NBT Transition Back-Lit Troffer
(NBT Series)

BEFORE YOU BEGIN

Read these instructions completely and carefully.

! WARNING/AVERTISSEMENT

RISK OF ELECTRIC SHOCK
- Turn power off before inspection, installation or removal.
- Properly ground electrical enclosure.

RISK OF FIRE
- Follow all NEC and local codes.
- Use only UL approved wire for input/output connections. Minimum size 18 AWG (0.75mm2).

RISQUES DE DÉCHARGES ÉLECTRIQUES
- Coupez l'alimentation avant d'inspecter, installer ou déplacer le luminaire.
- Assurez-vous de correctement mettre à la terre le boîtier d'alimentation électrique.

RISK OF FIRE
- Respectez tous les codes NEC et codes locaux.
- N'utilisez que des fils approuvés par UL pour les entrées/sorties de connexion. Taille minimum 18 AWG (0.75mm2).

Save These Instructions

Use only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.

Components Supplied

- Luminaire – Max. mounting height is 22-ft.

Tools and Components Required

- Slot or Philips screwdriver
- UL Listed conduit connections per NEC/CEC for nominal conduit trade sizes ½" or ¾"
- UL Listed wire connectors

Prepare Electrical Wiring

Electrical Requirements
- The LED Luminaire must be connected to the main supply according to it's ratings on the product label.

Grounding Instructions
- The grounding and bonding of the overall system shall be done in accordance with National Electric Code (NEC) Article 600 and local codes.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. CAN ICES-005(A)/NMB-005(A).

Cet appareil est conforme à la partie 15 des règles de la FCC. Le fonctionnement de cet appareil est assujetti aux deux conditions suivantes : 1) cet appareil ne doit pas causer d'interférence préjudiciable, et (2) cet appareil doit accepter toute autre interférence reçue, y compris les interferences pouvant entraîner un fonctionnement non désiré.

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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

REMARQUE: Cet appareil a été testé et reconnu conforme aux limites établies pour les appareils numériques de classe A, selon la section 15 des règlements de la FCC. Ces limites visent à fournir une protection raisonnable contre l'interférence préjudiciable lorsque l'équipement est utilisé en milieu commercial. Cet équipement produit, utilise et peut émettre de l'énergie radioélectrique et, s'il n'est pas installé et utilisé conformément aux instructions d'installation, il peut causer une interférence préjudiciable aux communications radio. L'utilisation de cet équipement en milieu résidentiel est susceptible de causer une interférence préjudiciable, auquel cas l'utilisateur devra corriger l'interférence à ses frais

FCC Caution Statement: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Déclaration de mise en garde de la FCC: Tout changement non expressément autorisé par le fabricant peut annuler l'autorisation d'utiliser cet équipement

INSTALLATION METHOD 1: RECESSED MOUNTING

1 Carefully unpack unit from its packaging. Properly inspect for defects before installing. Wear work gloves to prevent dirt and oil from being transferred to the luminaire.
Sizes Available: 14 (1x4), 22 (2x2), 24 (2x4)

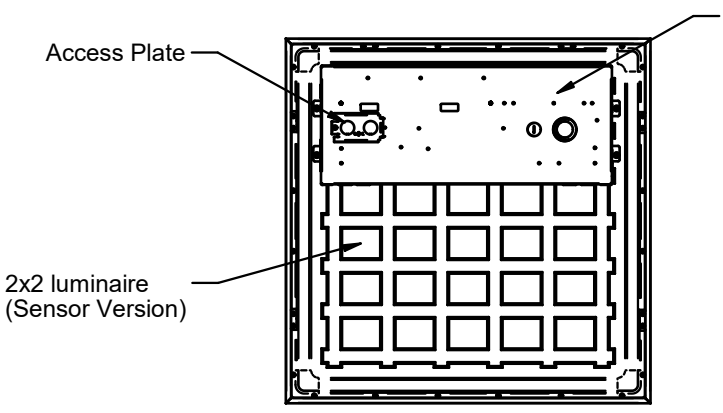

Fig 1.1

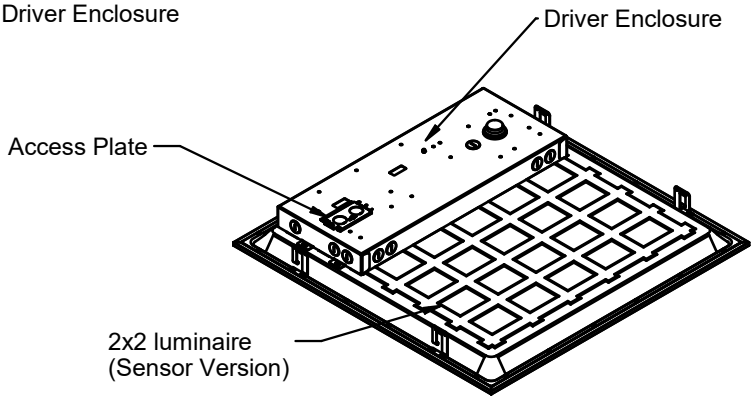

Fig 1.2

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2 The fixture will be installed by lifting it into the plenum and positioning it between the standard grid (Fig 2.1) or slotted grid (Fig 2.2), with its edge resting on the back of the grid.

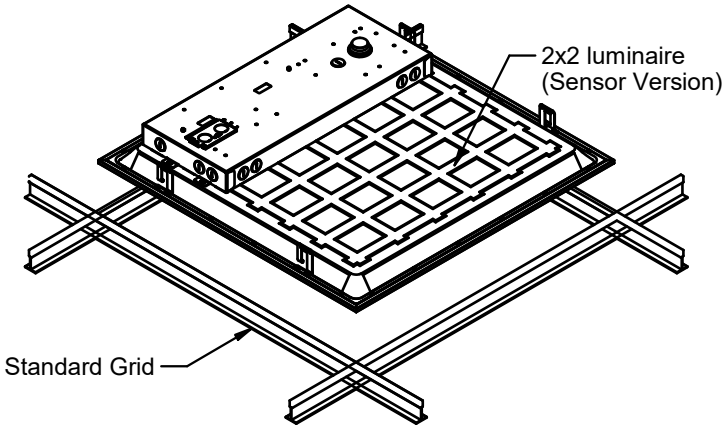

Fig 2.1

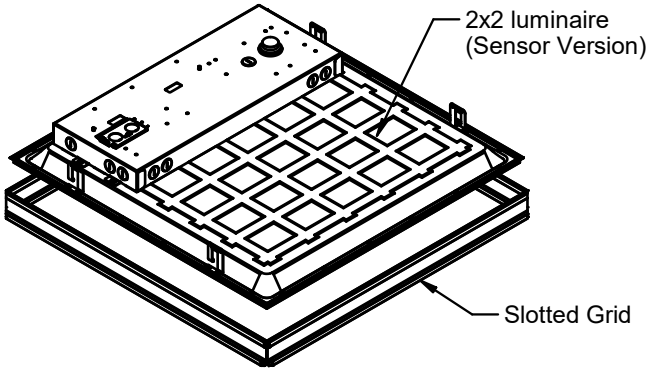

Fig 2.2

3 Open access plate by unfastening the screw (Fig 3.1). Open knockouts to connect power with appropriately sized electrical fittings. Make wiring connections according to Fig 3.3.
Replace access plate into place, and securely fasten screw to lock access plate closed. (Fig 3.2)

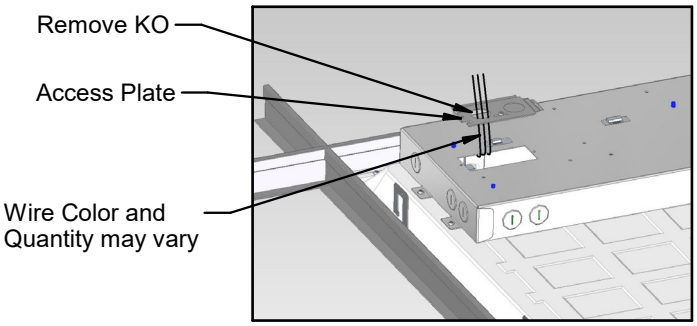

Fig 3.1

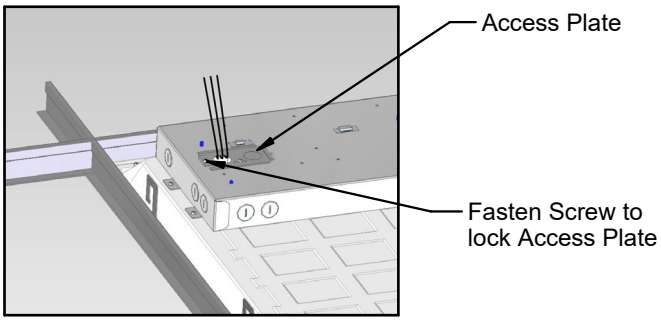

Fig 3.2

Electrical Connections

! WARNING/AVERTISSEMENT

Risk of electrical shock. Disconnect power before servicing or installing product.
Risque de choc électrique. Couper l'alimentation avant le dépannage ou avant l'installation du produit.

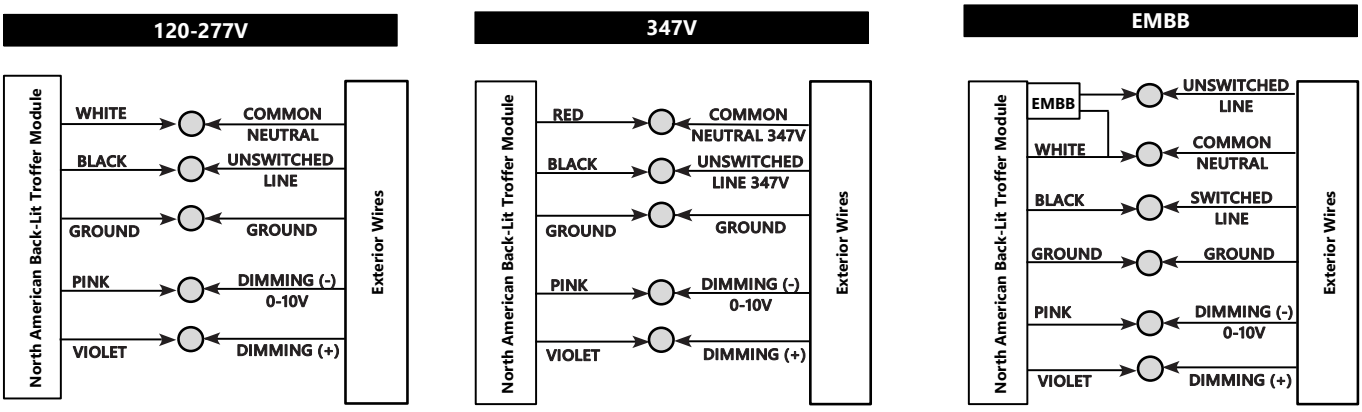

Fig 3.3

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4 For the standard grid (Fig 2.1), bend the grid clips to secure the luminaire in place (Fig 4.1).
For the slotted grid (Fig 2.2), support the fixture to the building structure using a fixture guy wire through the connection holes (Fig 4.2).

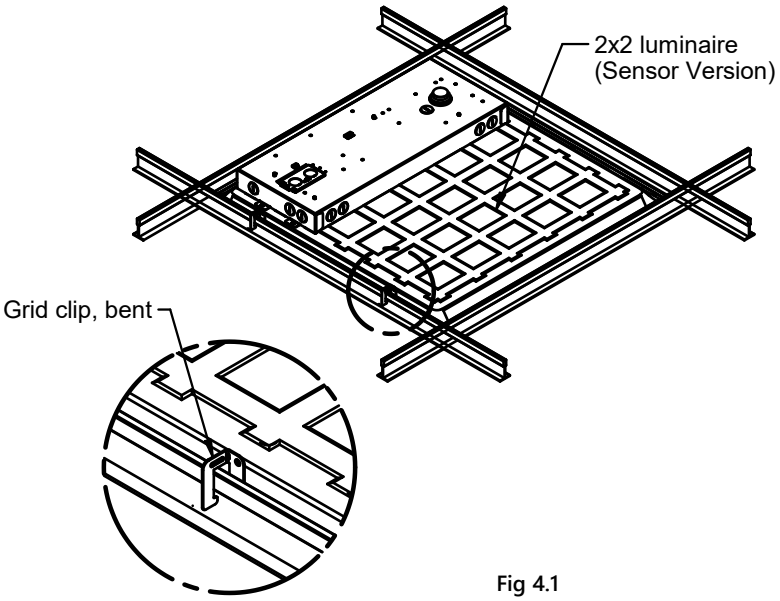

Fig 4.1

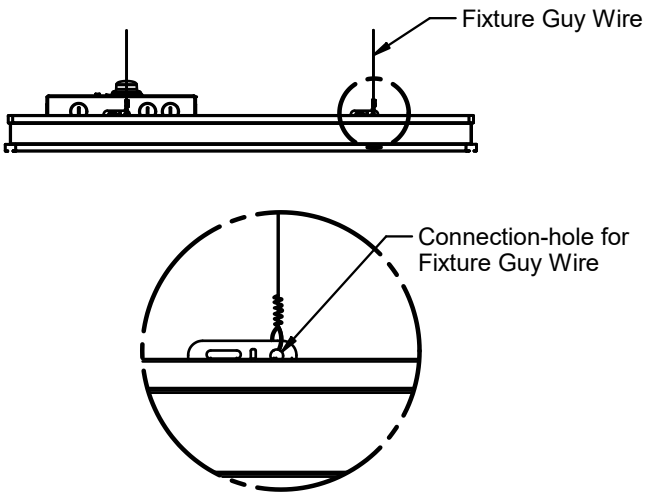

Fig 4.2

5 EM Option having integrated battery installed will have the test switch (TS) mounted onto the Lens and accessible as shown (Fig 5).

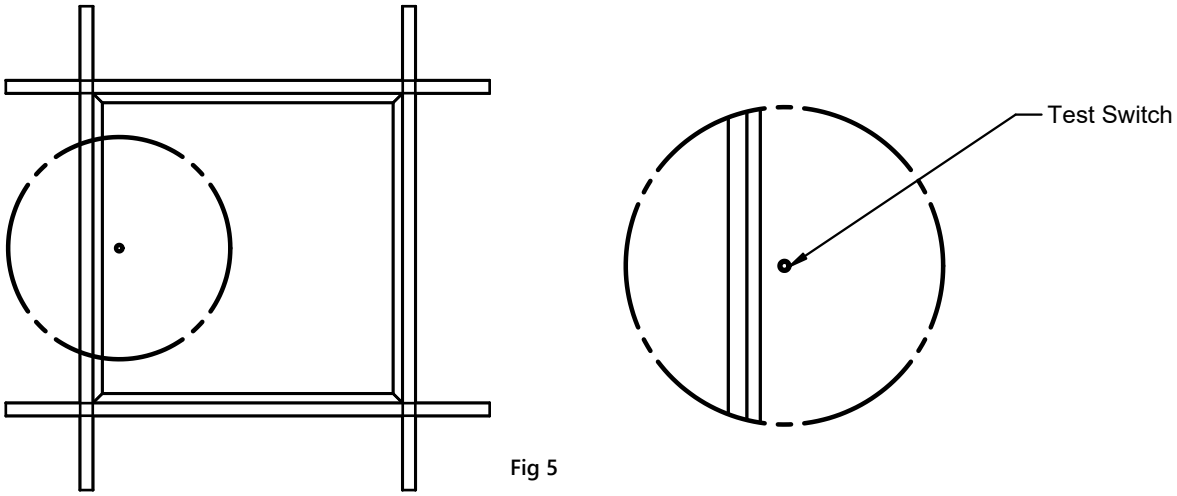

Fig 5

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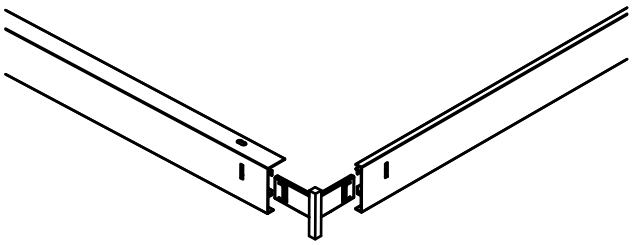
INSTALLATION METHOD 2: LUMINAIRE FITTING

*Finished installation depth is 4.3" from the ceiling surface.

NOTE: The maximum load for DSMK-14 is 10.25 lbs.
The maximum load for DSMK-22 is 9.5 lbs.
The maximum load for DSMK-24 is 18.5 lbs.

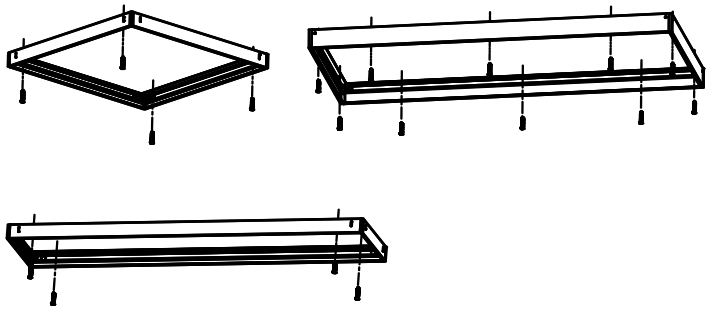
STEP 1

Snap corner bracket to extruded rails, making sure that mounting flanges are on opposite sides.



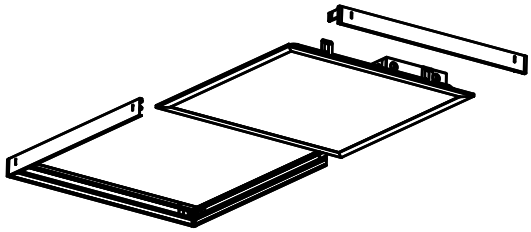
STEP 2

Attach frame to ceiling structure.



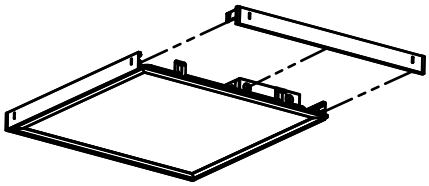
STEP 3

Remove one non-mounting frame side and slide in flat-panel. Make all electrical connections using appropriate fittings.



STEP 4

Reinstall frame side to complete.

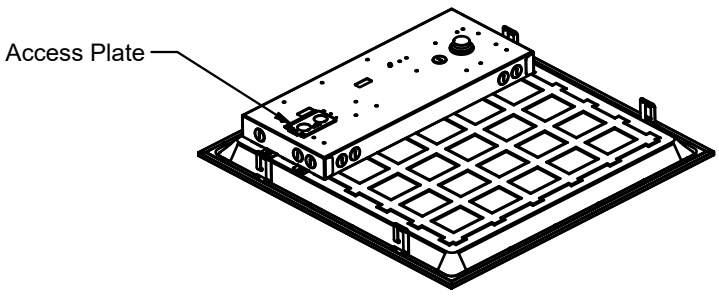


WIRING CONNECTION

*Wiring connection of all installation methods are the same.

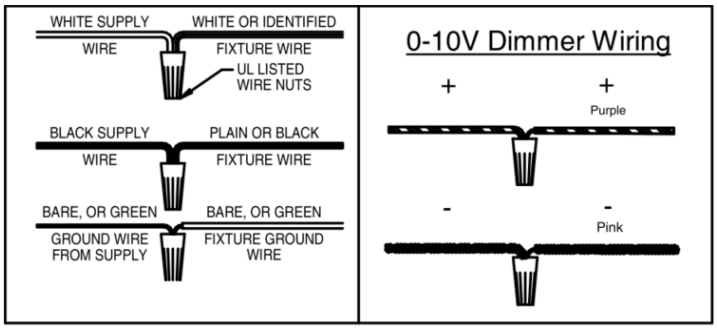
STEP 1

Open access plate. Use knockouts to connect power access using appropriately-sized electrical fittings.



STEP 2

Make wiring connections.



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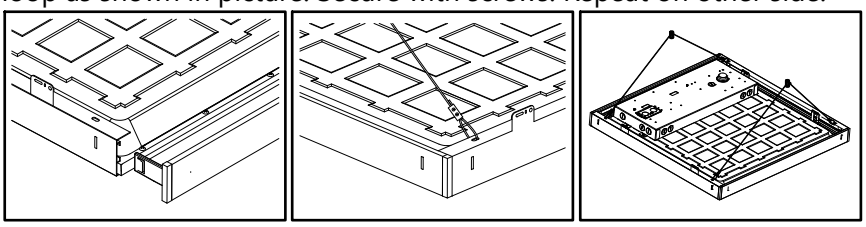
INSTALLATION METHOD 3: CABLE MOUNT — NON-POWER FEED SUSPENSION KIT

CAUTION

- All connections and assembled components need to be tightened and securely fastened. Do not remove die cast end from cable. Crimps are factory pressed onto cable for maximum strength. Current will not be responsible for damage or injuries which occur due to the cable/crimp alterations.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

STEP 1

Thread one end of gripper cross cable through safety stop ⑩, then through fixture bracket hole, and back though safety stop to complete loop as shown in picture. Secure with screws. Repeat on other side.



STEP 2

J-box bracket option: Securely install J-box bracket ① onto the junction box with the two #8-32 screws ②. Install the 1/4-20 threaded stud ③ into center hole of the bracket. Leave approx. 1/2"-3/4" exposed thread. Install the ground screw ④, which will be used later.

STEP 3

Thread cable with stop ⑧ through top threaded end of barrel coupler ⑦ and pull cable until stop is seated inside coupler.

STEP 4

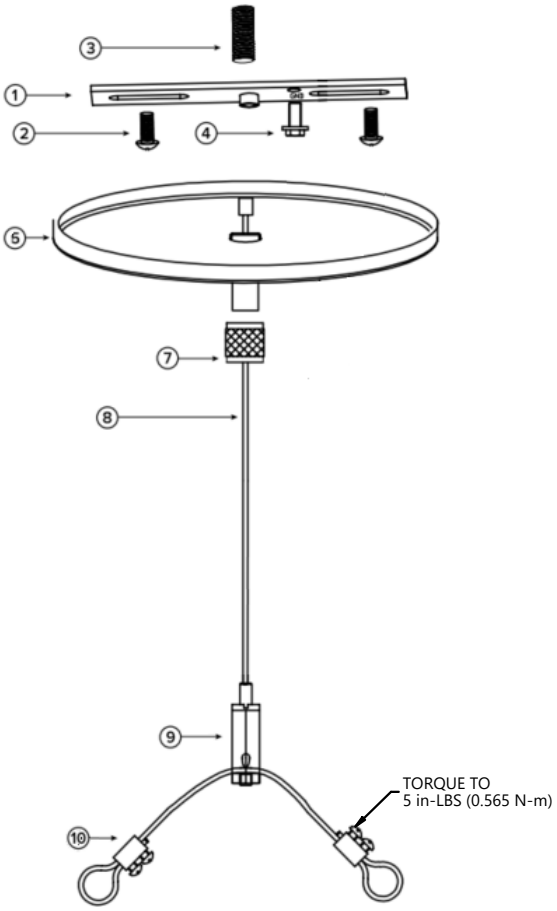
Install 1/4”-20 anchor onto ceiling. Fasten threaded stem making sure that the bottom protrudes approximately 3/4” from the surface of the ceiling. Insert non-power feed canopy over the stem, and secure the canopy in Place by threading the cable coupler and suspension cable onto the protruding stem.

STEP 5

Feed open end of cable through top plunger end of cable gripper. Gripper will engage around cable to prevent slipping. Adjust cable gripper position by pressing top plunger down. With the plunger depressed the gripper will move freely to any position.

STEP 6

Lift fixture to ceiling and thread cable completely through gripper. After the final cable gripper position is determined, trim excess cable no less than 3" beyond cable gripper outlet.



J-box bracket option

Item	Description	QTY
1	J-Box Bracket	1
2	#8-32 screws	2
3	1/4-20 Threaded Stud	1
4	Ground Screw	1
6	5” Canopy	1
7	Barrell Coupler	1
8	Cable with stop	1
9	Gripper with cross cable	1
10	Safety Stop	1

T-bar clip option

Item	Description	QTY
5	T-Bar Clip	1
6	5” Canopy	1
7	Barrell Coupler	1
8	Cable with stop	1
9	Gripper with cross cable	1
10	Safety Stop	1

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INSTALLATION METHOD 4: CABLE MOUNT — POWER FEED SUSPENSION KIT

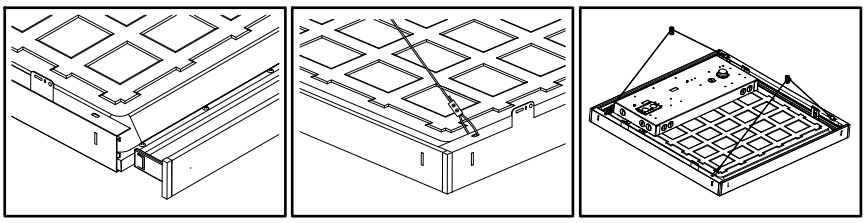
(Universal voltage only)

CAUTION

- All connections and assembled components need to be tightened and securely fastened. Do not remove die cast end from cable. Crimps are factory pressed onto cable for maximum strength. Current will not be responsible for damage or injuries which occur due to the cable/crimp alterations.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

STEP 1

Thread one end of gripper cross cable through safety stop ⑫, then through fixture bracket hole, and back though safety stop to complete loop as shown in picture. Secure with screws. Repeat on other side.



STEP 2

Securely install J-box bracket ① onto the junction box with the two #8-32 screws ②. Install the 1/4-20 threaded stud ③ into center hole of the bracket. Leave approx. 1/2"-3/4" exposed thread. Install the ground screw ④, which will be used later.

STEP 3

Insert the cord set ⑩ into the junction box and make the connections per all the appropriate electrical codes. For T-bar ceilings, the junction box installation is not covered in these instructions, but code requirements must be followed.

STEP 4

Thread cable with stop ⑨ through top threaded end of barrel coupler ⑦ and pull cable until stop is seated inside coupler.

STEP 5

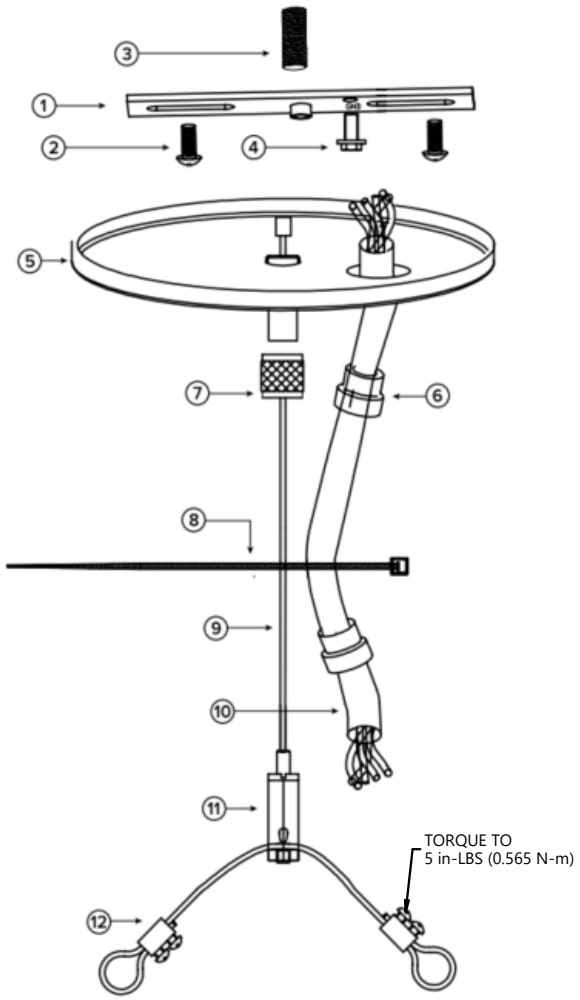
Feed cord set through larger canopy hole and secure canopy to 1/4-20 stud with barrel coupler. You may need to adjust the height of the 1/4-20 stud.

STEP 6

Use pliers to install strain relief bushing ⑥ around cord set and into canopy hole.

STEP 7

Thread cable through top plunger end of gripper. Insert cable completely through cable gripper. Gripper will engage around cable to prevent slipping. Adjust cable gripper position by pressing top plunger down, with the plunger depressed the gripper will move freely to any position.



Item	Description	QTY
1	J-Box Bracket	1
2	#8-32 screws	2
3	1/4-20 Threaded Stud	1
4	Ground Screw	1
5	5" Canopy	1
6	Strain Relief Bushing	2
7	Coupler	1
8	Cable tie	1
9	Cable with stop	1
10	18/5 SJT Cord set	1
11	Gripper with cross cable	1
12	Safety Stop	1

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STEP 8

Determine the final position of the fixture and the length of the cord set and cable that are required for the application. If necessary, trim the cord set length and adjust cord guide as appropriate to the fixture design. After the final cable gripper position is determined, trim excess cable no less than 3" beyond cable gripper outlet. Cord set can be secured to cable with provided cable ties ⑧.

STEP 9

Make electrical connections in the lighting fixture as appropriate. Be sure to follow all local and national code requirements.

Note: Approved electrical box must be attached appropriately and by qualified person. Installation must comply with local and/ or national code. Check local building codes prior to installation.

Warning: Risk of electric shock. Cable kit installation requires knowledge of lighting luminaire electric systems. If not qualified, do not attempt installation—contact qualified electrician.

Warning: Install this cable kit securely only with a lighting luminaire that has been designed or modified to accommodate the components supplied with this kit and secured to a structural member.

Notice: Turn off the electrical power to the lighting luminaire circuit during the installation process.

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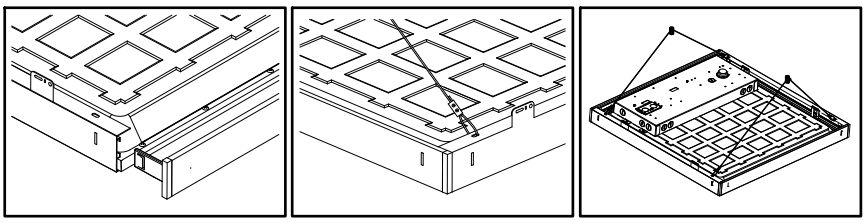
INSTALLATION METHOD 3: T-BAR MOUNT — NON-POWER FEED SUSPENSION KIT

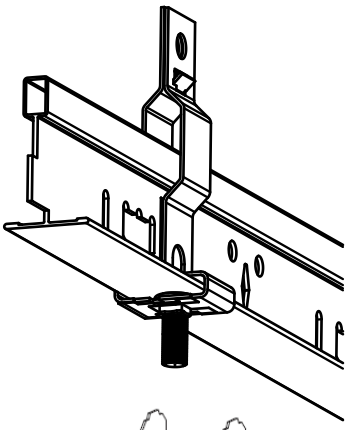
CAUTION

- All connections and assembled components need to be tightened and securely fastened. Do not remove die cast end from cable. Crimps are factory pressed onto cable for maximum strength. Current will not be responsible for damage or injuries which occur due to the cable/crimp alterations.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

STEP 1

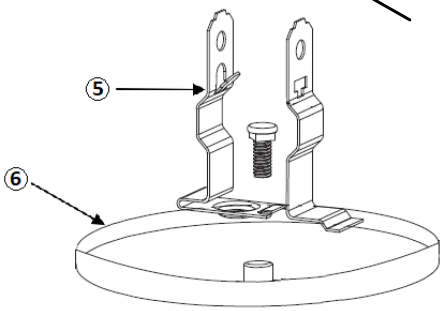
Thread one end of gripper cross cable through safety stop ⑩, then through fixture bracket hole, and back though safety stop to complete loop as shown in picture. Secure with screws. Repeat on other side.





STEP 2

T-bar clip option: Place 1/4-20 stud into square opening on the bottom of T-bar clip ⑤ as pictured. Position T-bar clip on ceiling grid at required location. Slide T-Bar Clip over T-Bar structural member. Secure clip to structural member with ¼-20 screw and nut at 1/4" diameter hole located at the top of the clip (1/4-20 screw & nut not included).



STEP 3

Thread cable with stop ⑧ through top threaded end of barrel coupler ⑦ and pull cable until stop is seated inside coupler.

STEP 4

Place 5" canopy ⑥ over mounting stud on T-bar and hold canopy against ceiling surface. Thread barrel coupler ⑦ onto stud and secure.

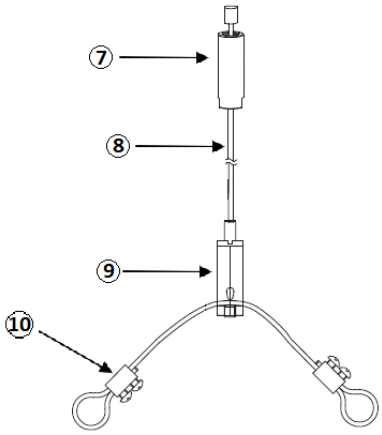
STEP 5

Feed open end of cable through top plunger end of cable gripper. Gripper will engage around cable to prevent slipping. Adjust cable gripper position by pressing top plunger down. With the plunger depressed the gripper will move freely to any position.

STEP 6

Lift fixture to ceiling and thread cable completely through gripper. After the final cable gripper position is determined, trim excess cable no less than 3" beyond cable gripper outlet.

5 N-m)



T-bar clip option

Item	Description	QTY
5	T-Bar Clip	1
6	5" Canopy	1
7	Barrell Coupler	1
8	Cable with Stop	1
9	Gripper with cross cable	1
10	Safety Stop	1

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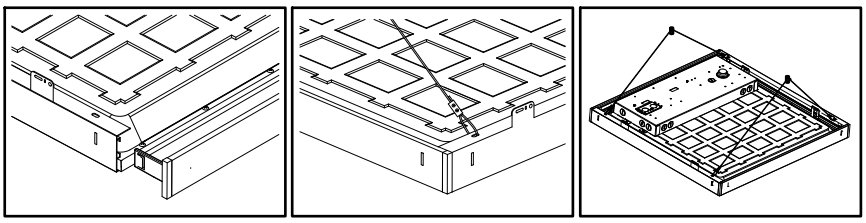
INSTALLATION METHOD 3: T-BAR MOUNT — POWER FEED SUSPENSION KIT

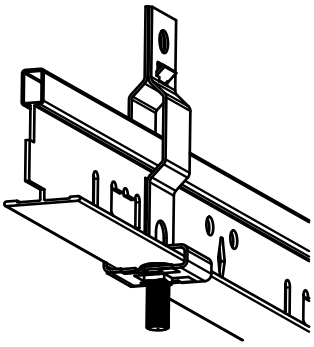
CAUTION

- All connections and assembled components need to be tightened and securely fastened. Do not remove die cast end from cable. Crimps are factory pressed onto cable for maximum strength. Current will not be responsible for damage or injuries which occur due to the cable/crimp alterations.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

STEP 1

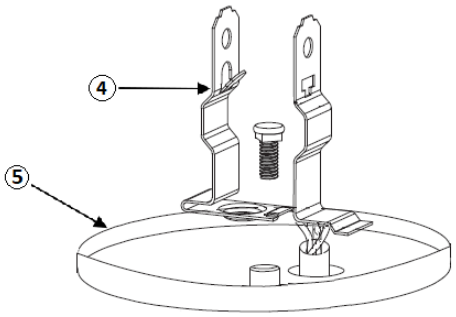
Thread one end of gripper cross cable through safety stop ⑫, then through fixture bracket hole, and back though safety stop to complete loop as shown in picture. Secure with screws. Repeat on other side.





STEP 2

T-bar clip option: Place 1/4-20 stud into square opening on the bottom of T-bar clip ④ as pictured. Position T-bar clip on ceiling grid at required location. Slide T-Bar Clip over T-Bar structural member. Secure clip to structural member with ¼-20 screw and nut at 1/4" diameter hole located at the top of the clip (1/4-20 screw & nut not included).



STEP 3

Thread cable with stop ⑨ through top threaded end of barrel coupler ⑦ and pull cable until stop is seated inside coupler.

STEP 4

Place 5" canopy over mounting stud on T-bar and hold canopy against ceiling surface. Thread barrel coupler ⑦ onto stud and secure.

STEP 5

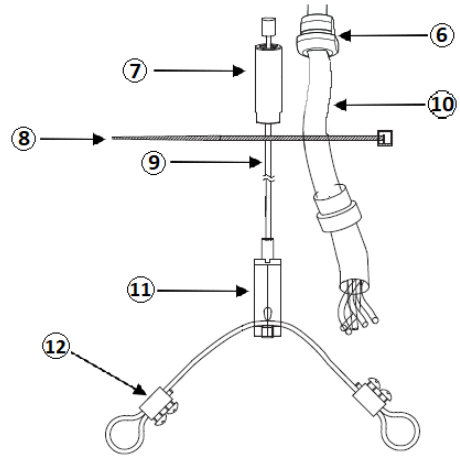
Feed cord set through larger canopy hole and secure canopy to 1/4-20 stud with barrel coupler. You may need to adjust the height of the 1/4-20 stud.

STEP 6

Use pliers to install strain relief bushing ⑥ around cord set and into canopy hole.

STEP 7

Thread cable through top plunger end of gripper. Insert cable completely through cable gripper. Gripper will engage around cable to prevent slipping. Adjust cable gripper position by pressing top plunger down, with the plunger depressed the gripper will move freely to any position.



T-bar clip option

Item	Description	QTY
4	T-Bar Clip	1
5	5" Canopy	1
6	Strain Relief Bushing	1
7	Barrell Coupler	1
8	Cable tie	1
9	Cable with Stop	1
10	18/5 SJT Cord ser	1
11	Gripper with cross cable	1
12	Safety Stop	1

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STEP 8

Determine the final position of the fixture and the length of the cord set and cable that are required for the application. If necessary, trim the cord set length and adjust cord guide as appropriate to the fixture design. After the final cable gripper position is determined, trim excess cable no less than 3" beyond cable gripper outlet. Cord set can be secured to cable with provided cable ties ⑧.

STEP 9

Make electrical connections in the lighting fixture as appropriate. Be sure to follow all local and national code requirements.

Note: Approved electrical box must be attached appropriately and by qualified person. Installation must comply with local and/ or national code. Check local building codes prior to installation.

Warning: Risk of electric shock. Cable kit installation requires knowledge of lighting luminaire electric systems. If not qualified, do not attempt installation—contact qualified electrician.

Warning: Install this cable kit securely only with a lighting luminaire that has been designed or modified to accommodate the components supplied with this kit and secured to a structural member.

Notice: Turn off the electrical power to the lighting luminaire circuit during the installation process.

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NX LIGHTING CONTROLS

NOTE:
1. Control devices are voltage specific.
2. Cables are used to control modules to other family devices and are orientation specific. See Figures 6 & 7 below.

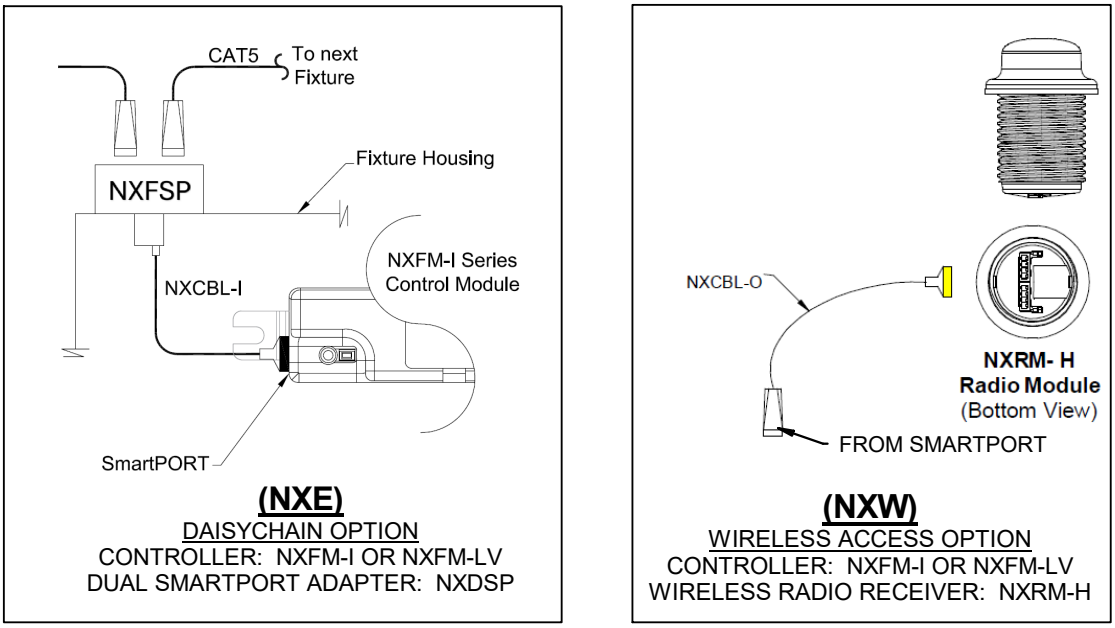

Fig. 6

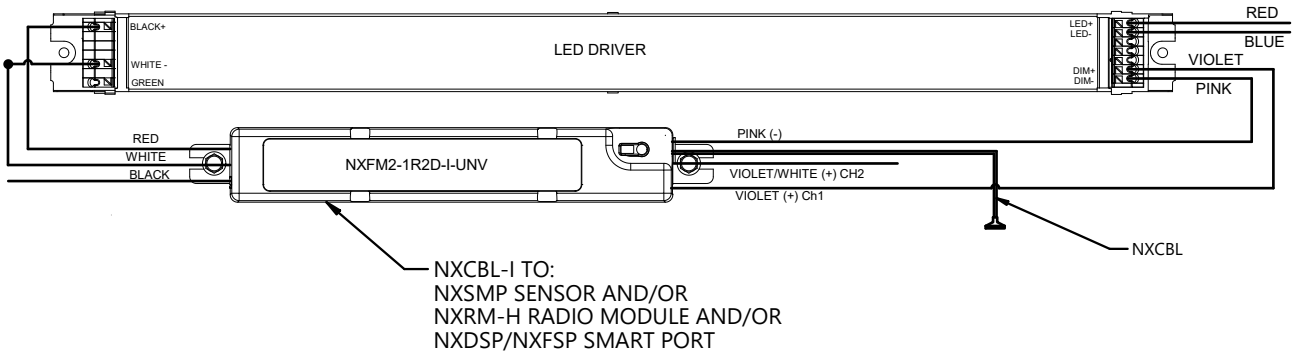

Fig. 7

BATTERY BACK-UP OPTION (ELL14)

CAUTION:

1. Follow OEM instructions provided regarding all warnings and guidelines connection and operation.
2. The unit engage connector pins must be connected for the emergency driver and AC driver to operate normally.
3. Wiring diagram provided is for reference only.
4. Make sure the necessary branch circuit wiring is available. An unswitched source of power is required. The emergency driver must be fed from the same branch circuit as the AC driver.
5. To prevent high voltage from being present on yellow & yellow/black output leads prior to installation, converter connector must be open. Do not join converter connector until installation is complete and AC power is supplied to the emergency driver.

NOTE: Typical schematics only. May be used with other drivers. Consult the factory for other wiring diagrams.

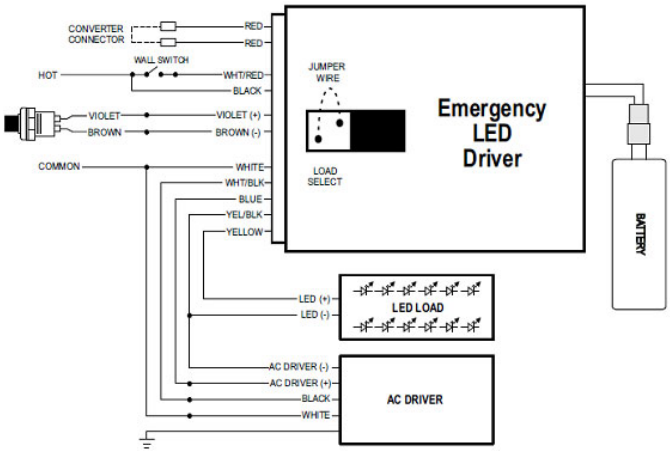

Fig. 8
2-Wire Integrated Test Switch

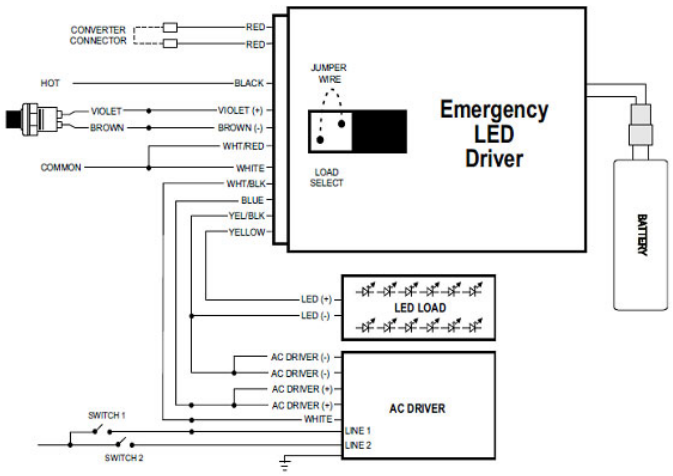

Fig. 9
Step Dimming Installation

NOTE: For short-term testing of the emergency function, the battery must be charge for at least one hour. The emergency driver must be charged for at least 24 hours before conducting a long-term test.

NOTE: NBT fixtures equipped with integral ELL14 option require remote test switch via PLRTS device ordered separately.

Current

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BATTERY BACKUP SELF-TEST OPTION (ELL14ST)

CAUTION:

1. Follow OEM instructions provided regarding all warnings and guidelines connection and operation.
2. The unit engage connector pins must be connected for the emergency driver and AC driver to operate normally.
3. Wiring diagram provided is for reference only.
4. Make sure the necessary branch circuit wiring is available. An unswitched source of power is required. The emergency driver must be fed from the same branch circuit as the AC driver.
5. To prevent high voltage from being present on yellow & yellow/black output leads prior to installation, converter connector must be open. Do not join converter connector until installation is complete and AC power is supplied to the emergency driver.

NOTE: Typical schematics only. May be used with other drivers. Consult the factory for other wiring diagrams.

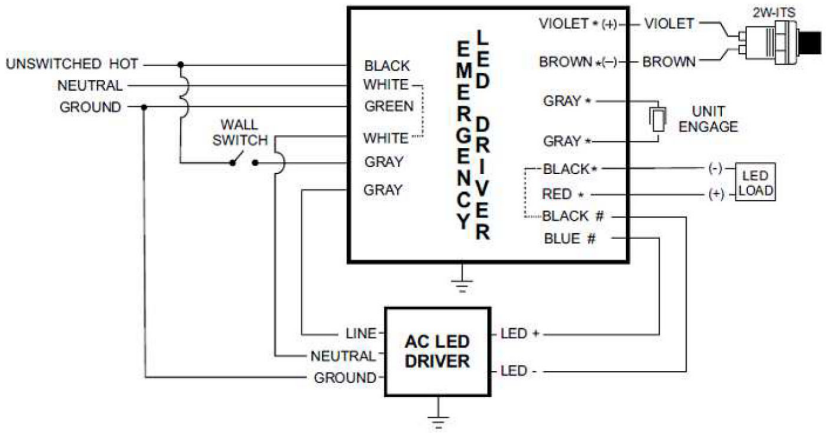

Fig. 10

NOTE: Connections with * are Class 2 rated outputs. Connections with # are Class 2 rated inputs only.

NOTE: For short-term testing of the emergency function, the battery must be charge for at least one hour. The emergency driver must be charged for at least 24 hours before conducting a long-term test.

NOTE: NBT fixtures equipped with integral ELL14ST option require remote test switch via PLRTS device ordered separately.

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