

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: P368209

Luminaire Tested: **MSA-SA4A-730-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368209
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-730-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11572 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

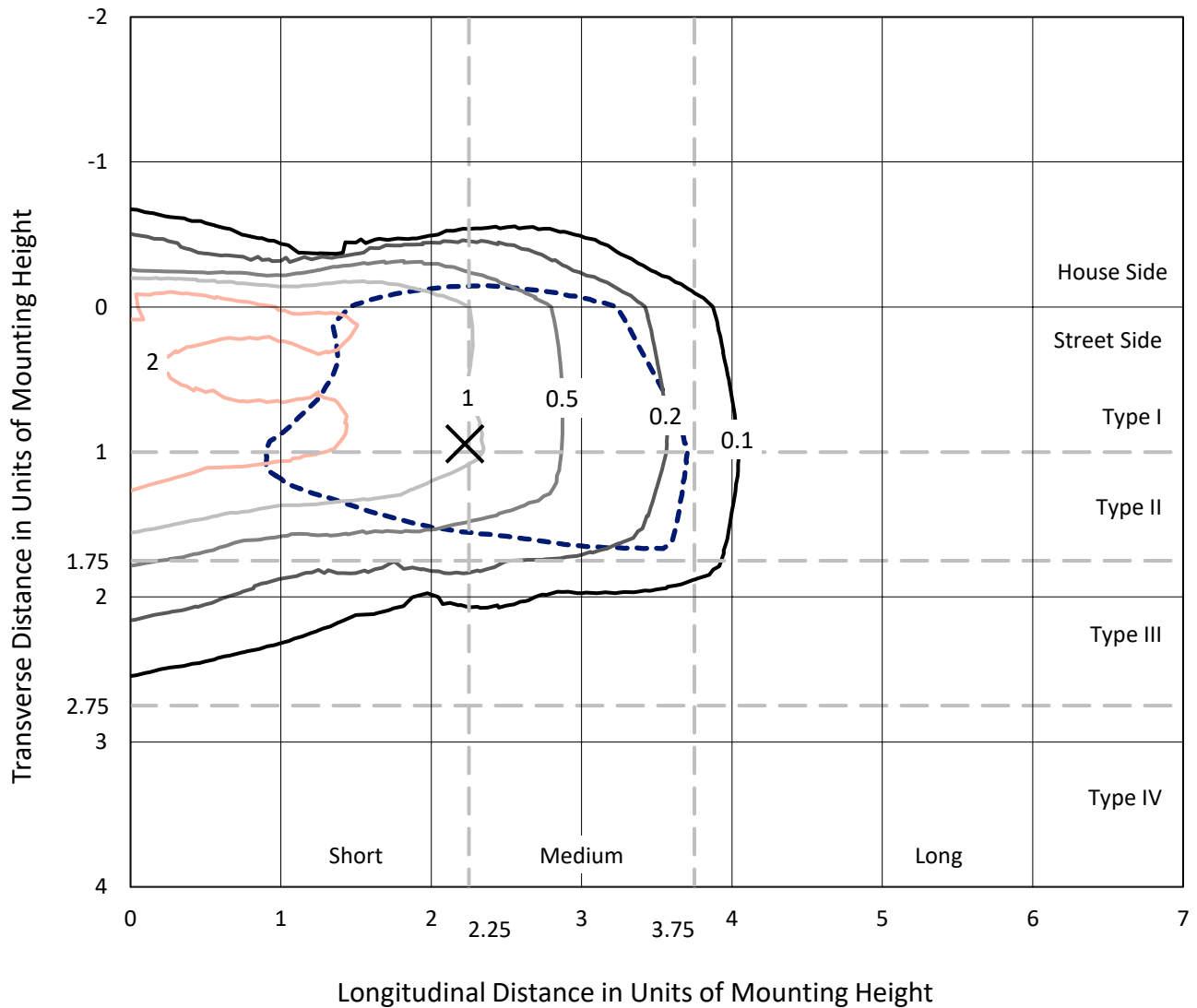
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

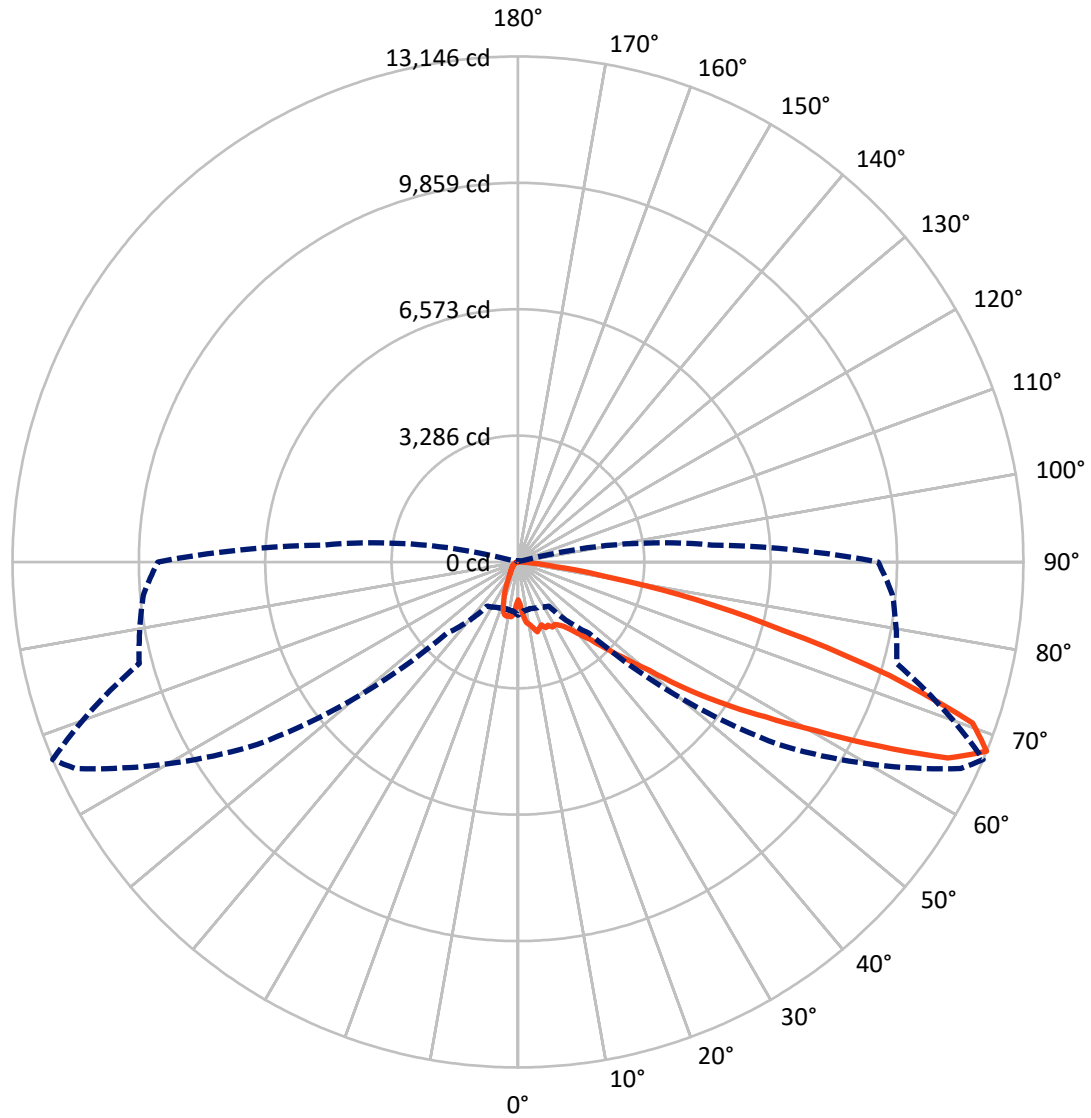
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1431.1	0.0	1431.1
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	10140.9	0.0	10140.9
	% Fixture	87.6	0.0	87.6
Total	Lumens	11572.0	0.0	11572.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	1.1
10°-20°	366.1	3.2
20°-30°	573.7	5.0
30°-40°	925.0	8.0
40°-50°	1699.8	14.7
50°-60°	2870.7	24.8
60°-70°	3173.6	27.4
70°-80°	1661.1	14.4
80°-90°	178.4	1.5
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°	11572.0	100.0
0°-180°	11572.0	100.0

Coefficient of Utilization

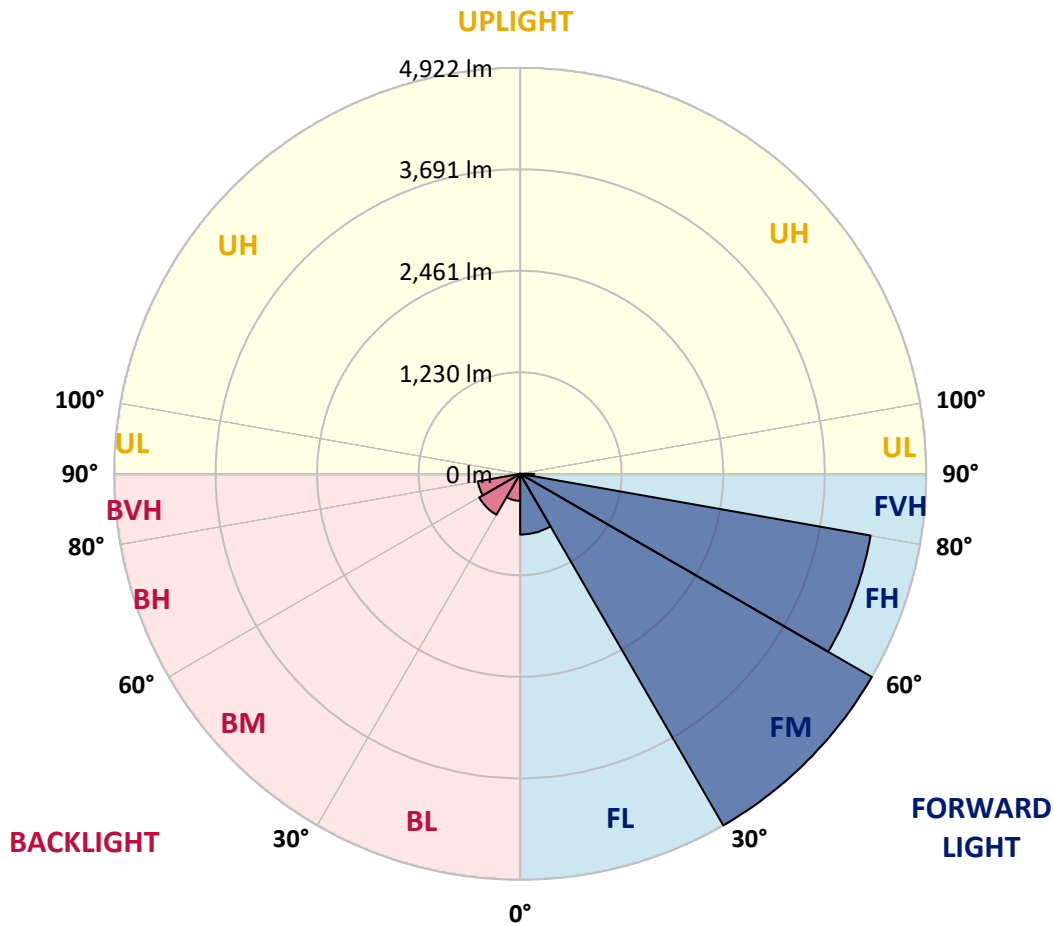


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	735.8	6.4			
FM (30°-60°)	4921.6	42.5			
FH (60°-80°)	4312.7	37.3			G2/5000
FVH (80°-90°)	170.8	1.5			G2/225
BL (0°-30°)	327.7	2.8	B1/500		
BM (30°-60°)	573.8	5.0	B1/1000		
BH (60°-80°)	522.0	4.5	B2/1000		G2/1000
BVH (80°-90°)	7.6	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6
2.5°	1163.5	1124.1	1057.2	1076.6	1115.3	1147.6	1132.4	1102.4	1103.0	1072.5	1182.3
5°	1353.7	1300.8	1262.1	1275.6	1273.8	1272.7	1344.9	1372.5	1384.2	1434.7	1509.2
7.5°	1408.3	1389.5	1349.0	1361.3	1320.8	1323.7	1450.5	1570.3	1589.1	1620.2	1752.8
10°	1387.1	1350.7	1365.4	1365.4	1366.0	1431.7	1516.9	1631.3	1654.2	1774.0	1788.1
12.5°	1364.2	1366.0	1424.1	1413.5	1493.4	1611.4	1640.1	1768.7	1757.5	1861.4	2015.8
15°	1449.4	1494.0	1456.4	1471.1	1478.7	1617.2	1663.6	1834.4	1883.8	2015.2	2115.6
17.5°	1595.5	1601.4	1523.3	1502.2	1557.4	1596.7	1690.0	1772.2	1805.1	2150.3	2292.3
20°	1621.9	1659.5	1580.3	1458.2	1575.0	1629.0	1694.1	1733.5	1747.6	2191.9	2392.1
22.5°	1781.0	1739.3	1612.5	1519.8	1553.3	1612.0	1652.5	1771.0	1855.6	2113.3	2487.8
25°	1862.6	1851.5	1730.5	1651.3	1617.2	1612.5	1705.3	1795.1	1822.1	2194.9	2511.3
27.5°	2058.1	2032.9	1798.6	1788.7	1676.5	1577.9	1707.1	1868.5	1919.0	2118.0	2599.3
30°	2324.0	2314.6	2002.9	1996.5	1818.0	1640.7	1802.2	1913.7	1883.2	2157.3	2658.0
32.5°	2591.7	2668.0	2349.3	2167.3	2033.4	1871.4	1775.2	1899.6	1954.2	2253.0	2766.0
35°	2915.2	2970.3	2645.7	2513.6	2216.0	1979.4	1954.2	2034.0	2057.5	2366.9	2888.7
37.5°	3481.0	3397.7	3121.2	2896.4	2740.2	2365.1	2240.7	2177.3	2231.9	2521.3	3139.4
40°	3899.0	3846.2	3505.7	3371.3	3012.0	2792.5	2467.3	2408.0	2469.0	2679.8	3313.7
42.5°	4403.3	4293.5	3973.0	3882.0	3512.2	3088.9	2759.0	2779.5	2741.4	2992.6	3619.6
45°	4859.4	4611.6	4433.2	4453.7	4256.5	3684.7	3245.6	3235.7	3204.0	3445.8	3941.3
47.5°	5166.4	4949.8	4776.0	4719.1	4695.6	4732.6	3948.9	3771.6	3748.1	3921.9	4447.9
50°	5331.3	5094.2	4879.3	4891.1	5367.7	5726.4	4674.5	4422.6	4431.4	4612.8	5140.6
52.5°	5220.4	4952.1	4725.5	4945.7	5889.0	6389.1	5875.5	5273.2	5477.5	5431.1	6069.8
55°	4707.9	4474.9	4314.0	4707.9	5945.9	7102.4	7354.2	6553.5	6507.7	6402.1	7017.3
57.5°	3845.6	3644.8	3545.6	3961.2	5323.1	7677.1	8839.4	8000.5	7610.2	7167.5	7803.9
60°	2865.3	2717.3	2614.0	2833.6	4194.3	7118.8	9812.1	9364.2	8912.2	7905.4	8510.6
62.5°	2122.1	2001.7	1892.0	1911.9	2888.1	6122.6	10185.4	10808.8	10549.4	8684.4	9177.5
65°	1693.6	1583.8	1506.9	1462.9	1788.7	4606.4	9665.9	11992.9	12292.2	9418.2	9658.9
67.5°	1383.0	1290.3	1252.1	1302.6	1403.0	2625.7	8278.2	12711.4	13145.8	10196.6	9777.4
70°	1125.3	1049.0	1044.9	1181.1	1292.0	1600.8	6089.2	12215.3	12542.3	10329.2	9066.6
72.5°	784.3	750.8	804.2	997.4	1280.3	1333.1	3496.9	10108.5	10120.3	9122.9	7457.5
75°	443.8	438.5	523.0	795.4	1246.8	1319.6	1949.5	7143.5	7148.8	6899.9	5166.4
77.5°	244.2	228.4	304.7	537.7	1070.7	1289.1	1257.4	4877.6	4752.5	3839.7	2359.8
80°	112.7	106.3	165.0	344.6	783.1	1219.2	1007.9	2680.9	2417.4	1250.9	575.9
82.5°	46.4	44.0	75.7	221.3	494.9	982.1	849.4	1189.3	954.5	237.7	177.9
85°	8.2	8.8	31.1	133.8	277.1	452.6	688.6	564.7	415.0	65.7	97.4
87.5°	0.0	0.0	6.5	32.3	66.9	123.9	279.4	157.9	108.6	19.4	28.8
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°	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6	985.6
2.5°	1204.0	1194.0	1093.0	1097.7	1104.8	1098.3	1097.1	1069.0	1043.1	1128.3	1127.1
5°	1522.7	1451.7	1381.8	1354.8	1296.7	1220.4	1221.0	1196.9	1172.3	1206.9	1206.9
7.5°	1749.9	1651.9	1563.2	1405.3	1251.5	1112.4	1100.1	1067.2	1029.6	1074.8	1083.6
10°	1802.7	1717.6	1603.2	1371.3	1225.7	1090.1	941.0	818.3	761.4	735.0	730.3
12.5°	1965.3	1902.0	1646.0	1389.5	1179.9	950.4	706.2	560.6	461.4	453.8	443.2
15°	2073.9	2029.3	1688.3	1344.3	986.2	683.3	443.8	340.5	300.6	297.0	291.7
17.5°	2242.4	2164.9	1647.8	1200.5	771.3	450.8	298.2	268.9	273.6	284.1	275.9
20°	2311.1	2159.7	1559.7	992.1	541.8	302.3	258.9	243.0	255.4	265.3	260.6
22.5°	2381.5	2174.9	1481.6	817.7	354.0	250.1	230.7	222.5	223.7	233.6	234.2
25°	2381.0	2217.2	1391.2	636.9	263.6	222.5	208.4	197.8	193.7	200.8	199.0
27.5°	2496.6	2168.5	1226.3	472.6	231.9	199.0	185.5	172.6	157.9	165.0	165.0
30°	2497.2	2247.7	1111.2	339.3	212.5	177.3	165.5	145.6	128.6	134.4	135.0
32.5°	2563.5	2179.0	1005.0	259.5	197.2	164.4	138.5	120.3	110.4	113.9	113.9
35°	2639.3	2237.7	841.8	228.9	182.0	146.2	118.6	103.9	96.3	99.2	99.2
37.5°	2889.3	2225.4	728.5	213.1	172.0	132.1	108.0	91.6	88.1	89.8	92.2
40°	2979.7	2312.9	574.7	203.7	155.6	119.2	95.1	82.8	78.1	79.2	79.8
42.5°	3209.8	2332.2	459.1	196.1	140.9	103.3	84.5	75.7	69.9	69.9	71.6
45°	3464.0	2381.0	365.1	189.6	128.6	92.7	76.3	69.3	60.5	59.3	61.6
47.5°	3832.1	2567.6	297.6	176.7	113.9	86.3	70.4	59.9	52.8	50.5	52.8
50°	4447.9	2884.6	263.0	160.8	103.3	81.0	62.2	51.1	45.8	42.9	44.6
52.5°	5316.7	3432.3	244.8	146.2	93.9	72.8	55.8	44.6	39.3	37.0	38.2
55°	6281.7	4060.4	236.0	131.5	85.7	64.0	48.7	39.3	34.6	31.7	32.3
57.5°	7174.0	4651.0	227.2	117.4	77.5	56.9	42.9	34.6	29.9	27.0	27.6
60°	8053.4	5122.4	206.0	101.0	69.9	51.1	37.6	29.9	27.0	23.5	23.5
62.5°	8831.2	5404.1	175.5	87.5	62.8	45.2	33.5	27.0	24.7	21.1	21.1
65°	9360.7	5417.0	141.5	75.1	55.2	38.7	29.4	25.2	22.9	18.8	18.2
67.5°	9368.3	5064.8	113.3	66.9	48.7	34.0	26.4	24.1	21.1	17.6	16.4
70°	8385.0	4184.3	94.5	58.7	42.3	29.9	22.9	22.9	20.5	17.0	15.3
72.5°	6707.3	3197.5	79.2	51.1	37.6	25.8	21.1	21.7	20.0	17.0	15.3
75°	4508.3	1833.9	65.7	43.4	32.9	21.7	20.5	21.1	20.5	17.0	14.7
77.5°	2076.3	584.1	51.1	35.8	28.2	18.2	20.0	20.0	18.8	15.3	12.9
80°	467.9	143.8	37.0	26.4	22.9	13.5	18.2	16.4	14.7	10.6	7.6
82.5°	170.2	44.0	22.3	16.4	14.1	5.3	11.7	11.7	10.6	7.6	4.7
85°	97.4	22.9	12.3	10.6	7.6	2.3	6.5	7.0	5.9	5.3	2.3
87.5°	31.7	5.3	5.9	6.5	5.9	1.2	2.3	2.3	1.8	1.2	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)