

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: P366619

Luminaire Tested: **MSA-SA1A-727-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366619
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-727-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2548 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

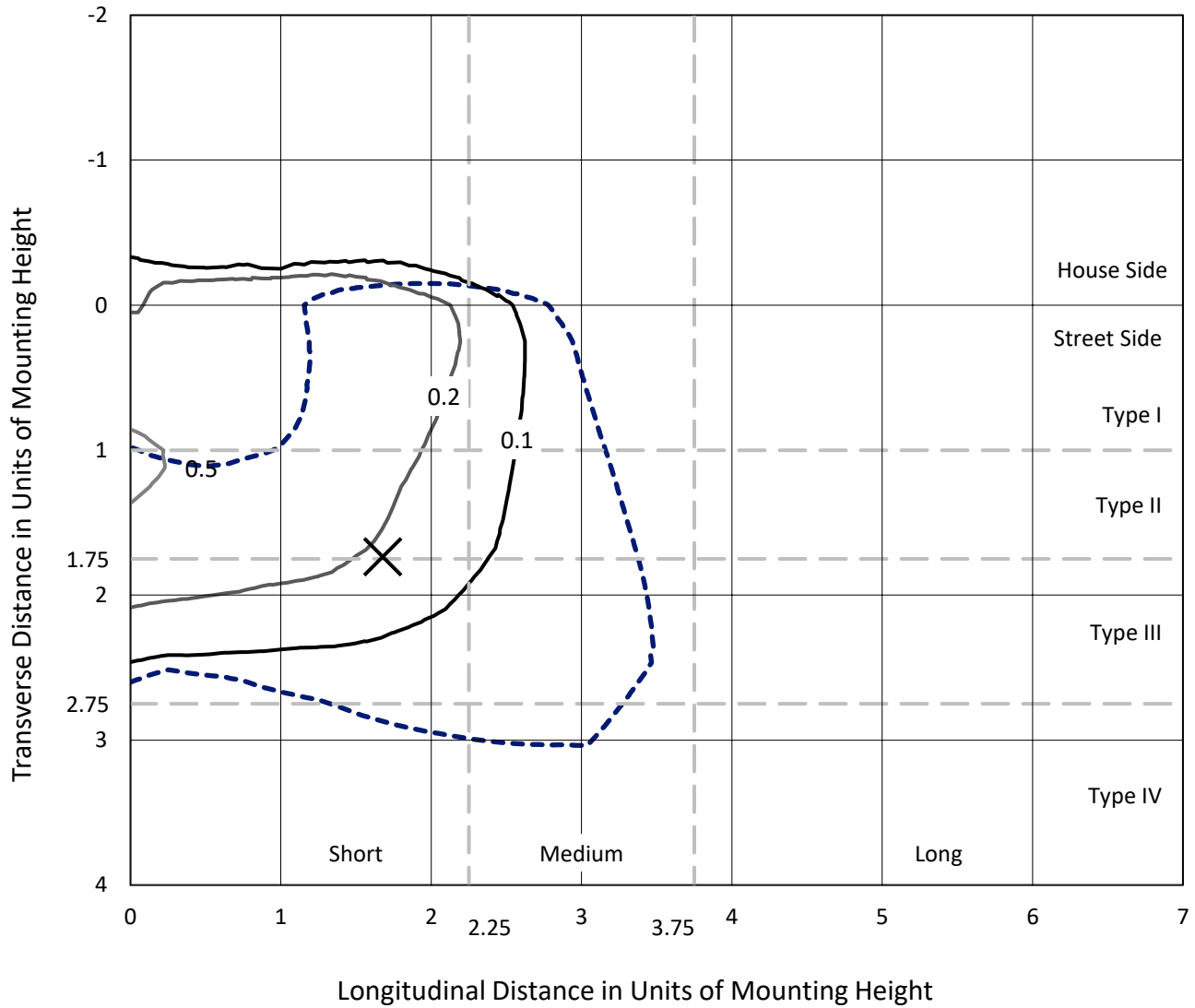
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366619
 CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

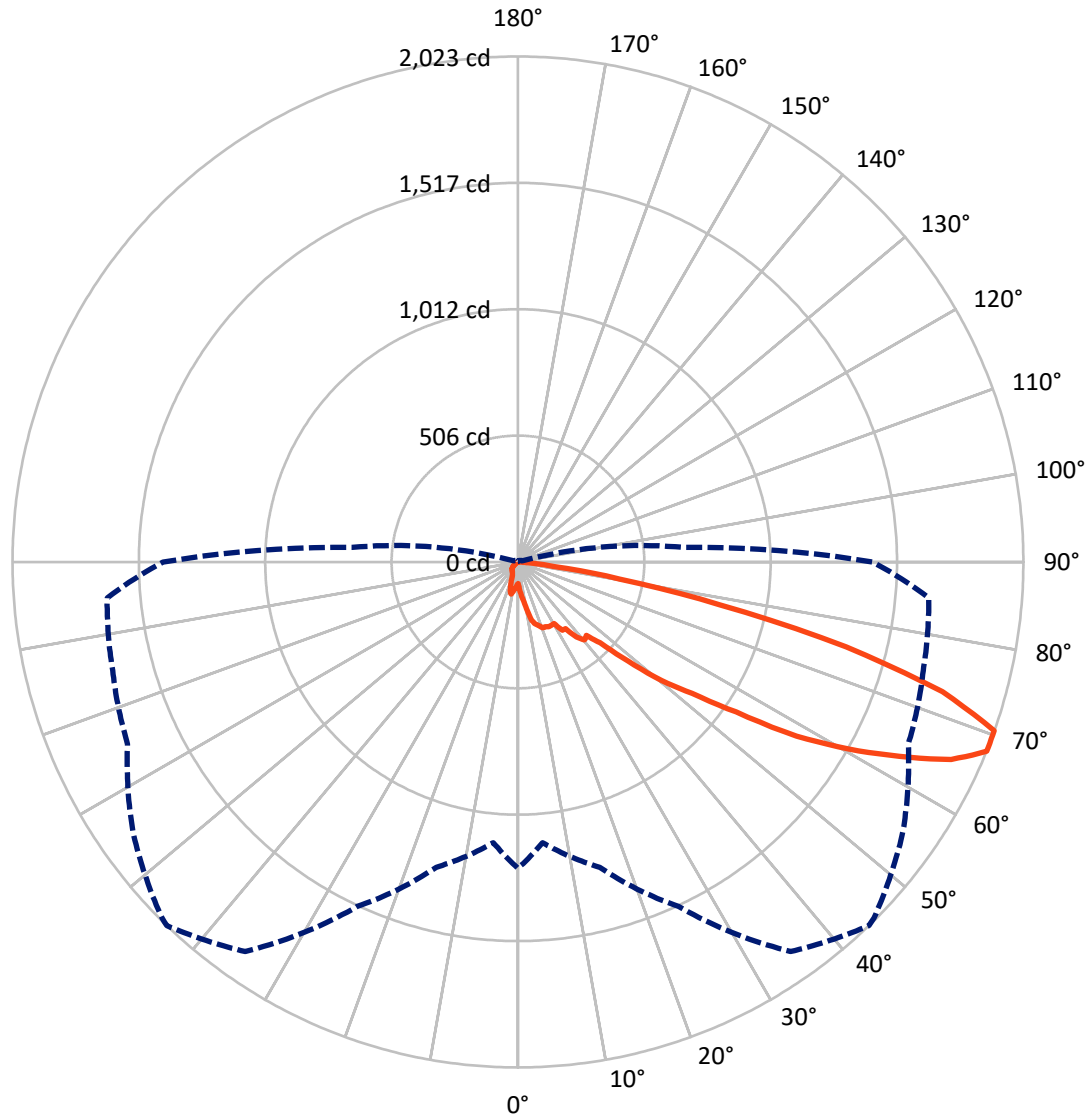
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366619
CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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 CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

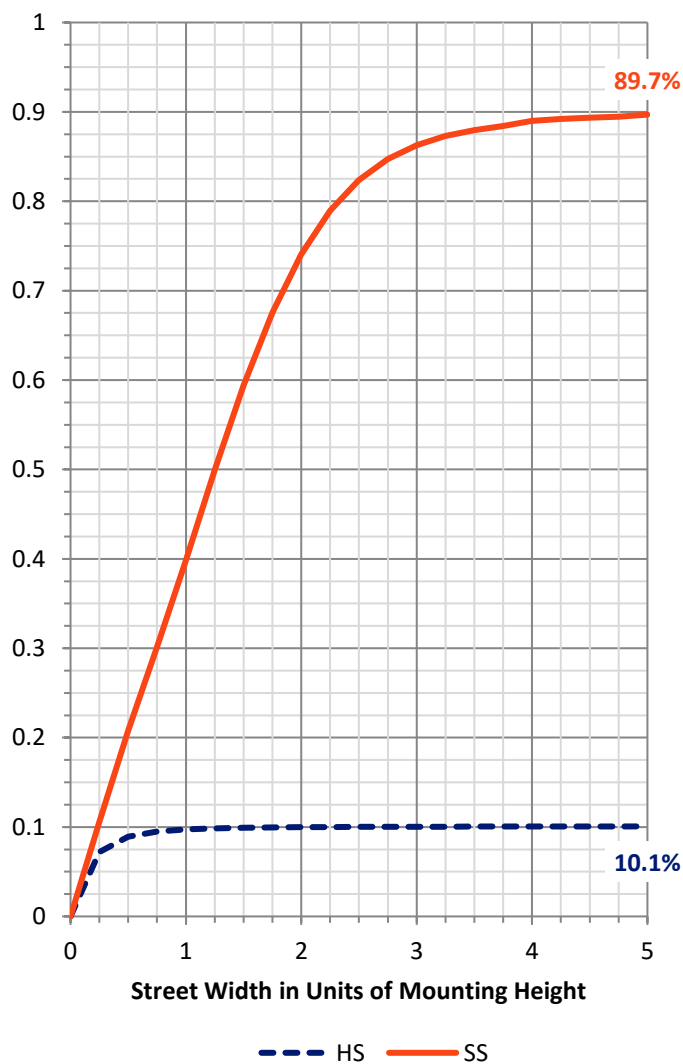
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	258.8	0.0	258.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2289.2	0.0	2289.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	2548.0	0.0	2548.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.7	0.5
10°-20°	53.3	2.1
20°-30°	94.4	3.7
30°-40°	153.4	6.0
40°-50°	306.9	12.0
50°-60°	629.7	24.7
60°-70°	865.0	33.9
70°-80°	406.6	16.0
80°-90°	26.0	1.0
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°	2548.0	100.0
0°-180°	2548.0	100.0

Coefficient of Utilization

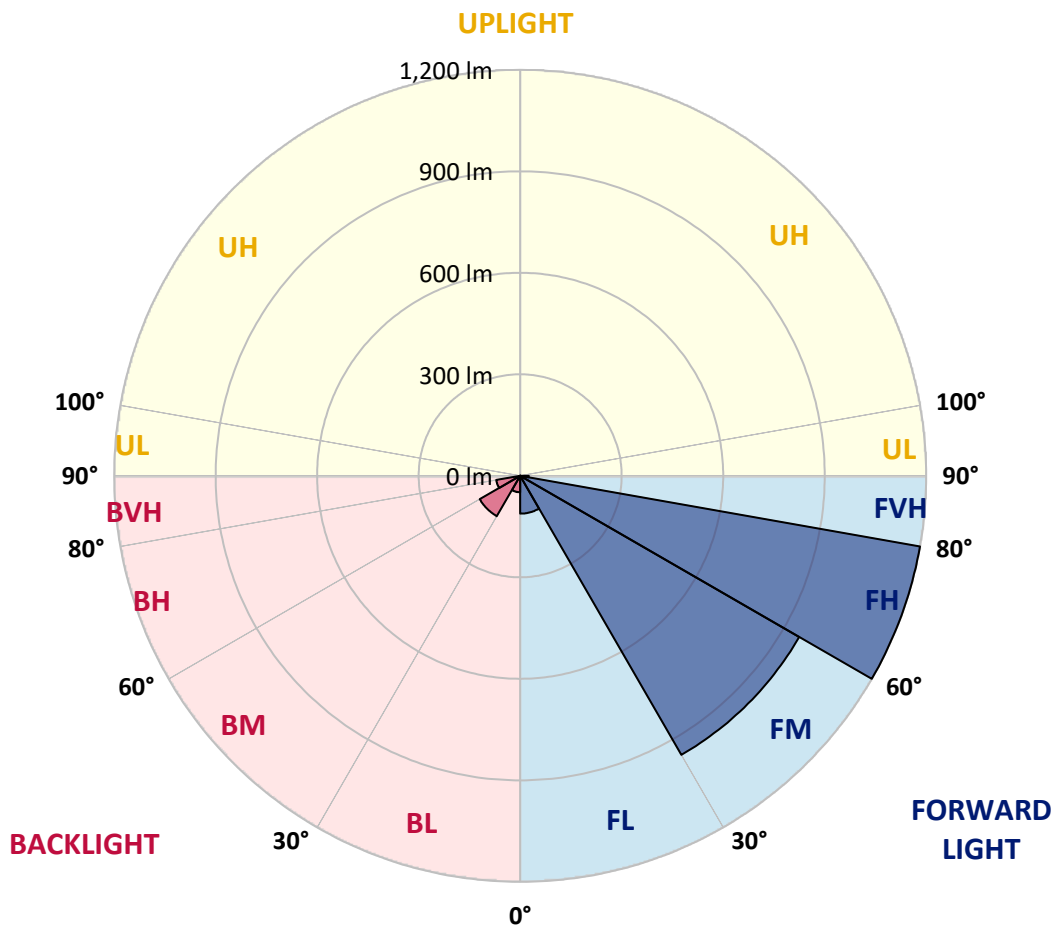


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 CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	111.8	4.4			
FM (30°-60°)	952.1	37.4			
FH (60°-80°)	1199.8	47.1			G1/1800
FVH (80°-90°)	25.5	1.0			G1/100
BL (0°-30°)	48.6	1.9	B0/110		
BM (30°-60°)	137.9	5.4	B0/220		
BH (60°-80°)	71.8	2.8	B0/110		G0/110
BVH (80°-90°)	0.5	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 IV Short





REPORT NUMBER: P366619

CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
2.5°	109.2	105.7	100.6	101.7	102.3	103.8	104.0	102.0	96.4	94.8	101.7
5°	153.0	144.4	142.9	139.7	133.2	129.7	128.8	132.4	127.9	126.5	128.3
7.5°	195.4	188.1	180.1	175.8	162.3	154.0	153.6	155.0	155.8	150.9	153.4
10°	223.7	215.7	214.0	203.7	192.1	190.1	189.3	183.9	179.6	175.9	163.7
12.5°	249.3	249.1	252.2	237.4	235.6	237.6	236.9	217.8	213.4	198.1	194.6
15°	283.3	291.7	278.3	266.0	250.2	257.0	255.2	242.9	240.0	229.6	214.5
17.5°	318.5	320.8	298.4	279.5	275.4	266.5	268.4	264.0	249.1	257.4	242.5
20°	319.4	324.3	300.4	269.1	281.6	281.1	281.3	277.1	257.4	276.8	263.2
22.5°	331.2	319.1	296.9	276.9	279.2	281.3	283.5	278.3	274.1	278.9	281.4
25°	326.4	321.6	300.3	287.0	284.9	286.6	287.2	293.8	291.1	302.6	296.3
27.5°	338.8	331.9	293.7	296.0	288.6	286.6	283.3	305.3	313.2	304.0	320.9
30°	360.0	359.0	305.0	308.5	302.8	285.5	294.5	323.3	333.1	327.5	348.0
32.5°	393.1	396.5	338.3	315.6	318.5	326.2	322.9	323.3	348.2	360.7	377.0
35°	440.2	438.4	370.8	342.3	326.8	328.1	332.9	355.8	387.9	387.1	404.4
37.5°	532.6	512.7	428.3	369.5	374.2	380.5	377.0	407.7	410.8	412.0	453.3
40°	668.9	642.4	518.9	427.0	382.3	410.3	408.6	416.2	436.8	444.6	504.8
42.5°	848.5	812.8	678.3	532.6	421.6	402.4	412.8	427.1	496.5	518.6	584.6
45°	1046.9	974.7	837.4	683.3	520.3	460.6	468.4	495.1	591.4	627.9	700.8
47.5°	1175.4	1111.9	994.9	816.7	623.1	591.8	592.5	598.3	702.8	770.5	868.3
50°	1287.1	1219.6	1111.0	956.3	805.1	745.8	732.3	705.7	844.7	937.3	1045.8
52.5°	1444.8	1365.8	1227.0	1119.9	1012.6	872.9	868.2	877.2	1012.0	1109.4	1227.7
55°	1587.0	1491.0	1358.5	1291.1	1249.2	1059.8	1063.9	1078.9	1226.9	1278.4	1389.6
57.5°	1649.8	1545.8	1477.7	1447.3	1425.0	1315.1	1301.3	1292.3	1396.3	1416.0	1559.2
60°	1690.9	1592.0	1561.1	1568.2	1635.9	1519.3	1506.8	1454.5	1536.5	1552.7	1711.2
62.5°	1665.0	1574.8	1581.4	1639.9	1790.3	1713.6	1677.5	1590.1	1651.2	1664.3	1820.4
65°	1501.3	1407.3	1492.1	1633.9	1908.0	1906.2	1889.5	1715.3	1714.7	1731.4	1828.8
67.5°	1226.3	1127.7	1264.9	1520.7	1903.1	2023.0	2015.1	1881.3	1723.8	1679.1	1650.3
70°	852.6	767.0	922.7	1255.8	1733.5	2022.1	2009.5	1992.9	1651.6	1445.4	1279.6
72.5°	443.0	395.9	540.9	865.4	1381.8	1776.7	1818.4	1791.1	1410.2	1050.1	753.5
75°	150.5	135.0	223.1	459.3	918.6	1356.7	1405.6	1377.9	957.8	563.4	298.0
77.5°	58.3	54.2	79.9	186.4	460.8	826.7	879.8	851.6	513.7	206.4	70.1
80°	33.2	32.0	44.1	84.0	203.2	411.3	448.6	406.9	185.2	69.5	18.3
82.5°	14.1	14.5	24.6	45.4	102.1	145.1	161.9	147.7	77.6	47.6	6.7
85°	3.1	3.8	11.7	25.3	42.9	41.4	43.4	48.2	47.6	35.0	3.0
87.5°	0.0	0.0	3.7	6.9	10.3	6.7	5.3	9.4	14.6	14.1	1.3
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: P366619

CATALOG NUMBER: MSA-SA1A-727-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
2.5°	103.0	101.6	92.7	92.2	92.7	91.2	91.0	87.8	88.1	95.4	96.0
5°	128.3	121.3	113.7	111.3	109.0	104.0	106.8	106.8	106.8	111.4	112.8
7.5°	151.2	141.8	131.1	122.1	113.4	107.1	111.4	114.5	116.3	122.4	125.2
10°	161.6	152.3	142.8	130.0	123.2	120.8	115.8	113.1	116.3	115.1	116.6
12.5°	183.8	175.3	158.9	145.7	140.6	132.5	117.6	107.2	100.3	99.2	98.9
15°	205.4	200.2	178.2	160.5	142.9	124.1	98.6	84.9	77.6	76.3	76.4
17.5°	232.8	225.4	192.9	167.5	137.7	103.8	76.2	64.4	63.8	66.9	67.2
20°	251.1	238.9	200.4	161.7	120.6	78.5	59.6	56.8	61.3	66.9	66.3
22.5°	268.5	255.3	210.2	156.7	93.4	59.6	54.8	55.1	58.9	64.9	66.5
25°	280.0	275.2	222.3	144.9	71.2	51.6	52.4	54.5	57.7	63.5	63.5
27.5°	314.7	292.4	220.9	122.0	54.8	48.1	50.0	52.7	54.4	61.3	62.0
30°	335.8	328.5	228.2	98.6	48.1	43.6	47.3	49.7	50.9	58.7	59.0
32.5°	361.7	345.5	237.0	72.8	44.7	43.3	42.4	44.3	47.5	54.4	54.8
35°	393.1	388.3	224.4	57.2	43.6	40.5	38.8	39.8	41.9	46.5	47.5
37.5°	457.3	429.0	216.8	49.0	43.6	39.5	37.7	35.1	35.4	38.6	40.5
40°	511.4	502.7	195.6	47.6	41.6	38.1	33.6	30.5	28.4	29.4	30.1
42.5°	610.8	570.4	168.2	46.9	39.8	34.4	28.5	25.3	22.1	22.3	23.5
45°	731.3	644.3	143.7	46.2	38.5	30.8	24.0	20.2	16.9	17.0	18.1
47.5°	892.3	752.1	114.1	44.1	36.2	27.4	19.4	15.5	13.5	13.9	14.9
50°	1075.3	846.7	90.2	40.9	33.6	24.2	15.7	12.5	11.8	12.2	13.3
52.5°	1238.7	916.4	74.5	37.9	29.8	19.7	13.2	11.1	10.8	11.1	11.9
55°	1384.0	956.8	62.2	34.6	25.6	15.9	11.9	10.3	10.1	10.0	10.5
57.5°	1520.2	968.5	48.6	29.2	20.8	13.8	11.1	9.6	9.3	8.9	9.3
60°	1619.6	948.5	35.7	23.5	17.0	12.5	10.4	8.6	8.1	7.4	7.7
62.5°	1667.5	893.9	27.0	18.8	14.5	11.4	9.3	7.4	6.9	6.0	6.2
65°	1622.0	803.8	21.2	15.9	12.4	9.6	7.9	6.3	5.6	4.8	4.8
67.5°	1420.3	666.8	18.0	13.8	10.4	8.1	6.5	5.8	4.6	3.9	3.8
70°	1042.5	479.7	15.5	12.1	9.0	7.0	5.5	5.2	4.5	3.8	3.5
72.5°	588.4	271.5	13.2	10.7	7.6	5.9	4.6	4.8	4.4	3.5	3.2
75°	224.5	91.5	11.0	8.9	6.2	4.5	3.9	3.9	3.9	3.0	2.5
77.5°	55.6	23.3	8.7	7.2	4.9	3.0	3.2	3.4	3.4	2.5	1.8
80°	15.3	7.9	5.2	5.2	3.5	1.7	2.2	2.2	1.8	0.8	0.0
82.5°	5.6	3.0	1.8	2.2	1.5	0.6	0.8	0.6	0.4	0.0	0.0
85°	2.4	1.5	1.1	1.3	0.7	0.0	0.1	0.3	0.0	0.0	0.0
87.5°	1.0	0.7	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	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)