

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: P367310

Luminaire Tested: **MSA-SA2B-740-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367310
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-SA2B-740-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: 9774 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

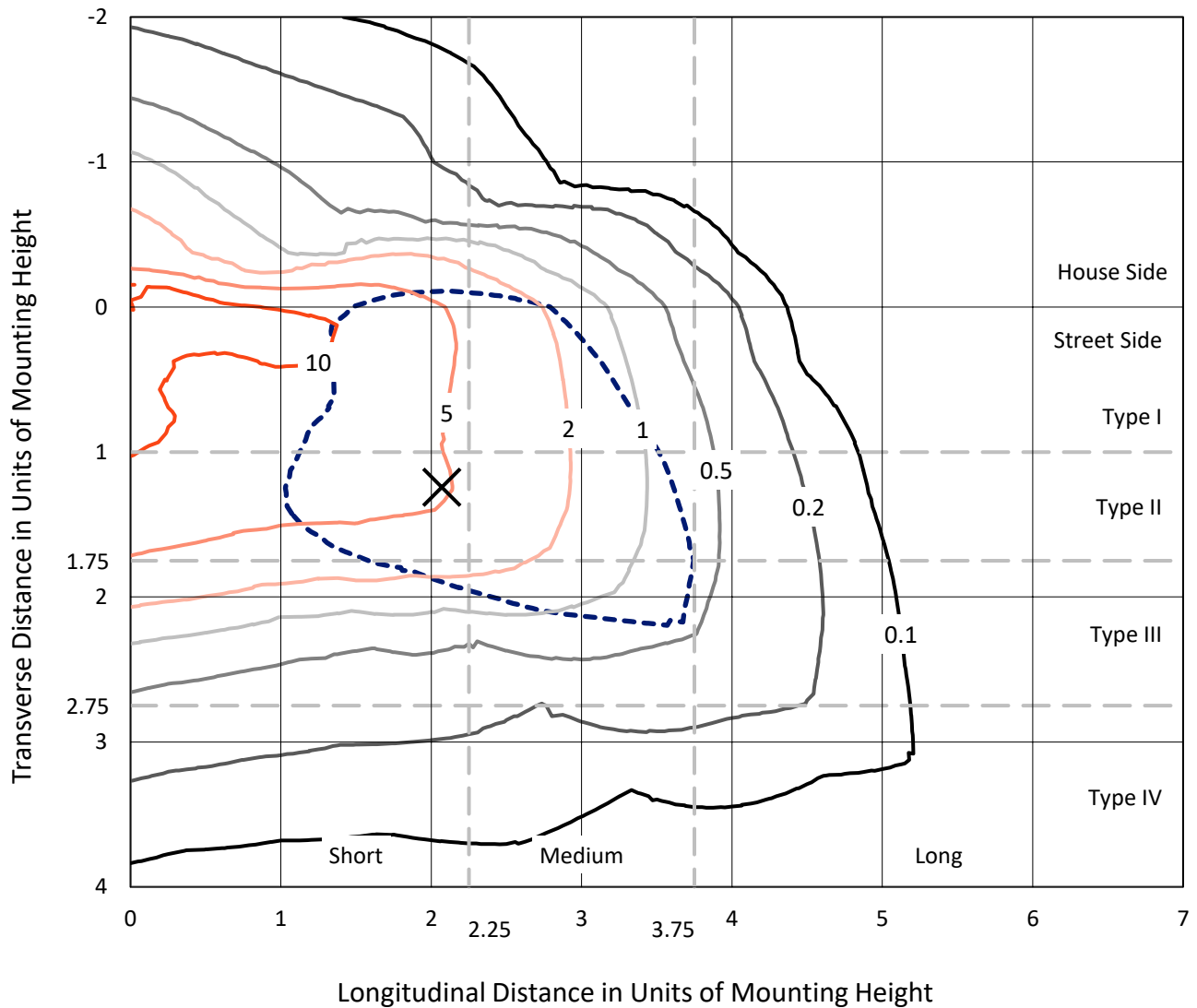
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

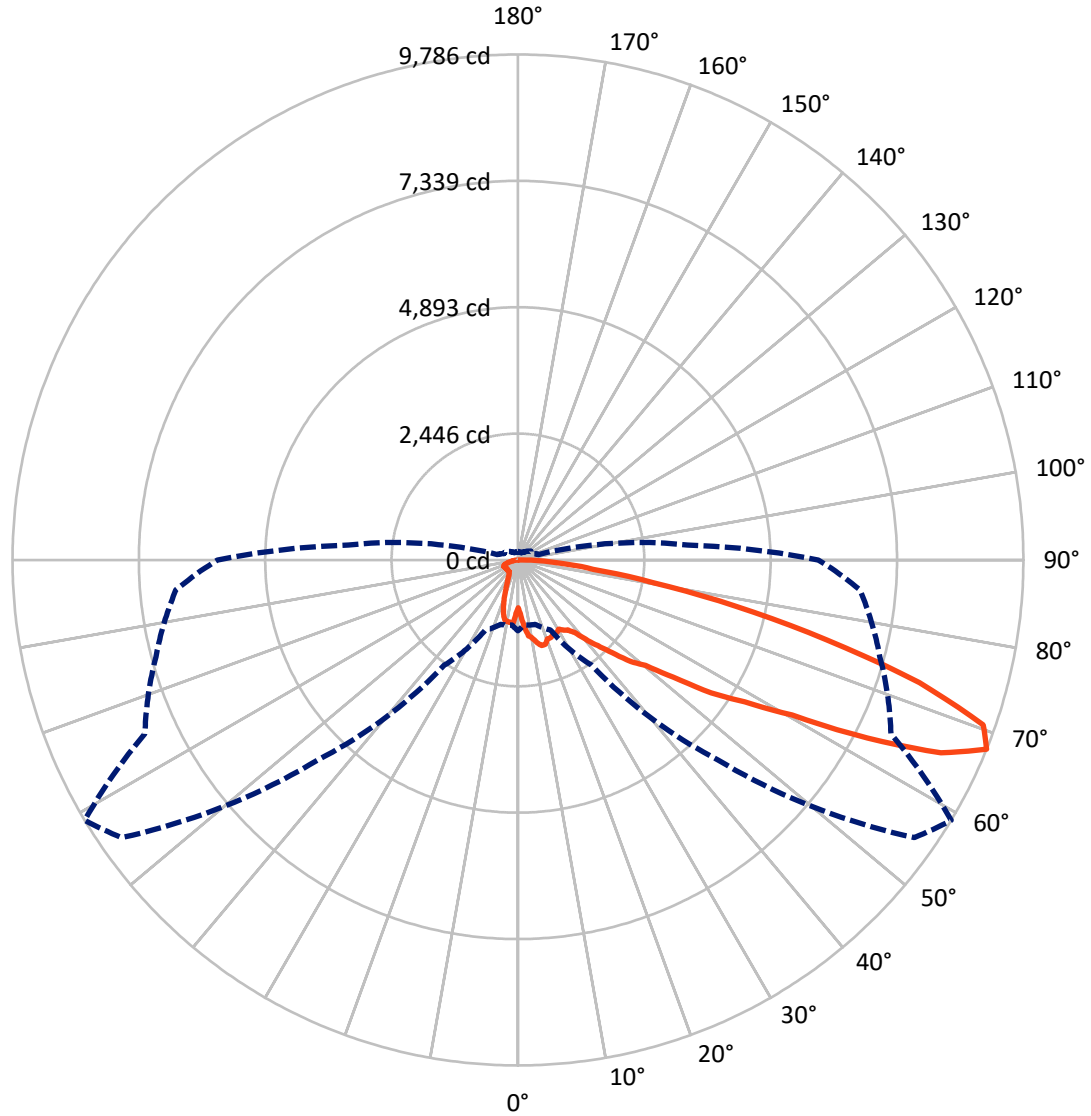
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.8 fc
 Type III - Short - N/A

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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	1471.2	0.0	1471.2
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	8302.8	0.0	8302.8
	% Fixture	84.9	0.0	84.9
Total	Lumens	9774.0	0.0	9774.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.8	1.2
10°-20°	357.4	3.7
20°-30°	510.5	5.2
30°-40°	752.2	7.7
40°-50°	1270.9	13.0
50°-60°	2211.6	22.6
60°-70°	2818.2	28.8
70°-80°	1492.3	15.3
80°-90°	240.1	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°	9774.0	100.0
0°-180°	9774.0	100.0

Coefficient of Utilization



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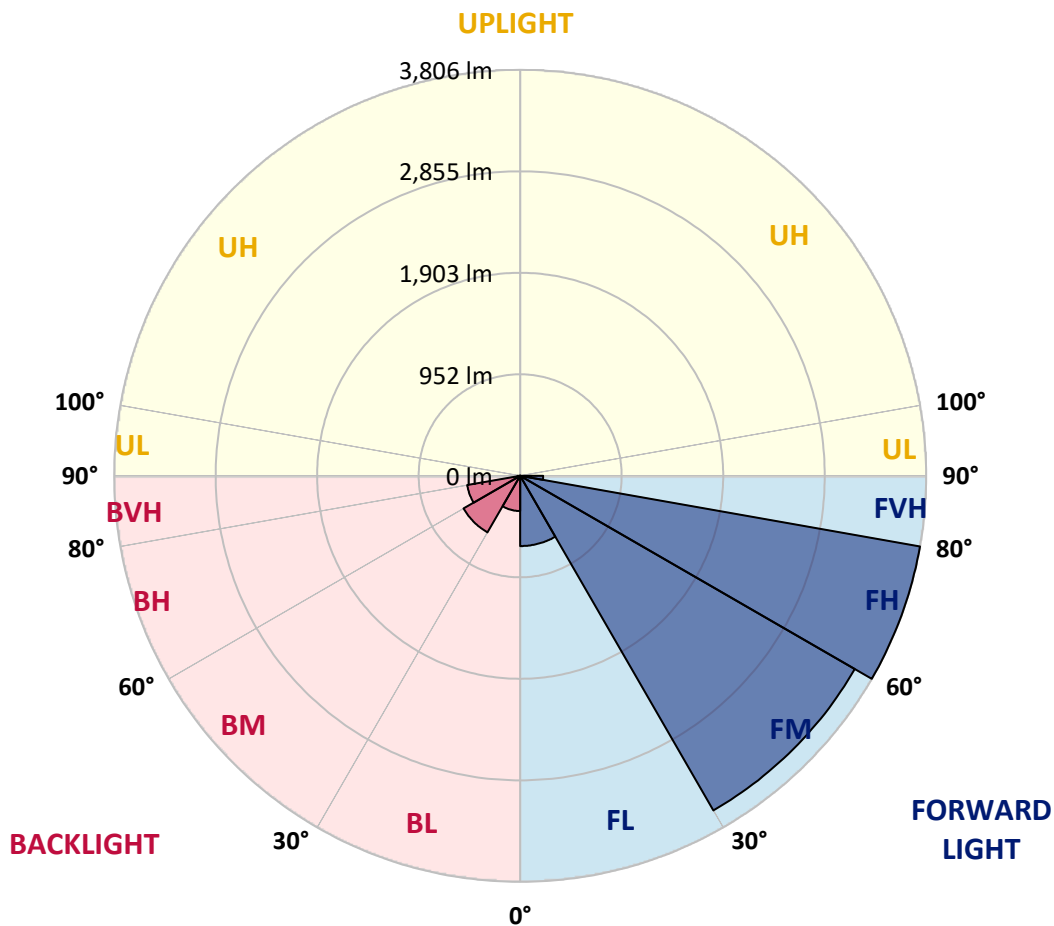
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	658.8	6.7			
FM (30°-60°)	3622.1	37.1			
FH (60°-80°)	3806.3	38.9			G2/5000
FVH (80°-90°)	215.6	2.2			G2/225
BL (0°-30°)	329.9	3.4	B1/500		
BM (30°-60°)	612.6	6.3	B1/1000		
BH (60°-80°)	504.2	5.2	B2/1000		G2/1000
BVH (80°-90°)	24.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9
2.5°	1154.8	1100.9	1043.7	1059.9	1092.6	1107.5	1091.4	1075.6	1055.3	1031.3	1113.3
5°	1400.4	1320.4	1308.8	1308.4	1296.8	1250.4	1310.1	1305.9	1330.0	1354.8	1418.6
7.5°	1470.4	1440.5	1408.2	1423.6	1365.2	1362.7	1455.5	1482.0	1528.3	1513.0	1598.8
10°	1434.3	1400.8	1417.8	1411.5	1416.9	1478.2	1535.0	1536.6	1586.3	1635.2	1580.1
12.5°	1371.0	1373.4	1441.0	1438.5	1525.4	1639.3	1656.3	1643.1	1724.3	1691.1	1738.3
15°	1416.1	1446.3	1429.4	1443.9	1478.2	1623.2	1670.4	1718.5	1795.5	1825.3	1778.1
17.5°	1488.2	1504.3	1428.1	1420.2	1491.1	1559.8	1677.0	1718.0	1730.1	1942.5	1875.8
20°	1457.5	1490.2	1415.7	1320.0	1437.6	1528.8	1644.3	1631.9	1690.3	1951.6	1896.1
22.5°	1544.5	1490.2	1395.4	1327.5	1368.9	1452.6	1550.7	1632.3	1701.5	1898.2	1925.6
25°	1561.1	1535.4	1446.8	1379.2	1365.2	1395.0	1535.0	1588.4	1705.2	1971.1	1909.8
27.5°	1662.1	1623.6	1443.0	1445.1	1375.1	1322.5	1485.3	1597.5	1747.5	1926.0	1948.3
30°	1787.6	1758.2	1531.7	1539.9	1443.0	1346.1	1519.2	1553.2	1771.9	1996.4	1996.8
32.5°	1881.6	1933.4	1706.0	1593.4	1559.0	1486.5	1467.0	1619.9	1743.3	2123.9	2079.6
35°	2051.1	2091.2	1840.2	1749.9	1633.6	1552.0	1608.7	1663.8	1862.2	2291.7	2202.6
37.5°	2364.6	2318.2	2089.6	1947.5	1904.0	1786.4	1817.9	1779.3	1991.4	2480.1	2443.7
40°	2546.0	2505.8	2265.2	2186.5	2014.2	2029.1	1989.8	2017.9	2164.1	2680.6	2669.0
42.5°	2724.9	2671.1	2467.7	2413.0	2241.2	2168.3	2175.3	2266.4	2430.4	3004.5	2966.0
45°	2901.8	2763.9	2674.8	2689.3	2606.5	2457.0	2467.3	2553.0	2721.2	3374.8	3286.2
47.5°	3037.2	2923.3	2853.7	2835.9	2794.9	2995.0	2905.5	2940.3	3014.4	3704.5	3670.9
50°	3293.6	3160.7	3069.9	3044.3	3183.4	3461.8	3279.5	3204.6	3362.4	4130.7	4113.3
52.5°	3704.1	3538.4	3387.2	3385.6	3586.9	3767.4	3895.8	3766.6	3824.6	4567.2	4616.9
55°	4062.3	3870.6	3734.7	3809.7	4096.3	4206.9	4643.0	4542.0	4493.1	5007.9	5150.0
57.5°	4196.1	3972.0	3883.4	3994.0	4416.5	4984.7	5445.7	5179.8	5132.2	5506.6	5804.4
60°	3902.5	3665.5	3670.9	3879.3	4611.1	5555.9	6323.4	6097.7	5818.5	6127.5	6418.2
62.5°	3065.8	2851.7	2991.3	3308.1	4447.9	6110.9	7499.7	7594.9	6602.5	6642.3	6758.7
65°	2083.8	1935.5	2061.4	2371.6	3607.6	6413.7	8620.0	9001.9	7316.6	6979.5	6905.7
67.5°	1371.4	1266.6	1291.0	1497.3	2483.5	5467.7	9369.3	9785.6	7969.4	7256.1	6646.4
70°	1062.0	977.5	966.7	1074.8	1472.8	3798.5	8925.3	9558.2	8367.0	6996.8	5793.2
72.5°	833.3	769.1	774.9	878.9	1140.7	2107.4	6906.6	8128.0	7768.1	6034.3	4450.8
75°	649.9	597.3	626.7	745.5	1054.9	1309.7	4765.2	6168.9	6005.7	4468.2	2538.5
77.5°	471.8	437.8	479.6	634.9	991.6	1123.7	2966.4	4303.8	3847.4	2294.2	871.0
80°	309.4	290.3	324.7	517.7	899.2	1081.4	1833.2	2637.1	1901.1	644.5	329.7
82.5°	182.2	174.0	202.5	350.4	722.8	1013.5	1222.7	1465.4	777.8	272.5	175.2
85°	95.7	89.5	120.1	201.3	498.3	925.3	962.6	877.2	375.7	118.5	83.7
87.5°	31.9	31.1	50.9	77.9	188.5	491.2	513.6	416.7	154.9	34.4	18.2
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°	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9	924.9
2.5°	1124.5	1107.9	1012.7	1025.9	1038.4	1032.2	1028.4	985.3	981.2	1042.5	1037.5
5°	1416.9	1348.2	1267.0	1263.3	1209.8	1155.2	1165.9	1148.5	1153.5	1178.8	1181.3
7.5°	1571.4	1485.7	1408.2	1282.3	1175.5	1088.9	1102.6	1098.4	1087.2	1144.4	1159.7
10°	1568.5	1492.3	1404.9	1252.5	1180.4	1110.0	1025.5	945.6	922.0	893.8	896.3
12.5°	1672.1	1604.6	1414.0	1258.7	1161.0	1039.6	881.4	794.0	710.3	708.7	687.5
15°	1704.4	1654.7	1433.5	1223.1	1024.7	850.7	687.1	592.3	531.8	519.8	502.0
17.5°	1786.0	1708.1	1374.3	1107.9	866.5	665.2	516.5	450.2	445.3	453.5	444.4
20°	1791.4	1665.0	1267.4	937.7	696.2	504.1	421.2	388.1	405.9	426.2	425.4
22.5°	1786.8	1610.8	1175.0	792.8	523.1	405.1	369.0	361.6	378.2	408.4	412.1
25°	1740.4	1593.0	1059.5	651.1	424.5	347.1	337.1	341.7	362.4	398.0	398.0
27.5°	1788.9	1520.5	914.5	529.7	357.0	309.0	316.0	327.6	342.9	383.5	391.0
30°	1773.1	1544.5	797.7	426.6	314.8	282.5	298.2	309.8	327.2	369.5	373.2
32.5°	1815.4	1480.3	699.6	358.7	287.0	272.1	275.8	291.6	314.4	347.5	354.1
35°	1880.0	1503.9	586.9	322.7	273.4	260.1	267.2	279.6	302.4	334.7	340.0
37.5°	2086.3	1502.7	509.0	302.8	270.9	257.6	260.9	269.6	296.1	325.6	338.0
40°	2218.8	1588.8	438.2	298.2	268.0	256.4	253.5	263.0	284.1	318.9	327.6
42.5°	2467.7	1641.4	407.6	296.6	267.6	249.3	246.4	257.6	278.3	310.6	323.9
45°	2730.7	1716.4	383.1	295.7	266.3	248.1	239.4	253.5	270.9	301.9	317.3
47.5°	3040.1	1875.0	369.5	292.8	263.8	249.8	236.9	244.0	263.4	294.5	309.8
50°	3445.2	2085.0	372.4	288.7	267.6	250.2	233.2	236.5	254.3	284.5	300.3
52.5°	3937.7	2410.2	391.0	290.3	270.0	248.1	231.5	229.9	245.2	271.7	287.4
55°	4531.2	2871.6	446.9	298.2	270.0	247.7	229.0	221.6	233.2	254.7	270.0
57.5°	5247.3	3405.9	556.3	301.9	268.0	245.2	223.7	210.4	217.4	235.3	249.8
60°	5862.4	3837.0	668.9	304.4	272.1	239.4	212.9	196.3	200.9	214.5	227.4
62.5°	6175.9	3958.0	702.9	302.4	283.3	235.7	200.1	181.4	181.8	193.4	205.0
65°	6234.7	3796.8	566.6	300.3	297.8	235.3	190.9	168.6	165.7	174.0	183.9
67.5°	5815.6	3295.7	408.8	295.7	299.5	232.8	184.7	158.2	150.8	156.6	164.8
70°	4937.9	2654.1	343.4	286.6	279.6	220.3	174.0	147.5	137.5	141.7	147.9
72.5°	3681.3	1963.7	299.5	267.2	243.5	188.5	157.4	135.4	125.1	128.0	132.5
75°	2045.3	1047.5	250.6	232.4	198.8	152.4	134.2	120.1	111.0	112.2	117.2
77.5°	679.3	386.4	183.9	184.3	150.3	117.6	110.6	102.7	95.7	96.1	100.2
80°	307.7	213.7	131.7	132.5	104.8	85.3	84.9	82.4	77.9	76.6	79.5
82.5°	178.5	129.6	90.3	86.2	67.5	55.5	61.7	60.5	59.2	54.7	55.5
85°	87.8	69.6	47.2	44.7	37.3	27.8	33.1	34.4	33.1	28.2	27.8
87.5°	21.5	22.8	11.6	10.8	6.2	2.9	5.0	5.0	6.2	4.1	2.1
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)