



WITH UNOBSTRUCTED WAVEFRONT PHASOR (CORRECT TERMINOLOGY?) RUNS FROM $(-0.5, -0.5)$ TO $(0.5, 0.5)$.

LENGTH: $\sqrt{2}$

WE WANT $\frac{1}{100}$ INTENSITY FACTOR $\Rightarrow \frac{1}{10}$ LENGTH FACTOR.

RUN FROM SOME w TO $(0.5, 0.5)$ TO HAVE LENGTH $\frac{\sqrt{2}}{10}$.

READING OFF: $w = 2.2$

$$w = x \sqrt{\frac{2}{\lambda R}}$$

$$x = w \sqrt{\frac{\lambda R}{2}}$$

$$R = \frac{1}{a} + \frac{1}{b} \rightarrow x = w \sqrt{\frac{\lambda}{2} \left(\frac{1}{a} + \frac{1}{b} \right)}$$

$$= 2.2 \sqrt{\frac{0.1}{2} \left(\frac{1}{50} + \frac{1}{950} \right)}$$

$$\frac{1}{R} = \frac{1}{a} + \frac{1}{b}$$

$$R = \frac{1}{\frac{1}{a} + \frac{1}{b}} = \frac{ab}{a+b}$$

$$x = w \sqrt{\frac{\lambda}{2} \frac{ab}{a+b}} = 2.2 \sqrt{\frac{0.1}{2} \frac{50 \cdot 950}{50+950}} \approx 3.4 \text{ m ABOVE ORIGIN}$$

$$\text{IE } (22-2) \cdot \frac{50}{1000} + 2 + 3.4 = 6.4 \text{ m ABOVE GROUND}$$