

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: P596099

Luminaire Tested: **MSA-SA3A-AMB-U-T4W**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596099  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-AMB-U-T4W  
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV WIDE OPTICS.  
Light Source: (48) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2403 lumens  
Efficiency: N/A  
Efficacy: 40.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

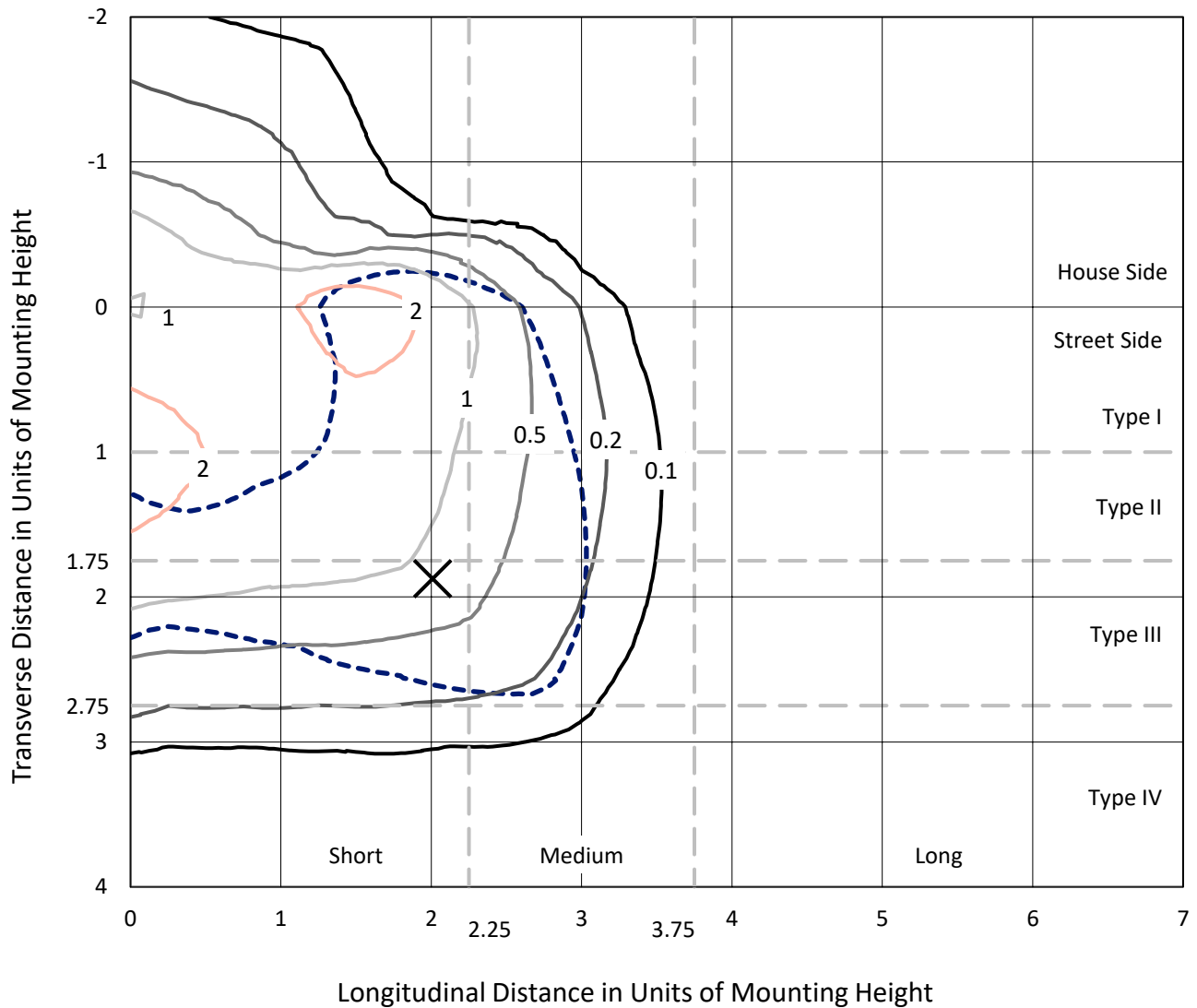
Input Watts (W): 59.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

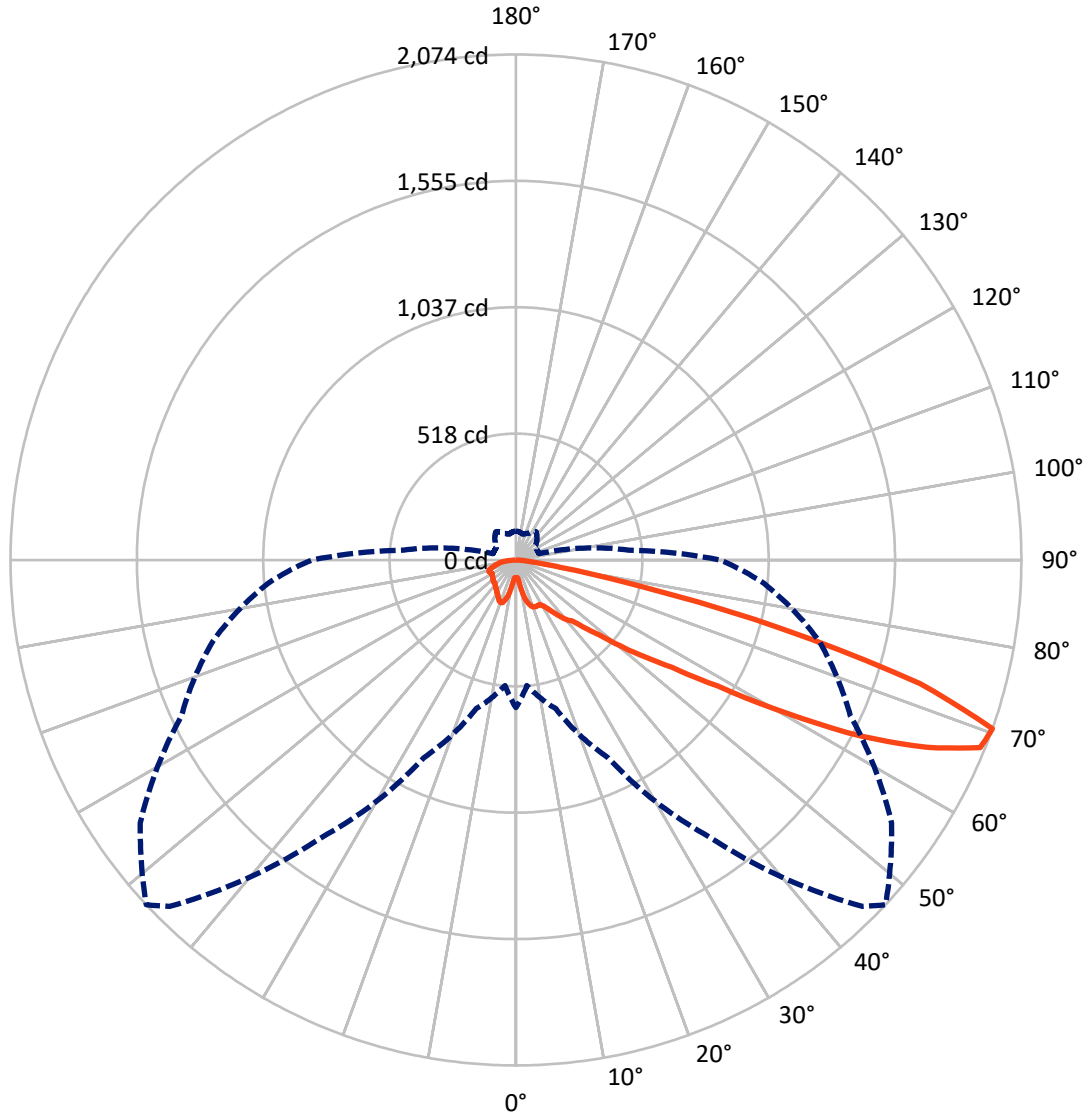
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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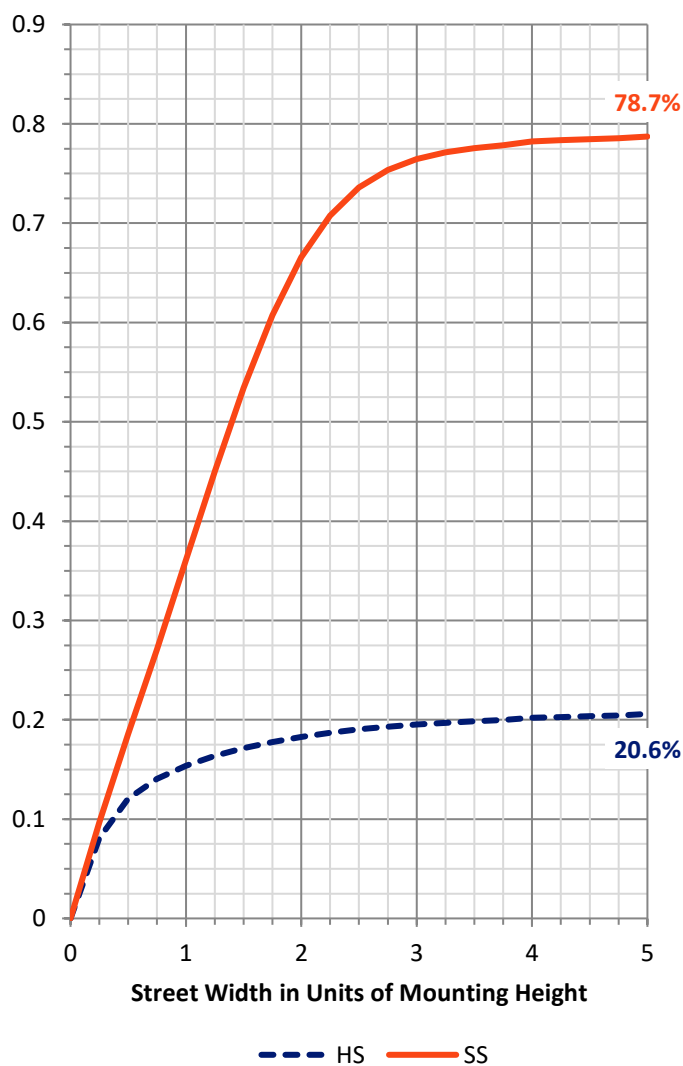
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	504.4	0.0	504.4
	% Fixture	21.0	0.0	21.0
<b>Street Side</b>	Lumens	1898.6	0.0	1898.6
	% Fixture	79.0	0.0	79.0
<b>Total</b>	Lumens	2403.0	0.0	2403.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.8	0.4
10°-20°	48.0	2.0
20°-30°	93.9	3.9
30°-40°	160.1	6.7
40°-50°	275.0	11.4
50°-60°	568.9	23.7
60°-70°	847.8	35.3
70°-80°	358.8	14.9
80°-90°	40.8	1.7
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°	2403.0	100.0
0°-180°	2403.0	100.0

**Coefficient of Utilization**

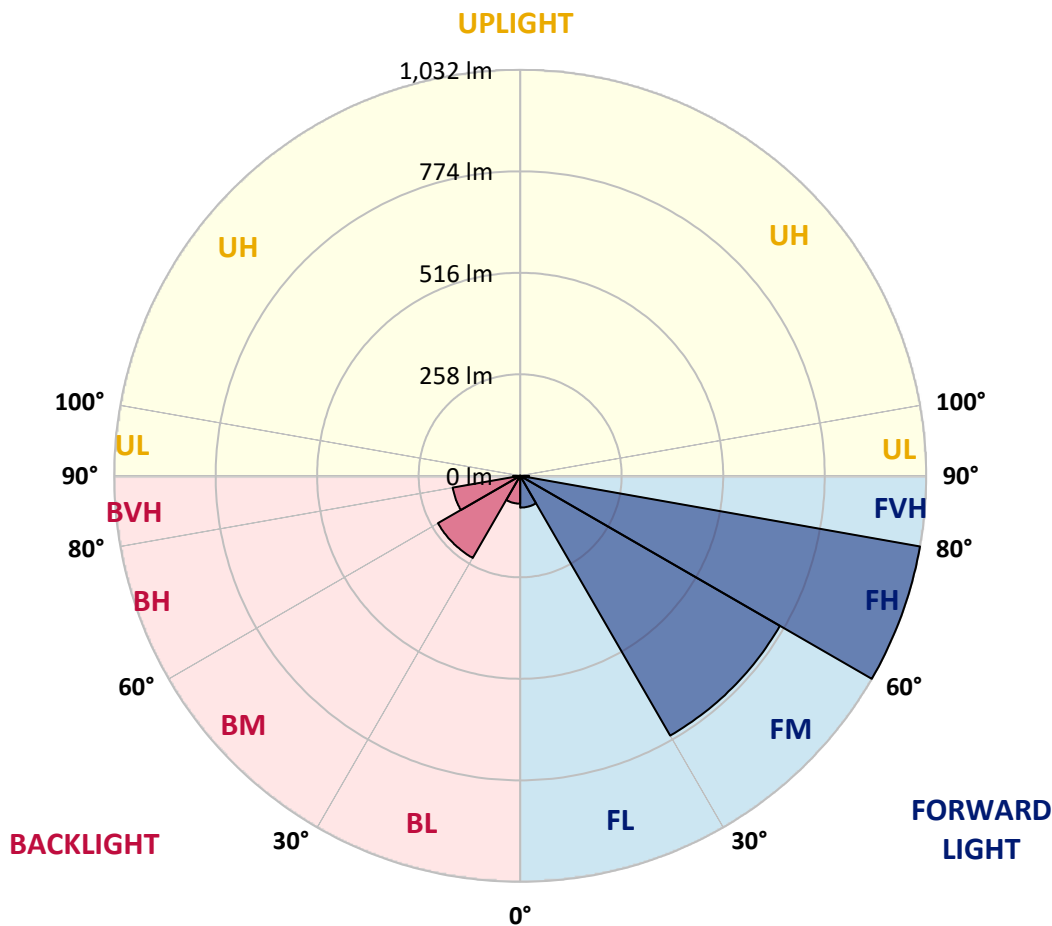


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	80.8	3.4			
FM (30°-60°)	762.7	31.7			
FH (60°-80°)	1032.4	43.0			G1/1800
FVH (80°-90°)	22.7	0.9			G1/100
BL (0°-30°)	70.9	3.0	B0/110		
BM (30°-60°)	241.3	10.0	B1/1000		
BH (60°-80°)	174.1	7.2	B1/500		G1/500
BVH (80°-90°)	18.1	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7
2.5°	89.4	80.6	78.2	74.3	74.3	74.3	75.1	73.5	71.9	77.4	79.8
5°	121.4	104.6	107.0	92.6	79.8	75.8	72.7	75.8	83.8	98.2	98.2
7.5°	148.5	137.3	134.9	115.0	99.0	94.2	90.2	94.2	104.6	114.2	115.0
10°	161.3	155.7	146.1	128.5	127.7	127.7	126.9	122.2	119.8	126.9	126.1
12.5°	168.5	167.7	173.3	159.7	161.3	162.1	161.3	157.3	151.7	144.5	138.1
15°	189.2	188.4	185.2	180.4	180.4	186.0	181.2	180.4	172.5	166.9	155.7
17.5°	206.0	206.8	198.0	196.4	198.0	198.8	198.0	195.6	189.2	184.4	178.0
20°	217.2	216.4	206.8	193.2	202.8	206.8	205.2	205.2	196.4	198.8	196.4
22.5°	228.3	222.8	203.6	195.6	199.6	206.8	208.4	206.8	202.0	207.6	216.4
25°	236.3	229.9	213.2	202.0	204.4	210.0	206.8	213.2	215.6	222.8	225.9
27.5°	253.1	249.9	219.6	215.6	210.0	205.2	206.8	218.8	228.3	227.5	245.1
30°	301.8	292.2	249.9	233.9	222.0	212.4	217.2	231.5	243.5	247.5	275.5
32.5°	384.0	378.4	307.4	262.7	241.1	238.7	236.3	240.3	265.9	287.4	303.4
35°	466.3	451.9	384.8	322.6	269.1	256.3	263.5	271.5	305.0	311.4	313.0
37.5°	566.1	543.7	451.9	369.7	326.5	301.8	293.0	317.0	326.5	318.6	338.5
40°	655.5	609.2	531.7	429.5	354.5	338.5	324.2	314.6	325.0	343.3	375.3
42.5°	731.3	704.2	609.2	506.2	403.2	339.3	342.5	317.8	355.3	379.2	417.6
45°	804.0	760.1	673.1	592.4	475.1	400.8	396.8	355.3	402.4	428.7	466.3
47.5°	860.7	810.4	752.9	662.7	546.1	483.0	457.5	410.4	462.3	503.8	553.3
50°	930.1	876.7	810.4	747.3	662.7	588.4	552.5	484.6	540.5	624.4	732.9
52.5°	1053.9	992.4	890.2	839.1	795.2	685.8	657.1	600.4	669.1	824.8	1029.2
55°	1174.5	1099.4	1006.8	970.9	957.3	808.8	776.9	768.1	918.2	1072.3	1364.5
57.5°	1275.1	1192.8	1130.5	1113.0	1121.0	1018.0	974.9	1006.8	1172.1	1329.4	1682.2
60°	1330.2	1245.5	1208.0	1243.1	1323.0	1286.2	1278.3	1270.3	1411.6	1557.7	1916.2
62.5°	1325.4	1239.9	1247.9	1312.6	1484.2	1584.8	1595.2	1536.9	1596.8	1715.0	1983.2
65°	1193.6	1096.2	1179.3	1311.8	1613.6	1851.5	1853.9	1766.1	1712.6	1709.4	1822.8
67.5°	891.8	832.7	970.9	1174.5	1619.2	2055.9	2054.3	1944.1	1711.8	1561.7	1496.2
70°	606.0	516.6	631.5	895.0	1389.2	2009.6	2073.5	1881.1	1513.8	1287.8	1010.0
72.5°	269.9	249.9	329.7	533.3	970.1	1639.1	1734.1	1501.8	1176.1	875.9	555.7
75°	130.9	122.2	154.1	273.9	529.3	1069.9	1127.4	983.6	713.8	481.4	246.7
77.5°	73.5	67.9	82.2	125.4	244.3	497.4	528.5	476.7	323.4	210.8	113.4
80°	50.3	46.3	55.9	77.4	133.3	154.9	186.0	209.2	158.9	111.0	68.7
82.5°	28.7	26.3	35.1	48.7	86.2	74.3	77.4	101.4	92.6	72.7	42.3
85°	15.2	14.4	20.0	27.1	45.5	38.3	35.9	47.9	55.1	48.7	24.8
87.5°	4.0	4.0	6.4	8.8	11.2	8.8	10.4	12.0	16.0	16.0	8.0
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°	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7
2.5°	82.2	76.6	77.4	71.1	70.3	73.5	73.5	74.3	79.0	79.8	84.6
5°	105.4	97.4	93.4	84.6	75.8	72.7	78.2	91.8	102.2	105.4	111.0
7.5°	121.4	114.2	110.2	98.2	87.0	87.8	95.0	107.0	119.8	127.7	136.5
10°	126.1	122.2	118.2	110.2	114.2	115.8	115.8	120.6	132.5	135.7	139.7
12.5°	140.5	134.1	132.5	134.9	141.3	146.9	144.5	146.1	150.1	152.5	154.1
15°	151.7	149.3	151.7	152.5	162.9	165.3	164.5	162.9	168.5	166.9	165.3
17.5°	172.5	174.9	166.1	172.5	178.8	183.6	178.0	174.9	178.0	181.2	176.4
20°	191.6	190.0	182.0	183.6	186.8	186.0	178.8	173.3	178.8	187.6	190.0
22.5°	212.4	206.8	194.8	187.6	181.2	182.0	177.2	172.5	179.6	192.4	193.2
25°	226.7	222.0	209.2	198.0	184.4	170.1	169.3	170.9	177.2	195.6	194.8
27.5°	246.7	237.9	215.6	205.2	180.4	158.1	163.7	166.9	168.5	189.2	194.0
30°	269.1	271.5	229.9	206.8	171.7	151.7	151.7	155.7	161.3	185.2	187.6
32.5°	297.8	284.2	252.3	200.4	160.5	147.7	145.3	148.5	153.3	172.5	175.7
35°	309.0	313.8	264.3	191.6	152.5	140.5	139.7	138.1	142.1	159.7	163.7
37.5°	354.5	348.1	280.2	186.8	146.1	136.5	129.3	130.1	134.1	145.3	149.3
40°	392.0	392.0	288.2	174.9	139.7	132.5	123.8	123.8	124.6	132.5	136.5
42.5°	440.7	447.9	296.2	162.1	137.3	125.4	119.8	118.2	118.2	121.4	126.1
45°	512.6	499.8	289.8	146.1	130.1	126.9	116.6	115.0	113.4	115.8	119.8
47.5°	623.6	572.5	278.6	133.3	124.6	127.7	115.0	111.0	110.2	113.4	118.2
50°	824.8	706.6	253.9	123.8	120.6	123.8	115.8	111.0	109.4	113.4	117.4
52.5°	1159.3	917.4	233.1	117.4	115.0	121.4	119.0	111.8	109.4	114.2	118.2
55°	1503.4	1144.9	214.0	113.4	111.0	119.8	119.8	114.2	111.0	115.0	120.6
57.5°	1809.2	1311.0	206.8	110.2	107.8	117.4	119.8	114.2	112.6	121.4	126.1
60°	2004.0	1382.8	189.2	107.0	106.2	115.0	123.0	115.8	117.4	130.9	139.7
62.5°	1985.6	1312.6	158.9	103.8	104.6	116.6	127.7	123.0	122.2	137.3	146.1
65°	1753.3	1078.7	128.5	102.2	102.2	121.4	138.1	124.6	119.0	133.3	139.7
67.5°	1322.2	772.9	107.8	99.8	99.8	126.1	146.1	124.6	115.0	128.5	132.5
70°	836.7	463.9	98.2	95.8	95.8	123.0	142.9	120.6	109.4	117.4	117.4
72.5°	469.5	224.4	90.2	92.6	89.4	108.6	134.9	114.2	103.0	107.0	108.6
75°	194.0	115.8	83.0	86.2	79.8	95.8	127.7	107.8	96.6	96.6	99.8
77.5°	93.4	76.6	73.5	78.2	70.3	83.8	115.0	99.0	85.4	83.8	85.4
80°	63.9	55.1	59.9	66.3	59.9	71.9	102.2	91.0	73.5	70.3	69.5
82.5°	39.1	35.1	44.7	47.9	44.7	61.5	91.0	75.1	55.9	48.7	52.7
85°	20.0	20.8	26.3	29.5	27.1	39.1	60.7	44.7	31.9	28.7	31.1
87.5°	4.8	7.2	8.8	9.6	7.2	4.0	4.8	5.6	5.6	4.8	2.4
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)