

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: P366657

Luminaire Tested: **MSA-SA1A-740-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366657  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-740-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3048 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G1

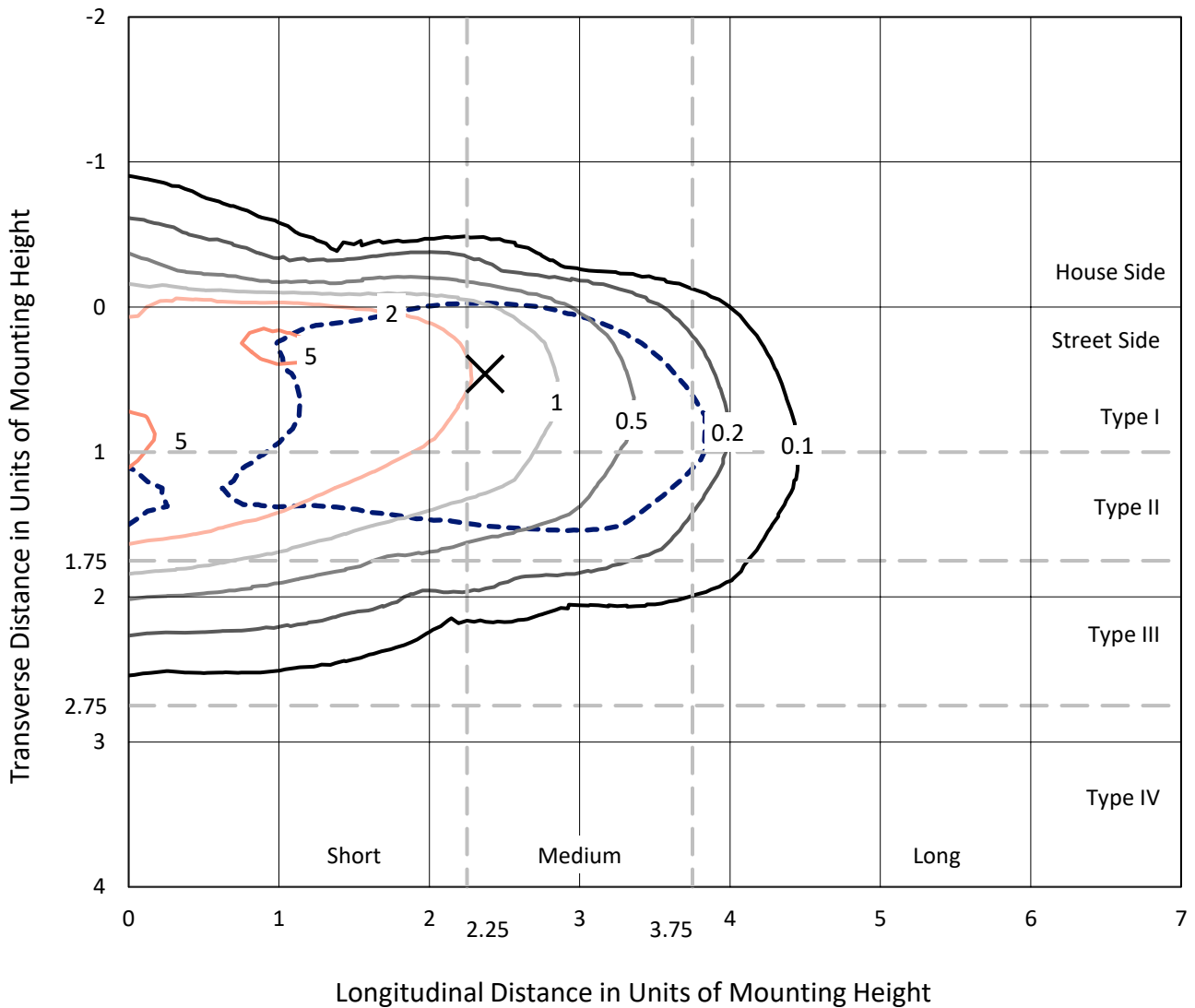
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P366657  
 CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

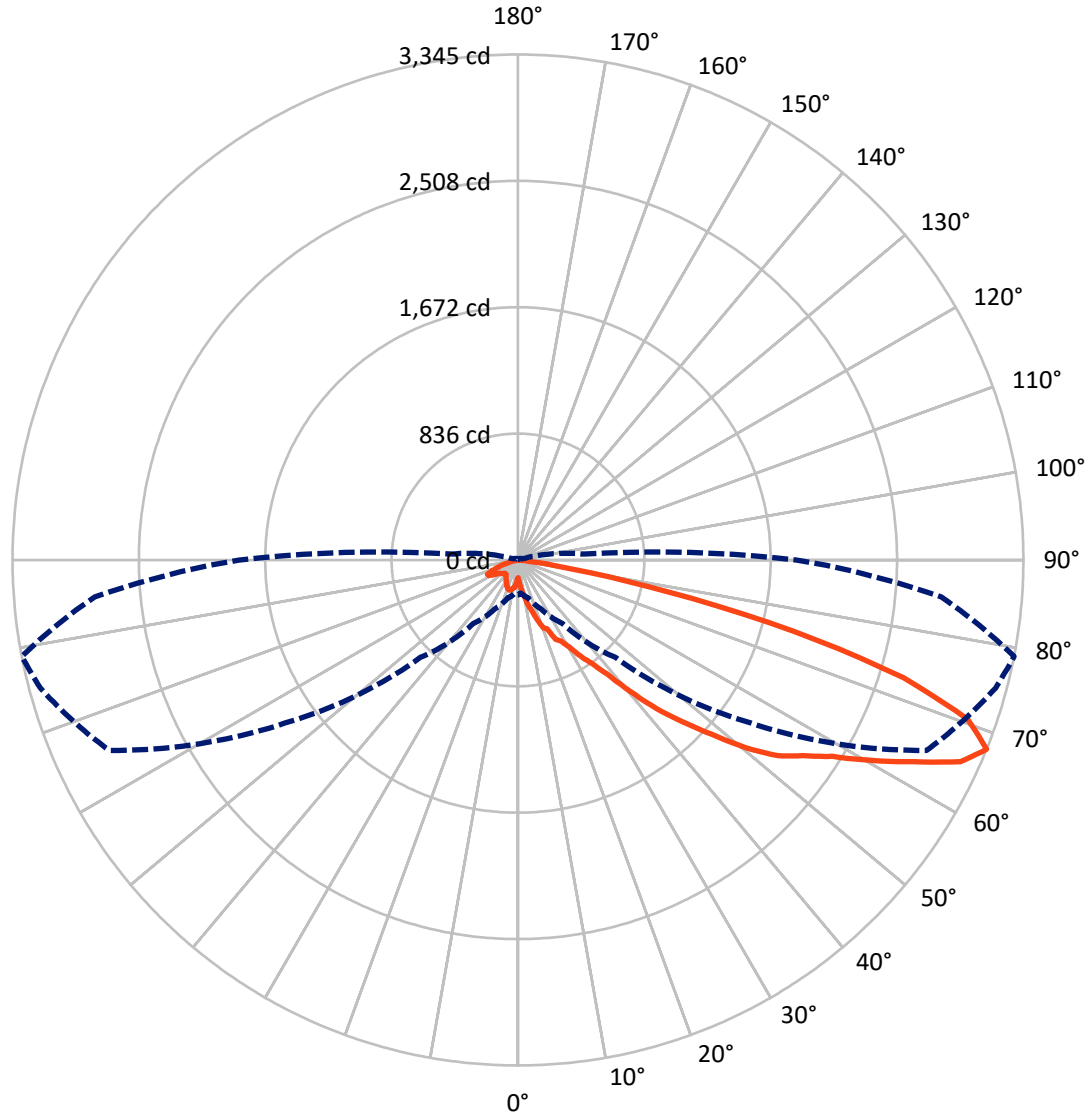
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 fc  
 Type II - Medium - N/A

REPORT NUMBER: P366657  
CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P366657  
 CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

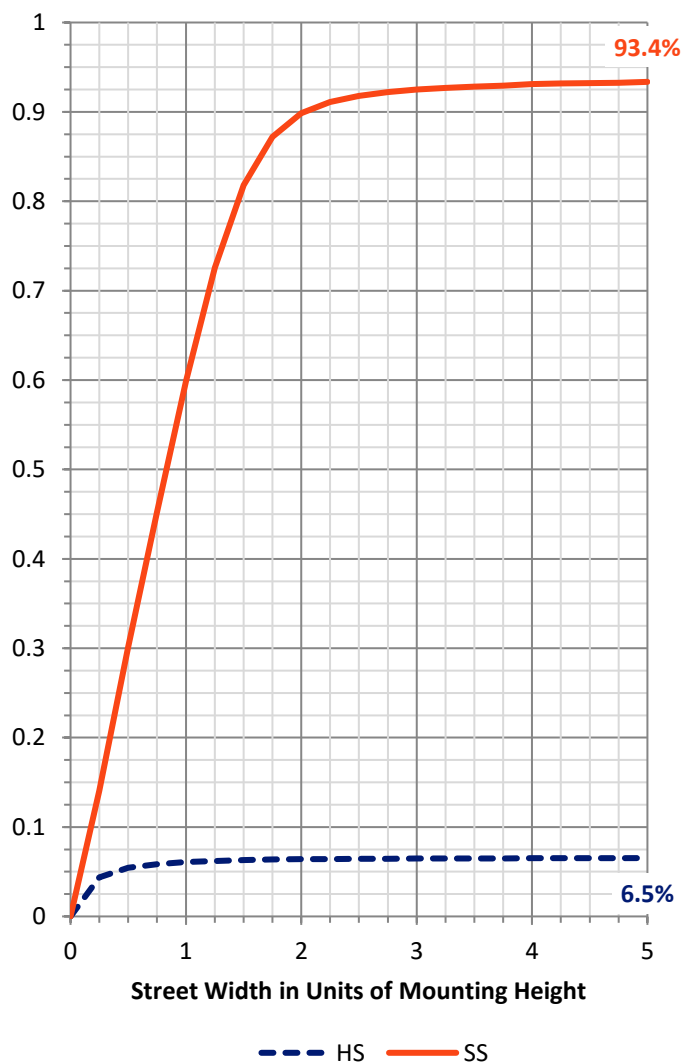
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	200.3	0.0	200.3
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	2847.7	0.0	2847.7
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	3048.0	0.0	3048.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.1	0.6
10°-20°	68.1	2.2
20°-30°	131.4	4.3
30°-40°	258.1	8.5
40°-50°	517.0	17.0
50°-60°	826.4	27.1
60°-70°	831.5	27.3
70°-80°	375.1	12.3
80°-90°	23.2	0.8
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°	3048.0	100.0
0°-180°	3048.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P366657

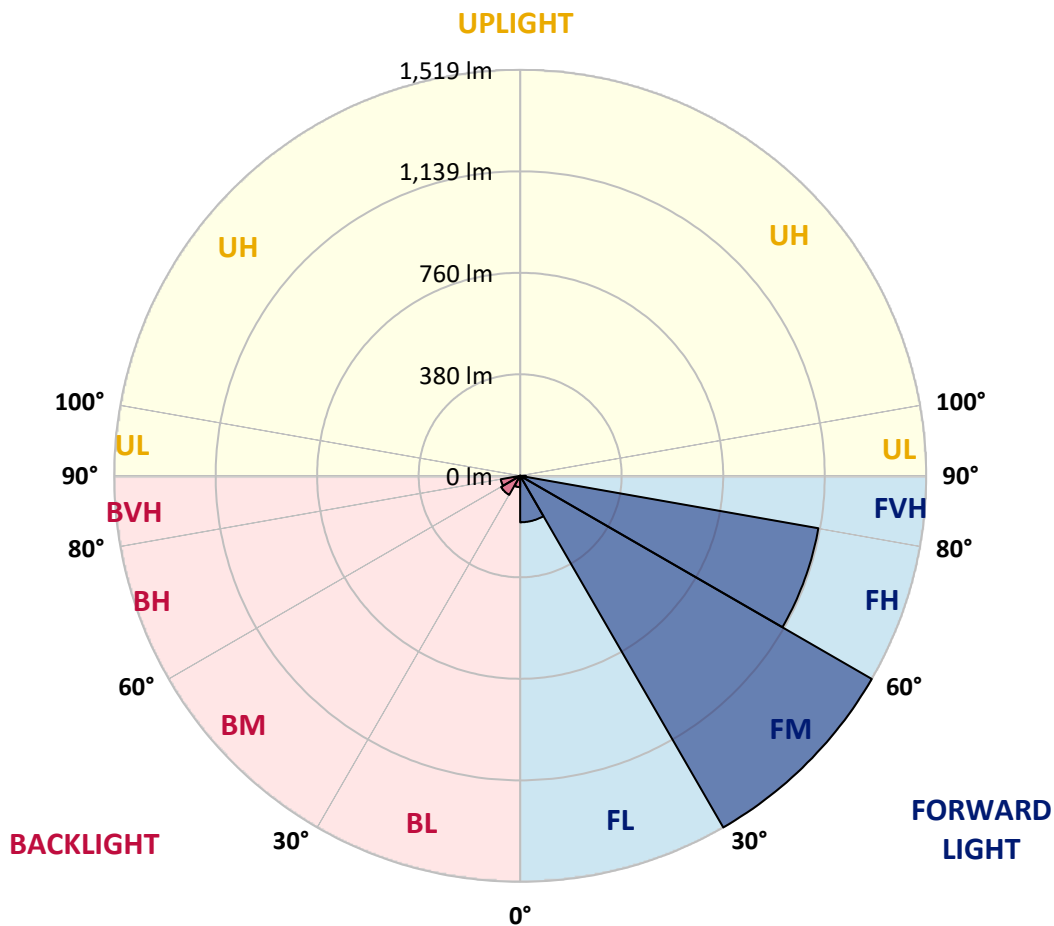
CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	174.0	5.7			
FM (30°-60°)	1519.2	49.8			
FH (60°-80°)	1132.8	37.2			G1/1800
FVH (80°-90°)	21.7	0.7			G1/100
BL (0°-30°)	42.6	1.4	B0/110		
BM (30°-60°)	82.4	2.7	B0/220		
BH (60°-80°)	73.8	2.4	B0/110		G0/110
BVH (80°-90°)	1.5	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 II Medium





REPORT NUMBER: P366657  
 CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4
2.5°	158.6	152.9	143.7	148.9	148.5	151.2	146.2	140.6	131.7	140.6	141.3
5°	228.3	217.8	211.0	209.7	202.3	195.4	193.9	188.2	183.8	175.9	183.0
7.5°	284.5	279.6	267.7	266.3	248.2	238.1	241.3	238.8	222.1	213.9	220.8
10°	308.3	299.9	301.6	299.9	292.2	295.0	288.5	280.9	267.7	254.0	236.9
12.5°	317.6	316.2	330.2	328.5	346.6	368.5	353.9	341.3	310.5	307.1	283.8
15°	337.4	345.8	343.8	350.8	362.4	399.6	399.2	402.2	369.6	352.2	318.4
17.5°	355.0	361.2	351.2	359.2	390.8	413.3	443.4	431.6	435.3	417.5	365.3
20°	347.5	354.5	344.4	339.6	395.2	437.9	478.0	469.5	491.6	480.5	408.5
22.5°	394.7	381.4	356.0	340.2	381.7	437.4	490.3	526.1	522.2	495.0	448.6
25°	453.0	444.9	414.5	386.6	390.3	434.3	528.9	581.5	592.9	581.4	486.8
27.5°	531.6	529.8	467.6	455.5	419.6	421.1	535.0	651.4	625.4	607.2	531.3
30°	634.3	619.7	545.9	530.1	477.0	451.0	571.9	711.7	692.6	667.9	573.1
32.5°	744.7	746.9	652.8	600.7	558.0	527.1	557.3	740.0	775.8	755.8	625.4
35°	870.0	879.8	764.7	703.5	620.5	575.0	620.2	826.7	890.9	838.3	695.4
37.5°	1063.1	1062.7	928.3	806.5	746.2	696.8	724.8	905.5	1032.3	958.4	821.1
40°	1232.9	1196.0	1071.0	931.0	836.9	823.5	803.1	1013.3	1183.4	1138.9	932.9
42.5°	1359.8	1333.8	1182.7	1073.8	957.2	914.5	907.3	1171.4	1406.3	1344.0	1092.3
45°	1511.5	1426.2	1314.9	1216.8	1098.0	1085.6	1068.6	1331.9	1665.8	1525.3	1230.9
47.5°	1647.5	1567.1	1462.0	1335.9	1199.5	1302.0	1236.8	1472.9	1854.5	1722.6	1383.8
50°	1761.9	1676.5	1558.7	1462.8	1404.3	1473.9	1365.2	1589.0	2058.3	1951.4	1526.8
52.5°	1820.2	1723.6	1632.5	1573.2	1609.0	1593.4	1539.2	1729.6	2232.0	2152.0	1653.5
55°	1772.3	1677.9	1639.7	1669.1	1777.8	1732.6	1737.0	1947.5	2396.0	2285.8	1763.7
57.5°	1559.9	1473.7	1490.7	1571.2	1779.5	1897.8	1962.5	2159.3	2527.6	2452.4	1933.8
60°	1180.0	1110.6	1173.5	1316.3	1612.2	1864.9	2122.5	2371.0	2715.6	2692.0	2191.2
62.5°	720.6	683.0	772.1	950.2	1284.7	1703.4	2215.7	2653.2	2916.7	2941.7	2464.2
65°	367.6	350.7	424.9	581.5	868.0	1399.3	2148.3	2828.7	3124.5	3216.9	2724.5
67.5°	231.5	220.6	260.3	354.7	512.1	912.7	1881.0	2982.1	3271.4	3344.5	2811.3
70°	160.5	153.6	187.8	243.5	323.1	491.6	1396.6	2838.9	3154.9	3158.3	2601.1
72.5°	101.8	96.4	129.9	180.3	238.4	253.9	800.6	2227.6	2700.6	2669.5	2106.5
75°	66.0	63.3	82.5	132.1	183.1	156.6	395.7	1503.1	1936.5	1887.7	1399.1
77.5°	47.4	45.7	55.3	88.2	130.4	109.6	177.4	895.9	1110.3	1003.8	679.1
80°	28.6	28.4	40.0	55.3	92.7	77.3	82.0	406.8	430.5	351.0	207.5
82.5°	14.3	14.8	22.3	35.6	59.6	50.6	37.5	135.4	115.6	85.2	42.0
85°	3.4	4.2	11.8	24.5	29.9	20.2	17.8	35.5	31.8	24.0	12.3
87.5°	0.0	0.0	3.7	5.9	8.1	3.4	6.0	6.7	8.6	6.7	2.5
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: P366657  
 CATALOG NUMBER: MSA-SA1A-740-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4
2.5°	141.5	139.5	127.2	124.0	123.7	120.1	121.0	117.6	117.8	125.3	125.3
5°	180.3	168.5	156.8	146.3	139.3	129.2	125.5	124.0	122.7	125.7	127.5
7.5°	211.7	194.4	173.2	150.5	129.5	115.1	113.1	109.4	108.0	111.1	113.4
10°	225.7	204.1	175.1	142.0	122.3	110.6	100.8	95.6	94.6	94.4	95.3
12.5°	255.2	228.5	177.1	138.8	117.4	104.5	93.4	84.7	76.6	77.5	76.6
15°	278.9	247.3	177.1	131.1	105.7	92.7	73.3	68.9	67.7	69.6	68.0
17.5°	314.7	266.0	168.2	117.3	95.6	72.1	64.7	64.4	66.7	69.4	67.7
20°	336.2	268.5	153.2	101.5	78.5	62.5	59.8	57.1	60.5	62.7	61.8
22.5°	358.6	268.7	138.3	93.1	63.2	57.0	52.6	50.4	50.9	52.9	53.3
25°	368.1	262.1	124.3	82.0	57.3	50.9	46.4	44.0	43.2	44.2	43.9
27.5°	394.2	249.5	109.2	69.9	54.4	45.2	41.0	38.1	35.6	37.3	37.6
30°	397.9	245.5	101.0	62.2	50.7	40.0	36.3	33.3	31.4	33.8	33.8
32.5°	409.6	223.3	96.8	59.0	46.9	37.0	31.9	29.7	29.4	30.9	31.1
35°	427.8	213.6	90.6	56.5	43.3	33.4	28.7	27.7	27.4	28.6	28.6
37.5°	489.3	201.5	83.7	54.3	40.3	31.6	27.9	26.2	26.4	27.4	28.1
40°	530.1	203.0	73.4	51.6	36.8	29.9	26.2	25.0	24.9	25.4	25.9
42.5°	605.9	204.1	68.9	48.7	34.1	27.9	24.5	23.7	23.0	23.5	24.0
45°	690.6	210.4	66.5	46.4	32.6	26.7	23.0	22.5	21.0	21.3	22.0
47.5°	772.2	233.0	63.7	43.0	31.3	26.0	21.5	20.3	19.3	19.2	19.8
50°	865.0	255.1	60.5	39.3	29.9	25.0	20.0	18.1	17.5	17.5	18.0
52.5°	948.0	276.1	57.5	36.8	28.9	23.2	18.7	16.8	16.3	16.3	17.0
55°	1035.4	298.1	54.8	34.4	27.6	21.3	17.5	15.8	15.6	15.3	15.8
57.5°	1189.6	346.1	51.4	32.4	25.7	19.8	16.5	14.8	14.4	13.9	14.4
60°	1414.2	419.9	47.0	30.4	23.5	18.8	15.6	13.6	13.1	12.3	12.4
62.5°	1633.8	479.5	42.0	27.9	21.5	17.8	14.3	12.3	11.4	10.4	10.6
65°	1822.0	503.1	36.6	24.9	19.5	15.5	12.4	10.8	9.6	8.2	8.1
67.5°	1844.2	444.3	31.4	22.0	17.5	13.1	10.6	9.6	7.7	6.6	6.2
70°	1659.7	331.0	26.2	19.5	15.1	11.1	9.1	8.4	7.2	6.2	5.7
72.5°	1321.7	244.3	22.0	17.3	13.3	9.4	7.7	7.9	7.2	6.0	5.4
75°	874.1	139.8	18.0	14.4	11.1	7.6	7.1	7.1	6.9	5.7	5.0
77.5°	420.6	60.3	13.8	11.4	8.9	5.7	6.4	6.4	6.6	5.2	4.2
80°	119.3	18.1	8.6	7.7	6.6	3.9	5.0	4.9	4.4	3.0	1.8
82.5°	21.3	7.1	3.9	4.0	3.7	1.5	2.9	2.7	2.2	1.2	0.2
85°	5.9	2.7	2.2	2.4	1.8	0.5	1.2	1.5	1.2	0.7	0.0
87.5°	1.5	1.2	1.5	1.7	1.3	0.2	0.5	0.2	0.5	0.2	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)