

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: P367152

Luminaire Tested: **MSA-SA2A-730-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367152
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-730-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: 7434 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

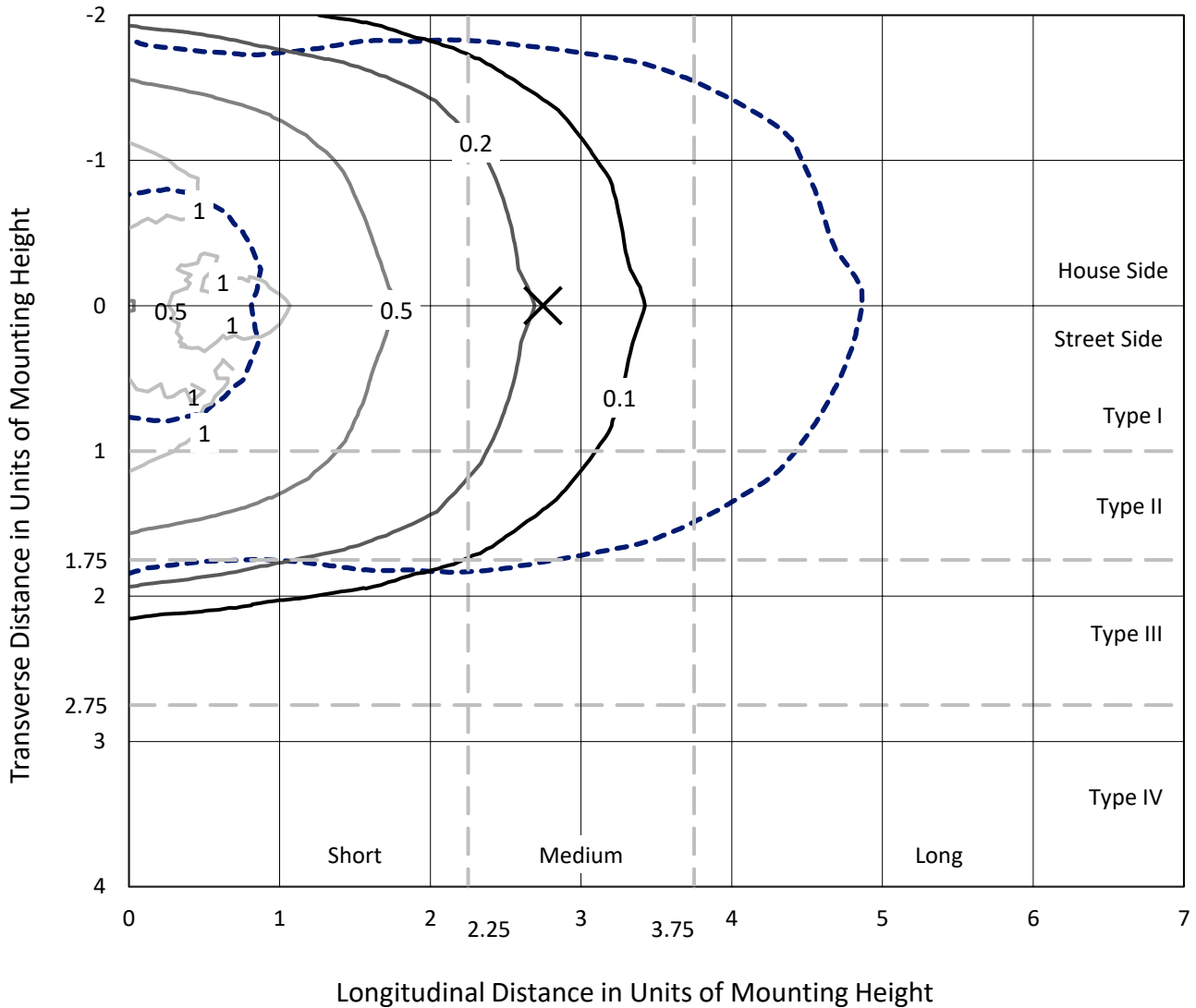
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

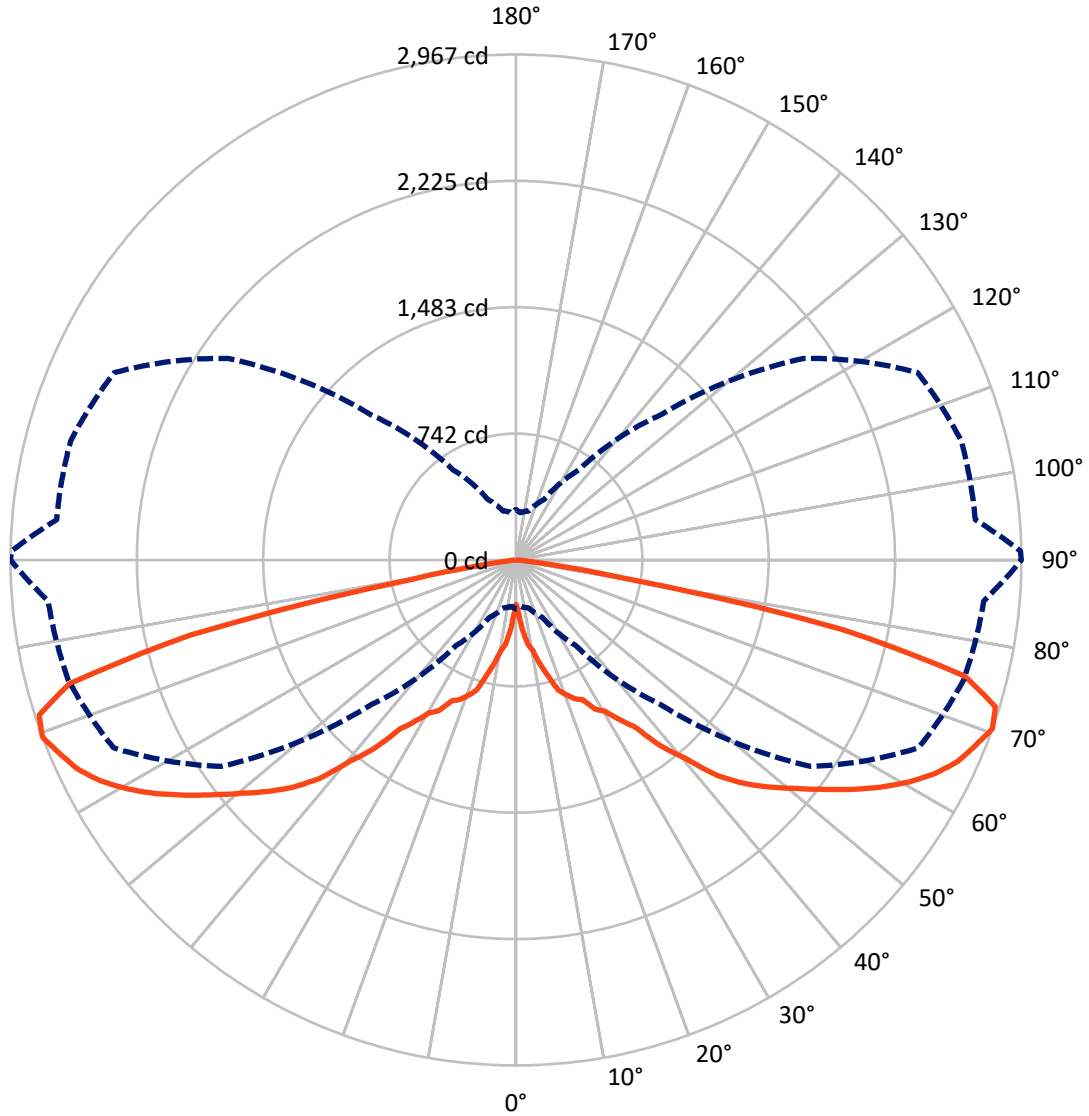
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 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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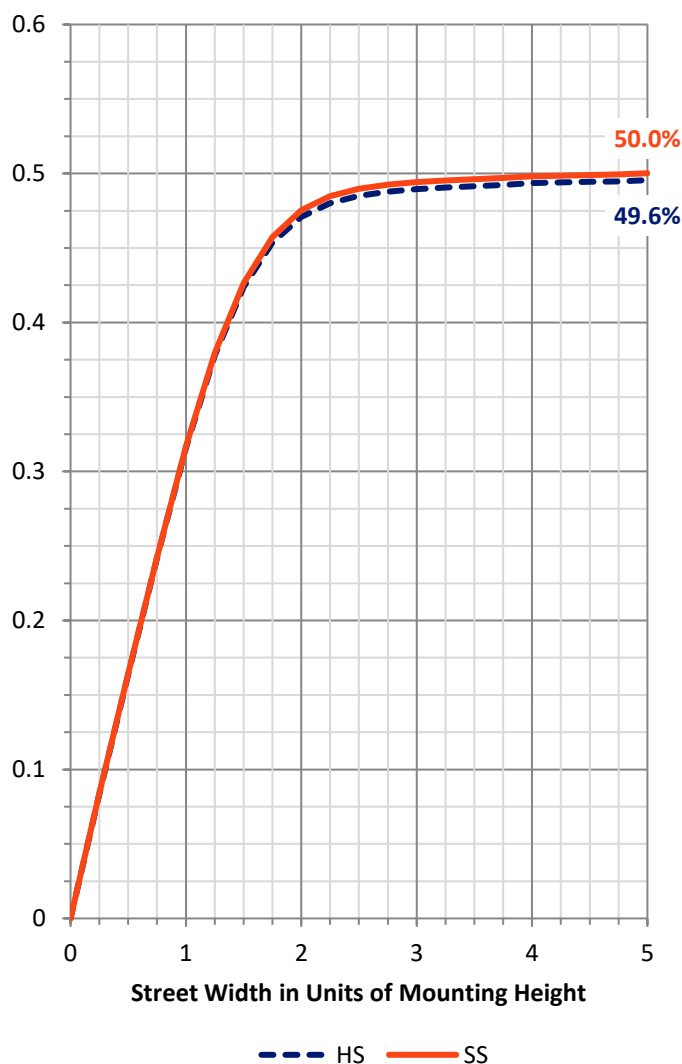
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3703.2	0.0	3703.2
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	3730.8	0.0	3730.8
	% Fixture	50.2	0.0	50.2
Total	Lumens	7434.0	0.0	7434.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.4	0.5
10°-20°	180.4	2.4
20°-30°	390.0	5.2
30°-40°	744.2	10.0
40°-50°	1351.9	18.2
50°-60°	1899.1	25.5
60°-70°	1813.2	24.4
70°-80°	930.6	12.5
80°-90°	85.3	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°	7434.0	100.0
0°-180°	7434.0	100.0

Coefficient of Utilization



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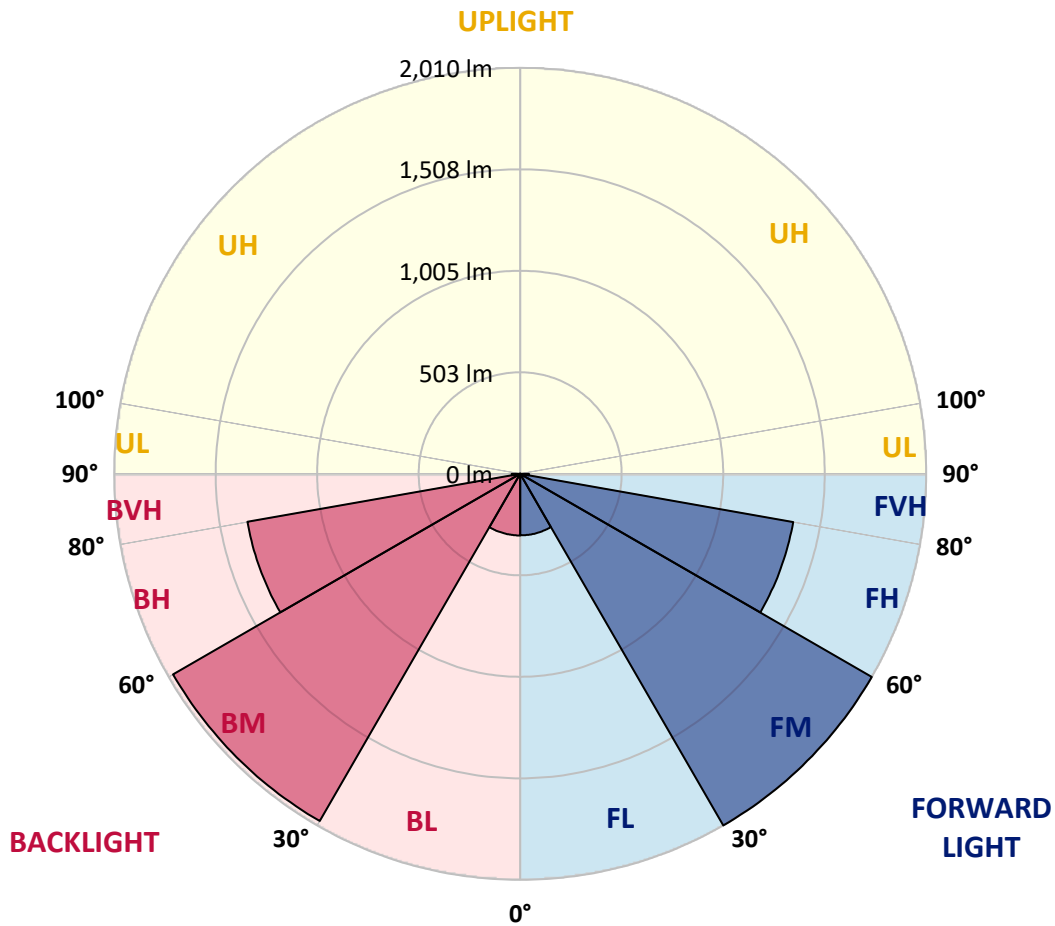
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	304.6	4.1			
FM (30°-60°)	2010.2	27.0			
FH (60°-80°)	1372.6	18.5			G1/1800
FVH (80°-90°)	43.3	0.6			G1/100
BL (0°-30°)	305.2	4.1	B1/500		
BM (30°-60°)	1984.9	26.7	B2/2500		
BH (60°-80°)	1371.2	18.4	B3/2500		G3/2500
BVH (80°-90°)	42.0	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°	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9
2.5°	316.1	304.3	289.5	298.3	301.9	308.2	307.3	304.3	291.3	313.0	315.4
5°	395.6	376.9	370.0	368.8	370.6	364.6	384.1	378.4	389.0	408.5	413.1
7.5°	450.4	436.6	421.8	426.3	407.6	404.9	430.2	452.8	458.6	494.4	496.8
10°	476.3	462.8	466.7	464.0	461.9	479.4	491.1	507.7	531.5	534.8	539.9
12.5°	498.3	503.8	520.9	520.3	548.6	579.7	575.2	592.3	596.3	637.8	625.2
15°	554.1	565.2	564.0	574.6	586.9	637.8	638.1	667.4	694.2	710.4	706.2
17.5°	635.7	639.6	623.4	624.0	659.8	680.6	703.8	698.7	768.6	800.5	802.6
20°	684.5	694.5	675.8	651.1	714.7	743.3	756.2	726.4	801.1	844.2	844.2
22.5°	769.8	744.2	715.9	699.3	755.3	785.8	784.3	775.8	815.6	891.8	884.6
25°	816.8	802.3	788.2	792.4	820.7	836.4	857.2	837.6	874.9	931.6	907.8
27.5°	906.0	879.2	809.6	865.0	865.0	853.3	897.2	906.6	882.2	974.4	992.1
30°	1006.9	997.6	899.0	957.8	939.7	906.6	990.9	984.9	943.9	1037.9	1029.8
32.5°	1102.4	1133.1	1039.7	1007.5	1034.6	1047.3	1003.0	1021.1	1028.9	1119.6	1115.7
35°	1248.8	1274.8	1150.9	1142.8	1097.6	1085.8	1119.6	1125.6	1126.2	1221.7	1204.3
37.5°	1502.2	1464.9	1342.5	1285.0	1290.1	1276.0	1282.6	1235.0	1241.6	1380.2	1388.9
40°	1687.5	1645.3	1509.2	1467.9	1366.6	1427.2	1373.6	1368.8	1355.5	1535.1	1530.2
42.5°	1892.1	1834.2	1683.6	1628.5	1520.9	1496.2	1471.5	1527.2	1523.6	1689.9	1726.7
45°	2046.7	1929.8	1851.1	1816.8	1752.3	1691.7	1668.2	1693.2	1681.8	1805.3	1869.5
47.5°	2144.3	2042.7	1952.4	1880.0	1818.3	1966.8	1847.8	1814.4	1791.2	1929.5	1991.2
50°	2222.0	2104.8	1998.2	1974.0	2022.9	2154.2	1966.5	1892.7	1921.0	2022.9	2106.9
52.5°	2243.1	2119.0	2023.2	2007.8	2139.8	2163.6	2133.1	2009.0	2001.5	2134.9	2236.5
55°	2178.6	2059.6	2014.1	2098.2	2244.0	2224.1	2270.5	2191.3	2137.9	2249.4	2377.2
57.5°	2012.6	1894.5	1883.7	2004.8	2188.6	2357.9	2380.8	2318.1	2248.2	2366.3	2517.0
60°	1739.9	1632.1	1659.5	1793.3	2070.5	2311.5	2433.2	2376.0	2354.3	2471.8	2646.5
62.5°	1315.4	1231.4	1304.6	1491.1	1854.7	2251.5	2505.5	2496.5	2465.1	2583.9	2761.0
65°	838.8	794.5	869.2	1058.7	1520.0	2142.5	2540.2	2552.2	2581.1	2670.3	2849.6
67.5°	487.5	464.0	509.5	664.6	1082.5	1759.2	2475.7	2648.6	2663.7	2714.9	2907.7
70°	288.3	273.0	291.6	373.3	612.8	1198.5	2111.7	2606.5	2720.3	2755.9	2966.5
72.5°	219.9	205.5	197.3	220.8	320.0	619.1	1427.8	2209.4	2674.8	2728.8	2941.8
75°	190.1	176.3	166.6	168.7	190.4	294.1	774.0	1580.3	2279.3	2484.7	2717.3
77.5°	163.3	150.9	144.0	143.4	146.1	161.5	323.6	856.9	1427.5	1786.0	1959.0
80°	130.8	121.1	119.6	119.6	115.7	114.5	160.9	326.0	543.2	644.2	617.6
82.5°	95.5	85.9	95.5	94.3	88.3	83.5	102.4	141.0	167.5	132.3	104.5
85°	64.5	55.7	63.0	64.2	58.5	43.4	61.5	70.5	72.3	45.2	37.4
87.5°	22.6	22.0	35.6	31.0	25.3	14.8	22.6	24.4	25.6	16.0	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



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CANDELA DISTRIBUTION (continued):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9	260.9
2.5°	316.4	312.7	294.7	297.4	304.3	307.6	310.9	297.4	290.7	311.8	309.7
5°	414.3	401.0	386.3	384.1	385.0	372.1	379.6	376.3	377.8	391.4	394.1
7.5°	496.2	480.3	460.7	445.3	418.8	397.7	415.5	424.5	427.2	451.3	460.4
10°	540.5	527.0	521.2	492.3	483.6	480.9	476.6	462.2	478.1	472.4	476.9
12.5°	627.3	624.6	594.7	575.8	577.6	582.7	556.2	541.7	520.9	553.5	541.7
15°	701.1	712.9	683.0	648.4	631.2	639.9	619.8	598.7	580.0	589.9	577.3
17.5°	795.4	795.1	737.0	699.9	698.4	697.8	668.0	621.6	643.9	636.9	637.5
20°	845.4	837.3	765.0	722.2	758.6	745.7	718.9	659.2	685.1	693.6	699.0
22.5°	887.3	882.8	795.1	763.8	787.3	787.6	760.8	729.4	726.1	752.3	738.2
25°	916.5	934.6	852.0	844.5	854.8	844.5	818.3	797.8	784.6	823.7	784.6
27.5°	985.8	960.2	860.8	903.6	909.9	858.4	891.2	867.1	830.4	878.9	894.8
30°	1035.2	1050.3	922.2	986.7	979.2	931.6	945.1	944.2	900.3	994.9	983.7
32.5°	1120.2	1102.1	1022.6	1017.5	1035.5	1033.4	1010.5	1021.7	1032.5	1101.2	1117.8
35°	1207.3	1226.5	1086.8	1121.4	1116.3	1083.7	1143.7	1136.8	1169.0	1310.0	1263.3
37.5°	1403.7	1311.8	1230.8	1226.2	1260.6	1265.7	1246.4	1276.9	1346.5	1454.9	1504.9
40°	1532.4	1490.5	1352.8	1358.2	1310.6	1392.6	1338.3	1436.2	1489.3	1672.2	1654.4
42.5°	1727.0	1624.9	1492.6	1510.7	1501.0	1461.6	1533.0	1583.3	1659.2	1798.7	1888.8
45°	1871.9	1731.8	1669.1	1658.0	1656.8	1725.5	1716.4	1796.9	1824.0	1928.9	2003.6
47.5°	1981.9	1862.9	1770.1	1782.7	1746.0	1942.1	1837.6	1862.6	1917.4	2016.2	2103.3
50°	2112.3	1979.8	1874.3	1905.7	1995.1	2070.5	1975.9	1933.1	1959.9	2076.5	2173.5
52.5°	2233.2	2093.7	1977.7	2003.9	2150.0	2115.7	2105.4	1997.2	1993.9	2087.6	2197.9
55°	2374.5	2217.2	2114.7	2197.9	2249.7	2207.2	2191.0	2059.3	1978.0	2030.1	2134.0
57.5°	2513.1	2339.5	2237.7	2254.8	2320.5	2278.3	2156.3	1953.6	1852.0	1862.3	1967.4
60°	2642.9	2451.9	2367.8	2351.3	2403.7	2238.3	2024.7	1759.8	1625.2	1600.4	1691.4
62.5°	2754.1	2545.9	2466.4	2421.2	2471.2	2239.8	1819.5	1448.9	1301.0	1217.2	1288.0
65°	2842.4	2623.9	2567.3	2543.8	2561.9	2103.6	1499.8	1063.9	882.5	789.7	831.0
67.5°	2901.1	2667.6	2641.7	2672.4	2431.4	1752.0	1111.2	680.9	513.1	462.5	488.4
70°	2962.0	2706.2	2705.3	2600.7	2061.7	1207.9	649.0	392.6	298.6	279.0	295.3
72.5°	2941.5	2660.4	2673.9	2274.4	1428.7	645.7	342.6	222.1	202.2	209.1	223.6
75°	2724.0	2418.8	2353.4	1635.1	810.5	300.1	197.3	168.1	166.9	177.5	191.6
77.5°	1975.9	1684.5	1511.6	926.8	347.4	162.4	145.2	140.4	140.4	148.8	161.5
80°	651.4	563.7	587.5	358.5	164.2	112.1	113.3	115.4	114.8	116.9	127.4
82.5°	107.0	110.9	171.4	146.4	99.1	76.5	85.6	89.8	91.0	81.3	92.5
85°	38.0	42.8	72.9	67.8	57.2	38.6	56.3	63.0	62.1	54.2	60.0
87.5°	11.8	15.1	26.5	20.5	17.2	10.5	21.1	24.7	31.0	12.7	11.4
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)