Supplementary material: Polariton condensation in $S$- and $P$-flatbands in a two-dimensional Lieb lattice

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Figure S1. (a)-(d) Photoluminescence measurement showing the lower polariton branch on the planar microcavity sample for increasingly negative detuning (a) δ = +0.76 meV, (b) δ = -8.89 meV, (c) δ = -16.46 meV, and (d) δ = -24.36 meV, respectively. The lower polariton branch shows the typical decrease of effective mass, due to an increasing photonic fraction. (e) White light reflectivity measurements as a function of radial position (detuning). Upper and lower polariton show the typical anti-crossing behavior with a Rabi splitting of 2ℏΩ_R = 9.5 meV.
Figure S2. (a), (c) $P$-flatband dispersion for the lattice with diameter $d=3.0 \mu m$ at an excitation power of $1.25 P_{th}$. At around $3.13 P_{th}$ a weak signature of a $S$-flatband becomes visible. (b), (d) $S$-flatband dispersion for the lattice with diameter $d=2.5 \mu m$ at an excitation power of $1.13 P_{th}$. At around $1.50 P_{th}$ a weak signature of a $P$-flatband becomes visible.