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A unidirectional (UD) glass fibre reinforced polymer (GFRP) composite was scanned at varying resolutions in the microscale with several imaging modalities. All six scans capture the same region of the sample, containing well-aligned fibres inside a UD load-carrying bundle. Two scans of the cross-sectional surface of the bundle were acquired at a high resolution, by means of scanning electron microscopy (SEM) and optical microscopy (OM), and four volumetric scans were acquired through X-ray computed tomography (CT) at different resolutions. Individual fibres can be resolved from these scans to investigate the micro-structure of the UD bundle. The data is hosted at https://doi.org/10.5281/zenodo.1195879 and it was used in [1] to demonstrate that precise and representative characterisations of fibre geometry are possible with relatively low X-ray CT resolutions if the analysis method is robust to image quality.

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