

colour valence metric (color data: linear relation to CIE 1931 data)

linear color terms	name and relationship to CIE tristimulus or chromaticity values	notes
luminous value	$Y = y (X + Y + Z)$	
chromatic value	<i>linear chromatic value diagram (A, B)</i>	<i>n=D65</i>
red-green	$A = [X / Y - X_n / Y_n] Y = [a - a_n] Y$ $= [x / y - x_n / y_n] Y$	<i>(background)</i>
yellow-blue	$B = - 0,4 [Z / Y - Z_n / Y_n] Y = [b - b_n] Y$ $= - 0,4 [z / y - z_n / y_n] Y$	
radial	$C_{AB} = [A^2 + B^2]^{1/2}$	
chromaticity	<i>linear chromaticity diagram (a, b)</i>	<i>compare to linear cone excitation</i>
red-green	$a = X / Y = x / y$	
yellow-blue	$b = - 0,4 [Z / Y] = - 0,4 [z / y]$	$L/(L+M)=P/(P+D)$
radial	$c_{ab} = [(a - a_n)^2 + (b - b_n)^2]^{1/2}$	$S/(L+M)=T/(P+D)$