Step 1 To render using mental ray's global illumination requires several steps to setup properly. First, open the Render Settings Option box (A) and click on the Common tab. Scroll to the bottom of this tab, open the Render Options section and un-check the Enable Default Lights(B)..



Step 2 Next, select the Quality tab (A) and select the Preview: Global Illumination option under the Quality Preset drop down (B).



Step 3 If you switch to the Indirect Lighting tab (A), Global Illumination option should be set (B).



Step 4 Global Illumination requires that at least one light emits "photons" in a scene. In this scene, an area light has been selected in the Outliner (A). Notice that the light has no intensity (it can) and that under the mental ray > Caustic and Global Illumination section, "Emit Photons" has been selected.

