Consider two stars with zenith distances $b = c = 45^o$. Suppose that their azimuths differ by $\alpha = 90^o$. Then the distance a between the stars is obtained by the cosine theorem:

$$\cos a = \cos b \cos c + \sin a \sin b \cos \alpha. \tag{1}$$

As $\cos b = \cos c = \sin b = \sin c = 1/\sqrt{2}$ and $\cos \alpha = 0$, we obtain $\cos a = 1/2$, so $a = 60^o$.

Now differentiate the formula (assuming $\cos \alpha = 0$):

$$(\sin a)da = (\sin b \cos c)db + (\cos b \sin c)dc,$$

Using (1) and refraction at 45^o from the almanach $db = dc = -0'.9$ we obtain

$$da = \sqrt{2}db = 1'.27.$$

while your rule gives $0.1 \times (60/5) = 1'.2$.

Another example: one star at 45^o, another at zenith. Refraction correction is the same $0'.9$, while $0'.1 \times (45/5) = 0'.9$.