

$(Y/\Delta Y) / (Y/\Delta Y)_u$

HAULAB-Y contrast

normalized to $(Y/\Delta Y)_u$

$C_r/C_{ru} = (Y/\Delta Y)/(Y/\Delta Y)_u$

$L^* = s(Y/Y_u)^n - d$ ($Y_n=100, Y_u=19, s=137,2, n=0,31, d=33,1$) [1a]

$L^* = r(Y/Y_u)^n - d$ ($r = s(Y_u/Y_n)^n = 80,63, L^*_u = r - d = 47,5$) [1b]

3

2

1

0

$Y_curve, ij=16, Y_{uij}=19, L^*_{uij}=50$

$k=99, Y_{kij}=200, L^*_{kij}=136,1, (Y/\Delta Y)/(Y/\Delta Y)_u = 1,65$

$k=19, Y_{kij}=120, L^*_{kij}=111,7, (Y/\Delta Y)/(Y/\Delta Y)_u = 1,00$

$k=1, Y_{kij}=102, L^*_{kij}=104,7, (Y/\Delta Y)/(Y/\Delta Y)_u = 0,650$

$k=0, Y_{kij}=101, L^*_{kij}=104,3, (Y/\Delta Y)/(Y/\Delta Y)_u = 0,39$

$m_{u90} = 0,284, f_{90}=41, f_4=16$

$m_u = 0,691$

$\phi=90'$

$L_{aw} = 200 \text{ cd/m}^2$

application range

0,1

1

10

$Y_u=18$ 100

$Y_u=19$

2

log Y

1,017

0,490

2,718