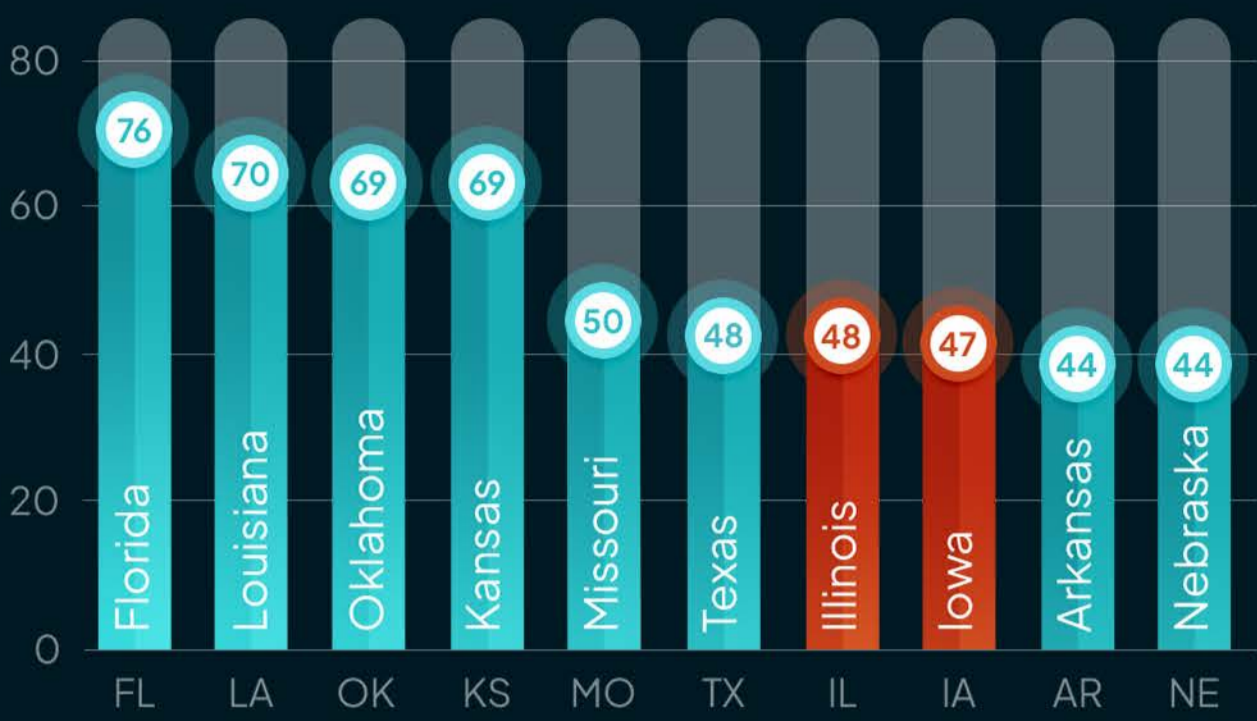


2024

# AEM's Lightning Report Delivers a Shock

Illinois & Iowa remarkably join the top 10 states with the most lightning activity

## Where lightning strikes the most (per square mile)



Lightning density rounded to the nearest whole number.

## Illinois & Iowa had exceptionally turbulent storm seasons



In 2024, Midwestern states experienced the kind of lightning activity normally reserved for the nation's storm belt.

This unusual shift may signal long-term changes in U.S. severe weather patterns.

### ILLINOIS

Total 2024 Lightning: **2,647,979**  
 Peak lightning day: **July 19**  
 Total Peak Lightning: **214,940**

### IOWA

Total 2024 Lightning: **2,600,612**  
 Peak lightning day: **May 21**  
 Total Peak Lightning: **286,149**

## Total U.S. lightning flashes

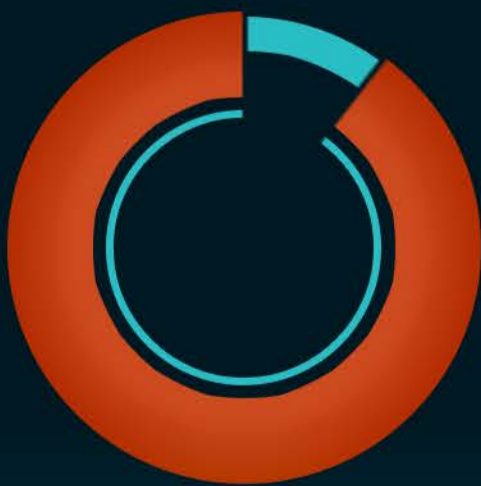


**80,460,298**

**74%**  
 In-cloud flashes

**26%**  
 Cloud-to-ground flashes

## Total U.S. lightning pulses



**459,763,208**

**90%**  
 In-cloud pulses

**10%**  
 Cloud-to-ground pulses

### Lightning pulses:

Surges of electric current in lightning, usually accompanied by bursts of light.

### Lightning flashes:

Collections of pulses close in space and time that approximate the continuous ionized channels of complete lightning bolts.

### In-cloud lightning:

A type of lightning that occurs between opposite electrical charges in a cloud without reaching the ground.

### Cloud-to-ground lightning:

Lightning that travels from a cloud to the ground, often the most visible type of lightning.

### Total lightning:

The combination of in-cloud and cloud-to-ground lightning.