

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: P596050

Luminaire Tested: **MSA-SA1A-AMB-U-T4FT-HSS**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596050  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-AMB-U-T4FT-HSS  
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (16) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 660 lumens  
Efficiency: N/A  
Efficacy: 32.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G0

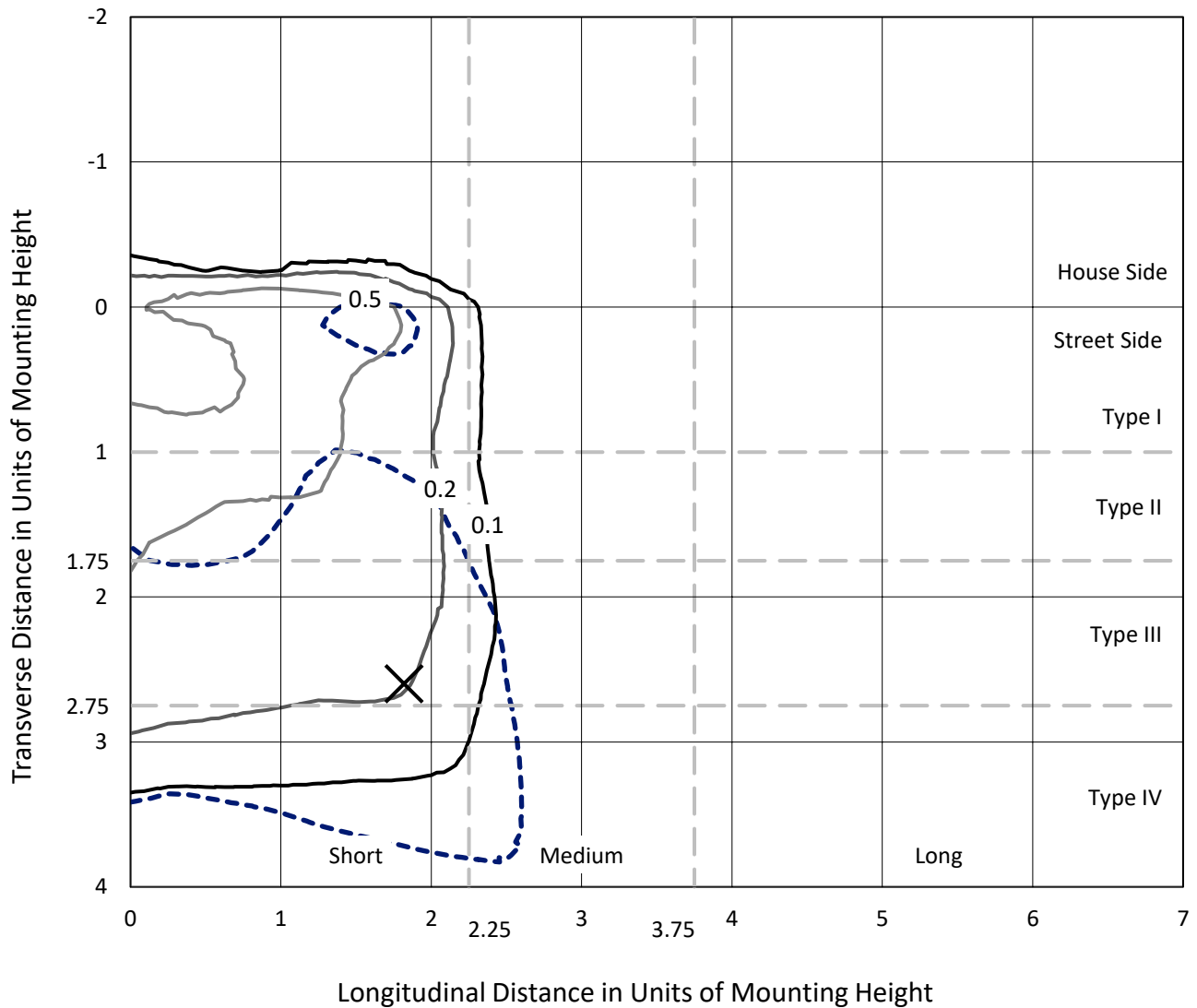
Input Watts (W): 20.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

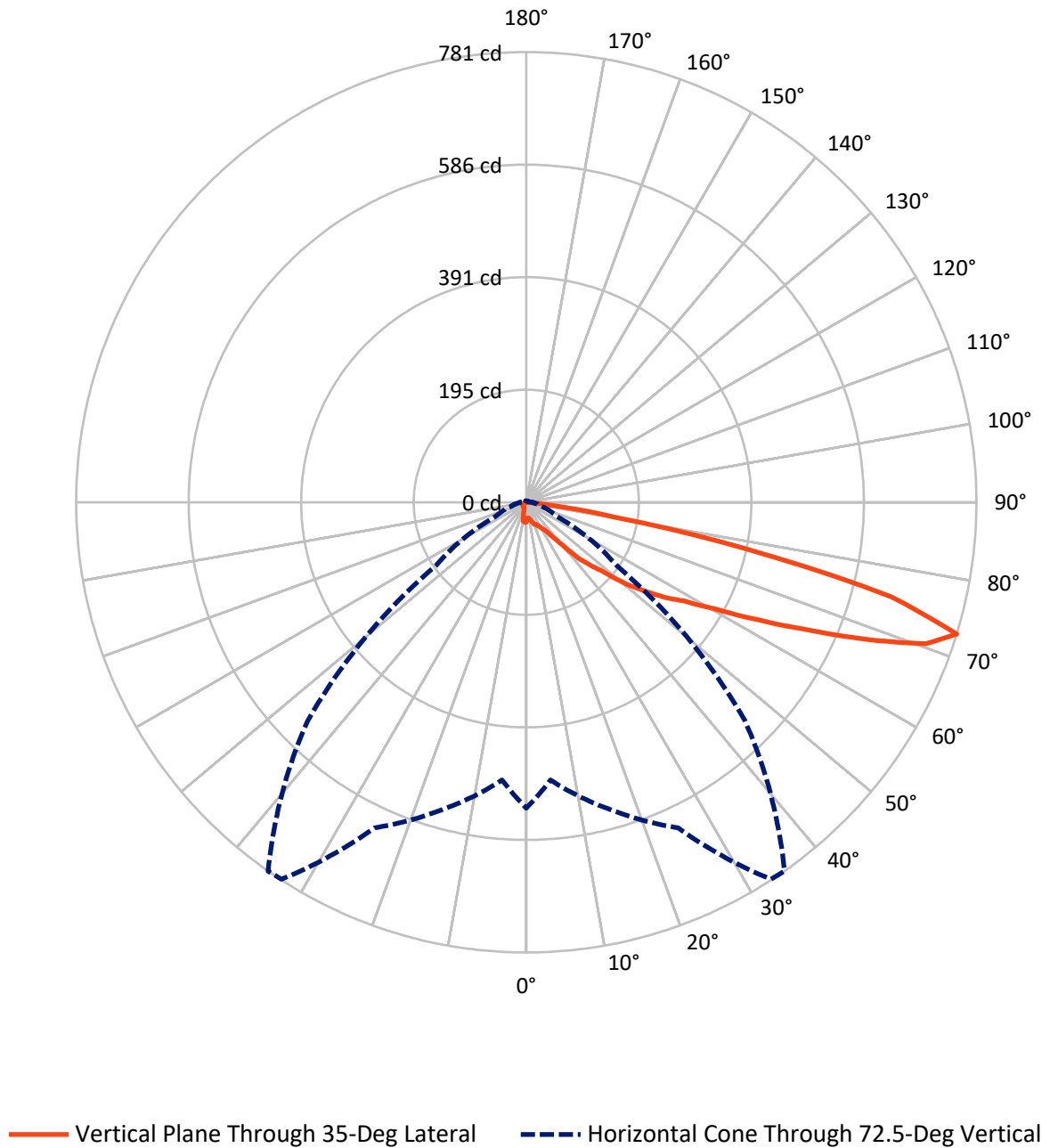
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



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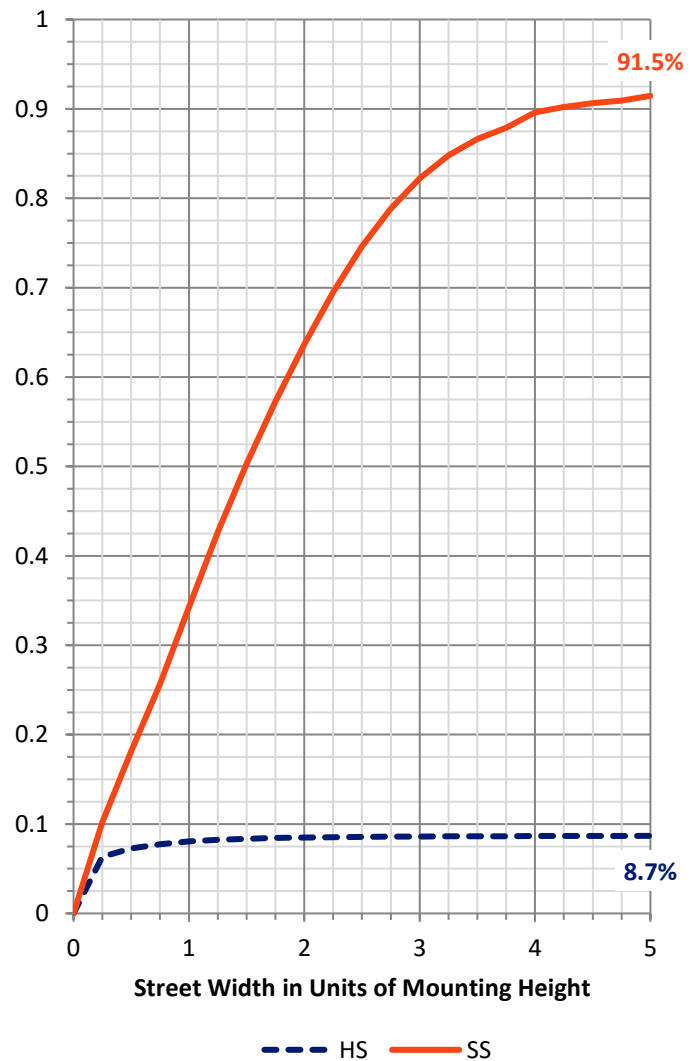
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	57.8	0.0	57.8
	% Fixture	8.8	0.0	8.8
<b>Street Side</b>	Lumens	602.2	0.0	602.2
	% Fixture	91.2	0.0	91.2
<b>Total</b>	Lumens	660.0	0.0	660.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.5	0.5
10°-20°	10.7	1.6
20°-30°	19.3	2.9
30°-40°	37.7	5.7
40°-50°	84.8	12.8
50°-60°	155.1	23.5
60°-70°	214.5	32.5
70°-80°	127.8	19.4
80°-90°	6.5	1.0
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°	660.0	100.0
0°-180°	660.0	100.0

**Coefficient of Utilization**



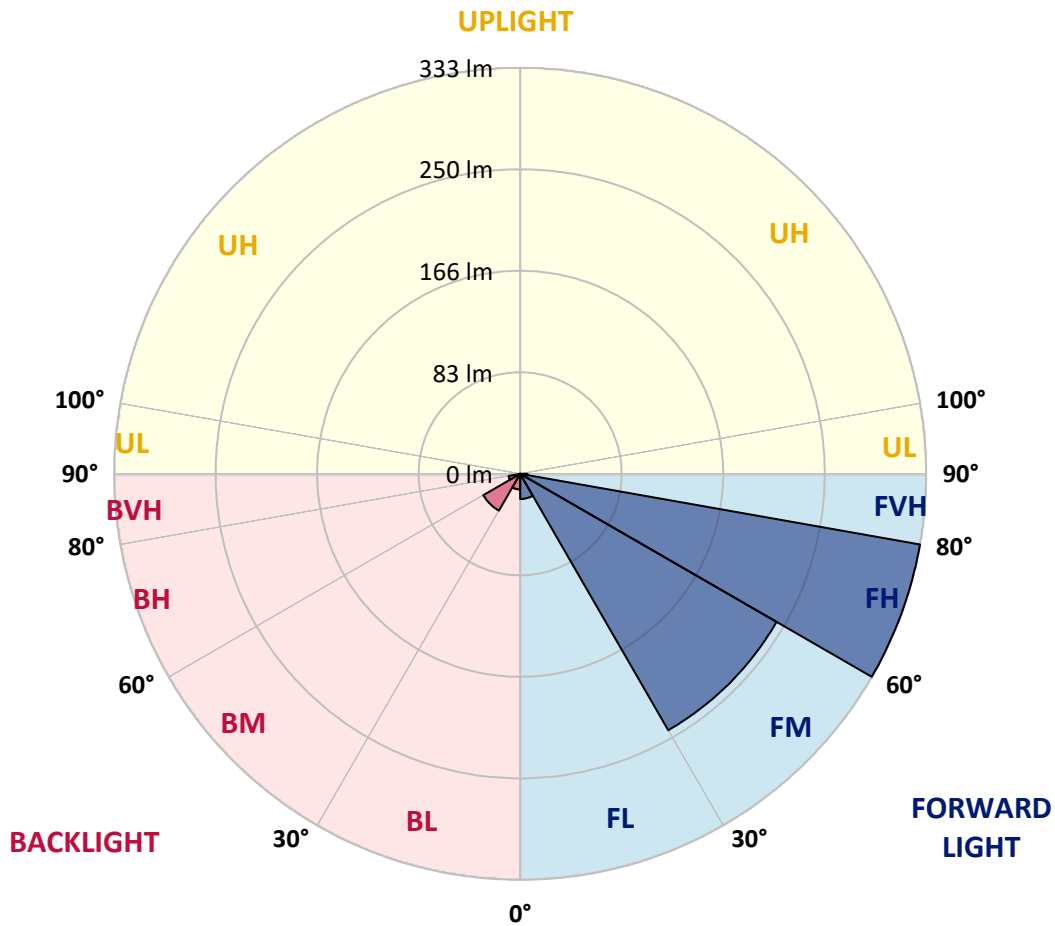
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	20.7	3.1			
FM (30°-60°)	242.7	36.8			
FH (60°-80°)	332.8	50.4			G0/660
FVH (80°-90°)	6.0	0.9			G0/10
BL (0°-30°)	12.9	1.9	B0/110		
BM (30°-60°)	34.9	5.3	B0/220		
BH (60°-80°)	9.6	1.4	B0/110		G0/110
BVH (80°-90°)	0.5	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
2.5°	37.5	33.9	31.8	28.2	27.9	28.2	28.8	30.3	31.2	34.8	38.7
5°	37.5	34.2	34.5	31.5	28.2	27.3	27.0	28.5	35.1	43.2	45.6
7.5°	34.2	32.4	32.4	30.3	28.5	27.6	28.8	31.5	38.7	45.9	51.0
10°	29.4	29.1	28.5	27.6	28.2	29.1	32.4	34.2	39.0	46.8	51.6
12.5°	27.9	27.9	29.1	28.8	31.2	31.5	35.7	39.0	44.4	50.1	56.4
15°	30.9	31.2	30.9	31.5	33.0	33.6	38.7	42.6	48.3	55.2	61.7
17.5°	35.7	36.0	34.2	35.4	36.6	37.8	41.4	45.6	50.1	60.3	70.1
20°	41.1	41.4	37.5	36.3	40.5	40.5	44.1	47.7	51.3	62.3	77.0
22.5°	46.2	45.6	39.9	39.0	41.7	41.4	45.3	49.5	52.5	63.5	85.1
25°	50.4	49.8	44.1	42.0	44.7	44.1	48.3	52.5	57.0	68.6	90.2
27.5°	54.9	54.3	45.6	46.5	46.8	47.1	49.5	56.1	62.3	69.5	98.0
30°	60.3	60.0	50.4	50.4	52.2	51.6	52.5	62.9	68.0	74.9	110.9
32.5°	73.1	70.1	59.1	54.3	54.9	56.4	62.0	66.8	75.2	84.8	125.3
35°	98.0	94.1	75.5	63.8	62.9	64.1	70.1	81.5	86.3	94.1	140.9
37.5°	140.3	135.5	108.2	82.4	79.7	79.1	84.5	96.2	100.7	107.9	174.5
40°	174.8	163.4	138.8	116.0	102.2	98.9	105.2	107.9	116.9	128.6	217.0
42.5°	207.1	194.5	165.8	149.6	136.1	131.9	116.6	121.7	138.2	152.3	248.5
45°	234.1	215.2	182.5	172.7	155.9	155.3	141.2	152.3	170.9	180.8	284.5
47.5°	254.2	234.1	207.1	196.3	185.8	179.6	183.4	187.9	204.7	213.7	324.0
50°	274.0	255.4	227.8	218.8	214.0	220.3	233.5	232.0	234.1	241.9	360.9
52.5°	303.1	274.3	248.8	245.2	246.7	253.9	269.8	281.5	263.5	268.6	405.6
55°	324.0	295.0	277.6	270.7	283.6	290.8	315.6	332.4	294.7	298.0	447.5
57.5°	363.6	325.8	317.4	306.3	326.7	323.4	366.0	376.5	312.3	317.4	476.6
60°	412.8	375.0	358.8	348.0	369.9	374.7	415.2	394.2	316.5	336.3	475.7
62.5°	488.0	439.7	408.0	399.3	427.1	447.2	465.5	408.0	315.6	327.9	406.2
65°	578.2	525.2	476.9	467.0	514.7	530.6	531.8	421.8	296.2	274.0	276.1
67.5°	657.4	599.8	556.9	556.3	630.4	634.0	598.9	431.6	243.7	176.6	128.0
70°	660.1	614.2	590.8	625.9	747.3	735.3	625.3	341.7	144.5	79.1	44.4
72.5°	530.6	483.8	550.6	623.2	780.0	781.2	536.9	191.8	59.4	27.9	13.5
75°	229.9	226.0	341.1	496.4	655.6	653.8	310.5	76.7	27.6	17.7	7.8
77.5°	100.7	86.3	123.2	274.9	403.5	393.3	113.0	26.4	18.9	14.7	4.8
80°	21.0	18.0	34.5	93.2	170.3	155.3	31.2	15.0	14.4	12.3	3.0
82.5°	5.4	5.7	10.8	26.4	55.2	47.4	10.5	9.6	10.8	9.3	1.8
85°	1.2	1.5	4.5	10.2	12.9	12.0	4.2	4.8	6.9	6.3	1.2
87.5°	0.6	0.6	1.2	2.1	1.8	1.5	0.9	1.5	1.8	2.1	0.6
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°	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
2.5°	40.5	35.4	37.8	33.6	33.6	36.0	35.1	34.5	36.3	36.0	40.8
5°	50.1	45.6	45.0	40.2	35.1	33.0	33.3	38.1	41.7	42.9	46.5
7.5°	54.9	51.9	52.2	44.7	34.8	32.1	34.2	36.6	38.7	39.3	41.1
10°	55.2	54.0	53.1	43.5	39.9	37.2	31.5	28.5	28.5	27.3	27.9
12.5°	59.1	58.8	56.7	46.8	40.8	32.7	25.2	21.6	19.5	18.9	18.0
15°	64.1	64.7	61.7	49.5	36.9	24.6	18.3	13.8	12.6	12.3	12.0
17.5°	71.9	75.8	62.9	46.8	29.1	18.0	12.6	11.1	10.8	11.1	11.1
20°	79.7	80.9	64.4	40.5	21.9	12.9	10.8	10.5	10.8	11.4	11.4
22.5°	89.6	88.7	62.0	32.1	15.3	10.8	10.5	10.5	11.1	11.7	12.0
25°	97.1	95.0	60.3	25.2	11.4	9.9	10.2	10.8	11.1	12.0	12.0
27.5°	107.9	99.5	54.9	19.2	9.9	9.6	10.2	11.1	11.4	12.3	12.3
30°	114.5	112.1	49.2	14.1	9.3	9.0	9.9	10.8	11.4	12.6	12.6
32.5°	133.1	115.7	42.9	10.8	8.7	8.7	9.3	10.2	11.7	13.2	13.2
35°	148.1	131.6	36.0	9.6	8.7	8.4	8.7	9.6	11.4	13.2	13.5
37.5°	184.9	145.4	28.8	9.3	8.7	8.4	8.7	9.0	10.8	13.5	14.1
40°	218.8	159.2	23.1	9.3	8.7	8.4	8.4	8.7	9.9	12.3	12.9
42.5°	247.0	174.2	18.3	9.0	8.4	8.1	8.1	8.4	9.6	11.1	11.1
45°	277.3	178.7	15.3	9.0	8.1	8.1	8.1	8.1	8.7	9.0	9.3
47.5°	303.6	181.1	12.6	8.7	8.1	8.1	7.8	7.8	7.8	7.8	7.8
50°	333.0	186.4	10.2	8.1	8.1	8.1	7.5	7.2	6.9	6.6	6.6
52.5°	363.6	192.1	8.7	7.2	7.5	7.8	7.2	6.3	6.0	5.7	5.7
55°	399.3	193.9	7.8	6.6	7.2	7.2	6.3	5.7	5.4	5.1	5.1
57.5°	426.2	186.7	7.2	6.0	6.3	6.6	5.7	5.1	4.8	4.5	4.2
60°	419.1	159.5	6.6	5.4	5.7	5.7	5.1	4.5	4.2	3.9	3.6
62.5°	352.8	117.2	5.7	4.8	5.1	5.1	4.5	4.2	3.6	3.3	3.0
65°	235.3	70.7	4.8	4.2	4.5	4.5	3.9	3.6	3.0	2.7	2.4
67.5°	113.6	33.0	4.2	3.9	3.9	3.9	3.3	3.3	2.7	2.4	2.1
70°	34.5	12.6	3.9	3.6	3.6	3.6	3.0	3.0	2.7	2.4	1.8
72.5°	10.8	6.0	3.6	3.3	3.3	2.7	2.7	2.7	2.4	2.1	1.5
75°	6.6	3.9	3.0	3.0	2.7	2.4	2.4	2.7	2.4	2.1	1.2
77.5°	3.9	3.0	2.7	2.7	2.4	1.8	2.1	1.8	1.5	1.2	0.6
80°	2.4	2.1	2.1	2.1	1.8	0.9	1.5	1.5	1.5	0.9	0.3
82.5°	1.5	1.2	1.2	1.5	0.9	0.3	1.2	1.5	1.2	0.9	0.3
85°	0.6	0.9	0.9	0.9	0.6	0.3	0.9	1.2	1.2	0.9	0.3
87.5°	0.6	0.6	0.9	0.9	0.6	0.3	1.2	1.2	1.2	0.9	0.3
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)