```
--------------------------------------------------------------------------------
      astar-L1-2way     Simulation Results
--------------------------------------------------------------------------------

Number of reference types:
  Number of reads   =  2549106849  [25.49%]
  Number of writes  =   626305991  [6.26%]
  Number of inst    =  6824587160  [68.25%]
  Total             =  10000000000

Total cycles for all activities:
  Cycles for reads  =  26226244755  [53.48%]
  Cycles for writes =  11378938976  [23.20%]
  Cycles for inst   =  11434789485  [23.32%]
  Total time        =  49039973216

Average cycles per activity:
  Read  = 10.29
  Write = 18.17
  Inst  = 1.68
Ideal: Exec. Time = 16824587160; CPI = 2.47
Ideal mis-aligned: Exec. Time = 23929686467; CPI = 3.51

Memory level: L1i
  Hits   =  11393817355  [100.00%]
  Misses =      497518  [0.00%]
  Total  =  11394314873
  Kickouts = 497262, Dirty kickouts = 0, Transfers = 497518

Memory level: L1d
  Hits   =  4261874755  [95.60%]
  Misses =   196297697  [4.40%]
  Total  =  4458172452
  Kickouts = 196297441, Dirty kickouts = 80765893, Transfers = 196297697

Memory level: L2
  Hits   =   145387883  [52.38%]
  Misses =   132173225  [47.62%]
  Total  =   277561108
  Kickouts = 132172713, Dirty kickouts = 62217961, Transfers = 132173225

Cost analysis:
  L1i cache cost = $400
  L1d cache cost = $400
  L2  cache cost = $50
  Memory cost    = $75
  Total cost     = $925
```