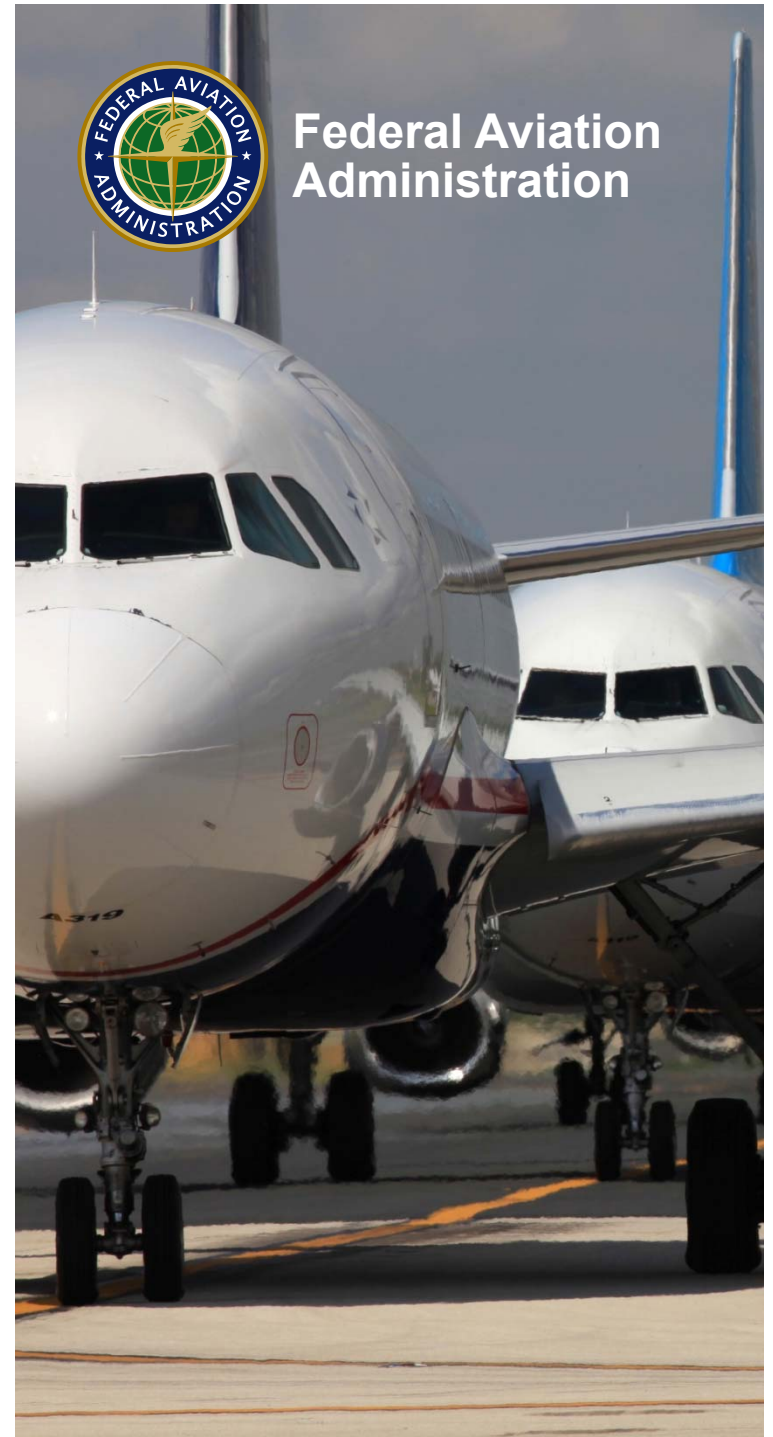


LED Lighting Airport Safety Database Query

October 24, 2016

Presented by: **Donald W. Gallagher**

Presented to: **IESALC**



Airport Safety Database Query:

Light Emitting Diode (LED) Issues



Previous

→ 2014 Pilot survey

- “The lights are so bright it floods the cockpit and blinds the Crew making it impossible to see beyond the lights right in front of you.”
- “Green LED taxi lighting [is] extremely bright causing windscreen visibility problem.”

→ 656 survey responses: **65% Negative**, 30% Positive

→ Actual questions asked not known and results have not been released at this time.

Purpose

- ➔ Because the results of this survey are not available and because mainly **anecdotal remarks** have been made at **various venues** concerning LEDs we decided to perform a query of available databases relating to **Safety**.
- ➔ In **March 2016**, the FAA's Airport Safety R&D section conducted a search of the FAA Safety Database to determine if **reports** could be found **regarding LEDs and/or brightness issues at airports**.



Purpose

- ➔ The database sources used included:
 1. National Aeronautics and Space Administration (**NASA**) Aviation Safety Reporting System (**ASRS**)
 2. National Transportation Safety Board's (**NTSB**) Aviation Accident and Incident Data System
 3. FAA Accident and Incident Data Systems (**AIDS**).

- ➔ The time period studied was **October 1, 2005 through February, 2016**.



Results

➔ In total, **88,056 reports** occurring between **October, 2005** and **February, 2016** were searched for issues related to LEDs.

Data Source	Total Reports	Most Recent Data Available	Total Reports Found
ASRS	55459	JAN-16	20
NTSB	18353	25-FEB-16	1
AIDS	14244	20-FEB-16	1
Total	88056	N/A	22

Summary

- ➔ Of these reports, **22** mentioned concerns about **LED lighting, excessive brightness of lights, or other similar lighting issues**. **2014** was the peak year for reports regarding LED lighting, with **seven reports**. Calendar year **2015** had fewer than half the number of reports concerning airport lighting issues.

Year	# Reports Found
2006	3
2007	2
2008	0
2009	1
2010	0
2011	2
2012	1
2013	1
2014	7
2015	3
2016 (Jan.)	0



Conclusion of Database Search

- ➔ The number of reports and incidents of LED lighting issues have been low in number to date; however, the FAA will continue tracking this issue to ensure safety is maintained going forward.
- ➔ Although the number from this effort, is small, we still consider them important and are analyzing the reports to determine what action, if any, is needed.



Questions or Comments?

Donald.Gallagher@faa.gov

**William J. Hughes Technical Center
Airport Safety Technology R&D Section
ANG-E261, Building 296
Atlantic City International Airport, NJ 08405
www.airporttech.tc.faa.gov**

