

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: P366998

Luminaire Tested: **MSA-SA1D-727-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366998
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-727-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5890 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

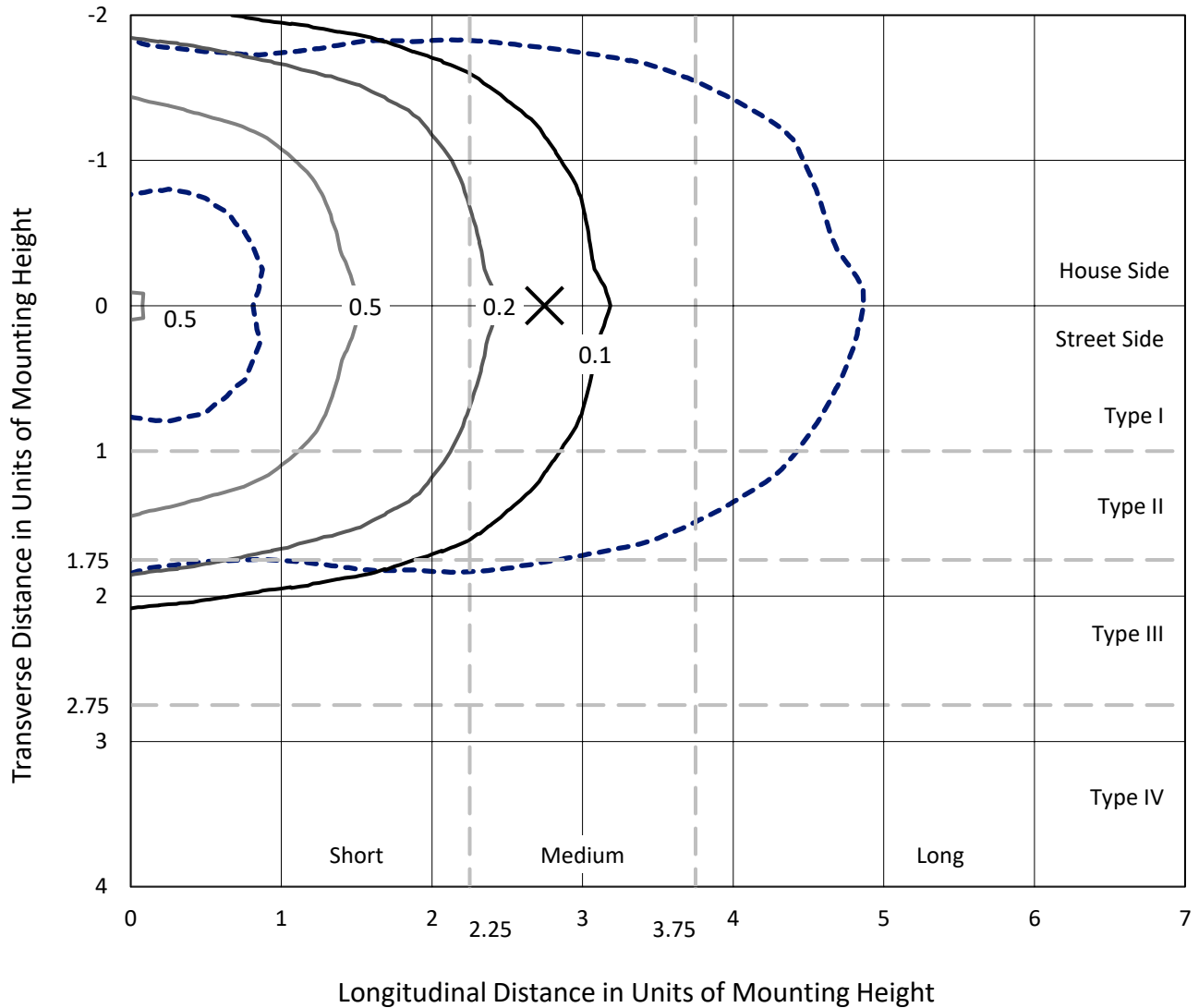
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366998
 CATALOG NUMBER: MSA-SA1D-727-U-RW

Iso-Footcandle Lines of Horizontal Illumination

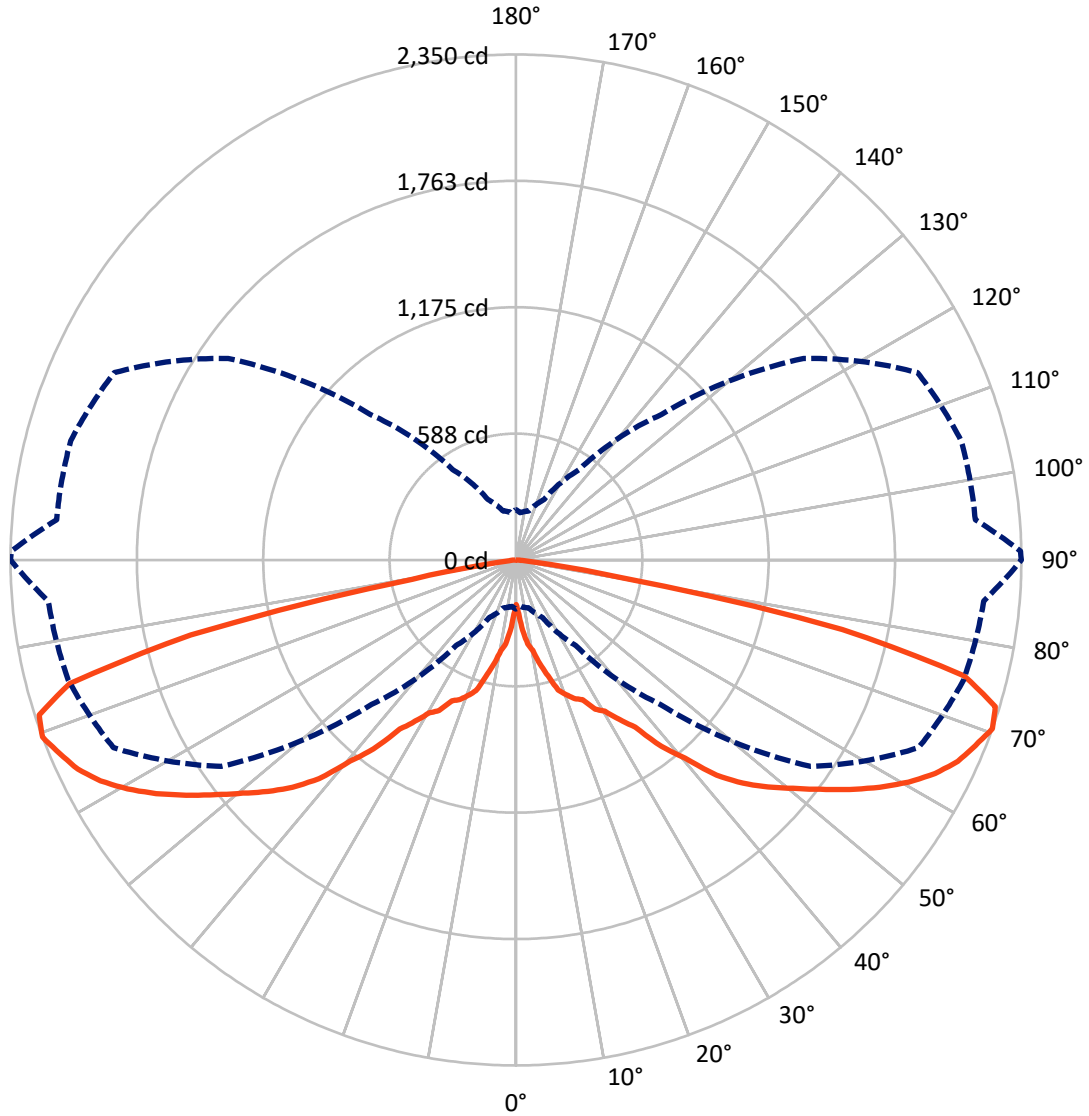
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type III - Short - N/A

REPORT NUMBER: P366998
CATALOG NUMBER: MSA-SA1D-727-U-RW

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P366998

CATALOG NUMBER: MSA-SA1D-727-U-RW

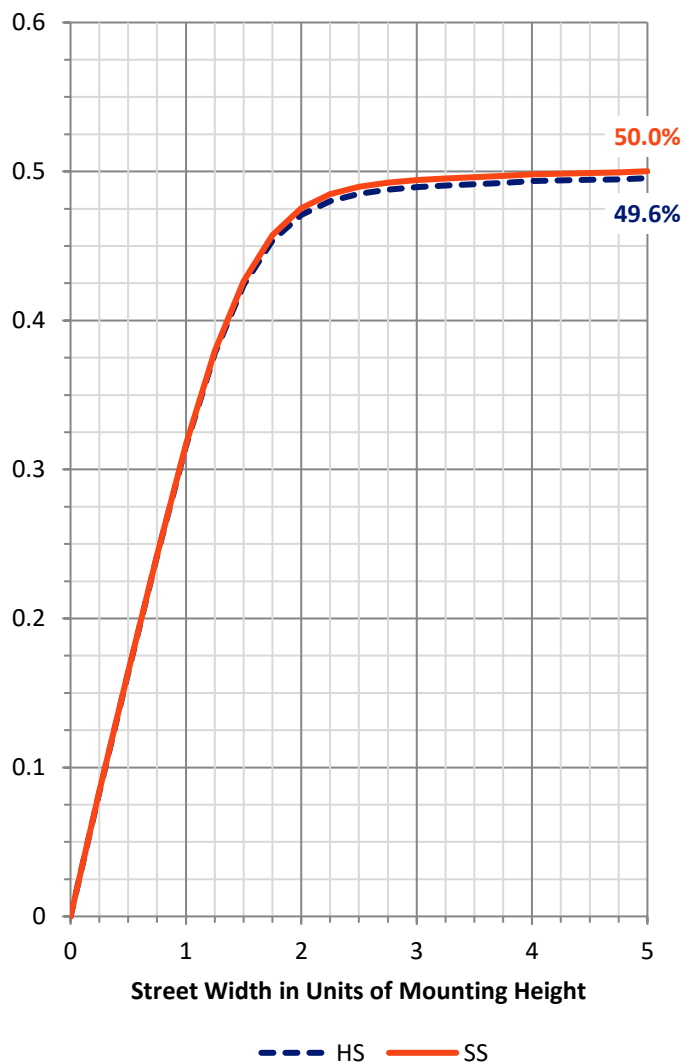
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2934.1	0.0	2934.1
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	2955.9	0.0	2955.9
	% Fixture	50.2	0.0	50.2
Total	Lumens	5890.0	0.0	5890.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.2	0.5
10°-20°	142.9	2.4
20°-30°	309.0	5.2
30°-40°	589.6	10.0
40°-50°	1071.1	18.2
50°-60°	1504.6	25.5
60°-70°	1436.6	24.4
70°-80°	737.3	12.5
80°-90°	67.6	1.1
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°	5890.0	100.0
0°-180°	5890.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366998

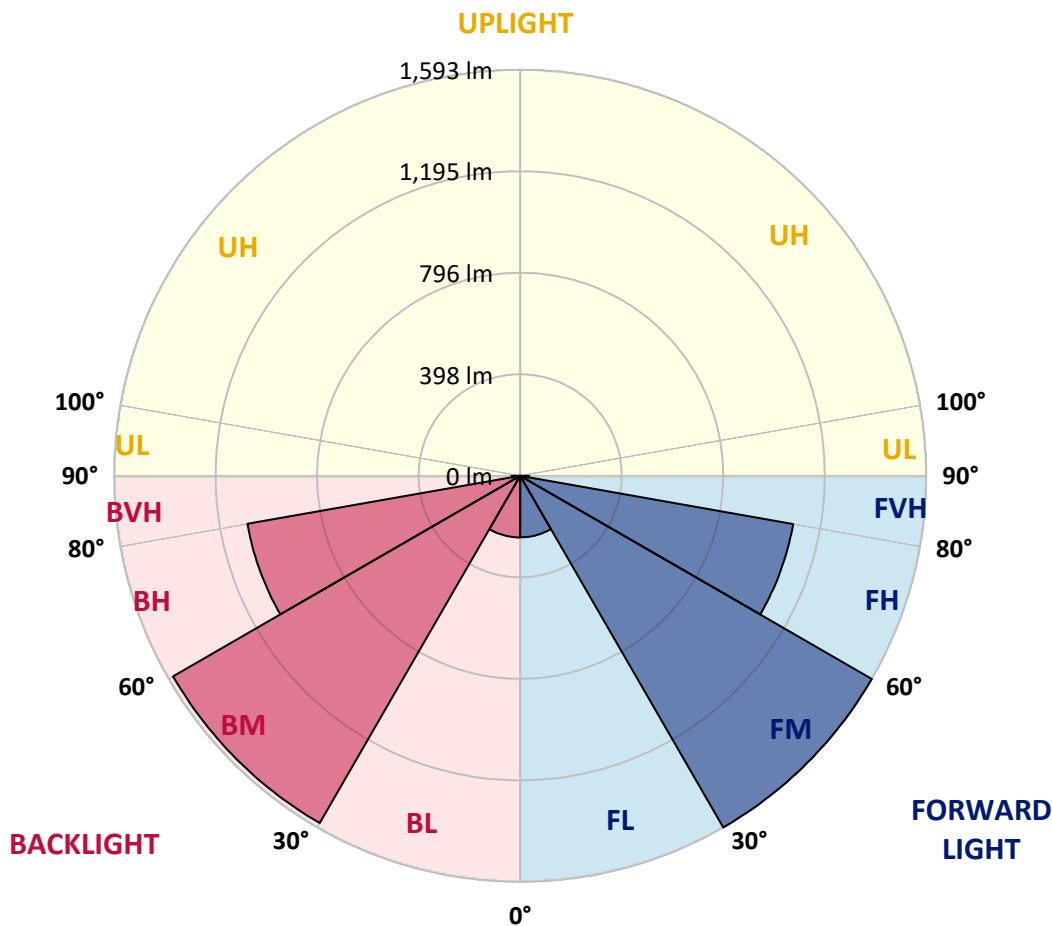
CATALOG NUMBER: MSA-SA1D-727-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	241.3	4.1			
FM (30°-60°)	1592.7	27.0			
FH (60°-80°)	1087.6	18.5			G1/1800
FVH (80°-90°)	34.3	0.6			G1/100
BL (0°-30°)	241.8	4.1	B1/500		
BM (30°-60°)	1572.6	26.7	B2/2500		
BH (60°-80°)	1086.4	18.4	B3/2500		G3/2500
BVH (80°-90°)	33.3	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





REPORT NUMBER: P366998
 CATALOG NUMBER: MSA-SA1D-727-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7
2.5°	250.4	241.1	229.4	236.3	239.2	244.2	243.5	241.1	230.8	248.0	249.9
5°	313.4	298.6	293.1	292.2	293.6	288.8	304.4	299.8	308.2	323.7	327.3
7.5°	356.9	345.9	334.2	337.8	323.0	320.8	340.9	358.8	363.3	391.7	393.6
10°	377.4	366.7	369.8	367.6	365.9	379.8	389.1	402.2	421.1	423.7	427.8
12.5°	394.8	399.1	412.7	412.3	434.7	459.3	455.7	469.3	472.4	505.4	495.3
15°	439.0	447.8	446.9	455.2	465.0	505.4	505.6	528.7	550.0	562.9	559.5
17.5°	503.7	506.8	493.9	494.4	522.8	539.3	557.6	553.6	609.0	634.3	635.9
20°	542.4	550.2	535.4	515.9	566.2	588.9	599.2	575.5	634.7	668.9	668.9
22.5°	609.9	589.6	567.2	554.1	598.5	622.6	621.4	614.7	646.2	706.6	700.9
25°	647.2	635.7	624.5	627.8	650.3	662.7	679.1	663.6	693.2	738.1	719.2
27.5°	717.8	696.6	641.4	685.3	685.3	676.0	710.9	718.3	699.0	772.0	786.1
30°	797.8	790.4	712.3	758.9	744.5	718.3	785.1	780.4	747.9	822.4	815.9
32.5°	873.5	897.8	823.8	798.3	819.7	829.8	794.7	809.0	815.2	887.1	884.0
35°	989.5	1010.0	911.9	905.4	869.6	860.3	887.1	891.8	892.3	968.0	954.1
37.5°	1190.2	1160.6	1063.7	1018.1	1022.2	1011.0	1016.2	978.5	983.7	1093.5	1100.5
40°	1337.0	1303.6	1195.7	1163.0	1082.8	1130.8	1088.3	1084.5	1074.0	1216.2	1212.4
42.5°	1499.1	1453.3	1333.9	1290.2	1205.0	1185.4	1165.9	1210.0	1207.2	1338.9	1368.1
45°	1621.6	1529.0	1466.7	1439.4	1388.4	1340.4	1321.8	1341.6	1332.5	1430.4	1481.2
47.5°	1698.9	1618.5	1546.9	1489.6	1440.6	1558.3	1464.0	1437.5	1419.2	1528.7	1577.7
50°	1760.5	1667.7	1583.1	1564.0	1602.7	1706.8	1558.1	1499.6	1522.0	1602.7	1669.3
52.5°	1777.2	1678.9	1603.0	1590.8	1695.3	1714.2	1690.1	1591.7	1585.8	1691.5	1772.0
55°	1726.1	1631.8	1595.8	1662.4	1777.9	1762.2	1798.9	1736.2	1693.9	1782.2	1883.4
57.5°	1594.6	1501.0	1492.4	1588.4	1734.0	1868.2	1886.3	1836.7	1781.3	1874.9	1994.2
60°	1378.6	1293.1	1314.8	1420.8	1640.4	1831.4	1927.8	1882.5	1865.3	1958.4	2096.9
62.5°	1042.2	975.6	1033.6	1181.4	1469.5	1783.9	1985.1	1978.0	1953.2	2047.2	2187.6
65°	664.6	629.5	688.7	838.8	1204.3	1697.5	2012.6	2022.1	2045.1	2115.7	2257.7
67.5°	386.2	367.6	403.7	526.6	857.7	1393.8	1961.5	2098.5	2110.5	2151.0	2303.8
70°	228.4	216.3	231.1	295.8	485.5	949.6	1673.1	2065.1	2155.3	2183.5	2350.4
72.5°	174.3	162.8	156.4	175.0	253.5	490.6	1131.3	1750.5	2119.3	2162.0	2330.8
75°	150.6	139.6	132.0	133.7	150.9	233.0	613.3	1252.1	1805.9	1968.7	2153.0
77.5°	129.4	119.6	114.1	113.6	115.8	128.0	256.4	678.9	1131.0	1415.1	1552.1
80°	103.6	96.0	94.8	94.8	91.7	90.7	127.5	258.3	430.4	510.4	489.4
82.5°	75.7	68.0	75.7	74.7	69.9	66.1	81.2	111.7	132.7	104.8	82.8
85°	51.1	44.2	49.9	50.8	46.3	34.4	48.7	55.9	57.3	35.8	29.6
87.5°	17.9	17.4	28.2	24.6	20.1	11.7	17.9	19.3	20.3	12.7	8.6
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: P366998
 CATALOG NUMBER: MSA-SA1D-727-U-RW

CANDELA DISTRIBUTION (continued):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7
2.5°	250.6	247.8	233.5	235.6	241.1	243.7	246.4	235.6	230.4	247.1	245.4
5°	328.2	317.7	306.0	304.4	305.1	294.8	300.8	298.2	299.3	310.1	312.2
7.5°	393.2	380.5	365.0	352.8	331.8	315.1	329.2	336.3	338.5	357.6	364.8
10°	428.3	417.5	413.0	390.1	383.1	381.0	377.6	366.2	378.8	374.3	377.9
12.5°	497.0	494.9	471.2	456.2	457.6	461.7	440.7	429.2	412.7	438.5	429.2
15°	555.5	564.8	541.2	513.7	500.1	507.0	491.0	474.3	459.5	467.4	457.4
17.5°	630.2	630.0	583.9	554.5	553.3	552.9	529.2	492.5	510.1	504.6	505.1
20°	669.8	663.4	606.1	572.2	601.1	590.8	569.6	522.3	542.8	549.5	553.8
22.5°	703.0	699.4	630.0	605.1	623.8	624.0	602.8	577.9	575.3	596.1	584.8
25°	726.2	740.5	675.1	669.1	677.2	669.1	648.3	632.1	621.6	652.6	621.6
27.5°	781.1	760.8	682.0	715.9	720.9	680.1	706.1	687.0	657.9	696.3	709.0
30°	820.2	832.2	730.7	781.8	775.8	738.1	748.8	748.1	713.3	788.2	779.4
32.5°	887.5	873.2	810.2	806.1	820.5	818.8	800.6	809.5	818.1	872.5	885.6
35°	956.5	971.8	861.0	888.5	884.4	858.7	906.2	900.7	926.2	1037.9	1000.9
37.5°	1112.2	1039.4	975.1	971.6	998.8	1002.8	987.6	1011.7	1066.8	1152.7	1192.4
40°	1214.1	1180.9	1071.8	1076.1	1038.4	1103.3	1060.4	1137.9	1180.0	1324.9	1310.8
42.5°	1368.3	1287.4	1182.6	1196.9	1189.3	1158.0	1214.6	1254.4	1314.6	1425.1	1496.5
45°	1483.1	1372.1	1322.5	1313.6	1312.7	1367.1	1359.9	1423.7	1445.2	1528.2	1587.4
47.5°	1570.3	1476.0	1402.4	1412.5	1383.3	1538.7	1455.9	1475.7	1519.2	1597.5	1666.5
50°	1673.6	1568.6	1485.0	1509.9	1580.8	1640.4	1565.5	1531.6	1552.8	1645.2	1722.1
52.5°	1769.3	1658.8	1566.9	1587.7	1703.5	1676.2	1668.1	1582.4	1579.8	1654.0	1741.4
55°	1881.3	1756.7	1675.5	1741.4	1782.5	1748.8	1735.9	1631.6	1567.2	1608.4	1690.8
57.5°	1991.1	1853.6	1772.9	1786.5	1838.6	1805.1	1708.5	1547.8	1467.4	1475.5	1558.8
60°	2094.0	1942.6	1876.0	1862.9	1904.5	1773.4	1604.2	1394.3	1287.6	1268.0	1340.1
62.5°	2182.1	2017.1	1954.1	1918.3	1957.9	1774.6	1441.6	1148.0	1030.8	964.4	1020.5
65°	2252.0	2079.0	2034.1	2015.5	2029.8	1666.7	1188.3	842.9	699.2	625.7	658.4
67.5°	2298.6	2113.6	2093.0	2117.4	1926.4	1388.1	880.4	539.5	406.5	366.4	387.0
70°	2346.8	2144.1	2143.4	2060.6	1633.5	957.0	514.2	311.0	236.6	221.0	233.9
72.5°	2330.6	2107.8	2118.6	1802.0	1132.0	511.6	271.4	175.9	160.2	165.7	177.1
75°	2158.2	1916.4	1864.6	1295.5	642.1	237.8	156.4	133.2	132.2	140.6	151.8
77.5°	1565.5	1334.6	1197.6	734.3	275.2	128.7	115.1	111.2	111.2	117.9	128.0
80°	516.1	446.6	465.5	284.1	130.1	88.8	89.8	91.4	90.9	92.6	101.0
82.5°	84.7	87.8	135.8	116.0	78.5	60.6	67.8	71.1	72.1	64.5	73.3
85°	30.1	33.9	57.8	53.7	45.4	30.6	44.6	49.9	49.2	43.0	47.5
87.5°	9.3	11.9	21.0	16.2	13.6	8.4	16.7	19.6	24.6	10.0	9.1
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)