

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: P368200

Luminaire Tested: **MSA-SA4A-727-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368200
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-727-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12947 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

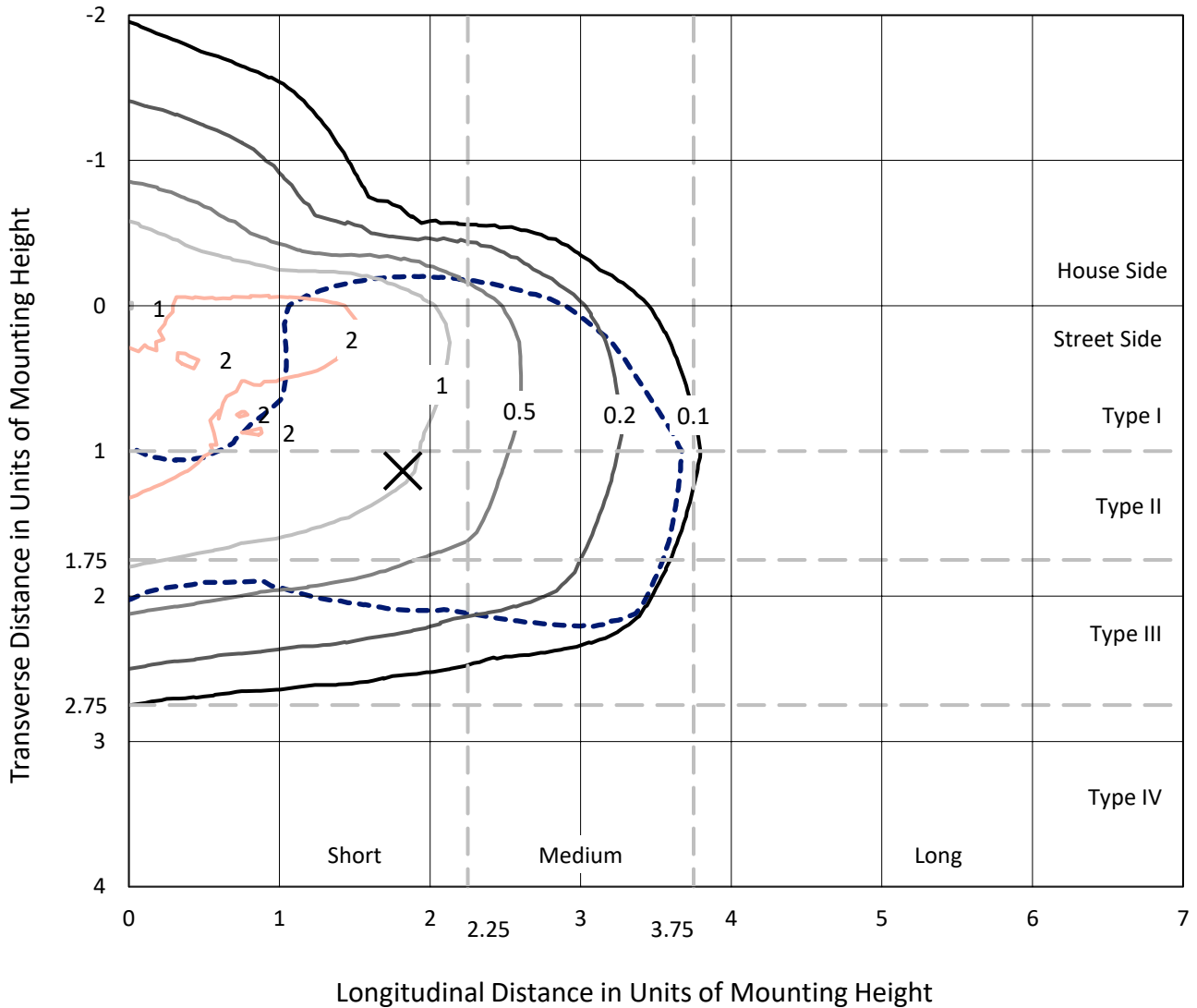
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

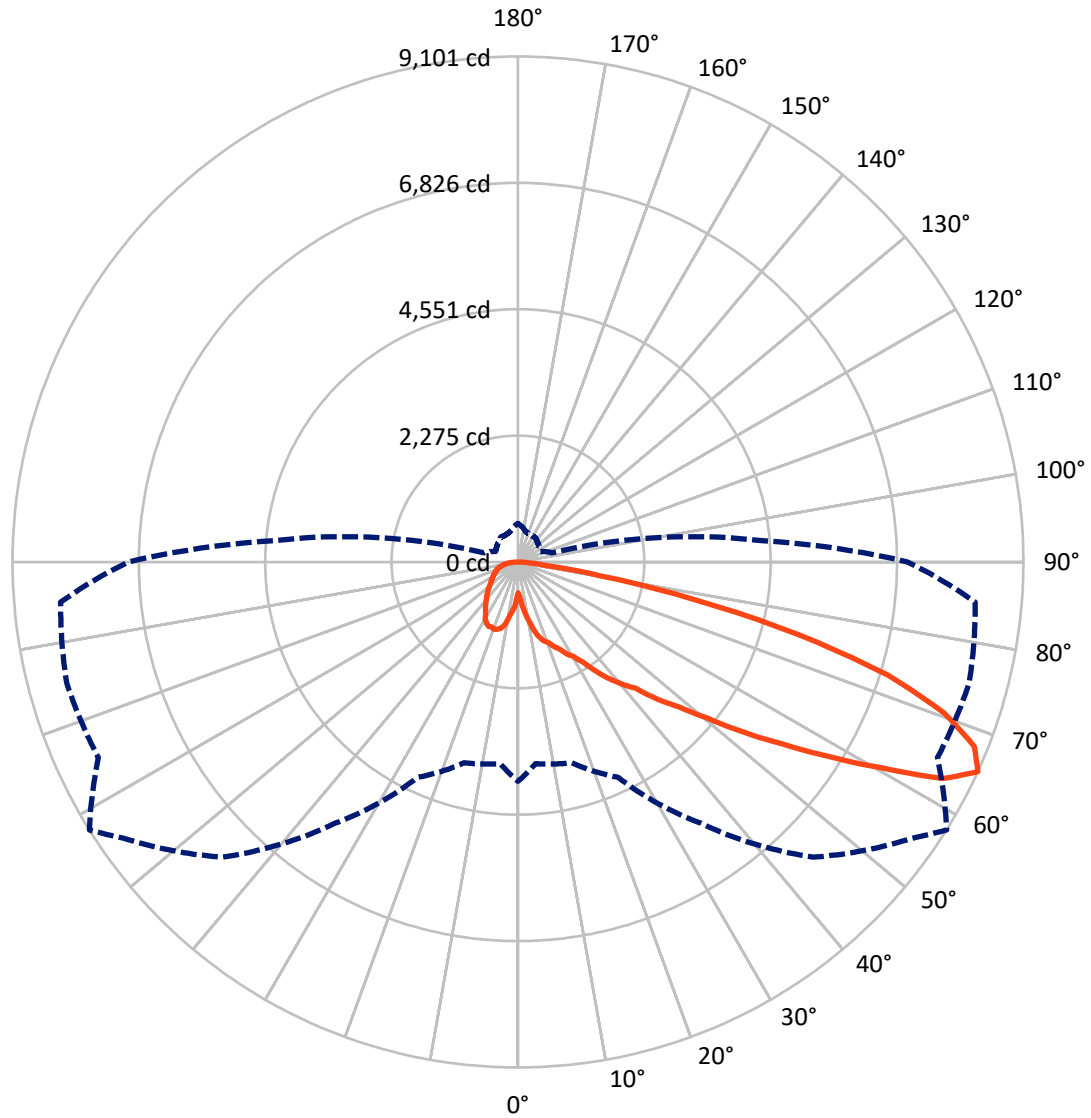
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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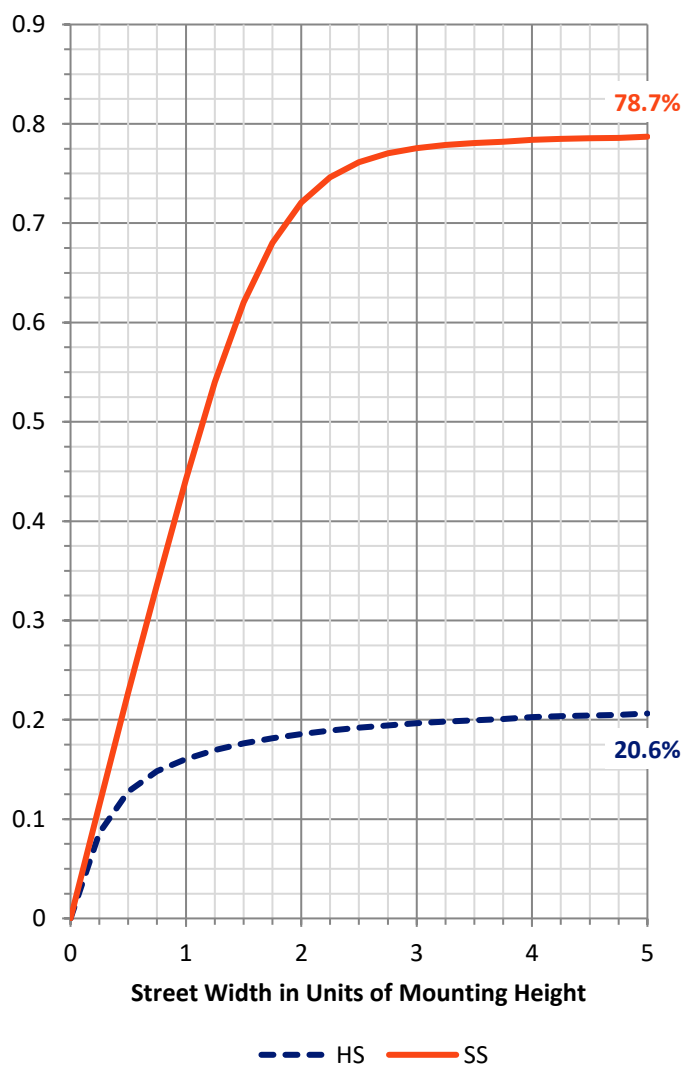
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2727.0	0.0	2727.0
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	10220.0	0.0	10220.0
	% Fixture	78.9	0.0	78.9
Total	Lumens	12947.0	0.0	12947.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	0.7
10°-20°	369.5	2.9
20°-30°	709.0	5.5
30°-40°	1170.5	9.0
40°-50°	1945.6	15.0
50°-60°	3213.1	24.8
60°-70°	3604.5	27.8
70°-80°	1638.9	12.7
80°-90°	211.4	1.6
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°	12947.0	100.0
0°-180°	12947.0	100.0

Coefficient of Utilization

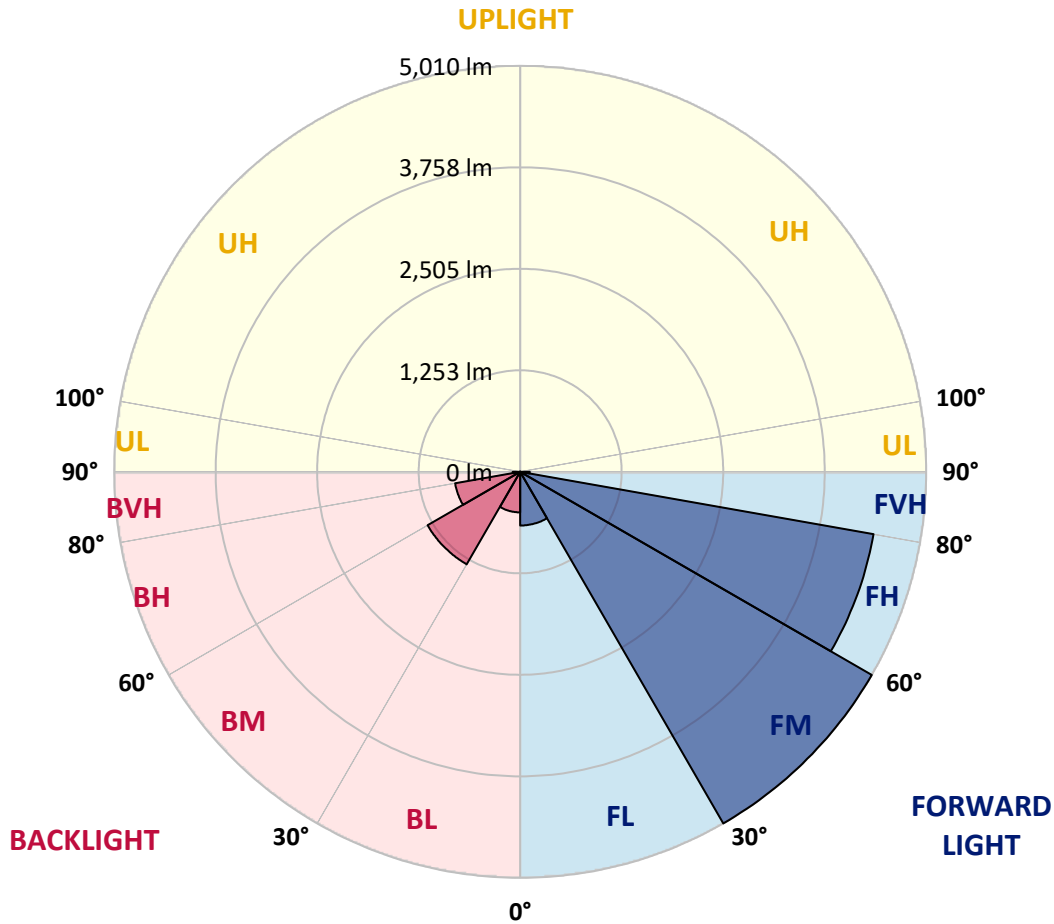


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	662.5	5.1			
FM (30°-60°)	5010.3	38.7			
FH (60°-80°)	4428.1	34.2			G2/5000
FVH (80°-90°)	119.0	0.9			G2/225
BL (0°-30°)	500.6	3.9	B2/1000		
BM (30°-60°)	1318.9	10.2	B2/2500		
BH (60°-80°)	815.2	6.3	B2/1000		G2/1000
BVH (80°-90°)	92.3	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9
2.5°	663.7	643.8	610.3	618.4	637.8	648.6	642.2	633.5	622.2	620.0	669.7
5°	859.4	821.2	805.5	799.1	775.3	761.3	785.6	782.3	795.3	819.0	867.5
7.5°	1002.3	975.4	949.5	946.8	901.0	884.8	917.1	934.4	957.6	958.1	1023.9
10°	1078.9	1055.7	1055.2	1030.9	1027.1	1057.9	1058.4	1071.3	1074.0	1101.5	1088.6
12.5°	1161.9	1160.3	1190.0	1189.4	1223.9	1274.6	1249.3	1249.3	1256.8	1223.4	1264.4
15°	1359.8	1377.0	1321.5	1330.7	1330.7	1380.3	1378.7	1388.4	1411.5	1402.9	1384.6
17.5°	1565.8	1576.5	1515.1	1457.9	1462.2	1451.4	1490.3	1494.0	1471.9	1572.2	1550.1
20°	1698.4	1740.4	1611.0	1539.3	1553.4	1565.8	1567.4	1544.2	1532.9	1687.1	1656.9
22.5°	1862.3	1826.7	1708.1	1628.8	1649.9	1633.1	1629.9	1647.7	1663.3	1721.6	1770.6
25°	1971.7	1969.1	1826.7	1739.9	1716.7	1711.9	1744.8	1737.7	1775.0	1880.6	1849.9
27.5°	2130.8	2180.4	1928.1	1949.6	1847.7	1740.4	1846.1	1877.9	1944.8	1927.5	1996.0
30°	2439.2	2402.0	2138.4	2132.4	2017.0	1927.0	2000.3	1973.4	2093.6	2089.8	2140.5
32.5°	2691.0	2716.9	2385.3	2323.3	2237.6	2129.2	2080.7	2155.6	2220.3	2326.5	2355.1
35°	2957.4	2951.4	2638.2	2513.1	2371.3	2326.5	2386.4	2417.6	2555.1	2652.7	2584.8
37.5°	3371.4	3324.5	2966.0	2729.3	2623.1	2606.9	2709.3	2664.0	2812.9	2836.0	2874.3
40°	3756.4	3615.1	3265.8	2994.6	2825.8	2886.2	2889.4	2895.3	2975.1	3038.2	3227.5
42.5°	4122.5	4023.3	3570.4	3366.6	3118.0	3059.3	3095.9	3108.3	3310.0	3438.8	3700.9
45°	4622.9	4357.0	4008.2	3799.0	3520.8	3445.8	3420.0	3526.7	3721.4	4014.7	4239.5
47.5°	5046.1	4806.2	4473.5	4198.0	3886.9	4100.9	3954.3	3894.4	4155.9	4519.3	4877.3
50°	5397.1	5132.9	4806.7	4647.7	4598.0	4788.9	4408.3	4415.3	4654.7	5167.4	5577.7
52.5°	5668.8	5386.9	5097.9	5017.0	5294.1	5404.1	5129.1	5087.6	5262.3	5868.3	6361.1
55°	5922.8	5623.6	5400.3	5565.3	6032.2	6044.6	6025.2	5795.0	6005.3	6619.4	7172.1
57.5°	5988.0	5665.6	5517.3	5754.0	6385.4	6876.6	7069.6	6617.8	6831.8	7302.5	7866.5
60°	5652.1	5376.1	5316.8	5638.1	6576.3	7294.4	7798.6	7528.4	7448.1	7850.9	8352.8
62.5°	4964.1	4643.9	4691.9	5138.3	6375.2	7460.0	8374.4	8585.2	8098.9	8287.1	8565.3
65°	3951.0	3645.3	3742.4	4279.4	5743.8	7515.0	8668.8	9101.2	8334.0	8410.5	8264.4
67.5°	2786.4	2508.8	2631.2	3325.6	4778.1	6810.8	8719.5	8860.7	8083.8	8058.4	7442.7
70°	1578.7	1404.5	1537.2	2116.2	3372.5	5425.7	8322.1	8136.1	7635.2	7276.1	6227.4
72.5°	724.1	664.3	727.9	1077.3	1941.6	3610.3	6794.1	6962.9	6579.0	6129.8	4737.7
75°	385.0	363.9	390.9	538.1	908.5	1964.2	4827.2	5206.8	5002.4	4649.3	3090.5
77.5°	286.3	270.1	283.1	348.8	485.3	768.3	2742.8	3221.5	3299.2	2974.1	1716.2
80°	219.4	206.5	219.4	263.7	335.9	365.0	1172.7	1501.6	1710.2	1381.9	682.1
82.5°	162.8	154.2	174.2	197.9	236.2	228.1	416.2	518.1	668.0	456.7	265.8
85°	129.4	118.6	126.2	134.3	151.0	125.1	190.3	213.0	225.4	188.7	98.1
87.5°	50.7	46.9	91.7	72.2	61.5	37.7	57.2	64.7	66.3	63.6	28.6
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9
2.5°	675.0	669.7	637.8	648.1	664.8	668.0	675.0	655.6	645.9	681.5	683.1
5°	871.8	842.7	827.6	829.2	818.5	801.7	827.1	843.8	850.3	876.7	886.4
7.5°	1024.4	989.4	964.0	934.9	893.9	867.5	911.7	944.1	961.3	1016.3	1037.9
10°	1092.4	1064.3	1058.9	1022.3	1021.2	1020.7	1018.5	1007.2	1044.4	1039.0	1054.1
12.5°	1232.5	1226.6	1175.4	1160.8	1162.5	1160.8	1115.5	1113.4	1113.9	1163.5	1145.7
15°	1363.0	1364.1	1317.2	1264.4	1216.9	1202.4	1184.6	1176.5	1188.3	1216.4	1199.1
17.5°	1524.2	1529.6	1395.4	1311.8	1249.3	1247.6	1205.0	1154.9	1227.2	1244.4	1225.5
20°	1628.3	1605.7	1440.7	1300.5	1282.7	1234.2	1181.3	1112.3	1174.9	1216.9	1228.8
22.5°	1727.0	1687.6	1482.7	1320.4	1235.2	1177.5	1126.3	1081.6	1101.5	1148.4	1140.9
25°	1793.8	1783.0	1541.0	1368.4	1233.6	1105.3	1036.3	1007.7	1018.0	1090.7	1083.7
27.5°	1953.4	1837.0	1530.7	1380.8	1181.9	1006.6	972.1	941.4	931.1	1009.9	1031.4
30°	2060.2	2012.2	1599.2	1361.4	1116.6	925.8	875.1	868.6	871.8	961.3	967.3
32.5°	2241.3	2116.8	1711.3	1287.0	1021.7	865.9	807.7	810.4	824.9	890.2	903.7
35°	2430.0	2355.6	1726.4	1233.6	944.6	802.3	778.6	759.7	767.8	824.9	827.6
37.5°	2780.5	2523.3	1819.2	1151.1	888.0	778.0	732.7	716.0	720.3	752.7	775.9
40°	3088.9	2860.3	1776.0	1071.3	817.9	745.7	689.1	676.7	663.7	695.5	710.1
42.5°	3583.3	3100.8	1761.5	983.4	785.0	702.0	663.2	630.3	617.9	644.8	671.3
45°	4077.7	3355.8	1682.2	894.5	738.7	698.8	625.4	594.2	597.4	621.7	648.6
47.5°	4628.8	3698.2	1548.0	808.2	688.0	683.1	587.7	574.2	583.9	610.9	637.8
50°	5280.1	4061.6	1436.9	730.6	651.9	636.2	582.8	566.7	575.8	607.6	634.1
52.5°	5992.3	4460.0	1356.0	658.9	610.9	599.0	589.3	573.7	584.5	612.0	639.5
55°	6700.3	4824.0	1301.0	609.8	575.8	583.4	602.8	591.5	596.9	617.4	644.8
57.5°	7225.4	5015.9	1190.5	557.5	547.3	574.2	604.4	585.5	588.8	617.4	647.0
60°	7530.6	5052.6	1008.8	514.9	524.6	555.9	587.7	563.4	561.3	608.2	645.4
62.5°	7497.2	4839.6	800.1	476.1	498.7	528.4	562.4	539.2	545.1	609.3	648.6
65°	7018.4	4404.5	636.2	443.2	467.5	498.2	541.3	532.2	560.7	652.4	695.0
67.5°	6177.3	3768.8	511.1	412.5	438.3	477.7	555.9	580.1	592.5	696.6	740.3
70°	5006.2	2928.2	425.9	385.5	415.2	487.4	597.9	593.1	582.8	675.6	710.1
72.5°	3616.8	2007.3	374.7	359.1	386.6	458.3	599.0	573.1	560.2	616.8	641.6
75°	2262.9	1197.5	327.3	325.7	342.9	410.8	572.1	548.9	513.8	541.9	574.2
77.5°	1292.4	613.0	275.5	290.1	300.3	356.4	512.2	491.2	459.9	471.8	503.6
80°	493.3	296.5	232.4	257.7	255.0	301.9	434.0	429.2	393.6	397.4	416.8
82.5°	232.4	166.1	193.0	221.6	207.0	240.5	352.6	351.0	319.7	289.5	305.2
85°	86.3	88.4	141.3	168.8	144.0	155.3	255.0	248.0	217.8	183.9	203.3
87.5°	19.4	31.8	69.6	87.9	50.1	48.0	103.0	89.5	86.3	51.2	53.9
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)