

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: P596045

Luminaire Tested: **MSA-SA1A-AMB-U-T1**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596045  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-8)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-AMB-U-T1  
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: (16) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 874 lumens  
Efficiency: N/A  
Efficacy: 42.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type I - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

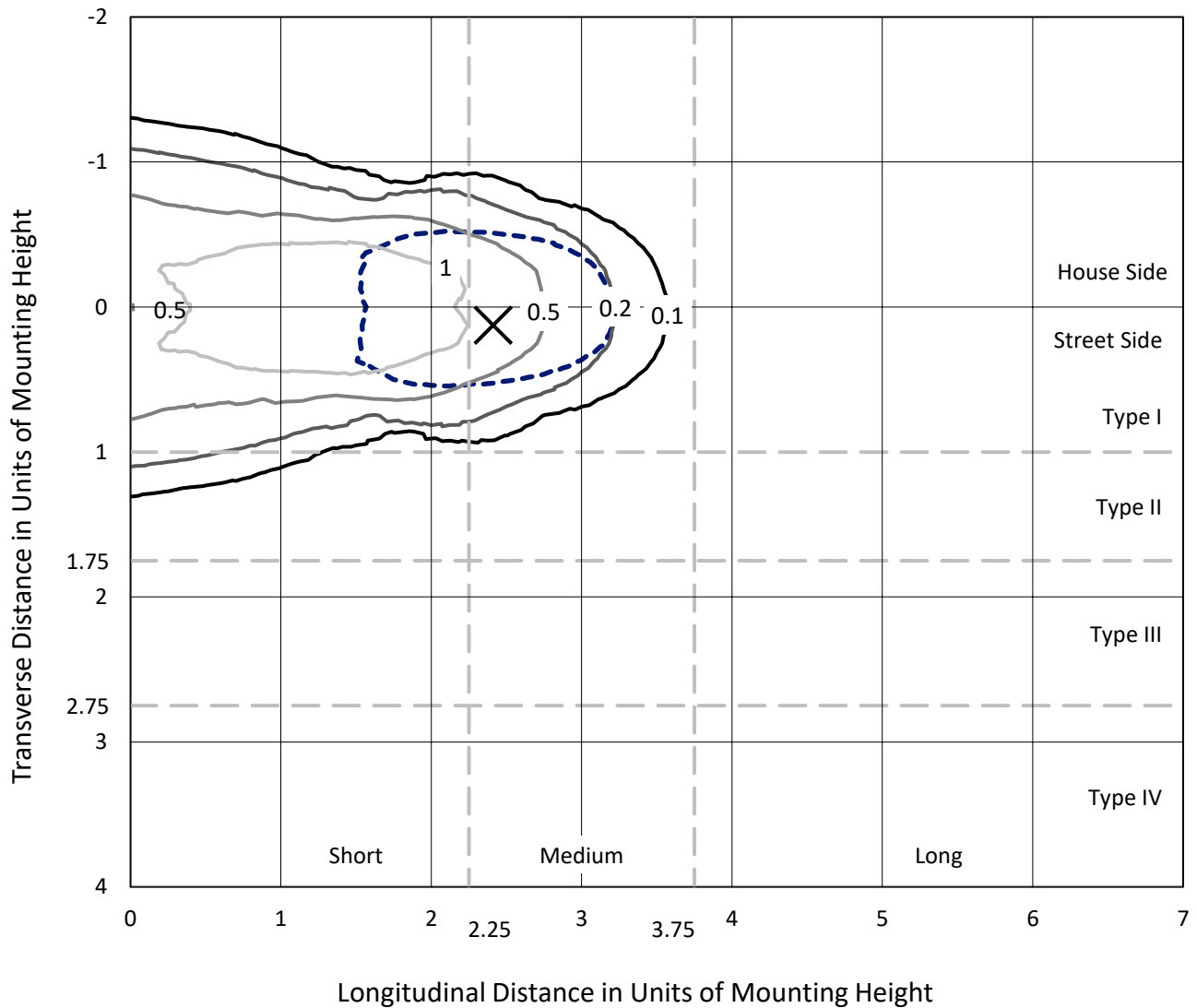
Input Watts (W): 20.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

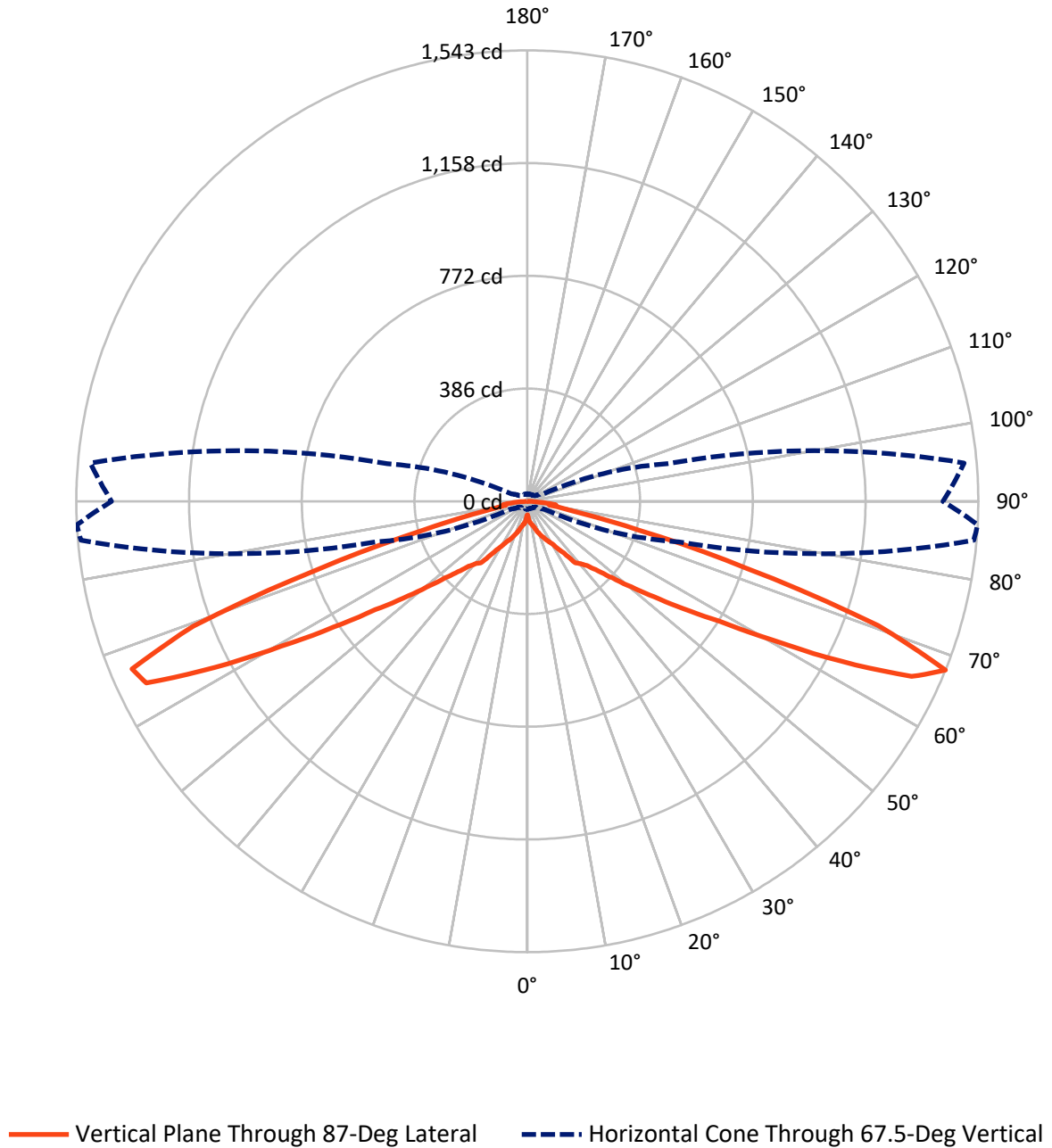
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.4 fc  
 Type I - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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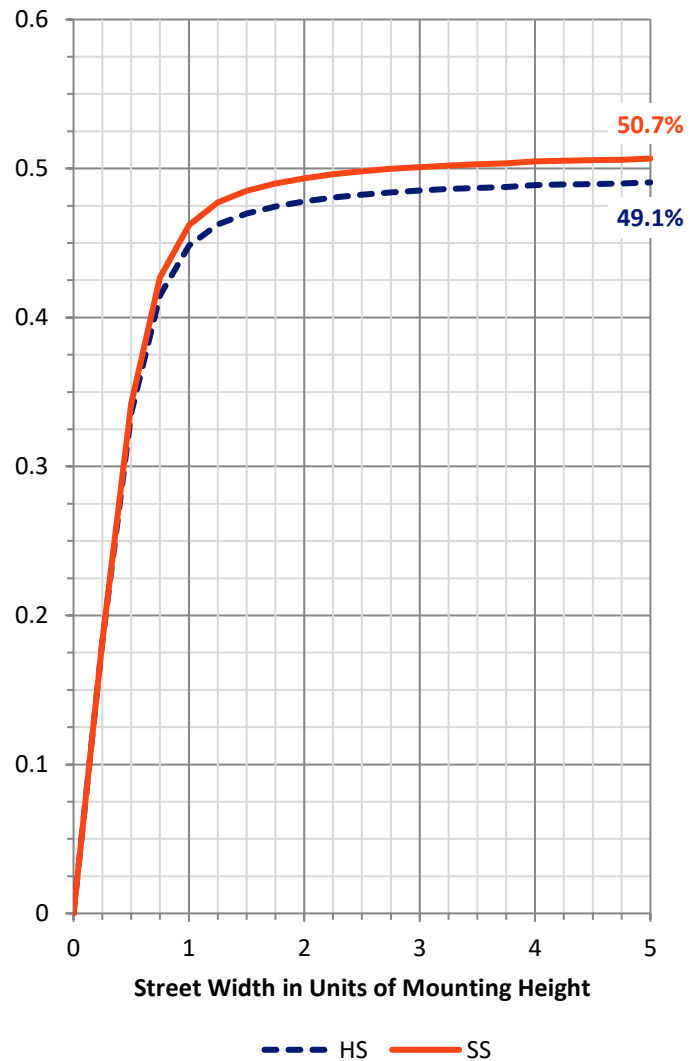
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	432.5	0.0	432.5
	% Fixture	49.5	0.0	49.5
<b>Street Side</b>	Lumens	441.5	0.0	441.5
	% Fixture	50.5	0.0	50.5
<b>Total</b>	Lumens	874.0	0.0	874.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	6.1	0.7
10°-20°	29.2	3.3
20°-30°	58.9	6.7
30°-40°	96.6	11.1
40°-50°	142.5	16.3
50°-60°	193.5	22.1
60°-70°	248.1	28.4
70°-80°	87.8	10.1
80°-90°	11.3	1.3
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°	874.0	100.0
0°-180°	874.0	100.0

**Coefficient of Utilization**



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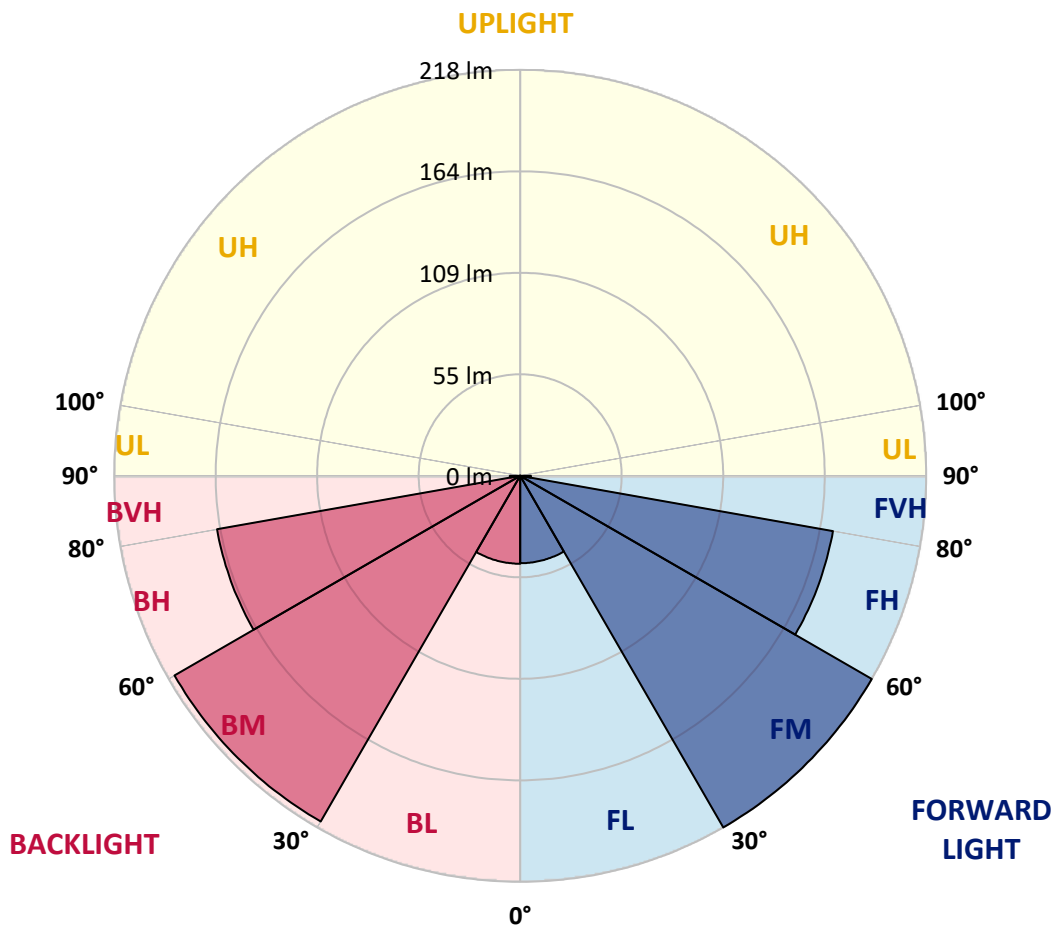
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	47.0	5.4			
FM (30°-60°)	218.1	25.0			
FH (60°-80°)	170.6	19.5			G0/660
FVH (80°-90°)	5.8	0.7			G0/10
BL (0°-30°)	47.2	5.4	B0/110		
BM (30°-60°)	214.4	24.5	B0/220		
BH (60°-80°)	165.4	18.9	B1/500		G1/500
BVH (80°-90°)	5.5	0.6			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5
2.5°	57.3	52.5	48.9	45.9	45.9	48.0	48.6	45.9	48.0	51.0	53.1
5°	71.4	64.5	60.6	55.5	49.2	48.6	48.9	55.2	62.1	64.8	67.5
7.5°	82.4	75.9	74.7	66.0	56.4	57.3	59.1	66.3	72.0	74.4	74.7
10°	85.1	83.3	79.7	72.3	72.0	74.4	68.7	72.0	76.8	78.5	79.4
12.5°	88.1	87.5	91.4	89.9	93.8	93.8	91.1	87.2	87.5	84.8	85.4
15°	92.9	93.8	96.8	99.8	104.6	113.0	107.0	101.0	98.3	94.1	93.8
17.5°	98.9	100.1	101.3	107.3	116.0	122.9	122.6	116.3	113.3	110.6	108.5
20°	103.1	104.9	104.3	106.1	120.2	131.0	135.2	125.3	122.0	119.3	117.8
22.5°	107.9	105.8	102.2	106.1	117.2	128.6	141.5	134.3	129.2	130.7	130.4
25°	104.6	105.2	103.7	108.2	119.3	131.9	146.6	150.5	144.5	141.8	143.0
27.5°	104.0	103.4	97.1	107.3	115.1	126.2	152.0	166.4	151.7	153.8	156.2
30°	100.1	102.2	94.7	105.2	114.2	126.2	158.0	179.3	166.4	171.8	168.8
32.5°	100.1	99.5	95.0	100.1	109.7	133.1	162.8	190.7	196.1	195.8	194.6
35°	100.1	100.4	93.8	98.6	108.2	128.9	169.4	214.4	226.4	227.9	218.3
37.5°	103.1	99.5	95.6	99.2	108.5	137.0	179.0	236.5	263.2	271.6	267.1
40°	98.9	96.8	91.7	98.6	104.9	131.6	176.3	262.6	295.3	283.9	280.6
42.5°	92.0	87.8	86.9	94.7	103.1	124.4	177.2	282.7	337.0	303.1	301.3
45°	81.5	75.3	78.5	87.8	99.2	125.3	174.5	304.9	382.6	337.0	338.8
47.5°	66.6	64.2	64.8	74.1	88.1	119.6	163.1	310.6	460.2	387.0	392.4
50°	53.4	51.3	52.8	60.3	75.6	103.4	158.3	313.6	524.1	451.2	460.5
52.5°	42.9	41.4	42.9	48.6	63.6	85.1	138.5	296.8	595.4	533.7	543.5
55°	37.5	36.0	36.3	39.9	49.8	68.7	112.1	268.6	684.5	639.2	648.5
57.5°	34.5	33.3	33.0	34.8	40.5	54.3	83.3	224.3	775.0	784.6	773.2
60°	32.7	31.5	31.2	31.8	34.8	42.3	65.1	159.5	829.3	1000.4	962.4
62.5°	31.8	30.6	30.0	30.0	32.1	36.3	49.2	108.8	836.2	1274.2	1206.7
65°	30.0	28.5	28.2	28.5	30.3	32.4	40.5	80.0	748.9	1520.3	1445.4
67.5°	27.9	26.7	26.1	26.7	28.5	29.4	34.2	62.7	537.0	1533.5	1543.4
70°	25.5	24.3	24.3	24.9	26.7	27.0	29.7	48.0	312.7	1204.6	1273.9
72.5°	22.8	21.9	21.9	22.8	24.3	24.3	26.1	36.3	175.1	748.0	785.2
75°	20.1	19.5	19.5	20.4	21.6	21.3	23.1	27.6	98.3	367.0	394.8
77.5°	16.5	16.2	16.5	18.0	18.6	17.7	19.5	22.2	53.4	155.6	149.0
80°	12.3	12.0	12.9	14.4	15.0	13.8	15.3	17.1	28.5	64.5	75.9
82.5°	8.7	8.7	8.7	10.2	10.5	9.3	11.1	12.3	15.9	58.8	98.3
85°	4.8	5.1	5.1	5.7	6.3	5.7	6.6	6.9	9.0	30.0	50.4
87.5°	1.5	1.8	2.1	2.4	2.7	1.8	2.7	3.0	3.3	5.7	5.4
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°	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5
2.5°	54.9	49.5	50.1	47.4	46.5	48.6	45.6	45.6	49.2	47.4	49.2
5°	70.2	63.3	61.2	57.0	51.3	49.2	51.3	56.4	65.4	66.6	68.1
7.5°	78.2	74.1	72.9	65.4	57.6	56.1	61.5	68.1	74.7	79.1	84.2
10°	80.9	77.9	76.8	71.7	75.9	77.6	77.3	76.5	82.7	84.5	85.7
12.5°	86.0	87.5	87.5	87.5	95.0	98.0	95.6	95.0	92.3	94.4	93.8
15°	94.7	95.3	100.7	103.4	111.2	113.0	108.5	101.6	99.8	98.0	97.1
17.5°	107.3	108.8	110.9	118.4	124.1	125.9	115.4	104.9	104.0	102.5	99.8
20°	117.2	119.9	124.1	130.7	135.2	127.7	116.3	104.3	104.0	105.5	105.2
22.5°	130.4	130.7	133.4	135.8	135.8	128.0	119.0	106.7	103.4	105.5	106.1
25°	143.0	145.1	146.0	150.2	144.2	125.6	114.8	107.3	102.8	108.8	106.4
27.5°	154.7	155.3	152.6	165.5	148.1	122.6	116.3	107.6	99.8	106.7	105.8
30°	166.7	179.0	169.4	180.5	156.2	124.7	110.9	103.1	98.3	107.3	105.8
32.5°	193.4	194.6	200.9	193.4	163.1	130.1	110.6	103.7	97.7	104.3	103.4
35°	218.3	228.2	226.7	211.7	163.4	131.3	114.5	100.7	95.9	104.6	104.3
37.5°	265.9	261.4	265.3	233.8	167.0	130.4	108.5	99.2	95.6	99.5	101.9
40°	280.3	273.4	298.3	259.3	170.9	127.4	103.1	97.1	88.1	92.9	94.4
42.5°	298.3	299.8	349.0	280.9	177.5	123.2	99.8	90.2	81.8	82.4	85.7
45°	338.5	337.0	391.2	295.6	167.9	120.5	94.1	81.2	73.2	73.2	75.6
47.5°	387.3	383.2	459.3	305.2	161.6	111.5	84.2	69.3	61.5	61.8	64.2
50°	451.8	453.0	526.5	297.7	150.2	98.0	72.6	59.1	51.0	50.1	52.5
52.5°	539.9	536.4	599.6	277.9	129.5	82.1	60.9	48.3	42.3	41.1	42.9
55°	631.1	643.7	664.1	239.8	104.0	66.6	48.6	39.6	36.0	35.7	37.2
57.5°	765.4	806.2	739.0	202.1	80.9	52.5	39.9	33.9	31.8	32.4	33.6
60°	921.3	1014.2	772.3	149.3	63.6	42.6	34.2	30.6	29.7	30.3	31.5
62.5°	1127.3	1268.8	770.8	108.8	50.4	36.0	31.2	28.8	27.9	28.5	29.7
65°	1343.7	1511.6	692.5	81.5	39.3	31.2	29.1	27.3	26.4	27.0	28.2
67.5°	1422.6	1500.8	495.6	59.7	33.6	28.2	27.3	25.8	24.9	25.2	26.1
70°	1253.5	1197.4	300.7	44.4	28.5	25.5	25.5	24.0	23.1	23.1	24.0
72.5°	811.6	709.6	172.1	35.1	24.6	23.1	23.4	21.9	21.0	21.0	21.6
75°	413.7	341.8	97.4	28.5	21.6	20.1	21.0	19.8	18.6	18.3	18.6
77.5°	143.6	148.7	58.2	23.1	18.3	17.1	17.7	16.8	15.3	15.0	15.3
80°	85.4	65.4	34.2	17.7	14.4	13.2	13.8	13.2	11.7	10.5	10.8
82.5°	125.3	57.0	19.5	12.3	10.2	8.4	9.9	9.0	7.5	7.5	7.5
85°	66.9	34.8	9.0	6.0	5.4	4.5	5.1	4.5	3.9	4.2	3.6
87.5°	4.8	5.7	3.0	2.4	2.1	1.5	2.1	2.1	1.8	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)