Each of the files contain 3 tab-separated columns. The first column contains the R-value which is the standard transformation of the eigenvalue given by:

$$\lambda = \frac{1}{4} + R^2.$$

The other two columns are parameters of the group. The parameter in the second column will be denoted by b below and the one in the last column by a (this follows the notation in the paper). The group corresponding to the values a and b are generated by the elements:

$$\begin{aligned} T &= \begin{pmatrix} 1 & 1 \\ 1 & 0 \end{pmatrix} \\ g_1 &= r_2(b, 1/\sqrt{a}) \\ g_2 &= r_2(x, \sqrt{y}), \end{aligned}$$

where

$$\begin{aligned} x &= \frac{1}{2}\left(\frac{2}{a} + b + Y\right) \\ y &= \frac{1}{2}\left(-\frac{4}{a^2} + \left(1 - \frac{2}{a} + b\right)(-b + Y)\right) \\ Y &= \sqrt{\frac{4}{a^2} + b^2} \\ r_2(c,d) &= \begin{pmatrix} -c & d^2 + c^2 \\ -1 & c \end{pmatrix}. \end{aligned}$$

The special case $a = 5$, $b = 0$ corresponds to the group $\Gamma_0(5)$ extended by the Fricke involution (g_1), the case $a = 6$, $b = 0$ to $\Gamma_0(6)$ extended by Fricke involutions and $a = 8$, $b = 0$ to an extension of $\Gamma_0(8)$.

Each line of the files corresponds to a Maass form with eigenvalue $\lambda = \frac{1}{4} + R^2$ with respect to the group corresponding to the parameters b and a. The lines in each file (seem to) correspond to a continous deformation of the Maass forms. The first 6 files are deformations of Maass forms for $\Gamma_0(5)$, the next 7 are deformations of Maass forms for $\Gamma_0(6)$ and the rest don't seem to originate from any arithmetic group.

Note that during the computation one of the parameters (sometimes a and sometimes b) is fixed (and hence exact) while the other parameter and the R-value are computed. Not all the presented decimals are correct. We haven't maximised the precision (in order to save computer time) and checks in some cases with higher precision suggests that usually at least 6 of the decimals should be correct.