Questions

1. The MW and M31 have very similar (effectively identical) total masses in this simulation. The galaxy component that dominates this total mass is the Disk Mass.
2. M31 has a larger stellar mass than MW. Therefore, I would expect M31 to be more luminous.
3. The ratio of the total dark matter mass of MW to M31 is 1.028. This makes sense, as whoever designed this simulation seemed to have made the total mass of the MW and M31 the same. The MW has a smaller stellar mass, so it has a larger dark matter mass.
4. The Baryon fraction for each galaxy is as follows:

   MW: 0.041

   M31: 0.067

   M33: 0.046

The Baryon fraction for these galaxies is much less that the baryon fraction for the Universe as a whole (which is ~0.16). Perhaps this difference can be explained by there existing somewhere in the universe bodies of baryons with no associated dark matter. A very large number of baryonic structures with much much smaller total baryonic mass as compared to these galaxies may not similar ratios of dark matter associated with them. This would explain the difference in the Baryon fraction of these galaxies when compared to the Baryon fraction of the Universe