

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: P367087

Luminaire Tested: **MSA-SA1D-760-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367087  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-760-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

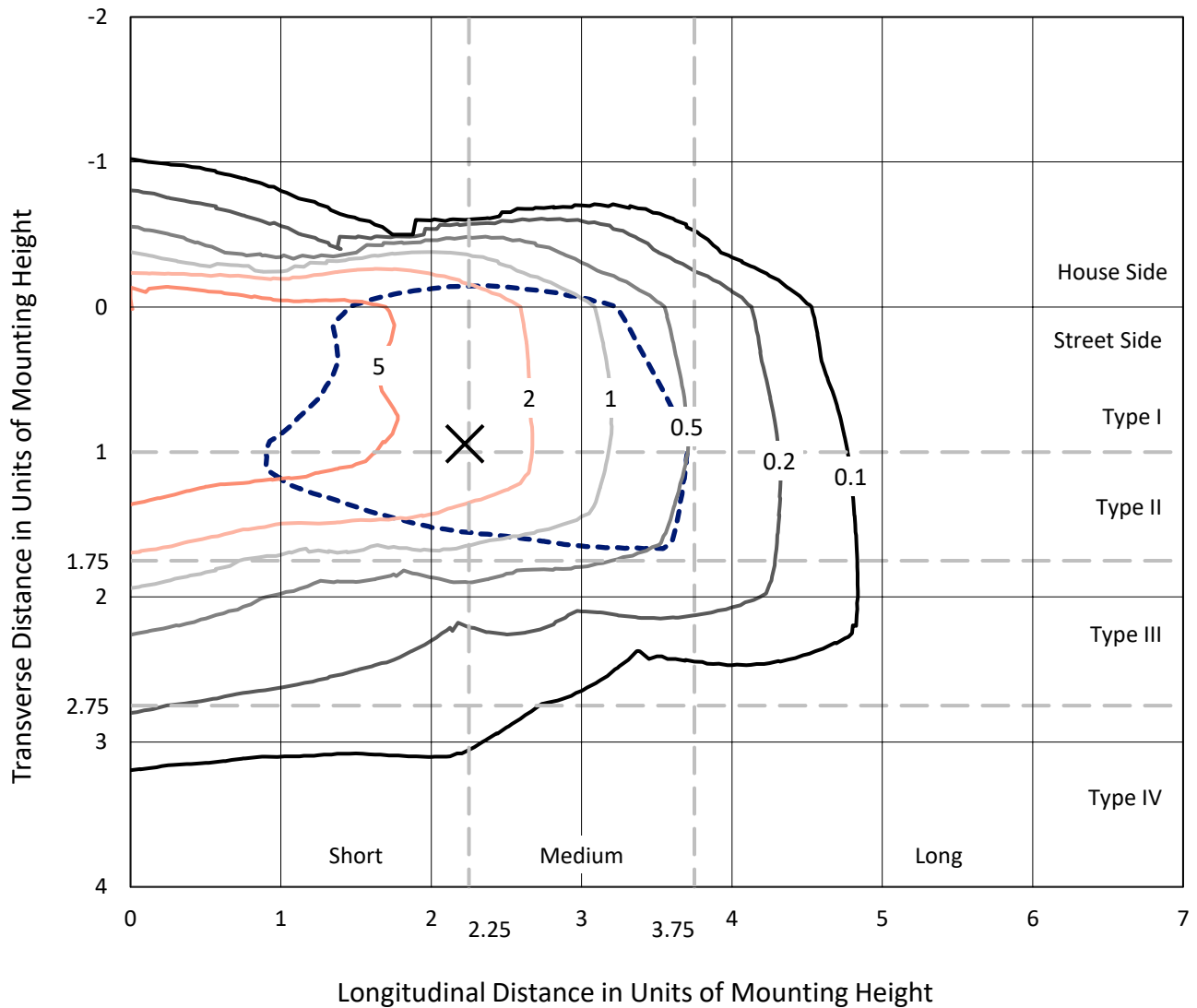
Lumens per Lamp: N/A  
Luminaire Lumens: 5620 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

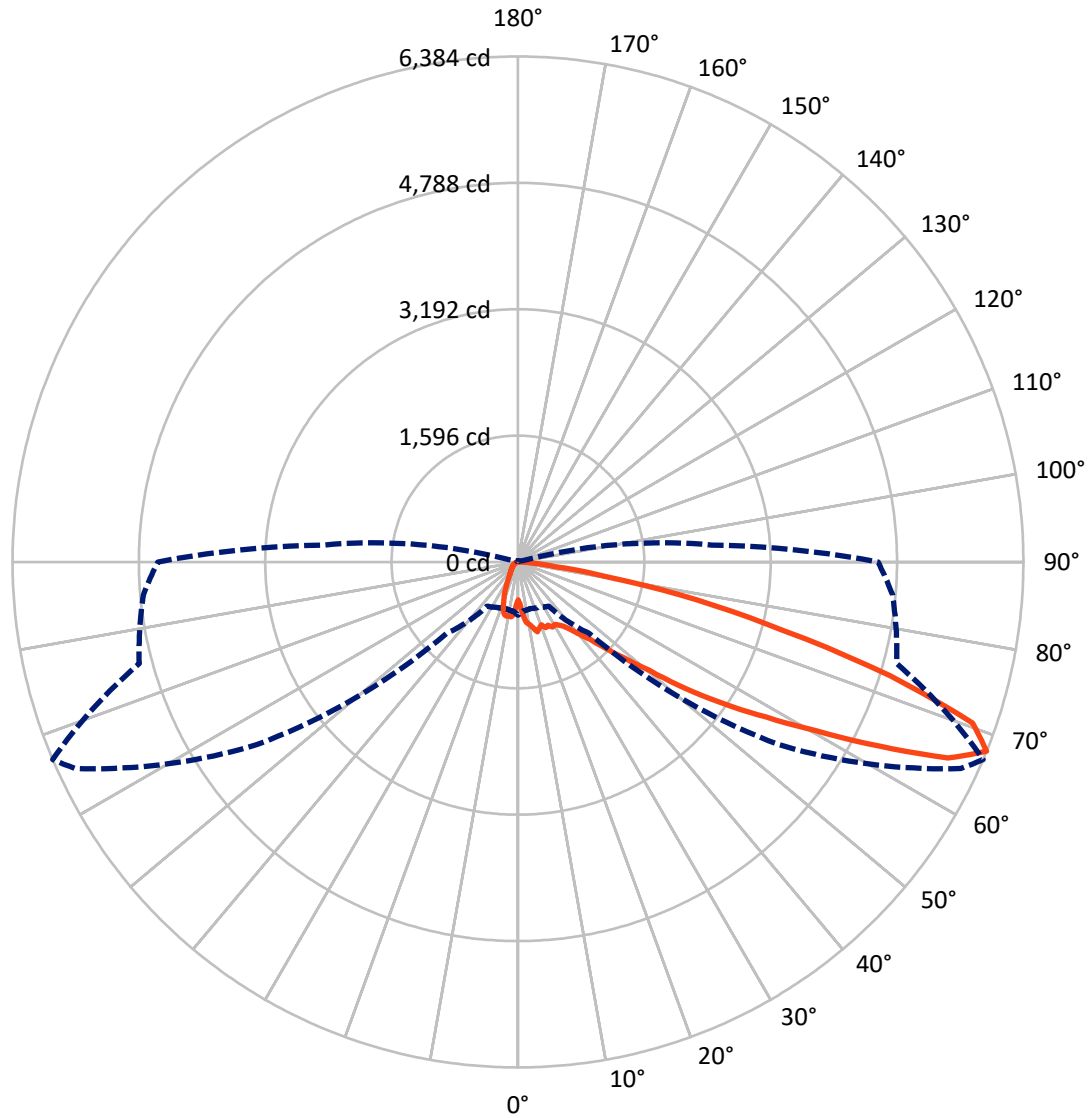
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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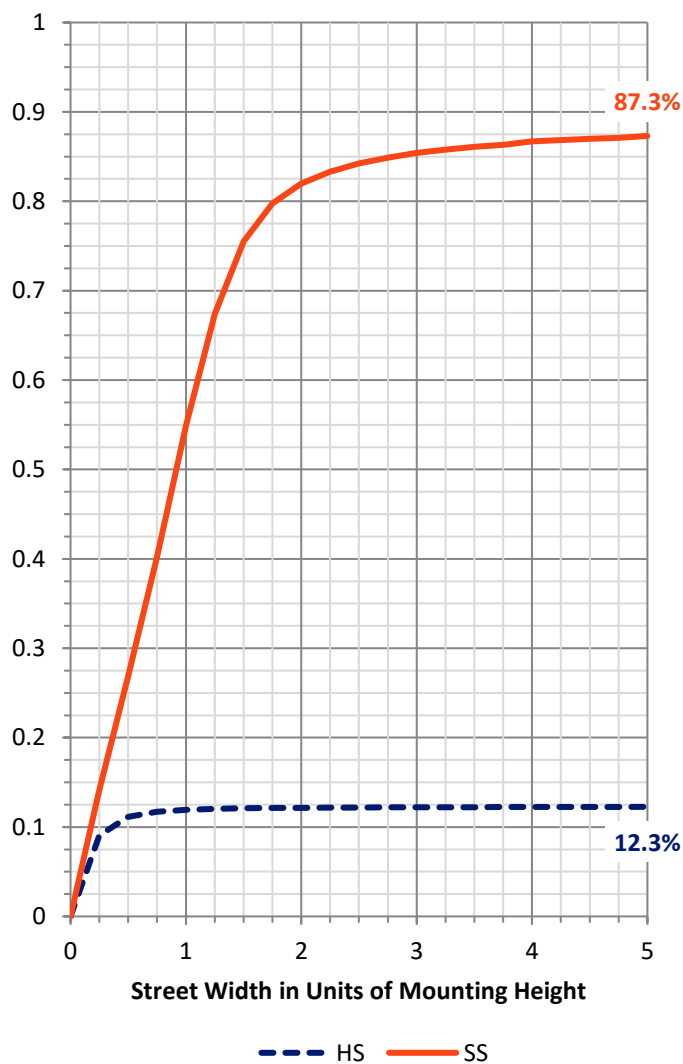
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	695.0	0.0	695.0
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	4925.0	0.0	4925.0
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	5620.0	0.0	5620.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.1	1.1
10°-20°	177.8	3.2
20°-30°	278.6	5.0
30°-40°	449.2	8.0
40°-50°	825.5	14.7
50°-60°	1394.2	24.8
60°-70°	1541.3	27.4
70°-80°	806.7	14.4
80°-90°	86.6	1.5
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°	5620.0	100.0
0°-180°	5620.0	100.0

**Coefficient of Utilization**



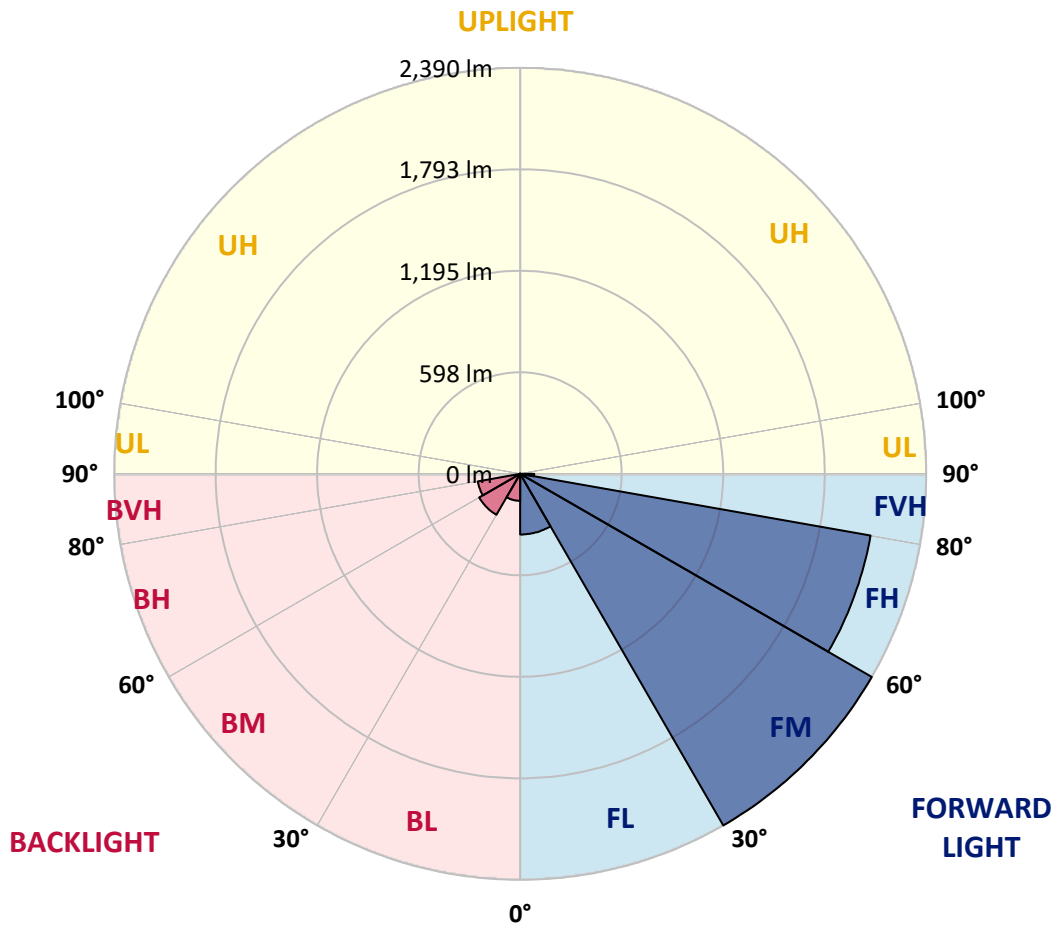
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	357.3	6.4			
FM (30°-60°)	2390.2	42.5			
FH (60°-80°)	2094.5	37.3			G2/5000
FVH (80°-90°)	82.9	1.5			G1/100
BL (0°-30°)	159.1	2.8	B1/500		
BM (30°-60°)	278.7	5.0	B1/1000		
BH (60°-80°)	253.5	4.5	B1/500		G1/500
BVH (80°-90°)	3.7	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7
2.5°	565.0	545.9	513.4	522.9	541.7	557.4	549.9	535.4	535.7	520.9	574.2
5°	657.4	631.8	612.9	619.5	618.6	618.1	653.1	666.5	672.2	696.8	733.0
7.5°	683.9	674.8	655.1	661.1	641.5	642.9	704.5	762.6	771.7	786.8	851.3
10°	673.7	656.0	663.1	663.1	663.4	695.3	736.7	792.3	803.4	861.5	868.4
12.5°	662.5	663.4	691.6	686.5	725.3	782.6	796.5	859.0	853.6	904.0	979.0
15°	703.9	725.6	707.3	714.4	718.1	785.4	807.9	890.9	914.9	978.7	1027.5
17.5°	774.9	777.7	739.8	729.5	756.3	775.4	820.8	860.7	876.7	1044.3	1113.3
20°	787.7	805.9	767.5	708.2	764.9	791.1	822.8	841.9	848.7	1064.5	1161.7
22.5°	865.0	844.7	783.1	738.1	754.3	782.9	802.5	860.1	901.2	1026.3	1208.2
25°	904.6	899.2	840.4	802.0	785.4	783.1	828.2	871.8	884.9	1066.0	1219.6
27.5°	999.5	987.3	873.5	868.7	814.2	766.3	829.0	907.4	932.0	1028.6	1262.4
30°	1128.7	1124.1	972.7	969.6	882.9	796.8	875.2	929.4	914.6	1047.7	1290.9
32.5°	1258.7	1295.7	1140.9	1052.6	987.6	908.9	862.1	922.6	949.1	1094.2	1343.3
35°	1415.8	1442.6	1284.9	1220.8	1076.2	961.3	949.1	987.8	999.2	1149.5	1402.9
37.5°	1690.6	1650.1	1515.8	1406.6	1330.8	1148.6	1088.2	1057.4	1083.9	1224.5	1524.7
40°	1893.6	1867.9	1702.6	1637.3	1462.8	1356.2	1198.2	1169.4	1199.1	1301.4	1609.3
42.5°	2138.5	2085.1	1929.5	1885.3	1705.7	1500.1	1339.9	1349.9	1331.4	1453.4	1757.9
45°	2360.0	2239.7	2153.0	2163.0	2067.2	1789.5	1576.3	1571.4	1556.0	1673.5	1914.1
47.5°	2509.1	2403.9	2319.5	2291.8	2280.4	2298.4	1917.8	1831.7	1820.3	1904.7	2160.1
50°	2589.2	2474.0	2369.7	2375.4	2606.9	2781.1	2270.2	2147.9	2152.1	2240.2	2496.5
52.5°	2535.3	2405.0	2295.0	2401.9	2860.0	3102.9	2853.5	2561.0	2660.2	2637.7	2947.8
55°	2286.4	2173.2	2095.1	2286.4	2887.7	3449.3	3571.6	3182.7	3160.5	3109.2	3408.0
57.5°	1867.6	1770.1	1721.9	1923.8	2585.2	3728.4	4292.9	3885.5	3695.9	3481.0	3790.0
60°	1391.5	1319.7	1269.5	1376.1	2037.0	3457.3	4765.3	4547.8	4328.2	3839.3	4133.2
62.5°	1030.6	972.2	918.8	928.5	1402.6	2973.5	4946.6	5249.4	5123.4	4217.6	4457.1
65°	822.5	769.2	731.8	710.4	868.7	2237.1	4694.3	5824.4	5969.8	4574.0	4690.9
67.5°	671.7	626.6	608.1	632.6	681.4	1275.2	4020.3	6173.3	6384.3	4952.0	4748.5
70°	546.5	509.5	507.5	573.6	627.5	777.4	2957.2	5932.4	6091.2	5016.4	4403.2
72.5°	380.9	364.6	390.6	484.4	621.8	647.4	1698.3	4909.3	4915.0	4430.6	3621.8
75°	215.5	213.0	254.0	386.3	605.5	640.9	946.8	3469.3	3471.8	3350.9	2509.1
77.5°	118.6	110.9	148.0	261.1	520.0	626.1	610.7	2368.8	2308.1	1864.8	1146.1
80°	54.7	51.6	80.1	167.3	380.3	592.1	489.5	1302.0	1174.0	607.5	279.7
82.5°	22.5	21.4	36.8	107.5	240.3	477.0	412.5	577.6	463.6	115.5	86.4
85°	4.0	4.3	15.1	65.0	134.6	219.8	334.4	274.3	201.6	31.9	47.3
87.5°	0.0	0.0	3.1	15.7	32.5	60.2	135.7	76.7	52.7	9.4	14.0
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°	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7	478.7
2.5°	584.7	579.9	530.8	533.1	536.5	533.4	532.8	519.1	506.6	547.9	547.4
5°	739.5	705.0	671.1	658.0	629.8	592.7	593.0	581.3	569.3	586.1	586.1
7.5°	849.9	802.2	759.2	682.5	607.8	540.2	534.3	518.3	500.0	522.0	526.3
10°	875.5	834.2	778.6	666.0	595.3	529.4	457.0	397.4	369.8	356.9	354.7
12.5°	954.5	923.7	799.4	674.8	573.0	461.6	343.0	272.3	224.1	220.4	215.2
15°	1007.2	985.6	819.9	652.9	479.0	331.8	215.5	165.4	146.0	144.3	141.7
17.5°	1089.0	1051.4	800.2	583.0	374.6	218.9	144.8	130.6	132.9	138.0	134.0
20°	1122.4	1048.8	757.5	481.8	263.1	146.8	125.7	118.0	124.0	128.9	126.6
22.5°	1156.6	1056.3	719.6	397.1	171.9	121.4	112.0	108.0	108.6	113.5	113.8
25°	1156.3	1076.8	675.7	309.3	128.0	108.0	101.2	96.1	94.1	97.5	96.6
27.5°	1212.5	1053.1	595.6	229.5	112.6	96.6	90.1	83.8	76.7	80.1	80.1
30°	1212.8	1091.6	539.7	164.8	103.2	86.1	80.4	70.7	62.4	65.3	65.6
32.5°	1245.0	1058.3	488.1	126.0	95.8	79.8	67.3	58.4	53.6	55.3	55.3
35°	1281.8	1086.8	408.8	111.2	88.4	71.0	57.6	50.5	46.8	48.2	48.2
37.5°	1403.2	1080.8	353.8	103.5	83.5	64.1	52.5	44.5	42.8	43.6	44.8
40°	1447.1	1123.3	279.1	98.9	75.5	57.9	46.2	40.2	37.9	38.5	38.8
42.5°	1558.9	1132.7	222.9	95.2	68.4	50.2	41.1	36.8	33.9	33.9	34.8
45°	1682.3	1156.3	177.3	92.1	62.4	45.0	37.1	33.6	29.4	28.8	29.9
47.5°	1861.1	1247.0	144.5	85.8	55.3	41.9	34.2	29.1	25.7	24.5	25.7
50°	2160.1	1400.9	127.7	78.1	50.2	39.3	30.2	24.8	22.2	20.8	21.7
52.5°	2582.1	1666.9	118.9	71.0	45.6	35.4	27.1	21.7	19.1	18.0	18.5
55°	3050.7	1972.0	114.6	63.9	41.6	31.1	23.7	19.1	16.8	15.4	15.7
57.5°	3484.1	2258.8	110.3	57.0	37.6	27.7	20.8	16.8	14.5	13.1	13.4
60°	3911.2	2487.7	100.1	49.0	33.9	24.8	18.2	14.5	13.1	11.4	11.4
62.5°	4288.9	2624.5	85.2	42.5	30.5	22.0	16.3	13.1	12.0	10.3	10.3
65°	4546.0	2630.8	68.7	36.5	26.8	18.8	14.3	12.3	11.1	9.1	8.8
67.5°	4549.8	2459.8	55.0	32.5	23.7	16.5	12.8	11.7	10.3	8.6	8.0
70°	4072.2	2032.1	45.9	28.5	20.5	14.5	11.1	11.1	10.0	8.3	7.4
72.5°	3257.4	1552.9	38.5	24.8	18.2	12.5	10.3	10.5	9.7	8.3	7.4
75°	2189.5	890.6	31.9	21.1	16.0	10.5	10.0	10.3	10.0	8.3	7.1
77.5°	1008.4	283.7	24.8	17.4	13.7	8.8	9.7	9.7	9.1	7.4	6.3
80°	227.2	69.8	18.0	12.8	11.1	6.6	8.8	8.0	7.1	5.1	3.7
82.5°	82.7	21.4	10.8	8.0	6.8	2.6	5.7	5.7	5.1	3.7	2.3
85°	47.3	11.1	6.0	5.1	3.7	1.1	3.1	3.4	2.9	2.6	1.1
87.5°	15.4	2.6	2.9	3.1	2.9	0.6	1.1	1.1	0.9	0.6	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)