The $^{31}(\gamma,p)^{30}\text{Si}$ reaction was studied at seven angles for nine bremsstrahlung end point energies varying from 17 to 25 MeV in 1 MeV steps. Absolute $(\gamma,p_0)$ and $(\gamma,p_1)$ angular cross sections for $^{31}\text{P}$ in the excitation energy interval between 14.6 and 25 MeV were extracted and angular distribution factors were deduced by fitting a sum of Legendre polynomials to the data. Absolute cross sections for various other photoproton reaction channels were determined using an artificially constructed pseudo-monoenergetic photon spectrum. The total $(\gamma,p)$ cross section was evaluated up to 24 MeV excitation energy. About 53% of this cross section is due to a direct-semidirect reaction mechanism. The angular distribution factors in the $(\gamma,p_0)$ channel were used to estimate the contribution of $E2$ photon absorption in this channel. It was found that between 48% and 63% of the isoscalar $E2$ energy-weighted sum rule is exhausted by this $(\gamma,p_0)$ channel.