```
---------------------------------------------------------------------------
      astar-All-FA     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  =  18015408791  [45.63%]
  Cycles for writes =  10066753018  [25.50%]
  Cycles for inst   =  11395359437  [28.87%]
  Total time        =  39477521246

Average cycles per activity:
  Read  = 7.07
  Write = 16.07
  Inst  = 1.67
Ideal: Exec. Time = 16824587160; CPI = 2.47
Ideal mis-aligned: Exec. Time = 23929686467; CPI = 3.51

Memory level: L1i
  Hits   =  11394307253  [100.00%]
  Misses =        7620  [0.00%]
  Total  =  11394314873
  Kickouts = 7364, Dirty kickouts = 0, Transfers = 7620

Memory level: L1d
  Hits   =  4292364560  [96.28%]
  Misses =   165807892  [3.72%]
  Total  =  4458172452
  Kickouts = 165807636, Dirty kickouts = 71377025, Transfers = 165807892

Memory level: L2
  Hits   =   155431402  [65.53%]
  Misses =    81761135  [34.47%]
  Total  =   237192537
  Kickouts = 81760623, Dirty kickouts = 52330695, Transfers = 81761135

Cost analysis:
  L1i cache cost = $1800
  L1d cache cost = $1800
  L2  cache cost = $500
  Memory cost    = $75
  Total cost     = $4175
```