

$\log(L^*/L_{\text{u}}^*)$

IECsRGB lightness L^* normalized
to the background lightness L_{u}^*

$$L^*/L_{\text{u}}^*$$

$$100L^* = s(Y/Y_{\text{n}})^n - t \quad (Y_{\text{n}}=100, s=100, n=(1/2,4), t=0) \quad [1\text{b}]$$

$$L^* = r(Y/Y_{\text{u}})^n - t \quad (Y_{\text{u}}=18, r=s(Y_{\text{u}}/Y_{\text{n}})^n = 48,95) \quad [1\text{c}]$$

$$L^*/L_{\text{u}}^* = (Y/Y_{\text{u}})^n \quad [1\text{d}]$$

$$\log(L^*/L_{\text{u}}^*) = n \log(Y/Y_{\text{u}}) \quad [1\text{e}]$$

$$\ln(L^*/L_{\text{u}}^*) = \ln(10) n \log(Y/Y_{\text{u}}) \quad [1\text{f}]$$

$$L^*/L_{\text{u}}^* = e^{\ln(10) n \log(Y/Y_{\text{u}})} \quad [1\text{g}]$$

0,301

$$\log[(L^*/L_{\text{u}}^*)] = 0, m_{\text{u}} = 0,41$$

$$L_{\text{u}}^* = 50, Y_{\text{u}} = 18$$

application
range

-0,532

