WARNING — RISK OF ELECTRIC SHOCK

Disconnect power at the circuit breaker and verify the circuit is de-energized before installing or servicing this luminaire. Lock out and tag the circuit.

Installation must be performed by a qualified electrician in accordance with the National Electrical Code (NEC), NFPA 70, and all applicable state and local codes.

Before installation, consult your local ordinances and building codes for compliance. LAMAR LED assumes no responsibility for misapplication of fixtures.

Do not install a damaged luminaire. Do not modify the housing, door, driver, LED module, or factory wiring — doing so voids the UL certification and the warranty.

1. Before You Begin

Confirm the following before opening the ceiling or pulling wire. The catalog number on the fixture label is the authority for what was supplied.

- Match the catalog number. Compare the label on the fixture to the approved submittal — housing gauge, lens, lumen level, CRI, CCT, finish and options (for example SG-NLR-12-FA12/PP18-S1-80-30K-B-WL).
- Verify supply voltage. The standard driver is 120–277V. Confirm branch-circuit voltage falls within this range.
- Check the location. Wet location use requires option WL (wet location listed) or 65 (IP65). Fixtures with EM or EMST require a minimum ambient of 0°C.
- Inspect the shipment. Check the housing, door, lens and finish for shipping damage. Report freight damage before installing.
- Confirm the mounting method matches the ceiling (see Section 5), and that any mounting hardware ordered was supplied.
- Verify support. The housing is welded 12–18 gauge cold-rolled steel. Confirm the structure, blocking or grid can carry the fixture weight and that support and safety wires are provided where required by local code.
- Tools required. Torx T-15 center-pin (tamper-resistant) security bit, power driver, wire strippers, listed wire connectors, tape measure, level, and an appropriate ladder or lift.

Item	As published
Model	SG-NLR — SentinelGuard™ 1x8 Recessed
Dimensions	10.62 in. × 92.58 in. × 4.75 in.
Lumen levels	S1 = 4,000 lm / ~34W, M1 = 6,000 lm / ~51W, H1 = 8,000 lm / ~68W
Input / dimming	120–277V; 0–10V standard, DALI optional (DAL)

Refer to the Dimensions page of the specification sheet for the housing and door-frame drawings. Confirm any ceiling opening with the factory before cutting.

2. Prepare the Location

1. Lay out fixture locations from the reflected ceiling plan and confirm the layout is square to the grid or ceiling.
2. In grid ceilings, confirm the grid module accepts the fixture. Do not remove main-runner support.
3. In hard ceilings, confirm the opening size with the factory before cutting, and frame the opening so the housing is supported by structure, not by the ceiling finish alone.
4. Route branch-circuit conductors to each fixture location, leaving 6–8 in. of free conductor. Support the whip or conduit independently of the luminaire.

3. Electrical Connection

1. Confirm power is off and locked out.
2. Remove the flush Torx T-15 center-pin security fasteners from the door and open it on the slide-and-swing hinge to reach the internal components. Retain every fastener — they are part of the tamper-resistant construction.
3. Bring the supply into the wiring compartment through the factory-provided entries only, using a listed connector or fitting. Do not drill the housing or door. Protect conductors from the entry edge.
4. Connect line, neutral, and ground to the corresponding fixture leads using listed wire connectors. Bond the equipment ground to the fixture ground screw.
5. For control wiring, keep low-voltage dimming conductors separated from line-voltage conductors per NEC Class 1 / Class 2 requirements. See Section 4.
6. Dress all conductors neatly so nothing is pinched by the door, hinge or lens frame when the fixture is closed.

4. Wiring and Controls

0-10V control conductor colors have changed. Effective January 1, 2022, NEC 2020 Article 410.69 prohibits colors reserved for the grounded conductor (white or gray) and the equipment grounding conductor (green) on field-connected control conductors.[1] NEMA Publication 100-2021 adopted pink in place of gray, making violet (+) and pink (–) the compliant 0-10V pair.[2] Legacy stock may still have a gray lead — see the wire color reference below.

4A. Line-voltage supply and 0-10V dimming

1. Connect the branch-circuit hot (black), neutral (white) and equipment ground (green) as described in Section 3.
2. Connect the driver's violet (+) and pink (–) leads to the 0-10V dimmer or control system. Observe polarity. Where no dimming control is used, cap each control lead individually.

4B. DALI (option DAL) and tunable white (TW)

1. DALI fixtures: connect the two DALI bus leads to the DALI control bus per the wiring diagram on the driver supplied and the control-system documentation.
2. Tunable-white fixtures: connect the control leads per the wiring diagram and label supplied with the fixture. Consult the factory if no diagram is supplied.

4C. Emergency battery (options EM / EMST)

1. Connect the emergency battery to an unswitched hot tapped ahead of any switch or dimmer, so it senses loss of normal power. The neutral is common to the driver and the battery.
2. Connect the switched hot to the driver for normal operation.
3. Follow the wiring diagram on the battery unit supplied.

Wire color reference:

Conductor	Color and notes
Line / hot	Black. Branch circuit, 120–277V. Switched hot where a switch or dimmer is used.
Neutral	White. Grounded conductor. Reserved color — never use for control conductors.
Equipment ground	Green or green/yellow. Bond to the fixture ground screw. Reserved color — never use for control conductors.
0-10V control (+)	Violet. Class 2 low voltage. Observe polarity.
0-10V control (–)	Pink (gray on legacy stock). Verify against the label on the driver supplied. A gray control lead must be re-identified with pink tape or paint where visible and accessible.[1]
Unswitched hot (EM / EMST)	Per project drawings. Tap ahead of the switch and dimmer so the battery senses loss of normal power.

1. Electrical Contractor Magazine, “Color Coding Changes: NEC 2020 impacts 0–10V control wiring” — ecmag.com
2. Inside Lighting, “No More Gray: Low Voltage Wiring Changes” — inside.lighting

5. Mounting

5A. Recessed in a grid ceiling (option SA swing arms)

1. Grid applications use option SA (swing arms for grid applications). Install the swing arms per the instructions supplied with the hardware.
2. Complete the electrical connections in Sections 3 and 4 before setting the fixture in place.
3. Set the housing in the grid opening and engage the swing arms so the housing is held evenly along its length.
4. Install support and safety wires from the housing to building structure where required by local code.
5. Confirm the door frame sits flat and tight to the ceiling with no rocking.

5B. Recessed in a hard ceiling

1. Confirm the framed opening matches the dimensions confirmed with the factory.
2. Where option UB (universal mount bracket) was supplied, install the bracket per the instructions supplied with it.
3. Make the electrical connections, then raise the housing into the opening and secure it to the framing or bracket so it is supported by structure, not by the ceiling finish.
4. Confirm the door frame sits flat and tight to the ceiling with no gaps that could create a ligature or pry point.

6. Close the Door and Lens

1. Confirm no conductor is near the hinge, door edge or lens frame.
2. Swing the door closed on the slide-and-swing hinge and seat it fully. The integral lens retention system compresses the lens seal — do not disturb or remove the seal, and do not over-tighten fasteners in an attempt to close a gap.
3. Reinstall every Torx T-15 center-pin security fastener and tighten until the heads sit flush. Do not substitute standard fasteners.
4. Remove any protective film and clean fingerprints from the lens.

7. Options

Option	Installation requirement
EM — emergency battery	10W integrated emergency battery backup. 0°C minimum ambient. Connect to an unswitched source — see 4C. Allow a full 24-hour charge before testing.
EMST — self-testing emergency	10W integrated self-testing emergency battery backup. 0°C minimum ambient. Wire as EM.
F — fuse & holder	Factory-installed. Replace only with the fuse rating marked on the fixture.
WL — wet location	Wet location listed (includes ISO 5-8 rating). Keep the seal intact — see Section 6.
65 — IP65	IP65 wet location. Keep the seal intact — see Section 6.
UB — universal mount bracket	Install per the instructions supplied with the bracket. See Section 5.
SA — swing arms	For grid applications. See 5A.
DAL — DALI	DALI dimming. See 4B.

120–277V standard, 0–10V dimming standard. Consult the factory for options not shown or listed.

8. Start-Up Check and Maintenance

- Restore power and confirm every fixture energizes.
- Operate the 0-10V or DALI control through its full range and confirm the fixtures dim smoothly and together.
- Allow a full 24-hour charge, then test emergency units by interrupting normal power and confirming transfer to the emergency battery for the rated duration.
- The fixture is room-side serviceable. To service, disconnect power, remove the Torx T-15 center-pin fasteners and open the door on its hinge. No routine relamping is required.
- Clean the lens with a soft cloth and mild soapy water only. Do not use ammonia, solvents, or abrasive cleaners.
- Warranty: 5 years, part replacement only (see the terms and conditions at www.lamarled.com). Listings and ratings as published: UL 1598, Wet Location (optional), IP65 (optional), IK10+.

QUESTIONS OR APPLICATIONS NOT COVERED HERE

Contact LAMAR LED at 631.777.7700 or sales@lamarled.com, or visit www.lamarled.com.