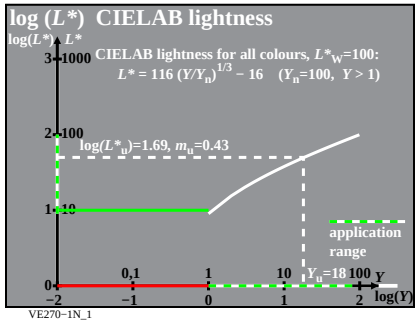
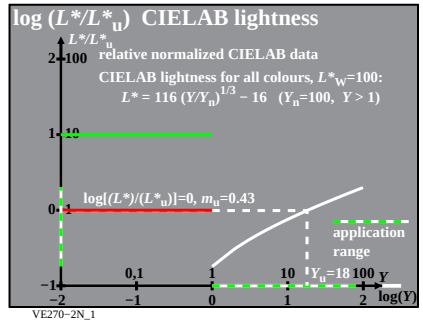
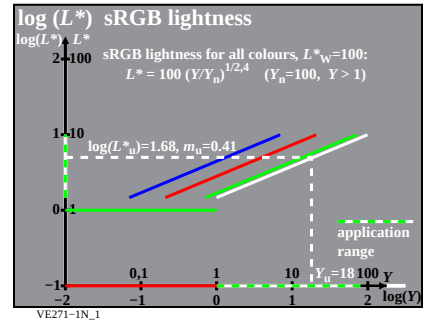
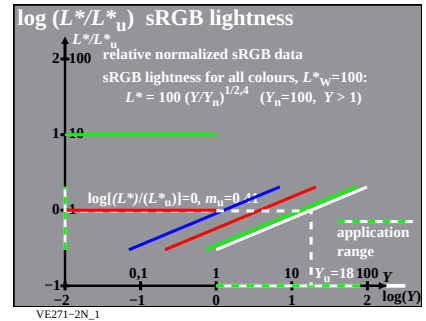
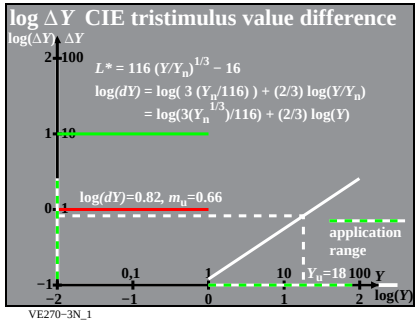
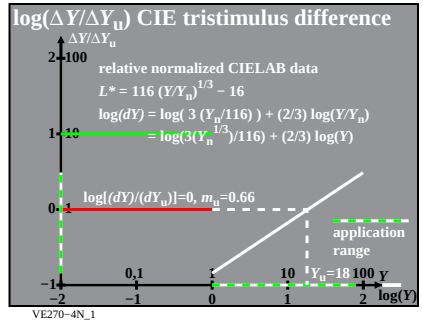

log (L*) CIELAB lightness
CIELAB lightness for all colours, L*W=100:
L* = 116 (Y/Yn)1/3 − 16 (Yn=100, Y > 1)
log(L*u)=1.69, mu=0.43
application range
Yu=18
VE270−1N_1

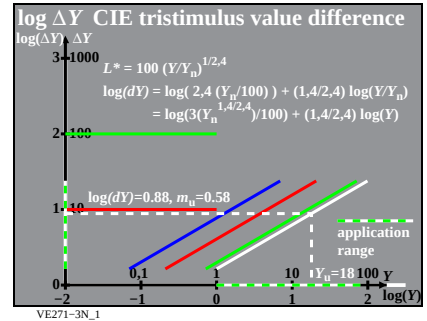

log (L*/L*u) CIELAB lightness
relative normalized CIELAB data
CIELAB lightness for all colours, L*W=100:
L* = 116 (Y/Yn)1/3 − 16 (Yn=100, Y > 1)
log[(L*)/(L*u)]=0, mu=0.43
application range
Yu=18
VE270−2N_1

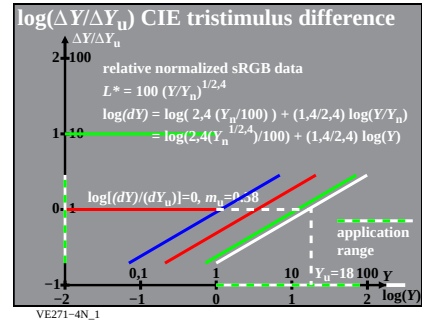

log (L*) sRGB lightness
sRGB lightness for all colours, L*W=100:
L* = 100 (Y/Yn)1/2,4 (Yn=100, Y > 1)
log(L*u)=1.68, mu=0.41
application range
Yu=18
VE271−1N_1

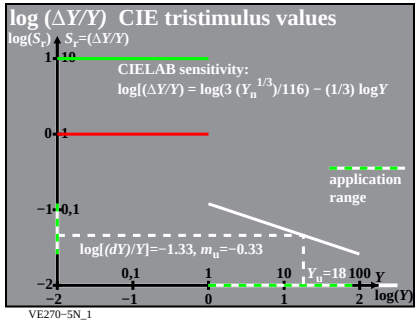

log (L*/L*u) sRGB lightness
relative normalized sRGB data
sRGB lightness for all colours, L*W=100:
L* = 100 (Y/Yn)1/2,4 (Yn=100, Y > 1)
log[(L*)/(L*u)]=0, mu=0.41
application range
Yu=18
VE271−2N_1

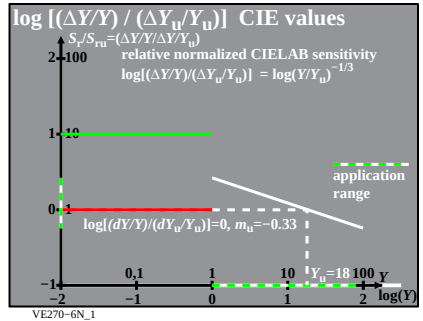

log ΔY CIE tristimulus value difference
L* = 116 (Y/Yn)1/3 − 16
log(dY) = log(3 (Yn/116)) + (2/3) log(Y/Yn)
= log(3(Yn1/3)/116) + (2/3) log(Y)
log(dY)=0.82, mu=0.66
application range
Yu=18
VE270−3N_1

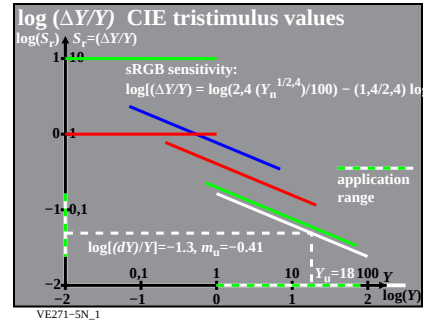

log(ΔY/ΔYu) CIE tristimulus difference
relative normalized CIELAB data
L* = 116 (Y/Yn)1/3 − 16
log(dY) = log(3 (Yn/116)) + (2/3) log(Y/Yn)
= log(3(Yn1/3)/116) + (2/3) log(Y)
log[(dY)/(dYu)]=0, mu=0.66
application range
Yu=18
VE270−4N_1

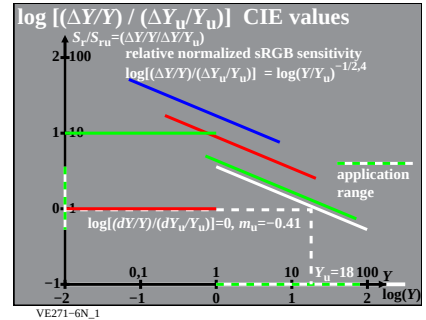

log ΔY CIE tristimulus value difference
L* = 100 (Y/Yn)1/2,4
log(dY) = log(2,4 (Yn/100)) + (1,4/2,4) log(Y/Yn)
= log(3(Yn1,4/2,4)/100) + (1,4/2,4) log(Y)
log(dY)=0.88, mu=0.58
application range
Yu=18
VE271−3N_1

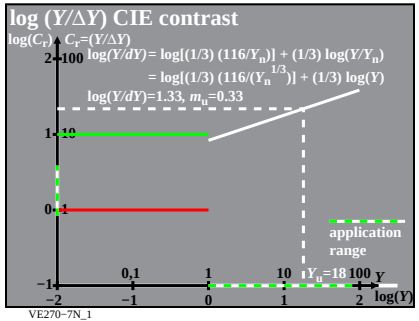

log(ΔY/ΔYu) CIE tristimulus difference
relative normalized sRGB data
L* = 100 (Y/Yn)1/2,4
log(dY) = log(2,4 (Yn/100)) + (1,4/2,4) log(Y/Yn)
= log(2,4(Yn1/2,4)/100) + (1,4/2,4) log(Y)
log[(dY)/(dYu)]=0, mu=0.58
application range
Yu=18
VE271−4N_1

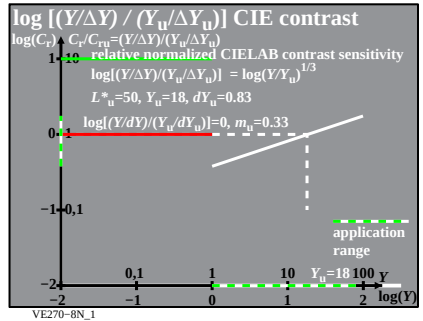

log (ΔY/Y) CIE tristimulus values
CIELAB sensitivity:
log[(ΔY/Y) = log(3 (Yn1/3)/116) − (1/3) logY
log[(dY)/Y]=−1.33, mu=−0.33
application range
Yu=18
VE270−5N_1

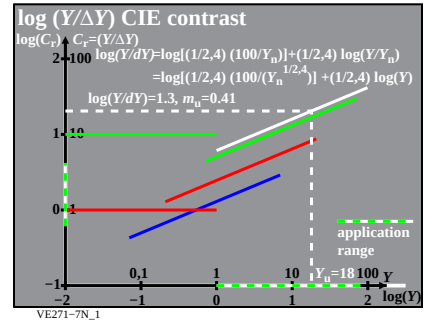

log [(ΔY/Y) / (ΔYu/Yu)] CIE values
relative normalized CIELAB sensitivity
log[(ΔY/Y)/(ΔYu/Yu)] = log(Y/Yu)−1/3
log[(dY/Y)/(dYu/Yu)]=0, mu=−0.33
application range
Yu=18
VE270−6N_1

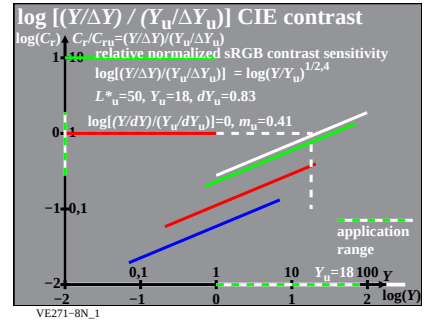

log (ΔY/Y) CIE tristimulus values
sRGB sensitivity:
log[(ΔY/Y) = log(2,4 (Yn1,4/2,4)/100) − (1,4/2,4) lo
log[(dY)/Y]=−1.3, mu=−0.41
application range
Yu=18
VE271−5N_1


log [(ΔY/Y) / (ΔYu/Yu)] CIE values
relative normalized sRGB sensitivity
log[(ΔY/Y)/(ΔYu/Yu)] = log(Y/Yu)−1/2,4
log[(dY/Y)/(dYu/Yu)]=0, mu=−0.41
application range
Yu=18
VE271−6N_1


log (Y/ΔY) CIE contrast
log(Y/dY)= log[(1/3) (116/Yn)] + (1/3) log(Y/Yn)
= log[(1/3) (116/(Yn1/3)] + (1/3) log(Y)
log(Y/dY)=1.33, mu=0.33
application range
Yu=18
VE270−7N_1


log [(Y/ΔY) / (Yu/ΔYu)] CIE contrast
relative normalized CIELAB contrast sensitivity
log[(Y/ΔY)/(Yu/ΔYu)] = log(Y/Yu)1/3
L*u=50, Yu=18, dYu=0.83
log[(Y/dY)/(Yu/dYu)]=0, mu=0.33
application range
Yu=18
VE270−8N_1


log (Y/ΔY) CIE contrast
log(Y/dY)=log[(1/2,4) (100/Yn)]+(1/2,4) log(Y/Yn)
=log[(1/2,4) (100/(Yn1/2,4)] +(1/2,4) log(Y)
log(Y/dY)=1.3, mu=0.41
application range
Yu=18
VE271−7N_1


log [(Y/ΔY) / (Yu/ΔYu)] CIE contrast
relative normalized sRGB contrast sensitivity
log[(Y/ΔY)/(Yu/ΔYu)] = log(Y/Yu)1/2,4
L*u=50, Yu=18, dYu=0.83
log[(Y/dY)/(Yu/dYu)]=0, mu=0.41
application range
Yu=18
VE271−8N_1

VE270−7N