

# HAULAB lightness $L^*_{80}$ normalized to the background lightness $L^*_{80,u}$

$$L^*_{80}/L^*_{80,u}$$

$$L^*/L^*_{80,u}$$

$$L^* = s(Y/Y_u)^n - d \quad (Y_n=100, Y_u=22, s=134,6, n=0,31, d=34,6) \quad [1a]$$

$$L^* = r(Y/Y_u)^n - d \quad (r = s(Y_u/Y_n)^n = 79,10, L^*_u = r - d = 44,4) \quad [1b]$$

$$L^*/L^*_u = g(Y/Y_u)^n - h \quad (g = r/(r-d) = 1,77, h = d/(r-d) = 0,77) \quad [1c]$$

3  
2  
1  
0

1,999

$$m_{u90} = 4 = 57,348, f_{90} = 96, f_4 = 18$$

$$m_u = 1,165$$

1,014

$$\phi = 120' = 2^\circ$$

$$L_{aw} = 300 \text{ cd/m}^2$$

application range

0,1  
1  
10  
100

0,046

$Y_u = 18$   
 $Y_u = 22$

log Y