ISO 11664-1:2007-10 (E)

Colorimetry - Part 1: CIE standard colorimetric observers

Contents

Page

FOREWORD VII

INTRODUCTION 1

1. SCOPE 1

2. NORMATIVE REFERENCES 1

3. DEFINITIONS 1

4. SPECIFICATIONS 3
4.1 Colour-matching functions 3
4.2 Spectral chromaticity coordinates 3

5. DERIVATION OF THE COLOUR-MATCHING FUNCTIONS FOR THE CIE 1931 STANDARD COLORIMETRIC OBSERVER 3
5.1 Experimental basis 3
5.2 Transformation procedures 4
5.3 Transformation properties 4
5.4 Comparison with earlier data 4

6. DERIVATION OF THE COLOUR-MATCHING FUNCTIONS FOR THE CIE 1964 STANDARD COLORIMETRIC OBSERVER 5
6.1 Experimental basis 5
6.2 Transformation procedures 5
6.3 Transformation properties 5
6.4 Comparison with earlier data 5

7. PRACTICAL APPLICATION OF COLOUR-MATCHING FUNCTIONS FOR CIE STANDARD COLORIMETRIC OBSERVERS 5
7.1 Obtaining tristimulus values 5
7.2 The basis for integration 6
7.3 Rod activity 6
7.4 The use of restricted data 6
7.5 Standard of reflectance 6

TABLE 1. COLOUR-MATCHING FUNCTIONS A ND CHROMATICITY COORDINATES OF CIE 1931 STANDARD COLORIMETRIC OBSERVER 7

TABLE 2. COLOUR-MATCHING FUNCTIONS A ND CHROMATICITY COORDINATES OF CIE 1964 STANDARD COLORIMETRIC OBSERVER 18

ANNEX: BIBLIOGRAPHY (INFORMATIVE) 29