Hydroxymethylene (HCOH) and the d1-isotopologue (HCOD) are isolated in low temperature helium nanodroplets through pyrolysis of glyoxylic acid. Transitions measured in the infrared spectra are assigned exclusively to the trans-conformation based on previously reported anharmonic frequency calculations (P. R. Schreiner, et. al. Nature 453, 906-909 and L. Kuziol, et. al. J. Chem. Phys. 128, 204310). For the OH(D) and CH stretches, a- and b-type lines are observed, and when taken in conjunction with CCSD(T)/cc-pVTZ computations, lower limits to the vibrational band origins are determined. The relative intensities of the a- and b-type transitions provide the orientation of the transition dipole moment in the inertial frame. Overall, the He nanodroplet data is in excellent agreement with the anharmonic frequency computations, confirming the appreciable Ar-matrix shift of the OH and OD stretches and a Fermi resonance interaction in HCOH between the $\nu_2$ CH stretch and the $\nu_3+\nu_4$ combination band.