We find that the **FFA-based** randomized local search **FRLS** does not just find better solutions than the objective-guided RLS algorithm on the vast majority of the QAPLIB instances, it also keeps improving its current best solution for the complete computational budget of 10<sup>8</sup> FEs that we assigned to the runs. With this budget, it can discover the optimal solutions of over 58% of the QAPLIB instances. Had we assigned a larger budget – (Liang et al., 2022; Liang et al., 2024; Weise et al., 2021b; Weise et al., 2023) use 10<sup>10</sup> FEs – we would likely have seen even more instances solved.

We furthermore confirm the remarkable ability of FFA to discover very diverse solutions (at least from the perspective of the objective function). It is known that on the QAP, many solutions tend to have the same objective values (Tayarani-N. and Prügel-Bennett, 2015). Yet, on some of the instances, more than half of the objective values discovered by FRLS were unique.