

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: P367243

Luminaire Tested: **MSA-SA2A-830-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367243  
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-SA2A-830-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5187 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

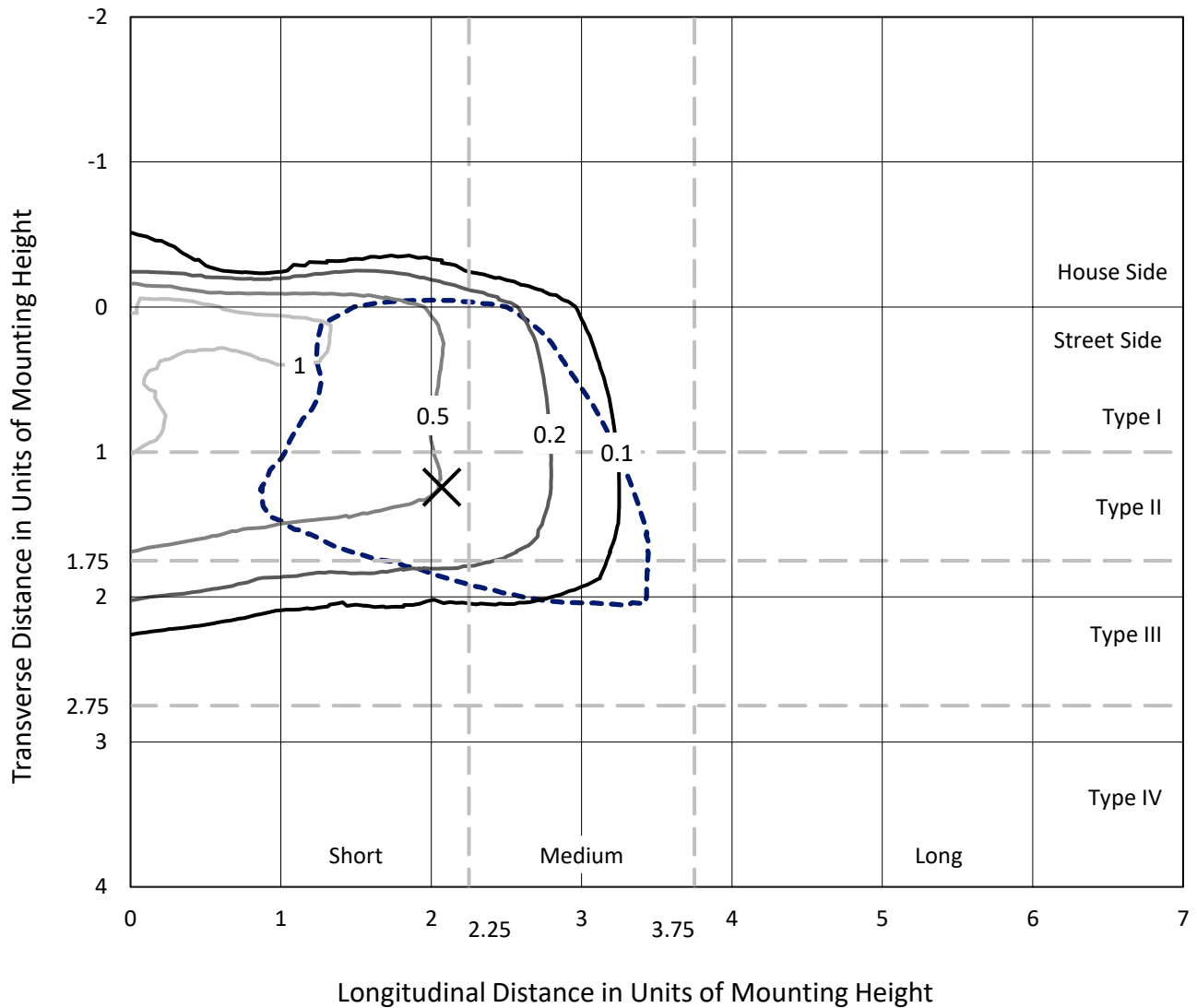
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

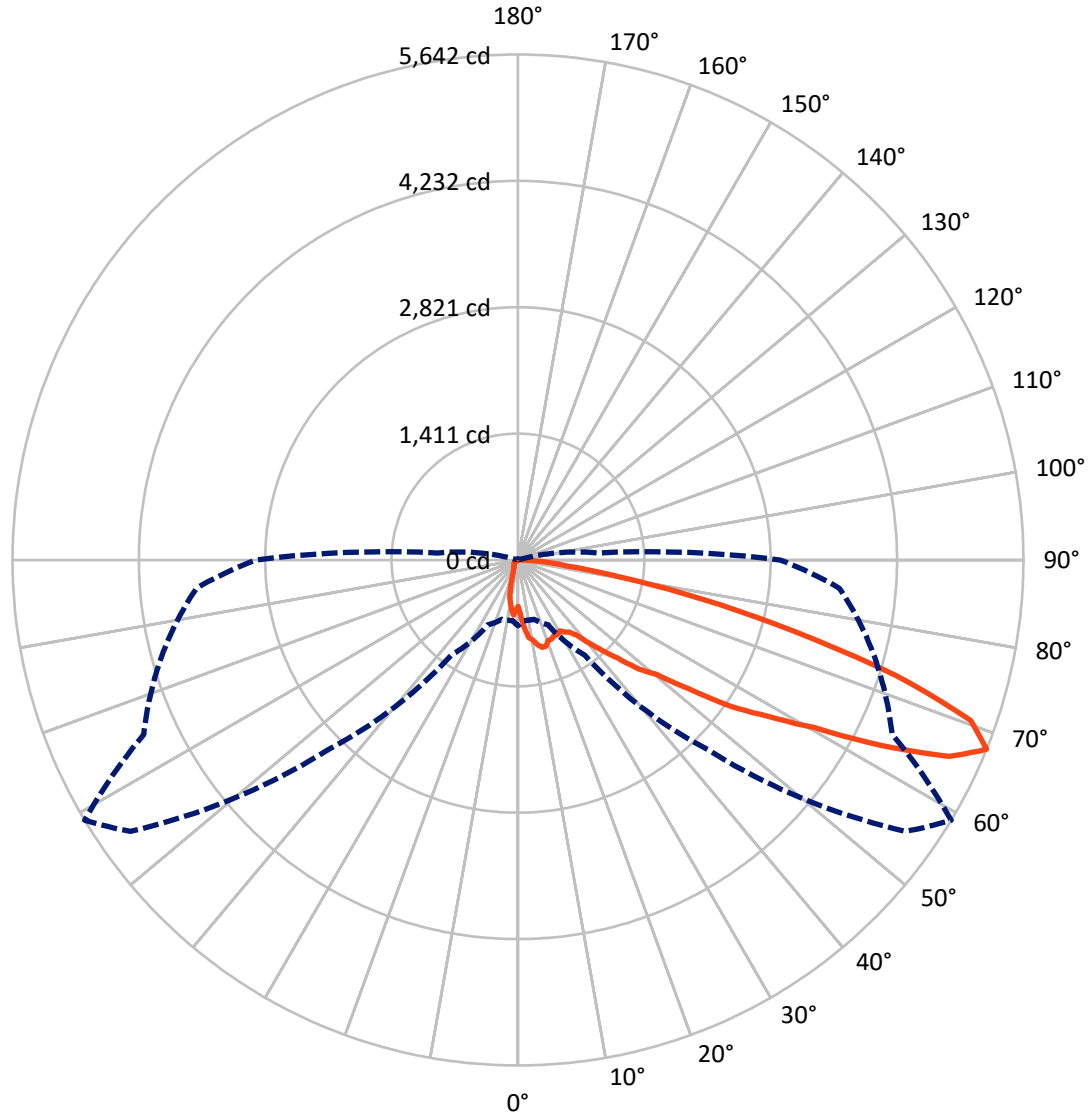
✕ Max cd  
 - - - 1/2 Max cd



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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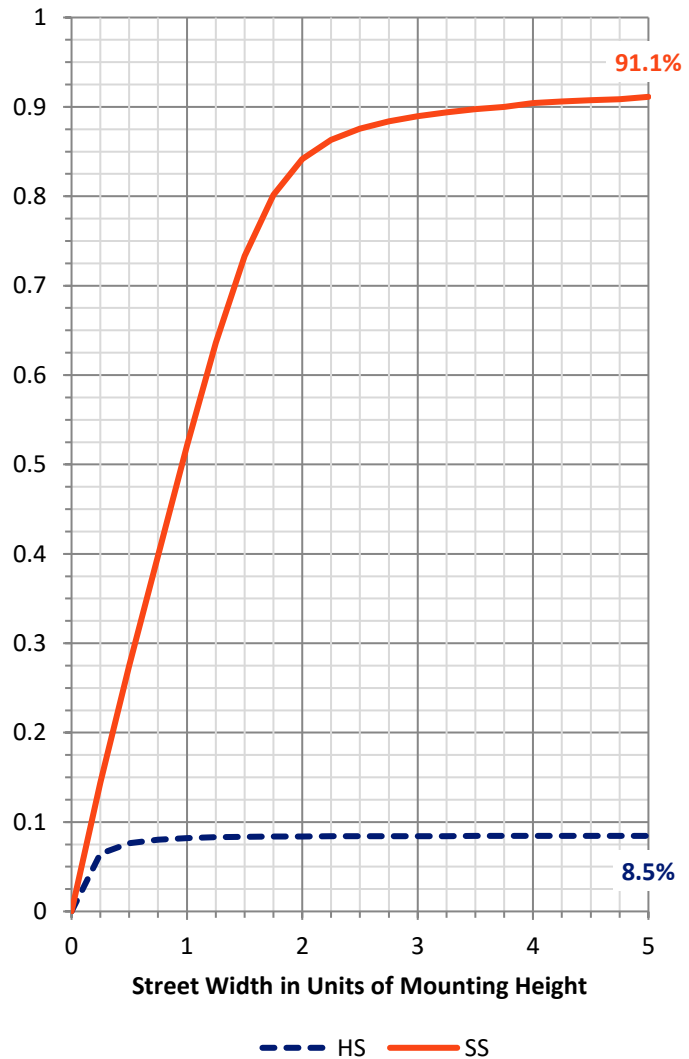
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	441.1	0.0	441.1
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4745.9	0.0	4745.9
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	5187.0	0.0	5187.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.1	1.2
10°-20°	177.7	3.4
20°-30°	264.3	5.1
30°-40°	407.7	7.9
40°-50°	727.7	14.0
50°-60°	1294.9	25.0
60°-70°	1508.1	29.1
70°-80°	670.7	12.9
80°-90°	72.8	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°	5187.0	100.0
0°-180°	5187.0	100.0

**Coefficient of Utilization**



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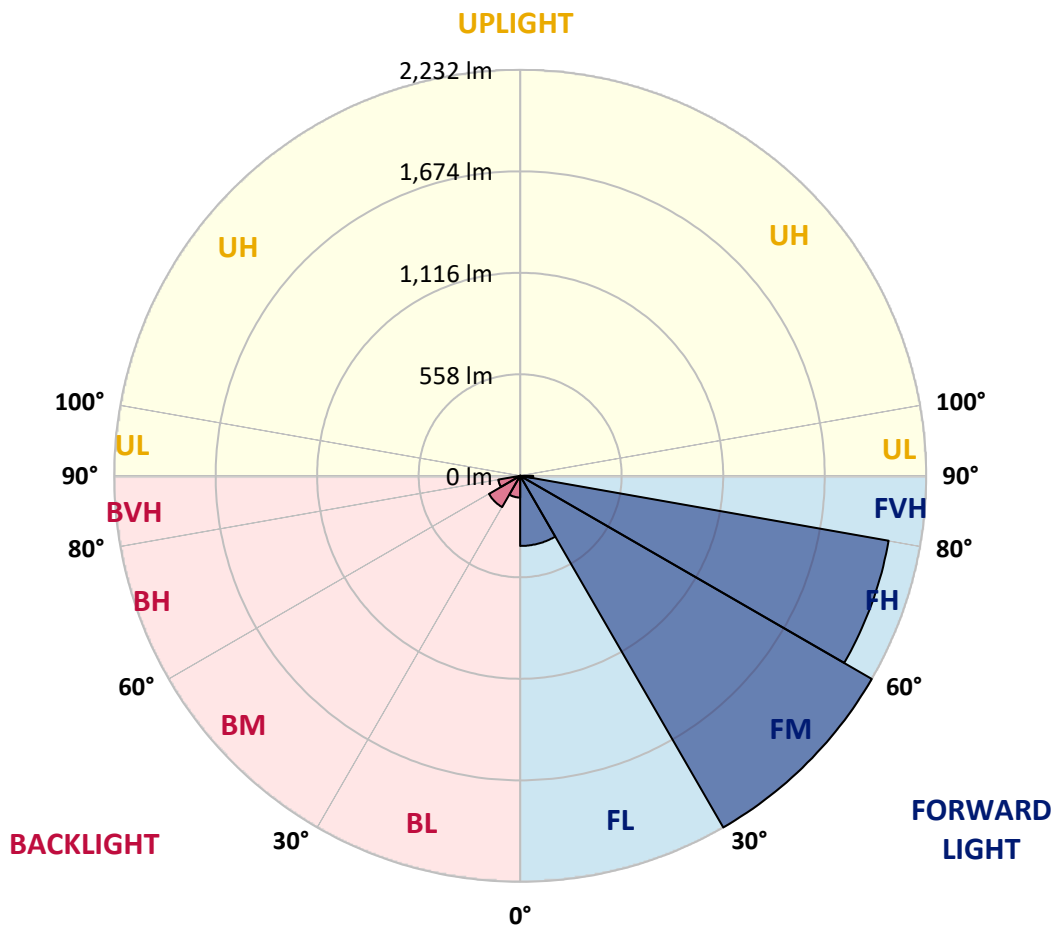
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	385.8	7.4			
FM (30°-60°)	2232.0	43.0			
FH (60°-80°)	2056.6	39.6			G2/5000
FVH (80°-90°)	71.5	1.4			G1/100
BL (0°-30°)	119.3	2.3	B1/500		
BM (30°-60°)	198.3	3.8	B0/220		
BH (60°-80°)	122.2	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°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0
2.5°	676.6	651.1	614.8	625.6	635.3	644.5	629.3	620.6	616.4	579.1	625.9
5°	830.7	798.9	782.4	778.2	767.7	744.3	783.2	765.9	771.6	779.0	794.2
7.5°	877.7	863.3	839.4	848.3	808.4	805.0	858.8	873.8	893.5	880.1	898.5
10°	853.6	828.6	839.9	836.8	835.2	870.4	908.2	909.0	938.4	952.6	890.3
12.5°	805.8	808.7	849.1	846.0	898.5	968.9	977.5	968.4	1016.4	991.7	982.3
15°	837.6	861.2	838.9	846.5	865.1	953.1	983.8	1012.2	1057.6	1072.4	1008.5
17.5°	875.9	878.3	837.6	828.1	875.1	916.1	988.6	1012.0	1016.4	1145.4	1067.6
20°	855.2	875.4	826.8	767.2	840.2	895.9	969.4	962.0	992.0	1166.9	1081.0
22.5°	910.3	881.4	819.2	774.3	798.9	849.6	911.9	959.9	1004.9	1115.4	1098.4
25°	915.6	905.1	849.6	809.7	805.5	818.4	905.1	936.0	1006.4	1161.7	1083.7
27.5°	974.7	962.6	849.1	853.1	813.7	774.0	872.0	944.7	1035.1	1133.6	1114.9
30°	1050.8	1051.9	905.6	917.9	861.7	797.9	899.0	919.0	1054.5	1178.5	1138.0
32.5°	1128.0	1159.8	1017.2	951.8	934.2	888.5	865.4	957.6	1033.2	1255.2	1195.8
35°	1245.4	1267.0	1109.1	1050.6	981.5	929.5	956.8	989.9	1109.7	1356.8	1271.7
37.5°	1444.3	1405.4	1274.1	1172.2	1155.6	1078.9	1092.6	1062.9	1187.7	1476.6	1421.9
40°	1556.1	1520.9	1384.4	1334.7	1229.2	1241.0	1197.9	1215.2	1300.9	1601.3	1558.8
42.5°	1672.8	1639.1	1519.4	1484.2	1383.6	1334.7	1315.3	1377.5	1474.5	1809.1	1755.0
45°	1789.9	1704.5	1653.8	1671.4	1626.3	1529.6	1507.0	1562.4	1664.1	2064.3	1961.9
47.5°	1888.6	1816.7	1778.6	1770.5	1752.9	1887.1	1795.1	1819.6	1864.5	2290.2	2219.8
50°	2066.7	1995.8	1936.2	1919.6	2005.3	2195.7	2053.8	2006.6	2096.4	2563.1	2518.7
52.5°	2323.8	2233.5	2138.7	2138.9	2300.5	2405.0	2472.2	2389.2	2406.0	2863.3	2843.6
55°	2530.5	2415.8	2337.2	2399.2	2640.1	2698.6	2955.2	2882.5	2860.7	3141.7	3117.5
57.5°	2558.9	2421.3	2384.0	2492.7	2822.3	3196.3	3472.4	3290.6	3257.3	3374.7	3422.7
60°	2294.2	2148.1	2176.2	2351.2	2881.7	3499.7	3947.2	3798.8	3586.9	3647.5	3680.6
62.5°	1711.1	1594.5	1673.3	1904.9	2652.9	3703.0	4496.9	4565.7	3969.3	3852.4	3845.3
65°	1110.2	1037.2	1088.9	1278.8	2007.6	3679.8	4988.1	5286.4	4270.5	4019.4	3897.0
67.5°	734.3	678.9	686.3	798.7	1298.2	2992.8	5281.7	5642.3	4609.3	4114.3	3600.5
70°	547.3	503.7	506.4	567.3	770.6	1973.7	4872.2	5361.5	4733.0	3785.7	2906.1
72.5°	394.7	365.6	390.0	457.8	614.1	1043.7	3631.5	4415.5	4127.1	2986.0	1958.0
75°	273.4	254.2	294.2	382.9	560.5	647.9	2399.7	3178.5	2892.7	1873.4	885.1
77.5°	151.5	145.8	203.3	312.0	508.7	531.1	1470.0	2088.5	1604.5	671.6	210.6
80°	66.2	64.1	98.5	234.3	427.6	479.8	827.6	1158.0	631.1	119.8	68.0
82.5°	28.4	27.3	42.0	141.0	310.7	401.3	510.3	557.3	217.2	37.0	38.6
85°	5.0	5.5	16.8	74.3	189.1	203.8	369.5	329.9	109.3	17.6	27.6
87.5°	0.0	0.0	2.6	14.4	35.5	58.3	160.2	115.6	20.7	5.8	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°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0
2.5°	632.4	617.7	561.8	554.7	547.1	535.8	531.6	507.4	504.3	535.3	535.3
5°	787.1	734.6	681.3	639.3	601.7	549.7	535.0	519.8	507.4	504.3	514.0
7.5°	868.8	804.7	720.9	614.1	527.4	452.0	420.5	398.4	373.7	381.1	385.0
10°	864.3	796.3	689.4	552.1	455.9	372.7	292.6	245.8	219.8	207.0	205.4
12.5°	908.2	844.1	668.2	502.7	380.0	265.0	184.1	150.8	131.6	131.8	130.3
15°	933.7	863.8	643.5	440.2	267.6	170.5	127.6	120.3	117.7	120.6	119.0
17.5°	978.6	884.6	587.5	346.9	184.1	128.7	117.4	114.5	117.9	124.0	122.4
20°	975.2	848.6	507.9	244.5	136.0	115.8	111.1	106.6	113.7	120.0	119.0
22.5°	972.0	813.4	433.1	180.4	113.7	105.6	101.6	99.8	103.5	110.8	112.4
25°	944.2	796.1	357.2	135.5	103.0	95.9	94.0	92.4	93.8	99.8	99.5
27.5°	978.3	752.2	275.8	113.7	95.3	86.9	85.4	82.7	80.1	85.4	86.1
30°	971.2	758.2	216.2	100.1	87.7	76.4	77.0	71.4	66.7	71.4	71.4
32.5°	997.0	714.1	173.1	90.9	80.1	72.0	65.4	59.6	56.2	59.1	59.6
35°	1034.5	716.0	135.5	85.1	73.5	64.1	56.2	50.4	47.3	48.6	49.4
37.5°	1160.3	703.3	113.2	80.6	71.2	59.4	51.2	43.6	41.5	43.1	43.9
40°	1242.3	737.0	99.8	78.3	65.1	54.6	43.9	38.3	36.5	37.3	38.6
42.5°	1396.7	755.6	93.2	75.6	59.6	46.7	37.6	34.4	31.8	32.8	33.9
45°	1561.9	787.4	88.2	72.8	55.4	41.0	33.1	30.5	27.1	27.3	28.4
47.5°	1764.9	863.0	82.5	67.8	49.6	37.3	29.4	25.5	22.3	22.1	23.4
50°	2037.6	964.2	77.2	61.5	46.0	34.1	25.7	20.7	18.1	17.3	18.4
52.5°	2328.6	1094.9	71.7	57.0	41.5	29.9	22.1	16.8	14.4	13.9	14.7
55°	2616.9	1220.5	66.4	54.1	36.8	25.7	18.6	13.9	11.8	11.3	11.8
57.5°	2945.5	1356.3	59.6	48.3	32.3	22.3	15.5	11.6	9.7	9.2	9.5
60°	3192.9	1404.1	53.8	42.0	28.1	19.7	13.1	9.2	7.9	7.4	7.6
62.5°	3310.3	1326.1	48.3	36.5	24.7	17.1	11.0	7.6	6.6	6.0	6.0
65°	3279.8	1153.3	42.8	31.3	21.3	14.2	8.7	6.6	5.8	5.0	4.7
67.5°	2927.9	902.4	36.5	26.3	17.9	11.6	7.4	6.3	5.3	4.7	3.9
70°	2322.0	653.4	29.7	21.8	15.0	9.5	5.8	5.8	5.0	4.7	3.7
72.5°	1522.0	411.3	24.2	17.6	12.3	7.4	4.5	5.3	4.7	4.7	3.4
75°	659.5	147.1	19.4	14.2	10.2	5.0	3.9	4.7	5.0	4.7	3.9
77.5°	154.4	45.7	15.2	11.3	8.4	3.4	3.9	4.7	5.0	4.5	3.4
80°	58.0	19.4	10.0	7.4	6.6	2.1	3.4	2.9	2.6	1.8	0.5
82.5°	35.2	8.1	5.3	3.7	3.2	0.5	1.6	1.1	0.5	0.5	0.0
85°	25.0	3.9	2.9	2.6	1.6	0.0	0.3	0.0	0.0	0.3	0.0
87.5°	3.4	1.1	1.3	1.3	1.1	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)