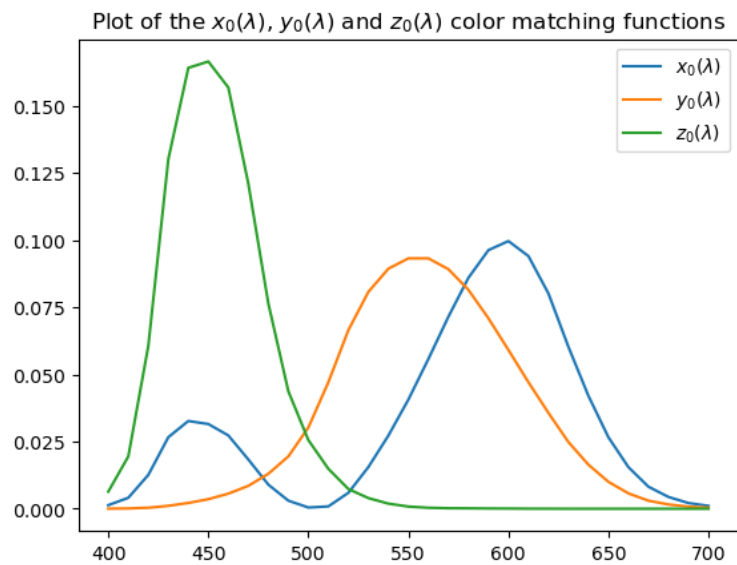# Laboratory 6

Introduction to Colorimetry
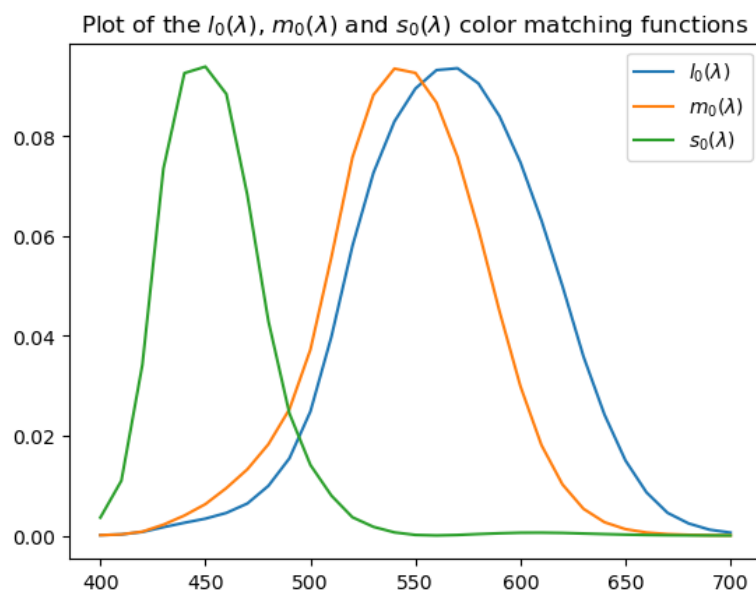
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2. Plotting Color Matching Functions and Illuminants
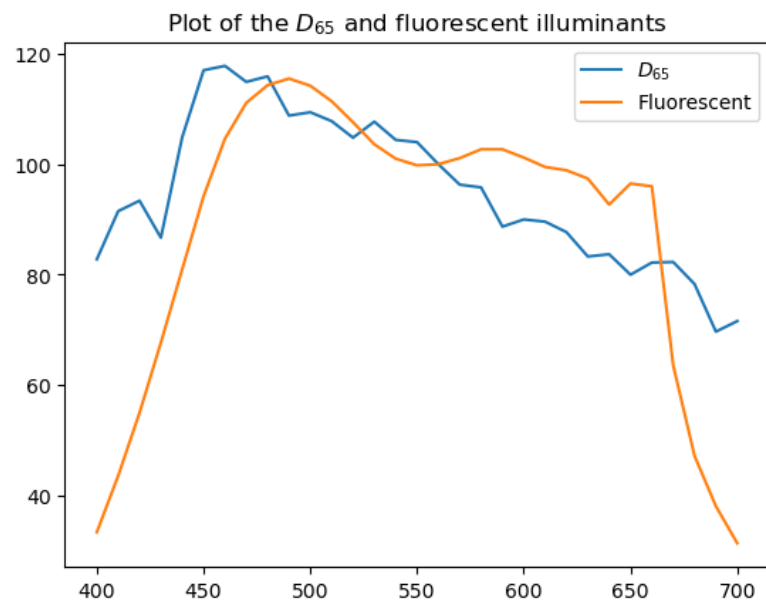
2.1. The plot of the x0(λ), y0(λ), and z0(λ) color matching functions

2.2. The plot of the l0(λ), m0(λ), and s0(λ) color matching functions

2.3. The plot of the D65 and fluorescent illuminants
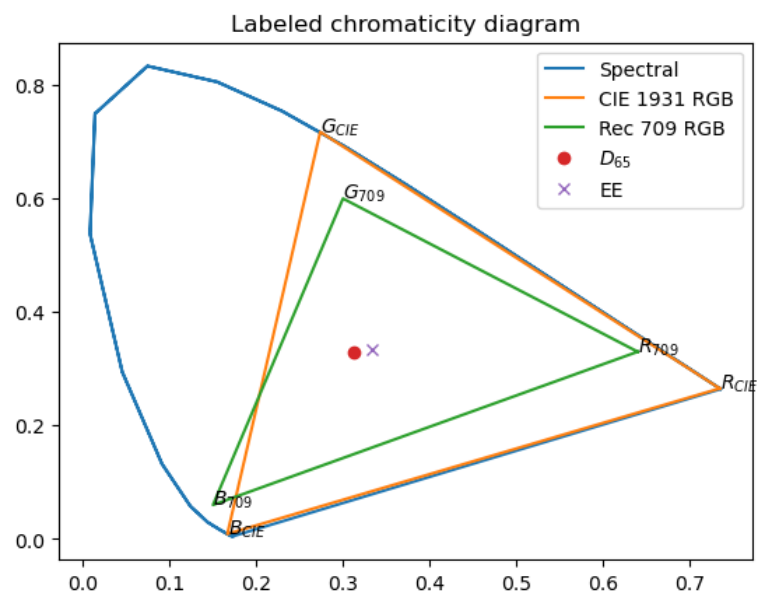
Plot of the D_{65} and fluorescent illuminants

3. Chromaticity Diagrams

3.1. Hand in your labeled chromaticity diagram.

Labeled chromaticity diagram
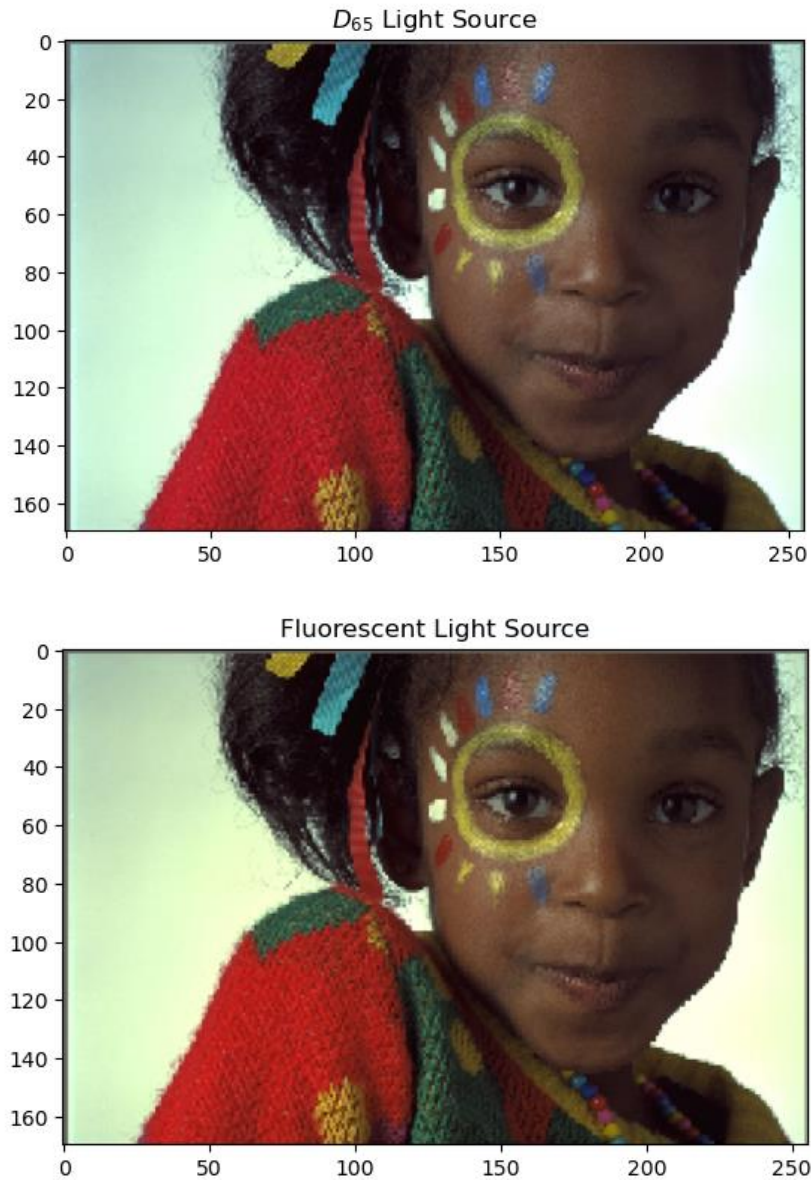
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4. Rendering an Image from Illuminant, Reflectance, and Color Matching Functions

4.1. The matrix M709_D65.

$$\begin{bmatrix} 0.4123908 & 0.35758434 & 0.18048079 \\ 0.21263901 & 0.71516868 & 0.07219232 \\ 0.01933082 & 0.11919478 & 0.95053215 \end{bmatrix}$$

4.2. The two images obtained from D65 and fluorescent light sources.

4.3. A qualitative description of the differences between the two images

The brightness of the image derived from fluorescent is brighter than the image obtained from D65, particularly in the left side of the face of the girl.

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5. Color Chromaticity Diagram

5.1. Hand in your color diagram

Color diagram