

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: P367218

Luminaire Tested: **MSA-SA2A-760-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367218
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-SA2A-760-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8163 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

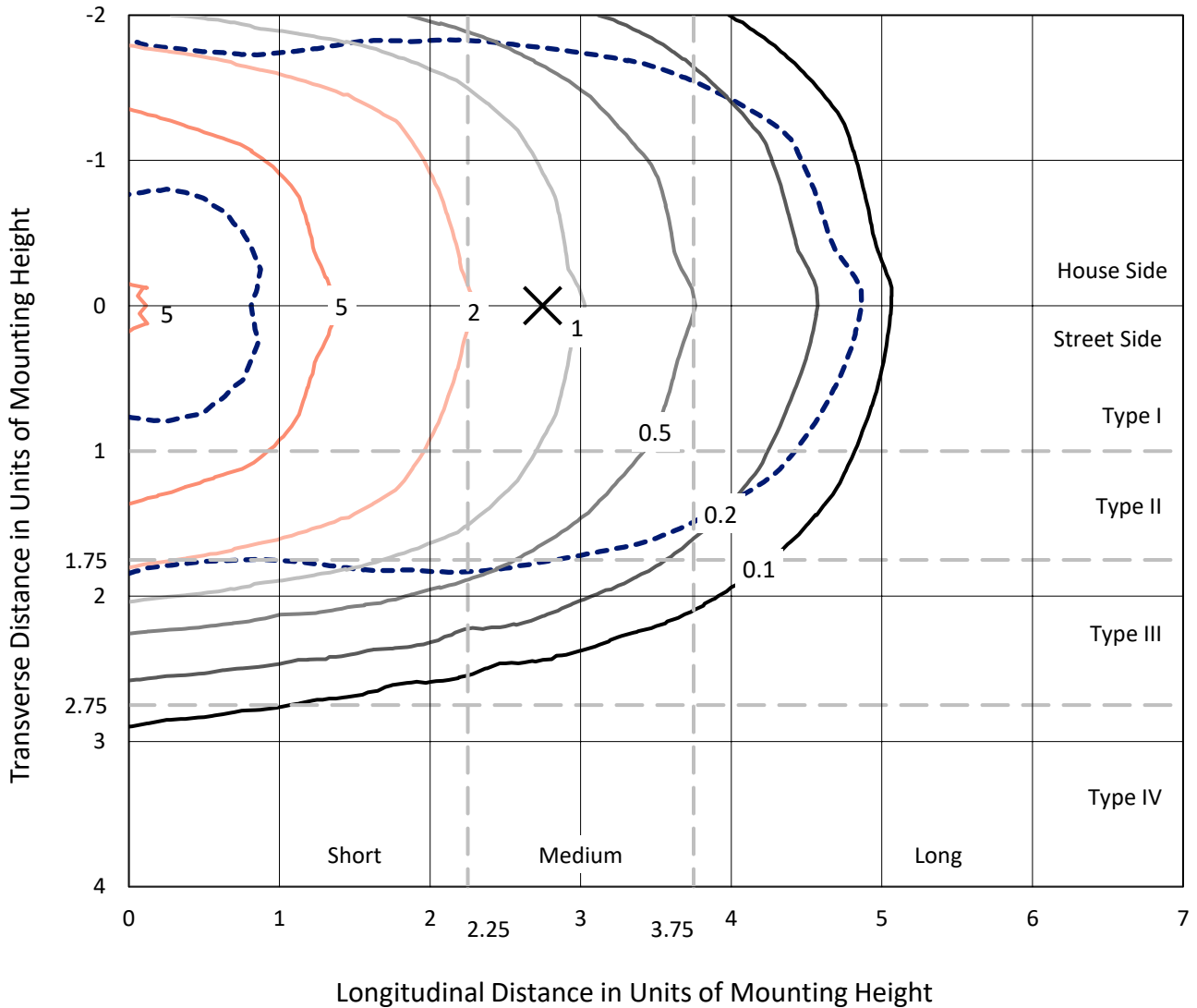
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

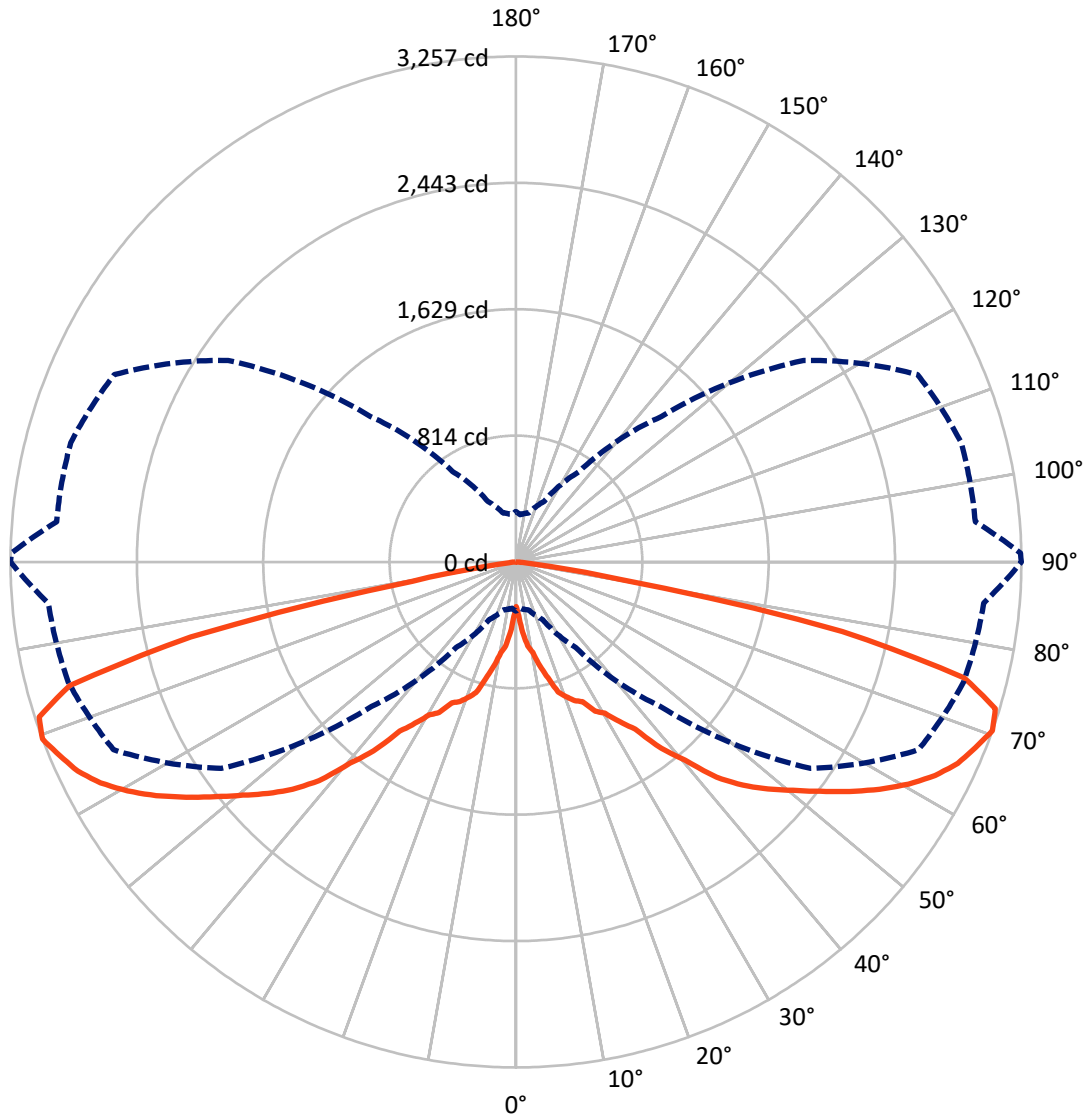
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 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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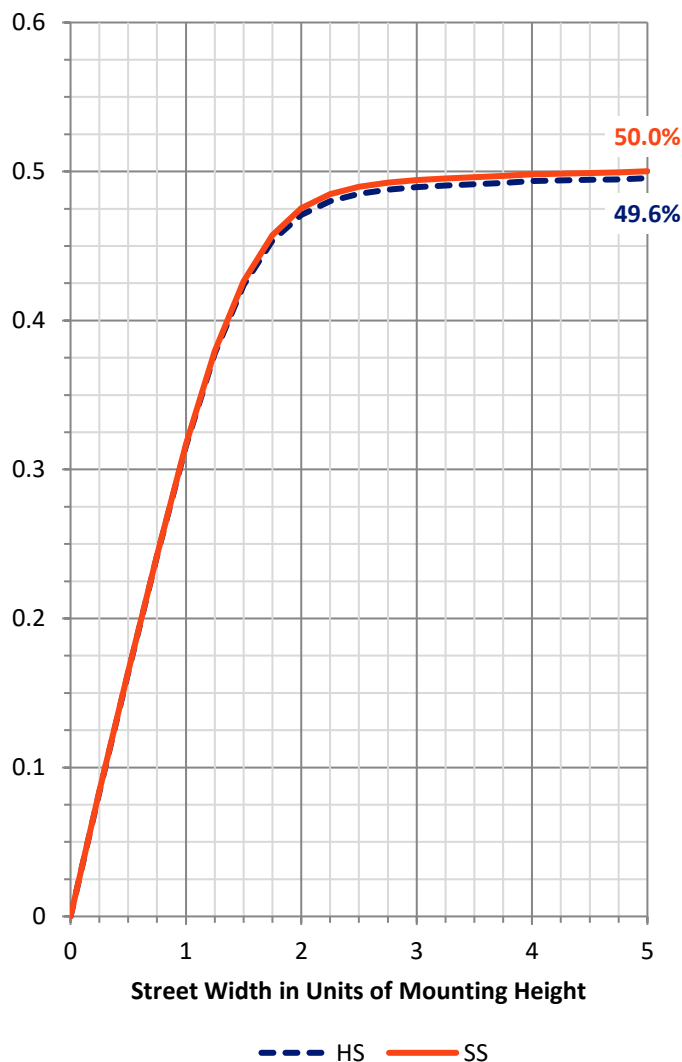
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4066.4	0.0	4066.4
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	4096.6	0.0	4096.6
	% Fixture	50.2	0.0	50.2
Total	Lumens	8163.0	0.0	8163.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.2	0.5
10°-20°	198.1	2.4
20°-30°	428.3	5.2
30°-40°	817.1	10.0
40°-50°	1484.4	18.2
50°-60°	2085.3	25.5
60°-70°	1991.0	24.4
70°-80°	1021.8	12.5
80°-90°	93.7	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°	8163.0	100.0
0°-180°	8163.0	100.0

Coefficient of Utilization



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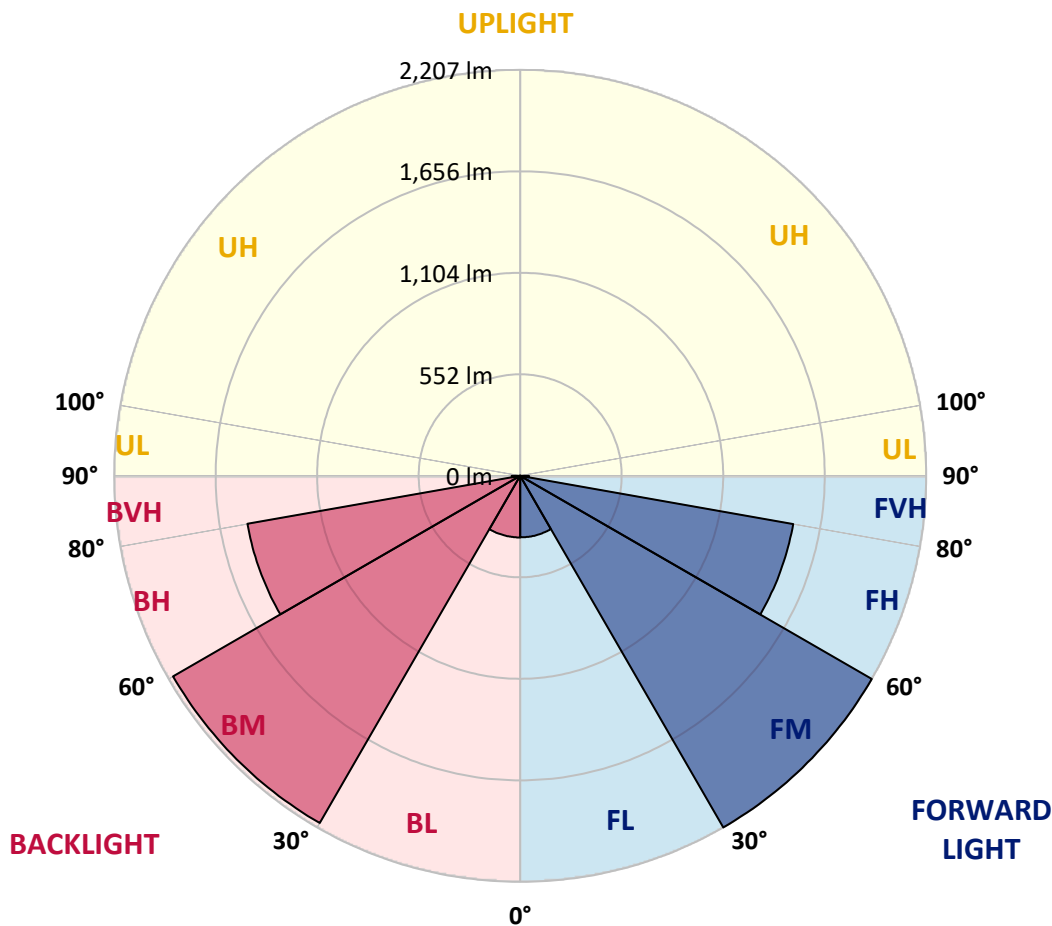
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	334.5	4.1			
FM (30°-60°)	2207.4	27.0			
FH (60°-80°)	1507.3	18.5			G1/1800
FVH (80°-90°)	47.5	0.6			G1/100
BL (0°-30°)	335.1	4.1	B1/500		
BM (30°-60°)	2179.5	26.7	B2/2500		
BH (60°-80°)	1505.6	18.4	B3/2500		G3/2500
BVH (80°-90°)	46.1	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°	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5
2.5°	347.0	334.1	317.9	327.5	331.5	338.4	337.5	334.1	319.9	343.7	346.4
5°	434.4	413.9	406.3	404.9	406.9	400.3	421.8	415.5	427.1	448.6	453.6
7.5°	494.6	479.4	463.2	468.1	447.6	444.6	472.4	497.2	503.5	542.9	545.5
10°	523.0	508.2	512.5	509.5	507.2	526.4	539.3	557.5	583.6	587.2	592.9
12.5°	547.2	553.2	572.0	571.4	602.4	636.5	631.6	650.4	654.7	700.4	686.5
15°	608.4	620.6	619.3	630.9	644.5	700.4	700.7	732.8	762.2	780.1	775.5
17.5°	698.1	702.4	684.5	685.2	724.5	747.4	772.8	767.2	844.0	879.0	881.3
20°	751.7	762.6	742.1	714.9	784.7	816.2	830.4	797.6	879.7	927.0	927.0
22.5°	845.3	817.2	786.1	767.9	829.4	862.8	861.2	851.9	895.6	979.3	971.3
25°	896.9	881.0	865.5	870.1	901.2	918.4	941.2	919.7	960.7	1022.9	996.8
27.5°	994.8	965.4	889.0	949.8	949.8	936.9	985.2	995.5	968.7	1069.9	1089.4
30°	1105.6	1095.4	987.2	1051.7	1031.9	995.5	1088.1	1081.5	1036.5	1139.7	1130.8
32.5°	1210.5	1244.3	1141.7	1106.3	1136.1	1150.0	1101.3	1121.2	1129.8	1229.4	1225.1
35°	1371.3	1399.8	1263.8	1254.9	1205.2	1192.3	1229.4	1236.0	1236.7	1341.5	1322.3
37.5°	1649.5	1608.5	1474.2	1411.0	1416.6	1401.1	1408.4	1356.1	1363.4	1515.6	1525.1
40°	1853.0	1806.7	1657.2	1611.8	1500.7	1567.2	1508.3	1503.0	1488.4	1685.6	1680.3
42.5°	2077.6	2014.1	1848.7	1788.2	1670.1	1642.9	1615.8	1677.0	1673.0	1855.7	1896.0
45°	2247.4	2119.0	2032.6	1994.9	1924.1	1857.6	1831.8	1859.3	1846.7	1982.4	2052.8
47.5°	2354.6	2243.1	2143.8	2064.4	1996.6	2159.7	2029.0	1992.3	1966.8	2118.7	2186.5
50°	2439.9	2311.2	2194.1	2167.6	2221.2	2365.5	2159.4	2078.3	2109.4	2221.2	2313.5
52.5°	2463.1	2326.8	2221.6	2204.7	2349.6	2375.7	2342.3	2206.0	2197.7	2344.3	2455.8
55°	2392.3	2261.6	2211.6	2303.9	2464.1	2442.2	2493.2	2406.2	2347.6	2470.0	2610.3
57.5°	2210.0	2080.3	2068.4	2201.4	2403.2	2589.1	2614.3	2545.4	2468.7	2598.4	2763.8
60°	1910.6	1792.1	1822.2	1969.1	2273.5	2538.2	2671.8	2609.0	2585.1	2714.2	2906.1
62.5°	1444.4	1352.1	1432.5	1637.3	2036.6	2472.3	2751.2	2741.3	2706.9	2837.2	3031.8
65°	921.0	872.4	954.5	1162.6	1669.1	2352.6	2789.3	2802.5	2834.3	2932.2	3129.0
67.5°	535.3	509.5	559.4	729.8	1188.7	1931.7	2718.5	2908.4	2924.9	2981.2	3192.9
70°	316.6	299.7	320.2	409.9	672.9	1316.1	2318.8	2862.1	2987.1	3026.1	3257.4
72.5°	241.5	225.6	216.7	242.5	351.3	679.9	1567.8	2426.0	2937.2	2996.4	3230.3
75°	208.8	193.5	183.0	185.3	209.1	322.9	849.9	1735.2	2502.8	2728.4	2983.8
77.5°	179.3	165.7	158.1	157.5	160.5	177.3	355.3	940.9	1567.5	1961.2	2151.1
80°	143.6	133.0	131.3	131.3	127.0	125.7	176.7	358.0	596.5	707.3	678.2
82.5°	104.9	94.3	104.9	103.6	96.9	91.6	112.5	154.8	183.9	145.2	114.8
85°	70.8	61.2	69.1	70.5	64.2	47.6	67.5	77.4	79.4	49.6	41.0
87.5°	24.8	24.2	39.0	34.1	27.8	16.2	24.8	26.8	28.1	17.5	11.9
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5	286.5
2.5°	347.4	343.4	323.6	326.5	334.1	337.8	341.4	326.5	319.3	342.4	340.1
5°	454.9	440.3	424.1	421.8	422.8	408.6	416.9	413.2	414.9	429.8	432.7
7.5°	544.9	527.4	505.8	489.0	459.9	436.7	456.2	466.1	469.1	495.6	505.5
10°	593.5	578.6	572.3	540.6	531.0	528.0	523.4	507.5	525.0	518.7	523.7
12.5°	688.8	685.8	653.1	632.2	634.2	639.8	610.7	594.8	572.0	607.7	594.8
15°	769.9	782.8	750.0	712.0	693.1	702.7	680.5	657.4	636.9	647.8	633.9
17.5°	873.4	873.1	809.2	768.5	766.9	766.2	733.5	682.5	707.0	699.4	700.0
20°	928.3	919.4	840.0	793.0	833.0	818.8	789.4	723.9	752.3	761.6	767.5
22.5°	974.3	969.3	873.1	838.7	864.5	864.8	835.4	801.0	797.3	826.1	810.5
25°	1006.4	1026.2	935.6	927.3	938.6	927.3	898.5	876.1	861.5	904.5	861.5
27.5°	1082.5	1054.4	945.2	992.2	999.1	942.5	978.6	952.1	911.8	965.0	982.6
30°	1136.7	1153.3	1012.7	1083.5	1075.2	1022.9	1037.8	1036.8	988.5	1092.4	1080.2
32.5°	1230.0	1210.2	1122.9	1117.2	1137.1	1134.8	1109.6	1121.9	1133.8	1209.2	1227.4
35°	1325.7	1346.8	1193.3	1231.4	1225.7	1190.0	1255.8	1248.2	1283.6	1438.5	1387.2
37.5°	1541.4	1440.5	1351.5	1346.5	1384.2	1389.8	1368.7	1402.1	1478.5	1597.6	1652.5
40°	1682.6	1636.6	1485.4	1491.4	1439.1	1529.1	1469.6	1577.1	1635.3	1836.1	1816.6
42.5°	1896.3	1784.2	1639.0	1658.8	1648.2	1604.9	1683.3	1738.5	1821.9	1975.1	2074.0
45°	2055.5	1901.6	1832.8	1820.6	1819.3	1894.7	1884.8	1973.1	2002.9	2118.0	2200.1
47.5°	2176.2	2045.6	1943.7	1957.5	1917.2	2132.6	2017.8	2045.2	2105.4	2213.9	2309.6
50°	2319.5	2173.9	2058.1	2092.5	2190.8	2273.5	2169.6	2122.6	2152.1	2280.1	2386.6
52.5°	2452.1	2299.0	2171.6	2200.4	2360.8	2323.1	2311.9	2193.1	2189.5	2292.4	2413.4
55°	2607.3	2434.6	2322.1	2413.4	2470.3	2423.7	2405.8	2261.3	2171.9	2229.2	2343.3
57.5°	2759.5	2568.9	2457.1	2476.0	2548.1	2501.8	2367.8	2145.1	2033.6	2044.9	2160.4
60°	2902.1	2692.3	2600.0	2581.8	2639.4	2457.8	2223.2	1932.4	1784.5	1757.4	1857.3
62.5°	3024.2	2795.6	2708.2	2658.6	2713.5	2459.4	1997.9	1591.0	1428.5	1336.6	1414.3
65°	3121.1	2881.2	2819.0	2793.2	2813.1	2309.9	1646.9	1168.2	969.0	867.1	912.4
67.5°	3185.6	2929.2	2900.8	2934.5	2669.8	1923.8	1220.1	747.7	563.4	507.8	536.3
70°	3252.4	2971.6	2970.6	2855.8	2263.9	1326.3	712.6	431.1	327.9	306.4	324.2
72.5°	3229.9	2921.3	2936.2	2497.5	1568.8	709.0	376.2	243.8	222.0	229.6	245.5
75°	2991.1	2655.9	2584.1	1795.4	889.9	329.5	216.7	184.6	183.3	194.9	210.4
77.5°	2169.6	1849.7	1659.8	1017.6	381.5	178.3	159.5	154.2	154.2	163.4	177.3
80°	715.3	619.0	645.1	393.7	180.3	123.1	124.4	126.7	126.0	128.4	139.9
82.5°	117.4	121.7	188.2	160.8	108.8	84.0	94.0	98.6	99.9	89.3	101.6
85°	41.7	47.0	80.1	74.4	62.9	42.3	61.9	69.1	68.2	59.6	65.8
87.5°	12.9	16.5	29.1	22.5	18.9	11.6	23.2	27.1	34.1	13.9	12.6
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)