

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: P596095

Luminaire Tested: **MSA-SA3A-AMB-U-T3**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596095  
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-SA3A-AMB-U-T3  
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE III OPTICS.  
Light Source: (48) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2373 lumens  
Efficiency: N/A  
Efficacy: 39.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

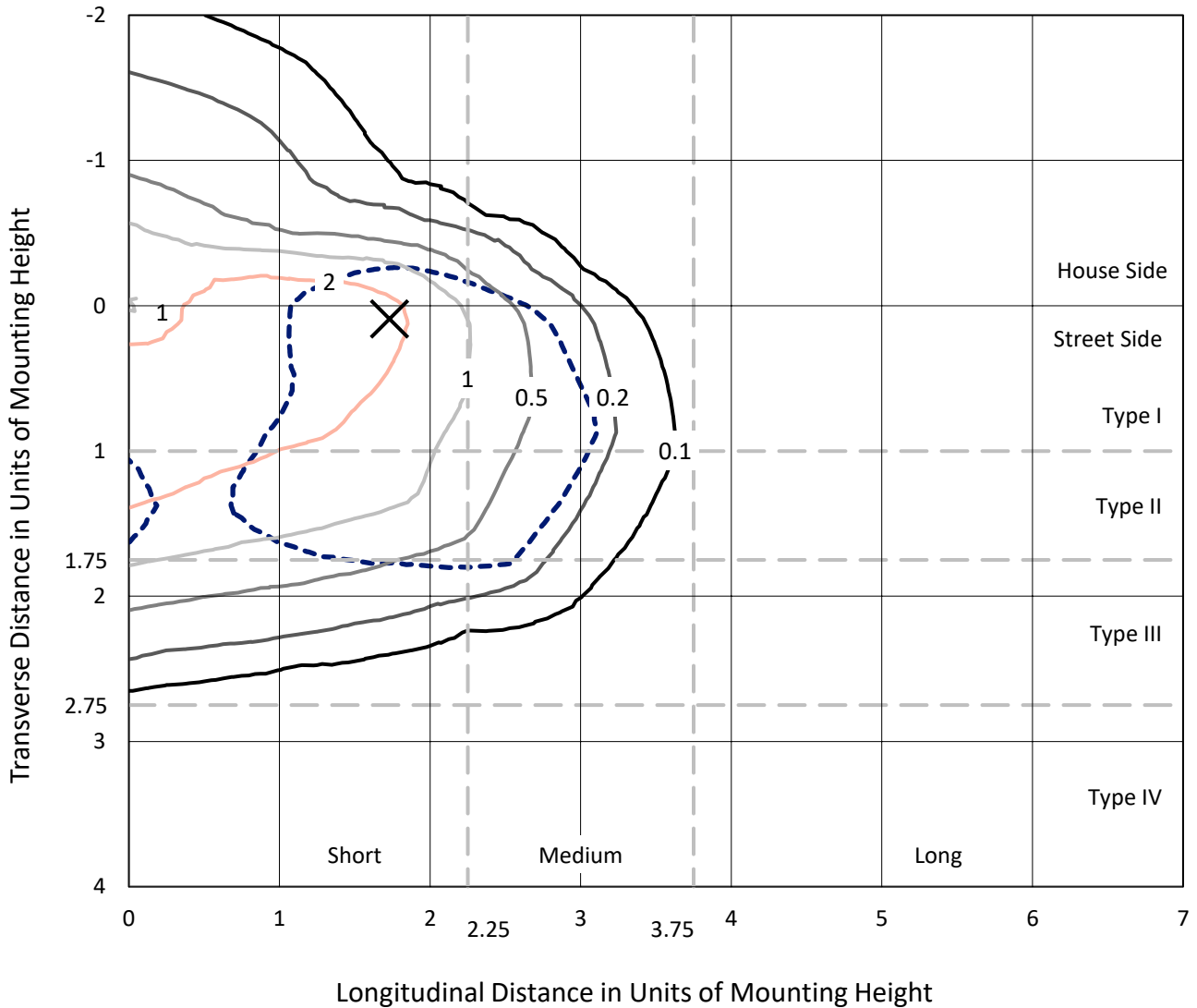
Input Watts (W): 59.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

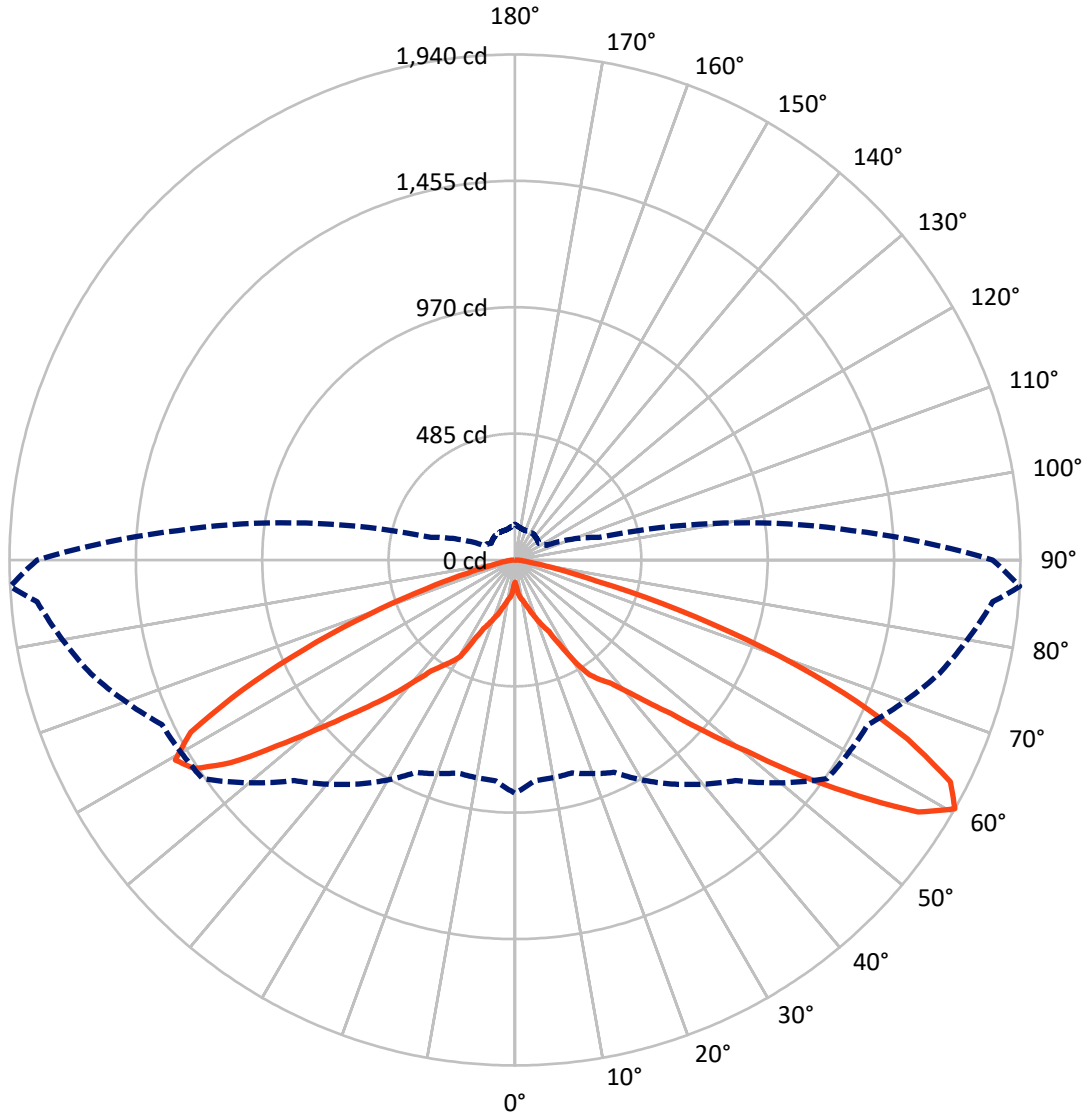
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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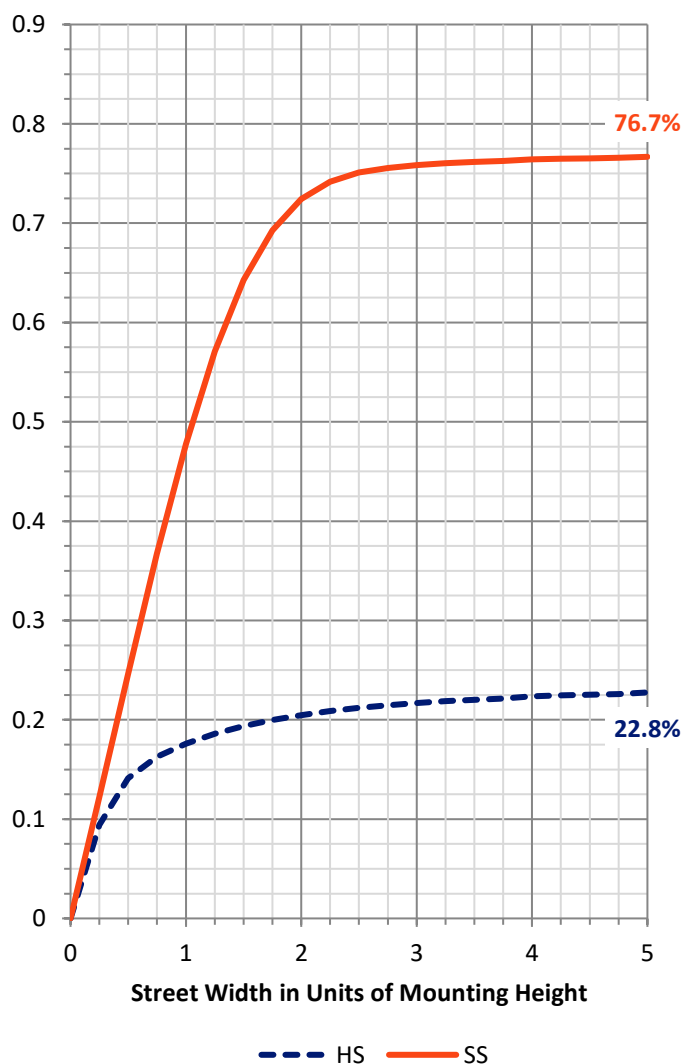
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	548.8	0.0	548.8
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	1824.2	0.0	1824.2
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	2373.0	0.0	2373.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	11.2	0.5
10°-20°	55.0	2.3
20°-30°	128.8	5.4
30°-40°	246.0	10.4
40°-50°	395.9	16.7
50°-60°	627.1	26.4
60°-70°	655.2	27.6
70°-80°	223.0	9.4
80°-90°	30.9	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°	2373.0	100.0
0°-180°	2373.0	100.0

**Coefficient of Utilization**



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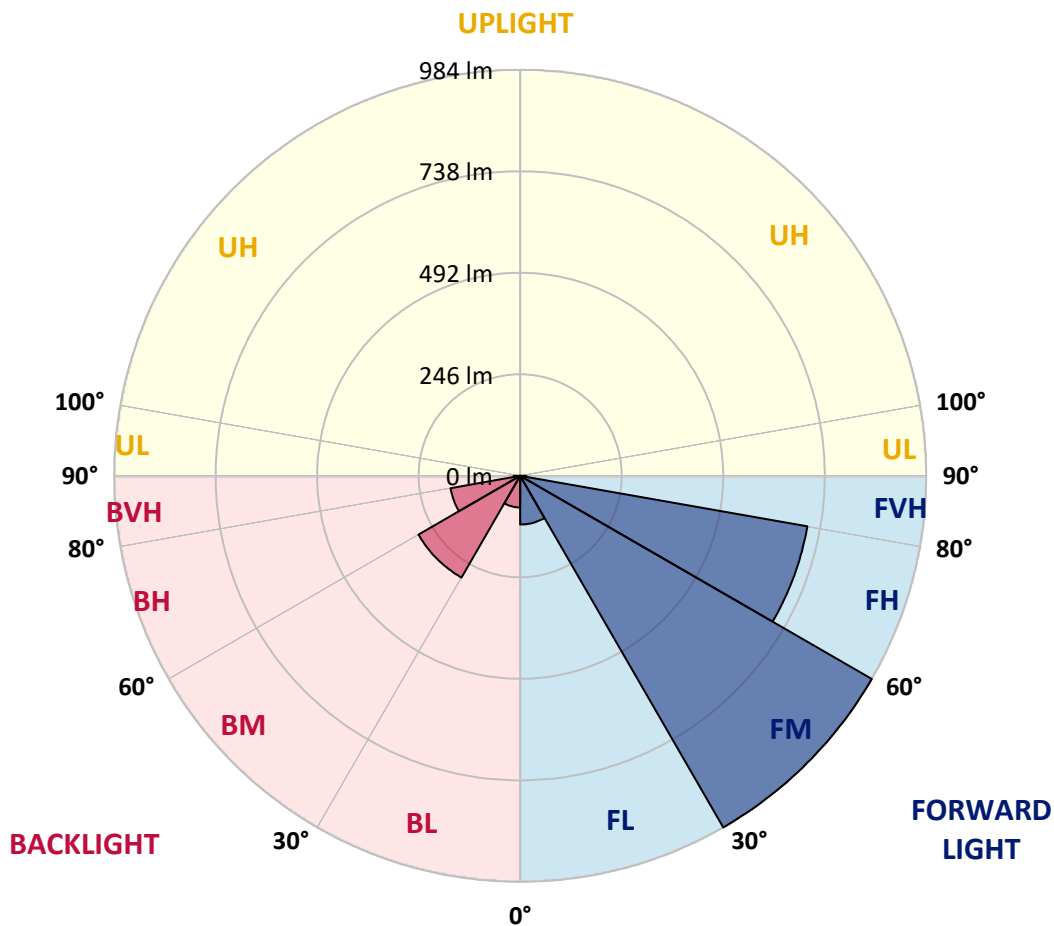
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	118.1	5.0			
FM (30°-60°)	984.2	41.5			
FH (60°-80°)	706.9	29.8			G1/1800
FVH (80°-90°)	15.0	0.6			G1/100
BL (0°-30°)	76.8	3.2	B0/110		
BM (30°-60°)	284.7	12.0	B1/1000		
BH (60°-80°)	171.3	7.2	B1/500		G1/500
BVH (80°-90°)	15.9	0.7			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6
2.5°	103.7	92.6	90.2	83.0	83.0	86.2	88.6	88.6	95.0	100.6	103.0
5°	129.3	116.5	114.1	102.2	89.4	87.8	91.0	104.5	118.1	126.1	127.7
7.5°	154.8	145.2	142.9	126.9	110.9	104.5	114.1	126.1	136.5	143.7	145.2
10°	174.8	171.6	162.0	145.2	142.1	139.7	138.9	140.5	151.6	154.0	154.8
12.5°	189.9	186.7	193.1	183.6	181.2	181.2	173.2	173.2	173.2	171.6	170.8
15°	225.1	223.5	213.1	211.5	210.7	209.1	205.9	203.5	201.1	189.9	189.9
17.5°	257.0	256.2	246.6	241.0	237.0	235.4	229.8	225.1	230.6	221.9	217.9
20°	299.3	297.7	280.9	276.1	275.3	264.2	242.6	239.4	251.4	247.4	245.0
22.5°	354.3	348.0	327.2	308.9	308.9	297.7	269.7	263.4	267.4	277.7	274.5
25°	436.5	429.4	387.1	376.7	366.3	342.4	325.6	300.9	302.5	308.9	304.1
27.5°	482.0	472.5	429.4	436.5	409.4	373.5	375.1	354.3	336.0	371.9	371.1
30°	546.7	542.7	462.9	478.8	463.7	410.2	415.0	400.6	399.0	475.6	452.5
32.5°	635.3	617.7	541.1	518.7	503.6	485.2	454.9	453.3	479.6	537.1	524.3
35°	682.3	697.5	595.4	569.0	540.3	517.9	533.1	535.5	557.1	582.6	564.2
37.5°	783.7	758.2	677.6	616.9	612.9	597.0	600.1	584.2	572.2	609.7	601.7
40°	823.6	812.4	709.5	658.4	640.0	651.2	604.1	598.5	620.1	668.8	664.0
42.5°	853.9	834.0	751.0	713.5	671.2	658.4	644.0	655.2	699.9	759.0	743.8
45°	912.2	855.5	795.7	755.8	705.5	727.0	702.3	717.5	798.9	843.6	842.0
47.5°	963.3	909.8	850.7	810.8	764.5	824.4	761.4	795.7	928.2	972.0	986.4
50°	984.8	937.7	886.7	831.6	841.2	894.6	868.3	913.8	1079.0	1128.5	1153.2
52.5°	999.2	952.1	895.4	861.9	910.6	950.5	990.4	1032.7	1218.6	1313.6	1373.5
55°	1010.4	954.5	910.6	916.2	988.0	1042.3	1144.4	1233.8	1400.6	1536.3	1599.3
57.5°	969.7	917.8	893.8	928.9	1031.9	1158.8	1300.1	1392.6	1559.4	1714.2	1825.2
60°	895.4	850.7	846.0	899.4	1049.5	1197.1	1463.7	1494.8	1685.5	1841.1	1940.1
62.5°	767.7	709.5	716.7	803.7	1015.1	1253.0	1581.8	1526.7	1733.4	1841.1	1875.5
65°	587.4	538.7	549.1	649.6	901.0	1217.1	1656.0	1532.3	1679.9	1683.1	1656.0
67.5°	371.1	324.0	346.4	454.1	655.2	1034.3	1583.4	1455.7	1564.2	1392.6	1360.7
70°	173.2	164.4	171.6	229.0	387.9	704.7	1288.1	1240.2	1288.1	1060.6	1013.5
72.5°	89.4	84.6	91.8	120.5	187.5	358.3	873.9	942.5	988.8	702.3	656.8
75°	67.0	64.6	68.6	79.0	106.1	139.7	427.8	547.5	608.9	380.7	324.8
77.5°	52.7	51.1	54.3	63.0	76.6	76.6	175.6	251.4	280.1	167.6	158.0
80°	39.9	38.3	42.3	49.5	56.7	54.3	78.2	121.3	127.7	74.2	69.4
82.5°	27.1	27.1	30.3	35.1	39.9	36.7	51.1	61.5	61.5	39.9	41.5
85°	20.0	20.0	20.7	21.5	22.3	20.0	28.7	32.7	33.5	21.5	20.7
87.5°	4.0	4.0	8.0	8.0	8.0	5.6	9.6	10.4	10.4	8.0	6.4
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°	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6
2.5°	103.7	94.2	94.2	85.4	83.0	85.4	82.2	81.4	85.4	86.2	91.0
5°	132.5	121.3	114.9	101.4	87.0	81.4	85.4	97.4	107.7	111.7	118.9
7.5°	150.8	139.7	135.7	116.5	100.6	95.0	103.7	113.3	125.3	131.7	141.3
10°	156.4	150.0	144.5	130.9	129.3	129.3	125.3	123.7	133.3	135.7	139.7
12.5°	174.0	168.4	163.6	158.0	155.6	154.8	149.2	150.0	150.8	154.0	153.2
15°	189.1	188.3	185.9	174.8	170.0	171.6	171.6	170.0	170.0	170.8	170.0
17.5°	214.7	214.7	197.9	184.4	185.9	193.1	186.7	179.6	184.4	182.8	178.0
20°	240.2	233.0	212.3	191.5	196.3	195.5	188.3	178.0	178.0	185.2	185.9
22.5°	271.3	256.2	218.7	199.5	196.3	193.1	182.8	169.2	170.0	177.2	176.4
25°	301.7	281.7	241.0	222.7	209.1	182.8	167.6	158.8	157.2	170.8	170.0
27.5°	361.5	326.4	267.4	254.6	209.9	167.6	156.4	148.4	143.7	154.8	158.8
30°	442.1	414.2	311.2	267.4	205.1	157.2	139.7	134.9	132.5	147.6	149.2
32.5°	500.4	434.9	338.4	259.4	187.5	146.8	130.9	127.7	125.3	136.5	139.7
35°	529.9	468.5	361.5	253.8	171.6	134.9	126.1	119.7	119.7	131.7	133.3
37.5°	571.4	506.8	399.8	251.4	160.4	131.7	117.3	115.7	116.5	124.5	129.3
40°	637.7	575.4	426.2	247.4	149.2	123.7	112.5	112.5	112.5	119.7	122.9
42.5°	719.9	667.2	465.3	235.4	141.3	117.3	111.7	107.7	110.1	116.5	120.5
45°	827.6	741.4	463.7	215.5	129.3	118.1	109.3	106.9	110.9	115.7	121.3
47.5°	958.5	820.4	457.3	195.5	122.9	120.5	107.7	107.7	111.7	117.3	122.1
50°	1133.3	917.0	433.4	174.0	118.9	116.5	110.9	110.1	114.1	120.5	126.1
52.5°	1331.2	1043.1	413.4	155.6	116.5	116.5	116.5	114.1	117.3	122.9	128.5
55°	1566.6	1189.9	403.0	146.0	114.9	117.3	120.5	120.5	122.9	126.9	132.5
57.5°	1754.2	1280.1	378.3	141.3	113.3	118.1	123.7	122.1	122.9	129.3	134.9
60°	1834.0	1298.5	333.6	134.1	111.7	117.3	122.1	120.5	120.5	129.3	137.3
62.5°	1744.6	1185.1	285.7	118.9	106.9	112.5	118.9	116.5	118.1	130.9	138.9
65°	1489.2	943.3	233.8	108.5	101.4	107.7	116.5	115.7	119.7	138.9	146.0
67.5°	1162.8	691.1	178.0	99.0	96.6	104.5	119.7	122.1	122.9	144.5	152.4
70°	851.5	434.1	136.5	87.8	91.0	105.3	118.9	118.1	120.5	138.9	144.5
72.5°	510.8	251.4	103.0	79.8	83.8	97.4	114.9	115.7	116.5	126.1	131.7
75°	259.4	139.7	79.8	72.6	75.0	87.8	106.9	107.7	106.1	109.3	114.9
77.5°	120.5	75.8	62.2	65.4	66.2	75.8	94.2	95.0	92.6	92.6	97.4
80°	63.0	51.1	53.5	55.1	55.1	61.5	77.4	79.8	74.2	72.6	75.8
82.5°	39.1	35.1	43.9	43.9	42.3	44.7	57.5	58.3	54.3	48.7	49.5
85°	19.2	22.3	31.1	31.1	26.3	24.7	36.7	35.1	32.7	28.7	28.7
87.5°	5.6	9.6	10.4	11.2	6.4	3.2	6.4	5.6	6.4	5.6	3.2
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)