$$
\begin{aligned}
\log P(q|d) &= \sum_{w \in q} \log \left(\lambda \frac{tf_{w,d}}{|d|} + (1-\lambda) \frac{df_w}{|c|} \right) \\
&= \sum_{w \in q : tf_{w,d} > 0} \log \left(\lambda \frac{tf_{w,d}}{|d|} + (1-\lambda) \frac{df_w}{|c|} \right) + \sum_{w \in q : tf_{w,d} = 0} \log (1-\lambda) \frac{df_w}{|c|} \\
&= \sum_{w \in q : tf_{w,d} > 0} \log \left(\frac{\lambda \frac{tf_{w,d}}{|d|} + (1-\lambda) \frac{df_w}{|c|}}{(1-\lambda) \frac{df_w}{|c|}} \right) + \sum_{w \in q} \log (1-\lambda) \frac{df_w}{|c|} \\
&\overset{rank}{=} \sum_{w \in q : tf_{w,d} > 0} \log \left(\frac{\lambda \frac{tf_{w,d}}{|d|}}{(1-\lambda) \frac{df_w}{|c|}} + 1 \right)
\end{aligned}
$$