

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: P368213

Luminaire Tested: **MSA-SA4A-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368213
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-SA4A-730-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 11677 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

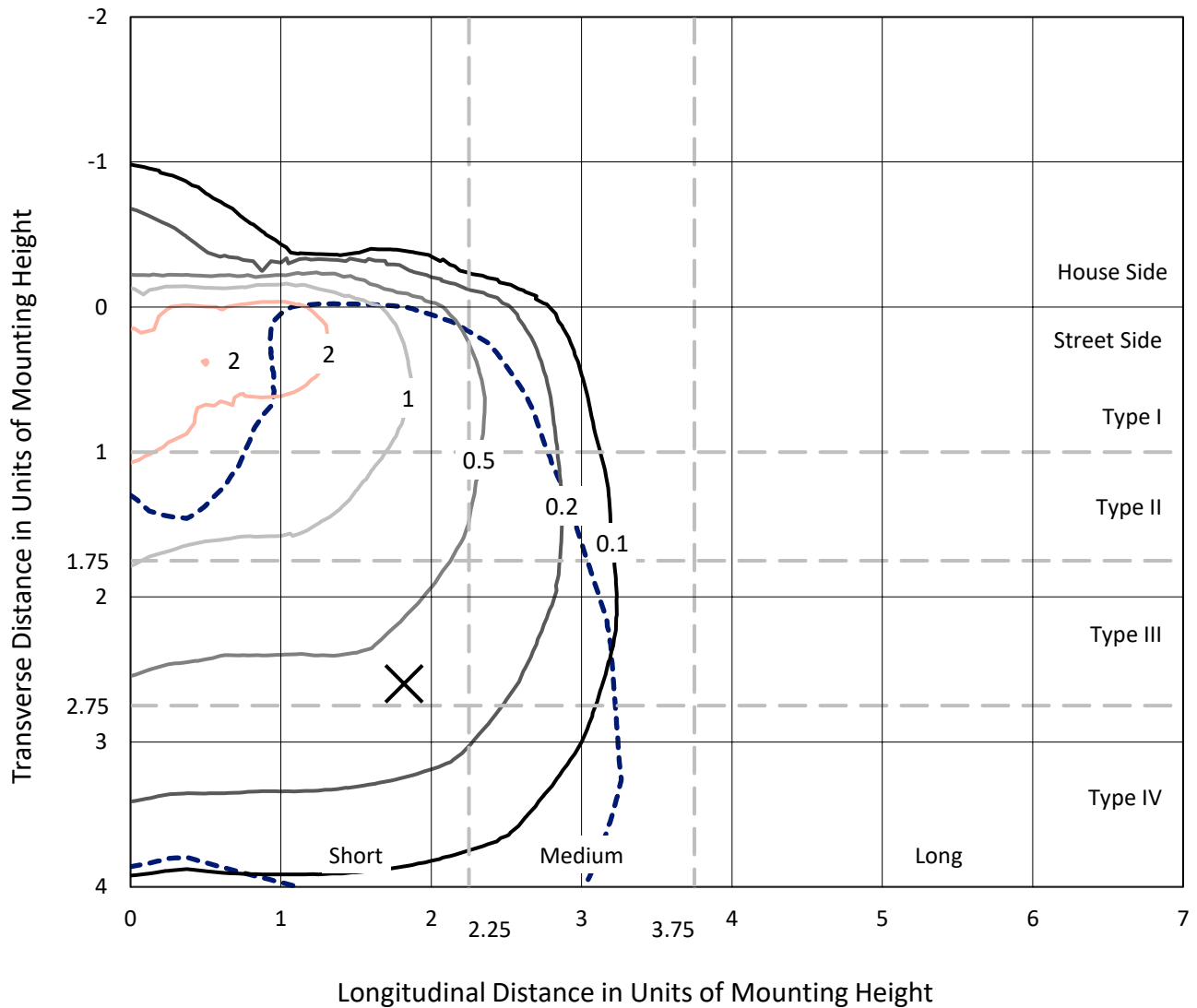
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

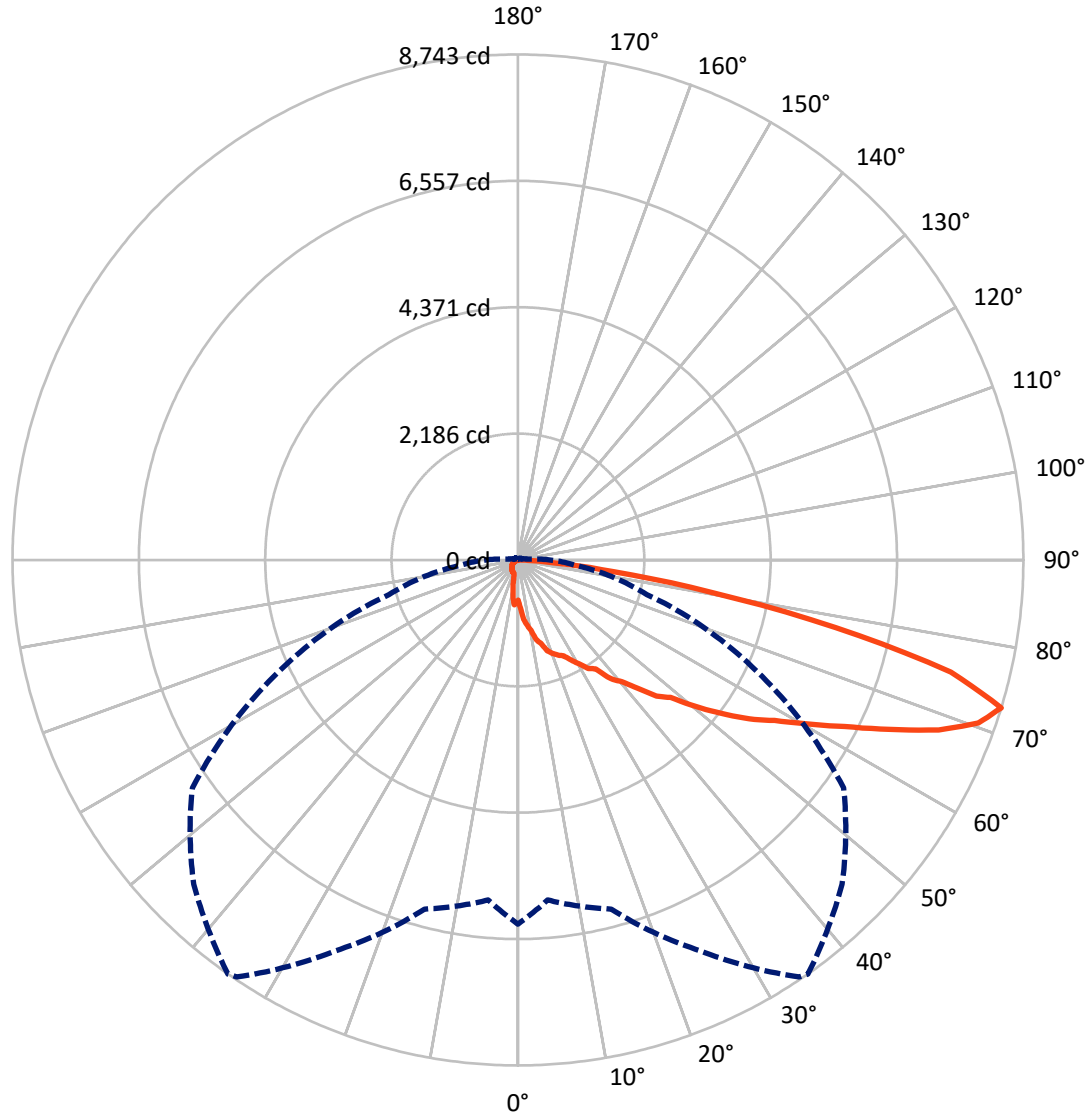
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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	910.8	0.0	910.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	10766.2	0.0	10766.2
	% Fixture	92.2	0.0	92.2
Total	Lumens	11677.0	0.0	11677.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	0.8
10°-20°	298.8	2.6
20°-30°	544.2	4.7
30°-40°	938.7	8.0
40°-50°	1668.7	14.3
50°-60°	2490.0	21.3
60°-70°	3181.3	27.2
70°-80°	2213.4	19.0
80°-90°	253.2	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°	11677.0	100.0
0°-180°	11677.0	100.0

Coefficient of Utilization



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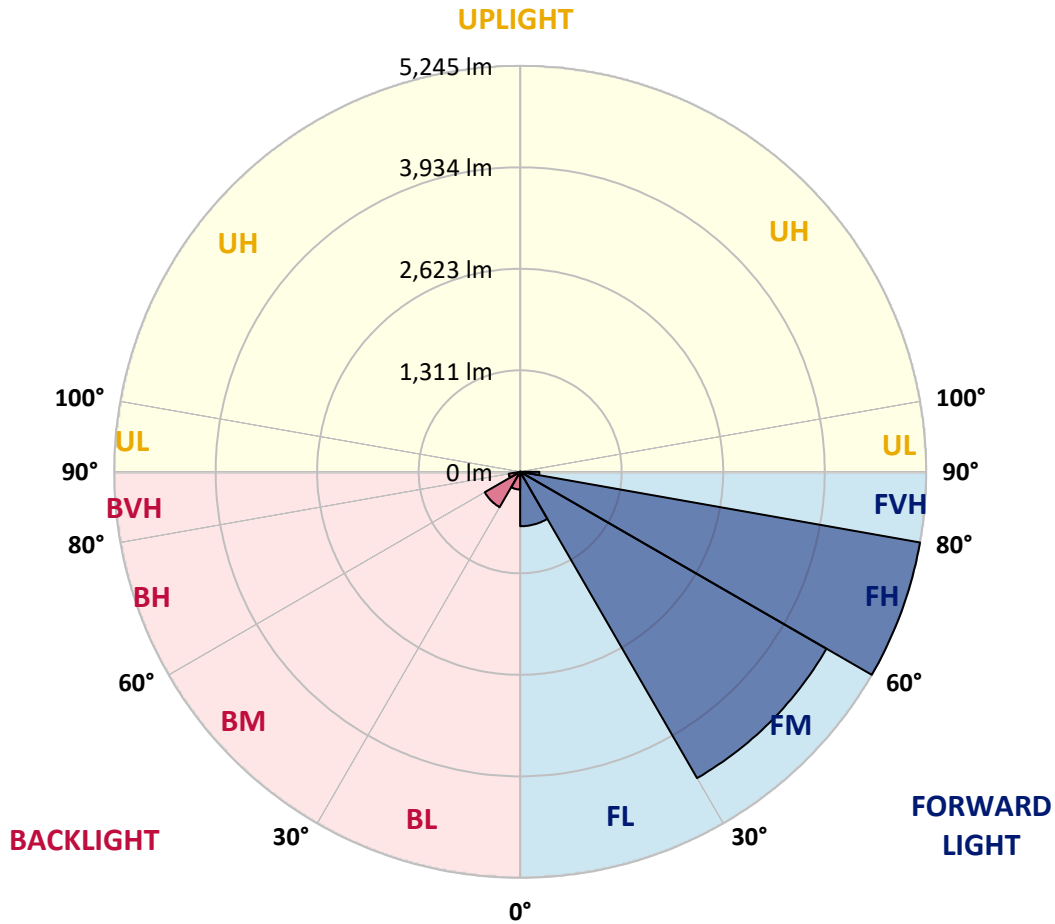
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	702.7	6.0			
FM (30°-60°)	4569.3	39.1			
FH (60°-80°)	5245.3	44.9			G3/7500
FVH (80°-90°)	248.9	2.1			G3/500
BL (0°-30°)	229.1	2.0	B1/500		
BM (30°-60°)	528.1	4.5	B1/1000		
BH (60°-80°)	149.3	1.3	B1/500		G1/500
BVH (80°-90°)	4.3	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6
2.5°	885.2	850.6	794.2	798.3	823.6	828.8	836.5	816.5	798.9	767.8	828.3
5°	1134.1	1084.2	1052.5	1042.5	1027.8	1029.0	993.2	1006.1	1002.6	1025.5	1053.1
7.5°	1274.4	1246.8	1206.9	1195.7	1141.7	1135.8	1091.8	1151.1	1157.0	1148.8	1194.0
10°	1330.1	1293.8	1298.4	1256.8	1229.8	1236.8	1243.9	1248.6	1256.2	1263.8	1208.6
12.5°	1363.0	1369.5	1433.5	1390.0	1417.0	1417.0	1464.6	1414.1	1415.8	1360.7	1370.1
15°	1510.9	1546.8	1518.0	1517.4	1488.0	1495.7	1550.9	1510.9	1531.5	1515.1	1451.7
17.5°	1696.4	1703.5	1648.9	1624.8	1651.2	1651.8	1628.3	1626.6	1555.0	1675.9	1599.0
20°	1755.7	1795.6	1718.2	1624.2	1734.0	1728.7	1727.0	1699.4	1580.2	1748.1	1684.7
22.5°	1917.1	1860.2	1807.4	1745.7	1788.6	1788.6	1782.1	1721.7	1675.3	1741.6	1768.6
25°	1967.6	1974.7	1906.0	1886.0	1887.2	1834.4	1829.7	1803.9	1759.2	1872.5	1818.5
27.5°	2141.4	2138.4	1973.5	2029.3	1958.2	1958.8	1829.1	1887.2	1894.8	1879.0	1939.5
30°	2312.2	2359.7	2110.9	2181.3	2106.7	2084.4	1957.7	2009.3	2022.8	2004.6	2080.9
32.5°	2530.0	2599.8	2358.0	2288.7	2174.8	2238.2	2150.8	2028.7	2095.6	2258.2	2301.0
35°	2760.7	2794.7	2537.0	2440.2	2311.6	2311.0	2308.1	2318.1	2392.0	2575.2	2611.6
37.5°	3175.1	3094.7	2861.6	2639.7	2668.5	2604.5	2559.9	2606.9	2683.8	2985.5	3141.0
40°	3406.4	3348.3	3020.1	2888.6	2746.0	2769.5	2890.4	2885.1	3090.0	3405.8	3638.8
42.5°	3631.2	3576.0	3253.2	3146.9	2963.8	3027.8	3080.6	3147.5	3567.2	4076.7	4204.7
45°	3831.4	3669.3	3441.6	3445.7	3350.6	3358.2	3451.6	3513.2	4120.2	4642.6	4732.4
47.5°	3952.3	3819.0	3600.7	3596.6	3590.7	3554.9	3994.5	4050.9	4561.0	5181.5	5189.7
50°	4122.5	3955.8	3764.4	3768.0	3903.6	3979.3	4504.1	4498.2	4986.6	5631.1	5441.5
52.5°	4334.4	4130.7	3920.0	4076.7	4286.3	4409.6	4835.7	5009.5	5443.9	5913.5	5540.1
55°	4605.6	4350.9	4147.8	4348.5	4805.8	4853.3	5160.3	5527.2	5942.2	6201.7	5571.8
57.5°	4923.8	4619.7	4455.3	4778.8	5234.9	5236.1	5632.9	6079.0	6248.0	6319.1	5536.0
60°	5266.6	4912.0	4746.5	5037.7	5708.0	5756.1	6158.2	6383.6	6558.6	6378.4	5472.0
62.5°	5568.3	5176.8	5048.2	5390.4	6226.9	6340.8	6616.1	6583.8	6782.8	6452.9	5309.4
65°	5927.5	5519.6	5435.1	5940.5	6904.3	7061.0	7130.3	6938.9	6857.9	6395.4	4886.2
67.5°	6283.3	5901.7	5899.4	6550.4	7792.5	7846.5	7773.7	7439.7	6770.5	5888.2	4110.8
70°	6533.9	6124.2	6278.6	7218.4	8599.6	8448.1	8141.7	7676.2	6138.9	4512.9	2685.5
72.5°	6298.5	5903.5	6251.6	7456.1	8699.4	8742.8	7928.6	6876.1	4561.0	2308.1	972.1
75°	4786.4	4544.6	5428.0	6614.9	7723.8	7733.8	6617.9	4849.8	2245.9	626.9	268.8
77.5°	2410.8	2333.9	3435.7	4696.0	5635.2	5618.8	4546.9	2598.1	722.6	208.4	135.6
80°	1220.4	1158.7	1462.2	2533.5	3346.5	3371.2	2596.3	1163.4	364.5	113.3	93.9
82.5°	749.6	711.4	800.1	1146.4	1624.2	1663.6	985.0	736.7	226.0	66.9	85.7
85°	145.0	152.6	459.6	574.1	648.6	633.4	291.7	606.4	68.1	39.9	62.2
87.5°	0.0	2.3	106.2	187.3	187.8	166.7	66.3	134.4	9.4	11.2	7.6
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°	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6
2.5°	838.2	829.4	756.1	747.8	749.6	737.3	733.2	707.3	700.9	740.8	747.8
5°	1041.3	982.6	914.5	889.9	851.7	787.2	777.8	761.3	743.1	750.2	744.9
7.5°	1165.8	1087.7	1014.9	885.2	777.8	683.9	668.6	640.4	612.2	612.8	631.0
10°	1185.7	1120.0	1019.6	861.7	739.0	621.6	519.5	445.5	412.1	382.1	390.9
12.5°	1301.4	1240.3	1055.4	854.7	682.7	499.5	365.7	293.5	261.8	251.2	250.1
15°	1394.1	1346.0	1116.5	833.0	557.7	351.6	261.8	240.7	234.8	244.8	241.8
17.5°	1532.1	1445.2	1110.0	743.1	425.0	267.1	241.3	238.3	245.4	251.2	253.0
20°	1592.5	1467.5	1066.0	602.3	318.2	244.8	235.4	229.5	242.4	260.0	256.5
22.5°	1653.6	1505.7	1014.3	493.1	255.9	234.2	228.9	224.2	234.2	251.2	255.3
25°	1681.2	1566.7	956.8	385.1	237.7	221.9	218.4	220.1	228.3	243.6	241.8
27.5°	1820.3	1573.8	847.0	304.1	230.1	213.1	213.1	217.2	217.2	237.7	236.0
30°	1907.2	1692.9	757.8	255.9	221.3	200.8	207.8	209.6	206.6	228.9	230.7
32.5°	2059.8	1725.8	670.9	234.8	207.2	199.0	197.8	199.0	201.3	223.1	223.6
35°	2294.6	1887.8	552.4	226.6	200.2	190.2	182.0	188.4	194.3	210.1	213.1
37.5°	2753.6	2053.9	450.2	220.1	196.6	182.0	179.0	177.9	188.4	206.6	212.5
40°	3125.2	2348.0	366.3	214.8	189.6	177.3	169.6	170.2	179.6	193.1	201.9
42.5°	3651.2	2560.5	310.5	206.6	179.6	167.3	158.5	163.8	167.9	182.0	187.8
45°	4090.2	2725.5	273.5	201.3	169.6	157.9	150.9	156.7	152.6	159.7	167.9
47.5°	4439.5	2869.3	246.0	188.4	163.2	152.6	143.8	142.1	135.0	136.8	144.4
50°	4631.4	2845.2	223.1	175.5	155.0	147.3	135.0	122.7	113.3	112.7	117.4
52.5°	4699.5	2716.6	204.3	164.4	145.0	135.6	121.5	104.5	95.1	92.2	96.3
55°	4718.3	2531.7	187.3	152.0	135.6	120.9	106.2	88.1	78.1	73.4	77.5
57.5°	4657.3	2247.0	170.8	140.3	124.4	106.8	91.0	72.2	62.8	56.9	60.5
60°	4506.4	1885.5	156.1	125.6	112.7	94.5	76.9	58.1	48.1	42.9	44.6
62.5°	4172.4	1478.1	140.3	112.1	100.4	82.8	64.6	45.8	36.4	31.7	32.3
65°	3664.1	1101.8	122.1	99.2	89.2	71.6	51.7	35.2	27.6	23.5	22.9
67.5°	2919.2	746.7	103.9	85.7	79.2	60.5	41.1	27.6	21.7	18.8	17.6
70°	1715.8	376.3	86.3	74.0	68.1	50.5	32.3	22.3	20.0	17.6	16.4
72.5°	565.9	162.6	67.5	61.0	56.4	40.5	25.2	20.5	19.4	17.0	15.8
75°	197.2	93.9	49.9	47.0	44.6	30.5	21.1	18.8	18.8	16.4	14.7
77.5°	129.1	72.8	37.0	34.0	33.5	22.3	18.2	17.6	16.4	13.5	11.2
80°	107.4	41.1	25.8	24.1	23.5	14.1	14.7	12.9	10.0	5.9	2.3
82.5°	99.2	24.7	13.5	14.7	13.5	5.3	8.2	7.0	5.3	2.3	0.0
85°	58.1	11.2	7.6	7.6	5.9	1.2	4.1	4.1	2.3	0.6	0.0
87.5°	6.5	5.3	4.1	4.1	2.9	0.0	1.8	1.2	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)