An investment account earns an annual interest rate \( R \) that follows a uniform distribution on the interval \( (0.04, 0.08) \). The value of a 10,000 initial investment in this account after one year is given by \( V = 10,000 e^R \).

Determine the cumulative distribution function, \( F(v) \), of \( V \) for values of \( v \) that satisfy \( 0 < F(v) < 1 \).

(A) \( \frac{4}{y^2} \)

(B) \( \frac{8}{y^{3/2}} \)

(C) \( \frac{8}{y^3} \)

(D) \( \frac{16}{y} \)

(E) \( \frac{1024}{y^5} \)