UCC28070 Multiplier Curve Fitting

$k := 0,1..7$ $\quad i := 0,1..100$ $\quad k_R := \frac{3}{400}$ $\quad k_R = 7.5 \cdot 10^{-3}$

$$V_g := \begin{bmatrix} 0+133 \\ 133+160 \\ 160+187 \\ 187+220 \\ 220+260 \\ 260+300 \\ 300+345 \\ 345+400 \end{bmatrix} \cdot \frac{1}{2} \qquad V_g = \begin{bmatrix} 66.5 \\ 146.5 \\ 173.5 \\ 203.5 \\ 240 \\ 280 \\ 322.5 \\ 372.5 \end{bmatrix} \qquad V_{igg_k} := V_{g_k} \cdot k_R \qquad V_{ig} := \begin{bmatrix} 0.79+1 \\ 1+1.2 \\ 1.2+1.4 \\ 1.4+1.65 \\ 1.65+1.95 \\ 1.95+2.25 \\ 2.25+2.6 \\ 2.6+2.978 \end{bmatrix} \cdot \frac{1}{2}$$

$$V_{igg} = \begin{bmatrix} 0.499 \\ 1.099 \\ 1.301 \\ 1.526 \\ 1.8 \\ 2.1 \\ 2.419 \\ 2.794 \end{bmatrix} \qquad V_{ig} = \begin{bmatrix} 0.895 \\ 1.1 \\ 1.3 \\ 1.525 \\ 1.8 \\ 2.1 \\ 2.425 \\ 2.789 \end{bmatrix} \qquad k_V := \begin{bmatrix} 0.398 \\ 0.600 \\ 0.839 \\ 1.156 \\ 1.604 \\ 2.199 \\ 2.922 \\ 3.857 \end{bmatrix}$$

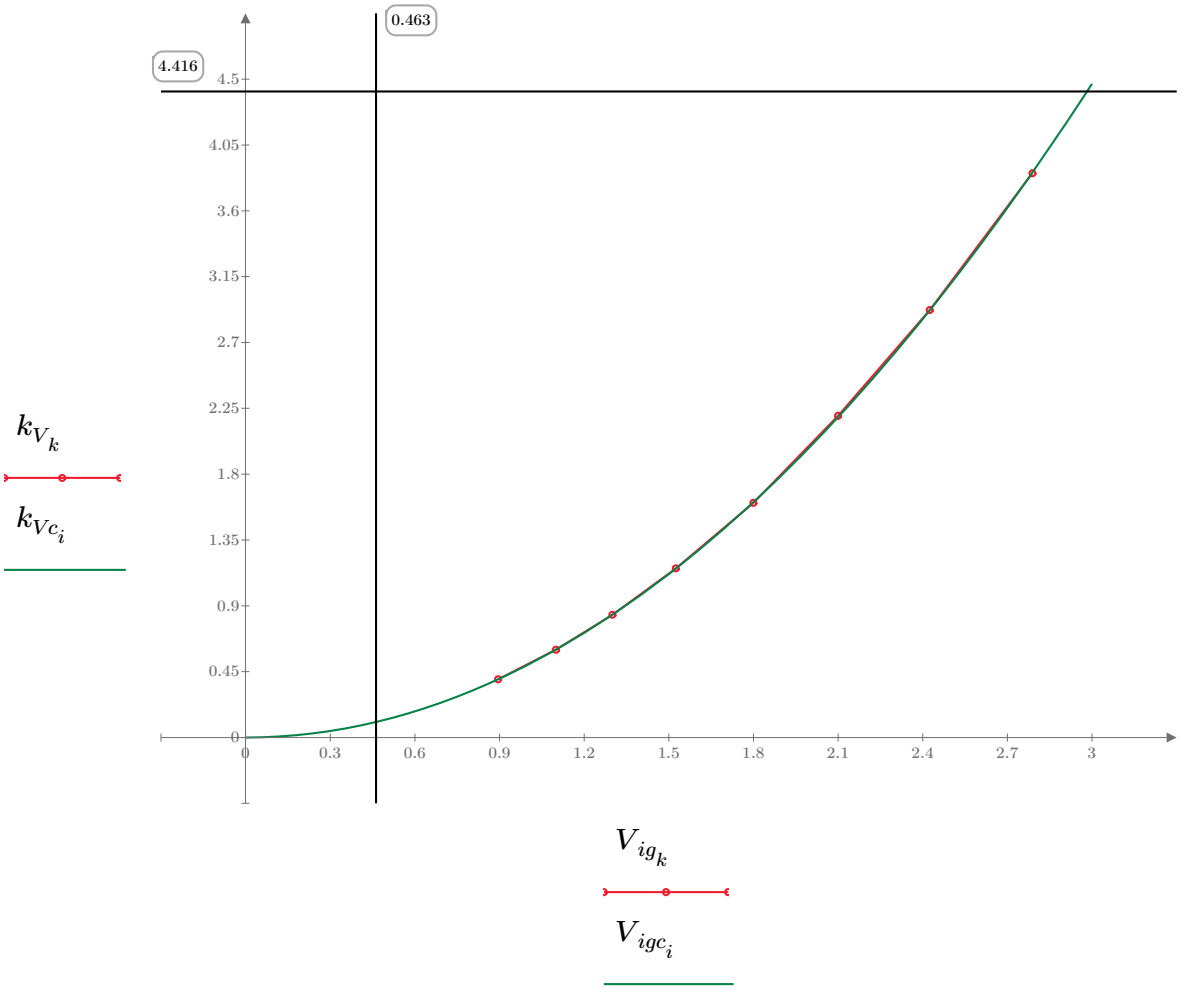
$.895 \cdot 2 - 1 = 0.79$

$2.789 \cdot 2 - 2.6 = 2.978$

Least squares fit to parabola

$$\beta := \frac{\sum_{k=0}^{7} k_{V_k} \cdot V_{ig_k}{}^2}{\sum_{k=0}^{7} V_{ig_k}{}^4} \qquad \beta = 496.522 \cdot 10^{-3}$$

$V_{igc_i} := 400 \cdot k_R \cdot \frac{i}{100}$ $\quad k_{Vc_i} := \beta \cdot V_{igc_i}{}^2$


0.463
4.416
4.5
4.05
3.6
3.15
2.7
2.25
1.8
1.35
0.9
0.45
0
0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3
k_{V_k}
k_{Vc_i}
V_{ig_k}
V_{igc_i}