

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: P596506

Luminaire Tested: **MSA-SA1B-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596506
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3626 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

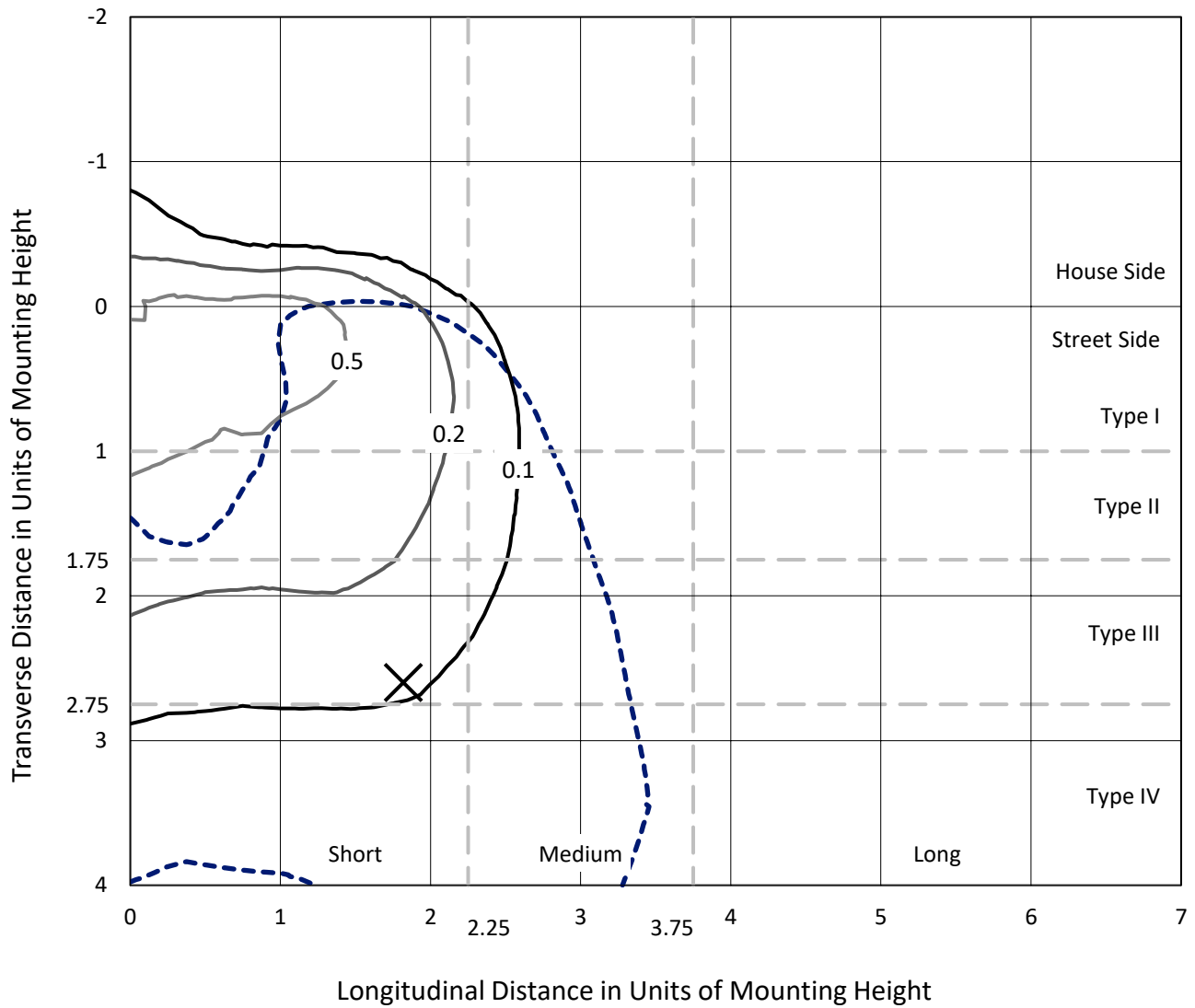
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596506
 CATALOG NUMBER: MSA-SA1B-827-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

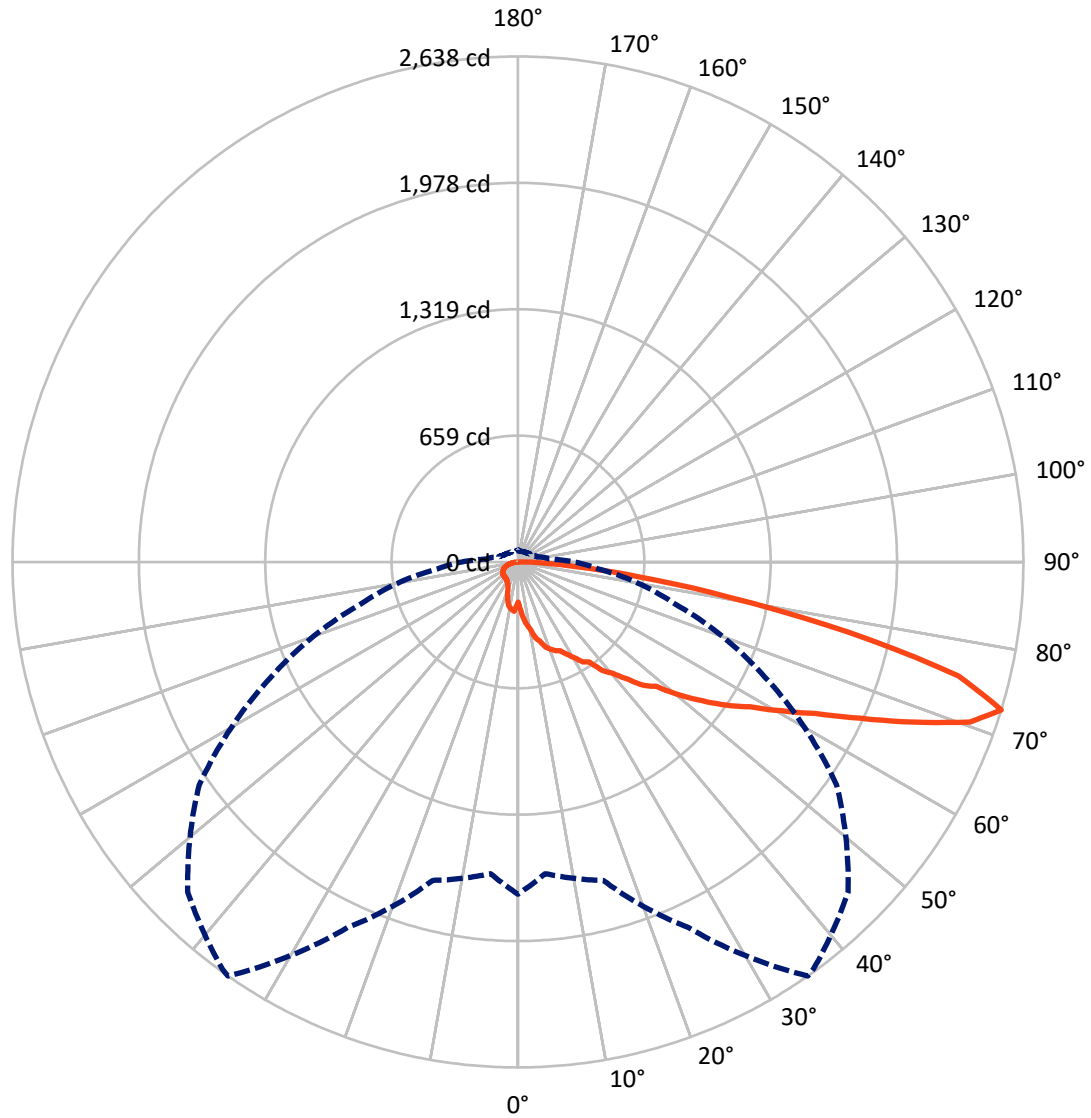
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P596506
CATALOG NUMBER: MSA-SA1B-827-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P596506
 CATALOG NUMBER: MSA-SA1B-827-U-SL4

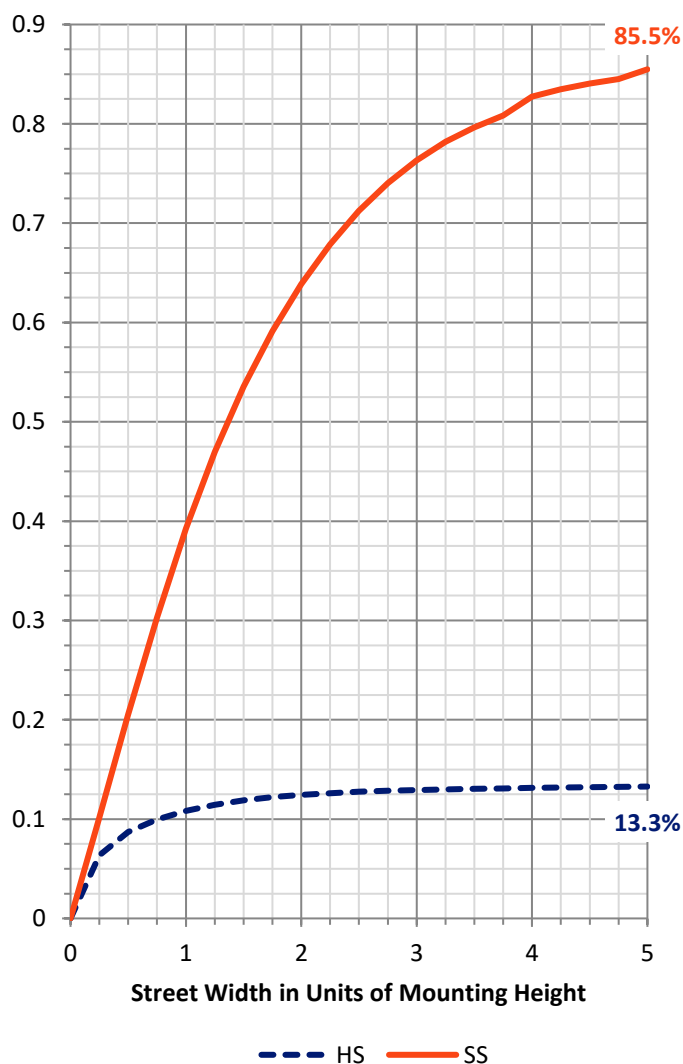
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	486.6	0.0	486.6
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	3139.4	0.0	3139.4
	% Fixture	86.6	0.0	86.6
Total	Lumens	3626.0	0.0	3626.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.9	0.8
10°-20°	98.1	2.7
20°-30°	170.5	4.7
30°-40°	284.9	7.9
40°-50°	494.5	13.6
50°-60°	747.5	20.6
60°-70°	968.4	26.7
70°-80°	714.6	19.7
80°-90°	119.8	3.3
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°	3626.0	100.0
0°-180°	3626.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596506

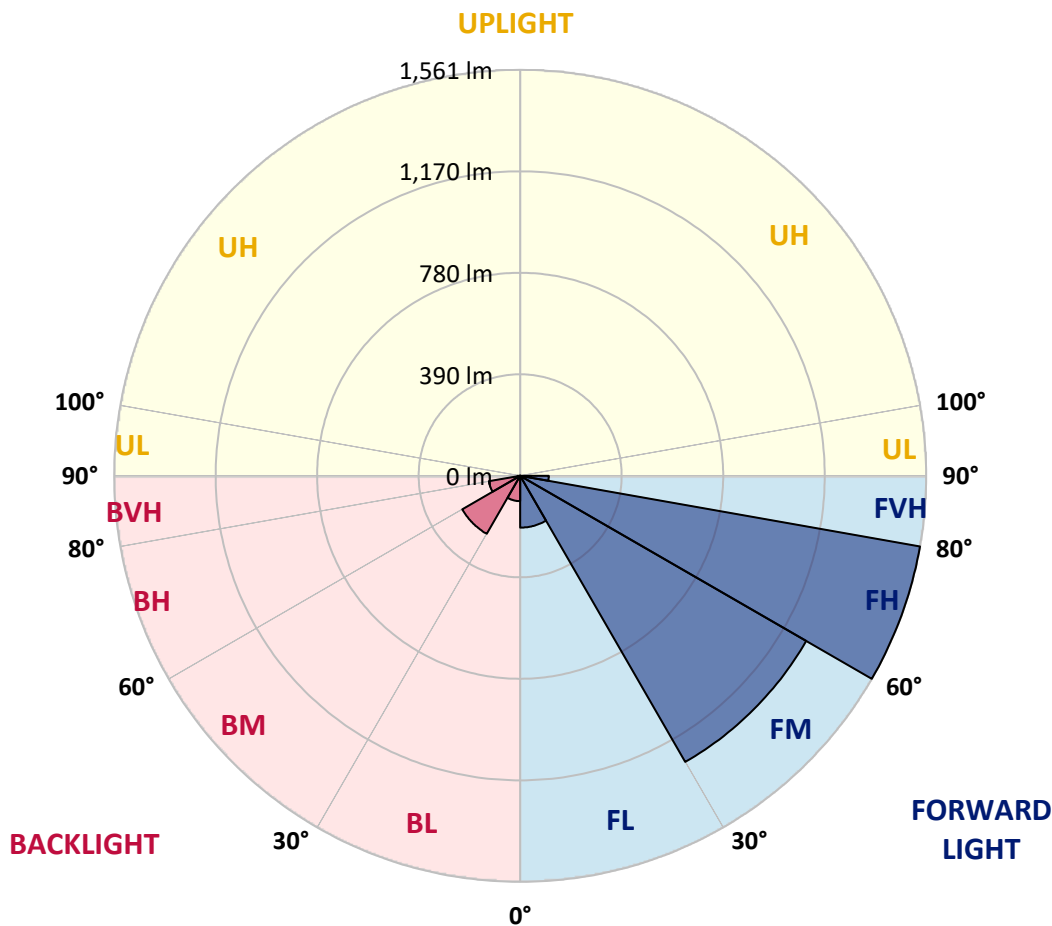
CATALOG NUMBER: MSA-SA1B-827-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	199.1	5.5			
FM (30°-60°)	1269.7	35.0			
FH (60°-80°)	1560.6	43.0			G1/1800
FVH (80°-90°)	110.0	3.0			G2/225
BL (0°-30°)	97.3	2.7	B0/110		
BM (30°-60°)	257.2	7.1	B1/1000		
BH (60°-80°)	122.4	3.4	B1/500		G1/500
BVH (80°-90°)	9.8	0.3			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





REPORT NUMBER: P596506

CATALOG NUMBER: MSA-SA1B-827-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5
2.5°	261.4	248.9	238.0	237.6	247.6	251.5	249.9	246.5	242.5	234.0	252.6
5°	327.5	309.5	306.1	302.1	293.0	295.4	280.6	291.9	295.4	303.6	316.0
7.5°	366.5	356.0	347.8	344.3	328.6	326.7	315.7	331.8	338.6	337.5	356.0
10°	381.8	372.2	372.8	361.7	356.6	358.7	360.0	360.3	364.5	367.9	358.6
12.5°	389.7	393.4	407.0	399.4	405.9	408.6	421.6	408.3	408.7	391.2	400.8
15°	429.5	438.8	430.9	430.5	428.5	432.9	444.0	435.0	442.0	436.4	424.0
17.5°	477.4	480.2	465.1	458.9	466.9	465.5	462.7	464.1	446.8	479.0	463.8
20°	492.1	503.1	483.2	458.9	485.5	489.0	488.4	482.4	452.7	499.1	484.4
22.5°	534.9	520.0	504.2	488.7	502.4	504.4	501.0	486.6	476.7	494.3	505.9
25°	554.2	550.6	530.5	528.7	513.7	506.5	512.4	508.2	498.5	529.9	517.1
27.5°	598.5	594.3	548.0	567.0	545.2	543.4	512.3	526.2	535.9	533.6	552.8
30°	648.6	653.4	585.8	604.8	579.6	576.2	544.9	562.6	569.2	571.4	595.4
32.5°	704.3	717.5	650.3	634.7	621.2	623.5	597.1	564.9	590.7	641.3	651.7
35°	764.7	770.1	699.7	676.2	641.0	638.5	639.0	643.0	669.2	726.9	735.0
37.5°	876.3	851.2	789.4	729.9	718.1	695.0	710.7	723.0	749.2	837.7	871.5
40°	945.0	926.4	832.3	797.8	765.3	767.5	796.7	796.6	858.3	949.6	1001.2
42.5°	1008.6	988.3	899.6	865.0	834.2	841.8	850.1	864.8	983.2	1130.4	1153.9
45°	1059.8	1015.4	951.6	943.9	918.5	908.5	943.9	967.4	1132.6	1276.6	1290.3
47.5°	1094.6	1058.1	995.7	988.9	970.2	994.8	1091.5	1106.7	1248.3	1423.5	1422.4
50°	1147.6	1097.6	1041.2	1037.7	1090.5	1103.6	1221.5	1220.0	1361.0	1545.5	1519.9
52.5°	1208.5	1145.6	1084.4	1122.6	1203.1	1209.6	1311.9	1353.6	1484.0	1663.1	1596.4
55°	1278.6	1208.2	1149.1	1200.2	1320.0	1300.8	1404.3	1506.0	1638.0	1787.0	1651.6
57.5°	1365.5	1280.0	1232.2	1309.9	1426.6	1443.6	1536.6	1664.6	1762.0	1864.1	1691.9
60°	1457.1	1356.8	1313.0	1387.0	1575.9	1595.4	1686.4	1796.5	1900.9	1936.7	1684.3
62.5°	1544.5	1436.0	1396.4	1487.7	1741.5	1789.8	1857.0	1927.1	2016.6	1954.3	1592.5
65°	1641.9	1533.2	1508.3	1645.3	1966.1	2014.1	2101.8	2080.8	2056.2	1891.8	1440.7
67.5°	1744.9	1634.6	1639.2	1828.1	2230.9	2239.1	2373.9	2234.0	2009.6	1726.2	1185.8
70°	1800.3	1687.4	1735.2	2022.9	2500.3	2488.6	2516.1	2275.2	1819.7	1364.5	817.3
72.5°	1733.2	1632.4	1720.0	2104.9	2637.5	2624.8	2436.3	2030.8	1422.7	848.6	423.7
75°	1467.5	1370.3	1504.3	1876.3	2374.4	2386.1	2073.4	1510.2	814.5	341.3	176.0
77.5°	997.1	947.0	1061.8	1398.6	1763.7	1804.4	1538.3	883.1	342.0	141.3	106.5
80°	527.0	503.1	587.9	805.7	1116.8	1147.1	904.6	439.8	175.2	91.5	76.0
82.5°	286.3	276.3	321.8	414.3	634.5	661.0	469.1	292.2	118.1	57.3	46.4
85°	192.4	188.5	218.7	222.5	300.1	308.8	245.8	225.0	70.9	28.0	30.6
87.5°	96.3	92.4	115.1	101.7	114.5	114.7	112.7	143.6	18.0	9.3	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596506
 CATALOG NUMBER: MSA-SA1B-827-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5	209.5
2.5°	252.9	247.5	228.7	228.6	231.4	229.5	230.9	223.3	220.1	234.9	234.2
5°	314.3	298.1	282.4	277.0	270.7	256.9	257.7	257.8	255.5	264.3	265.0
7.5°	350.4	330.9	316.5	287.7	265.1	247.5	249.8	252.4	249.8	261.5	265.9
10°	355.6	340.2	323.0	291.0	275.9	260.0	243.9	229.7	228.0	222.5	224.3
12.5°	386.9	374.1	338.2	303.0	285.5	261.1	231.7	215.4	201.8	204.1	199.8
15°	412.6	403.5	360.4	314.5	272.7	242.4	211.1	188.8	176.6	175.2	170.9
17.5°	447.4	434.4	362.5	306.6	256.1	219.8	184.5	159.3	154.0	151.8	149.7
20°	464.1	440.8	355.2	281.8	236.8	192.8	158.2	136.5	135.0	138.8	138.0
22.5°	478.7	446.0	348.7	266.8	206.6	165.6	140.2	126.0	124.3	129.2	130.2
25°	487.2	461.0	341.6	251.5	187.9	145.3	126.8	118.7	119.0	125.5	124.7
27.5°	525.6	466.3	323.6	233.4	166.4	130.3	120.3	116.1	114.4	123.3	124.1
30°	549.7	500.7	319.6	214.2	150.4	119.3	114.4	112.7	112.4	123.2	124.0
32.5°	594.6	512.1	321.4	193.3	136.0	115.9	110.0	109.9	113.0	123.3	124.6
35°	656.8	560.4	312.5	181.4	128.1	110.7	106.6	107.9	113.1	124.4	126.1
37.5°	778.1	605.9	315.3	170.2	125.5	109.0	105.7	106.5	115.0	127.2	131.9
40°	874.3	688.4	310.9	164.7	122.0	108.6	103.7	106.8	114.8	128.8	132.9
42.5°	1013.5	754.2	311.4	159.1	121.8	107.4	103.4	107.1	114.5	127.4	133.1
45°	1133.0	813.1	318.0	155.8	120.3	109.4	102.9	107.6	112.5	122.4	128.8
47.5°	1231.0	878.9	324.8	152.8	119.6	111.3	102.5	104.3	109.1	116.8	122.6
50°	1310.8	925.2	333.5	152.1	119.6	110.3	101.2	101.1	105.1	111.3	116.7
52.5°	1373.1	957.8	339.4	152.9	119.6	106.8	99.7	98.4	100.9	105.4	110.8
55°	1418.1	967.9	334.6	154.9	119.5	103.5	96.9	95.8	97.0	100.1	105.2
57.5°	1436.2	941.4	306.0	151.4	119.5	101.2	93.5	92.2	93.5	95.8	100.9
60°	1390.8	856.3	264.6	142.2	117.2	98.1	89.6	88.8	90.7	92.7	97.7
62.5°	1277.1	743.2	220.5	131.4	112.4	95.5	85.9	86.0	89.0	91.8	96.7
65°	1100.4	606.4	183.9	120.4	106.3	91.3	82.0	83.1	87.3	91.0	96.0
67.5°	865.9	449.3	154.8	109.7	97.8	84.5	77.7	78.0	80.9	84.5	89.3
70°	578.8	285.8	127.2	97.2	86.7	75.7	71.0	70.0	69.2	72.3	76.5
72.5°	293.6	168.8	104.5	83.1	74.6	66.1	62.5	59.7	57.6	59.4	62.7
75°	153.8	118.1	84.3	69.0	61.6	56.2	53.5	49.8	48.3	49.4	51.7
77.5°	108.8	92.4	68.3	54.6	50.1	44.6	45.0	41.2	39.9	40.5	43.0
80°	83.6	73.2	52.5	41.3	38.7	33.3	34.8	32.5	31.0	30.6	32.5
82.5°	57.0	55.1	37.3	28.9	27.1	23.2	25.4	24.5	22.4	21.2	22.1
85°	38.4	36.5	22.8	16.7	15.9	12.1	15.5	14.9	13.2	11.3	11.5
87.5°	6.7	12.2	6.5	4.2	3.9	1.4	3.6	3.4	3.1	1.5	1.2
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)