



# Color Imaging



# Describing Chromatic lights

- Radiance (watt):
  - » Total amount of energy flow from the light source.
- Luminance (lumens,  $lm$ ):
  - » measure of amount of energy an observer perceives from a light source. It varies based on distance from the source, wavelength, etc.
- Brightness:
  - » a subjective descriptor, describing color sensation.

# Primary Colors

- Primary colors of light (additive):
  - » Red (700 nm), 65% cones sensitive to red light.
  - » Green (546.1nm), 33%
  - » Blue(435.8nm). 2% cones sensitive to blue light.
- Mixing of R,G,B may NOT generate ALL visible colors.

