

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: P596073

Luminaire Tested: **MSA-SA2A-AMB-U-T4FT-HSS**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-AMB-U-T4FT-HSS  
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (32) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1299 lumens  
Efficiency: N/A  
Efficacy: 31.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

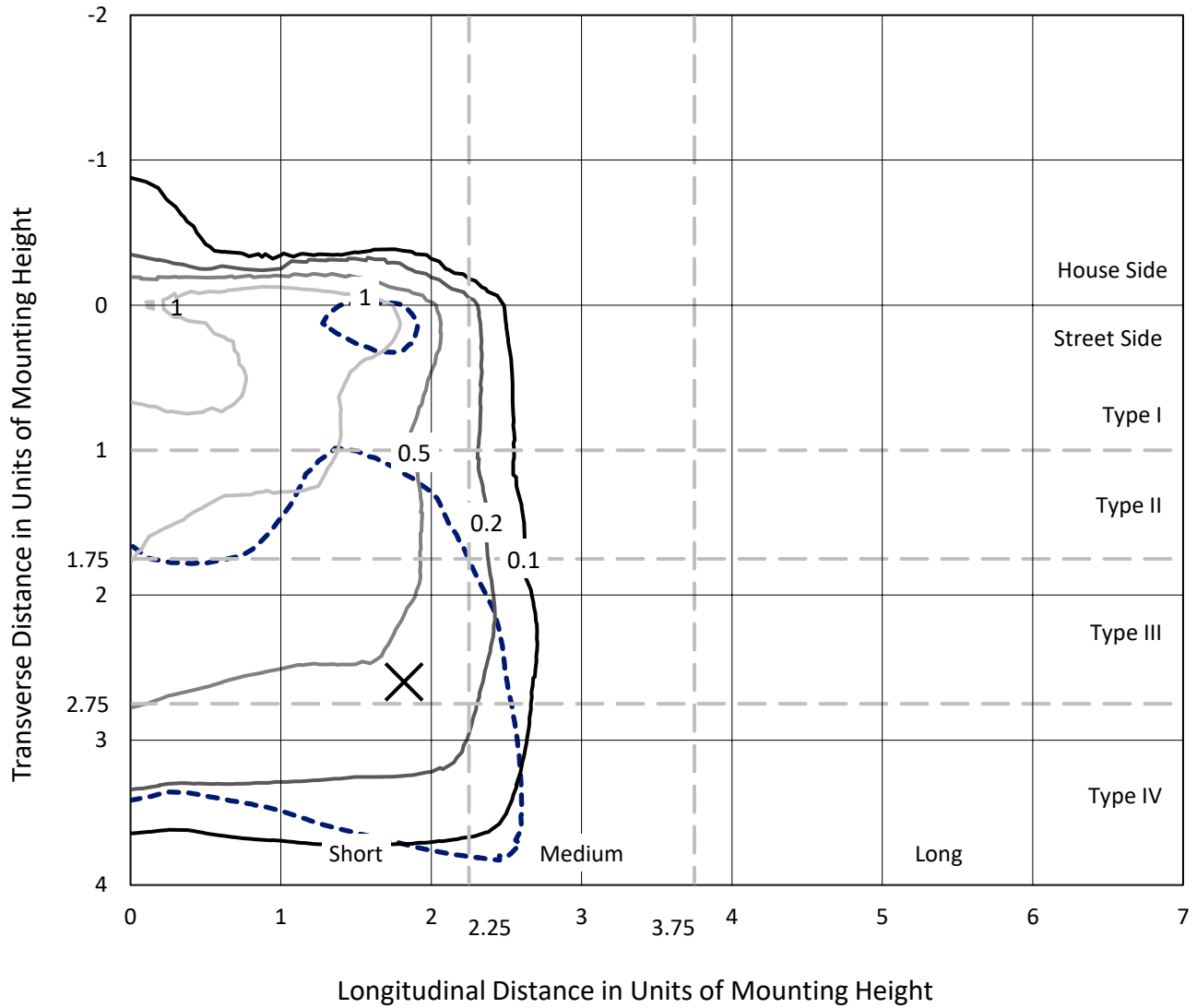
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

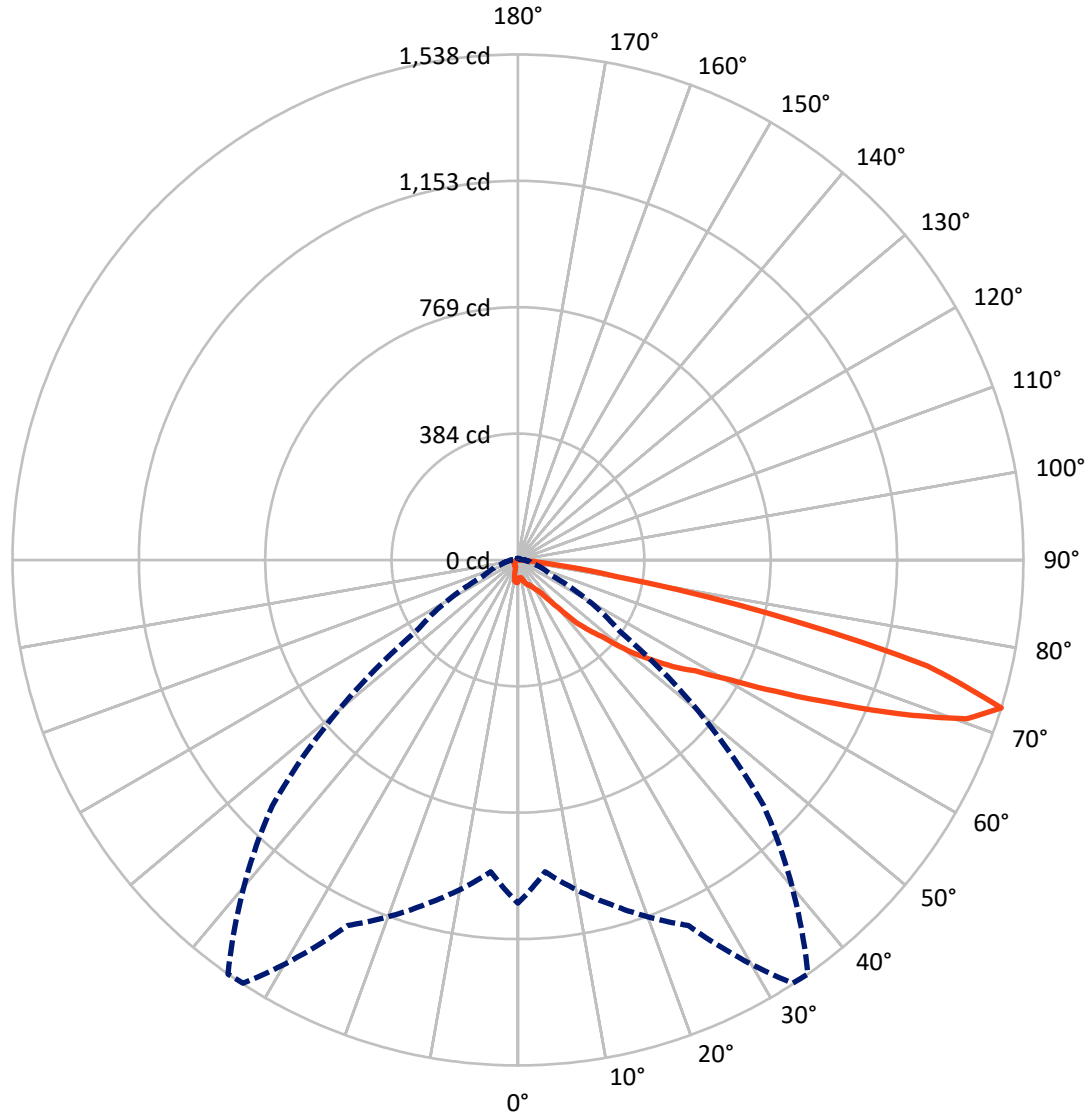
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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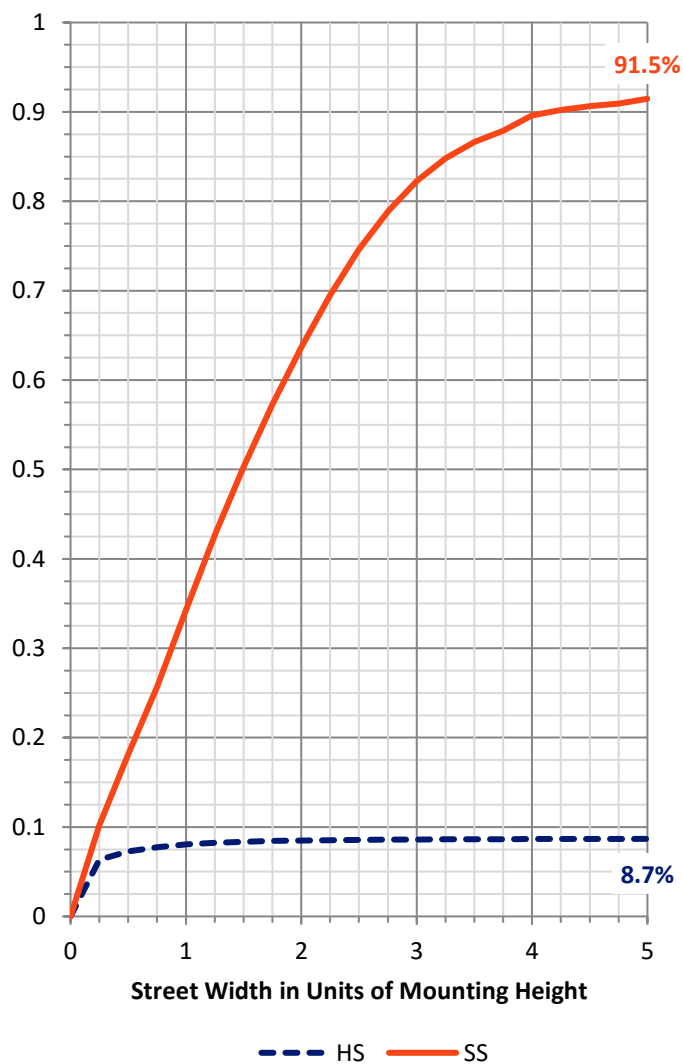
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	113.7	0.0	113.7
	% Fixture	8.8	0.0	8.8
<b>Street Side</b>	Lumens	1185.3	0.0	1185.3
	% Fixture	91.2	0.0	91.2
<b>Total</b>	Lumens	1299.0	0.0	1299.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	6.9	0.5
10°-20°	21.0	1.6
20°-30°	38.1	2.9
30°-40°	74.2	5.7
40°-50°	166.8	12.8
50°-60°	305.3	23.5
60°-70°	422.2	32.5
70°-80°	251.6	19.4
80°-90°	12.8	1.0
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°	1299.0	100.0
0°-180°	1299.0	100.0

**Coefficient of Utilization**

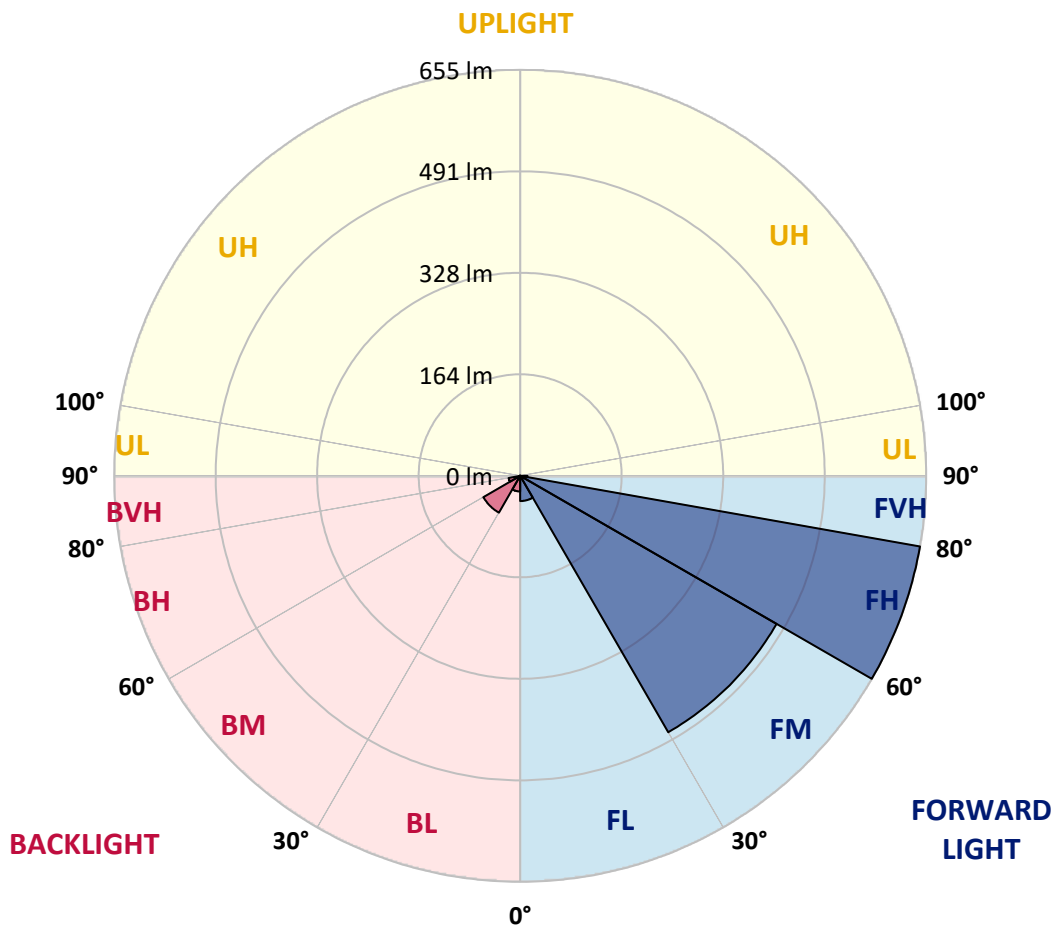


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	40.7	3.1			
FM (30°-60°)	477.7	36.8			
FH (60°-80°)	655.0	50.4			G0/660
FVH (80°-90°)	11.8	0.9			G1/100
BL (0°-30°)	25.3	1.9	B0/110		
BM (30°-60°)	68.6	5.3	B0/220		
BH (60°-80°)	18.8	1.4	B0/110		G0/110
BVH (80°-90°)	1.0	0.1			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
2.5°	73.7	66.7	62.5	55.5	54.9	55.5	56.6	59.6	61.4	68.4	76.1
5°	73.7	67.3	67.8	61.9	55.5	53.7	53.1	56.0	69.0	85.0	89.7
7.5°	67.3	63.7	63.7	59.6	56.0	54.3	56.6	61.9	76.1	90.3	100.3
10°	57.8	57.2	56.0	54.3	55.5	57.2	63.7	67.3	76.7	92.0	101.5
12.5°	54.9	54.9	57.2	56.6	61.4	61.9	70.2	76.7	87.3	98.5	110.9
15°	60.8	61.4	60.8	61.9	64.9	66.1	76.1	83.8	95.0	108.6	121.5
17.5°	70.2	70.8	67.3	69.6	72.0	74.3	81.4	89.7	98.5	118.6	138.1
20°	80.8	81.4	73.7	71.4	79.6	79.6	86.7	93.8	100.9	122.7	151.6
22.5°	90.9	89.7	78.5	76.7	82.0	81.4	89.1	97.3	103.2	125.1	167.6
25°	99.1	97.9	86.7	82.6	87.9	86.7	95.0	103.2	112.1	135.1	177.6
27.5°	108.0	106.8	89.7	91.4	92.0	92.6	97.3	110.3	122.7	136.9	192.9
30°	118.6	118.0	99.1	99.1	102.7	101.5	103.2	123.9	133.9	147.5	218.3
32.5°	144.0	138.1	116.2	106.8	108.0	110.9	122.1	131.6	148.1	167.0	246.6
35°	192.9	185.2	148.7	125.7	123.9	126.3	138.1	160.5	169.9	185.2	277.3
37.5°	276.1	266.7	213.0	162.2	156.9	155.8	166.4	189.4	198.2	212.4	343.4
40°	344.0	321.5	273.2	228.3	201.2	194.7	207.1	212.4	230.1	253.1	427.1
42.5°	407.7	382.9	326.3	294.4	267.8	259.6	229.5	239.5	272.0	299.7	489.1
45°	460.8	423.6	359.3	339.8	306.8	305.6	277.9	299.7	336.3	355.8	559.9
47.5°	500.3	460.8	407.7	386.4	365.8	353.4	361.1	369.9	402.9	420.6	637.8
50°	539.2	502.7	448.4	430.7	421.2	433.6	459.6	456.6	460.8	476.1	710.3
52.5°	596.5	539.8	489.7	482.6	485.5	499.7	531.0	554.0	518.6	528.6	798.2
55°	637.8	580.5	546.3	532.7	558.1	572.3	621.2	654.3	579.9	586.4	880.8
57.5°	715.6	641.3	624.8	602.9	643.1	636.6	720.4	741.0	614.7	624.8	938.0
60°	812.4	738.1	706.2	685.0	728.0	737.5	817.1	775.8	623.0	661.9	936.3
62.5°	960.5	865.5	802.9	785.8	840.7	880.2	916.2	802.9	621.2	645.4	799.4
65°	1138.0	1033.6	938.6	919.2	1013.0	1044.2	1046.6	830.1	582.9	539.2	543.4
67.5°	1293.8	1180.5	1096.2	1095.0	1240.7	1247.8	1178.8	849.6	479.6	347.5	251.9
70°	1299.1	1208.8	1162.8	1231.9	1470.8	1447.2	1230.7	672.6	284.4	155.8	87.3
72.5°	1044.2	952.2	1083.8	1226.5	1535.1	1537.5	1056.6	377.6	116.8	54.9	26.5
75°	452.5	444.8	671.4	977.0	1290.3	1286.7	611.2	151.0	54.3	34.8	15.3
77.5°	198.2	169.9	242.5	541.0	794.1	774.0	222.4	51.9	37.2	28.9	9.4
80°	41.3	35.4	67.8	183.5	335.1	305.6	61.4	29.5	28.3	24.2	5.9
82.5°	10.6	11.2	21.2	51.9	108.6	93.2	20.6	18.9	21.2	18.3	3.5
85°	2.4	2.9	8.8	20.1	25.4	23.6	8.3	9.4	13.6	12.4	2.4
87.5°	1.2	1.2	2.4	4.1	3.5	2.9	1.8	2.9	3.5	4.1	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
2.5°	79.6	69.6	74.3	66.1	66.1	70.8	69.0	67.8	71.4	70.8	80.2
5°	98.5	89.7	88.5	79.1	69.0	64.9	65.5	74.9	82.0	84.4	91.4
7.5°	108.0	102.1	102.7	87.9	68.4	63.1	67.3	72.0	76.1	77.3	80.8
10°	108.6	106.2	104.4	85.5	78.5	73.2	61.9	56.0	56.0	53.7	54.9
12.5°	116.2	115.6	111.5	92.0	80.2	64.3	49.6	42.5	38.3	37.2	35.4
15°	126.3	127.4	121.5	97.3	72.6	48.4	36.0	27.1	24.8	24.2	23.6
17.5°	141.6	149.3	123.9	92.0	57.2	35.4	24.8	21.8	21.2	21.8	21.8
20°	156.9	159.3	126.8	79.6	43.1	25.4	21.2	20.6	21.2	22.4	22.4
22.5°	176.4	174.6	122.1	63.1	30.1	21.2	20.6	20.6	21.8	23.0	23.6
25°	191.1	187.0	118.6	49.6	22.4	19.5	20.1	21.2	21.8	23.6	23.6
27.5°	212.4	195.9	108.0	37.8	19.5	18.9	20.1	21.8	22.4	24.2	24.2
30°	225.4	220.6	96.8	27.7	18.3	17.7	19.5	21.2	22.4	24.8	24.8
32.5°	261.9	227.7	84.4	21.2	17.1	17.1	18.3	20.1	23.0	26.0	26.0
35°	291.4	259.0	70.8	18.9	17.1	16.5	17.1	18.9	22.4	26.0	26.5
37.5°	364.0	286.1	56.6	18.3	17.1	16.5	17.1	17.7	21.2	26.5	27.7
40°	430.7	313.3	45.4	18.3	17.1	16.5	16.5	17.1	19.5	24.2	25.4
42.5°	486.1	342.8	36.0	17.7	16.5	15.9	15.9	16.5	18.9	21.8	21.8
45°	545.7	351.6	30.1	17.7	15.9	15.9	15.9	15.9	17.1	17.7	18.3
47.5°	597.6	356.3	24.8	17.1	15.9	15.9	15.3	15.3	15.3	15.3	15.3
50°	655.5	367.0	20.1	15.9	15.9	15.9	14.7	14.2	13.6	13.0	13.0
52.5°	715.6	378.2	17.1	14.2	14.7	15.3	14.2	12.4	11.8	11.2	11.2
55°	785.8	381.7	15.3	13.0	14.2	14.2	12.4	11.2	10.6	10.0	10.0
57.5°	838.9	367.6	14.2	11.8	12.4	13.0	11.2	10.0	9.4	8.8	8.3
60°	824.8	313.9	13.0	10.6	11.2	11.2	10.0	8.8	8.3	7.7	7.1
62.5°	694.4	230.7	11.2	9.4	10.0	10.0	8.8	8.3	7.1	6.5	5.9
65°	463.1	139.2	9.4	8.3	8.8	8.8	7.7	7.1	5.9	5.3	4.7
67.5°	223.6	64.9	8.3	7.7	7.7	7.7	6.5	6.5	5.3	4.7	4.1
70°	67.8	24.8	7.7	7.1	7.1	7.1	5.9	5.9	5.3	4.7	3.5
72.5°	21.2	11.8	7.1	6.5	6.5	5.3	5.3	5.3	4.7	4.1	2.9
75°	13.0	7.7	5.9	5.9	5.3	4.7	4.7	5.3	4.7	4.1	2.4
77.5°	7.7	5.9	5.3	5.3	4.7	3.5	4.1	3.5	2.9	2.4	1.2
80°	4.7	4.1	4.1	4.1	3.5	1.8	2.9	2.9	2.9	1.8	0.6
82.5°	2.9	2.4	2.4	2.9	1.8	0.6	2.4	2.9	2.4	1.8	0.6
85°	1.2	1.8	1.8	1.8	1.2	0.6	1.8	2.4	2.4	1.8	0.6
87.5°	1.2	1.2	1.8	1.8	1.2	0.6	2.4	2.4	2.4	1.8	0.6
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)