An attempt was made to produce thin films of vanadium oxide by evaporating V_2O_5 in vacuum using molybdenum boats. It was found that the films contained a large amount of molybdenum (atomic ratio of Mo:V > 1). The films were chemically inhomogeneous along the direction of growth. However, a study of the optical properties of the films revealed that they were optically homogeneous. The films went through a semiconductor-to-metal phase transition at a temperature of about 200 ^{o}C. Annealing the films in vacuum resulted in an increase in their electrical conductivity, refractive index and band gap.