

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: P596480

Luminaire Tested: **MSA-SA1A-827-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596480
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-SA1A-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: 2951 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

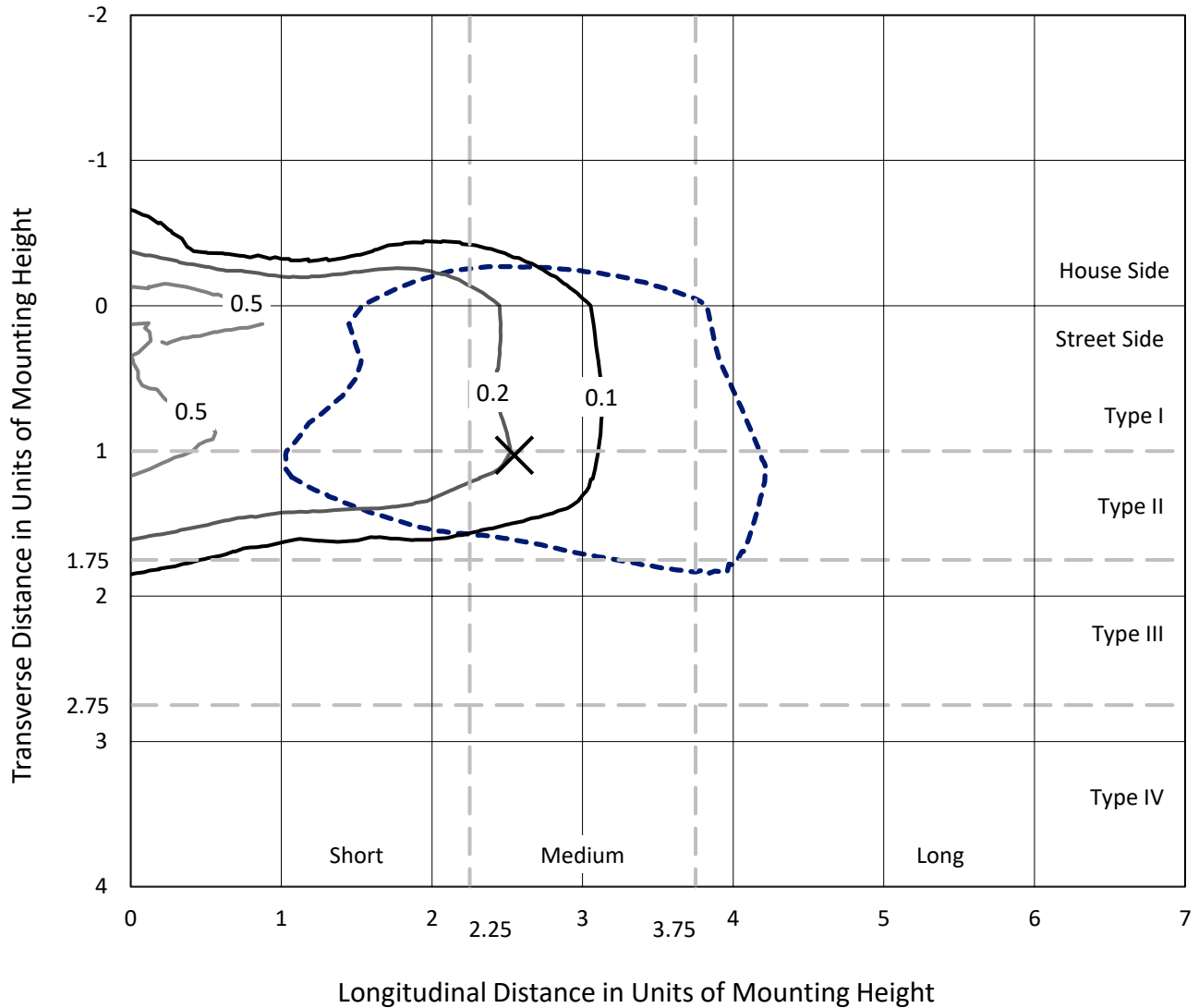
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

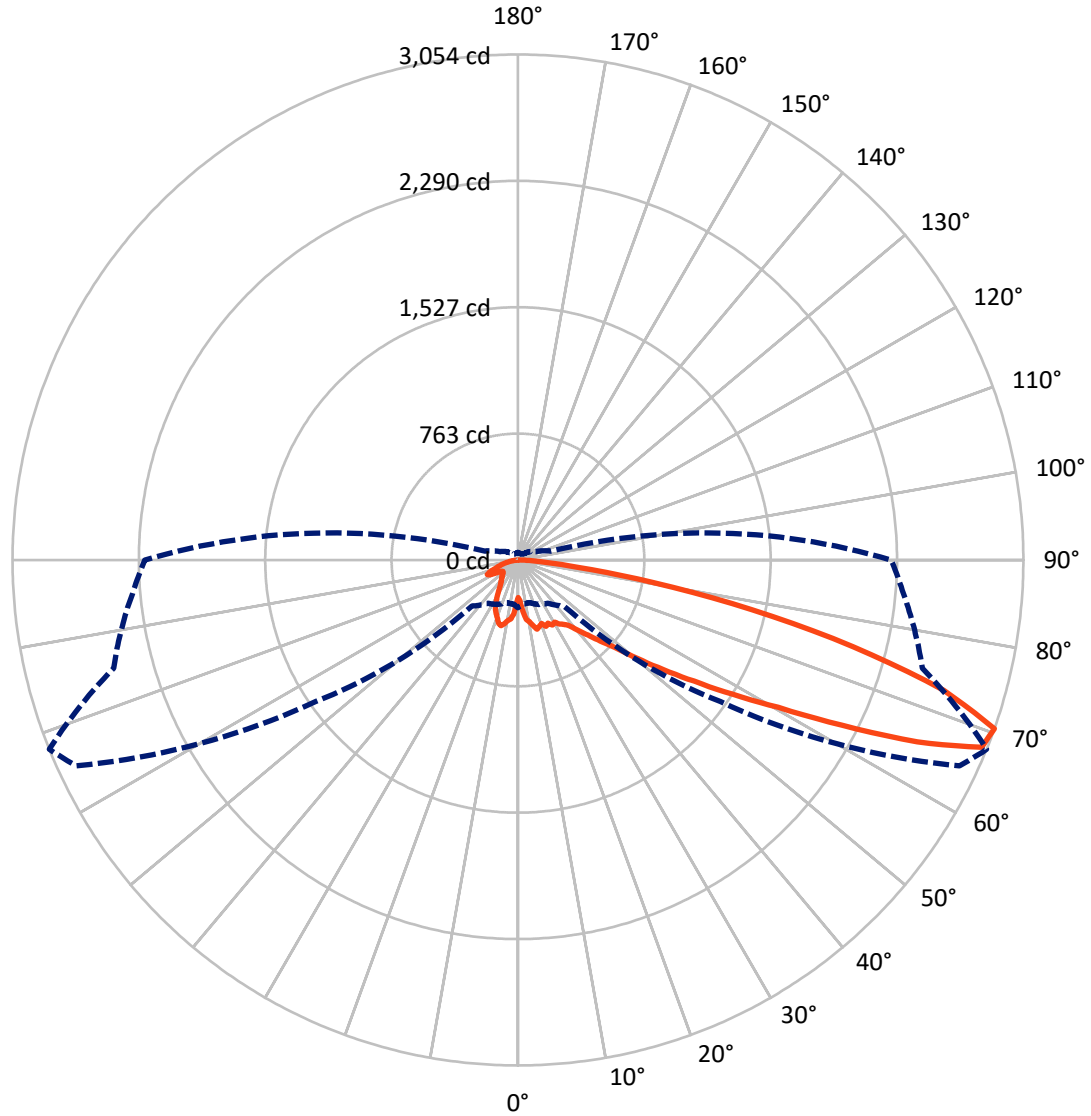
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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

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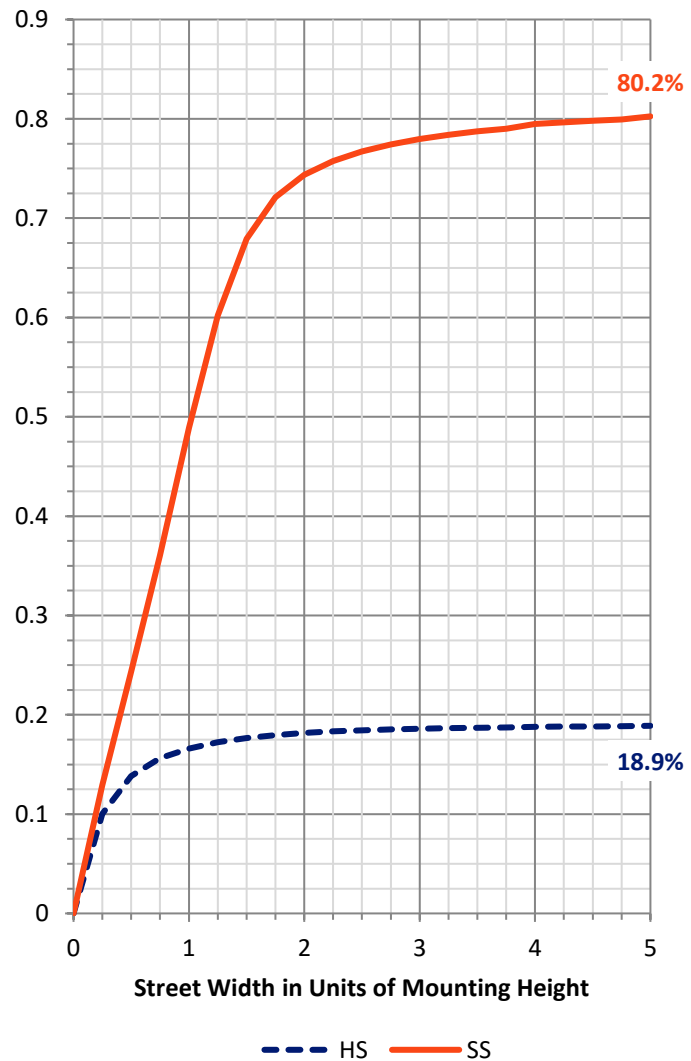
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	563.4	0.0	563.4
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	2387.6	0.0	2387.6
	% Fixture	80.9	0.0	80.9
Total	Lumens	2951.0	0.0	2951.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	1.0
10°-20°	98.5	3.3
20°-30°	149.8	5.1
30°-40°	228.9	7.8
40°-50°	393.5	13.3
50°-60°	651.3	22.1
60°-70°	803.0	27.2
70°-80°	515.8	17.5
80°-90°	80.0	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°	2951.0	100.0
0°-180°	2951.0	100.0



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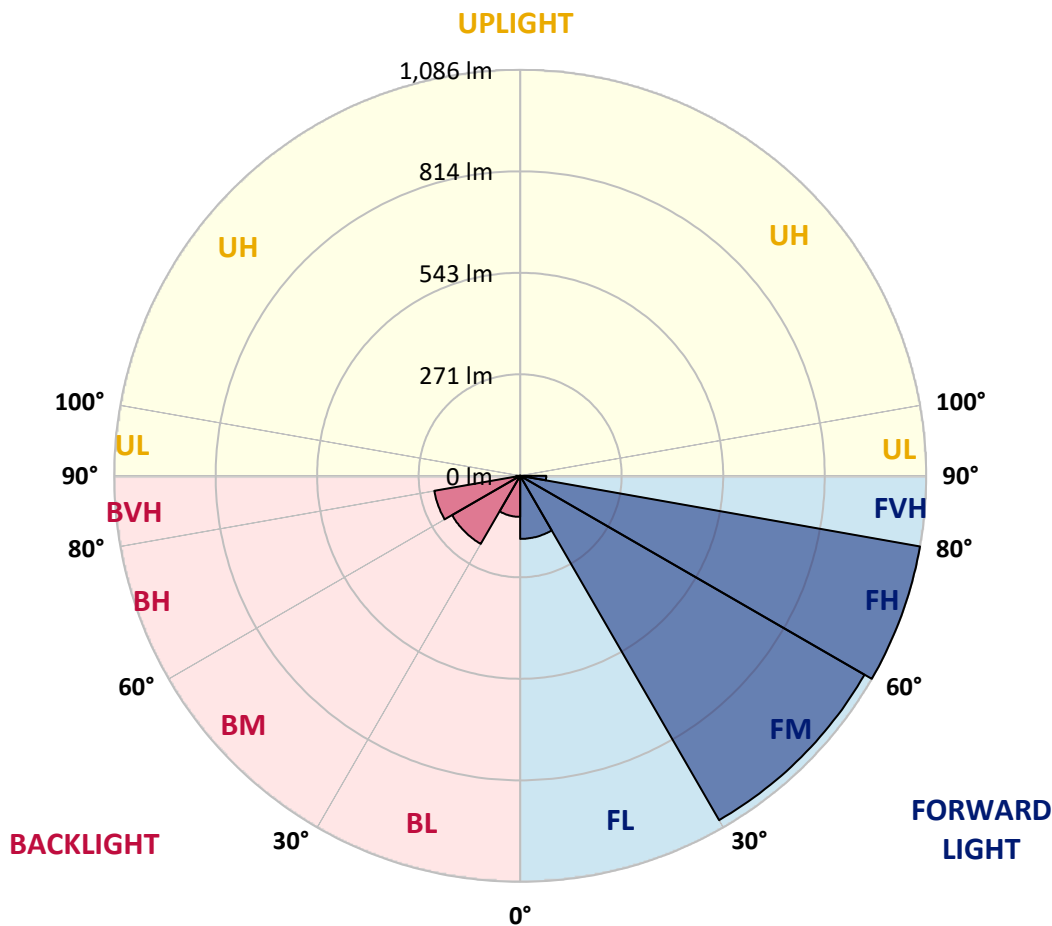
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	168.7	5.7			
FM (30°-60°)	1063.4	36.0			
FH (60°-80°)	1085.7	36.8			G1/1800
FVH (80°-90°)	69.7	2.4			G1/100
BL (0°-30°)	109.8	3.7	B0/110		
BM (30°-60°)	210.3	7.1	B0/220		
BH (60°-80°)	233.1	7.9	B1/500		G1/500
BVH (80°-90°)	10.3	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-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3
2.5°	260.0	249.5	238.9	244.0	252.3	259.6	258.1	259.0	249.0	247.6	273.9
5°	306.3	288.3	287.9	288.1	288.9	280.5	301.0	311.6	314.0	324.8	350.6
7.5°	322.4	315.1	307.7	311.4	302.0	302.8	328.0	355.7	362.2	370.1	405.5
10°	319.0	312.1	314.3	314.9	316.7	330.6	346.8	373.4	378.9	404.1	413.3
12.5°	319.5	318.3	328.7	329.0	347.5	372.6	379.0	403.5	405.7	424.2	462.4
15°	336.4	345.0	339.1	342.2	345.8	375.8	385.1	420.2	433.5	457.3	486.0
17.5°	369.4	371.9	354.5	349.9	361.6	370.8	391.9	407.1	421.0	487.6	527.1
20°	377.1	383.7	363.0	339.4	364.2	376.9	391.6	398.6	409.4	492.0	548.1
22.5°	409.9	396.1	371.0	350.5	358.7	371.0	381.6	407.7	436.2	479.3	569.1
25°	428.6	420.5	398.2	376.2	369.3	369.7	390.2	413.5	423.4	498.0	573.3
27.5°	473.6	460.8	410.5	406.3	380.3	360.0	391.5	427.8	445.1	483.4	593.8
30°	530.1	520.3	454.4	448.8	409.1	373.7	408.8	438.4	436.0	492.9	608.0
32.5°	575.8	592.1	525.5	481.7	453.4	419.6	403.4	436.6	461.2	515.0	632.1
35°	641.0	656.3	581.0	551.3	489.9	440.8	441.3	462.0	477.2	540.8	659.0
37.5°	753.9	740.4	679.8	633.0	593.7	520.3	498.3	491.1	503.3	572.5	711.8
40°	835.3	823.9	752.5	725.8	649.4	606.8	546.5	539.6	561.2	605.1	754.9
42.5°	931.7	911.5	845.0	823.0	743.1	666.3	605.6	609.5	620.0	666.6	813.2
45°	1029.9	980.8	943.1	941.4	888.0	781.9	700.3	697.1	697.4	757.1	878.6
47.5°	1107.9	1063.6	1020.5	1000.0	973.1	981.9	837.9	800.2	788.8	848.2	976.8
50°	1160.6	1109.7	1060.9	1056.1	1128.0	1175.3	967.1	926.8	933.8	978.7	1107.7
52.5°	1161.7	1101.3	1050.4	1084.1	1253.5	1321.1	1189.6	1077.1	1099.6	1130.1	1278.5
55°	1080.9	1018.3	985.2	1062.0	1302.5	1494.2	1502.3	1317.9	1292.0	1303.2	1482.7
57.5°	910.6	847.4	828.1	920.1	1209.5	1661.0	1880.0	1605.7	1529.6	1482.7	1691.9
60°	685.5	630.7	618.8	677.4	1002.7	1612.0	2185.8	1963.9	1808.9	1683.1	1901.8
62.5°	514.0	474.8	456.7	465.1	693.9	1452.6	2386.6	2416.4	2196.9	1902.0	2106.8
65°	417.7	386.0	369.9	359.0	431.5	1123.2	2350.3	2797.3	2650.2	2131.8	2266.3
67.5°	348.9	320.7	313.3	324.0	341.1	651.6	2066.3	3010.3	3020.3	2358.6	2359.6
70°	289.6	268.7	266.0	296.2	318.8	393.2	1492.5	2943.4	3053.8	2528.7	2337.7
72.5°	223.8	212.6	212.2	259.5	316.7	335.2	888.8	2542.7	2691.1	2474.3	2123.8
75°	155.2	147.5	153.4	213.3	309.4	340.0	507.2	1980.5	2091.6	2105.5	1701.3
77.5°	106.8	100.3	106.7	154.3	276.3	348.2	354.8	1432.1	1444.4	1411.9	974.5
80°	74.4	69.8	74.7	109.2	215.0	344.6	302.1	901.6	827.2	630.1	312.0
82.5°	46.1	44.7	50.1	77.8	151.4	313.5	286.3	465.2	355.2	173.9	111.4
85°	24.2	22.2	29.1	50.8	94.7	246.0	268.3	212.3	137.1	61.8	44.7
87.5°	7.2	6.4	11.2	20.5	40.1	110.3	153.5	90.0	51.1	18.2	14.0
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°	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3	226.3
2.5°	275.8	274.4	256.2	258.5	262.5	263.4	263.3	256.6	249.6	269.2	268.6
5°	351.3	339.0	329.9	327.9	316.7	305.4	309.4	308.0	306.3	315.2	316.3
7.5°	405.6	388.7	378.1	350.8	324.8	302.3	309.5	311.7	307.3	323.3	328.2
10°	419.9	406.6	395.1	360.0	345.7	332.6	313.2	291.1	288.1	278.9	280.0
12.5°	456.8	455.0	415.8	385.0	366.3	340.3	298.4	271.6	248.6	249.7	243.1
15°	486.0	487.0	439.9	396.7	346.7	306.9	257.6	224.3	200.7	196.0	191.2
17.5°	525.1	523.2	441.9	382.6	319.3	261.0	200.6	167.5	163.5	166.2	162.0
20°	542.2	524.8	429.3	347.7	276.4	198.2	151.5	134.0	141.7	152.5	152.8
22.5°	557.5	527.7	422.8	319.5	219.3	144.1	121.7	118.4	127.5	142.2	143.4
25°	556.9	541.5	411.0	291.1	170.1	112.5	105.7	108.1	118.8	134.1	135.0
27.5°	584.9	531.0	380.5	253.8	128.1	96.3	98.1	102.4	107.5	122.0	124.9
30°	584.7	550.5	365.2	208.5	102.9	88.3	92.8	96.5	100.7	114.0	115.6
32.5°	598.5	537.7	355.9	162.2	92.3	86.3	87.4	91.1	97.2	106.2	107.3
35°	615.2	552.2	326.3	128.8	88.3	84.6	85.5	87.6	93.1	101.4	102.5
37.5°	668.7	554.9	314.6	108.6	88.1	83.9	83.7	84.8	91.1	98.7	102.0
40°	689.5	579.7	280.4	101.4	87.2	83.9	82.1	82.7	87.9	97.6	100.2
42.5°	739.6	588.0	255.0	98.9	87.2	82.4	79.7	80.6	86.7	95.2	99.3
45°	791.1	599.7	224.9	98.4	87.1	82.3	77.1	79.3	84.2	91.4	95.8
47.5°	864.4	642.0	194.8	97.0	86.1	82.9	76.5	76.3	80.6	86.8	91.0
50°	984.1	707.9	171.4	95.1	86.2	82.4	75.2	73.5	76.3	81.8	85.8
52.5°	1150.7	820.3	162.3	94.1	85.2	80.4	73.1	70.4	72.0	76.3	80.3
55°	1344.1	972.1	171.3	94.1	83.2	77.3	70.2	66.9	67.8	70.8	74.6
57.5°	1570.1	1160.7	214.9	92.8	80.8	73.6	66.6	62.9	63.1	65.7	69.2
60°	1806.2	1371.4	312.6	91.6	79.0	69.5	62.4	58.5	58.2	60.6	63.7
62.5°	2042.5	1565.8	415.4	94.2	78.6	66.1	57.9	54.1	54.0	56.2	58.8
65°	2230.5	1698.7	440.9	104.7	81.8	62.1	53.4	49.8	49.5	51.4	54.2
67.5°	2322.8	1718.0	334.9	117.8	88.6	58.4	48.9	45.6	45.3	47.3	49.8
70°	2254.5	1586.3	206.7	119.2	88.2	54.1	44.3	41.5	41.0	43.1	45.0
72.5°	2001.8	1387.6	157.1	105.5	76.3	47.9	39.8	37.3	36.6	38.4	40.1
75°	1606.7	1101.7	125.9	85.1	60.1	40.4	35.2	32.9	32.0	33.7	35.2
77.5°	935.9	619.8	92.0	66.4	45.5	33.0	30.0	27.9	26.9	28.8	29.9
80°	304.3	206.5	57.8	47.7	33.2	25.8	24.3	22.8	21.9	23.1	23.5
82.5°	109.3	76.8	32.0	29.3	22.1	18.5	18.4	17.5	16.3	16.8	16.8
85°	48.4	35.1	19.0	15.7	13.2	9.9	11.6	11.0	9.8	9.5	9.1
87.5°	13.6	11.6	6.9	5.3	4.3	1.6	3.7	3.3	2.7	2.5	1.7
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)