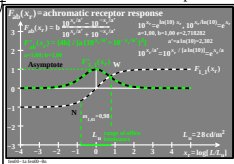
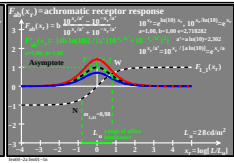
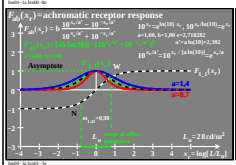
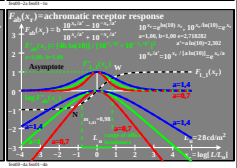
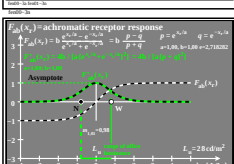
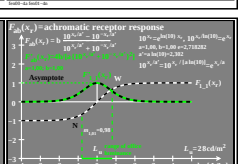

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

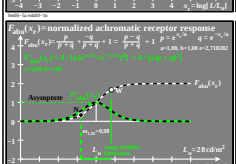

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

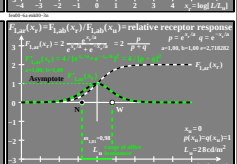

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

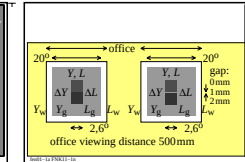

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

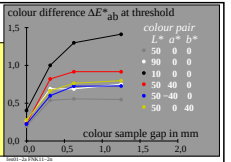

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

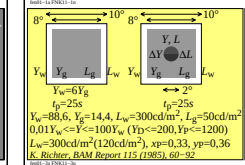

achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

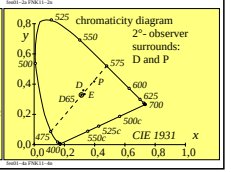

normalized achromatic receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

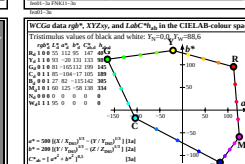

relative receptor response
Asymptote
W
N
L_e=28cd/m²
x_e=log(L/L_e)

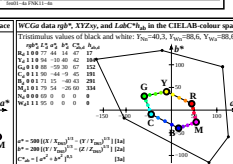

office
gap:
0mm
1mm
2mm
office viewing distance 500mm

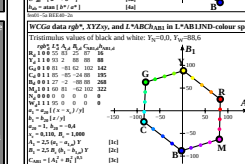

colour difference ΔE*ab at threshold
colour pair
L* a* b*
colour sample gap in mm

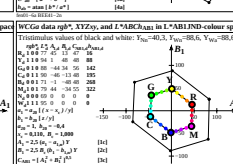

office
t_E=25s
Y_W=88,6, Y_E=14,4, L_W=300cd/m², L_E=50cd/m²
0,01Y$_W$<=Y<=100Y$_W$ (Y$_P$<=200,Y$_P$<=1200)
L_W=300cd/m²(120cd/m²), xp=0,33, yp=0,36
K. Richter, BAM Report 115 (1985), 60–92


chromaticity diagram
2°- observer
surrounds:
D and P
CIE 1931


WCGa data rgb*, XYZxy, and LabC*h$_{ab}$ in the CIELAB-colour space
Tristimulus values of black and white: Y_{Sb}=0,0, Y_{Sw}=88,6
$a^* = 500\,[(X/X_{Sw})^{1/3} - (Y/Y_{Sw})^{1/3}]$ [11a]
$b^* = 200\,[(Y/Y_{Sw})^{1/3} - (Z/Z_{Sw})^{1/3}]$ [12a]
$C^*_{ab} = [\,a^{*2} + b^{*2}\,]^{0,5}$ [3a]
$h_{ab} = \text{atan}\,[\,b^*/a^*\,]$ [4a]


WCGa data rgb*, XYZxy, and LabC*h$_{ab}$ in the CIELAB-colour space
Tristimulus values of black and white: Y_{Sb}=40,3, Y_{Sw}=88,6, Y_{WG}=88,6
$a^* = 500\,[(X/X_{Sw})^{1/3} - (Y/Y_{Sw})^{1/3}]$ [11a]
$b^* = 200\,[(Y/Y_{Sw})^{1/3} - (Z/Z_{Sw})^{1/3}]$ [12a]
$C^*_{ab} = [\,a^{*2} + b^{*2}\,]^{0,5}$ [3a]
$h_{ab} = \text{atan}\,[\,b^*/a^*\,]$ [4a]


WCGa data rgb*, XYZxy, and L*ABCh$_{AB1}$ in L*AB1JND-colour space
Tristimulus values of black and white: Y_{Sb}=0,0, Y_{Sw}=88,6
$a_1 = a_{AB}\,[\,(x^* - x_n)/y\,]$
$b_1 = b_{AB}\,[\,x/y\,]$
$a_{B1} = 1,\ b_{B1} = -0,4$
$c_1 = 0,116 \cdot L_1 - 1,000$ [1c]
$A_1 = 2,5 \cdot (a_1 - a_{1,0})\cdot Y$ [2c]
$B_1 = 2,5 \cdot B_1 \cdot (b_1 - b_{1,0})\cdot Y$ [2c]
$C_{AB1} = [\,A_1^2 + B_1^2\,]^{0,5}$ [3c]
$h_{AB1} = \text{atan}\,[\,B_1/A_1\,]$ [4c]


WCGa data rgb*, XYZxy, and L*ABCh$_{AB1}$ in L*AB1JND-colour space
Tristimulus values of black and white: Y_{Sb}=40,3, Y_{Sw}=88,6, Y_{WG}=88,6
$a_1 = a_{AB}\,[\,(x^* - x_n)/y\,]$
$b_1 = b_{AB}\,[\,x/y\,]$
$a_{B1} = 1,\ b_{B1} = -0,4$
$c_1 = 0,116 \cdot L_1 - 1,000$
$A_1 = 2,5 \cdot (a_1 - a_{1,0})\cdot Y$ [1c]
$B_1 = 2,5 \cdot B_1 \cdot (b_1 - b_{1,0})\cdot Y$ [2c]
$C_{AB1} = [\,A_1^2 + B_1^2\,]^{0,5}$ [3c]
$h_{AB1} = \text{atan}\,[\,B_1/A_1\,]$ [4c]