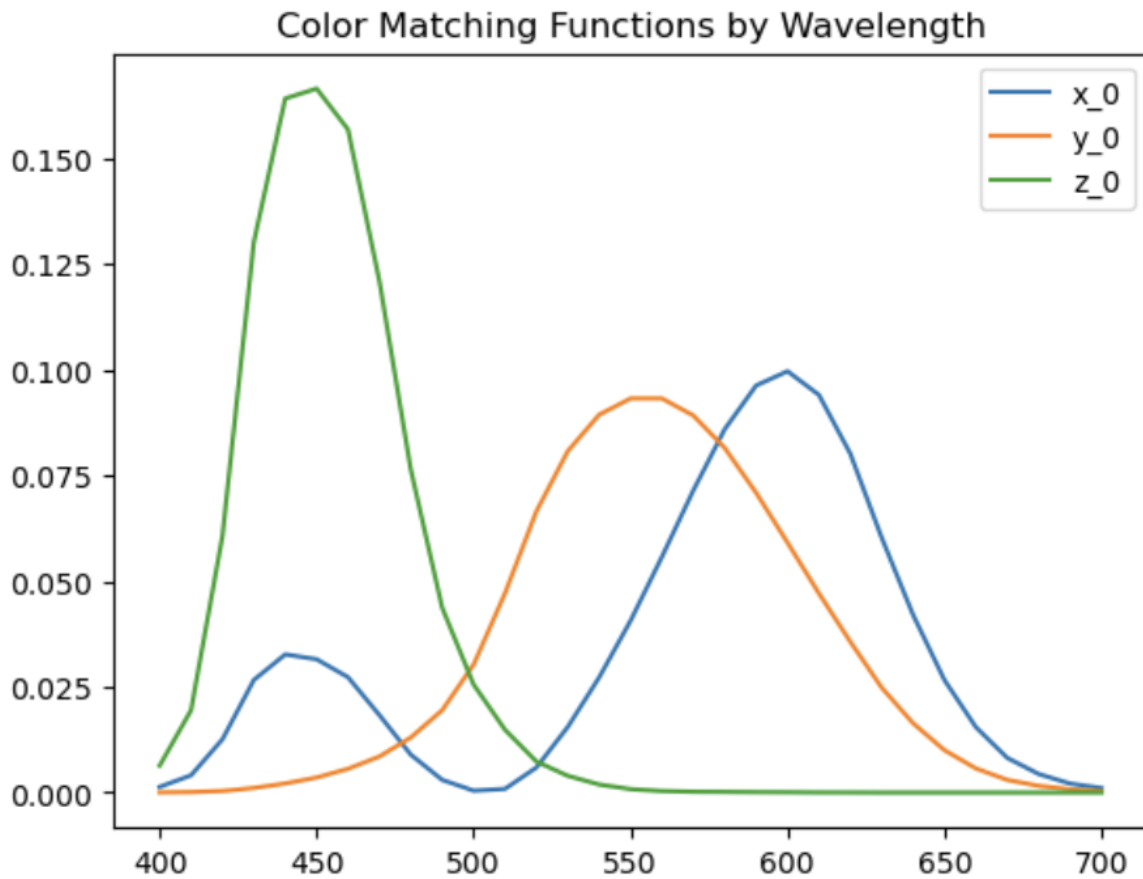
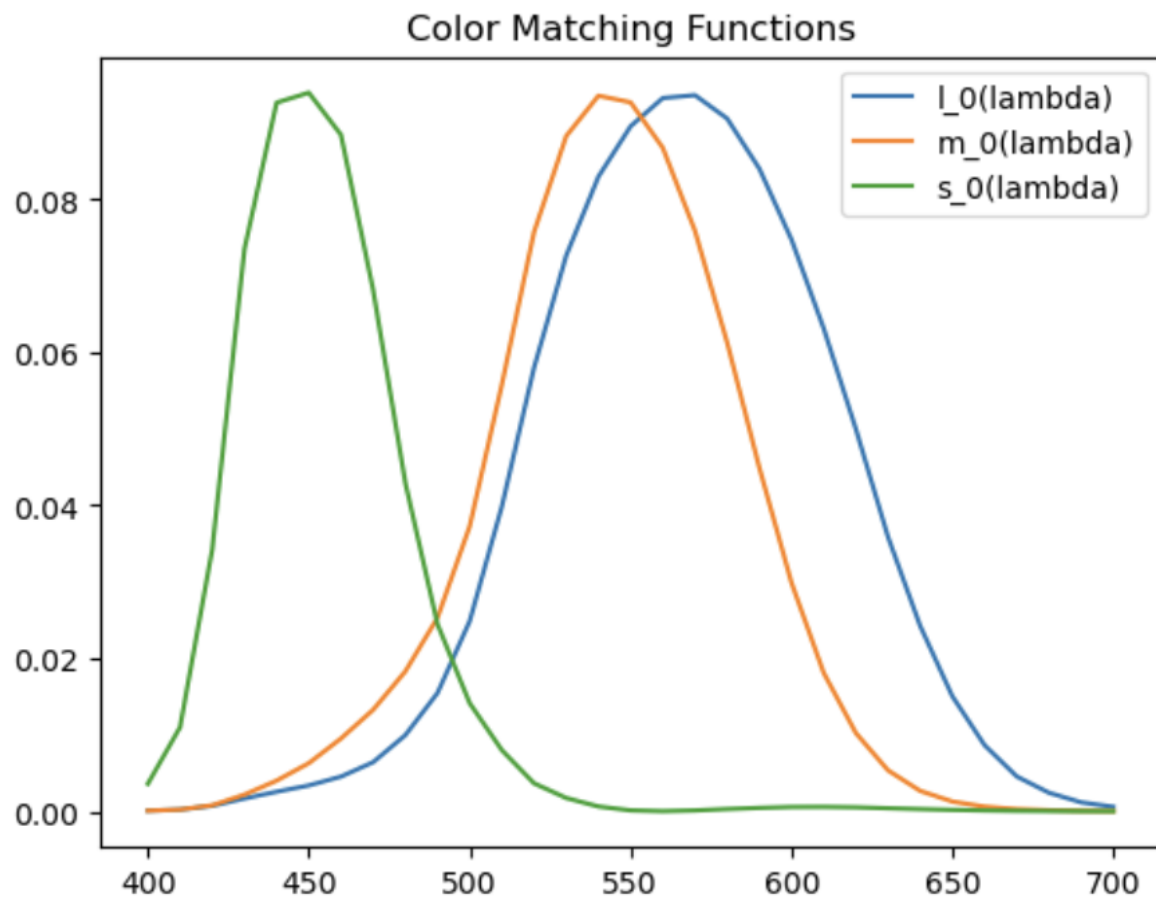


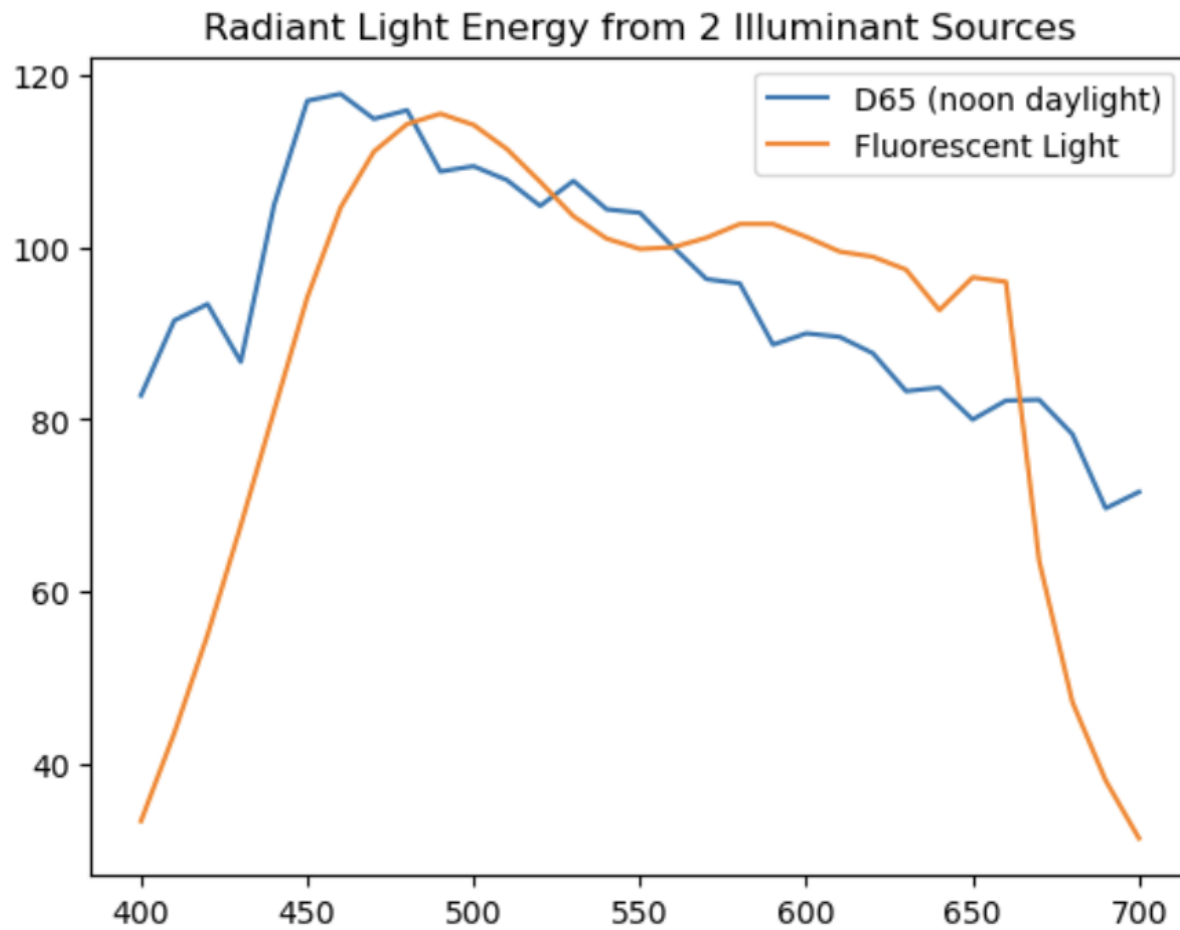
April 21, 2023

Section 2: Plotting Color Matching Functions and Illuminants**Deliverable 1: Plot of $x_0(\lambda)$, $y_0(\lambda)$, $z_0(\lambda)$ color matching functions****Deliverable 2: Plot of $l_0(\lambda)$, $m_0(\lambda)$, $s_0(\lambda)$ color matching functions**

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**Deliverable 3: Plot of the D_{65} and fluorescent illuminants**

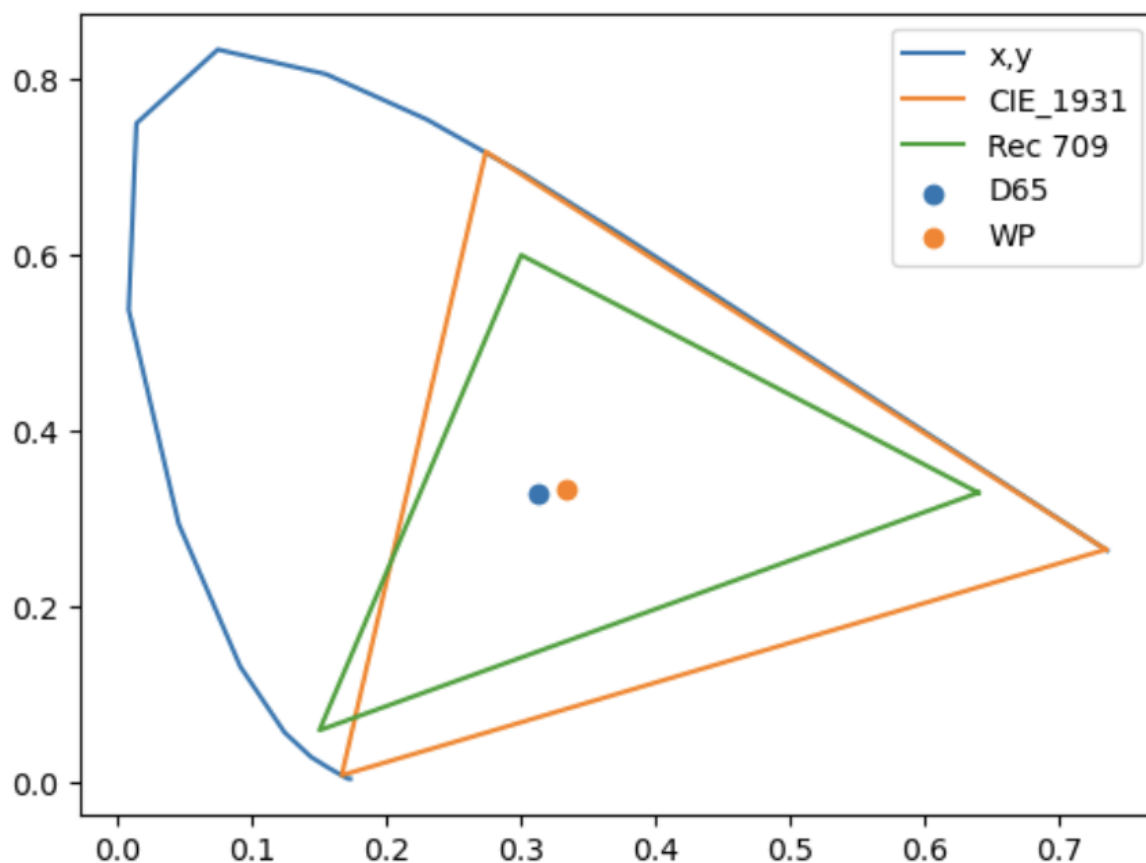
April 21, 2023



Section 3: Chromaticity Diagrams

Deliverable 1: Labeled Chromaticity Diagram

April 21, 2023



Section 4: Rendering and Image from Illuminant, Reflectance, and Color Matching Functions

Deliverable 1: Matrix M_{709_D65} :

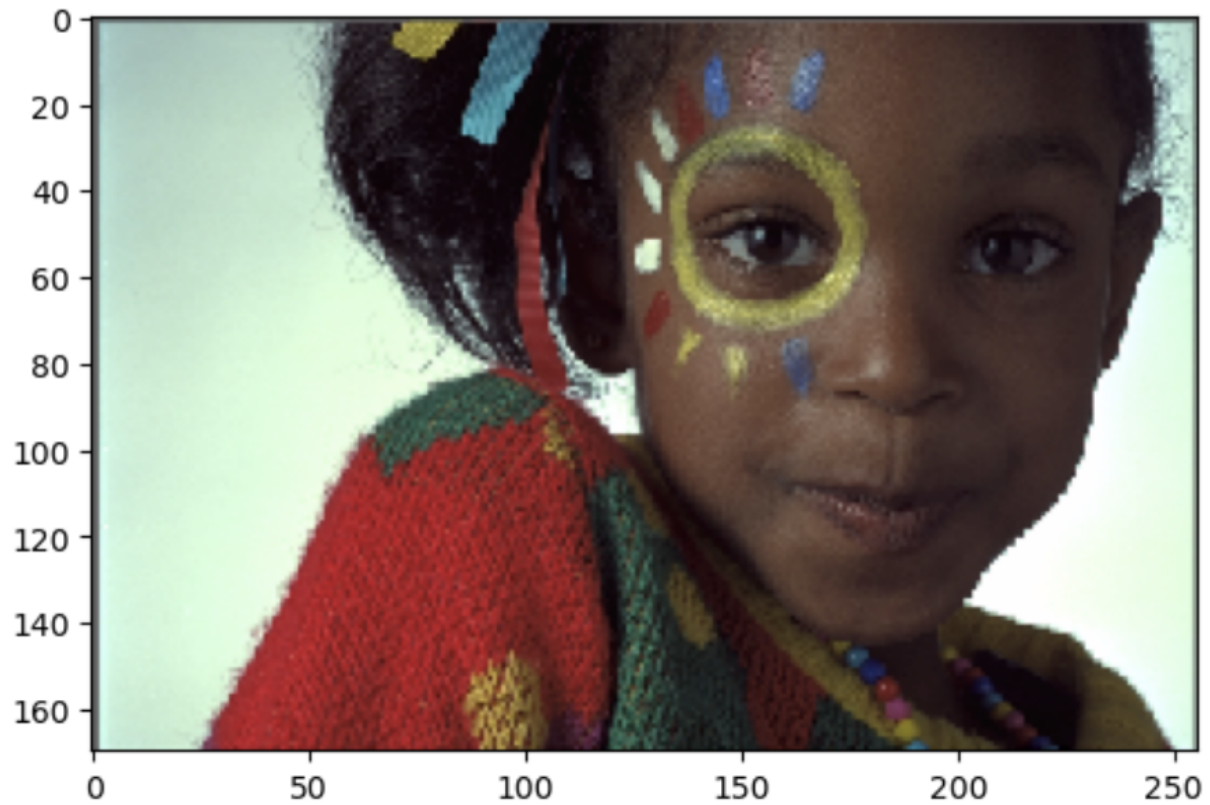
Transformation matrix to get from r, g, b to X, Y, Z : M

```
[[0.4123908  0.35758434 0.18048079]
 [0.21263901 0.71516868 0.07219232]
 [0.01933082 0.11919478 0.95053215]]
```

Deliverable 2: The 2 images obtained from D_{65} and the fluorescent light sources:

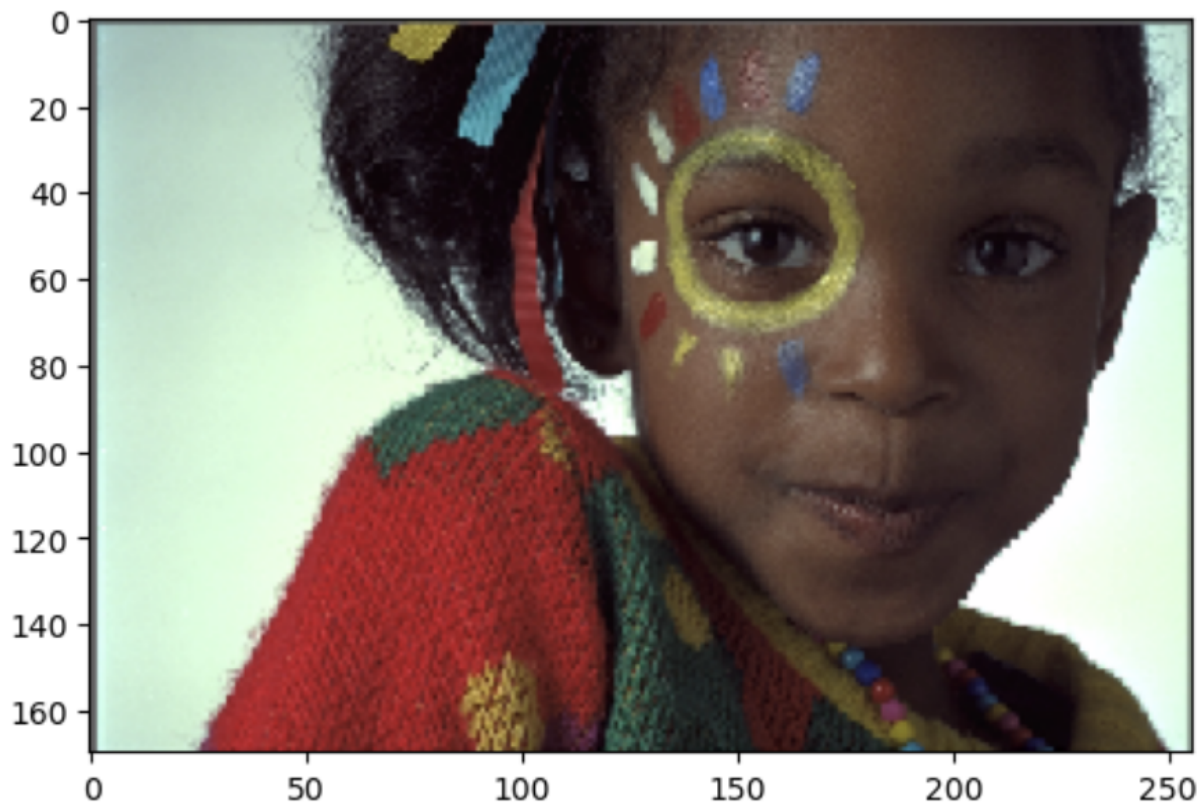
Rendering with D_{65} :

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Rendering with fluorescent light source:

April 21, 2023

**Deliverable 3: Qualitative Description of Differences between the two images:**

It is a very slight difference, but the fluorescent light source is slightly warmer and so the second image's background is slightly brighter.

Section 5: Color Chromaticity Diagram**Deliverable 1: Color Diagram**

April 21, 2023

