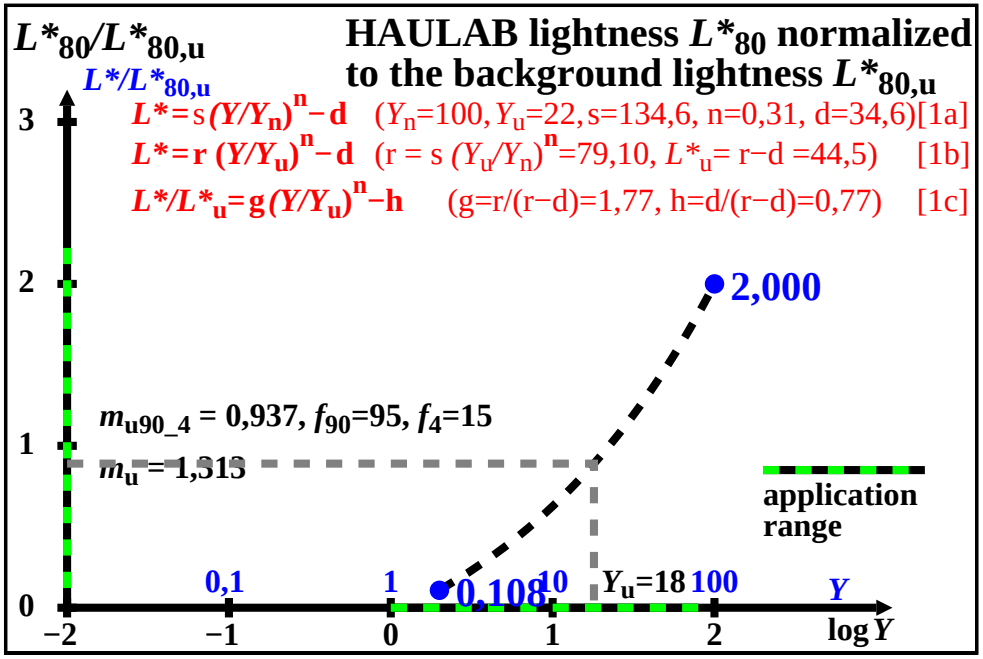
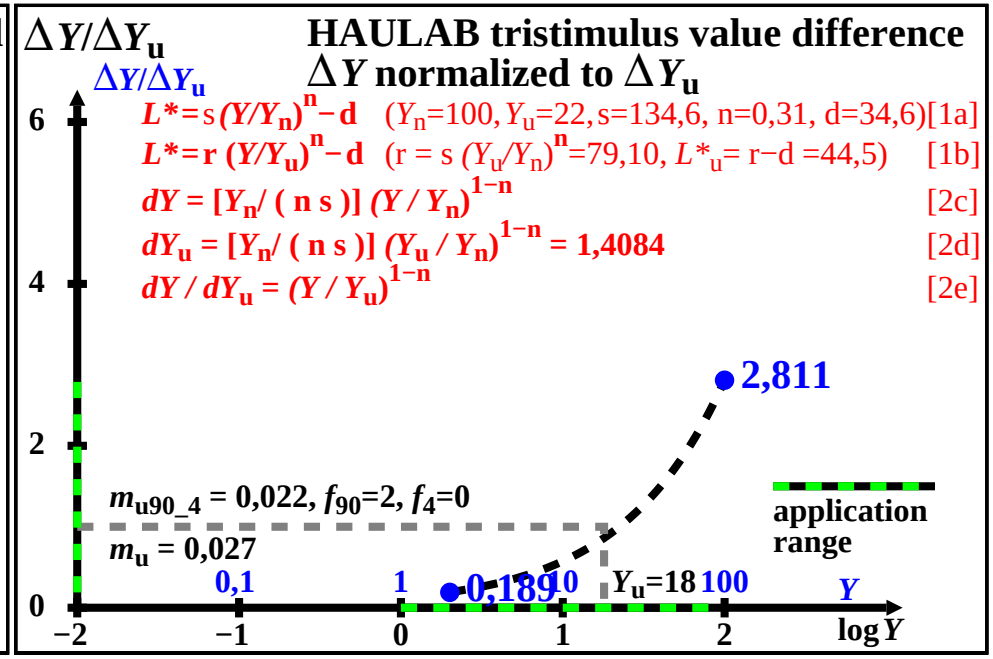
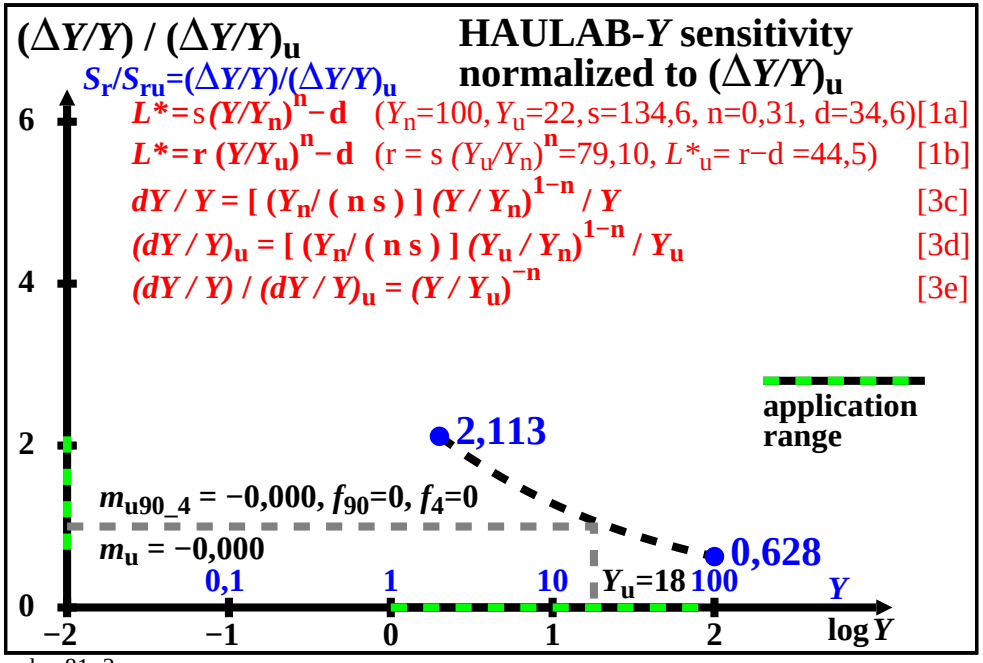
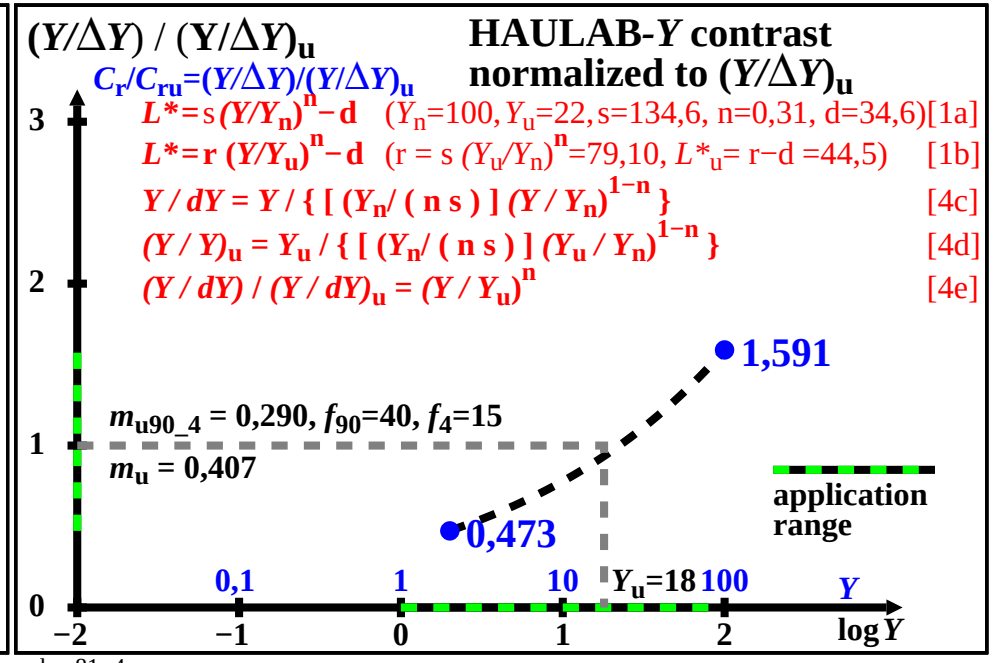

$L^*_{80}/L^*_{80,u}$
HAULAB lightness L^*_{80} normalized to the background lightness $L^*_{80,u}$
$L^*/L^*_{80,u}$
$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=22, s=134,6, n=0,31, d=34,6) [1a]
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=79,10, L^*_u= r−d =44,5) [1b]
$L^*/L^*_u = g\,(Y/Y_u)^n - h$ (g=r/(r−d)=1,77, h=d/(r−d)=0,77) [1c]
m_{u90_4} = 0,937, f_{90}=95, f_4=15
m_u = 1,313
2,000
0,108
application range
Y_u=18
Y
log Y
hep81−1a


$\Delta Y/\Delta Y_u$
HAULAB tristimulus value difference ΔY normalized to ΔY_u
$\Delta Y/\Delta Y_u$
$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=22, s=134,6, n=0,31, d=34,6) [1a]
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=79,10, L^*_u= r−d =44,5) [1b]
$dY = [Y_n/(n\,s)]\,(Y/Y_n)^{1-n}$ [2c]
$dY_u = [Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n}$ = 1,4084 [2d]
$dY/dY_u = (Y/Y_u)^{1-n}$ [2e]
2,811
m_{u90_4} = 0,022, f_{90}=2, f_4=0
m_u = 0,027
0,189
application range
Y_u=18
Y
log Y
hep81−2a


$(\Delta Y/Y)/(\Delta Y/Y)_u$
HAULAB-Y sensitivity normalized to $(\Delta Y/Y)_u$
$S_r/S_{ru} = (\Delta Y/Y)/(\Delta Y/Y)_u$
$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=22, s=134,6, n=0,31, d=34,6) [1a]
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=79,10, L^*_u= r−d =44,5) [1b]
$dY/Y = [(Y_n/(n\,s)]\,(Y/Y_n)^{1-n}/Y$ [3c]
$(dY/Y)_u = [(Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n}/Y_u$ [3d]
$(dY/Y)/(dY/Y)_u = (Y/Y_u)^{-n}$ [3e]
2,113
0,628
application range
m_{u90_4} = −0,000, f_{90}=0, f_4=0
m_u = −0,000
Y_u=18
Y
log Y
hep81−3a


$(Y/\Delta Y)/(Y/\Delta Y)_u$
HAULAB-Y contrast normalized to $(Y/\Delta Y)_u$
$C_r/C_{ru} = (Y/\Delta Y)/(Y/\Delta Y)_u$
$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=22, s=134,6, n=0,31, d=34,6) [1a]
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=79,10, L^*_u= r−d =44,5) [1b]
$Y/dY = Y/\{[(Y_n/(n\,s)]\,(Y/Y_n)^{1-n}\}$ [4c]
$(Y/Y)_u = Y_u/\{[(Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n}\}$ [4d]
$(Y/dY)/(Y/dY)_u = (Y/Y_u)^n$ [4e]
1,591
m_{u90_4} = 0,290, f_{90}=40, f_4=15
m_u = 0,407
0,473
application range
Y_u=18
Y
log Y
hep81−4a

hep81−3n