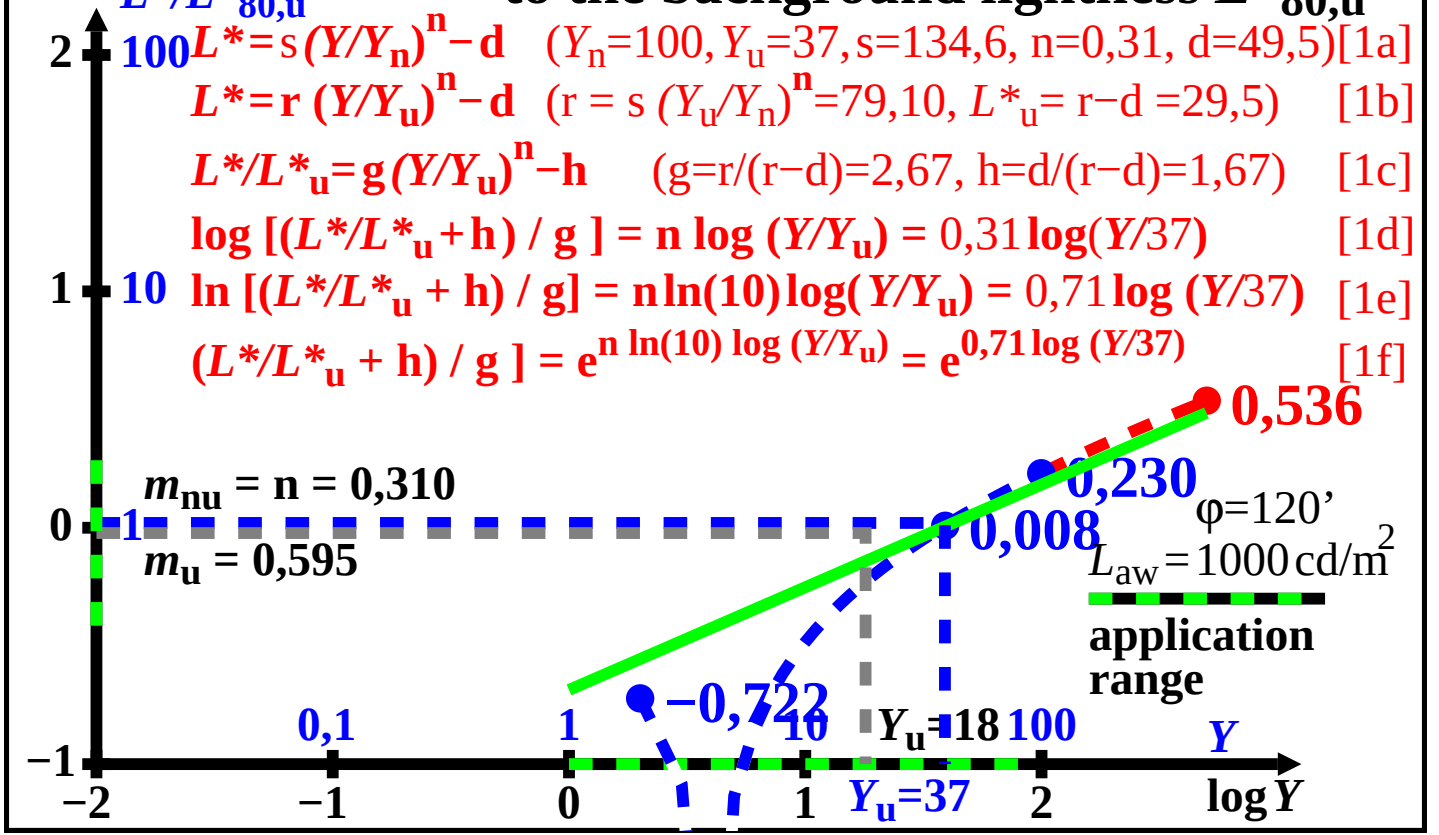
HAULAB lightness L^*_{80} normalized to the background lightness $L^*_{80,u}$

$L^*=s\,(Y/Y_n)^n-d$ (Y_n=100, Y_u=37, s=134,6, n=0,31, d=49,5) [1a]

$L^*=r\,(Y/Y_u)^n-d$ (r = s $(Y_u/Y_n)^n$=79,10, L^*_u= r−d =29,5) [1b]

$L^*/L^*_u=g\,(Y/Y_u)^n-h$ (g=r/(r−d)=2,67, h=d/(r−d)=1,67) [1c]

$\log[(L^*/L^*_u+h)/g] = n\log(Y/Y_u) = 0{,}31\log(Y/37)$ [1d]

$\ln[(L^*/L^*_u+h)/g] = n\ln(10)\log(Y/Y_u) = 0{,}71\log(Y/37)$ [1e]

$(L^*/L^*_u+h)/g] = e^{n\ln(10)\log(Y/Y_u)} = e^{0{,}71\log(Y/37)}$ [1f]