

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: P596096

Luminaire Tested: **MSA-SA3A-AMB-U-T4FT-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596096
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-SA3A-AMB-U-T4FT-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1758 lumens
Efficiency: N/A
Efficacy: 29.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

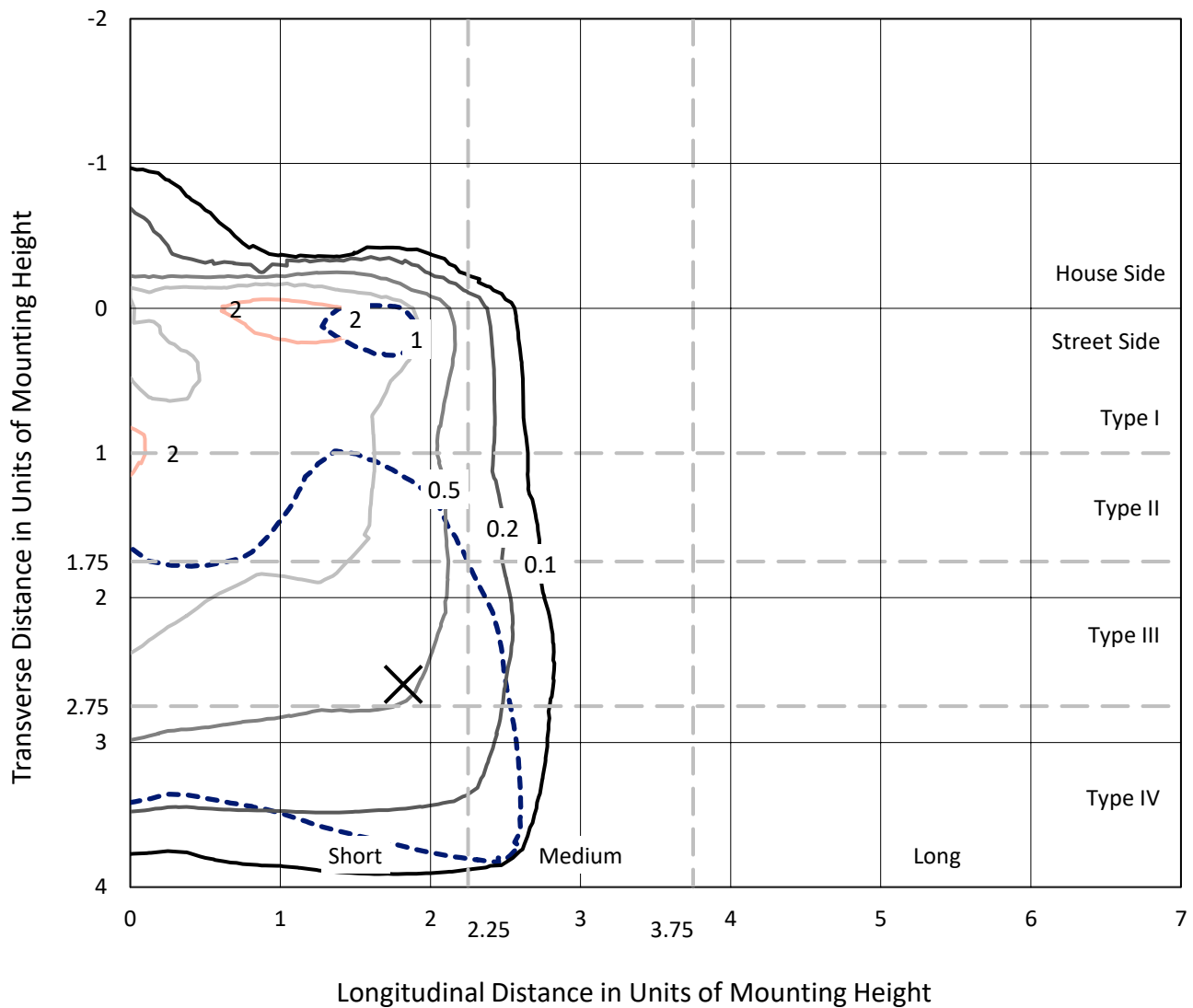
Input Watts (W): 59.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

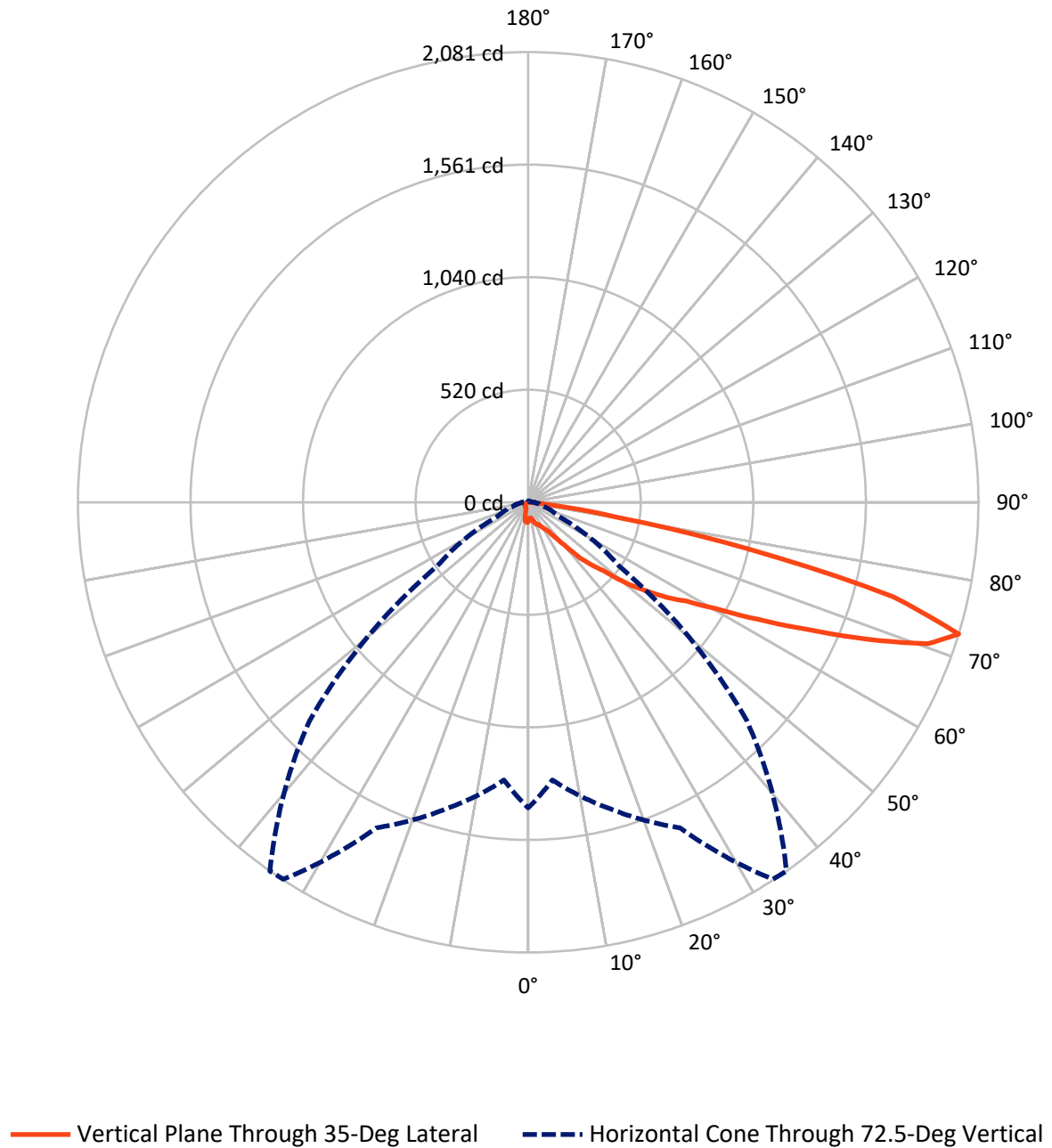
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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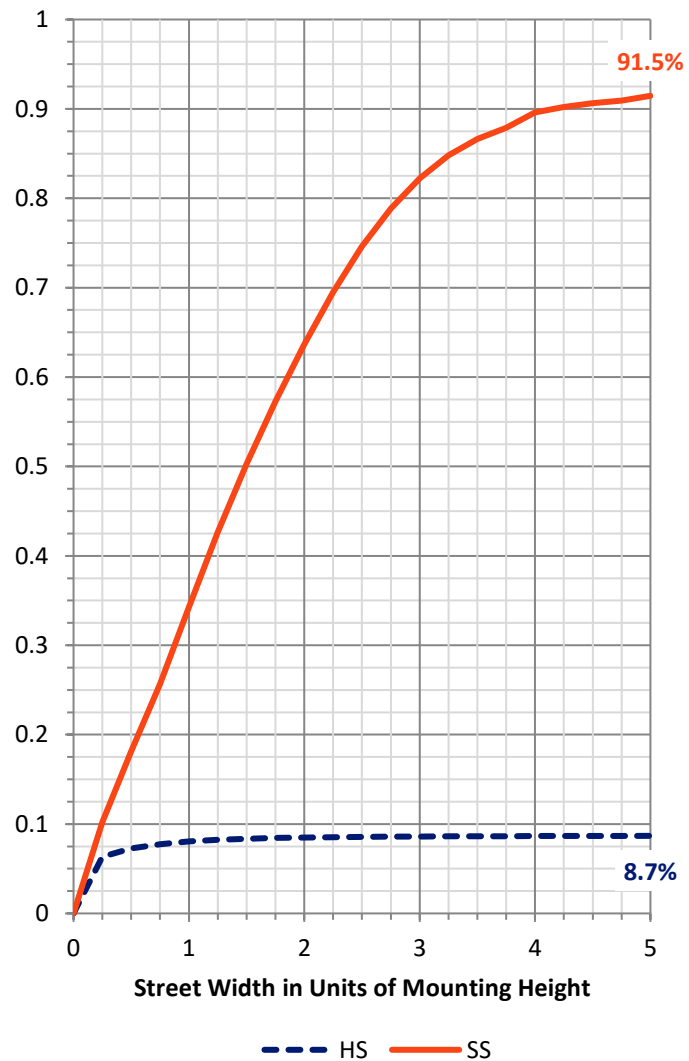
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	153.9	0.0	153.9
	% Fixture	8.8	0.0	8.8
Street Side	Lumens	1604.1	0.0	1604.1
	% Fixture	91.2	0.0	91.2
Total	Lumens	1758.0	0.0	1758.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.4	0.5
10°-20°	28.4	1.6
20°-30°	51.5	2.9
30°-40°	100.4	5.7
40°-50°	225.8	12.8
50°-60°	413.2	23.5
60°-70°	571.4	32.5
70°-80°	340.5	19.4
80°-90°	17.3	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°	1758.0	100.0
0°-180°	1758.0	100.0

Coefficient of Utilization



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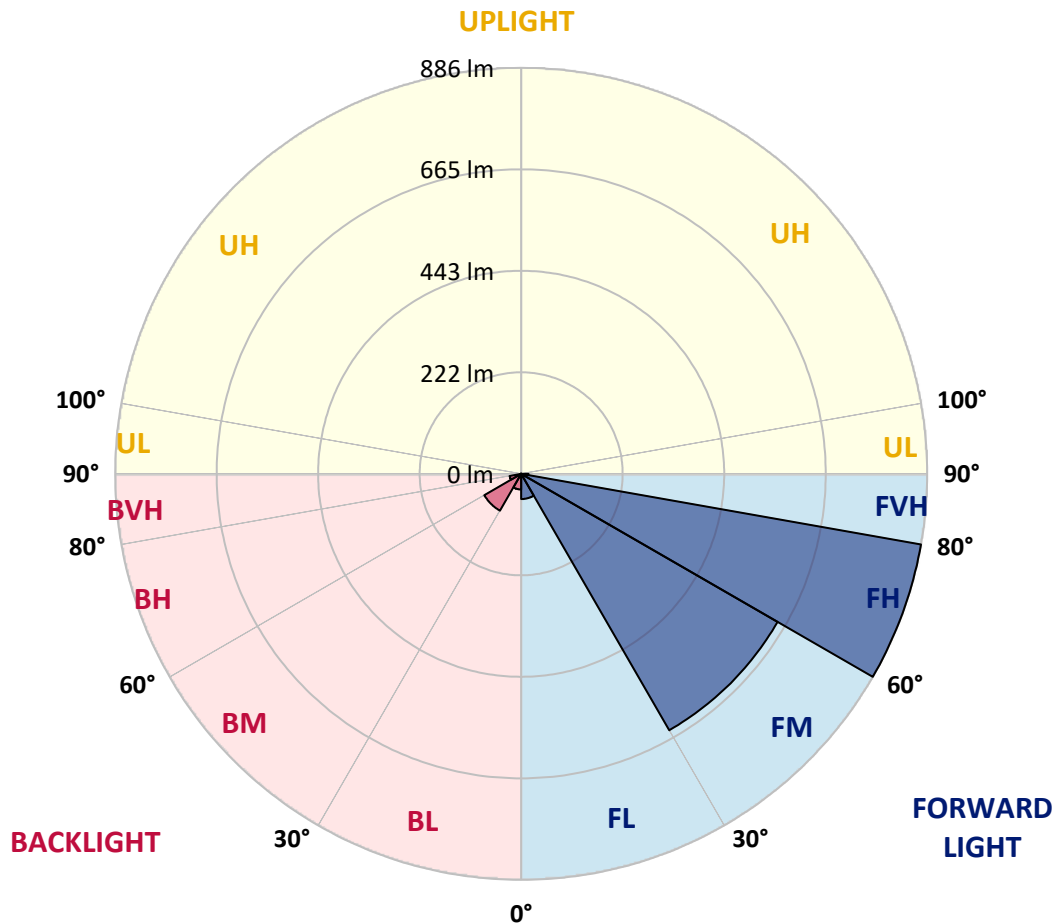
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	55.1	3.1			
FM	(30°-60°)	646.5	36.8			
FH	(60°-80°)	886.5	50.4			G1/1800
FVH	(80°-90°)	16.0	0.9			G1/100
BL	(0°-30°)	34.2	1.9	B0/110		
BM	(30°-60°)	92.9	5.3	B0/220		
BH	(60°-80°)	25.5	1.5	B0/110		G0/110
BVH	(80°-90°)	1.3	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-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6
2.5°	99.8	90.2	84.6	75.1	74.3	75.1	76.6	80.6	83.0	92.6	103.0
5°	99.8	91.0	91.8	83.8	75.1	72.7	71.9	75.9	93.4	115.0	121.4
7.5°	91.0	86.2	86.2	80.6	75.9	73.5	76.6	83.8	103.0	122.2	135.7
10°	78.2	77.4	75.9	73.5	75.1	77.4	86.2	91.0	103.8	124.6	137.3
12.5°	74.3	74.3	77.4	76.6	83.0	83.8	95.0	103.8	118.2	133.3	150.1
15°	82.2	83.0	82.2	83.8	87.8	89.4	103.0	113.4	128.5	146.9	164.5
17.5°	95.0	95.8	91.0	94.2	97.4	100.6	110.2	121.4	133.3	160.5	186.8
20°	109.4	110.2	99.8	96.6	107.8	107.8	117.4	127.0	136.5	166.1	205.2
22.5°	123.0	121.4	106.2	103.8	111.0	110.2	120.6	131.7	139.7	169.3	226.8
25°	134.1	132.5	117.4	111.8	119.0	117.4	128.5	139.7	151.7	182.8	240.3
27.5°	146.1	144.5	121.4	123.8	124.6	125.4	131.7	149.3	166.1	185.2	261.1
30°	160.5	159.7	134.1	134.1	138.9	137.3	139.7	167.7	181.2	199.6	295.4
32.5°	194.8	186.8	157.3	144.5	146.1	150.1	165.3	178.1	200.4	226.0	333.7
35°	261.1	250.7	201.2	170.1	167.7	170.9	186.8	217.2	229.9	250.7	375.3
37.5°	373.7	360.9	288.2	219.6	212.4	210.8	225.2	256.3	268.3	287.4	464.7
40°	465.5	435.1	369.7	309.0	272.3	263.5	280.2	287.4	311.4	342.5	578.1
42.5°	551.7	518.2	441.5	398.4	362.5	351.3	310.6	324.2	368.1	405.6	661.9
45°	623.6	573.3	486.2	459.9	415.2	413.6	376.1	405.6	455.1	481.5	757.7
47.5°	677.1	623.6	551.7	523.0	495.0	478.3	488.6	500.6	545.3	569.3	863.1
50°	729.8	680.3	606.8	582.9	570.1	586.8	622.0	618.0	623.6	644.3	961.3
52.5°	807.2	730.6	662.7	653.1	657.1	676.3	718.6	749.7	701.8	715.4	1080.3
55°	863.1	785.7	739.3	721.0	755.3	774.5	840.7	885.5	784.9	793.6	1192.1
57.5°	968.5	867.9	845.5	816.0	870.3	861.5	974.9	1002.8	832.0	845.5	1269.5
60°	1099.4	998.8	955.7	927.0	985.3	998.0	1105.8	1049.9	843.1	895.8	1267.1
62.5°	1299.8	1171.3	1086.7	1063.5	1137.8	1191.3	1240.0	1086.7	840.7	873.5	1081.9
65°	1540.2	1398.9	1270.3	1244.0	1370.9	1413.2	1416.4	1123.4	788.9	729.8	735.4
67.5°	1751.0	1597.7	1483.5	1481.9	1679.1	1688.7	1595.3	1149.7	649.1	470.3	340.9
70°	1758.1	1636.0	1573.7	1667.1	1990.5	1958.6	1665.5	910.2	384.8	210.8	118.2
72.5°	1413.2	1288.7	1466.7	1659.9	2077.5	2080.7	1430.0	511.0	158.1	74.3	35.9
75°	612.4	602.0	908.6	1322.2	1746.2	1741.4	827.2	204.4	73.5	47.1	20.8
77.5°	268.3	229.9	328.2	732.2	1074.7	1047.5	301.0	70.3	50.3	39.1	12.8
80°	55.9	47.9	91.8	248.3	453.5	413.6	83.0	39.9	38.3	32.7	8.0
82.5°	14.4	15.2	28.7	70.3	146.9	126.2	27.9	25.5	28.7	24.8	4.8
85°	3.2	4.0	12.0	27.1	34.3	31.9	11.2	12.8	18.4	16.8	3.2
87.5°	1.6	1.6	3.2	5.6	4.8	4.0	2.4	4.0	4.8	5.6	1.6
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°	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6
2.5°	107.8	94.2	100.6	89.4	89.4	95.8	93.4	91.8	96.6	95.8	108.6
5°	133.3	121.4	119.8	107.0	93.4	87.8	88.6	101.4	111.0	114.2	123.8
7.5°	146.1	138.1	138.9	119.0	92.6	85.4	91.0	97.4	103.0	104.6	109.4
10°	146.9	143.7	141.3	115.8	106.2	99.0	83.8	75.9	75.9	72.7	74.3
12.5°	157.3	156.5	150.9	124.6	108.6	87.0	67.1	57.5	51.9	50.3	47.9
15°	170.9	172.5	164.5	131.7	98.2	65.5	48.7	36.7	33.5	32.7	31.9
17.5°	191.6	202.0	167.7	124.6	77.4	47.9	33.5	29.5	28.7	29.5	29.5
20°	212.4	215.6	171.7	107.8	58.3	34.3	28.7	27.9	28.7	30.3	30.3
22.5°	238.7	236.3	165.3	85.4	40.7	28.7	27.9	27.9	29.5	31.1	31.9
25°	258.7	253.1	160.5	67.1	30.3	26.3	27.1	28.7	29.5	31.9	31.9
27.5°	287.4	265.1	146.1	51.1	26.3	25.5	27.1	29.5	30.3	32.7	32.7
30°	305.0	298.6	130.9	37.5	24.8	24.0	26.3	28.7	30.3	33.5	33.5
32.5°	354.5	308.2	114.2	28.7	23.2	23.2	24.8	27.1	31.1	35.1	35.1
35°	394.4	350.5	95.8	25.5	23.2	22.4	23.2	25.5	30.3	35.1	35.9
37.5°	492.6	387.2	76.6	24.8	23.2	22.4	23.2	24.0	28.7	35.9	37.5
40°	582.9	424.0	61.5	24.8	23.2	22.4	22.4	23.2	26.3	32.7	34.3
42.5°	657.9	463.9	48.7	24.0	22.4	21.6	21.6	22.4	25.5	29.5	29.5
45°	738.6	475.9	40.7	24.0	21.6	21.6	21.6	21.6	23.2	24.0	24.8
47.5°	808.8	482.3	33.5	23.2	21.6	21.6	20.8	20.8	20.8	20.8	20.8
50°	887.1	496.6	27.1	21.6	21.6	21.6	20.0	19.2	18.4	17.6	17.6
52.5°	968.5	511.8	23.2	19.2	20.0	20.8	19.2	16.8	16.0	15.2	15.2
55°	1063.5	516.6	20.8	17.6	19.2	19.2	16.8	15.2	14.4	13.6	13.6
57.5°	1135.4	497.4	19.2	16.0	16.8	17.6	15.2	13.6	12.8	12.0	11.2
60°	1116.2	424.8	17.6	14.4	15.2	15.2	13.6	12.0	11.2	10.4	9.6
62.5°	939.8	312.2	15.2	12.8	13.6	13.6	12.0	11.2	9.6	8.8	8.0
65°	626.8	188.4	12.8	11.2	12.0	12.0	10.4	9.6	8.0	7.2	6.4
67.5°	302.6	87.8	11.2	10.4	10.4	10.4	8.8	8.8	7.2	6.4	5.6
70°	91.8	33.5	10.4	9.6	9.6	9.6	8.0	8.0	7.2	6.4	4.8
72.5°	28.7	16.0	9.6	8.8	8.8	7.2	7.2	7.2	6.4	5.6	4.0
75°	17.6	10.4	8.0	8.0	7.2	6.4	6.4	7.2	6.4	5.6	3.2
77.5°	10.4	8.0	7.2	7.2	6.4	4.8	5.6	4.8	4.0	3.2	1.6
80°	6.4	5.6	5.6	5.6	4.8	2.4	4.0	4.0	4.0	2.4	0.8
82.5°	4.0	3.2	3.2	4.0	2.4	0.8	3.2	4.0	3.2	2.4	0.8
85°	1.6	2.4	2.4	2.4	1.6	0.8	2.4	3.2	3.2	2.4	0.8
87.5°	1.6	1.6	2.4	2.4	1.6	0.8	3.2	3.2	3.2	2.4	0.8
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)