

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: P596053

Luminaire Tested: **MSA-SA1A-AMB-U-T4W**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596053  
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-SA1A-AMB-U-T4W  
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV WIDE OPTICS.  
Light Source: (16) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 903 lumens  
Efficiency: N/A  
Efficacy: 44.0 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

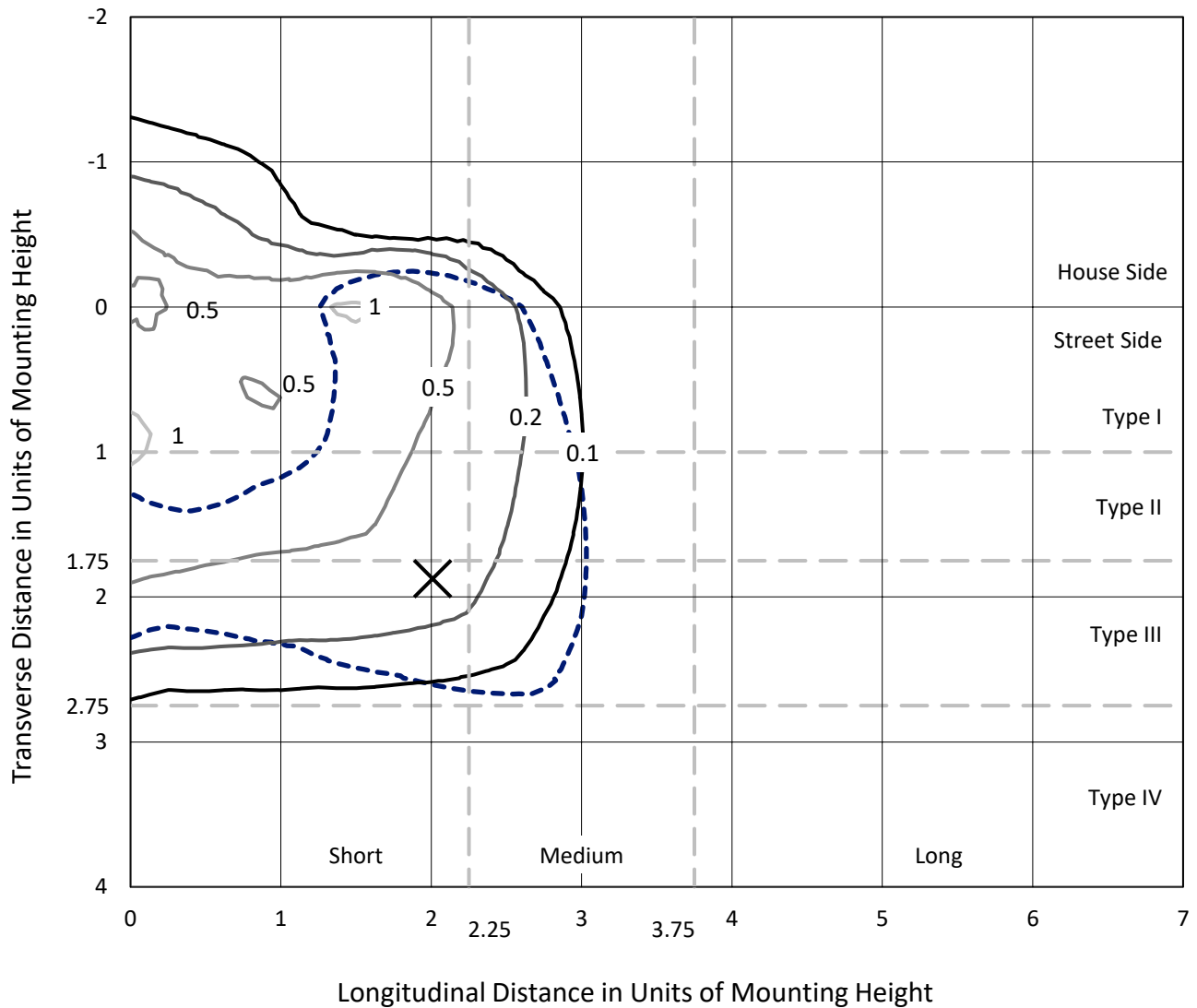
Input Watts (W): 20.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

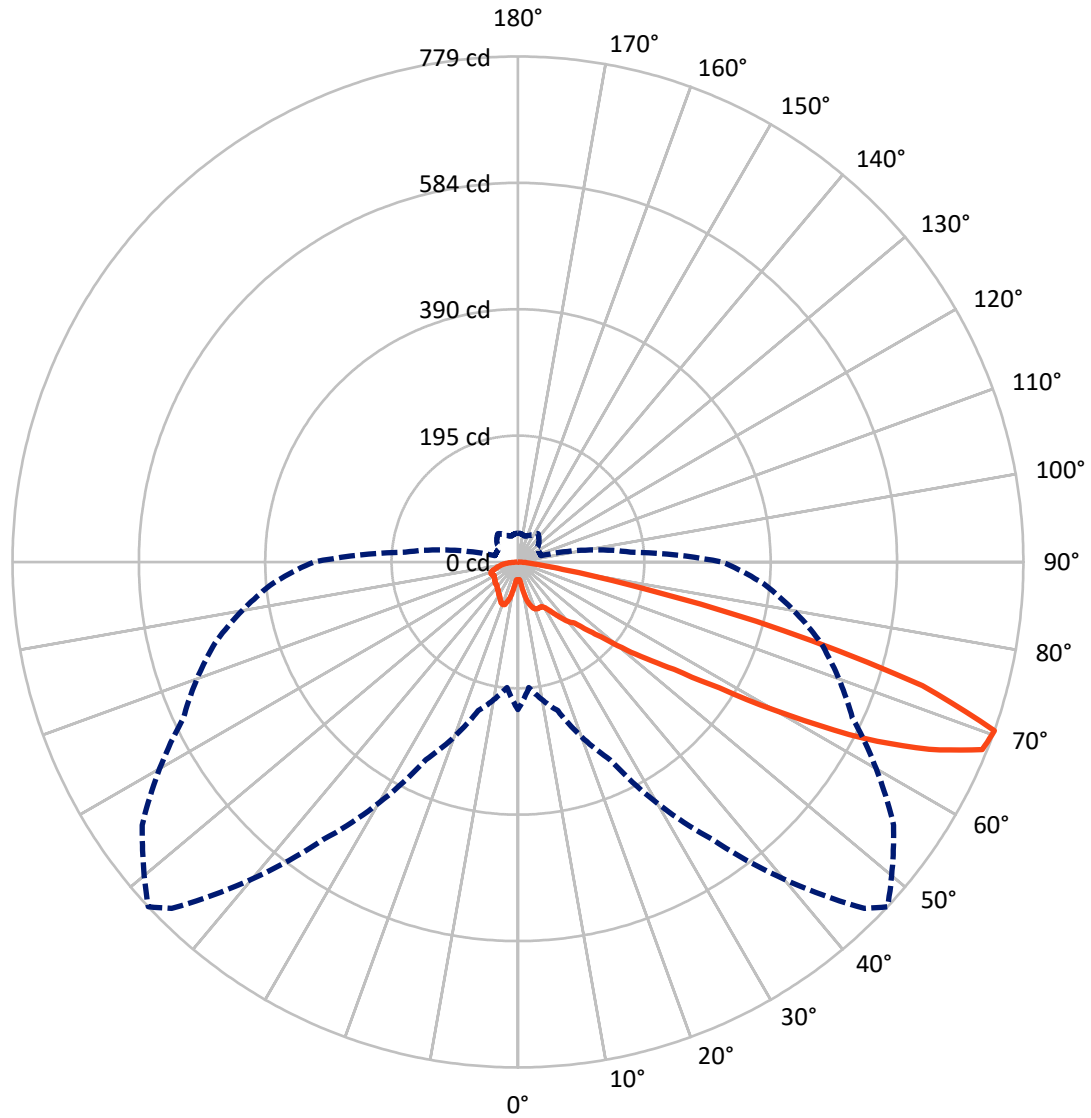
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.1 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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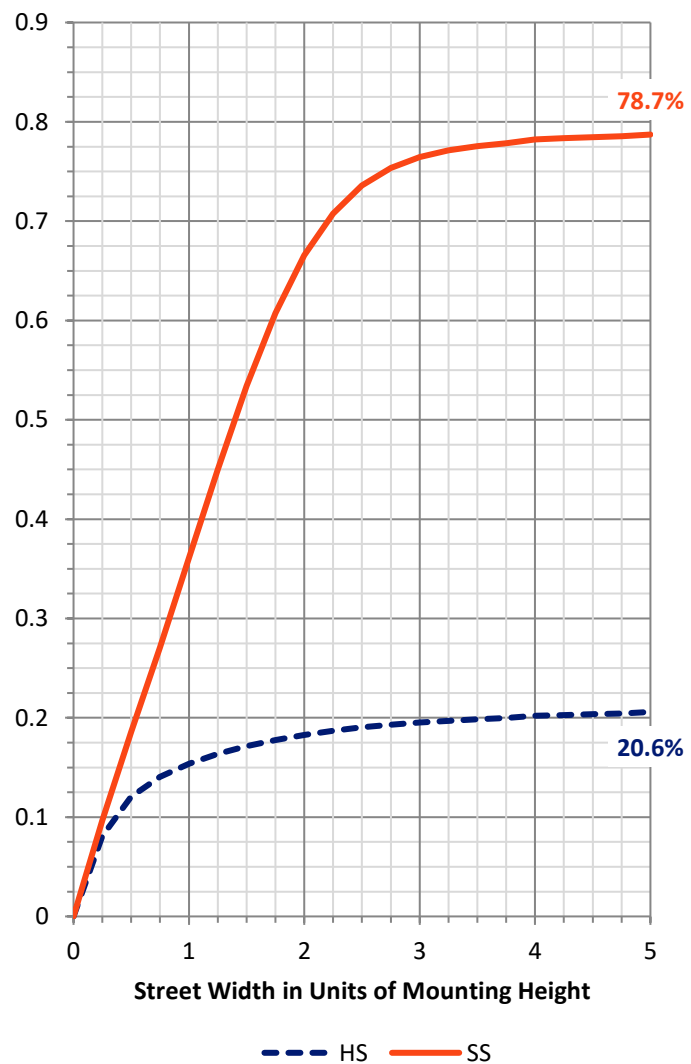
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	189.5	0.0	189.5
	% Fixture	21.0	0.0	21.0
<b>Street Side</b>	Lumens	713.4	0.0	713.4
	% Fixture	79.0	0.0	79.0
<b>Total</b>	Lumens	903.0	0.0	903.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.7	0.4
10°-20°	18.0	2.0
20°-30°	35.3	3.9
30°-40°	60.2	6.7
40°-50°	103.3	11.4
50°-60°	213.7	23.7
60°-70°	318.6	35.3
70°-80°	134.8	14.9
80°-90°	15.3	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°	903.0	100.0
0°-180°	903.0	100.0



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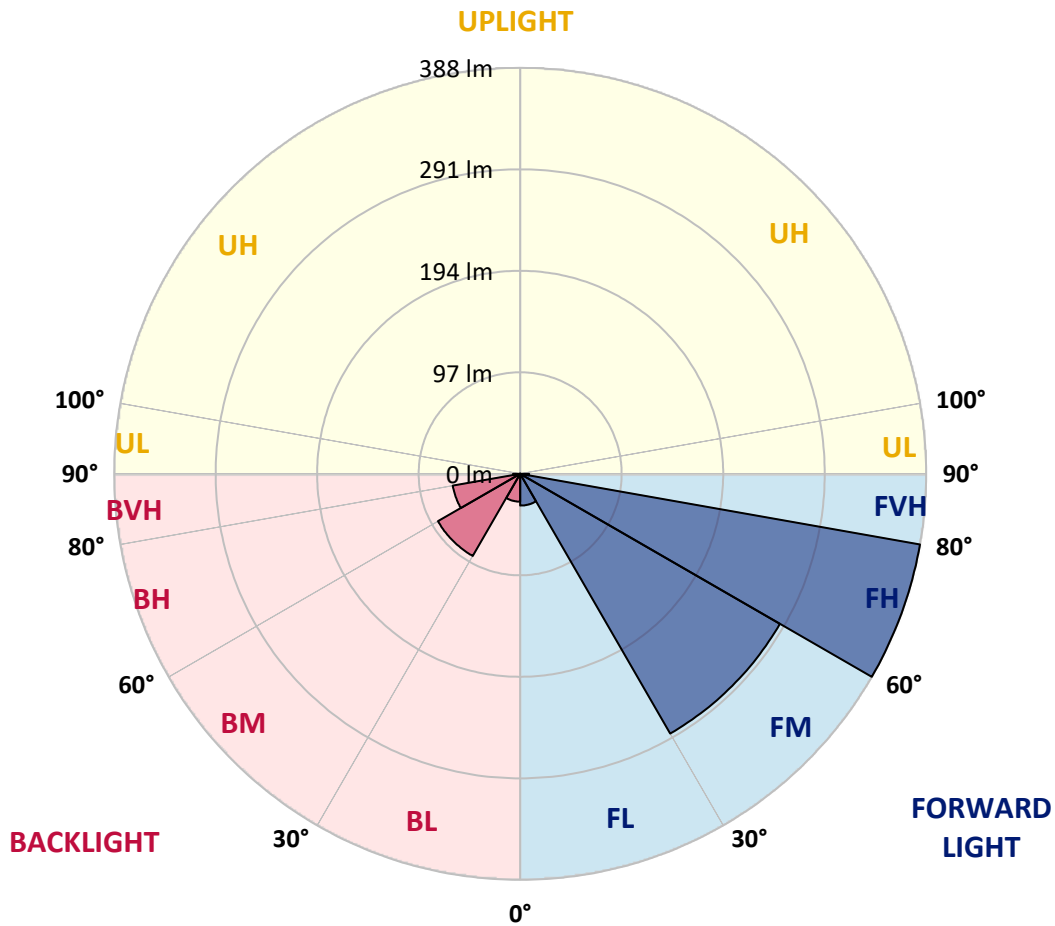
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	30.4	3.4			
FM (30°-60°)	286.6	31.7			
FH (60°-80°)	388.0	43.0			G0/660
FVH (80°-90°)	8.5	0.9			G0/10
BL (0°-30°)	26.6	3.0	B0/110		
BM (30°-60°)	90.7	10.0	B0/220		
BH (60°-80°)	65.4	7.2	B0/110		G0/110
BVH (80°-90°)	6.8	0.8			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°	47°	55°	65°	75°	85°
0°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
2.5°	33.6	30.3	29.4	27.9	27.9	27.9	28.2	27.6	27.0	29.1	30.0
5°	45.6	39.3	40.2	34.8	30.0	28.5	27.3	28.5	31.5	36.9	36.9
7.5°	55.8	51.6	50.7	43.2	37.2	35.4	33.9	35.4	39.3	42.9	43.2
10°	60.6	58.5	54.9	48.3	48.0	48.0	47.7	45.9	45.0	47.7	47.4
12.5°	63.3	63.0	65.1	60.0	60.6	60.9	60.6	59.1	57.0	54.3	51.9
15°	71.1	70.8	69.6	67.8	67.8	69.9	68.1	67.8	64.8	62.7	58.5
17.5°	77.4	77.7	74.4	73.8	74.4	74.7	74.4	73.5	71.1	69.3	66.9
20°	81.6	81.3	77.7	72.6	76.2	77.7	77.1	77.1	73.8	74.7	73.8
22.5°	85.8	83.7	76.5	73.5	75.0	77.7	78.3	77.7	75.9	78.0	81.3
25°	88.8	86.4	80.1	75.9	76.8	78.9	77.7	80.1	81.0	83.7	84.9
27.5°	95.1	93.9	82.5	81.0	78.9	77.1	77.7	82.2	85.8	85.5	92.1
30°	113.4	109.8	93.9	87.9	83.4	79.8	81.6	87.0	91.5	93.0	103.5
32.5°	144.3	142.2	115.5	98.7	90.6	89.7	88.8	90.3	99.9	108.0	114.0
35°	175.2	169.8	144.6	121.2	101.1	96.3	99.0	102.0	114.6	117.0	117.6
37.5°	212.7	204.3	169.8	138.9	122.7	113.4	110.1	119.1	122.7	119.7	127.2
40°	246.3	228.9	199.8	161.4	133.2	127.2	121.8	118.2	122.1	129.0	141.0
42.5°	274.8	264.6	228.9	190.2	151.5	127.5	128.7	119.4	133.5	142.5	156.9
45°	302.1	285.6	252.9	222.6	178.5	150.6	149.1	133.5	151.2	161.1	175.2
47.5°	323.4	304.5	282.9	249.0	205.2	181.5	171.9	154.2	173.7	189.3	207.9
50°	349.5	329.4	304.5	280.8	249.0	221.1	207.6	182.1	203.1	234.6	275.4
52.5°	396.0	372.9	334.5	315.3	298.8	257.7	246.9	225.6	251.4	309.9	386.7
55°	441.3	413.1	378.3	364.8	359.7	303.9	291.9	288.6	345.0	402.9	512.7
57.5°	479.1	448.2	424.8	418.2	421.2	382.5	366.3	378.3	440.4	499.5	632.2
60°	499.8	468.0	453.9	467.1	497.1	483.3	480.3	477.3	530.4	585.4	720.1
62.5°	498.0	465.9	468.9	493.2	557.7	595.6	599.5	577.6	600.1	644.5	745.3
65°	448.5	411.9	443.1	492.9	606.4	695.8	696.7	663.7	643.6	642.4	685.0
67.5°	335.1	312.9	364.8	441.3	608.5	772.6	772.0	730.6	643.3	586.9	562.2
70°	227.7	194.1	237.3	336.3	522.0	755.2	779.2	706.9	568.9	483.9	379.5
72.5°	101.4	93.9	123.9	200.4	364.5	616.0	651.7	564.4	441.9	329.1	208.8
75°	49.2	45.9	57.9	102.9	198.9	402.0	423.6	369.6	268.2	180.9	92.7
77.5°	27.6	25.5	30.9	47.1	91.8	186.9	198.6	179.1	121.5	79.2	42.6
80°	18.9	17.4	21.0	29.1	50.1	58.2	69.9	78.6	59.7	41.7	25.8
82.5°	10.8	9.9	13.2	18.3	32.4	27.9	29.1	38.1	34.8	27.3	15.9
85°	5.7	5.4	7.5	10.2	17.1	14.4	13.5	18.0	20.7	18.3	9.3
87.5°	1.5	1.5	2.4	3.3	4.2	3.3	3.9	4.5	6.0	6.0	3.0
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°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
2.5°	30.9	28.8	29.1	26.7	26.4	27.6	27.6	27.9	29.7	30.0	31.8
5°	39.6	36.6	35.1	31.8	28.5	27.3	29.4	34.5	38.4	39.6	41.7
7.5°	45.6	42.9	41.4	36.9	32.7	33.0	35.7	40.2	45.0	48.0	51.3
10°	47.4	45.9	44.4	41.4	42.9	43.5	43.5	45.3	49.8	51.0	52.5
12.5°	52.8	50.4	49.8	50.7	53.1	55.2	54.3	54.9	56.4	57.3	57.9
15°	57.0	56.1	57.0	57.3	61.2	62.1	61.8	61.2	63.3	62.7	62.1
17.5°	64.8	65.7	62.4	64.8	67.2	69.0	66.9	65.7	66.9	68.1	66.3
20°	72.0	71.4	68.4	69.0	70.2	69.9	67.2	65.1	67.2	70.5	71.4
22.5°	79.8	77.7	73.2	70.5	68.1	68.4	66.6	64.8	67.5	72.3	72.6
25°	85.2	83.4	78.6	74.4	69.3	63.9	63.6	64.2	66.6	73.5	73.2
27.5°	92.7	89.4	81.0	77.1	67.8	59.4	61.5	62.7	63.3	71.1	72.9
30°	101.1	102.0	86.4	77.7	64.5	57.0	57.0	58.5	60.6	69.6	70.5
32.5°	111.9	106.8	94.8	75.3	60.3	55.5	54.6	55.8	57.6	64.8	66.0
35°	116.1	117.9	99.3	72.0	57.3	52.8	52.5	51.9	53.4	60.0	61.5
37.5°	133.2	130.8	105.3	70.2	54.9	51.3	48.6	48.9	50.4	54.6	56.1
40°	147.3	147.3	108.3	65.7	52.5	49.8	46.5	46.5	46.8	49.8	51.3
42.5°	165.6	168.3	111.3	60.9	51.6	47.1	45.0	44.4	44.4	45.6	47.4
45°	192.6	187.8	108.9	54.9	48.9	47.7	43.8	43.2	42.6	43.5	45.0
47.5°	234.3	215.1	104.7	50.1	46.8	48.0	43.2	41.7	41.4	42.6	44.4
50°	309.9	265.5	95.4	46.5	45.3	46.5	43.5	41.7	41.1	42.6	44.1
52.5°	435.6	344.7	87.6	44.1	43.2	45.6	44.7	42.0	41.1	42.9	44.4
55°	565.0	430.2	80.4	42.6	41.7	45.0	45.0	42.9	41.7	43.2	45.3
57.5°	679.9	492.6	77.7	41.4	40.5	44.1	45.0	42.9	42.3	45.6	47.4
60°	753.1	519.6	71.1	40.2	39.9	43.2	46.2	43.5	44.1	49.2	52.5
62.5°	746.2	493.2	59.7	39.0	39.3	43.8	48.0	46.2	45.9	51.6	54.9
65°	658.9	405.3	48.3	38.4	38.4	45.6	51.9	46.8	44.7	50.1	52.5
67.5°	496.8	290.4	40.5	37.5	37.5	47.4	54.9	46.8	43.2	48.3	49.8
70°	314.4	174.3	36.9	36.0	36.0	46.2	53.7	45.3	41.1	44.1	44.1
72.5°	176.4	84.3	33.9	34.8	33.6	40.8	50.7	42.9	38.7	40.2	40.8
75°	72.9	43.5	31.2	32.4	30.0	36.0	48.0	40.5	36.3	36.3	37.5
77.5°	35.1	28.8	27.6	29.4	26.4	31.5	43.2	37.2	32.1	31.5	32.1
80°	24.0	20.7	22.5	24.9	22.5	27.0	38.4	34.2	27.6	26.4	26.1
82.5°	14.7	13.2	16.8	18.0	16.8	23.1	34.2	28.2	21.0	18.3	19.8
85°	7.5	7.8	9.9	11.1	10.2	14.7	22.8	16.8	12.0	10.8	11.7
87.5°	1.8	2.7	3.3	3.6	2.7	1.5	1.8	2.1	2.1	1.8	0.9
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)