

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: P368423

Luminaire Tested: **MSA-SA4B-760-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368423
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-760-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14647 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

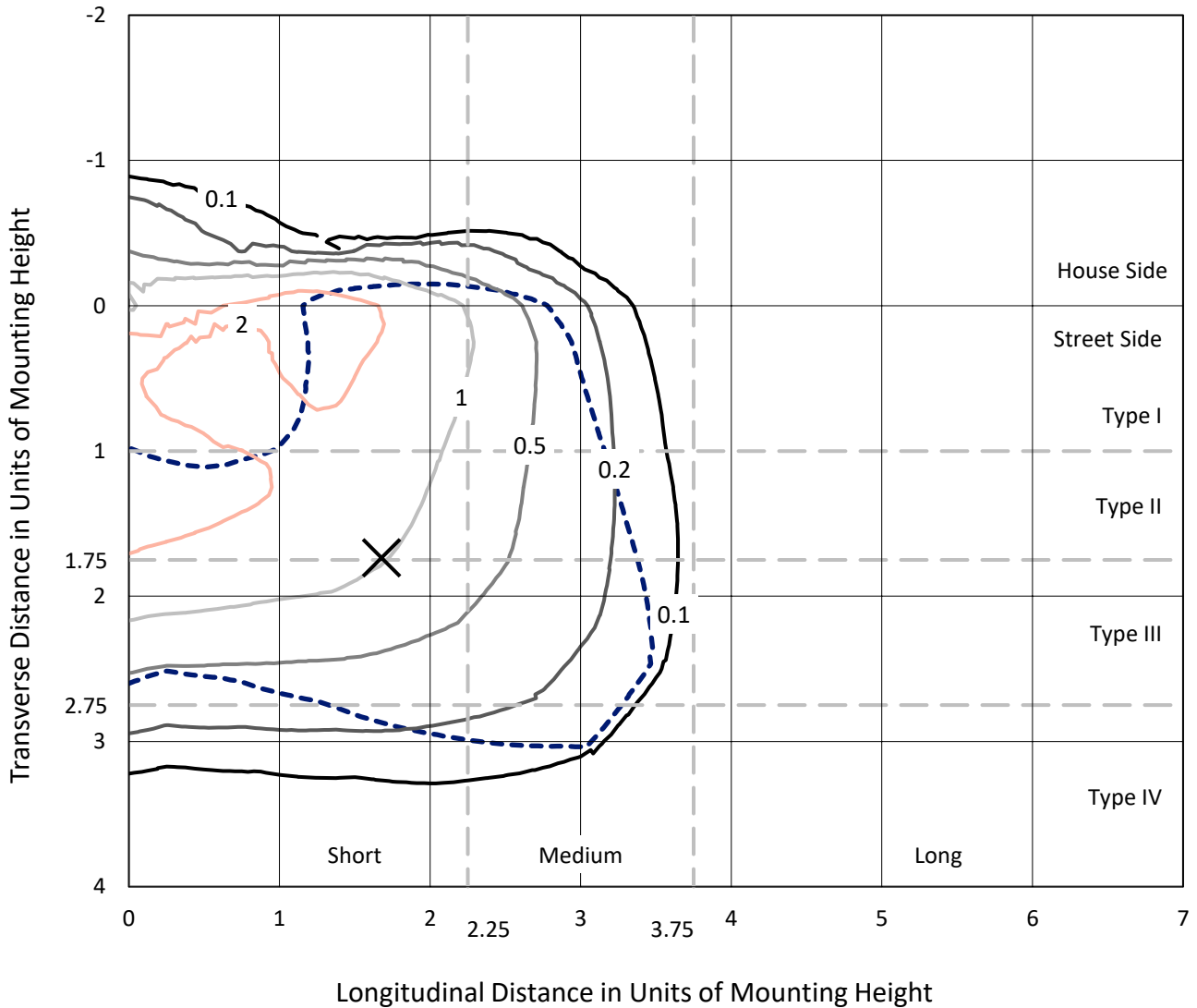
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

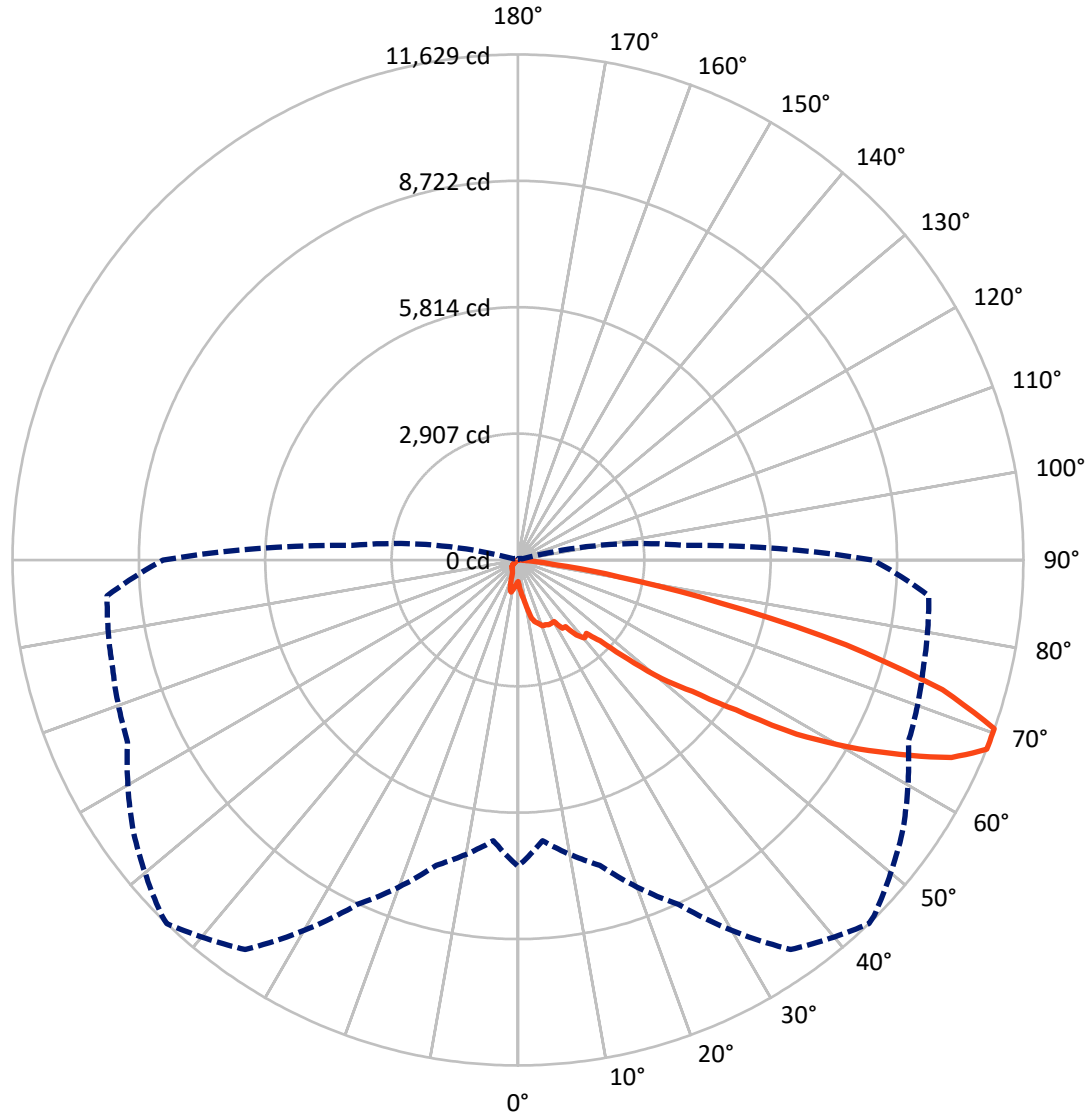
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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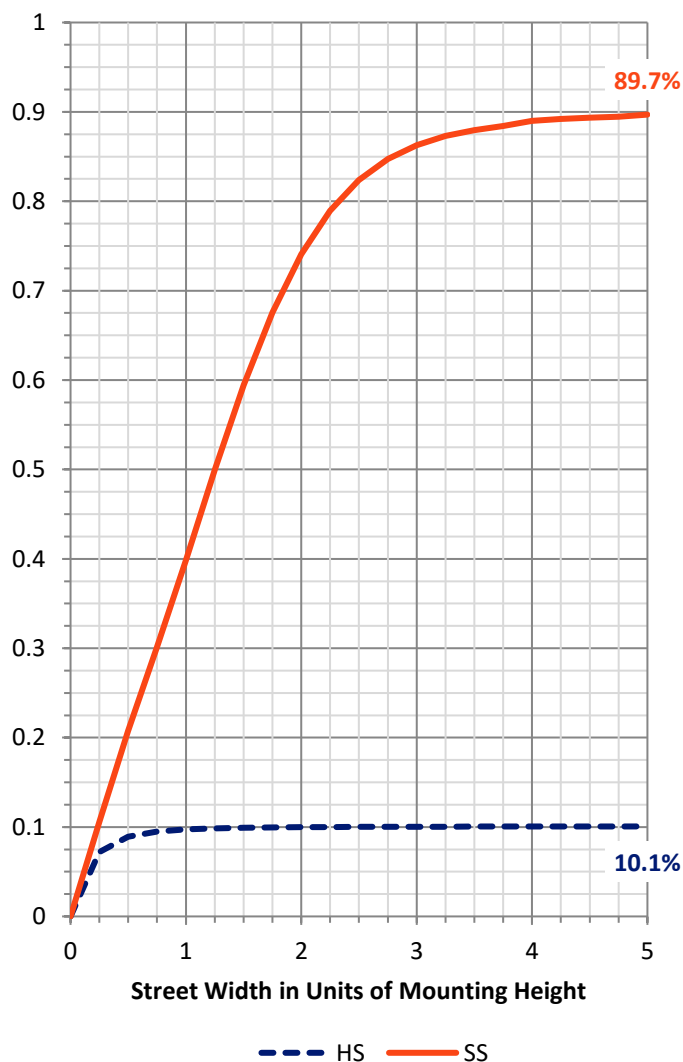
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1487.9	0.0	1487.9
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	13159.2	0.0	13159.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	14647.0	0.0	14647.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	0.5
10°-20°	306.2	2.1
20°-30°	542.5	3.7
30°-40°	881.7	6.0
40°-50°	1764.4	12.0
50°-60°	3619.8	24.7
60°-70°	4972.5	33.9
70°-80°	2337.1	16.0
80°-90°	149.7	1.0
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°	14647.0	100.0
0°-180°	14647.0	100.0

Coefficient of Utilization

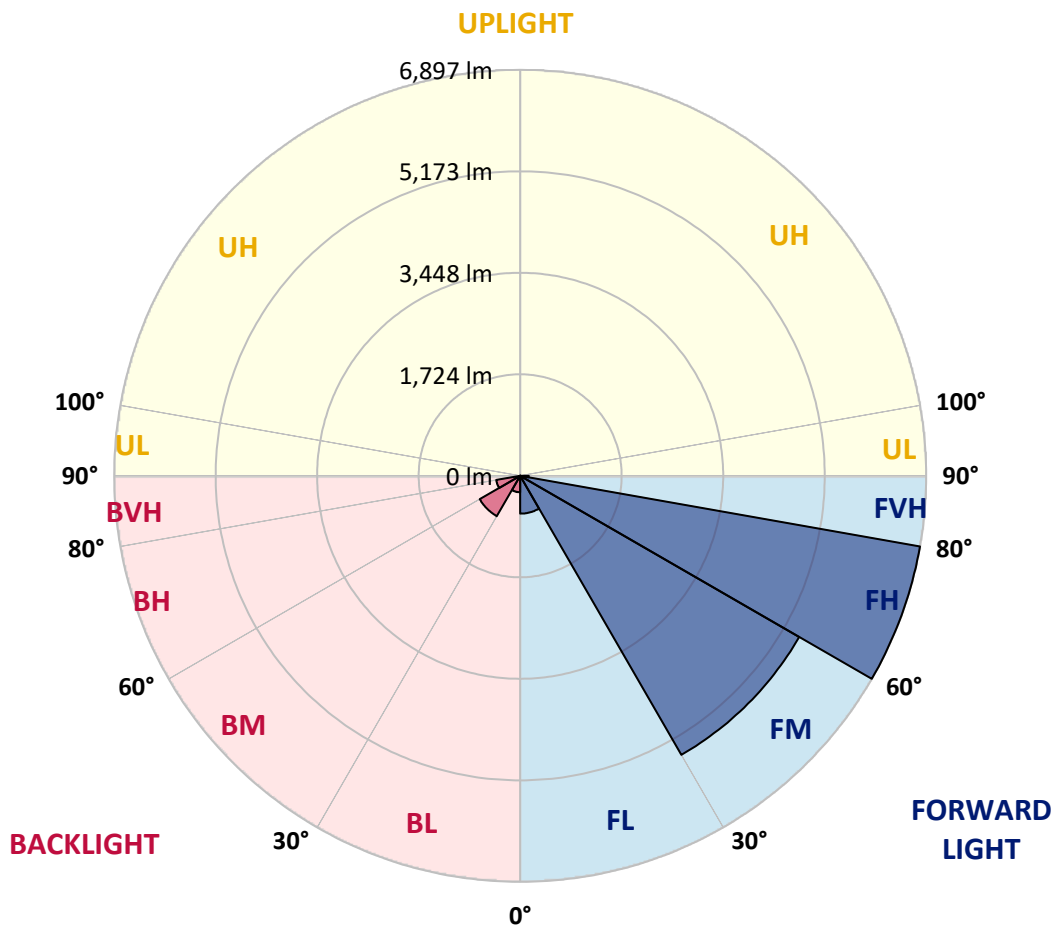


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	642.5	4.4			
FM (30°-60°)	5473.3	37.4			
FH (60°-80°)	6896.7	47.1			G3/7500
FVH (80°-90°)	146.6	1.0			G2/225
BL (0°-30°)	279.4	1.9	B1/500		
BM (30°-60°)	792.6	5.4	B1/1000		
BH (60°-80°)	412.9	2.8	B1/500		G1/500
BVH (80°-90°)	3.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5
2.5°	627.6	607.4	578.3	584.8	588.0	596.9	597.7	586.4	554.1	545.2	584.8
5°	879.6	830.3	821.4	802.8	765.7	745.5	740.6	760.8	735.0	726.9	737.4
7.5°	1123.5	1081.5	1035.4	1010.4	932.9	885.2	882.8	890.9	895.7	867.4	882.0
10°	1285.8	1239.8	1230.1	1171.1	1104.1	1092.8	1087.9	1057.2	1032.2	1011.2	940.9
12.5°	1432.8	1432.0	1449.8	1365.0	1354.5	1365.8	1361.7	1251.9	1226.9	1138.8	1118.6
15°	1628.3	1676.7	1600.0	1528.9	1438.5	1477.2	1466.7	1396.5	1379.5	1319.7	1233.3
17.5°	1831.0	1843.9	1715.5	1606.5	1583.0	1532.1	1542.6	1517.6	1432.0	1479.7	1394.0
20°	1835.8	1864.1	1726.8	1546.7	1618.6	1616.1	1617.0	1592.7	1479.7	1591.1	1512.8
22.5°	1903.7	1834.2	1706.6	1591.9	1604.8	1617.0	1629.9	1600.0	1575.8	1603.2	1617.8
25°	1876.2	1848.8	1726.0	1650.1	1638.0	1647.6	1650.9	1688.8	1673.5	1739.7	1703.4
27.5°	1947.3	1907.7	1688.0	1701.8	1659.0	1647.6	1628.3	1755.1	1800.3	1747.8	1844.7
30°	2069.3	2063.6	1753.5	1773.6	1740.5	1641.2	1692.9	1858.4	1915.0	1882.7	2000.6
32.5°	2259.9	2279.2	1944.9	1814.0	1831.0	1875.4	1856.0	1858.4	2001.4	2073.3	2167.0
35°	2530.4	2519.9	2131.4	1967.5	1878.6	1885.9	1913.4	2045.0	2230.0	2225.1	2324.5
37.5°	3061.9	2947.2	2461.8	2124.2	2150.8	2187.2	2167.0	2343.9	2361.6	2368.1	2605.5
40°	3845.3	3692.7	2982.7	2454.5	2197.7	2358.4	2348.7	2392.3	2511.0	2555.5	2902.0
42.5°	4877.5	4672.4	3899.4	3061.9	2423.8	2313.2	2372.9	2455.3	2854.3	2981.1	3360.7
45°	6017.9	5602.8	4813.7	3927.7	2990.8	2647.5	2692.8	2846.2	3399.5	3609.5	4028.7
47.5°	6757.0	6391.9	5719.1	4695.0	3582.0	3401.9	3405.9	3439.1	4040.0	4429.3	4991.4
50°	7399.1	7010.6	6386.2	5497.0	4627.9	4287.1	4209.6	4056.9	4855.7	5388.0	6011.5
52.5°	8305.3	7851.4	7053.4	6437.9	5820.9	5018.1	4990.6	5042.3	5817.6	6377.4	7057.4
55°	9122.6	8571.0	7809.4	7421.7	7181.0	6092.3	6115.7	6202.1	7052.6	7349.0	7987.9
57.5°	9483.7	8886.0	8494.3	8319.8	8191.4	7559.8	7480.6	7428.9	8026.6	8139.7	8962.7
60°	9720.3	9151.7	8974.0	9014.4	9403.7	8733.3	8661.5	8361.0	8832.7	8925.6	9836.6
62.5°	9570.9	9052.4	9090.3	9427.1	10291.3	9850.3	9642.8	9140.4	9491.7	9566.8	10464.2
65°	8630.0	8089.6	8577.5	9392.4	10968.2	10957.7	10861.5	9860.0	9856.8	9952.9	10512.6
67.5°	7049.3	6482.4	7271.5	8741.4	10939.9	11628.8	11583.6	10814.7	9909.3	9652.5	9486.9
70°	4900.9	4409.1	5304.0	7219.0	9965.0	11624.0	11551.3	11456.0	9494.2	8308.5	7355.4
72.5°	2546.6	2276.0	3109.5	4974.4	7943.4	10213.0	10452.9	10296.2	8106.6	6036.5	4331.5
75°	865.0	776.2	1282.6	2640.3	5280.5	7798.9	8079.9	7920.8	5505.9	3238.8	1713.1
77.5°	335.2	311.8	459.6	1071.8	2649.2	4752.3	5057.6	4895.3	2952.8	1186.5	403.0
80°	190.6	184.1	253.6	483.0	1167.9	2364.0	2578.9	2339.0	1064.5	399.8	105.0
82.5°	80.8	83.2	141.3	260.9	587.2	834.3	930.4	848.9	445.8	273.8	38.8
85°	17.8	21.8	67.0	145.4	246.3	238.3	249.6	277.0	273.8	201.1	17.0
87.5°	0.0	0.0	21.0	39.6	59.0	38.8	30.7	54.1	84.0	80.8	7.3
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°	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5	493.5
2.5°	592.0	583.9	533.1	529.8	533.1	524.2	523.4	504.8	506.4	548.4	551.6
5°	737.4	697.0	653.4	639.7	626.8	597.7	613.8	613.8	613.8	640.5	648.6
7.5°	869.1	814.9	753.6	701.9	651.8	615.4	640.5	658.3	668.8	703.5	719.6
10°	928.8	875.5	820.6	747.1	708.3	694.6	665.5	650.2	668.8	661.5	670.4
12.5°	1056.4	1008.0	913.5	837.6	808.5	761.6	676.0	616.3	576.7	570.2	568.6
15°	1180.8	1150.9	1024.1	922.4	821.4	713.2	567.0	487.8	445.8	438.6	439.4
17.5°	1338.3	1295.5	1108.9	962.7	791.5	596.9	437.8	369.9	366.7	384.5	386.1
20°	1443.3	1373.0	1151.7	929.6	693.0	451.5	342.5	326.3	352.1	384.5	381.2
22.5°	1543.5	1467.5	1208.3	900.6	537.1	342.5	315.0	316.6	338.4	373.1	382.0
25°	1609.7	1582.2	1277.7	832.7	409.5	296.4	301.3	313.4	332.0	365.1	365.1
27.5°	1809.2	1680.8	1269.7	701.1	315.0	276.2	287.5	302.9	312.6	352.1	356.2
30°	1930.3	1888.3	1311.7	567.0	276.2	250.4	272.2	285.9	292.4	337.6	339.2
32.5°	2078.9	1986.1	1362.5	418.4	256.8	248.8	243.9	254.4	273.0	312.6	315.0
35°	2259.9	2232.4	1289.8	328.7	250.4	232.6	222.9	228.6	240.7	267.3	273.0
37.5°	2629.0	2465.8	1246.2	281.9	250.4	227.0	216.5	201.9	203.5	222.1	232.6
40°	2939.9	2889.8	1124.3	273.8	239.1	218.9	193.0	175.3	163.1	168.8	172.8
42.5°	3510.9	3279.1	966.8	269.8	228.6	197.9	164.0	145.4	126.8	128.4	134.9
45°	4203.9	3704.0	826.2	265.7	221.3	176.9	138.1	116.3	96.9	97.7	104.2
47.5°	5129.5	4323.5	655.8	253.6	208.4	157.5	111.5	88.8	77.5	80.0	85.6
50°	6181.1	4867.0	518.5	235.0	193.0	138.9	90.5	71.9	67.8	70.3	76.7
52.5°	7120.4	5267.6	428.1	218.1	171.2	113.1	75.9	63.8	62.2	63.8	68.7
55°	7955.5	5500.2	357.8	198.7	147.0	91.3	68.7	59.0	58.2	57.3	60.6
57.5°	8739.0	5567.3	279.5	168.0	119.5	79.2	63.8	54.9	53.3	50.9	53.3
60°	9310.0	5452.6	205.1	134.9	97.7	71.9	59.8	49.3	46.8	42.8	44.4
62.5°	9585.4	5138.4	155.1	108.2	83.2	65.4	53.3	42.8	39.6	34.7	35.5
65°	9323.7	4620.7	122.0	91.3	71.1	54.9	45.2	36.3	32.3	27.5	27.5
67.5°	8164.7	3833.2	103.4	79.2	59.8	46.8	37.2	33.1	26.7	22.6	21.8
70°	5992.9	2757.4	88.8	69.5	51.7	40.4	31.5	29.9	25.8	21.8	20.2
72.5°	3382.5	1560.4	75.9	61.4	43.6	33.9	26.7	27.5	25.0	20.2	18.6
75°	1290.7	525.8	63.0	50.9	35.5	25.8	22.6	22.6	22.6	17.0	14.5
77.5°	319.8	134.1	50.1	41.2	28.3	17.0	18.6	19.4	19.4	14.5	10.5
80°	88.0	45.2	29.9	29.9	20.2	9.7	12.9	12.9	10.5	4.8	0.0
82.5°	32.3	17.0	10.5	12.9	8.9	3.2	4.8	3.2	2.4	0.0	0.0
85°	13.7	8.9	6.5	7.3	4.0	0.0	0.8	1.6	0.0	0.0	0.0
87.5°	5.7	4.0	3.2	3.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0
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)