

RESTREPO STANDARD

Channel & Reveal.

Linear Lighting Installations

Mapped to the Restrepo Standard.

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WHY THIS EXISTS

Linear lighting succeeds or fails before the first foot of tape is unrolled. It succeeds when the channel is selected at the framing stage, when the reveal is dimensioned to a manufacturer profile, when the mitres are mocked up before production cuts, and when the drivers are placed where a service panel can reach them in five years. It fails when any one of those decisions slides downstream. This reference codifies the upstream decisions in the language we use on site so the lighting designer, electrician, drywaller, and millworker are working from the same set of dimensions and the same tolerances.

This document supplements manufacturer instructions — it does not replace them. For listed assemblies (Q-Tran iQA channel + LED at the factory), the manufacturer's UL-listed instructions govern.

Code is the floor.

Standard is the ceiling.

01 CHANNEL SELECTION · PROFILE, DEPTH, REVEAL

CODE INTENT (PARAPHRASED)

Channel is the visible architecture of a linear run. Profile (recessed, surface, plaster-in, mud-in), depth, and reveal width all decide how the finished light reads on the wall. The wrong profile installed correctly still looks wrong. Manufacturer dimension sheets are the only valid source for stud-bay framing, drywall reveal, and millwork pocket dimensions.

RESTREPO STANDARD

- Channel is selected before drywall framing. Reveal geometry drives stud layout, not the other way around.
- Channel depth is at least $1.5 \times$ the tape height. Less depth produces visible hot-spotting on the diffuser.
- Recessed channel: drywall reveal $\geq 1/8$ in. on each side of the diffuser. Drywall must not touch the diffuser.
- Plaster-in channel (PureEdge Reveal, Q-Tran iQA mud-in): mounted to studs/joists per the manufacturer dimension sheet, not to drywall alone.
- Surface channel: backing block in framing. No drywall-only fasteners on any surface-mount channel.
- One channel profile per sightline. Mixing profiles on a continuous run is a defect.

FIELD CHECK · CHANNEL SELECTION

Stand at the design eye level before close-in. If the reveal width varies by more than $1/16$ in. along the run, fix it now.

02 MITRE, END-CAP & JOINT DETAILS

CODE INTENT (PARAPHRASED)

Mitres and joints are where linear lighting earns or loses its luxury reading. A 45° external mitre with the diffuser aligned across the joint reads as a single light line. A butt-joint at the same corner reads as two separate fixtures. Tolerances at the diffuser face are tighter than at the channel back, because the eye sees the diffuser, not the housing.

RESTREPO STANDARD

- External corners: 45° mitre. No butt joints visible on a sightline.
- Internal corners: butt joint acceptable; the tape continues across with no visible break.
- End caps: full-depth, color-matched to the channel anodizing. No raw aluminum at termination.
- Channel-to-channel joints: aligned within 1/64 in. on the diffuser face, regardless of housing tolerance.
- Mock-up every unique mitre condition before production cuts — hand a sample to the lighting designer at rough-in.
- Joint between two reels of tape lands at a corner, never in the middle of a sightline.

FIELD CHECK · MITRE, END-CAP & JOINT DETAILS

Run a finger along the diffuser at every joint. If you can feel the seam, the eye will see it under low light.

03 DRYWALL, PLASTER & PAINTER COORDINATION

CODE INTENT (PARAPHRASED)

Channel rough-in happens before drywall. Drywall returns into the reveal, not over the channel. Painters mask the diffuser slot before primer or the diffuser becomes a permanent record of the prime coat. Plaster-in channels have their own discipline — they are designed to receive plaster, but only to the line specified on the manufacturer dimension sheet.

RESTREPO STANDARD

- Channel installed pre-rock. Drywall lead walks the rough-in with the AV/lighting lead before rock goes up.
- Drywall returns terminate at the channel reveal line, not on top of the channel housing.
- Plaster-in channels: plaster lapped to the manufacturer's reference line, not over the diffuser slot.
- Painter masks the diffuser slot with low-tack tape before primer. Tape pulled before final dust cure.
- Any paint or compound on the diffuser is a defect. Replace, do not clean in place.
- Final reveal width verified after paint, before fixture commissioning.

FIELD CHECK · DRYWALL, PLASTER & PAINTER COORDINATION

Inspect the diffuser slot under raking light after paint. Any compound, fuzz, or roller spray means a re-do.

04 DRIVER REMOTING & SERVICE ACCESS

CODE INTENT (PARAPHRASED)

Drivers are not buried. Every driver — Lutron Hi-Lume Premier, Q-Tran QTM, Ketra D4 — is mounted where a service tech can reach it through a removable panel without damaging finish. V-drop and thermal budgets are calculated, not assumed. The lighting closet, the AV/IT rack, or a dedicated equipment chase are the three acceptable locations.

RESTREPO STANDARD

- Default location: dedicated lighting closet on the same level as the load. AV/IT rack acceptable when noise and heat budgets allow.
- V-drop budget driver-to-fixture: 1.5 % maximum. Reference Lutron AN591 and ERP AN110.
- Local drivers permitted only when remote driver exceeds the V-drop budget. Local drivers still require a removable service panel.
- Heat dissipation: 2 in. minimum air space between driver bodies and any combustible surface or finish.
- Pull strings + service loop at every driver location. Output cables labeled with circuit, zone, and processor address.
- Service panel is dimensioned for the largest driver in the group plus a 4 in. service envelope on every side.

FIELD CHECK · DRIVER REMOTING & SERVICE ACCESS

Open the service panel with one hand. If you need a tool, the panel is wrong.

05 TAPE, COLOR & COMMISSIONING

CODE INTENT (PARAPHRASED)

Tape spec, single-reel discipline, and a 24-hour burn-in before scene tuning are the difference between a luxury cove and a builder-grade strip. CRI ≥ 95 is the floor; R9 ≥ 90 catches reds the eye remembers. Single reel per continuous run prevents MacAdam-ellipse mismatches that show up only after the homeowner is in the space.

RESTREPO STANDARD

- Tape: 24 V high-CRI, CRI ≥ 95 and R9 ≥ 90 . No 12 V tape on luxury residential interior linear.
- Single reel per continuous sightline. If splicing is unavoidable, splice at a corner, never mid-run.
- MacAdam ellipse 3-step or tighter on all runs visible on a single sightline.
- Tunable-white runs: Ketra D4 tape on a dedicated D4 link. Do not substitute 0–10 V tunable for D4 spec.
- Burn-in 24 hours minimum at 100 % output before scene tuning. Color verification with calibrated meter on every Ketra zone.
- Dim-curve test at 1 %, 10 %, 50 %, 100 %. No flicker, no pop-on, no audible buzz.

FIELD CHECK · TAPE, COLOR & COMMISSIONING

At commissioning, walk the run at 1 % dim. Any flicker, color shift, or hot-spot is a defect to log and resolve before owner walk-through.

06 APPLIES-TO MATRIX

SITUATION	CODE	RESTREPO ACTION
Channel selection at framing stage	\$01	Manufacturer dimension sheet drives stud layout. Profile locked before rock.
External corner on a sightline	\$02	45° mitre, diffuser aligned within 1/64 in. on face.
Drywall reveal at recessed channel	\$03	≥ 1/8 in. on each side. Drywall returns to reveal line, not on housing.
Driver location	\$04	Dedicated lighting closet by default; service panel removable by hand.
Tape splice on a continuous run	\$05	Single reel per sightline. If splicing required, splice at a corner.
V-drop driver-to-fixture	\$04	≤ 1.5 %. Verify per Lutron AN591 / ERP AN110 before commissioning.

07 QC GATE · MATCHES THE REFERENCE CARD

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| ☐ Channel set pre-drywall, reveal verified | ☐ V-drop budget ≤ 1.5 % verified |
| ☐ Mitres mocked-up, joints aligned | ☐ CRI ≥ 95, single reel per sightline |
| ☐ Drywall returns to reveal line | ☐ Burn-in 24 h before scene tuning |
| ☐ Drivers accessible, service panels set | ☐ Ketra zones color-metered |

08 CITATIONS & FURTHER READING**Lutron Application Note 591 — Driver Remoting**

V-drop budget and output wiring for Lutron LED drivers.

<https://assets.lutron.com/a/documents/048591.pdf>

Lutron Hi-Lume Premier (369883)

EcoSystem 3-wire constant-voltage LED driver spec.

<https://assets.lutron.com/a/documents/369883.pdf>

Lutron Ketra D4 Spec (3662374)

D4 link, color science, tunable-white commissioning.

https://assets.lutron.com/a/documents/d4r_spec_3662374.pdf

ERP Application Note 110 — Mounting Drivers Remotely

Power supply remoting and thermal considerations.

https://www.erp-power.com/wp-content/uploads/2024/04/AN110_Mounting%20Drivers%20Remotely%20From%20Fixtures-1.pdf

Q-Tran iQA SLIM Aluminum Extrusion

UL-listed when assembled with strip at Q-Tran. NEC 410.2 / 410.16 closet-rated.

PureEdge Lighting Reveal Series

24 VDC plaster-in linear systems, 95+ CRI.

<https://www.pureedgelighting.com>