BMR [3] and BFMRB [2] use Euclidean space time; this introduces a factor $(-1)^{p'}$ compared to our definition of Feynman diagrams, where p' is the weighted number of propagators and numerators in the corresponding diagram.
The conventions are such that the tadpoles become:

$$
\begin{aligned}
T^{BMR} &= -\left(\frac{\mu_0^2}{a}\right)^{\epsilon} \frac{a}{\epsilon(1-\epsilon)}, \\
T^{BFMRB} &= -\frac{m^2}{4\epsilon(1-\epsilon)}.
\end{aligned}
$$

For an l-loop master integral with p propagators the relations between the integrals become (assuming here $\mu_0^2 = m^2 = a = 1$):

$$
\begin{aligned}
M_{l,p'}^{BMR} &= \frac{(-1)^{p'}}{\left[e^{\gamma_\epsilon}\Gamma(1+\epsilon)\right]^l} M_{l,p'}^{CGR}, \\
M_{l,p'}^{BFMRB} &= \frac{(-1)^{p'}}{\left[4e^{\gamma_\epsilon}\Gamma(1+\epsilon)\right]^l} M_{l,p'}^{CGR}.
\end{aligned}
$$

One has also to take into account the various definitions of the series expansions:

$$
\begin{aligned}
M_{l,p'}^{BMR} &= \left(\frac{\mu_0^2}{a}\right)^{2\epsilon} \sum_k M_k^{BMR}(l,p',\ldots)\ \epsilon^k, \\
M_{l,p'}^{BFMRB} &= \sum_k M_k^{BFMRB}(l,p',\ldots)\ (-2)^k\ \epsilon^k.
\end{aligned}
$$