

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: P596614

Luminaire Tested: **MSA-SA2C-827-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596614
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-827-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: 8898 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

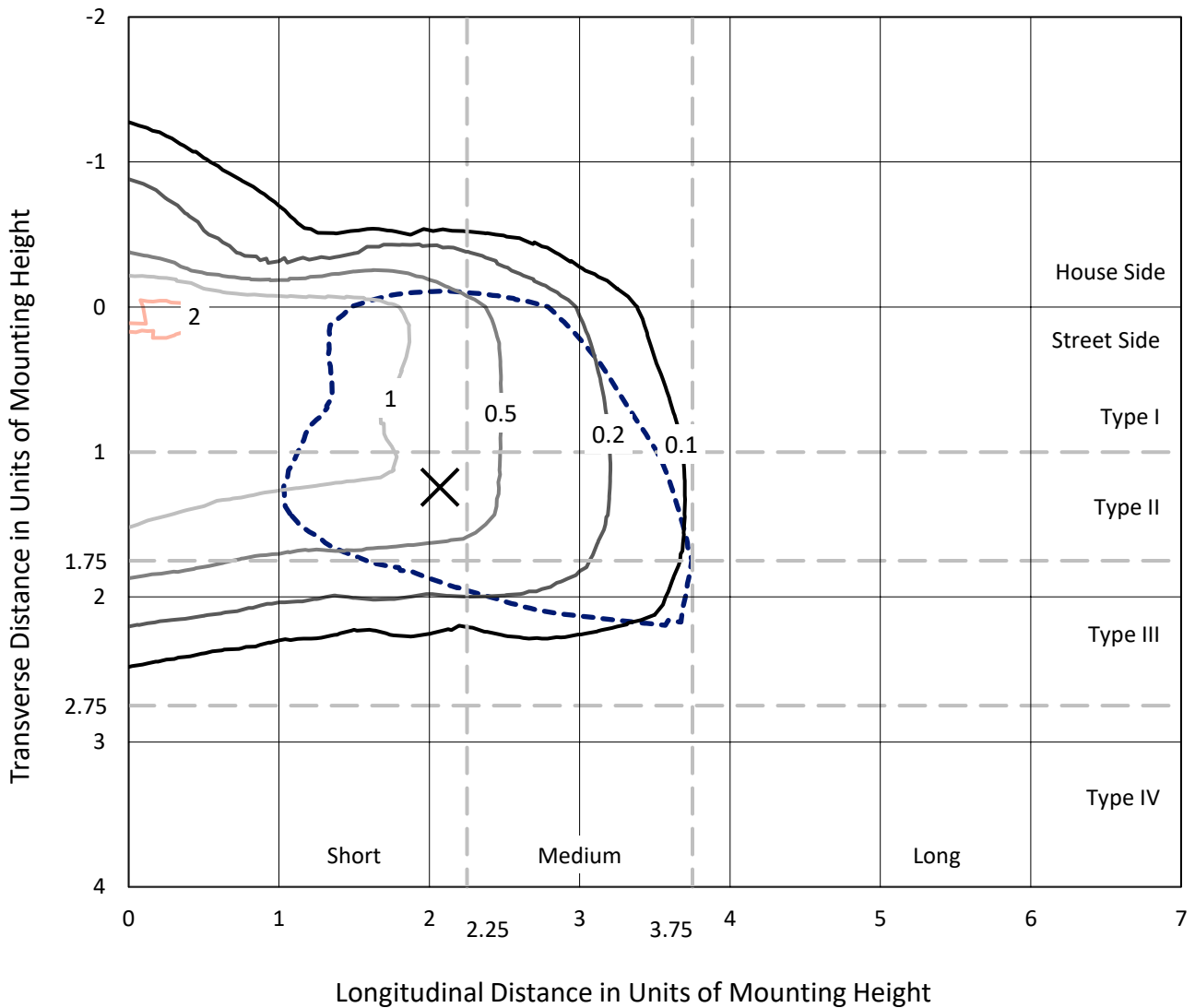
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596614
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Iso-Footcandle Lines of Horizontal Illumination

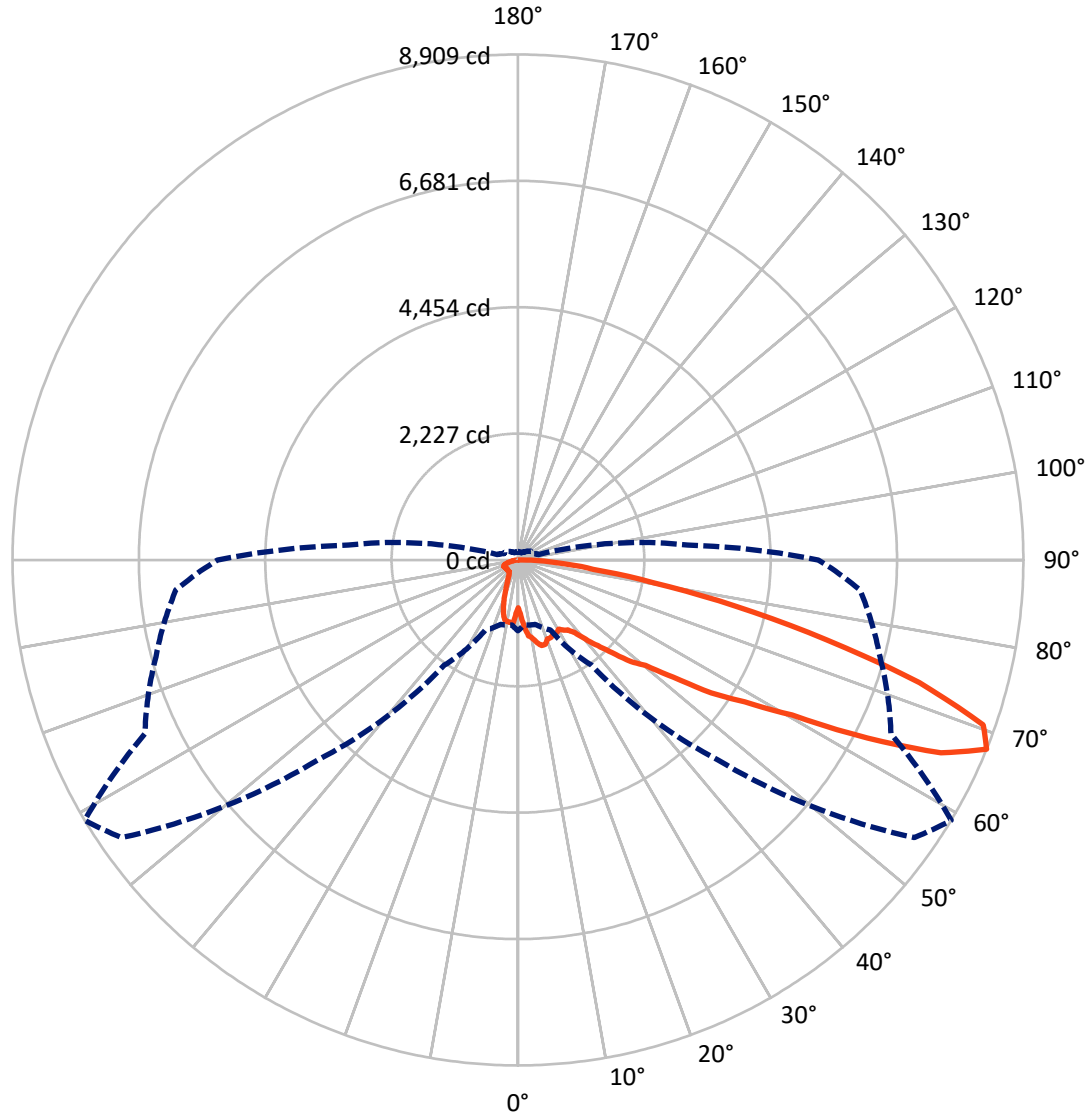
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type III - Short - N/A

REPORT NUMBER: P596614
CATALOG NUMBER: MSA-SA2C-827-U-SL3

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596614

CATALOG NUMBER: MSA-SA2C-827-U-SL3

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1339.3	0.0	1339.3
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	7558.7	0.0	7558.7
	% Fixture	84.9	0.0	84.9
Total	Lumens	8898.0	0.0	8898.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	1.2
10°-20°	325.4	3.7
20°-30°	464.7	5.2
30°-40°	684.8	7.7
40°-50°	1157.0	13.0
50°-60°	2013.4	22.6
60°-70°	2565.7	28.8
70°-80°	1358.5	15.3
80°-90°	218.5	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°	8898.0	100.0
0°-180°	8898.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596614

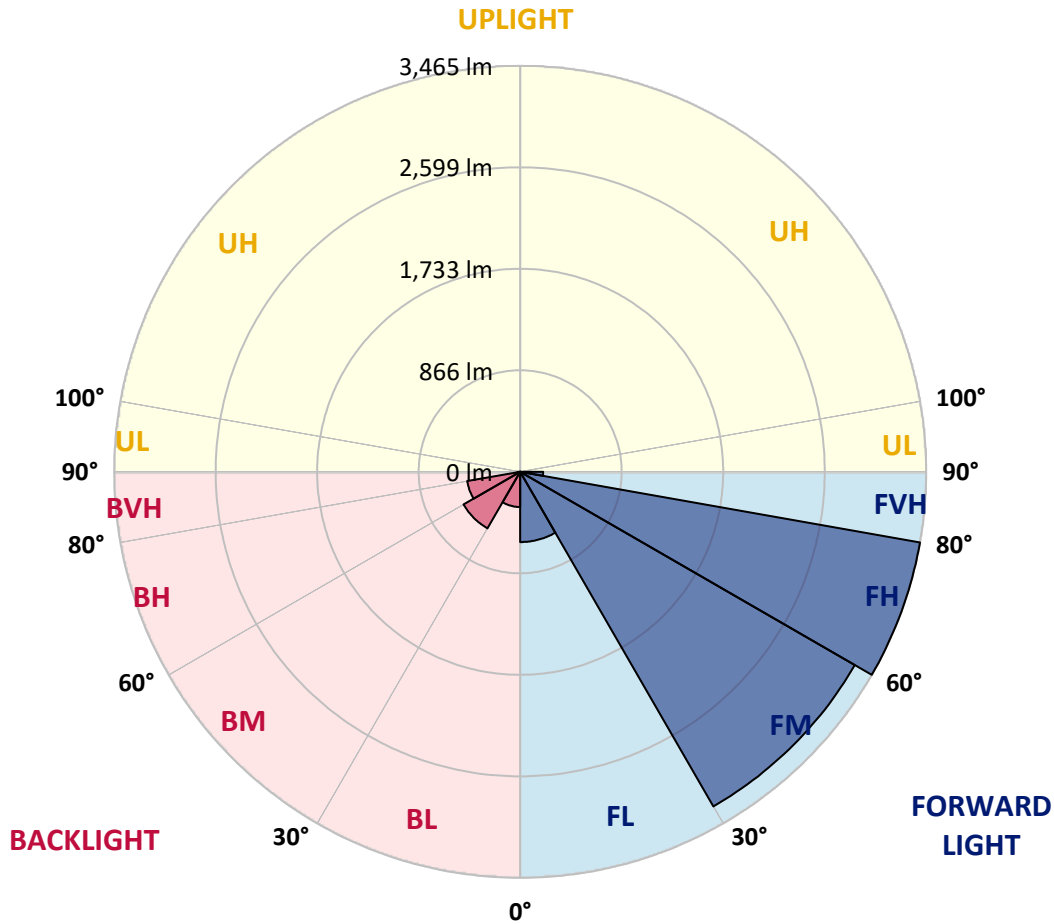
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	599.7	6.7			
FM (30°-60°)	3297.5	37.1			
FH (60°-80°)	3465.2	38.9			G2/5000
FVH (80°-90°)	196.3	2.2			G2/225
BL (0°-30°)	300.4	3.4	B1/500		
BM (30°-60°)	557.7	6.3	B1/1000		
BH (60°-80°)	459.0	5.2	B1/500		G1/500
BVH (80°-90°)	22.3	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





REPORT NUMBER: P596614
 CATALOG NUMBER: MSA-SA2C-827-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0
2.5°	1051.3	1002.2	950.2	964.9	994.7	1008.3	993.6	979.2	960.8	938.9	1013.5
5°	1274.9	1202.1	1191.5	1191.1	1180.6	1138.4	1192.7	1188.9	1210.8	1233.4	1291.4
7.5°	1338.6	1311.4	1282.0	1296.0	1242.8	1240.5	1325.0	1349.1	1391.4	1377.4	1455.5
10°	1305.8	1275.2	1290.7	1285.0	1289.9	1345.7	1397.4	1398.9	1444.2	1488.7	1438.5
12.5°	1248.1	1250.3	1311.8	1309.5	1388.7	1492.4	1507.9	1495.8	1569.7	1539.6	1582.5
15°	1289.2	1316.7	1301.3	1314.4	1345.7	1477.7	1520.7	1564.4	1634.6	1661.7	1618.7
17.5°	1354.8	1369.5	1300.1	1293.0	1357.4	1420.0	1526.7	1564.1	1575.0	1768.4	1707.7
20°	1326.9	1356.7	1288.8	1201.7	1308.8	1391.7	1496.9	1485.6	1538.8	1776.7	1726.2
22.5°	1406.1	1356.7	1270.3	1208.5	1246.2	1322.4	1411.7	1486.0	1549.0	1728.1	1753.0
25°	1421.2	1397.8	1317.1	1255.6	1242.8	1270.0	1397.4	1446.0	1552.4	1794.5	1738.6
27.5°	1513.2	1478.1	1313.7	1315.6	1251.9	1204.0	1352.2	1454.3	1590.8	1753.4	1773.7
30°	1627.4	1600.6	1394.4	1401.9	1313.7	1225.5	1383.1	1414.0	1613.1	1817.5	1817.8
32.5°	1713.0	1760.1	1553.1	1450.6	1419.3	1353.3	1335.6	1474.7	1587.1	1933.6	1893.2
35°	1867.2	1903.8	1675.3	1593.1	1487.1	1412.9	1464.5	1514.7	1695.3	2086.3	2005.2
37.5°	2152.7	2110.4	1902.3	1773.0	1733.4	1626.3	1654.9	1619.9	1812.9	2257.9	2224.7
40°	2317.8	2281.2	2062.2	1990.5	1833.7	1847.2	1811.4	1837.1	1970.2	2440.4	2429.8
42.5°	2480.7	2431.7	2246.6	2196.8	2040.3	1973.9	1980.3	2063.3	2212.6	2735.2	2700.2
45°	2641.7	2516.2	2435.1	2448.3	2372.9	2236.7	2246.2	2324.2	2477.3	3072.3	2991.6
47.5°	2765.0	2661.3	2598.0	2581.8	2544.4	2726.6	2645.1	2676.8	2744.3	3372.5	3341.9
50°	2998.4	2877.4	2794.8	2771.4	2898.1	3151.5	2985.6	2917.3	3061.0	3760.5	3744.6
52.5°	3372.1	3221.3	3083.6	3082.1	3265.4	3429.8	3546.7	3429.0	3481.8	4157.9	4203.1
55°	3698.3	3523.7	3400.0	3468.2	3729.2	3829.8	4226.9	4134.9	4090.4	4559.1	4688.4
57.5°	3820.0	3616.1	3535.4	3636.0	4020.6	4538.0	4957.6	4715.6	4672.2	5013.1	5284.2
60°	3552.7	3337.0	3341.9	3531.6	4197.9	5057.9	5756.6	5551.1	5297.0	5578.3	5843.0
62.5°	2791.0	2596.1	2723.2	3011.6	4049.3	5563.2	6827.5	6914.2	6010.8	6047.0	6152.9
65°	1897.0	1762.0	1876.7	2159.1	3284.2	5838.8	7847.5	8195.1	6660.8	6353.9	6286.8
67.5°	1248.5	1153.1	1175.3	1363.1	2260.9	4977.6	8529.6	8908.5	7255.1	6605.8	6050.8
70°	966.8	889.9	880.1	978.5	1340.8	3458.1	8125.4	8701.5	7617.1	6369.8	5274.0
72.5°	758.7	700.2	705.5	800.1	1038.4	1918.5	6287.6	7399.5	7071.8	5493.5	4051.9
75°	591.6	543.7	570.5	678.7	960.4	1192.3	4338.1	5616.0	5467.4	4067.8	2311.0
77.5°	429.5	398.6	436.6	578.0	902.7	1023.0	2700.5	3918.1	3502.6	2088.6	793.0
80°	281.7	264.3	295.6	471.3	818.6	984.5	1668.9	2400.8	1730.7	586.7	300.1
82.5°	165.9	158.4	184.4	319.0	658.0	922.7	1113.1	1334.1	708.1	248.1	159.5
85°	87.1	81.4	109.3	183.3	453.6	842.4	876.3	798.6	342.0	107.8	76.2
87.5°	29.0	28.3	46.4	70.9	171.6	447.2	467.6	379.3	141.0	31.3	16.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596614
 CATALOG NUMBER: MSA-SA2C-827-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0	842.0
2.5°	1023.7	1008.6	921.9	934.0	945.3	939.6	936.3	897.0	893.3	949.1	944.5
5°	1289.9	1227.3	1153.4	1150.0	1101.4	1051.6	1061.4	1045.6	1050.1	1073.1	1075.4
7.5°	1430.6	1352.5	1282.0	1167.4	1070.1	991.3	1003.7	1000.0	989.8	1041.8	1055.8
10°	1427.9	1358.6	1279.0	1140.2	1074.6	1010.5	933.6	860.8	839.3	813.7	816.0
12.5°	1522.2	1460.7	1287.3	1145.9	1056.9	946.4	802.4	722.8	646.7	645.2	625.9
15°	1551.6	1506.4	1305.0	1113.5	932.9	774.5	625.6	539.2	484.2	473.2	457.0
17.5°	1625.9	1555.0	1251.1	1008.6	788.8	605.6	470.2	409.9	405.3	412.9	404.6
20°	1630.8	1515.8	1153.8	853.7	633.8	458.9	383.5	353.3	369.5	388.0	387.2
22.5°	1626.7	1466.4	1069.7	721.7	476.2	368.8	336.0	329.2	344.3	371.8	375.2
25°	1584.4	1450.2	964.5	592.7	386.5	316.0	306.9	311.1	329.9	362.4	362.4
27.5°	1628.5	1384.2	832.6	482.3	325.0	281.3	287.7	298.3	312.2	349.2	355.9
30°	1614.2	1406.1	726.2	388.4	286.6	257.2	271.5	282.0	297.9	336.3	339.7
32.5°	1652.7	1347.6	636.9	326.5	261.3	247.7	251.1	265.5	286.2	316.4	322.4
35°	1711.5	1369.1	534.3	293.7	248.9	236.8	243.2	254.5	275.3	304.7	309.6
37.5°	1899.3	1368.0	463.4	275.6	246.6	234.5	237.6	245.5	269.6	296.4	307.7
40°	2019.9	1446.4	398.9	271.5	244.0	233.4	230.8	239.4	258.7	290.3	298.3
42.5°	2246.6	1494.3	371.0	270.0	243.6	227.0	224.4	234.5	253.4	282.8	294.9
45°	2486.0	1562.6	348.8	269.2	242.5	225.9	217.9	230.8	246.6	274.9	288.8
47.5°	2767.7	1707.0	336.3	266.6	240.2	227.4	215.7	222.1	239.8	268.1	282.0
50°	3136.4	1898.1	339.0	262.8	243.6	227.7	212.3	215.3	231.5	259.0	273.4
52.5°	3584.8	2194.1	355.9	264.3	245.8	225.9	210.8	209.3	223.2	247.4	261.7
55°	4125.1	2614.2	406.9	271.5	245.8	225.5	208.5	201.7	212.3	231.9	245.8
57.5°	4777.0	3100.6	506.4	274.9	244.0	223.2	203.6	191.5	198.0	214.2	227.4
60°	5337.0	3493.1	609.0	277.1	247.7	217.9	193.8	178.7	182.9	195.3	207.0
62.5°	5622.4	3603.2	639.9	275.3	257.9	214.5	182.1	165.2	165.5	176.1	186.6
65°	5676.0	3456.6	515.8	273.4	271.1	214.2	173.8	153.5	150.8	158.4	167.4
67.5°	5294.4	3000.3	372.2	269.2	272.6	211.9	168.2	144.0	137.3	142.5	150.1
70°	4495.4	2416.2	312.6	260.9	254.5	200.6	158.4	134.2	125.2	129.0	134.6
72.5°	3351.4	1787.7	272.6	243.2	221.7	171.6	143.3	123.3	113.9	116.5	120.7
75°	1861.9	953.6	228.1	211.5	181.0	138.8	122.2	109.3	101.1	102.2	106.7
77.5°	618.4	351.8	167.4	167.8	136.9	107.1	100.7	93.5	87.1	87.5	91.2
80°	280.2	194.6	119.9	120.7	95.4	77.7	77.3	75.0	70.9	69.8	72.4
82.5°	162.5	118.0	82.2	78.4	61.5	50.5	56.2	55.1	53.9	49.8	50.5
85°	79.9	63.3	43.0	40.7	33.9	25.3	30.2	31.3	30.2	25.6	25.3
87.5°	19.6	20.7	10.6	9.8	5.7	2.6	4.5	4.5	5.7	3.8	1.9
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)