from trigonometry import cos

$$\sum_i cos\left(\theta\right)^2((p_i - q_i) \cdot n_i + ((p_i + q_i) \times n_i) \cdot \tilde{a} + n_i \cdot \tilde{t})^2$$

where

$$\begin{aligned}
\theta &\in \mathbb{R} \text{ angle of rotation} \\
p_i &\in \mathbb{R}^3 \\
q_i &\in \mathbb{R}^3 \\
n_i &\in \mathbb{R}^3 \\
\tilde{a} &\in \mathbb{R}^3 \\
\tilde{t} &\in \mathbb{R}^3
\end{aligned}$$