|                                | cplex     |          |
|--------------------------------|-----------|----------|
| Instance                       | Temps (s) | Optimal? |
| instance_t10_hard_1.txt        | 139.56    | ×        |
| $instance\_t10\_hard\_10.txt$  | 113.23    | ×        |
| $instance\_t10\_hard\_2.txt$   | 128.49    | ×        |
| $instance\_t10\_hard\_3.txt$   | 6.64      | ×        |
| $instance\_t10\_hard\_4.txt$   | 26.81     | ×        |
| $instance\_t10\_hard\_5.txt$   | 141.09    | ×        |
| $instance\_t10\_hard\_6.txt$   | 292.98    | ×        |
| $instance\_t10\_hard\_7.txt$   | 42.44     | ×        |
| $instance\_t10\_hard\_8.txt$   | 18.63     | ×        |
| $instance\_t5\_hard\_1.txt$    | 4.11      | ×        |
| $instance\_t5\_hard\_10.txt$   | 0.08      | ×        |
| $instance\_t5\_hard\_2.txt$    | 0.07      | ×        |
| $instance\_t5\_hard\_3.txt$    | 0.08      | ×        |
| $instance\_t5\_hard\_4.txt$    | 0.05      | ×        |
| $instance\_t5\_hard\_5.txt$    | 0.08      | ×        |
| $instance\_t5\_hard\_6.txt$    | 0.09      | ×        |
| $instance\_t5\_hard\_7.txt$    | 0.06      | ×        |
| $instance\_t5\_hard\_8.txt$    | 0.11      | ×        |
| $instance\_t5\_hard\_9.txt$    | 0.12      | ×        |
| $instance\_t5\_normal\_1.txt$  | 0.07      | ×        |
| $instance\_t5\_normal\_10.txt$ | 0.08      | ×        |
| $instance\_t5\_normal\_2.txt$  | 0.08      | ×        |
| $instance\_t5\_normal\_3.txt$  | 0.14      | ×        |
| $instance\_t5\_normal\_4.txt$  | 0.09      | ×        |
| $instance\_t5\_normal\_5.txt$  | 0.05      | ×        |
| $instance\_t5\_normal\_6.txt$  | 0.05      | ×        |
| $instance\_t5\_normal\_7.txt$  | 0.02      |          |
| $instance\_t5\_normal\_8.txt$  | 0.05      | ×        |
| $instance\_t5\_normal\_9.txt$  | 0.03      |          |

|                             | cplex     |          |
|-----------------------------|-----------|----------|
| Instance                    | Temps (s) | Optimal? |
| instance_t6_hard_1.txt      | 0.38      | ×        |
| instance_t6_hard_10.txt     | 0.31      | ×        |
| instance_t6_hard_2.txt      | 0.32      | ×        |
| instance_t6_hard_3.txt      | 0.24      | ×        |
| instance_t6_hard_4.txt      | 0.1       | ×        |
| $instance\_t6\_hard\_5.txt$ | 0.29      | ×        |
| instance_t6_hard_6.txt      | 0.16      | ×        |
| instance_t6_hard_7.txt      | 0.28      | ×        |
| instance_t6_hard_8.txt      | 0.19      | ×        |
| instance_t6_hard_9.txt      | 0.15      | ×        |
| instance_t6_normal_1.txt    | 0.17      | ×        |
| instance_t6_normal_10.txt   | 0.06      |          |
| instance_t6_normal_2.txt    | 0.17      | ×        |
| instance_t6_normal_3.txt    | 0.18      | ×        |
| instance_t6_normal_4.txt    | 0.29      | ×        |
| instance_t6_normal_5.txt    | 0.11      | ×        |
| instance_t6_normal_6.txt    | 0.07      |          |
| instance_t6_normal_7.txt    | 0.1       | ×        |
| instance_t6_normal_8.txt    | 0.08      | ×        |
| instance_t6_normal_9.txt    | 0.27      | ×        |
| instance_t7_hard_1.txt      | 0.41      | ×        |
| instance_t7_hard_10.txt     | 0.25      | ×        |
| instance_t7_hard_2.txt      | 0.38      | ×        |
| instance_t7_hard_3.txt      | 1.03      | ×        |
| instance_t7_hard_4.txt      | 0.49      | ×        |
| instance_t7_hard_5.txt      | 0.81      | ×        |
| instance_t7_hard_6.txt      | 0.46      | ×        |
| instance_t7_hard_7.txt      | 0.11      | ×        |
| instance_t7_hard_8.txt      | 0.23      | ×        |
| instance_t7_hard_9.txt      | 0.21      | ×        |

|                               | cplex     |          |
|-------------------------------|-----------|----------|
| Instance                      | Temps (s) | Optimal? |
| instance_t7_normal_1.txt      | 0.2       | ×        |
| instance_t7_normal_10.txt     | 0.18      | ×        |
| instance_t7_normal_2.txt      | 1.12      | ×        |
| instance_t7_normal_3.txt      | 0.1       |          |
| instance_t7_normal_4.txt      | 1.18      | ×        |
| instance_t7_normal_5.txt      | 0.08      |          |
| instance_t7_normal_6.txt      | 0.54      | ×        |
| instance_t7_normal_7.txt      | 0.99      | ×        |
| instance_t7_normal_8.txt      | 0.22      | ×        |
| instance_t7_normal_9.txt      | 0.39      | ×        |
| instance_t8_hard_1.txt        | 0.47      | ×        |
| instance_t8_hard_10.txt       | 1.88      | ×        |
| instance_t8_hard_2.txt        | 0.9       | ×        |
| instance_t8_hard_3.txt        | 0.82      | ×        |
| instance_t8_hard_4.txt        | 1.75      | ×        |
| instance_t8_hard_5.txt        | 0.86      | ×        |
| instance_t8_hard_6.txt        | 2.72      | ×        |
| instance_t8_hard_7.txt        | 0.35      | ×        |
| instance_t8_hard_8.txt        | 11.5      | ×        |
| instance_t8_hard_9.txt        | 4.07      | ×        |
| instance_t8_normal_1.txt      | 2.74      | ×        |
| instance_t8_normal_10.txt     | 20.86     | ×        |
| instance_t8_normal_2.txt      | 2.64      | ×        |
| instance_t8_normal_3.txt      | 0.12      |          |
| instance_t8_normal_4.txt      | 7.14      | ×        |
| $instance\_t8\_normal\_5.txt$ | 2.06      | ×        |
| instance_t8_normal_6.txt      | 4.59      | ×        |
| instance_t8_normal_7.txt      | 5.86      | ×        |
| instance_t8_normal_8.txt      | 3.07      | ×        |
| instance_t8_normal_9.txt      | 0.13      |          |

|                                | cplex     |          |
|--------------------------------|-----------|----------|
| Instance                       | Temps (s) | Optimal? |
| instance_t9_hard_1.txt         | 100.78    | ×        |
| $instance\_t9\_hard\_10.txt$   | 26.25     | ×        |
| $instance\_t9\_hard\_2.txt$    | 84.61     | ×        |
| $instance\_t9\_hard\_3.txt$    | 34.49     | ×        |
| $instance\_t9\_hard\_4.txt$    | 76.97     | ×        |
| $instance\_t9\_hard\_5.txt$    | 5.93      | ×        |
| $instance\_t9\_hard\_6.txt$    | 47.33     | ×        |
| $instance\_t9\_hard\_7.txt$    | 118.89    | ×        |
| $instance\_t9\_hard\_8.txt$    | 135.84    | ×        |
| $instance\_t9\_hard\_9.txt$    | 14.93     | ×        |
| $instance\_t9\_normal\_1.txt$  | 5.01      | ×        |
| $instance\_t9\_normal\_10.txt$ | 32.23     | ×        |
| $instance\_t9\_normal\_2.txt$  | 29.63     | ×        |
| $instance\_t9\_normal\_3.txt$  | 55.74     | ×        |
| $instance\_t9\_normal\_4.txt$  | 102.31    | ×        |
| $instance\_t9\_normal\_5.txt$  | 250.12    | ×        |
| $instance\_t9\_normal\_6.txt$  | 31.58     | ×        |
| $instance\_t9\_normal\_7.txt$  | 9.57      | ×        |
| $instance\_t9\_normal\_8.txt$  | 17.38     | ×        |
| $instance\_t9\_normal\_9.txt$  | 35.26     | ×        |