

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: P596068

Luminaire Tested: **MSA-SA2A-AMB-U-T1**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596068  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-8)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-AMB-U-T1  
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE I OPTICS.  
Light Source: (32) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1720 lumens  
Efficiency: N/A  
Efficacy: 41.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B1 - U0 - G1

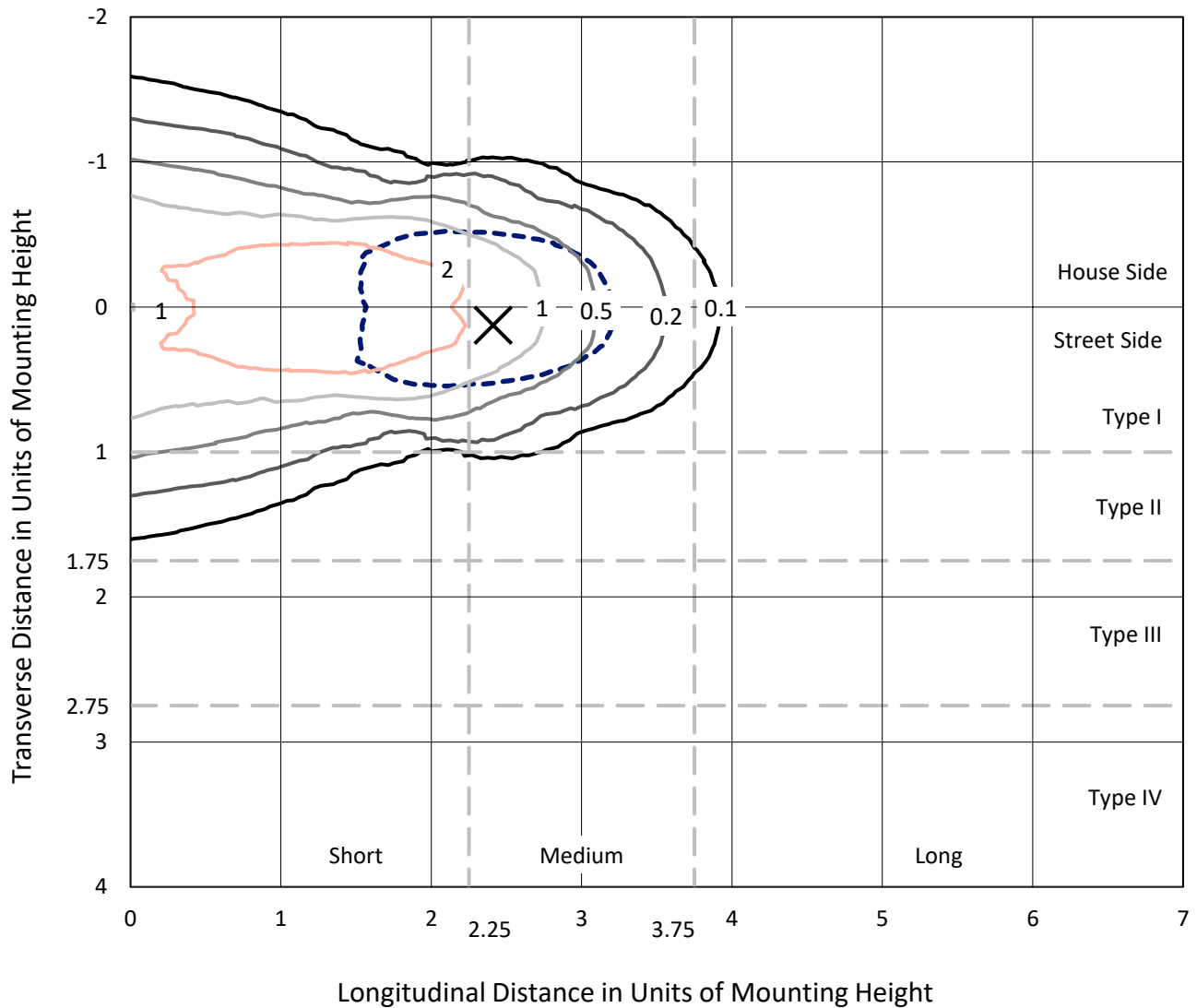
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

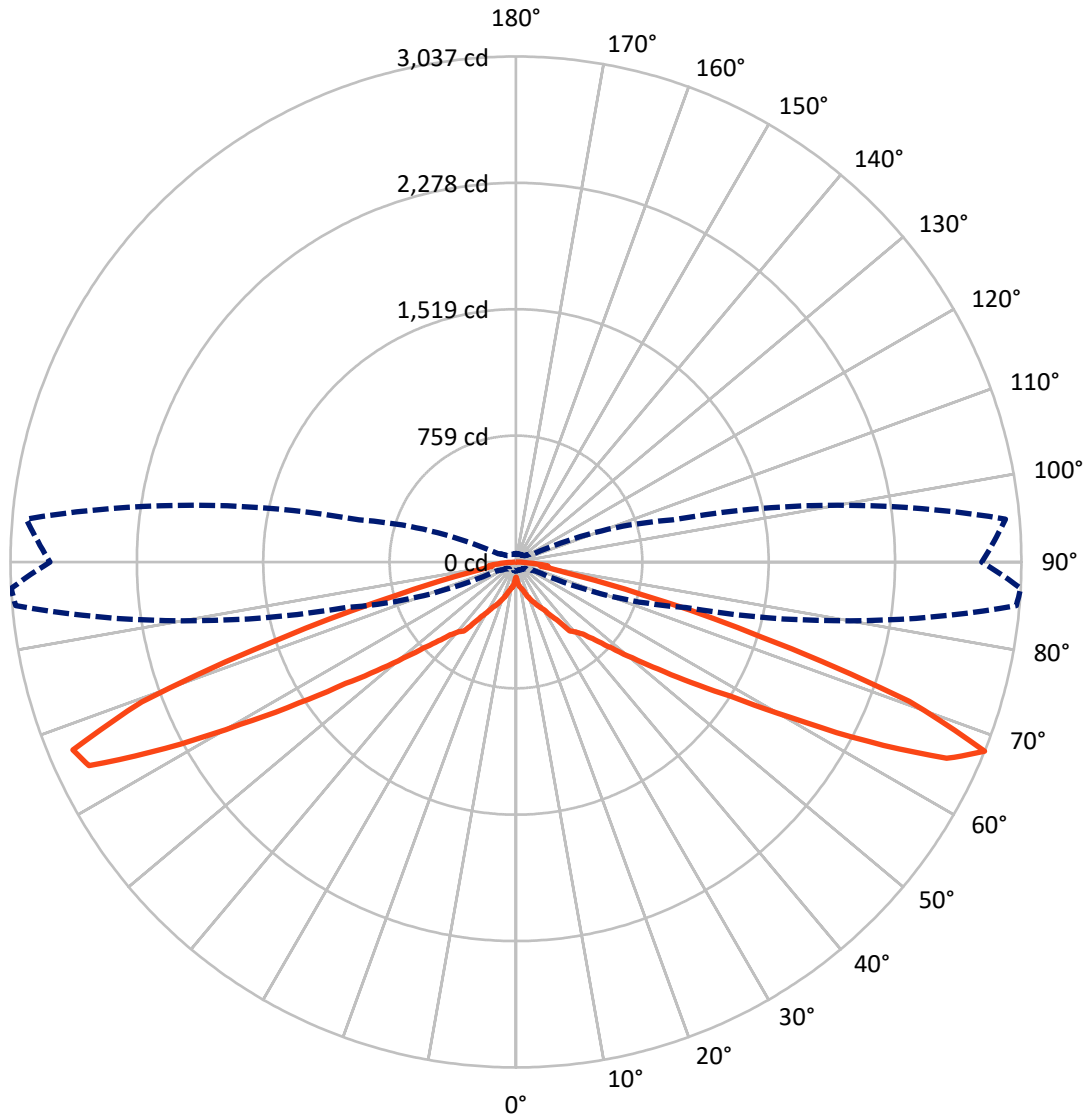
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 fc  
 Type I - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 87-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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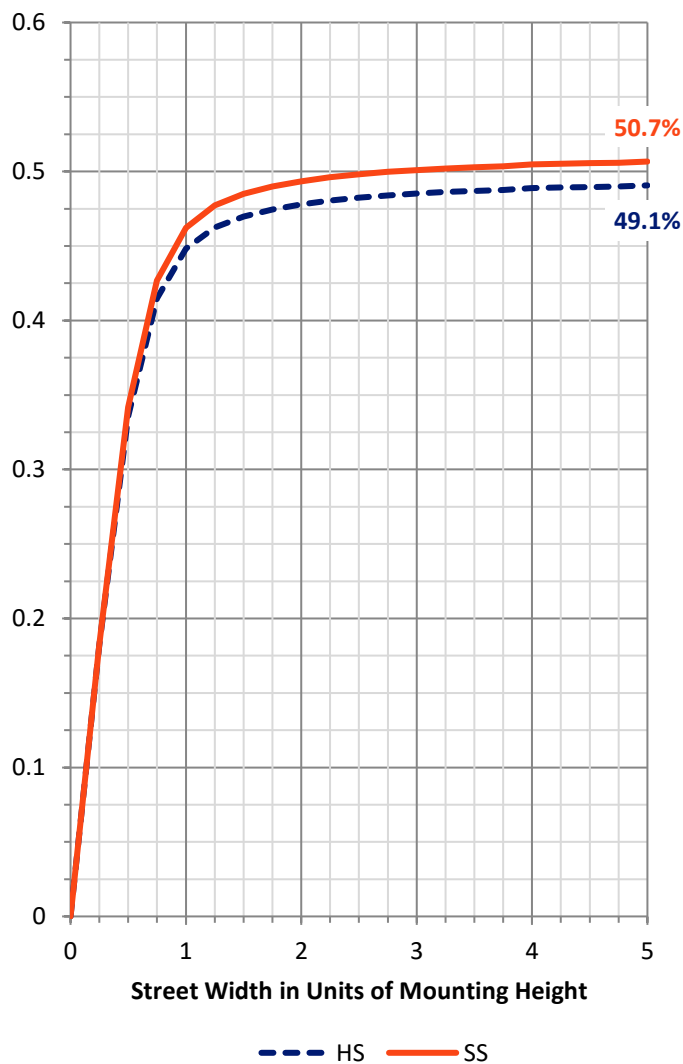
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	851.2	0.0	851.2
	% Fixture	49.5	0.0	49.5
<b>Street Side</b>	Lumens	868.8	0.0	868.8
	% Fixture	50.5	0.0	50.5
<b>Total</b>	Lumens	1720.0	0.0	1720.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.0	0.7
10°-20°	57.5	3.3
20°-30°	115.9	6.7
30°-40°	190.1	11.1
40°-50°	280.4	16.3
50°-60°	380.8	22.1
60°-70°	488.3	28.4
70°-80°	172.9	10.1
80°-90°	22.2	1.3
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°	1720.0	100.0
0°-180°	1720.0	100.0

**Coefficient of Utilization**



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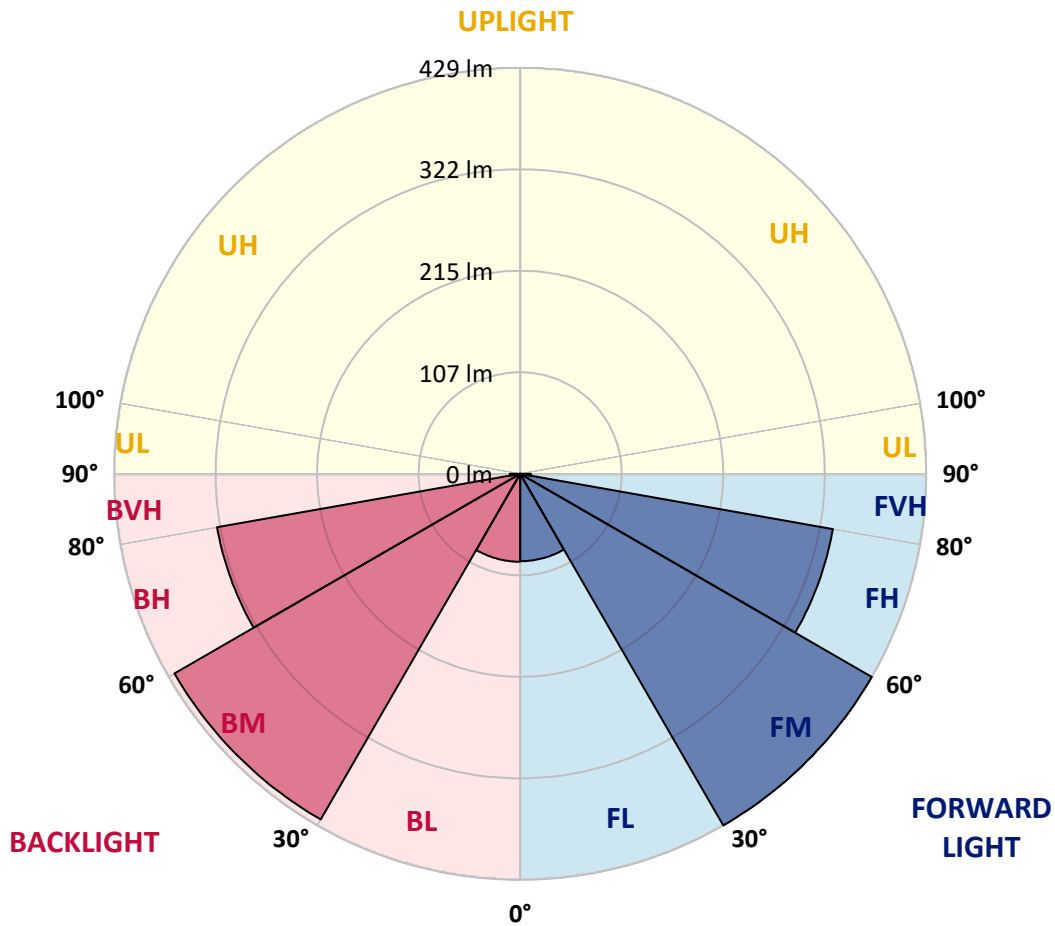
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	92.4	5.4			
FM (30°-60°)	429.3	25.0			
FH (60°-80°)	335.8	19.5			G0/660
FVH (80°-90°)	11.3	0.7			G1/100
BL (0°-30°)	93.0	5.4	B0/110		
BM (30°-60°)	422.0	24.5	B1/1000		
BH (60°-80°)	325.4	18.9	B1/500		G1/500
BVH (80°-90°)	10.9	0.6			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 I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
2.5°	112.7	103.3	96.2	90.3	90.3	94.4	95.6	90.3	94.4	100.3	104.4
5°	140.4	126.9	119.2	109.2	96.8	95.6	96.2	108.6	122.1	127.4	132.8
7.5°	162.3	149.3	146.9	129.8	110.9	112.7	116.2	130.4	141.6	146.3	146.9
10°	167.6	164.0	156.9	142.2	141.6	146.3	135.1	141.6	151.0	154.6	156.4
12.5°	173.5	172.3	180.0	177.0	184.7	184.7	179.4	171.7	172.3	167.0	168.2
15°	182.9	184.7	190.6	196.5	205.9	222.4	210.6	198.8	193.5	185.3	184.7
17.5°	194.7	197.1	199.4	211.2	228.3	241.9	241.3	228.9	223.0	217.7	213.6
20°	203.0	206.5	205.3	208.9	236.6	257.8	266.1	246.6	240.1	234.8	231.9
22.5°	212.4	208.3	201.2	208.9	230.7	253.1	278.5	264.3	254.3	257.2	256.7
25°	205.9	207.1	204.1	213.0	234.8	259.6	288.5	296.2	284.4	279.1	281.4
27.5°	204.7	203.6	191.2	211.2	226.6	248.4	299.1	327.5	298.5	302.7	307.4
30°	197.1	201.2	186.4	207.1	224.8	248.4	310.9	352.8	327.5	338.1	332.2
32.5°	197.1	195.9	187.0	197.1	215.9	262.0	320.4	375.2	385.9	385.3	382.9
35°	197.1	197.7	184.7	194.1	213.0	253.7	333.4	421.9	445.5	448.4	429.5
37.5°	203.0	195.9	188.2	195.3	213.6	269.6	352.2	465.5	518.0	534.5	525.7
40°	194.7	190.6	180.5	194.1	206.5	259.0	346.9	516.8	581.2	558.7	552.2
42.5°	181.1	172.9	171.1	186.4	203.0	244.9	348.7	556.4	663.2	596.5	593.0
45°	160.5	148.1	154.6	172.9	195.3	246.6	343.4	600.0	752.8	663.2	666.7
47.5°	131.0	126.3	127.4	145.7	173.5	235.4	321.0	611.2	905.7	761.7	772.3
50°	105.0	100.9	103.8	118.6	148.7	203.6	311.5	617.1	1031.3	888.0	906.2
52.5°	84.4	81.4	84.4	95.6	125.1	167.6	272.6	584.1	1171.8	1050.2	1069.7
55°	73.8	70.8	71.4	78.5	97.9	135.1	220.7	528.6	1347.0	1257.9	1276.2
57.5°	67.9	65.5	64.9	68.4	79.7	106.8	164.0	441.3	1525.2	1544.0	1521.6
60°	64.3	62.0	61.4	62.5	68.4	83.2	128.0	313.9	1632.0	1968.8	1893.9
62.5°	62.5	60.2	59.0	59.0	63.1	71.4	96.8	214.2	1645.5	2507.5	2374.8
65°	59.0	56.1	55.5	56.1	59.6	63.7	79.7	157.5	1473.8	2991.9	2844.4
67.5°	54.9	52.5	51.3	52.5	56.1	57.8	67.3	123.3	1056.7	3017.9	3037.3
70°	50.2	47.8	47.8	49.0	52.5	53.1	58.4	94.4	615.4	2370.6	2506.9
72.5°	44.8	43.1	43.1	44.8	47.8	47.8	51.3	71.4	344.6	1472.1	1545.2
75°	39.5	38.4	38.4	40.1	42.5	41.9	45.4	54.3	193.5	722.2	777.0
77.5°	32.5	31.9	32.5	35.4	36.6	34.8	38.4	43.7	105.0	306.2	293.2
80°	24.2	23.6	25.4	28.3	29.5	27.1	30.1	33.6	56.1	126.9	149.3
82.5°	17.1	17.1	17.1	20.1	20.7	18.3	21.8	24.2	31.3	115.6	193.5
85°	9.4	10.0	10.0	11.2	12.4	11.2	13.0	13.6	17.7	59.0	99.1
87.5°	3.0	3.5	4.1	4.7	5.3	3.5	5.3	5.9	6.5	11.2	10.6
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°	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
2.5°	108.0	97.4	98.5	93.2	91.5	95.6	89.7	89.7	96.8	93.2	96.8
5°	138.1	124.5	120.4	112.1	100.9	96.8	100.9	110.9	128.6	131.0	133.9
7.5°	154.0	145.7	143.4	128.6	113.3	110.3	121.0	133.9	146.9	155.8	165.8
10°	159.3	153.4	151.0	141.0	149.3	152.8	152.2	150.5	162.8	166.4	168.7
12.5°	169.3	172.3	172.3	172.3	187.0	192.9	188.2	187.0	181.7	185.9	184.7
15°	186.4	187.6	198.2	203.6	218.9	222.4	213.6	200.0	196.5	192.9	191.2
17.5°	211.2	214.2	218.3	233.1	244.3	247.8	227.2	206.5	204.7	201.8	196.5
20°	230.7	236.0	244.3	257.2	266.1	251.3	228.9	205.3	204.7	207.7	207.1
22.5°	256.7	257.2	262.6	267.3	267.3	251.9	234.2	210.0	203.6	207.7	208.9
25°	281.4	285.6	287.3	295.6	283.8	247.2	226.0	211.2	202.4	214.2	209.5
27.5°	304.4	305.6	300.3	325.7	291.5	241.3	228.9	211.8	196.5	210.0	208.3
30°	328.0	352.2	333.4	355.2	307.4	245.4	218.3	203.0	193.5	211.2	208.3
32.5°	380.6	382.9	395.3	380.6	321.0	256.1	217.7	204.1	192.3	205.3	203.6
35°	429.5	449.0	446.0	416.5	321.6	258.4	225.4	198.2	188.8	205.9	205.3
37.5°	523.3	514.5	522.2	460.2	328.6	256.7	213.6	195.3	188.2	195.9	200.6
40°	551.7	538.1	587.1	510.4	336.3	250.8	203.0	191.2	173.5	182.9	185.9
42.5°	587.1	590.0	686.8	552.8	349.3	242.5	196.5	177.6	161.1	162.3	168.7
45°	666.1	663.2	770.0	581.7	330.4	237.2	185.3	159.9	144.0	144.0	148.7
47.5°	762.3	754.0	903.9	600.6	318.0	219.5	165.8	136.3	121.0	121.5	126.3
50°	889.1	891.5	1036.0	585.9	295.6	192.9	142.8	116.2	100.3	98.5	103.3
52.5°	1062.6	1055.5	1180.0	546.9	254.9	161.7	119.8	95.0	83.2	80.8	84.4
55°	1242.0	1266.7	1306.9	472.0	204.7	131.0	95.6	77.9	70.8	70.2	73.2
57.5°	1506.3	1586.5	1454.4	397.7	159.3	103.3	78.5	66.7	62.5	63.7	66.1
60°	1813.1	1996.0	1519.9	293.8	125.1	83.8	67.3	60.2	58.4	59.6	62.0
62.5°	2218.4	2496.9	1516.9	214.2	99.1	70.8	61.4	56.6	54.9	56.1	58.4
65°	2644.4	2974.8	1362.9	160.5	77.3	61.4	57.2	53.7	51.9	53.1	55.5
67.5°	2799.6	2953.6	975.3	117.4	66.1	55.5	53.7	50.7	49.0	49.6	51.3
70°	2466.8	2356.5	591.8	87.3	56.1	50.2	50.2	47.2	45.4	45.4	47.2
72.5°	1597.1	1396.5	338.7	69.0	48.4	45.4	46.0	43.1	41.3	41.3	42.5
75°	814.2	672.6	191.8	56.1	42.5	39.5	41.3	38.9	36.6	36.0	36.6
77.5°	282.6	292.6	114.5	45.4	36.0	33.6	34.8	33.0	30.1	29.5	30.1
80°	168.2	128.6	67.3	34.8	28.3	26.0	27.1	26.0	23.0	20.7	21.2
82.5°	246.6	112.1	38.4	24.2	20.1	16.5	19.5	17.7	14.8	14.8	14.8
85°	131.6	68.4	17.7	11.8	10.6	8.9	10.0	8.9	7.7	8.3	7.1
87.5°	9.4	11.2	5.9	4.7	4.1	3.0	4.1	4.1	3.5	3.0	1.8
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)