

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: P596511

Luminaire Tested: **MSA-SA1B-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2808 lumens
Efficiency: N/A
Efficacy: 63.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B0 - U0 - G1

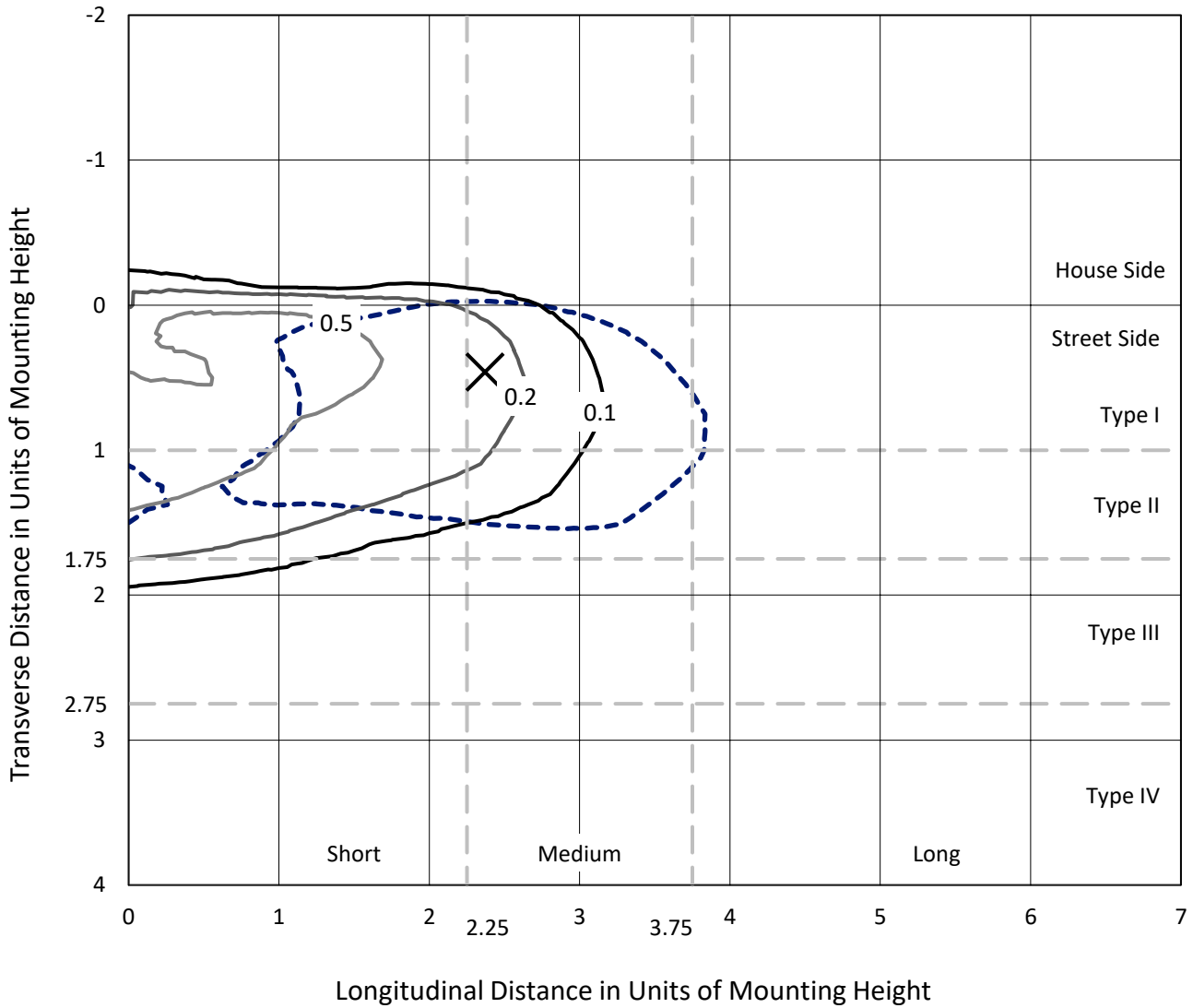
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

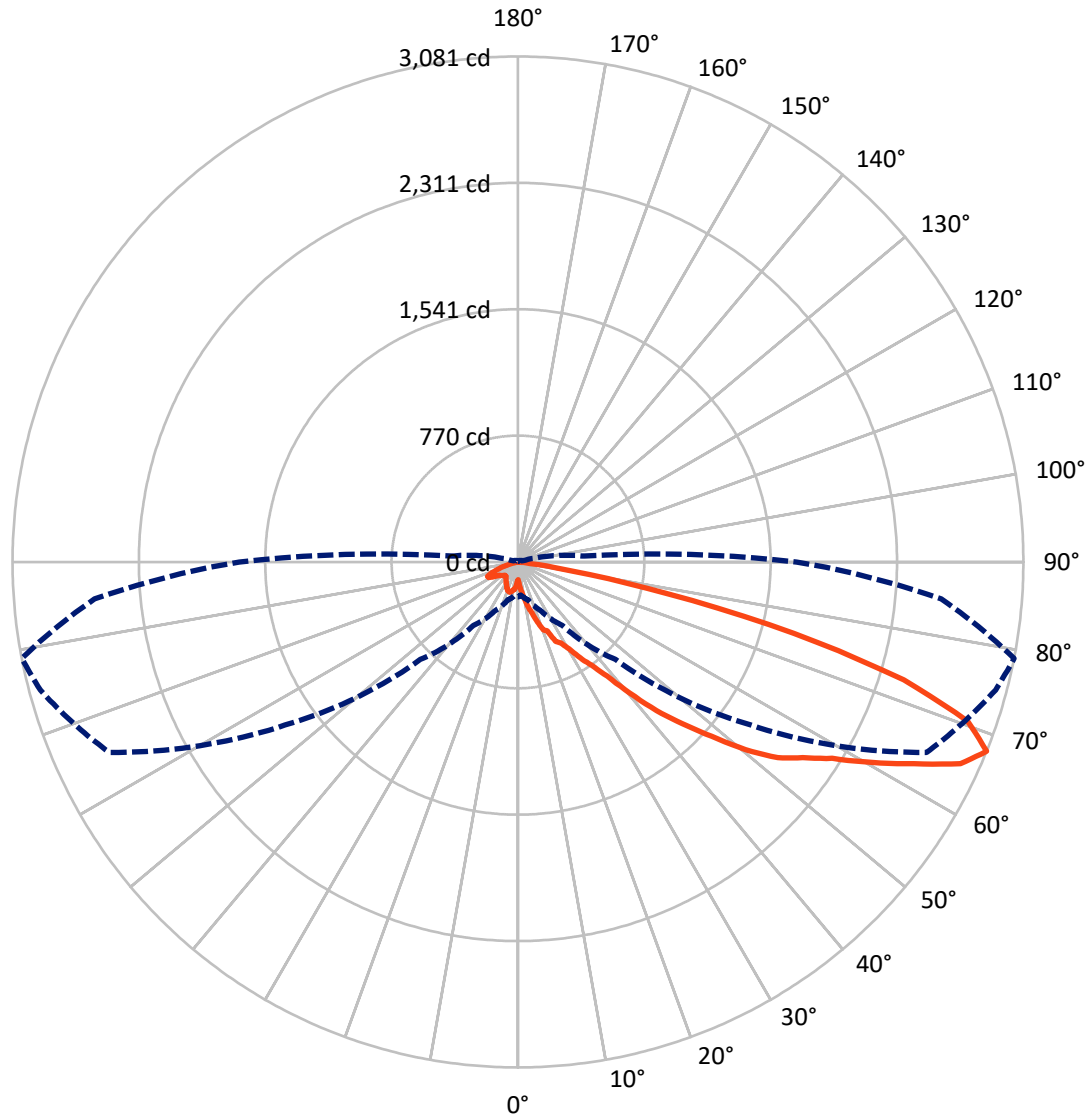
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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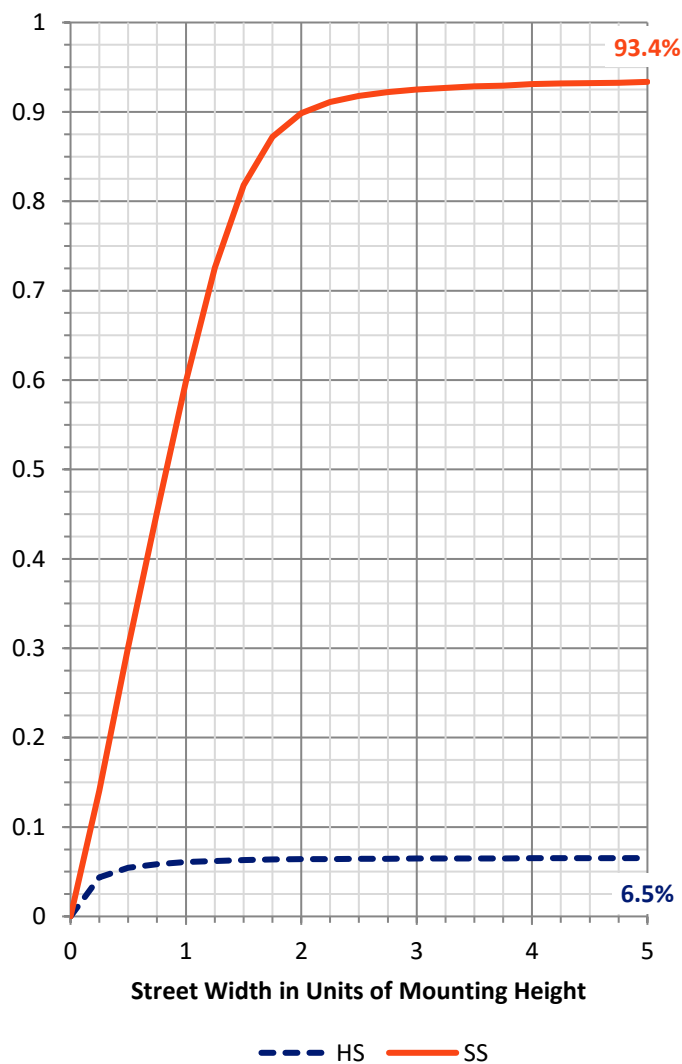
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	184.5	0.0	184.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	2623.5	0.0	2623.5
	% Fixture	93.4	0.0	93.4
Total	Lumens	2808.0	0.0	2808.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.7	0.6
10°-20°	62.7	2.2
20°-30°	121.0	4.3
30°-40°	237.8	8.5
40°-50°	476.3	17.0
50°-60°	761.4	27.1
60°-70°	766.0	27.3
70°-80°	345.6	12.3
80°-90°	21.4	0.8
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°	2808.0	100.0
0°-180°	2808.0	100.0

Coefficient of Utilization



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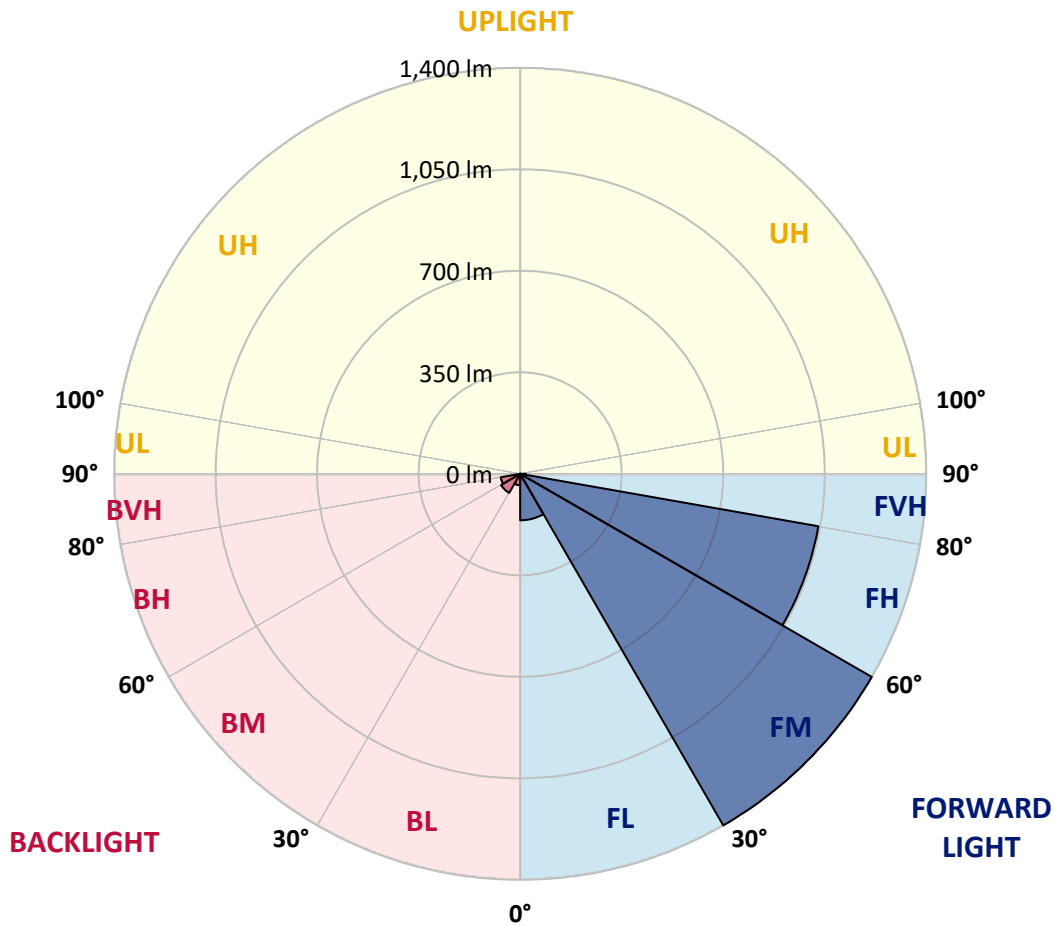
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	160.3	5.7			
FM (30°-60°)	1399.5	49.8			
FH (60°-80°)	1043.6	37.2			G1/1800
FVH (80°-90°)	20.0	0.7			G1/100
BL (0°-30°)	39.2	1.4	B0/110		
BM (30°-60°)	75.9	2.7	B0/220		
BH (60°-80°)	68.0	2.4	B0/110		G0/110
BVH (80°-90°)	1.4	0.0			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2
2.5°	146.1	140.9	132.3	137.1	136.8	139.3	134.7	129.6	121.4	129.6	130.2
5°	210.4	200.6	194.4	193.2	186.4	180.0	178.6	173.4	169.3	162.1	168.6
7.5°	262.1	257.6	246.6	245.3	228.6	219.3	222.3	220.0	204.6	197.1	203.4
10°	284.0	276.3	277.9	276.3	269.2	271.8	265.8	258.8	246.6	234.0	218.3
12.5°	292.6	291.3	304.2	302.6	319.3	339.5	326.0	314.4	286.1	283.0	261.4
15°	310.8	318.6	316.7	323.2	333.9	368.1	367.8	370.6	340.5	324.4	293.3
17.5°	327.1	332.8	323.5	330.9	360.0	380.8	408.5	397.7	401.1	384.7	336.5
20°	320.1	326.6	317.3	312.8	364.1	403.4	440.4	432.5	452.9	442.7	376.3
22.5°	363.6	351.4	328.0	313.5	351.7	402.9	451.7	484.7	481.1	456.0	413.3
25°	417.3	409.9	381.9	356.2	359.6	400.1	487.3	535.7	546.3	535.6	448.4
27.5°	489.8	488.1	430.8	419.6	386.5	387.9	492.9	600.1	576.1	559.4	489.5
30°	584.3	570.9	502.9	488.4	439.5	415.5	526.9	655.7	638.1	615.3	528.0
32.5°	686.0	688.1	601.4	553.4	514.1	485.6	513.4	681.7	714.7	696.3	576.1
35°	801.5	810.5	704.5	648.1	571.6	529.7	571.3	761.6	820.7	772.3	640.7
37.5°	979.4	979.1	855.2	743.0	687.4	641.9	667.8	834.2	951.0	882.9	756.5
40°	1135.9	1101.8	986.6	857.7	771.0	758.6	739.9	933.6	1090.2	1049.2	859.4
42.5°	1252.7	1228.7	1089.6	989.3	881.8	842.5	835.9	1079.2	1295.6	1238.2	1006.3
45°	1392.5	1313.9	1211.4	1121.0	1011.6	1000.1	984.5	1227.0	1534.6	1405.2	1134.0
47.5°	1517.7	1443.7	1346.8	1230.8	1105.1	1199.5	1139.4	1356.9	1708.4	1586.9	1274.9
50°	1623.1	1544.5	1436.0	1347.6	1293.8	1357.8	1257.7	1463.9	1896.2	1797.8	1406.6
52.5°	1676.9	1587.9	1504.0	1449.3	1482.3	1467.9	1418.0	1593.4	2056.3	1982.6	1523.3
55°	1632.7	1545.8	1510.6	1537.7	1637.9	1596.2	1600.2	1794.2	2207.3	2105.8	1624.9
57.5°	1437.1	1357.7	1373.3	1447.5	1639.4	1748.4	1808.0	1989.2	2328.5	2259.3	1781.5
60°	1087.1	1023.2	1081.1	1212.6	1485.2	1718.0	1955.3	2184.3	2501.7	2480.1	2018.6
62.5°	663.9	629.2	711.3	875.3	1183.5	1569.3	2041.2	2444.3	2687.0	2710.1	2270.2
65°	338.7	323.1	391.5	535.7	799.7	1289.1	1979.2	2605.9	2878.5	2963.6	2510.0
67.5°	213.3	203.2	239.8	326.8	471.8	840.8	1732.9	2747.2	3013.8	3081.1	2590.0
70°	147.8	141.5	173.1	224.3	297.7	452.9	1286.6	2615.4	2906.5	2909.6	2396.3
72.5°	93.8	88.9	119.7	166.1	219.6	233.9	737.6	2052.2	2488.0	2459.3	1940.6
75°	60.8	58.4	76.0	121.7	168.7	144.3	364.5	1384.8	1784.0	1739.1	1289.0
77.5°	43.7	42.1	50.9	81.3	120.1	100.9	163.5	825.4	1022.9	924.7	625.7
80°	26.3	26.2	36.8	50.9	85.4	71.2	75.5	374.8	396.6	323.4	191.2
82.5°	13.2	13.6	20.6	32.8	55.0	46.6	34.5	124.8	106.5	78.5	38.7
85°	3.1	3.9	10.8	22.6	27.6	18.6	16.4	32.7	29.3	22.1	11.3
87.5°	0.0	0.0	3.4	5.4	7.4	3.1	5.6	6.2	7.9	6.2	2.3
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°	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2
2.5°	130.3	128.5	117.2	114.2	113.9	110.7	111.5	108.4	108.5	115.5	115.5
5°	166.1	155.3	144.4	134.8	128.3	119.0	115.6	114.2	113.0	115.8	117.5
7.5°	195.0	179.1	159.6	138.7	119.3	106.0	104.2	100.8	99.5	102.3	104.5
10°	207.9	188.1	161.3	130.8	112.7	101.9	92.9	88.1	87.1	87.0	87.8
12.5°	235.1	210.5	163.2	127.9	108.2	96.3	86.1	78.0	70.6	71.4	70.6
15°	257.0	227.9	163.2	120.7	97.4	85.4	67.5	63.5	62.4	64.1	62.7
17.5°	289.9	245.0	154.9	108.0	88.1	66.4	59.6	59.3	61.5	63.9	62.4
20°	309.7	247.4	141.2	93.5	72.3	57.6	55.1	52.6	55.7	57.7	57.0
22.5°	330.3	247.5	127.4	85.8	58.2	52.5	48.4	46.4	46.9	48.8	49.1
25°	339.1	241.5	114.5	75.5	52.8	46.9	42.7	40.6	39.8	40.7	40.4
27.5°	363.1	229.9	100.6	64.4	50.2	41.6	37.8	35.1	32.8	34.4	34.7
30°	366.5	226.2	93.0	57.3	46.7	36.8	33.4	30.6	28.9	31.1	31.1
32.5°	377.4	205.7	89.2	54.3	43.2	34.1	29.4	27.4	27.1	28.5	28.6
35°	394.1	196.7	83.4	52.0	39.9	30.8	26.5	25.5	25.2	26.3	26.3
37.5°	450.8	185.6	77.1	50.0	37.2	29.1	25.7	24.1	24.3	25.2	25.9
40°	488.4	187.0	67.6	47.5	33.9	27.6	24.1	23.1	22.9	23.4	23.8
42.5°	558.2	188.1	63.5	44.9	31.4	25.7	22.6	21.8	21.2	21.7	22.1
45°	636.2	193.8	61.3	42.7	30.0	24.6	21.2	20.7	19.3	19.7	20.3
47.5°	711.4	214.7	58.7	39.6	28.8	24.0	19.8	18.7	17.8	17.6	18.3
50°	796.9	235.0	55.7	36.2	27.6	23.1	18.4	16.7	16.1	16.1	16.6
52.5°	873.3	254.3	52.9	33.9	26.6	21.4	17.2	15.5	15.0	15.0	15.6
55°	953.8	274.6	50.5	31.7	25.4	19.7	16.1	14.6	14.4	14.1	14.6
57.5°	1095.9	318.9	47.4	29.9	23.7	18.3	15.2	13.6	13.3	12.8	13.3
60°	1302.9	386.8	43.3	28.0	21.7	17.3	14.4	12.5	12.1	11.3	11.5
62.5°	1505.2	441.8	38.7	25.7	19.8	16.4	13.2	11.3	10.5	9.6	9.8
65°	1678.6	463.4	33.7	22.9	18.0	14.2	11.5	9.9	8.8	7.6	7.4
67.5°	1699.0	409.3	28.9	20.3	16.1	12.1	9.8	8.8	7.1	6.0	5.7
70°	1529.0	304.9	24.1	18.0	13.9	10.2	8.4	7.7	6.7	5.7	5.3
72.5°	1217.6	225.1	20.3	15.9	12.2	8.7	7.1	7.3	6.7	5.6	5.0
75°	805.2	128.8	16.6	13.3	10.2	7.0	6.5	6.5	6.3	5.3	4.6
77.5°	387.4	55.6	12.7	10.5	8.2	5.3	5.9	5.9	6.0	4.8	3.9
80°	109.9	16.7	7.9	7.1	6.0	3.6	4.6	4.5	4.0	2.8	1.7
82.5°	19.7	6.5	3.6	3.7	3.4	1.4	2.6	2.5	2.0	1.1	0.2
85°	5.4	2.5	2.0	2.2	1.7	0.5	1.1	1.4	1.1	0.6	0.0
87.5°	1.4	1.1	1.4	1.5	1.2	0.2	0.5	0.2	0.5	0.2	0.0
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)