

$Q$ -function changes; transition  
from light- to color metrics

scaling function of **light metrics**:

$$Q[k(x - u)] = Q[k(\log L - \log L_u)]$$

$\log L \rightarrow \log P$  **for color metrics**:

$$\begin{aligned} &Q[k(\log P - \log L_u)] \\ &= Q[k(\log L - \log L_u + \log P - \log L)] \end{aligned}$$

with saturation  $p = \log P - \log L$

**for color metrics:**  $Q[k(x - u + p)]$