



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

SAPPHIRE TECHNICAL SOLUTIONS, L.L.C.
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MECHANICAL

Valid To: October 31, 2025

Certificate Number: 5273.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on automotive, aerospace, maritime, and commercial lighting for vehicles and facilities:

Test Technology:

Test Method(s)¹:

Photometry, Luminous Intensity

FMVSS 108 (49 CFR 571.108); CMVSS 108, 108.1, 1201;
SAE (Methods) J575, J2139, J1889,
J2650 (Road Illumination), J581, J582, J583, J591, J852,
J1383, J1735, J2595 (Signal and Marking), J222, J585,
J586, J587, J588, J592, J593, J914, J1319, J1373, J1395,
J1398, J1424, J1432, J1957, J2039, J2040, J2042, J2087,
J2261 (Motorcycle), J131, J584, J1306,
J1623 (Snowmobile), J278, J279, J280, J29 (Agricultural);
J137, J974, J975 (Construction / Industrial), J95, J96,
J572, J598 (All Terrain), J1623;
UNECE R1, R5, R6, R7, R8, R19, R20, R23, R31, R38, R50,
R72, R76, R77, R82, R87, R91, R98, R112, R113, R119,
R123;
CIE 70; ITE ST-017 Chapter 13;
FAA AC 150/5345, -12, -27, -28, -43, -44, -46, -50,
-51, -52, -55;
FAA EB 67B;
ICAO Annex 14; TP312; STS TP-22

Photometry, Reflex

FMVSS 108 (49 CFR 571.108), 125 (49 CFR 571.125),
131 (49 CFR 571.131);
CMVSS 108, 108.1, 131, 1201;
SAE J594, J774, J1967, J2041;
UNECE R3, R27, R69, R70, R88, R104; CIE 54.2;
ASTM D4280, D4383, D4956, E808, E809, E810;
ANSI 107, 207; NFPA 1971, 1977;
CPSC 1512.16 (16 CFR 1512.16); ISO 7591;
ITE ST-017 Chapter 13; AASHTO M268;
FAA AC 150/5345-39; STS TP-22

Photometry, Flash Energy

FMVSS 131 (49 CFR 131);
SAE J595, J845, J887, J1133, J1318;
UNECE R65; ITE ST-017 Chapter 13;
GSA/FED KKK-A-1822F Section 3.8; STS TP-22

Test Technology:

Test Method(s)¹:

Photometry, License Plate Lamps

FMVSS 108 (49 CFR 571.108); CMVSS 108; SAE J587; UNECE R4, R50; STS TP-18

Color (Chromaticity)

FMVSS 108 (49 CFR 571.108), 125 (49 CFR 571.125), 131 (49 CFR 571.131);
CMVSS 108, 108.1, 131, 1201;
CPSC 1512.16 (16 CFR 1512.16); CIE 13.3, 15;
SAE J576, J578;
UNECE R1, R3, R4, R5, R6, R7, R8, R19, R20, R23, R27, R31, R38, R50, R65, R69, R70, R72, R76, R77, R82, R87, R88, R91, R98, R104, R112, R113, R123;
ASTM D4280, D4383, D4956, E308, E811;
ANSI 107, 207;
NFPA 1971, 1977; ISO 7591;
FAA AC 150/5345-12, -27, -28, -43, -46, -50, -51, -52;
FAA EB 67; ICAO Annex 14; TP312;
STS TP-6

Photometry, Luminous Flux

FMVSS 108 (49 CFR 571.108), Part 564 (49 CFR 564);
CMVSS 108; CIE 84; IES LM 45; SAE J573, J2560;
UNECE R37, R99; STS TP-17

Environmental Simulation,
Temperature
-70 °C to 190 °C

FMVSS 108 (49 CFR 571.108), 125 (49 CFR 571.125)
(Temperature Cycle);
CMVSS 108 (Temperature Cycle);
SAE J575, J2139, J595, J845, J887, J1318
(Warpage, Exposure);
NFPA 1971 S8.1.5 (Heat Exposure - Trim);
FAA AC 150/5345-5, -10, -12, -28, -39, -43, -44, -46, -50,
-51, -52, -54, -55;
STS TP-43

Humidity
10 % RH to 98 % RH

FMVSS 108 (49 CFR 571.108), 125 (49 CFR 571.125);
CMVSS 108; SAE J575, J2139;
FAA AC 150/5345, -10, -43, -51, -54;
MIL-STD-810E/F/G, Method 507.4; STS TP-43

Air Flow
330ft/m +/-30ft/m

FMVSS 108 (49 CFR 571.108); CMVSS 108;
STS TP-51

Vibration, Shock

FMVSS 108 (49 CFR 571.108);
CMVSS 108; SAE J577, J2139; STS TP-45

Water Spray

FMVSS 108 (49 CFR 571.108); CMVSS 108;
SAE J575, J2139; STS TP-46

Dust

FMVSS 108 (49 CFR 571.108); CMVSS 108;
SAE J575, J2139; STS TP-44

Salt Spray (Fog)

ASTM B117; FMVSS 108 (49 CFR 571.108);
CMVSS 108; SAE J575, J2139; STS TP-47

Aim Range

FMVSS 108 (49 CFR 571.108); CMVSS 108; STS TP-50

Test Technology:

Test Method(s)¹:

Lens Abrasion

FMVSS 108 (49 CFR 571.108); CMVSS 108; STS TP-49

Chemical Resistance

FMVSS 108 (49 CFR 571.108); CMVSS 108;
SAE J575; FAA AC 150/5345-42; STS TP-48

Effective Projected
Luminous Lens Area (EPLLA)

FMVSS 108 (49 CFR 571.108); CMVSS 108; STS TP-55

Markings

FMVSS 108 (49 CFR 571.108); CMVSS 108; STS TP-56

¹ When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.



Accredited Laboratory

A2LA has accredited

SAPPHIRE TECHNICAL SOLUTIONS, L.L.C

Pineville, NC

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 22nd day of November 2023.

A blue ink signature of Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5273.02
Valid to October 31, 2025

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