The solar corona is a highly-structured plasma which reaches temperatures of more than \( \sim 2 \text{MK} \). At low radio frequencies (\( \leq 400 \text{ MHz} \)), scattering and refraction of electromagnetic waves are thought to broaden sources to several arcminutes. However, exactly how source size relates to scattering due to turbulence is still subject to investigation. This is mainly due to the lack of high spatial resolution observations of the solar corona at low frequencies. Here, we use the LOw Frequency ARray (LOFAR) to observe the solar corona at 120-180 MHz using baselines of up to \( \sim 3.5 \text{ km (\~1--2')} \) during a partial solar eclipse of 2015 March 20. We use a lunar de-occultation technique to achieve higher spatial resolution than that attainable via traditional interferometric imaging. This provides a means of studying source sizes in the corona that are smaller than the angular width of the interferometric point spread function.