**1. Performace:**

The results of the tournament are shown in Table below:

Match # Opponent AB\_Improved AB\_Custom AB\_Custom\_2 AB\_Custom\_3

Won | Lost Won | Lost Won | Lost Won | Lost

1 Random 7 | 3 8 | 2 9 | 1 9 | 1

2 MM\_Open 8 | 2 8 | 2 6 | 4 6 | 4

3 MM\_Center 8 | 2 9 | 1 9 | 1 7 | 3

4 MM\_Improved 6 | 4 6 | 4 6 | 4 5 | 5

5 AB\_Open 4 | 6 5 | 5 6 | 4 6 | 4

6 AB\_Center 7 | 3 6 | 4 6 | 4 6 | 4

7 AB\_Improved 4 | 6 4 | 6 5 | 5 4 | 5

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Win Rate: 62.9% 65.7% 67.1% 61.4%

As we can see, player’s agent has higher performance compared to the ones of opponents, and among them, the AB\_Custom\_2 which uses the difference between player’s choice and opponent’s choice as the evaluation function has the highest performance.

**2. Conclusion:**

The evaluation function AB\_Custom\_2 is recommended due to the reasons as follows,

(1) AB\_Custom\_2 has highest win rate compared to other functions;

(2) The complexity is not high compared to other functions;

(3) Since AB\_Custom\_2 considered not only the player’s performance, but also the opponent’s performance, which is a “net” score of the current state.