

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: P367707

Luminaire Tested: **MSA-SA3A-740-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-740-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9701 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

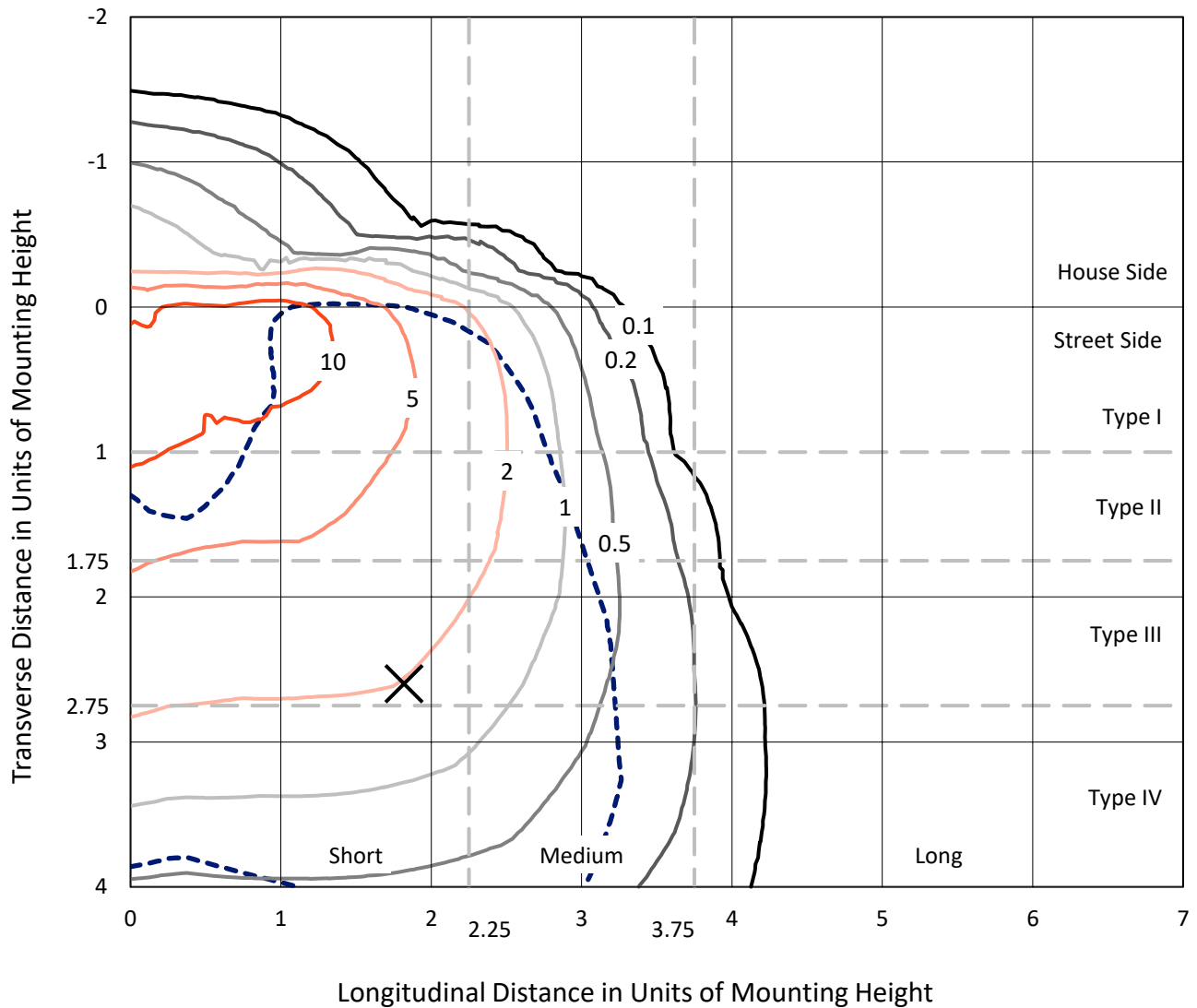
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

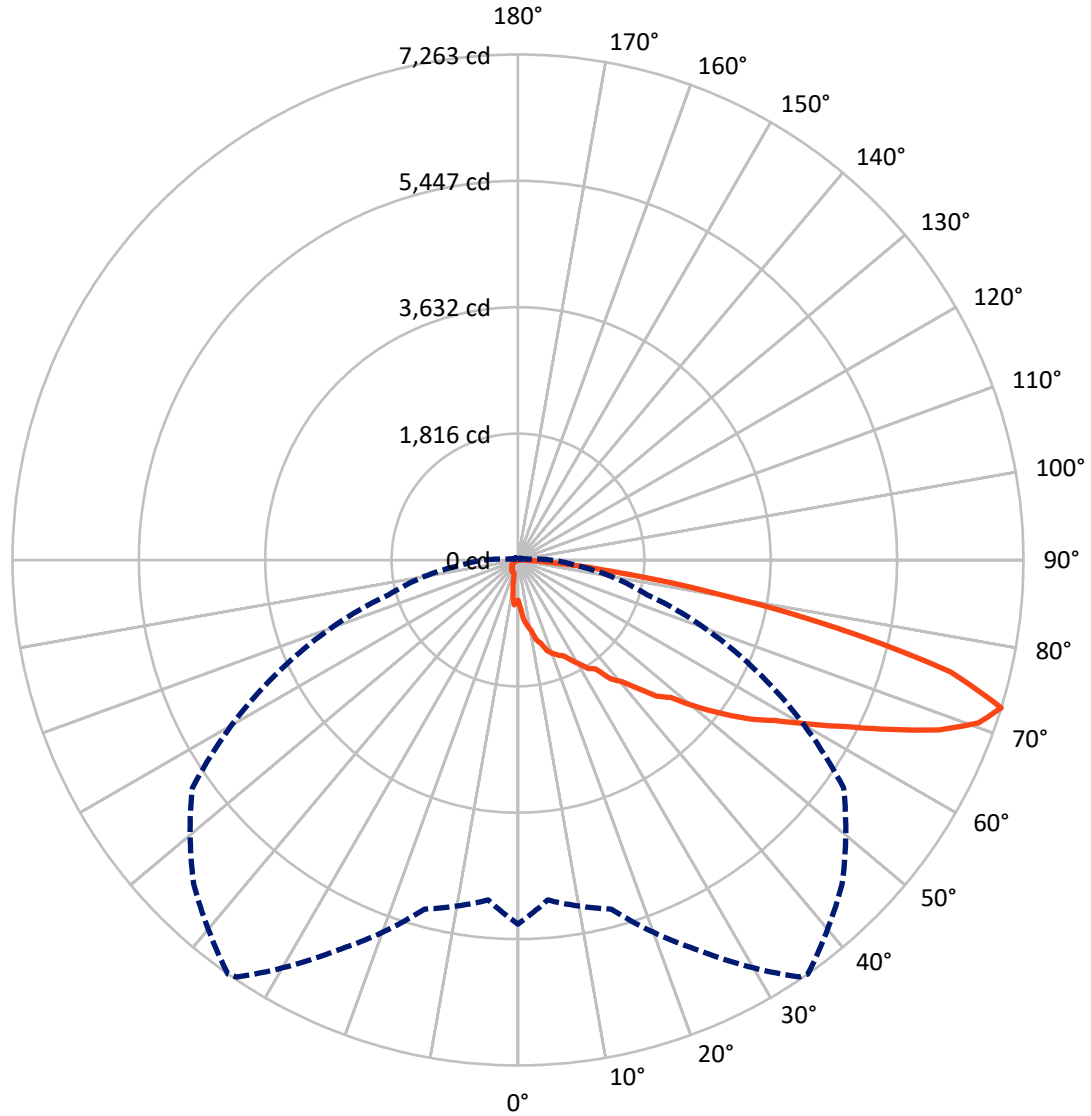
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	756.7	0.0	756.7
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8944.3	0.0	8944.3
	% Fixture	92.2	0.0	92.2
Total	Lumens	9701.0	0.0	9701.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	0.8
10°-20°	248.3	2.6
20°-30°	452.1	4.7
30°-40°	779.8	8.0
40°-50°	1386.3	14.3
50°-60°	2068.7	21.3
60°-70°	2643.0	27.2
70°-80°	1838.8	19.0
80°-90°	210.4	2.2
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°	9701.0	100.0
0°-180°	9701.0	100.0

Coefficient of Utilization



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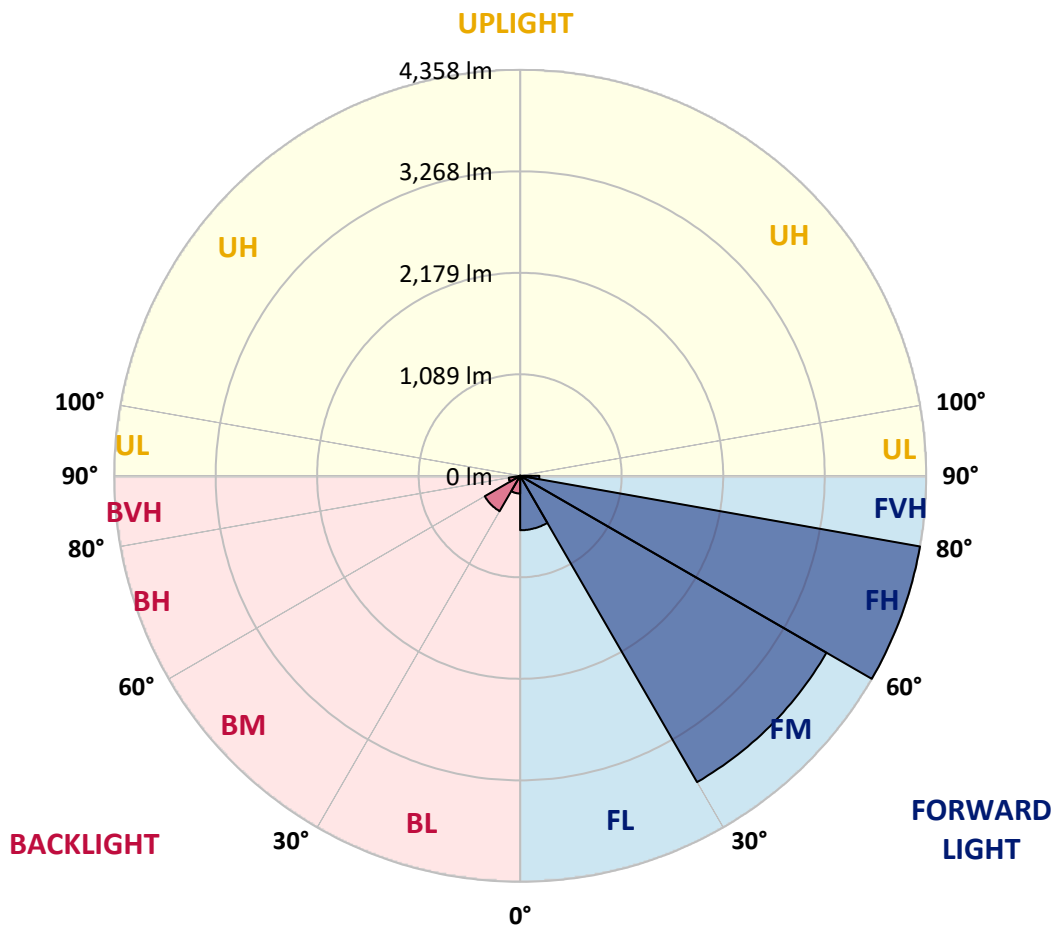
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	583.8	6.0			
FM (30°-60°)	3796.0	39.1			
FH (60°-80°)	4357.7	44.9			G2/5000
FVH (80°-90°)	206.8	2.1			G2/225
BL (0°-30°)	190.3	2.0	B1/500		
BM (30°-60°)	438.8	4.5	B1/1000		
BH (60°-80°)	124.0	1.3	B1/500		G1/500
BVH (80°-90°)	3.5	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°	34°	35°	45°	55°	65°	75°	85°
0°	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9
2.5°	735.4	706.6	659.8	663.2	684.2	688.6	694.9	678.3	663.7	637.9	688.1
5°	942.2	900.7	874.4	866.1	853.9	854.9	825.1	835.9	832.9	852.0	874.9
7.5°	1058.7	1035.8	1002.6	993.4	948.5	943.6	907.1	956.3	961.2	954.4	991.9
10°	1105.1	1074.8	1078.7	1044.1	1021.7	1027.5	1033.4	1037.3	1043.6	1050.0	1004.1
12.5°	1132.4	1137.7	1190.9	1154.8	1177.2	1177.2	1216.7	1174.8	1176.3	1130.4	1138.2
15°	1255.3	1285.0	1261.1	1260.6	1236.2	1242.6	1288.4	1255.3	1272.3	1258.7	1206.0
17.5°	1409.4	1415.2	1369.9	1349.9	1371.8	1372.3	1352.8	1351.3	1291.8	1392.3	1328.4
20°	1458.6	1491.8	1427.4	1349.4	1440.6	1436.2	1434.7	1411.8	1312.8	1452.3	1399.6
22.5°	1592.7	1545.4	1501.5	1450.3	1485.9	1485.9	1480.6	1430.3	1391.8	1446.9	1469.3
25°	1634.7	1640.5	1583.5	1566.9	1567.9	1524.0	1520.1	1498.6	1461.5	1555.7	1510.8
27.5°	1779.0	1776.6	1639.5	1685.9	1626.9	1627.3	1519.6	1567.9	1574.2	1561.0	1611.3
30°	1920.9	1960.4	1753.7	1812.2	1750.2	1731.7	1626.4	1669.3	1680.5	1665.4	1728.8
32.5°	2101.9	2159.9	1959.0	1901.4	1806.8	1859.5	1786.8	1685.4	1741.0	1876.1	1911.7
35°	2293.5	2321.8	2107.7	2027.2	1920.4	1920.0	1917.5	1925.8	1987.2	2139.4	2169.6
37.5°	2637.8	2571.0	2377.4	2193.0	2216.9	2163.8	2126.7	2165.7	2229.6	2480.3	2609.5
40°	2829.9	2781.7	2509.1	2399.8	2281.3	2300.8	2401.3	2396.9	2567.1	2829.5	3023.1
42.5°	3016.7	2970.9	2702.7	2614.4	2462.2	2515.4	2559.3	2614.9	2963.6	3386.9	3493.2
45°	3183.0	3048.4	2859.2	2862.6	2783.6	2790.0	2867.5	2918.7	3422.9	3857.0	3931.6
47.5°	3283.5	3172.8	2991.4	2987.9	2983.1	2953.3	3318.6	3365.4	3789.2	4304.7	4311.5
50°	3424.9	3286.4	3127.4	3130.3	3243.0	3305.9	3741.9	3737.0	4142.7	4678.2	4520.7
52.5°	3600.9	3431.7	3256.7	3386.9	3561.0	3663.4	4017.4	4161.8	4522.6	4912.8	4602.6
55°	3826.2	3614.6	3445.9	3612.6	3992.5	4032.0	4287.1	4591.9	4936.7	5152.2	4628.9
57.5°	4090.6	3838.0	3701.4	3970.1	4349.0	4350.0	4679.7	5050.3	5190.7	5249.8	4599.2
60°	4375.4	4080.8	3943.3	4185.2	4742.1	4782.1	5116.1	5303.4	5448.7	5299.0	4546.0
62.5°	4626.0	4300.7	4193.9	4478.3	5173.2	5267.8	5496.5	5469.7	5635.0	5360.9	4411.0
65°	4924.5	4585.5	4515.3	4935.2	5736.0	5866.2	5923.7	5764.7	5697.4	5313.1	4059.4
67.5°	5220.0	4903.0	4901.1	5441.9	6473.8	6518.7	6458.2	6180.7	5624.8	4891.8	3415.1
70°	5428.2	5087.8	5216.1	5996.9	7144.3	7018.5	6764.0	6377.2	5100.0	3749.2	2231.1
72.5°	5232.7	4904.5	5193.7	6194.4	7227.2	7263.3	6586.9	5712.5	3789.2	1917.5	807.6
75°	3976.4	3775.5	4509.5	5495.5	6416.7	6425.0	5498.0	4029.1	1865.8	520.8	223.4
77.5°	2002.9	1939.0	2854.3	3901.3	4681.6	4668.0	3777.5	2158.4	600.3	173.1	112.7
80°	1013.9	962.7	1214.8	2104.8	2780.2	2800.7	2157.0	966.6	302.8	94.1	78.0
82.5°	622.8	591.1	664.7	952.4	1349.4	1382.1	818.3	612.0	187.8	55.6	71.2
85°	120.5	126.8	381.8	476.9	538.9	526.2	242.4	503.8	56.6	33.2	51.7
87.5°	0.0	2.0	88.3	155.6	156.1	138.5	55.1	111.7	7.8	9.3	6.3
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°	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9	577.9
2.5°	696.4	689.1	628.1	621.3	622.8	612.5	609.1	587.6	582.3	615.4	621.3
5°	865.1	816.4	759.8	739.3	707.6	654.0	646.2	632.5	617.4	623.2	618.9
7.5°	968.5	903.6	843.2	735.4	646.2	568.1	555.5	532.0	508.6	509.1	524.2
10°	985.1	930.5	847.1	715.9	614.0	516.4	431.6	370.1	342.3	317.5	324.8
12.5°	1081.2	1030.4	876.8	710.0	567.2	415.0	303.8	243.8	217.5	208.7	207.7
15°	1158.2	1118.2	927.5	692.0	463.3	292.1	217.5	199.9	195.1	203.4	200.9
17.5°	1272.8	1200.6	922.2	617.4	353.1	221.9	200.4	198.0	203.8	208.7	210.2
20°	1323.0	1219.2	885.6	500.3	264.3	203.4	195.6	190.7	201.4	216.0	213.1
22.5°	1373.8	1250.9	842.7	409.6	212.6	194.6	190.2	186.3	194.6	208.7	212.1
25°	1396.7	1301.6	794.9	319.9	197.5	184.3	181.4	182.9	189.7	202.4	200.9
27.5°	1512.3	1307.4	703.7	252.6	191.2	177.0	177.0	180.4	180.4	197.5	196.0
30°	1584.4	1406.4	629.6	212.6	183.9	166.8	172.6	174.1	171.7	190.2	191.7
32.5°	1711.2	1433.7	557.4	195.1	172.1	165.3	164.3	165.3	167.3	185.3	185.8
35°	1906.3	1568.3	458.9	188.2	166.3	158.0	151.2	156.5	161.4	174.6	177.0
37.5°	2287.7	1706.4	374.0	182.9	163.4	151.2	148.7	147.8	156.5	171.7	176.5
40°	2596.3	1950.7	304.3	178.5	157.5	147.3	140.9	141.4	149.2	160.4	167.8
42.5°	3033.3	2127.2	258.0	171.7	149.2	139.0	131.7	136.1	139.5	151.2	156.1
45°	3398.1	2264.2	227.3	167.3	140.9	131.2	125.3	130.2	126.8	132.6	139.5
47.5°	3688.2	2383.7	204.3	156.5	135.6	126.8	119.5	118.0	112.2	113.6	120.0
50°	3847.7	2363.7	185.3	145.8	128.7	122.4	112.2	101.9	94.1	93.6	97.5
52.5°	3904.3	2256.9	169.7	136.5	120.5	112.7	100.9	86.8	79.0	76.6	80.0
55°	3919.9	2103.3	155.6	126.3	112.7	100.5	88.3	73.2	64.9	61.0	64.4
57.5°	3869.2	1866.8	141.9	116.6	103.4	88.8	75.6	60.0	52.2	47.3	50.2
60°	3743.8	1566.4	129.7	104.4	93.6	78.5	63.9	48.3	40.0	35.6	37.1
62.5°	3466.3	1227.9	116.6	93.1	83.4	68.8	53.6	38.0	30.2	26.3	26.8
65°	3044.0	915.4	101.4	82.4	74.1	59.5	42.9	29.3	22.9	19.5	19.0
67.5°	2425.2	620.3	86.3	71.2	65.8	50.2	34.1	22.9	18.0	15.6	14.6
70°	1425.5	312.6	71.7	61.4	56.6	41.9	26.8	18.5	16.6	14.6	13.7
72.5°	470.1	135.1	56.1	50.7	46.8	33.6	21.0	17.1	16.1	14.1	13.2
75°	163.9	78.0	41.5	39.0	37.1	25.4	17.6	15.6	15.6	13.7	12.2
77.5°	107.3	60.5	30.7	28.3	27.8	18.5	15.1	14.6	13.7	11.2	9.3
80°	89.2	34.1	21.5	20.0	19.5	11.7	12.2	10.7	8.3	4.9	2.0
82.5°	82.4	20.5	11.2	12.2	11.2	4.4	6.8	5.9	4.4	2.0	0.0
85°	48.3	9.3	6.3	6.3	4.9	1.0	3.4	3.4	2.0	0.5	0.0
87.5°	5.4	4.4	3.4	3.4	2.4	0.0	1.5	1.0	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)