

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: P368485

Luminaire Tested: **MSA-SA4C-730-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368485
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-SA4C-730-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 16183 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

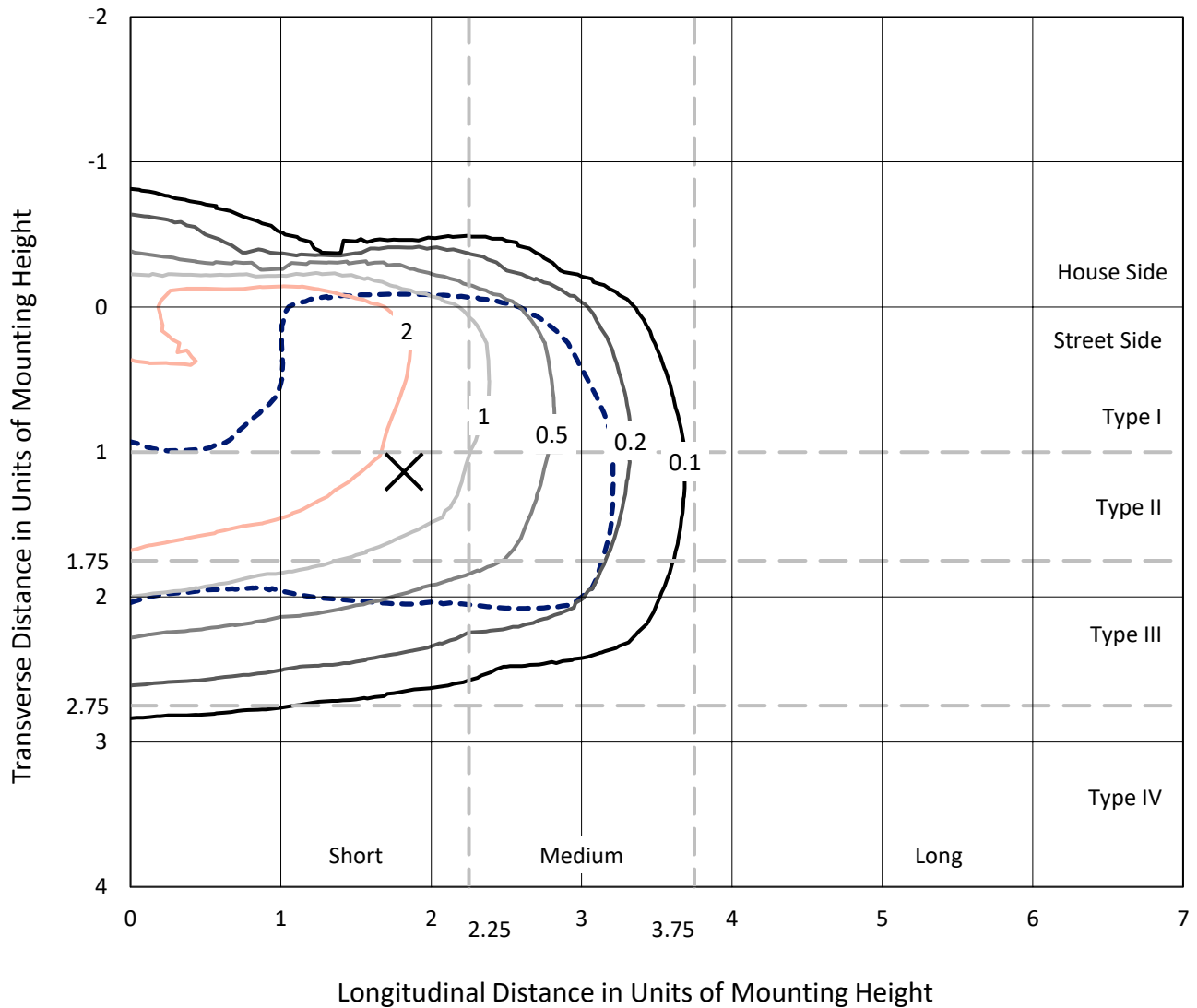
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

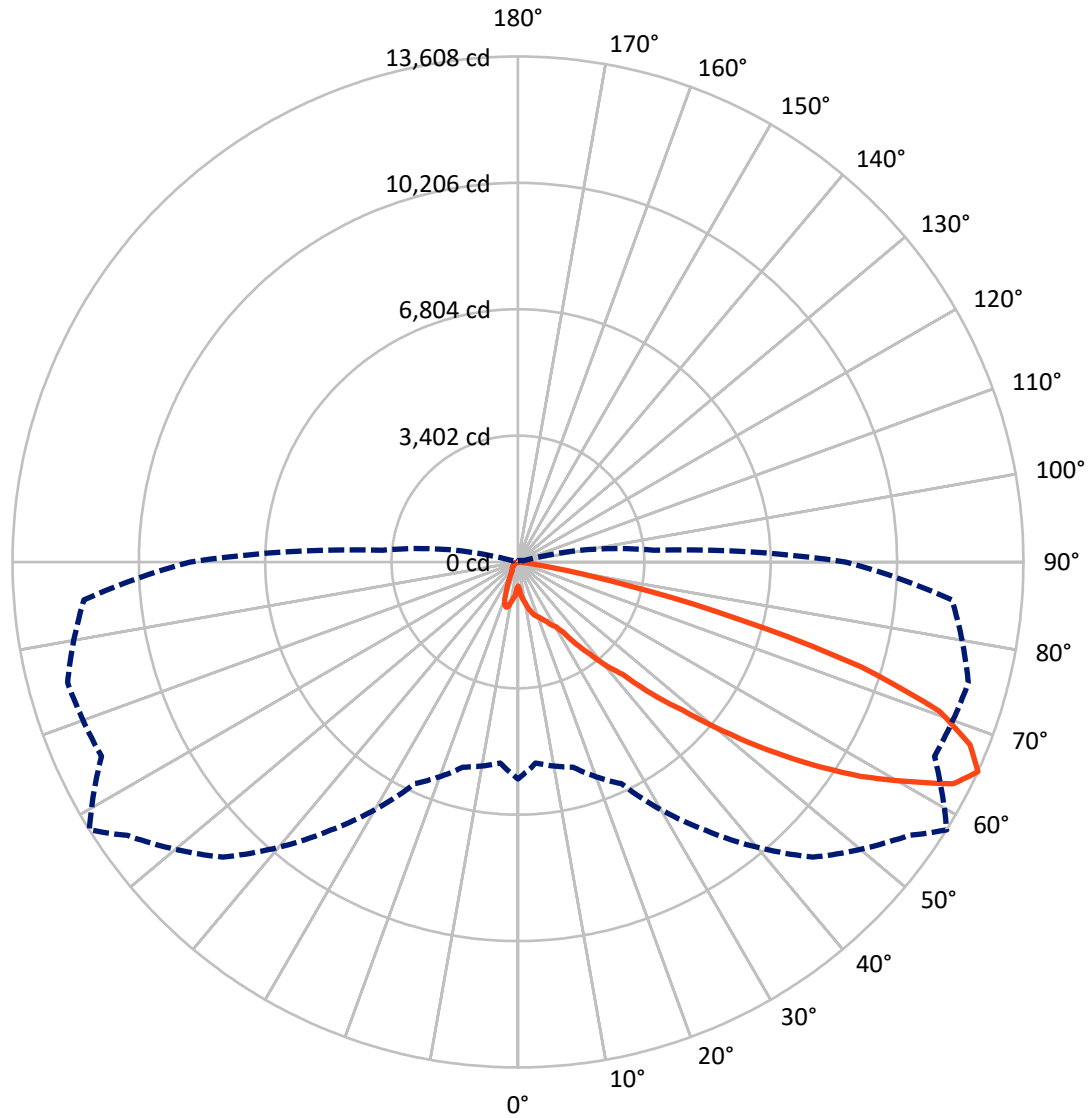
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 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	1596.8	0.0	1596.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	14586.2	0.0	14586.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	16183.0	0.0	16183.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.0	0.6
10°-20°	332.2	2.1
20°-30°	643.0	4.0
30°-40°	1282.9	7.9
40°-50°	2622.7	16.2
50°-60°	4651.9	28.7
60°-70°	4904.3	30.3
70°-80°	1590.0	9.8
80°-90°	65.0	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°	16183.0	100.0
0°-180°	16183.0	100.0

Coefficient of Utilization



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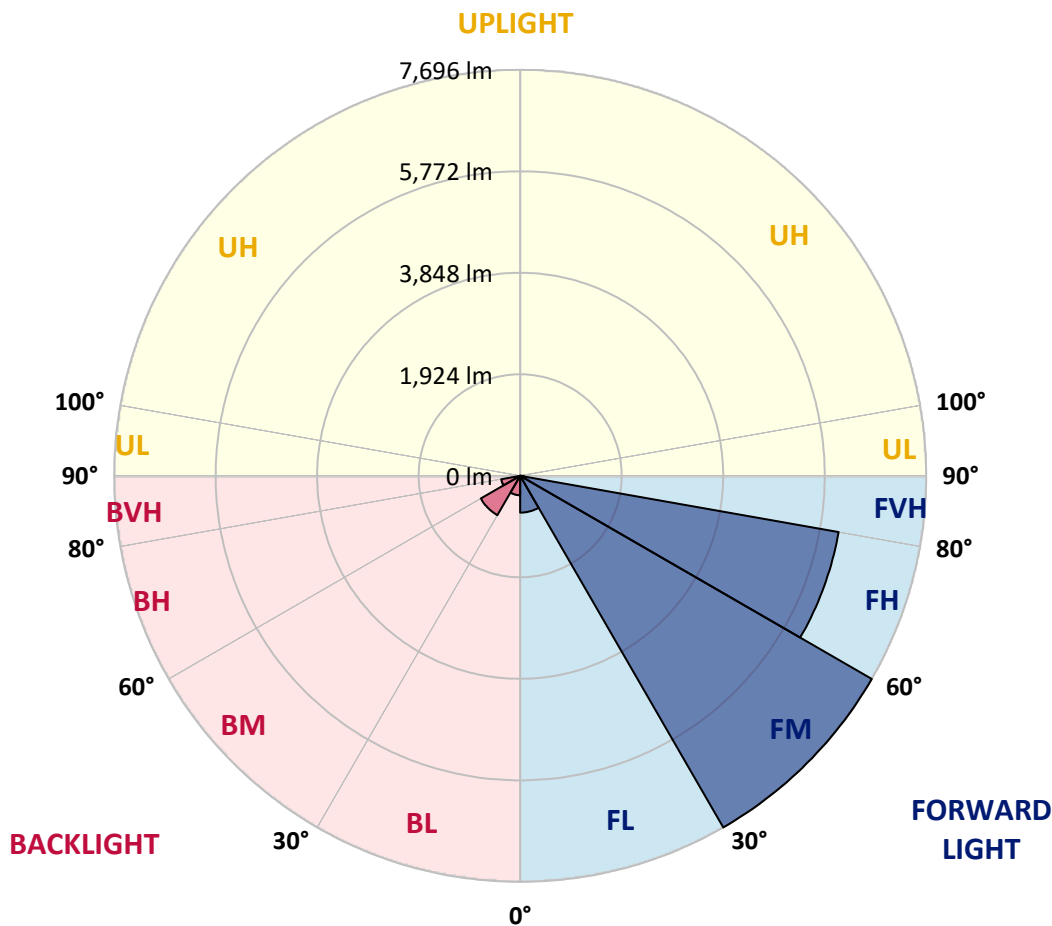
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	698.2	4.3			
FM (30°-60°)	7695.9	47.6			
FH (60°-80°)	6129.9	37.9			G3/7500
FVH (80°-90°)	62.3	0.4			G1/100
BL (0°-30°)	368.1	2.3	B1/500		
BM (30°-60°)	861.6	5.3	B1/1000		
BH (60°-80°)	364.5	2.3	B1/500		G1/500
BVH (80°-90°)	2.7	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-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8
2.5°	790.9	767.2	729.8	736.2	743.5	758.1	746.2	735.3	723.5	708.0	767.2
5°	954.9	915.7	912.1	903.9	897.5	896.6	911.2	906.6	913.0	942.1	972.2
7.5°	1015.0	998.6	967.6	980.4	960.4	944.9	1009.6	1030.5	1070.6	1084.3	1162.6
10°	1008.6	985.0	997.7	1004.1	1017.8	1074.3	1115.3	1138.0	1172.7	1247.4	1231.9
12.5°	1037.8	1058.8	1072.4	1073.3	1143.5	1247.4	1276.5	1295.7	1357.6	1386.8	1463.3
15°	1135.3	1169.9	1148.1	1157.2	1179.9	1306.6	1374.9	1416.8	1504.3	1599.1	1618.2
17.5°	1274.7	1296.6	1251.0	1218.2	1281.1	1350.3	1474.2	1518.0	1573.6	1795.0	1836.0
20°	1450.6	1487.9	1389.5	1259.2	1342.1	1424.1	1559.0	1579.9	1639.2	1928.0	1992.7
22.5°	1861.5	1805.9	1655.6	1452.4	1427.8	1464.2	1592.7	1674.7	1774.9	2002.7	2153.1
25°	2267.0	2247.8	2026.4	1799.5	1635.5	1553.5	1723.9	1769.5	1933.5	2180.4	2263.3
27.5°	2718.0	2756.2	2386.3	2248.7	1927.1	1659.2	1805.9	1919.8	2113.9	2245.1	2444.6
30°	3313.0	3251.9	2818.2	2680.6	2313.4	1949.9	2018.2	2025.5	2310.7	2458.3	2647.8
32.5°	3779.5	3818.6	3273.8	3062.4	2769.0	2397.2	2177.7	2272.4	2476.5	2805.4	2984.9
35°	4284.2	4280.6	3749.4	3465.1	3081.5	2762.6	2650.5	2719.8	2975.8	3348.5	3395.9
37.5°	5038.7	4974.0	4347.1	3930.7	3604.5	3332.1	3246.4	3154.4	3418.7	3774.0	3951.7
40°	5750.3	5527.1	4947.6	4453.7	4036.4	3925.3	3615.5	3672.0	3750.3	4219.6	4710.7
42.5°	6469.2	6330.7	5556.2	5142.6	4629.6	4365.3	4163.1	4136.6	4509.3	5065.1	5572.6
45°	7417.7	6994.0	6374.4	6010.9	5416.8	5151.7	4988.6	5086.1	5421.4	6233.2	6571.2
47.5°	8214.1	7824.1	7292.0	6739.8	6116.6	6414.5	6108.4	5954.4	6414.5	7253.7	7702.9
50°	8898.3	8463.7	7925.2	7516.1	7415.0	7701.1	7081.5	7138.0	7436.8	8422.7	8676.0
52.5°	9395.8	8938.4	8468.3	8270.5	8685.1	8829.1	8518.4	8393.6	8665.1	9419.5	9542.5
55°	9770.3	9302.0	8934.8	9207.2	10009.0	9961.6	10071.0	9644.6	9904.2	10459.1	10400.8
57.5°	9793.1	9238.2	9023.2	9461.4	10562.1	11295.6	11615.4	10890.1	11037.7	11271.9	11140.7
60°	9076.9	8524.8	8507.4	9129.8	10722.5	11640.9	12340.7	11987.1	11789.4	11963.5	11714.7
62.5°	7650.0	7263.7	7444.1	8132.1	10125.7	11450.5	12727.0	13152.5	12382.6	12421.8	12068.2
65°	5841.4	5435.9	5718.4	6584.9	8820.9	11237.3	12836.3	13608.1	12371.7	12552.1	11729.3
67.5°	3868.8	3633.7	3953.5	4908.4	7013.2	9919.7	12779.8	13129.7	11978.9	12042.7	10471.0
70°	1997.2	1939.8	2198.6	2952.1	4715.2	7620.9	12225.0	12033.6	11181.7	10374.4	8076.5
72.5°	639.6	642.4	891.1	1348.5	2542.1	4639.6	9396.7	9659.1	8947.5	7589.0	4931.2
75°	283.4	278.8	372.7	565.8	1059.7	2080.2	5837.8	6121.1	5570.8	4174.9	2072.9
77.5°	204.1	197.7	238.7	330.7	524.8	705.2	2737.1	2954.0	2525.7	1446.9	474.7
80°	144.0	143.1	173.1	232.3	328.0	313.4	864.7	969.5	776.3	350.8	139.4
82.5°	81.1	83.8	120.3	164.0	199.5	156.7	243.3	267.9	261.5	186.8	61.0
85°	39.2	43.7	78.4	118.5	104.8	61.0	86.6	93.8	109.3	108.4	31.0
87.5°	0.0	0.0	31.9	53.8	28.2	9.1	26.4	30.1	29.2	34.6	7.3
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°	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8	647.8
2.5°	779.0	773.6	704.3	709.8	725.3	718.9	724.4	711.6	697.0	756.3	755.3
5°	985.0	944.0	922.1	902.0	905.7	864.7	888.4	899.3	897.5	931.2	940.3
7.5°	1165.4	1110.7	1067.0	1025.0	961.3	903.9	939.4	962.2	977.7	1036.0	1058.8
10°	1250.1	1205.5	1188.1	1106.1	1060.6	1025.0	982.2	951.2	964.0	948.5	964.0
12.5°	1436.0	1405.9	1339.4	1256.5	1201.8	1128.9	969.5	836.4	754.4	755.3	749.9
15°	1605.5	1603.6	1504.3	1366.7	1208.2	1000.4	751.7	584.0	506.6	484.7	477.4
17.5°	1826.9	1799.5	1618.2	1415.0	1129.8	774.5	512.1	400.0	392.7	405.5	400.0
20°	1968.1	1928.0	1674.7	1344.9	931.2	523.9	386.3	354.4	376.3	394.5	390.0
22.5°	2109.3	2049.2	1717.5	1259.2	662.4	383.6	349.0	343.5	357.2	380.0	383.6
25°	2186.8	2174.9	1801.4	1098.9	453.8	336.2	336.2	334.4	338.9	355.4	352.6
27.5°	2411.8	2251.5	1738.5	857.4	350.8	308.9	313.4	311.6	295.2	311.6	312.5
30°	2552.1	2478.3	1743.0	610.5	308.9	273.3	285.2	270.6	246.0	259.7	256.9
32.5°	2834.6	2650.5	1729.4	411.8	281.5	260.6	242.4	221.4	203.2	208.7	204.1
35°	3163.5	3023.2	1544.4	330.7	262.4	230.5	201.4	180.4	161.3	165.8	164.9
37.5°	3817.7	3372.2	1391.3	297.9	249.7	211.4	177.7	148.5	138.5	141.2	144.0
40°	4423.7	3954.4	1106.1	283.4	227.8	188.6	146.7	125.7	119.4	121.2	123.9
42.5°	5329.3	4417.3	835.5	268.8	205.9	159.5	122.1	108.4	102.0	105.7	107.5
45°	6205.9	4810.9	624.1	256.0	187.7	137.6	103.0	93.8	86.6	89.3	92.9
47.5°	7081.5	5248.2	465.6	236.0	167.7	118.5	88.4	82.0	77.4	78.4	82.9
50°	7865.1	5452.3	366.3	211.4	151.3	103.0	80.2	73.8	72.0	72.9	76.5
52.5°	8440.9	5454.2	308.9	189.5	135.8	91.1	75.6	68.3	67.4	69.2	72.9
55°	8961.2	5308.4	267.9	170.4	122.1	82.9	72.0	65.6	65.6	67.4	71.1
57.5°	9306.5	5040.5	232.3	150.3	110.2	78.4	69.2	62.9	62.0	61.0	63.8
60°	9475.1	4675.1	196.8	132.1	99.3	75.6	67.4	55.6	54.7	52.8	54.7
62.5°	9368.5	4217.7	164.9	113.9	88.4	72.0	59.2	48.3	46.5	42.8	45.6
65°	8823.6	3661.9	139.4	97.5	76.5	61.0	50.1	41.0	36.4	31.9	31.0
67.5°	7709.3	2974.9	116.6	83.8	65.6	50.1	41.0	36.4	28.2	24.6	23.7
70°	5777.6	2031.0	96.6	72.0	54.7	42.8	34.6	32.8	26.4	23.7	21.9
72.5°	3389.5	1096.1	81.1	62.9	46.5	35.5	28.2	30.1	26.4	21.9	20.0
75°	1354.0	364.5	64.7	50.1	37.4	25.5	23.7	24.6	23.7	20.0	16.4
77.5°	308.9	114.8	50.1	39.2	29.2	16.4	19.1	21.0	21.0	16.4	11.8
80°	96.6	45.6	29.2	24.6	21.0	9.1	13.7	14.6	10.0	4.6	0.0
82.5°	31.0	12.8	10.0	10.0	9.1	1.8	2.7	1.8	0.0	0.0	0.0
85°	11.8	8.2	6.4	6.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.6	3.6	2.7	3.6	1.8	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)