The graded response model for a certain item observed in category k is

$P(y=k \mid f) = F(k) - F(k-1)$,

where f represents the factor and where

$F(k) = 1/[1+\exp(\tau_k - \lambda f)]$.

As in equations (21) and (22) of our 2016 IRT document as well as in the Topic 2 handout, slide 94, the translation to IRT parameters with theta having mean zero and variance one is analogous to the translation for the binary logistic response case,

$a = \lambda\sqrt{\psi}$,

$b_k = (\tau_k - \lambda\alpha)/\lambda\sqrt{\psi}$,

where τ_k is a threshold, λ is a factor loading, and α and ψ are the mean and variance of the factor f, respectively.

The a and b_k parameters can be expressed in the Model Constraint command using parameter labels in the Model command for τ_k, λ, α, and ψ (the latter two may already be fixed to zero and one).