

section6_Ex.5

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5. The diameter of the blur circle for an on-axis point source image in seconds of arc for a spherical mirror is given by

$$\beta = \frac{206235}{128F^3}$$

Determine the focal ratio (F) that yields an image diameter of 1 arcsecond. (spherical aberration)

$$F = \left(\frac{202635}{128 \times 1 \text{ arcsec}} \right)^{\frac{1}{3}} = 11.74$$