

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: P596049

Luminaire Tested: **MSA-SA1A-AMB-U-T3**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596049  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-AMB-U-T3  
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: (16) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 891 lumens  
Efficiency: N/A  
Efficacy: 43.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B0 - U0 - G0

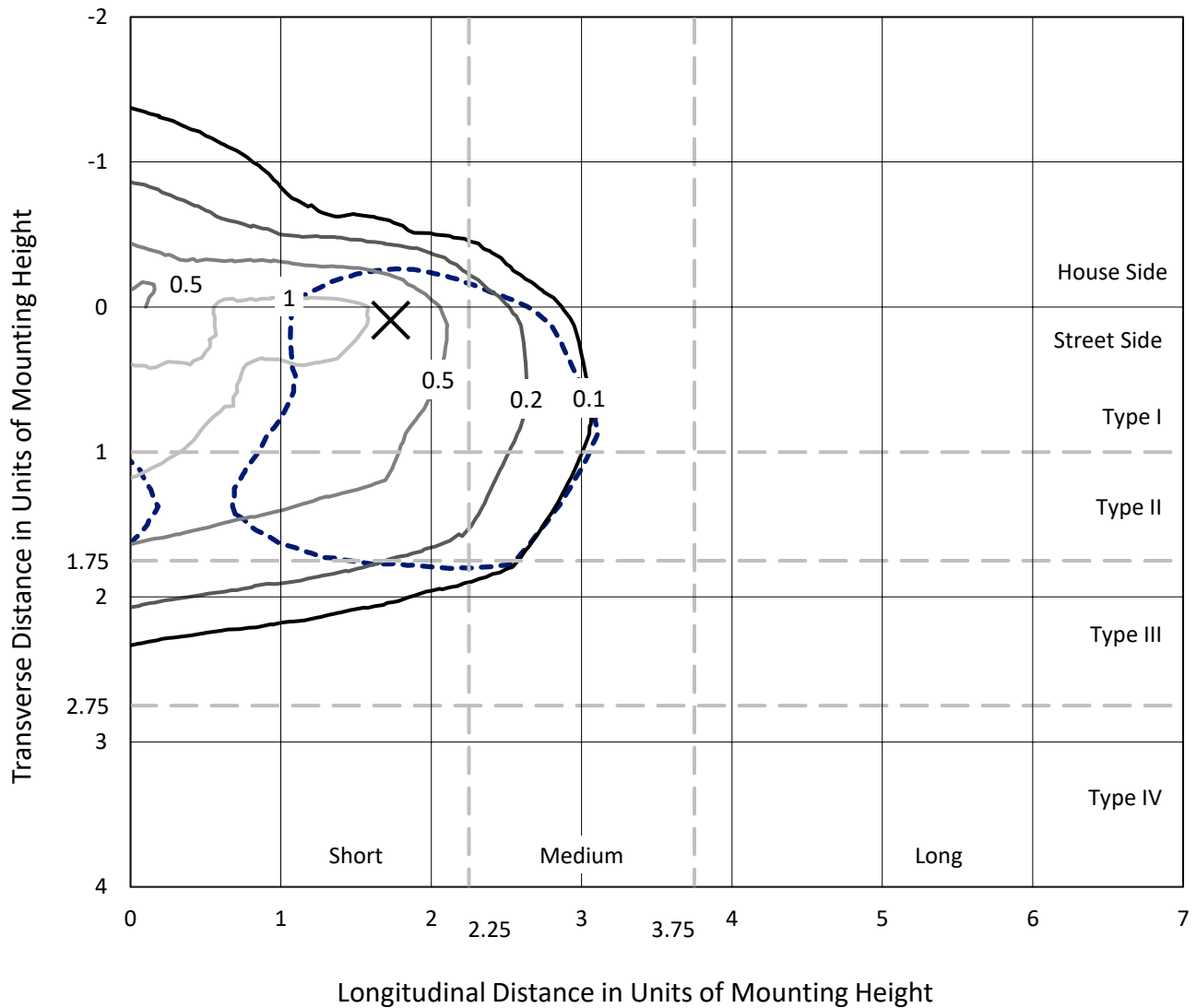
Input Watts (W): 20.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

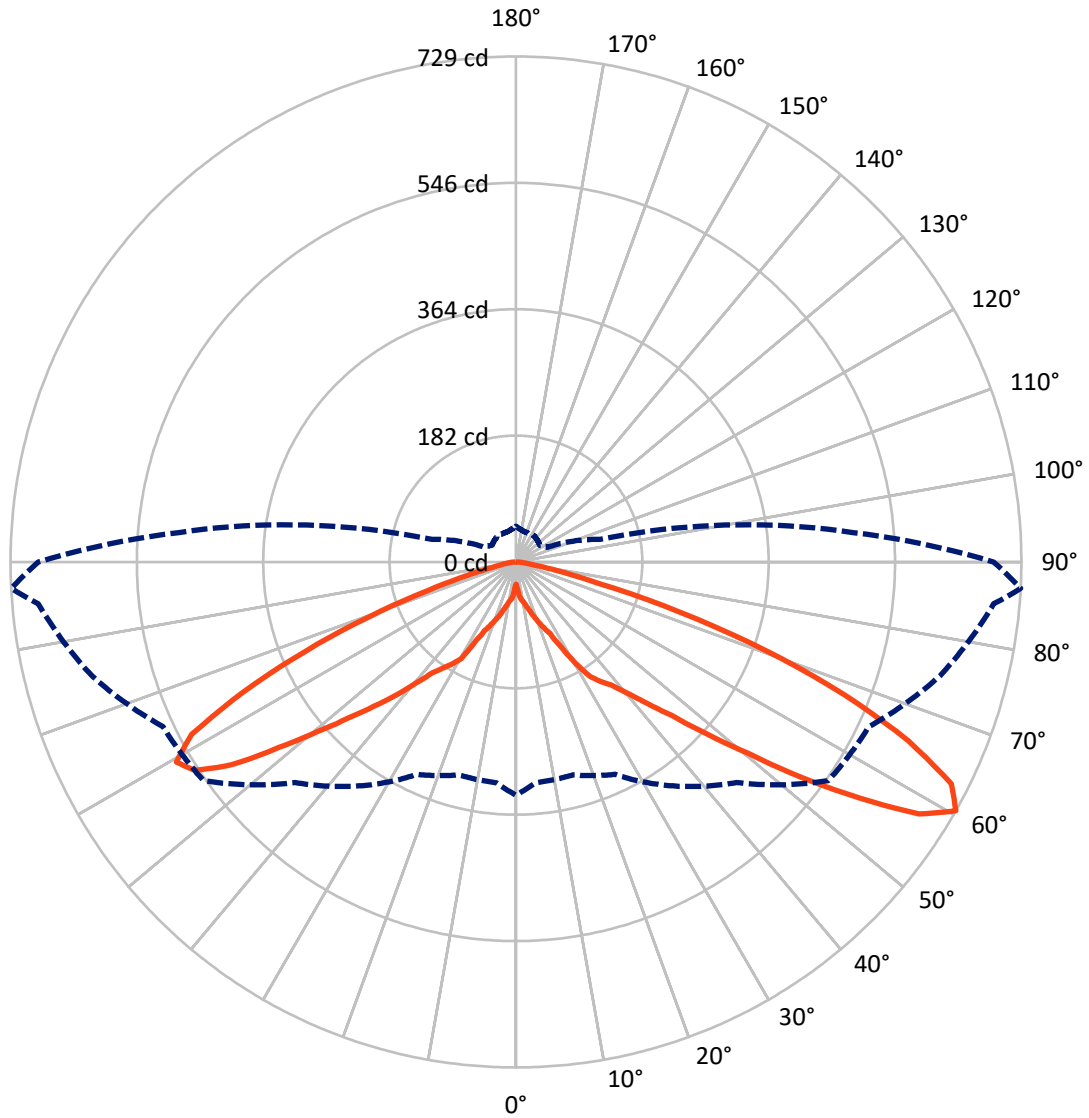
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.5 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 87-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

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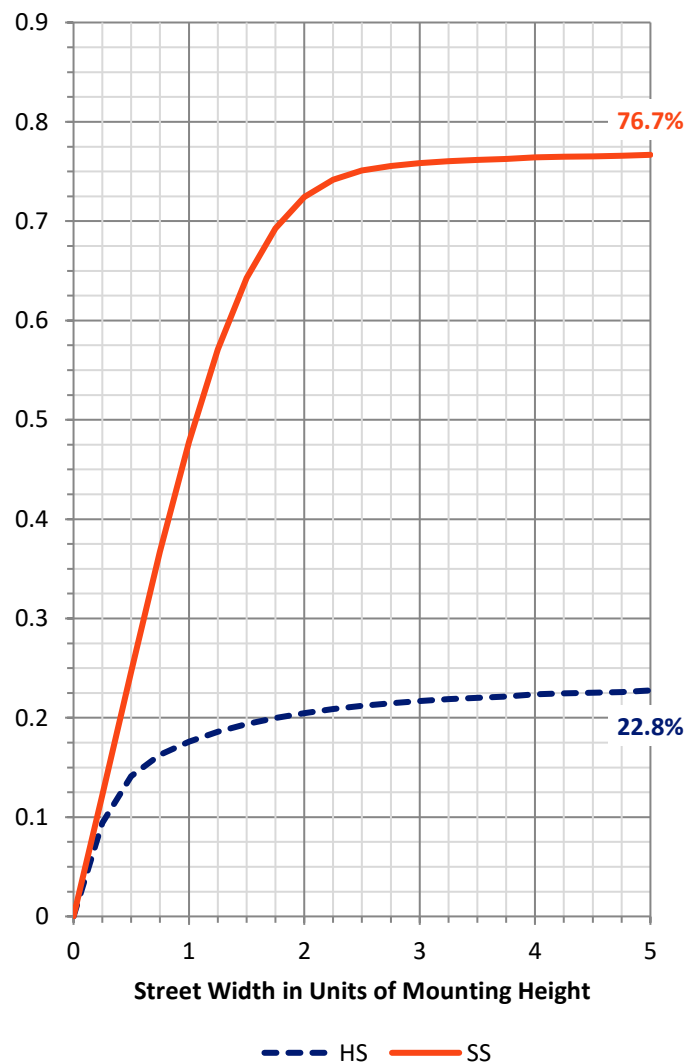
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	206.0	0.0	206.0
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	685.0	0.0	685.0
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	891.0	0.0	891.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.2	0.5
10°-20°	20.6	2.3
20°-30°	48.3	5.4
30°-40°	92.4	10.4
40°-50°	148.6	16.7
50°-60°	235.4	26.4
60°-70°	246.0	27.6
70°-80°	83.8	9.4
80°-90°	11.6	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°	891.0	100.0
0°-180°	891.0	100.0



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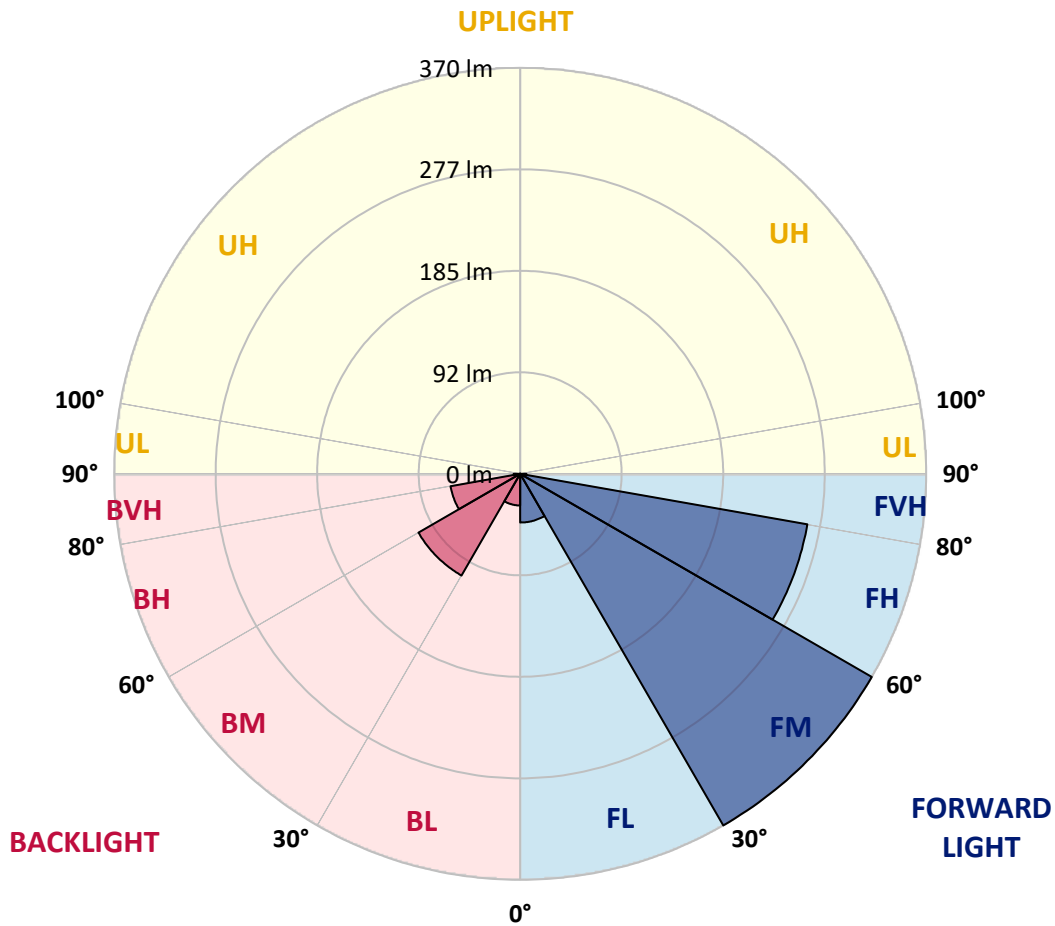
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	44.4	5.0			
FM (30°-60°)	369.5	41.5			
FH (60°-80°)	265.4	29.8			G0/660
FVH (80°-90°)	5.6	0.6			G0/10
BL (0°-30°)	28.8	3.2	B0/110		
BM (30°-60°)	106.9	12.0	B0/220		
BH (60°-80°)	64.3	7.2	B0/110		G0/110
BVH (80°-90°)	6.0	0.7			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G0**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
2.5°	39.0	34.8	33.9	31.2	31.2	32.4	33.3	33.3	35.7	37.8	38.7
5°	48.5	43.7	42.9	38.4	33.6	33.0	34.2	39.3	44.3	47.3	47.9
7.5°	58.1	54.5	53.6	47.6	41.7	39.3	42.9	47.3	51.2	53.9	54.5
10°	65.6	64.4	60.8	54.5	53.3	52.4	52.1	52.7	56.9	57.8	58.1
12.5°	71.3	70.1	72.5	68.9	68.0	68.0	65.0	65.0	65.0	64.4	64.1
15°	84.5	83.9	80.0	79.4	79.1	78.5	77.3	76.4	75.5	71.3	71.3
17.5°	96.5	96.2	92.6	90.5	89.0	88.4	86.3	84.5	86.6	83.3	81.8
20°	112.4	111.8	105.5	103.7	103.4	99.2	91.1	89.9	94.4	92.9	92.0
22.5°	133.0	130.6	122.9	116.0	116.0	111.8	101.3	98.9	100.4	104.3	103.1
25°	163.9	161.2	145.3	141.4	137.5	128.6	122.3	113.0	113.6	116.0	114.2
27.5°	181.0	177.4	161.2	163.9	153.7	140.2	140.8	133.0	126.2	139.6	139.3
30°	205.3	203.8	173.8	179.8	174.1	154.0	155.8	150.4	149.8	178.6	169.9
32.5°	238.5	231.9	203.2	194.8	189.1	182.2	170.8	170.2	180.1	201.7	196.9
35°	256.2	261.9	223.5	213.7	202.9	194.5	200.2	201.1	209.2	218.7	211.9
37.5°	294.3	284.7	254.4	231.6	230.1	224.1	225.3	219.3	214.9	228.9	225.9
40°	309.2	305.0	266.4	247.2	240.3	244.5	226.8	224.7	232.8	251.1	249.3
42.5°	320.6	313.1	282.0	267.9	252.0	247.2	241.8	246.0	262.8	285.0	279.3
45°	342.5	321.2	298.8	283.8	264.9	273.0	263.7	269.4	300.0	316.7	316.1
47.5°	361.7	341.6	319.4	304.4	287.1	309.5	285.9	298.8	348.5	365.0	370.4
50°	369.8	352.1	332.9	312.2	315.8	335.9	326.0	343.1	405.1	423.7	433.0
52.5°	375.2	357.5	336.2	323.6	341.9	356.9	371.9	387.8	457.6	493.2	515.7
55°	379.4	358.4	341.9	344.0	371.0	391.3	429.7	463.3	525.9	576.8	600.5
57.5°	364.1	344.6	335.6	348.8	387.5	435.1	488.1	522.9	585.5	643.7	685.3
60°	336.2	319.4	317.6	337.7	394.0	449.5	549.6	561.3	632.9	691.3	728.5
62.5°	288.3	266.4	269.1	301.8	381.2	470.5	593.9	573.2	650.8	691.3	704.2
65°	220.5	202.3	206.2	243.9	338.3	457.0	621.8	575.3	630.8	632.0	621.8
67.5°	139.3	121.7	130.0	170.5	246.0	388.4	594.5	546.6	587.3	522.9	510.9
70°	65.0	61.7	64.4	86.0	145.6	264.6	483.6	465.7	483.6	398.2	380.6
72.5°	33.6	31.8	34.5	45.2	70.4	134.5	328.1	353.9	371.3	263.7	246.6
75°	25.2	24.3	25.8	29.7	39.9	52.4	160.6	205.6	228.6	142.9	122.0
77.5°	19.8	19.2	20.4	23.7	28.8	28.8	65.9	94.4	105.2	62.9	59.3
80°	15.0	14.4	15.9	18.6	21.3	20.4	29.4	45.5	47.9	27.9	26.1
82.5°	10.2	10.2	11.4	13.2	15.0	13.8	19.2	23.1	23.1	15.0	15.6
85°	7.5	7.5	7.8	8.1	8.4	7.5	10.8	12.3	12.6	8.1	7.8
87.5°	1.5	1.5	3.0	3.0	3.0	2.1	3.6	3.9	3.9	3.0	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
2.5°	39.0	35.4	35.4	32.1	31.2	32.1	30.9	30.6	32.1	32.4	34.2
5°	49.7	45.5	43.2	38.1	32.7	30.6	32.1	36.6	40.5	42.0	44.6
7.5°	56.6	52.4	50.9	43.7	37.8	35.7	39.0	42.6	47.0	49.4	53.0
10°	58.7	56.3	54.2	49.1	48.5	48.5	47.0	46.4	50.0	50.9	52.4
12.5°	65.3	63.2	61.4	59.3	58.4	58.1	56.0	56.3	56.6	57.8	57.5
15°	71.0	70.7	69.8	65.6	63.8	64.4	64.4	63.8	63.8	64.1	63.8
17.5°	80.6	80.6	74.3	69.2	69.8	72.5	70.1	67.4	69.2	68.6	66.8
20°	90.2	87.5	79.7	71.9	73.7	73.4	70.7	66.8	66.8	69.5	69.8
22.5°	101.9	96.2	82.1	74.9	73.7	72.5	68.6	63.5	63.8	66.5	66.2
25°	113.3	105.8	90.5	83.6	78.5	68.6	62.9	59.6	59.0	64.1	63.8
27.5°	135.7	122.6	100.4	95.6	78.8	62.9	58.7	55.7	53.9	58.1	59.6
30°	166.0	155.5	116.9	100.4	77.0	59.0	52.4	50.6	49.7	55.4	56.0
32.5°	187.9	163.3	127.1	97.4	70.4	55.1	49.1	47.9	47.0	51.2	52.4
35°	199.0	175.9	135.7	95.3	64.4	50.6	47.3	44.9	44.9	49.4	50.0
37.5°	214.6	190.3	150.1	94.4	60.2	49.4	44.0	43.4	43.7	46.7	48.5
40°	239.4	216.1	160.0	92.9	56.0	46.4	42.3	42.3	42.3	44.9	46.1
42.5°	270.3	250.5	174.7	88.4	53.0	44.0	42.0	40.5	41.4	43.7	45.2
45°	310.7	278.4	174.1	80.9	48.5	44.3	41.1	40.2	41.7	43.4	45.5
47.5°	359.9	308.0	171.7	73.4	46.1	45.2	40.5	40.5	42.0	44.0	45.8
50°	425.5	344.3	162.7	65.3	44.6	43.7	41.7	41.4	42.9	45.2	47.3
52.5°	499.8	391.6	155.2	58.4	43.7	43.7	43.7	42.9	44.0	46.1	48.2
55°	588.2	446.8	151.3	54.8	43.2	44.0	45.2	45.2	46.1	47.6	49.7
57.5°	658.6	480.6	142.0	53.0	42.6	44.3	46.4	45.8	46.1	48.5	50.6
60°	688.6	487.5	125.3	50.3	42.0	44.0	45.8	45.2	45.2	48.5	51.5
62.5°	655.0	445.0	107.3	44.6	40.2	42.3	44.6	43.7	44.3	49.1	52.1
65°	559.2	354.2	87.8	40.8	38.1	40.5	43.7	43.4	44.9	52.1	54.8
67.5°	436.6	259.5	66.8	37.2	36.3	39.3	44.9	45.8	46.1	54.2	57.2
70°	319.7	163.0	51.2	33.0	34.2	39.6	44.6	44.3	45.2	52.1	54.2
72.5°	191.8	94.4	38.7	30.0	31.5	36.6	43.2	43.4	43.7	47.3	49.4
75°	97.4	52.4	30.0	27.3	28.2	33.0	40.2	40.5	39.9	41.1	43.2
77.5°	45.2	28.5	23.4	24.6	24.9	28.5	35.4	35.7	34.8	34.8	36.6
80°	23.7	19.2	20.1	20.7	20.7	23.1	29.1	30.0	27.9	27.3	28.5
82.5°	14.7	13.2	16.5	16.5	15.9	16.8	21.6	21.9	20.4	18.3	18.6
85°	7.2	8.4	11.7	11.7	9.9	9.3	13.8	13.2	12.3	10.8	10.8
87.5°	2.1	3.6	3.9	4.2	2.4	1.2	2.4	2.1	2.4	2.1	1.2
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)