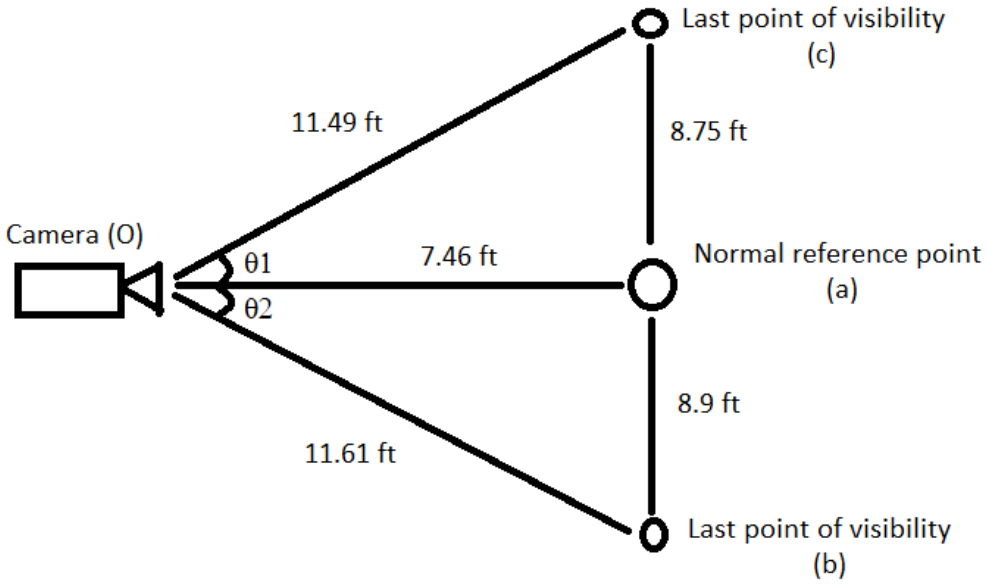
EXPERIMENT 1

Aim: To estimate the horizontal Field of View of the camera.

Point	Description	Distance (in ft)
a	Normal reference point	7.46
b	Last point of visibility (left)	8.9
c	Last point of visibility (right)	8.75



Calculation:

$$Sin\ \theta 1 = \frac{Opposite}{Hypotenuse}$$

$$= \frac{7.46}{11.61}$$

$$= \ 0.643$$

$$\theta 1 = \sin^{-1} 0.643$$

$$\theta 1 = 39.79^0$$

$$Sin\ \theta 2 = \frac{Opposite}{Hypotenuse}$$

$$= \frac{7.46}{11.49}$$

$$=0.649$$

$$\theta 2 = \sin^{-1} 0.649$$

$$\theta 2 = 40.54^0$$

$$\boldsymbol{Field\ of\ View} = \ \theta 1 + \theta 2$$

$$= 39.79^0 + 40.54^0$$

$$= 80.33^0$$

Normal Reference Point

Moving towards Left

Last point of visibility (Left)

Moving towards Right

Last point of visibility (Right)