

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: P366642

Luminaire Tested: **MSA-SA1A-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366642
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-730-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3732 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

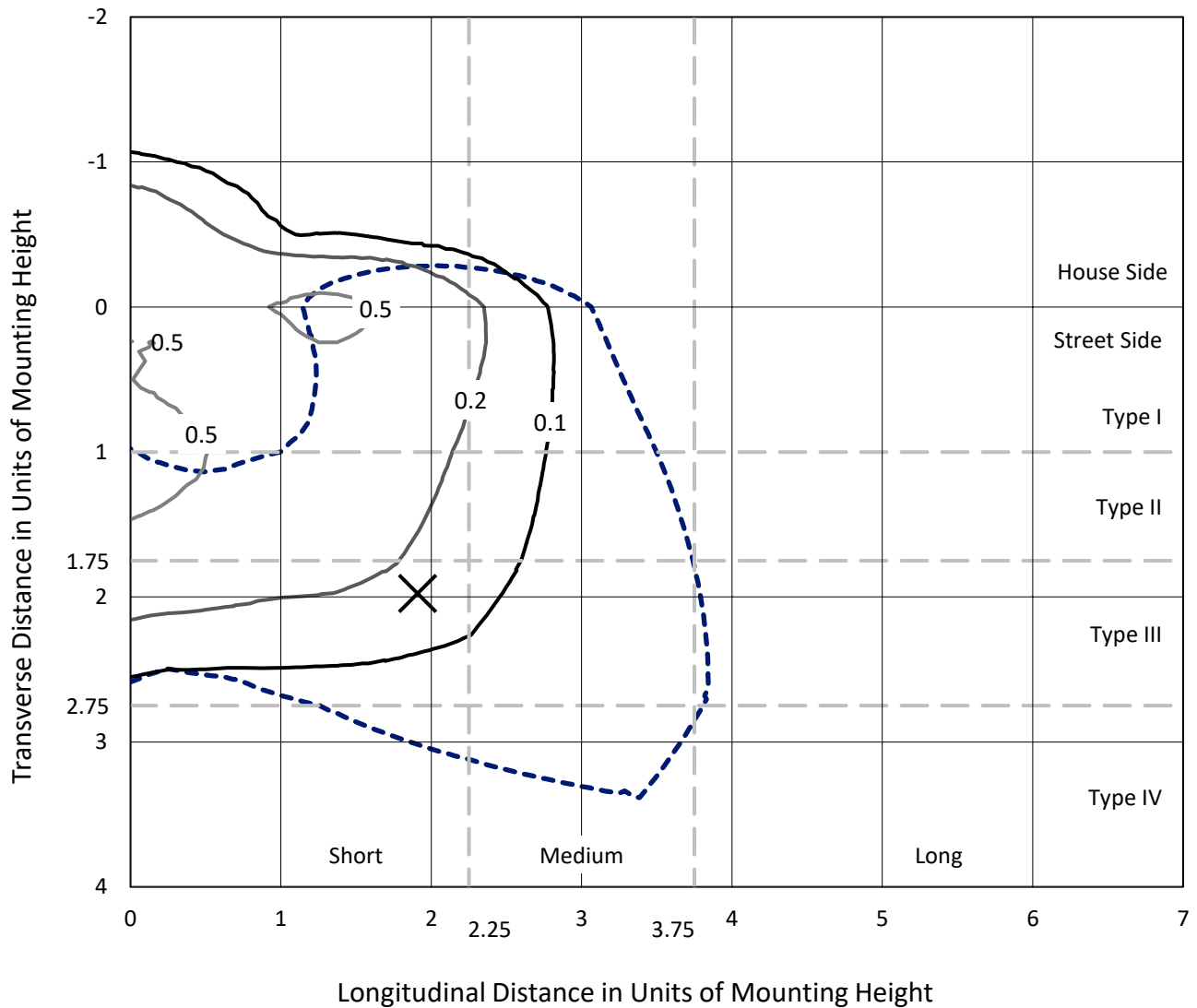
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366642
 CATALOG NUMBER: MSA-SA1A-730-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

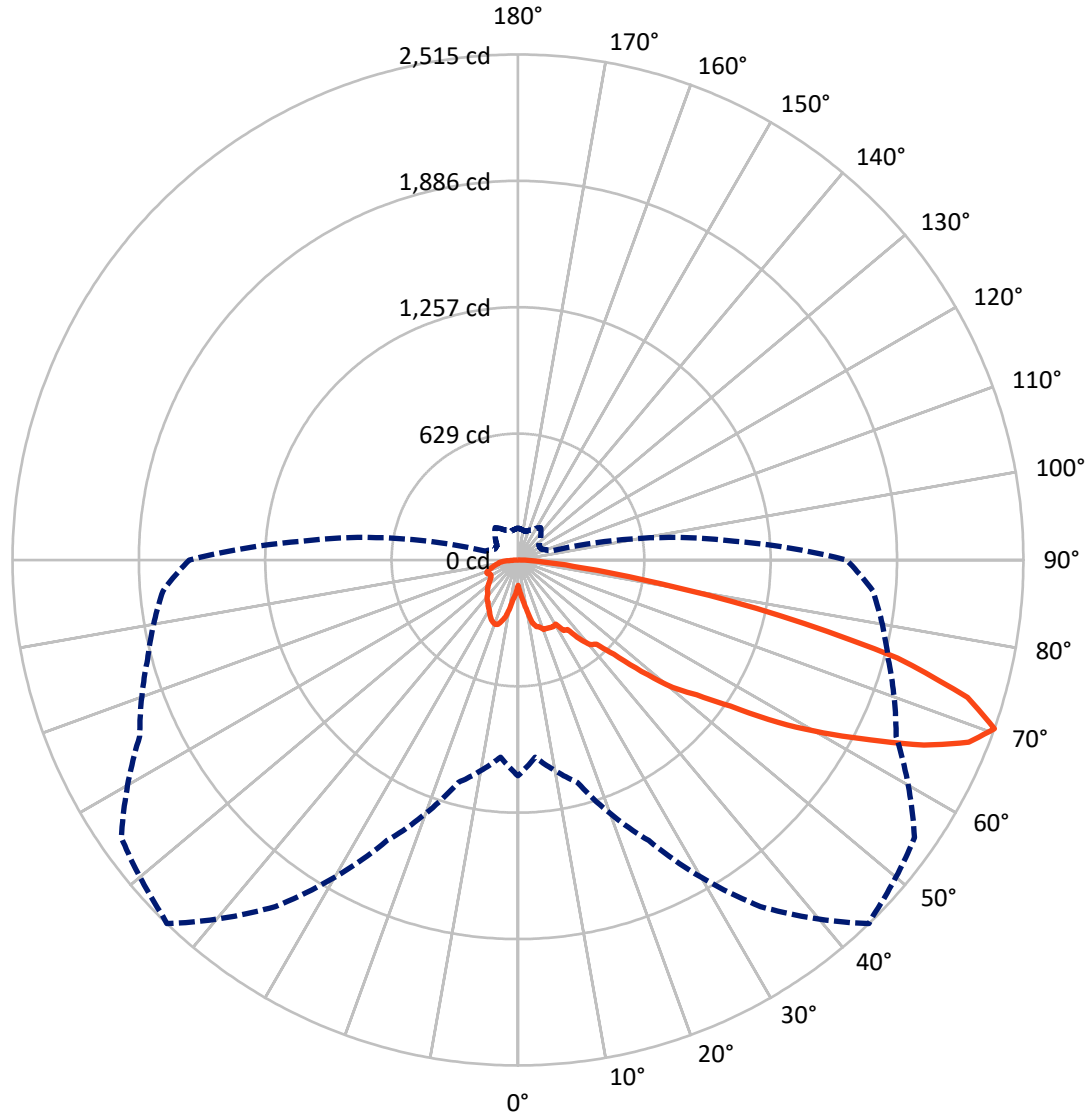
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366642
CATALOG NUMBER: MSA-SA1A-730-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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 CATALOG NUMBER: MSA-SA1A-730-U-T4W

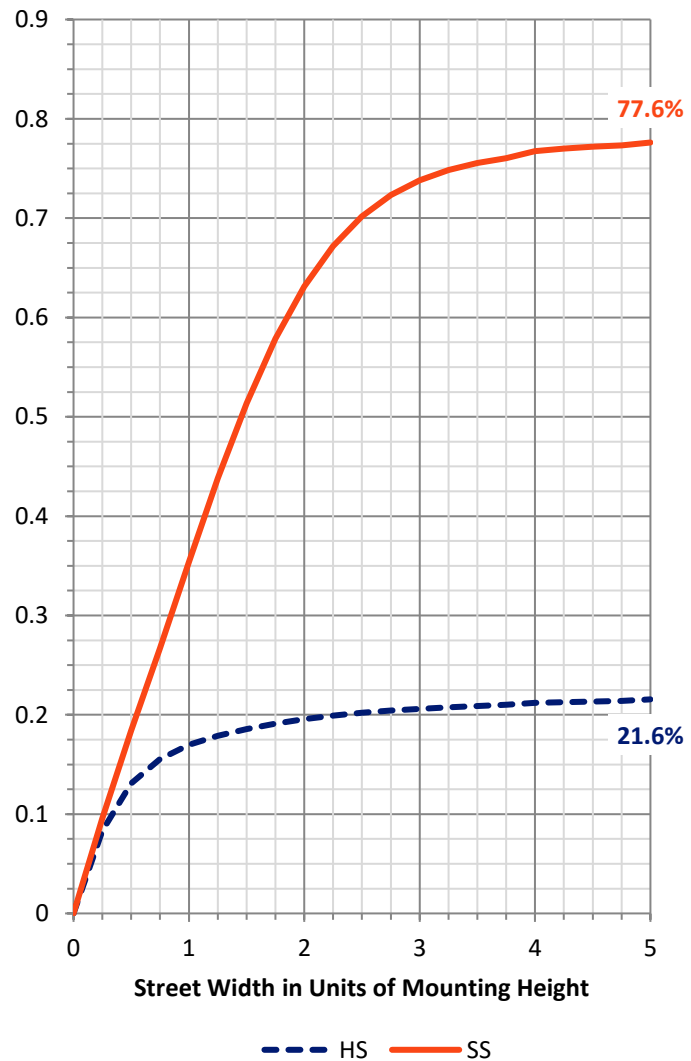
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	823.4	0.0	823.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	2908.6	0.0	2908.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	3732.0	0.0	3732.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.9	0.5
10°-20°	91.6	2.5
20°-30°	171.2	4.6
30°-40°	274.7	7.4
40°-50°	463.7	12.4
50°-60°	826.4	22.1
60°-70°	1130.3	30.3
70°-80°	664.7	17.8
80°-90°	89.5	2.4
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°	3732.0	100.0
0°-180°	3732.0	100.0

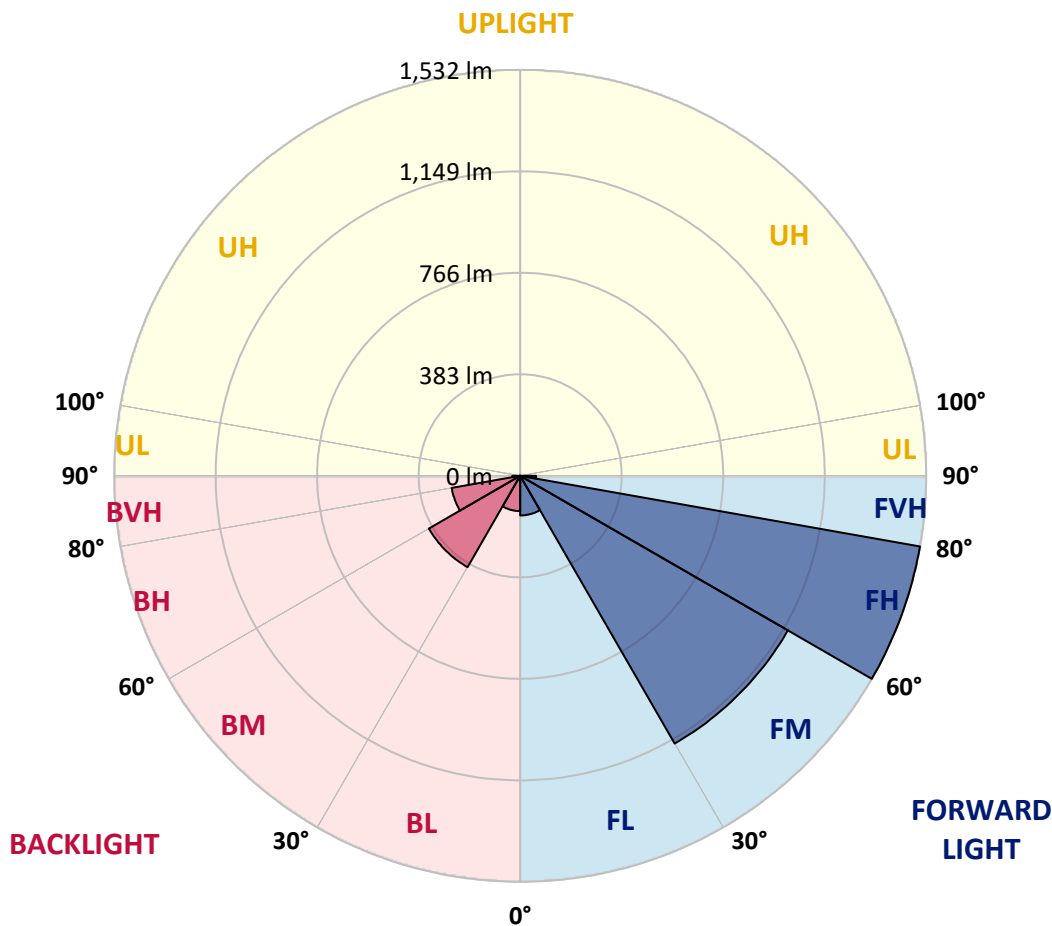


REPORT NUMBER: P366642
 CATALOG NUMBER: MSA-SA1A-730-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	149.6	4.0			
FM (30°-60°)	1166.9	31.3			
FH (60°-80°)	1532.5	41.1			G1/1800
FVH (80°-90°)	59.6	1.6			G1/100
BL (0°-30°)	133.1	3.6	B1/500		
BM (30°-60°)	397.9	10.7	B1/1000		
BH (60°-80°)	262.6	7.0	B1/500		G1/500
BVH (80°-90°)	29.9	0.8			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 IV Short





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CATALOG NUMBER: MSA-SA1A-730-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9
2.5°	153.9	150.9	143.5	146.0	149.0	150.3	150.0	149.7	144.9	143.2	151.6
5°	209.2	202.4	197.1	195.0	187.9	182.4	179.0	187.9	186.5	188.8	194.6
7.5°	261.2	256.9	244.8	240.6	226.2	216.7	215.6	222.6	224.5	220.8	230.8
10°	294.7	287.4	284.9	274.7	264.7	263.2	262.3	259.1	254.6	254.3	245.4
12.5°	320.7	324.6	326.5	314.8	315.1	320.6	317.7	304.7	297.2	284.0	285.1
15°	367.4	372.9	357.2	349.7	335.3	343.5	342.5	331.6	330.5	322.0	312.0
17.5°	408.1	410.6	384.2	367.1	362.2	350.3	353.5	353.8	339.7	355.0	346.1
20°	411.5	420.2	389.9	355.8	370.5	368.9	369.4	366.3	347.8	373.1	369.7
22.5°	428.0	414.7	387.5	362.5	366.3	368.6	370.8	367.1	366.0	380.1	390.4
25°	424.9	420.7	393.1	372.0	372.5	372.9	374.0	385.0	383.8	402.9	408.3
27.5°	453.6	447.0	394.8	389.6	377.7	375.1	367.7	390.7	408.6	408.1	437.6
30°	508.0	501.3	434.0	418.8	397.2	370.6	384.7	415.3	429.4	434.1	471.6
32.5°	593.1	604.1	511.1	450.0	423.3	417.4	415.9	412.9	447.7	471.2	505.3
35°	715.2	706.5	602.0	516.9	450.7	425.7	429.1	447.7	489.2	504.4	535.9
37.5°	855.1	837.0	718.4	592.7	529.6	498.4	487.2	505.3	514.5	526.4	590.8
40°	997.2	953.2	832.7	692.3	577.0	553.5	543.7	521.5	543.1	567.3	649.1
42.5°	1134.5	1100.4	957.2	811.2	656.9	572.9	567.6	545.8	612.7	638.3	733.3
45°	1278.3	1199.2	1084.6	945.4	773.7	668.2	660.3	621.3	707.0	760.2	852.0
47.5°	1375.1	1301.8	1201.4	1054.3	871.5	827.7	812.5	745.8	823.6	892.7	1035.5
50°	1466.6	1391.1	1285.7	1173.5	1048.5	998.2	965.9	854.8	968.8	1081.4	1270.7
52.5°	1597.6	1530.1	1383.6	1293.7	1238.7	1114.9	1090.9	1029.8	1138.6	1290.6	1527.8
55°	1737.6	1645.6	1512.9	1463.0	1440.9	1282.3	1262.7	1223.9	1364.8	1504.7	1777.7
57.5°	1799.4	1703.4	1630.3	1600.5	1598.6	1525.6	1503.1	1476.1	1596.0	1688.3	2012.9
60°	1848.5	1745.5	1716.3	1733.0	1793.6	1745.5	1716.3	1692.4	1784.2	1869.8	2204.7
62.5°	1839.5	1736.2	1751.2	1802.0	1956.7	1970.8	1948.3	1890.4	1970.8	2018.5	2314.8
65°	1693.8	1598.3	1685.7	1806.3	2108.3	2220.8	2219.6	2068.3	2096.1	2096.1	2303.1
67.5°	1438.6	1339.7	1482.8	1768.5	2213.2	2419.0	2419.3	2256.8	2107.6	2088.3	2123.2
70°	1074.2	984.7	1145.5	1540.2	2105.0	2514.9	2501.0	2408.9	2076.1	1907.6	1773.5
72.5°	641.6	583.8	731.8	1121.2	1795.6	2338.5	2375.5	2233.7	1900.5	1586.4	1267.8
75°	291.4	266.3	343.8	644.1	1281.9	1950.6	1990.8	1885.1	1509.6	1140.9	732.7
77.5°	124.7	118.0	150.1	285.7	706.8	1333.9	1416.4	1347.2	1022.8	663.0	324.1
80°	80.2	75.9	92.3	137.4	328.2	720.7	791.7	765.9	521.0	257.8	114.2
82.5°	47.9	46.5	61.7	86.3	179.0	317.2	357.5	366.9	216.4	115.7	65.3
85°	26.2	26.5	33.8	52.3	107.4	123.5	132.2	143.8	101.9	67.0	31.7
87.5°	8.7	10.1	13.6	21.3	38.3	34.9	35.0	40.7	43.0	27.9	10.1
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: P366642
 CATALOG NUMBER: MSA-SA1A-730-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9	126.9
2.5°	153.0	150.3	143.2	143.7	146.3	146.9	147.7	143.2	142.3	150.7	151.5
5°	195.6	186.5	182.4	181.0	177.0	175.7	183.0	186.4	189.7	196.3	199.5
7.5°	229.7	219.6	212.1	205.2	199.4	196.0	208.4	217.9	223.7	237.2	243.3
10°	245.3	236.6	233.8	228.3	232.7	242.8	245.1	245.4	258.3	258.0	260.6
12.5°	276.4	270.7	261.7	263.7	275.3	285.7	282.8	287.2	291.8	302.8	297.8
15°	304.7	303.1	294.7	296.1	298.4	311.4	313.1	317.5	324.6	333.3	327.3
17.5°	339.6	338.9	318.4	316.6	322.0	334.7	330.7	322.9	346.1	355.5	353.0
20°	363.3	358.7	332.4	324.6	338.2	339.9	335.3	322.9	343.1	363.4	368.9
22.5°	383.0	377.7	350.6	335.3	332.5	333.3	333.3	331.0	340.9	357.6	357.5
25°	398.9	404.0	369.5	354.9	340.2	321.8	319.5	321.5	327.2	359.3	358.2
27.5°	438.9	424.9	376.0	365.0	334.8	305.9	312.2	315.2	317.1	352.3	358.1
30°	464.9	469.2	398.9	370.9	327.0	288.1	290.3	299.2	309.9	351.5	353.2
32.5°	499.9	490.7	434.7	361.0	306.2	277.4	273.5	285.4	301.3	339.1	343.7
35°	532.5	543.4	449.9	359.1	291.7	261.4	265.6	269.8	286.3	325.3	330.7
37.5°	609.0	584.2	492.4	350.3	279.6	253.3	248.7	254.9	269.0	299.2	311.6
40°	667.2	668.7	501.6	339.1	256.5	241.6	231.8	238.1	244.1	268.1	273.5
42.5°	776.3	742.9	524.1	314.6	241.9	224.2	218.7	221.4	222.3	232.4	241.3
45°	915.1	836.9	533.0	281.7	222.8	217.0	205.8	204.4	199.4	200.8	208.6
47.5°	1107.1	983.5	526.6	246.7	205.8	207.7	191.6	185.3	178.3	180.0	187.3
50°	1355.5	1170.8	526.1	217.0	194.2	195.4	182.2	170.9	163.9	167.4	173.8
52.5°	1634.1	1358.7	528.2	196.6	181.5	180.9	176.1	162.4	156.7	160.4	167.7
55°	1900.7	1520.3	544.1	183.8	168.3	169.4	171.2	159.6	153.3	156.7	164.3
57.5°	2132.7	1647.9	538.2	170.2	156.1	161.0	165.9	155.8	151.0	155.9	163.6
60°	2294.9	1707.1	491.0	157.2	147.1	153.8	163.3	155.3	154.7	165.3	174.4
62.5°	2354.1	1685.2	399.2	146.9	141.7	152.9	169.2	165.4	166.0	179.0	191.7
65°	2267.6	1570.2	297.8	140.3	137.6	157.3	183.0	171.4	163.0	173.7	185.3
67.5°	2021.7	1365.6	217.6	134.7	132.8	164.3	195.7	170.8	155.2	166.0	175.5
70°	1635.7	1077.9	168.5	127.5	126.5	159.6	196.9	166.2	146.7	153.8	159.1
72.5°	1120.7	738.0	139.6	120.6	115.7	141.4	187.0	155.9	136.6	140.8	145.2
75°	626.3	414.2	117.4	112.0	101.3	125.9	175.4	149.8	129.2	130.4	136.5
77.5°	281.1	179.2	99.6	100.7	88.3	111.4	160.2	140.0	117.7	114.9	121.0
80°	106.4	87.4	80.8	85.1	74.2	96.6	144.5	131.1	105.6	102.1	105.6
82.5°	61.7	52.9	60.0	65.5	58.9	88.8	137.9	123.0	93.0	84.2	87.2
85°	28.6	27.4	36.0	42.5	41.2	69.2	118.0	92.6	66.3	56.0	62.0
87.5°	7.5	8.4	12.7	15.0	15.3	23.7	45.4	34.4	25.9	19.6	18.8
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)