

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: P596063

Luminaire Tested: **MSA-SA2A-AMB-U-SL4**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596063  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-21)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-AMB-U-SL4  
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: (32) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1673 lumens  
Efficiency: N/A  
Efficacy: 40.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

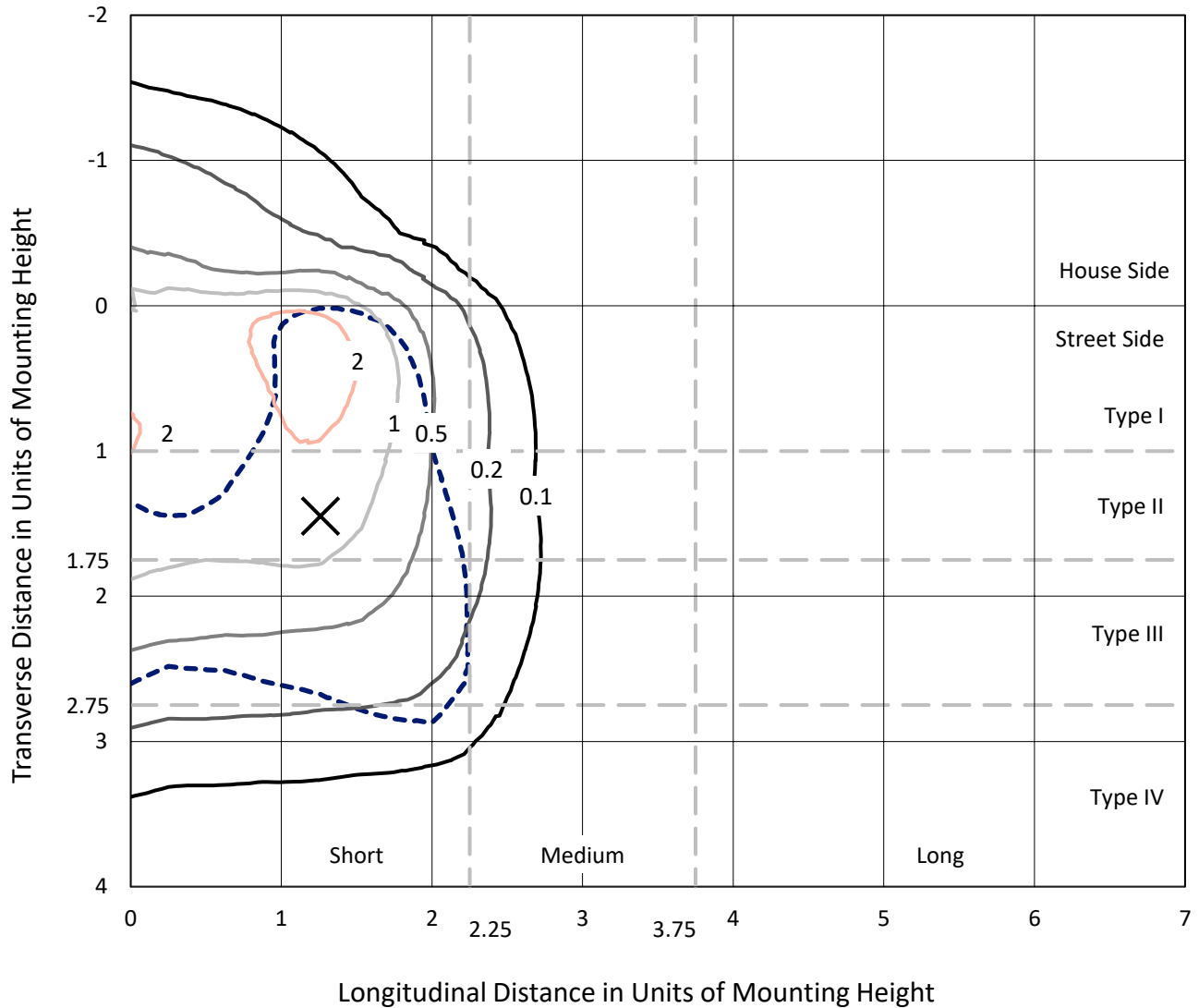
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596063  
 CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

### Iso-Footcandle Lines of Horizontal Illumination

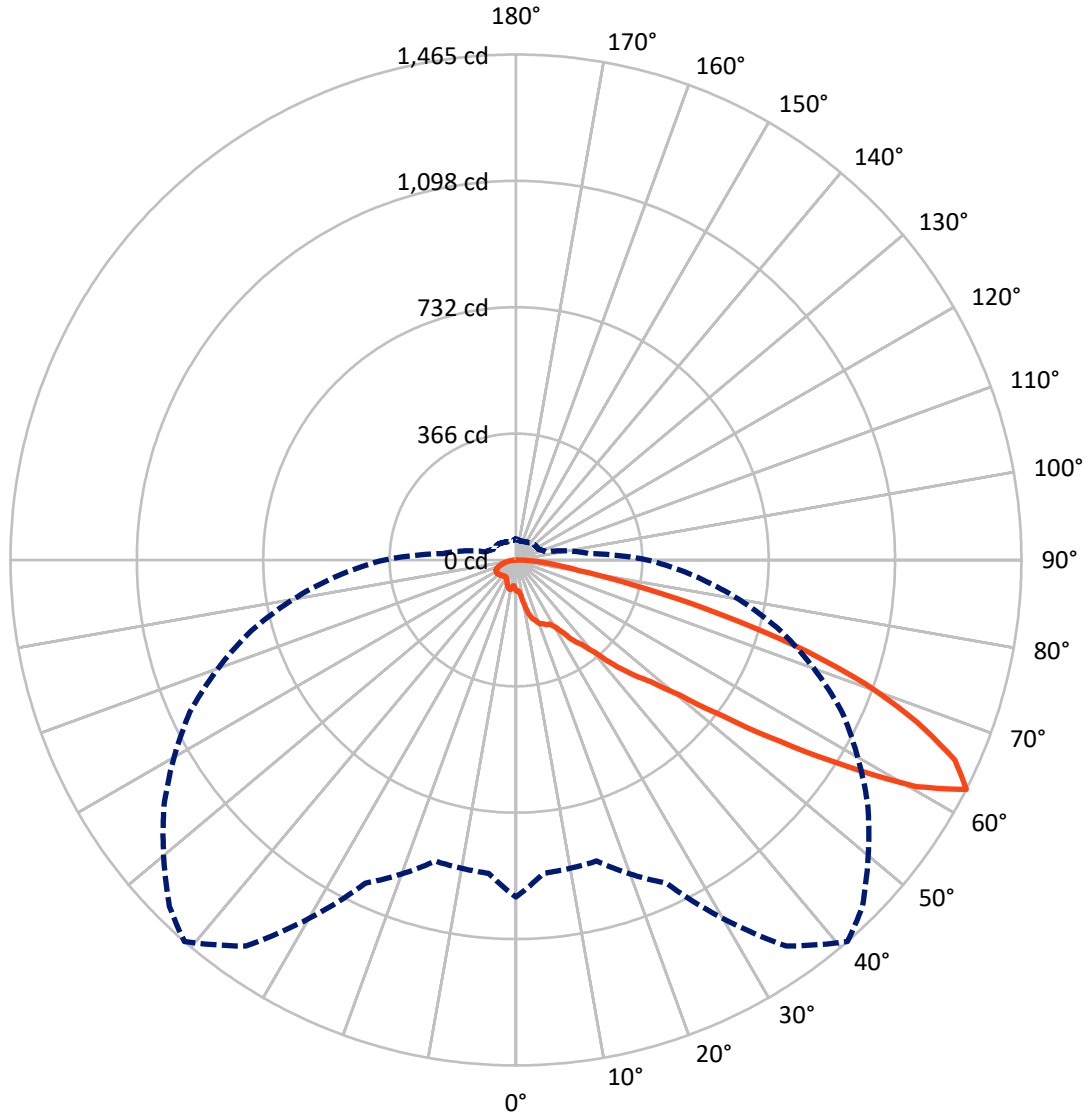
✕ Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P596063  
CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

### Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P596063  
 CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

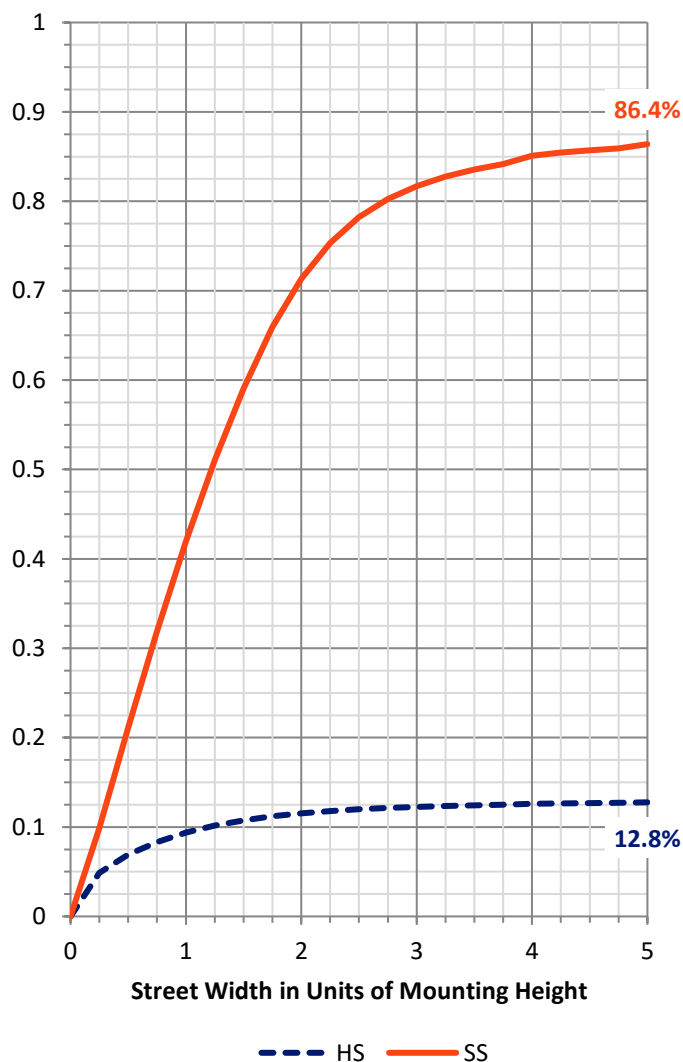
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	215.9	0.0	215.9
	% Fixture	12.9	0.0	12.9
<b>Street Side</b>	Lumens	1457.1	0.0	1457.1
	% Fixture	87.1	0.0	87.1
<b>Total</b>	Lumens	1673.0	0.0	1673.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	10.1	0.6
10°-20°	37.1	2.2
20°-30°	69.4	4.2
30°-40°	123.0	7.4
40°-50°	251.5	15.0
50°-60°	470.3	28.1
60°-70°	481.1	28.8
70°-80°	196.3	11.7
80°-90°	34.1	2.0
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°	1673.0	100.0
0°-180°	1673.0	100.0

**Coefficient of Utilization**



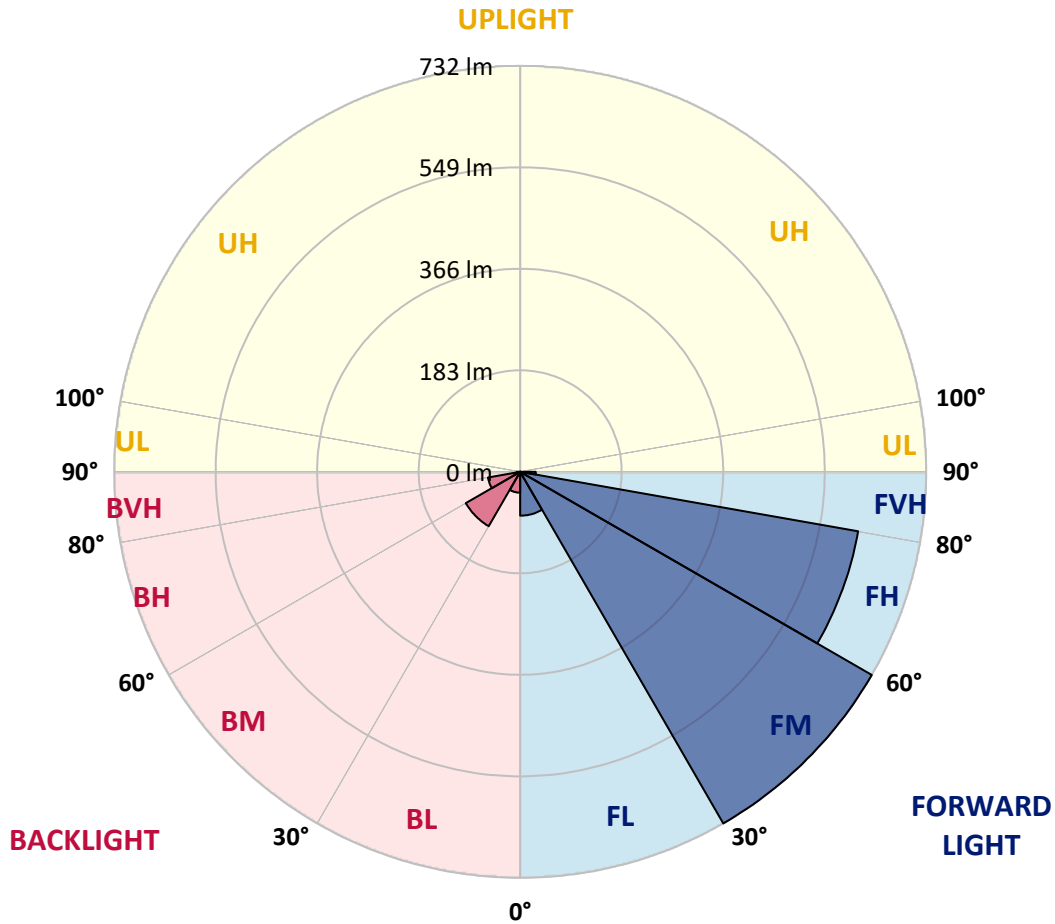
REPORT NUMBER: P596063  
 CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	79.0	4.7			
FM (30°-60°)	731.8	43.7			
FH (60°-80°)	618.4	37.0			G0/660
FVH (80°-90°)	27.9	1.7			G1/100
BL (0°-30°)	37.6	2.2	B0/110		
BM (30°-60°)	113.1	6.8	B0/220		
BH (60°-80°)	59.0	3.5	B0/110		G0/110
BVH (80°-90°)	6.2	0.4			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





REPORT NUMBER: P596063  
 CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
0°	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1
2.5°	119.7	104.4	100.3	90.8	90.2	90.2	92.6	90.2	89.1	92.6	103.2
5°	141.0	125.0	123.9	111.5	96.1	92.0	91.4	93.8	105.0	124.5	121.5
7.5°	151.6	145.1	143.3	128.0	107.4	102.6	101.5	113.8	125.0	135.1	135.7
10°	151.6	148.1	142.2	128.6	127.4	129.2	131.5	127.4	133.9	142.2	138.6
12.5°	145.1	145.1	155.1	149.8	154.5	157.5	159.3	153.4	154.0	150.4	148.1
15°	157.5	159.9	161.0	165.2	169.9	175.2	175.2	171.1	169.3	166.3	158.1
17.5°	174.0	177.0	174.6	182.3	187.6	184.0	185.8	181.7	175.8	184.0	174.0
20°	190.5	193.5	191.1	186.4	198.2	197.0	193.5	189.3	181.7	194.1	187.6
22.5°	213.5	207.6	200.0	198.2	202.3	200.6	198.2	189.3	188.2	199.4	204.1
25°	228.3	227.7	215.3	211.2	210.6	207.6	204.7	199.4	204.1	218.8	211.8
27.5°	250.1	250.7	226.5	237.7	224.1	210.0	208.8	207.0	220.6	225.3	224.1
30°	276.6	277.2	250.7	250.1	240.1	226.5	218.2	225.9	238.9	241.3	243.0
32.5°	316.2	315.0	279.6	268.4	258.9	250.1	244.8	230.0	253.6	270.7	266.6
35°	349.8	345.7	314.4	295.5	279.0	286.7	267.2	267.8	286.1	315.6	295.5
37.5°	408.8	400.5	354.5	323.8	322.7	310.9	310.3	317.3	340.3	374.0	361.0
40°	464.2	441.2	385.8	362.8	347.4	352.1	366.3	355.7	398.2	470.7	453.0
42.5°	523.8	493.7	420.6	401.7	395.8	414.1	389.9	400.5	483.1	595.2	546.8
45°	572.2	532.6	441.2	441.8	448.3	472.5	460.1	482.5	612.9	765.0	673.6
47.5°	609.3	569.2	478.4	471.9	486.0	526.7	552.1	602.2	770.4	945.5	809.9
50°	640.0	609.3	518.5	513.8	568.6	615.8	661.8	731.4	953.8	1137.8	934.9
52.5°	682.5	651.2	586.3	596.3	687.8	751.5	785.7	944.4	1134.9	1315.4	1003.3
55°	767.4	713.7	677.7	703.1	847.6	927.8	975.0	1139.0	1313.6	1363.2	977.4
57.5°	851.8	789.8	766.8	826.4	996.9	1124.3	1198.0	1313.6	1348.4	1294.7	863.0
60°	949.1	883.6	866.5	969.7	1195.6	1333.1	1347.8	1318.3	1270.6	1098.3	706.6
62.5°	976.8	911.3	903.1	1033.4	1365.5	1464.6	1419.8	1245.2	1042.3	793.9	515.5
65°	941.4	874.2	897.2	1046.4	1395.6	1397.4	1374.4	1070.0	751.5	550.3	368.1
67.5°	837.0	760.9	808.1	980.9	1267.6	1253.4	1208.6	850.6	533.2	392.3	260.7
70°	636.5	588.1	657.1	798.7	1086.5	1073.5	955.0	654.2	369.8	259.5	152.8
72.5°	492.5	449.5	496.7	629.4	872.4	840.5	707.8	460.1	232.4	139.2	82.0
75°	361.0	317.3	368.1	457.1	630.6	572.8	483.1	280.2	123.9	72.0	56.0
77.5°	234.8	204.1	241.8	283.7	405.8	345.1	266.6	168.7	75.5	48.4	44.2
80°	132.1	120.9	142.2	165.2	215.3	184.6	151.6	126.2	56.6	37.2	33.6
82.5°	82.0	79.0	95.6	105.6	119.7	110.9	102.6	110.9	42.5	24.8	22.4
85°	49.0	49.0	64.3	66.1	75.5	71.4	79.0	87.9	24.2	14.7	14.2
87.5°	12.4	13.0	18.9	20.1	20.1	20.1	21.8	33.0	6.5	4.7	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596063  
 CATALOG NUMBER: MSA-SA2A-AMB-U-SL4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1
2.5°	105.6	92.6	95.0	86.1	82.6	82.6	83.8	81.4	89.1	86.1	95.0
5°	130.9	115.6	110.3	94.4	80.8	73.7	77.3	88.5	96.1	96.1	104.4
7.5°	142.2	128.6	119.7	97.3	80.8	74.9	79.0	83.8	89.7	93.2	99.1
10°	138.0	129.2	117.4	97.9	93.8	89.1	80.2	74.3	76.7	76.1	78.5
12.5°	146.3	135.7	122.7	108.5	101.5	92.0	80.2	72.0	67.8	66.1	66.1
15°	149.2	143.3	128.0	112.1	100.3	87.9	76.7	67.8	63.1	60.2	59.6
17.5°	162.2	156.9	131.5	113.3	96.7	84.9	73.7	66.1	61.9	60.2	58.4
20°	176.4	164.6	129.8	106.2	92.0	79.0	69.0	63.1	61.3	62.5	63.1
22.5°	188.8	167.5	127.4	96.7	82.0	72.6	66.1	61.3	60.8	62.5	62.5
25°	195.2	172.8	122.7	90.8	74.3	64.9	61.3	60.2	60.2	63.1	62.5
27.5°	204.7	171.1	114.4	84.3	68.4	60.8	60.2	59.6	59.0	62.5	62.5
30°	209.4	179.9	108.5	77.9	64.3	58.4	57.8	59.0	59.6	63.7	63.7
32.5°	228.3	177.5	106.8	73.7	61.3	57.8	57.8	58.4	60.8	64.3	65.5
35°	244.8	187.6	103.2	70.2	60.2	57.2	58.4	58.4	61.3	66.1	67.2
37.5°	288.4	200.0	102.6	69.6	60.8	58.4	57.8	59.0	62.5	67.2	69.0
40°	342.1	222.4	101.5	70.2	61.3	59.6	58.4	59.6	62.5	67.2	69.6
42.5°	410.0	251.3	103.8	72.0	63.1	60.2	59.6	60.2	62.5	66.7	69.0
45°	492.5	279.0	106.2	72.6	64.3	62.5	60.2	60.8	61.9	65.5	67.8
47.5°	579.8	313.8	112.1	74.9	66.7	64.3	60.8	60.2	60.8	63.7	66.1
50°	658.9	348.6	115.0	77.9	69.6	65.5	61.9	60.2	59.6	61.9	64.9
52.5°	689.5	356.3	115.6	79.6	72.6	67.2	62.5	60.2	58.4	60.2	63.7
55°	658.9	336.2	113.3	80.2	73.7	68.4	63.7	60.8	57.8	59.6	62.5
57.5°	583.4	303.8	109.7	79.6	73.7	68.4	63.7	60.2	57.2	58.4	61.3
60°	488.4	261.9	101.5	77.3	73.7	68.4	63.7	59.6	56.6	57.8	60.8
62.5°	381.0	211.8	90.8	72.6	70.8	67.2	61.9	58.4	56.6	58.4	61.3
65°	291.4	159.3	77.9	66.7	66.7	63.7	60.2	56.0	54.9	56.0	58.4
67.5°	194.1	110.9	67.8	61.3	60.8	59.6	57.2	51.9	49.0	49.0	50.1
70°	115.6	75.5	57.8	54.3	54.3	53.1	51.9	46.6	43.1	42.5	43.1
72.5°	73.7	60.2	50.1	47.2	47.2	46.0	45.4	41.9	38.3	37.2	37.8
75°	57.2	51.9	43.6	40.7	40.7	40.1	39.5	36.0	33.6	32.4	31.9
77.5°	48.4	44.2	36.6	34.2	34.2	32.4	32.4	30.1	27.7	26.0	24.8
80°	36.6	36.0	28.9	27.1	28.3	25.4	26.0	24.2	21.2	18.3	17.1
82.5°	25.4	27.1	21.2	19.5	19.5	17.1	18.9	17.1	15.3	13.0	11.2
85°	17.1	18.3	13.6	11.2	10.0	7.7	10.0	10.0	8.8	7.1	5.9
87.5°	2.4	3.5	3.5	3.5	2.9	1.2	3.5	3.5	3.5	3.5	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)