$$
\begin{aligned}
m &= 6, \\
\\
\overline{\delta_{\min}} &= \frac{1}{m}\sum \delta_{\min} \\
&= \frac{1}{6}(38^\circ 36' + 38^\circ 36' + 38^\circ 37' + 38^\circ 55' + 38^\circ 57' + 38^\circ 56') \\
&= 38^\circ 46', \\
\\
S_\delta^2 &= \frac{1}{m-1}\sum (\overline{\delta_{\min}} - \delta_{\min})^2 \\
&= \frac{1}{5}(10'0''^2 + 10'0''^2 + 9'0''^2 + 9'0''^2 + 11'0''^2 + 10'0''^2) \\
&= \frac{1}{5}(0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2+) \\
&= 0.00001 \text{ rad}^2, \\
\\
S_{\overline{\delta}} &= \frac{S_\delta}{\sqrt{m}} \\
&= \sqrt{\frac{0.00001}{6}} \\
&= 0.001 \text{ rad}, \\
U_A &= t_{0.683} S_{\overline{\delta}} \\
&= 1.11 * 0.001 \\
&= 0.001 \text{ rad}, \\
U_B &= 1' \\
&= 0.0003 \text{ rad}, \\
U_\delta &= \sqrt{U_A^2 + U_B^2} \\
&= \sqrt{0.001^2 + 0.0003^2} \\
&= 0.001 \text{ rad},
\end{aligned}
$$

$$
\begin{aligned}
U_{\overline{n}} &= \frac{\partial n}{\partial \delta} U_\delta \\
&= \frac{\cos \frac{1}{2}(\alpha + \overline{\delta_{\min}})}{2 \sin \frac{\alpha}{2}} U_\delta \\
&= 0.001 \cos \frac{60^\circ + 38^\circ 46'}{2} \\
&= 0.001 \text{ rad},
\end{aligned}
$$

$$
\begin{aligned}
\overline{n} &= \frac{\sin \frac{1}{2}(\alpha + \overline{\delta_{\min}})}{\sin \frac{\alpha}{2}} \\
&= 2 \sin \frac{60^\circ + 38^\circ 46'}{2} \\
&= 1.518,
\end{aligned}
$$

$$
\begin{aligned}
n = \quad & \overline{n} \pm U_{\overline{n}} \\
& 1.518 \pm 0.001.
\end{aligned}
$$