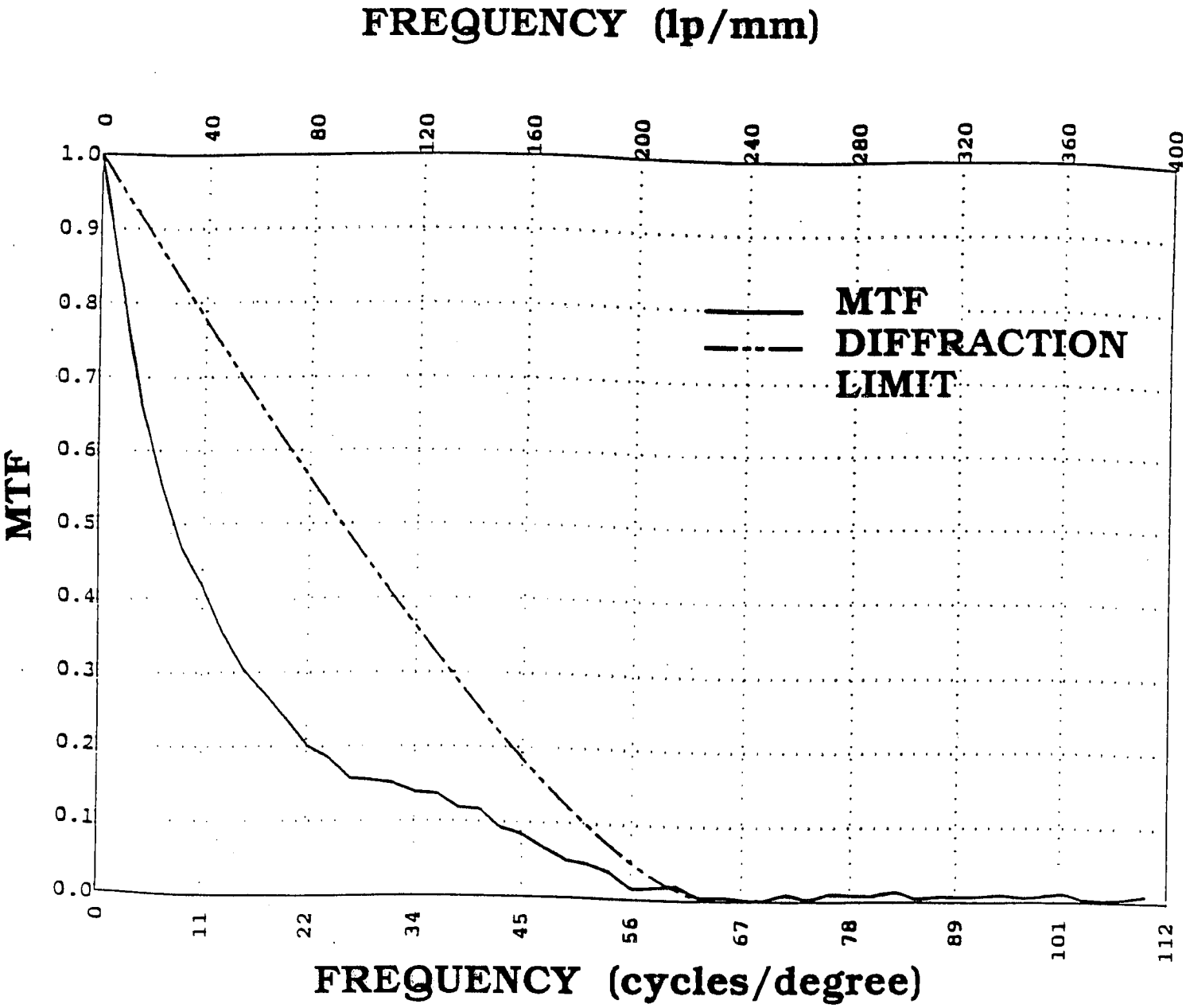
# MODULATION TRANSFER FUNCTION




**MONOFOCAL IOL**
**2 mm PUPIL DISTANCE FOCUS**

## APPENDIX A

## CALCULATION OF DIFFRACTION LIMIT AND SPATIAL FREQUENCY

The Diffraction Limit at 0 MTF is given by:

$$\frac{n_{aq}d}{f\lambda}=\nu_{co}$$

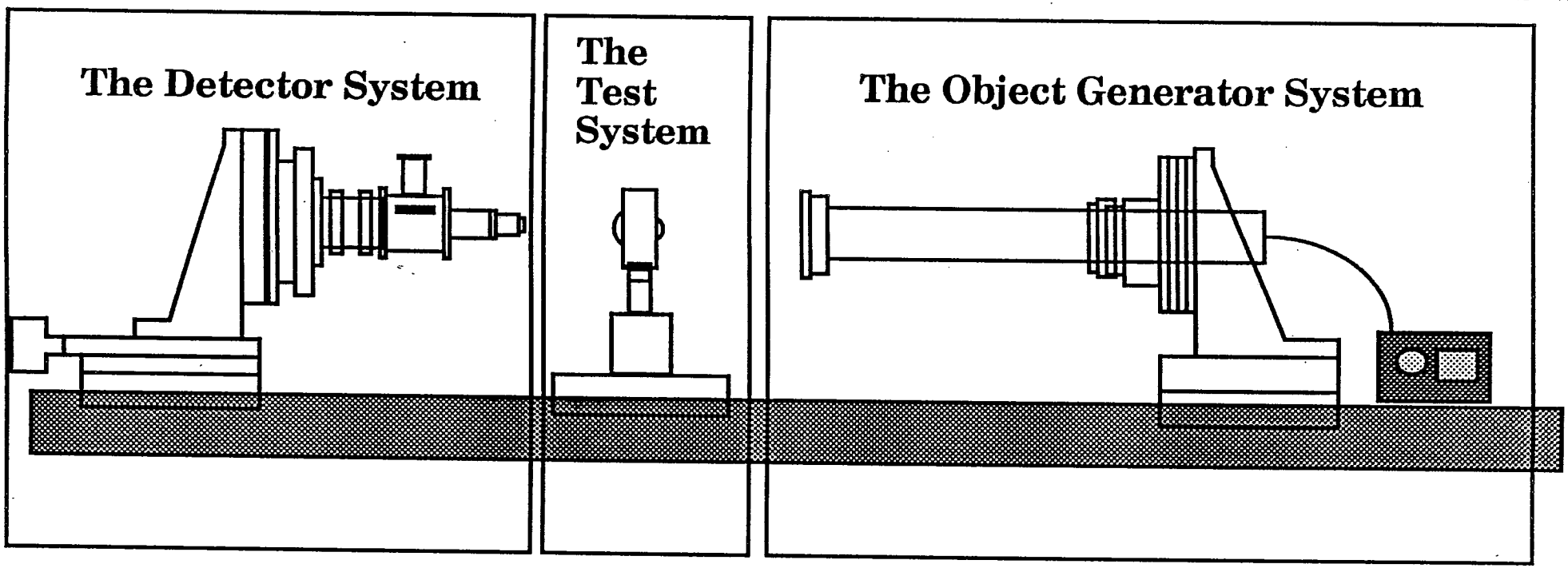
where:

$n_{aq}$ = Refractive Index of aqueous = 1.336

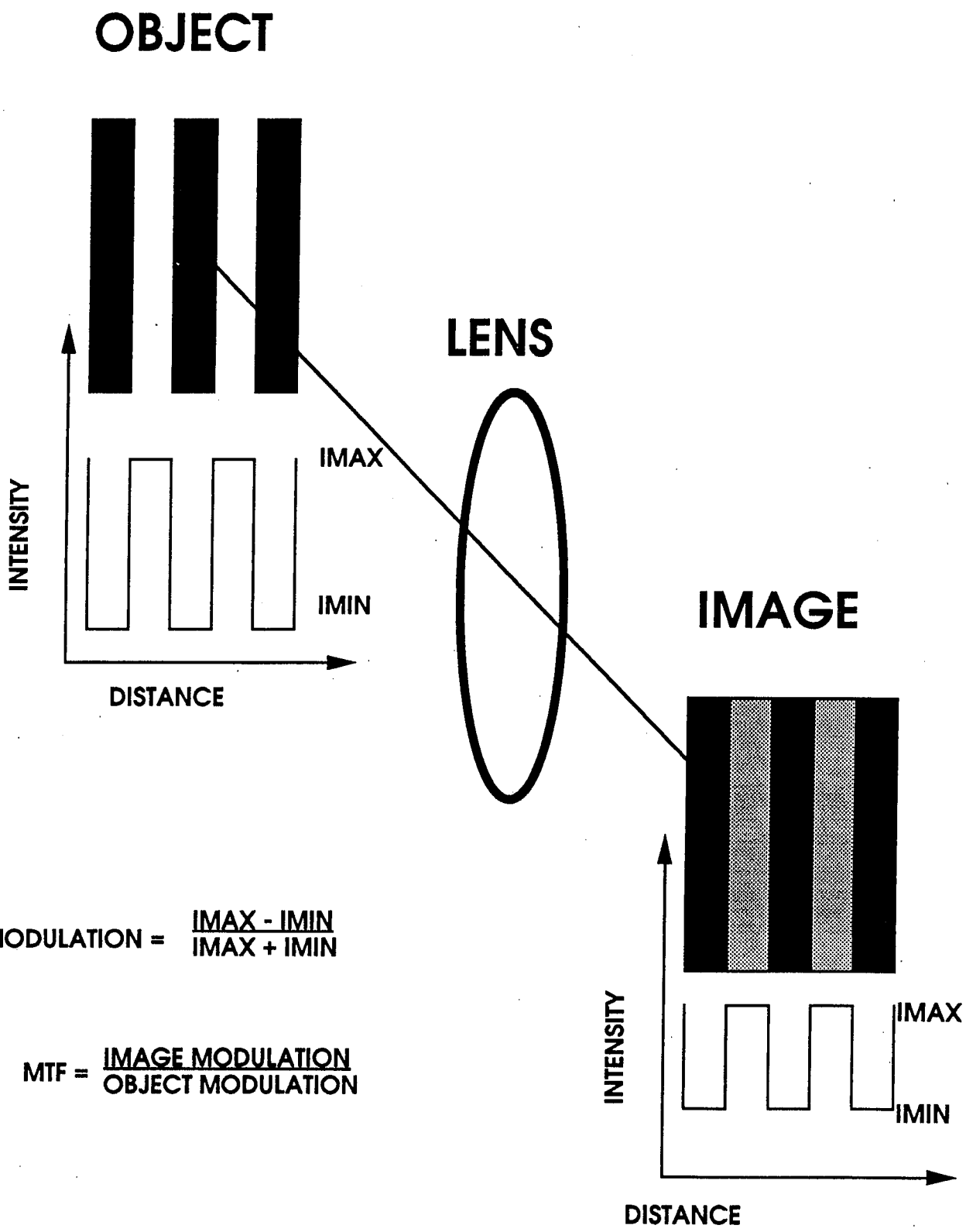
d = pupil size = 3 mm

$\lambda$ = wavelength of light = 0.000555 mm

f = focal length of the lens (system) under test


The Detector System
The Test System
The Object Generator System

# IMAGING AN IDEAL OBJECT THROUGH A REAL LENS




$$\text{MODULATION} = \frac{\text{IMAX} - \text{IMIN}}{\text{IMAX} + \text{IMIN}}$$

$$\text{MTF} = \frac{\text{IMAGE MODULATION}}{\text{OBJECT MODULATION}}$$

FIGURE 2. DIAGRAM OF IOLAB EYE MODEL TEST CELL

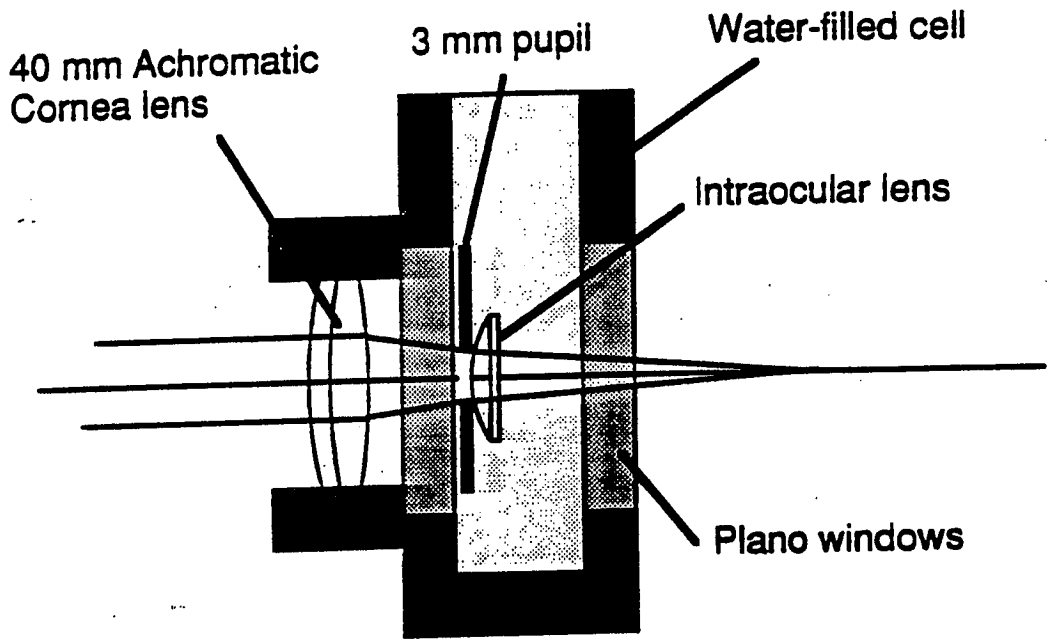
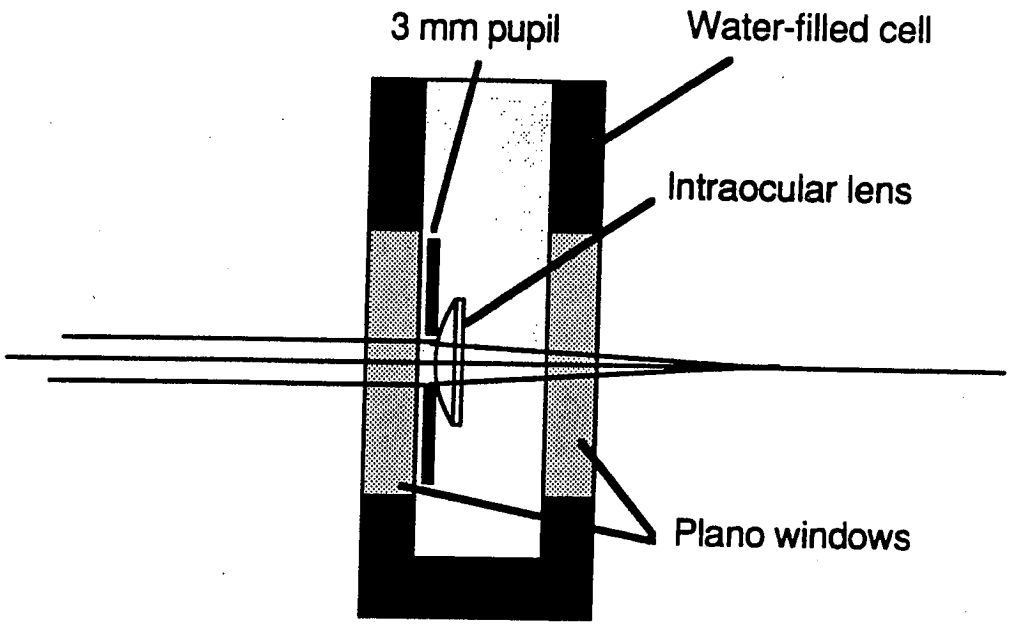
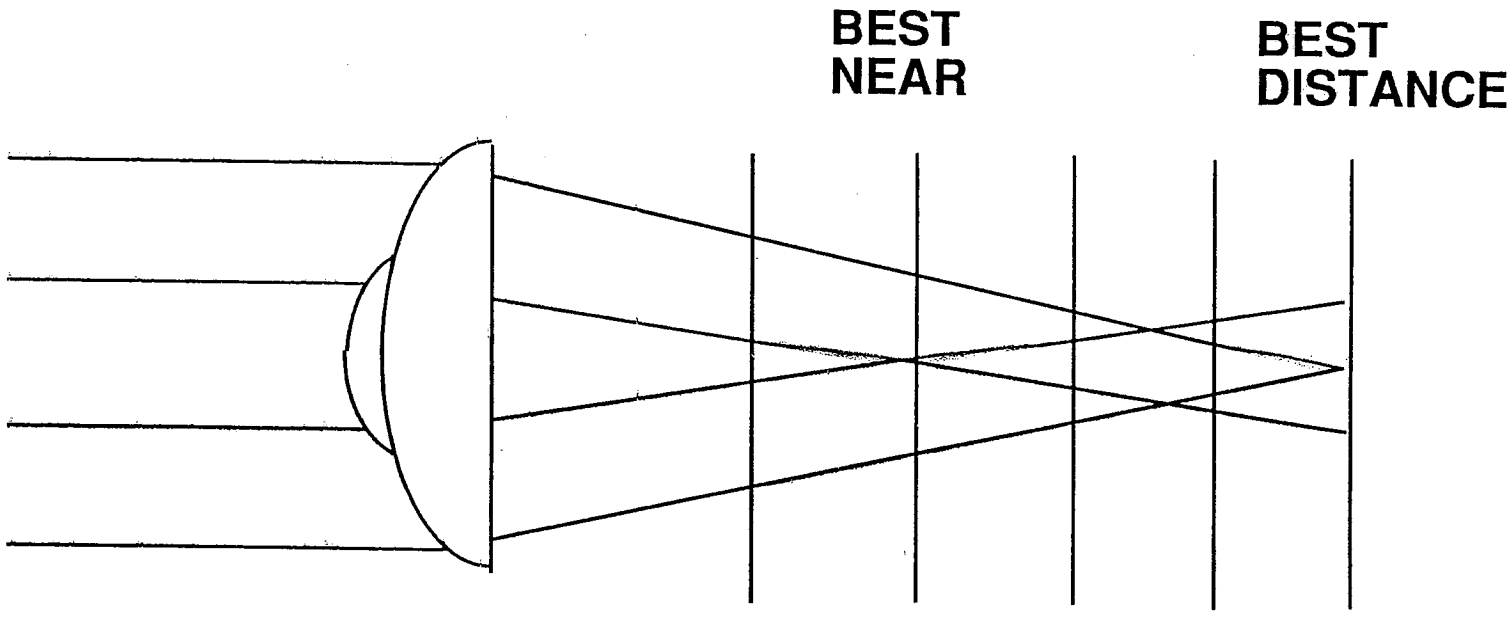


Figure 2

IOLAB EYE MODEL TEST CELL



# THROUGH FOCUS RESPONSE




MTF values at various points along the optical axis.

# THROUGH FOCUS RESPONSE