

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: P368208

Luminaire Tested: **MSA-SA4A-730-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368208  
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-SA4A-730-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14500 lumens  
Efficiency: N/A  
Efficacy: 112.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U0 - G4

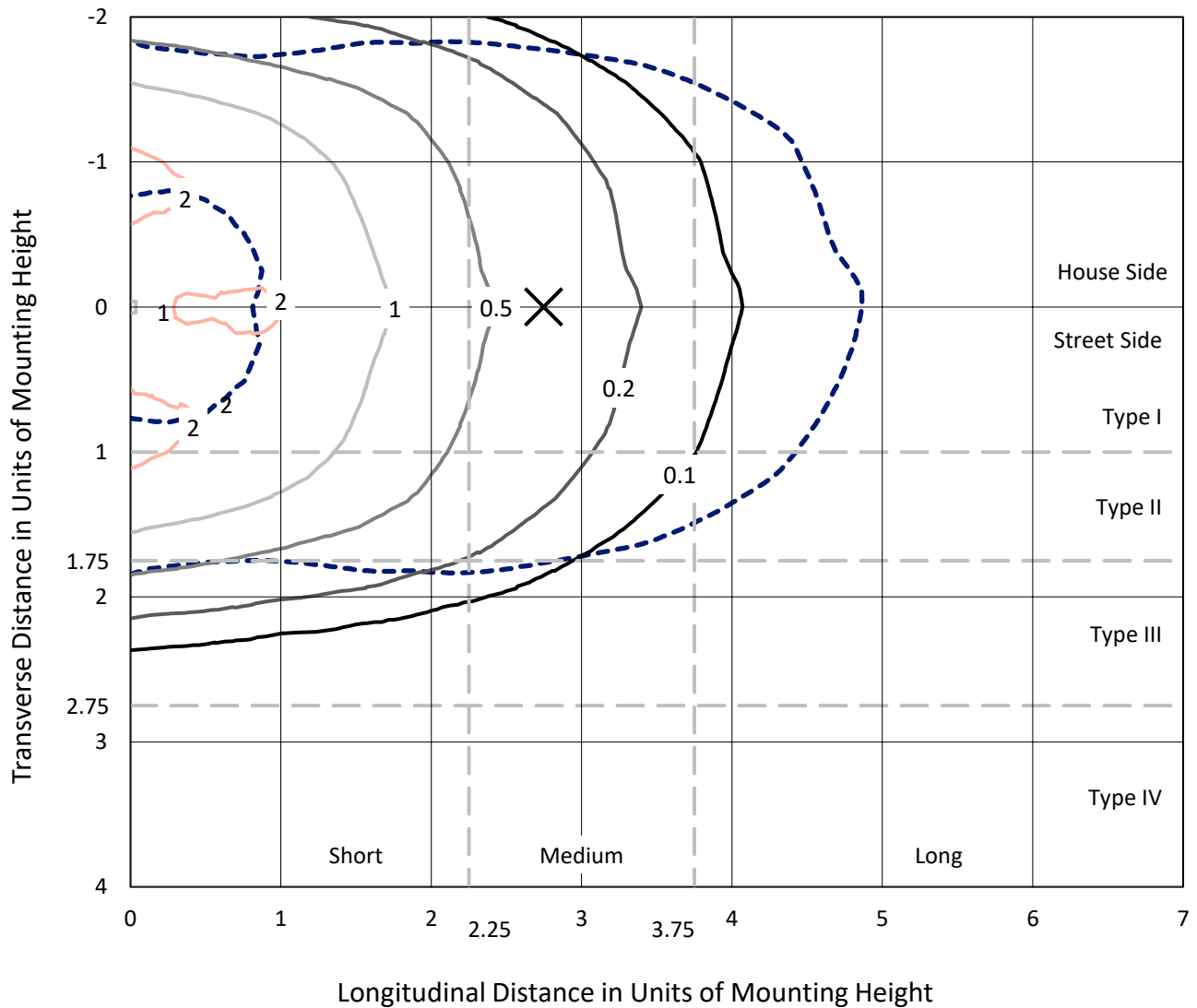
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

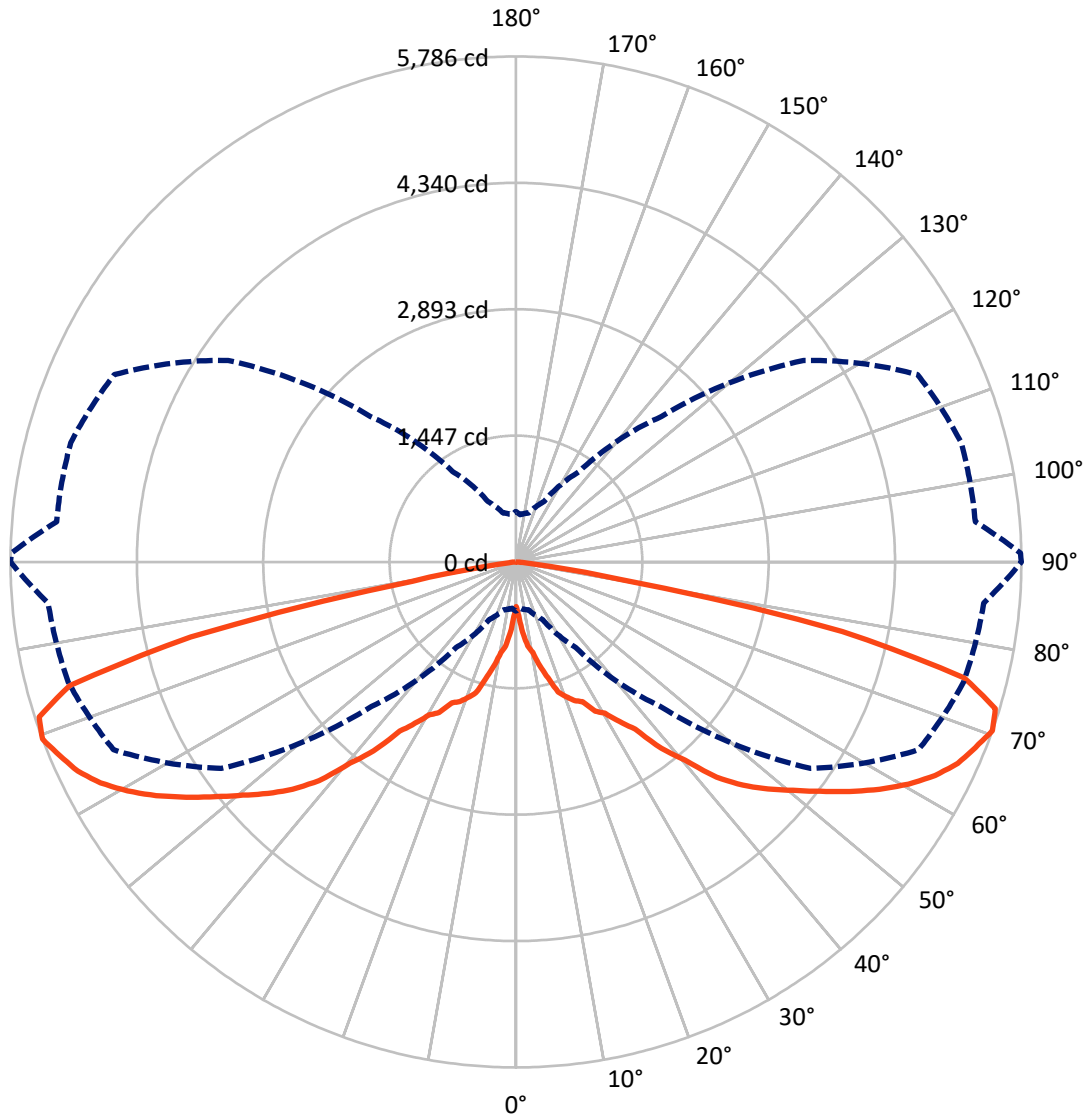
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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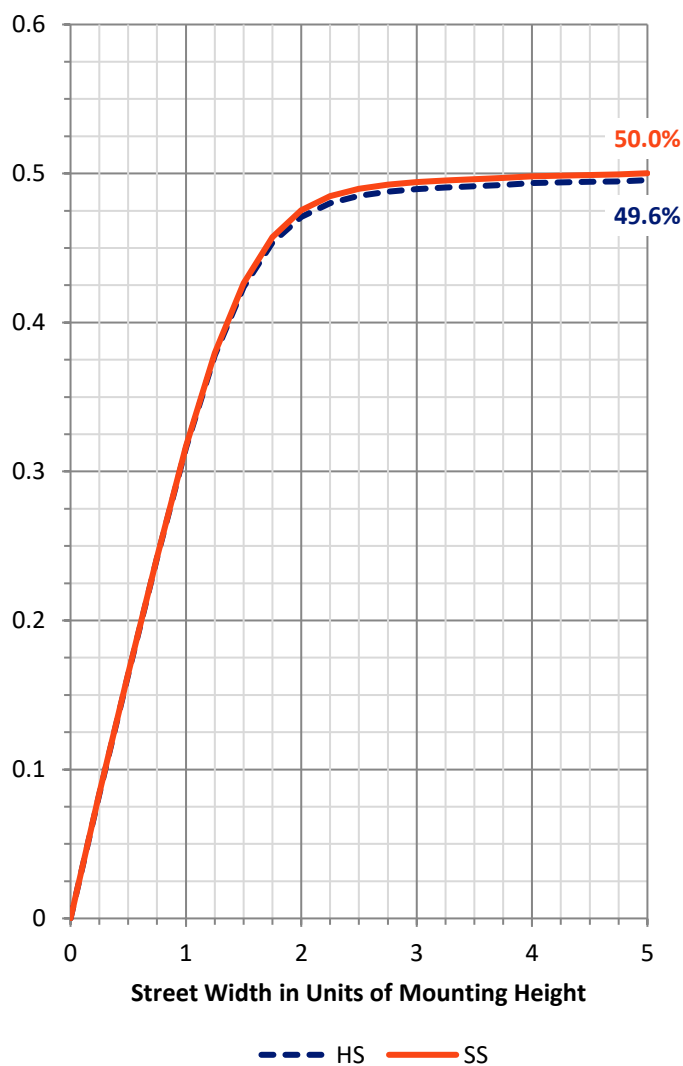
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7223.1	0.0	7223.1
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	7276.9	0.0	7276.9
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	14500.0	0.0	14500.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.8	0.5
10°-20°	351.9	2.4
20°-30°	760.8	5.2
30°-40°	1451.5	10.0
40°-50°	2636.8	18.2
50°-60°	3704.1	25.5
60°-70°	3536.7	24.4
70°-80°	1815.1	12.5
80°-90°	166.4	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°	14500.0	100.0
0°-180°	14500.0	100.0

**Coefficient of Utilization**



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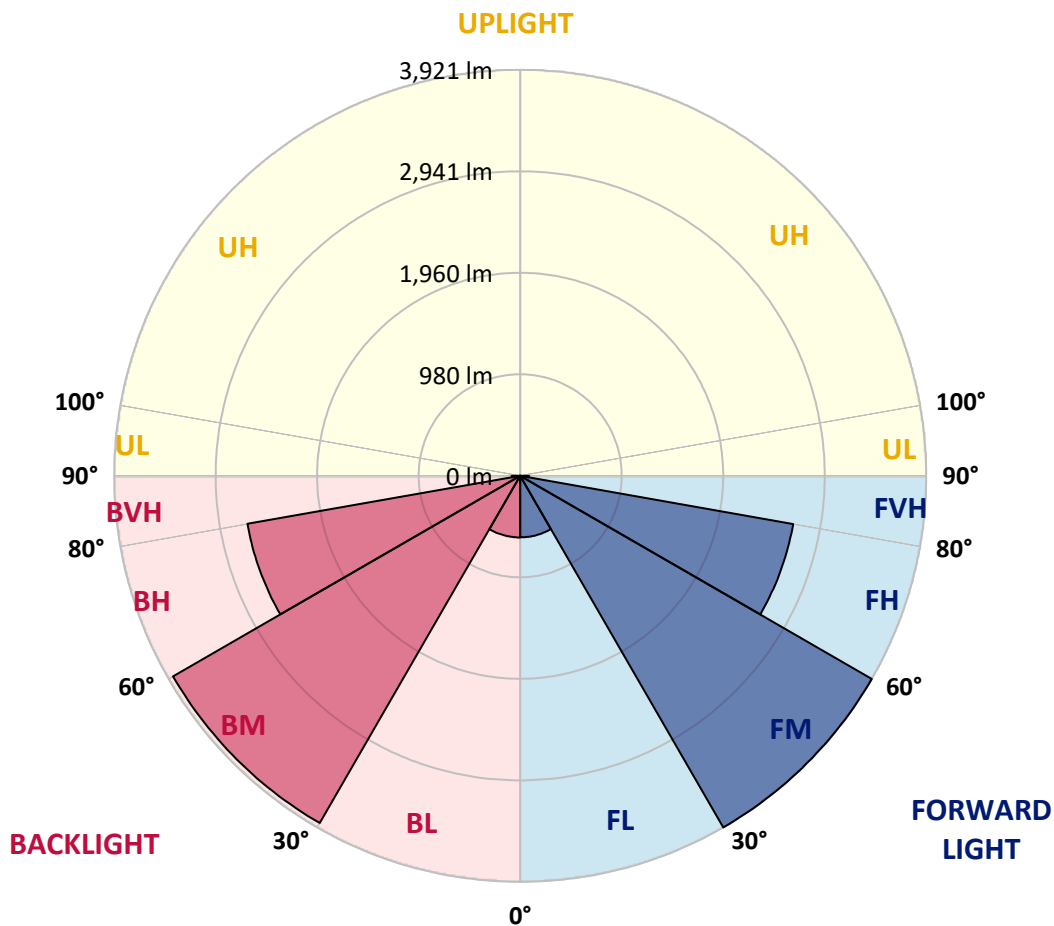
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	594.1	4.1			
FM (30°-60°)	3921.0	27.0			
FH (60°-80°)	2677.4	18.5			G2/5000
FVH (80°-90°)	84.4	0.6			G1/100
BL (0°-30°)	595.3	4.1	B2/1000		
BM (30°-60°)	3871.5	26.7	B3/5000		
BH (60°-80°)	2674.4	18.4	B4/5000		G4/5000
BVH (80°-90°)	82.0	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9
2.5°	616.5	593.5	564.7	581.8	588.8	601.2	599.4	593.5	568.3	610.6	615.3
5°	771.6	735.2	721.7	719.3	722.8	711.1	749.3	738.1	758.7	796.9	805.7
7.5°	878.6	851.5	822.7	831.5	795.1	789.8	839.2	883.3	894.4	964.4	969.1
10°	929.1	902.7	910.3	905.0	900.9	935.0	957.9	990.2	1036.6	1043.1	1053.1
12.5°	972.0	982.6	1016.1	1014.9	1070.1	1130.7	1121.9	1155.3	1163.0	1244.1	1219.4
15°	1080.7	1102.5	1100.1	1120.7	1144.8	1244.1	1244.7	1301.7	1354.0	1385.7	1377.5
17.5°	1240.0	1247.6	1215.9	1217.1	1287.0	1327.5	1372.8	1362.8	1499.1	1561.4	1565.5
20°	1335.2	1354.6	1318.1	1269.9	1393.9	1449.8	1475.0	1416.9	1562.6	1646.6	1646.6
22.5°	1501.5	1451.5	1396.3	1364.0	1473.3	1532.6	1529.7	1513.2	1590.8	1739.5	1725.4
25°	1593.2	1564.9	1537.3	1545.6	1600.8	1631.4	1671.9	1633.7	1706.6	1817.1	1770.6
27.5°	1767.1	1714.8	1579.1	1687.2	1687.2	1664.3	1750.1	1768.3	1720.7	1900.5	1935.2
30°	1964.0	1945.8	1753.6	1868.2	1832.9	1768.3	1932.8	1921.1	1841.2	2024.5	2008.6
32.5°	2150.3	2210.2	2028.0	1965.1	2018.0	2042.7	1956.3	1991.6	2006.9	2183.8	2176.1
35°	2435.9	2486.4	2244.9	2229.0	2140.9	2117.9	2183.8	2195.5	2196.7	2383.0	2348.9
37.5°	2930.1	2857.2	2618.6	2506.4	2516.4	2488.8	2501.7	2408.8	2421.8	2692.1	2709.1
40°	3291.5	3209.2	2943.6	2863.1	2665.6	2783.8	2679.2	2669.8	2643.9	2994.1	2984.7
42.5°	3690.5	3577.7	3283.9	3176.3	2966.5	2918.3	2870.2	2978.9	2971.8	3296.2	3367.9
45°	3992.0	3764.0	3610.6	3543.6	3417.9	3299.7	3253.9	3302.7	3280.3	3521.3	3646.5
47.5°	4182.4	3984.4	3808.1	3667.0	3546.6	3836.3	3604.1	3538.9	3493.7	3763.4	3883.9
50°	4334.0	4105.4	3897.4	3850.4	3945.6	4201.8	3835.7	3691.7	3746.9	3945.6	4109.5
52.5°	4375.2	4133.0	3946.2	3916.2	4173.6	4220.0	4160.7	3918.5	3903.9	4164.2	4362.2
55°	4249.4	4017.3	3928.5	4092.5	4376.9	4338.1	4428.6	4274.1	4170.1	4387.5	4636.7
57.5°	3925.6	3695.2	3674.1	3910.3	4268.8	4599.1	4643.7	4521.5	4385.1	4615.5	4909.3
60°	3393.8	3183.4	3236.9	3497.8	4038.4	4508.6	4746.0	4634.3	4592.0	4821.2	5162.0
62.5°	2565.7	2401.8	2544.6	2908.3	3617.7	4391.6	4887.0	4869.4	4808.3	5039.8	5385.4
65°	1636.1	1549.7	1695.4	2065.1	2964.8	4178.9	4954.6	4978.1	5034.5	5208.5	5558.1
67.5°	950.8	905.0	993.7	1296.4	2111.5	3431.4	4828.8	5166.2	5195.5	5295.4	5671.5
70°	562.4	532.4	568.9	728.1	1195.3	2337.7	4118.9	5083.9	5306.0	5375.4	5786.1
72.5°	429.0	400.8	384.9	430.8	624.1	1207.6	2784.9	4309.3	5217.3	5322.5	5738.0
75°	370.8	343.8	325.0	329.1	371.4	573.6	1509.7	3082.3	4445.7	4846.5	5300.1
77.5°	318.5	294.4	280.9	279.7	285.0	315.0	631.2	1671.3	2784.4	3483.7	3821.0
80°	255.0	236.2	233.3	233.3	225.7	223.3	313.8	635.9	1059.6	1256.4	1204.7
82.5°	186.3	167.5	186.3	183.9	172.2	162.8	199.8	275.0	326.7	258.0	203.9
85°	125.8	108.7	122.8	125.2	114.0	84.6	119.9	137.5	141.0	88.1	72.9
87.5°	44.1	42.9	69.3	60.5	49.4	28.8	44.1	47.6	50.0	31.1	21.2
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°	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9
2.5°	617.0	610.0	574.7	580.0	593.5	600.0	606.5	580.0	567.1	608.2	604.1
5°	808.0	782.2	753.4	749.3	751.0	725.8	740.5	734.0	736.9	763.4	768.7
7.5°	967.9	936.7	898.5	868.6	816.9	775.7	810.4	828.0	833.3	880.3	898.0
10°	1054.3	1027.8	1016.7	960.2	943.2	937.9	929.7	901.5	932.6	921.5	930.3
12.5°	1223.5	1218.2	1160.0	1123.0	1126.6	1136.5	1084.8	1056.6	1016.1	1079.5	1056.6
15°	1367.5	1390.4	1332.2	1264.7	1231.2	1248.2	1208.8	1167.7	1131.3	1150.6	1126.0
17.5°	1551.4	1550.8	1437.4	1365.1	1362.2	1361.0	1302.9	1212.4	1255.8	1242.3	1243.5
20°	1649.0	1633.1	1492.1	1408.6	1479.7	1454.5	1402.2	1285.8	1336.3	1352.8	1363.4
22.5°	1730.7	1721.9	1550.8	1489.7	1535.6	1536.2	1483.9	1422.7	1416.3	1467.4	1439.8
25°	1787.7	1822.9	1661.9	1647.2	1667.2	1647.2	1596.1	1556.1	1530.3	1606.7	1530.3
27.5°	1922.8	1872.9	1679.0	1762.4	1774.7	1674.3	1738.3	1691.3	1619.6	1714.2	1745.4
30°	2019.2	2048.6	1798.8	1924.6	1909.9	1817.1	1843.5	1841.7	1755.9	1940.5	1918.7
32.5°	2184.9	2149.7	1994.5	1984.5	2019.8	2015.7	1971.0	1992.8	2013.9	2147.9	2180.2
35°	2354.8	2392.4	2119.7	2187.3	2177.3	2113.8	2230.8	2217.3	2280.1	2555.2	2464.1
37.5°	2737.9	2558.7	2400.6	2391.8	2458.8	2468.8	2431.2	2490.5	2626.3	2837.8	2935.4
40°	2988.9	2907.2	2638.6	2649.2	2556.3	2716.2	2610.4	2801.4	2904.8	3261.5	3226.9
42.5°	3368.5	3169.3	2911.3	2946.5	2927.7	2850.8	2990.0	3088.2	3236.3	3508.4	3684.1
45°	3651.2	3377.9	3255.7	3233.9	3231.6	3365.6	3347.9	3504.8	3557.7	3762.2	3908.0
47.5°	3865.7	3633.5	3452.5	3477.2	3405.5	3788.1	3584.2	3632.9	3739.9	3932.6	4102.5
50°	4120.1	3861.5	3655.9	3717.0	3891.5	4038.4	3853.9	3770.5	3822.8	4050.2	4239.4
52.5°	4355.8	4083.7	3857.4	3908.6	4193.6	4126.6	4106.6	3895.6	3889.2	4071.9	4287.0
55°	4631.4	4324.6	4124.8	4287.0	4388.1	4305.2	4273.5	4016.7	3858.0	3959.7	4162.4
57.5°	4901.7	4563.2	4364.6	4398.1	4526.2	4443.9	4205.9	3810.4	3612.4	3632.4	3837.4
60°	5155.0	4782.4	4618.5	4586.1	4688.4	4365.8	3949.1	3432.5	3169.9	3121.7	3299.1
62.5°	5371.8	4965.8	4810.6	4722.5	4820.0	4368.7	3548.9	2826.1	2537.5	2374.2	2512.3
65°	5544.0	5118.0	5007.5	4961.6	4996.9	4103.1	2925.4	2075.0	1721.3	1540.3	1620.8
67.5°	5658.6	5203.2	5152.6	5212.6	4742.4	3417.3	2167.3	1328.1	1000.8	902.1	952.6
70°	5777.3	5278.4	5276.6	5072.7	4021.4	2355.9	1265.8	765.7	582.4	544.2	575.9
72.5°	5737.4	5189.1	5215.5	4436.3	2786.7	1259.4	668.2	433.1	394.3	407.8	436.0
75°	5313.1	4717.8	4590.2	3189.3	1580.8	585.3	384.9	327.9	325.6	346.1	373.8
77.5°	3853.9	3285.6	2948.3	1807.7	677.6	316.8	283.3	273.9	273.9	290.3	315.0
80°	1270.5	1099.5	1145.9	699.3	320.3	218.6	221.0	225.1	223.9	228.0	248.6
82.5°	208.6	216.3	334.4	285.6	193.3	149.3	166.9	175.1	177.5	158.7	180.4
85°	74.0	83.4	142.2	132.2	111.7	75.2	109.9	122.8	121.1	105.8	116.9
87.5°	22.9	29.4	51.7	40.0	33.5	20.6	41.1	48.2	60.5	24.7	22.3
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)