

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: P367178

Luminaire Tested: **MSA-SA2A-740-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367178  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-740-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: 7799 lumens  
Efficiency: N/A  
Efficacy: 118.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

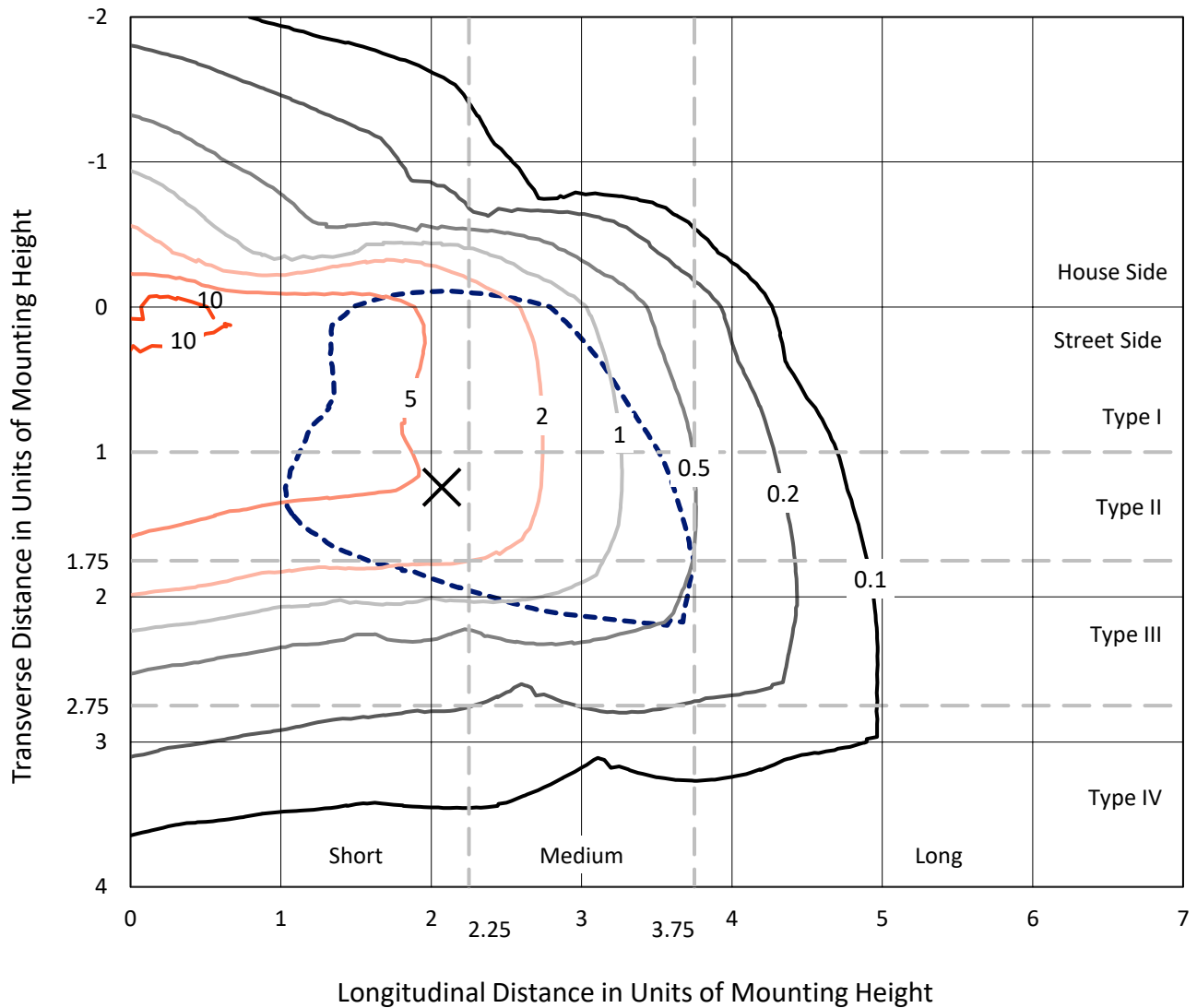
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

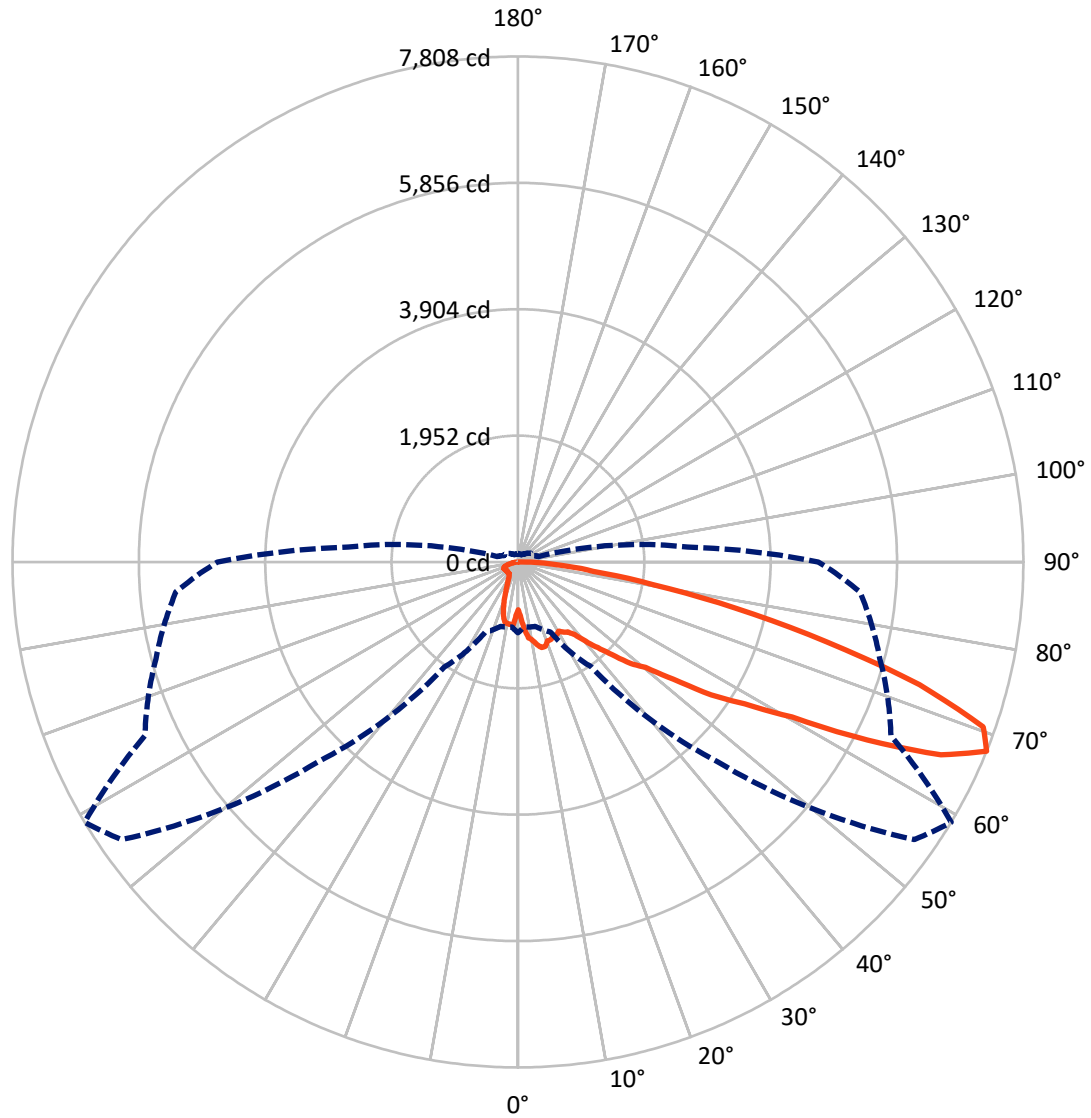
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.6 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	1173.9	0.0	1173.9
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	6625.1	0.0	6625.1
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	7799.0	0.0	7799.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.4	1.2
10°-20°	285.2	3.7
20°-30°	407.3	5.2
30°-40°	600.2	7.7
40°-50°	1014.1	13.0
50°-60°	1764.7	22.6
60°-70°	2248.8	28.8
70°-80°	1190.7	15.3
80°-90°	191.6	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°	7799.0	100.0
0°-180°	7799.0	100.0

**Coefficient of Utilization**



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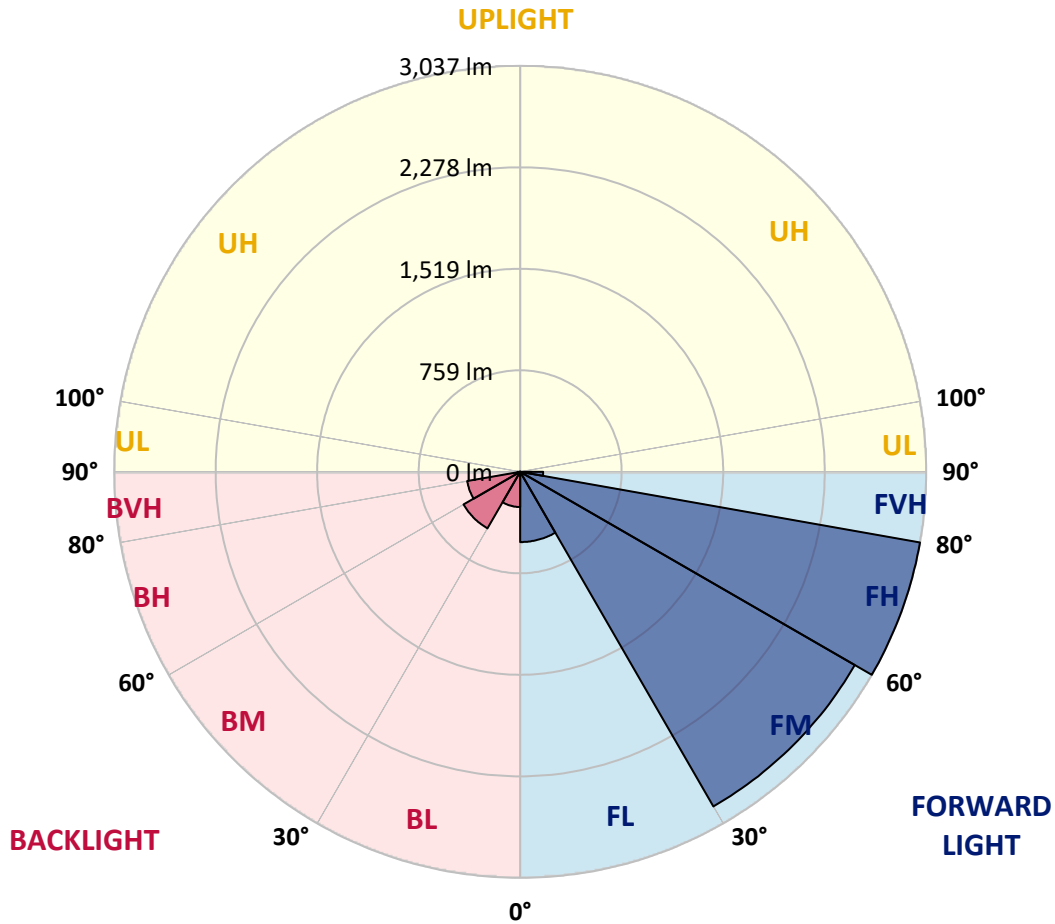
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	525.7	6.7			
FM (30°-60°)	2890.2	37.1			
FH (60°-80°)	3037.2	38.9			G2/5000
FVH (80°-90°)	172.1	2.2			G2/225
BL (0°-30°)	263.3	3.4	B1/500		
BM (30°-60°)	488.8	6.3	B1/1000		
BH (60°-80°)	402.3	5.2	B1/500		G1/500
BVH (80°-90°)	19.5	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°	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0
2.5°	921.4	878.5	832.8	845.7	871.8	883.7	870.8	858.3	842.1	822.9	888.4
5°	1117.4	1053.6	1044.4	1044.0	1034.8	997.8	1045.3	1042.0	1061.2	1081.0	1131.9
7.5°	1173.3	1149.5	1123.7	1135.9	1089.3	1087.3	1161.4	1182.5	1219.5	1207.3	1275.7
10°	1144.5	1117.7	1131.3	1126.3	1130.6	1179.5	1224.8	1226.1	1265.8	1304.8	1260.8
12.5°	1093.9	1095.9	1149.8	1147.8	1217.2	1308.1	1321.6	1311.1	1375.8	1349.4	1387.1
15°	1130.0	1154.1	1140.5	1152.1	1179.5	1295.2	1332.9	1371.2	1432.7	1456.5	1418.8
17.5°	1187.5	1200.4	1139.5	1133.3	1189.8	1244.6	1338.2	1370.9	1380.5	1550.0	1496.8
20°	1163.0	1189.1	1129.6	1053.3	1147.1	1219.8	1312.1	1302.1	1348.7	1557.3	1513.0
22.5°	1232.4	1189.1	1113.4	1059.2	1092.3	1159.0	1237.4	1302.5	1357.7	1514.6	1536.5
25°	1245.6	1225.1	1154.4	1100.5	1089.3	1113.1	1224.8	1267.4	1360.6	1572.8	1523.9
27.5°	1326.3	1295.5	1151.4	1153.1	1097.2	1055.3	1185.1	1274.7	1394.4	1536.8	1554.6
30°	1426.4	1402.9	1222.2	1228.8	1151.4	1074.1	1212.2	1239.3	1413.8	1593.0	1593.3
32.5°	1501.4	1542.7	1361.3	1271.4	1244.0	1186.1	1170.6	1292.6	1391.0	1694.8	1659.4
35°	1636.6	1668.7	1468.4	1396.3	1303.5	1238.4	1283.6	1327.6	1485.9	1828.6	1757.6
37.5°	1886.8	1849.8	1667.3	1554.0	1519.3	1425.4	1450.5	1419.8	1589.0	1979.0	1949.9
40°	2031.5	1999.5	1807.5	1744.7	1607.2	1619.1	1587.7	1610.2	1726.8	2139.0	2129.7
42.5°	2174.3	2131.3	1969.1	1925.5	1788.3	1730.1	1735.7	1808.5	1939.3	2397.4	2366.7
45°	2315.4	2205.4	2134.3	2145.9	2079.8	1960.5	1968.7	2037.2	2171.3	2692.9	2622.1
47.5°	2423.5	2332.6	2277.1	2262.9	2230.2	2389.8	2318.4	2346.2	2405.3	2955.9	2929.2
50°	2628.1	2522.0	2449.6	2429.1	2540.2	2762.3	2616.8	2557.0	2682.9	3296.0	3282.1
52.5°	2955.6	2823.4	2702.8	2701.5	2862.1	3006.2	3108.6	3005.5	3051.8	3644.3	3684.0
55°	3241.5	3088.5	2980.1	3039.9	3268.6	3356.8	3704.8	3624.2	3585.2	3996.0	4109.4
57.5°	3348.2	3169.4	3098.7	3186.9	3524.0	3977.5	4345.3	4133.1	4095.1	4393.9	4631.5
60°	3113.9	2924.9	2929.2	3095.4	3679.4	4433.2	5045.6	4865.5	4642.8	4889.3	5121.3
62.5°	2446.3	2275.4	2386.8	2639.6	3549.2	4876.1	5984.2	6060.3	5268.4	5300.1	5393.0
65°	1662.7	1544.4	1644.9	1892.4	2878.6	5117.7	6878.2	7182.9	5838.2	5569.1	5510.3
67.5°	1094.3	1010.6	1030.1	1194.7	1981.6	4362.8	7476.1	7808.2	6359.0	5789.9	5303.4
70°	847.4	780.0	771.4	857.6	1175.2	3031.0	7121.8	7626.8	6676.3	5583.0	4622.6
72.5°	665.0	613.7	618.4	701.3	910.2	1681.5	5511.0	6485.6	6198.4	4815.0	3551.5
75°	518.5	476.6	500.0	594.9	841.8	1045.0	3802.3	4922.4	4792.1	3565.4	2025.6
77.5°	376.4	349.3	382.7	506.6	791.2	896.6	2367.0	3434.2	3070.0	1830.6	695.0
80°	246.9	231.7	259.1	413.1	717.5	862.9	1462.8	2104.2	1517.0	514.2	263.1
82.5°	145.4	138.8	161.6	279.6	576.7	808.7	975.6	1169.3	620.7	217.5	139.8
85°	76.3	71.4	95.8	160.6	397.6	738.3	768.1	700.0	299.8	94.5	66.8
87.5°	25.4	24.8	40.7	62.1	150.4	392.0	409.8	332.5	123.6	27.4	14.5
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°	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0	738.0
2.5°	897.3	884.1	808.1	818.6	828.5	823.6	820.6	786.2	782.9	831.9	827.9
5°	1130.6	1075.8	1011.0	1008.0	965.4	921.7	930.3	916.5	920.4	940.6	942.6
7.5°	1253.9	1185.5	1123.7	1023.2	937.9	868.9	879.8	876.5	867.5	913.2	925.4
10°	1251.6	1190.8	1121.0	999.4	941.9	885.7	818.3	754.5	735.7	713.2	715.2
12.5°	1334.2	1280.3	1128.3	1004.4	926.4	829.5	703.3	633.6	566.8	565.5	548.6
15°	1360.0	1320.3	1143.8	975.9	817.6	678.8	548.3	472.6	424.4	414.8	400.6
17.5°	1425.1	1363.0	1096.6	884.1	691.4	530.8	412.1	359.2	355.3	361.9	354.6
20°	1429.4	1328.6	1011.3	748.2	555.6	402.2	336.1	309.7	323.9	340.1	339.4
22.5°	1425.7	1285.3	937.6	632.6	417.4	323.2	294.5	288.5	301.7	325.9	328.8
25°	1388.7	1271.1	845.4	519.5	338.8	277.0	269.0	272.7	289.2	317.6	317.6
27.5°	1427.4	1213.2	729.7	422.7	284.9	246.5	252.2	261.4	273.6	306.0	312.0
30°	1414.8	1232.4	636.5	340.4	251.2	225.4	238.0	247.2	261.1	294.8	297.8
32.5°	1448.6	1181.2	558.2	286.2	229.0	217.1	220.1	232.7	250.8	277.3	282.6
35°	1500.1	1200.0	468.3	257.5	218.1	207.5	213.2	223.1	241.3	267.0	271.3
37.5°	1664.7	1199.0	406.2	241.6	216.1	205.6	208.2	215.2	236.3	259.8	269.7
40°	1770.5	1267.8	349.7	238.0	213.8	204.6	202.3	209.9	226.7	254.5	261.4
42.5°	1969.1	1309.7	325.2	236.6	213.5	199.0	196.6	205.6	222.1	247.9	258.4
45°	2178.9	1369.6	305.7	236.0	212.5	198.0	191.0	202.3	216.1	240.9	253.2
47.5°	2425.8	1496.1	294.8	233.7	210.5	199.3	189.0	194.7	210.2	235.0	247.2
50°	2749.0	1663.7	297.1	230.4	213.5	199.6	186.1	188.7	202.9	227.0	239.6
52.5°	3142.0	1923.1	312.0	231.7	215.5	198.0	184.7	183.4	195.7	216.8	229.4
55°	3615.6	2291.3	356.6	238.0	215.5	197.6	182.8	176.8	186.1	203.3	215.5
57.5°	4187.0	2717.6	443.9	240.9	213.8	195.7	178.5	167.9	173.5	187.7	199.3
60°	4677.8	3061.7	533.7	242.9	217.1	191.0	169.9	156.7	160.3	171.2	181.4
62.5°	4928.0	3158.2	560.8	241.3	226.1	188.1	159.6	144.8	145.1	154.3	163.6
65°	4974.9	3029.6	452.1	239.6	237.6	187.7	152.4	134.5	132.2	138.8	146.7
67.5°	4640.5	2629.7	326.2	236.0	238.9	185.7	147.4	126.2	120.3	124.9	131.5
70°	3940.1	2117.8	274.0	228.7	223.1	175.8	138.8	117.7	109.7	113.0	118.0
72.5°	2937.4	1566.9	238.9	213.2	194.3	150.4	125.6	108.1	99.8	102.1	105.8
75°	1632.0	835.8	199.9	185.4	158.6	121.6	107.1	95.8	88.6	89.6	93.5
77.5°	542.0	308.4	146.7	147.1	120.0	93.9	88.2	82.0	76.3	76.7	80.0
80°	245.6	170.5	105.1	105.8	83.6	68.1	67.8	65.8	62.1	61.1	63.5
82.5°	142.4	103.4	72.0	68.7	53.9	44.3	49.2	48.3	47.3	43.6	44.3
85°	70.1	55.5	37.7	35.7	29.7	22.1	26.4	27.4	26.4	22.5	22.1
87.5°	17.2	18.2	9.3	8.6	5.0	2.3	4.0	4.0	5.0	3.3	1.7
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)