

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: P596040

Luminaire Tested: **MSA-SA1A-AMB-U-SL4**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596040
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-SA1A-AMB-U-SL4
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: (16) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 850.1 lumens
Efficiency: N/A
Efficacy: 41.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

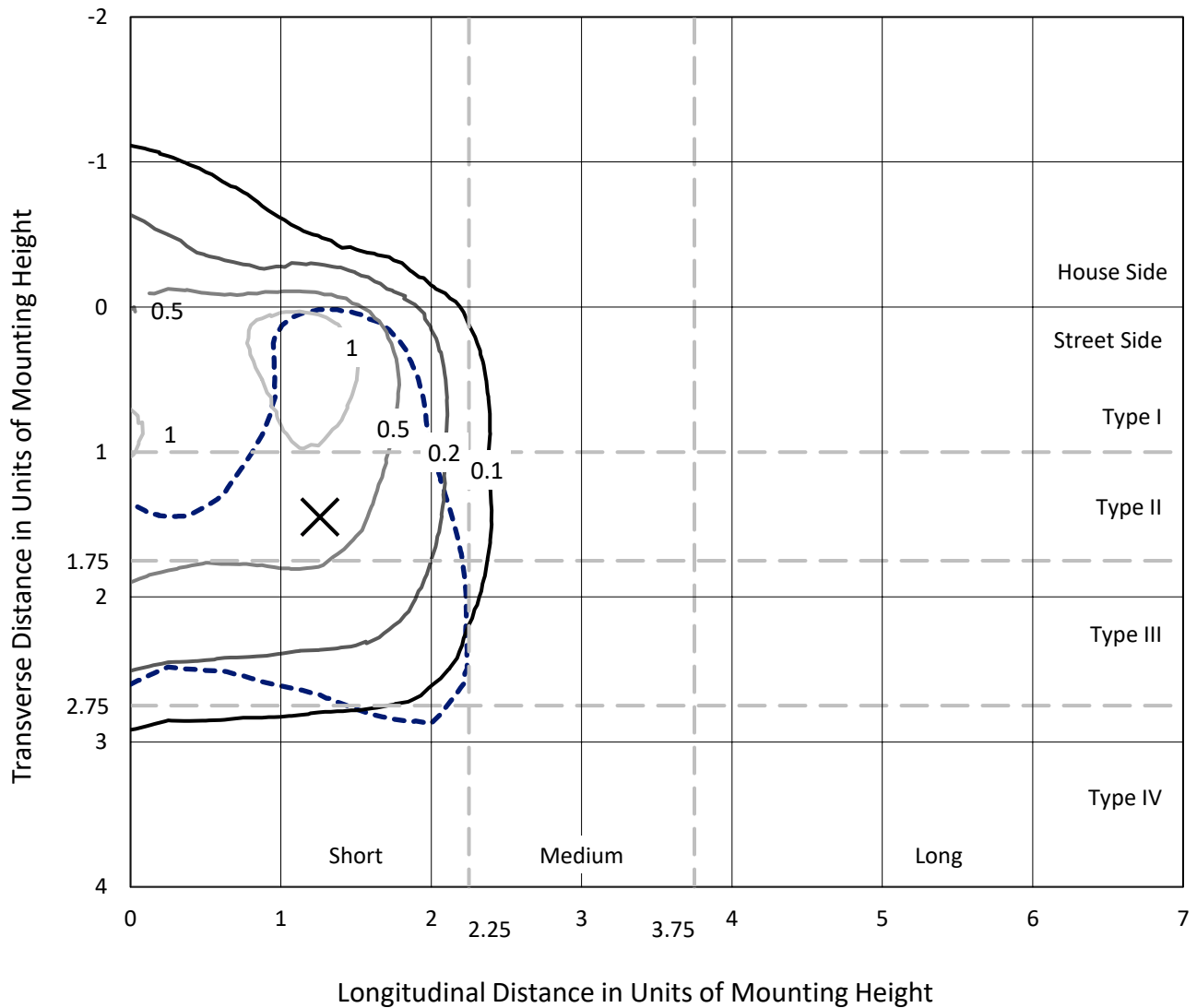
Input Watts (W): 20.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

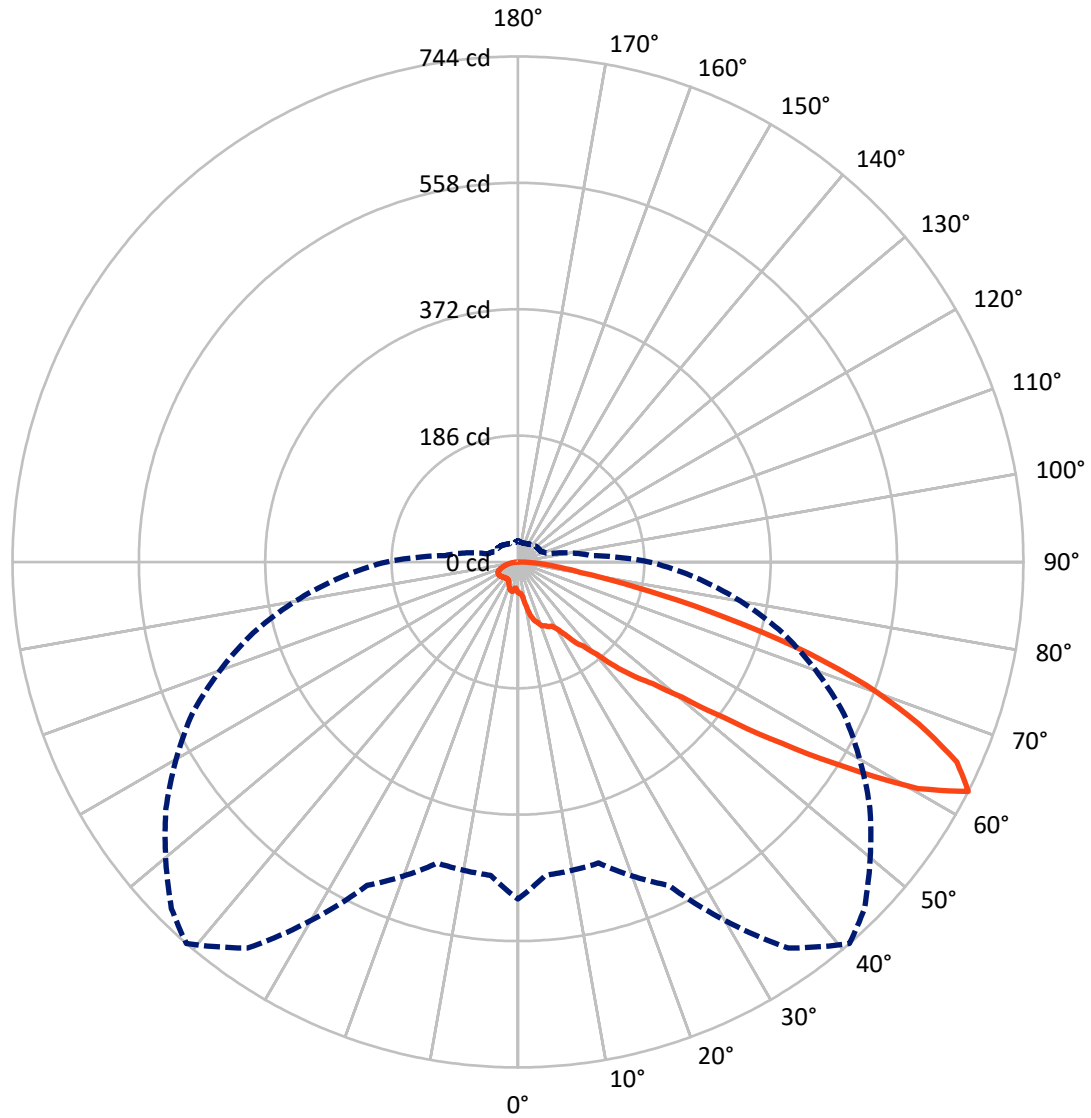
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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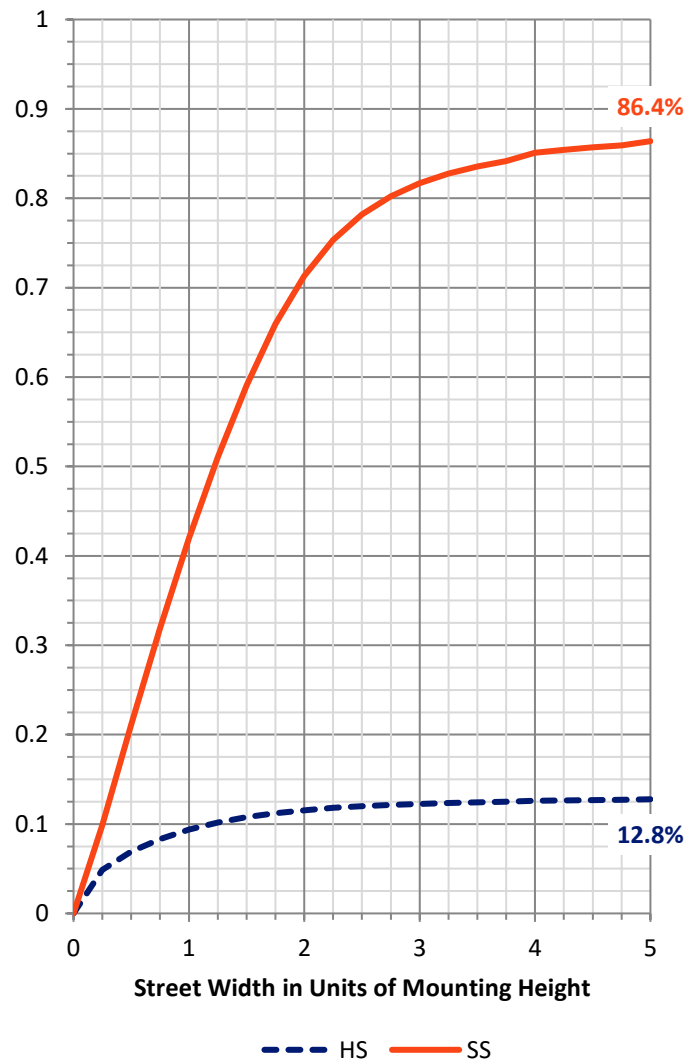
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	109.7	0.0	109.7
	% Fixture	12.9	0.0	12.9
Street Side	Lumens	740.3	0.0	740.3
	% Fixture	87.1	0.0	87.1
Total	Lumens	850.1	0.0	850.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	0.6
10°-20°	18.8	2.2
20°-30°	35.3	4.2
30°-40°	62.5	7.4
40°-50°	127.8	15.0
50°-60°	239.0	28.1
60°-70°	244.4	28.8
70°-80°	99.7	11.7
80°-90°	17.3	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°	850.1	100.0
0°-180°	850.1	100.0

Coefficient of Utilization



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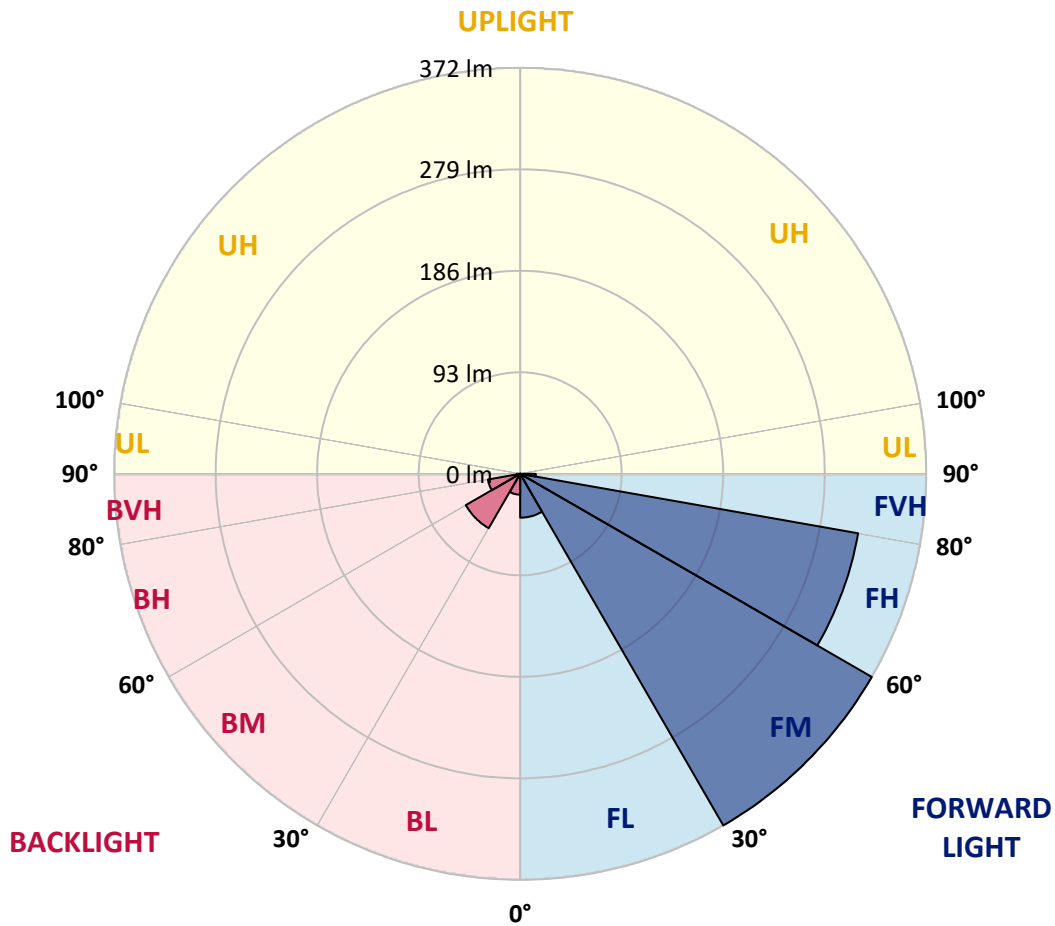
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	40.2	4.7			
FM (30°-60°)	371.8	43.7			
FH (60°-80°)	314.2	37.0			G0/660
FVH (80°-90°)	14.2	1.7			G1/100
BL (0°-30°)	19.1	2.2	B0/110		
BM (30°-60°)	57.5	6.8	B0/220		
BH (60°-80°)	30.0	3.5	B0/110		G0/110
BVH (80°-90°)	3.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
0°	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
2.5°	60.8	53.0	50.9	46.2	45.9	45.9	47.1	45.9	45.3	47.1	52.4
5°	71.6	63.5	62.9	56.6	48.8	46.8	46.5	47.7	53.3	63.2	61.7
7.5°	77.0	73.7	72.8	65.0	54.5	52.1	51.5	57.8	63.5	68.6	68.9
10°	77.0	75.2	72.2	65.3	64.7	65.6	66.8	64.7	68.0	72.2	70.4
12.5°	73.7	73.7	78.8	76.1	78.5	80.0	80.9	77.9	78.2	76.4	75.2
15°	80.0	81.2	81.8	83.9	86.3	89.0	89.0	86.9	86.0	84.5	80.3
17.5°	88.4	89.9	88.7	92.6	95.3	93.5	94.4	92.3	89.3	93.5	88.4
20°	96.8	98.3	97.1	94.7	100.7	100.1	98.3	96.2	92.3	98.6	95.3
22.5°	108.5	105.5	101.6	100.7	102.8	101.9	100.7	96.2	95.6	101.3	103.7
25°	116.0	115.7	109.4	107.3	107.0	105.5	104.0	101.3	103.7	111.2	107.6
27.5°	127.1	127.4	115.1	120.8	113.9	106.7	106.1	105.2	112.1	114.5	113.9
30°	140.6	140.9	127.4	127.1	122.0	115.1	110.9	114.8	121.4	122.6	123.5
32.5°	160.6	160.0	142.1	136.4	131.6	127.1	124.4	116.9	128.9	137.6	135.5
35°	177.7	175.6	159.7	150.1	141.8	145.6	135.8	136.1	145.3	160.3	150.1
37.5°	207.7	203.5	180.1	164.5	163.9	157.9	157.6	161.2	172.9	190.0	183.4
40°	235.9	224.2	196.0	184.3	176.5	178.9	186.1	180.7	202.3	239.2	230.2
42.5°	266.1	250.8	213.7	204.1	201.1	210.4	198.1	203.5	245.4	302.4	277.8
45°	290.7	270.6	224.2	224.5	227.8	240.1	233.8	245.1	311.4	388.7	342.2
47.5°	309.6	289.2	243.0	239.8	246.9	267.6	280.5	306.0	391.4	480.4	411.5
50°	325.2	309.6	263.4	261.0	288.9	312.9	336.3	371.6	484.6	578.1	475.0
52.5°	346.7	330.9	297.9	303.0	349.4	381.8	399.2	479.8	576.6	668.3	509.8
55°	389.9	362.6	344.3	357.2	430.7	471.4	495.4	578.7	667.4	692.6	496.6
57.5°	432.8	401.3	389.6	419.9	506.5	571.2	608.7	667.4	685.1	657.8	438.4
60°	482.2	448.9	440.2	492.7	607.5	677.3	684.8	669.8	645.5	558.0	359.0
62.5°	496.3	463.0	458.8	525.1	693.8	744.1	721.4	632.6	529.5	403.4	261.9
65°	478.3	444.1	455.8	531.6	709.1	710.0	698.3	543.6	381.8	279.6	187.0
67.5°	425.3	386.6	410.6	498.4	644.0	636.8	614.1	432.2	270.9	199.3	132.5
70°	323.4	298.8	333.9	405.8	552.0	545.4	485.2	332.4	187.9	131.9	77.6
72.5°	250.2	228.4	252.3	319.8	443.2	427.1	359.6	233.8	118.1	70.7	41.7
75°	183.4	161.2	187.0	232.3	320.4	291.0	245.4	142.4	62.9	36.6	28.5
77.5°	119.3	103.7	122.9	144.2	206.2	175.3	135.5	85.7	38.4	24.6	22.5
80°	67.1	61.4	72.2	83.9	109.4	93.8	77.0	64.1	28.8	18.9	17.1
82.5°	41.7	40.2	48.5	53.6	60.8	56.3	52.1	56.3	21.6	12.6	11.4
85°	24.9	24.9	32.7	33.6	38.4	36.3	40.2	44.7	12.3	7.5	7.2
87.5°	6.3	6.6	9.6	10.2	10.2	10.2	11.1	16.8	3.3	2.4	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
2.5°	53.6	47.1	48.2	43.8	42.0	42.0	42.6	41.4	45.3	43.8	48.2
5°	66.5	58.7	56.0	48.0	41.1	37.5	39.3	45.0	48.8	48.8	53.0
7.5°	72.2	65.3	60.8	49.4	41.1	38.1	40.2	42.6	45.6	47.4	50.3
10°	70.1	65.6	59.6	49.7	47.7	45.3	40.8	37.8	39.0	38.7	39.9
12.5°	74.3	68.9	62.3	55.1	51.5	46.8	40.8	36.6	34.5	33.6	33.6
15°	75.8	72.8	65.0	56.9	50.9	44.7	39.0	34.5	32.1	30.6	30.3
17.5°	82.4	79.7	66.8	57.5	49.1	43.2	37.5	33.6	31.5	30.6	29.7
20°	89.6	83.6	65.9	53.9	46.8	40.2	35.1	32.1	31.2	31.8	32.1
22.5°	95.9	85.1	64.7	49.1	41.7	36.9	33.6	31.2	30.9	31.8	31.8
25°	99.2	87.8	62.3	46.2	37.8	33.0	31.2	30.6	30.6	32.1	31.8
27.5°	104.0	86.9	58.1	42.9	34.8	30.9	30.6	30.3	30.0	31.8	31.8
30°	106.4	91.4	55.1	39.6	32.7	29.7	29.4	30.0	30.3	32.4	32.4
32.5°	116.0	90.2	54.2	37.5	31.2	29.4	29.4	29.7	30.9	32.7	33.3
35°	124.4	95.3	52.4	35.7	30.6	29.1	29.7	29.7	31.2	33.6	34.2
37.5°	146.5	101.6	52.1	35.4	30.9	29.7	29.4	30.0	31.8	34.2	35.1
40°	173.8	113.0	51.5	35.7	31.2	30.3	29.7	30.3	31.8	34.2	35.4
42.5°	208.3	127.7	52.7	36.6	32.1	30.6	30.3	30.6	31.8	33.9	35.1
45°	250.2	141.8	53.9	36.9	32.7	31.8	30.6	30.9	31.5	33.3	34.5
47.5°	294.6	159.4	56.9	38.1	33.9	32.7	30.9	30.6	30.9	32.4	33.6
50°	334.8	177.1	58.4	39.6	35.4	33.3	31.5	30.6	30.3	31.5	33.0
52.5°	350.3	181.0	58.7	40.5	36.9	34.2	31.8	30.6	29.7	30.6	32.4
55°	334.8	170.8	57.5	40.8	37.5	34.8	32.4	30.9	29.4	30.3	31.8
57.5°	296.4	154.3	55.7	40.5	37.5	34.8	32.4	30.6	29.1	29.7	31.2
60°	248.1	133.1	51.5	39.3	37.5	34.8	32.4	30.3	28.8	29.4	30.9
62.5°	193.6	107.6	46.2	36.9	36.0	34.2	31.5	29.7	28.8	29.7	31.2
65°	148.0	80.9	39.6	33.9	33.9	32.4	30.6	28.5	27.9	28.5	29.7
67.5°	98.6	56.3	34.5	31.2	30.9	30.3	29.1	26.4	24.9	24.9	25.5
70°	58.7	38.4	29.4	27.6	27.6	27.0	26.4	23.7	21.9	21.6	21.9
72.5°	37.5	30.6	25.5	24.0	24.0	23.4	23.1	21.3	19.5	18.9	19.2
75°	29.1	26.4	22.2	20.7	20.7	20.4	20.1	18.3	17.1	16.5	16.2
77.5°	24.6	22.5	18.6	17.4	17.4	16.5	16.5	15.3	14.1	13.2	12.6
80°	18.6	18.3	14.7	13.8	14.4	12.9	13.2	12.3	10.8	9.3	8.7
82.5°	12.9	13.8	10.8	9.9	9.9	8.7	9.6	8.7	7.8	6.6	5.7
85°	8.7	9.3	6.9	5.7	5.1	3.9	5.1	5.1	4.5	3.6	3.0
87.5°	1.2	1.8	1.8	1.8	1.5	0.6	1.8	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)