

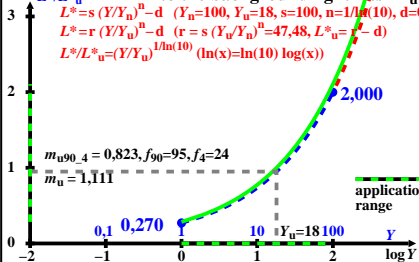
$L^*/L^*_u$

TUBsRGB lightness  $L^*$  normalized to the background lightness  $L^*_u$

$L^* = s (Y/Y_n)^n - d$  ( $Y_n=100, Y_u=18, s=100, n=1/\ln(10), d=0$ ) [1a]

$L^* = r (Y/Y_u)^n - d$  ( $r = s (Y_u/Y_n)^n = 47,48, L^*_u = r - d$ ) [1b]

$L^*/L^*_u = (Y/Y_u)^{1/\ln(10)}$  ( $\ln(x) = \ln(10) \log(x)$ ) [1c]



application range

2,000

$m_{u90_4} = 0,823, f_{90}=95, f_4=24$

$\bar{m}_u = 1,111$

0,1 0,270

10  $Y_u=18$  100

$Y$   
 $\log Y$