

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: P367438

Luminaire Tested: **MSA-SA2C-740-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367438
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-SA2C-740-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: 12669 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

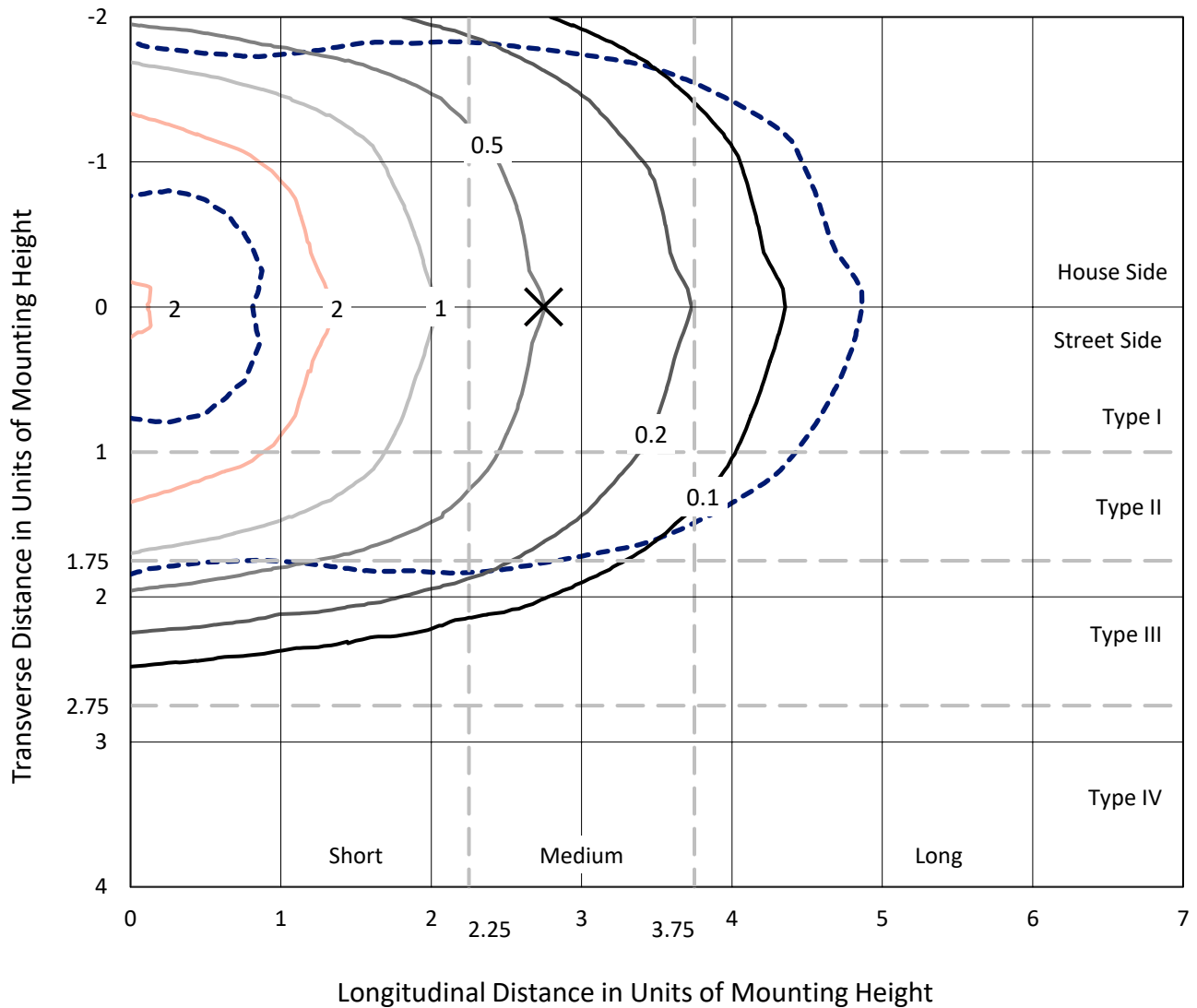
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

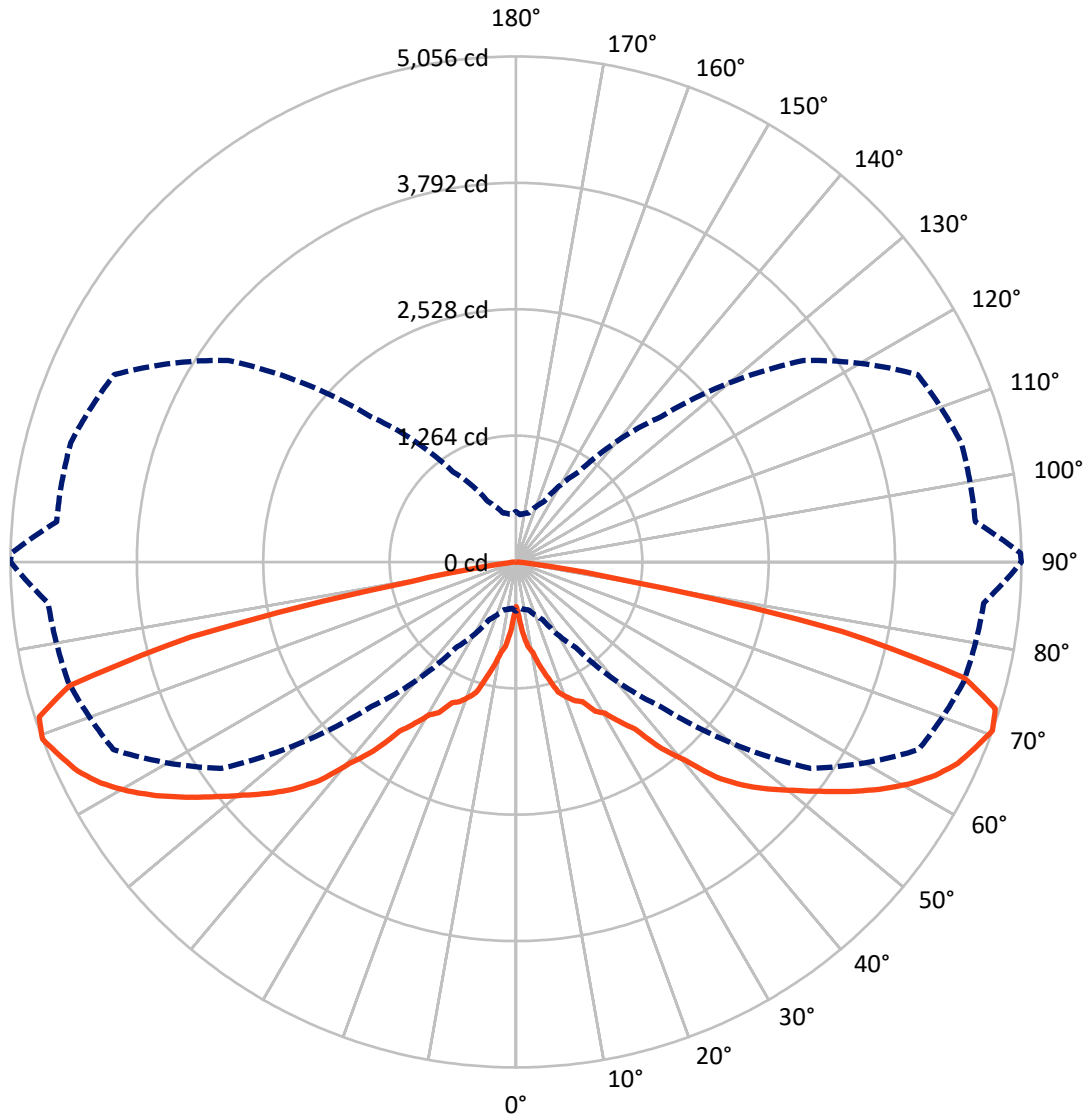
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 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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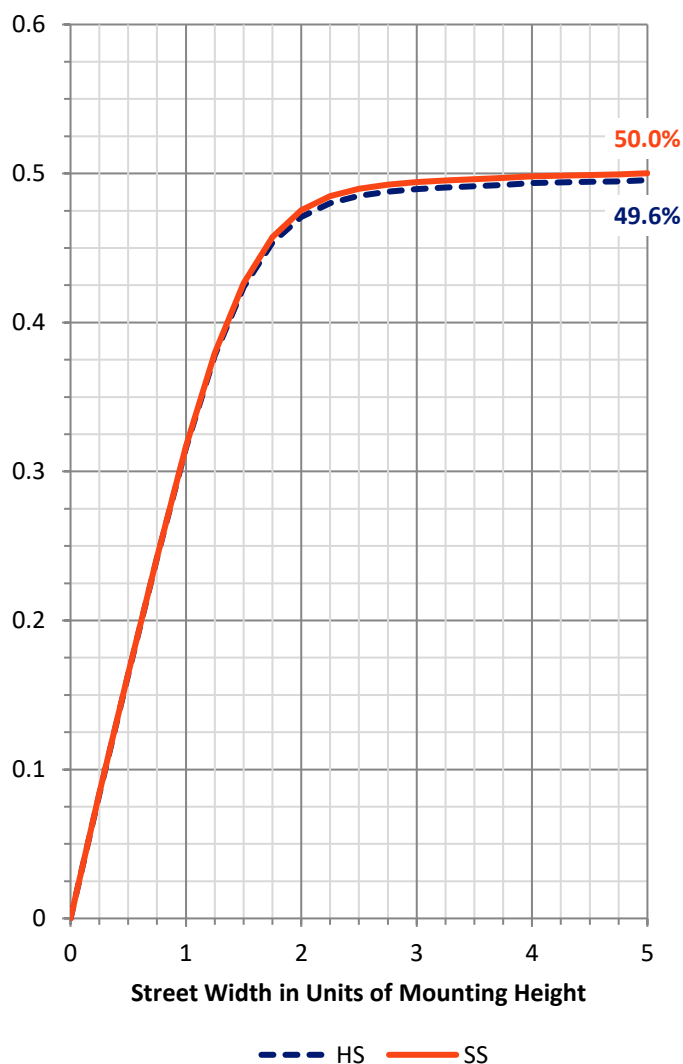
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6311.0	0.0	6311.0
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6358.0	0.0	6358.0
	% Fixture	50.2	0.0	50.2
Total	Lumens	12669.0	0.0	12669.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.1	0.5
10°-20°	307.4	2.4
20°-30°	664.7	5.2
30°-40°	1268.2	10.0
40°-50°	2303.9	18.2
50°-60°	3236.4	25.5
60°-70°	3090.1	24.4
70°-80°	1585.9	12.5
80°-90°	145.4	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°	12669.0	100.0
0°-180°	12669.0	100.0

Coefficient of Utilization



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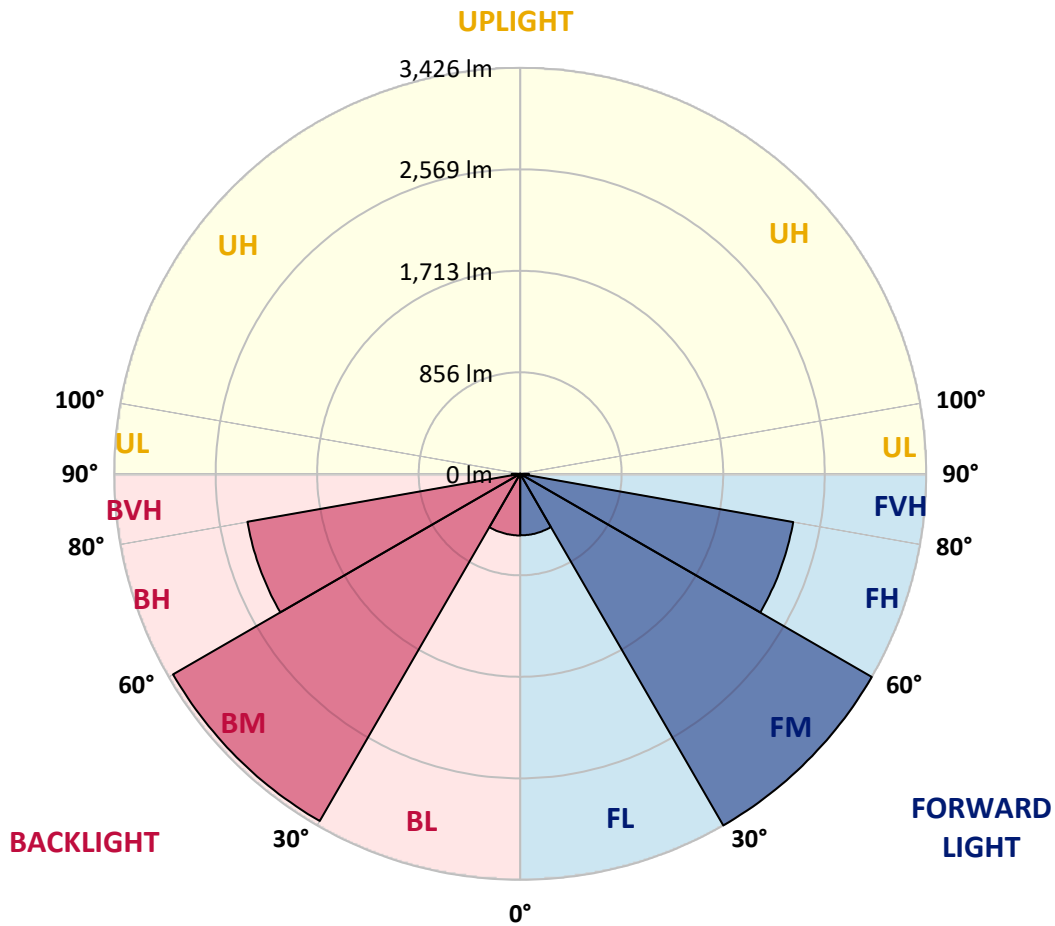
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	519.1	4.1			
FM (30°-60°)	3425.8	27.0			
FH (60°-80°)	2339.3	18.5			G2/5000
FVH (80°-90°)	73.8	0.6			G1/100
BL (0°-30°)	520.1	4.1	B2/1000		
BM (30°-60°)	3382.6	26.7	B3/5000		
BH (60°-80°)	2336.7	18.4	B3/2500		G3/2500
BVH (80°-90°)	71.6	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°	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7
2.5°	538.6	518.6	493.4	508.3	514.5	525.3	523.7	518.6	496.5	533.5	537.6
5°	674.2	642.3	630.5	628.5	631.6	621.3	654.7	644.9	662.9	696.2	703.9
7.5°	767.6	744.0	718.8	726.5	694.7	690.1	733.2	771.7	781.5	842.6	846.7
10°	811.8	788.7	795.3	790.7	787.1	816.9	836.9	865.2	905.7	911.4	920.1
12.5°	849.3	858.5	887.8	886.7	935.0	987.9	980.2	1009.5	1016.1	1087.0	1065.4
15°	944.2	963.2	961.2	979.2	1000.2	1087.0	1087.5	1137.3	1183.0	1210.7	1203.5
17.5°	1083.4	1090.1	1062.3	1063.4	1124.5	1159.9	1199.4	1190.7	1309.8	1364.3	1367.8
20°	1166.6	1183.5	1151.7	1109.6	1217.9	1266.7	1288.8	1237.9	1365.3	1438.7	1438.7
22.5°	1311.9	1268.2	1220.0	1191.7	1287.2	1339.1	1336.5	1322.2	1389.9	1519.8	1507.5
25°	1392.0	1367.3	1343.2	1350.4	1398.7	1425.4	1460.8	1427.4	1491.1	1587.6	1547.0
27.5°	1544.0	1498.3	1379.7	1474.1	1474.1	1454.1	1529.1	1545.0	1503.4	1660.5	1690.8
30°	1716.0	1700.1	1532.2	1632.3	1601.5	1545.0	1688.8	1678.5	1608.7	1768.9	1755.0
32.5°	1878.7	1931.1	1771.9	1717.0	1763.2	1784.8	1709.3	1740.1	1753.5	1908.0	1901.3
35°	2128.3	2172.4	1961.4	1947.5	1870.5	1850.5	1908.0	1918.3	1919.3	2082.1	2052.3
37.5°	2560.1	2496.4	2288.0	2189.9	2198.6	2174.5	2185.8	2104.7	2116.0	2352.1	2367.0
40°	2875.9	2804.0	2571.9	2501.6	2329.0	2432.2	2340.8	2332.6	2310.0	2616.1	2607.8
42.5°	3224.5	3125.9	2869.2	2775.2	2591.9	2549.8	2507.7	2602.7	2596.5	2880.0	2942.6
45°	3487.9	3288.7	3154.7	3096.1	2986.3	2883.1	2843.0	2885.6	2866.1	3076.6	3186.0
47.5°	3654.3	3481.2	3327.2	3204.0	3098.7	3351.8	3149.0	3092.0	3052.5	3288.2	3393.4
50°	3786.7	3587.0	3405.2	3364.2	3447.3	3671.2	3351.3	3225.5	3273.8	3447.3	3590.6
52.5°	3822.7	3611.1	3447.9	3421.7	3646.6	3687.1	3635.3	3423.7	3410.9	3638.4	3811.4
55°	3712.8	3510.0	3432.5	3575.7	3824.2	3790.3	3869.4	3734.4	3643.5	3833.5	4051.2
57.5°	3429.9	3228.6	3210.1	3416.5	3729.7	4018.3	4057.3	3950.5	3831.4	4032.7	4289.4
60°	2965.2	2781.4	2828.1	3056.1	3528.5	3939.2	4146.7	4049.1	4012.1	4212.4	4510.2
62.5°	2241.8	2098.5	2223.3	2541.1	3160.8	3837.1	4269.9	4254.5	4201.1	4403.4	4705.3
65°	1429.5	1354.0	1481.3	1804.3	2590.4	3651.2	4329.0	4349.5	4398.8	4550.8	4856.3
67.5°	830.8	790.7	868.3	1132.7	1844.8	2998.1	4219.1	4513.8	4539.5	4626.8	4955.4
70°	491.4	465.2	497.0	636.2	1044.4	2042.5	3598.8	4441.9	4636.0	4696.6	5055.5
72.5°	374.8	350.2	336.3	376.4	545.3	1055.2	2433.3	3765.2	4558.5	4650.4	5013.4
75°	324.0	300.4	283.9	287.5	324.5	501.1	1319.1	2693.1	3884.3	4234.5	4630.9
77.5°	278.3	257.2	245.4	244.4	249.0	275.2	551.5	1460.3	2432.8	3043.8	3338.5
80°	222.8	206.4	203.8	203.8	197.2	195.1	274.2	555.6	925.8	1097.8	1052.6
82.5°	162.8	146.3	162.8	160.7	150.4	142.2	174.6	240.3	285.5	225.4	178.2
85°	109.9	95.0	107.3	109.4	99.6	73.9	104.7	120.1	123.2	77.0	63.7
87.5°	38.5	37.5	60.6	52.9	43.1	25.2	38.5	41.6	43.6	27.2	18.5
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°	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7	444.7
2.5°	539.1	533.0	502.2	506.8	518.6	524.2	529.9	506.8	495.5	531.4	527.8
5°	706.0	683.4	658.3	654.7	656.2	634.1	647.0	641.3	643.9	667.0	671.6
7.5°	845.7	818.4	785.1	758.9	713.7	677.8	708.1	723.5	728.1	769.2	784.6
10°	921.1	898.0	888.3	839.0	824.1	819.5	812.3	787.6	814.9	805.1	812.8
12.5°	1069.0	1064.4	1013.6	981.2	984.3	993.0	947.8	923.2	887.8	943.2	923.2
15°	1194.8	1214.8	1164.0	1105.0	1075.7	1090.6	1056.2	1020.2	988.4	1005.3	983.8
17.5°	1355.5	1355.0	1255.9	1192.8	1190.2	1189.2	1138.3	1059.3	1097.3	1085.4	1086.5
20°	1440.8	1426.9	1303.7	1230.8	1292.9	1270.8	1225.1	1123.4	1167.6	1182.0	1191.2
22.5°	1512.1	1504.4	1355.0	1301.6	1341.7	1342.2	1296.5	1243.1	1237.4	1282.1	1258.0
25°	1561.9	1592.7	1452.1	1439.2	1456.7	1439.2	1394.5	1359.6	1337.0	1403.8	1337.0
27.5°	1680.0	1636.4	1466.9	1539.9	1550.6	1462.8	1518.8	1477.7	1415.1	1497.8	1525.0
30°	1764.2	1789.9	1571.7	1681.6	1668.7	1587.6	1610.7	1609.2	1534.2	1695.4	1676.4
32.5°	1909.0	1878.2	1742.7	1733.9	1764.7	1761.2	1722.1	1741.1	1759.6	1876.7	1904.9
35°	2057.4	2090.3	1852.0	1911.1	1902.4	1846.9	1949.1	1937.3	1992.2	2232.5	2152.9
37.5°	2392.2	2235.6	2097.5	2089.8	2148.3	2157.0	2124.2	2176.0	2294.6	2479.5	2564.7
40°	2611.4	2540.1	2305.4	2314.7	2233.5	2373.2	2280.8	2447.6	2538.0	2849.7	2819.4
42.5°	2943.1	2769.1	2543.7	2574.5	2558.0	2490.8	2612.5	2698.2	2827.6	3065.3	3218.9
45°	3190.1	2951.3	2844.5	2825.6	2823.5	2940.6	2925.2	3062.3	3108.5	3287.1	3414.5
47.5°	3377.5	3174.7	3016.6	3038.1	2975.5	3309.7	3131.6	3174.2	3267.6	3436.0	3584.4
50°	3599.8	3373.9	3194.2	3247.6	3400.1	3528.5	3367.2	3294.3	3340.0	3538.7	3704.1
52.5°	3805.7	3568.0	3370.3	3415.0	3664.0	3605.5	3588.0	3403.7	3398.1	3557.7	3745.7
55°	4046.5	3778.5	3604.0	3745.7	3834.0	3761.6	3733.9	3509.5	3370.8	3459.7	3636.8
57.5°	4282.7	3987.0	3813.4	3842.7	3954.6	3882.8	3674.8	3329.3	3156.2	3173.7	3352.9
60°	4504.0	4178.5	4035.3	4007.0	4096.4	3814.5	3450.4	2999.1	2769.6	2727.5	2882.5
62.5°	4693.5	4338.7	4203.2	4126.1	4211.4	3817.0	3100.8	2469.2	2217.1	2074.4	2195.0
65°	4843.9	4471.7	4375.2	4335.1	4365.9	3585.0	2556.0	1813.0	1503.9	1345.8	1416.1
67.5°	4944.1	4546.1	4502.0	4554.4	4143.6	2985.7	1893.6	1160.4	874.4	788.2	832.3
70°	5047.8	4611.9	4610.3	4432.2	3513.6	2058.4	1106.0	669.0	508.8	475.5	503.2
72.5°	5012.9	4533.8	4556.9	3876.1	2434.8	1100.3	583.8	378.4	344.5	356.3	381.0
75°	4642.2	4122.0	4010.6	2786.5	1381.2	511.4	336.3	286.5	284.5	302.4	326.6
77.5°	3367.2	2870.7	2576.0	1579.4	592.0	276.8	247.5	239.3	239.3	253.6	275.2
80°	1110.1	960.7	1001.2	611.0	279.8	191.0	193.1	196.7	195.6	199.2	217.2
82.5°	182.3	189.0	292.2	249.5	168.9	130.4	145.8	153.0	155.1	138.6	157.6
85°	64.7	72.9	124.3	115.5	97.6	65.7	96.0	107.3	105.8	92.4	102.2
87.5°	20.0	25.7	45.2	34.9	29.3	18.0	35.9	42.1	52.9	21.6	19.5
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)