In superstring theory, " p-branes" are higher dimensional generalizations of black holes. Usually p-brane spacetimes are asymptotically flat, i.e. their gravitational potentials vanish at radial infinity. In this presentation, we will explore the null geodesics (trajectories of light beams) of a non-asymptotically flat 2-brane in five dimensional string theory. We find that this 2-brane splits space into two distinct regions, one dynamically ups ide-down with respect to the other. The effective potential method is used to illustrate this unusual property. We will explore the equations of motion, circular orbits, and the brane's curvature. All of these will be used to analyze relevant geodesics and interpret the properties of this brane.