

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: P366615

Luminaire Tested: **MSA-SA1A-727-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366615
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-727-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2496 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

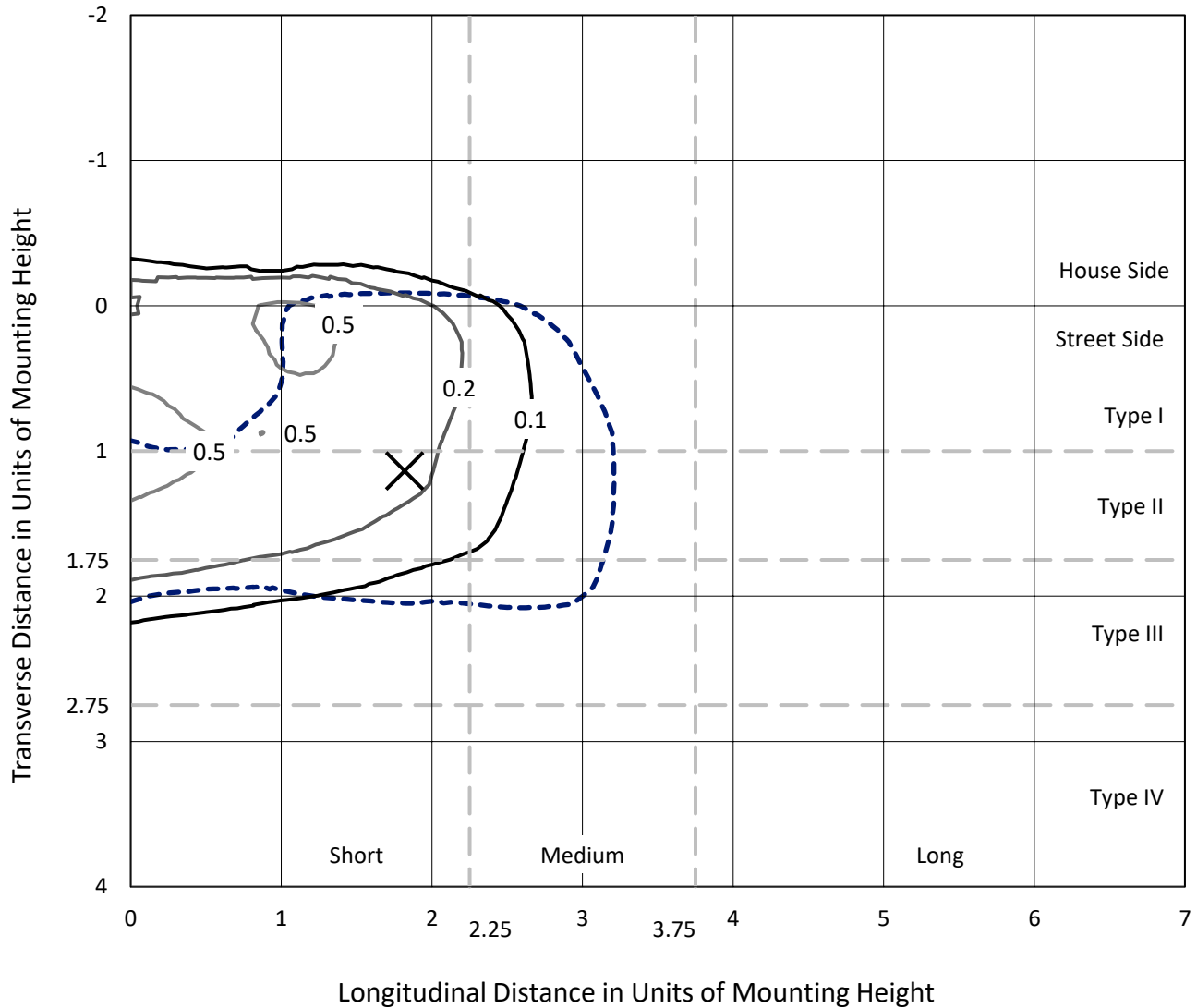
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

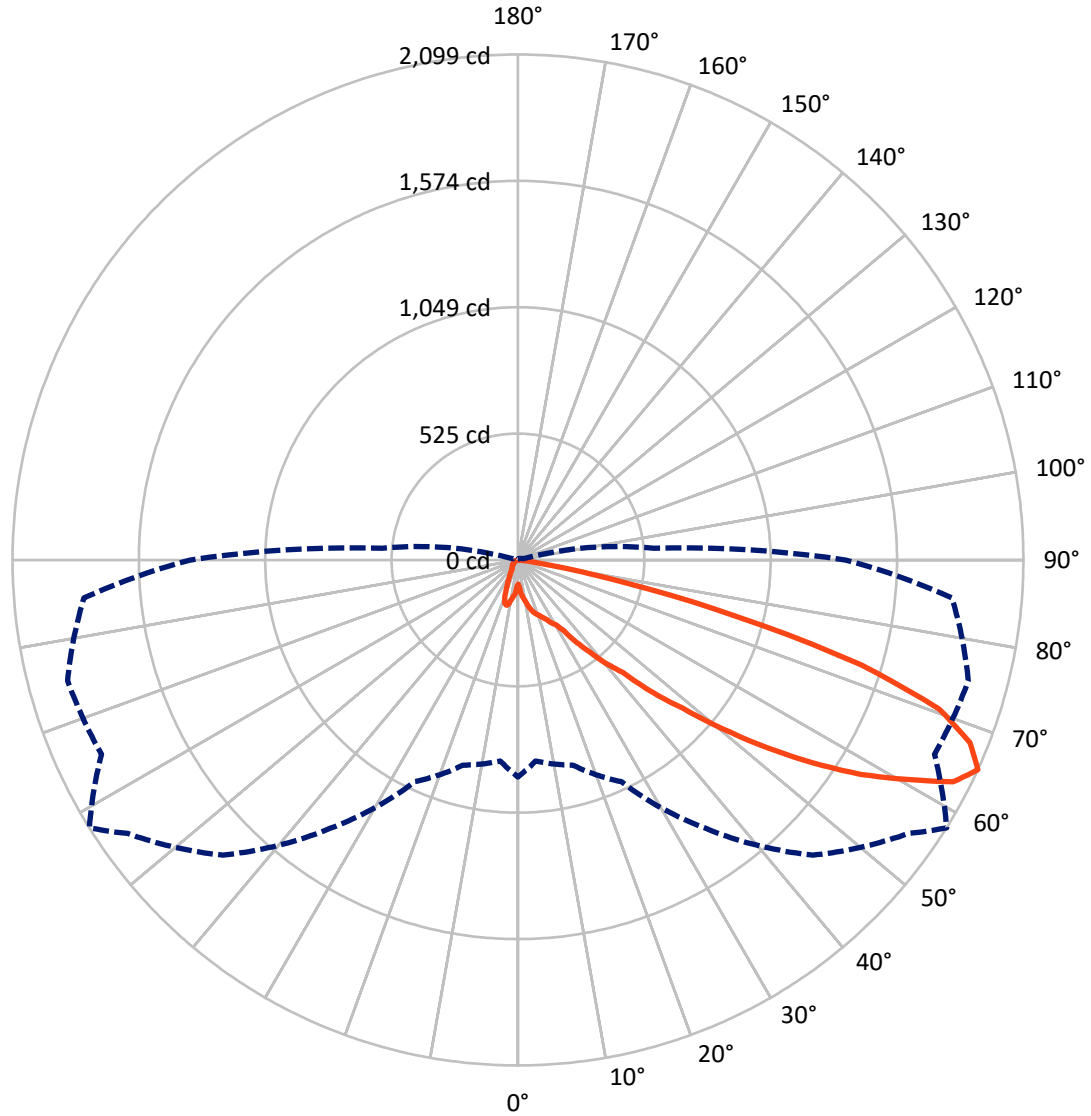
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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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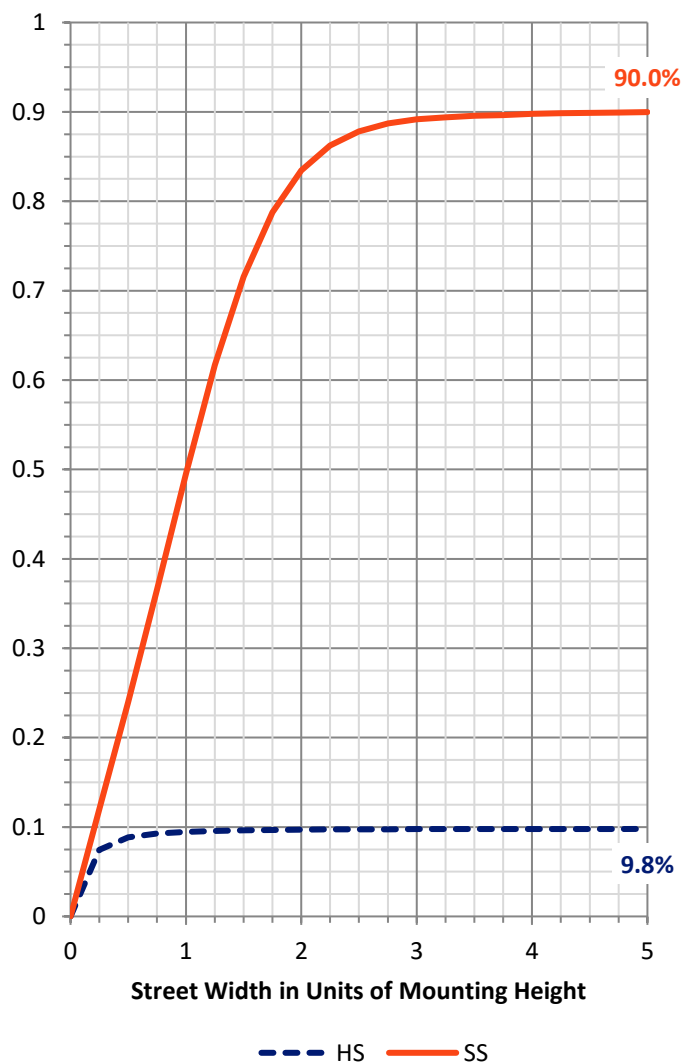
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	246.3	0.0	246.3
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	2249.7	0.0	2249.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	2496.0	0.0	2496.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.0	0.6
10°-20°	51.2	2.1
20°-30°	99.2	4.0
30°-40°	197.9	7.9
40°-50°	404.5	16.2
50°-60°	717.5	28.7
60°-70°	756.4	30.3
70°-80°	245.2	9.8
80°-90°	10.0	0.4
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°	2496.0	100.0
0°-180°	2496.0	100.0

Coefficient of Utilization



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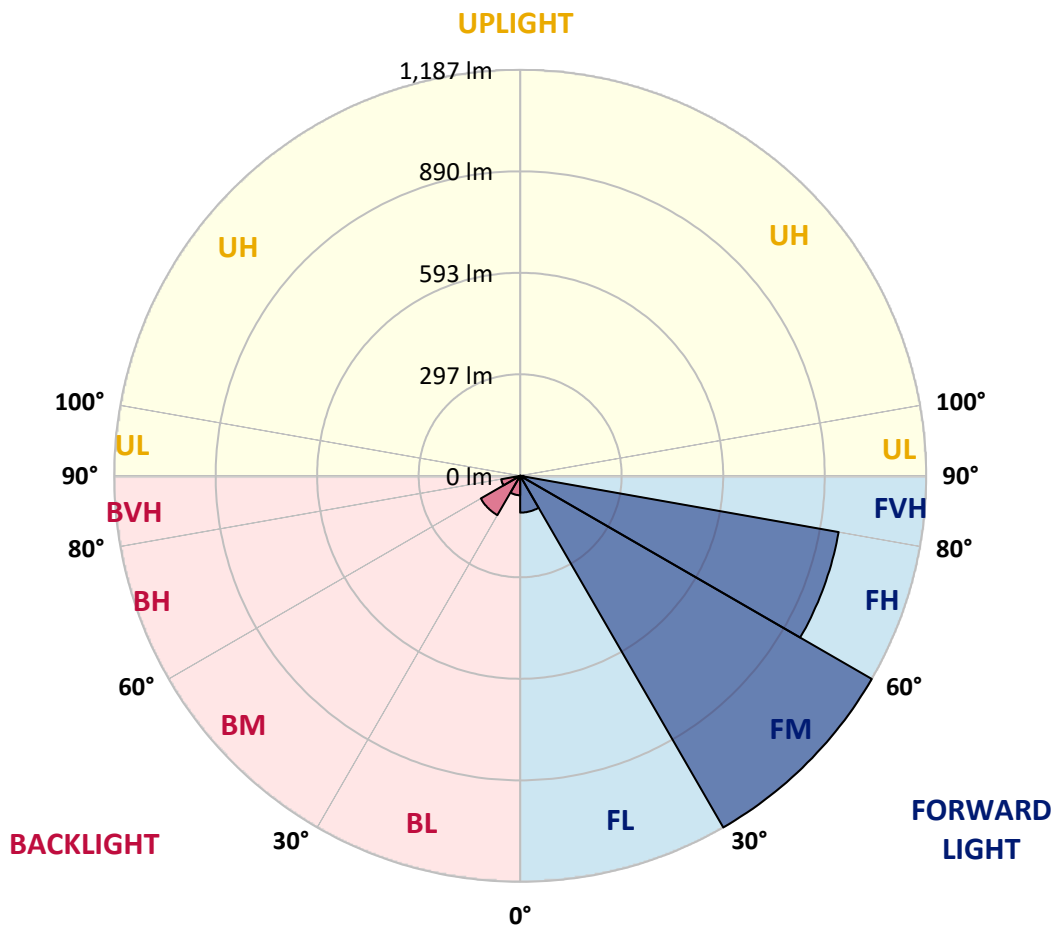
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	107.7	4.3			
FM (30°-60°)	1187.0	47.6			
FH (60°-80°)	945.4	37.9			G1/1800
FVH (80°-90°)	9.6	0.4			G0/10
BL (0°-30°)	56.8	2.3	B0/110		
BM (30°-60°)	132.9	5.3	B0/220		
BH (60°-80°)	56.2	2.3	B0/110		G0/110
BVH (80°-90°)	0.4	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
2.5°	122.0	118.3	112.6	113.6	114.7	116.9	115.1	113.4	111.6	109.2	118.3
5°	147.3	141.2	140.7	139.4	138.4	138.3	140.5	139.8	140.8	145.3	149.9
7.5°	156.6	154.0	149.2	151.2	148.1	145.7	155.7	158.9	165.1	167.2	179.3
10°	155.6	151.9	153.9	154.9	157.0	165.7	172.0	175.5	180.9	192.4	190.0
12.5°	160.1	163.3	165.4	165.5	176.4	192.4	196.9	199.8	209.4	213.9	225.7
15°	175.1	180.4	177.1	178.5	182.0	201.5	212.1	218.5	232.0	246.6	249.6
17.5°	196.6	200.0	193.0	187.9	197.6	208.3	227.4	234.1	242.7	276.8	283.2
20°	223.7	229.5	214.3	194.2	207.0	219.7	240.5	243.7	252.8	297.4	307.3
22.5°	287.1	278.5	255.3	224.0	220.2	225.8	245.7	258.3	273.8	308.9	332.1
25°	349.6	346.7	312.5	277.6	252.3	239.6	265.9	272.9	298.2	336.3	349.1
27.5°	419.2	425.1	368.1	346.8	297.2	255.9	278.5	296.1	326.0	346.3	377.0
30°	511.0	501.6	434.7	413.4	356.8	300.7	311.3	312.4	356.4	379.2	408.4
32.5°	582.9	589.0	504.9	472.3	427.1	369.7	335.9	350.5	382.0	432.7	460.4
35°	660.8	660.2	578.3	534.4	475.3	426.1	408.8	419.5	459.0	516.5	523.8
37.5°	777.1	767.2	670.5	606.3	555.9	513.9	500.7	486.5	527.3	582.1	609.5
40°	886.9	852.5	763.1	686.9	622.6	605.4	557.6	566.3	578.4	650.8	726.6
42.5°	997.8	976.4	857.0	793.2	714.0	673.3	642.1	638.0	695.5	781.2	859.5
45°	1144.1	1078.7	983.2	927.1	835.5	794.6	769.4	784.5	836.2	961.4	1013.5
47.5°	1266.9	1206.8	1124.7	1039.5	943.4	989.4	942.1	918.4	989.4	1118.8	1188.1
50°	1372.4	1305.4	1222.4	1159.3	1143.7	1187.8	1092.2	1100.9	1147.0	1299.1	1338.2
52.5°	1449.2	1378.6	1306.1	1275.6	1339.6	1361.8	1313.8	1294.6	1336.5	1452.8	1471.8
55°	1506.9	1434.7	1378.1	1420.1	1543.8	1536.4	1553.3	1487.5	1527.6	1613.2	1604.2
57.5°	1510.4	1424.9	1391.7	1459.3	1629.1	1742.2	1791.5	1679.6	1702.4	1738.5	1718.3
60°	1400.0	1314.8	1312.2	1408.1	1653.8	1795.4	1903.4	1848.8	1818.4	1845.2	1806.8
62.5°	1179.9	1120.3	1148.2	1254.3	1561.7	1766.1	1963.0	2028.6	1909.8	1915.9	1861.4
65°	901.0	838.4	882.0	1015.6	1360.5	1733.2	1979.8	2098.9	1908.2	1936.0	1809.1
67.5°	596.7	560.4	609.8	757.0	1081.7	1530.0	1971.1	2025.1	1847.6	1857.4	1615.0
70°	308.0	299.2	339.1	455.3	727.3	1175.4	1885.5	1856.0	1724.6	1600.1	1245.7
72.5°	98.7	99.1	137.4	208.0	392.1	715.6	1449.3	1489.8	1380.0	1170.5	760.6
75°	43.7	43.0	57.5	87.3	163.4	320.8	900.4	944.1	859.2	643.9	319.7
77.5°	31.5	30.5	36.8	51.0	80.9	108.8	422.2	455.6	389.6	223.2	73.2
80°	22.2	22.1	26.7	35.8	50.6	48.3	133.4	149.5	119.7	54.1	21.5
82.5°	12.5	12.9	18.6	25.3	30.8	24.2	37.5	41.3	40.3	28.8	9.4
85°	6.0	6.7	12.1	18.3	16.2	9.4	13.4	14.5	16.9	16.7	4.8
87.5°	0.0	0.0	4.9	8.3	4.4	1.4	4.1	4.6	4.5	5.3	1.1
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°	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
2.5°	120.2	119.3	108.6	109.5	111.9	110.9	111.7	109.8	107.5	116.6	116.5
5°	151.9	145.6	142.2	139.1	139.7	133.4	137.0	138.7	138.4	143.6	145.0
7.5°	179.7	171.3	164.6	158.1	148.3	139.4	144.9	148.4	150.8	159.8	163.3
10°	192.8	185.9	183.3	170.6	163.6	158.1	151.5	146.7	148.7	146.3	148.7
12.5°	221.5	216.8	206.6	193.8	185.4	174.1	149.5	129.0	116.4	116.5	115.7
15°	247.6	247.3	232.0	210.8	186.3	154.3	115.9	90.1	78.1	74.8	73.6
17.5°	281.8	277.6	249.6	218.2	174.3	119.5	79.0	61.7	60.6	62.5	61.7
20°	303.6	297.4	258.3	207.4	143.6	80.8	59.6	54.7	58.0	60.9	60.1
22.5°	325.3	316.1	264.9	194.2	102.2	59.2	53.8	53.0	55.1	58.6	59.2
25°	337.3	335.5	277.8	169.5	70.0	51.9	51.9	51.6	52.3	54.8	54.4
27.5°	372.0	347.3	268.1	132.2	54.1	47.6	48.3	48.1	45.5	48.1	48.2
30°	393.6	382.2	268.8	94.2	47.6	42.2	44.0	41.7	37.9	40.1	39.6
32.5°	437.2	408.8	266.7	63.5	43.4	40.2	37.4	34.1	31.3	32.2	31.5
35°	487.9	466.3	238.2	51.0	40.5	35.6	31.1	27.8	24.9	25.6	25.4
37.5°	588.8	520.1	214.6	46.0	38.5	32.6	27.4	22.9	21.4	21.8	22.2
40°	682.3	609.9	170.6	43.7	35.1	29.1	22.6	19.4	18.4	18.7	19.1
42.5°	822.0	681.3	128.9	41.5	31.8	24.6	18.8	16.7	15.7	16.3	16.6
45°	957.2	742.0	96.3	39.5	28.9	21.2	15.9	14.5	13.4	13.8	14.3
47.5°	1092.2	809.5	71.8	36.4	25.9	18.3	13.6	12.6	11.9	12.1	12.8
50°	1213.1	840.9	56.5	32.6	23.3	15.9	12.4	11.4	11.1	11.2	11.8
52.5°	1301.9	841.2	47.6	29.2	20.9	14.1	11.7	10.5	10.4	10.7	11.2
55°	1382.1	818.7	41.3	26.3	18.8	12.8	11.1	10.1	10.1	10.4	11.0
57.5°	1435.4	777.4	35.8	23.2	17.0	12.1	10.7	9.7	9.6	9.4	9.8
60°	1461.4	721.1	30.4	20.4	15.3	11.7	10.4	8.6	8.4	8.2	8.4
62.5°	1445.0	650.5	25.4	17.6	13.6	11.1	9.1	7.4	7.2	6.6	7.0
65°	1360.9	564.8	21.5	15.0	11.8	9.4	7.7	6.3	5.6	4.9	4.8
67.5°	1189.0	458.8	18.0	12.9	10.1	7.7	6.3	5.6	4.4	3.8	3.7
70°	891.1	313.2	14.9	11.1	8.4	6.6	5.3	5.1	4.1	3.7	3.4
72.5°	522.8	169.1	12.5	9.7	7.2	5.5	4.4	4.6	4.1	3.4	3.1
75°	208.8	56.2	10.0	7.7	5.8	3.9	3.7	3.8	3.7	3.1	2.5
77.5°	47.6	17.7	7.7	6.0	4.5	2.5	3.0	3.2	3.2	2.5	1.8
80°	14.9	7.0	4.5	3.8	3.2	1.4	2.1	2.2	1.5	0.7	0.0
82.5°	4.8	2.0	1.5	1.5	1.4	0.3	0.4	0.3	0.0	0.0	0.0
85°	1.8	1.3	1.0	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.7	0.6	0.4	0.6	0.3	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)