

### 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, driver, LED board, 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 housing to the approved submittal — series, size, power, lens, CCT and options.
- Verify supply voltage. The standard driver is universal input 120-277V. Confirm branch-circuit voltage falls within this range.
- Inspect the shipment. Check the housing, lens, and trims for shipping damage. Report freight damage before installing.
- Confirm the mounting method matches the structure (see table below). Verify the fixture as supplied is configured for the mounting condition on site.
- Verify ceiling support. The luminaire must be independently supported by the building structure where required by code — grid ceilings require seismic or safety wires per local requirements.
- Tools required. Power driver with the appropriate bit, wire strippers, listed wire connectors, tape measure, level, drywall saw or grid cutters, and an appropriate ladder or lift.

| Mounting method                            | Typical application                          |
|--------------------------------------------|----------------------------------------------|
| T-bar or Grid Ceiling                      | Suspended T-bar / grid ceilings              |
| Flanged (recessed into a finished ceiling) | Sheetrock, plaster, and concealed-Z ceilings |

Each method is detailed in Section 5. Confirm which configuration was supplied before starting — mounting styles are not interchangeable in the field.

Mounting options as published: Recessed grid mount. Actual overall lengths: 2x2 nominal = 23.750 in. x 23.750 in, 2x4 nominal = 47.750 in. x 23.750 in. Available in 2x2 or 2x4 sizes.

## 2. Prepare the Location

1. Lay out fixture locations from the reflected ceiling plan. Snap lines and confirm the run is square and level before cutting or drilling.
2. Size the opening to the actual fixture length, not the nominal length (see the note above). For continuous rows, verify cumulative dimensions across the full run.
3. In sheetrock or plaster ceilings, cut the opening and confirm framing or blocking is in place to receive the mounting hardware.
4. In grid ceilings, remove the ceiling tile and confirm the T-bar opening is the correct module. Do not remove main-runner support.
5. Route branch-circuit conductors to each fixture location, leaving 6–8 in. of free conductor. Support the whip or conduit independently of the luminaire.

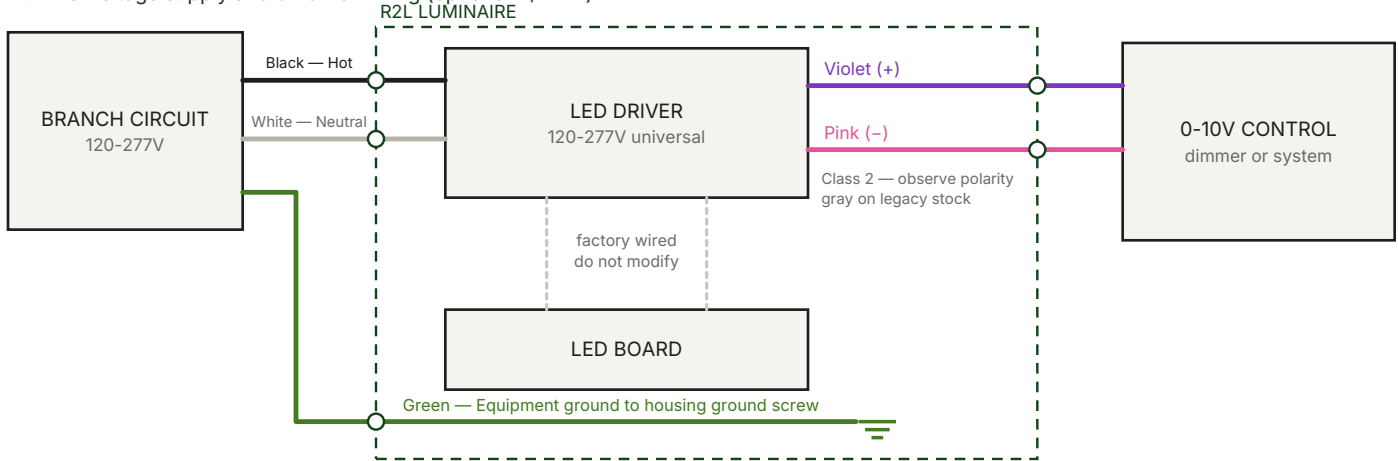
## 3. Electrical Connection

1. Confirm power is off and locked out.
2. Open the fixture for access per its construction and retain all fasteners.
3. Select the entry closest to the incoming feed. .875 in. KO shown in dimension drawings; access plate provided.
4. Install a listed connector or fitting in the knockout and bring conductors into the wireway. Protect conductors from the knockout edge.
5. Connect line, neutral, and ground to the corresponding fixture leads using listed wire connectors. Bond the equipment ground to the housing ground screw.
6. For control wiring, keep low-voltage dimming conductors separated from line-voltage conductors per NEC Class 1 / Class 2 requirements. See Sections 4 and 7.
7. Dress all conductors neatly inside the housing so nothing is pinched when the cover is reinstalled.

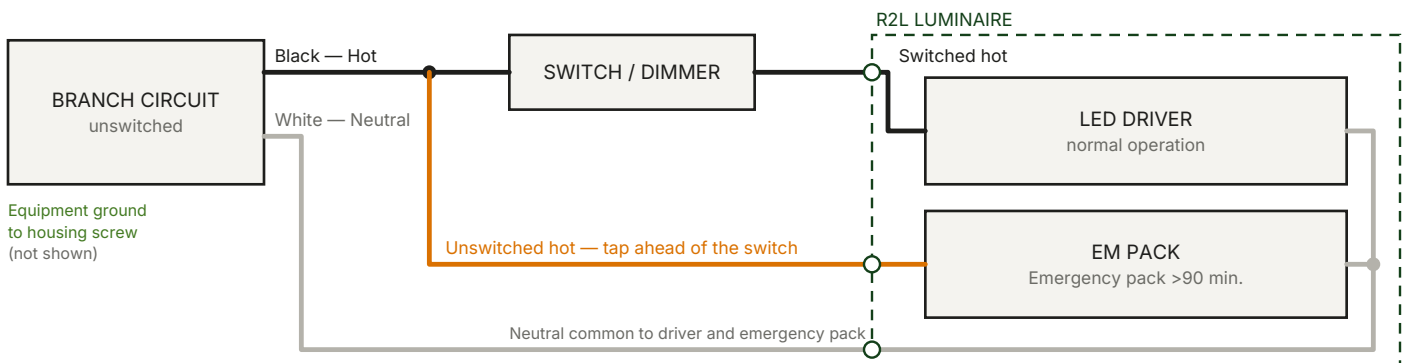
## 4. Wiring Diagrams

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.<sup>1</sup> NEMA Publication 100-2021 adopted pink in place of gray, making violet (+) and pink (-) the compliant 0-10V pair.<sup>2</sup> Legacy stock may still have a gray lead — see the wire color reference below.

### A. Line-voltage supply and 0-10V dimming (options D / DTD)



### B. Emergency pack connection (options EM / EMB)



Schematic; field connections only. Circles mark housing knockouts, each of which needs a listed connector or fitting.

### Wire color reference

| Conductor                     | Color                            | 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 housing ground screw. Reserved color — never use for control conductors.                                                                                                                                                                                   |
| 0-10V control (+)             | Violet                           | Class 2 low voltage. Observe polarity.                                                                                                                                                                                                                                 |
| 0-10V control (-)             | Pink<br>gray on legacy stock     | Pink replaces gray per NEMA Publication 100-2021. <sup>2</sup> Verify against the label on the driver supplied — legacy stock may still have a gray lead. A gray control lead must be re-identified with pink tape or paint where visible and accessible. <sup>1</sup> |
| Lutron EcoSystem digital link | Purple and purple/white (E1, E2) | Polarity-free. Confirm against the Lutron driver label and the controls submittal. <sup>3</sup>                                                                                                                                                                        |
| Unswitched hot (EM / EMB)     | Per project drawings             | Tap ahead of the switch and dimmer so the pack senses loss of normal power.                                                                                                                                                                                            |

1. Electrical Contractor Magazine, "Color Coding Changes: NEC 2020 impacts 0-10V control wiring" — [ecmag.com](http://ecmag.com)

2. Inside Lighting, "No More Gray: Low Voltage Wiring Changes" — [inside.lighting](http://inside.lighting)

3. Lutron, "LED Driver Installation Best Practices Guide" (041827) — [assets.lutron.com](http://assets.lutron.com)

## 5. Mounting

### 5A. T-bar or Grid Ceiling

1. Confirm the grid opening matches the fixture module and that main runners and cross tees are level and locked.
2. Lift the housing into the opening and lower it onto the T-bar so the grid clips engage the grid flange on both sides.
3. Verify every clip is fully seated. The clips are what hold the fixture to the grid — do not leave a clip partially engaged.
4. Install seismic restraint or safety wires to the building structure where required by local code. Do not rely on the grid alone if code requires independent support.
5. Confirm the fixture sits flat in the grid with no rocking and that the lens plane is flush with the adjacent ceiling.

### 5B. Flanged (recessed into a finished ceiling)

1. Lift the housing into the prepared opening.
2. Secure the housing to the ceiling framing or blocking using the supplied mounting hardware. Fasteners are selected by the installer to suit the substrate and must be adequate for the fixture weight.
3. Level the housing and confirm the flange sits flat and tight against the finished ceiling with no gap or rocking.
4. Set any adjustable end flange trims to close the end gap. In continuous rows, adjust the trims so joints between fixtures align and read as one line.
5. For a concealed "Z" ceiling, coordinate the housing position with the Z channel so the flange lands on the finished plane.

## 6. Lens and Covers

1. Reinstall the wireway cover or access plate with the original fasteners. Confirm no conductor is pinched and the cover is fully seated.
2. Install or reseal the lens or diffuser as supplied. Handle acrylic and polycarbonate by the edges; do not force, flex sharply, or over-tighten against the lens.
3. Remove any protective film and clean fingerprints before closing out the ceiling.

## 7. Controls and Optional Equipment

| Option                                   | Installation requirement                                                                                                                                                                                                                                                                                                       |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D — 0-10V dimming<br>DTD — 0-10V dimming | Land the violet (+) and pink (–) control leads on the 0-10V control circuit, observing polarity — see Diagram A. Verify the leads against the driver label: legacy stock may have a gray lead in place of pink, and gray must be re-identified with pink tape or paint. Do not connect control leads to line voltage.          |
| Option                                   | Installation requirement                                                                                                                                                                                                                                                                                                       |
| LDH — Lutron EcoSystem dimming           | Wire the EcoSystem digital link per the Lutron system drawings. The link is polarity-free but must be run as a Class 1 or Class 2 circuit per the controls submittal.                                                                                                                                                          |
| EM — emergency pack                      | Emergency pack >90 min., >500 lumens (higher output & run time available - consult factory). Connect the pack to an unswitched line-voltage source ahead of any switch or dimmer so it senses loss of normal power — see Diagram B. Allow a full 24-hour charge before testing.                                                |
| EMB — emergency pack                     | BABA Compliant Emergency pack >90 min., >500 lumens. Connect the pack to an unswitched line-voltage source ahead of any switch or dimmer so it senses loss of normal power — see Diagram B. Allow a full 24-hour charge before testing.                                                                                        |
| AWNRR — sensor                           | Lutron Athena wireless node integral fixture control (RF only). Mount and aim so the detection zone covers the intended area and nothing obstructs the sensor lens. Set time delay and sensitivity to the project requirements and walk-test before close-out.                                                                 |
| AWNS — sensor                            | Lutron Athena wireless node integral fixture control (RF with daylight and occupancy sensing). Factory-set standby level. Confirm the setting matches the project requirements and walk-test the fixture before close-out. Change settings only by the method described in the sensor documentation supplied with the fixture. |
| W                                        | 6ft Whip (Dimming and/or EM leads included when necessary). Factory-supplied configuration. Verify the fixture as supplied matches the approved submittal, and confirm nothing interferes with the lens, gasket, or lens retention on reassembly.                                                                              |
| FK2X2                                    | Flange kit (2x2) for Dry-wall installation. Factory-supplied configuration. Verify the fixture as supplied matches the approved submittal, and confirm nothing interferes with the lens, gasket, or lens retention on reassembly.                                                                                              |

| Option | Installation requirement                                                                                                                                                                                                          |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FK2X4  | Flange kit (2x4) for Dry-wall installation. Factory-supplied configuration. Verify the fixture as supplied matches the approved submittal, and confirm nothing interferes with the lens, gasket, or lens retention on reassembly. |

Universal voltage 120-277V standard. 0-10V or Lutron dimming optional. Custom driver tuning available for specific lumen requirements. Driver disconnect standard. Tuned fixtures are factory-set and must not be adjusted in the field. Contact the factory for options not shown.

## 8. Start-Up Check and Maintenance

- Restore power and confirm the fixture energizes at full output.
- Sweep the dimming control from 100% to minimum and back; confirm smooth, flicker-free response with no dropout across the run.
- Allow a full 24-hour charge, then test emergency units by interrupting normal power and confirming transfer to the emergency pack for the rated duration.
- Verify sensor coverage and walk-test each sensor. Confirm time delay and sensitivity settings match the project requirements, and that nothing obstructs the sensor.
- Sight the finished run for level, alignment, and consistent lens appearance; confirm color temperature is uniform across all fixtures.
- No routine relamping is required — the LED board and driver are the serviceable components. Disconnect power before any service.
- Clean the lens with a soft cloth and mild soapy water only. Do not use ammonia, solvents, or abrasive cleaners on acrylic or polycarbonate.
- Warranty: 5 years - part replacement only (see our terms & conditions page at [www.lamarled.com](http://www.lamarled.com) for details). Listings and ratings as published: All electrical components are U.L. listed or recognized, All fixtures are U.L. Certified and Union made in the USA, Meets Buy America Act (BAA), BABA Compliant.

### QUESTIONS OR APPLICATIONS NOT COVERED HERE

Contact LAMAR LED at 631.777.7700 or visit [www.lamarled.com](http://www.lamarled.com). Due to the rapid advancements in LED technology, please consult our website for the most current technical data.