

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: P368274

Luminaire Tested: **MSA-SA4A-760-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368274
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-760-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: 15921 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

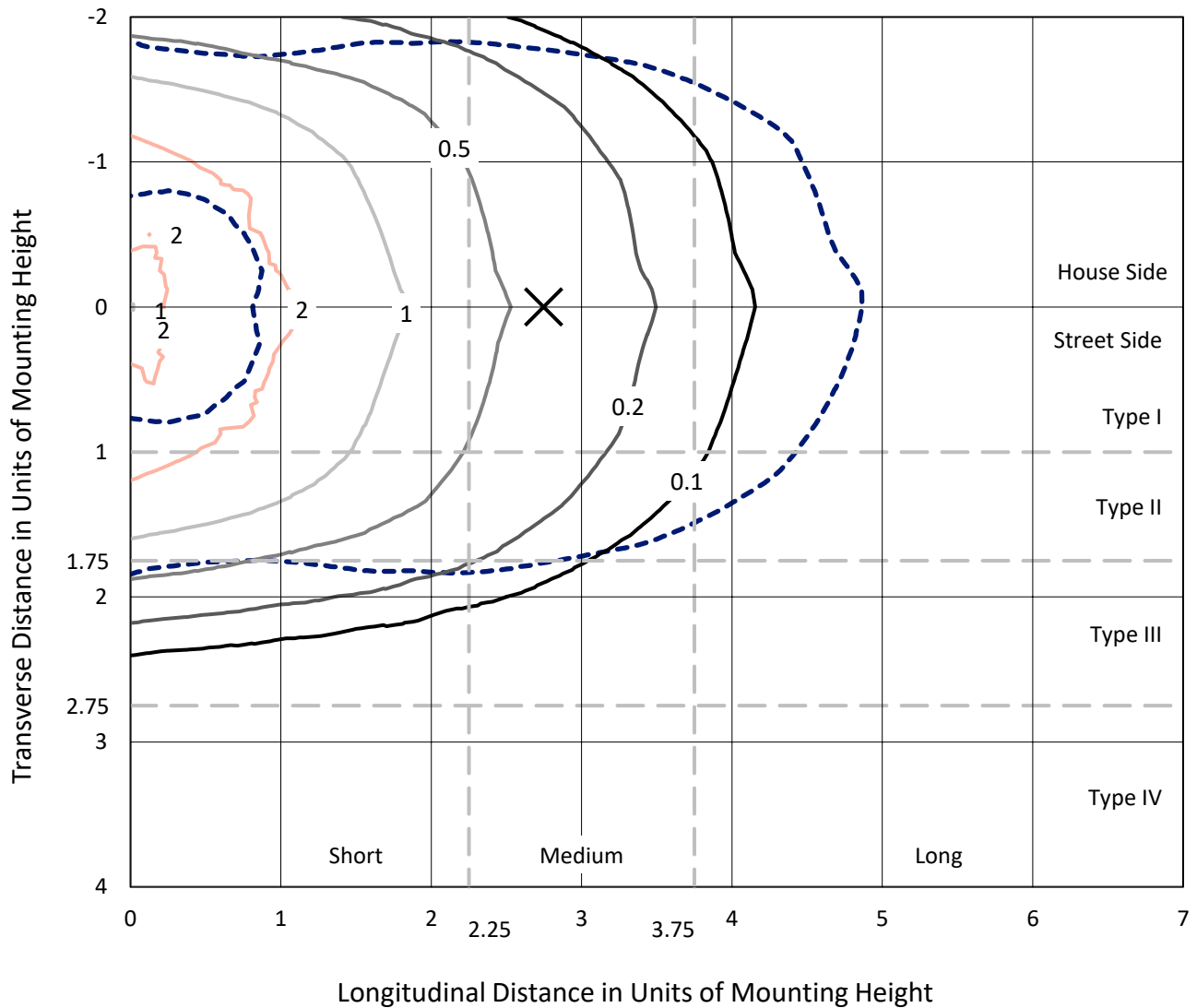
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

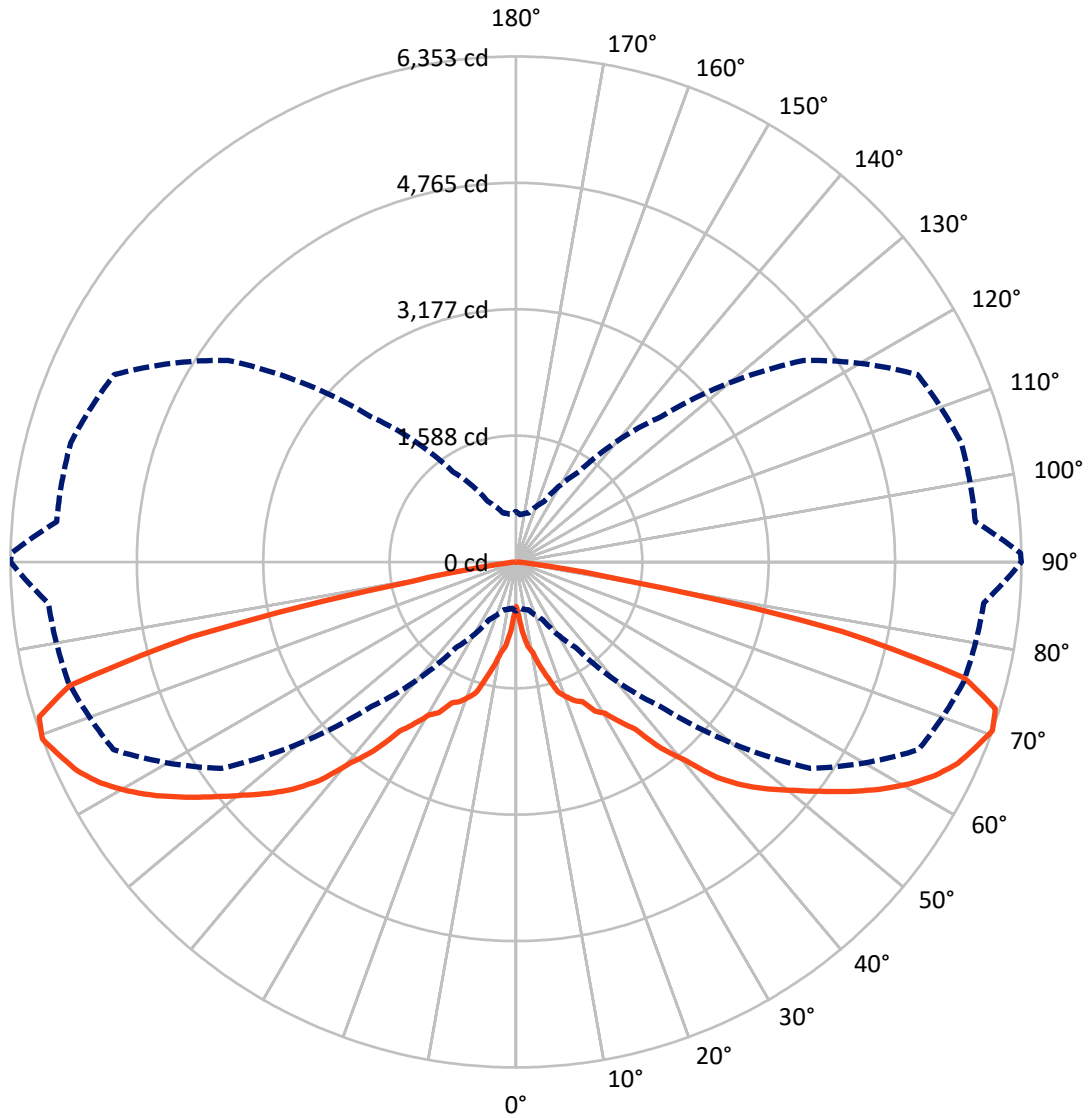
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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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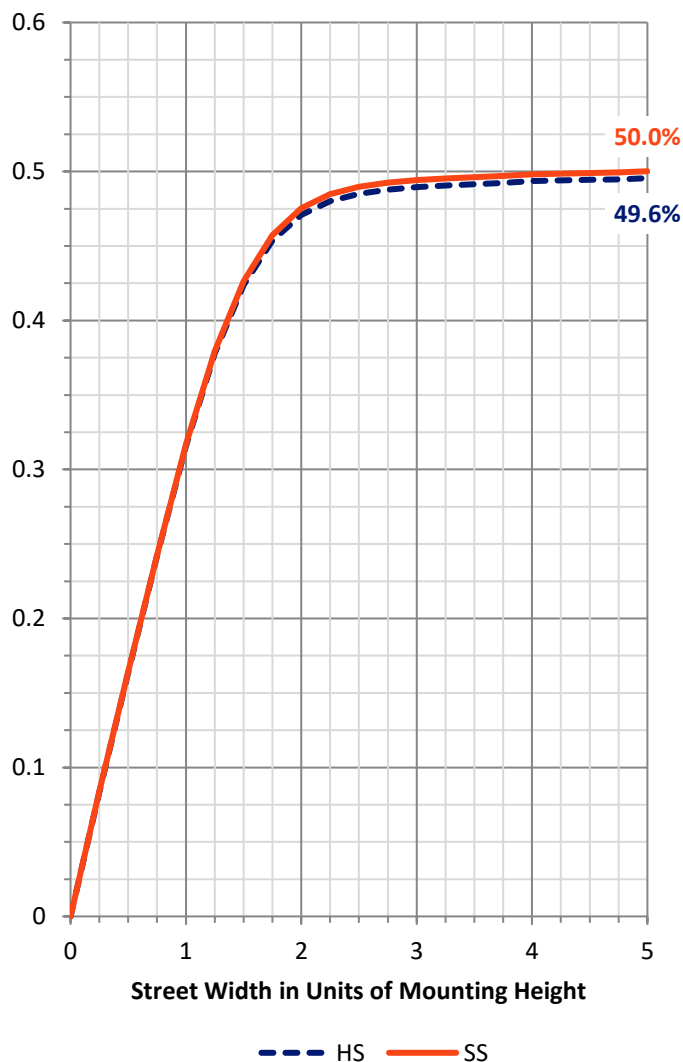
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7931.0	0.0	7931.0
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	7990.0	0.0	7990.0
	% Fixture	50.2	0.0	50.2
Total	Lumens	15921.0	0.0	15921.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.3	0.5
10°-20°	386.3	2.4
20°-30°	835.3	5.2
30°-40°	1593.7	10.0
40°-50°	2895.2	18.2
50°-60°	4067.1	25.5
60°-70°	3883.3	24.4
70°-80°	1992.9	12.5
80°-90°	182.7	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°	15921.0	100.0
0°-180°	15921.0	100.0

Coefficient of Utilization



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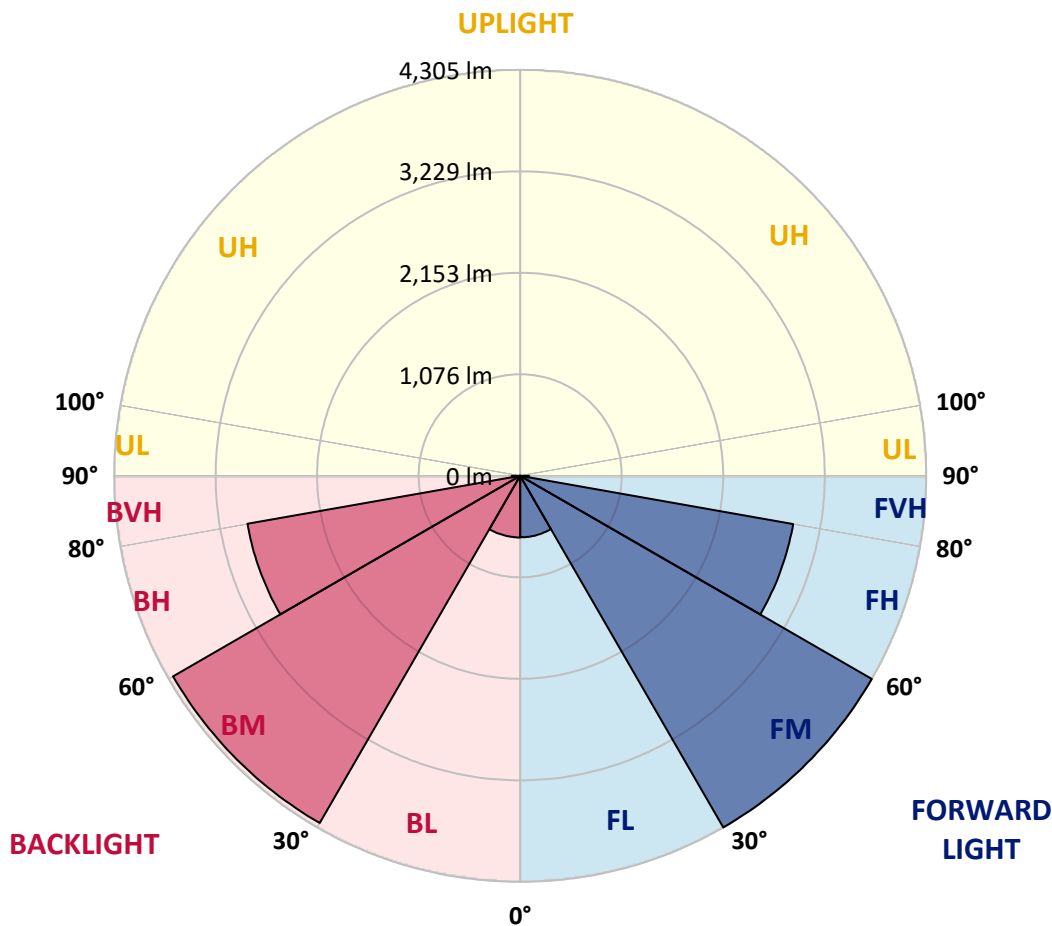
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	652.3	4.1			
FM (30°-60°)	4305.2	27.0			
FH (60°-80°)	2939.7	18.5			G2/5000
FVH (80°-90°)	92.7	0.6			G1/100
BL (0°-30°)	653.6	4.1	B2/1000		
BM (30°-60°)	4250.9	26.7	B3/5000		
BH (60°-80°)	2936.5	18.4	B4/5000		G4/5000
BVH (80°-90°)	90.0	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°	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8
2.5°	676.9	651.7	620.1	638.8	646.5	660.1	658.2	651.7	624.0	670.4	675.6
5°	847.2	807.2	792.4	789.8	793.7	780.8	822.7	810.4	833.0	875.0	884.6
7.5°	964.7	935.0	903.4	913.0	873.0	867.2	921.4	969.8	982.1	1058.9	1064.0
10°	1020.1	991.1	999.5	993.7	989.2	1026.6	1051.8	1087.3	1138.2	1145.3	1156.3
12.5°	1067.3	1078.9	1115.6	1114.4	1175.0	1241.5	1231.8	1268.6	1277.0	1366.0	1338.9
15°	1186.6	1210.5	1207.9	1230.5	1257.0	1366.0	1366.7	1429.2	1486.7	1521.5	1512.5
17.5°	1361.5	1369.9	1335.0	1336.3	1413.1	1457.6	1507.3	1496.3	1646.0	1714.4	1719.0
20°	1466.0	1487.3	1447.3	1394.4	1530.5	1591.8	1619.6	1555.7	1715.7	1808.0	1808.0
22.5°	1648.6	1593.8	1533.1	1497.6	1617.7	1682.8	1679.6	1661.5	1746.7	1910.0	1894.5
25°	1749.3	1718.3	1688.0	1697.0	1757.7	1791.2	1835.8	1793.8	1873.8	1995.1	1944.2
27.5°	1940.3	1882.9	1733.8	1852.5	1852.5	1827.4	1921.6	1941.6	1889.3	2086.8	2124.8
30°	2156.4	2136.4	1925.4	2051.3	2012.6	1941.6	2122.2	2109.3	2021.6	2222.9	2205.5
32.5°	2361.0	2426.8	2226.8	2157.7	2215.8	2242.9	2148.1	2186.8	2203.5	2397.8	2389.4
35°	2674.6	2730.1	2464.9	2447.5	2350.7	2325.5	2397.8	2410.7	2412.0	2616.5	2579.1
37.5°	3217.2	3137.2	2875.3	2752.0	2763.0	2732.7	2746.9	2644.9	2659.1	2955.9	2974.6
40°	3614.1	3523.7	3232.1	3143.7	2926.9	3056.6	2941.7	2931.4	2903.0	3287.6	3277.3
42.5°	4052.2	3928.3	3605.7	3487.6	3257.2	3204.3	3151.4	3270.8	3263.1	3619.2	3698.0
45°	4383.2	4132.9	3964.4	3890.9	3752.8	3623.1	3572.8	3626.3	3601.8	3866.4	4003.8
47.5°	4592.3	4374.8	4181.3	4026.4	3894.1	4212.2	3957.4	3885.7	3836.0	4132.2	4264.5
50°	4758.8	4507.8	4279.3	4227.7	4332.2	4613.6	4211.6	4053.5	4114.1	4332.2	4512.3
52.5°	4803.9	4538.1	4332.9	4300.0	4582.6	4633.6	4568.4	4302.6	4286.4	4572.3	4789.7
55°	4665.8	4411.0	4313.5	4493.6	4805.9	4763.3	4862.6	4692.9	4578.7	4817.5	5091.1
57.5°	4310.3	4057.4	4034.1	4293.5	4687.1	5049.8	5098.8	4964.6	4814.9	5067.8	5390.5
60°	3726.3	3495.3	3554.1	3840.6	4434.2	4950.4	5211.1	5088.5	5042.0	5293.7	5667.9
62.5°	2817.2	2637.2	2794.0	3193.4	3972.2	4822.0	5365.9	5346.6	5279.5	5533.7	5913.1
65°	1796.4	1701.5	1861.6	2267.4	3255.3	4588.4	5440.1	5466.0	5527.9	5718.9	6102.8
67.5°	1044.0	993.7	1091.1	1423.4	2318.4	3767.6	5302.1	5672.4	5704.7	5814.4	6227.4
70°	617.5	584.6	624.6	799.5	1312.4	2566.8	4522.6	5582.1	5826.0	5902.1	6353.2
72.5°	471.0	440.1	422.6	473.0	685.3	1326.0	3057.9	4731.7	5728.6	5844.1	6300.3
75°	407.2	377.5	356.8	361.3	407.8	629.8	1657.7	3384.4	4881.4	5321.4	5819.6
77.5°	349.7	323.3	308.4	307.1	312.9	345.9	693.0	1835.1	3057.2	3825.1	4195.4
80°	280.0	259.4	256.2	256.2	247.8	245.2	344.6	698.2	1163.4	1379.6	1322.8
82.5°	204.5	183.9	204.5	202.0	189.1	178.7	219.4	302.0	358.8	283.3	223.9
85°	138.1	119.4	134.9	137.4	125.2	92.9	131.6	151.0	154.9	96.8	80.0
87.5°	48.4	47.1	76.1	66.5	54.2	31.6	48.4	52.3	54.8	34.2	23.2
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°	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8
2.5°	677.5	669.8	631.1	636.9	651.7	658.8	665.9	636.9	622.7	667.8	663.3
5°	887.2	858.8	827.2	822.7	824.6	796.9	813.0	805.9	809.2	838.2	844.0
7.5°	1062.7	1028.5	986.6	953.7	896.9	851.7	889.8	909.2	915.0	966.6	986.0
10°	1157.6	1128.6	1116.3	1054.3	1035.6	1029.8	1020.8	989.8	1024.0	1011.8	1021.4
12.5°	1343.4	1337.6	1273.7	1233.1	1237.0	1247.9	1191.1	1160.2	1115.6	1185.3	1160.2
15°	1501.5	1526.7	1462.8	1388.6	1351.8	1370.5	1327.3	1282.1	1242.1	1263.4	1236.3
17.5°	1703.5	1702.8	1578.3	1498.9	1495.7	1494.4	1430.5	1331.2	1378.9	1364.1	1365.4
20°	1810.6	1793.2	1638.3	1546.7	1624.8	1597.0	1539.6	1411.8	1467.3	1485.4	1497.0
22.5°	1900.3	1890.6	1702.8	1635.7	1686.1	1686.7	1629.3	1562.2	1555.1	1611.2	1580.9
25°	1962.9	2001.6	1824.8	1808.7	1830.6	1808.7	1752.5	1708.6	1680.2	1764.1	1680.2
27.5°	2111.3	2056.4	1843.5	1935.1	1948.7	1838.3	1908.7	1857.0	1778.3	1882.2	1916.4
30°	2217.1	2249.4	1975.1	2113.2	2097.1	1995.1	2024.2	2022.2	1928.0	2130.6	2106.8
32.5°	2399.1	2360.3	2190.0	2179.0	2217.7	2213.2	2164.2	2188.1	2211.3	2358.4	2393.9
35°	2585.5	2626.8	2327.4	2401.6	2390.7	2321.0	2449.4	2434.5	2503.6	2805.6	2705.6
37.5°	3006.2	2809.4	2635.9	2626.2	2699.7	2710.7	2669.4	2734.6	2883.6	3115.9	3223.0
40°	3281.8	3192.1	2897.2	2908.8	2806.9	2982.4	2866.2	3075.9	3189.5	3581.2	3543.1
42.5°	3698.6	3479.9	3196.6	3235.3	3214.7	3130.1	3283.1	3390.8	3553.4	3852.2	4045.1
45°	4009.0	3708.9	3574.7	3550.8	3548.3	3695.4	3676.0	3848.3	3906.4	4130.9	4290.9
47.5°	4244.5	3989.6	3790.9	3818.0	3739.3	4159.3	3935.4	3989.0	4106.4	4318.0	4504.5
50°	4523.9	4240.0	4014.1	4081.2	4272.9	4434.2	4231.6	4140.0	4197.4	4447.1	4654.9
52.5°	4782.6	4483.9	4235.5	4291.6	4604.5	4531.0	4509.0	4277.4	4270.3	4471.0	4707.1
55°	5085.3	4748.4	4529.0	4707.1	4818.1	4727.1	4692.3	4410.3	4236.1	4347.7	4570.3
57.5°	5382.1	5010.4	4792.3	4829.1	4969.8	4879.4	4618.1	4183.8	3966.4	3988.3	4213.5
60°	5660.2	5251.1	5071.1	5035.6	5147.8	4793.6	4336.1	3768.9	3480.5	3427.6	3622.5
62.5°	5898.3	5452.4	5282.1	5185.3	5292.4	4796.8	3896.7	3103.0	2786.2	2606.8	2758.5
65°	6087.3	5619.5	5498.2	5447.9	5486.6	4505.2	3212.1	2278.4	1890.0	1691.2	1779.6
67.5°	6213.2	5713.1	5657.6	5723.4	5207.2	3752.2	2379.7	1458.3	1098.9	990.5	1046.0
70°	6343.5	5795.7	5793.7	5569.8	4415.5	2586.8	1389.9	840.8	639.4	597.5	632.4
72.5°	6299.6	5697.6	5726.6	4871.0	3059.8	1382.8	733.7	475.6	433.0	447.8	478.8
75°	5833.8	5180.1	5040.1	3501.8	1735.7	642.7	422.6	360.1	357.5	380.1	410.4
77.5°	4231.6	3607.6	3237.2	1984.8	744.0	347.8	311.0	300.7	300.7	318.8	345.9
80°	1395.0	1207.3	1258.2	767.9	351.7	240.0	242.6	247.1	245.8	250.4	272.9
82.5°	229.1	237.5	367.2	313.6	212.3	163.9	183.3	192.3	194.9	174.2	198.1
85°	81.3	91.6	156.2	145.2	122.6	82.6	120.7	134.9	132.9	116.1	128.4
87.5°	25.2	32.3	56.8	43.9	36.8	22.6	45.2	52.9	66.5	27.1	24.5
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)