

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: P596546

Luminaire Tested: **MSA-SA1D-827-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596546
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5008 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

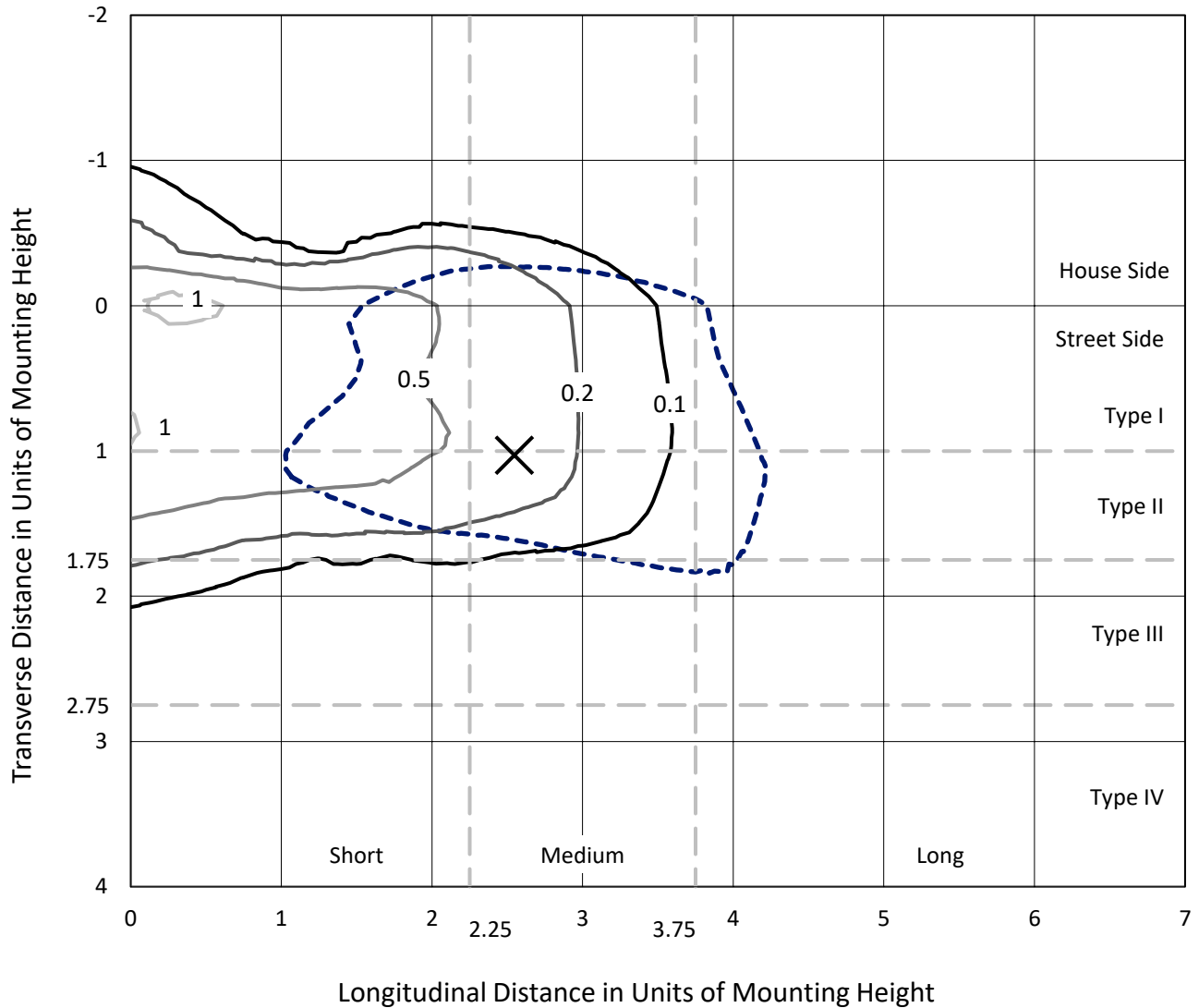
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596546
 CATALOG NUMBER: MSA-SA1D-827-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

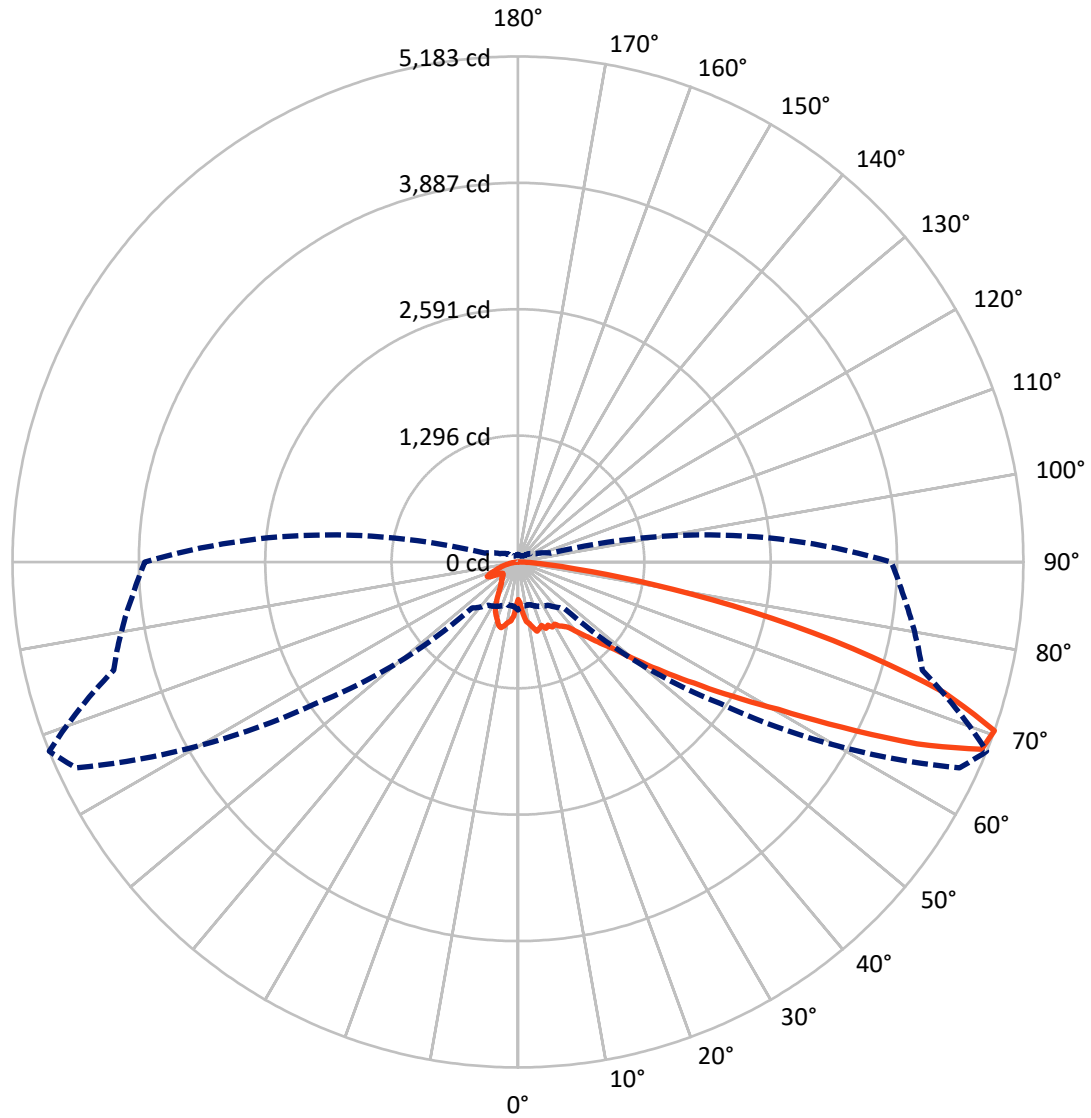
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type III - Medium - N/A

REPORT NUMBER: P596546
CATALOG NUMBER: MSA-SA1D-827-U-SL2

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P596546
 CATALOG NUMBER: MSA-SA1D-827-U-SL2

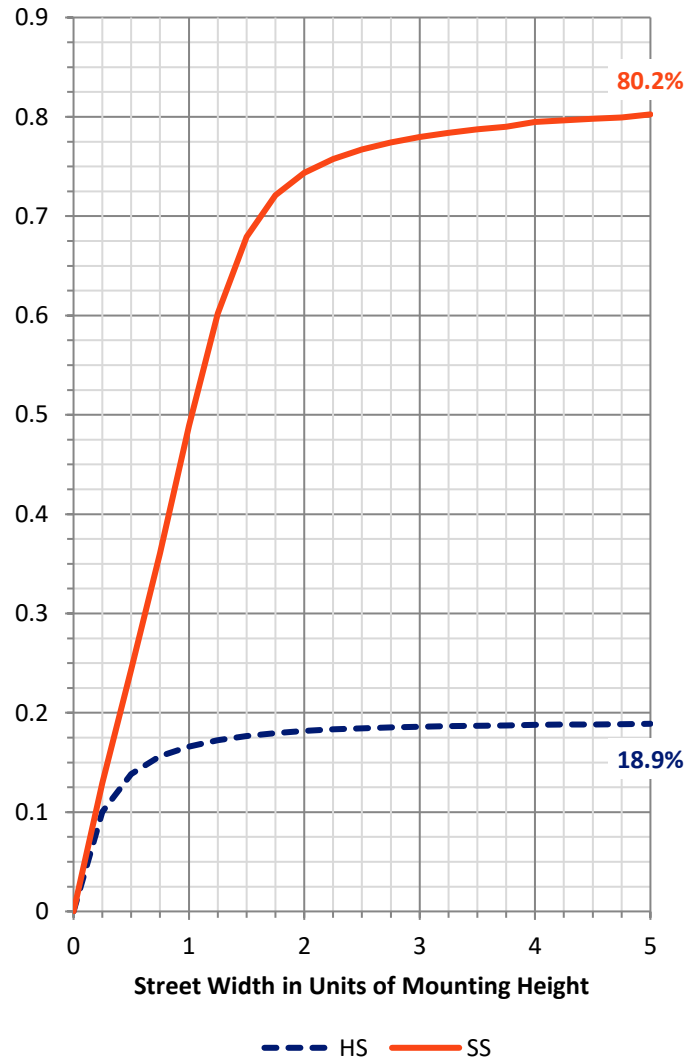
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	956.1	0.0	956.1
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	4051.9	0.0	4051.9
	% Fixture	80.9	0.0	80.9
Total	Lumens	5008.0	0.0	5008.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	1.0
10°-20°	167.1	3.3
20°-30°	254.3	5.1
30°-40°	388.4	7.8
40°-50°	667.8	13.3
50°-60°	1105.3	22.1
60°-70°	1362.7	27.2
70°-80°	875.4	17.5
80°-90°	135.8	2.7
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°	5008.0	100.0
0°-180°	5008.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596546

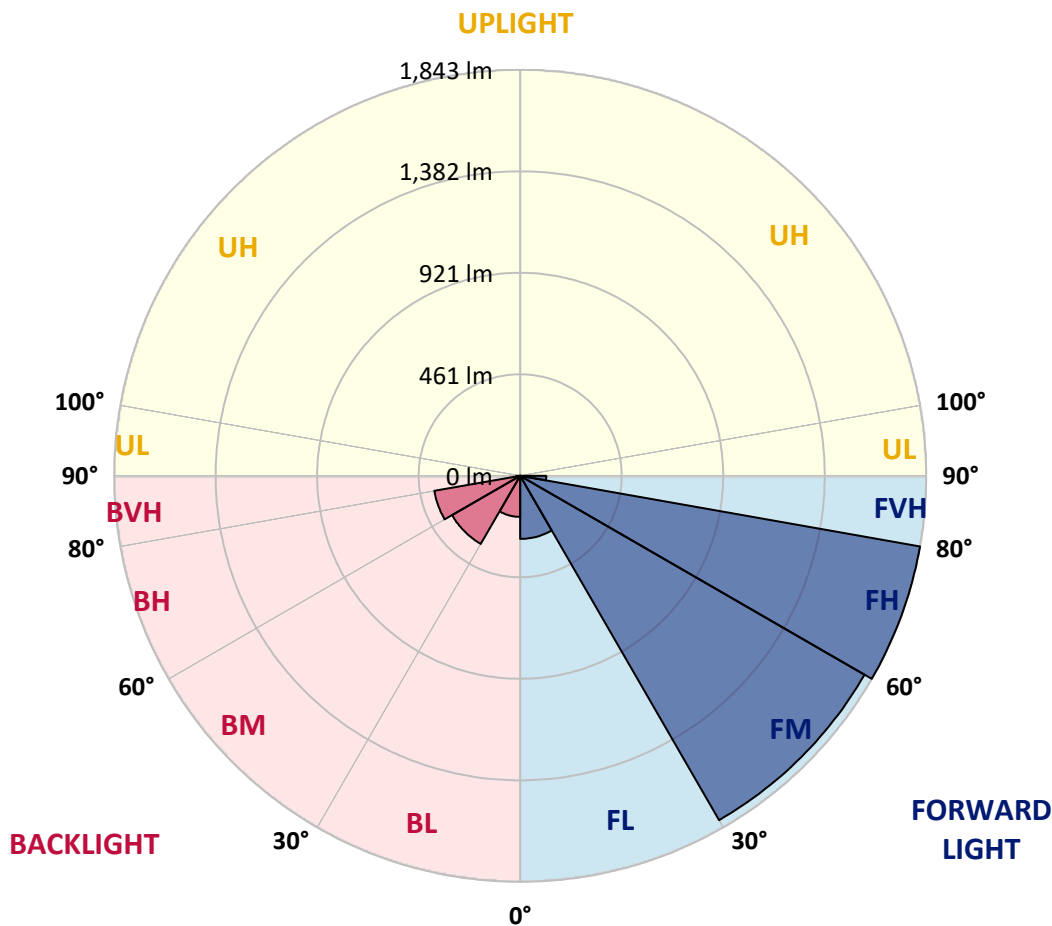
CATALOG NUMBER: MSA-SA1D-827-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	286.4	5.7			
FM (30°-60°)	1804.6	36.0			
FH (60°-80°)	1842.6	36.8			G2/5000
FVH (80°-90°)	118.4	2.4			G2/225
BL (0°-30°)	186.3	3.7	B1/500		
BM (30°-60°)	356.9	7.1	B1/1000		
BH (60°-80°)	395.5	7.9	B1/500		G1/500
BVH (80°-90°)	17.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





REPORT NUMBER: P596546

CATALOG NUMBER: MSA-SA1D-827-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0
2.5°	441.2	423.4	405.4	414.2	428.2	440.6	438.1	439.5	422.5	420.2	464.9
5°	519.8	489.2	488.6	489.0	490.2	476.0	510.8	528.8	532.8	551.2	595.0
7.5°	547.0	534.7	522.1	528.4	512.5	513.9	556.7	603.6	614.7	628.2	688.1
10°	541.4	529.7	533.4	534.5	537.4	561.1	588.5	633.6	643.0	685.8	701.3
12.5°	542.2	540.1	557.7	558.4	589.8	632.4	643.3	684.8	688.5	720.0	784.7
15°	570.9	585.4	575.6	580.8	586.9	637.8	653.5	713.0	735.7	776.1	824.8
17.5°	626.9	631.1	601.5	593.8	613.7	629.2	665.1	690.8	714.5	827.5	894.6
20°	639.9	651.2	616.0	576.0	618.1	639.7	664.6	676.4	694.8	835.0	930.2
22.5°	695.7	672.2	629.6	594.8	608.7	629.6	647.7	691.9	740.3	813.4	965.8
25°	727.3	713.7	675.7	638.4	626.7	627.3	662.1	701.7	718.5	845.1	972.9
27.5°	803.8	782.0	696.7	689.6	645.3	611.0	664.4	726.0	755.4	820.4	1007.7
30°	899.6	883.0	771.1	761.7	694.2	634.2	693.8	744.1	739.9	836.5	1031.8
32.5°	977.1	1004.8	891.8	817.4	769.4	712.0	684.5	740.9	782.6	874.0	1072.7
35°	1087.8	1113.8	985.9	935.6	831.5	748.1	748.9	784.1	809.9	917.8	1118.4
37.5°	1279.4	1256.5	1153.6	1074.2	1007.5	883.0	845.7	833.4	854.1	971.5	1207.9
40°	1417.5	1398.2	1277.1	1231.8	1102.1	1029.7	927.5	915.7	952.4	1026.8	1281.1
42.5°	1581.2	1546.8	1434.1	1396.8	1261.1	1130.8	1027.7	1034.4	1052.2	1131.2	1380.0
45°	1747.8	1664.4	1600.5	1597.5	1507.0	1327.0	1188.4	1183.0	1183.6	1284.8	1491.1
47.5°	1880.1	1805.0	1731.9	1697.1	1651.4	1666.3	1421.9	1358.0	1338.7	1439.5	1657.7
50°	1969.6	1883.2	1800.4	1792.3	1914.2	1994.5	1641.1	1572.8	1584.8	1660.8	1879.9
52.5°	1971.5	1869.0	1782.6	1839.8	2127.2	2242.1	2018.8	1827.9	1866.0	1917.8	2169.7
55°	1834.4	1728.1	1672.0	1802.3	2210.4	2535.7	2549.5	2236.6	2192.6	2211.7	2516.2
57.5°	1545.4	1438.0	1405.3	1561.5	2052.6	2818.9	3190.5	2725.0	2595.9	2516.2	2871.3
60°	1163.3	1070.4	1050.1	1149.6	1701.7	2735.7	3709.4	3332.8	3069.8	2856.4	3227.4
62.5°	872.3	805.7	775.1	789.3	1177.5	2465.1	4050.2	4100.8	3728.3	3227.8	3575.3
65°	708.9	655.0	627.7	609.3	732.3	1906.1	3988.6	4747.2	4497.5	3617.8	3846.1
67.5°	592.1	544.3	531.7	549.8	578.9	1105.8	3506.6	5108.7	5125.7	4002.7	4004.3
70°	491.5	456.1	451.5	502.6	541.0	667.4	2532.8	4995.1	5182.5	4291.3	3967.2
72.5°	379.8	360.7	360.1	440.4	537.4	568.8	1508.3	4315.2	4566.9	4199.1	3604.2
75°	263.5	250.3	260.3	362.0	525.0	577.0	860.8	3361.1	3549.5	3573.2	2887.2
77.5°	181.3	170.2	181.1	261.8	468.9	590.9	602.2	2430.3	2451.2	2396.1	1653.7
80°	126.2	118.4	126.8	185.3	364.9	584.8	512.7	1530.1	1403.9	1069.4	529.4
82.5°	78.2	75.9	85.1	132.0	257.0	532.0	485.8	789.6	602.8	295.1	189.1
85°	41.1	37.7	49.5	86.1	160.8	417.5	455.2	360.3	232.7	104.8	75.9
87.5°	12.2	10.9	19.1	34.8	68.1	187.2	260.5	152.8	86.8	30.8	23.7
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: P596546
 CATALOG NUMBER: MSA-SA1D-827-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0	384.0
2.5°	468.0	465.7	434.7	438.7	445.4	447.1	446.9	435.5	423.6	456.9	455.9
5°	596.1	575.3	559.8	556.5	537.4	518.3	525.0	522.7	519.8	534.9	536.8
7.5°	688.3	659.6	641.6	595.3	551.2	513.1	525.2	529.0	521.5	548.7	556.9
10°	712.6	690.0	670.5	611.0	586.7	564.4	531.5	494.0	489.0	473.3	475.2
12.5°	775.3	772.2	705.7	653.3	621.7	577.4	506.4	460.9	421.9	423.8	412.5
15°	824.8	826.4	746.6	673.2	588.3	520.8	437.2	380.6	340.6	332.6	324.5
17.5°	891.2	887.9	749.9	649.3	541.8	442.9	340.4	284.2	277.5	282.1	275.0
20°	920.1	890.6	728.6	590.0	469.1	336.4	257.2	227.4	240.4	258.9	259.3
22.5°	946.1	895.6	717.4	542.2	372.2	244.6	206.5	201.0	216.3	241.2	243.3
25°	945.1	918.9	697.5	494.0	288.6	190.9	179.4	183.4	201.6	227.6	229.1
27.5°	992.6	901.1	645.8	430.7	217.4	163.5	166.4	173.8	182.3	207.1	211.9
30°	992.2	934.2	619.8	353.8	174.6	149.9	157.4	163.7	170.8	193.5	196.2
32.5°	1015.7	912.6	604.1	275.2	156.6	146.5	148.4	154.7	165.0	180.3	182.1
35°	1044.0	937.1	553.8	218.6	149.9	143.6	145.0	148.6	158.0	172.1	174.0
37.5°	1134.8	941.7	533.8	184.2	149.4	142.3	142.1	144.0	154.7	167.5	173.1
40°	1170.2	983.8	475.8	172.1	148.0	142.3	139.4	140.4	149.2	165.6	170.0
42.5°	1255.1	997.9	432.8	167.9	148.0	139.8	135.2	136.9	147.1	161.6	168.5
45°	1342.5	1017.8	381.7	167.0	147.8	139.6	130.8	134.6	142.9	155.1	162.6
47.5°	1467.0	1089.5	330.5	164.5	146.1	140.6	129.7	129.5	136.9	147.3	154.5
50°	1670.1	1201.4	290.9	161.4	146.3	139.8	127.6	124.7	129.5	138.8	145.7
52.5°	1952.8	1392.1	275.4	159.7	144.6	136.4	124.1	119.5	122.2	129.5	136.2
55°	2281.0	1649.7	290.7	159.7	141.3	131.2	119.1	113.6	115.1	120.1	126.6
57.5°	2664.6	1969.8	364.7	157.4	137.1	124.9	113.0	106.7	107.1	111.5	117.4
60°	3065.1	2327.4	530.5	155.5	134.1	118.0	105.8	99.3	98.7	102.9	108.2
62.5°	3466.3	2657.3	704.9	159.9	133.3	112.1	98.3	91.8	91.6	95.4	99.8
65°	3785.3	2882.8	748.3	177.7	138.8	105.4	90.5	84.5	84.0	87.2	92.0
67.5°	3941.9	2915.5	568.4	200.0	150.3	99.1	83.0	77.3	76.9	80.3	84.5
70°	3826.0	2692.1	350.9	202.3	149.7	91.8	75.2	70.4	69.6	73.1	76.3
72.5°	3397.1	2354.8	266.6	179.0	129.5	81.3	67.5	63.3	62.0	65.2	68.1
75°	2726.6	1869.6	213.6	144.4	102.1	68.5	59.7	55.8	54.3	57.2	59.7
77.5°	1588.3	1051.8	156.1	112.8	77.1	56.0	50.9	47.4	45.7	48.8	50.7
80°	516.4	350.4	98.1	80.9	56.4	43.8	41.3	38.8	37.1	39.2	39.8
82.5°	185.5	130.4	54.3	49.7	37.5	31.4	31.2	29.8	27.7	28.5	28.5
85°	82.2	59.5	32.3	26.6	22.4	16.8	19.7	18.7	16.6	16.1	15.5
87.5°	23.1	19.7	11.7	9.0	7.3	2.7	6.3	5.7	4.6	4.2	2.9
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)