

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: P596922

Luminaire Tested: **MSA-SA2A-835-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596922  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-835-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

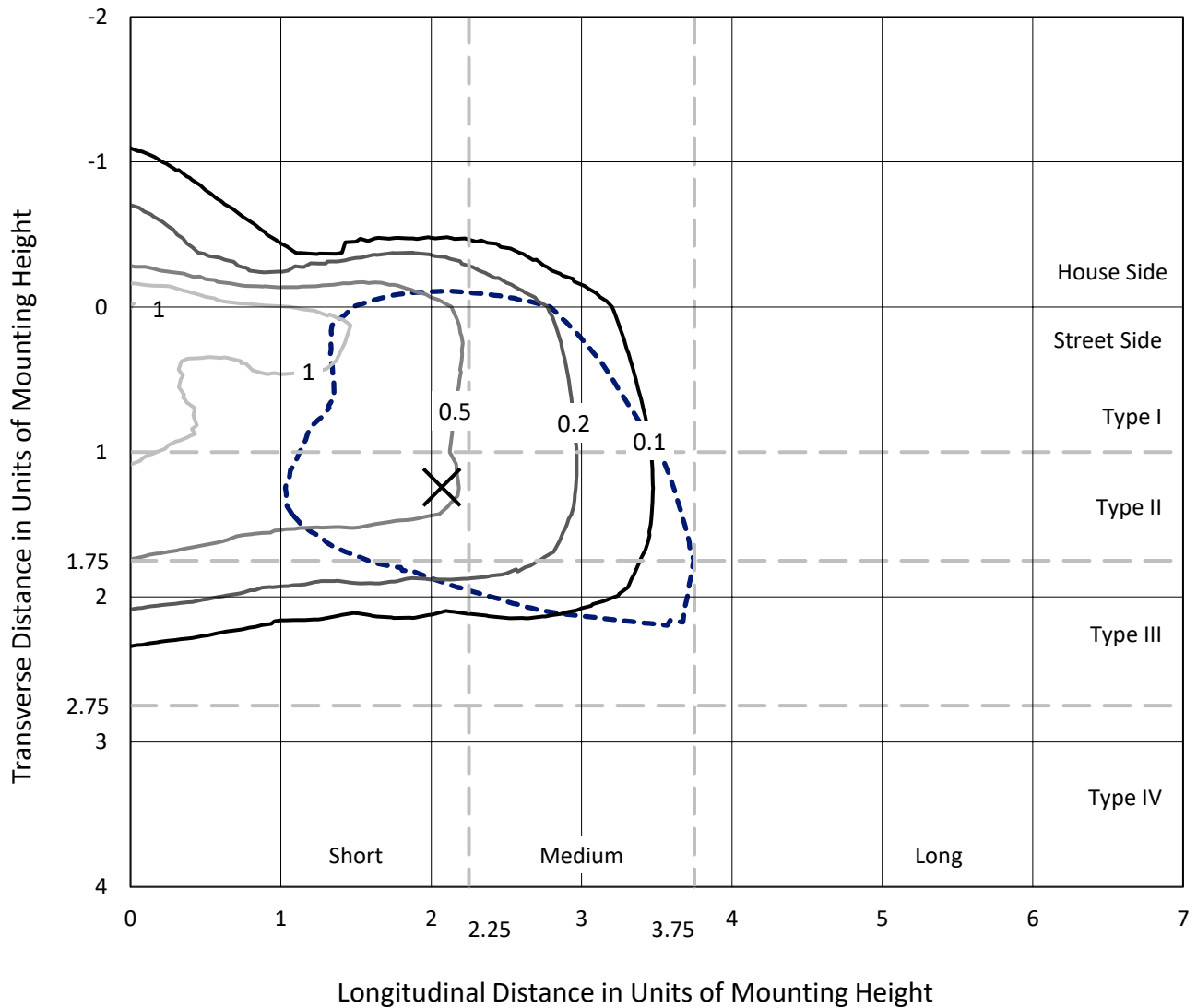
Lumens per Lamp: N/A  
Luminaire Lumens: 6430 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

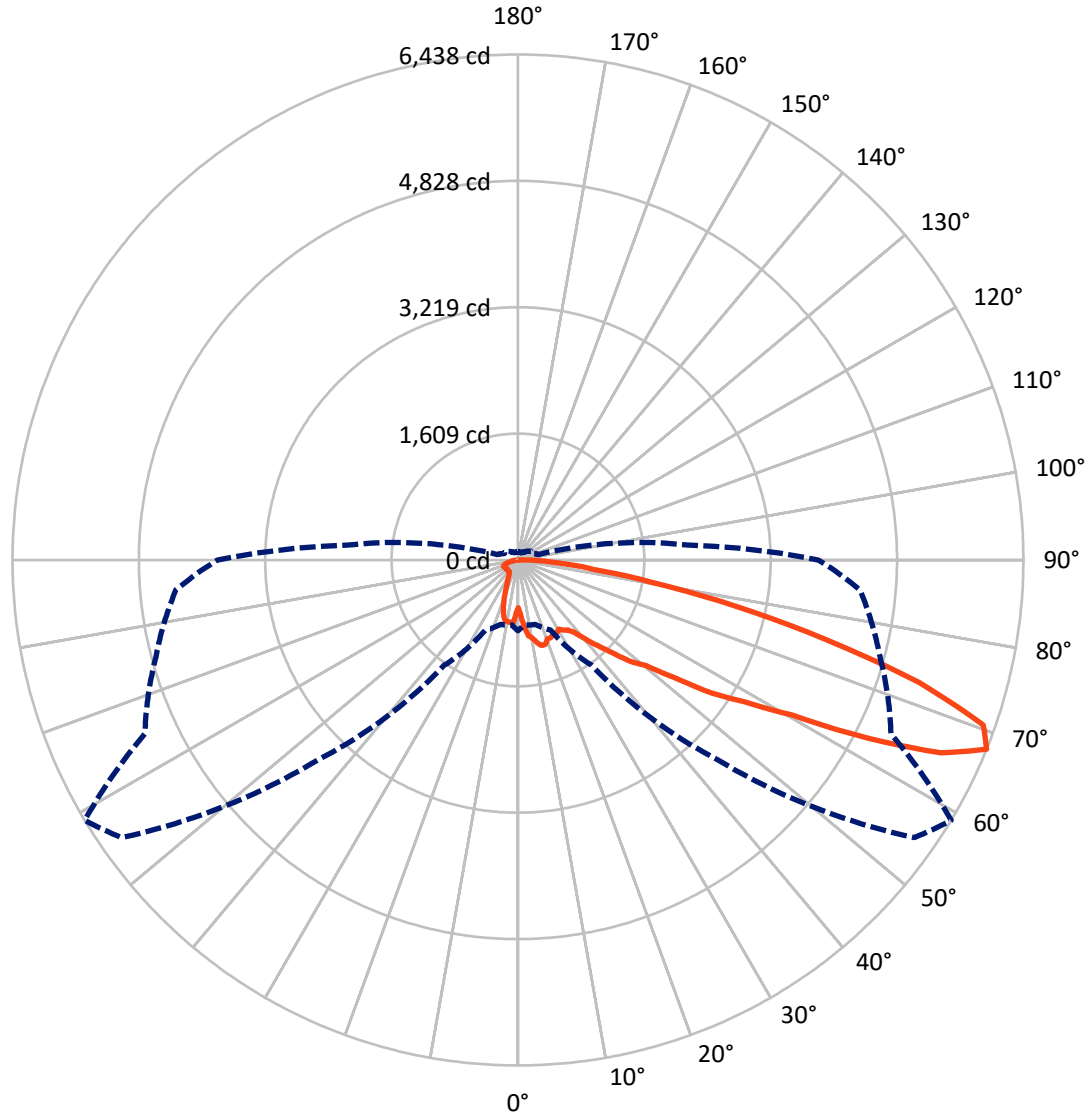
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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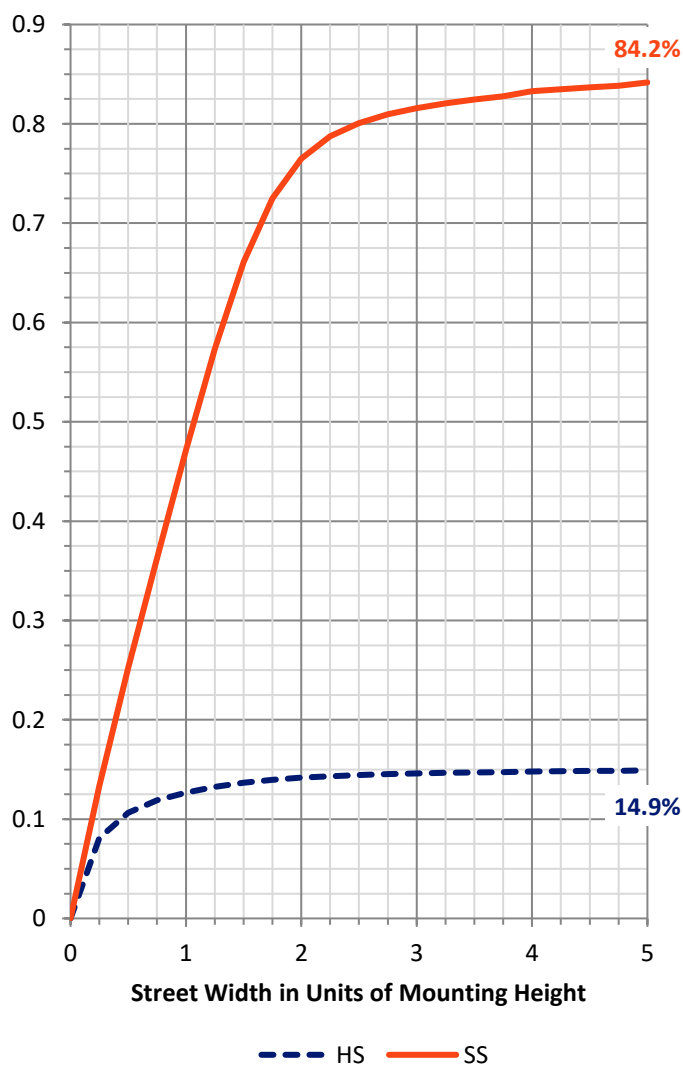
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	967.9	0.0	967.9
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	5462.2	0.0	5462.2
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	6430.0	0.0	6430.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.5	1.2
10°-20°	235.2	3.7
20°-30°	335.8	5.2
30°-40°	494.9	7.7
40°-50°	836.1	13.0
50°-60°	1454.9	22.6
60°-70°	1854.0	28.8
70°-80°	981.7	15.3
80°-90°	157.9	2.5
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°	6430.0	100.0
0°-180°	6430.0	100.0

**Coefficient of Utilization**



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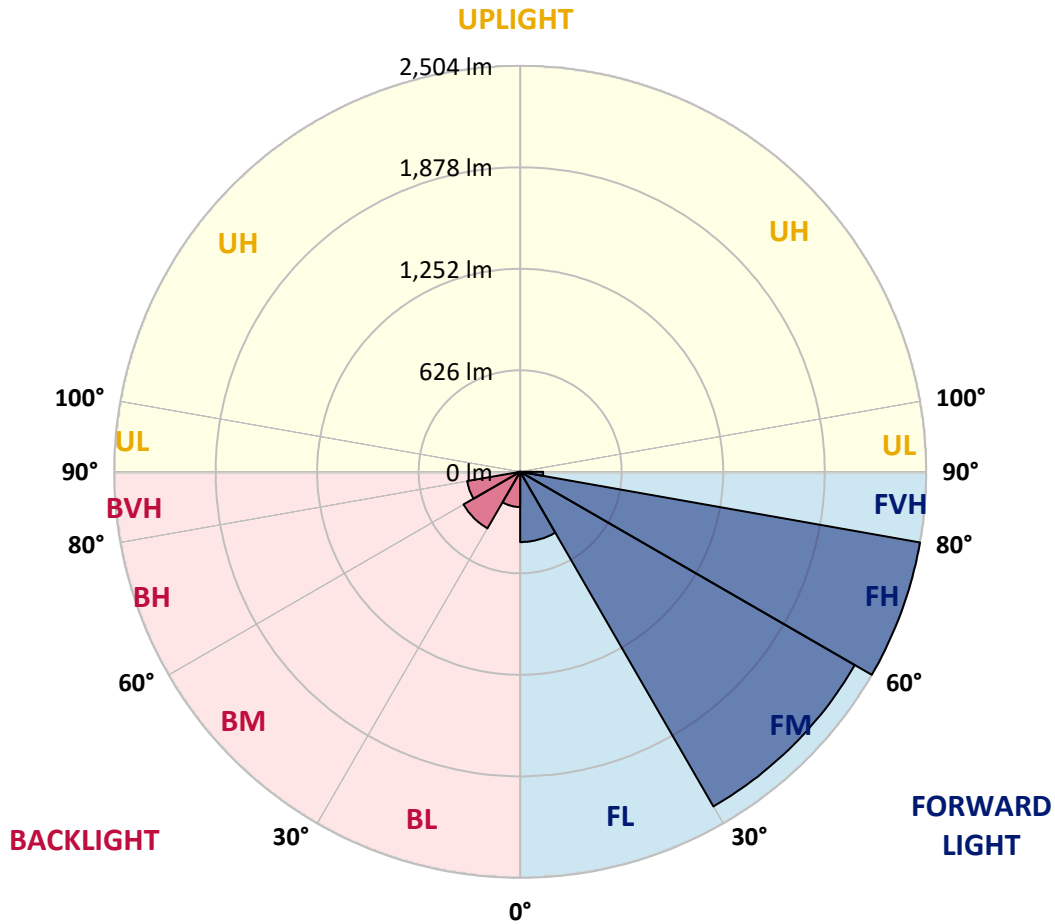
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	433.4	6.7			
FM (30°-60°)	2382.9	37.1			
FH (60°-80°)	2504.0	38.9			G2/5000
FVH (80°-90°)	141.8	2.2			G2/225
BL (0°-30°)	217.0	3.4	B1/500		
BM (30°-60°)	403.0	6.3	B1/1000		
BH (60°-80°)	331.7	5.2	B1/500		G1/500
BVH (80°-90°)	16.1	0.3			G1/100
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°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	759.7	724.3	686.6	697.3	718.8	728.6	718.0	707.6	694.3	678.5	732.4
5°	921.3	868.7	861.0	860.8	853.1	822.6	861.9	859.1	874.9	891.3	933.2
7.5°	967.3	947.7	926.4	936.5	898.1	896.5	957.5	974.9	1005.5	995.4	1051.8
10°	943.6	921.5	932.7	928.6	932.2	972.5	1009.8	1010.9	1043.6	1075.8	1039.5
12.5°	901.9	903.5	948.0	946.3	1003.5	1078.5	1089.6	1080.9	1134.3	1112.5	1143.6
15°	931.6	951.5	940.3	949.9	972.5	1067.8	1098.9	1130.5	1181.2	1200.8	1169.8
17.5°	979.0	989.6	939.5	934.3	980.9	1026.2	1103.3	1130.2	1138.1	1277.9	1234.1
20°	958.9	980.4	931.3	868.4	945.8	1005.7	1081.7	1073.6	1112.0	1283.9	1247.4
22.5°	1016.1	980.4	918.0	873.3	900.5	955.6	1020.2	1073.8	1119.3	1248.8	1266.8
25°	1027.0	1010.1	951.8	907.4	898.1	917.7	1009.8	1045.0	1121.8	1296.7	1256.4
27.5°	1093.5	1068.1	949.3	950.7	904.6	870.0	977.1	1051.0	1149.6	1267.0	1281.7
30°	1176.0	1156.7	1007.6	1013.1	949.3	885.6	999.5	1021.8	1165.7	1313.4	1313.6
32.5°	1237.9	1271.9	1122.3	1048.2	1025.6	977.9	965.1	1065.7	1146.9	1397.3	1368.1
35°	1349.3	1375.8	1210.6	1151.2	1074.7	1021.0	1058.3	1094.6	1225.1	1507.6	1449.0
37.5°	1555.6	1525.1	1374.7	1281.2	1252.6	1175.2	1195.9	1170.6	1310.1	1631.6	1607.6
40°	1674.9	1648.5	1490.2	1438.4	1325.1	1334.9	1309.0	1327.5	1423.7	1763.5	1755.9
42.5°	1792.6	1757.2	1623.4	1587.5	1474.4	1426.4	1431.1	1491.0	1598.9	1976.6	1951.2
45°	1909.0	1818.3	1759.7	1769.2	1714.7	1616.4	1623.2	1679.6	1790.2	2220.2	2161.9
47.5°	1998.1	1923.2	1877.4	1865.7	1838.7	1970.3	1911.4	1934.3	1983.1	2437.1	2415.0
50°	2166.8	2079.3	2019.6	2002.7	2094.3	2277.4	2157.5	2108.2	2212.0	2717.4	2706.0
52.5°	2436.8	2327.8	2228.3	2227.3	2359.7	2478.5	2562.9	2477.9	2516.1	3004.6	3037.3
55°	2672.5	2546.3	2457.0	2506.3	2694.8	2767.6	3054.5	2988.0	2955.9	3294.6	3388.0
57.5°	2760.5	2613.1	2554.8	2627.5	2905.5	3279.3	3582.6	3407.6	3376.3	3622.6	3818.5
60°	2567.3	2411.4	2415.0	2552.0	3033.5	3655.0	4159.9	4011.4	3827.8	4031.1	4222.3
62.5°	2016.9	1876.0	1967.8	2176.3	2926.2	4020.2	4933.8	4996.5	4343.6	4369.8	4446.3
65°	1370.8	1273.3	1356.1	1560.2	2373.3	4219.4	5670.9	5922.1	4813.4	4591.6	4543.1
67.5°	902.2	833.2	849.3	985.0	1633.8	3597.0	6163.8	6437.6	5242.8	4773.6	4372.5
70°	698.6	643.1	636.0	707.1	968.9	2498.9	5871.7	6288.0	5504.4	4603.0	3811.2
72.5°	548.2	506.0	509.8	578.2	750.4	1386.4	4543.6	5347.1	5110.4	3969.8	2928.1
75°	427.5	392.9	412.3	490.5	694.0	861.6	3134.9	4058.3	3951.0	2939.5	1670.0
77.5°	310.4	288.0	315.5	417.7	652.3	739.2	1951.5	2831.3	2531.1	1509.3	573.0
80°	203.5	191.0	213.6	340.6	591.6	711.4	1206.0	1734.9	1250.7	424.0	216.9
82.5°	119.9	114.4	133.2	230.5	475.5	666.8	804.4	964.0	511.7	179.3	115.3
85°	62.9	58.9	79.0	132.4	327.8	608.7	633.2	577.1	247.1	77.9	55.0
87.5°	21.0	20.4	33.5	51.2	124.0	323.2	337.9	274.1	101.9	22.6	12.0
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°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	739.8	728.9	666.2	674.9	683.1	679.0	676.6	648.2	645.5	685.8	682.6
5°	932.2	886.9	833.5	831.1	795.9	759.9	767.0	755.6	758.9	775.5	777.1
7.5°	1033.8	977.4	926.4	843.6	773.3	716.3	725.3	722.6	715.3	752.9	762.9
10°	1031.9	981.7	924.3	824.0	776.6	730.2	674.7	622.1	606.5	588.0	589.6
12.5°	1100.0	1055.6	930.2	828.1	763.8	683.9	579.8	522.3	467.3	466.2	452.3
15°	1121.3	1088.6	943.1	804.6	674.1	559.7	452.0	389.6	349.9	342.0	330.2
17.5°	1174.9	1123.7	904.1	728.9	570.0	437.6	339.8	296.2	292.9	298.4	292.4
20°	1178.5	1095.4	833.8	616.9	458.0	331.6	277.1	255.3	267.0	280.4	279.8
22.5°	1175.5	1059.7	773.0	521.5	344.1	266.5	242.8	237.9	248.8	268.7	271.1
25°	1145.0	1048.0	697.0	428.3	279.3	228.3	221.8	224.8	238.4	261.9	261.9
27.5°	1176.8	1000.3	601.6	348.5	234.9	203.3	207.9	215.5	225.6	252.3	257.2
30°	1166.5	1016.1	524.8	280.7	207.1	185.8	196.2	203.8	215.3	243.1	245.5
32.5°	1194.3	973.8	460.2	236.0	188.8	179.0	181.5	191.8	206.8	228.6	233.0
35°	1236.8	989.4	386.1	212.3	179.8	171.1	175.7	183.9	198.9	220.2	223.7
37.5°	1372.5	988.6	334.9	199.2	178.2	169.5	171.7	177.4	194.8	214.2	222.3
40°	1459.7	1045.2	288.3	196.2	176.3	168.7	166.8	173.0	186.9	209.8	215.5
42.5°	1623.4	1079.8	268.1	195.1	176.0	164.0	162.1	169.5	183.1	204.4	213.1
45°	1796.5	1129.2	252.0	194.6	175.2	163.2	157.5	166.8	178.2	198.6	208.7
47.5°	2000.0	1233.5	243.1	192.6	173.6	164.3	155.9	160.5	173.3	193.7	203.8
50°	2266.5	1371.7	245.0	189.9	176.0	164.6	153.4	155.6	167.3	187.2	197.5
52.5°	2590.5	1585.6	257.2	191.0	177.7	163.2	152.3	151.2	161.3	178.7	189.1
55°	2980.9	1889.1	294.0	196.2	177.7	162.9	150.7	145.8	153.4	167.6	177.7
57.5°	3452.0	2240.6	365.9	198.6	176.3	161.3	147.1	138.4	143.1	154.8	164.3
60°	3856.7	2524.3	440.1	200.3	179.0	157.5	140.1	129.2	132.2	141.1	149.6
62.5°	4062.9	2603.8	462.4	198.9	186.4	155.0	131.6	119.3	119.6	127.2	134.9
65°	4101.6	2497.8	372.8	197.5	195.9	154.8	125.6	110.9	109.0	114.4	121.0
67.5°	3825.9	2168.1	268.9	194.6	197.0	153.1	121.5	104.1	99.2	103.0	108.4
70°	3248.5	1746.1	225.9	188.6	183.9	145.0	114.4	97.0	90.5	93.2	97.3
72.5°	2421.8	1291.8	197.0	175.7	160.2	124.0	103.5	89.1	82.3	84.2	87.2
75°	1345.5	689.1	164.9	152.9	130.8	100.3	88.3	79.0	73.0	73.8	77.1
77.5°	446.9	254.2	121.0	121.3	98.9	77.4	72.8	67.6	62.9	63.2	65.9
80°	202.5	140.6	86.6	87.2	68.9	56.1	55.9	54.2	51.2	50.4	52.3
82.5°	117.4	85.3	59.4	56.7	44.4	36.5	40.6	39.8	39.0	36.0	36.5
85°	57.8	45.8	31.1	29.4	24.5	18.3	21.8	22.6	21.8	18.5	18.3
87.5°	14.2	15.0	7.6	7.1	4.1	1.9	3.3	3.3	4.1	2.7	1.4
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)