

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: P367023

Luminaire Tested: **MSA-SA1D-730-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367023  
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-SA1D-730-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: 5128 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

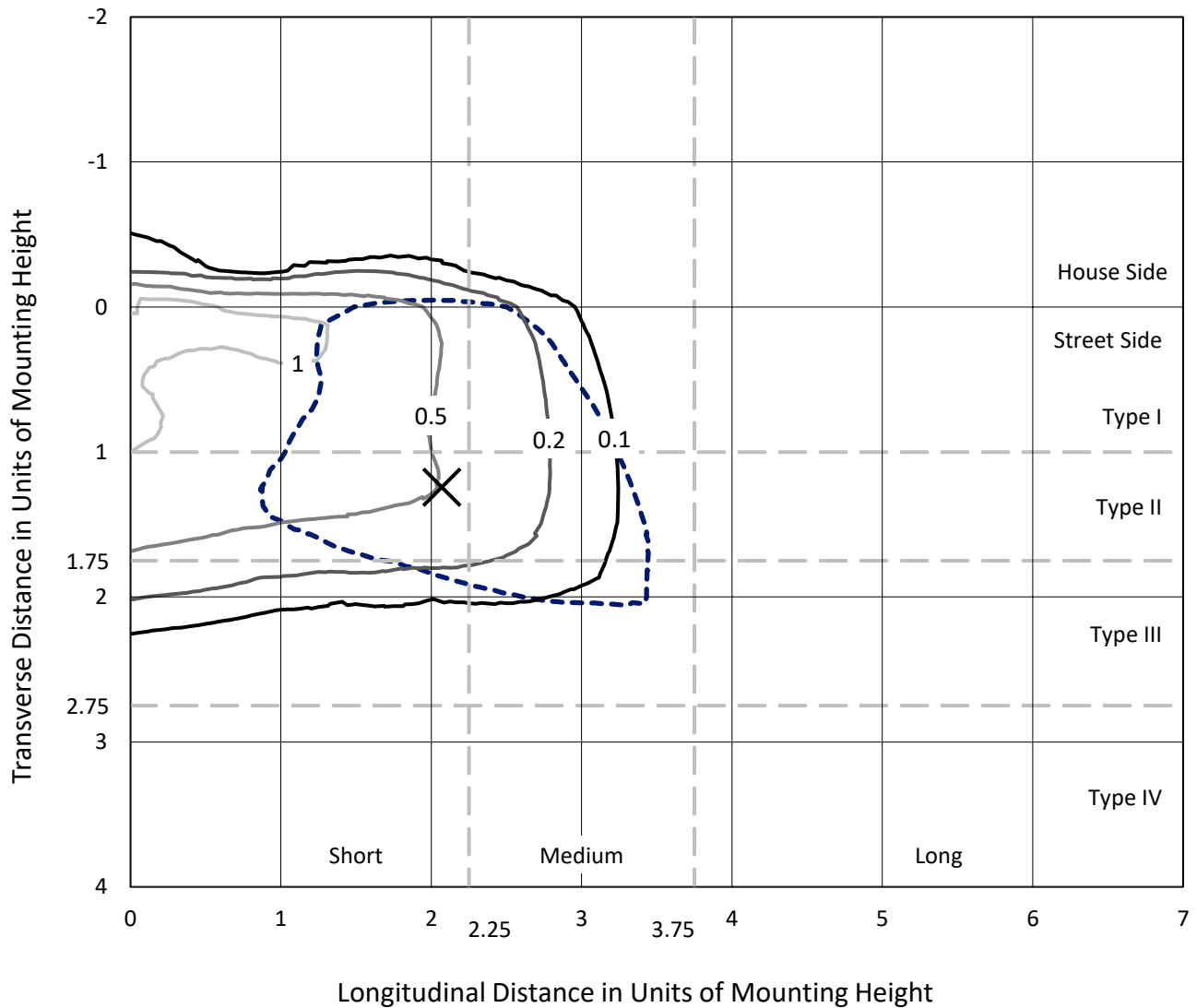
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

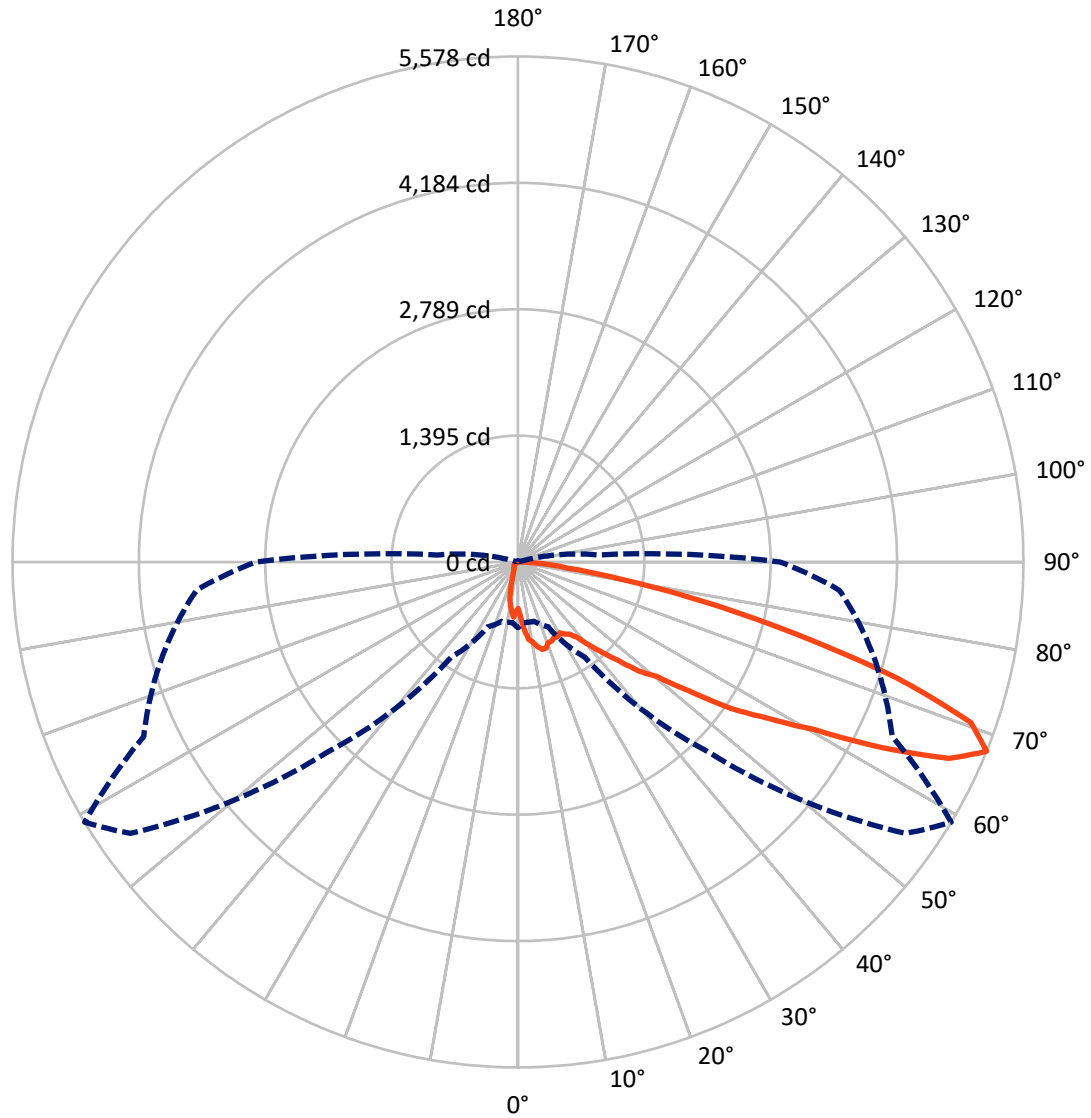
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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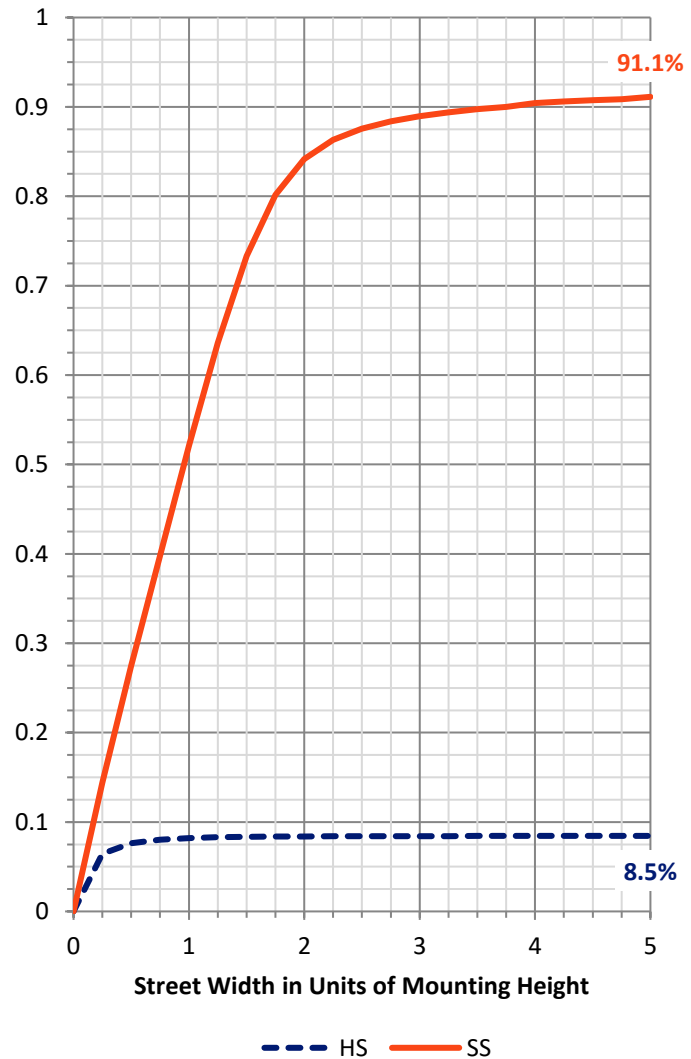
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	436.1	0.0	436.1
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4691.9	0.0	4691.9
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	5128.0	0.0	5128.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.4	1.2
10°-20°	175.7	3.4
20°-30°	261.3	5.1
30°-40°	403.1	7.9
40°-50°	719.4	14.0
50°-60°	1280.2	25.0
60°-70°	1491.0	29.1
70°-80°	663.1	12.9
80°-90°	72.0	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°	5128.0	100.0
0°-180°	5128.0	100.0

**Coefficient of Utilization**



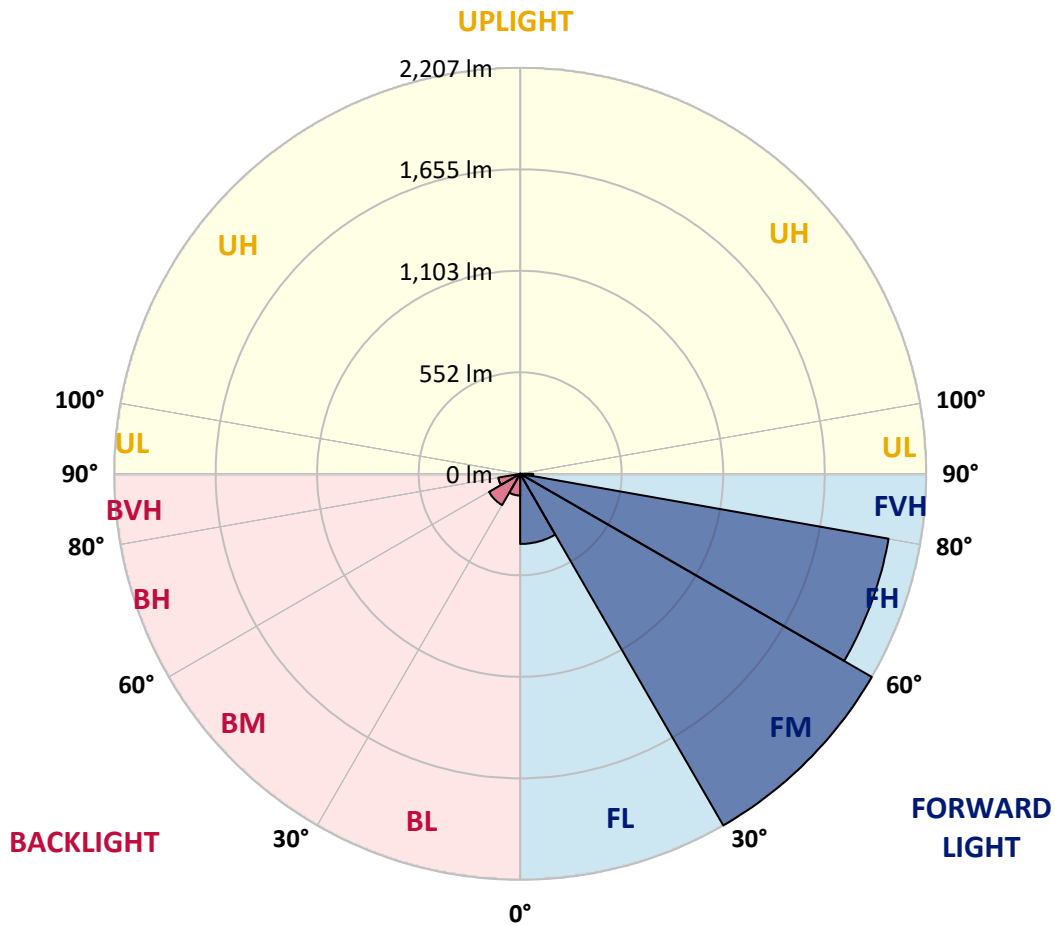
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	381.4	7.4			
FM (30°-60°)	2206.6	43.0			
FH (60°-80°)	2033.2	39.6			G2/5000
FVH (80°-90°)	70.7	1.4			G1/100
BL (0°-30°)	117.9	2.3	B1/500		
BM (30°-60°)	196.1	3.8	B0/220		
BH (60°-80°)	120.8	2.4	B1/500		G1/500
BVH (80°-90°)	1.3	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-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1
2.5°	668.9	643.7	607.8	618.5	628.1	637.2	622.1	613.6	609.4	572.5	618.8
5°	821.3	789.9	773.5	769.3	759.0	735.9	774.3	757.1	762.9	770.1	785.2
7.5°	867.8	853.5	829.8	838.7	799.2	795.8	849.1	863.9	883.3	870.1	888.3
10°	843.9	819.2	830.4	827.3	825.7	860.5	897.9	898.7	927.7	941.8	880.2
12.5°	796.6	799.5	839.5	836.3	888.3	957.9	966.4	957.3	1004.9	980.4	971.1
15°	828.0	851.4	829.3	836.9	855.3	942.3	972.7	1000.7	1045.6	1060.2	997.1
17.5°	865.9	868.3	828.0	818.7	865.2	905.7	977.3	1000.4	1004.9	1132.3	1055.5
20°	845.4	865.4	817.4	758.4	830.6	885.7	958.4	951.1	980.7	1153.6	1068.7
22.5°	900.0	871.4	809.9	765.5	789.9	840.0	901.5	949.0	993.4	1102.7	1085.9
25°	905.1	894.8	840.0	800.5	796.4	809.1	894.8	925.4	995.0	1148.4	1071.3
27.5°	963.6	951.6	839.5	843.4	804.4	765.2	862.0	934.0	1023.3	1120.7	1102.2
30°	1038.9	1039.9	895.3	907.5	851.9	788.8	888.8	908.5	1042.5	1165.1	1125.1
32.5°	1115.2	1146.6	1005.6	941.0	923.6	878.4	855.6	946.7	1021.5	1240.9	1182.2
35°	1231.3	1252.6	1096.5	1038.6	970.3	918.9	945.9	978.6	1097.0	1341.4	1257.2
37.5°	1427.8	1389.4	1259.6	1158.8	1142.5	1066.7	1080.2	1050.8	1174.1	1459.8	1405.8
40°	1538.4	1503.6	1368.6	1319.6	1215.2	1226.9	1184.3	1201.4	1286.1	1583.1	1541.0
42.5°	1653.7	1620.5	1502.1	1467.3	1367.8	1319.6	1300.3	1361.9	1457.7	1788.5	1735.0
45°	1769.5	1685.1	1635.0	1652.4	1607.8	1512.2	1489.9	1544.7	1645.2	2040.9	1939.6
47.5°	1867.2	1796.0	1758.4	1750.3	1732.9	1865.6	1774.7	1798.9	1843.3	2264.2	2194.6
50°	2043.2	1973.1	1914.2	1897.8	1982.4	2170.7	2030.5	1983.7	2072.5	2533.9	2490.1
52.5°	2297.4	2208.1	2114.3	2114.6	2274.3	2377.6	2444.1	2362.1	2378.7	2830.7	2811.3
55°	2501.7	2388.3	2310.6	2371.9	2610.0	2667.9	2921.6	2849.7	2828.1	3106.0	3082.1
57.5°	2529.8	2393.7	2356.9	2464.4	2790.2	3160.0	3432.9	3253.2	3220.2	3336.3	3383.8
60°	2268.1	2123.7	2151.5	2324.4	2848.9	3459.9	3902.3	3755.6	3546.1	3606.1	3638.8
62.5°	1691.6	1576.3	1654.2	1883.3	2622.7	3660.8	4445.8	4513.8	3924.1	3808.6	3801.6
65°	1097.6	1025.4	1076.5	1264.2	1984.8	3638.0	4931.3	5226.3	4221.9	3973.7	3852.7
67.5°	726.0	671.2	678.5	789.6	1283.5	2958.7	5221.6	5578.1	4556.9	4067.5	3559.6
70°	541.1	498.0	500.6	560.8	761.8	1951.3	4816.8	5300.5	4679.2	3742.6	2873.1
72.5°	390.3	361.4	385.6	452.6	607.1	1031.9	3590.2	4365.3	4080.2	2952.0	1935.7
75°	270.3	251.3	290.8	378.6	554.1	640.6	2372.4	3142.3	2859.8	1852.1	875.0
77.5°	149.8	144.1	201.0	308.5	502.9	525.0	1453.3	2064.8	1586.2	663.9	208.2
80°	65.4	63.4	97.4	231.6	422.7	474.4	818.2	1144.8	623.9	118.4	67.2
82.5°	28.0	27.0	41.5	139.4	307.2	396.7	504.5	551.0	214.7	36.6	38.2
85°	4.9	5.5	16.6	73.5	186.9	201.5	365.3	326.1	108.0	17.4	27.3
87.5°	0.0	0.0	2.6	14.3	35.1	57.6	158.4	114.2	20.5	5.7	4.7
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°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1
2.5°	625.2	610.7	555.4	548.4	540.9	529.7	525.5	501.6	498.5	529.2	529.2
5°	778.2	726.2	673.5	632.0	594.9	543.5	528.9	513.9	501.6	498.5	508.1
7.5°	858.9	795.6	712.7	607.1	521.4	446.9	415.7	393.9	369.5	376.8	380.7
10°	854.5	787.3	681.6	545.8	450.8	368.4	289.3	243.0	217.3	204.6	203.0
12.5°	897.9	834.5	660.6	497.0	375.7	262.0	182.0	149.0	130.1	130.3	128.8
15°	923.1	854.0	636.1	435.2	264.6	168.5	126.2	118.9	116.3	119.2	117.6
17.5°	967.5	874.5	580.8	343.0	182.0	127.2	116.1	113.2	116.6	122.6	121.0
20°	964.1	838.9	502.2	241.7	134.5	114.5	109.8	105.4	112.4	118.7	117.6
22.5°	961.0	804.1	428.2	178.4	112.4	104.4	100.5	98.7	102.3	109.6	111.1
25°	933.4	787.0	353.1	134.0	101.8	94.8	93.0	91.4	92.7	98.7	98.4
27.5°	967.2	743.6	272.6	112.4	94.3	85.9	84.4	81.8	79.2	84.4	85.2
30°	960.2	749.6	213.7	98.9	86.7	75.6	76.1	70.6	66.0	70.6	70.6
32.5°	985.6	706.0	171.1	89.8	79.2	71.1	64.7	58.9	55.6	58.4	58.9
35°	1022.8	707.8	134.0	84.1	72.7	63.4	55.6	49.9	46.7	48.0	48.8
37.5°	1147.1	695.3	111.9	79.7	70.4	58.7	50.6	43.1	41.0	42.6	43.4
40°	1228.2	728.6	98.7	77.4	64.4	54.0	43.4	37.9	36.1	36.9	38.2
42.5°	1380.8	747.0	92.2	74.8	58.9	46.2	37.1	34.0	31.4	32.5	33.5
45°	1544.2	778.4	87.2	71.9	54.8	40.5	32.7	30.1	26.7	27.0	28.0
47.5°	1744.9	853.2	81.5	67.0	49.1	36.9	29.1	25.2	22.1	21.8	23.1
50°	2014.4	953.2	76.3	60.8	45.4	33.8	25.4	20.5	17.9	17.1	18.2
52.5°	2302.1	1082.5	70.9	56.3	41.0	29.6	21.8	16.6	14.3	13.8	14.5
55°	2587.2	1206.6	65.7	53.5	36.4	25.4	18.4	13.8	11.7	11.2	11.7
57.5°	2912.0	1340.8	58.9	47.8	31.9	22.1	15.3	11.4	9.6	9.1	9.3
60°	3156.6	1388.1	53.2	41.5	27.8	19.5	13.0	9.1	7.8	7.3	7.5
62.5°	3272.7	1311.0	47.8	36.1	24.4	16.9	10.9	7.5	6.5	6.0	6.0
65°	3242.5	1140.1	42.3	30.9	21.0	14.0	8.6	6.5	5.7	4.9	4.7
67.5°	2894.6	892.2	36.1	26.0	17.7	11.4	7.3	6.2	5.2	4.7	3.9
70°	2295.6	646.0	29.3	21.6	14.8	9.3	5.7	5.7	4.9	4.7	3.6
72.5°	1504.7	406.6	23.9	17.4	12.2	7.3	4.4	5.2	4.7	4.7	3.4
75°	652.0	145.4	19.2	14.0	10.1	4.9	3.9	4.7	4.9	4.7	3.9
77.5°	152.7	45.2	15.1	11.2	8.3	3.4	3.9	4.7	4.9	4.4	3.4
80°	57.4	19.2	9.9	7.3	6.5	2.1	3.4	2.9	2.6	1.8	0.5
82.5°	34.8	8.0	5.2	3.6	3.1	0.5	1.6	1.0	0.5	0.5	0.0
85°	24.7	3.9	2.9	2.6	1.6	0.0	0.3	0.0	0.0	0.3	0.0
87.5°	3.4	1.0	1.3	1.3	1.0	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)