

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: P596048

Luminaire Tested: **MSA-SA1A-AMB-U-T3-HSS**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596048  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-12)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-AMB-U-T3-HSS  
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (16) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 654 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 III - Short - Full Cutoff  
BUG Rating: B0 - U0 - G0

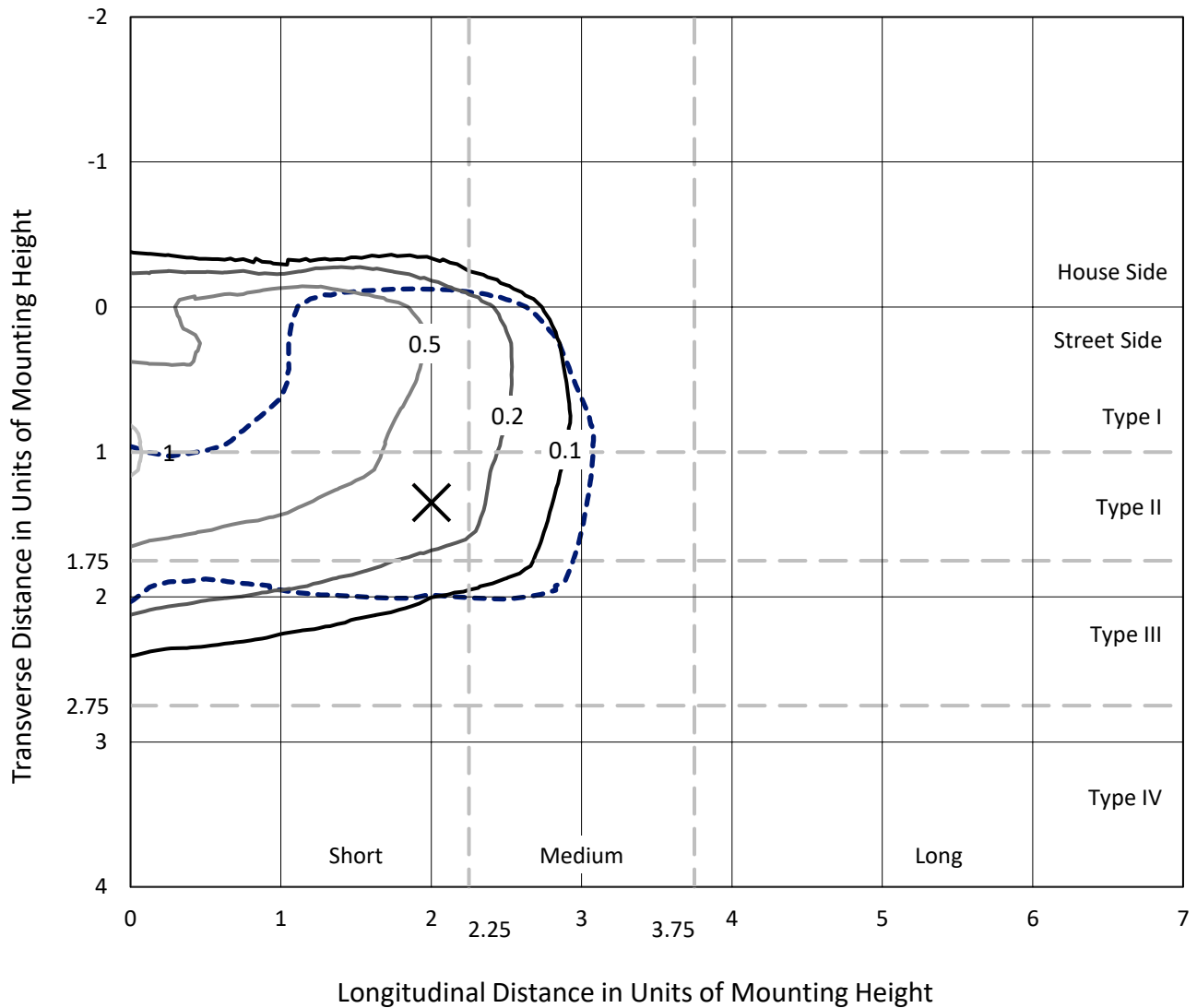
Input Watts (W): 20.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

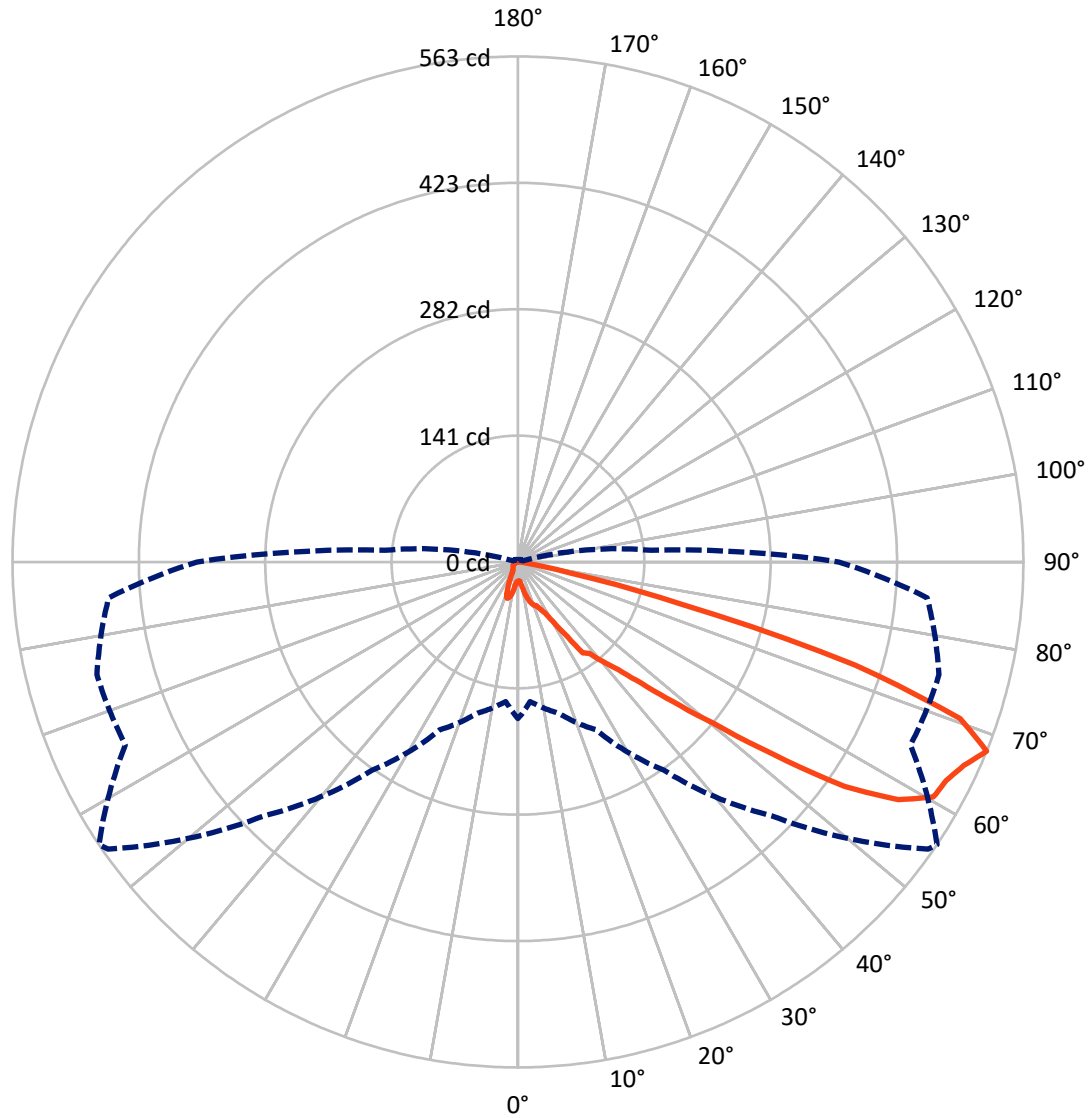
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 56-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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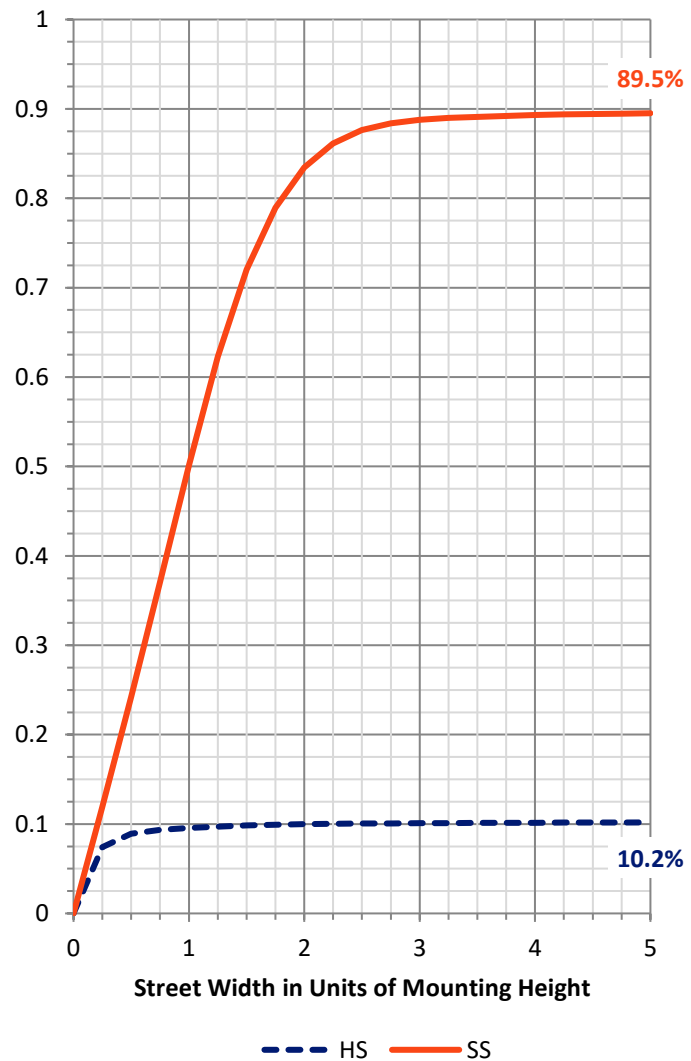
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	67.5	0.0	67.5
	% Fixture	10.3	0.0	10.3
<b>Street Side</b>	Lumens	586.6	0.0	586.6
	% Fixture	89.7	0.0	89.7
<b>Total</b>	Lumens	654.0	0.0	654.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.7	0.4
10°-20°	11.0	1.7
20°-30°	24.0	3.7
30°-40°	50.8	7.8
40°-50°	102.9	15.7
50°-60°	197.1	30.1
60°-70°	204.9	31.3
70°-80°	57.5	8.8
80°-90°	3.1	0.5
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°	654.0	100.0
0°-180°	654.0	100.0



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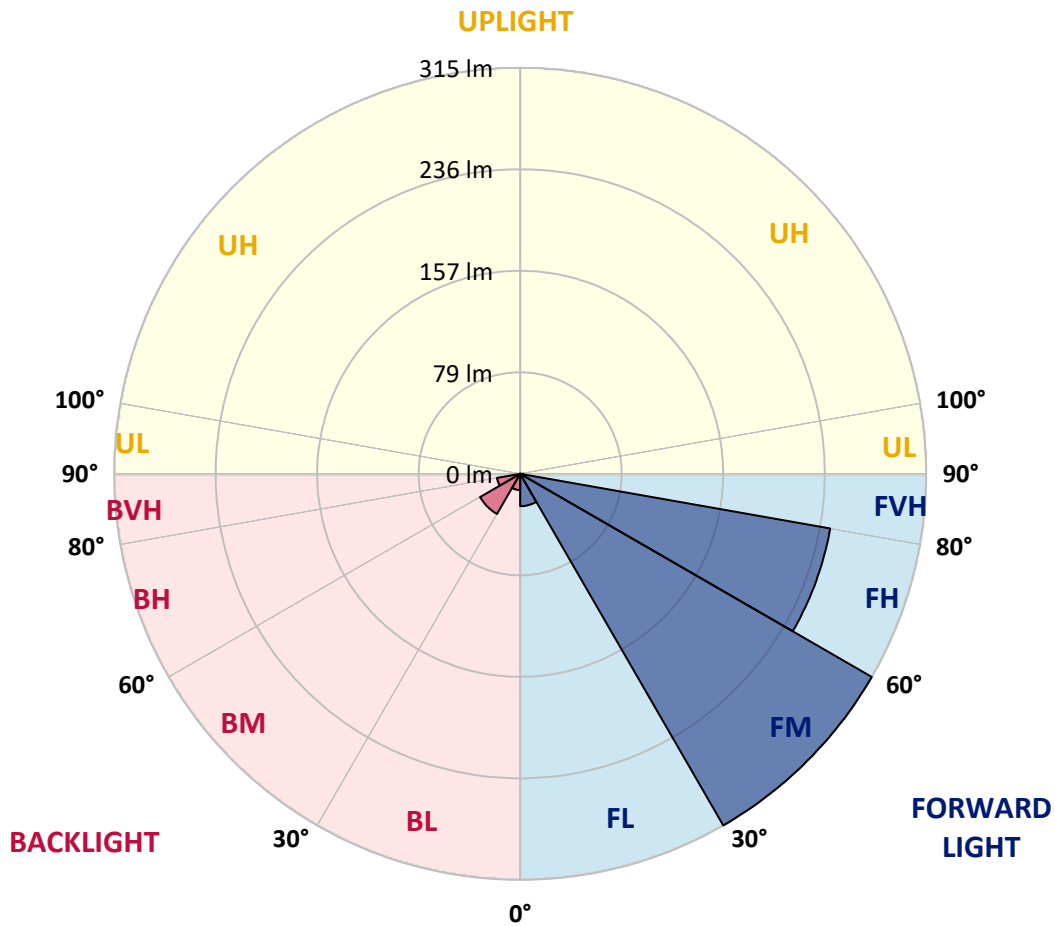
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	25.1	3.8			
FM (30°-60°)	314.9	48.1			
FH (60°-80°)	244.1	37.3			G0/660
FVH (80°-90°)	2.5	0.4			G0/10
BL (0°-30°)	12.6	1.9	B0/110		
BM (30°-60°)	35.9	5.5	B0/220		
BH (60°-80°)	18.3	2.8	B0/110		G0/110
BVH (80°-90°)	0.7	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	26.1	23.7	22.8	20.4	20.1	21.0	21.3	21.3	21.3	23.4	24.6
5°	28.2	25.5	25.5	23.1	19.8	19.8	21.3	21.6	24.9	29.1	30.9
7.5°	30.9	28.5	28.2	25.2	22.5	22.5	25.2	25.2	30.0	34.5	36.9
10°	31.5	30.3	29.1	26.7	27.3	29.1	29.7	29.4	32.7	38.7	41.4
12.5°	32.7	32.4	33.3	32.4	33.6	36.0	37.2	37.5	41.4	45.6	45.9
15°	35.7	36.0	36.0	36.9	37.8	40.8	42.9	43.5	48.0	53.0	53.3
17.5°	42.9	44.1	42.0	42.0	42.9	44.7	48.0	48.3	53.3	60.8	62.6
20°	55.1	55.1	51.5	47.1	47.4	48.0	51.2	51.5	56.3	66.5	68.9
22.5°	77.0	74.9	65.3	57.2	52.4	50.6	53.3	53.0	59.9	70.4	75.8
25°	96.5	95.3	85.1	72.8	61.7	56.9	57.2	58.4	67.1	78.2	81.2
27.5°	119.3	119.3	104.0	95.0	77.6	63.8	64.1	64.4	75.2	82.7	89.3
30°	136.4	133.1	117.8	114.2	99.8	81.8	77.0	77.3	83.3	95.3	101.6
32.5°	154.3	153.1	129.2	125.0	116.0	105.8	95.6	94.4	101.9	119.0	117.2
35°	172.3	168.7	152.8	142.1	125.9	119.9	124.1	124.4	136.4	141.5	125.3
37.5°	194.8	193.0	172.6	158.8	147.7	135.5	131.6	129.2	134.9	143.6	142.4
40°	226.3	216.4	193.3	178.6	163.3	160.0	144.8	145.7	143.0	161.8	167.8
42.5°	258.0	249.9	223.0	207.4	184.9	175.0	163.9	164.2	164.8	188.5	194.5
45°	295.5	280.2	250.8	241.6	214.0	203.2	198.1	192.1	195.7	225.4	232.6
47.5°	337.2	318.9	292.2	279.0	254.7	253.8	233.2	232.6	238.3	284.1	285.3
50°	375.8	353.9	329.1	306.0	303.0	316.8	289.2	282.9	291.0	352.7	353.6
52.5°	396.5	368.3	347.6	342.5	357.8	362.6	362.9	355.1	360.5	419.9	416.6
55°	397.1	371.6	354.2	362.9	403.4	418.1	439.9	441.7	440.2	478.9	469.3
57.5°	380.0	353.0	349.4	364.7	413.0	454.3	495.4	499.9	493.6	520.6	509.8
60°	336.6	312.0	318.6	348.2	411.5	453.1	526.6	532.0	512.2	543.6	544.2
62.5°	306.3	276.9	284.4	315.9	391.7	449.2	539.1	535.9	502.0	541.2	550.2
65°	254.1	229.9	235.0	276.9	357.5	436.1	546.3	546.3	478.0	517.0	526.6
67.5°	174.7	156.1	174.4	206.5	283.2	400.1	558.0	563.4	482.8	485.8	457.9
70°	84.8	76.4	92.6	120.5	186.4	302.7	518.2	522.7	437.0	410.9	325.8
72.5°	31.5	27.3	35.7	51.8	94.1	157.6	378.2	393.2	330.9	285.0	169.0
75°	14.1	13.8	16.2	20.7	36.3	45.0	172.6	188.5	173.8	135.5	56.6
77.5°	10.2	9.6	11.1	14.4	18.3	17.7	52.4	60.8	57.2	35.7	13.8
80°	7.2	6.9	7.8	10.2	12.3	10.8	17.4	18.9	21.0	14.4	7.2
82.5°	3.9	3.9	5.4	7.5	7.5	6.0	8.7	9.0	10.5	8.7	3.9
85°	1.2	1.5	3.3	4.8	3.9	3.0	4.2	4.5	4.8	5.4	2.4
87.5°	0.3	0.6	1.5	1.8	1.5	0.9	1.8	1.8	1.8	2.1	1.5
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°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	26.1	23.4	24.3	21.9	21.6	22.8	22.5	21.9	23.1	23.7	25.5
5°	33.9	30.3	29.7	27.3	23.7	21.9	22.5	26.4	29.4	30.0	32.7
7.5°	39.3	36.9	35.7	31.5	25.8	24.6	25.8	28.8	31.5	32.1	34.2
10°	42.3	40.5	39.0	33.9	33.3	31.8	28.8	27.9	30.0	30.6	31.2
12.5°	47.1	46.8	45.0	41.1	38.1	35.7	32.1	29.1	26.4	25.5	25.5
15°	53.0	52.1	51.8	45.6	40.5	36.3	28.5	21.3	19.2	17.4	16.5
17.5°	60.5	61.1	54.8	46.8	41.7	31.5	20.1	14.1	12.9	12.6	12.3
20°	67.1	66.5	57.8	47.4	36.9	21.3	13.2	11.7	12.0	12.6	12.3
22.5°	74.6	71.0	57.5	46.2	26.7	13.2	11.4	11.4	11.7	12.3	12.3
25°	78.8	75.2	58.1	43.8	18.3	11.1	11.1	11.1	11.4	11.7	11.7
27.5°	85.4	77.9	57.5	37.5	12.0	10.2	10.5	10.2	9.6	9.9	9.9
30°	92.9	87.2	60.2	27.3	10.2	9.3	9.3	9.0	8.1	8.4	8.4
32.5°	104.0	89.6	65.9	17.1	9.6	9.0	8.4	7.5	7.2	7.2	7.2
35°	110.6	97.7	64.7	12.0	9.3	8.4	7.2	6.6	6.3	6.3	6.3
37.5°	127.7	111.2	59.9	10.5	9.0	7.8	6.6	6.0	5.7	6.0	6.0
40°	151.3	132.8	50.6	10.2	8.4	7.2	6.0	5.4	5.4	5.4	5.7
42.5°	178.9	156.7	38.1	9.9	7.8	6.6	5.4	5.1	5.1	5.4	5.4
45°	215.5	179.2	25.8	9.3	7.5	6.3	5.1	4.8	4.8	5.1	5.1
47.5°	268.8	202.3	18.9	8.7	7.2	5.7	5.1	4.8	4.8	5.1	5.1
50°	324.6	229.6	14.7	8.4	6.9	5.7	5.1	4.8	4.8	5.1	5.1
52.5°	376.1	243.6	12.3	7.8	6.6	5.4	5.1	4.8	4.8	5.1	5.1
55°	419.3	246.9	10.8	7.5	6.3	5.4	5.1	4.8	4.8	4.8	4.8
57.5°	452.8	243.6	9.9	6.9	6.0	5.1	4.8	4.5	4.5	4.5	4.5
60°	469.0	234.4	8.7	6.3	5.7	5.1	4.5	4.5	4.2	4.2	4.2
62.5°	457.0	218.2	7.5	5.7	5.1	4.5	4.2	3.9	3.6	3.6	3.3
65°	425.3	192.4	6.6	5.1	4.5	4.2	3.9	3.6	3.0	3.0	2.7
67.5°	357.8	148.9	5.7	4.5	4.2	3.9	3.3	3.0	2.7	2.4	2.1
70°	241.9	94.4	5.1	4.2	3.6	3.3	3.0	3.0	2.7	2.4	2.1
72.5°	110.6	37.5	4.8	3.9	3.3	3.0	2.7	3.0	2.7	2.7	2.1
75°	35.1	12.3	4.2	3.6	3.0	2.4	2.7	2.7	2.4	2.1	1.5
77.5°	10.2	5.4	3.6	3.3	2.7	2.1	2.4	2.1	1.8	1.5	0.9
80°	4.8	3.3	2.7	2.4	2.1	1.2	1.8	1.8	1.8	1.5	0.9
82.5°	2.4	1.8	1.8	1.8	1.2	0.6	1.5	1.8	1.5	1.5	0.9
85°	1.5	1.5	1.5	1.5	1.2	0.3	1.2	1.5	1.5	1.5	0.9
87.5°	0.9	1.2	1.5	1.5	1.2	0.6	1.5	1.5	1.5	1.5	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)