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| Autore                  | Hunt R. W. G (Robert William Gainer), <1923->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Titolo                  | Measuring colour / / R.W.G. Hunt, M.R. Pointer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Descrizione fisica      | 1 online resource (xxii, 469 pages) : illustrations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Altri autori (Persone)  | PointerMichael, Ph. D.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Note generali           | Description based upon print version of record.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Nota di contenuto       | Measuring Colour; Contents; About the Authors; Series Preface; Preface; Acknowledgements; 1 Colour Vision; 1.1 Introduction; 1.2 The spectrum; 1.3 Construction of the eye; 1.4 The retinal receptors; 1.5 Spectral sensitivities of the retinal receptors; 1.6 Visual signal transmission; 1.7 Basic perceptual attributes of colour; 1.8 Colour constancy; 1.9 Relative perceptual attributes of colours; 1.10 Defective colour vision; 1.11 Colour pseudo-stereopsis; References; General References; 2 Spectral Weighting Functions; 2.1 Introduction; 2.2 Scotopic spectral luminous efficiency<br>2.3 Photopic spectral luminous efficiency2.4 Colour-matching functions; 2.5 Transformation from R, G, B to X, Y, Z; 2.6 CIE colour-matching functions; 2.7 Metamerism; 2.8 Spectral luminous efficiency functions for photopic vision; References; General References; 3 Relations between Colour Stimuli; 3.1 Introduction; 3.2 The Y tristimulus value; 3.3 Chromaticity; 3.4 Dominant wavelength and excitation purity; 3.5 Colour mixtures on chromaticity diagrams; 3.6 Uniform chromaticity diagrams; 3.7 CIE 1976 hue-angle and saturation; 3.8 CIE 1976 lightness, L.; 3.9 Uniform colour spaces |

3.10 CIE 1976 colour difference formulae; 3.11 CMC, CIE94, and CIEDE2000 color difference formulae; 3.12 An alternative form of the CIEDE2000 colour-difference equation; 3.13 Summary of measures and their perceptual correlates; 3.14 Allowing for chromatic adaptation; 3.15 The evaluation of whiteness; 3.16 Colorimetric purity; 3.17 Identifying stimuli of equal brightness; 3.18 CIEDE2000 worked example; References; General References; 4 Light Sources; 4.1 Introduction; 4.2 Methods of producing light; 4.3 Gas discharges; 4.4 Sodium lamps; 4.5 Mercury lamps; 4.6 Fluorescent lamps; 4.7 Xenon lamps; 4.8 Incandescent light sources; 4.9 Tungsten lamps; 4.10 Tungsten halogen lamps; 4.11 Light emitting diodes; 4.12 Daylight; 4.13 Standard illuminants and sources; 4.14 CIE standard illuminant A; 4.15 CIE illuminants B and C; 4.16 CIE sources; 4.17 CIE illuminants D; 4.18 CIE indoor daylight; 4.19 Comparison of commonly used sources; References; General References; 5 Obtaining Spectral Data and Tristimulus Values; 5.1 Introduction; 5.2 Radiometry and photometry; 5.3 Spectroradiometry; 5.4 Tele-spectroradiometry; 5.5 Spectroradiometry of self-luminous colours; 5.6 Spectrophotometry of non-self-luminous colours; 5.7 Reference whites and working standards; 5.8 Geometries of illumination and viewing; 5.9 CIE Geometries of illumination and measurement; 5.10 Spectroradiometers and spectrophotometers; 5.11 Choice of illuminant; 5.12 Calculation of tristimulus values from spectral data; 5.13 Colorimeters using filtered photo-detectors; References; General References; 6 Metamerism and Colour Constancy; 6.1 Introduction; 6.2 The cause of metamerism; 6.3 The definition of metamerism; 6.4 Examples of metamerism in practice; 6.5 Degree of metamerism; 6.6 Index of metamerism for change of illuminant

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## Sommario/riassunto

The classic authority on colour measurement now fully revised and updated with the latest CIE recommendations The measurement of colour is of major importance in many commercial applications, such as the textile, paint, and foodstuff industries; as well as having a significant role in the lighting, paper, printing, cosmetic, plastics, glass, chemical, photographic, television, transport, and communication industries. Building upon the success of earlier editions, the 4th edition of Measuring Colour has been updated throughout with new chapters on colour rendering by li

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