## Comparing with the Perfect Heuristic

| Empty map |     |     | Dense map |       |        | Large map |     |      |       |        |     |     |      |       |
|-----------|-----|-----|-----------|-------|--------|-----------|-----|------|-------|--------|-----|-----|------|-------|
| Agents    | CG  | DG  | WDG       | $h^*$ | Agents | CG        | DG  | WDG  | $h^*$ | Agents | CG  | DG  | WDG  | $h^*$ |
| 30        | 0.2 | 1.0 | 1.2       | 1.7   | 16     | 3.9       | 3.9 | 11.5 | 18.6  | 60     | 3.6 | 4.0 | 6.7  | 7.6   |
| 40        | 0.5 | 1.6 | 2.0       | 3.3   | 20     | 4.7       | 4.7 | 14.0 | 23.2  | 80     | 5.7 | 6.5 | 10.9 | 12.2  |
| 50        | 0.5 | 2.2 | 2.6       | 4.7   | 24     | 6.5       | 6.5 | 18.9 | 28.5  | 100    | 8.6 | 9.2 | 15.6 | 18.0  |

Table 3: Average h-values and average  $h^*$ -values of the root CT node over instances of which the  $h^*$ -value is known, i.e., instances solved

by at least one CBSH solver.











