

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: P367086

Luminaire Tested: **MSA-SA1D-760-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367086
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-760-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: 7042 lumens
Efficiency: N/A
Efficacy: 105.1 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

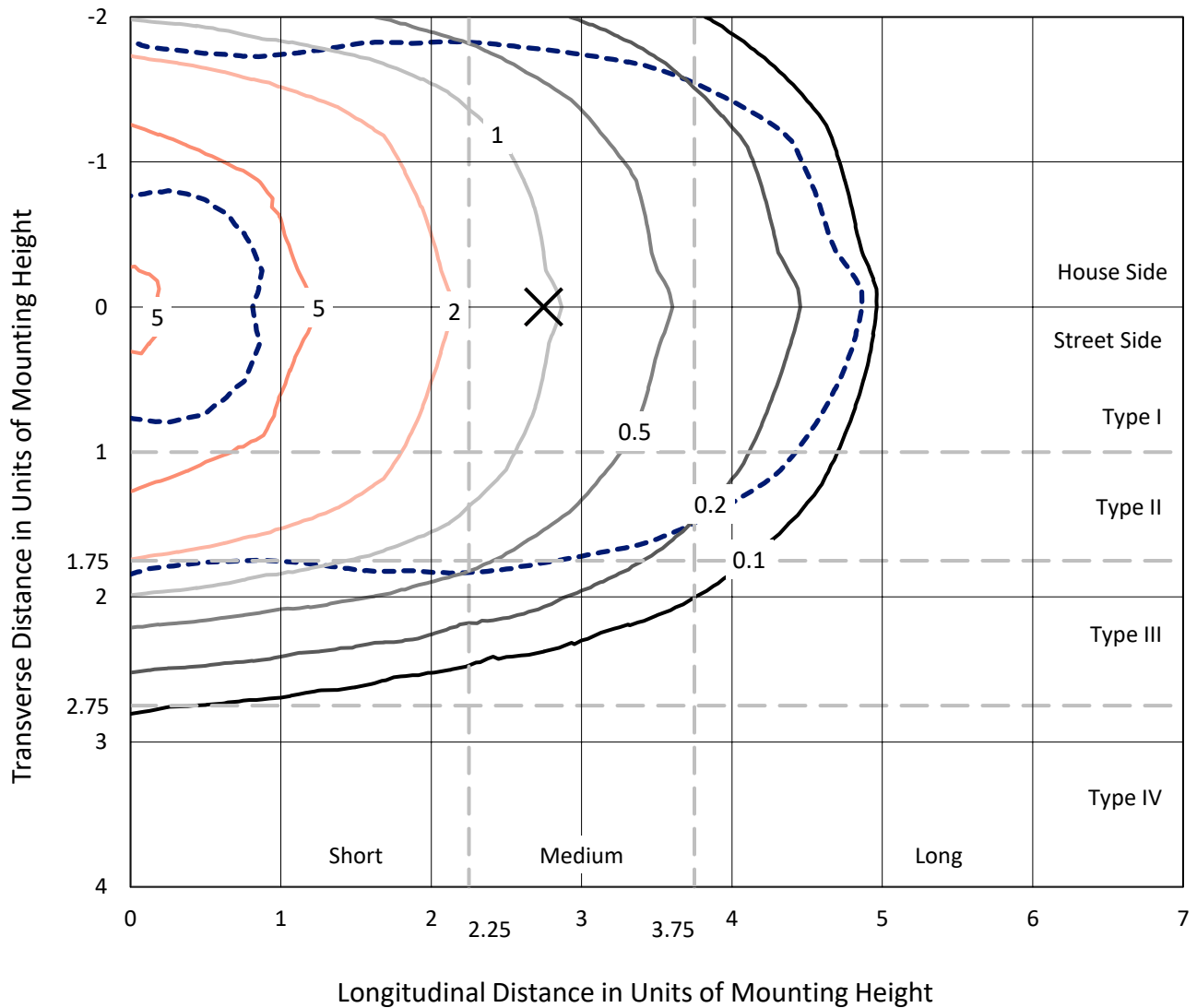
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

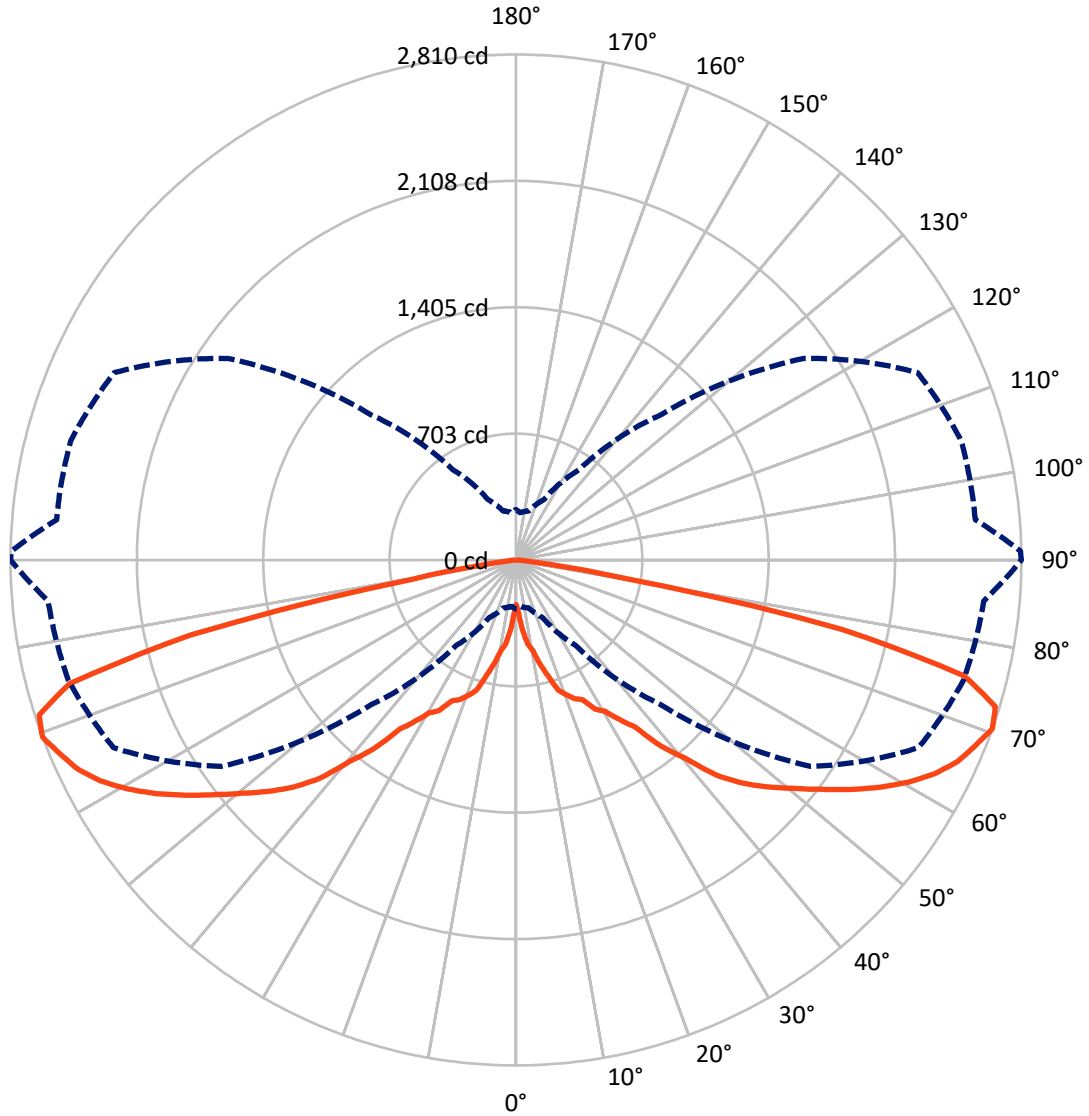
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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

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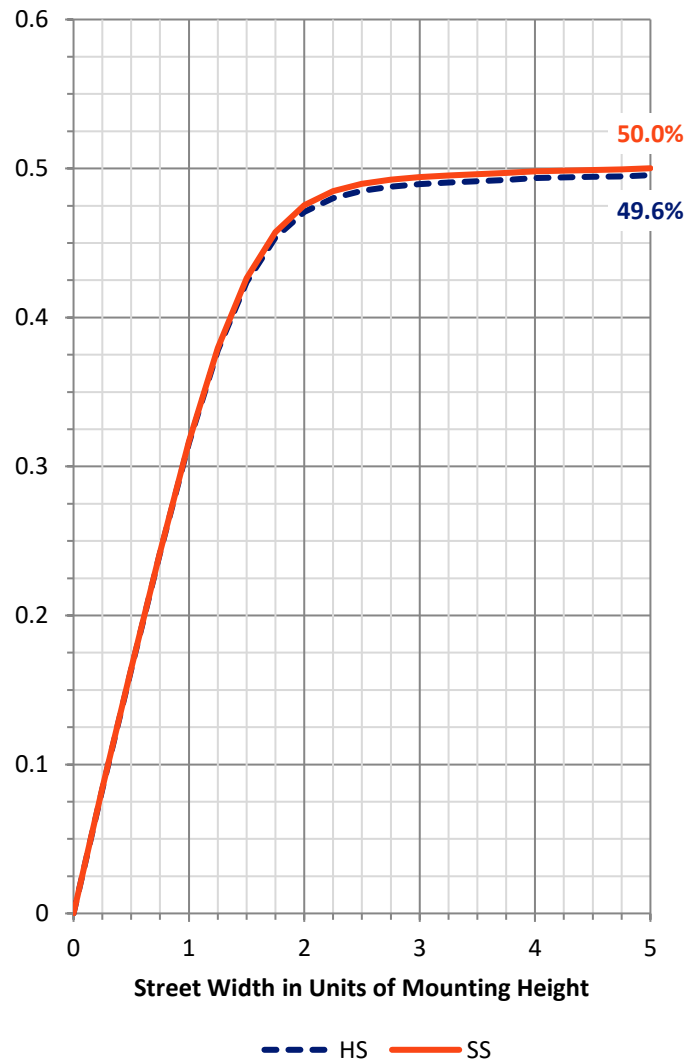
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3508.0	0.0	3508.0
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	3534.0	0.0	3534.0
	% Fixture	50.2	0.0	50.2
Total	Lumens	7042.0	0.0	7042.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	0.5
10°-20°	170.9	2.4
20°-30°	369.5	5.2
30°-40°	704.9	10.0
40°-50°	1280.6	18.2
50°-60°	1798.9	25.5
60°-70°	1717.6	24.4
70°-80°	881.5	12.5
80°-90°	80.8	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°	7042.0	100.0
0°-180°	7042.0	100.0



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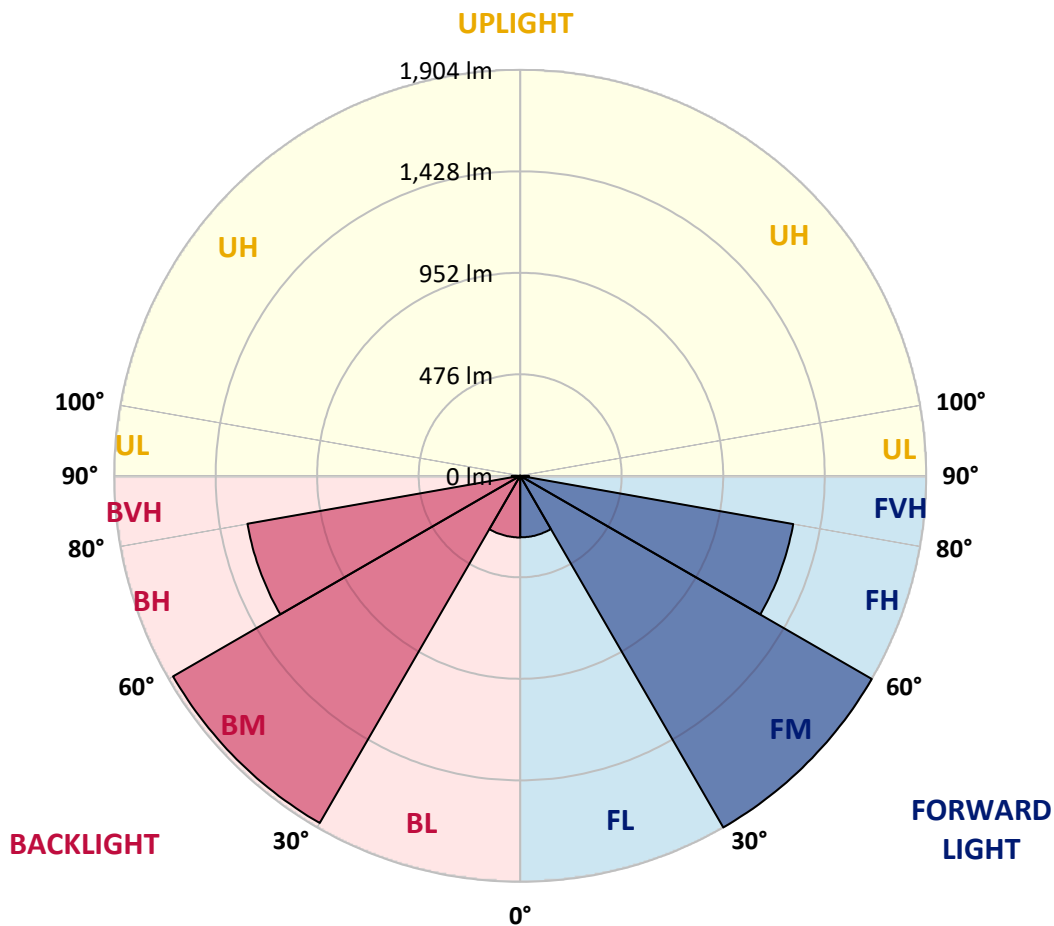
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	288.5	4.1			
FM (30°-60°)	1904.2	27.0			
FH (60°-80°)	1300.3	18.5			G1/1800
FVH (80°-90°)	41.0	0.6			G1/100
BL (0°-30°)	289.1	4.1	B1/500		
BM (30°-60°)	1880.2	26.7	B2/2500		
BH (60°-80°)	1298.8	18.4	B3/2500		G3/2500
BVH (80°-90°)	39.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2
2.5°	299.4	288.3	274.3	282.5	286.0	292.0	291.1	288.3	276.0	296.5	298.8
5°	374.7	357.0	350.5	349.3	351.0	345.3	363.9	358.5	368.5	387.0	391.3
7.5°	426.7	413.5	399.6	403.8	386.1	383.6	407.6	429.0	434.4	468.3	470.6
10°	451.2	438.4	442.1	439.5	437.5	454.1	465.2	480.9	503.4	506.6	511.4
12.5°	472.1	477.2	493.5	492.9	519.7	549.1	544.8	561.1	564.8	604.2	592.2
15°	524.9	535.4	534.3	544.3	556.0	604.2	604.5	632.2	657.6	673.0	669.0
17.5°	602.2	605.9	590.5	591.1	625.0	644.7	666.7	661.8	728.1	758.3	760.3
20°	648.4	657.9	640.2	616.8	677.0	704.1	716.4	688.1	758.9	799.7	799.7
22.5°	729.2	704.9	678.1	662.4	715.5	744.3	742.9	734.9	772.6	844.8	837.9
25°	773.7	760.0	746.6	750.6	777.4	792.3	812.0	793.4	828.8	882.5	859.9
27.5°	858.2	832.8	766.9	819.4	819.4	808.3	849.9	858.8	835.7	923.0	939.8
30°	953.8	945.0	851.6	907.3	890.2	858.8	938.7	933.0	894.2	983.2	975.5
32.5°	1044.3	1073.4	984.9	954.4	980.1	992.1	950.1	967.2	974.6	1060.6	1056.8
35°	1183.0	1207.5	1090.2	1082.5	1039.7	1028.6	1060.6	1066.3	1066.8	1157.3	1140.8
37.5°	1423.0	1387.6	1271.8	1217.2	1222.1	1208.7	1215.0	1169.9	1176.1	1307.4	1315.7
40°	1598.5	1558.6	1429.6	1390.5	1294.6	1351.9	1301.1	1296.6	1284.0	1454.1	1449.6
42.5°	1792.3	1737.5	1594.8	1542.6	1440.7	1417.3	1393.9	1446.7	1443.3	1600.8	1635.6
45°	1938.7	1828.0	1753.5	1721.0	1659.9	1602.5	1580.3	1604.0	1593.1	1710.1	1770.9
47.5°	2031.2	1935.0	1849.4	1780.9	1722.4	1863.1	1750.4	1718.7	1696.7	1827.7	1886.2
50°	2104.8	1993.8	1892.8	1870.0	1916.2	2040.6	1862.8	1792.9	1819.7	1916.2	1995.8
52.5°	2124.8	2007.2	1916.5	1901.9	2026.9	2049.5	2020.6	1903.1	1895.9	2022.4	2118.5
55°	2063.7	1951.0	1907.9	1987.5	2125.7	2106.8	2150.8	2075.7	2025.2	2130.8	2251.8
57.5°	1906.5	1794.6	1784.3	1899.1	2073.2	2233.6	2255.2	2195.9	2129.7	2241.5	2384.2
60°	1648.2	1546.0	1572.0	1698.7	1961.3	2189.6	2304.9	2250.7	2230.1	2341.4	2507.0
62.5°	1246.1	1166.4	1235.8	1412.5	1756.9	2132.8	2373.4	2364.8	2335.2	2447.6	2615.4
65°	794.6	752.6	823.4	1002.9	1439.9	2029.5	2406.2	2417.6	2445.0	2529.5	2699.3
67.5°	461.8	439.5	482.6	629.6	1025.4	1666.5	2345.1	2509.0	2523.2	2571.8	2754.4
70°	273.1	258.6	276.3	353.6	580.5	1135.3	2000.4	2469.0	2576.9	2610.6	2810.1
72.5°	208.3	194.6	186.9	209.2	303.1	586.5	1352.5	2092.9	2533.8	2584.9	2786.7
75°	180.1	167.0	157.8	159.8	180.4	278.6	733.2	1496.9	2159.1	2353.7	2574.0
77.5°	154.7	143.0	136.4	135.9	138.4	153.0	306.5	811.7	1352.2	1691.9	1855.7
80°	123.9	114.7	113.3	113.3	109.6	108.5	152.4	308.8	514.6	610.2	585.1
82.5°	90.5	81.3	90.5	89.3	83.6	79.1	97.0	133.6	158.7	125.3	99.0
85°	61.1	52.8	59.6	60.8	55.4	41.1	58.2	66.8	68.5	42.8	35.4
87.5°	21.4	20.8	33.7	29.4	24.0	14.0	21.4	23.1	24.3	15.1	10.3
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2	247.2
2.5°	299.7	296.2	279.1	281.7	288.3	291.4	294.5	281.7	275.4	295.4	293.4
5°	392.4	379.9	365.9	363.9	364.7	352.5	359.6	356.5	357.9	370.7	373.3
7.5°	470.1	454.9	436.4	421.8	396.7	376.7	393.6	402.1	404.7	427.5	436.1
10°	512.0	499.2	493.7	466.3	458.1	455.5	451.5	437.8	452.9	447.5	451.8
12.5°	594.2	591.6	563.4	545.4	547.1	552.0	526.9	513.2	493.5	524.3	513.2
15°	664.1	675.3	647.0	614.2	597.9	606.2	587.1	567.1	549.4	558.8	546.8
17.5°	753.5	753.2	698.1	663.0	661.6	661.0	632.7	588.8	609.9	603.3	603.9
20°	800.8	793.1	724.6	684.1	718.6	706.4	681.0	624.5	649.0	657.0	662.1
22.5°	840.5	836.2	753.2	723.5	745.8	746.0	720.6	691.0	687.8	712.6	699.2
25°	868.2	885.3	807.1	800.0	809.7	800.0	775.2	755.7	743.2	780.3	743.2
27.5°	933.8	909.6	815.4	855.9	861.9	813.1	844.2	821.4	786.6	832.5	847.6
30°	980.6	994.9	873.6	934.7	927.6	882.5	895.3	894.5	852.8	942.4	931.8
32.5°	1061.1	1044.0	968.7	963.8	980.9	978.9	957.2	967.8	978.1	1043.1	1058.8
35°	1143.6	1161.9	1029.4	1062.3	1057.4	1026.6	1083.4	1076.8	1107.4	1240.9	1196.7
37.5°	1329.7	1242.6	1165.9	1161.6	1194.1	1199.0	1180.7	1209.5	1275.5	1378.2	1425.6
40°	1451.6	1411.9	1281.5	1286.6	1241.5	1319.1	1267.8	1360.5	1410.7	1584.0	1567.1
42.5°	1635.9	1539.2	1413.9	1431.0	1421.9	1384.5	1452.1	1499.8	1571.7	1703.9	1789.2
45°	1773.2	1640.5	1581.1	1570.6	1569.4	1634.5	1625.9	1702.1	1727.8	1827.1	1897.9
47.5°	1877.4	1764.6	1676.7	1688.7	1653.9	1839.7	1740.7	1764.4	1816.3	1909.9	1992.4
50°	2001.0	1875.4	1775.5	1805.2	1889.9	1961.3	1871.7	1831.1	1856.5	1967.0	2058.9
52.5°	2115.4	1983.3	1873.4	1898.2	2036.6	2004.1	1994.4	1891.9	1888.8	1977.6	2082.0
55°	2249.3	2100.3	2003.2	2082.0	2131.1	2090.9	2075.4	1950.7	1873.7	1923.0	2021.5
57.5°	2380.5	2216.1	2119.7	2135.9	2198.2	2158.2	2042.6	1850.5	1754.4	1764.1	1863.7
60°	2503.5	2322.6	2243.0	2227.3	2276.9	2120.3	1917.9	1667.0	1539.5	1516.1	1602.2
62.5°	2608.9	2411.6	2336.3	2293.5	2340.9	2121.7	1723.5	1372.5	1232.4	1153.0	1220.1
65°	2692.5	2485.6	2431.9	2409.7	2426.8	1992.7	1420.7	1007.8	835.9	748.0	787.1
67.5°	2748.1	2527.0	2502.4	2531.5	2303.2	1659.6	1052.6	645.0	486.0	438.1	462.6
70°	2805.8	2563.5	2562.6	2463.6	1953.0	1144.2	614.8	371.9	282.8	264.3	279.7
72.5°	2786.4	2520.1	2532.9	2154.5	1353.4	611.6	324.5	210.3	191.5	198.1	211.8
75°	2580.3	2291.2	2229.3	1548.9	767.7	284.3	186.9	159.3	158.1	168.1	181.5
77.5°	1871.7	1595.7	1431.9	877.9	329.1	153.8	137.6	133.0	133.0	141.0	153.0
80°	617.0	534.0	556.5	339.6	155.5	106.2	107.3	109.3	108.7	110.7	120.7
82.5°	101.3	105.0	162.4	138.7	93.9	72.5	81.1	85.0	86.2	77.1	87.6
85°	36.0	40.5	69.1	64.2	54.2	36.5	53.4	59.6	58.8	51.4	56.8
87.5°	11.1	14.3	25.1	19.4	16.3	10.0	20.0	23.4	29.4	12.0	10.8
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)