

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: P367697

Luminaire Tested: **MSA-SA3A-730-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367697
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-730-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8054 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

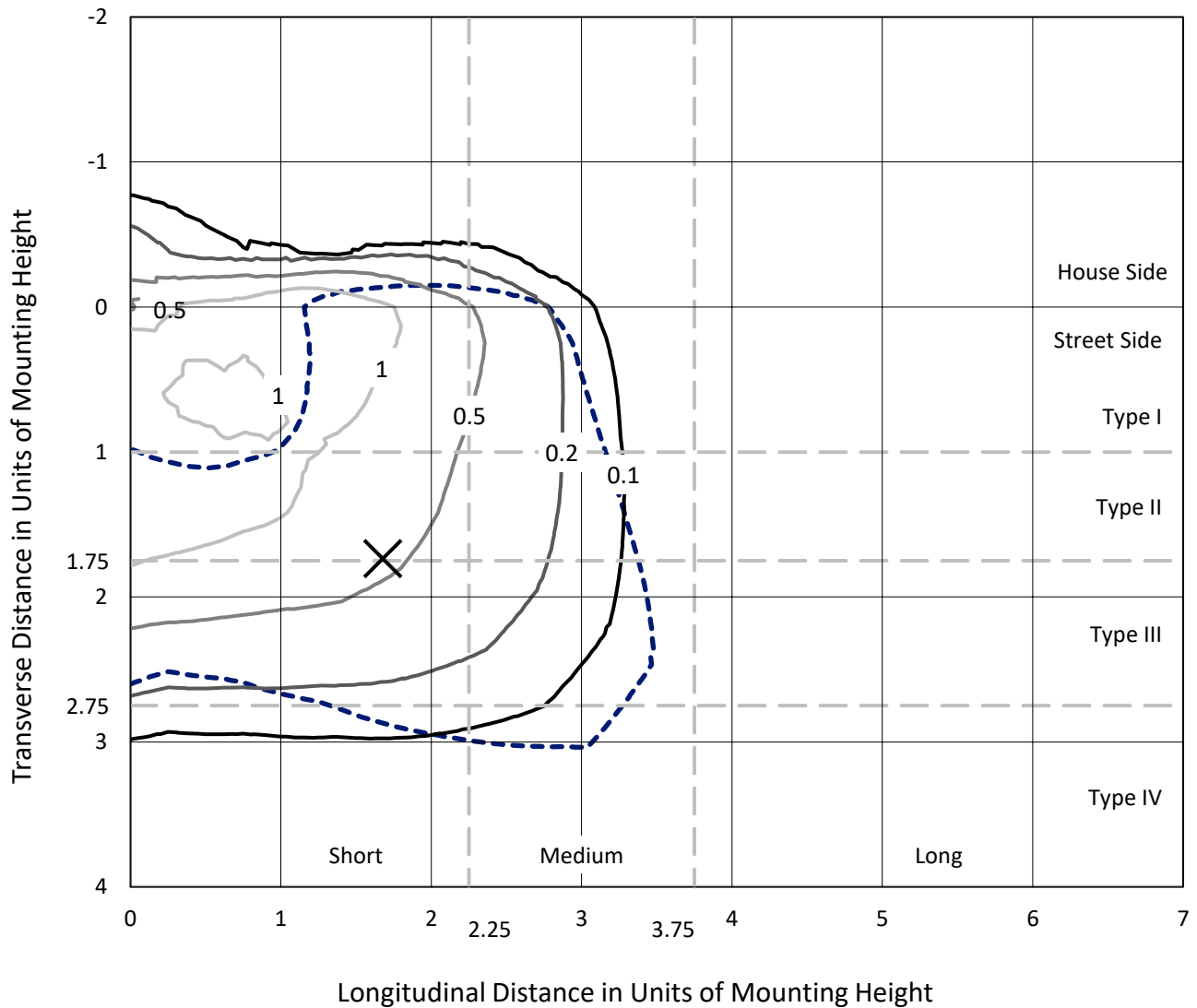
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

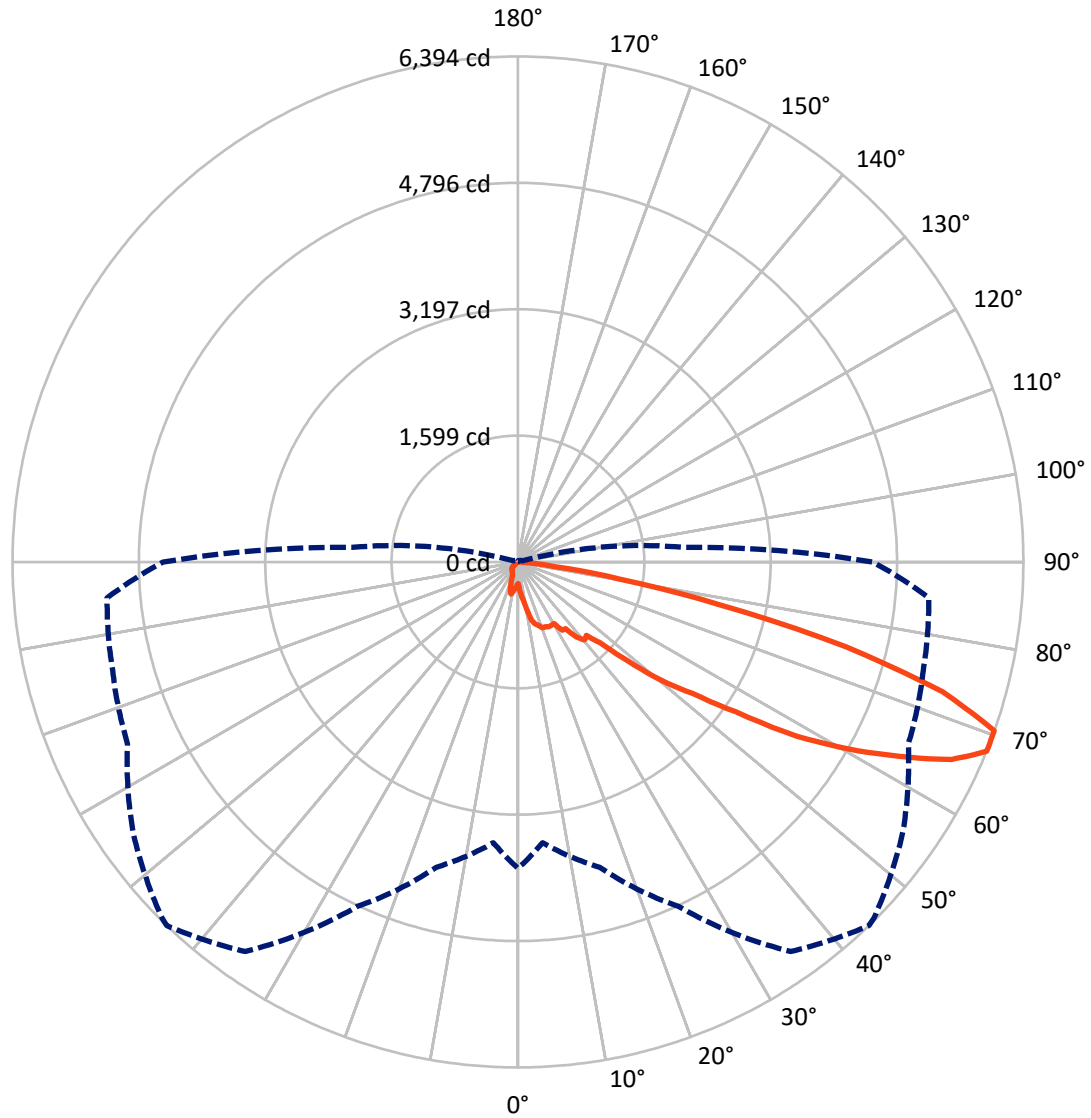
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	818.1	0.0	818.1
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	7235.9	0.0	7235.9
	% Fixture	89.8	0.0	89.8
Total	Lumens	8054.0	0.0	8054.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.2	0.5
10°-20°	168.4	2.1
20°-30°	298.3	3.7
30°-40°	484.8	6.0
40°-50°	970.2	12.0
50°-60°	1990.4	24.7
60°-70°	2734.2	33.9
70°-80°	1285.1	16.0
80°-90°	82.3	1.0
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°	8054.0	100.0
0°-180°	8054.0	100.0

Coefficient of Utilization

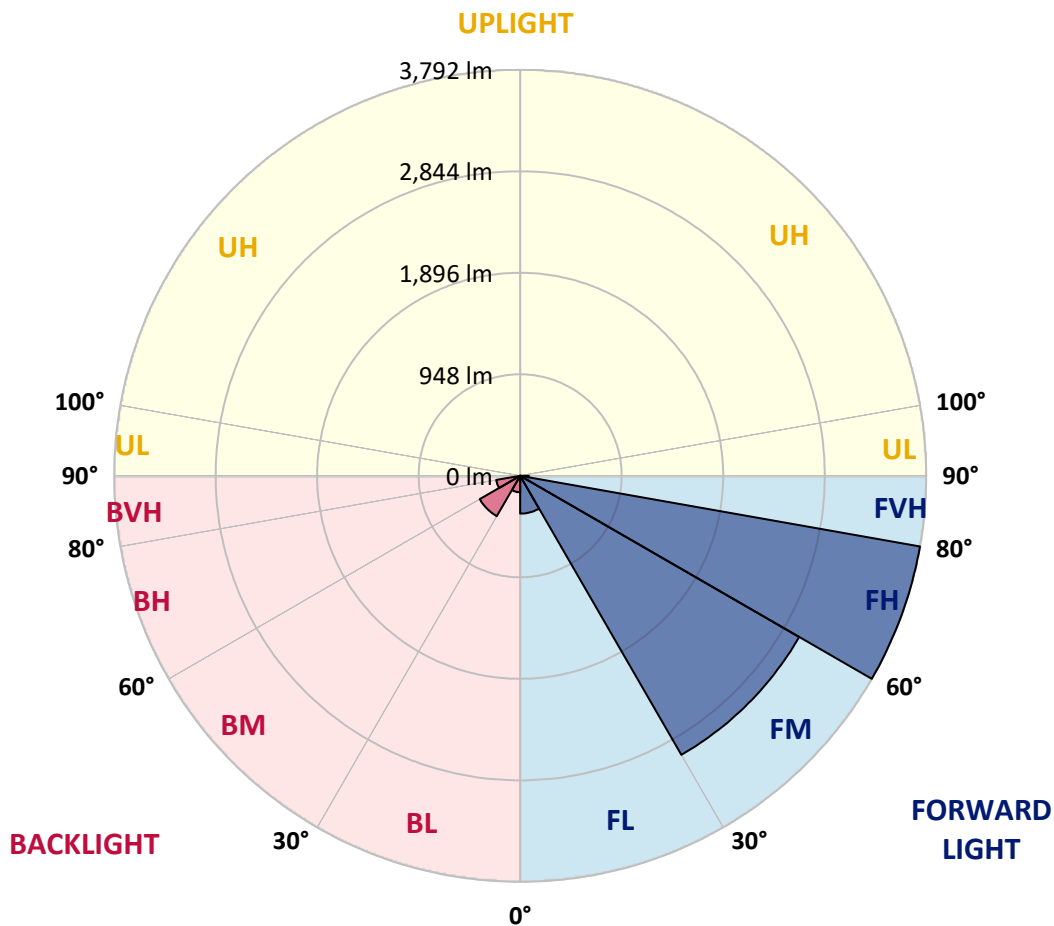


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	353.3	4.4			
FM (30°-60°)	3009.6	37.4			
FH (60°-80°)	3792.3	47.1			G2/5000
FVH (80°-90°)	80.6	1.0			G1/100
BL (0°-30°)	153.6	1.9	B1/500		
BM (30°-60°)	435.8	5.4	B1/1000		
BH (60°-80°)	227.0	2.8	B1/500		G1/500
BVH (80°-90°)	1.7	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4
2.5°	345.1	334.0	318.0	321.5	323.3	328.2	328.6	322.4	304.7	299.8	321.5
5°	483.6	456.6	451.7	441.5	421.0	409.9	407.3	418.4	404.1	399.7	405.5
7.5°	617.8	594.7	569.4	555.6	513.0	486.8	485.4	489.9	492.5	477.0	485.0
10°	707.0	681.7	676.4	644.0	607.1	600.9	598.2	581.3	567.6	556.0	517.4
12.5°	787.9	787.4	797.2	750.6	744.8	751.0	748.8	688.4	674.6	626.2	615.1
15°	895.3	922.0	879.8	840.7	791.0	812.3	806.5	767.9	758.6	725.7	678.2
17.5°	1006.8	1013.9	943.3	883.3	870.5	842.5	848.3	834.5	787.4	813.6	766.5
20°	1009.5	1025.0	949.5	850.5	890.0	888.7	889.1	875.8	813.6	874.9	831.8
22.5°	1046.8	1008.6	938.4	875.4	882.5	889.1	896.2	879.8	866.5	881.6	889.6
25°	1031.7	1016.6	949.1	907.3	900.7	906.0	907.8	928.6	920.2	956.6	936.6
27.5°	1070.8	1049.0	928.2	935.8	912.2	906.0	895.3	965.1	989.9	961.1	1014.4
30°	1137.8	1134.7	964.2	975.3	957.1	902.4	930.9	1021.9	1053.0	1035.2	1100.1
32.5°	1242.6	1253.3	1069.4	997.5	1006.8	1031.2	1020.6	1021.9	1100.5	1140.0	1191.6
35°	1391.4	1385.6	1172.0	1081.9	1033.0	1037.0	1052.1	1124.5	1226.2	1223.5	1278.2
37.5°	1683.6	1620.6	1353.7	1168.0	1182.7	1202.7	1191.6	1288.8	1298.6	1302.1	1432.7
40°	2114.4	2030.5	1640.1	1349.7	1208.4	1296.8	1291.5	1315.5	1380.8	1405.2	1595.7
42.5°	2682.0	2569.2	2144.2	1683.6	1332.8	1271.9	1304.8	1350.1	1569.5	1639.2	1848.0
45°	3309.1	3080.8	2646.9	2159.7	1644.6	1455.8	1480.7	1565.1	1869.3	1984.8	2215.3
47.5°	3715.5	3514.7	3144.8	2581.6	1969.7	1870.6	1872.8	1891.0	2221.5	2435.5	2744.6
50°	4068.6	3854.9	3511.6	3022.7	2544.8	2357.4	2314.7	2230.8	2670.0	2962.7	3305.6
52.5°	4566.8	4317.3	3878.5	3540.1	3200.7	2759.3	2744.2	2772.6	3199.0	3506.7	3880.7
55°	5016.3	4713.0	4294.2	4081.0	3948.6	3350.0	3362.8	3410.4	3878.0	4041.0	4392.3
57.5°	5214.8	4886.2	4670.8	4574.8	4504.2	4156.9	4113.4	4085.0	4413.6	4475.8	4928.4
60°	5344.9	5032.3	4934.6	4956.8	5170.8	4802.2	4762.7	4597.5	4856.9	4907.9	5408.9
62.5°	5262.8	4977.7	4998.5	5183.7	5658.9	5416.4	5302.3	5026.1	5219.3	5260.6	5754.0
65°	4745.4	4448.3	4716.5	5164.6	6031.1	6025.3	5972.5	5421.8	5420.0	5472.8	5780.6
67.5°	3876.2	3564.5	3998.4	4806.7	6015.6	6394.4	6369.5	5946.7	5448.9	5307.6	5216.6
70°	2694.9	2424.4	2916.5	3969.5	5479.5	6391.7	6351.8	6299.3	5220.6	4568.6	4044.6
72.5°	1400.3	1251.5	1709.8	2735.3	4367.9	5615.9	5747.8	5661.6	4457.6	3319.3	2381.8
75°	475.6	426.8	705.3	1451.8	2903.6	4288.4	4442.9	4355.4	3027.5	1780.9	942.0
77.5°	184.3	171.4	252.7	589.3	1456.7	2613.2	2781.1	2691.8	1623.7	652.4	221.6
80°	104.8	101.3	139.5	265.6	642.2	1299.9	1418.1	1286.2	585.3	219.8	57.7
82.5°	44.4	45.7	77.7	143.4	322.9	458.8	511.6	466.8	245.2	150.6	21.3
85°	9.8	12.0	36.9	79.9	135.5	131.0	137.2	152.3	150.6	110.6	9.3
87.5°	0.0	0.0	11.5	21.8	32.4	21.3	16.9	29.8	46.2	44.4	4.0
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°	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4	271.4
2.5°	325.5	321.1	293.1	291.3	293.1	288.2	287.8	277.6	278.5	301.6	303.3
5°	405.5	383.3	359.3	351.7	344.6	328.6	337.5	337.5	337.5	352.2	356.6
7.5°	477.9	448.1	414.4	385.9	358.4	338.4	352.2	362.0	367.7	386.8	395.7
10°	510.7	481.4	451.2	410.8	389.5	381.9	366.0	357.5	367.7	363.7	368.6
12.5°	580.9	554.3	502.3	460.5	444.6	418.8	371.7	338.9	317.1	313.5	312.7
15°	649.3	632.9	563.1	507.2	451.7	392.2	311.8	268.2	245.2	241.2	241.6
17.5°	735.9	712.4	609.8	529.4	435.2	328.2	240.7	203.4	201.6	211.4	212.3
20°	793.6	755.0	633.3	511.2	381.1	248.3	188.3	179.4	193.6	211.4	209.6
22.5°	848.7	807.0	664.4	495.2	295.3	188.3	173.2	174.1	186.1	205.2	210.1
25°	885.1	870.0	702.6	457.9	225.2	163.0	165.7	172.3	182.5	200.7	200.7
27.5°	994.8	924.2	698.2	385.5	173.2	151.9	158.1	166.5	171.9	193.6	195.9
30°	1061.4	1038.3	721.2	311.8	151.9	137.7	149.7	157.2	160.8	185.6	186.5
32.5°	1143.2	1092.1	749.2	230.1	141.2	136.8	134.1	139.9	150.1	171.9	173.2
35°	1242.6	1227.5	709.3	180.8	137.7	127.9	122.6	125.7	132.3	147.0	150.1
37.5°	1445.6	1355.9	685.3	155.0	137.7	124.8	119.0	111.0	111.9	122.1	127.9
40°	1616.6	1589.0	618.2	150.6	131.5	120.4	106.1	96.4	89.7	92.8	95.0
42.5°	1930.6	1803.1	531.6	148.3	125.7	108.8	90.2	79.9	69.7	70.6	74.2
45°	2311.6	2036.7	454.3	146.1	121.7	97.3	75.9	64.0	53.3	53.7	57.3
47.5°	2820.6	2377.4	360.6	139.5	114.6	86.6	61.3	48.9	42.6	44.0	47.1
50°	3398.8	2676.2	285.1	129.2	106.1	76.4	49.7	39.5	37.3	38.6	42.2
52.5°	3915.3	2896.5	235.4	119.9	94.2	62.2	41.7	35.1	34.2	35.1	37.7
55°	4374.5	3024.4	196.7	109.3	80.8	50.2	37.7	32.4	32.0	31.5	33.3
57.5°	4805.3	3061.3	153.7	92.4	65.7	43.5	35.1	30.2	29.3	28.0	29.3
60°	5119.3	2998.2	112.8	74.2	53.7	39.5	32.9	27.1	25.8	23.5	24.4
62.5°	5270.8	2825.5	85.3	59.5	45.7	36.0	29.3	23.5	21.8	19.1	19.5
65°	5126.9	2540.8	67.1	50.2	39.1	30.2	24.9	20.0	17.8	15.1	15.1
67.5°	4489.6	2107.8	56.8	43.5	32.9	25.8	20.4	18.2	14.7	12.4	12.0
70°	3295.3	1516.2	48.9	38.2	28.4	22.2	17.3	16.4	14.2	12.0	11.1
72.5°	1860.0	858.0	41.7	33.8	24.0	18.7	14.7	15.1	13.8	11.1	10.2
75°	709.7	289.1	34.6	28.0	19.5	14.2	12.4	12.4	12.4	9.3	8.0
77.5°	175.9	73.7	27.5	22.6	15.5	9.3	10.2	10.7	10.7	8.0	5.8
80°	48.4	24.9	16.4	16.4	11.1	5.3	7.1	7.1	5.8	2.7	0.0
82.5°	17.8	9.3	5.8	7.1	4.9	1.8	2.7	1.8	1.3	0.0	0.0
85°	7.5	4.9	3.6	4.0	2.2	0.0	0.4	0.9	0.0	0.0	0.0
87.5°	3.1	2.2	1.8	1.8	0.9	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)