1. τ_d : The transmission coefficient for the diffuse radiation penetration.

$$\tau_d = 2\Delta\varphi \sum_{\varphi_i=\varphi_1}^{\varphi=n} \tau_{\varphi_i} \ sin\,\varphi_i \ cos\,\varphi_i$$

Where i: the i^{th} zenith angle division (n is the number of divisions selected by you)

$\Delta\varphi$: the zenith angle increment in radians
τ_φ: The transmission coefficient for the ray penetrations (or the fraction of the sky visible) in each zenith angle area. 0 means no sky is visible and 1 means the entire area is sky.

2. L: Leaf Area Index

$$\tau_{\varphi_i} = e^{-k_{\varphi_i} L}$$

$$\mathrm{K}\varphi_i = \frac{\sqrt{x^2 + tan^2\,\varphi_i}}{A}$$

$$\mathrm{K}\varphi_i = 1 \qquad \text{for horizontal leaves } x \rightarrow \infty$$

$$\mathrm{K}\varphi_i = \frac{2tan\,\varphi_i}{\pi} \qquad \text{for vertical leaves } x \rightarrow 0$$

$$\mathrm{K}\varphi_i = \frac{1}{2cos\,\varphi_i} \qquad \text{for spherical leaves } x \rightarrow 1$$

Where K: The extinction coefficient of the canopy
A: a polynomial function
$A = x + 1.774\,(x + 1.182)^{-0.733}$
Where x represents leaf angle distribution (Norman and Campbell, 1989)

3. α: The mean foliage inclination angle of the canopy.

$$\alpha = \tan^{-1} x \ (0° \leq \alpha \leq 90°)$$

$$x = \frac{b}{a}$$

Where b: the horizontal projection of the foliage