

log (Y/ΔY)

LABJNDu4

tristimulus value contrast

$Y_{nc} = L^*_{wRGBnc} = 100, 52, 87, 31$

$C_r = (Y/\Delta Y)$

4 10000

$$L^*_{LABJNDu4} = \ln(A_{1n} + A_{2n}Y) / (A_{2n}A_{0n}) \quad (Y_{nc}/100 < Y \leq Y_{nc})$$

$$L^*_{LABJNDu4} = \ln(A_{1n} + A_{2u}x) / (A_{2u}A_{0n}) \quad (x = Y/Y_u)$$

$$Y/dY = Y/[A_{0n}(A_{1n} + A_{2n}Y)] = x Y_u/[A_{0n}(A_{1n} + A_{2u}x)]$$

3 1000

$$L^*_u = 1780, dY_u = 0,03, Y_u/dY_u = 529$$

$$\log(Y/dY) = 2,72, m_u = 0,13$$

2 100

$$(Y/dY)_{90} = 596,34, A_{0n} = 0,6666, A_{2n} = 0,0428, A_{2u} = 0,42$$

$$(Y/dY)_{18} = 529,53, A_{1n} = 0,007, A_{2n} = 0,0024$$

$$(Y/dY)_{3,6} = 339,41, Y_u = 18, dY_u = 0,03$$

application
range

1 0 1 10 100 Y
-2 -1 0 1 2 log(Y)
 $x_N = 0,2$ $x_u = 1$ $x_W = 5$