



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

GROTE INDUSTRIES LLC
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Madison, IN 47250
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MECHANICAL

Valid To: November 30, 2027

Certificate Number: 5396.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on incandescent light assemblies, LED light assemblies, wiring harness assemblies, strobe lights, para-distribution modules, plastic, polycarbonate, acrylic, PC/ABS, chrome plating, electrical encapsulate, rubber gaskets, adhesives, circuits boards, electrical components, metal fasteners:

| <u>Test:</u> | <u>Test Method(s):</u> |
|---|---|
| <u>Photometry</u> | |
| Photometer Range: (0.00001 to 500,000) lx | FMVSS 108 (49 C.F.R. 571.108); UNECE Regs. 3, 4, 6, 7, 19, 23, 38, 77, 87, 91, 112, 113, 119, 148, 149 (<i>excludes Adaptive Lighting Systems and Gas Discharge Lighting</i>), 150 (<i>includes only Reflex Reflector Types IA, IB, IIIA, IIIB and IVA</i>); GB 18408-2015, 11564-2008, 17509- 2008, 5920-2008; VSCC 20, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 52, 53, 56, 69, 73, 74; ADR 6/00, 45/01, 49/00, 1/00, 47/00, 74/00, 74/01, 48/00, 46/00 |
| Goniometer Positioning Resolution: 0.01° | |
| Spectral Range: (350 to 1,000) nm | |
| Luminance Measuring Range: (0.1 to 5,000) cd/m² | |
| Illuminance Measuring Range: (5 to 20,000) lx | |
| <u>Environmental Tests</u> | |
| Temperature Range: (-40 to 100) °C | FMVSS 108 14.6.6; ECE Reg. 3 Annex 10, ECE Reg. 148 Annex 6, ECE Reg. 150 Annex 6 |
| Temperature and Humidity: (33 to 95) %RH, (-40 to 100) °C | SAE J1455 Sec. 4.2 |
| Thermal Cycling: (-40 to 100) °C | SAE J1455 Sec. 4.1.3.1 |
| Thermal Shock: (-40 to 100) °C | SAE J1455 Sec. 4.1.3.2 Figure 2C |
| Corrosion | ASTM B117; FMVSS 108 14.5.4, FMVSS 108 14.6.3 |
| Dust | FMVSS 108 14.5.3 |

| <u>Test:</u> | <u>Test Method(s):</u> |
|---|---|
| <u>Vibration</u> | |
| <i>Sine Sweep:</i> (15 to 2000) Hz; 50 g Acceleration @ 5 ms Duration; 4000 lbs. force 2" Peak to Peak Displacement | SAE J575:1992 (<i>Superseded 2004</i>) (Sine) |
| <i>Random:</i> (4 to 2000) Hz; 6 GRMS; 4000 lbs. force 2" Peak to Peak Displacement | ISO-16750-3 (Random) |
| <i>Combined:</i> Environments, Random and Sine with Temperatures Range: (-50 to 100) °C | ISO-16750-3 (Random) |
| Vibration (SAE J577 Machine) | FMVSS 108 14.5.1, FMVSS 108 14.6.8 |
| Chemical / Fluid Resistance | FMVSS 108 14.6.2 |
| <u>Leak</u> | |
| Rain Spray Simulation | FMVSS 108 14.5.2 |
| <u>Electrical</u> | |
| Voltage Regulation Tolerance | SAE J2139 Sec. 4.8/5.8, J1455 Sec. 4.13.1 |
| <u>Mechanical Testing</u> | |
| Mechanical Shock Handling Shock | SAE J1455 Sec. 4.11.3.1 |
| Transit Drop | SAE J1455 Sec. 4.11.3.2 |



Accredited Laboratory

A2LA has accredited

GROTE INDUSTRIES LLC

Madison, IN

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 13th day of January 2026.

A blue ink signature of Mr. Trace McInturff, Vice President of Accreditation Services.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5396.01
Valid to November 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.