Solutions to HW2 of PHYS 3038

3.13 $\mathrm{I} = 0.298\ \mathrm{W}/m^2$

3.23 $\mathrm{N} = 2.8\times10^{20}$

5.1 It's trivial.

5.12 $S_i = -13.3\ cm$ (from the thin lens equation or lensmakers' formula)

$M_T = 0.67.$ The image is virtual, erect, and smaller in size.

5.31 $S_i = 11f$, $M_T = -10$. The images of A and B have the same length of *1f*, and C stretches from *11f* to infinity.

5.47 Use the chief ray and the marginal ray to determine the image position.

Figure P.5.47