

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: P367669

Luminaire Tested: **MSA-SA3A-727-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367669
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-727-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7399 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

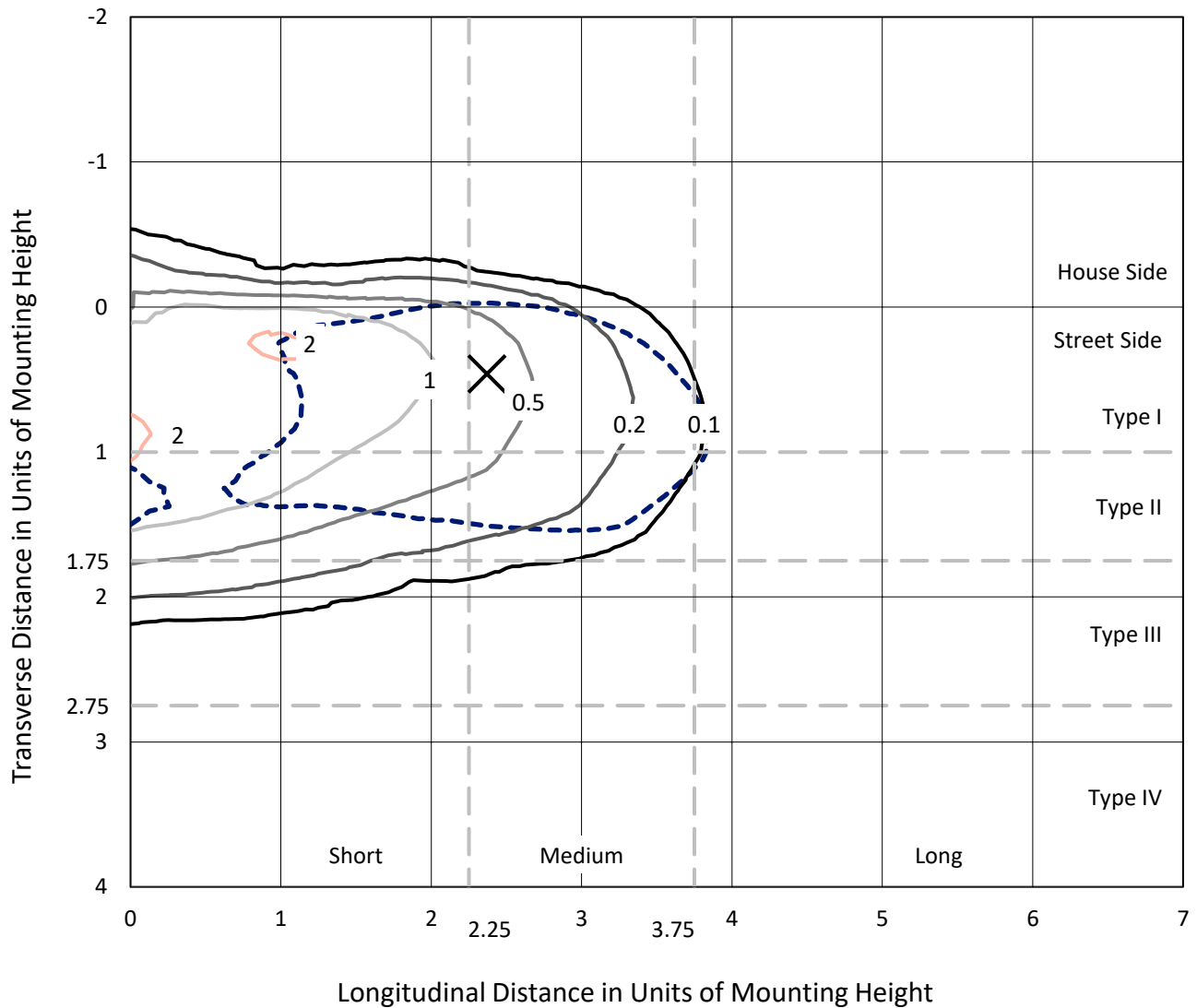
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

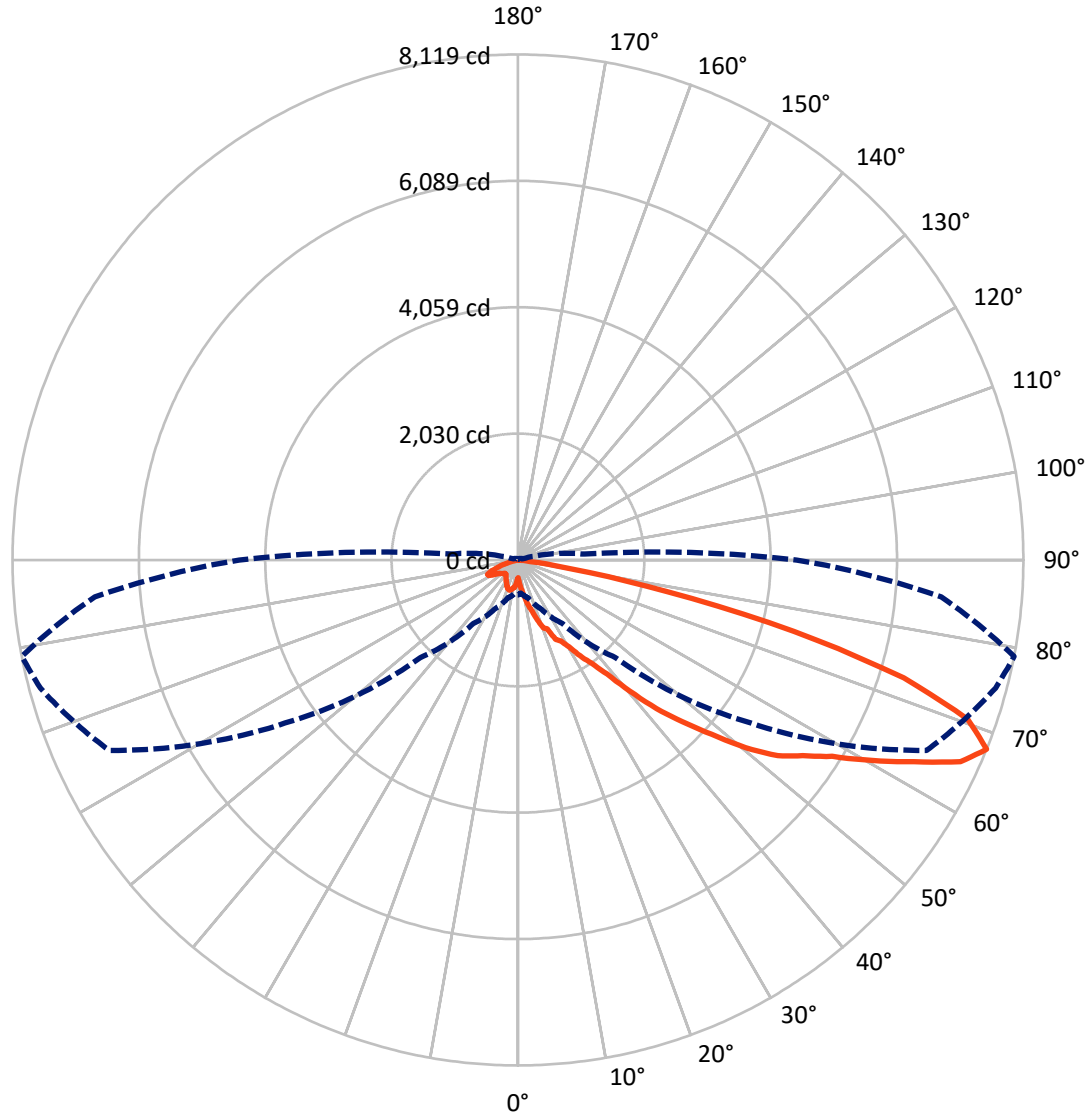
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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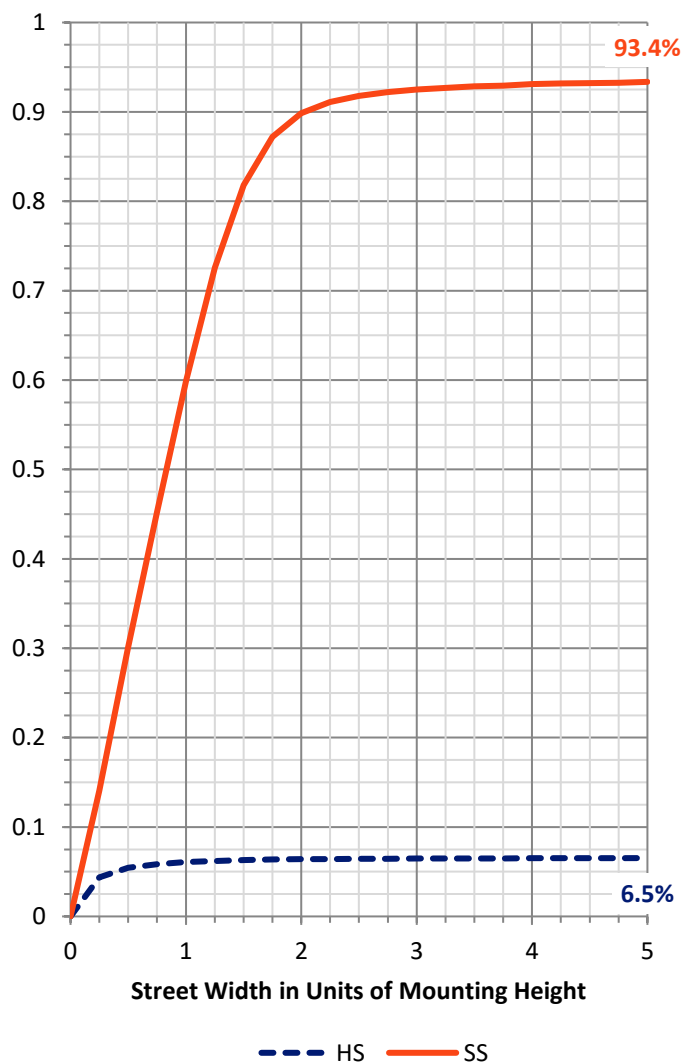
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	486.2	0.0	486.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6912.8	0.0	6912.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	7399.0	0.0	7399.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.5	0.6
10°-20°	165.3	2.2
20°-30°	319.0	4.3
30°-40°	626.5	8.5
40°-50°	1255.1	17.0
50°-60°	2006.1	27.1
60°-70°	2018.5	27.3
70°-80°	910.6	12.3
80°-90°	56.3	0.8
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°	7399.0	100.0
0°-180°	7399.0	100.0

Coefficient of Utilization



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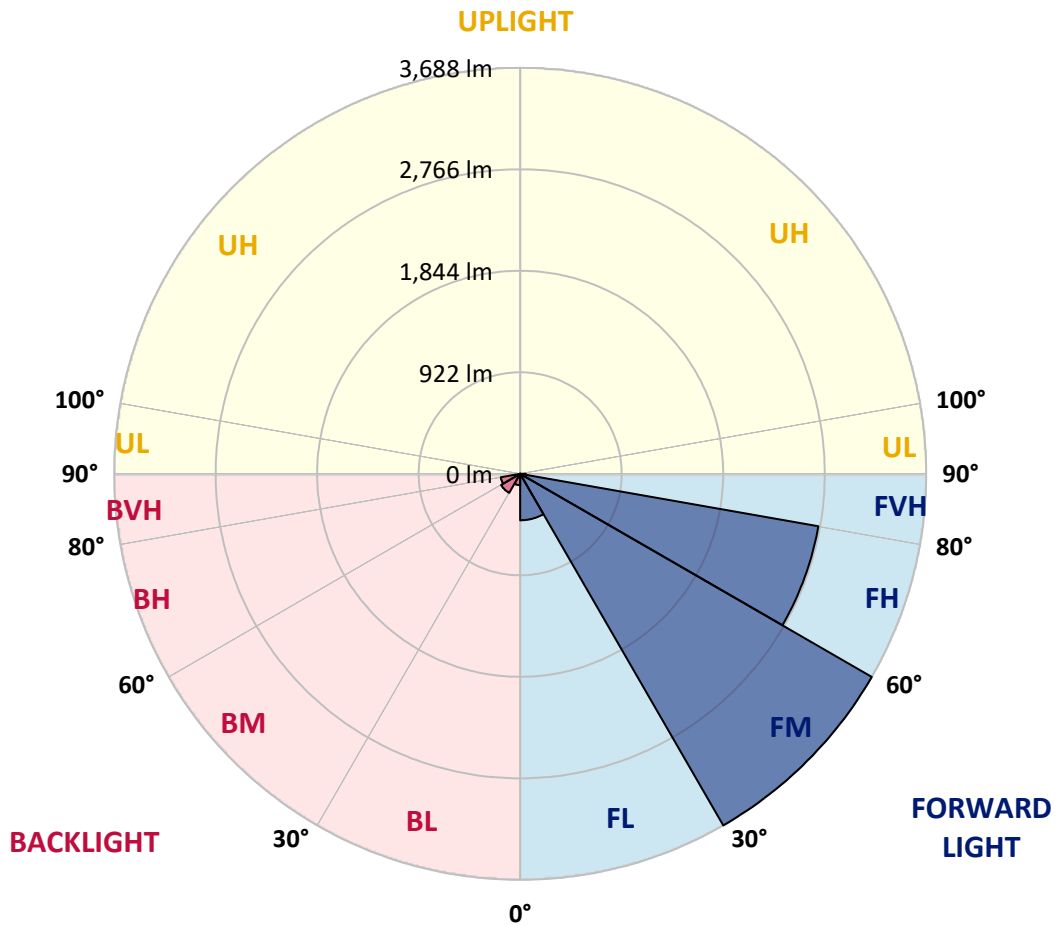
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	422.4	5.7			
FM (30°-60°)	3687.8	49.8			
FH (60°-80°)	2749.9	37.2			G2/5000
FVH (80°-90°)	52.8	0.7			G1/100
BL (0°-30°)	103.3	1.4	B0/110		
BM (30°-60°)	200.0	2.7	B0/220		
BH (60°-80°)	179.2	2.4	B1/500		G1/500
BVH (80°-90°)	3.6	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1
2.5°	385.0	371.2	348.7	361.4	360.6	367.1	354.8	341.4	319.8	341.4	343.0
5°	554.3	528.6	512.3	509.0	491.1	474.4	470.7	456.8	446.2	427.0	444.2
7.5°	690.5	678.7	649.7	646.5	602.4	578.0	585.7	579.6	539.2	519.2	535.9
10°	748.4	728.1	732.1	728.1	709.3	716.2	700.3	682.0	649.7	616.7	575.1
12.5°	770.9	767.6	801.5	797.4	841.4	894.5	859.0	828.4	753.7	745.6	688.9
15°	819.0	839.4	834.5	851.6	879.8	969.9	969.1	976.4	897.3	854.9	772.9
17.5°	861.8	876.9	852.5	872.0	948.7	1003.4	1076.4	1047.8	1056.8	1013.6	886.7
20°	843.5	860.6	836.1	824.3	959.3	1062.9	1160.4	1139.6	1193.4	1166.5	991.5
22.5°	958.1	925.9	864.3	825.9	926.7	1061.7	1190.2	1277.0	1267.7	1201.6	1089.0
25°	1099.6	1080.0	1006.2	938.5	947.5	1054.3	1284.0	1411.6	1439.4	1411.2	1181.6
27.5°	1290.5	1286.0	1135.1	1105.7	1018.5	1022.1	1298.7	1581.3	1518.1	1474.1	1289.7
30°	1539.7	1504.2	1325.2	1286.8	1157.9	1094.7	1388.4	1727.7	1681.2	1621.3	1391.3
32.5°	1807.7	1813.0	1584.6	1458.1	1354.5	1279.5	1352.9	1796.3	1883.1	1834.6	1518.1
35°	2112.0	2135.6	1856.2	1707.8	1506.3	1395.7	1505.5	2006.7	2162.5	2034.9	1688.2
37.5°	2580.6	2579.8	2253.5	1957.8	1811.4	1691.4	1759.6	2198.0	2506.0	2326.5	1993.3
40°	2993.0	2903.2	2599.8	2260.0	2031.6	1999.0	1949.6	2459.9	2872.6	2764.6	2264.5
42.5°	3300.9	3237.7	2871.0	2606.7	2323.6	2220.0	2202.5	2843.7	3413.9	3262.6	2651.6
45°	3669.2	3462.0	3192.0	2953.8	2665.4	2635.3	2594.1	3233.2	4043.6	3702.7	2988.1
47.5°	3999.2	3804.2	3548.9	3243.0	2911.8	3160.6	3002.3	3575.4	4501.7	4181.5	3359.2
50°	4276.9	4069.7	3783.8	3550.9	3409.0	3577.9	3314.0	3857.2	4996.4	4737.0	3706.3
52.5°	4418.5	4184.0	3962.9	3818.9	3905.8	3867.9	3736.5	4198.6	5418.2	5224.0	4013.9
55°	4302.2	4073.0	3980.4	4051.8	4315.7	4206.0	4216.6	4727.6	5816.3	5548.7	4281.4
57.5°	3786.7	3577.4	3618.6	3814.0	4319.8	4606.9	4763.9	5241.6	6135.6	5953.3	4694.2
60°	2864.5	2696.0	2848.6	3195.3	3913.5	4527.0	5152.2	5755.5	6592.0	6534.9	5319.1
62.5°	1749.4	1658.0	1874.2	2306.5	3118.6	4135.0	5378.6	6440.7	7080.3	7141.0	5981.9
65°	892.4	851.2	1031.5	1411.6	2107.1	3396.8	5215.1	6866.5	7584.8	7809.1	6613.6
67.5°	562.0	535.5	631.8	861.0	1243.2	2215.6	4566.1	7238.9	7941.3	8118.7	6824.5
70°	389.5	372.8	456.0	591.0	784.3	1193.4	3390.2	6891.4	7658.6	7666.8	6314.3
72.5°	247.2	234.1	315.3	437.6	578.8	616.3	1943.5	5407.6	6555.7	6480.3	5113.5
75°	160.3	153.8	200.3	320.6	444.6	380.1	960.5	3648.8	4700.7	4582.4	3396.4
77.5°	115.0	110.9	134.2	214.1	316.5	265.9	430.7	2174.8	2695.2	2436.6	1648.6
80°	69.3	68.9	97.1	134.2	225.1	187.6	199.0	987.5	1045.0	852.0	503.7
82.5°	34.7	35.9	54.2	86.5	144.8	122.8	91.0	328.7	280.6	206.8	102.0
85°	8.2	10.2	28.6	59.5	72.6	48.9	43.2	86.1	77.1	58.3	29.8
87.5°	0.0	0.0	9.0	14.3	19.6	8.2	14.7	16.3	20.8	16.3	6.1
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°	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1
2.5°	343.4	338.5	308.8	301.0	300.2	291.6	293.7	285.5	285.9	304.3	304.3
5°	437.6	409.1	380.5	355.3	338.1	313.7	304.7	301.0	297.7	305.1	309.6
7.5°	513.9	471.9	420.5	365.5	314.5	279.4	274.5	265.5	262.3	269.6	275.3
10°	547.8	495.6	425.0	344.7	296.9	268.4	244.7	232.1	229.6	229.2	231.3
12.5°	619.6	554.7	429.9	336.9	285.1	253.7	226.8	205.6	186.0	188.0	186.0
15°	677.1	600.4	429.9	318.1	256.6	225.1	177.8	167.2	164.4	168.9	165.2
17.5°	763.9	645.7	408.3	284.7	232.1	175.0	157.0	156.2	161.9	168.5	164.4
20°	816.2	651.8	372.0	246.4	190.5	151.7	145.2	138.7	146.8	152.1	150.1
22.5°	870.4	652.2	335.7	226.0	153.4	138.3	127.7	122.4	123.6	128.5	129.3
25°	893.6	636.3	301.8	199.0	139.1	123.6	112.6	106.9	104.8	107.3	106.5
27.5°	956.9	605.7	265.1	169.7	132.2	109.7	99.5	92.6	86.5	90.5	91.4
30°	965.8	595.9	245.1	150.9	123.2	97.1	88.1	80.8	76.3	82.0	82.0
32.5°	994.4	542.1	234.9	143.2	113.8	89.7	77.5	72.2	71.4	75.0	75.5
35°	1038.4	518.4	219.8	137.0	105.2	81.2	69.7	67.3	66.5	69.3	69.3
37.5°	1187.7	489.0	203.1	131.7	97.9	76.7	67.7	63.6	64.0	66.5	68.1
40°	1286.8	492.7	178.2	125.2	89.3	72.6	63.6	60.8	60.4	61.6	62.8
42.5°	1470.8	495.6	167.2	118.3	82.8	67.7	59.5	57.5	55.9	57.1	58.3
45°	1676.4	510.7	161.5	112.6	79.1	64.9	55.9	54.7	51.0	51.8	53.4
47.5°	1874.6	565.7	154.6	104.4	75.9	63.2	52.2	49.4	46.9	46.5	48.1
50°	2099.7	619.2	146.8	95.4	72.6	60.8	48.5	44.1	42.4	42.4	43.6
52.5°	2301.2	670.1	139.5	89.3	70.2	56.3	45.3	40.8	39.6	39.6	41.2
55°	2513.3	723.6	133.0	83.6	66.9	51.8	42.4	38.3	37.9	37.1	38.3
57.5°	2887.7	840.2	124.8	78.7	62.4	48.1	40.0	35.9	35.1	33.9	35.1
60°	3433.1	1019.3	114.2	73.8	57.1	45.7	37.9	33.0	31.8	29.8	30.2
62.5°	3966.2	1164.1	102.0	67.7	52.2	43.2	34.7	29.8	27.7	25.3	25.7
65°	4423.0	1221.2	88.9	60.4	47.3	37.5	30.2	26.1	23.2	20.0	19.6
67.5°	4476.8	1078.4	76.3	53.4	42.4	31.8	25.7	23.2	18.8	15.9	15.1
70°	4029.0	803.5	63.6	47.3	36.7	26.9	22.0	20.4	17.5	15.1	13.9
72.5°	3208.3	593.0	53.4	42.0	32.2	22.8	18.8	19.2	17.5	14.7	13.1
75°	2121.8	339.3	43.6	35.1	26.9	18.4	17.1	17.1	16.7	13.9	12.2
77.5°	1020.9	146.4	33.4	27.7	21.6	13.9	15.5	15.5	15.9	12.6	10.2
80°	289.6	44.1	20.8	18.8	15.9	9.4	12.2	11.8	10.6	7.3	4.5
82.5°	51.8	17.1	9.4	9.8	9.0	3.7	6.9	6.5	5.3	2.9	0.4
85°	14.3	6.5	5.3	5.7	4.5	1.2	2.9	3.7	2.9	1.6	0.0
87.5°	3.7	2.9	3.7	4.1	3.3	0.4	1.2	0.4	1.2	0.4	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)