

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: P596492

Luminaire Tested: **MSA-SA1A-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-827-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2966 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

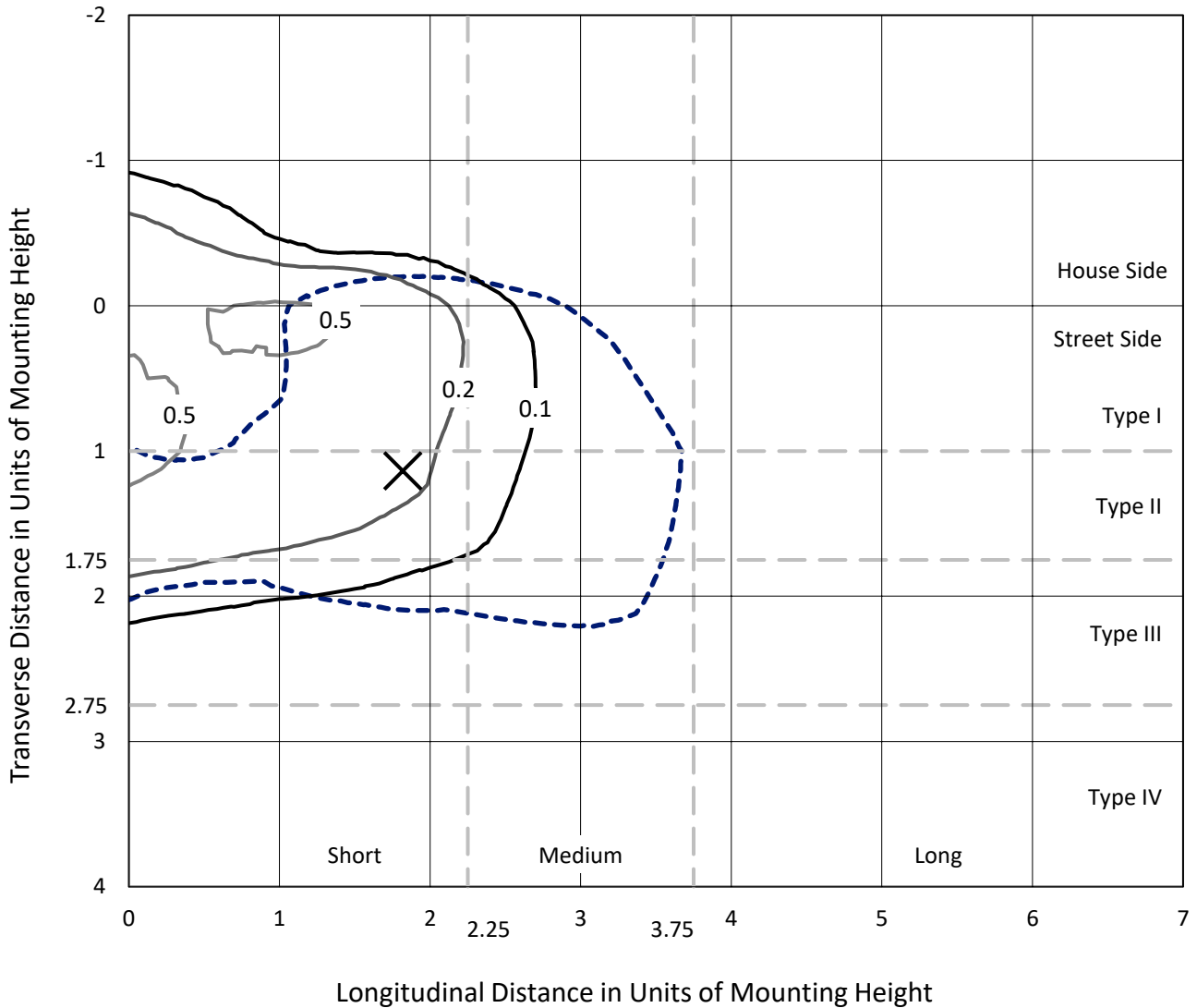
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596492
 CATALOG NUMBER: MSA-SA1A-827-U-T3

Iso-Footcandle Lines of Horizontal Illumination

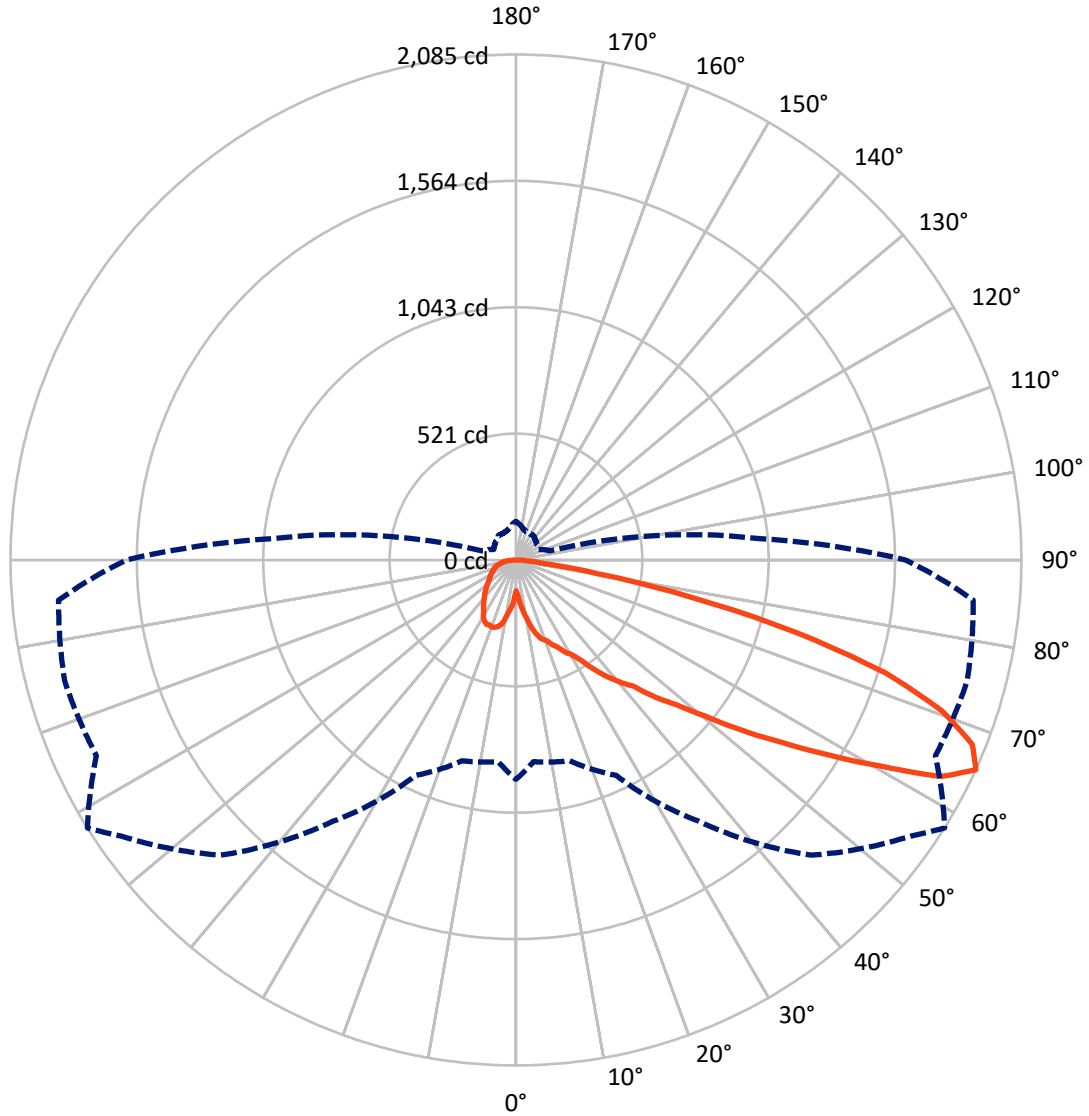
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc
 Type III - Short - N/A

REPORT NUMBER: P596492
CATALOG NUMBER: MSA-SA1A-827-U-T3

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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 CATALOG NUMBER: MSA-SA1A-827-U-T3

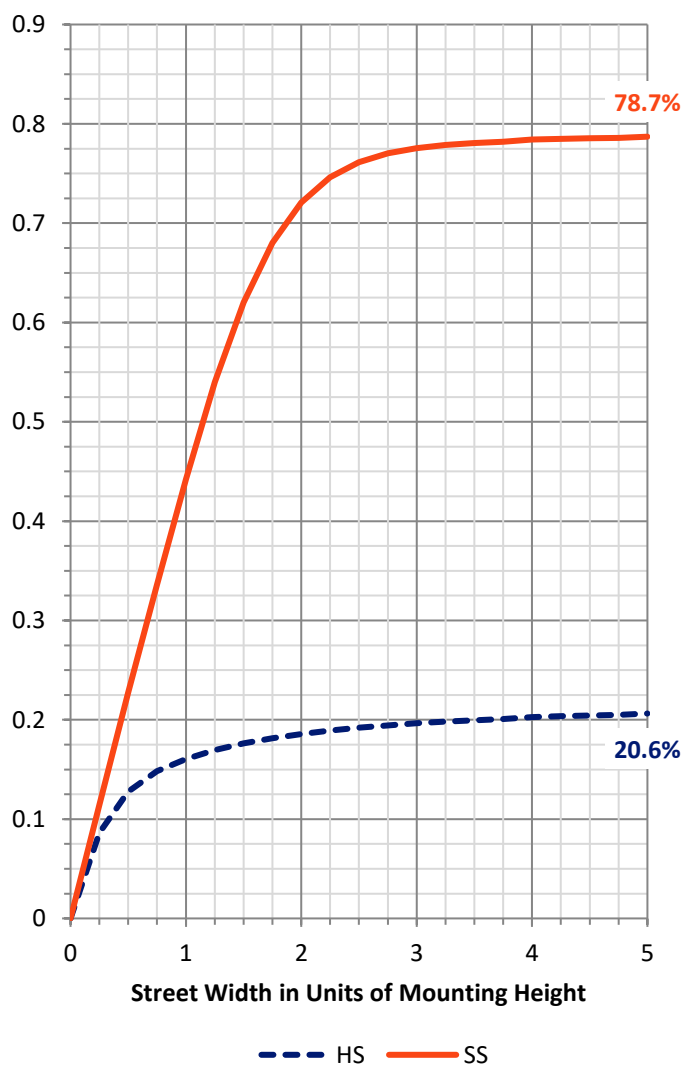
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	624.7	0.0	624.7
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	2341.3	0.0	2341.3
	% Fixture	78.9	0.0	78.9
Total	Lumens	2966.0	0.0	2966.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.4	0.7
10°-20°	84.6	2.9
20°-30°	162.4	5.5
30°-40°	268.1	9.0
40°-50°	445.7	15.0
50°-60°	736.1	24.8
60°-70°	825.7	27.8
70°-80°	375.4	12.7
80°-90°	48.4	1.6
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°	2966.0	100.0
0°-180°	2966.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596492

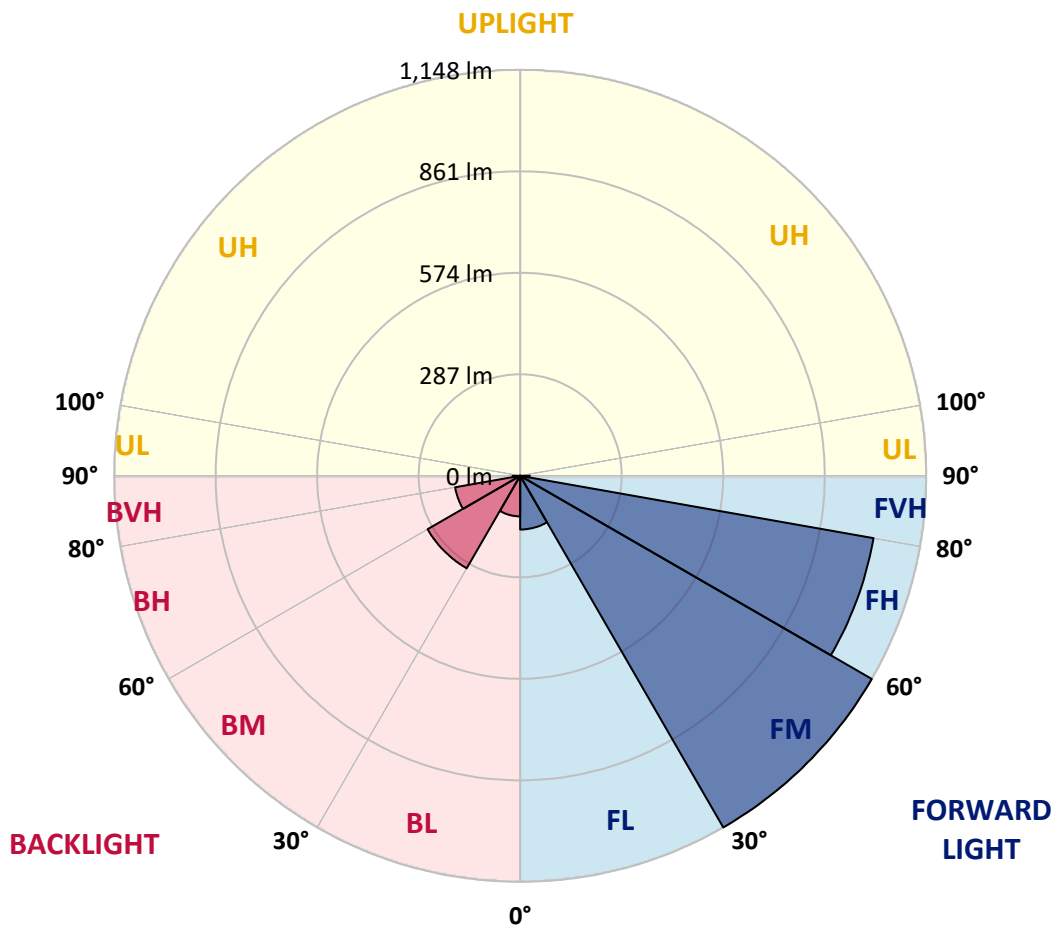
CATALOG NUMBER: MSA-SA1A-827-U-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	151.8	5.1			
FM (30°-60°)	1147.8	38.7			
FH (60°-80°)	1014.4	34.2			G1/1800
FVH (80°-90°)	27.3	0.9			G1/100
BL (0°-30°)	114.7	3.9	B1/500		
BM (30°-60°)	302.1	10.2	B1/1000		
BH (60°-80°)	186.7	6.3	B1/500		G1/500
BVH (80°-90°)	21.2	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





REPORT NUMBER: P596492
 CATALOG NUMBER: MSA-SA1A-827-U-T3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3
2.5°	152.1	147.5	139.8	141.7	146.1	148.6	147.1	145.1	142.5	142.0	153.4
5°	196.9	188.1	184.5	183.1	177.6	174.4	180.0	179.2	182.2	187.6	198.7
7.5°	229.6	223.4	217.5	216.9	206.4	202.7	210.1	214.1	219.4	219.5	234.6
10°	247.2	241.8	241.7	236.2	235.3	242.3	242.5	245.4	246.0	252.3	249.4
12.5°	266.2	265.8	272.6	272.5	280.4	292.0	286.2	286.2	287.9	280.3	289.6
15°	311.5	315.5	302.7	304.8	304.8	316.2	315.8	318.1	323.4	321.4	317.2
17.5°	358.7	361.2	347.1	334.0	335.0	332.5	341.4	342.3	337.2	360.2	355.1
20°	389.1	398.7	369.1	352.6	355.9	358.7	359.1	353.8	351.2	386.5	379.6
22.5°	426.6	418.5	391.3	373.1	378.0	374.1	373.4	377.5	381.1	394.4	405.6
25°	451.7	451.1	418.5	398.6	393.3	392.2	399.7	398.1	406.6	430.8	423.8
27.5°	488.1	499.5	441.7	446.6	423.3	398.7	422.9	430.2	445.5	441.6	457.3
30°	558.8	550.3	489.9	488.5	462.1	441.5	458.2	452.1	479.6	478.8	490.4
32.5°	616.5	622.4	546.4	532.2	512.6	487.8	476.7	493.8	508.6	533.0	539.5
35°	677.5	676.1	604.4	575.7	543.2	533.0	546.7	553.9	585.3	607.7	592.1
37.5°	772.4	761.6	679.5	625.2	600.9	597.2	620.7	610.3	644.4	649.7	658.5
40°	860.5	828.2	748.1	686.0	647.4	661.2	661.9	663.3	681.6	696.0	739.4
42.5°	944.4	921.7	817.9	771.2	714.3	700.8	709.2	712.1	758.3	787.8	847.8
45°	1059.0	998.1	918.2	870.3	806.6	789.4	783.5	807.9	852.5	919.7	971.2
47.5°	1156.0	1101.0	1024.8	961.7	890.4	939.5	905.9	892.2	952.1	1035.3	1117.3
50°	1236.4	1175.9	1101.2	1064.7	1053.4	1097.1	1009.9	1011.5	1066.3	1183.8	1277.8
52.5°	1298.7	1234.1	1167.9	1149.3	1212.8	1238.0	1175.0	1165.5	1205.5	1344.4	1457.3
55°	1356.8	1288.3	1237.2	1274.9	1381.9	1384.8	1380.3	1327.6	1375.7	1516.4	1643.0
57.5°	1371.8	1297.9	1264.0	1318.2	1462.8	1575.3	1619.6	1516.1	1565.1	1672.9	1802.1
60°	1294.8	1231.6	1218.0	1291.6	1506.5	1671.1	1786.6	1724.7	1706.3	1798.5	1913.5
62.5°	1137.2	1063.9	1074.8	1177.1	1460.5	1709.0	1918.5	1966.8	1855.4	1898.5	1962.2
65°	905.1	835.1	857.3	980.4	1315.8	1721.6	1985.9	2085.0	1909.2	1926.7	1893.3
67.5°	638.3	574.7	602.8	761.9	1094.6	1560.3	1997.5	2029.9	1851.9	1846.1	1705.0
70°	361.7	321.8	352.1	484.8	772.6	1243.0	1906.5	1863.9	1749.1	1666.9	1426.6
72.5°	165.9	152.2	166.7	246.8	444.8	827.1	1556.4	1595.1	1507.2	1404.3	1085.3
75°	88.2	83.4	89.6	123.3	208.1	450.0	1105.9	1192.8	1146.0	1065.1	708.0
77.5°	65.6	61.9	64.8	79.9	111.2	176.0	628.3	738.0	755.8	681.3	393.2
80°	50.3	47.3	50.3	60.4	77.0	83.6	268.7	344.0	391.8	316.6	156.2
82.5°	37.3	35.3	39.9	45.3	54.1	52.2	95.4	118.7	153.0	104.6	60.9
85°	29.6	27.2	28.9	30.8	34.6	28.7	43.6	48.8	51.6	43.2	22.5
87.5°	11.6	10.7	21.0	16.6	14.1	8.6	13.1	14.8	15.2	14.6	6.5
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: P596492
 CATALOG NUMBER: MSA-SA1A-827-U-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3	127.3
2.5°	154.6	153.4	146.1	148.5	152.3	153.0	154.6	150.2	148.0	156.1	156.5
5°	199.7	193.1	189.6	190.0	187.5	183.7	189.5	193.3	194.8	200.8	203.1
7.5°	234.7	226.7	220.8	214.2	204.8	198.7	208.9	216.3	220.2	232.8	237.8
10°	250.2	243.8	242.6	234.2	233.9	233.8	233.3	230.7	239.3	238.0	241.5
12.5°	282.4	281.0	269.3	265.9	266.3	265.9	255.6	255.1	255.2	266.6	262.5
15°	312.3	312.5	301.8	289.6	278.8	275.4	271.4	269.5	272.2	278.7	274.7
17.5°	349.2	350.4	319.7	300.5	286.2	285.8	276.1	264.6	281.1	285.1	280.8
20°	373.0	367.8	330.0	297.9	293.8	282.7	270.6	254.8	269.1	278.8	281.5
22.5°	395.6	386.6	339.7	302.5	283.0	269.8	258.0	247.8	252.3	263.1	261.4
25°	410.9	408.5	353.0	313.5	282.6	253.2	237.4	230.9	233.2	249.9	248.3
27.5°	447.5	420.8	350.7	316.3	270.8	230.6	222.7	215.7	213.3	231.3	236.3
30°	472.0	461.0	366.4	311.9	255.8	212.1	200.5	199.0	199.7	220.2	221.6
32.5°	513.5	484.9	392.0	294.8	234.1	198.4	185.0	185.6	189.0	203.9	207.0
35°	556.7	539.6	395.5	282.6	216.4	183.8	178.4	174.0	175.9	189.0	189.6
37.5°	637.0	578.1	416.7	263.7	203.4	178.2	167.9	164.0	165.0	172.4	177.7
40°	707.6	655.3	406.9	245.4	187.4	170.8	157.9	155.0	152.1	159.3	162.7
42.5°	820.9	710.3	403.5	225.3	179.8	160.8	151.9	144.4	141.6	147.7	153.8
45°	934.2	768.8	385.4	204.9	169.2	160.1	143.3	136.1	136.9	142.4	148.6
47.5°	1060.4	847.2	354.6	185.2	157.6	156.5	134.6	131.5	133.8	139.9	146.1
50°	1209.6	930.5	329.2	167.4	149.3	145.8	133.5	129.8	131.9	139.2	145.3
52.5°	1372.8	1021.7	310.6	150.9	139.9	137.2	135.0	131.4	133.9	140.2	146.5
55°	1535.0	1105.1	298.0	139.7	131.9	133.6	138.1	135.5	136.7	141.4	147.7
57.5°	1655.3	1149.1	272.7	127.7	125.4	131.5	138.5	134.1	134.9	141.4	148.2
60°	1725.2	1157.5	231.1	118.0	120.2	127.3	134.6	129.1	128.6	139.3	147.9
62.5°	1717.5	1108.7	183.3	109.1	114.3	121.0	128.8	123.5	124.9	139.6	148.6
65°	1607.8	1009.0	145.8	101.5	107.1	114.1	124.0	121.9	128.5	149.5	159.2
67.5°	1415.1	863.4	117.1	94.5	100.4	109.4	127.3	132.9	135.7	159.6	169.6
70°	1146.9	670.8	97.6	88.3	95.1	111.7	137.0	135.9	133.5	154.8	162.7
72.5°	828.6	459.9	85.8	82.3	88.6	105.0	137.2	131.3	128.3	141.3	147.0
75°	518.4	274.3	75.0	74.6	78.6	94.1	131.1	125.7	117.7	124.1	131.5
77.5°	296.1	140.4	63.1	66.5	68.8	81.6	117.3	112.5	105.4	108.1	115.4
80°	113.0	67.9	53.2	59.0	58.4	69.2	99.4	98.3	90.2	91.0	95.5
82.5°	53.2	38.0	44.2	50.8	47.4	55.1	80.8	80.4	73.2	66.3	69.9
85°	19.8	20.3	32.4	38.7	33.0	35.6	58.4	56.8	49.9	42.1	46.6
87.5°	4.4	7.3	15.9	20.1	11.5	11.0	23.6	20.5	19.8	11.7	12.4
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)