

L^*/L_u^* CIELAB & TUBJND

relative lightness L^*/L_u^*
normalized to the
background lightness L_u^*

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

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

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

2

non linearized real output:

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

1

$$L^*_{r,\text{CIELAB}}=1, m_u=1,020,99$$

$$L^*_{u,\text{CIELAB}}=49, Y_u=18$$

0

$$Y_N=3,6$$

0

$$Y_u=18$$

50

$$Y_W=90$$

100

150 Y

1,93

1,75

device white

device black

black

1,00

0,47

0,43

50

100

150 Y