

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: P368296

Luminaire Tested: **MSA-SA4A-830-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368296
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-830-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: 12652 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

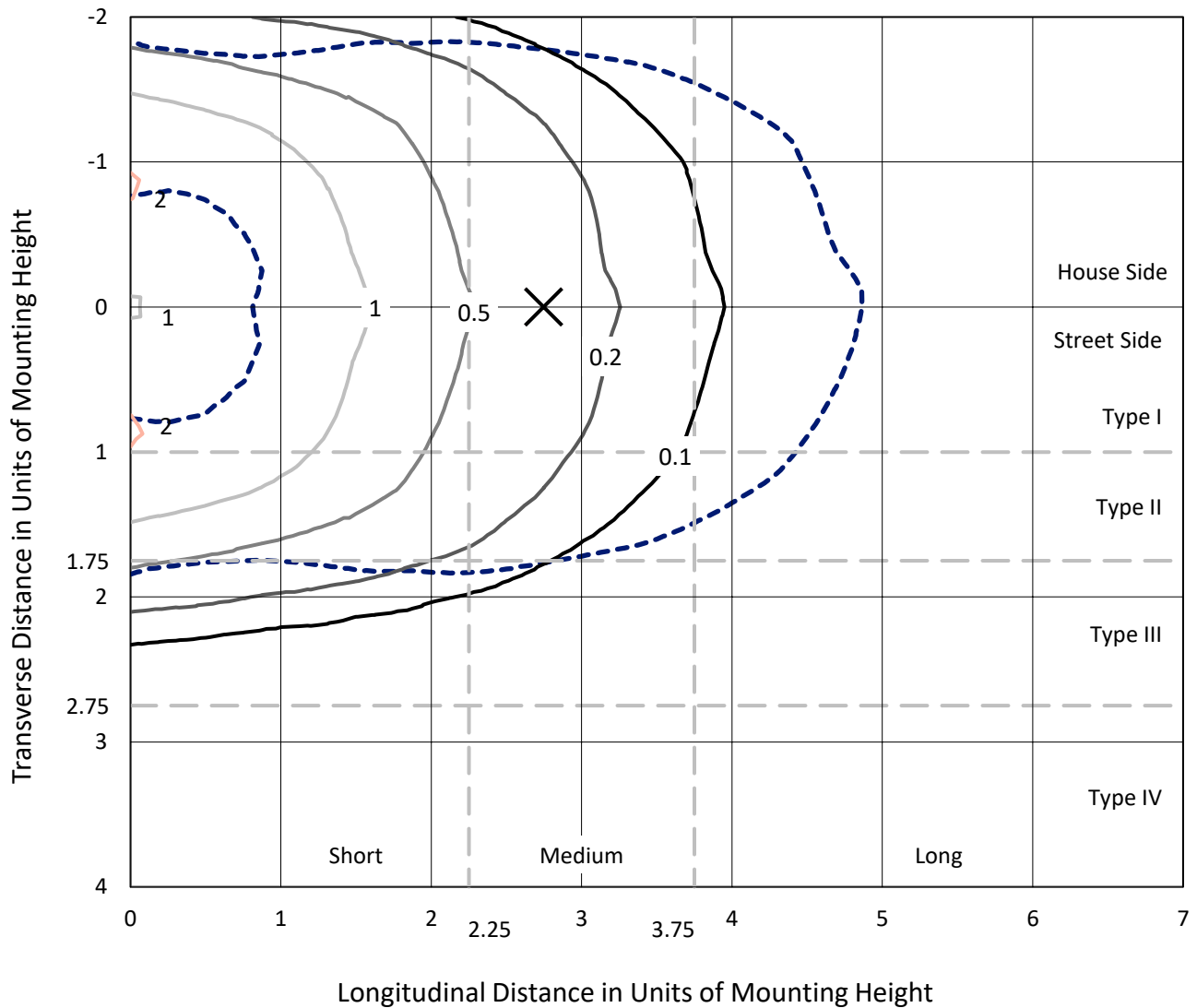
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368296
 CATALOG NUMBER: MSA-SA4A-830-U-RW

Iso-Footcandle Lines of Horizontal Illumination

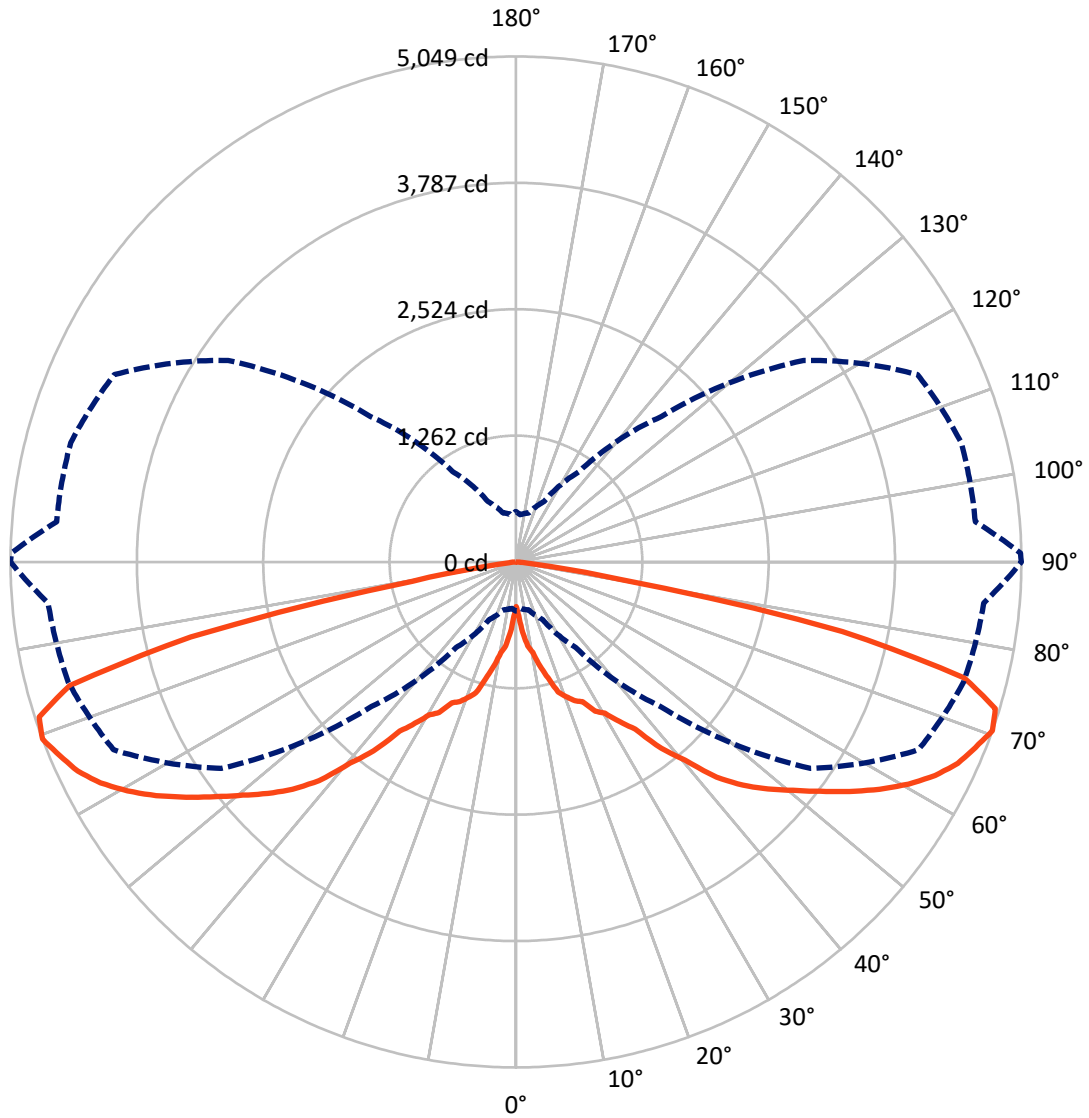
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type III - Short - N/A

REPORT NUMBER: P368296
CATALOG NUMBER: MSA-SA4A-830-U-RW

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368296
 CATALOG NUMBER: MSA-SA4A-830-U-RW

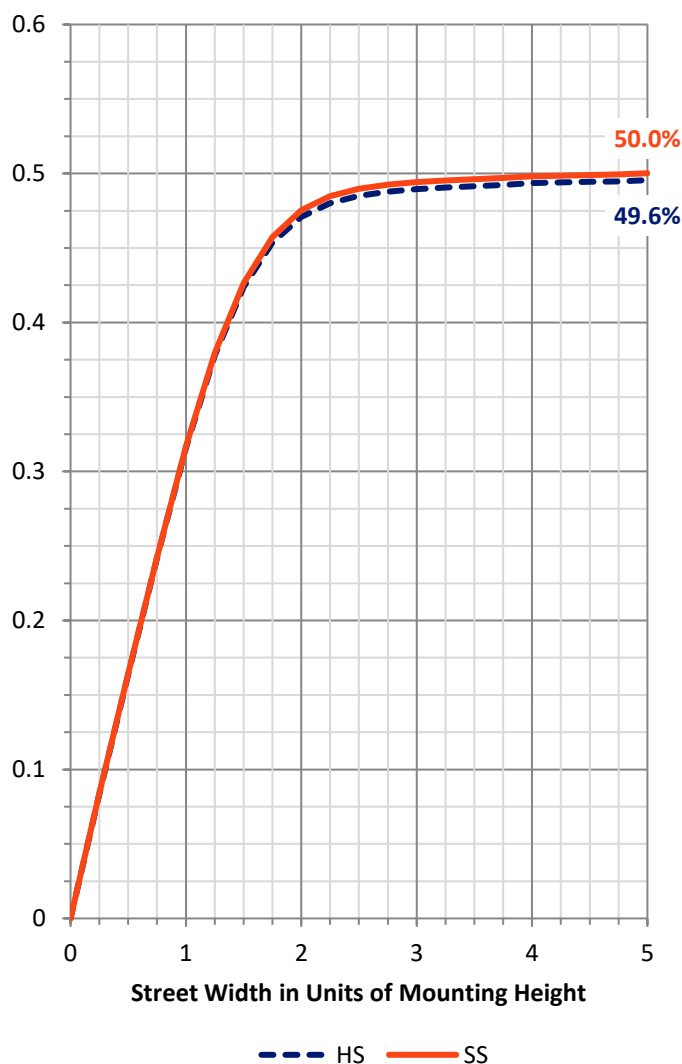
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6302.6	0.0	6302.6
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6349.4	0.0	6349.4
	% Fixture	50.2	0.0	50.2
Total	Lumens	12652.0	0.0	12652.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	0.5
10°-20°	307.0	2.4
20°-30°	663.8	5.2
30°-40°	1266.5	10.0
40°-50°	2300.8	18.2
50°-60°	3232.0	25.5
60°-70°	3086.0	24.4
70°-80°	1583.7	12.5
80°-90°	145.2	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°	12652.0	100.0
0°-180°	12652.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368296

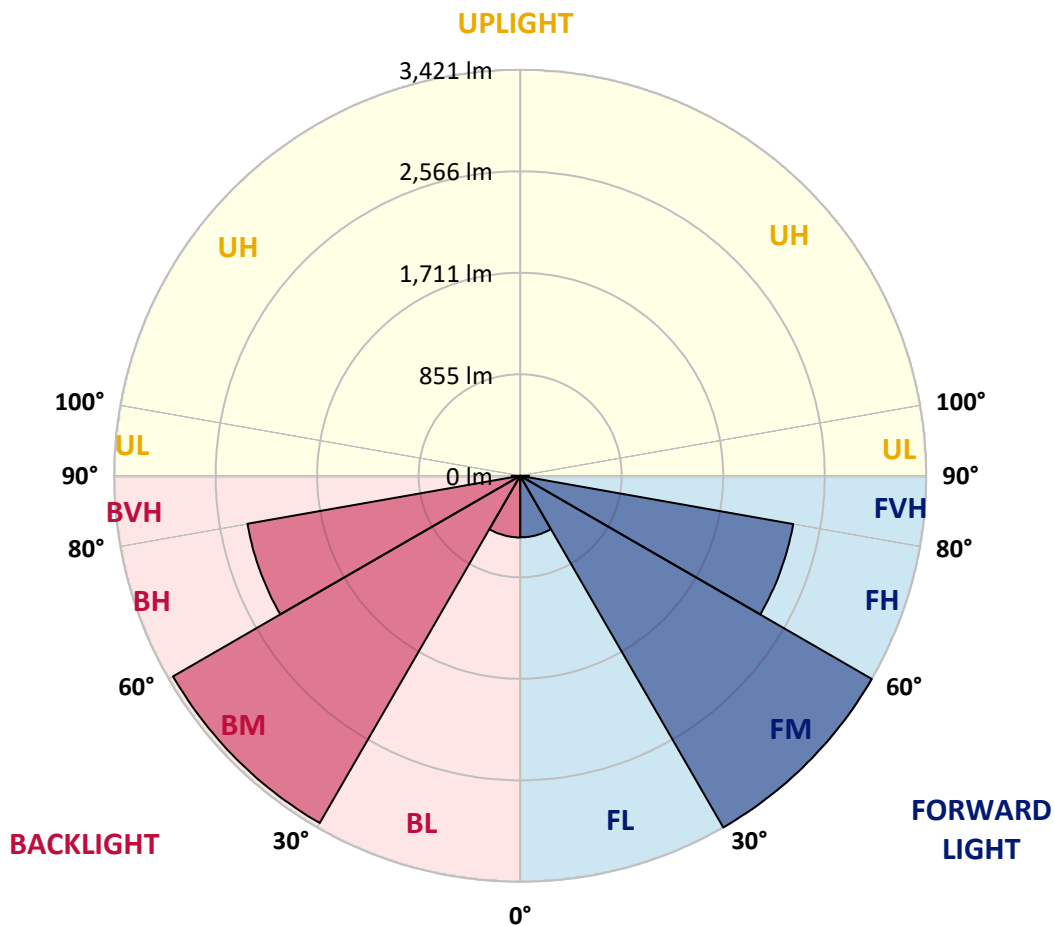
CATALOG NUMBER: MSA-SA4A-830-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	518.4	4.1			
FM (30°-60°)	3421.2	27.0			
FH (60°-80°)	2336.1	18.5			G2/5000
FVH (80°-90°)	73.7	0.6			G1/100
BL (0°-30°)	519.4	4.1	B2/1000		
BM (30°-60°)	3378.1	26.7	B3/5000		
BH (60°-80°)	2333.6	18.4	B3/2500		G3/2500
BVH (80°-90°)	71.5	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





REPORT NUMBER: P368296

CATALOG NUMBER: MSA-SA4A-830-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1
2.5°	537.9	517.9	492.8	507.6	513.8	524.6	523.0	517.9	495.8	532.8	536.9
5°	673.3	641.5	629.7	627.6	630.7	620.4	653.8	644.0	662.0	695.3	703.0
7.5°	766.6	743.0	717.9	725.6	693.8	689.2	732.2	770.7	780.4	841.5	845.6
10°	810.7	787.6	794.3	789.7	786.1	815.8	835.8	864.0	904.5	910.2	918.9
12.5°	848.1	857.3	886.6	885.5	933.7	986.6	978.9	1008.1	1014.8	1085.5	1064.0
15°	943.0	962.0	959.9	977.8	998.9	1085.5	1086.0	1135.8	1181.4	1209.1	1201.9
17.5°	1081.9	1088.6	1060.9	1061.9	1123.0	1158.3	1197.8	1189.1	1308.1	1362.4	1366.0
20°	1165.0	1181.9	1150.1	1108.1	1216.3	1265.0	1287.0	1236.3	1363.4	1436.8	1436.8
22.5°	1310.1	1266.5	1218.3	1190.1	1285.5	1337.3	1334.7	1320.4	1388.1	1517.8	1505.5
25°	1390.1	1365.5	1341.4	1348.6	1396.8	1423.4	1458.8	1425.5	1489.1	1585.5	1545.0
27.5°	1541.9	1496.3	1377.8	1472.2	1472.2	1452.2	1527.0	1542.9	1501.4	1658.3	1688.5
30°	1713.7	1697.8	1530.1	1630.1	1599.3	1542.9	1686.5	1676.2	1606.5	1766.5	1752.6
32.5°	1876.2	1928.5	1769.6	1714.7	1760.8	1782.4	1707.0	1737.8	1751.1	1905.4	1898.8
35°	2125.4	2169.5	1958.8	1944.9	1868.0	1848.0	1905.4	1915.7	1916.7	2079.3	2049.5
37.5°	2556.7	2493.1	2284.9	2187.0	2195.7	2171.6	2182.9	2101.8	2113.1	2349.0	2363.9
40°	2872.0	2800.2	2568.5	2498.2	2325.9	2429.0	2337.7	2329.5	2306.9	2612.5	2604.3
42.5°	3220.2	3121.7	2865.3	2771.5	2588.4	2546.4	2504.4	2599.2	2593.1	2876.1	2938.7
45°	3483.2	3284.3	3150.4	3092.0	2982.3	2879.2	2839.2	2881.8	2862.3	3072.5	3181.7
47.5°	3649.4	3476.6	3322.7	3199.7	3094.6	3347.3	3144.8	3087.9	3048.4	3283.8	3388.9
50°	3781.7	3582.2	3400.7	3359.7	3442.7	3666.3	3346.8	3221.2	3269.4	3442.7	3585.8
52.5°	3817.6	3606.3	3443.2	3417.1	3641.7	3682.2	3630.4	3419.1	3406.3	3633.5	3806.3
55°	3707.8	3505.3	3427.8	3570.9	3819.1	3785.2	3864.2	3729.4	3638.6	3828.3	4045.7
57.5°	3425.3	3224.3	3205.8	3412.0	3724.7	4012.9	4051.9	3945.2	3826.3	4027.3	4283.7
60°	2961.2	2777.7	2824.3	3052.0	3523.7	3934.0	4141.1	4043.7	4006.8	4206.7	4504.1
62.5°	2238.7	2095.7	2220.3	2537.7	3156.6	3831.9	4264.2	4248.8	4195.5	4397.5	4699.0
65°	1427.5	1352.2	1479.3	1801.9	2586.9	3646.3	4323.1	4343.7	4392.9	4544.7	4849.8
67.5°	829.7	789.7	867.1	1131.2	1842.4	2994.0	4213.4	4507.7	4533.4	4620.5	4948.7
70°	490.7	464.6	496.4	635.3	1043.0	2039.8	3594.0	4436.0	4629.8	4690.3	5048.7
72.5°	374.3	349.7	335.9	375.9	544.6	1053.7	2430.0	3760.1	4552.3	4644.1	5006.7
75°	323.6	300.0	283.6	287.1	324.1	500.5	1317.3	2689.5	3879.1	4228.8	4624.6
77.5°	277.9	256.9	245.1	244.1	248.7	274.8	550.7	1458.3	2429.5	3039.7	3334.0
80°	222.5	206.1	203.6	203.6	196.9	194.9	273.8	554.8	924.5	1096.3	1051.2
82.5°	162.5	146.1	162.5	160.5	150.2	142.0	174.3	240.0	285.1	225.1	177.9
85°	109.7	94.9	107.2	109.2	99.5	73.8	104.6	120.0	123.1	76.9	63.6
87.5°	38.5	37.4	60.5	52.8	43.1	25.1	38.5	41.5	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



REPORT NUMBER: P368296

CATALOG NUMBER: MSA-SA4A-830-U-RW

CANDELA DISTRIBUTION (continued):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1	444.1
2.5°	538.4	532.3	501.5	506.1	517.9	523.5	529.2	506.1	494.8	530.7	527.1
5°	705.1	682.5	657.4	653.8	655.3	633.3	646.1	640.4	643.0	666.1	670.7
7.5°	844.5	817.4	784.0	757.9	712.7	676.9	707.1	722.5	727.1	768.1	783.5
10°	919.9	896.8	887.1	837.9	823.0	818.4	811.2	786.6	813.8	804.0	811.7
12.5°	1067.6	1063.0	1012.2	979.9	983.0	991.7	946.6	922.0	886.6	942.0	922.0
15°	1193.2	1213.2	1162.4	1103.5	1074.2	1089.1	1054.8	1018.9	987.1	1004.0	982.5
17.5°	1353.7	1353.2	1254.2	1191.2	1188.6	1187.6	1136.8	1057.8	1095.8	1084.0	1085.0
20°	1438.8	1425.0	1301.9	1229.1	1291.1	1269.1	1223.5	1121.9	1166.0	1180.4	1189.6
22.5°	1510.1	1502.4	1353.2	1299.9	1339.9	1340.4	1294.7	1241.4	1235.8	1280.4	1256.3
25°	1559.8	1590.6	1450.1	1437.3	1454.7	1437.3	1392.7	1357.8	1335.2	1401.9	1335.2
27.5°	1677.8	1634.2	1465.0	1537.8	1548.6	1460.9	1516.8	1475.7	1413.2	1495.7	1522.9
30°	1761.9	1787.5	1569.6	1679.3	1666.5	1585.5	1608.6	1607.0	1532.1	1693.2	1674.2
32.5°	1906.5	1875.7	1740.3	1731.6	1762.4	1758.8	1719.8	1738.8	1757.3	1874.2	1902.4
35°	2054.7	2087.5	1849.6	1908.5	1899.8	1844.4	1946.5	1934.7	1989.5	2229.5	2150.0
37.5°	2389.0	2232.6	2094.7	2087.0	2145.4	2154.1	2121.3	2173.1	2291.6	2476.2	2561.3
40°	2607.9	2536.7	2302.3	2311.6	2230.5	2370.0	2277.7	2444.4	2534.6	2845.9	2815.6
42.5°	2939.2	2765.4	2540.2	2571.0	2554.6	2487.4	2609.0	2694.6	2823.8	3061.2	3214.5
45°	3185.8	2947.4	2840.7	2821.8	2819.7	2936.6	2921.2	3058.1	3104.3	3282.7	3409.9
47.5°	3373.0	3170.4	3012.5	3034.0	2971.5	3305.3	3127.4	3169.9	3263.3	3431.4	3579.6
50°	3595.0	3369.4	3189.9	3243.3	3395.5	3523.7	3362.7	3289.9	3335.6	3534.0	3699.1
52.5°	3800.6	3563.2	3365.8	3410.4	3659.1	3600.7	3583.2	3399.1	3393.5	3553.0	3740.6
55°	4041.1	3773.5	3599.1	3740.6	3828.8	3756.5	3728.8	3504.8	3366.3	3455.0	3631.9
57.5°	4277.0	3981.6	3808.3	3837.6	3949.3	3877.5	3669.9	3324.8	3152.0	3169.4	3348.4
60°	4498.0	4172.9	4029.8	4001.6	4090.9	3809.3	3445.8	2995.1	2765.9	2723.8	2878.7
62.5°	4687.2	4332.9	4197.5	4120.6	4205.7	3811.9	3096.6	2465.9	2214.1	2071.6	2192.1
65°	4837.4	4465.7	4369.3	4329.3	4360.1	3580.1	2552.6	1810.6	1501.9	1344.0	1414.2
67.5°	4937.4	4540.0	4495.9	4548.2	4138.0	2981.7	1891.1	1158.9	873.2	787.1	831.2
70°	5041.0	4605.7	4604.1	4426.2	3508.9	2055.7	1104.5	668.1	508.2	474.8	502.5
72.5°	5006.1	4527.7	4550.8	3870.9	2431.5	1098.9	583.0	377.9	344.1	355.9	380.5
75°	4635.9	4116.5	4005.2	2782.8	1379.3	510.7	335.9	286.1	284.1	302.0	326.1
77.5°	3362.7	2866.9	2572.6	1577.3	591.2	276.4	247.2	238.9	238.9	253.3	274.8
80°	1108.6	959.4	999.9	610.2	279.5	190.7	192.8	196.4	195.4	199.0	216.9
82.5°	182.0	188.7	291.8	249.2	168.7	130.2	145.6	152.8	154.9	138.4	157.4
85°	64.6	72.8	124.1	115.4	97.4	65.6	95.9	107.2	105.6	92.3	102.0
87.5°	20.0	25.6	45.1	34.9	29.2	17.9	35.9	42.0	52.8	21.5	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)