

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: P366618

Luminaire Tested: **MSA-SA1A-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-727-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3388 lumens
Efficiency: N/A
Efficacy: 99.6 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

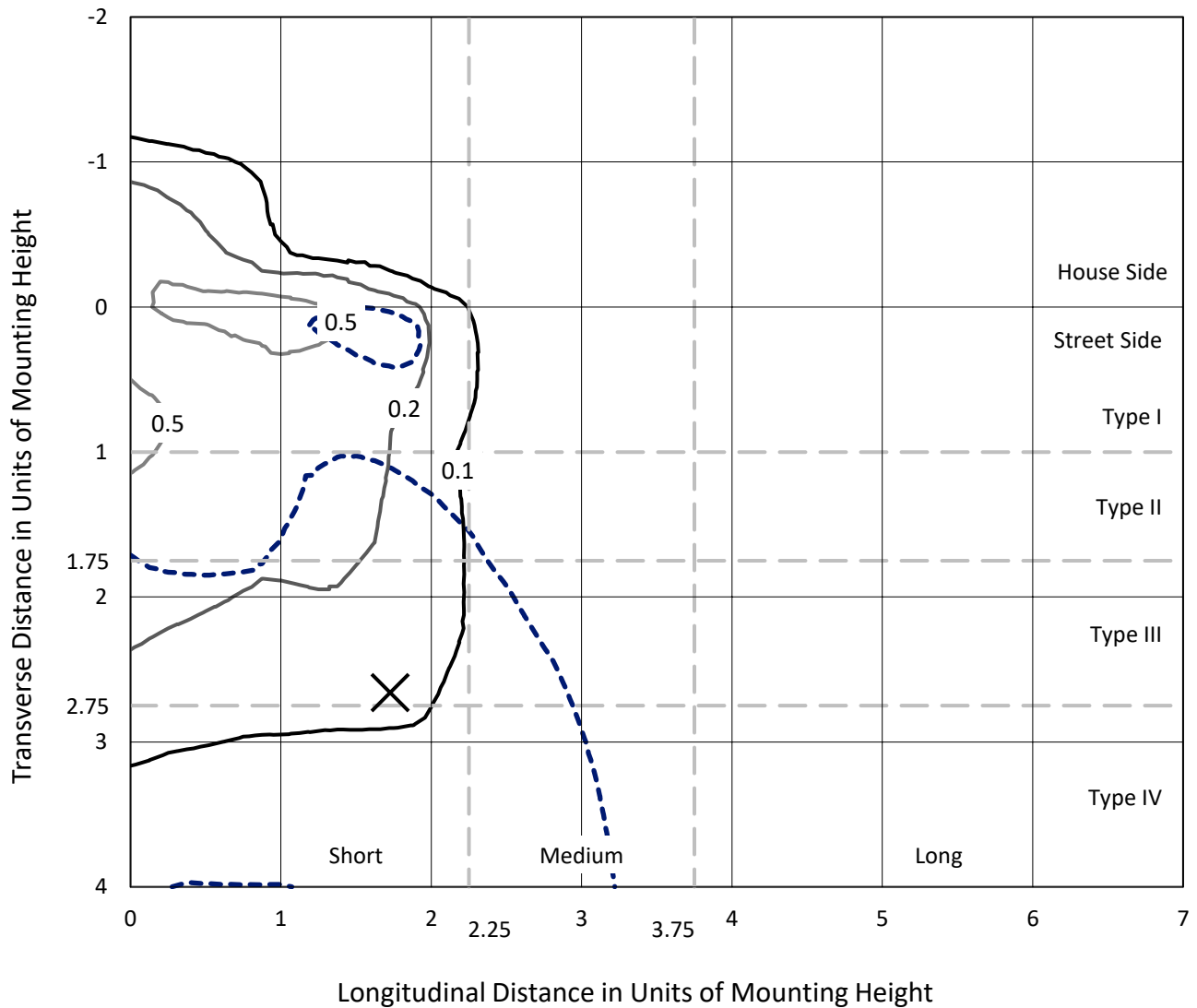
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366618
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

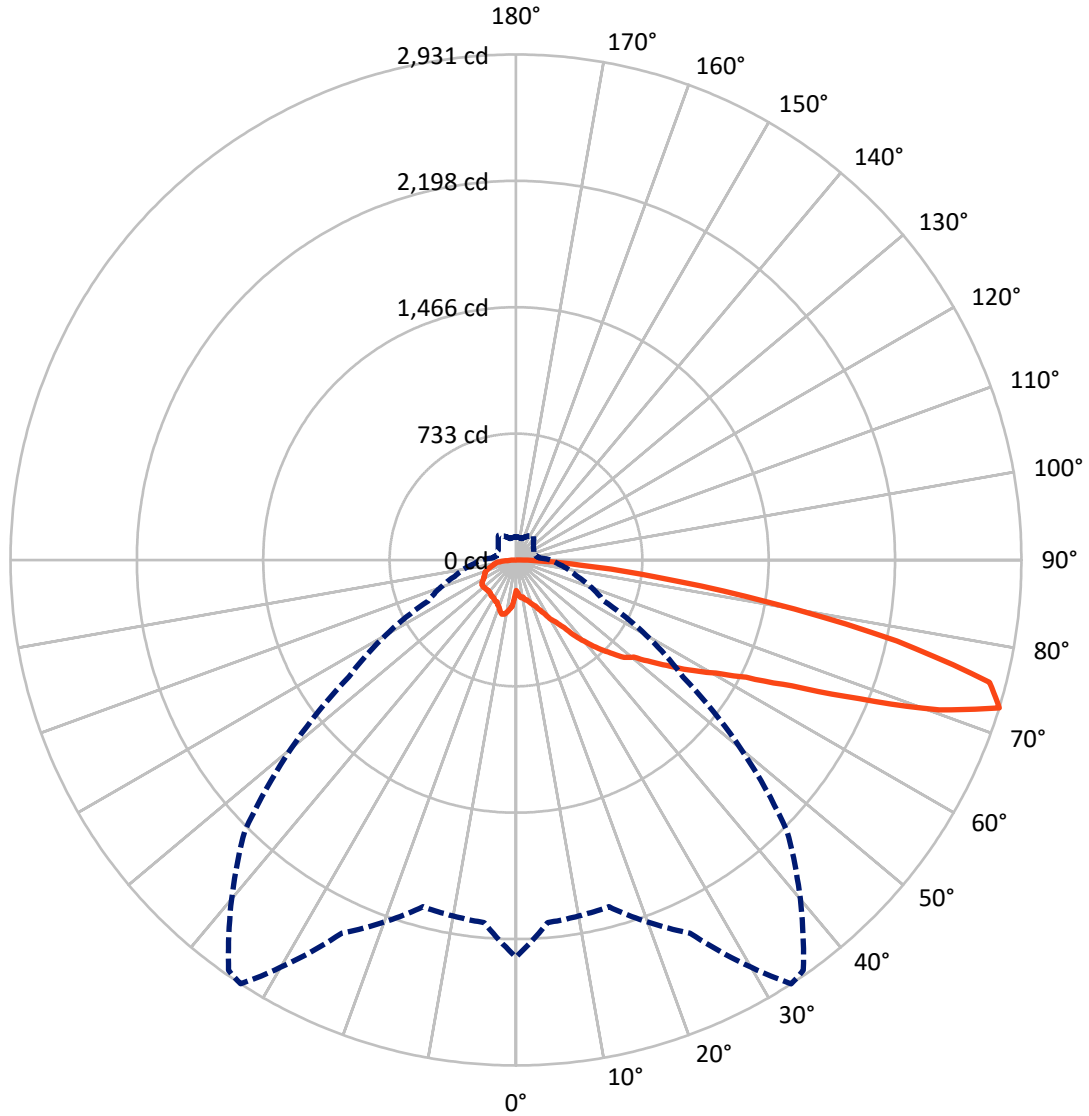
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366618
CATALOG NUMBER: MSA-SA1A-727-U-T4FT

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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 CATALOG NUMBER: MSA-SA1A-727-U-T4FT

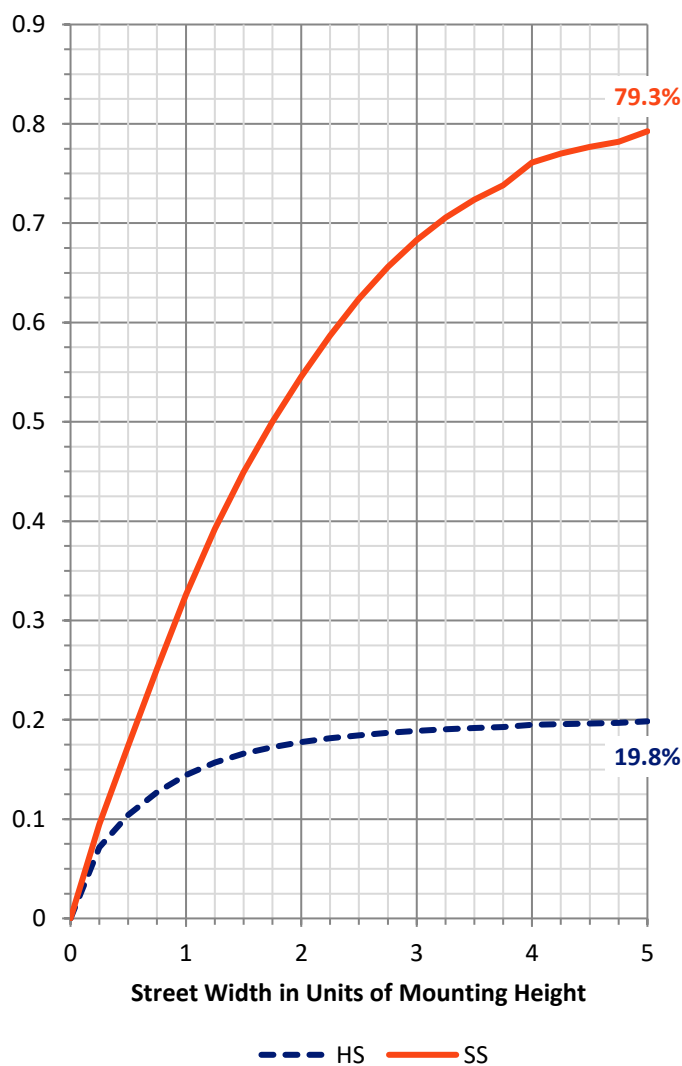
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	685.4	0.0	685.4
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	2702.6	0.0	2702.6
	% Fixture	79.8	0.0	79.8
Total	Lumens	3388.0	0.0	3388.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.4	0.7
10°-20°	90.3	2.7
20°-30°	164.6	4.9
30°-40°	278.5	8.2
40°-50°	463.3	13.7
50°-60°	679.9	20.1
60°-70°	869.8	25.7
70°-80°	707.6	20.9
80°-90°	109.6	3.2
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°	3388.0	100.0
0°-180°	3388.0	100.0

Coefficient of Utilization

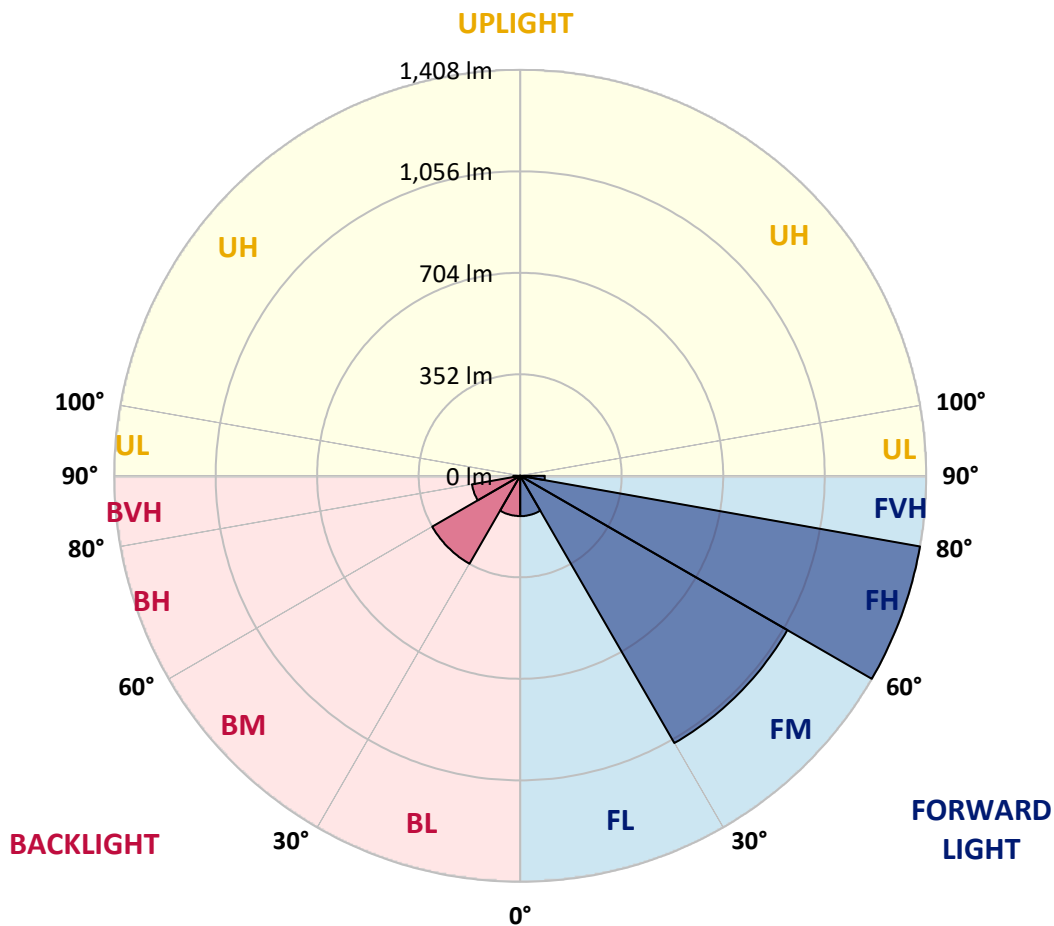


REPORT NUMBER: P366618
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	139.8	4.1			
FM (30°-60°)	1069.7	31.6			
FH (60°-80°)	1407.6	41.5			G1/1800
FVH (80°-90°)	85.5	2.5			G1/100
BL (0°-30°)	139.5	4.1	B1/500		
BM (30°-60°)	352.0	10.4	B1/1000		
BH (60°-80°)	169.8	5.0	B1/500		G1/500
BVH (80°-90°)	24.1	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 IV Short





REPORT NUMBER: P366618
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7
2.5°	201.4	195.1	184.7	184.4	190.2	191.4	195.2	195.5	196.9	194.7	210.7
5°	222.2	215.5	211.4	212.8	210.1	213.4	213.4	222.6	235.0	249.3	269.7
7.5°	227.1	222.2	217.6	221.1	221.6	218.6	221.5	243.3	265.6	280.0	312.6
10°	217.3	212.4	215.9	217.0	216.9	223.9	239.2	256.6	281.5	307.9	325.5
12.5°	215.5	219.0	220.7	222.6	236.0	238.1	261.3	279.3	304.3	327.5	373.2
15°	242.6	247.2	236.8	236.1	240.5	242.4	266.5	284.6	321.2	360.1	401.1
17.5°	281.2	282.9	264.2	254.7	257.9	259.5	270.0	292.8	315.3	387.2	438.4
20°	318.6	319.7	284.6	263.2	274.6	276.3	286.2	299.2	316.9	402.4	463.5
22.5°	357.8	350.7	312.2	285.2	291.8	292.2	298.0	305.1	330.3	400.0	494.2
25°	400.7	396.2	347.7	321.9	321.6	315.8	316.1	326.4	344.5	425.6	514.3
27.5°	457.6	458.2	387.8	373.9	352.1	348.3	329.3	348.4	369.1	425.9	557.7
30°	531.4	517.8	443.6	421.1	399.6	391.6	365.8	382.2	391.1	450.2	604.9
32.5°	591.4	587.5	501.8	467.7	432.6	441.9	413.5	399.2	415.3	492.1	676.5
35°	648.9	636.0	563.3	519.0	482.1	476.5	458.0	460.4	470.3	545.0	769.9
37.5°	734.6	727.6	650.5	579.6	562.3	539.4	527.8	535.2	527.5	612.9	910.1
40°	830.5	789.7	723.3	660.2	627.8	611.7	615.7	608.7	602.8	689.1	1035.7
42.5°	922.3	885.2	771.6	743.2	701.1	707.8	685.5	690.4	707.1	797.2	1151.9
45°	1022.2	942.0	822.9	797.9	767.7	776.3	794.1	788.8	816.2	924.7	1261.4
47.5°	1072.1	995.8	885.9	845.1	844.7	826.8	935.5	947.3	904.4	1019.1	1372.6
50°	1120.2	1045.1	932.7	905.1	885.2	923.4	1071.1	1044.0	984.3	1127.5	1494.9
52.5°	1187.1	1101.5	986.4	957.0	981.7	1017.2	1179.3	1174.0	1062.5	1238.9	1601.1
55°	1238.1	1151.7	1067.2	1039.9	1087.1	1121.9	1289.5	1257.3	1129.6	1320.7	1668.5
57.5°	1327.5	1238.8	1186.5	1125.9	1210.8	1210.3	1395.8	1370.9	1201.3	1387.9	1695.6
60°	1469.6	1365.4	1310.8	1240.9	1331.8	1364.3	1517.2	1445.5	1252.0	1430.4	1646.7
62.5°	1669.0	1545.3	1456.6	1387.5	1498.4	1557.1	1667.2	1499.9	1255.2	1418.3	1518.1
65°	1915.7	1765.3	1649.1	1576.0	1759.0	1842.9	1848.5	1533.5	1225.4	1293.3	1247.7
67.5°	2156.3	1987.2	1865.9	1879.8	2147.0	2186.8	2045.0	1561.6	1065.4	1038.5	866.3
70°	2314.7	2131.4	2050.6	2198.2	2604.1	2563.3	2204.2	1487.6	838.9	673.2	487.8
72.5°	2302.7	2110.9	2081.8	2387.4	2931.0	2905.6	2223.6	1183.0	561.9	368.1	243.3
75°	1876.0	1726.9	1793.0	2260.0	2836.8	2835.6	1930.6	732.3	288.3	189.0	153.8
77.5°	1037.2	979.3	1173.4	1711.2	2258.8	2270.3	1304.4	332.1	155.4	133.9	115.8
80°	363.3	358.0	508.5	923.4	1485.9	1488.7	606.6	151.9	113.0	101.3	85.0
82.5°	132.8	131.7	210.8	429.0	818.1	816.3	230.1	94.6	83.8	71.7	56.1
85°	53.0	51.9	96.4	190.4	375.8	369.8	89.4	53.7	54.8	42.7	27.5
87.5°	14.6	15.2	32.7	59.6	115.1	106.7	22.5	18.1	22.2	17.4	8.7
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: P366618
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7	177.7
2.5°	213.5	214.9	201.0	205.9	212.2	215.6	217.3	210.1	212.5	222.6	222.2
5°	273.9	268.3	263.0	268.4	264.8	259.6	268.0	267.6	273.1	278.6	279.8
7.5°	319.0	311.7	309.2	296.8	284.5	272.0	282.8	289.5	290.9	304.6	310.3
10°	335.3	332.5	333.5	317.2	315.7	316.9	307.0	296.1	302.7	297.1	301.3
12.5°	373.0	380.0	362.6	351.5	350.5	342.8	322.8	315.8	308.4	316.1	312.2
15°	403.2	416.3	397.6	378.1	356.0	344.1	327.1	316.4	311.5	313.1	308.4
17.5°	447.5	459.7	412.2	382.3	359.5	342.0	316.0	293.2	305.3	306.3	300.8
20°	476.9	477.7	417.1	371.9	351.4	320.9	295.6	275.6	289.5	303.7	309.9
22.5°	505.6	499.2	423.2	363.6	321.7	292.2	279.8	278.6	289.0	300.9	302.3
25°	527.1	528.0	426.7	360.5	304.3	264.1	264.1	273.2	282.4	310.8	309.3
27.5°	579.2	540.8	413.1	346.3	280.1	247.6	264.2	276.5	280.8	311.6	314.7
30°	617.1	592.1	415.9	322.0	255.7	239.9	253.5	268.9	281.0	316.5	315.4
32.5°	680.8	613.5	422.5	287.8	237.4	237.0	249.1	265.2	279.7	311.2	312.9
35°	751.2	676.5	404.1	261.8	233.0	235.3	250.9	257.3	274.4	309.1	310.6
37.5°	881.5	709.3	392.4	241.7	230.2	236.7	242.6	252.6	269.7	298.5	308.6
40°	958.0	777.1	349.1	230.1	224.3	235.6	238.5	246.9	256.2	285.9	292.3
42.5°	1058.6	798.5	312.2	217.1	221.4	230.9	239.8	241.9	248.1	265.9	277.7
45°	1142.5	814.5	272.9	206.7	211.4	241.2	241.7	240.8	239.6	246.2	255.9
47.5°	1229.4	857.5	236.8	195.2	207.6	249.6	242.7	233.7	229.1	229.9	238.9
50°	1325.2	888.7	211.2	185.8	208.4	249.6	247.5	226.6	217.3	214.9	224.3
52.5°	1409.6	892.3	191.8	178.2	204.9	241.0	250.7	222.1	206.5	200.7	209.6
55°	1455.5	846.1	177.8	171.3	195.9	233.3	249.1	219.5	193.4	189.0	196.9
57.5°	1454.5	769.4	165.8	161.8	185.7	222.5	239.6	205.8	185.4	182.9	190.6
60°	1402.1	679.4	156.7	153.9	175.1	206.7	222.8	196.8	177.7	176.4	184.8
62.5°	1283.2	586.5	147.9	145.6	165.3	195.6	214.8	186.8	169.6	169.5	177.5
65°	1050.9	470.8	139.6	139.0	156.1	184.7	207.2	178.4	161.3	164.2	172.3
67.5°	724.1	330.9	130.7	132.4	147.7	174.1	201.4	172.7	152.6	158.4	165.7
70°	397.3	204.6	120.9	124.2	137.0	161.9	192.4	163.6	141.3	150.1	155.2
72.5°	202.1	136.5	108.6	114.0	124.0	143.9	175.5	150.4	129.0	132.4	135.1
75°	135.8	102.7	95.0	100.9	108.1	126.8	155.7	138.0	117.4	116.9	119.9
77.5°	102.6	80.3	80.7	87.4	92.1	111.5	140.0	127.6	107.5	106.5	110.9
80°	75.1	60.9	64.9	72.0	76.2	100.1	129.7	116.1	94.2	90.2	93.9
82.5°	49.8	43.1	48.1	55.1	58.5	83.6	117.8	98.5	76.7	66.8	67.3
85°	23.5	22.6	28.7	32.0	36.4	51.9	88.1	68.2	48.9	40.5	42.3
87.5°	5.3	7.2	9.4	9.3	10.8	13.9	27.4	19.1	14.2	9.7	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

(END OF REPORT)