

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: P367323

Luminaire Tested: **MSA-SA2B-740-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367323
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-SA2B-740-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7509 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

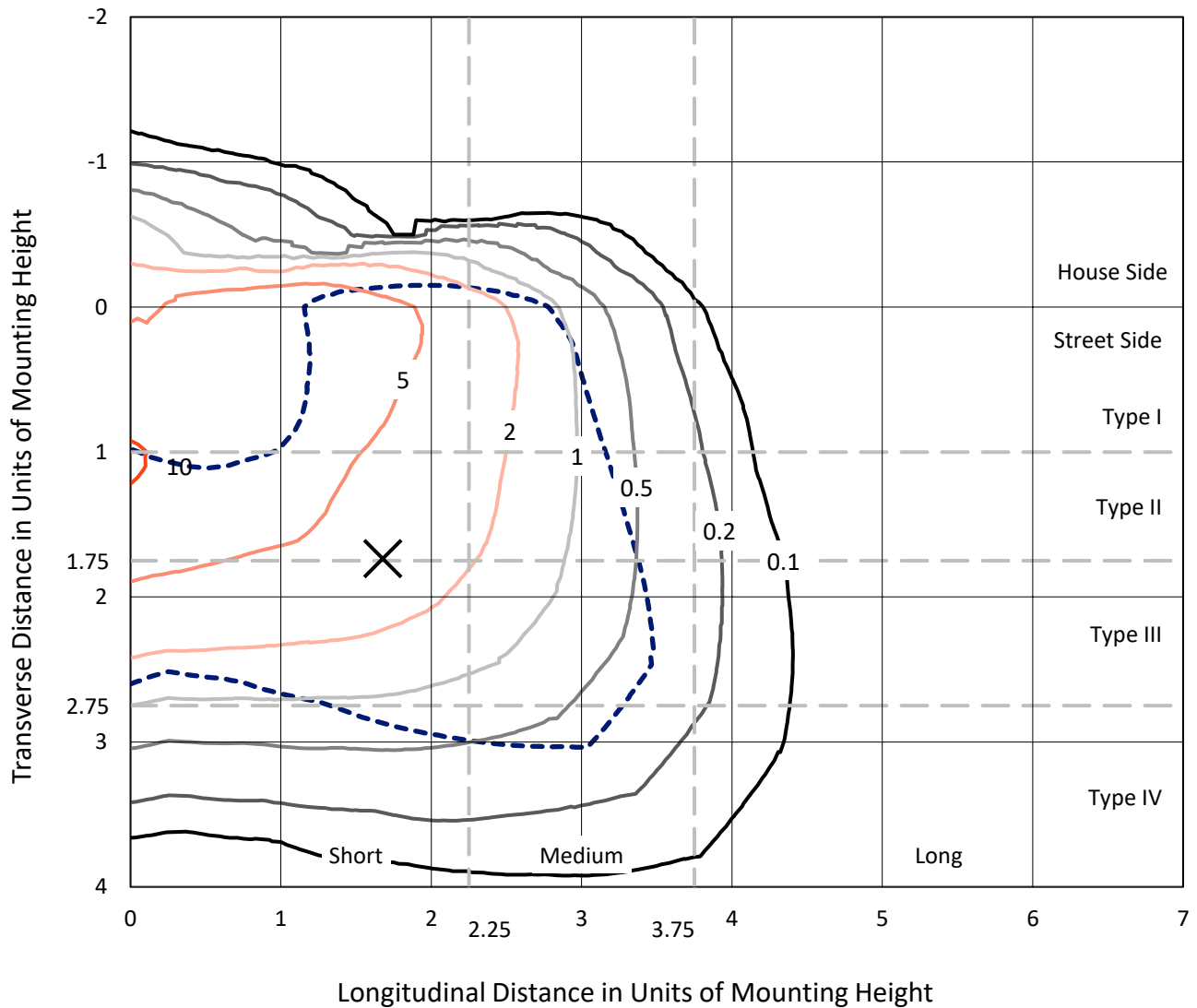
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P367323
 CATALOG NUMBER: MSA-SA2B-740-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

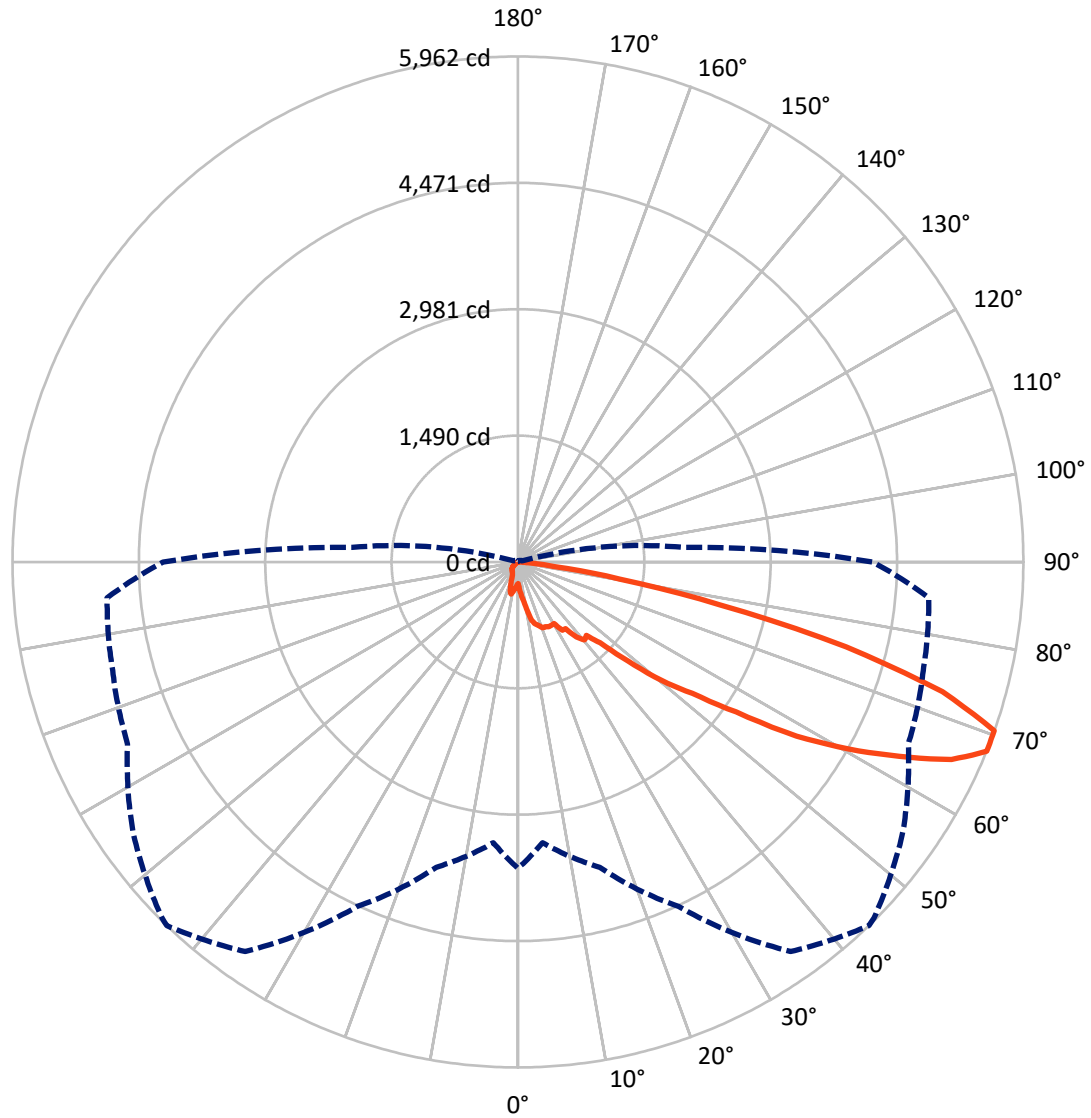
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc
 Type IV - Short - N/A

REPORT NUMBER: P367323
CATALOG NUMBER: MSA-SA2B-740-U-T4W-HSS

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	762.8	0.0	762.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	6746.2	0.0	6746.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	7509.0	0.0	7509.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	0.5
10°-20°	157.0	2.1
20°-30°	278.1	3.7
30°-40°	452.0	6.0
40°-50°	904.6	12.0
50°-60°	1855.7	24.7
60°-70°	2549.2	33.9
70°-80°	1198.2	16.0
80°-90°	76.7	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°	7509.0	100.0
0°-180°	7509.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367323

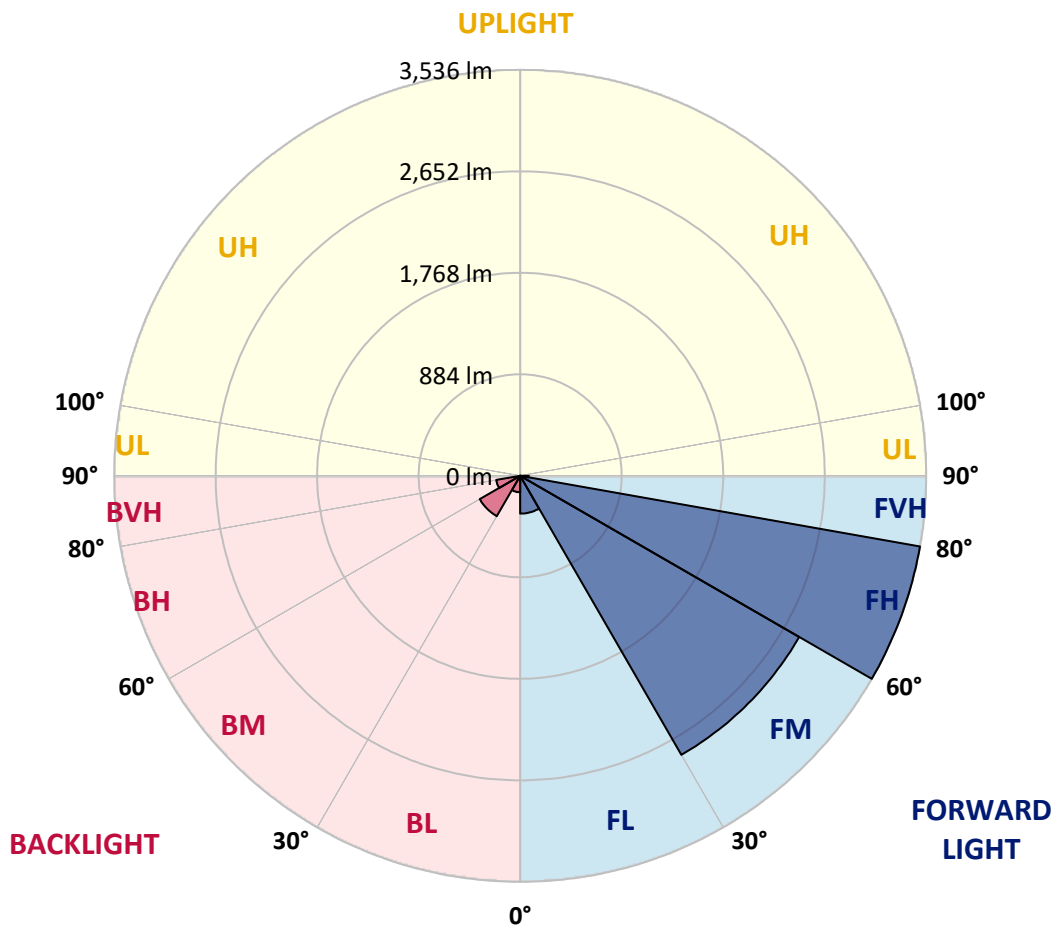
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	329.4	4.4			
FM (30°-60°)	2806.0	37.4			
FH (60°-80°)	3535.7	47.1			G2/5000
FVH (80°-90°)	75.2	1.0			G1/100
BL (0°-30°)	143.2	1.9	B1/500		
BM (30°-60°)	406.3	5.4	B1/1000		
BH (60°-80°)	211.7	2.8	B1/500		G1/500
BVH (80°-90°)	1.6	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 IV Short





REPORT NUMBER: P367323

CATALOG NUMBER: MSA-SA2B-740-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0
2.5°	321.7	311.4	296.5	299.8	301.4	306.0	306.4	300.6	284.0	279.5	299.8
5°	450.9	425.7	421.1	411.6	392.5	382.2	379.7	390.0	376.8	372.7	378.0
7.5°	576.0	554.4	530.8	518.0	478.2	453.8	452.6	456.7	459.2	444.7	452.2
10°	659.2	635.6	630.6	600.4	566.0	560.2	557.7	542.0	529.2	518.4	482.4
12.5°	734.5	734.1	743.2	699.8	694.4	700.2	698.1	641.8	629.0	583.8	573.5
15°	834.8	859.6	820.3	783.8	737.4	757.3	751.9	715.9	707.2	676.6	632.3
17.5°	938.7	945.3	879.5	823.6	811.6	785.5	790.9	778.0	734.1	758.6	714.7
20°	941.2	955.7	885.3	792.9	829.8	828.5	829.0	816.5	758.6	815.7	775.5
22.5°	975.9	940.3	874.9	816.1	822.7	829.0	835.6	820.3	807.8	821.9	829.4
25°	961.9	947.8	884.9	845.9	839.7	844.7	846.3	865.8	857.9	891.9	873.3
27.5°	998.3	978.0	865.4	872.4	850.5	844.7	834.8	899.8	922.9	896.0	945.7
30°	1060.8	1057.9	898.9	909.3	892.3	841.4	867.9	952.8	981.7	965.2	1025.6
32.5°	1158.6	1168.5	997.1	930.0	938.7	961.5	951.5	952.8	1026.1	1062.9	1110.9
35°	1297.3	1291.9	1092.7	1008.7	963.1	966.8	980.9	1048.4	1143.2	1140.7	1191.7
37.5°	1569.7	1510.9	1262.1	1089.0	1102.7	1121.3	1110.9	1201.6	1210.7	1214.0	1335.8
40°	1971.4	1893.1	1529.1	1258.3	1126.7	1209.1	1204.1	1226.5	1287.3	1310.1	1487.7
42.5°	2500.5	2395.4	1999.1	1569.7	1242.6	1185.9	1216.5	1258.8	1463.3	1528.3	1722.9
45°	3085.2	2872.4	2467.8	2013.6	1533.3	1357.3	1380.5	1459.2	1742.8	1850.5	2065.4
47.5°	3464.1	3276.9	2932.0	2407.0	1836.4	1744.0	1746.1	1763.1	2071.1	2270.7	2558.9
50°	3793.2	3594.1	3274.0	2818.1	2372.6	2197.9	2158.1	2079.8	2489.4	2762.2	3081.9
52.5°	4257.8	4025.1	3616.0	3300.5	2984.2	2572.6	2558.5	2585.0	2982.5	3269.4	3618.1
55°	4676.9	4394.0	4003.6	3804.8	3681.4	3123.3	3135.3	3179.6	3615.6	3767.6	4095.1
57.5°	4861.9	4555.5	4354.7	4265.3	4199.4	3875.6	3835.1	3808.6	4115.0	4172.9	4594.9
60°	4983.3	4691.8	4600.7	4621.4	4820.9	4477.3	4440.4	4286.4	4528.2	4575.8	5042.9
62.5°	4906.7	4640.8	4660.3	4833.0	5276.0	5049.9	4943.5	4686.0	4866.1	4904.6	5364.6
65°	4424.3	4147.3	4397.4	4815.1	5623.0	5617.6	5568.3	5054.9	5053.2	5102.5	5389.5
67.5°	3613.9	3323.3	3727.8	4481.4	5608.5	5961.7	5938.5	5544.3	5080.1	4948.5	4863.6
70°	2512.5	2260.4	2719.2	3700.9	5108.7	5959.2	5921.9	5873.1	4867.3	4259.5	3770.9
72.5°	1305.5	1166.8	1594.1	2550.2	4072.3	5235.8	5358.8	5278.5	4156.0	3094.7	2220.6
75°	443.5	397.9	657.5	1353.6	2707.1	3998.2	4142.3	4060.7	2822.7	1660.4	878.2
77.5°	171.8	159.8	235.6	549.5	1358.1	2436.4	2592.9	2509.6	1513.8	608.3	206.6
80°	97.7	94.4	130.0	247.6	598.7	1212.0	1322.1	1199.1	545.7	205.0	53.8
82.5°	41.4	42.6	72.5	133.7	301.0	427.7	477.0	435.2	228.6	140.4	19.9
85°	9.1	11.2	34.4	74.5	126.3	122.1	127.9	142.0	140.4	103.1	8.7
87.5°	0.0	0.0	10.8	20.3	30.2	19.9	15.7	27.7	43.1	41.4	3.7
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: P367323
 CATALOG NUMBER: MSA-SA2B-740-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0	253.0
2.5°	303.5	299.4	273.3	271.6	273.3	268.7	268.3	258.8	259.6	281.1	282.8
5°	378.0	357.3	335.0	327.9	321.3	306.4	314.7	314.7	314.7	328.4	332.5
7.5°	445.5	417.8	386.3	359.8	334.1	315.5	328.4	337.5	342.8	360.6	368.9
10°	476.2	448.8	420.7	383.0	363.1	356.1	341.2	333.3	342.8	339.1	343.7
12.5°	541.6	516.8	468.3	429.4	414.5	390.5	346.6	315.9	295.6	292.3	291.5
15°	605.4	590.0	525.0	472.9	421.1	365.6	290.7	250.1	228.6	224.8	225.3
17.5°	686.1	664.2	568.5	493.6	405.8	306.0	224.4	189.6	188.0	197.1	197.9
20°	739.9	703.9	590.5	476.6	355.3	231.5	175.6	167.3	180.5	197.1	195.4
22.5°	791.3	752.4	619.4	461.7	275.4	175.6	161.5	162.3	173.5	191.3	195.9
25°	825.2	811.2	655.0	426.9	209.9	152.0	154.4	160.7	170.2	187.2	187.2
27.5°	927.5	861.7	650.9	359.4	161.5	141.6	147.4	155.3	160.2	180.5	182.6
30°	989.6	968.1	672.4	290.7	141.6	128.4	139.5	146.6	149.9	173.1	173.9
32.5°	1065.8	1018.2	698.5	214.5	131.7	127.5	125.0	130.4	140.0	160.2	161.5
35°	1158.6	1144.5	661.3	168.5	128.4	119.3	114.3	117.2	123.4	137.1	140.0
37.5°	1347.8	1264.1	638.9	144.5	128.4	116.4	111.0	103.5	104.3	113.9	119.3
40°	1507.2	1481.5	576.4	140.4	122.6	112.2	99.0	89.9	83.6	86.5	88.6
42.5°	1799.9	1681.1	495.6	138.3	117.2	101.4	84.1	74.5	65.0	65.8	69.1
45°	2155.2	1898.9	423.6	136.2	113.5	90.7	70.8	59.6	49.7	50.1	53.4
47.5°	2629.7	2216.5	336.2	130.0	106.8	80.7	57.1	45.5	39.8	41.0	43.9
50°	3168.8	2495.1	265.8	120.5	99.0	71.2	46.4	36.9	34.8	36.0	39.3
52.5°	3650.4	2700.5	219.5	111.8	87.8	58.0	38.9	32.7	31.9	32.7	35.2
55°	4078.5	2819.8	183.4	101.9	75.4	46.8	35.2	30.2	29.8	29.4	31.1
57.5°	4480.2	2854.1	143.3	86.1	61.3	40.6	32.7	28.2	27.3	26.1	27.3
60°	4772.9	2795.3	105.2	69.1	50.1	36.9	30.6	25.3	24.0	21.9	22.8
62.5°	4914.1	2634.3	79.5	55.5	42.6	33.5	27.3	21.9	20.3	17.8	18.2
65°	4780.0	2368.9	62.5	46.8	36.4	28.2	23.2	18.6	16.6	14.1	14.1
67.5°	4185.8	1965.1	53.0	40.6	30.6	24.0	19.0	17.0	13.7	11.6	11.2
70°	3072.4	1413.6	45.5	35.6	26.5	20.7	16.1	15.3	13.3	11.2	10.4
72.5°	1734.1	800.0	38.9	31.5	22.4	17.4	13.7	14.1	12.8	10.4	9.5
75°	661.7	269.6	32.3	26.1	18.2	13.3	11.6	11.6	11.6	8.7	7.5
77.5°	164.0	68.7	25.7	21.1	14.5	8.7	9.5	9.9	9.9	7.5	5.4
80°	45.1	23.2	15.3	15.3	10.4	5.0	6.6	6.6	5.4	2.5	0.0
82.5°	16.6	8.7	5.4	6.6	4.6	1.7	2.5	1.7	1.2	0.0	0.0
85°	7.0	4.6	3.3	3.7	2.1	0.0	0.4	0.8	0.0	0.0	0.0
87.5°	2.9	2.1	1.7	1.7	0.8	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)