$$\left(\frac{W_{new}}{W_{old}}\right)=\left(\frac{D_{new}}{D_{old}}\right)^{-4}\left(\frac{Q_{new}}{Q_{old}}\right)^{3}$$

$$\left(\frac{477\ watts}{809.8\ watts}\right)=\left(\frac{18.5\ inches}{24\ inches}\right)^{-4}\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}$$

$$.59=(.77)^{-4}\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}$$

$$.59\times(.77)^{4}=\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}$$

$$.59\times.35=\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}$$

$$.21=\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}$$

$$\sqrt[3]{.21}=\sqrt[3]{\left(\frac{Q_{new}}{5064.9\ cfm}\right)^{3}}$$

$$.59=\frac{Q_{new}}{5064.9\ cfm}$$

$$.59\times5064.9\ cfm=Q_{new}$$

$$2988.29\ cfm=Q_{new}$$