

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: P366613

Luminaire Tested: **MSA-SA1A-727-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366613  
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-SA1A-727-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 2549 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G1

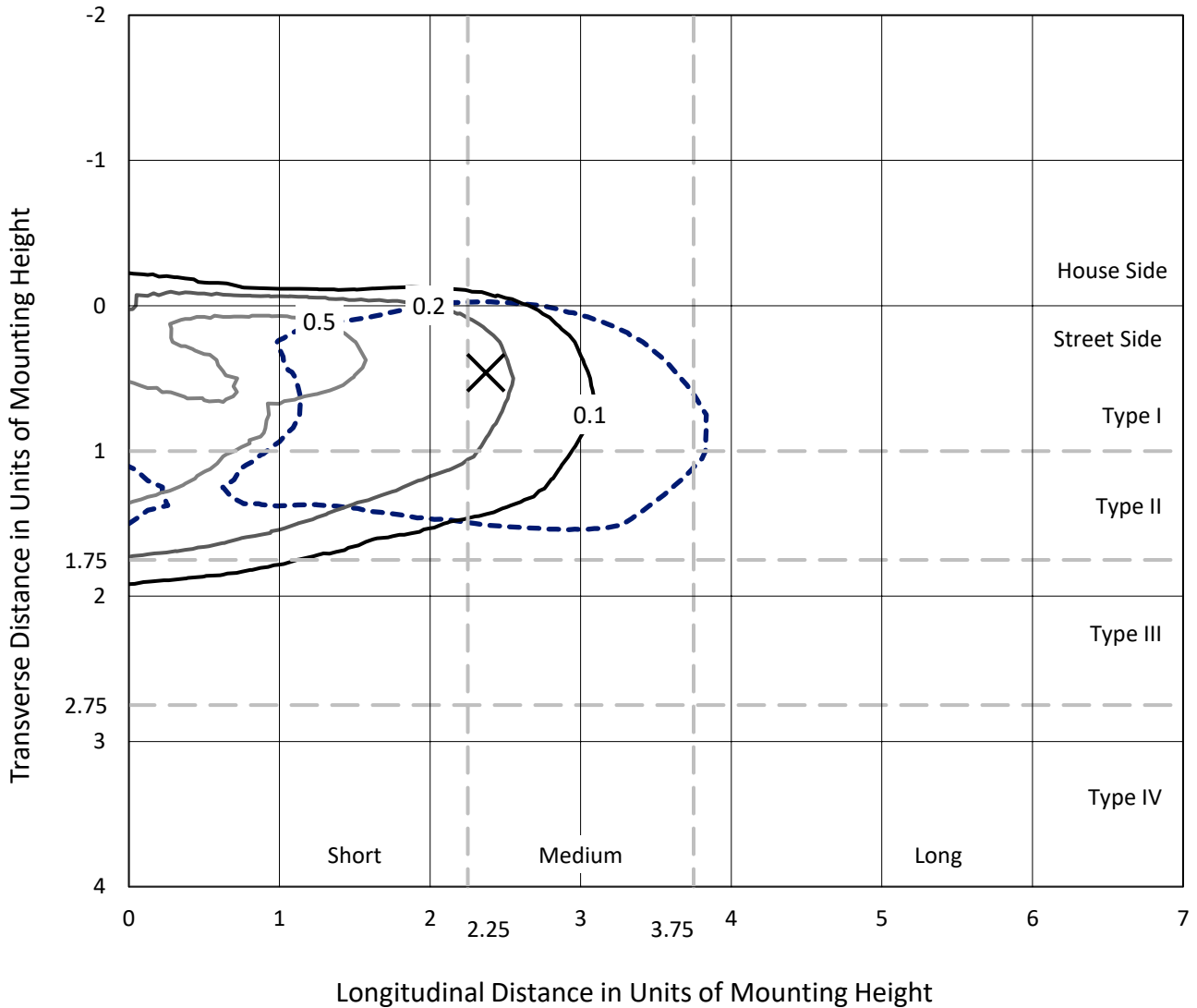
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

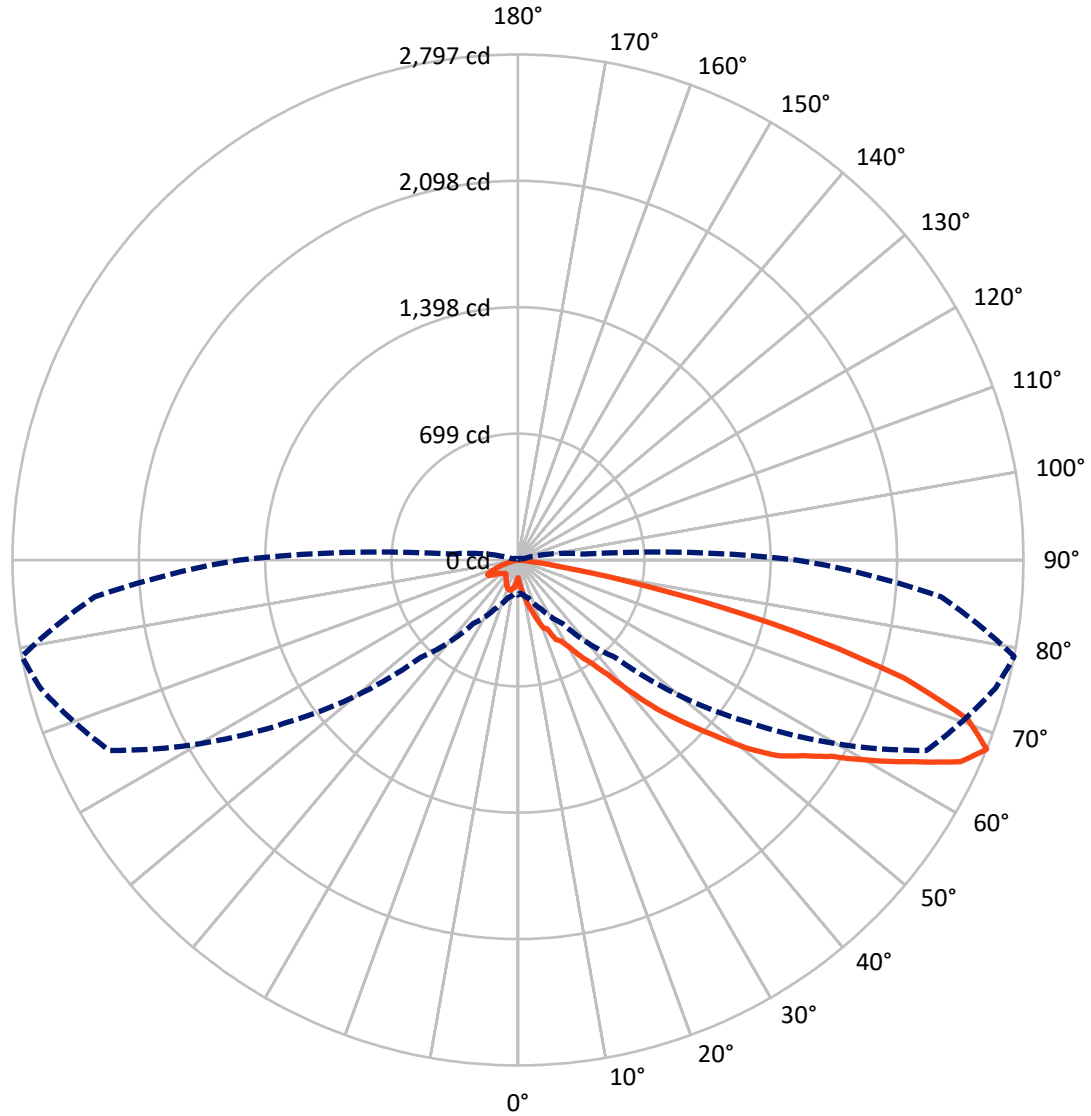
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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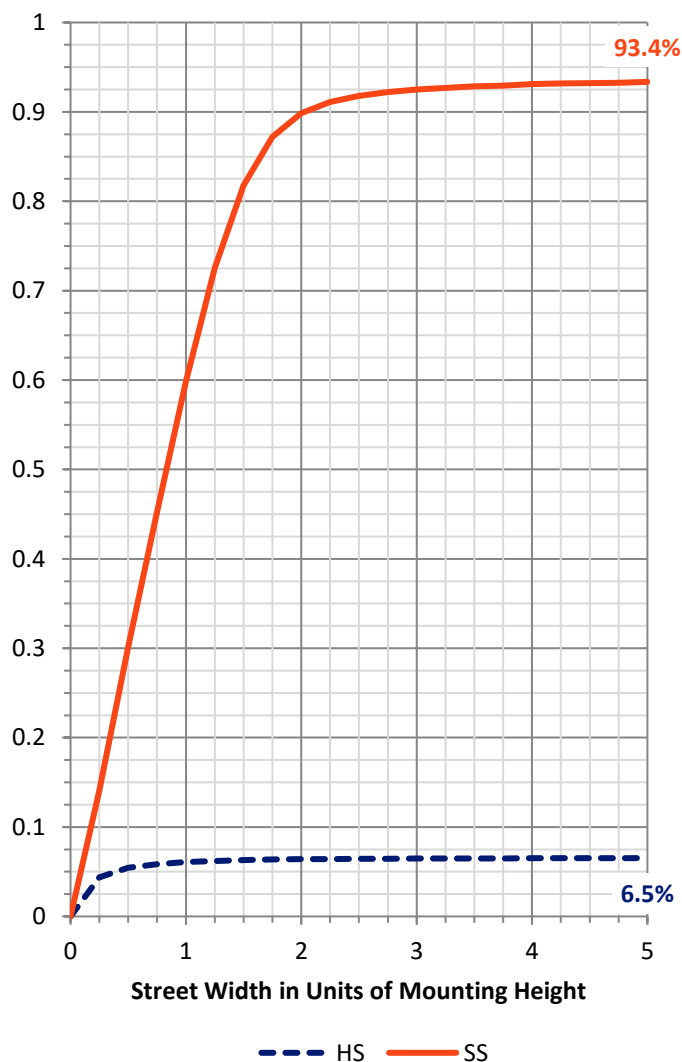
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	167.5	0.0	167.5
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	2381.5	0.0	2381.5
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	2549.0	0.0	2549.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	14.3	0.6
10°-20°	57.0	2.2
20°-30°	109.9	4.3
30°-40°	215.8	8.5
40°-50°	432.4	17.0
50°-60°	691.1	27.1
60°-70°	695.4	27.3
70°-80°	313.7	12.3
80°-90°	19.4	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°	2549.0	100.0
0°-180°	2549.0	100.0

**Coefficient of Utilization**



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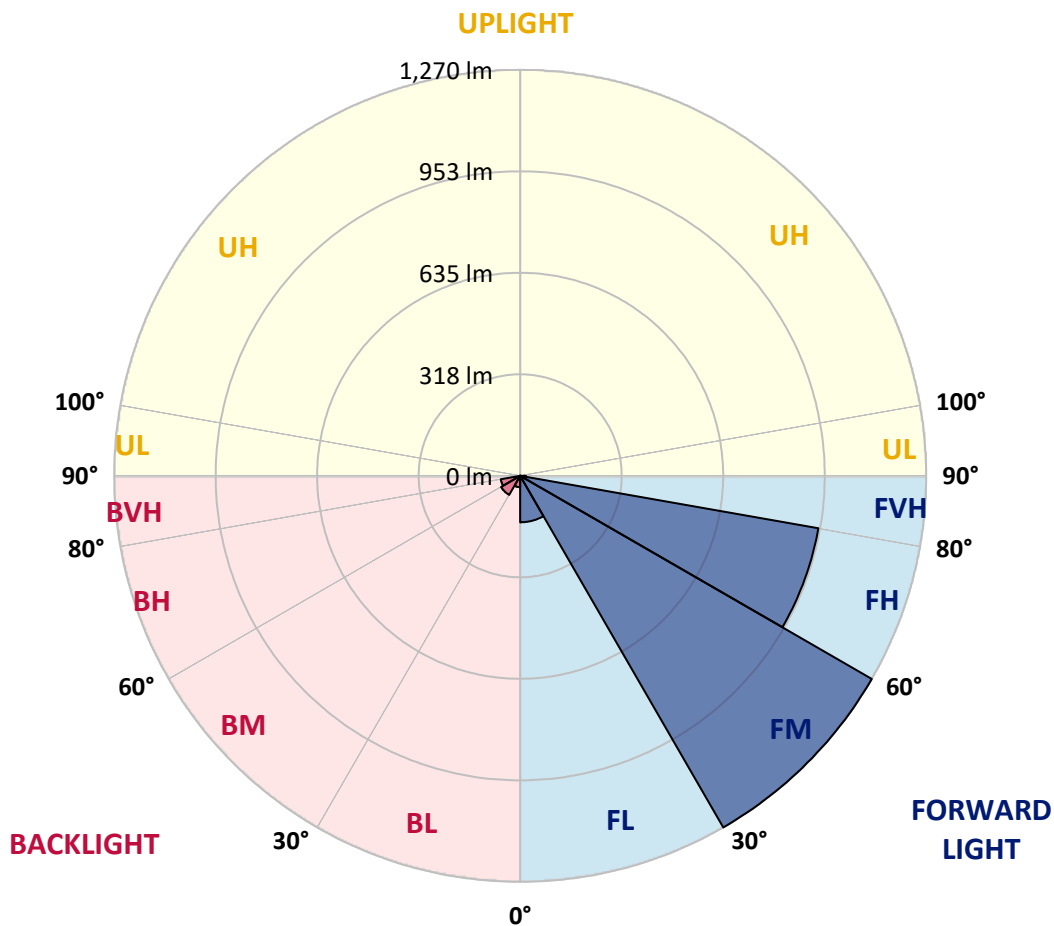
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	145.5	5.7			
FM (30°-60°)	1270.5	49.8			
FH (60°-80°)	947.4	37.2			G1/1800
FVH (80°-90°)	18.2	0.7			G1/100
BL (0°-30°)	35.6	1.4	B0/110		
BM (30°-60°)	68.9	2.7	B0/220		
BH (60°-80°)	61.7	2.4	B0/110		G0/110
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2
2.5°	132.6	127.9	120.1	124.5	124.2	126.5	122.2	117.6	110.2	117.6	118.2
5°	191.0	182.1	176.5	175.4	169.2	163.4	162.2	157.4	153.7	147.1	153.0
7.5°	237.9	233.8	223.8	222.7	207.5	199.1	201.8	199.7	185.8	178.9	184.6
10°	257.8	250.8	252.2	250.8	244.4	246.7	241.3	234.9	223.8	212.5	198.1
12.5°	265.6	264.4	276.1	274.7	289.9	308.1	295.9	285.4	259.7	256.9	237.3
15°	282.2	289.2	287.5	293.4	303.1	334.1	333.9	336.4	309.1	294.5	266.3
17.5°	296.9	302.1	293.7	300.4	326.8	345.7	370.8	361.0	364.1	349.2	305.5
20°	290.6	296.5	288.1	284.0	330.5	366.2	399.8	392.6	411.1	401.9	341.6
22.5°	330.1	319.0	297.8	284.5	319.2	365.8	410.0	440.0	436.7	414.0	375.2
25°	378.8	372.1	346.6	323.3	326.4	363.2	442.3	486.3	495.9	486.2	407.1
27.5°	444.6	443.0	391.1	380.9	350.9	352.1	447.4	544.8	523.0	507.8	444.3
30°	530.4	518.2	456.5	443.3	398.9	377.1	478.3	595.2	579.2	558.5	479.3
32.5°	622.8	624.6	545.9	502.3	466.6	440.8	466.1	618.8	648.8	632.0	523.0
35°	727.6	735.7	639.5	588.3	518.9	480.8	518.6	691.3	745.0	701.0	581.6
37.5°	889.0	888.8	776.3	674.5	624.0	582.7	606.2	757.2	863.3	801.5	686.7
40°	1031.1	1000.2	895.6	778.6	699.9	688.7	671.7	847.4	989.6	952.4	780.1
42.5°	1137.2	1115.4	989.1	898.0	800.5	764.8	758.8	979.7	1176.1	1124.0	913.5
45°	1264.1	1192.7	1099.7	1017.6	918.3	907.9	893.7	1113.9	1393.1	1275.6	1029.4
47.5°	1377.7	1310.6	1222.6	1117.2	1003.1	1088.8	1034.3	1231.7	1550.9	1440.6	1157.3
50°	1473.4	1402.1	1303.6	1223.3	1174.4	1232.6	1141.7	1328.8	1721.3	1631.9	1276.9
52.5°	1522.2	1441.4	1365.2	1315.6	1345.6	1332.5	1287.3	1446.5	1866.6	1799.7	1382.8
55°	1482.1	1403.2	1371.3	1395.9	1486.8	1449.0	1452.6	1628.7	2003.7	1911.6	1475.0
57.5°	1304.5	1232.5	1246.6	1314.0	1488.2	1587.1	1641.2	1805.8	2113.8	2050.9	1617.2
60°	986.8	928.8	981.4	1100.8	1348.2	1559.6	1775.0	1982.8	2271.0	2251.3	1832.4
62.5°	602.7	571.2	645.7	794.6	1074.4	1424.5	1853.0	2218.9	2439.2	2460.1	2060.8
65°	307.4	293.3	355.4	486.3	725.9	1170.2	1796.6	2365.6	2613.0	2690.3	2278.4
67.5°	193.6	184.5	217.7	296.6	428.3	763.3	1573.1	2493.9	2735.8	2796.9	2351.1
70°	134.2	128.4	157.1	203.6	270.2	411.1	1168.0	2374.1	2638.4	2641.3	2175.3
72.5°	85.2	80.7	108.6	150.8	199.4	212.3	669.6	1862.9	2258.5	2232.5	1761.6
75°	55.2	53.0	69.0	110.4	153.2	131.0	330.9	1257.0	1619.4	1578.7	1170.1
77.5°	39.6	38.2	46.2	73.8	109.0	91.6	148.4	749.2	928.5	839.4	568.0
80°	23.9	23.7	33.4	46.2	77.6	64.6	68.6	340.2	360.0	293.5	173.5
82.5°	11.9	12.4	18.7	29.8	49.9	42.3	31.3	113.3	96.7	71.2	35.1
85°	2.8	3.5	9.8	20.5	25.0	16.9	14.9	29.6	26.6	20.1	10.3
87.5°	0.0	0.0	3.1	4.9	6.7	2.8	5.1	5.6	7.2	5.6	2.1
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°	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2
2.5°	118.3	116.6	106.4	103.7	103.4	100.5	101.2	98.4	98.5	104.8	104.8
5°	150.8	140.9	131.1	122.4	116.5	108.1	105.0	103.7	102.6	105.1	106.7
7.5°	177.0	162.6	144.9	125.9	108.3	96.3	94.6	91.5	90.4	92.9	94.8
10°	188.7	170.7	146.4	118.7	102.3	92.5	84.3	80.0	79.1	79.0	79.7
12.5°	213.4	191.1	148.1	116.1	98.2	87.4	78.1	70.8	64.1	64.8	64.1
15°	233.3	206.8	148.1	109.6	88.4	77.6	61.3	57.6	56.6	58.2	56.9
17.5°	263.2	222.4	140.7	98.1	80.0	60.3	54.1	53.8	55.8	58.0	56.6
20°	281.2	224.5	128.1	84.9	65.6	52.3	50.0	47.8	50.6	52.4	51.7
22.5°	299.9	224.7	115.6	77.8	52.8	47.6	44.0	42.2	42.6	44.3	44.5
25°	307.9	219.2	104.0	68.6	47.9	42.6	38.8	36.8	36.1	37.0	36.7
27.5°	329.6	208.7	91.3	58.5	45.5	37.8	34.3	31.9	29.8	31.2	31.5
30°	332.7	205.3	84.4	52.0	42.4	33.4	30.4	27.8	26.3	28.2	28.2
32.5°	342.6	186.7	80.9	49.3	39.2	30.9	26.7	24.9	24.6	25.9	26.0
35°	357.7	178.6	75.7	47.2	36.3	28.0	24.0	23.2	22.9	23.9	23.9
37.5°	409.2	168.5	70.0	45.4	33.7	26.4	23.3	21.9	22.1	22.9	23.5
40°	443.3	169.7	61.4	43.1	30.8	25.0	21.9	20.9	20.8	21.2	21.6
42.5°	506.7	170.7	57.6	40.7	28.5	23.3	20.5	19.8	19.3	19.7	20.1
45°	577.5	175.9	55.6	38.8	27.3	22.3	19.3	18.8	17.6	17.8	18.4
47.5°	645.8	194.9	53.3	36.0	26.1	21.8	18.0	17.0	16.2	16.0	16.6
50°	723.4	213.3	50.6	32.9	25.0	20.9	16.7	15.2	14.6	14.6	15.0
52.5°	792.8	230.9	48.1	30.8	24.2	19.4	15.6	14.1	13.6	13.6	14.2
55°	865.9	249.3	45.8	28.8	23.0	17.8	14.6	13.2	13.1	12.8	13.2
57.5°	994.8	289.5	43.0	27.1	21.5	16.6	13.8	12.4	12.1	11.7	12.1
60°	1182.7	351.1	39.3	25.4	19.7	15.7	13.1	11.4	11.0	10.3	10.4
62.5°	1366.4	401.0	35.1	23.3	18.0	14.9	11.9	10.3	9.6	8.7	8.9
65°	1523.7	420.7	30.6	20.8	16.3	12.9	10.4	9.0	8.0	6.9	6.7
67.5°	1542.3	371.5	26.3	18.4	14.6	11.0	8.9	8.0	6.5	5.5	5.2
70°	1388.0	276.8	21.9	16.3	12.6	9.3	7.6	7.0	6.0	5.2	4.8
72.5°	1105.3	204.3	18.4	14.5	11.1	7.9	6.5	6.6	6.0	5.1	4.5
75°	731.0	116.9	15.0	12.1	9.3	6.3	5.9	5.9	5.8	4.8	4.2
77.5°	351.7	50.4	11.5	9.6	7.4	4.8	5.3	5.3	5.5	4.4	3.5
80°	99.8	15.2	7.2	6.5	5.5	3.2	4.2	4.1	3.7	2.5	1.5
82.5°	17.8	5.9	3.2	3.4	3.1	1.3	2.4	2.2	1.8	1.0	0.1
85°	4.9	2.2	1.8	2.0	1.5	0.4	1.0	1.3	1.0	0.6	0.0
87.5°	1.3	1.0	1.3	1.4	1.1	0.1	0.4	0.1	0.4	0.1	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)