

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: P367508

Luminaire Tested: **MSA-SA2C-830-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367508
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9619 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

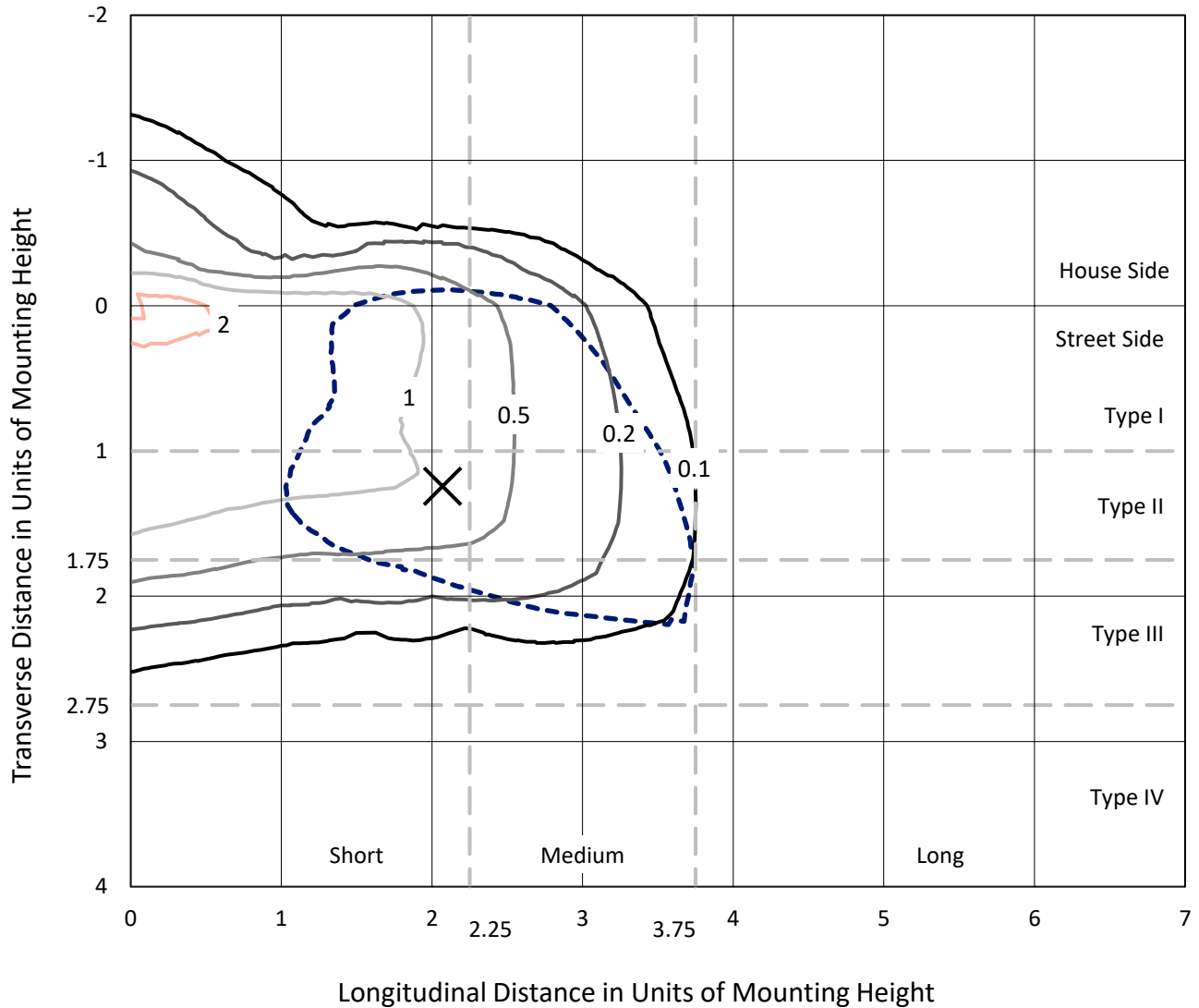
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

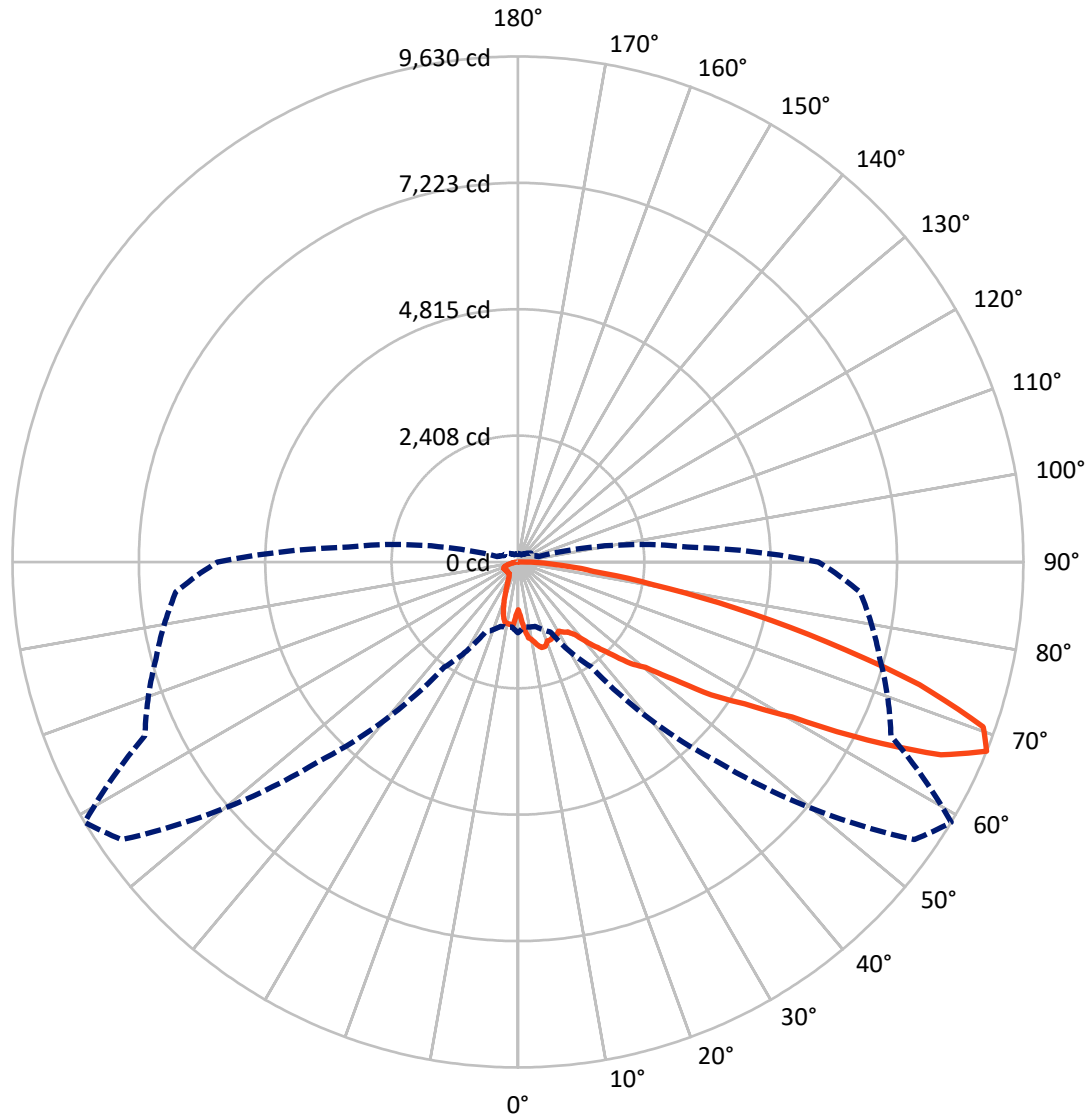
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type III - Short - N/A

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CATALOG NUMBER: MSA-SA2C-830-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1447.9	0.0	1447.9
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	8171.1	0.0	8171.1
	% Fixture	84.9	0.0	84.9
Total	Lumens	9619.0	0.0	9619.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	1.2
10°-20°	351.8	3.7
20°-30°	502.4	5.2
30°-40°	740.3	7.7
40°-50°	1250.7	13.0
50°-60°	2176.5	22.6
60°-70°	2773.5	28.8
70°-80°	1468.6	15.3
80°-90°	236.2	2.5
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°	9619.0	100.0
0°-180°	9619.0	100.0

Coefficient of Utilization

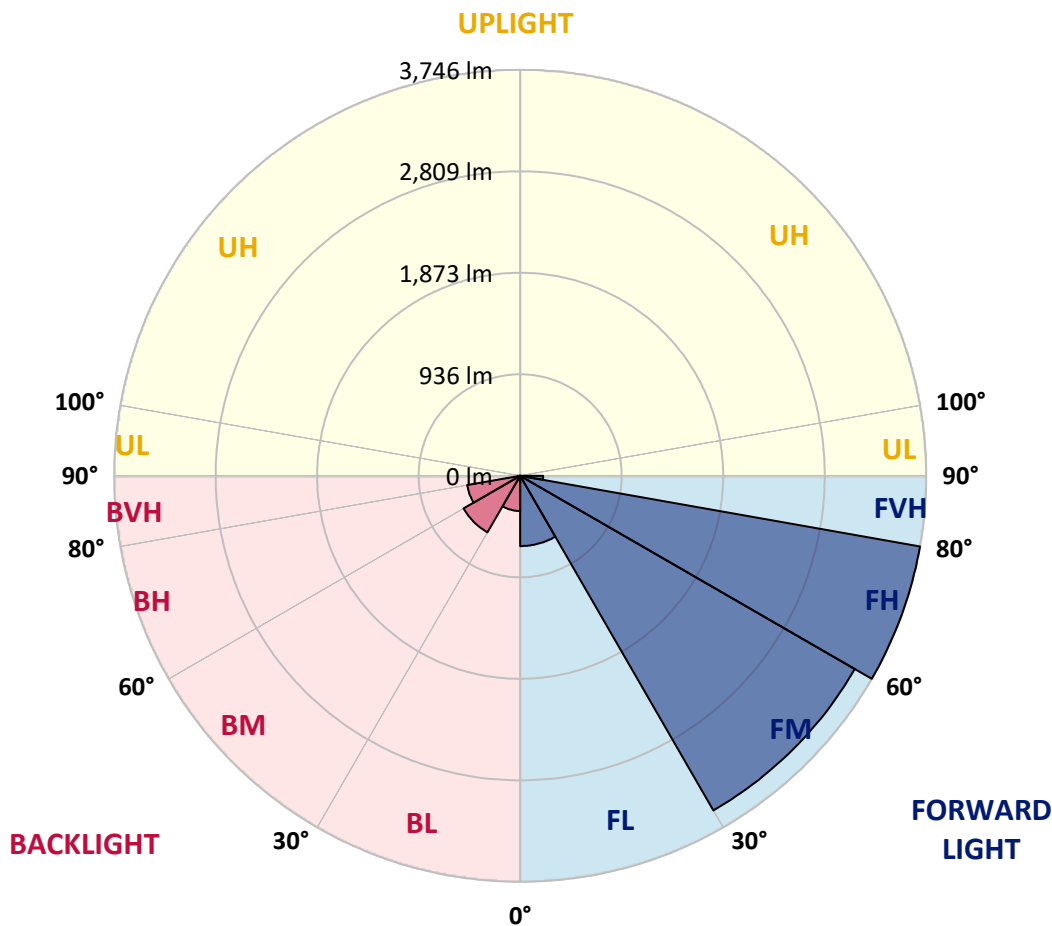


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	648.3	6.7			
FM (30°-60°)	3564.7	37.1			
FH (60°-80°)	3745.9	38.9			G2/5000
FVH (80°-90°)	212.2	2.2			G2/225
BL (0°-30°)	324.7	3.4	B1/500		
BM (30°-60°)	602.9	6.3	B1/1000		
BH (60°-80°)	496.2	5.2	B1/500		G1/500
BVH (80°-90°)	24.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2
2.5°	1136.4	1083.4	1027.2	1043.1	1075.3	1090.0	1074.1	1058.6	1038.6	1015.0	1095.7
5°	1378.2	1299.5	1288.1	1287.7	1276.3	1230.6	1289.3	1285.2	1308.9	1333.3	1396.1
7.5°	1447.0	1417.7	1385.9	1401.0	1343.5	1341.1	1432.4	1458.5	1504.1	1489.0	1573.4
10°	1411.6	1378.6	1395.3	1389.2	1394.5	1454.8	1510.6	1512.3	1561.2	1609.3	1555.1
12.5°	1349.2	1351.7	1418.1	1415.7	1501.3	1613.4	1630.1	1617.0	1696.9	1664.3	1710.8
15°	1393.6	1423.4	1406.7	1421.0	1454.8	1597.5	1643.9	1691.2	1767.0	1796.4	1749.9
17.5°	1464.6	1480.5	1405.5	1397.7	1467.4	1535.1	1650.4	1690.8	1702.6	1911.7	1846.1
20°	1434.4	1466.6	1393.2	1299.1	1414.8	1504.5	1618.2	1606.0	1663.5	1920.7	1866.1
22.5°	1520.0	1466.6	1373.3	1306.4	1347.2	1429.5	1526.1	1606.4	1674.5	1868.1	1895.0
25°	1536.3	1511.0	1423.8	1357.4	1343.5	1372.9	1510.6	1563.2	1678.2	1939.9	1879.5
27.5°	1635.8	1597.9	1420.1	1422.2	1353.3	1301.5	1461.7	1572.2	1719.7	1895.4	1917.4
30°	1759.3	1730.3	1507.4	1515.5	1420.1	1324.8	1495.1	1528.6	1743.8	1964.7	1965.1
32.5°	1851.8	1902.8	1679.0	1568.1	1534.3	1462.9	1443.8	1594.2	1715.7	2090.3	2046.6
35°	2018.5	2058.1	1811.0	1722.2	1607.6	1527.3	1583.2	1637.4	1832.7	2255.4	2167.7
37.5°	2327.1	2281.4	2056.4	1916.6	1873.8	1758.1	1789.0	1751.1	1959.8	2440.8	2404.9
40°	2505.6	2466.1	2229.3	2151.8	1982.2	1996.9	1958.2	1985.9	2129.8	2638.1	2626.7
42.5°	2681.7	2628.7	2428.6	2374.8	2205.6	2133.9	2140.8	2230.5	2391.9	2956.9	2919.0
45°	2855.8	2720.0	2632.4	2646.7	2565.1	2418.0	2428.2	2512.6	2678.1	3321.3	3234.0
47.5°	2989.1	2877.0	2808.5	2791.0	2750.6	2947.5	2859.4	2893.7	2966.6	3645.7	3612.7
50°	3241.4	3110.5	3021.3	2996.0	3133.0	3406.9	3227.5	3153.7	3309.0	4065.2	4048.1
52.5°	3645.3	3482.3	3333.5	3331.9	3530.0	3707.7	3834.1	3706.9	3763.9	4494.8	4543.7
55°	3997.9	3809.2	3675.5	3749.3	4031.3	4140.2	4569.4	4469.9	4421.8	4928.5	5068.3
57.5°	4129.6	3909.1	3821.8	3930.7	4346.4	4905.7	5359.4	5097.7	5050.8	5419.3	5712.4
60°	3840.6	3607.4	3612.7	3817.8	4538.0	5467.8	6223.1	6001.0	5726.2	6030.3	6316.4
62.5°	3017.2	2806.4	2943.8	3255.6	4377.4	6014.0	7380.7	7474.5	6497.8	6537.0	6651.5
65°	2050.7	1904.8	2028.7	2334.0	3550.4	6312.0	8483.3	8859.2	7200.6	6868.8	6796.2
67.5°	1349.6	1246.5	1270.5	1473.5	2444.1	5381.0	9220.7	9630.4	7843.0	7141.1	6541.0
70°	1045.1	962.0	951.4	1057.8	1449.5	3738.3	8783.8	9406.6	8234.3	6885.9	5701.4
72.5°	820.1	756.9	762.7	865.0	1122.6	2074.0	6797.0	7999.1	7644.9	5938.6	4380.3
75°	639.6	587.8	616.7	733.7	1038.2	1288.9	4689.6	6071.1	5910.5	4397.4	2498.3
77.5°	464.3	430.9	472.0	624.9	975.8	1105.9	2919.4	4235.6	3786.4	2257.8	857.2
80°	304.5	285.7	319.6	509.5	884.9	1064.3	1804.1	2595.3	1871.0	634.3	324.5
82.5°	179.4	171.2	199.3	344.8	711.3	997.4	1203.3	1442.2	765.5	268.2	172.4
85°	94.2	88.0	118.2	198.1	490.4	910.6	947.3	863.3	369.7	116.6	82.3
87.5°	31.4	30.6	50.1	76.6	185.5	483.4	505.4	410.1	152.4	33.8	17.9
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°	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2	910.2
2.5°	1106.7	1090.4	996.6	1009.7	1021.9	1015.8	1012.1	969.7	965.6	1026.0	1021.1
5°	1394.5	1326.8	1246.9	1243.2	1190.7	1136.8	1147.4	1130.3	1135.2	1160.1	1162.5
7.5°	1546.5	1462.1	1385.9	1262.0	1156.8	1071.6	1085.1	1081.0	1070.0	1126.2	1141.3
10°	1543.6	1468.6	1382.6	1232.6	1161.7	1092.4	1009.3	930.6	907.4	879.6	882.1
12.5°	1645.6	1579.1	1391.6	1238.8	1142.6	1023.1	867.4	781.4	699.1	697.4	676.6
15°	1677.3	1628.4	1410.8	1203.7	1008.4	837.2	676.2	582.9	523.4	511.6	494.0
17.5°	1757.6	1681.0	1352.5	1090.4	852.7	654.6	508.3	443.1	438.2	446.3	437.4
20°	1762.9	1638.6	1247.3	922.8	685.2	496.1	414.5	381.9	399.5	419.4	418.6
22.5°	1758.5	1585.2	1156.4	780.2	514.8	398.7	363.2	355.9	372.2	401.9	405.6
25°	1712.8	1567.7	1042.7	640.8	417.8	341.6	331.8	336.3	356.7	391.7	391.7
27.5°	1760.5	1496.4	900.0	521.3	351.4	304.1	311.0	322.4	337.5	377.5	384.8
30°	1745.0	1520.0	785.1	419.8	309.8	278.0	293.5	304.9	322.0	363.6	367.3
32.5°	1786.6	1456.8	688.5	353.0	282.5	267.8	271.5	287.0	309.4	342.0	348.5
35°	1850.2	1480.1	577.6	317.5	269.0	256.0	262.9	275.1	297.6	329.4	334.7
37.5°	2053.2	1478.8	501.0	298.0	266.6	253.5	256.8	265.4	291.4	320.4	332.6
40°	2183.6	1563.6	431.3	293.5	263.7	252.3	249.5	258.8	279.6	313.9	322.4
42.5°	2428.6	1615.4	401.1	291.9	263.3	245.4	242.5	253.5	273.9	305.7	318.8
45°	2687.4	1689.2	377.0	291.0	262.1	244.2	235.6	249.5	266.6	297.2	312.2
47.5°	2991.9	1845.3	363.6	288.2	259.7	245.8	233.2	240.1	259.2	289.8	304.9
50°	3390.6	2051.9	366.4	284.1	263.3	246.2	229.5	232.7	250.3	280.0	295.5
52.5°	3875.2	2371.9	384.8	285.7	265.8	244.2	227.9	226.2	241.3	267.4	282.9
55°	4459.3	2826.0	439.8	293.5	265.8	243.8	225.4	218.1	229.5	250.7	265.8
57.5°	5164.1	3351.8	547.4	297.2	263.7	241.3	220.1	207.1	214.0	231.5	245.8
60°	5769.4	3776.2	658.3	299.6	267.8	235.6	209.5	193.2	197.7	211.1	223.8
62.5°	6078.0	3895.2	691.7	297.6	278.8	231.9	196.9	178.5	178.9	190.4	201.8
65°	6135.9	3736.6	557.6	295.5	293.1	231.5	187.9	165.9	163.0	171.2	181.0
67.5°	5723.4	3243.4	402.3	291.0	294.7	229.1	181.8	155.7	148.4	154.1	162.2
70°	4859.6	2612.0	337.9	282.1	275.1	216.9	171.2	145.1	135.3	139.4	145.5
72.5°	3622.9	1932.5	294.7	262.9	239.7	185.5	154.9	133.3	123.1	126.0	130.4
75°	2012.8	1030.9	246.6	228.7	195.7	150.0	132.1	118.2	109.2	110.5	115.4
77.5°	668.5	380.3	181.0	181.4	148.0	115.8	108.8	101.1	94.2	94.6	98.6
80°	302.9	210.3	129.6	130.4	103.1	84.0	83.6	81.1	76.6	75.4	78.3
82.5°	175.7	127.6	88.9	84.8	66.4	54.6	60.7	59.5	58.3	53.8	54.6
85°	86.4	68.5	46.5	44.0	36.7	27.3	32.6	33.8	32.6	27.7	27.3
87.5°	21.2	22.4	11.4	10.6	6.1	2.9	4.9	4.9	6.1	4.1	2.0
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)