

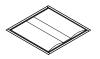
LUCEN INSTALLATION INSTRUCTIONS

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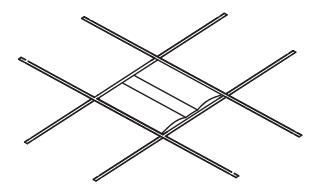






LUCEN

GRID CEILING INSTALLATION







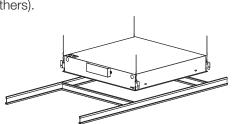


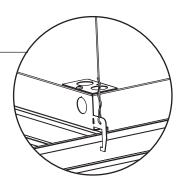


Step 1:

T-Grid Installation

- 1. Position fixture up through grid opening.
- 2. Lower fixture so fixture flanges rest on T-Grid.
- 3. Tie off fixture to structure with retention wires (by others).

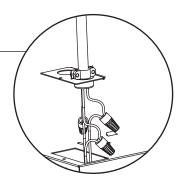




Step 2:

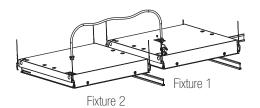
Making the Connections

- 1. Remove electrical cover, remove knockout, attach building supplied conduit.
- 2. Make electrical connections, recess wires into fixture cavity and attach cover.



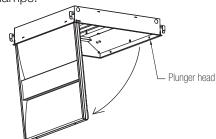
Through-wiring Option *shown with optional flex whip.

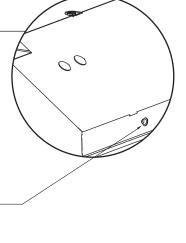
- 1. Fixtures are shipped with knock out removed and wires for joining fixtures extended from housing.
- 2. Pull wiring from fixture 1 into fixture 2 make wiring connections in fixture 2.



Step 3: Installing Lamps

- 1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.
- 2. One-piece door frame swings open allowing access to lamps.







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- 2. Minimum 90°C supply conductors
- 3. All electrical connections must be performed by a certified electrician to applicable local and national electrical codes.
- 4. Contact Pinnacle prior to making any fixture alterations.
- 5. Contact Pinnacle with any installation questions or field issues.



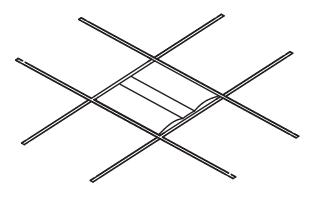
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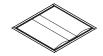


LUCEN 1X1 LED GRID CEILING INSTALLATION









LUCEN 1x1 LED Grid Ceiling Installation



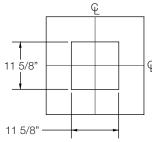


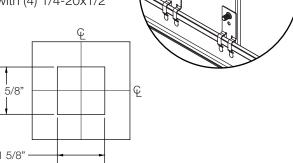
Step 1:

Preparing the Tile

- 1. Install IDS clips on T-grid 9-3/8" from inner side of grid and 3" apart.
- 2. Cut out center of ceiling tile as shown.
- 3. Install mounting angle with (4) 1/4-20x1/2 bolts through IDS clips.

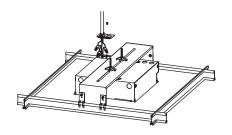
2x2 Tile Cut-out dimensions

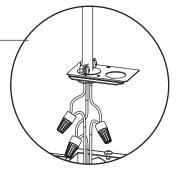




Step 3: Making the Connections

- 1. Remove electrical cover, remove knockout, attach building supplied conduit.
- 2. Make electrical connections, recess wires into fixture cavity and attach cover.



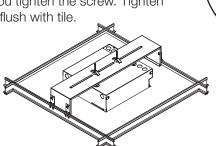


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Step 2:

Mounting Fixture

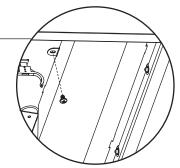
- 1. Lift and shift fixture through opening in tile and secure by pushing toggle bolt through mounting angle holes until the toggle snaps open.
- 2. Pull back on screw to keep the wings from spinning while you tighten the screw. Tighten until flanges are flush with tile.





Installing Lamps

- 1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.
- 2. One-piece door frame swings open allowing access to lamps.



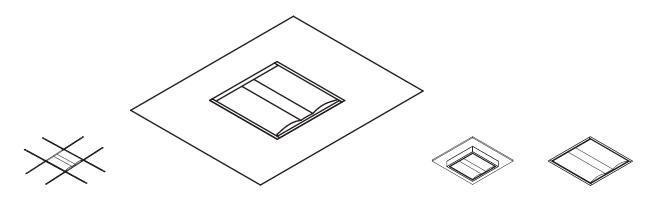


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- 5. Contact Pinnacle with any installation questions or field issues.



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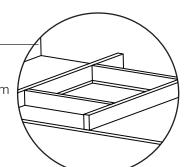
INACCESSIBLE INSTALLATION

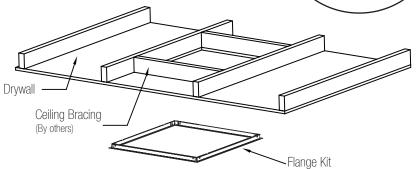


Step 1: Rough in

- 1. Build ceiling framing using Dim "A" and Dim "B".
- 2. Make appropriate cut out in drywall using Dim "A" and Dim "B" (see dimension chart below).



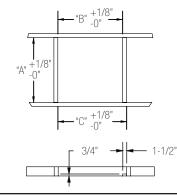






Dimension Chart

Fixture Size	Dim "A"	Dim "B"
1x4	12-3/4"	48-3/4"
2x2	24-3/4"	24-3/4"
2x4	24-3/4"	48-3/4"

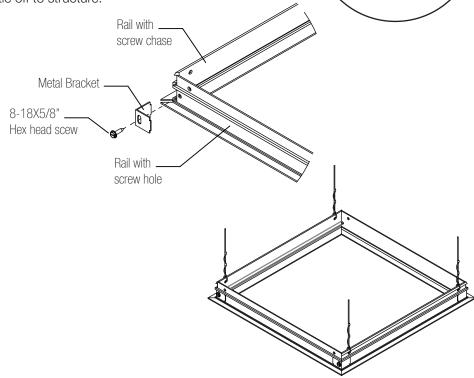


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Step 2:

Setting up the Flange Kit

- 1. Slide bracket into the rail with the screw chase and rail with the screw hole making sure the screw slot lines up with the whole.
- 2. Use the four 8-18x5/8" Hex head screws provided to screw the brackets into the corners.
- 3. Place assembled flange kit into ceiling cut out and tie off to structure.





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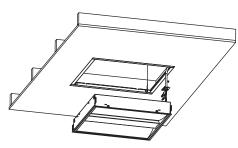


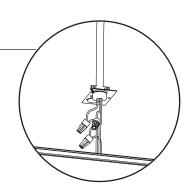


Step 3:

Making the Connections

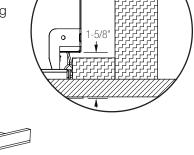
- 1. Remove electrical cover, remove knockout, attach building supplied conduit.
- 2. Make electrical connections, recess wires into fixture cavity and attach cover.





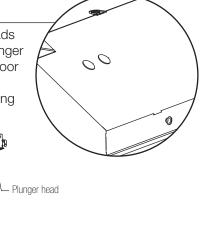


1. After wiring the fixture and checking all connections, carefully install fixture by angling it up through drywall frame kit and rest the housing on it.



Step 5: Installing Lamps

- 1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.
- 2. One-piece door frame swings open allowing access to lamps.



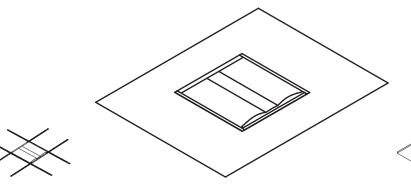
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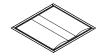
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LUCEN 1X1 INACCESSIBLE INSTALLATION







LUCEN 1x1 Inaccessible Installation

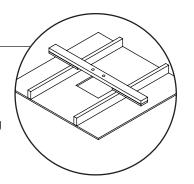




Step 1:

Prepare the Brace and the Opening

- 1. Cut an 11-5/8" square opening in the drywall.
- 2. Drill 2x 1" diameter holes on 2x4 stud.
- 3. Cut 2 pieces of 1x4 stud attach them to the 2x4 stud already drilled using #10 wood screws.
- 4. Insert pre-drilled stud through drywall opening and let rest on ceiling bracing.

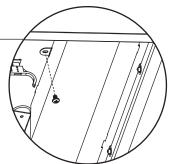


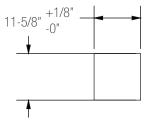
Step 2:

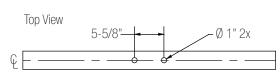
Opening Lens

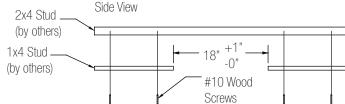
1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.

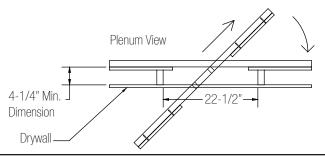
2. One-piece door frame swings open allowing access to lamps.

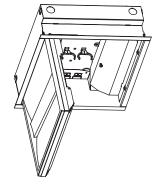














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- 2. Minimum 90°C supply conductors

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LUCEN 1x1 Inaccessible Installation



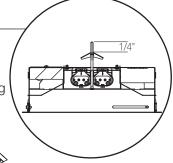
Step 3:

Installing Toggle Bolts

1. After opening the fixture install bolts through the fixture.

2. Thread the toggle 1/4" max. allowing the threads of the bolt to keep the toggle from turning sideways.

> 10-32 Toggle Bol



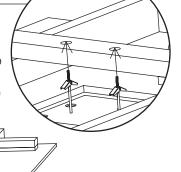
Step 5:

Installing into Ceiling

1. Install fixture by angling it up through drywall opening.

2. Secure by pushing toggle bolt through predrilled wood until you hear or feel the toggle snap open.

3. Tighten the screw until the housing flanges are flat with the drywall.

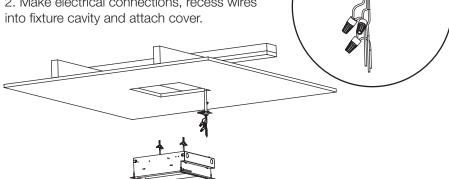


Fixture Extension

Step 4:

Making the Connections

- 1. Remove electrical cover, remove knockout, attach building supplied conduit.
- 2. Make electrical connections, recess wires



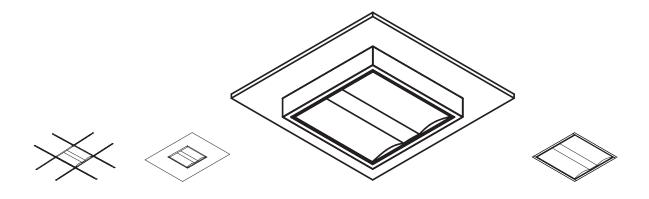


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LUCEN 2X2, 2X4 & 1X4 SURFACE MOUNT INSTALLATION

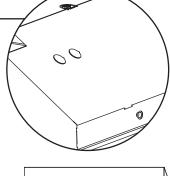


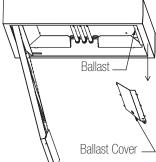
Step 1:

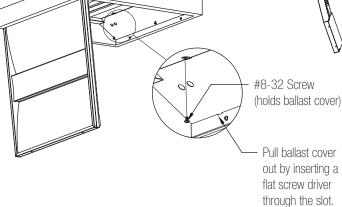
Remove Ballast Cover

- 1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.
- 2. One-piece door frame swings open allowing access to lamps, and remains captive to fixture during maintenance.
- 3. To access ballast, remove #8-32 screw (one side only) that holds ballast cover and pull out cover by inserting a flat screw driver through slot. To remove opposite side cover slide door frame over and repeat steps.

(Note: See page 4 for instructions on accessing driver.)



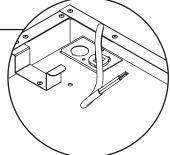


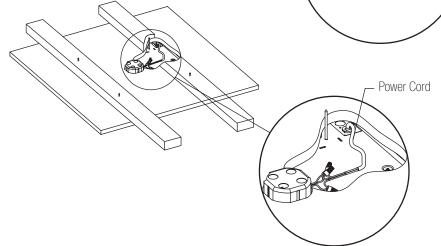


Step 2:

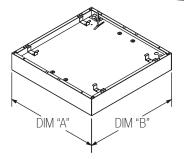
Making the Connections

- 1. Using the power cord from the fixture make necessary wiring connections to building power.
- 2. After making connections recess the wires into the J-Box.





Fixture Size	Dim "A"	Dim "B"
1x4	13-1/2"	49-1/2"
2x2	25-1/2"	25-1/2"
2x4	25-1/2"	49-1/2"





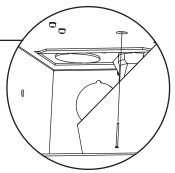
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- 2. Minimum 90°C supply conductors

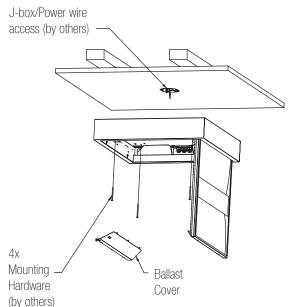
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- 3. All electrical connections must be performed by a certified electrician to applicable local and national electrical codes.
- 4. Contact Pinnacle prior to making any fixture alterations.
- 5. Contact Pinnacle with any installation questions or field issues.

Step 3: Mounting

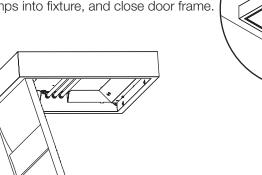
- 1. Inside ballast channel locate holes in corners (one in each corner).
- 2. Using these holes (4) mount fixture to ceiling with appropriate mounting hardware (by others).

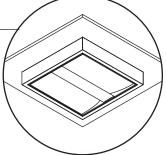




Step 4 Finishing

- 1. Refer to step 1, reverse steps and re-install ballast covers.
- 2. Install lamps into fixture, and close door frame.







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LUCEN

MAINTANENCE SHEET









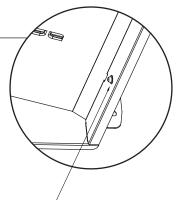


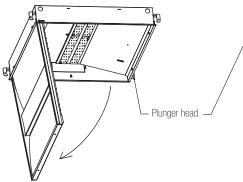


Step 1:

Accessing Boards

- 1. Gently push lens up to locate plunger heads (located on one side only), depress both plunger heads with fingers and simultaneously pull door frame down.
- 2. One-piece door frame swings open allowing access to lamps.





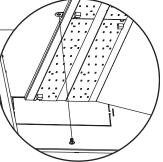
Step 1B: Cleaning Lens

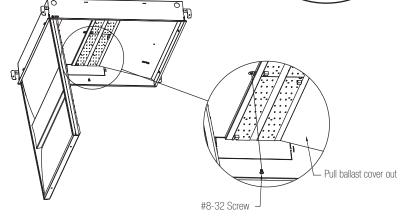
- 1. Open door frame (as instructed above).
- 2. Door frame remains captive to fixture during maintenance/cleaning.
- 3. Wipe top and bottom of lenses with Isopropyl alcohol and a clean rag. (DO NOT USE AMMONIA)
- 4. Close door frame.

Step 2:

Accessing the Driver

- 1. Remove #8-32 screw (one side only) that holds LED panel.
- 2. Remove LED panel.
- 3. Reverse steps prior to closing.









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LUCEN CONTROLS DETAILS





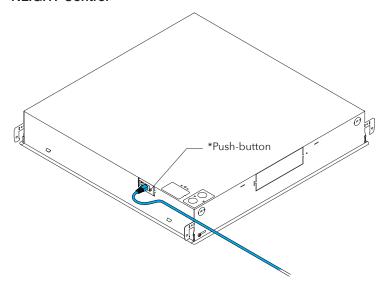




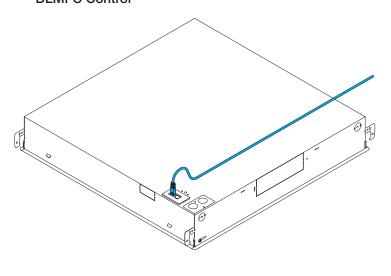




NLIGHT Control



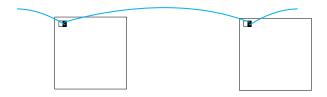
DLMFC Control



Controls Connections

- 1. Both NLIGHT and DLMFC options require ethernet connection.
- (see images above for port location)
- 2. Connect ethernet cable to either jack in port.
- 3. To daisy chain fixtures use one jack for input and second jack for output to chain fixtures together.

Chaining individual fixtures



*NLIGHT Note: For push-button programming, refer to nLight installation literature.



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