***CS148 Summer 2016 Reading Assignment***

***Light and Colors***

**Due: Tuesday 28th June, by 1:30 PM.**

**Please use “Reading 1 Reponses” as the email subject header and turn your responses at** [cs148.staff@gmail.com](mailto:cs148.staff@gmail.com)

Please read Chapter 20 & 21 of Shirley, and answer the following questions. As long as you are able to answer the questions, please don’t worry about any math you don’t understand (though you are encouraged to ask about it on Piazza).

1. What is the difference between *radiance* and *irradiance?*

2. Explain what a BRDF is and why it is important for graphics.

3. In the mathematical definition of luminance, why are the bounds of the integral 380nm to 800nm?

4. What is a steradian? Draw a picture if it helps.

5. A [FILL\_THIS\_BLANK] describes how much energy is available at each [FILL\_THIS\_BLANK] lambda.

6. Name 3 types of cones.

7. CIE has defined three primaries to be monochromatic light sources - what are those?

8. How long did it take for you to (a) read the material and (b) answer these questions?