

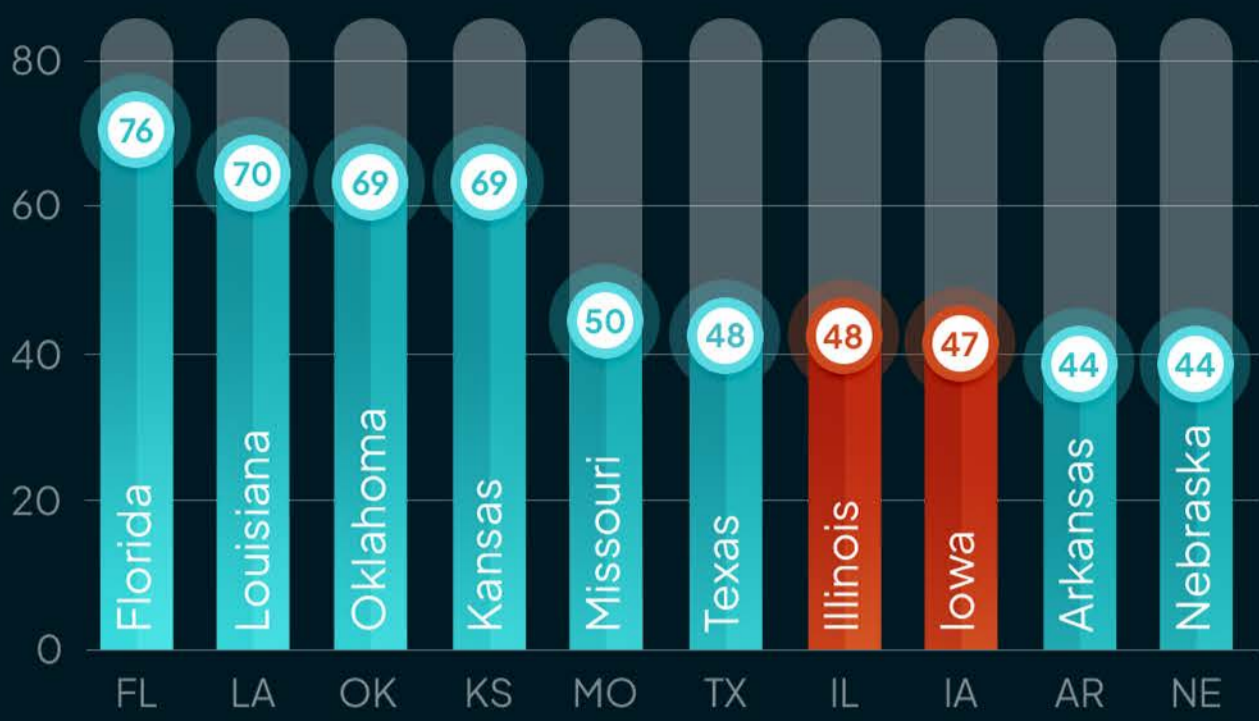
2024

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

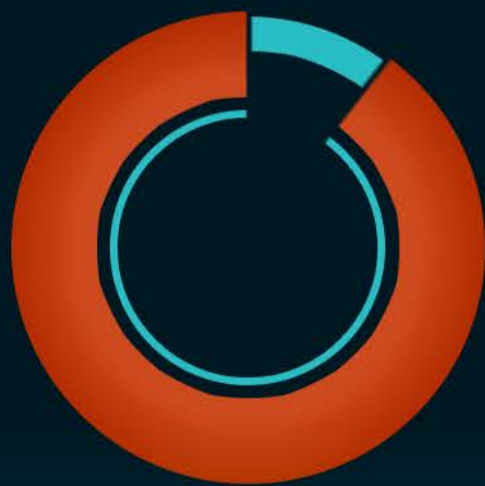
74%

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.