see similar files: http://farbe.li.tu-berlin.de/eew9/eew9.HTM
technical information: http://farbe.li.tu-berlin.de or http://color.li.tu-berlin.de

TUB registration: 20220501-eew9/eew9l0NP.PDF /.PS
TUB material: code=rha4ta
application for evaluation and measurement of display or print output

Panel 1 (top-left):
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_r(\lambda)$ triangle lightness: T^*_{TUB}
6,00 4,999 $\Delta\lambda_R = \Delta\lambda_C$ 40,0 R_{rw}
λ_1= 570
3,00
1,00 1,000 0,0 R_{rz}
R^+
1/3
1/6 0,199 R^- −40,0 R_{rn}
0 400 500 600 700
wavelength λ/nm contrast C=25:1
eew90−7a, eez81−1a

Panel center-top:
XYZ_W=85.53 , 90.0 , 98.0
$A_2 = 2,5\, C_c\,(a_2 − a_{2,n})\, Y$
$B_2 = 2,5\, C_c\, B_c\,(b_2 − b_{2,n})\, Y$
$a_2 = a_{20}\,[(x−x_c)/y]$
$b_2 = b_{20}\,[z/y]$
$a_{20} = 1,\ b_{20} = −0,4$
$x_c = 0,110,\ B_c = 0,750$
n = D65, xy_W=0,312 , 0,329
$C_{AB,2}=[A_2^2+B_2^2]^{1/2}$
Name and spectral range
$R_m\ 570\_770$ $Y_m\ 520\_770$
$G_m\ 470\_570$ $C_m\ 380\_570$
$B_m\ 380\_520$ $M_m\ 570\_470$
6 optimal colours (o), Y_W=90, Y_N=3,6
6 of maximum (m) C_{AB} for D65
in chromatic value diagram (A_2, B_2)
Parameter: Y
D65, C_r = 25:1
$\Delta h_{AB,2}$ = 6
B_2 100 ; A_2 100 ; −50 ; −100
max: 490_770 min: 380_490
eew90−2a, eez80−7a

Panel 2 (row2 left):
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_r(\lambda)$ triangle lightness: T^*_{TUB}
$\Delta\lambda_R = \Delta\lambda_C$
λ_1= 570 R^+
6,00
3,00
1,414 8,6 R_{rw}
1,000 0,0 R_{rz}
0,707 −8,−6 R_{rn}
R^-
1/3
1/6
400 500 600 700
wavelength λ/nm contrast C=2:1
eew90−3a, eeh91−1a

Panel center-row2:
XYZ_W=98.86 , 89.99 , 32.02
$A_2 = 2,5\, C_c\,(a_2 − a_{2,n})\, Y$
$B_2 = 2,5\, C_c\, B_c\,(b_2 − b_{2,n})\, Y$
$a_2 = a_{20}\,[(x−x_c)/y]$
$b_2 = b_{20}\,[z/y]$
$a_{20} = 1,\ b_{20} = −0,4$
$x_c = 0,110,\ B_c = 2,500$
n = A00, xy_W=0,447 , 0,407
$C_{AB,2}=[A_2^2+B_2^2]^{1/2}$
Name and spectral range
$R_m\ 570\_770$ $Y_m\ 520\_770$
$G_m\ 470\_570$ $C_m\ 380\_570$
$B_m\ 380\_520$ $M_m\ 570\_470$
6 optimal colours (o), Y_W=90, Y_N=3,6
6 of maximum (m) C_{AB} for A00
in chromatic value diagram (A_2, B_2)
Parameter: Y
A00, C_r = 2:1
$\Delta h_{AB,2}$ = 18
max: 495_770 min: 380_495
eew90−3n

Panel top-right-1:
$R(\lambda)$ standard reflection, R_n=0,036, R_w=0,900
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R(\lambda)$ triangle lightness T^*_{TUB}
1,00 0,900 40,0 R_{wa}
λ_1= 570
0,75
0,50
0,25 0,180 0,0 R_z
0,00 0,036 −40,0 R_{na}
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−

Panel top-right-2:
$R(\lambda)$ standard reflection, R_n=0,036, R_w=0,900
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R(\lambda)$ triangle lightness T^*_{TUB}
1,00 0,900 40,0 R_{wa}
λ_1= 570
0,75
0,50
0,25 0,180 0,0 R_z
0,036 −40,0 R_{na}
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−1A

Panel right row2 (left):
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_r(\lambda)$ triangle lightness T^*_{TUB}
6,00 4,999 40,0 R_{rw}
λ_1= 570
3,00
1,00 1,000 0,0 R_{rz}
1/3
1/6 0,199 −40,0 R_{rn}
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−

Panel right row2 (right):
$R_s(\lambda) = \log[R_r(\lambda)] = \log[R(\lambda)/0,18]$ reflection (log)
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_s(\lambda)$ triangle lightness T^*_{TUB}
0,8 0,698 40,0 R_{sw}
λ_1= 570
0,4
0,0 0,000 0,0 R_{sz}
−0,4
−0,8 −0,698 −40,0 R_{sn}
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−1A

Panel row3 left:
$R(\lambda)$ standard reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R(\lambda)$ triangle lightness: T^*_{TUB}
1,00 0,900 $\Delta\lambda_R = \Delta\lambda_C$ 40,0 R_w
λ_1= 570 R^+
0,75
0,50
0,25 0,180 0,0 R_z
0,036 R^- −40,0 R_n
0,00
400 500 600 700
wavelength λ/nm contrast C=25:1
eew90−5a, eez82−1a

Panel row3 2nd:
$R(\lambda)$ standard reflection
Ostwald colour: cyan C, λ_1=400, λ_2=570, λ_d=495
$R(\lambda)$ triangle lightness T^*_{TUB}
0,900 $\Delta\lambda_C = \Delta\lambda_R$ 40,0 R_w
λ_2= 570 c^+
0,75
0,50
0,180 0,0 R_z
0,036 c^- −40,0 R_n
400 500 600 700
wavelength λ/nm contrast C=25:1
eew90−6a, eez80−4a

Panel row3 3rd:
$R(\lambda)$ standard reflection, R_n=0,036, R_w=0,900
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R(\lambda)$ triangle lightness T^*_{TUB}
1,00 0,900 40,0 R_w
λ_1= 570
0,75
0,50
0,25 0,180 0,0 R_{wa}
0,036 −40,0 R_{na}
0,00
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−

Panel row3 4th:
$R(\lambda)$ standard reflection, R_n=0,036, R_w=0,900
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R(\lambda)$ triangle lightness T^*_{TUB}
1,00 0,900 40,0 R_w
λ_1= 570
0,75
0,50
0,25 0,180 0,0 R_{wa}
0,036 −40,0 R_{na}
0,00
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−1A

Panel row4 left:
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_r(\lambda)$ triangle lightness: T^*_{TUB}
6,00 $\Delta\lambda_R = \Delta\lambda_C$
λ_1= 570 R^+
3,00
1,414 8,6 R_{rw}
1,000 0,0 R_{rz}
0,707 R^- −8,−6 R_{rn}
1/3
1/6
400 500 600 700
wavelength λ/nm contrast C=2:1
eew90−7a, eez21−1a

Panel row4 2nd:
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: cyan C, λ_1=400, λ_2=570, λ_d=495
$R_r(\lambda)$ triangle lightness: T^*_{TUB}
6,00 $\Delta\lambda_C = \Delta\lambda_R$
λ_2= 570 c^+
3,00
1,414 8,6 R_{rw}
1,000 0,0 R_{rz}
0,707 c^- −8,−6 R_{rn}
1/3
1/6
400 500 600 700
wavelength λ/nm contrast C=2:1
eew90−8a, eeh91−7a

Panel row4 3rd:
$R_r(\lambda) = R(\lambda)/0,18$ relative reflection
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_r(\lambda)$ triangle lightness T^*_{TUB}
6,00 4,999 40,0 R_{rw}
λ_1= 570
3,00
1,00 1,000 0,0 R_{rz}
1/3
1/6 0,199 −40,0 R_{rn}
400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−

Panel row4 4th:
$R_s(\lambda) = \log[R_r(\lambda)] = \log[R(\lambda)/0,18]$ reflection (log)
Ostwald colour: red R, λ_1=570, λ_2=700, λ_d=595
$R_s(\lambda)$ triangle lightness T^*_{TUB}
0,8 0,698 40,0 R_{sw}
λ_1= 570
0,4
0,0 0,000 0,0 R_{sz}
−0,4
−0,8 −0,698 −40,0 R_{sn}
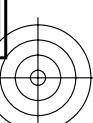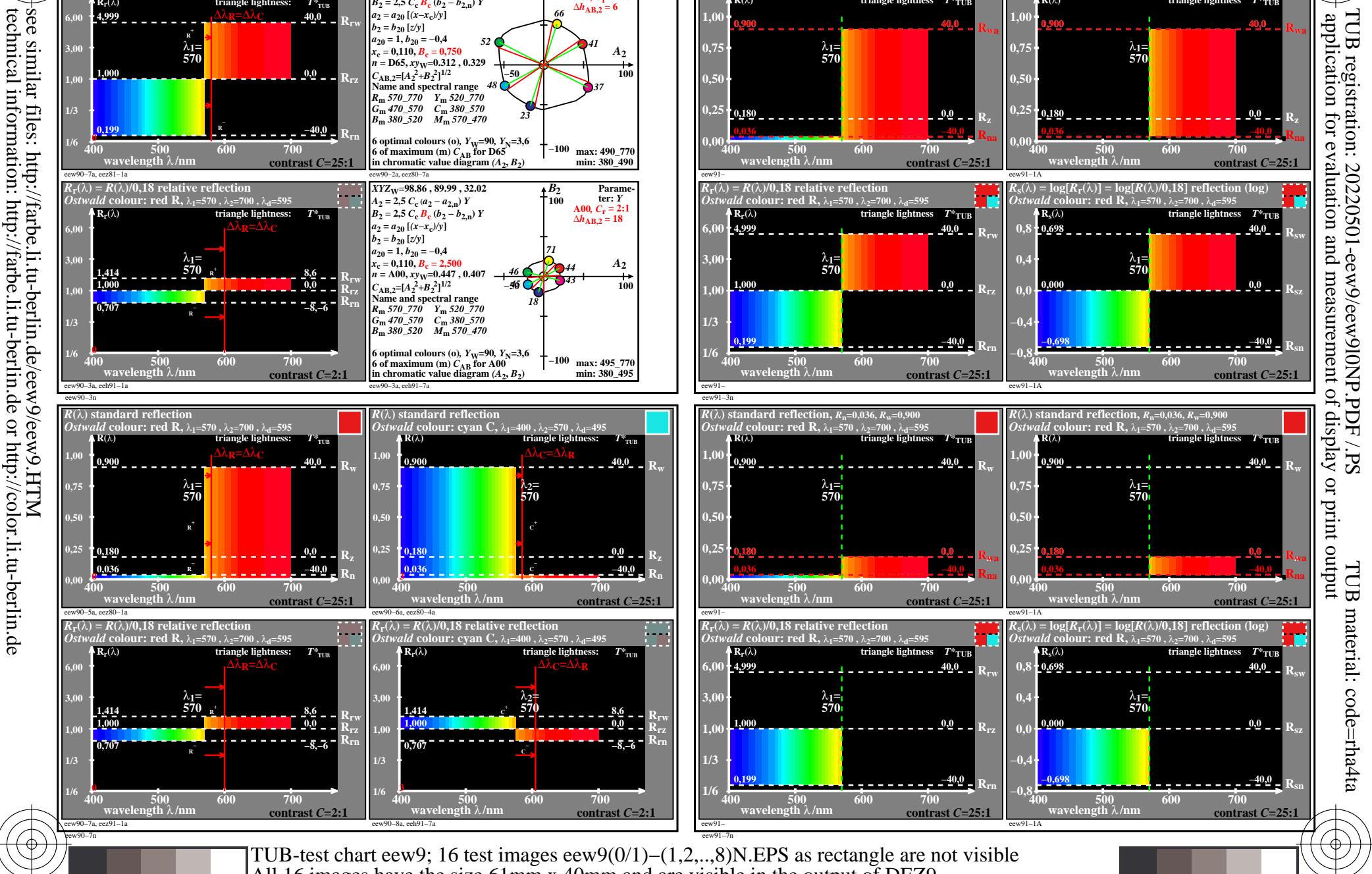400 500 600 700
wavelength λ/nm contrast C=25:1
eew91−1A

TUB-test chart eew9; 16 test images eew9(0/1)−(1,2,..,8)N.EPS as rectangle are not visible
All 16 images have the size 61mm x 40mm and are visible in the output of DEZ9