

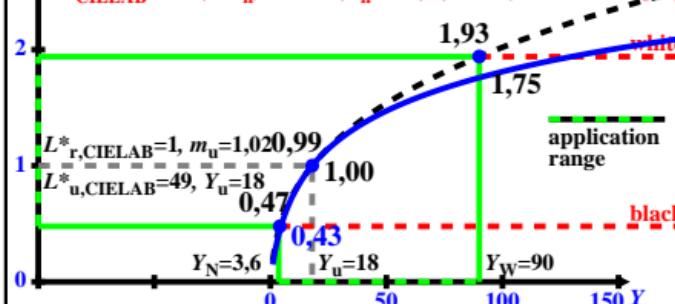
### $L^*/L^*_u$ CIELAB & TUBJND

relative lightness  $L^*/L^*_u$   
normalized to the  
background lightness  $L^*_u$

3

$$L^*_{\text{TUBJND}} = d \ln [1 + b \cdot (Y/Y_u)] \quad d=25,6 \quad b=6,141 \quad [2a]$$

$$L^*_{\text{CIELAB}} = 116 (Y/Y_n)^{1/3} - 16 \quad (Y_n=100, 0,89 \leq Y) \quad [2b]$$



cef30-1a

### $L^*/L^*_u$ CIELAB & TUBJND

relative lightness  $L^*/L^*_u$   
normalized to the  
background lightness  $L^*_u$

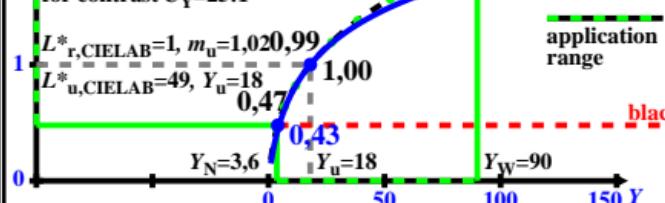
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$$L^*_{\text{CIELAB}} = 116 (Y/Y_n)^{1/3} - 16 \quad (Y_n=100, 0,89 \leq Y) \quad [2b]$$

regularity index:  $g^*_5=99, g^*_9=99$ ,  
intended output:

equally spaced 9 steps in CIELAB  
for contrast  $C_Y=25:1$



cef30-2a

### $L^*/L^*_u$ CIELAB & TUBJND

relative lightness  $L^*/L^*_u$   
normalized to the  
background lightness  $L^*_u$

3

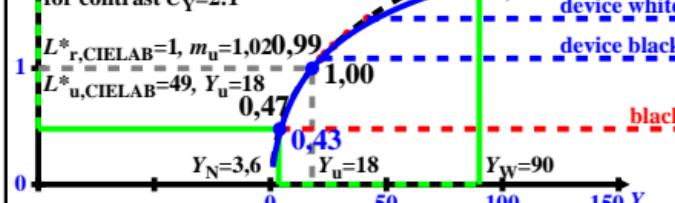
$$L^*_{\text{TUBJND}} = d \ln [1 + b \cdot (Y/Y_u)] \quad d=25,6 \quad b=6,141 \quad [2a]$$

$$L^*_{\text{CIELAB}} = 116 (Y/Y_n)^{1/3} - 16 \quad (Y_n=100, 0,89 \leq Y) \quad [2b]$$

regularity index:  $g^*_5=30, g^*_9=23$ ,

non linearized real output:

nonequally spaced 9 steps  
for contrast  $C_Y=2:1$



cef30-3a

cef30-3n

### $L^*/L^*_u$ CIELAB & TUBJND

relative lightness  $L^*/L^*_u$   
normalized to the  
background lightness  $L^*_u$

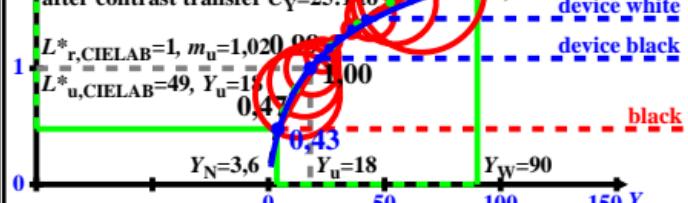
3

$$L^*_{\text{TUBJND}} = d \ln [1 + b \cdot (Y/Y_u)] \quad d=25,6 \quad b=6,141 \quad [2a]$$

$$L^*_{\text{CIELAB}} = 116 (Y/Y_n)^{1/3} - 16 \quad (Y_n=100, 0,89 \leq Y) \quad [2b]$$

regularity index:  $g^*_5=88, g^*_9=74$ ,  
linearized real output:

equally spaced 9 steps in CIELAB  
after contrast transfer  $C_Y=25:1 \rightarrow 2$



cef30-4a