

## 7 Step-ellipsoid

```
bbob f7, 5-D
51 targets: 100
5, 15 instances
```



v2.6.1.158

 $\log_{10}(\# \text{ f-evals} / \text{dimension})$ 

☆ both cumulative  
 ▷ stepsize cumulative  
 ✕ covariance  
 ☆ both cumulative  
 ○ stepsize cumulative  
 ◇ stepsize cumulative  
 ▽ no cumulative  
 ○ best 2009  
 ▷ stepsize cumulative  
 ◇ both cumulative  
 △ no cumulative  
 ○ CMA-ES-2009  
 ▽ covariance  
 + both cumulative