

sensation scaling functions

lightness L^* and tristimulus value Y

adaptation on surround white W

$$L^*_{\mathbf{W}} = 100 (Y / 100)^{1/2,0}$$

adaptation on surround grey U

$$L^*_{\mathbf{U}} = 100 (Y / 100)^{1/2,4}$$

description with CIELAB 1976

$$L^*_{\mathbf{CIELAB}} = 116 (Y / 100)^{1/3,0} - 16$$

adaptation on surround black N

$$L^*_{\mathbf{N}} = 100 (Y / 100)^{1/3,0}$$