

$\log(l^*)$

CIELABu0 standard lightness l^*

$$Y_{nc} = Y_{WRGBnc} = 100, 21, 72, 7$$

4 l^*
10000

$$l^*_{CIELABu0} = 66(Y/Y_u)^{1/3,0} - 16 \quad (Y_u = 18, Y_{nc}/100 < Y \leq Y_{nc})$$

$$l^*_{N(3,6)} = 23, l^*_u(18) = 50, l^*_{W(90)} = 97$$

3 l^*
1000

$$l^*_{90} = 96,50, \gamma = 3,0, 1/\gamma = 1/3,0 = 0,33$$

$$l^*_{18} = 50,00, S_u = 65,49, D_u = -15,49$$

$$l^*_{3,6} = 22,72, l^*_u = 50,00, Y_u = 18$$

2 l^*
100

$$\log[l^*/l^*_u] = 0, m_u = 0,43$$

$$L^*_u = 49, l^*_u = 50$$

application range

1 l^*

0,1

1

10

100

$Y_u = 18$

Y

-2

-1

0

$Y_N = 3,6$

1

100

$Y_W = 90$

2

$\log(Y)$