interspace Installation Guide

Grid Patterns (GR)

This installation guide details the steps for installing Interspace Grid Patterns (GR) for both open and closed shape pattern applications.

The components required for a pattern include:

Fixture Module(s), Driver Box, Jumper Box, Mount Brackets, Joiner Bracket, and End Cap Kit

Key Installation Features

- No advanced site framing or coordination required.
- Simple and variable positioning avoids structural and mechanical obstructions.
- Factory assembled modules eliminate on-site assembly, LED installation, wiring and soldering with an integrated wiring harness.
- Bring line voltage power to any driver or jumper location.



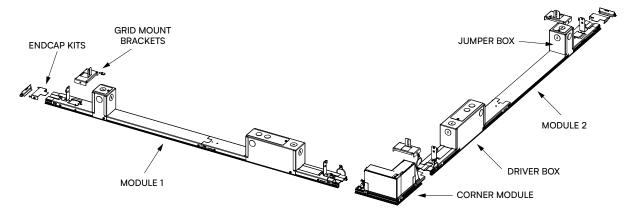
Contents

System Overview	2
Information	
Ceiling Preparation	
Installation Steps	6
Electrical Connections	25
Lens Installation	30
Lens Removal	35



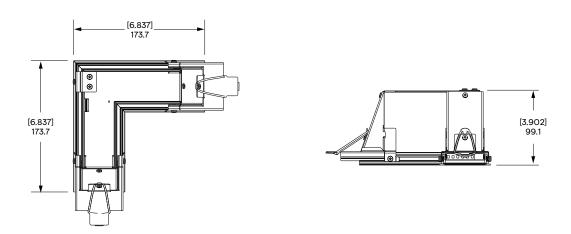
System Overview

Corner Fixture



L-SHAPE SHOWN FOR REFERENCE

Corner Fixture Dimensions

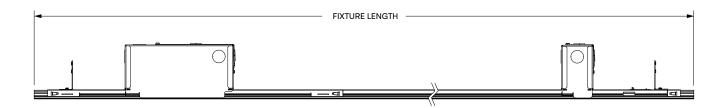




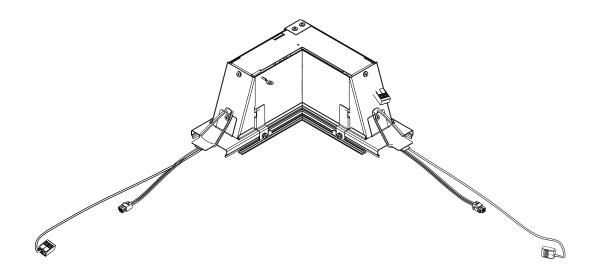
Fixture Nominal Lengths

Fixture Length	3V	4ft Short	5ft	6ft Short	7ft	8ft Short	8ft
Length (ft-in)	23 - 36	47	60	71	84	95	96
Length (mm)	584.2 - 914.4	1193.8	1524.0	1803.4	2133.6	2413.0	2438.4

^{*}Refer to layout drawings for lengths as fixtures between 2ft and 3ft are factory-adjusted and come in 1" increments.



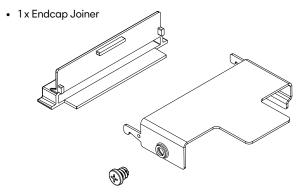
Corner Fixture





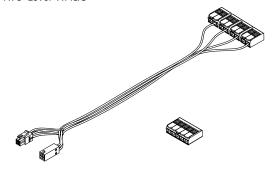
Endcap Kit

- 1x White Aluminum Diecast Endcap
- 1 x 10-32 Screws



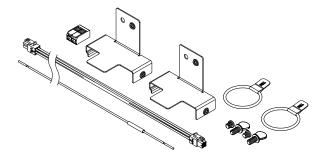
Power Drop Kit

- 1x Wire Harness
- 4 x 2-Lever WAGOs
- 1x5-Lever WAGO



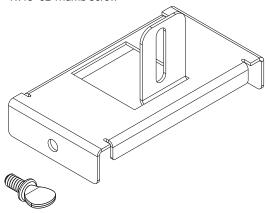
Joining Kit

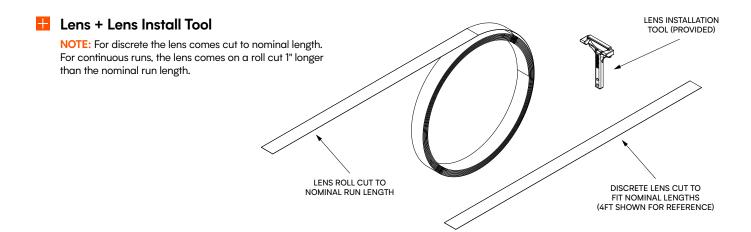
- 1x Ground Wire Connect
- 2 x Joiner Brackets
- 1x 2-Lever WAGO
- 2 x 10-32 Screws
- 2 x Pull O-Rings
- 2 x 10-32 Thumb Screws



Mounting Kit

- 1x T-Grid Mount Bracket
- 1x10-32 Thumb Screw







Information

Important

- Read all instructions including wiring and mechanical details before the start of the installation.
- Install in accordance with the local and national building and electrical codes.
- Straight connections, do not join fixtures on the ground and raise them into place. This will damage the fixtures due to the significant forces on the joining brackets.
- Pattern start, corner fixture and straight fixture will be connected to begin a pattern before raising.
- Fixture through wiring is 18 AWG. Calculate maximum row length per fixture watts per foot and local and national building codes.
- Contact the factory if you require assistance or have questions.
- CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR. / CONSULTER UN ÉLECTRICIEN QUALIFIÉ POUR VOUS ASSURER QUE LES CONDUCTEURS DE LA DÉRIVATION SONT ADÉQUATS.



Tools & Materials Required

Tools:

- Phillips Screwdriver
- Pliers
- Lens Installation Tool (provided)
- Wire Stripper + Cutter

Materials:

- Hanger wire (by others)
- #8 Sheet Metal Screws (by others)



Safety Warnings

- Shock hazard! Fixtures must be connected to building ground via provided ground wire before connecting to main supply power.
- Disconnect or turn off power supply before attempting any installation maintenance or servicing operations.
- CCEA applications driver box and jumper box can not be adjusted.

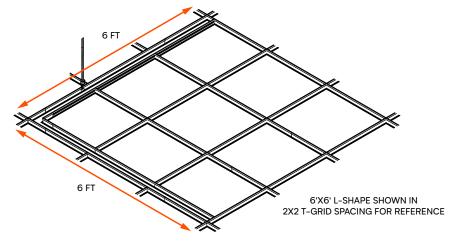
Ceiling Preparation

T-Grid Pattern Ceiling

Designed for adaptability across various ceiling grid systems, the Interspace fixture is sized to fit within a 3" (76.2 mm) nominal grid opening, based on the grid's center-to-center spacing. Prepare ceiling grid as per layout drawings and plan locations for fixtures. Install power drops as per layout drawings. Remove adjacent ACT tiles to allow for access from above to complete installation Steps.

Prepare the ceiling and identify power drop locations by referring to the layout drawings for all patterns. Installation must comply with local and national building and electrical codes.

Note: Overall dimensions are on center T-Grid spacings.



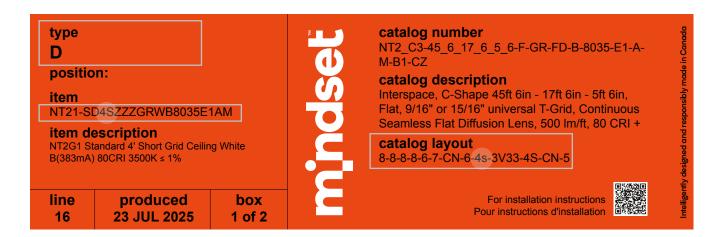
Installation Steps



Place Boxes

IMPORTANT: The pattern identified in the layout drawing(s) will have matching identifiers on the fixtures and lens labels.

The image below is an example of an Open C-pattern for a 4s fixture. The label on the box and on the lens will have a matching type and and layout.



type: D

catalog layout: 8-8-8-8-6-7-CN-6-4s -3V33-4S-CN-5

This sequence of the catalog layout is important as it represents the order of the installation to follow. Lay the fixtures on the ground as per the catalog layout order and the matching layout drawing(s).

Unpackage the fixtures from the package. Do not remove protective plastic and any care labels during installation.

IMPORTANT: The lens will have matching identifiers on the label for the type.

Item: NT2OPTICK-GROP0<mark>4506</mark>
Desc: Interspace Optic Kit Grid OP 45FT 6IN

Type: D

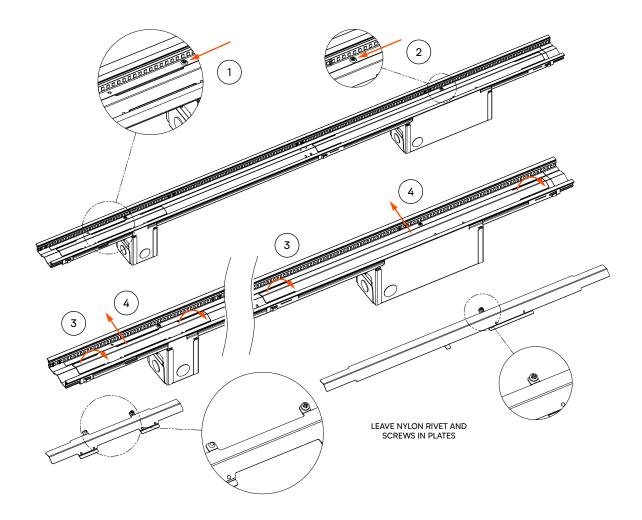
45ft 6in

For example, the segment that is 45'-6", the identifier on the label will have 4506 at the end. The next segment 17'-5" will be identified by 1706, and the final segment of the pattern is 5'-6" and the lens will be identified as 0506. Go to Step 35 (page 33) for further instructions of the lens installation and matching to the pattern.



2 Driver Box Access Plate + Jumper Box Access Plate Removal

- 1. Turn the fixture over so the optical cavity faces up.
- Use No. 2 Phillips screwdriver to remove the retention screw. NOTE: The retention screw is captive and will stay with the cover plate - there is no need to fully remove it. Do not remove the nylon rivet on the jumper access plate.
- Once access plates are removed, the electrical cavity will become accessible.
 NOTE: Middle run fixture shown for reference, endcaps not installed.





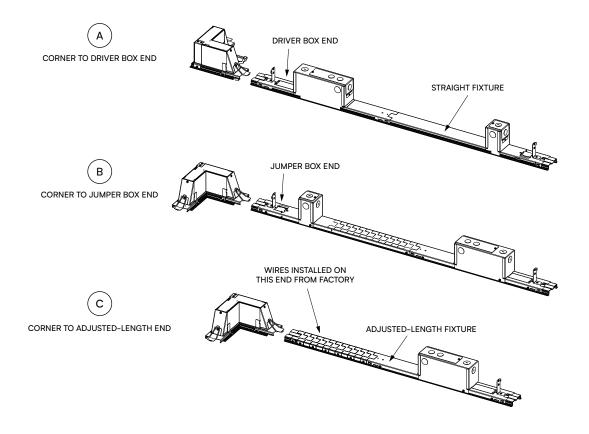
7

Prepare Fixture(s) for Start of Pattern Installation - Open + Closed Shapes

Best practice to start the pattern by preparing and connecting a corner fixture to a straight fixture before raising into the grid system.

When layout drawings are provided, the starting connecting fixture conditions can be determined from the drawings.

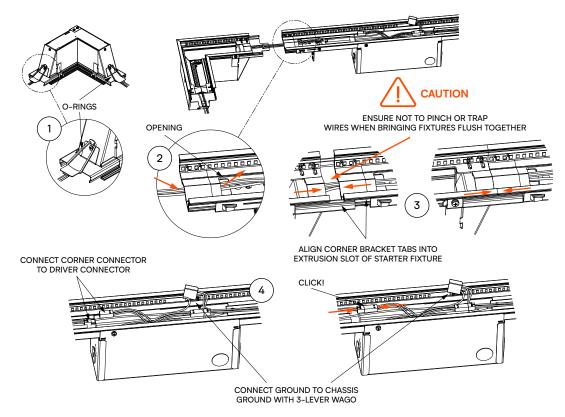
Below are common starting conditions for a pattern to connect a corner to the starting fixture.





Condition A + B: Connect Corner to Driver Box End or Jumper Box End

- 1. Gather corner fixture and starter fixture and remove O-rings from corner fixture ends.
- 2. Feed corner fixture ground wire and corner wire harness through the opening of the starter fixture.
- 3. Carefully bring fixtures together and align the tabs on the corner connection end to the extrusion slot on the starter fixture until flush together.
- A: Connect ground wire with 3-Lever WAGO to chassis ground wire and connect corner wire connector to driver connector.
- 5. B: For the jumper box end, connect ground wire with 2-Lever WAGO to chassis ground wire and connect corner wire connector to jumper box connector.

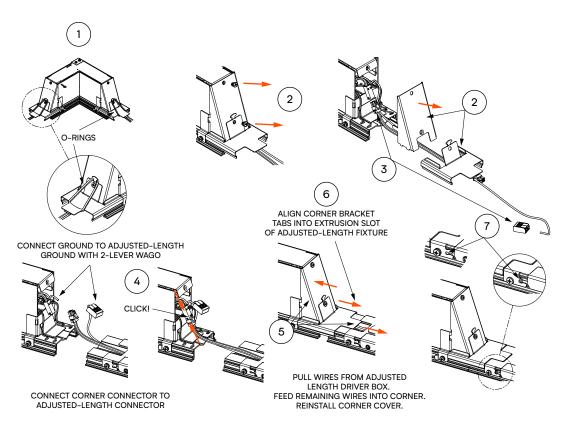


Go to Step 6 (page 11) to complete corner connection steps.



Condition C: Connect Corner to Adjusted-Length Fixture End

- 1. Gather the corner fixture and remove O-rings from corner fixture ends.
- 2. Remove corner cover and joiner bracket from corner fixture by removing the screws.
- 3. Disconnect corner fixture ground wire from the 2-Lever WAGO and disconnect corner wire connector harness from the corner fixture connector.
- Gather the factory-adjusted fixture, connect factory-adjusted ground wire to corner fixture ground wire with 2-Lever WAGO. Connect the factory-adjusted connector to the corner fixture connector.
- Pull the wires carefully from the fixture driver box's wire access opening. This
 allows for more space to feed the remaining wires into the corner fixture.
 Afterward, reinstall the corner cover and joiner bracket using screws.
- Carefully bring fixtures together by aligning the tabs on the joiner bracket end to the extrusion slot on the adjusted-length fixture.
- Bend out tabs on both sides of the adjusted-length fixture ~45 degrees to install the o-rings in the next step.

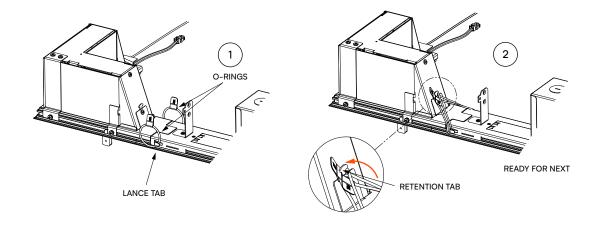


Go to Step 6 (page 11) to complete corner connection steps.



6 Prepare Corner Fixture for Installation Continued – Open + Closed Shapes

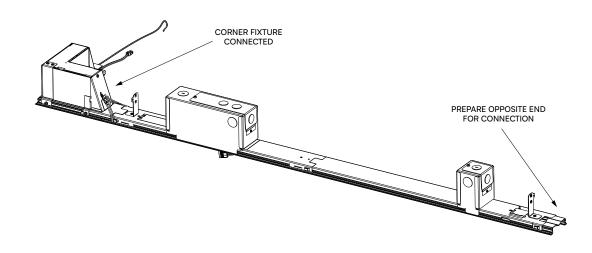
- 1. Gather the o-rings and install onto the lance tabs on the joining fixture.
- Pull the o-rings onto the retention tab on the front of the corner fixture to secure in place. Driver side of non-adjusted-length fixture shown for reference.



Prepare Opposite End of Starter Pattern Fixture for Connection

The following instructions are the steps to prepare the starter fixtures for the next connection in the pattern before raising into the T-Grid system.

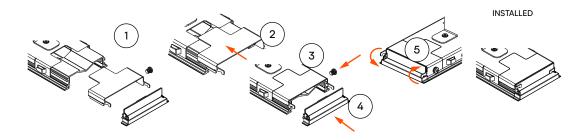
- Step 8: Install endcap (page 12).
- Step 9: Prepare for corner fixture connection (page 12).
- Step 10: Prepare for straight fixture connection (page 13).
- Step 11: Prepare for factory-adjusted fixture connection (page 14).





8 Install Endcap

Gather endcap kit(s), install end cover onto extrusion end of straight fixture and hand tighten with screw. Next install diecast endcap into end and secure in place by folding over tabs onto back face of diecast endcap to secure to fixture.

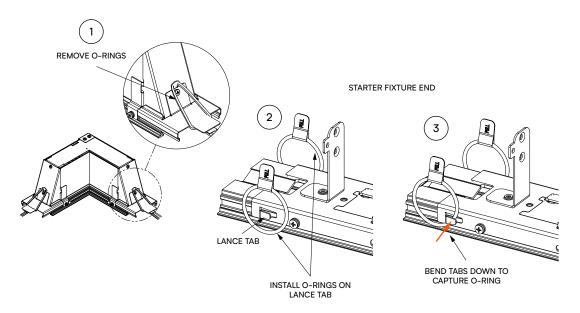


Once the endcap is installed continue to Step 12 (page 15).

9 Prepare for Corner Fixture Connection

Gather the next corner fixture to be connected in the pattern.

- 1. Remove the two o-rings from the connecting end of the corner fixture.
- 2. Install the two o-rings onto the opposing end of the starter fixture
- 3. Bend the lance tabs down to capture the o-rings.



Once o-rings are installed continue to Step 12 (page 15).

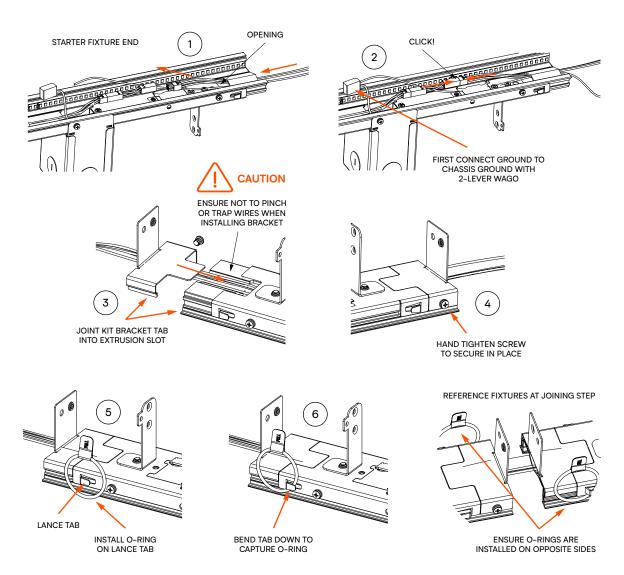


10

Prepare for Straight Fixture Connection

Gather joining kit and turn fixtures over so the optical cavity is facing up.

- Feed ground wire and joining kit harness through the opening of the end of the fixture not being joined to the corner fixture.
- 2. Connect ground wire with 2-Lever WAGO to chassis ground wire. Connect joint kit harness to jumper box connector.
- 3. Turn the fixture over so the optical cavity is laying on the ground. Carefully install joint kit bracket on joining end of starter fixture.
- 4. Secure with provided screw to fixture.



Once the starter fixture end is ready go to Step 12 (page 15).



11

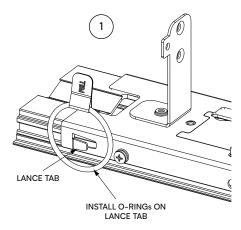
Prepare for Factory-Adjusted Fixture Connection

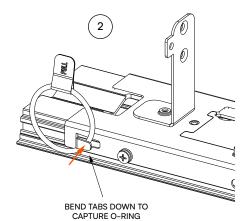
NOTE: The connection of an adjusted-length fixture depends on the end to be connected.

Factory-adjusted end with wires installed - The factory-adjusted fixture has the ground wire and connector harness installed from the factory. The starter fixture does not need the joining kit wire harness and ground wire installed.

- 1. Gather the joining kit and install an o-ring from the joining kit on one side.
- 2. Bend lance detail down to capture the o-ring.



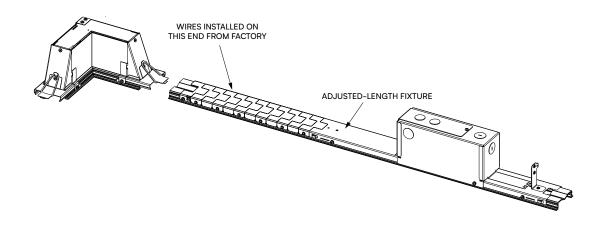




NOTE: The joint kit bracket and the second o-ring are to be installed during the joining connection steps.

Driver Box End - When the driver end of the adjusted-length fixture is to be connected to the starter fixture Repeat Step 10 (page 13).

Once the starter fixture end is ready go to Step 12 (page 15).

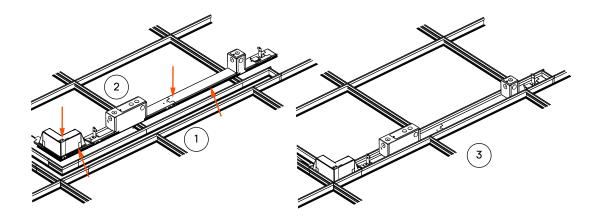




12

Raise Starter Fixture into T-Grid Opening

- 1. Raise fixture to T-Grid opening.
- 2. Pass through T-Grid system on the adjacent side.
- 3. Align fixture to 3" wide opening and lower fixture into the opening to rest in place.



Open shape start condition of pattern shown for reference, endcaps installed.

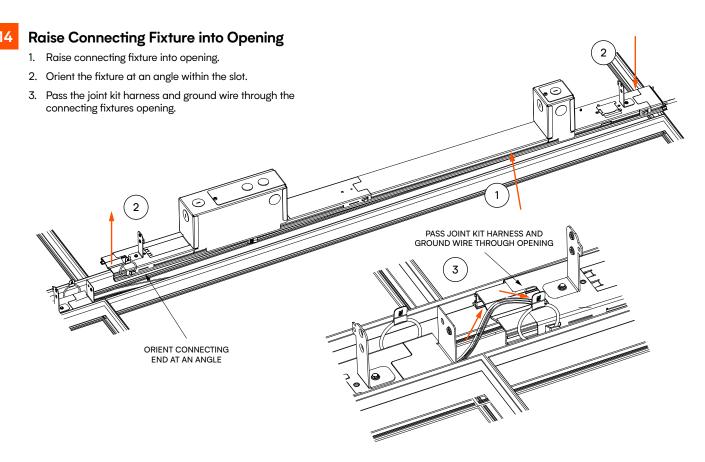
13

Prepare Next Fixture in the Pattern for Connection

- For the next straight fixture, repeat each step in step 10 (page 13) to
 join an additional fixture in a longer run. Once the fixture is prepared proceed
 to Steps 14 + 15 (page 16) to complete installation steps.
- For an end of run fixture, refer to end cap installation Step 8 (page 12). Once
 endcap is installed, proceed to Step 14 (page 17) to complete installation steps.
- For adjusted-length fixtures, Go to Step 16 (page 18) to prepare and complete installation steps.
- For corner fixture connection as the next fixture go to step 17 (page 19) for instructions to connect in the T-Grid ceiling system.
- For a straight fixture to a corner as the next fixture, go to step 21 (page 22) for installation instructions
- For a final step of a closed shape install a corner between two fixtures, go to step 22 (page 23) for installation instructions.

Repeat the above steps as required per layout drawings to complete the pattern(s).



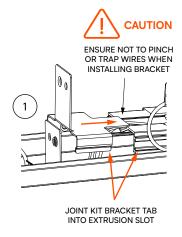


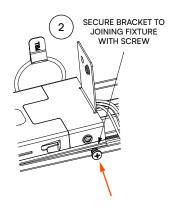
NOTE: End fixture shown for reference to complete the run.

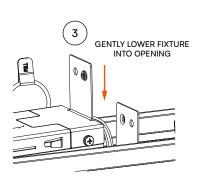


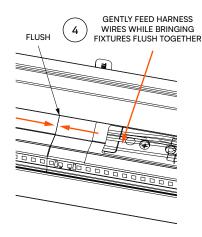
15 Complete Joining Steps

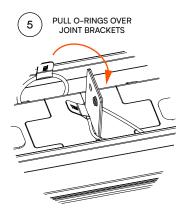
- 1. Carefully install the joint kit bracket onto the connecting fixture.
- 2. Secure with the screw.
- 3. Gently lower the fixture into the opening.
- 4. Gently feed wires and bring fixtures together until flush.
- Secure the brackets together by pulling the provided o-rings over the joint brackets to pull fixtures together.

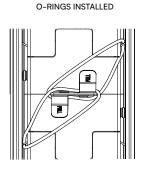














16

Adjusted-Length Fixture Joining

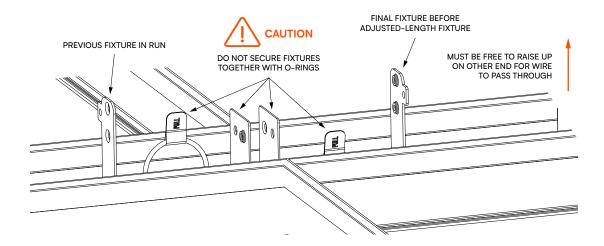
NOTE: The Adjusted-Length Fixture comes with the ground wire and connector harness installed from the factory.

IMPORTANT: Before preparing the Adjusted-Length Fixture, prepare the previous and final in-run fixtures—repeat Steps 1, 2, and 3 from within Step 22 on the previous page to do so.

The final fixture before the Adjusted-Length Fixture MUST NOT be secured to the previous fixture in the run with the o-rings. The final fixture before the Adjusted-Length Fixture is to be free

so it can be raised up at an angle to complete the wire harness and ground wire pass-through coming from the Adjusted-Length Fixture.

To allow the wires from the Adjusted–Length Fixture to be passed through, do not install a joint kit bracket on the end of the final fixture that is to be raised. Do not install joint kit and ground wire from joint kit in the final fixture before the Adjusted–Length Fixture.

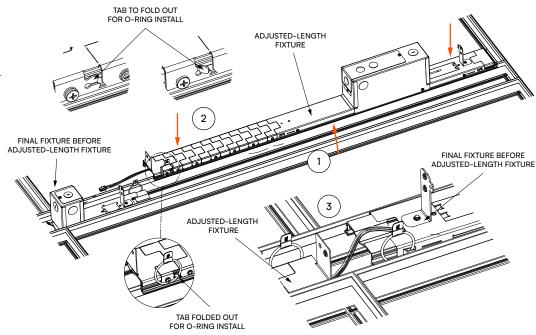


Prepare and Install the Adjusted-Length Fixture:

To install the joint kit bracket to the Adjusted-Length Fixture, refer to Step 11 starting from Sub-Steps 3+4 (page 14). Notice there is no lance tab on the side of the Adjusted-Length Fixture, the tab must be bent outward to install the o-ring to it.

- Raise the Adjusted-Length
 Fixture into the T-Grid opening
- Lower the Adjusted-Length Fixture into place
- Raise the final fixture to pass the ground wire and connector harness wires from the Adjusted-Length Fixture through the final fixture opening

Once complete, go back to Step 22 on page 23, "Complete Joining Steps" for the previous, final, and Adjusted-Length Fixtures in the run sequence.





17 Next Fixture is a Corner Fixture

Gather the corner fixture and prepare it for the installation. Recall the three conditions A, B, + C in step 3 (page 8).

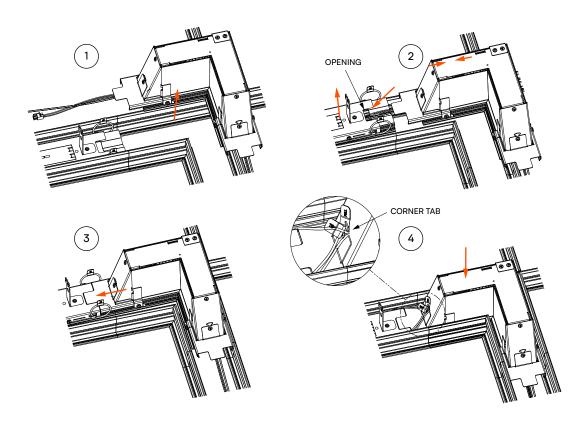
IMPORTANT: The fixture that the corner is to be connected to is to have two o-rings installed on the lance details and captured prior to raising into the T-Grid system.

- Condition A /B Corner to driver end or Corner to jumper box end. Go to the next Step 18 (page 19).
- C Corner to factory-adjusted fixture end. Go to Step 19 (page 20) for instructions to prepare and install the corner fixture as the next fixture in the pattern.

Condition A + B: Connect Corner to Driver Box End or Jumper Box End in T-Grid System

Gather corner fixture that the o-rings were removed from.

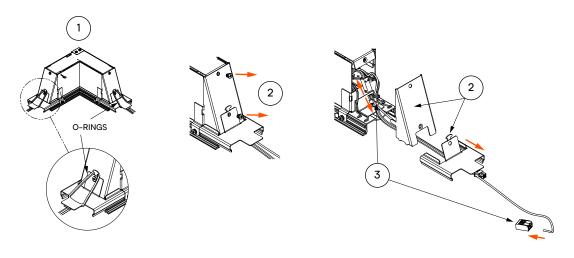
- 1. Raise corner fixture into grid system.
- 2. Raise joining fixture up at an angle and feed corner ground wire and connector harness through opening.
- 3. Carefully bring fixtures together until flush.
- 4. Lower into place and secure together by pulling o-rings over the corner tab.





Condition C - Corner to Adjusted-Length Fixture End in T-Grid System

- 1. Gather the next corner fixture and remove O-rings from corner fixture ends.
- 2. Remove corner cover and joiner bracket from corner fixture by removing the screws.
- 3. Disconnect corner fixture ground wire from the 2-Lever WAGO and disconnect corner wire connector harness from the corner fixture connector.



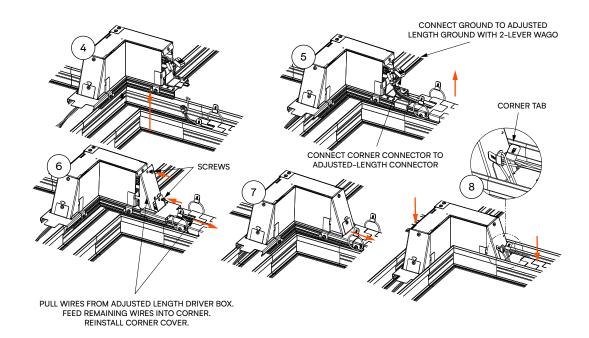
Continue to the next Step 20 for ceiling T-Grid system install steps.



20

Condition C - Corner to Adjusted-Length Fixture End in T-Grid System Continued

- 4. Raise corner fixture into grid system.
- 5. Raise the joining adjusted-length fixture up at an angle and connect ground wire and factory-adjusted wire harness to corner connections.
- Carefully pull wires from the adjusted-length fixture driver box wire access opening to create more space. This will allow you to feed the remaining wires into the corner fixture before reinstalling the corner cover and joiner bracket with the screws.
- 7. Carefully bring fixtures together until flush.
- 8. Lower into place and secure together by pulling o-rings over the corner tab.

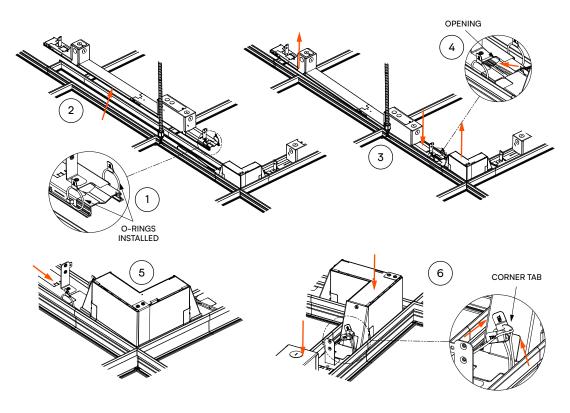




21

Next Fixture is a Straight Fixture to a Corner Fixture

- 1. Refer Step 9 (page 12) for steps to install the two o-rings onto the fixture end.
- 2. Raise fixture into T-Grid system.
- 3. Lower the fixture at an angle and raise the corner fixture end at an angle to align the fixtures.
- 4. Feed corner harness wires through the opening on the connecting fixture.
- 5. Bring the fixture into the corner fixture until together.
- Lower fixtures into the T-Grid opening and secure fixtures together by pulling the o-rings over the corner tab.

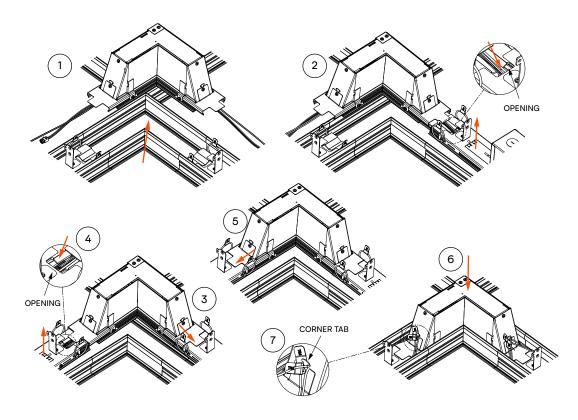


For factory-adjusted fixtures: Factory-adjusted fixtures arrive with the connector harness and ground wire pre-installed. Before raising the factory-adjusted fixture into the T-Grid opening, the corner fixture must be prepared. Refer to steps 19 and 20 (page 20) for instructions on preparation and complete installation.



22 Final Step to Complete a Closed Shape

- 1. Raise corner fixture into T-Grid system.
- Raise the first connecting fixture to the corner fixture to feed corner ground wire and connector harness through the opening.
- 3. Carefully bring fixtures together to first connect fixture.
- 4. Raise the second connecting fixture to feed corner ground wire and connector harness through the opening.
- 5. Carefully bring fixtures together.
- 6. Lower into opening.
- 7. Secure fixtures by pulling the o-rings over the corner tab on both sides.



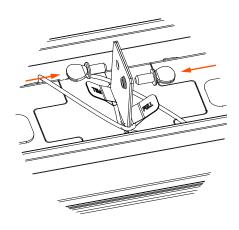
For factory-adjusted fixtures: Factory-adjusted fixtures arrive with the connector harness and ground wire pre-installed. Before raising the factory-adjusted fixture into the T-Grid opening, the corner fixture must be prepared. Refer to steps 19 and 20 (page 20) for instructions on preparation and complete installation.

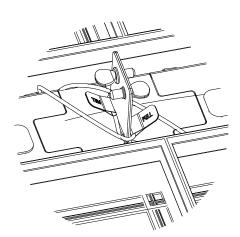


23

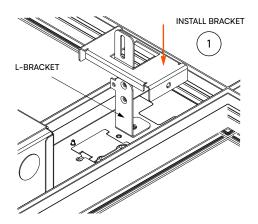
Install Grid Mount Brackets

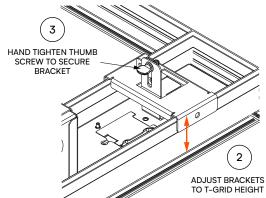
Ensure all fixtures are aligned and have a tight fit at the joints. Install the thumb screws on all joining kit brackets to secure fixtures together before installing the T-Grid mounting brackets.





- 1. Gather T-Grid mount bracket kit(s).
- 2. Install onto L-Bracket.
- 3. Adjust height and secure with thumb screw to L-Bracket.

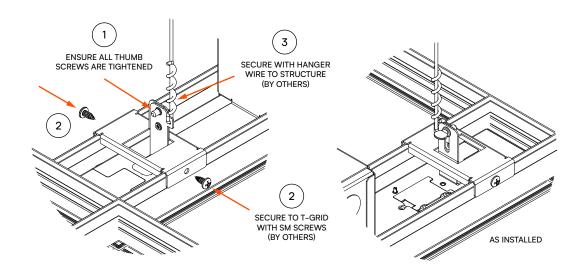






24 Once Seated Secure Fixture in Place

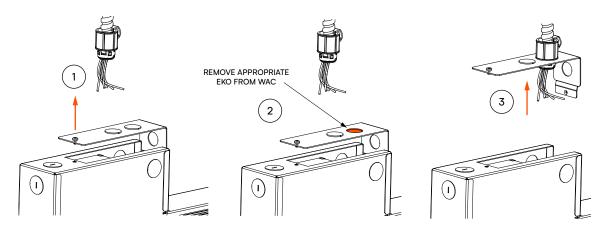
- 1. Ensure all thumb screws are tightened.
- 2. Secure bracket to T-Grid system with SM screw (by others).
- 3. Tie off bracket to structure with hanger wire (by others) as per local building and electrical codes.



Electrical Connections

25 Prepare Power Connection

- Loosen captive screw from driver box to remove wire access cover (WAC) from driver box.
- 2. Remove EKO.
- Install WAC onto an armored cable (quick connect shown for reference).

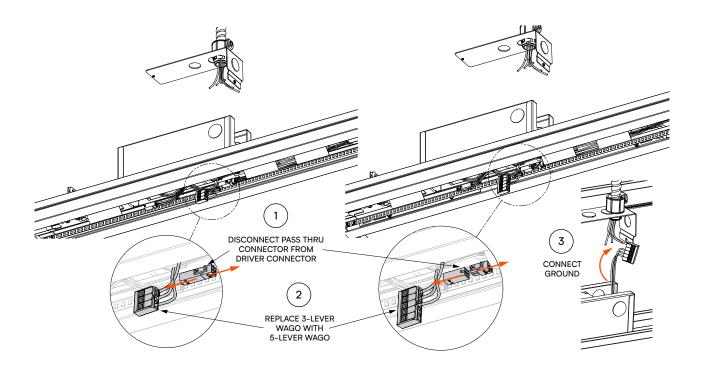




26

Gather the Power Drop Kit and Make Ground Connection – Driver Box

- 1. Disconnect the pass through connector from the driver connector harness.
- 2. Replace 3-Lever WAGO connecting the ground wires with provided 5-Lever WAGO.
- 3. Pass ground wire WAGO up to supply ground to connect to supply ground first.

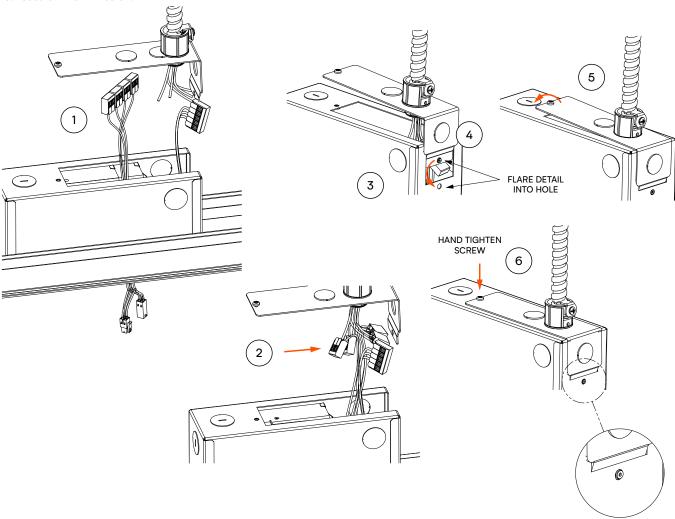




27

Connect Power Drop Harness Driver Box

- 1. Pass the power drop harness through the driver box.
- 2. Connect the 2-Lever WAGOs to complete electrical connections to supply.
- 3. Safely feed the connected wires into the driver box and reinstall the WAC.
- 4. Install flare detail on WAC into hole on driver box.
- 5. Bring the WAC down to the box top.
- 6. Secure WAC with screw.

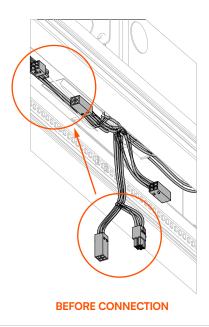


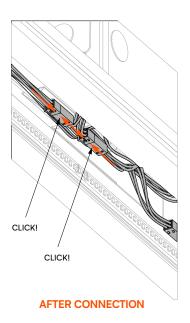


28

Connect Power Drop to Fixture Connectors - Driver Box

To complete the electrical connection, connect the power drop harness connectors between the pass–thru and driver connectors.

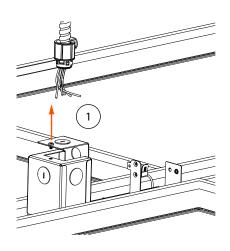


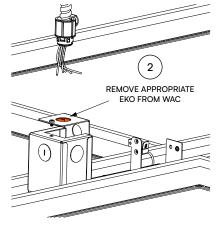


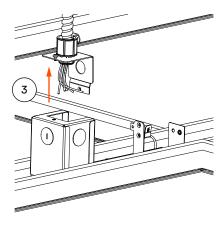
29

Prepare Power Connection – Jumper Box

- Loosen the captive screw from the jumper box to remove WAC from the jumper box.
- 2. Remove EKO.
- 3. Install WAC onto an armored cable (quick connect shown for reference).





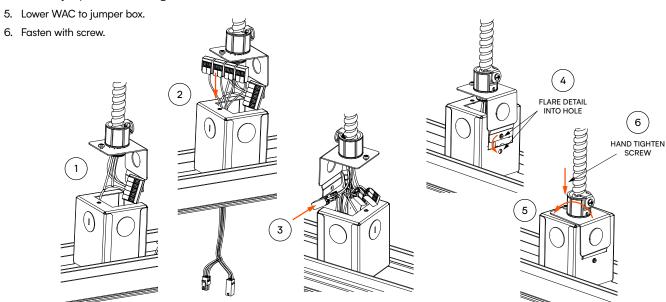




30

Gather the Power Drop Kit and Make Electrical Connection - Jumper Box

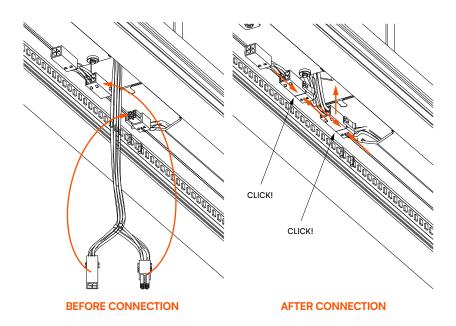
- 1. Connect ground wire to supply ground and connect with provided 5-Lever WAGO from the power kit.
- 2. Feed power drop harness through jumper box.
- 3. Secure the supply leads to the 2-Lever WAGOs to the power drop connections.
- 4. Reinstall jumper WAC, inserting flare detail into hole.



31

Make Power Connections + Prepare Next Mount Location

Connect the power drop harness connectors between the pass-thru and jumper box connectors.





Lens Installation

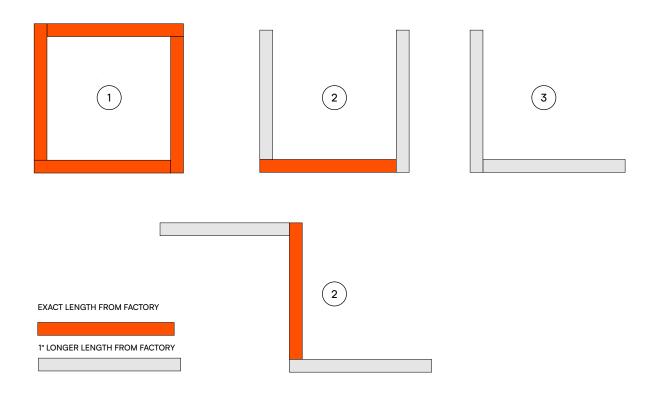
Lens Install at the Corner in a Pattern

The fixture type in the layout drawing will match the type on the lens label.

Once you have identified the lenses for the pattern. Review the below three conditions for how the lens in a pattern is to be installed.

- Closed shape: square or rectangle, must be installed in a head to tail sequence as seen in image 1 below.
- 2. Open shape: U + Z shapes will have one exact lens cut to length from factory, with two end lenses that will be 1" longer to be shortened on site during the final step of lens install (by others).
- Open shape: L shapes will have two end lenses that will be 1" longer to be shortened on site during the final steps of lens install (by others).

Once the pattern and lens segments have been identified proceed to the next step to begin the installation steps.



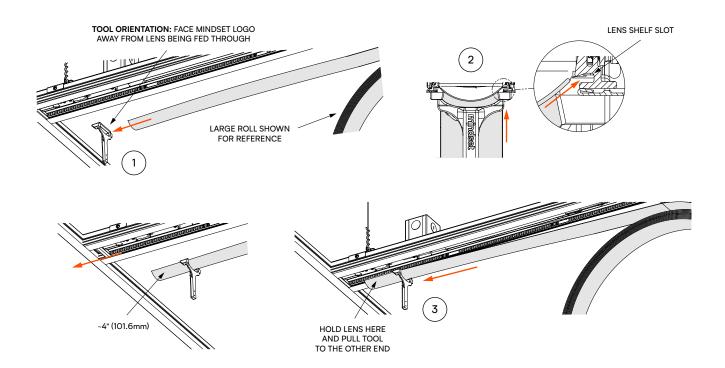


33

Install Continuous Lens

Gather lens roll and lens installation tool.

- 1. Insert non-dominant arm through the lens roll and rest roll on shoulder.
- 2. Next take one end of the start of the lens roll. NOTE: the orientation of the tool is important see image. Bend with your hand and feed through the install tool. Allow for ~4 inches of the folded lens to pass through the tool to provide enough length for the lens to feed into the shelf slot. Raise to fixture aperture and insert lens into lens slots.
- Hold the lens and push the lens tool into aperture and slide the tool along the trim face. The lens will feed into the shelf slot. Slide to the opposite end, stop ~1ft before you reach the end.



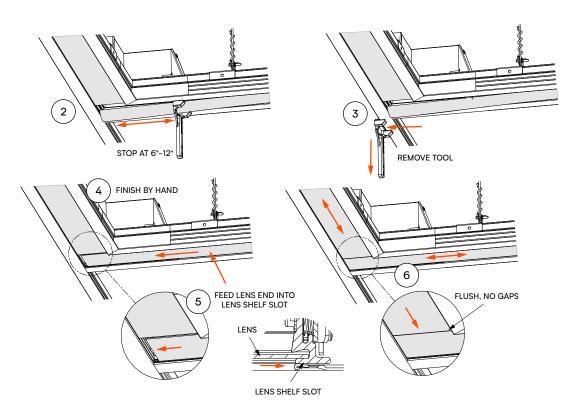


34

Lens Install for a Corner Intersection

Gather the next lens segment in the pattern for a corner intersection.

- 1. Repeat step 32 (page 30) to start the lens installation from an end condition.
- 2. When you reach approximately 6"-12" from the corner intersection stop.
- 3. Slide the lens install tool off the end of the lens.
- Complete the installation by hand, run your hand and push gently up along the remaining length.
- 5. Ensure to feed the end of the lens at the corner intersection into the lens shelf slot in the corner fixture.
- Center all lenses for all apertures and flush lenses against the corner edges to conceal any gaps.



Replace tiles, finished.



35

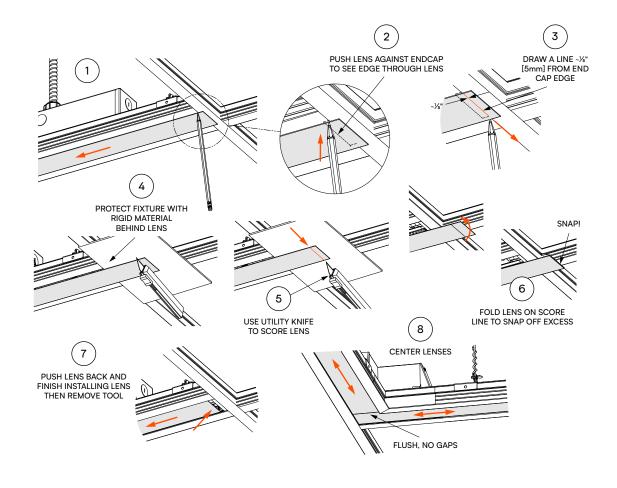
Lens Install for End Condition

Leave the lens tool installed at ~1ft from the end of the run.

- Slide the lens towards the corner fixture and ensure the lens tucks into the lens shelf slot until it stops (see step 5 within step 34 (page 32) for instructions on feeding lens into the shelf slot detail)
- 2. Push lens flush to the endcap shelf edge. The edge can be seen through the lens.
- Draw a line on the lens ~1/8" or [5mm] from the shelf edge.
- 4. Next pull the lens out ~v8 to 10 inches past the end of the fixture. Obtain a piece of rigid material (e.g. scrap corrugated fiberboard) and place the board behind the lens.

- Use the utility knife to score along the line to create a snap line. Use the utility knife to score along the line to create a snap line.
- 6. Remove the board and fold the lens over itself to snap the lens along the scored line.
- Push lens back to starter end until it stops. Finish installing the lens with the tool until the end and slide tool out.
- 8. Center lens in aperture and replace ceiling tiles, finished.

IMPORTANT: If the lens is slightly too long, it can be gently worked into place. However, if it's significantly oversized, it will need to be trimmed. Exercise caution when trimming, as cutting too much will result in a gap.

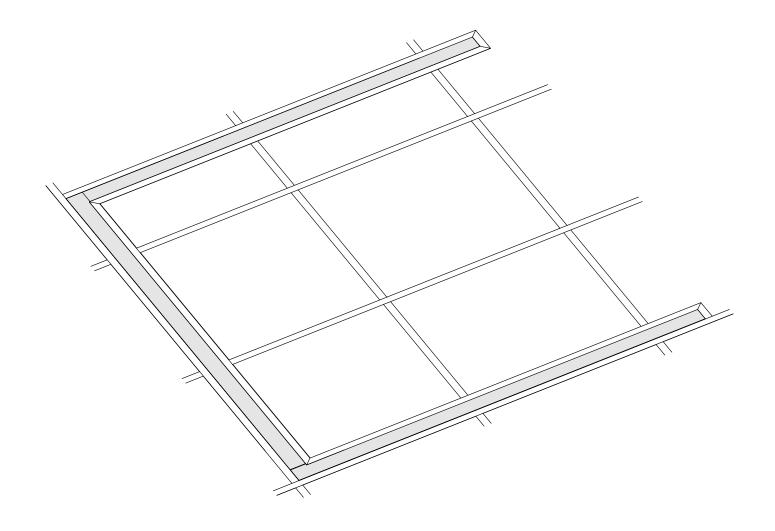






Pattern Installed

All lenses centered, all tiles replaced. Finished C3 pattern shown for reference.

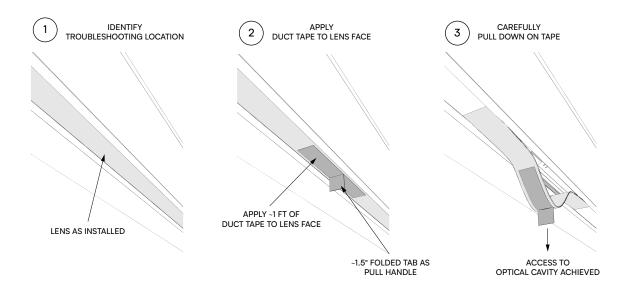




Lens Removal (Troubleshooting)

Affix a 1 ft length of duct tape to the lens, creating a folded tab to serve as a handle. Flex the lens outward; once a section is dislodged, the remainder can be easily slid out.

The need for full lens removal depends on its length. Shorter lenses are simpler to remove entirely. For lengths exceeding 20 ft, it might be sufficient to pull the lens down only enough to access the troubleshooting area.





Different thinking, by design.



real help. real people. real answers.

778.650.1000 justask@mindsetlighting.com