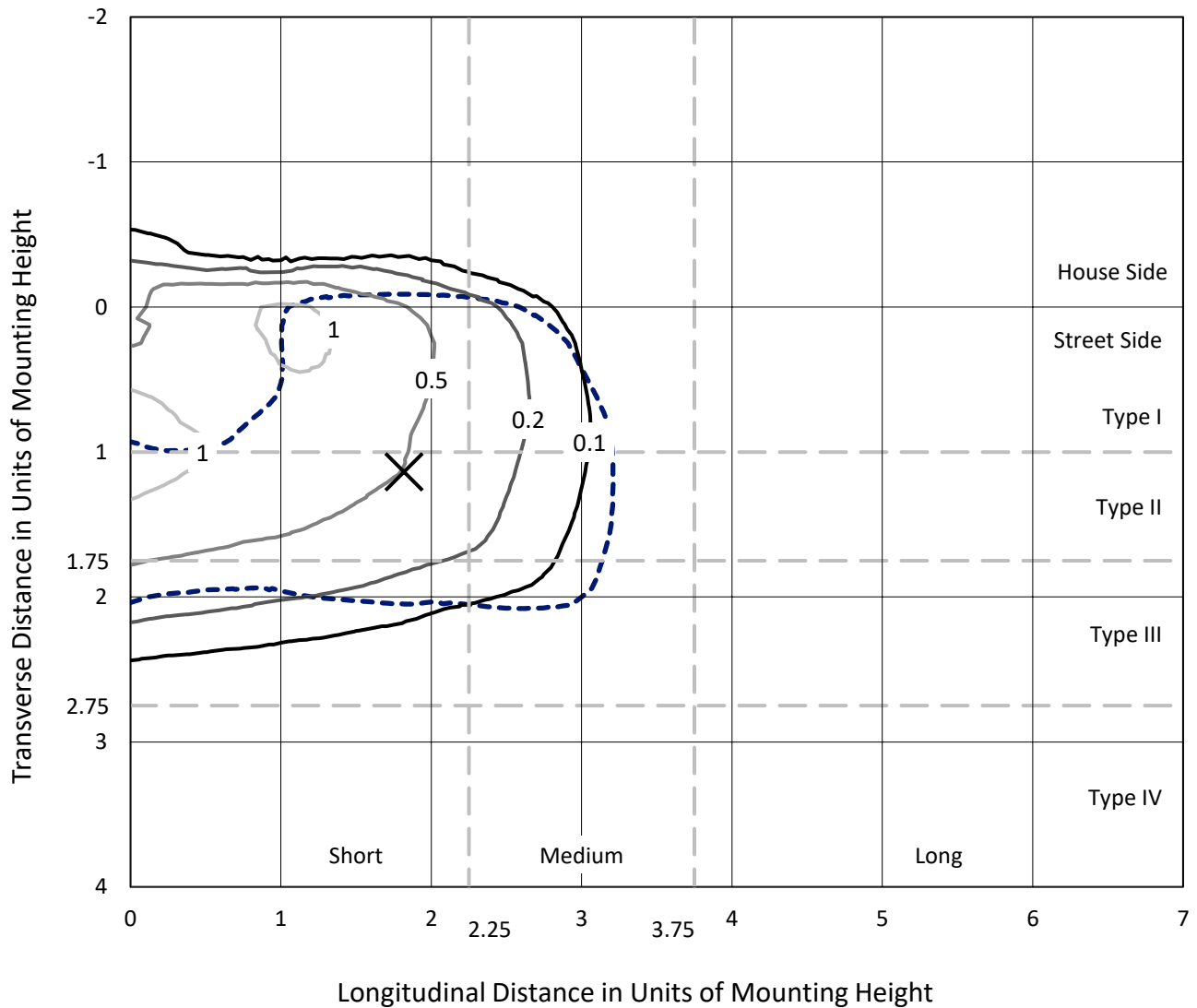
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

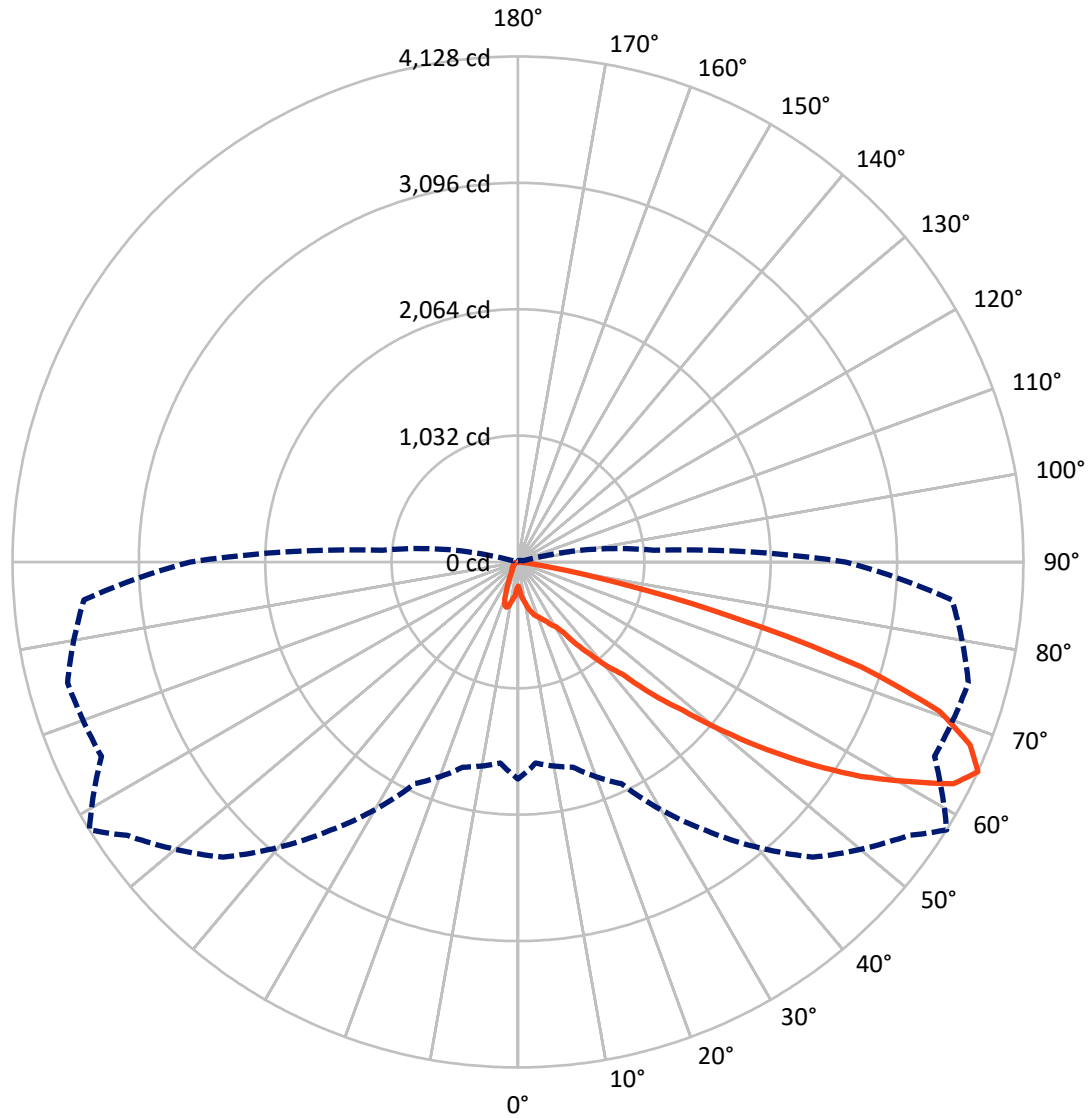
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	484.4	0.0	484.4
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	4424.6	0.0	4424.6
	% Fixture	90.1	0.0	90.1
Total	Lumens	4909.0	0.0	4909.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.6	0.6
10°-20°	100.8	2.1
20°-30°	195.1	4.0
30°-40°	389.2	7.9
40°-50°	795.6	16.2
50°-60°	1411.1	28.7
60°-70°	1487.7	30.3
70°-80°	482.3	9.8
80°-90°	19.7	0.4
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°	4909.0	100.0
0°-180°	4909.0	100.0

Coefficient of Utilization



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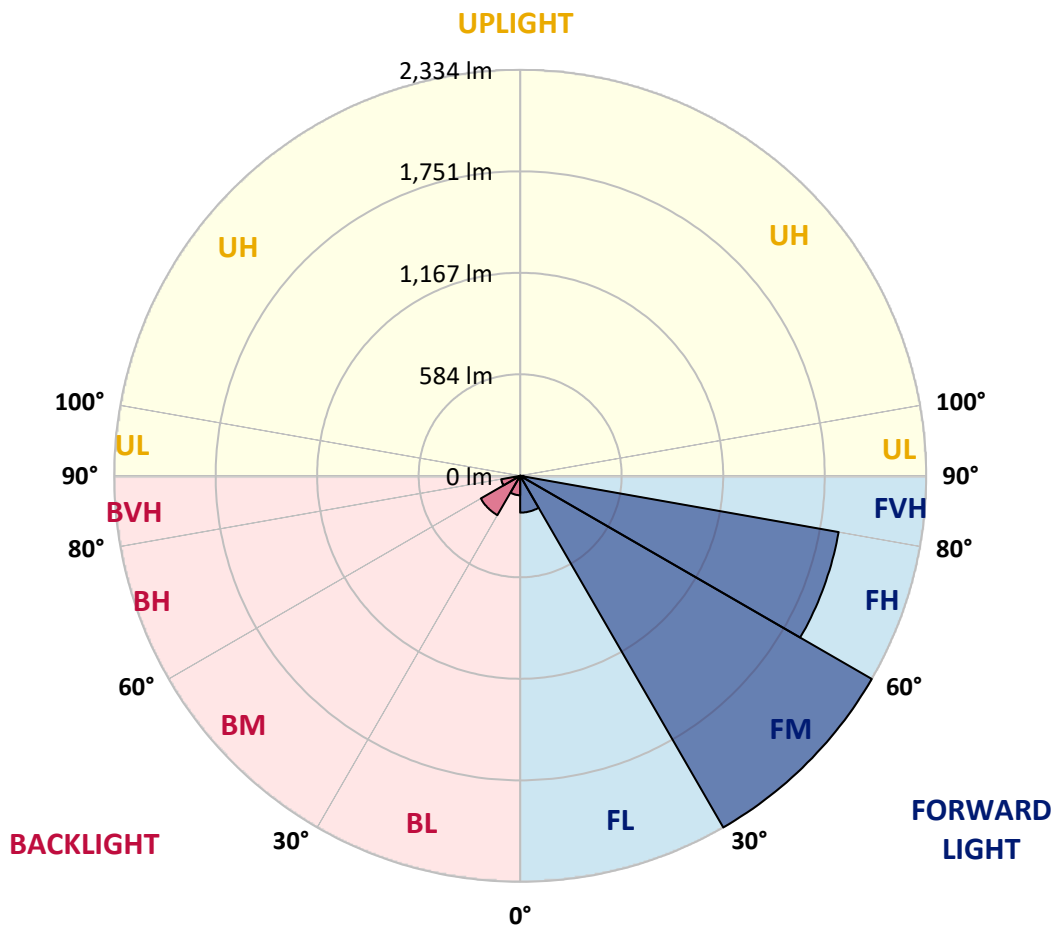
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	211.8	4.3			
FM (30°-60°)	2334.5	47.6			
FH (60°-80°)	1859.5	37.9			G2/5000
FVH (80°-90°)	18.9	0.4			G1/100
BL (0°-30°)	111.7	2.3	B1/500		
BM (30°-60°)	261.3	5.3	B1/1000		
BH (60°-80°)	110.6	2.3	B1/500		G1/500
BVH (80°-90°)	0.8	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5
2.5°	239.9	232.7	221.4	223.3	225.5	230.0	226.4	223.0	219.5	214.8	232.7
5°	289.7	277.8	276.7	274.2	272.2	272.0	276.4	275.0	276.9	285.8	294.9
7.5°	307.9	302.9	293.5	297.4	291.3	286.6	306.2	312.6	324.8	328.9	352.7
10°	306.0	298.8	302.6	304.6	308.7	325.9	338.3	345.2	355.7	378.4	373.7
12.5°	314.8	321.2	325.3	325.6	346.9	378.4	387.2	393.0	411.8	420.7	443.9
15°	344.4	354.9	348.3	351.0	357.9	396.3	417.1	429.8	456.3	485.1	490.9
17.5°	386.7	393.3	379.5	369.5	388.6	409.6	447.2	460.5	477.3	544.5	556.9
20°	440.0	451.3	421.5	382.0	407.1	432.0	472.9	479.3	497.2	584.8	604.5
22.5°	564.7	547.8	502.2	440.6	433.1	444.2	483.1	508.0	538.4	607.5	653.1
25°	687.7	681.9	614.7	545.9	496.1	471.2	522.9	536.8	586.5	661.4	686.6
27.5°	824.5	836.1	723.9	682.1	584.6	503.3	547.8	582.4	641.2	681.0	741.6
30°	1005.0	986.4	854.9	813.1	701.8	591.5	612.2	614.4	700.9	745.7	803.2
32.5°	1146.5	1158.4	993.1	929.0	840.0	727.2	660.6	689.3	751.2	851.0	905.5
35°	1299.6	1298.5	1137.4	1051.1	934.8	838.0	804.0	825.0	902.7	1015.7	1030.1
37.5°	1528.4	1508.8	1318.7	1192.4	1093.4	1010.8	984.8	956.9	1037.0	1144.8	1198.7
40°	1744.3	1676.6	1500.8	1351.0	1224.4	1190.7	1096.7	1113.9	1137.6	1280.0	1428.9
42.5°	1962.4	1920.4	1685.4	1560.0	1404.3	1324.2	1262.8	1254.8	1367.9	1536.5	1690.4
45°	2250.1	2121.6	1933.6	1823.4	1643.2	1562.7	1513.2	1542.8	1644.5	1890.8	1993.3
47.5°	2491.7	2373.4	2212.0	2044.5	1855.4	1945.8	1852.9	1806.2	1945.8	2200.4	2336.6
50°	2699.2	2567.4	2404.1	2280.0	2249.3	2336.1	2148.1	2165.3	2255.9	2555.0	2631.8
52.5°	2850.2	2711.4	2568.8	2508.8	2634.6	2678.2	2584.0	2546.1	2628.5	2857.3	2894.7
55°	2963.8	2821.7	2710.3	2792.9	3036.2	3021.8	3055.0	2925.6	3004.4	3172.7	3155.0
57.5°	2970.7	2802.3	2737.1	2870.1	3203.9	3426.4	3523.4	3303.4	3348.2	3419.2	3379.4
60°	2753.4	2585.9	2580.7	2769.5	3252.6	3531.2	3743.5	3636.2	3576.2	3629.0	3553.6
62.5°	2320.6	2203.4	2258.1	2466.8	3071.5	3473.4	3860.6	3989.7	3756.2	3768.1	3660.8
65°	1772.0	1649.0	1734.6	1997.5	2675.8	3408.7	3893.8	4127.9	3752.9	3807.6	3558.0
67.5°	1173.6	1102.3	1199.3	1488.9	2127.4	3009.1	3876.7	3982.8	3633.7	3653.1	3176.3
70°	605.9	588.4	666.9	895.5	1430.3	2311.7	3708.4	3650.3	3391.9	3147.0	2449.9
72.5°	194.0	194.9	270.3	409.1	771.1	1407.4	2850.4	2930.0	2714.2	2302.1	1495.8
75°	86.0	84.6	113.0	171.6	321.4	631.0	1770.8	1856.8	1689.9	1266.4	628.8
77.5°	61.9	60.0	72.4	100.3	159.2	213.9	830.3	896.1	766.2	438.9	144.0
80°	43.7	43.4	52.5	70.5	99.5	95.1	262.3	294.1	235.5	106.4	42.3
82.5°	24.6	25.4	36.5	49.8	60.5	47.5	73.8	81.3	79.3	56.7	18.5
85°	11.9	13.3	23.8	35.9	31.8	18.5	26.3	28.5	33.2	32.9	9.4
87.5°	0.0	0.0	9.7	16.3	8.6	2.8	8.0	9.1	8.8	10.5	2.2
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°	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5	196.5
2.5°	236.3	234.7	213.7	215.3	220.0	218.1	219.7	215.9	211.4	229.4	229.1
5°	298.8	286.3	279.7	273.6	274.7	262.3	269.5	272.8	272.2	282.5	285.2
7.5°	353.5	336.9	323.7	310.9	291.6	274.2	285.0	291.9	296.6	314.3	321.2
10°	379.2	365.7	360.4	335.5	321.7	310.9	298.0	288.6	292.4	287.7	292.4
12.5°	435.6	426.5	406.3	381.1	364.6	342.4	294.1	253.7	228.9	229.1	227.5
15°	487.0	486.5	456.3	414.6	366.5	303.5	228.0	177.2	153.7	147.0	144.8
17.5°	554.2	545.9	490.9	429.2	342.7	234.9	155.3	121.3	119.1	123.0	121.3
20°	597.0	584.8	508.0	408.0	282.5	158.9	117.2	107.5	114.1	119.7	118.3
22.5°	639.8	621.6	521.0	382.0	200.9	116.4	105.9	104.2	108.3	115.3	116.4
25°	663.3	659.7	546.4	333.3	137.6	102.0	102.0	101.4	102.8	107.8	107.0
27.5°	731.6	683.0	527.4	260.1	106.4	93.7	95.1	94.5	89.6	94.5	94.8
30°	774.2	751.8	528.7	185.2	93.7	82.9	86.5	82.1	74.6	78.8	77.9
32.5°	859.9	804.0	524.6	124.9	85.4	79.0	73.5	67.2	61.6	63.3	61.9
35°	959.6	917.1	468.5	100.3	79.6	69.9	61.1	54.7	48.9	50.3	50.0
37.5°	1158.1	1022.9	422.1	90.4	75.7	64.1	53.9	45.1	42.0	42.8	43.7
40°	1341.9	1199.5	335.5	86.0	69.1	57.2	44.5	38.1	36.2	36.8	37.6
42.5°	1616.6	1339.9	253.5	81.5	62.5	48.4	37.0	32.9	31.0	32.1	32.6
45°	1882.5	1459.4	189.3	77.7	56.9	41.7	31.2	28.5	26.3	27.1	28.2
47.5°	2148.1	1592.0	141.2	71.6	50.9	35.9	26.8	24.9	23.5	23.8	25.2
50°	2385.8	1653.9	111.1	64.1	45.9	31.2	24.3	22.4	21.8	22.1	23.2
52.5°	2560.5	1654.5	93.7	57.5	41.2	27.6	22.9	20.7	20.5	21.0	22.1
55°	2718.3	1610.3	81.3	51.7	37.0	25.2	21.8	19.9	19.9	20.5	21.6
57.5°	2823.1	1529.0	70.5	45.6	33.4	23.8	21.0	19.1	18.8	18.5	19.3
60°	2874.2	1418.2	59.7	40.1	30.1	22.9	20.5	16.9	16.6	16.0	16.6
62.5°	2841.9	1279.4	50.0	34.5	26.8	21.8	18.0	14.6	14.1	13.0	13.8
65°	2676.6	1110.8	42.3	29.6	23.2	18.5	15.2	12.4	11.1	9.7	9.4
67.5°	2338.6	902.4	35.4	25.4	19.9	15.2	12.4	11.1	8.6	7.5	7.2
70°	1752.6	616.1	29.3	21.8	16.6	13.0	10.5	10.0	8.0	7.2	6.6
72.5°	1028.2	332.5	24.6	19.1	14.1	10.8	8.6	9.1	8.0	6.6	6.1
75°	410.7	110.6	19.6	15.2	11.3	7.7	7.2	7.5	7.2	6.1	5.0
77.5°	93.7	34.8	15.2	11.9	8.8	5.0	5.8	6.4	6.4	5.0	3.6
80°	29.3	13.8	8.8	7.5	6.4	2.8	4.1	4.4	3.0	1.4	0.0
82.5°	9.4	3.9	3.0	3.0	2.8	0.6	0.8	0.6	0.0	0.0	0.0
85°	3.6	2.5	1.9	1.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.4	1.1	0.8	1.1	0.6	0.0	0.0	0.0	0.0	0.0	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)