

$\Delta Y / \Delta Y_u$ 

HAULAB tristimulus value difference

 $\Delta Y$  normalized to  $\Delta Y_u$  $\Delta Y / \Delta Y_u$ 

6

4

2

0

$$L^* = s(Y/Y_n)^n - d \quad (Y_n=100, Y_u=19, s=134,6, n=0,31, d=30,7) \quad [1a]$$

$$L^* = r(Y/Y_u)^n - d \quad (r = s(Y_u/Y_n)^n = 79,10, L^*_u = r - d = 48,3) \quad [1b]$$

$$dY = [Y_n / (n s)] (Y / Y_n)^{1-n} \quad [2c]$$

$$dY_u = [Y_n / (n s)] (Y_u / Y_n)^{1-n} = 1,4083 \quad [2d]$$

$$dY / dY_u = (Y / Y_u)^{1-n} \quad [2e]$$

 $m_{u90} = 0,022, f_{90} = 2, f_4 = 0$ 
 $m_u = 1,550$ 

0,1

0,130

10

 $Y_u = 18 \quad 100$ 
 $Y_u = 19$ 

log Y

 $3,121$   
 $L^*_{TUB} / L^*_{(u),u}$   
 $= (Y/Y_u)$ 
 $\phi = 120^\circ$ 
 $L_{aw} = 200 \text{ cd/m}^2$ 

 application  
 range