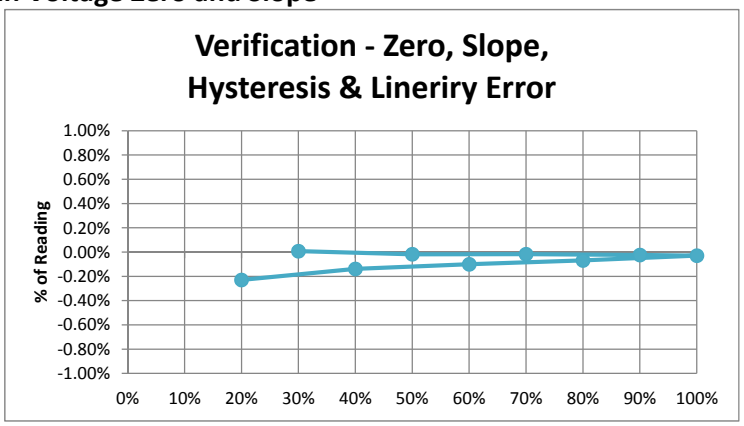
Appendix A – Calculation of Cal Set 5's Six Zero, Slope, and Linearity Verifications When Compared to Its Median Zero and Slope Verification

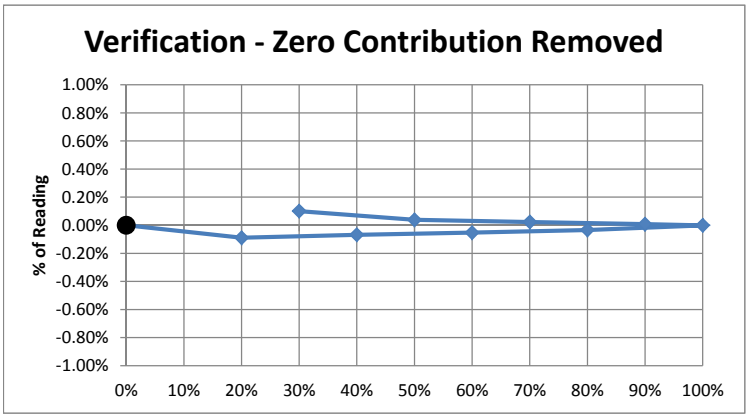
Cal Set 5 **Run 2** **Run Use P** **Date 2003-04-02 10:59**

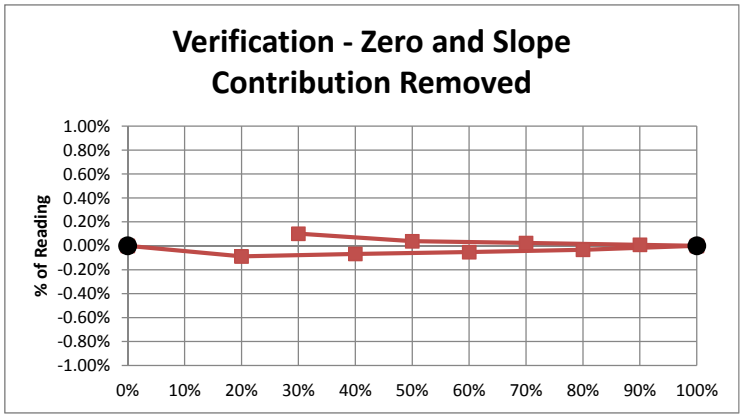
Verification Based on Median Voltage Zero and Slope

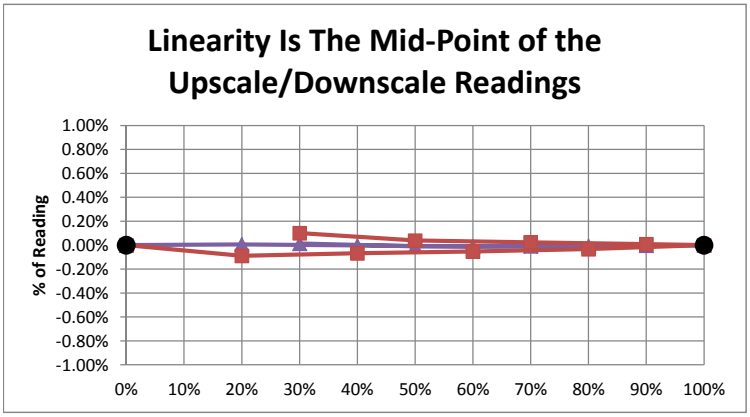
Zero 0.99359 **Median Zero** 0.99471
Slope 4.00583 **Median Slope** 4.00585

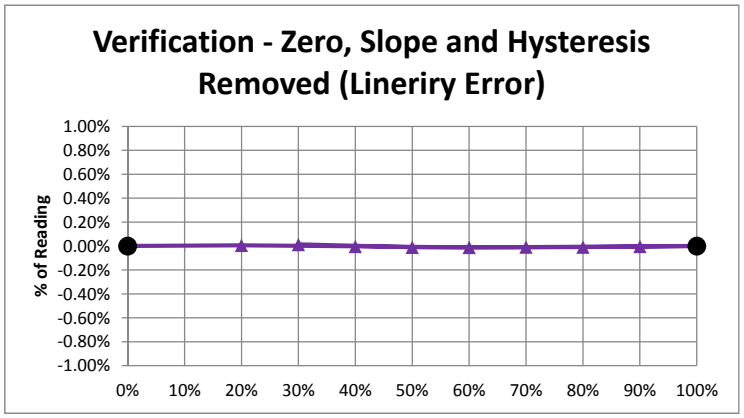
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.99359					
20%	34.81	1.79405	-0.23%	-0.14%	0.00%	-0.09%	0.01%
40%	69.62	2.59484	-0.14%	-0.07%	0.00%	-0.06%	0.00%
60%	104.43	3.39582	-0.10%	-0.05%	0.00%	-0.04%	-0.01%
80%	139.24	4.19719	-0.07%	-0.03%	0.00%	-0.02%	-0.01%
100%	174.05	4.99942	-0.03%	-0.03%	0.00%	0.00%	0.00%
90%	156.64	4.59914	-0.02%	-0.03%	0.00%	0.01%	0.00%
70%	121.83	3.79833	-0.02%	-0.04%	0.00%	0.03%	-0.01%
50%	87.02	2.99728	-0.02%	-0.06%	0.00%	0.05%	-0.01%
30%	52.21	2.19656	0.01%	-0.09%	0.00%	0.09%	0.01%







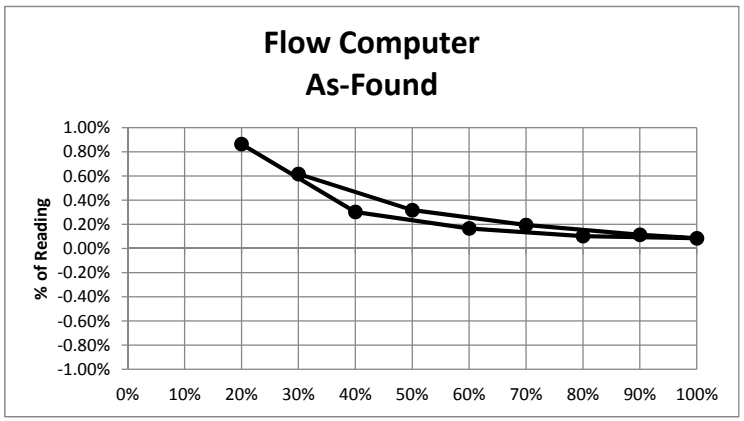




Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2003-04-02 10:59**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	0.427	0.000	0.000	0.99359		0.25%
20%	35.110	34.777	34.810	1.79405	0.86%	0.17%
40%	69.830	69.574	69.620	2.59484	0.30%	0.12%
60%	104.602	104.386	104.429	3.39582	0.17%	0.10%
80%	139.381	139.205	139.239	4.19719	0.10%	0.08%
100%	174.195	174.049	174.049	4.99942	0.08%	0.08%
90%	156.821	156.662	156.644	4.59914	0.11%	0.10%
70%	122.070	121.874	121.834	3.79833	0.19%	0.14%
50%	87.300	87.067	87.024	2.99728	0.32%	0.16%
30%	52.537	52.261	52.215	2.19656	0.62%	0.18%

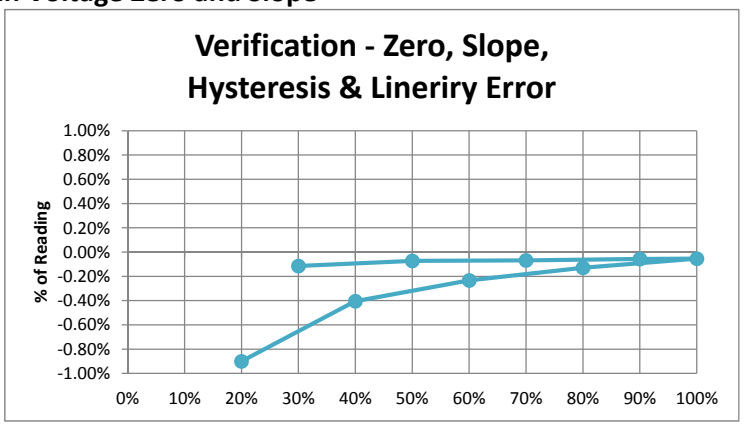


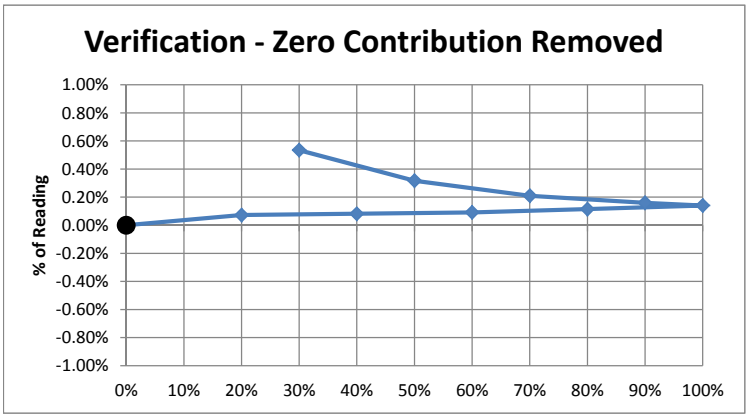
Cal Set 5 **Run 2** **Run Use P** **Date 2004-09-02 14:27**

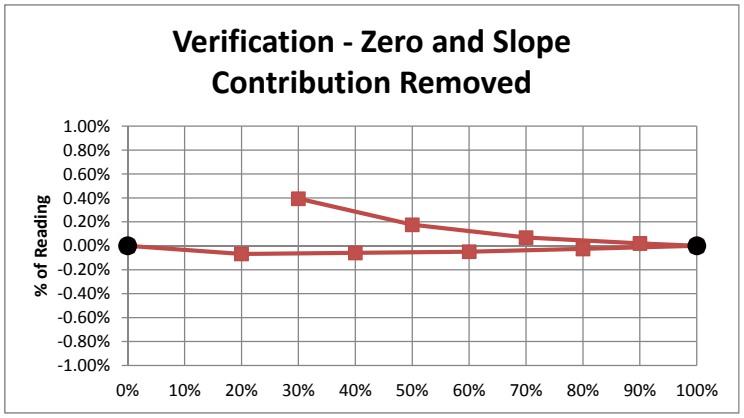
Verification Based on Median Voltage Zero and Slope

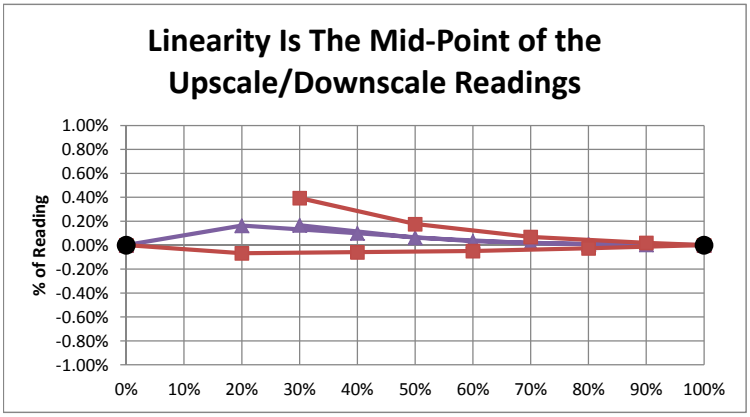
Zero 0.98692 **Median Zero** 0.99471
Slope 4.01148 **Median Slope** 4.00585

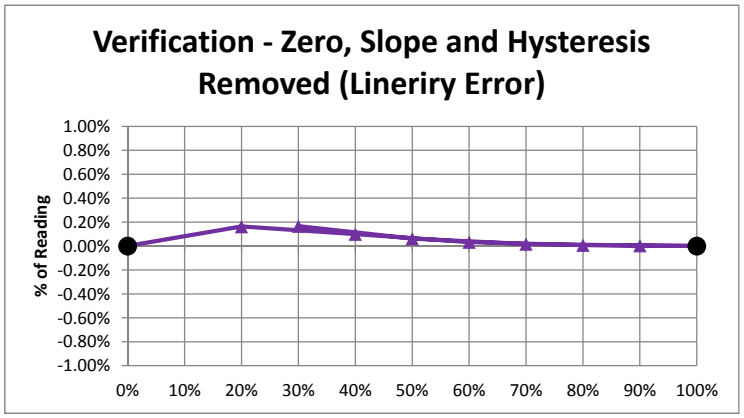
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.98692					
20%	34.81	1.78867	-0.90%	-0.97%	0.14%	-0.23%	0.16%
40%	69.62	2.59056	-0.40%	-0.49%	0.14%	-0.16%	0.10%
60%	104.43	3.39262	-0.23%	-0.32%	0.14%	-0.08%	0.03%
80%	139.24	4.19527	-0.13%	-0.24%	0.14%	-0.03%	0.01%
100%	174.05	4.99840	-0.05%	-0.19%	0.14%	0.00%	0.00%
90%	156.64	4.59795	-0.06%	-0.22%	0.14%	0.02%	0.00%
70%	121.83	3.79689	-0.07%	-0.28%	0.14%	0.05%	0.02%
50%	87.02	2.99619	-0.07%	-0.39%	0.14%	0.11%	0.06%
30%	52.21	2.19510	-0.11%	-0.65%	0.14%	0.23%	0.17%







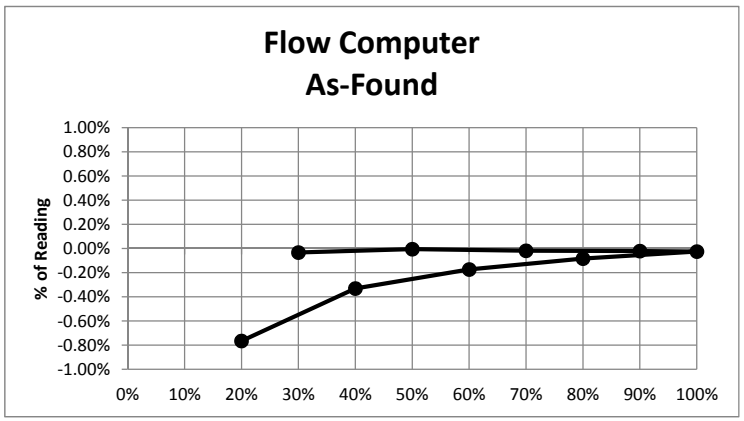




Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2004-09-02 14:27**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	-0.290	0.000	0.000	0.98692		-0.17%
20%	34.543	34.730	34.810	1.78867	-0.77%	-0.15%
40%	69.388	69.509	69.620	2.59056	-0.33%	-0.13%
60%	104.247	104.344	104.429	3.39262	-0.17%	-0.10%
80%	139.122	139.192	139.239	4.19527	-0.08%	-0.07%
100%	174.005	174.049	174.049	4.99840	-0.03%	-0.03%
90%	156.611	156.668	156.644	4.59795	-0.02%	-0.02%
70%	121.811	121.898	121.834	3.79689	-0.02%	-0.01%
50%	87.019	87.124	87.024	2.99619	-0.01%	0.00%
30%	52.197	52.334	52.215	2.19510	-0.03%	-0.01%

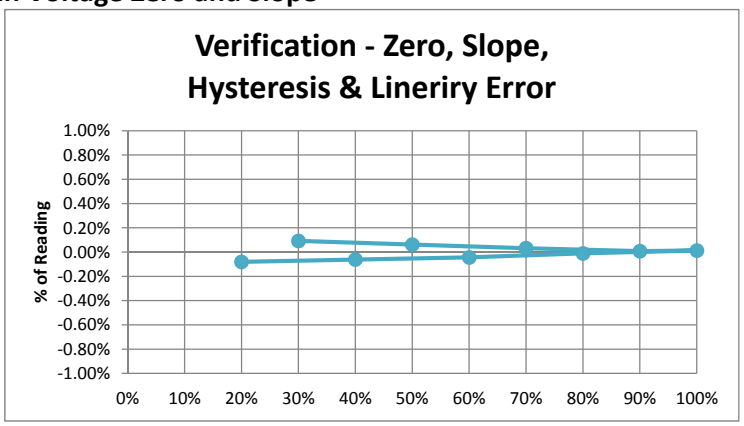


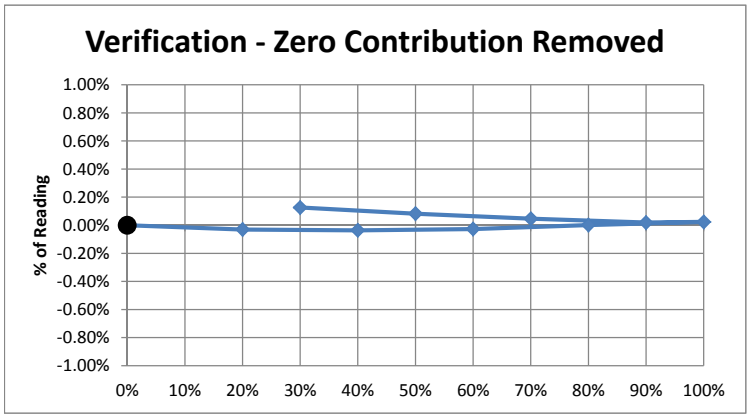
Cal Set 5 **Run 2** **Run Use P** **Date 2005-10-18 13:53**

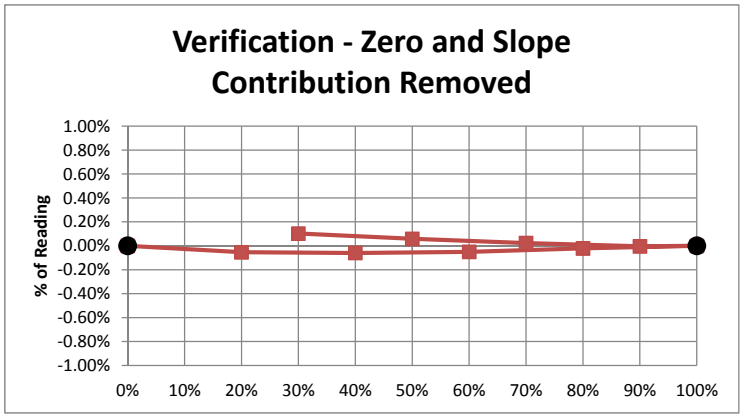
Verification Based on Median Voltage Zero and Slope

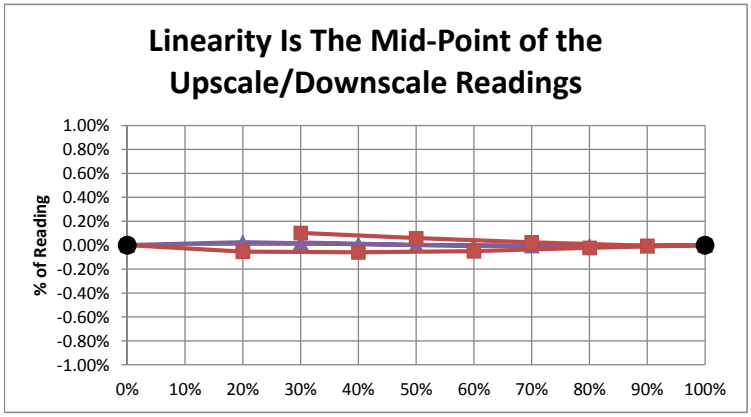
Zero 0.99431 **Median Zero** 0.99471
Slope 4.00679 **Median Slope** 4.00585

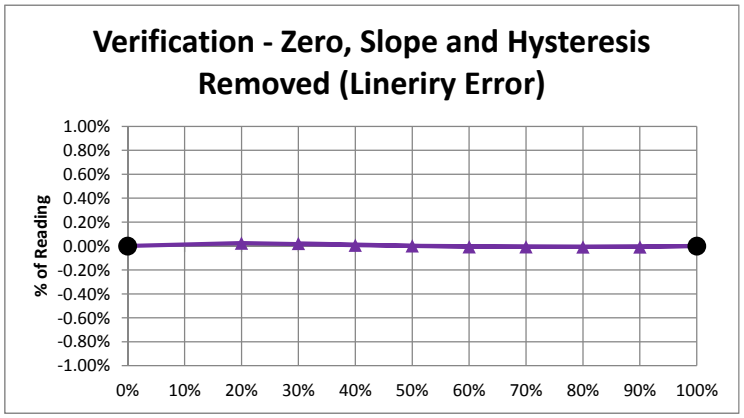
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.99431					
20%	34.81	1.79524	-0.08%	-0.05%	0.02%	-0.08%	0.02%
40%	69.62	2.59607	-0.06%	-0.02%	0.02%	-0.07%	0.01%
60%	104.43	3.39716	-0.04%	-0.02%	0.02%	-0.04%	-0.01%
80%	139.24	4.19904	-0.01%	-0.01%	0.02%	-0.01%	-0.01%
100%	174.05	5.00110	0.01%	-0.01%	0.02%	0.00%	0.00%
90%	156.64	4.60027	0.01%	-0.01%	0.02%	0.00%	-0.01%
70%	121.83	3.79971	0.03%	-0.01%	0.02%	0.03%	-0.01%
50%	87.02	2.99888	0.06%	-0.02%	0.02%	0.06%	0.00%
30%	52.21	2.19758	0.09%	-0.03%	0.02%	0.08%	0.02%







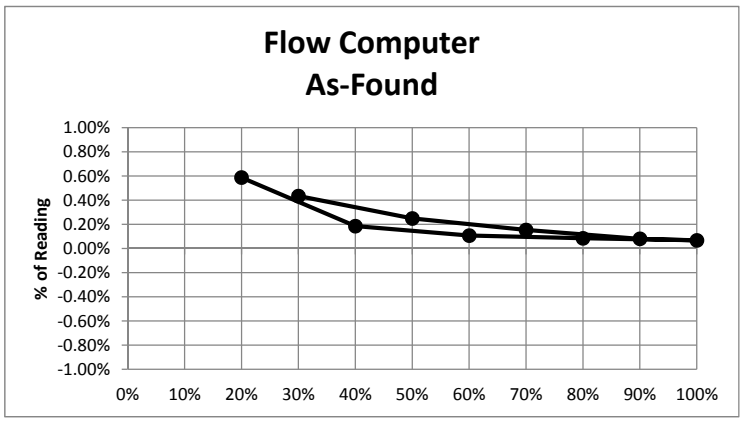




Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2005-10-18 13:53**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	0.320	0.000	0.000	0.99431		0.18%
20%	35.014	34.783	34.810	1.79524	0.59%	0.12%
40%	69.748	69.573	69.620	2.59607	0.18%	0.07%
60%	104.541	104.383	104.429	3.39716	0.11%	0.06%
80%	139.356	139.218	139.239	4.19904	0.08%	0.07%
100%	174.166	174.049	174.049	5.00110	0.07%	0.07%
90%	156.769	156.648	156.644	4.60027	0.08%	0.07%
70%	122.021	121.869	121.834	3.79971	0.15%	0.11%
50%	87.241	87.074	87.024	2.99888	0.25%	0.12%
30%	52.441	52.256	52.215	2.19758	0.43%	0.13%

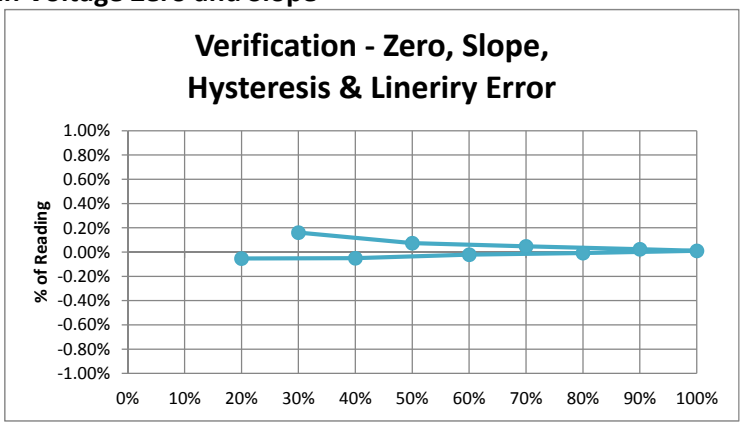


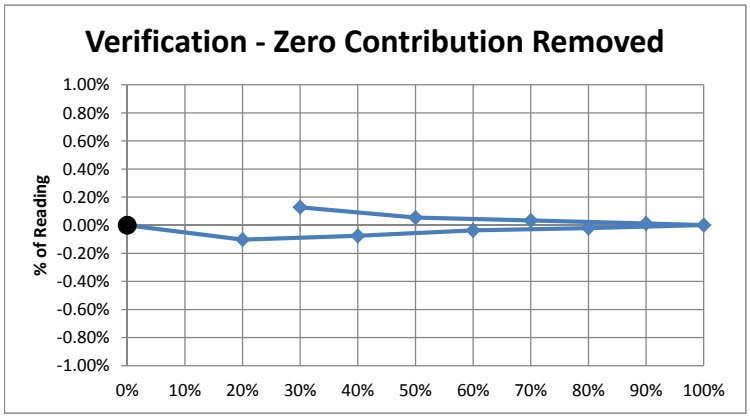
Cal Set 5 **Run 2** **Run Use P** **Date 2006-12-12 11:30**

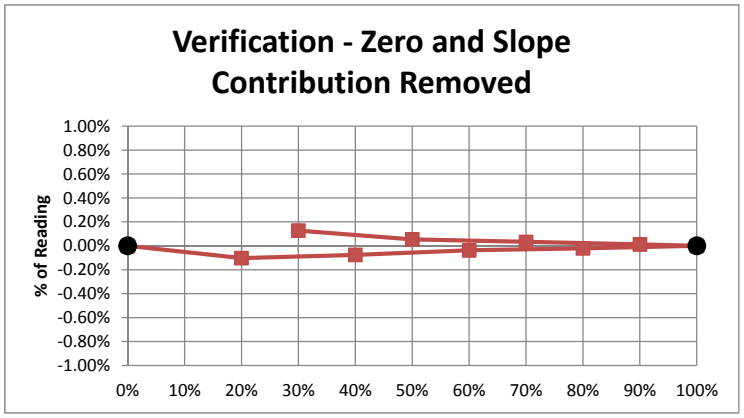
Verification Based on Median Voltage Zero and Slope

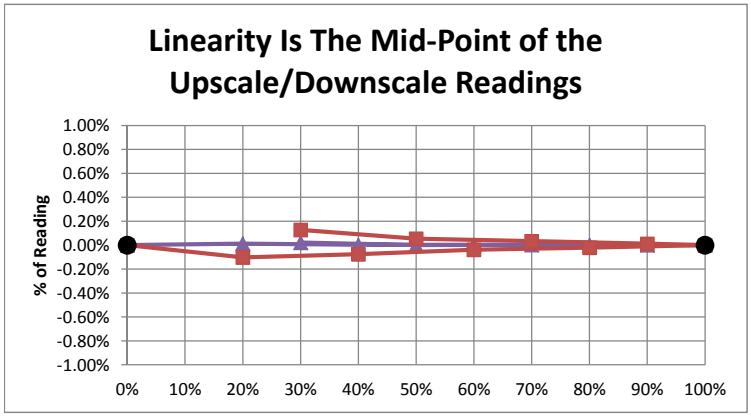
Zero 0.99511 **Median Zero** 0.99471
Slope 4.00587 **Median Slope** 4.00585

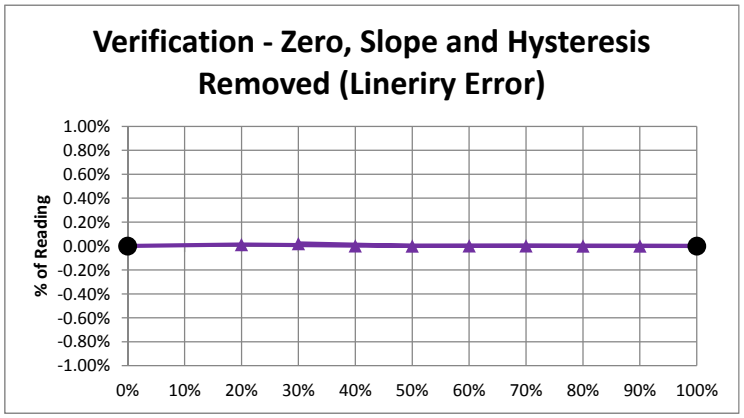
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.99511					
20%	34.81	1.79546	-0.05%	0.05%	0.00%	-0.12%	0.01%
40%	69.62	2.59624	-0.05%	0.02%	0.00%	-0.08%	0.00%
60%	104.43	3.39773	-0.02%	0.02%	0.00%	-0.04%	0.00%
80%	139.24	4.19914	-0.01%	0.01%	0.00%	-0.02%	0.00%
100%	174.05	5.00099	0.01%	0.01%	0.00%	0.00%	0.00%
90%	156.64	4.60083	0.02%	0.01%	0.00%	0.01%	0.00%
70%	121.83	3.80015	0.05%	0.01%	0.00%	0.03%	0.00%
50%	87.02	2.99912	0.07%	0.02%	0.00%	0.05%	0.00%
30%	52.21	2.19841	0.16%	0.03%	0.00%	0.11%	0.02%







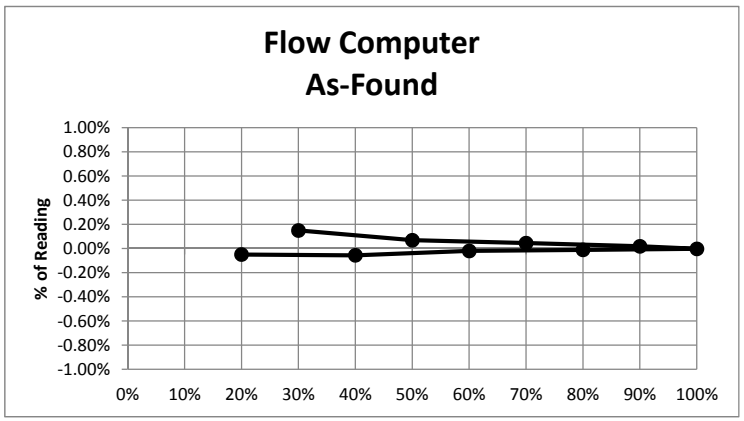




Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2006-12-12 11:30**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	0.035	0.000	0.000	0.99511		0.02%
20%	34.792	34.770	34.810	1.79546	-0.05%	-0.01%
40%	69.580	69.565	69.620	2.59624	-0.06%	-0.02%
60%	104.407	104.388	104.429	3.39773	-0.02%	-0.01%
80%	139.223	139.210	139.239	4.19914	-0.01%	-0.01%
100%	174.044	174.049	174.049	5.00099	0.00%	0.00%
90%	156.673	156.661	156.644	4.60083	0.02%	0.02%
70%	121.888	121.871	121.834	3.80015	0.04%	0.03%
50%	87.084	87.071	87.024	2.99912	0.07%	0.03%
30%	52.292	52.270	52.215	2.19841	0.15%	0.04%

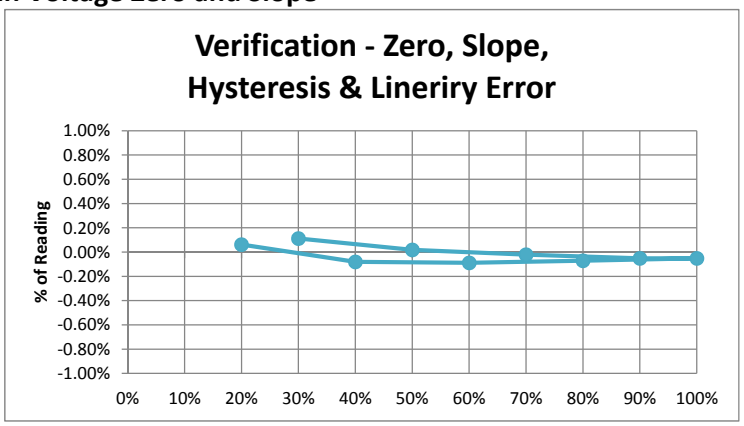


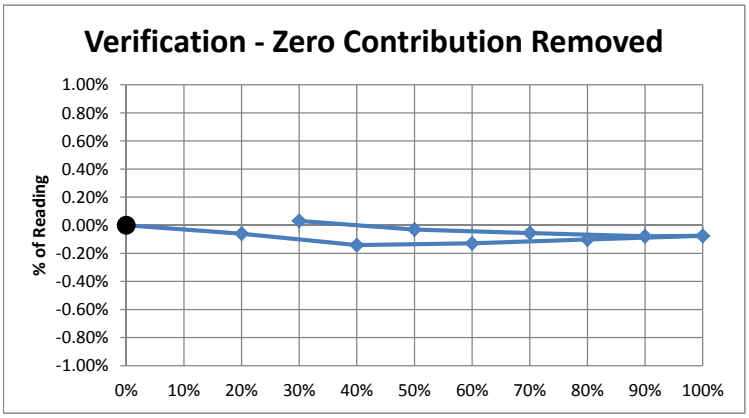
Cal Set 5 **Run 2** **Run Use P** **Date 2007-11-29 12:43**

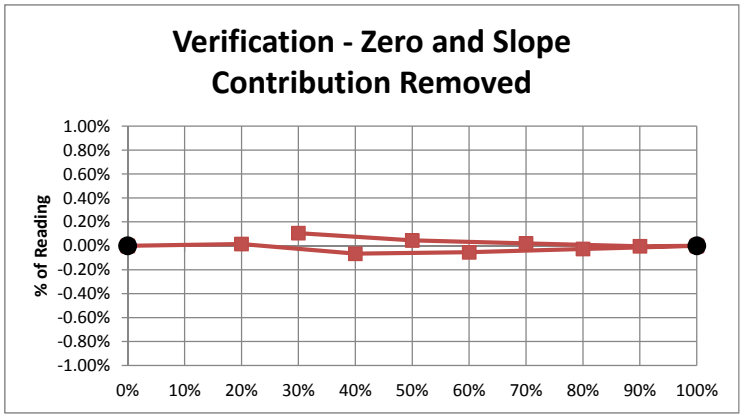
Verification Based on Median Voltage Zero and Slope

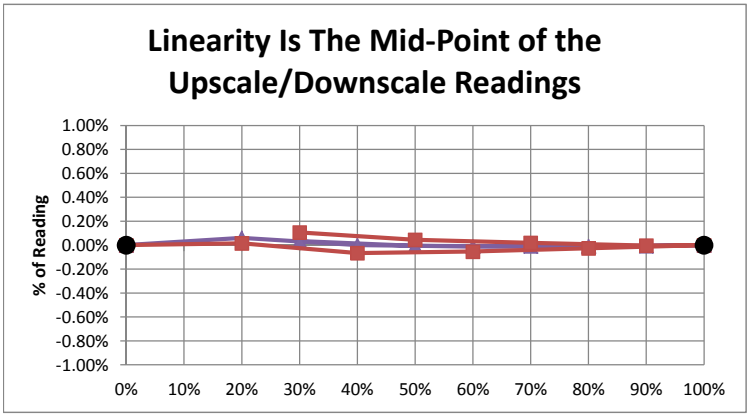
Zero 0.99569 **Median Zero** 0.99471
Slope 4.00283 **Median Slope** 4.00585

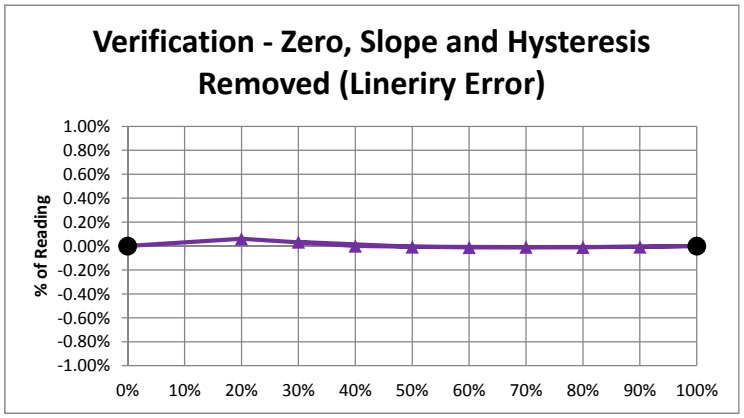
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.99569					
20%	34.81	1.79638	0.06%	0.12%	-0.08%	-0.05%	0.06%
40%	69.62	2.59576	-0.08%	0.06%	-0.08%	-0.07%	0.00%
60%	104.43	3.39610	-0.09%	0.04%	-0.08%	-0.04%	-0.01%
80%	139.24	4.19712	-0.07%	0.03%	-0.08%	-0.02%	-0.01%
100%	174.05	4.99852	-0.05%	0.02%	-0.08%	0.00%	0.00%
90%	156.64	4.59811	-0.05%	0.03%	-0.08%	0.00%	-0.01%
70%	121.83	3.79822	-0.02%	0.03%	-0.08%	0.03%	-0.01%
50%	87.02	2.99800	0.02%	0.05%	-0.08%	0.05%	-0.01%
30%	52.21	2.19781	0.11%	0.08%	-0.08%	0.07%	0.03%







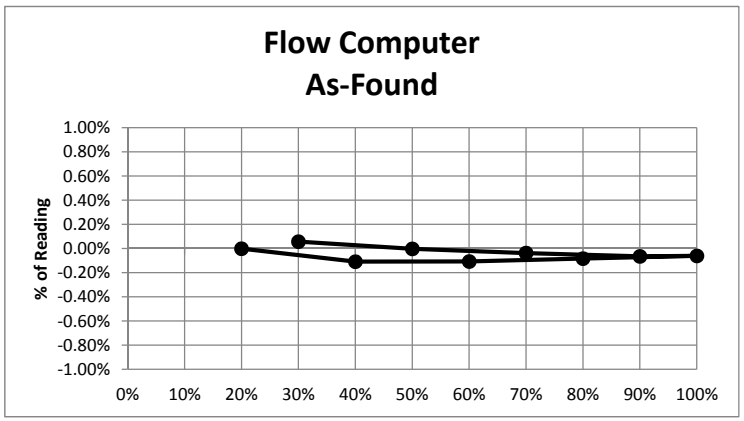




Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2007-11-29 12:43**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	0.025	0.000	0.000	0.99569		0.01%
20%	34.809	34.794	34.810	1.79638	0.00%	0.00%
40%	69.544	69.573	69.620	2.59576	-0.11%	-0.04%
60%	104.317	104.385	104.429	3.39610	-0.11%	-0.06%
80%	139.122	139.216	139.239	4.19712	-0.08%	-0.07%
100%	173.942	174.049	174.049	4.99852	-0.06%	-0.06%
90%	156.542	156.650	156.644	4.59811	-0.06%	-0.06%
70%	121.788	121.869	121.834	3.79822	-0.04%	-0.03%
50%	87.022	87.069	87.024	2.99800	0.00%	0.00%
30%	52.244	52.253	52.215	2.19781	0.06%	0.02%

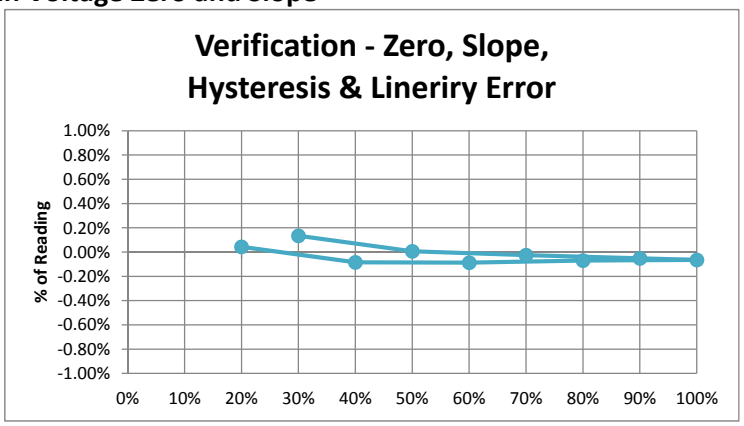


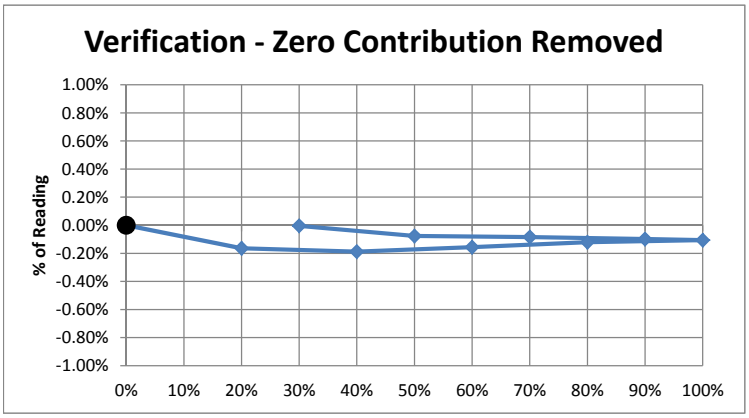
Cal Set 5 **Run 2** **Run Use P** **Date 2007-11-29 13:02**

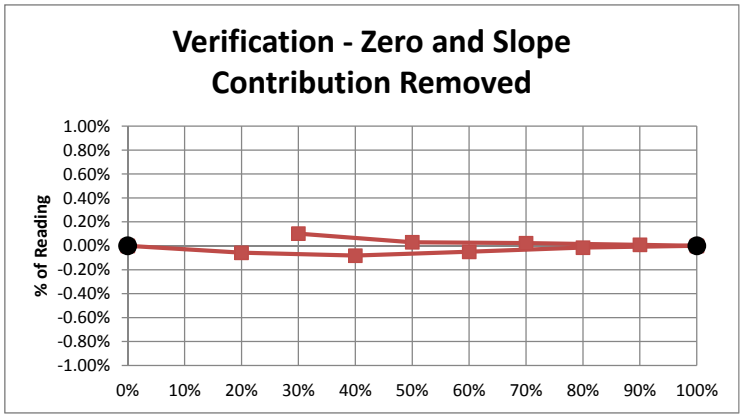
Verification Based on Median Voltage Zero and Slope

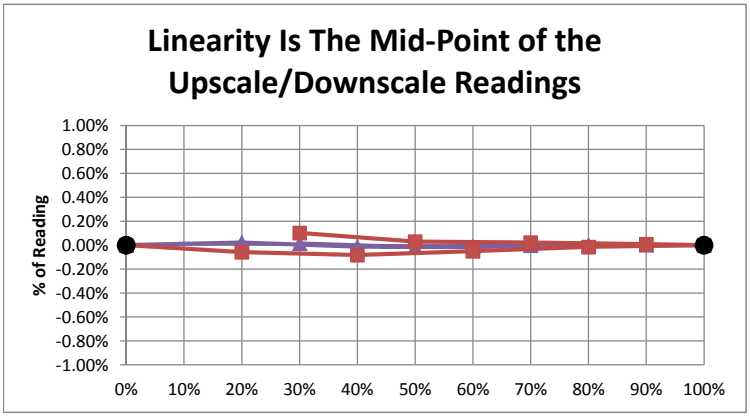
Zero 0.99638 **Median Zero** 0.99471
Slope 4.00158 **Median Slope** 4.00585

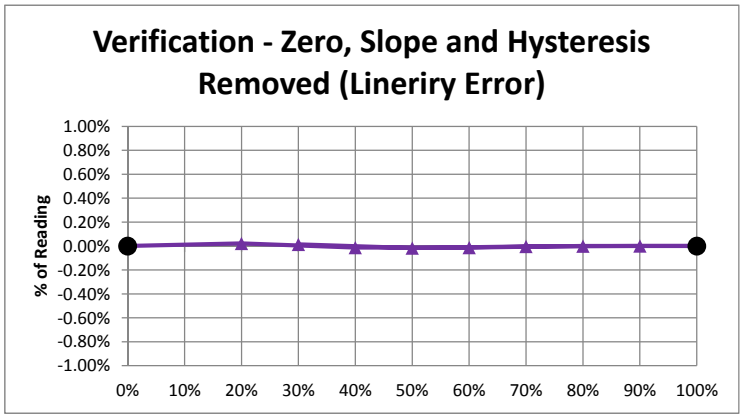
Verification (Compared to Median Voltage Zero and Slope)							
			Verification	Verification Components			
	Eng Val	Voltage	Total	Zero	Slope	Hysteresis	Linearity
0%	0.00	0.99638					
20%	34.81	1.79623	0.04%	0.21%	-0.11%	-0.08%	0.02%
40%	69.62	2.59570	-0.08%	0.10%	-0.11%	-0.07%	-0.01%
60%	104.43	3.39613	-0.09%	0.07%	-0.11%	-0.04%	-0.01%
80%	139.24	4.19717	-0.07%	0.05%	-0.11%	-0.01%	0.00%
100%	174.05	4.99796	-0.06%	0.04%	-0.11%	0.00%	0.00%
90%	156.64	4.59811	-0.05%	0.05%	-0.11%	0.01%	0.00%
70%	121.83	3.79811	-0.02%	0.06%	-0.11%	0.03%	0.00%
50%	87.02	2.99776	0.01%	0.08%	-0.11%	0.05%	-0.02%
30%	52.21	2.19808	0.13%	0.14%	-0.11%	0.09%	0.01%



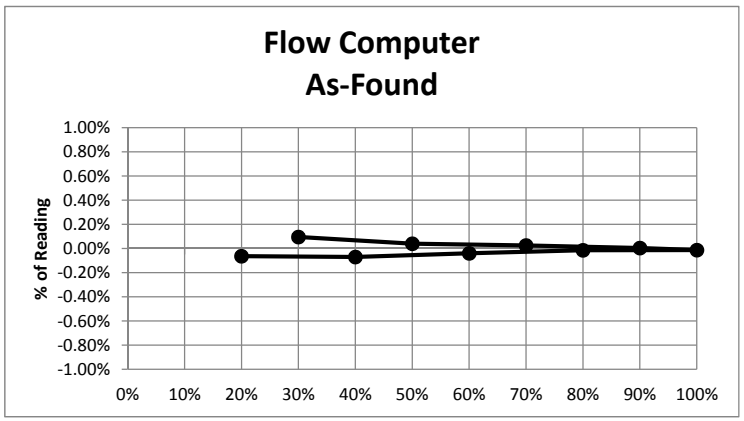








Flow Computer As-Found Based on Previous Calibration

Cal Set 5 **Run 2** **Run Use P**
Date **2007-11-29 13:02**

Flow Computer Calibration					As-Found	
	As-Found	As-Left	Eng Value	Voltage	% Read	% Span
0%	0.030	0.000	0.000	0.99638		0.02%
20%	34.788	34.782	34.810	1.79623	-0.06%	-0.01%
40%	69.570	69.571	69.620	2.59570	-0.07%	-0.03%
60%	104.386	104.390	104.429	3.39613	-0.04%	-0.02%
80%	139.219	139.219	139.239	4.19717	-0.01%	-0.01%
100%	174.025	174.049	174.049	4.99796	-0.01%	-0.01%
90%	156.650	156.656	156.644	4.59811	0.00%	0.00%
70%	121.864	121.866	121.834	3.79811	0.02%	0.02%
50%	87.059	87.065	87.024	2.99776	0.04%	0.02%
30%	52.264	52.261	52.215	2.19808	0.09%	0.03%