

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: P596046

Luminaire Tested: **MSA-SA1A-AMB-U-T2-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596046
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-AMB-U-T2-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 653 lumens
Efficiency: N/A
Efficacy: 31.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B0 - U0 - G0

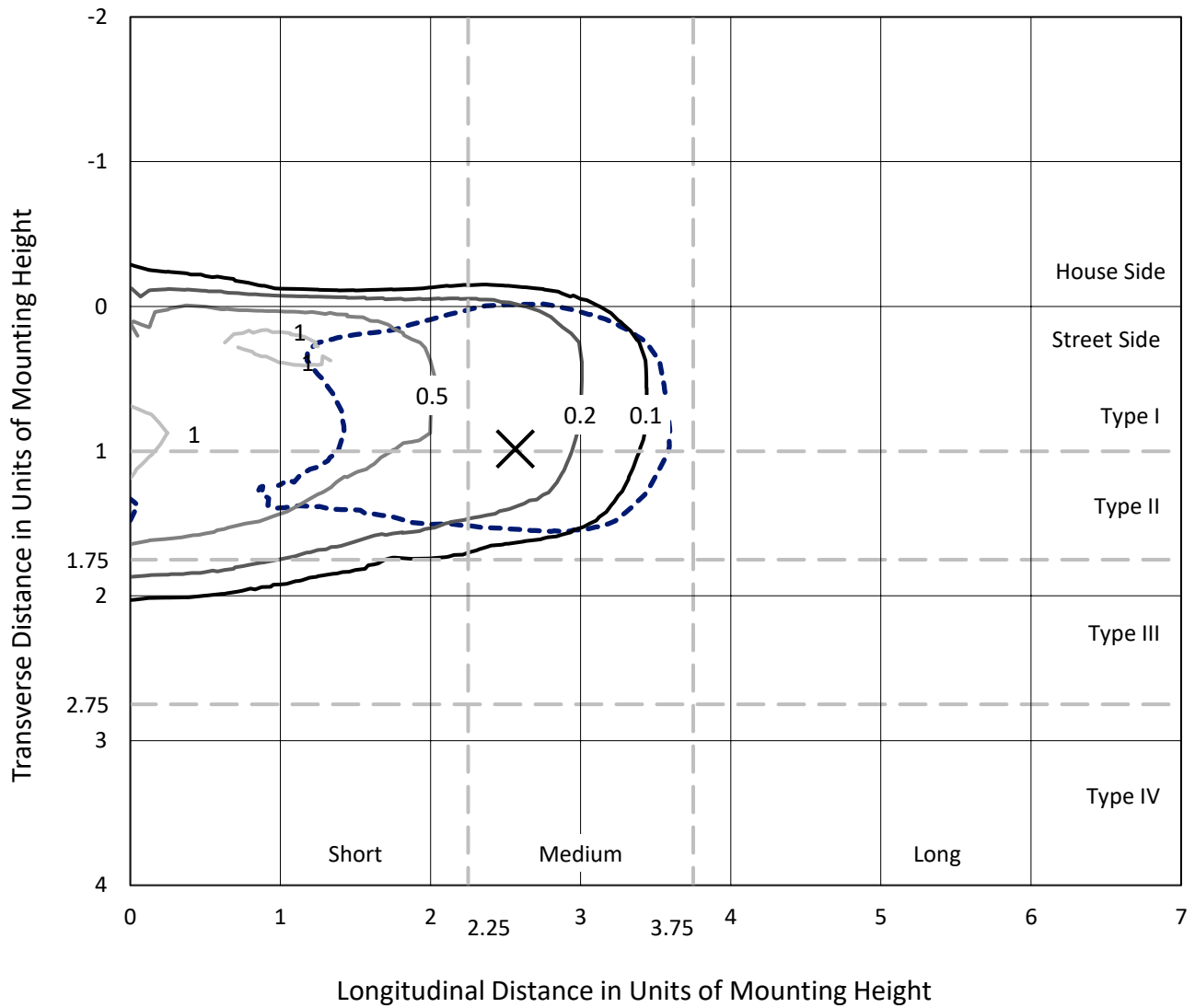
Input Watts (W): 20.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

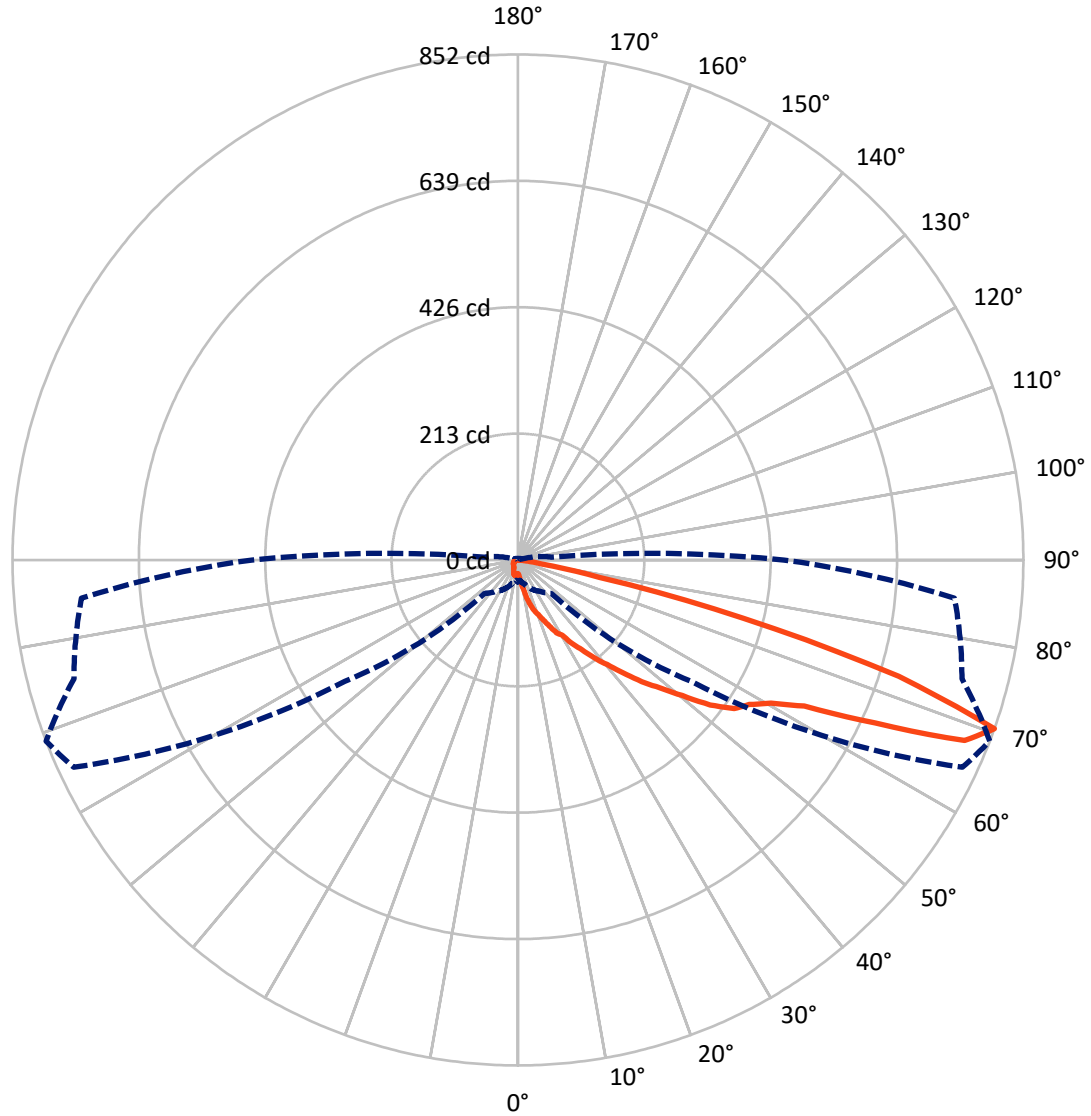
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.2 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 69-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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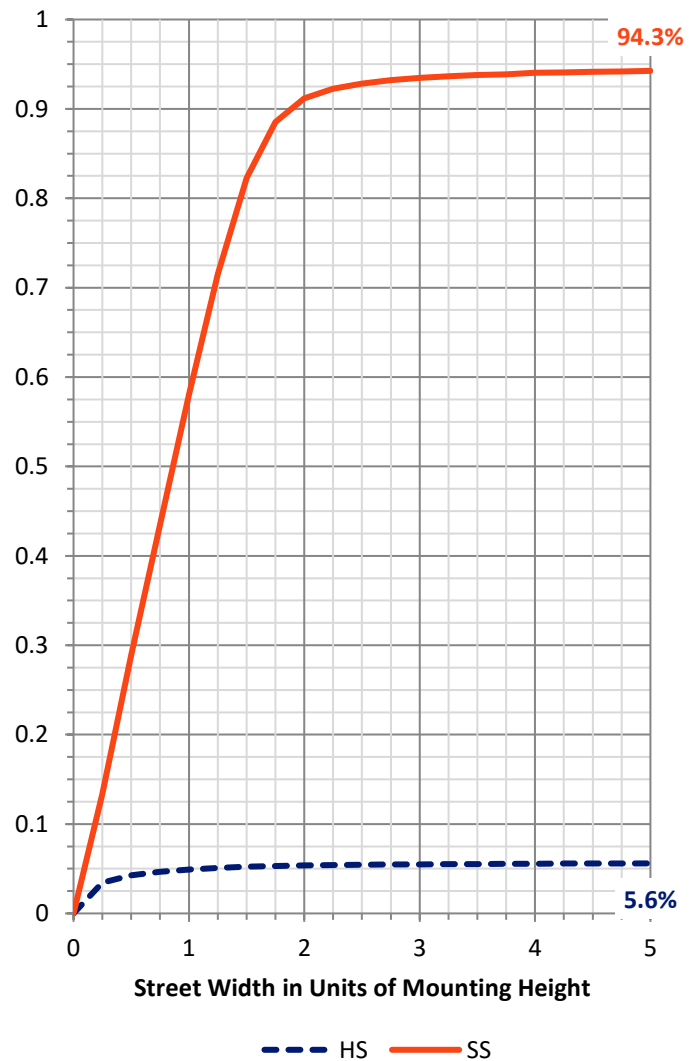
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	37.1	0.0	37.1
	% Fixture	5.7	0.0	5.7
Street Side	Lumens	616.0	0.0	616.0
	% Fixture	94.3	0.0	94.3
Total	Lumens	653.0	0.0	653.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.9	0.5
10°-20°	12.6	1.9
20°-30°	26.0	4.0
30°-40°	52.3	8.0
40°-50°	103.6	15.9
50°-60°	176.3	27.0
60°-70°	190.2	29.1
70°-80°	84.9	13.0
80°-90°	4.2	0.6
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°	653.0	100.0
0°-180°	653.0	100.0

Coefficient of Utilization



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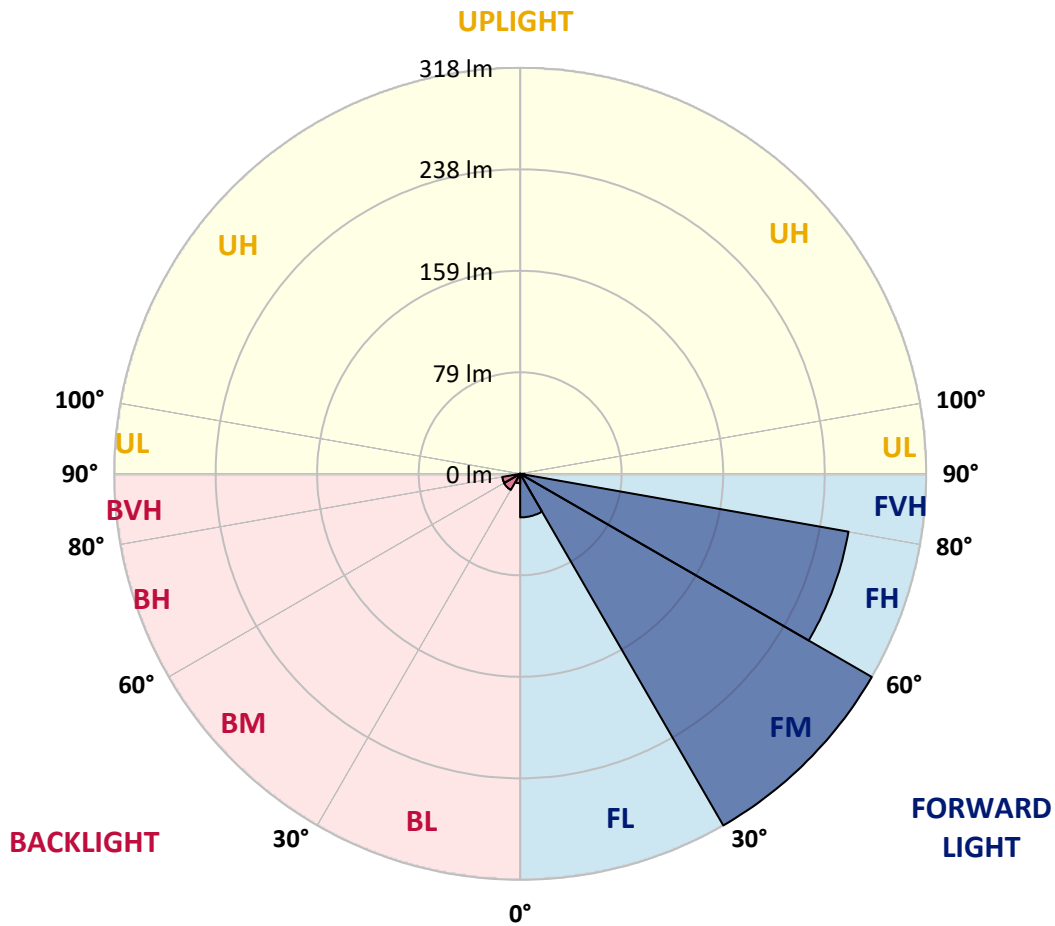
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	34.1	5.2			
FM (30°-60°)	317.7	48.6			
FH (60°-80°)	260.8	39.9			G0/660
FVH (80°-90°)	3.4	0.5			G0/10
BL (0°-30°)	7.4	1.1	B0/110		
BM (30°-60°)	14.6	2.2	B0/220		
BH (60°-80°)	14.3	2.2	B0/110		G0/110
BVH (80°-90°)	0.9	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-G0

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	69°	75°	85°
0°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
2.5°	32.7	29.1	27.9	26.4	26.1	27.0	25.8	24.6	24.9	24.9	27.0
5°	45.6	39.0	38.4	34.8	29.7	28.5	27.9	30.0	30.3	35.1	34.5
7.5°	54.6	50.4	51.3	44.7	38.1	34.8	37.8	41.1	41.1	42.3	39.9
10°	55.8	54.3	53.1	49.5	50.1	50.7	50.1	49.5	48.9	51.0	45.3
12.5°	53.7	53.7	58.2	57.9	63.0	67.8	66.0	64.8	64.8	60.6	51.6
15°	57.0	57.0	59.7	63.3	69.3	78.3	80.1	77.7	78.0	75.3	60.3
17.5°	60.6	61.2	62.1	66.6	74.4	85.5	91.5	90.9	90.0	88.8	71.1
20°	64.8	65.4	63.6	63.6	75.0	87.0	99.0	99.6	98.1	99.3	79.5
22.5°	78.6	76.5	69.6	66.0	70.8	84.3	102.0	108.0	110.1	108.0	89.7
25°	91.8	91.5	83.7	77.7	73.5	84.0	105.0	123.3	123.0	124.8	94.8
27.5°	109.2	109.5	96.6	94.8	84.3	82.2	106.5	136.5	139.2	130.5	104.7
30°	128.7	127.8	112.8	110.7	100.2	87.9	111.0	147.3	147.0	145.5	114.9
32.5°	153.0	151.5	131.1	125.4	116.7	105.9	109.5	154.2	168.0	167.4	126.0
35°	180.9	178.5	158.1	146.1	130.8	118.8	121.5	165.3	185.7	188.1	140.1
37.5°	224.7	215.1	190.8	169.5	154.8	144.0	139.8	183.9	209.7	220.5	160.2
40°	258.3	246.3	222.0	195.0	175.5	169.8	156.0	196.8	231.6	253.8	183.3
42.5°	287.7	278.7	251.4	228.6	201.3	187.8	177.6	219.6	259.5	289.8	208.5
45°	309.6	295.5	270.3	255.3	226.8	224.4	212.4	250.2	292.2	332.7	231.6
47.5°	336.3	317.7	295.5	276.9	251.4	263.4	241.5	280.8	321.6	386.7	263.4
50°	372.6	351.0	326.7	297.3	285.3	290.7	270.3	310.5	358.8	440.7	300.9
52.5°	425.7	399.9	374.7	348.9	325.5	306.9	297.0	346.8	405.9	485.1	336.9
55°	435.9	408.6	401.1	398.1	395.4	341.4	323.4	399.0	441.9	520.8	370.2
57.5°	403.5	377.4	384.6	399.9	434.4	408.6	358.8	436.8	459.6	550.7	399.0
60°	294.3	279.9	309.3	348.9	424.5	445.2	428.7	470.4	489.6	561.2	426.0
62.5°	151.5	144.0	177.9	229.5	344.4	444.3	521.7	529.5	541.7	578.9	485.7
65°	76.8	74.4	91.2	115.5	190.5	364.5	567.2	668.3	662.0	638.9	599.3
67.5°	52.2	49.8	59.1	74.1	94.5	199.5	534.6	840.8	811.7	724.4	718.4
70°	37.2	34.5	42.0	54.0	64.5	79.5	356.4	826.1	851.6	774.5	738.2
72.5°	23.1	21.9	29.4	39.6	50.4	39.6	146.1	629.0	670.7	674.9	588.8
75°	15.0	14.4	18.0	27.9	39.0	28.5	41.4	330.9	392.4	419.4	334.5
77.5°	11.1	10.5	12.6	18.9	25.5	20.4	21.9	128.7	139.8	167.1	119.4
80°	5.7	5.7	8.7	11.1	16.8	13.5	14.7	38.1	39.9	48.3	23.7
82.5°	3.0	3.0	4.8	8.1	10.2	8.4	7.5	15.6	16.2	16.5	8.4
85°	0.6	0.9	3.0	4.8	5.4	3.6	4.2	6.0	6.6	7.2	3.9
87.5°	0.3	0.6	1.2	1.5	1.5	1.2	2.1	2.4	2.4	2.4	2.1
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°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
2.5°	27.6	24.0	24.9	21.3	20.4	20.1	19.8	19.8	22.2	22.5	24.0
5°	36.0	31.5	29.1	24.9	20.4	18.0	18.6	20.7	22.2	22.8	23.7
7.5°	41.7	36.3	31.8	24.6	18.9	16.8	18.0	18.6	19.2	19.2	20.1
10°	42.6	37.5	30.0	22.5	19.8	18.0	15.9	14.7	15.0	15.0	15.3
12.5°	47.4	39.9	30.3	22.8	19.8	16.5	14.1	12.9	12.0	11.7	12.0
15°	51.3	42.9	30.0	22.2	17.7	14.1	11.7	11.1	11.4	11.4	11.4
17.5°	57.0	46.8	28.8	21.0	15.3	12.0	11.1	11.4	11.4	12.0	11.7
20°	61.8	46.8	27.0	18.0	12.6	10.8	10.8	10.5	10.8	10.8	10.8
22.5°	67.2	46.8	24.0	15.3	11.1	10.2	9.6	9.3	9.3	9.3	9.6
25°	67.8	43.8	21.9	13.5	10.5	9.3	8.7	8.1	8.1	8.4	8.4
27.5°	69.9	40.8	19.5	12.0	10.2	8.4	7.8	7.5	7.2	7.5	7.5
30°	69.9	39.3	18.0	11.4	9.6	7.8	7.2	6.9	6.6	6.9	6.9
32.5°	69.9	35.4	16.5	11.1	9.0	7.2	6.6	6.3	6.3	6.6	6.6
35°	69.9	32.7	15.3	10.5	8.4	6.9	6.3	6.0	6.0	6.3	6.3
37.5°	77.4	31.5	14.4	10.5	8.1	6.9	6.3	6.0	6.0	6.3	6.3
40°	81.0	31.8	13.2	9.9	7.8	6.9	6.3	6.0	5.7	6.0	6.0
42.5°	87.6	31.5	12.9	9.6	7.5	6.6	6.0	5.7	5.7	5.7	5.7
45°	99.0	31.5	12.6	9.3	7.5	6.6	6.0	5.7	5.4	5.4	5.7
47.5°	111.3	33.3	12.3	8.7	7.2	6.6	5.7	5.4	5.1	5.4	5.4
50°	127.8	34.5	12.0	8.4	7.2	6.6	5.7	5.1	5.1	5.1	5.1
52.5°	148.5	35.7	11.4	8.1	7.2	6.3	5.4	5.1	4.8	5.1	5.1
55°	171.0	36.6	11.1	7.8	7.2	6.0	5.4	4.8	4.8	4.8	4.8
57.5°	194.4	36.9	10.8	7.5	6.6	6.0	5.1	4.8	4.5	4.5	4.5
60°	223.5	37.2	9.9	7.2	6.3	5.4	4.8	4.5	4.2	4.2	3.9
62.5°	269.4	39.9	9.0	6.9	5.7	5.1	4.5	3.9	3.9	3.6	3.3
65°	355.2	45.0	7.8	6.3	5.4	4.5	3.9	3.6	3.3	3.0	2.7
67.5°	440.7	54.9	6.9	5.7	4.8	4.2	3.6	3.3	2.7	2.7	2.1
70°	448.2	56.4	6.0	5.1	4.2	3.9	3.3	3.0	2.7	2.4	2.1
72.5°	343.5	37.8	5.4	4.8	3.9	3.0	3.0	3.0	2.7	2.4	2.1
75°	180.6	17.1	4.8	4.2	3.3	2.7	3.0	2.7	2.4	2.1	1.5
77.5°	53.4	7.8	3.9	3.6	3.0	2.1	2.4	2.1	2.1	1.5	0.9
80°	10.5	4.2	3.0	3.0	2.4	1.2	1.8	2.1	1.8	1.5	0.9
82.5°	3.9	2.7	2.4	2.1	1.8	0.9	1.8	1.8	1.8	1.8	1.2
85°	1.8	1.8	2.1	1.8	1.5	0.6	1.5	1.8	1.8	1.8	1.2
87.5°	1.2	1.8	1.8	1.8	1.5	0.9	1.5	1.8	1.8	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)