Case 1. One or more dark corners

Image Circle = Sensor Diagonal
The lens image circle is equal to the diagonal of the effective area of the image sensor. Because the lens image circle does not have a sufficient tolerance, even a slight misalignment of the sensor, mount and lens will cause one or more dark corners.

Case 2. No dark corners

Image Circle > Sensor Diagonal
The lens image circle was designed to be slightly larger than the diagonal of the effective area of the image sensor. This image circle tolerance allows for slight misalignment of the sensor, mount and lens typical in camera manufacturing.