

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: P366640

Luminaire Tested: **MSA-SA1A-730-U-T4FT**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366640  
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-730-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: 3689 lumens  
Efficiency: N/A  
Efficacy: 108.5 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

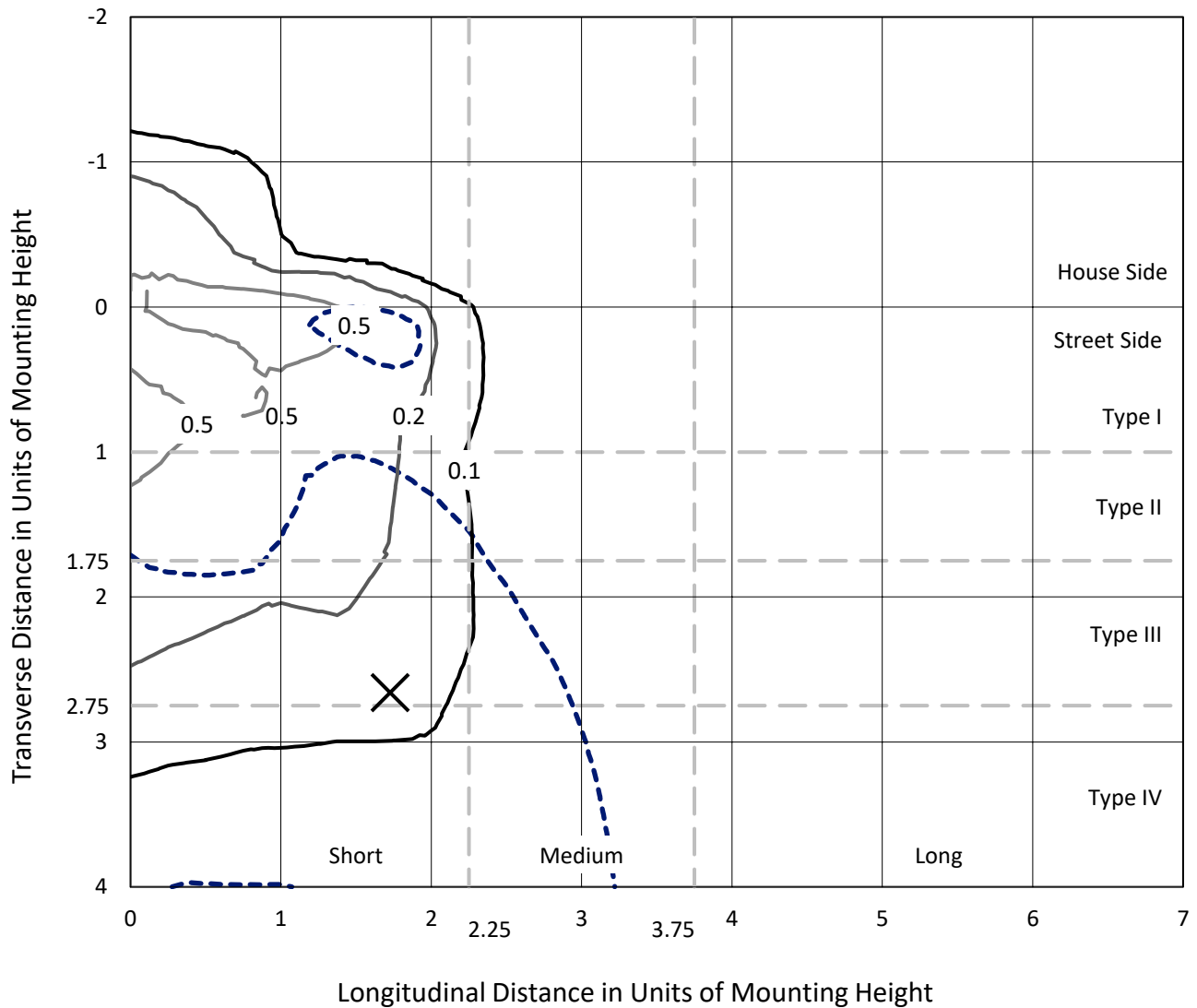
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P366640  
 CATALOG NUMBER: MSA-SA1A-730-U-T4FT

### Iso-Footcandle Lines of Horizontal Illumination

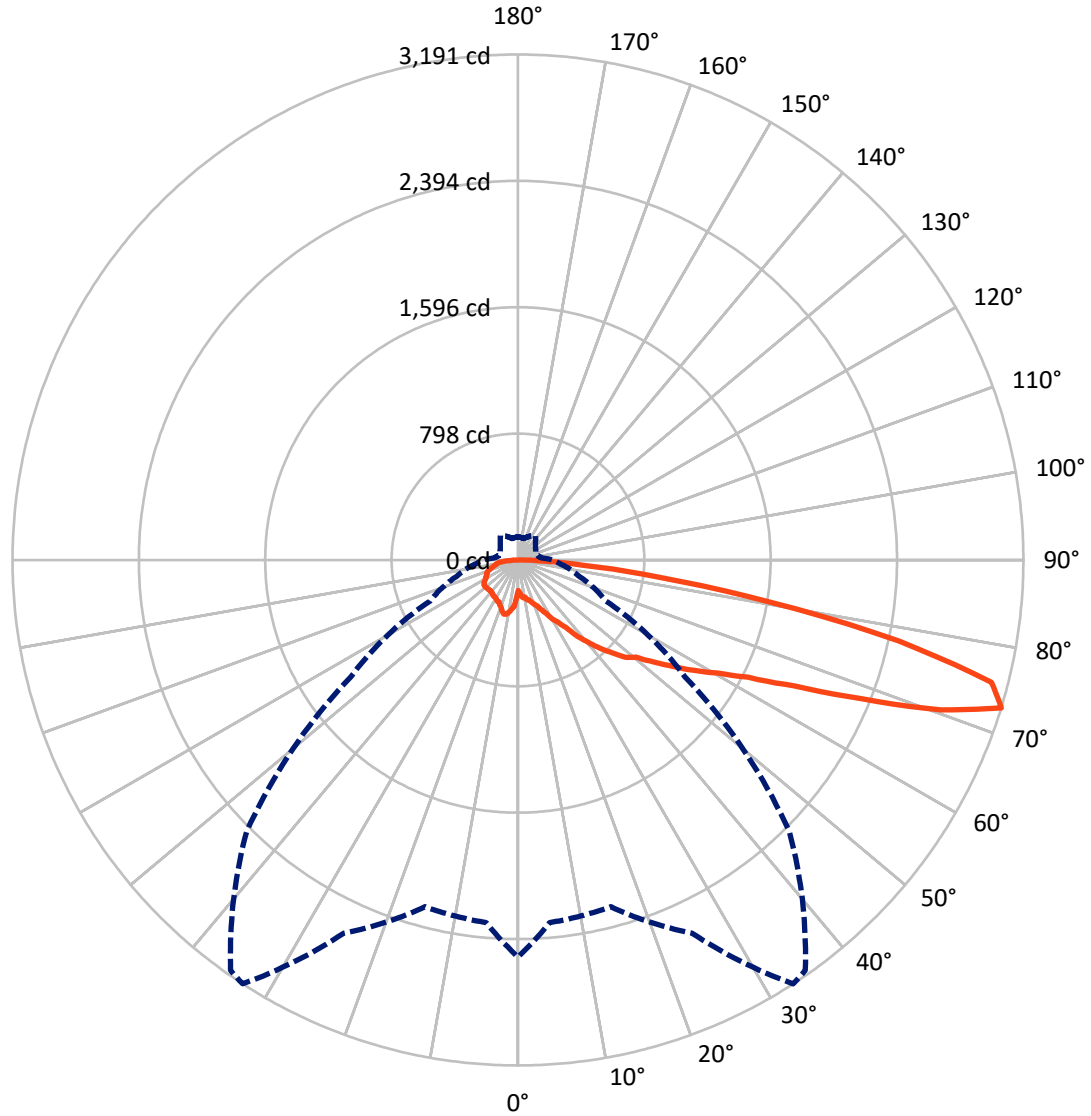
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc  
 Type IV - Short - N/A

REPORT NUMBER: P366640  
CATALOG NUMBER: MSA-SA1A-730-U-T4FT

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P366640  
 CATALOG NUMBER: MSA-SA1A-730-U-T4FT

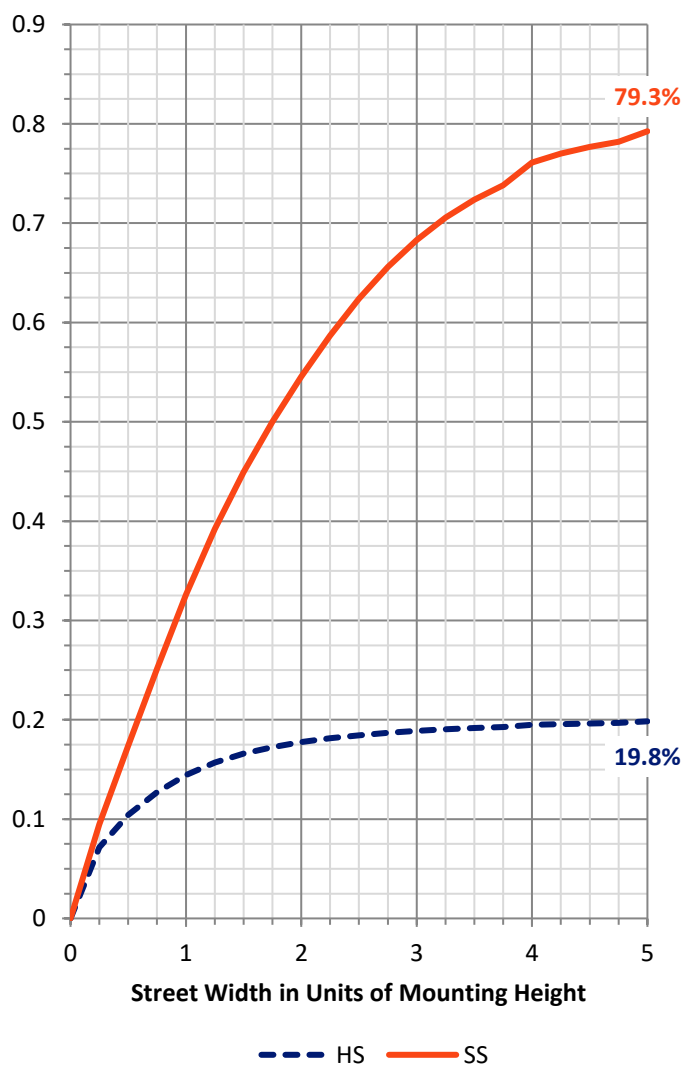
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	746.3	0.0	746.3
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	2942.7	0.0	2942.7
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	3689.0	0.0	3689.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.6	0.7
10°-20°	98.3	2.7
20°-30°	179.2	4.9
30°-40°	303.2	8.2
40°-50°	504.4	13.7
50°-60°	740.3	20.1
60°-70°	947.0	25.7
70°-80°	770.5	20.9
80°-90°	119.3	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°	3689.0	100.0
0°-180°	3689.0	100.0

**Coefficient of Utilization**

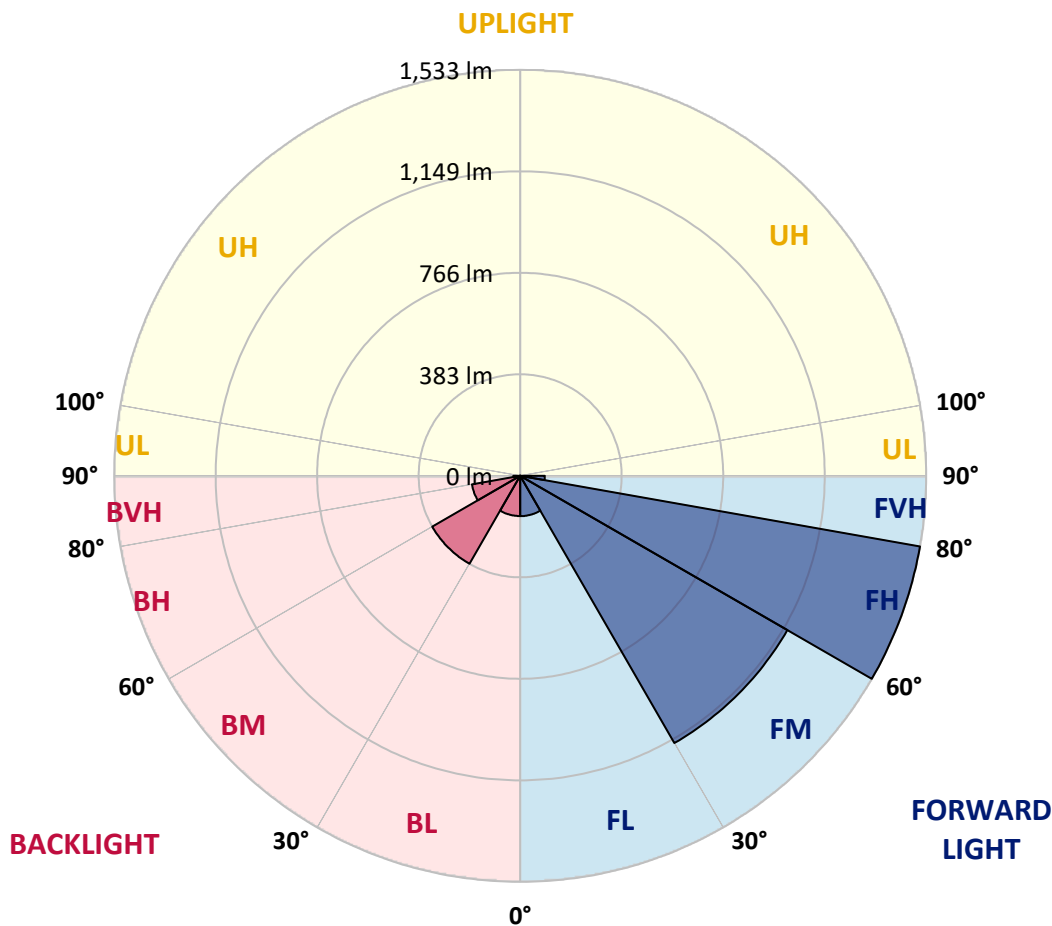


REPORT NUMBER: P366640  
 CATALOG NUMBER: MSA-SA1A-730-U-T4FT

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	152.2	4.1			
FM (30°-60°)	1164.7	31.6			
FH (60°-80°)	1532.6	41.5			G1/1800
FVH (80°-90°)	93.1	2.5			G1/100
BL (0°-30°)	151.9	4.1	B1/500		
BM (30°-60°)	383.3	10.4	B1/1000		
BH (60°-80°)	184.9	5.0	B1/500		G1/500
BVH (80°-90°)	26.2	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: P366640

CATALOG NUMBER: MSA-SA1A-730-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4
2.5°	219.3	212.4	201.1	200.8	207.1	208.4	212.6	212.9	214.4	212.0	229.4
5°	241.9	234.6	230.2	231.7	228.8	232.3	232.3	242.4	255.9	271.5	293.7
7.5°	247.3	241.9	236.9	240.7	241.3	238.0	241.2	264.9	289.2	304.8	340.4
10°	236.6	231.2	235.1	236.3	236.1	243.8	260.5	279.4	306.5	335.3	354.4
12.5°	234.6	238.4	240.3	242.4	256.9	259.2	284.5	304.1	331.3	356.6	406.3
15°	264.1	269.2	257.9	257.1	261.8	264.0	290.2	309.9	349.7	392.1	436.8
17.5°	306.2	308.1	287.7	277.3	280.8	282.5	294.0	318.8	343.3	421.6	477.3
20°	346.9	348.2	309.9	286.6	299.0	300.9	311.6	325.8	345.1	438.1	504.7
22.5°	389.6	381.8	339.9	310.5	317.7	318.2	324.4	332.2	359.6	435.5	538.1
25°	436.3	431.4	378.6	350.5	350.1	343.9	344.2	355.3	375.1	463.4	560.0
27.5°	498.3	498.9	422.2	407.1	383.4	379.2	358.6	379.4	401.9	463.7	607.2
30°	578.6	563.8	483.0	458.5	435.1	426.4	398.4	416.1	425.9	490.2	658.7
32.5°	644.0	639.7	546.3	509.3	471.0	481.1	450.2	434.6	452.2	535.8	736.6
35°	706.6	692.5	613.4	565.2	524.9	518.8	498.7	501.3	512.1	593.5	838.3
37.5°	799.9	792.3	708.2	631.1	612.3	587.4	574.6	582.8	574.3	667.4	990.9
40°	904.3	859.9	787.5	718.8	683.6	666.0	670.4	662.8	656.4	750.3	1127.7
42.5°	1004.2	963.8	840.2	809.3	763.3	770.7	746.4	751.7	769.9	868.0	1254.3
45°	1113.0	1025.6	896.0	868.8	835.9	845.2	864.7	858.8	888.7	1006.8	1373.5
47.5°	1167.4	1084.3	964.6	920.2	919.7	900.3	1018.6	1031.5	984.8	1109.7	1494.5
50°	1219.7	1138.0	1015.5	985.5	963.8	1005.4	1166.3	1136.7	1071.7	1227.7	1627.7
52.5°	1292.5	1199.3	1074.0	1042.0	1069.0	1107.5	1284.1	1278.3	1156.9	1349.0	1743.4
55°	1348.1	1254.0	1162.0	1132.3	1183.7	1221.5	1404.1	1369.1	1229.9	1438.1	1816.7
57.5°	1445.4	1348.9	1291.9	1226.0	1318.4	1317.8	1519.8	1492.7	1308.0	1511.2	1846.2
60°	1600.1	1486.7	1427.2	1351.1	1450.2	1485.5	1652.0	1574.0	1363.2	1557.4	1793.0
62.5°	1817.3	1682.6	1586.1	1510.8	1631.5	1695.5	1815.3	1633.2	1366.8	1544.3	1652.9
65°	2085.9	1922.1	1795.6	1716.0	1915.2	2006.6	2012.7	1669.8	1334.3	1408.2	1358.5
67.5°	2347.9	2163.8	2031.7	2046.8	2337.8	2381.1	2226.7	1700.4	1160.0	1130.8	943.3
70°	2520.3	2320.8	2232.8	2393.5	2835.4	2791.1	2400.1	1619.7	913.5	733.0	531.2
72.5°	2507.3	2298.4	2266.8	2599.5	3191.4	3163.7	2421.2	1288.1	611.8	400.8	264.9
75°	2042.7	1880.3	1952.3	2460.8	3088.9	3087.5	2102.1	797.3	313.9	205.8	167.4
77.5°	1129.4	1066.4	1277.7	1863.2	2459.4	2472.0	1420.3	361.6	169.3	145.8	126.1
80°	395.6	389.8	553.7	1005.4	1617.9	1621.0	660.5	165.4	123.0	110.3	92.6
82.5°	144.6	143.4	229.6	467.1	890.8	888.8	250.5	103.0	91.2	78.0	61.1
85°	57.7	56.5	105.0	207.4	409.2	402.6	97.3	58.5	59.7	46.5	30.0
87.5°	15.9	16.5	35.7	64.9	125.3	116.2	24.5	19.7	24.2	19.0	9.5
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: P366640  
 CATALOG NUMBER: MSA-SA1A-730-U-T4FT

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4	193.4
2.5°	232.5	234.0	218.8	224.2	231.1	234.8	236.6	228.8	231.4	242.4	241.9
5°	298.3	292.1	286.3	292.3	288.3	282.7	291.8	291.4	297.3	303.3	304.7
7.5°	347.4	339.4	336.7	323.2	309.7	296.1	307.9	315.3	316.8	331.6	337.9
10°	365.1	362.1	363.2	345.4	343.7	345.1	334.2	322.4	329.6	323.5	328.1
12.5°	406.2	413.8	394.8	382.7	381.7	373.3	351.5	343.9	335.8	344.2	339.9
15°	439.1	453.3	432.9	411.7	387.6	374.6	356.1	344.5	339.1	341.0	335.8
17.5°	487.3	500.6	448.9	416.3	391.5	372.3	344.0	319.2	332.4	333.5	327.5
20°	519.2	520.2	454.2	404.9	382.6	349.4	321.8	300.1	315.3	330.7	337.4
22.5°	550.5	543.6	460.8	395.9	350.3	318.2	304.7	303.3	314.6	327.6	329.2
25°	573.9	575.0	464.6	392.5	331.3	287.6	287.6	297.5	307.4	338.4	336.8
27.5°	630.7	588.9	449.8	377.1	305.0	269.6	287.7	301.0	305.8	339.3	342.6
30°	672.0	644.7	452.8	350.6	278.4	261.2	276.1	292.8	305.9	344.6	343.4
32.5°	741.3	668.0	460.0	313.4	258.5	258.0	271.2	288.8	304.5	338.8	340.7
35°	818.0	736.6	440.0	285.1	253.7	256.2	273.2	280.2	298.7	336.5	338.2
37.5°	959.8	772.4	427.3	263.2	250.7	257.7	264.1	275.0	293.7	325.0	336.1
40°	1043.1	846.1	380.1	250.5	244.2	256.5	259.7	268.9	279.0	311.3	318.3
42.5°	1152.7	869.4	339.9	236.4	241.0	251.4	261.1	263.4	270.1	289.5	302.4
45°	1244.0	886.8	297.2	225.1	230.2	262.6	263.2	262.1	260.9	268.1	278.7
47.5°	1338.6	933.7	257.9	212.6	226.0	271.8	264.3	254.5	249.4	250.4	260.2
50°	1443.0	967.6	230.0	202.3	227.0	271.8	269.5	246.7	236.6	234.0	244.2
52.5°	1534.8	971.6	208.9	194.0	223.1	262.5	273.0	241.8	224.8	218.5	228.2
55°	1584.8	921.3	193.6	186.6	213.3	254.0	271.2	239.0	210.6	205.8	214.4
57.5°	1583.8	837.7	180.6	176.1	202.2	242.3	260.9	224.0	201.9	199.1	207.5
60°	1526.7	739.8	170.6	167.6	190.7	225.1	242.6	214.2	193.4	192.1	201.2
62.5°	1397.2	638.6	161.0	158.5	180.0	213.0	233.8	203.4	184.7	184.6	193.3
65°	1144.2	512.7	152.0	151.4	170.0	201.1	225.6	194.2	175.7	178.7	187.6
67.5°	788.4	360.2	142.3	144.2	160.8	189.6	219.3	188.1	166.2	172.5	180.4
70°	432.6	222.8	131.6	135.3	149.2	176.3	209.5	178.1	153.8	163.4	169.0
72.5°	220.1	148.6	118.3	124.1	135.0	156.7	191.1	163.7	140.5	144.2	147.1
75°	147.8	111.9	103.5	109.9	117.7	138.0	169.6	150.3	127.8	127.3	130.5
77.5°	111.7	87.4	87.8	95.2	100.2	121.4	152.4	139.0	117.1	116.0	120.7
80°	81.7	66.3	70.7	78.4	82.9	109.0	141.3	126.4	102.5	98.2	102.2
82.5°	54.2	47.0	52.3	60.0	63.7	91.1	128.2	107.3	83.6	72.7	73.3
85°	25.6	24.6	31.2	34.9	39.6	56.5	96.0	74.2	53.3	44.1	46.1
87.5°	5.8	7.8	10.3	10.1	11.8	15.2	29.8	20.8	15.5	10.6	7.0
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)