

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: P366649

Luminaire Tested: **MSA-SA1A-740-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366649  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-740-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3318 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

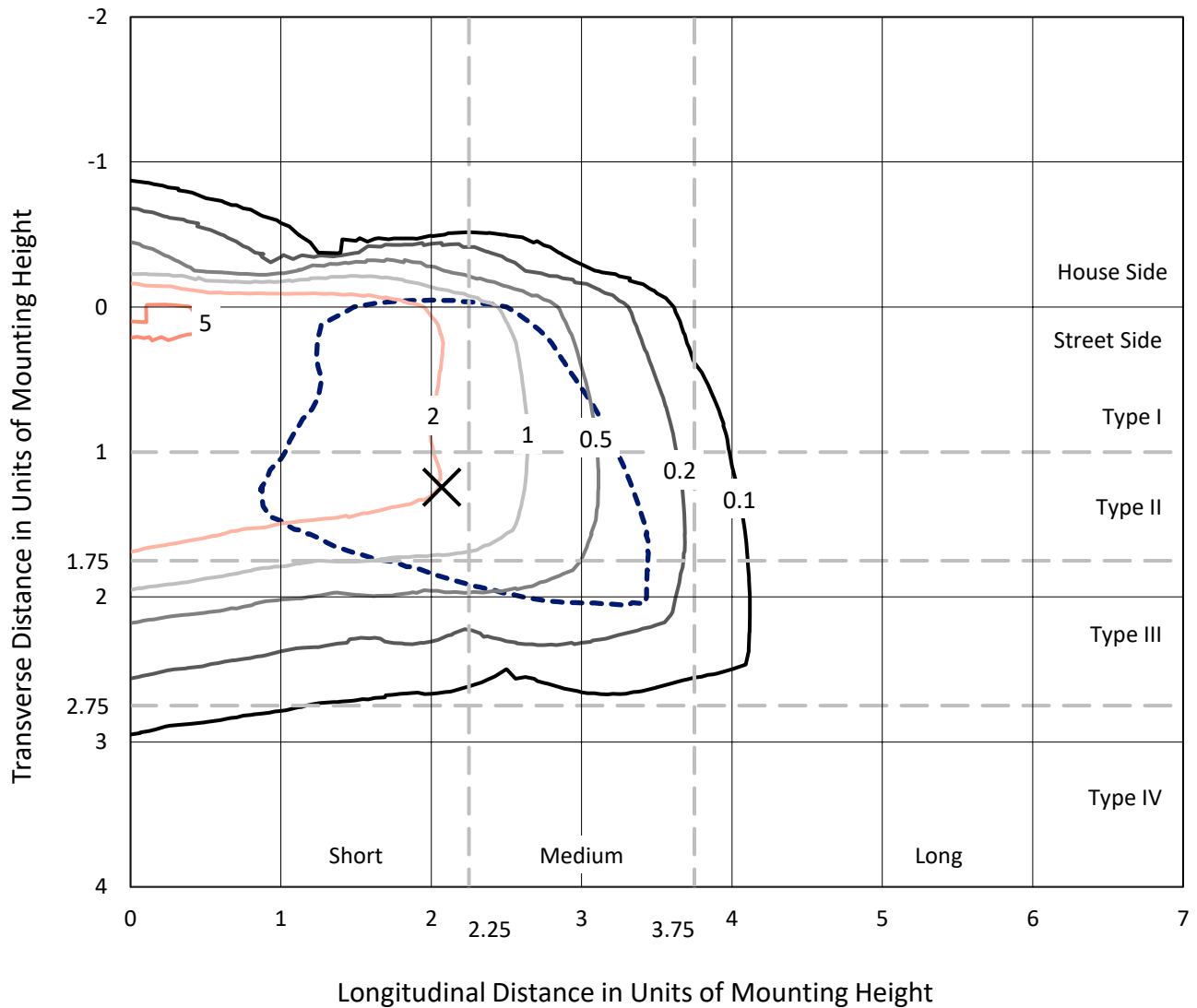
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

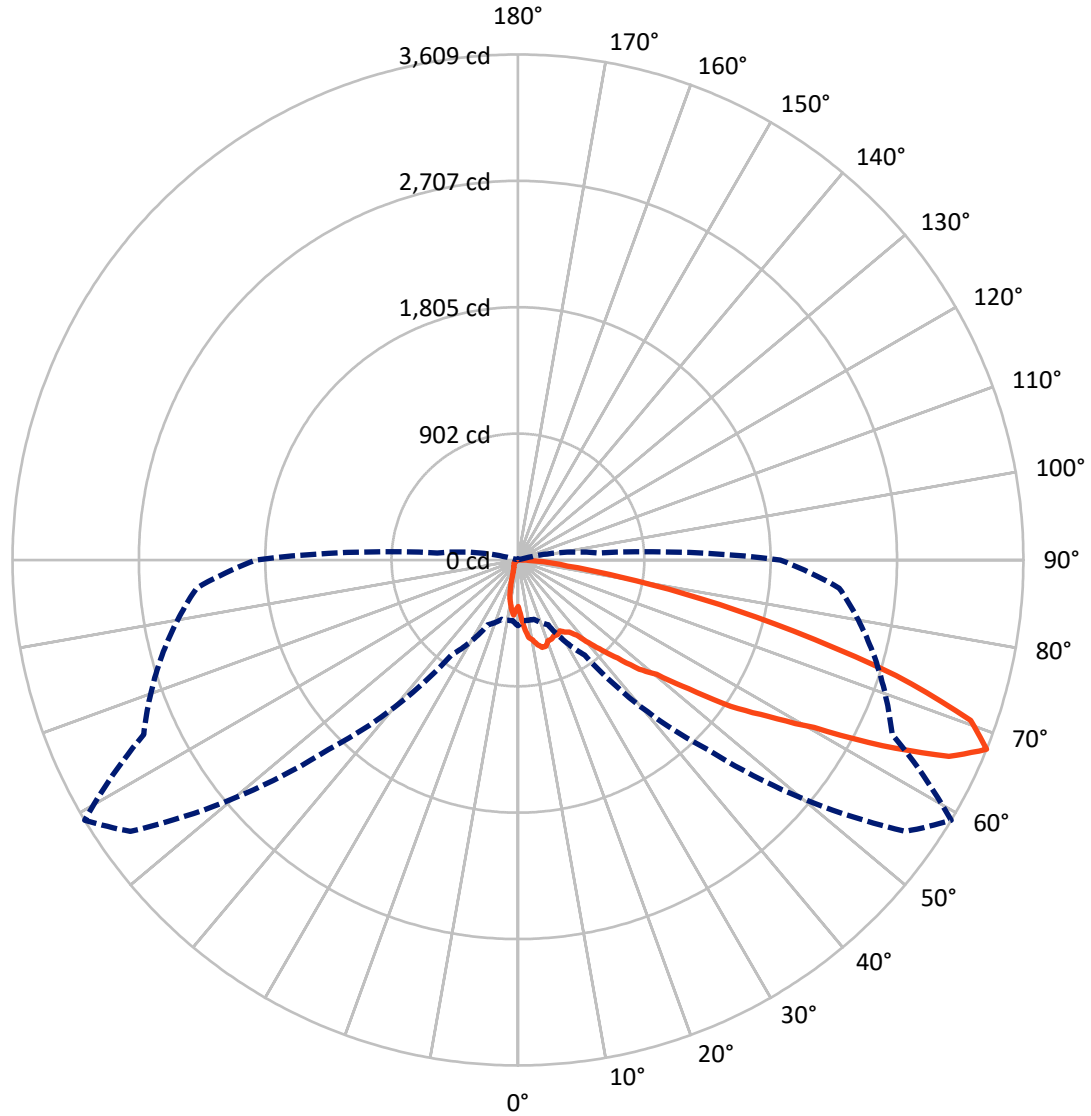
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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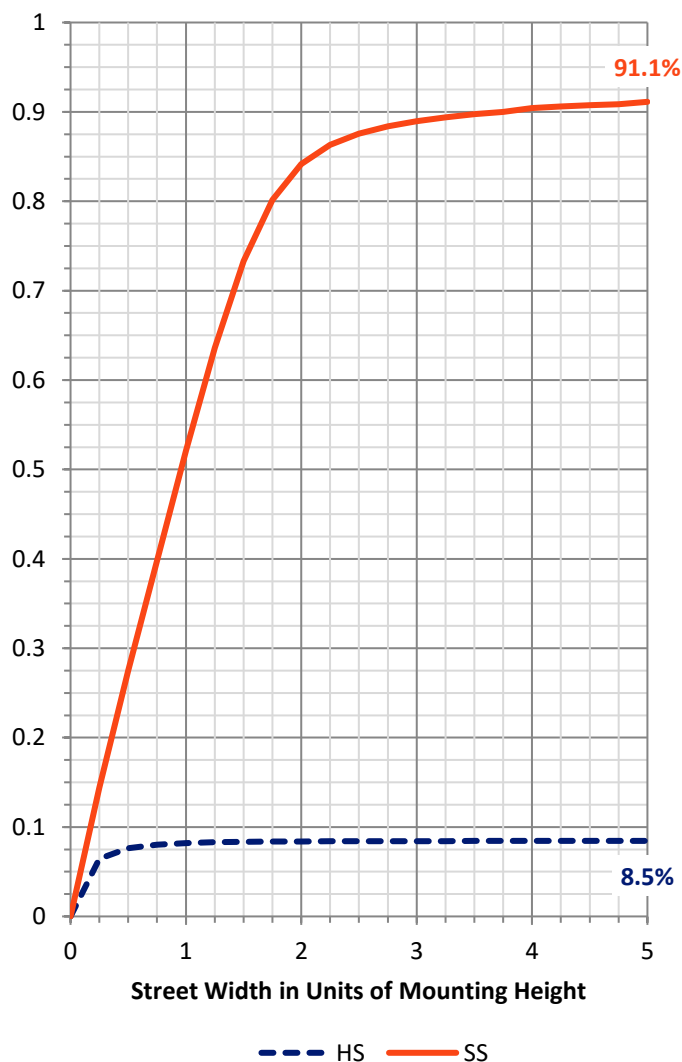
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	282.2	0.0	282.2
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	3035.8	0.0	3035.8
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	3318.0	0.0	3318.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.4	1.2
10°-20°	113.7	3.4
20°-30°	169.1	5.1
30°-40°	260.8	7.9
40°-50°	465.5	14.0
50°-60°	828.3	25.0
60°-70°	964.7	29.1
70°-80°	429.0	12.9
80°-90°	46.6	1.4
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°	3318.0	100.0
0°-180°	3318.0	100.0

**Coefficient of Utilization**

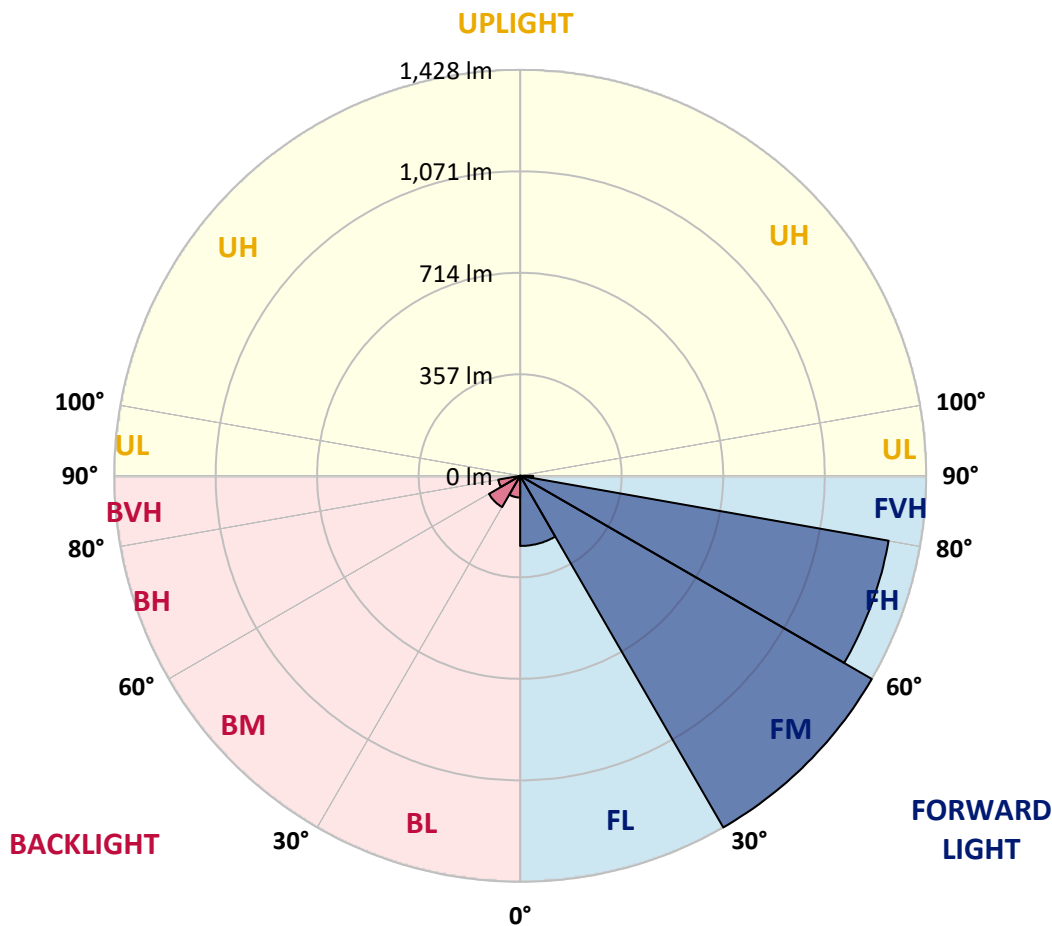


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	246.8	7.4			
FM (30°-60°)	1427.7	43.0			
FH (60°-80°)	1315.6	39.6			G1/1800
FVH (80°-90°)	45.8	1.4			G1/100
BL (0°-30°)	76.3	2.3	B0/110		
BM (30°-60°)	126.9	3.8	B0/220		
BH (60°-80°)	78.2	2.4	B0/110		G0/110
BVH (80°-90°)	0.8	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0
2.5°	432.8	416.5	393.3	400.2	406.4	412.3	402.5	397.0	394.3	370.4	400.4
5°	531.4	511.1	500.5	497.8	491.1	476.1	501.0	489.9	493.6	498.3	508.0
7.5°	561.5	552.2	536.9	542.7	517.1	514.9	549.4	559.0	571.6	563.0	574.7
10°	546.0	530.1	537.3	535.3	534.3	556.8	581.0	581.5	600.3	609.4	569.5
12.5°	515.4	517.3	543.2	541.1	574.7	619.8	625.3	619.4	650.2	634.4	628.3
15°	535.8	550.9	536.6	541.5	553.4	609.7	629.3	647.5	676.6	686.0	645.1
17.5°	560.3	561.8	535.8	529.7	559.8	586.0	632.4	647.3	650.2	732.7	682.9
20°	547.0	560.0	528.9	490.7	537.4	573.1	620.1	615.4	634.6	746.4	691.5
22.5°	582.3	563.8	524.0	495.3	511.1	543.5	583.3	614.1	642.8	713.5	702.6
25°	585.7	578.9	543.5	518.0	515.3	523.5	578.9	598.8	643.8	743.1	693.2
27.5°	623.5	615.7	543.2	545.7	520.5	495.1	557.8	604.3	662.1	725.1	713.2
30°	672.2	672.9	579.3	587.2	551.2	510.4	575.1	587.8	674.5	753.8	728.0
32.5°	721.6	741.9	650.7	608.8	597.6	568.4	553.6	612.5	660.9	802.9	764.9
35°	796.7	810.5	709.5	672.0	627.8	594.6	612.0	633.2	709.8	867.9	813.5
37.5°	923.9	899.0	815.0	749.8	739.2	690.2	698.9	679.9	759.7	944.5	909.6
40°	995.4	972.9	885.6	853.8	786.3	793.8	766.3	777.4	832.1	1024.3	997.1
42.5°	1070.0	1048.5	971.9	949.4	885.0	853.8	841.4	881.2	943.2	1157.2	1122.6
45°	1144.9	1090.3	1057.9	1069.2	1040.3	978.5	964.0	999.5	1064.5	1320.5	1255.0
47.5°	1208.1	1162.1	1137.7	1132.5	1121.3	1207.1	1148.3	1163.9	1192.7	1465.0	1420.0
50°	1322.0	1276.7	1238.5	1227.9	1282.7	1404.5	1313.8	1283.6	1341.0	1639.6	1611.2
52.5°	1486.5	1428.7	1368.1	1368.2	1471.5	1538.4	1581.4	1528.3	1539.1	1831.6	1819.0
55°	1618.7	1545.3	1495.1	1534.7	1688.8	1726.2	1890.4	1843.8	1829.9	2009.7	1994.2
57.5°	1636.9	1548.8	1525.0	1594.5	1805.4	2044.6	2221.2	2104.9	2083.6	2158.7	2189.4
60°	1467.5	1374.1	1392.1	1504.0	1843.3	2238.7	2524.9	2430.0	2294.4	2333.2	2354.4
62.5°	1094.5	1020.0	1070.4	1218.5	1697.0	2368.7	2876.6	2920.6	2539.0	2464.3	2459.8
65°	710.2	663.4	696.5	818.0	1284.2	2353.9	3190.7	3381.6	2731.8	2571.1	2492.8
67.5°	469.7	434.3	439.0	510.9	830.4	1914.4	3378.6	3609.2	2948.5	2631.8	2303.2
70°	350.1	322.2	323.9	362.9	492.9	1262.6	3116.6	3429.6	3027.6	2421.6	1859.0
72.5°	252.5	233.9	249.5	292.8	392.8	667.6	2323.0	2824.5	2640.0	1910.0	1252.5
75°	174.9	162.6	188.2	245.0	358.5	414.5	1535.1	2033.2	1850.4	1198.4	566.2
77.5°	96.9	93.2	130.0	199.6	325.4	339.7	940.3	1336.0	1026.3	429.6	134.7
80°	42.3	41.0	63.0	149.9	273.5	306.9	529.4	740.7	403.7	76.6	43.5
82.5°	18.1	17.5	26.9	90.2	198.7	256.7	326.4	356.5	138.9	23.7	24.7
85°	3.2	3.5	10.8	47.5	121.0	130.4	236.4	211.0	69.9	11.3	17.6
87.5°	0.0	0.0	1.7	9.2	22.7	37.3	102.5	73.9	13.3	3.7	3.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0	332.0
2.5°	404.6	395.1	359.4	354.8	350.0	342.7	340.0	324.6	322.6	342.4	342.4
5°	503.5	469.9	435.8	408.9	384.9	351.6	342.2	332.5	324.6	322.6	328.8
7.5°	555.8	514.8	461.2	392.8	337.4	289.1	269.0	254.9	239.1	243.8	246.3
10°	552.9	509.4	441.0	353.1	291.7	238.4	187.2	157.3	140.6	132.4	131.4
12.5°	581.0	540.0	427.4	321.6	243.1	169.5	117.8	96.4	84.2	84.3	83.3
15°	597.3	552.6	411.6	281.6	171.2	109.0	81.7	76.9	75.3	77.1	76.1
17.5°	626.0	565.8	375.8	221.9	117.8	82.3	75.1	73.2	75.4	79.3	78.3
20°	623.8	542.8	324.9	156.4	87.0	74.1	71.1	68.2	72.7	76.8	76.1
22.5°	621.8	520.3	277.0	115.4	72.7	67.5	65.0	63.8	66.2	70.9	71.9
25°	604.0	509.2	228.5	86.7	65.9	61.3	60.1	59.1	60.0	63.8	63.7
27.5°	625.8	481.2	176.4	72.7	61.0	55.6	54.6	52.9	51.2	54.6	55.1
30°	621.3	485.0	138.3	64.0	56.1	48.9	49.2	45.7	42.7	45.7	45.7
32.5°	637.7	456.8	110.7	58.1	51.2	46.0	41.8	38.1	36.0	37.8	38.1
35°	661.8	458.0	86.7	54.4	47.0	41.0	36.0	32.3	30.2	31.1	31.6
37.5°	742.2	449.9	72.4	51.6	45.5	38.0	32.8	27.9	26.5	27.6	28.1
40°	794.7	471.4	63.8	50.1	41.7	34.9	28.1	24.5	23.4	23.9	24.7
42.5°	893.4	483.3	59.6	48.4	38.1	29.9	24.0	22.0	20.3	21.0	21.7
45°	999.1	503.7	56.4	46.5	35.4	26.2	21.2	19.5	17.3	17.5	18.1
47.5°	1129.0	552.1	52.8	43.3	31.8	23.9	18.8	16.3	14.3	14.1	15.0
50°	1303.4	616.7	49.4	39.3	29.4	21.8	16.5	13.3	11.6	11.1	11.8
52.5°	1489.5	700.4	45.9	36.5	26.5	19.2	14.1	10.8	9.2	8.9	9.4
55°	1674.0	780.7	42.5	34.6	23.5	16.5	11.9	8.9	7.6	7.2	7.6
57.5°	1884.2	867.6	38.1	30.9	20.7	14.3	9.9	7.4	6.2	5.9	6.0
60°	2042.4	898.2	34.4	26.9	18.0	12.6	8.4	5.9	5.0	4.7	4.9
62.5°	2117.5	848.3	30.9	23.4	15.8	10.9	7.1	4.9	4.2	3.9	3.9
65°	2098.0	737.7	27.4	20.0	13.6	9.1	5.5	4.2	3.7	3.2	3.0
67.5°	1872.9	577.3	23.4	16.8	11.4	7.4	4.7	4.0	3.4	3.0	2.5
70°	1485.3	418.0	19.0	13.9	9.6	6.0	3.7	3.7	3.2	3.0	2.4
72.5°	973.6	263.1	15.5	11.3	7.9	4.7	2.9	3.4	3.0	3.0	2.2
75°	421.9	94.1	12.4	9.1	6.6	3.2	2.5	3.0	3.2	3.0	2.5
77.5°	98.8	29.2	9.7	7.2	5.4	2.2	2.5	3.0	3.2	2.9	2.2
80°	37.1	12.4	6.4	4.7	4.2	1.3	2.2	1.8	1.7	1.2	0.3
82.5°	22.5	5.2	3.4	2.4	2.0	0.3	1.0	0.7	0.3	0.3	0.0
85°	16.0	2.5	1.8	1.7	1.0	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	2.2	0.7	0.8	0.8	0.7	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)