

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: P596070

Luminaire Tested: **MSA-SA2A-AMB-U-T2**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596070  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-AMB-U-T2  
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE II OPTICS.  
Light Source: (32) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1687 lumens  
Efficiency: N/A  
Efficacy: 40.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

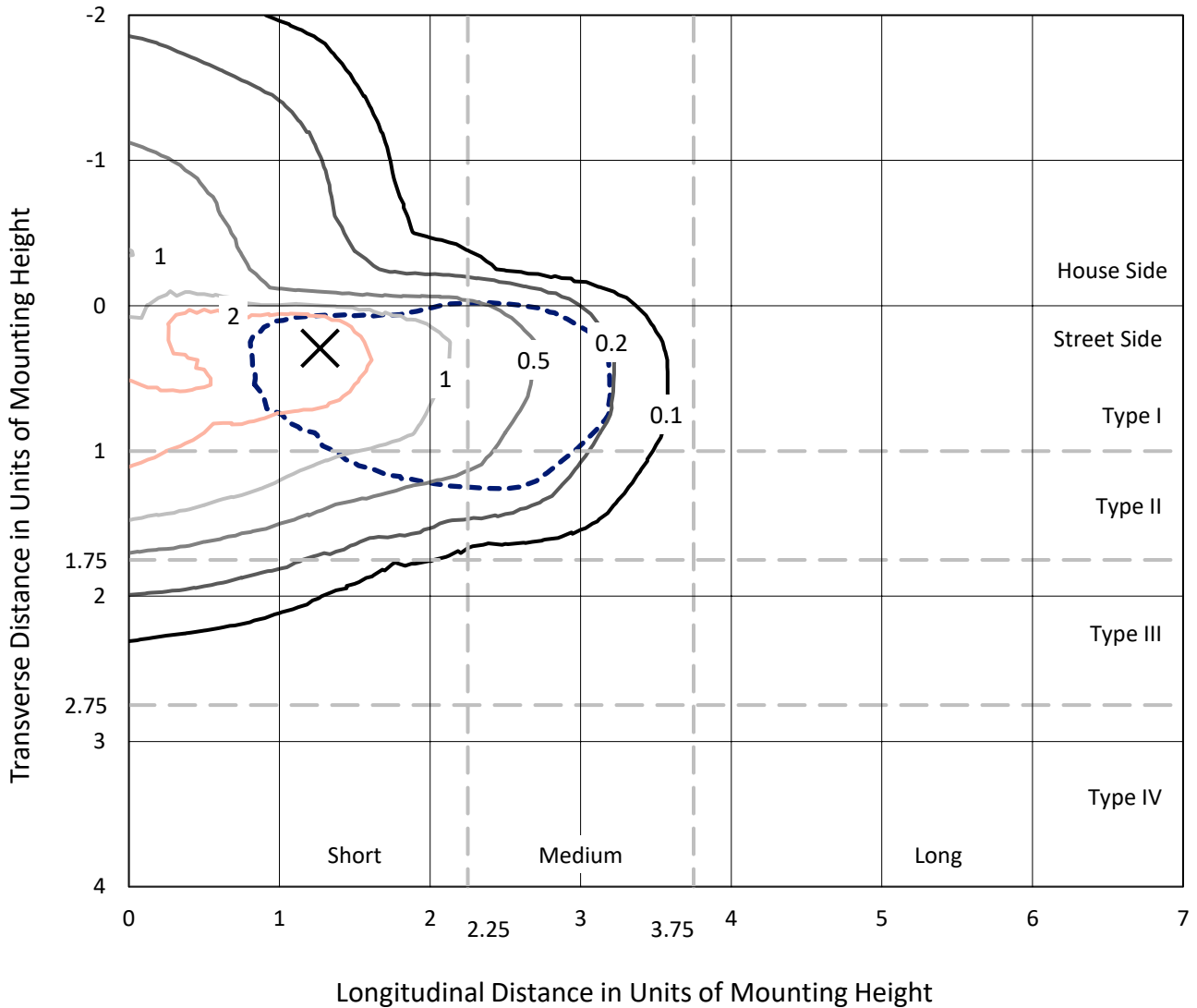
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

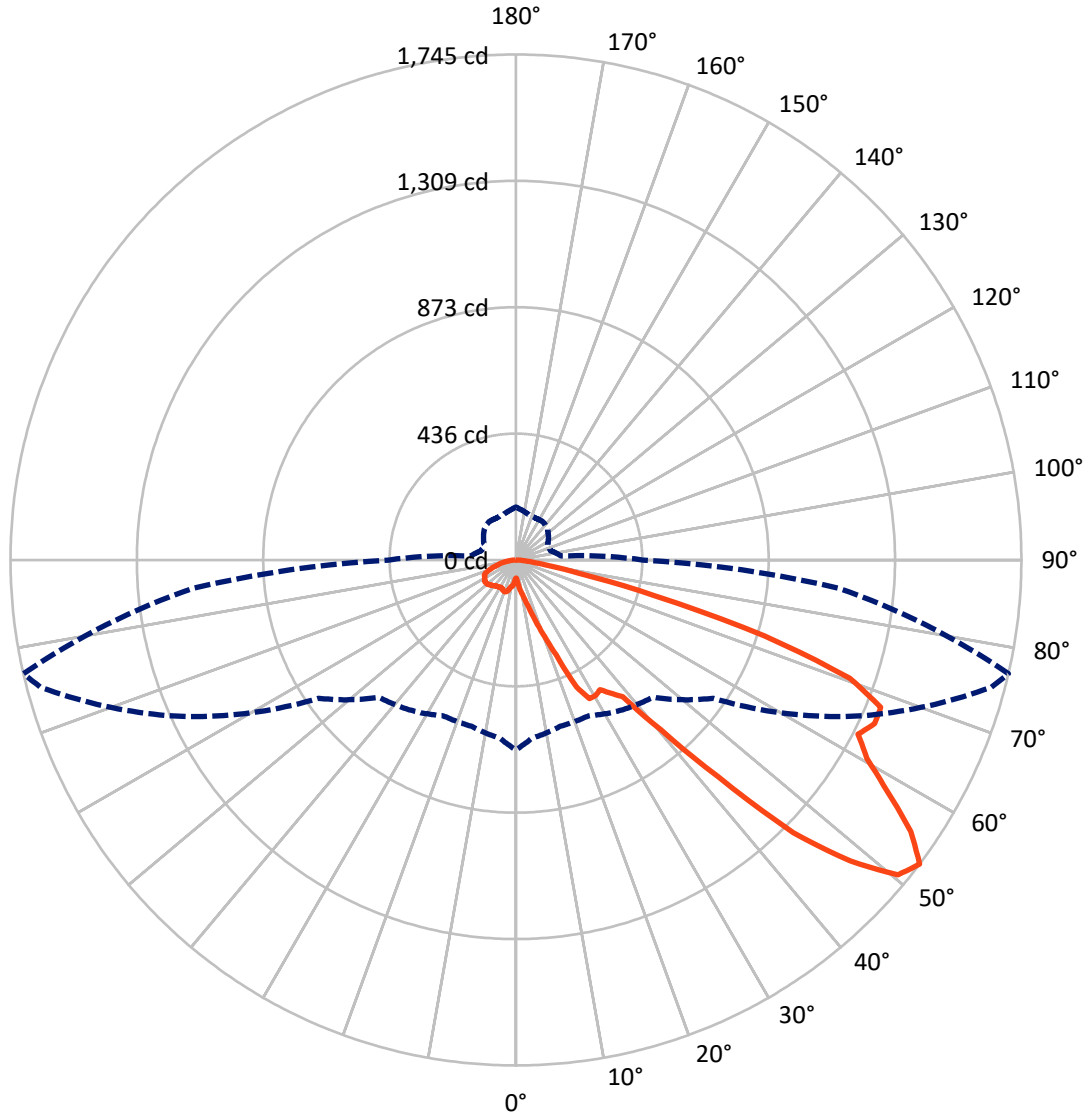
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral      - - - Horizontal Cone Through 52.5-Deg Vertical

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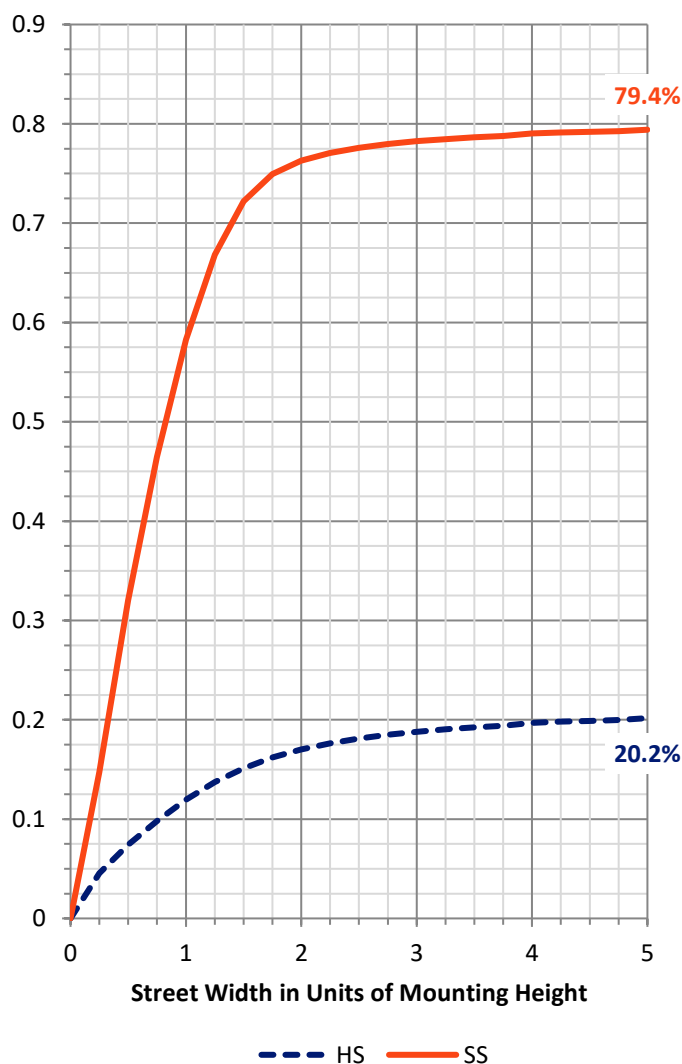
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	344.8	0.0	344.8
	% Fixture	20.4	0.0	20.4
<b>Street Side</b>	Lumens	1342.2	0.0	1342.2
	% Fixture	79.6	0.0	79.6
<b>Total</b>	Lumens	1687.0	0.0	1687.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	8.2	0.5
10°-20°	41.0	2.4
20°-30°	97.8	5.8
30°-40°	175.8	10.4
40°-50°	341.5	20.2
50°-60°	447.8	26.5
60°-70°	382.5	22.7
70°-80°	165.8	9.8
80°-90°	26.6	1.6
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°	1687.0	100.0
0°-180°	1687.0	100.0

**Coefficient of Utilization**

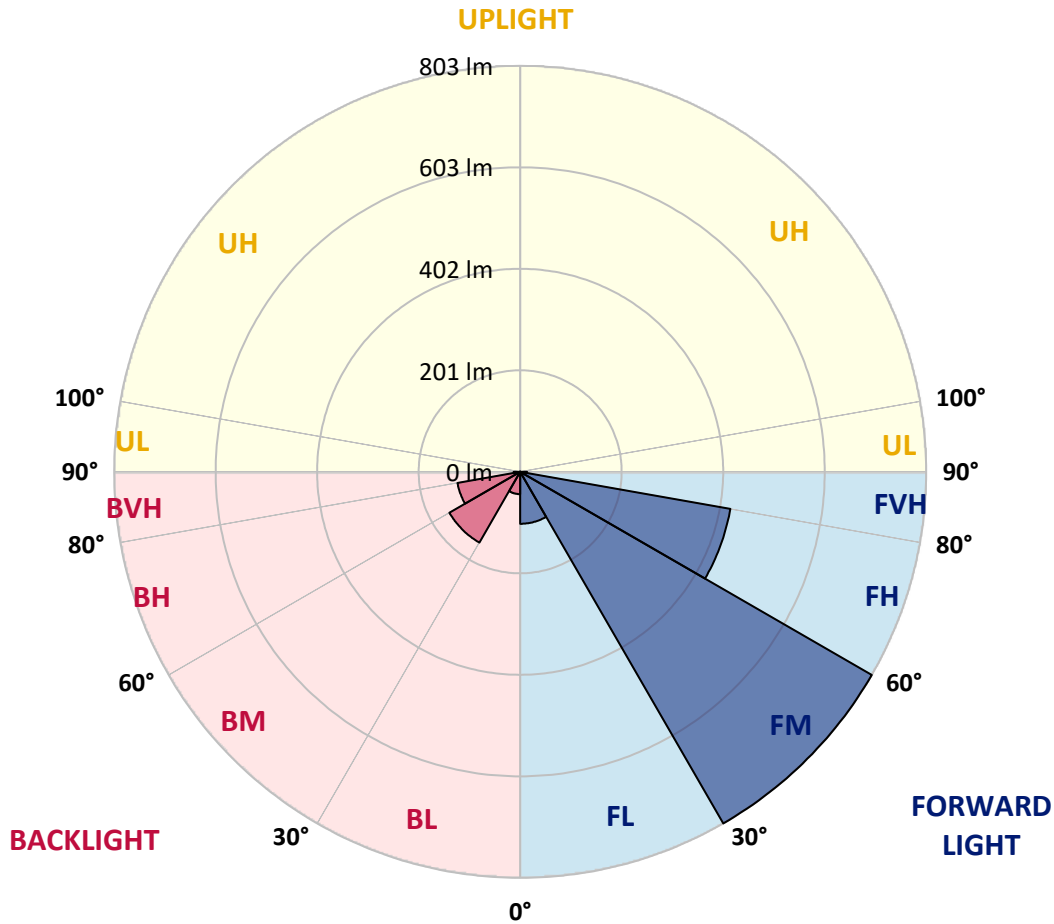


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	102.9	6.1			
FM (30°-60°)	803.4	47.6			
FH (60°-80°)	422.3	25.0			G0/660
FVH (80°-90°)	13.6	0.8			G1/100
BL (0°-30°)	44.2	2.6	B0/110		
BM (30°-60°)	161.7	9.6	B0/220		
BH (60°-80°)	126.0	7.5	B1/500		G1/500
BVH (80°-90°)	13.0	0.8			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9
2.5°	80.8	69.6	69.0	66.7	66.1	67.8	66.7	64.3	68.4	67.3	70.2
5°	110.9	96.8	95.0	83.8	72.6	70.8	70.2	76.7	88.5	87.3	89.7
7.5°	129.8	121.5	120.9	108.0	93.2	89.1	91.4	100.3	103.8	103.8	102.1
10°	139.8	136.9	129.8	120.9	121.5	123.3	123.3	119.8	122.1	119.8	113.9
12.5°	143.4	141.0	151.0	146.3	156.9	166.4	164.0	161.1	146.3	141.6	126.3
15°	159.9	162.2	161.7	168.1	181.7	197.6	205.3	202.4	183.5	174.6	148.7
17.5°	181.1	178.8	177.6	185.3	198.2	220.1	243.1	251.9	230.7	221.8	181.1
20°	200.6	200.0	195.3	190.0	207.1	230.7	277.9	304.4	295.6	282.6	217.1
22.5°	230.1	227.7	209.4	202.4	211.2	234.8	302.1	391.8	372.3	355.8	259.0
25°	256.6	254.9	237.2	224.2	221.2	243.7	331.0	498.5	513.3	486.2	316.2
27.5°	285.6	287.9	257.2	252.5	242.5	249.6	356.9	609.5	592.9	541.6	341.0
30°	332.8	324.5	293.8	285.0	270.8	271.4	358.1	583.5	575.8	542.8	336.9
32.5°	392.9	393.5	347.5	319.2	306.2	305.0	363.4	542.8	578.8	533.4	351.0
35°	467.9	464.9	417.7	382.9	344.6	335.7	398.8	555.8	594.1	564.6	356.4
37.5°	578.8	564.6	499.7	456.7	420.7	413.6	449.6	589.4	636.6	599.4	395.9
40°	642.5	615.4	560.5	511.5	479.1	492.6	519.8	659.6	788.2	769.9	464.3
42.5°	659.6	638.4	588.8	561.1	536.9	558.1	622.4	830.1	1040.7	1021.9	581.7
45°	660.8	628.9	588.8	581.1	561.1	646.6	736.3	1001.8	1312.1	1343.4	749.9
47.5°	660.2	627.2	587.0	586.4	572.9	699.7	805.9	1168.2	1554.6	1553.4	899.7
50°	678.5	637.8	602.4	589.4	607.1	682.6	828.9	1244.3	1689.7	1709.2	1046.6
52.5°	656.1	618.3	594.1	593.5	633.1	669.6	831.9	1277.9	1698.6	1745.2	1118.0
55°	605.3	568.2	562.3	575.2	648.4	677.3	816.5	1275.0	1593.0	1654.3	1099.2
57.5°	498.5	472.6	495.6	522.7	606.5	689.1	818.3	1216.0	1466.7	1513.3	1087.9
60°	349.3	331.0	349.3	393.5	515.1	631.3	840.7	1197.1	1326.3	1392.4	1100.9
62.5°	240.1	230.7	244.3	269.0	360.5	531.0	823.0	1228.9	1283.8	1325.7	1180.0
65°	179.9	171.1	175.8	193.5	230.1	364.0	739.3	1243.7	1306.2	1361.1	1323.3
67.5°	146.3	139.8	142.8	154.0	165.8	217.1	542.8	1190.0	1316.3	1358.7	1347.5
70°	122.1	115.6	119.2	127.4	135.7	132.7	306.8	967.0	1172.3	1221.9	1191.8
72.5°	102.1	96.2	99.1	103.8	115.6	97.9	156.3	640.7	859.0	898.0	827.2
75°	85.5	79.6	80.8	85.5	94.4	80.8	92.0	332.8	476.7	496.8	417.7
77.5°	67.3	65.5	64.9	69.6	76.1	65.5	67.8	145.7	207.1	221.2	175.8
80°	50.1	49.0	50.1	51.9	56.6	51.3	50.1	80.8	102.7	98.5	69.6
82.5°	31.9	31.3	37.2	37.8	40.7	35.4	35.4	50.7	54.9	51.3	40.1
85°	18.3	17.7	24.2	23.0	23.6	20.1	19.5	25.4	27.7	26.0	20.1
87.5°	2.9	3.5	4.7	6.5	7.1	5.3	7.7	7.7	9.4	8.3	7.1
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°	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9
2.5°	71.4	66.7	66.7	61.9	58.4	57.8	57.8	59.0	63.7	64.9	66.1
5°	90.9	84.4	79.6	70.2	60.2	56.6	60.2	68.4	75.5	78.5	80.2
7.5°	105.0	96.8	88.5	73.2	64.9	63.7	69.0	73.7	82.0	86.7	89.7
10°	108.6	101.5	90.3	77.9	79.1	80.8	80.2	81.4	87.9	89.7	90.3
12.5°	119.2	109.1	96.8	89.7	92.6	93.8	93.2	93.8	96.2	98.5	99.1
15°	133.9	121.5	105.6	98.5	99.1	100.3	102.1	103.2	106.8	107.4	106.8
17.5°	152.8	136.3	109.1	103.2	103.2	107.4	108.6	110.3	114.5	118.0	115.0
20°	174.6	142.2	110.3	102.1	103.8	106.8	108.6	110.3	116.2	123.3	123.9
22.5°	188.2	144.0	108.0	99.1	100.3	103.8	108.0	109.7	115.6	123.9	123.9
25°	199.4	139.8	104.4	98.5	98.5	99.7	103.8	107.4	110.9	120.9	120.9
27.5°	209.4	135.1	100.9	98.5	97.9	97.3	102.7	105.0	106.8	115.0	116.8
30°	210.6	136.9	100.9	99.1	97.9	96.8	99.7	102.1	105.6	115.0	116.2
32.5°	214.8	133.3	104.4	99.7	98.5	98.5	100.3	104.4	109.7	118.0	119.8
35°	208.9	131.0	106.8	102.1	101.5	101.5	105.6	108.6	117.4	128.0	129.8
37.5°	211.8	129.2	109.1	105.6	105.0	109.1	109.1	115.6	128.6	139.8	146.3
40°	230.1	130.4	111.5	109.7	110.3	113.9	115.6	123.9	138.1	152.8	156.3
42.5°	249.6	133.9	115.0	113.3	118.6	120.4	126.8	132.7	145.1	154.6	159.3
45°	287.9	136.9	117.4	116.8	122.7	134.5	135.7	141.0	149.3	155.8	161.7
47.5°	344.6	141.0	120.9	119.2	129.2	144.0	141.0	145.1	152.8	161.7	167.6
50°	391.8	149.9	123.3	120.4	134.5	148.7	152.2	152.8	158.7	168.1	175.8
52.5°	437.8	155.8	123.9	120.4	136.9	153.4	161.7	159.3	163.4	175.2	182.9
55°	485.6	161.1	123.3	118.0	135.1	157.5	165.8	163.4	168.1	181.7	189.4
57.5°	520.4	163.4	120.4	115.6	133.9	154.6	163.4	161.1	168.1	182.9	191.7
60°	582.3	168.7	113.9	111.5	131.0	148.7	160.5	157.5	164.0	181.7	190.6
62.5°	710.9	187.0	105.6	105.6	123.3	142.2	154.6	149.9	156.9	176.4	185.8
65°	865.5	213.6	97.9	100.3	116.8	132.2	148.1	141.6	148.7	169.9	179.4
67.5°	880.9	199.4	90.9	93.8	106.8	122.1	139.8	133.3	138.1	158.7	167.6
70°	776.4	162.8	82.0	86.1	97.3	110.9	126.8	122.1	125.7	144.5	153.4
72.5°	539.3	119.2	73.7	77.9	87.9	97.9	113.9	110.3	112.1	129.2	135.7
75°	263.7	77.9	64.3	69.0	76.1	85.5	100.3	96.8	96.8	109.7	118.0
77.5°	110.9	58.4	54.9	59.6	64.3	72.0	85.0	83.2	80.8	89.7	93.2
80°	54.3	42.5	43.1	48.4	50.7	56.6	68.4	65.5	63.7	68.4	70.2
82.5°	33.6	28.3	30.7	33.6	35.4	41.9	52.5	48.4	44.8	43.7	43.1
85°	16.5	15.9	18.9	20.1	18.3	21.2	31.9	26.5	24.2	21.8	21.8
87.5°	4.1	5.3	6.5	6.5	5.3	2.9	5.9	4.7	4.7	4.1	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

(END OF REPORT)