

Figure S1: Comparing the normalised duration of short and long flights.

A: Distance from nest plotted against flight duration for an individual's long LN1. B: Same flight with distance from nest plotted against normalised flight duration. C and D. Similar plots to A and B for an individual's shorter LF1.

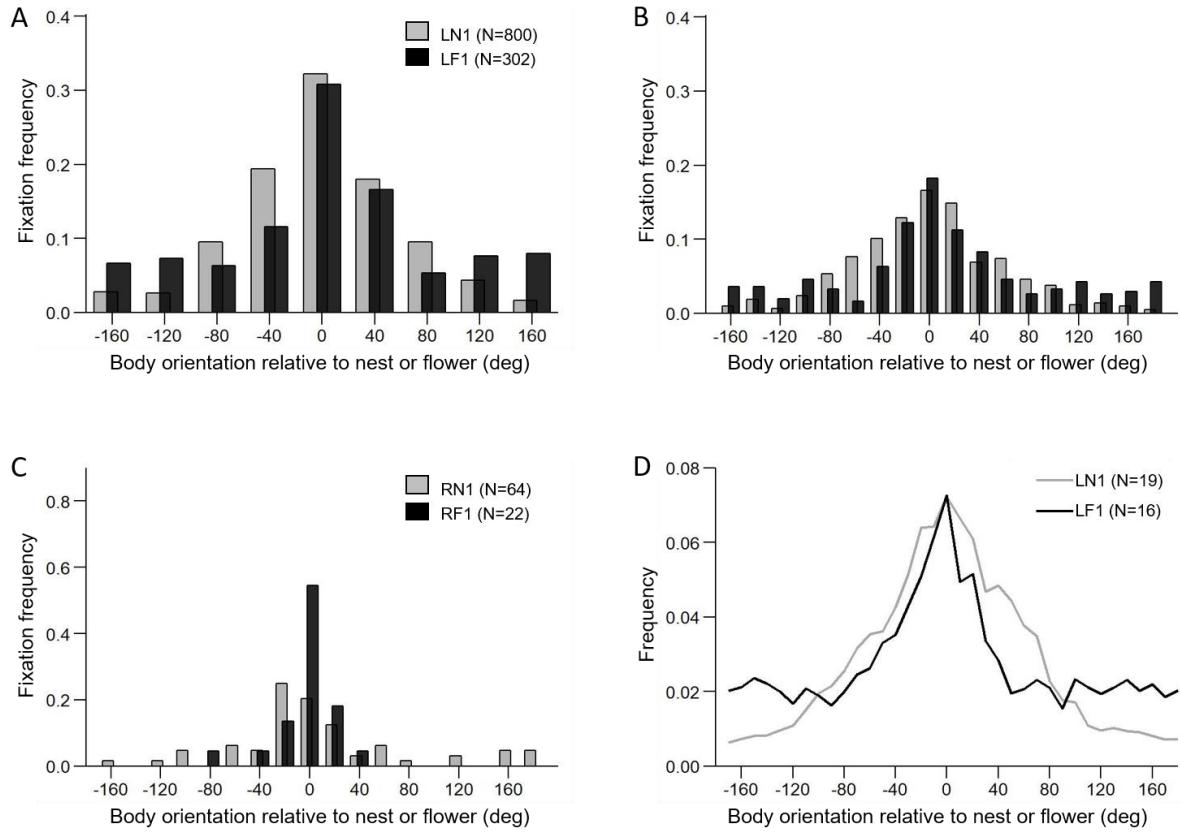


Figure S2: Data of Figure 4 shown with smaller bin size.

Frequency of fixations relative to nest and flower during LN1 and LF1, A: bins $\pm 20^\circ$, B: bins $\pm 10^\circ$. C: Frequency of fixations relative to nest and flower during RN1 and RF1, bins $\pm 10^\circ$. D: Bees' body orientation relative to the nest or flower during LN1 and LF1, bins $\pm 5^\circ$.

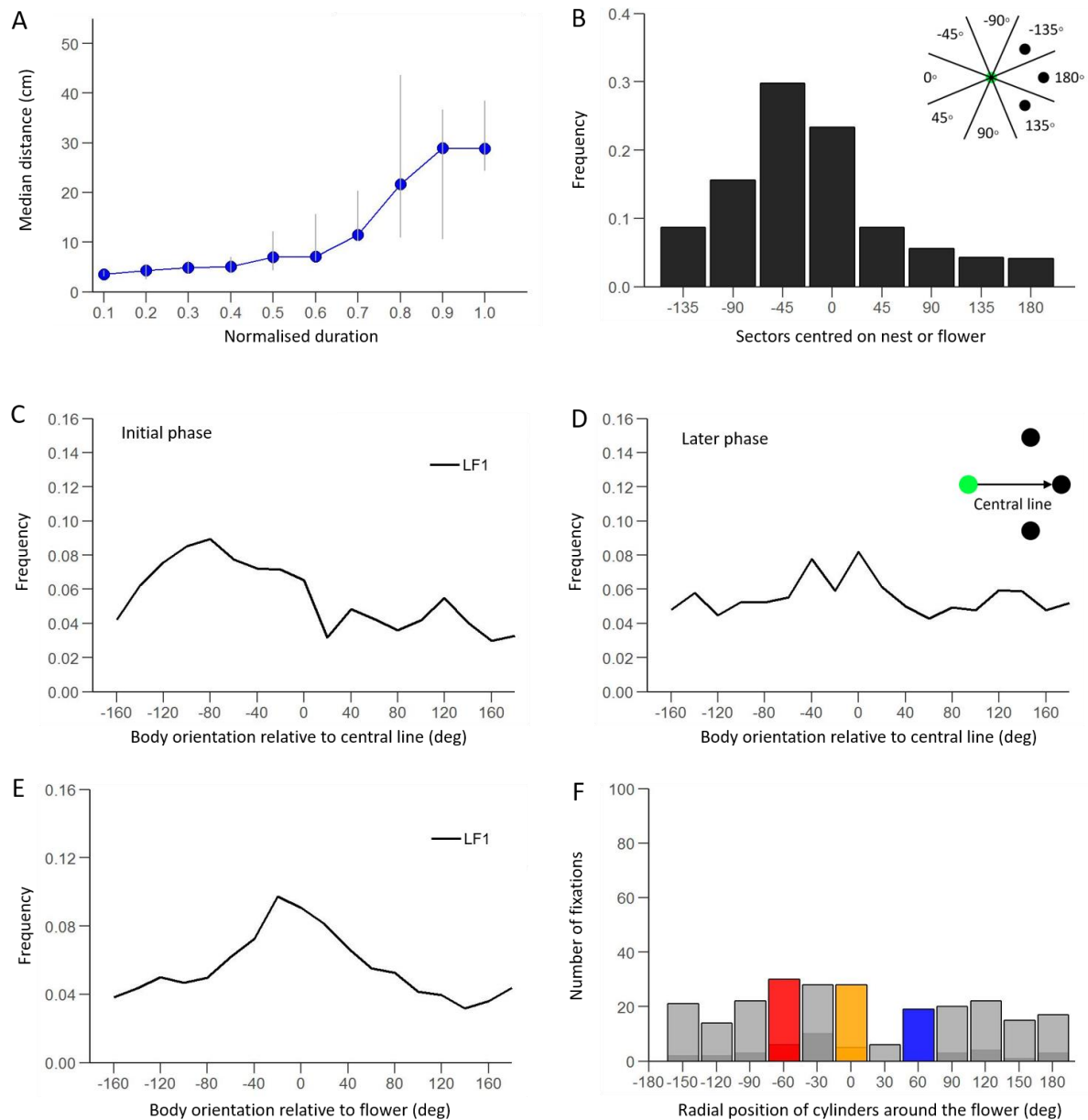
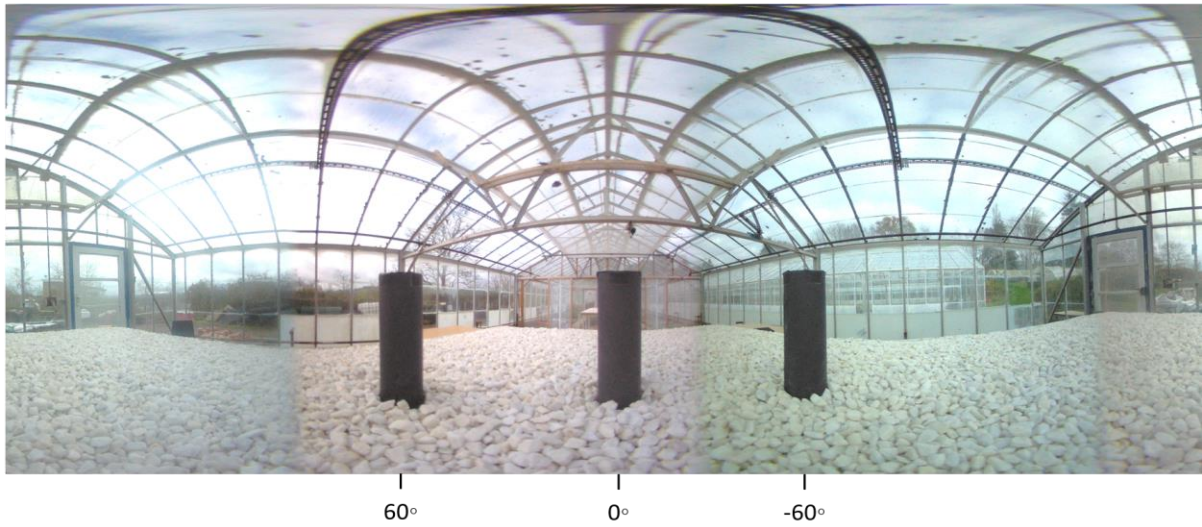


Figure S3: Properties of LF1 in control experiment with no cylinders and no ring at nest table and three cylinders and ring at flower table.

A: Bees' distance from flower plotted against normalised time. Median duration of LF1 5.9 s, 5.46 IQR, $n = 17$. B: Bees' positions relative to flower during LF1 in different radial sectors centred on the flower (cf. Figure 3D). Mean angular position of LF1 is -36.12° (vector amplitude (ρ): 0.49). C: Frequency distribution of the bees' body orientation relative to the central line of the array (see inset) for the initial phase of LF1 (cf. Figure 3E). Bin width is $\pm 10^\circ$. D: As C for the later phase of LF1. E: Bees' body orientation relative to flower (cf. Figure 4A). F: Number of cylinder fixations towards real and virtual cylinders (cf Figure 5B).

A



B

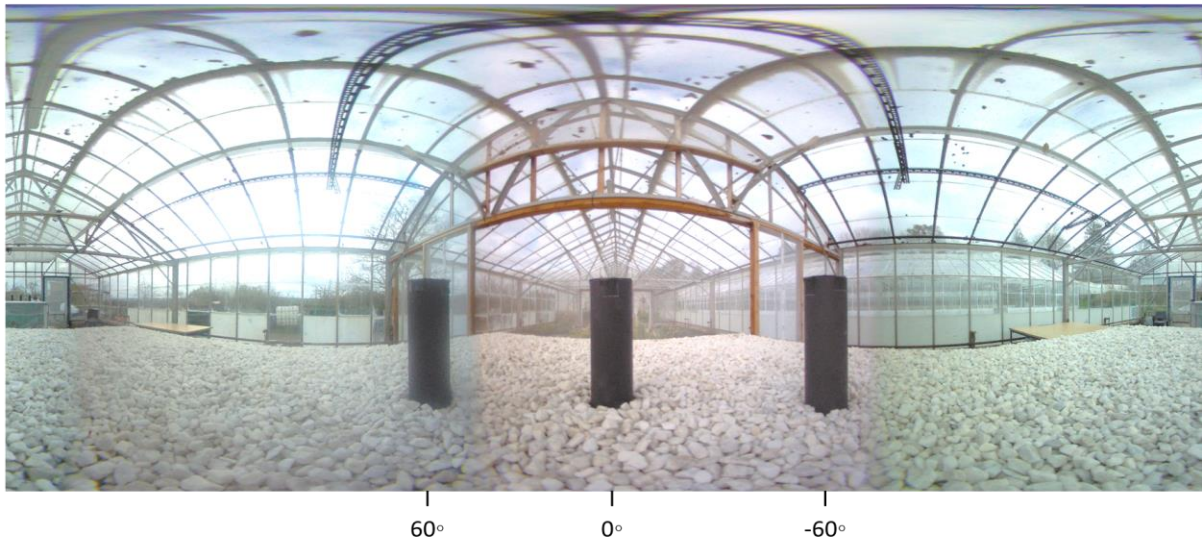


Figure S4: Panorama within greenhouse viewed from nest and flower centred on the cylinder array.

A: nest B: flower. Viewpoint of camera was 14 cm above the tables. Pictures were taken with a Giroptic 360cam panoramic camera.