

Elite Airport Lighting Equipment Certification Program

IESALC Government Contacts Subcommittee
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Program Administrator



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Information about Elite



Elite Electronic Engineering, Inc.

Providing electromagnetic compatibility (EMC) and environmental (ENV) stress testing services since 1954



- Family-owned business with 80 employees
- 75,000 ft² campus in Downers Grove, IL
- Administrative, Testing, Certification, and full machine shop on campus
- ISO 17025 Testing Accreditation
- ISO 17065 Certification Body Accreditation



History

- **69 years as an Independent Testing Laboratory**
 - 69 years in EMC / Electrical Testing
 - 47 years in Environmental / Mechanical Testing
 - 6 years in Photometric Testing
- **23 years as a Certification Body**
 - FCC/ISED/EU since 2000 for telecommunications
 - FAA since 2020 for airport light equipment
- **ISO 17025 and 17065 Accreditations from A2LA and NVLAP**
- **Active in industry organizations and standards committees**
 - IESALC Fall Conference Exhibitor since 2015
 - IES Testing Procedures Committee
 - SAE Emergency Warning Lights Committee
 - IEEE, MIL-STD, RTCA, CISPR, CTIA, etc.

Photometric Capabilities

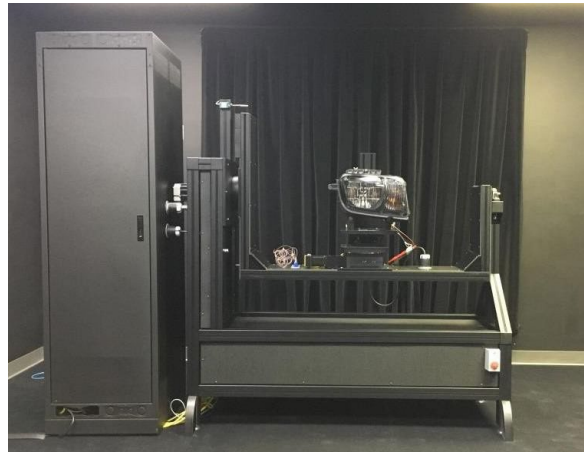
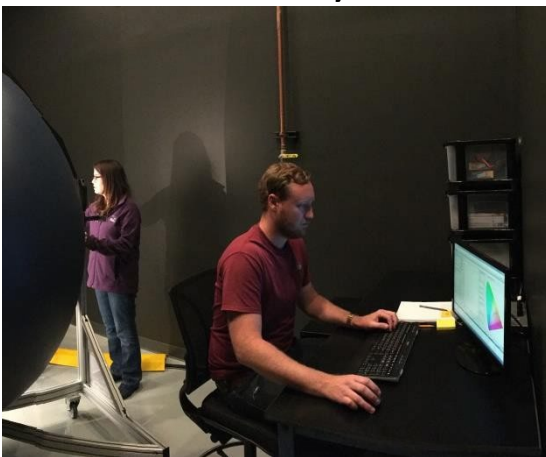
Full-service test and certification facility for aviation, automotive, military, electronics, and heavy equipment industries

Photometric Capabilities

- Luminous Flux (lumen)
- Luminous Intensity (Cd)
- Effective Intensity (Cd)
- NIR Radiant Intensity (W/sr)
- Chromaticity / Color

Key Equipment

- Type A Goniometer / 64 ft Distance
- 2-meter Integrating Sphere
- Portable Spectroradiometers
- Steady / Flashing Measurements



Third Party Certification Body Roles

- **Per 150/5345-53D, All Third-Party Certification Bodies:**
 - Are accepted by the FAA to certify all L-types
 - Issue initial and revised Certificate of Conformance
 - Approve test plans and ensure test locations follow ISO17025
 - Evaluate equipment per -53D and respective Advisory Circulars
 - Ensure manufacturers maintain a suitable quality control program
 - Reviews modifications to equipment
 - Notify FAA of new and rescinded certificates

Evaluate Equipment

- **Meant to verify all design requirements from the applicable Advisory Circulars and Engineering Briefs are being met**
- **Accomplished by:**
 - Visual Examination
 - Testing
 - Demonstration
 - Drawing analysis

Evaluate Equipment - Testing

- **Pre-compliance testing**

- Highly encouraged to prevent surprises during qualification testing
 - Can be done at internal facility
 - Can be used to correlate internal and third-party lab results
 - Provides a foundation of understanding of the requirements of the Advisory Circulars
 - Share results and design intent with the third-party certifier in order to minimize risk of failure during qualification testing
 - Any pre-compliance test data applied towards qualification starts the clock on the certificate – when testing is done under third-party certifier oversight
- Prevent costly test delays or late design changes

Evaluate Equipment - Testing

- **Qualification testing**

- Completed at third-party certifier's laboratory
- Completed at manufacture's facility*
- Completed at an independent laboratory *

*Third-party certifier reserves the right to witness testing and facility must conform to ISO-17025 standards. If witnessing is waived, certified test reports must be submitted to the third-party certifier.

FAA AC 150/5345-53d, Appendix 2, Para. 5.c.i.

Certification Process General Observations



- **Opportunities for cost savings**
 - Many products require the same qualification tests (temperature, rain, salt, etc.), time and money can be saved by running together
 - Any differences in ICAO Annex 14/TP Canada/MOS139 testing could be completed with fewer set ups
- **Opportunities for time savings**
 - Submit complete drawing packages required for design and certification reviews
 - Timely submission of complete quality management system documents submitted
 - Other certifications combined with FAA testing

Current Program Statistics

- **Accepted by FAA in August 2020**
- **3 Licensed Manufacturing Facilities**
 - (3 Pending)
- **0 Certificate Issued Since Fall Meeting**
 - (3 Pending)

Key ALECP Personnel at Elite



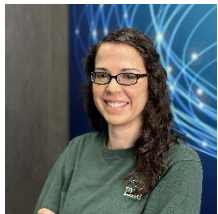
Certification Staff



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Sr. Mechanical Engineer



Mark Gabalewicz
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Sr. Mechanical Engineer



Jessica Kramer
Certification Specialist
Photometric Engineer

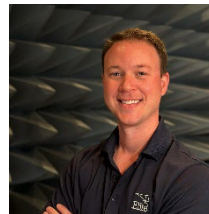


Technical Sales

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Project Engineer
FAA Technical Sales Lead



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For follow up questions

<https://www.elitetest.com/>

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