

26. Fig. 36-9 in the textbook is plotted versus the phase difference (in radians), whereas this problem requests that we plot the intensity versus the physical angle  $\theta$  (defined in Fig. 36-8). The values given in the problem imply  $d\lambda = 1000$ . Combining this with Eq. 36-22 and Eq. 36-21, we solve for the (normalized) intensity:

$$\frac{I}{4I_0} = \cos^2(1000\pi \sin \theta) .$$

This is plotted over  $0 \leq \theta \leq 0.0040$  rad:

