In the code of profile likelihood, the estimators of f(y) and b(θ, f) are obtained as

(1) f(y)=$\left\{ \mathrm{E}\left(\frac{\exp(\beta^T X y)}{\exp\{\int_0^{\beta^T X} E\left(Y \middle| \beta^T X\right) d(\beta^T X)\}} \middle| y \right) \right\}^{-1}$

(2) b(θ, f)=log$\int \exp(\theta y) f(y) dy$, where

$\int \exp(\theta y) f(y) dy = \frac{1}{n} \sum_{i=1}^{n} \frac{\exp(\theta * Y_i) f(Y_i)}{p(Y_i)}$, and $p(Y_i)$ is the N-W estimator of the density $p(Y_i)$ of Y, $p(Y_i) = \frac{1}{n-1} \sum_{j \neq i, j=1}^{n} \frac{1}{h} K((Y_j - Y_i)/h)$