

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: P366923

Luminaire Tested: **MSA-SA1C-740-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366923  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-740-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4632 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

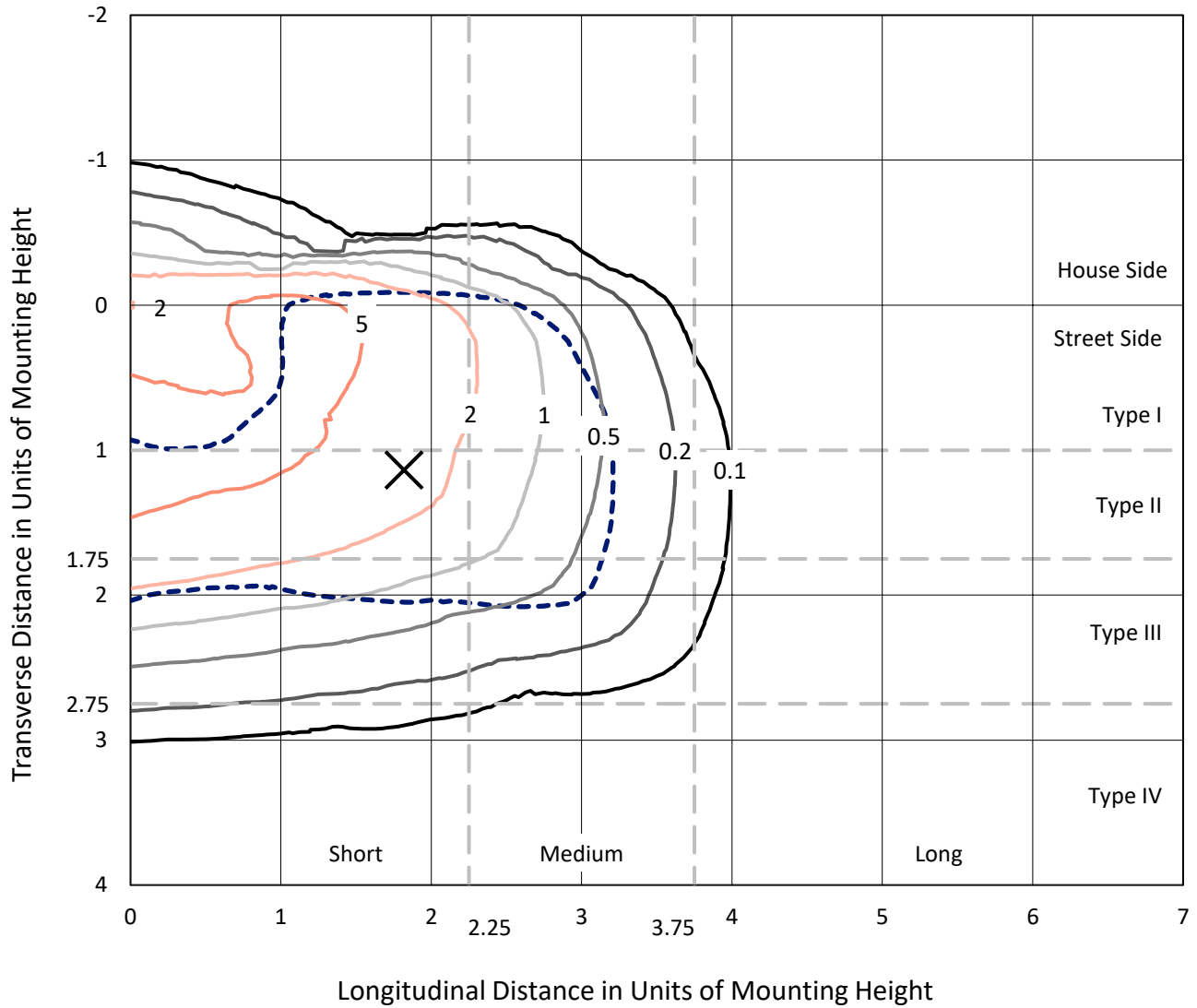
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

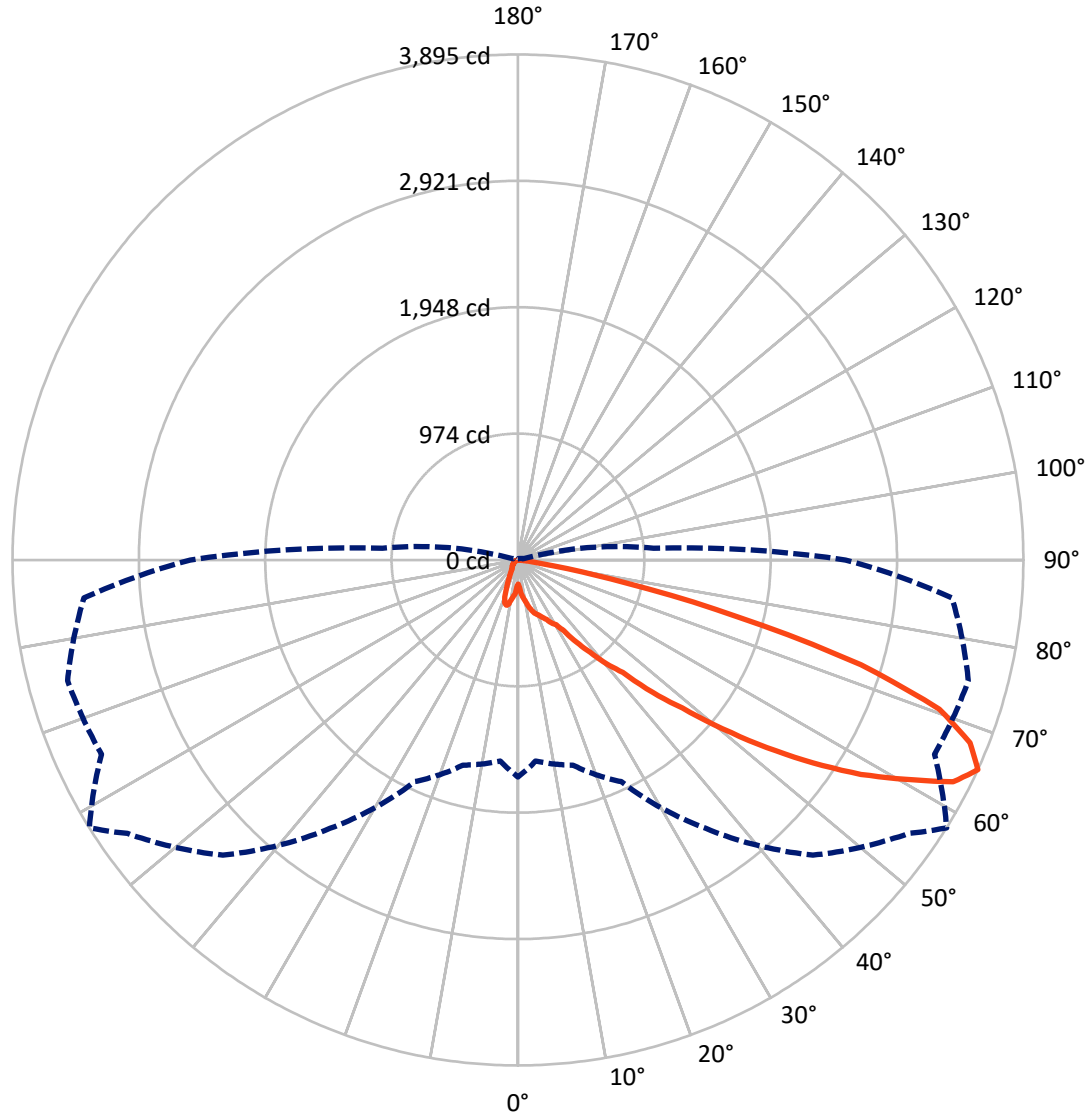
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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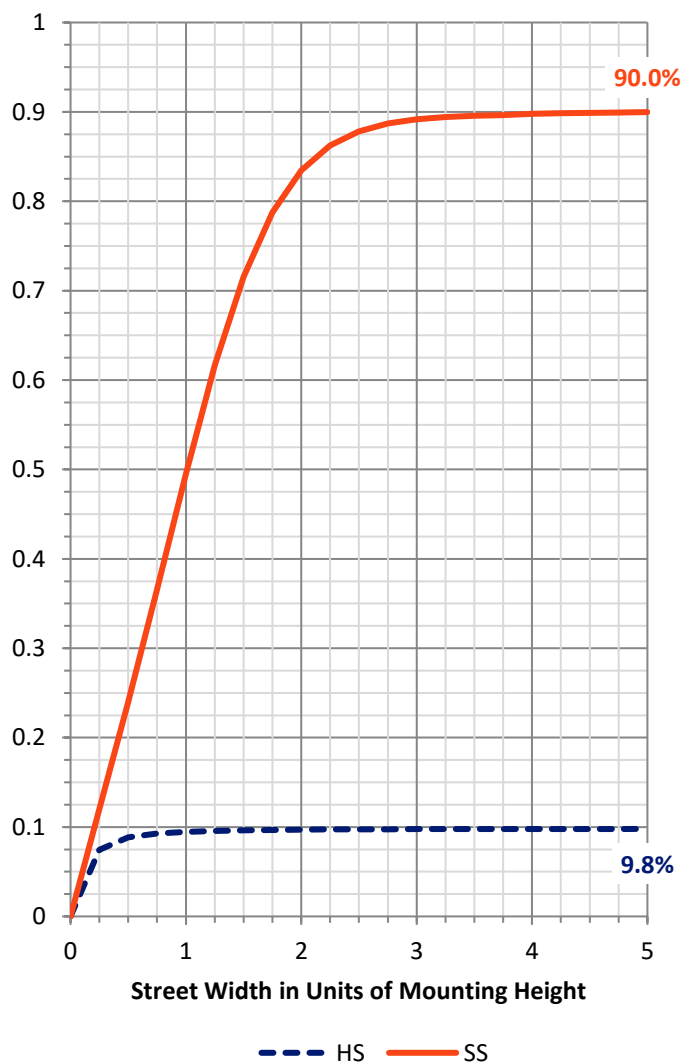
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	457.0	0.0	457.0
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	4174.9	0.0	4174.9
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	4632.0	0.0	4632.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.1	0.6
10°-20°	95.1	2.1
20°-30°	184.0	4.0
30°-40°	367.2	7.9
40°-50°	750.7	16.2
50°-60°	1331.5	28.7
60°-70°	1403.7	30.3
70°-80°	455.1	9.8
80°-90°	18.6	0.4
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°	4632.0	100.0
0°-180°	4632.0	100.0

**Coefficient of Utilization**



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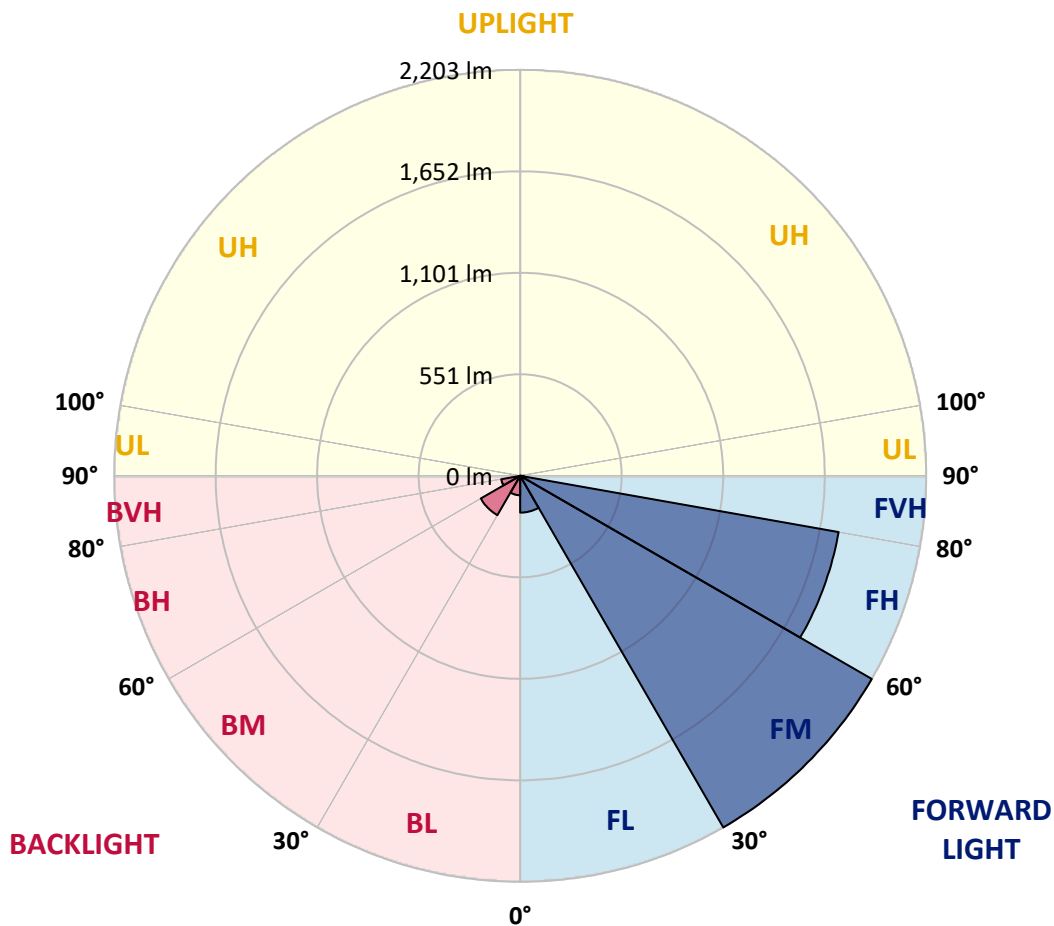
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	199.8	4.3			
FM (30°-60°)	2202.8	47.6			
FH (60°-80°)	1754.5	37.9			G1/1800
FVH (80°-90°)	17.8	0.4			G1/100
BL (0°-30°)	105.4	2.3	B0/110		
BM (30°-60°)	246.6	5.3	B1/1000		
BH (60°-80°)	104.3	2.3	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: B1-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4
2.5°	226.4	219.6	208.9	210.7	212.8	217.0	213.6	210.5	207.1	202.6	219.6
5°	273.3	262.1	261.1	258.7	256.9	256.6	260.8	259.5	261.3	269.7	278.3
7.5°	290.5	285.8	277.0	280.6	274.9	270.4	289.0	295.0	306.4	310.3	332.8
10°	288.7	281.9	285.6	287.4	291.3	307.5	319.2	325.7	335.6	357.0	352.6
12.5°	297.0	303.0	307.0	307.2	327.3	357.0	365.4	370.9	388.6	396.9	418.8
15°	325.0	334.9	328.6	331.2	337.7	374.0	393.5	405.5	430.6	457.7	463.2
17.5°	364.9	371.1	358.1	348.7	366.7	386.5	422.0	434.5	450.4	513.8	525.5
20°	415.2	425.9	397.7	360.4	384.2	407.6	446.2	452.2	469.2	551.8	570.4
22.5°	532.8	516.9	473.9	415.7	408.7	419.1	455.9	479.3	508.0	573.2	616.3
25°	648.9	643.4	580.0	515.1	468.1	444.7	493.4	506.5	553.4	624.1	647.8
27.5°	778.0	788.9	683.0	643.6	551.6	474.9	516.9	549.5	605.0	642.6	699.7
30°	948.3	930.8	806.6	767.3	662.2	558.1	577.7	579.8	661.4	703.6	757.9
32.5°	1081.8	1093.0	937.0	876.5	792.6	686.2	623.3	650.4	708.8	803.0	854.4
35°	1226.3	1225.2	1073.2	991.8	882.0	790.7	758.7	778.5	851.8	958.4	972.0
37.5°	1442.2	1423.7	1244.3	1125.1	1031.7	953.7	929.2	902.9	978.5	1080.2	1131.1
40°	1645.9	1582.0	1416.1	1274.8	1155.3	1123.5	1034.8	1051.0	1073.4	1207.7	1348.3
42.5°	1851.7	1812.0	1590.3	1471.9	1325.1	1249.5	1191.6	1184.0	1290.7	1449.8	1595.0
45°	2123.1	2001.9	1824.5	1720.5	1550.4	1474.5	1427.9	1455.8	1551.7	1784.1	1880.9
47.5°	2351.1	2239.5	2087.2	1929.1	1750.7	1836.0	1748.4	1704.3	1836.0	2076.2	2204.8
50°	2546.9	2422.5	2268.4	2151.3	2122.4	2204.2	2026.9	2043.1	2128.6	2410.8	2483.3
52.5°	2689.3	2558.4	2423.8	2367.2	2485.9	2527.1	2438.2	2402.5	2480.2	2696.1	2731.3
55°	2796.5	2662.5	2557.4	2635.3	2864.8	2851.3	2882.6	2760.5	2834.9	2993.7	2977.0
57.5°	2803.0	2644.2	2582.7	2708.1	3023.2	3233.1	3324.6	3117.0	3159.3	3226.3	3188.8
60°	2598.1	2440.0	2435.1	2613.2	3069.1	3331.9	3532.2	3431.0	3374.4	3424.3	3353.1
62.5°	2189.6	2079.1	2130.7	2327.6	2898.2	3277.4	3642.8	3764.6	3544.2	3555.4	3454.2
65°	1672.0	1555.9	1636.8	1884.8	2524.8	3216.4	3674.1	3895.0	3541.1	3592.7	3357.2
67.5°	1107.3	1040.1	1131.6	1404.9	2007.3	2839.3	3657.9	3758.1	3428.7	3446.9	2997.1
70°	571.7	555.2	629.3	845.0	1349.6	2181.3	3499.1	3444.3	3200.5	2969.4	2311.7
72.5°	183.1	183.9	255.1	386.0	727.6	1328.0	2689.6	2764.7	2561.0	2172.2	1411.4
75°	81.1	79.8	106.7	162.0	303.3	595.4	1670.9	1752.0	1594.5	1195.0	593.3
77.5°	58.4	56.6	68.3	94.7	150.2	201.9	783.4	845.5	722.9	414.1	135.9
80°	41.2	40.9	49.6	66.5	93.9	89.7	247.5	277.5	222.2	100.4	39.9
82.5°	23.2	24.0	34.4	46.9	57.1	44.9	69.6	76.7	74.8	53.5	17.5
85°	11.2	12.5	22.4	33.9	30.0	17.5	24.8	26.9	31.3	31.0	8.9
87.5°	0.0	0.0	9.1	15.4	8.1	2.6	7.6	8.6	8.3	9.9	2.1
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°	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4
2.5°	223.0	221.4	201.6	203.2	207.6	205.8	207.3	203.7	199.5	216.5	216.2
5°	281.9	270.2	263.9	258.2	259.2	247.5	254.3	257.4	256.9	266.5	269.1
7.5°	333.6	317.9	305.4	293.4	275.1	258.7	268.9	275.4	279.8	296.5	303.0
10°	357.8	345.0	340.1	316.6	303.6	293.4	281.1	272.3	275.9	271.5	275.9
12.5°	411.0	402.4	383.4	359.6	344.0	323.1	277.5	239.4	215.9	216.2	214.6
15°	459.5	459.0	430.6	391.2	345.8	286.4	215.2	167.2	145.0	138.7	136.7
17.5°	522.9	515.1	463.2	405.0	323.4	221.7	146.6	114.5	112.4	116.1	114.5
20°	563.3	551.8	479.3	384.9	266.5	150.0	110.6	101.4	107.7	112.9	111.6
22.5°	603.7	586.5	491.6	360.4	189.6	109.8	99.9	98.3	102.2	108.8	109.8
25°	625.9	622.5	515.6	314.5	129.9	96.2	96.2	95.7	97.0	101.7	100.9
27.5°	690.3	644.4	497.6	245.4	100.4	88.4	89.7	89.2	84.5	89.2	89.5
30°	730.5	709.4	498.9	174.7	88.4	78.2	81.6	77.5	70.4	74.3	73.5
32.5°	811.3	758.7	495.0	117.9	80.6	74.6	69.4	63.4	58.2	59.7	58.4
35°	905.5	865.3	442.0	94.7	75.1	66.0	57.6	51.6	46.2	47.5	47.2
37.5°	1092.7	965.2	398.2	85.3	71.5	60.5	50.9	42.5	39.6	40.4	41.2
40°	1266.2	1131.9	316.6	81.1	65.2	54.0	42.0	36.0	34.2	34.7	35.5
42.5°	1525.4	1264.3	239.2	76.9	58.9	45.6	34.9	31.0	29.2	30.3	30.8
45°	1776.3	1377.0	178.6	73.3	53.7	39.4	29.5	26.9	24.8	25.6	26.6
47.5°	2026.9	1502.2	133.3	67.5	48.0	33.9	25.3	23.5	22.2	22.4	23.7
50°	2251.2	1560.6	104.8	60.5	43.3	29.5	23.0	21.1	20.6	20.9	21.9
52.5°	2416.0	1561.1	88.4	54.2	38.9	26.1	21.6	19.6	19.3	19.8	20.9
55°	2564.9	1519.4	76.7	48.8	34.9	23.7	20.6	18.8	18.8	19.3	20.3
57.5°	2663.8	1442.7	66.5	43.0	31.6	22.4	19.8	18.0	17.7	17.5	18.3
60°	2712.0	1338.1	56.3	37.8	28.4	21.6	19.3	15.9	15.6	15.1	15.6
62.5°	2681.5	1207.2	47.2	32.6	25.3	20.6	17.0	13.8	13.3	12.3	13.0
65°	2525.6	1048.1	39.9	27.9	21.9	17.5	14.3	11.7	10.4	9.1	8.9
67.5°	2206.6	851.5	33.4	24.0	18.8	14.3	11.7	10.4	8.1	7.0	6.8
70°	1653.7	581.3	27.6	20.6	15.6	12.3	9.9	9.4	7.6	6.8	6.3
72.5°	970.2	313.7	23.2	18.0	13.3	10.2	8.1	8.6	7.6	6.3	5.7
75°	387.5	104.3	18.5	14.3	10.7	7.3	6.8	7.0	6.8	5.7	4.7
77.5°	88.4	32.9	14.3	11.2	8.3	4.7	5.5	6.0	6.0	4.7	3.4
80°	27.6	13.0	8.3	7.0	6.0	2.6	3.9	4.2	2.9	1.3	0.0
82.5°	8.9	3.7	2.9	2.9	2.6	0.5	0.8	0.5	0.0	0.0	0.0
85°	3.4	2.3	1.8	1.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	1.0	0.8	1.0	0.5	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)