



LinmoreLED Essential Series Installation Guide

[Home](#) » [LinmoreLED](#) » LinmoreLED Essential Series Installation Guide 

Contents

- 1 LinmoreLED Essential Series
- 2 INSTALLATION INSTRUCTIONS
- 3 GENERAL NOTES
- 4 GENERAL INSTRUCTIONS
- 5 CABLE READY MOUNT (CRM)
- 6 SURFACE MOUNT (MBR AND FIXTURES WITH EMB OR EMB2)
- 7 RIGID STEM MOUNTING OPTION (STEM)
- 8 HOOK AND LOOP (HOOK)
- 9 PLATE MOUNT (CRM)
- 10 HANGER MOUNT (CRM)
- 11 CHANGING LENSES
- 12 WIRING INSTRUCTIONS
- 13 IMPORTANT SAFETY INSTRUCTIONS
- 14 OPERATION/TESTING
- 15 OPTIONAL GENERATOR TRANSFER DEVICE
- 16 Documents / Resources
 - 16.1 References
- 17 Related Posts



LinmoreLED Essential Series



INSTALLATION INSTRUCTIONS

IMPORTANT: READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ES5xx SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE.

The Essentials Series of commercial and industrial LED fixtures is designed to provide superior optical performance, quality, and versatility for low and high bay applications. The Essentials Series is designed for use in 120/277V and 347/480V, 50/60Hz protected (max 20A) circuits. Size line voltage service wire as required per the National Electrical Code (NEC).

These instructions apply to the following part numbers:

- ES50U-Ax-xxx-xxx-xx-xx-xx-xxx-10V
- ES50P-Ax-xxx-xxx-xx-xx-xx-xxx-10V
- ES40S-Ax-xxx-xxx-xx-xx-xx-xx -xxx-10V
- ES50U – Min: -40°C (-40°F) to Max 65°C (149°F)
- ES50P – Min: -40°C (-40°F) to Max 65°C (149°F)
- ES50P-A1-53K/56K/74K Max 63°C (145°F)
- ES50S – Min: -40°C (-40°F) to Max 55°C (131°F)
- ES50S-A1-82k/90K Max 40°C (104°F)

GENERAL NOTES

1. MAKE SURE ALL WIRE AND CONNECTORS ARE UL-LISTED. IF THE ELECTRICAL SYSTEM CONTAINS NO GROUNDING WIRE, CONSULT WITH A QUALIFIED ELECTRICIAN BEFORE PROCEEDING WITH THE INSTALLATION.
2. DO NOT MOUNT FIXTURE DIRECTLY TO ANY SURFACE. DOING SO WILL INHIBIT COOLING AND MAY VOID THE WARRANTY. MINIMUM 6" FROM CEILING REQUIRED. INCREASE DISTANCE FROM CEILING AT HIGH AMBIENT TEMPS.
3. SUSPENSION CABLE, CHAIN OR CEILING JUNCTION BOX PROVIDED BY CONTRACTOR SHALL BE RATED TO SUPPORT WEIGHT OF FIXTURE(S) – INCLUDING ALL ACCESSORIES AND OPTIONS. AIRCRAFT SUSPENSION CABLE MAY BE ORDERED SEPARATELY FROM LINMORE LED OR OTHERWISE PROVIDE BY CONTRACTOR.

ITEMS NOT INCLUDED

(BUT REQUIRED FOR INSTALLATION):

PERSONAL PROTECTIVE EQUIPMENT

- SCREWDRIVER
- PLIERS
- SUPPLY CONDUCTORS (BUILDING LINE POWER)
- RECEPTACLE (IF APPLICABLE)

ITEMS INCLUDED:

- ES50x LED LIGHT FIXTURE
 - CORD AND PLUG (OPTIONAL; SOLD SEPARATELY)
 - MAY ALSO INCLUDE SOME OPTIONAL ACCESSORIES (IF ORDERED)
- REFER TO SPECIFICATIONS SHEET FOR ALL POSSIBLE OPTIONS.

IMPORTANT: READ ALL INSTRUCTIONS THOROUGHLY AND CAREFULLY PRIOR TO INSTALLATION OF ES5xx SERIES FIXTURES AND RETAIN FOR FUTURE REFERENCE

WARNING:

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH, SERIOUS INJURY OR SIGNIFICANT PROPERTY DAMAGE.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH APPLICABLE BUILDING AND ELECTRICAL CODES, BY A QUALIFIED PERSON WHO IS FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

- FULLY INSPECT LENS AND HOUSING OF THE FIXTURE PRIOR TO INSTALLATION. IF DAMAGED, NOTIFY FACTORY.
- TO AVOID ELECTRIC SHOCK: DISCONNECT ELECTRICAL POWER (LINE POWER) BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- VERIFY SUPPLY VOLTAGE IS SAME AS RATED FIXTURE VOLTAGE. THE ELECTRICAL RATINGS OF THE FIXTURE ARE CLEARLY INDICATED ON THE PRODUCT LABEL.
- ESSENTIALS FIXTURES ARE SUITABLE FOR DRY AND DAMP LOCATIONS ONLY.
- BE CAUTIOUS OF ANY SHARP EDGES. WEAR PROPER SAFETY GEAR (SUCH AS GLOVES AND SAFETY GLASSES) WHILE HANDLING.

CAUTION – RISK OF PERSONAL INJURY

- ACCOUNT FOR SMALL PARTS AND DESTROY PACKING MATERIAL, AS THESE MAY BE HAZARDOUS TO CHILDREN

CAUTION – RISK OF FIRE

- MINIMUM 90° C SUPPLY CONDUCTORS.
LES FILS D'ALIMENTATION 90°C MIN
- NOT INTENDED FOR RECESSED INSTALLATION IN CEILINGS OR SOFFITS.

WARNING –

- LUMINAIRE WIRING AND ELECTRICAL PARTS MAY BE DAMAGED WHEN DRILLING FOR INSTALLATION OF RETROFIT ASSEMBLY HARDWARE. CHECK FOR ENCLOSED WIRING AND COMPONENTS.

CAUTION – RISK OF ELECTRIC SHOCK

- SUITABLE FOR DAMP LOCATIONS.
CONVIENT AUX EMPLACEMENTS HUMIDES

OR WHEN ORDERED AS AN OPTION:
SUITABLE FOR WET LOCATIONS
CONVIENT AUX EMPLACEMENTS MOUILLÉS

- USE INDOORS ONLY.
- TURN POWER OFF BEFORE SERVICING — SEE INSTRUCTIONS.
- PROPERLY GROUND FIXTURE.

WARNING –

- ENSURE NO BARE WIRES ARE EXPOSED OUTSIDE THE ELECTRICAL CONNECTIONS.
- TO PREVENT WIRING DAMAGE OR ABRASION, DO NOT EXPOSE WIRING TO EDGES OR OTHER SHARP OBJECTS.
- ONLY THOSE OPEN HOLES INDICATED IN THE PHOTOGRAPHS AND/OR DRAWINGS MAY BE MADE OR ALTERED AS A RESULT OF KIT INSTALLATION. DO NOT LEAVE ANY OTHER OPEN HOLES IN AN ENCLOSURE OF WIRING OR ELECTRICAL COMPONENTS.\

S Models: SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 55°C.

P Models: SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 65°C.

U Models: SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 65°C.

All Models with battery backup: SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 50°C.

THESE INSTRUCTIONS DO NOT ATTEMPT TO COVER ALL INSTALLATION AND MAINTENANCE SITUATIONS. FOR MORE INFORMATION OR QUESTIONS REGARDING THE INSTALLATION OR USE OF THE ES50x FIXTURE, CALL 559.485.6010 OR EMAIL AT technical@linmoreled.com.

MAINTENANCE

LENSED ES50x FIXTURES SHOULD BE DRY DUSTED PERIODICALLY. THE FROSTED LENS CAN BE CLEANED WITH DAMP OR DRY CLOTH. NO SPECIAL CLEANER REQUIRED.

TROUBLESHOOTING

TURN ELECTRICITY OFF AT THE MAIN CIRCUIT BREAKER, PANELBOARD, FUSE BOX OR DISCONNECT. DO NOT ATTEMPT TO TROUBLESHOOT WITH THE POWER ON.

ISSUE 1 – LIGHT DOES NOT COME ON

1. VERIFY THAT POWER IS BEING DELIVERED TO THE FIXTURE. CHECK ALL UPSTREAM CIRCUIT BREAKERS, FUSES AND DISCONNECT TO ENSURE THEY ARE ON AND IN PROPER WORKING ORDER.
2. CONFIRM ALL ELECTRICAL CONNECTIONS ARE COMPLETE AND CONTINUOUS.
3. IF THE ISSUE REMAINS UNRESOLVED, CONTACT LINMORE LED.

ISSUE 2 – ONE OR MORE LEDS ARE OUT WHILE OTHERS REMAIN ON

1. DETERMINE IF REPLACEMENT IS DESIRED. AFTER ONE OR MORE LEDS FAILS, THE FIXTURE MAY CONTINUE TO OPERATE NORMALLY, ALTHOUGH WITH A REDUCED LUMEN OUTPUT.
2. IF REPLACEMENT FIXTURE IS DESIRED, CONTACT LINMORE LED.

GENERAL INSTRUCTIONS

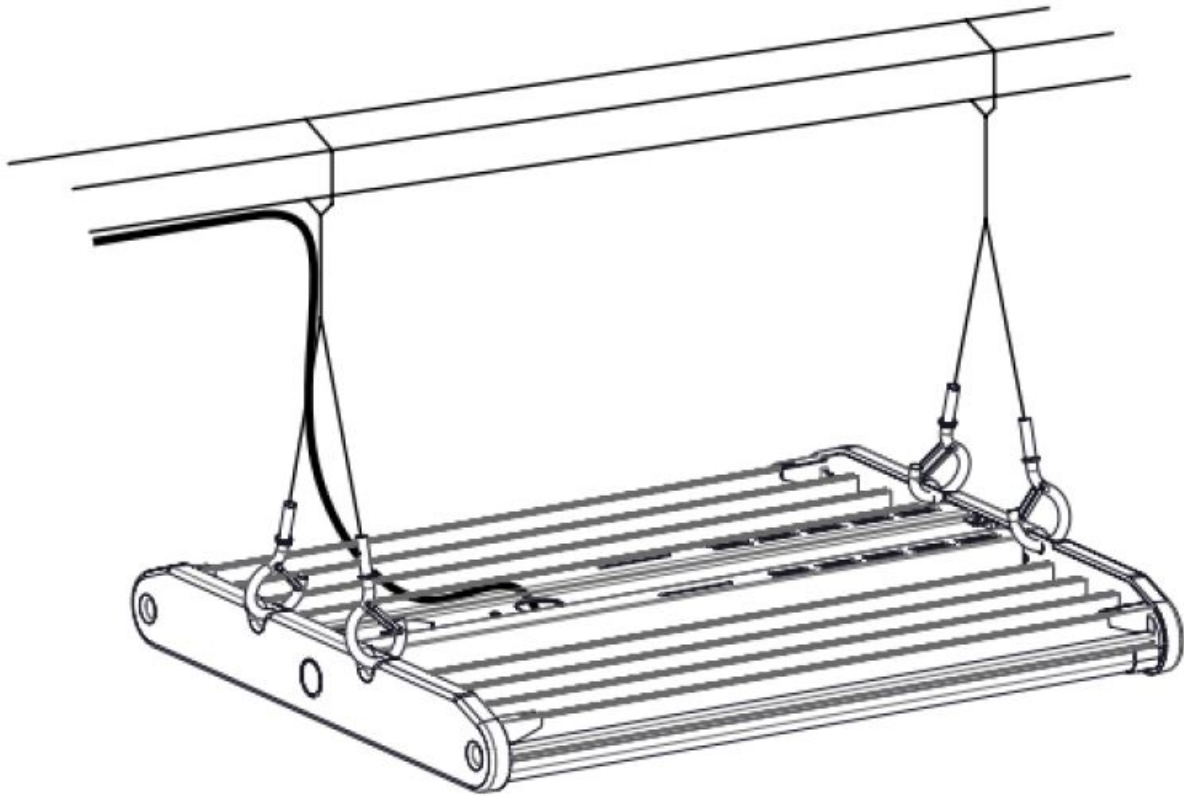
PREPARING TO INSTALL

1. CONSULT A LOCAL LICENSED ELECTRICIAN OR ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
2. REVIEW WARNINGS FOUND IN THIS DOCUMENT PRIOR TO STARTING WORK.
3. INSPECT PACKAGE(S) FOR SIGNS OF DAMAGE. NOTIFY CARRIER IMMEDIATELY IF FIXTURE PACKAGING IS DAMAGED.
4. UNPACK THE FIXTURES FROM PACKAGING. RECYCLE AND PROPERLY DISPOSE OF PACKAGING.
5. INSPECT FIXTURES. IF THERE IS ANY FIXTURE DAMAGE OBSERVED, TAKE PHOTOGRAPHS AND IMMEDIATELY CONTACT warranty@linmoreled.com.
6. TURN OFF ELECTRICITY AT THE MAIN CIRCUIT BREAKER, PANELBOARD, FUSE BOX OR DISCONNECT. DO NOT ATTEMPT TO INSTALL FIXTURE WITH THE POWER ON.
7. ENSURE RESPECTIVE LOCATIONS HAVE A PROPERLY RATED FIXTURE.
8. MAKE SURE THE MOUNTING SURFACE IS CAPABLE OF SUPPORTING WEIGHT OF THE FIXTURE.
9. MAX AMBIENT REDUCED 5°C WHEN MOUNTED NEAR CEILING WITH MBR BOX. LINMORE LED RECOMMENDS AT LEAST 6" OF SPACE BETWEEN THE CEILING AND TOP OF THE FIXTURE AND AT LEAST 10" AT AMBIENT TEMPERATURES ABOVE 55°C.
10. ENSURE PROPER AIRFLOW AROUND FIXTURE.

CABLE READY MOUNT (CRM)

INSTALLATION – CONNECTION IN MIDDLE OF WIREWAY OR CTOPEND

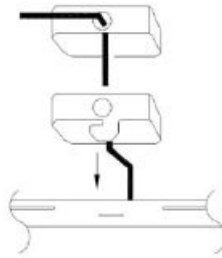
1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 5 AT THE BEGINNING OF THIS SECTION.
2. SECURE SUSPENSION CABLE (ORDERED SEPARATELY) OR CHAIN (NOT INCLUDED) TO STRUCTURE.
3. ATTACH SUSPENSION CABLE OR CHAIN TO ALL FOUR MOUNTING TABS.
4. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).
5. CLOSE COVER AND INSERT SAFETY SCREW (SUPPLIED) INTO HOLE IN WIREWAY COVER.



SURFACE MOUNT (MBR AND FIXTURES WITH EMB OR EMB2)

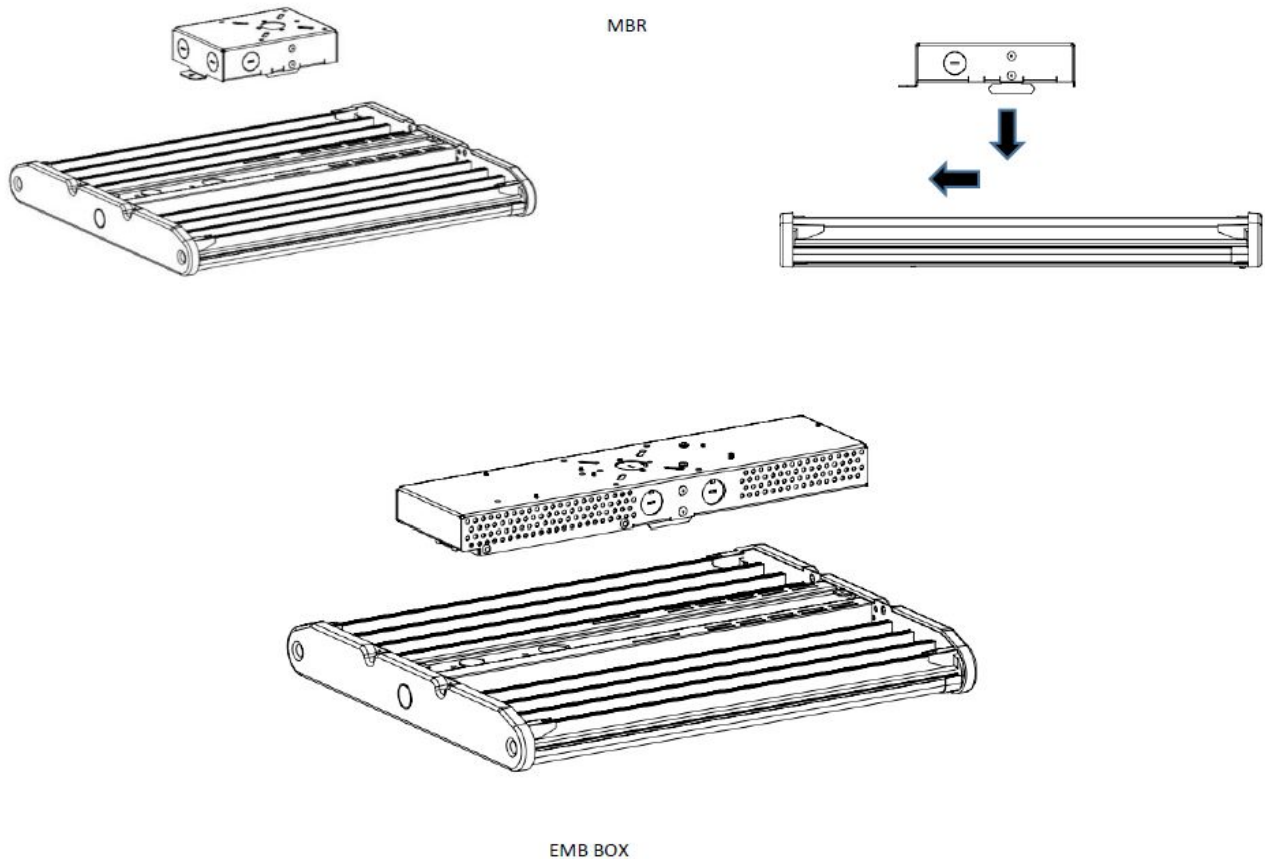
INSTALLATION

1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 6 AT THE BEGINNING OF THIS SECTION.
2. NOTE: EMB and EMB2 ALSO FUNCTION AS A FLUSH MOUNTING BOX.
3. REMOVE SAFETY SCREW FROM WIREWAY COVER. OPEN WIREWAY COVER FROM BELOW BY SQUEEZING WIREWAY AND PULLING DOWN ON THE COVER. TAKE CARE NOT TO DAMAGE THE FIXTURE. WIREWAY COVER IS NOT CAPTIVE TO THE WIREWAY.
4. REMOVE SCREW FROM MOUNTING BRACKET (MBR, EMB OR EMB2) BOX INSIDE OF THE WIREWAY. REMOVE THE BOX.
5. RAISE THE MBR (EMB OR EMB2) BOX TO CEILING JUNCTION BOX (IF APPLICABLE AND PROVIDED BY OTHER). CEILING JUNCTION BOX SHALL BE SUITABLE TO WITHSTAND WEIGHT OF FIXTURE.
6. THREAD BUILDING POWER WIRING THROUGH ANY KO HOLE IN THE MBR (EMB OR EMB2).
7. ATTACH MBR (EMB OR EMB2) TO CEILING JUNCTION BOX.
8. RAISE FIXTURE TO MBR (EMB OR EMB2). PASS BUILDING POWER WIRING INTO WIREWAY AND PUSH MBR (EMB OR EMB2) FLAPS THROUGH SLOTS ON WIREWAY. SLIDE FIXTURE INTO PLACE TO "SIT" ON FLAPS. FOR MBR ORIENT FIXTURE SO THE MBR COVERS THE WIRING HOLE ON TOP OF THE WIREWAY. FOR EMB OR EMB2 THE INSTALLATION TAB AND SCREW ARE ON THE SIDE OF THE WIREWAY OPPOSITE THE DRIVER.
9. FROM INSIDE OF WIREWAY, SECURE MBR (EMB OR EMB2) TO FIXTURE, USING SCREW PROVIDED.
10. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION).
11. CLOSE COVER: REATTACH WIREWAY COVER ON TO HOUSING GENTLY PRESS DOWN ON THE COVER UNTIL IT "SNAPS" SHUT.
12. INSERT SAFETY SCREW (PROVIDED) INTO WIREWAY COVER.



INSTALLING OPTIONAL SAFETY CABLE

1. SECURE SAFETY CABLE (ORDERED SEPARATELY) TO STRUCTURE.
2. ATTACH SAFETY CABLE TO ONE OF THE FOUR (4) MOUNTING TABS.



RIGID STEM MOUNTING OPTION (STEM)

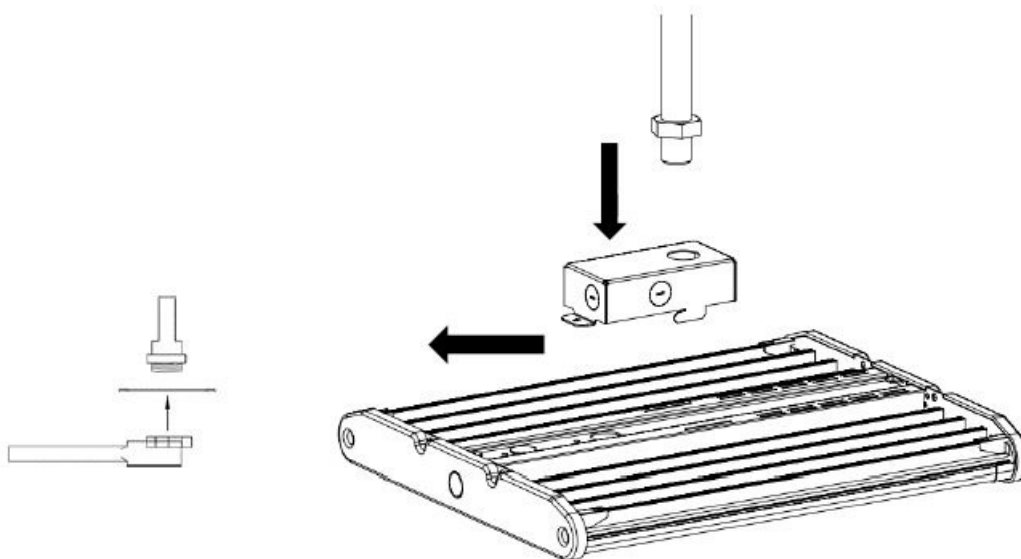
INSTALLATION

1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 6 AT THE BEGINNING OF THIS SECTION.
2. INSTALL 3/4" RIGID STEM (PROVIDED BY CONTRACTOR) IN ACCORDANCE WITH LOCAL BUILDING CODES AND AUTHORITY HAVING JURISDICTION.
MAKE SURE THE RIGID STEM IS CAPABLE OF SUPPORTING WEIGHT OF FIXTURE.
3. RAISE STEM BOX TO RIGID STEM
4. REACH INSIDE STEM BOX AND THREAD WASHER (PROVIDED BY CONTRACTOR) ONTO BOTTOM OF THREADED RIGID STEM. FINGER TIGHTEN, THEN USE WRENCH TO SECURELY TIGHTEN LOCKNUT.
5. OPEN WIREWAY COVER FROM BELOW BY SQUEEZING WIREWAY AND PULLING DOWN ON THE COVER. TAKE CARE NOT TO DAMAGE THE FIXTURE. WIREWAY COVER IS NOT CAPTIVE TO THE WIREWAY.

6. ATTACH STEM BOX TO RIGID STEM.
7. ORIENT FIXTURE SO THE STEM COVERS THE WIRING HOLE ON TOP OF THE WIREWAY. THREAD BUILDING POWER WIRING AT BOTTOM OF RIGID STEM THROUGH HOLE IN TOP OF FIXTURE WIREWAY.
8. RAISE FIXTURE TO THE STEM BOX. PASS BUILDING POWER WIRING INTO WIREWAY AND PUSH STEM BOX FLAPS THROUGH SLOTS ON WIREWAY. SLIDE FIXTURE INTO PLACE TO "SIT" ON FLAPS.
9. FROM INSIDE OF WIREWAY, SECURE STEM BOX TO FIXTURE, USING SCREW PROVIDED AND ALSO BY SECURING THE NUT TO THE STEM.
10. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION).
11. CLOSE COVER: REATTACH WIREWAY COVER ON TO HOUSING GENTLY PRESS DOWN ON THE COVER UNTIL IT "SNAPS" SHUT.
12. INSERT SAFETY SCREW (PROVIDED) INTO WIREWAY COVER.

INSTALLING OPTIONAL SAFETY CABLE

1. SECURE SAFETY CABLE (ORDERED SEPARATELY) TO STRUCTURE.
2. ATTACH SAFETY CABLE TO ONE OF THE FOUR (4) MOUNTING TABS.



HOOK AND LOOP (HOOK)

INSTALLATION

1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 5 AT THE BEGINNING OF THIS SECTION.
2. ATTACH HOOK AT GROUND LEVEL BEFORE ATTEMPTING TO HANG FIXTURE AT CEILING LEVEL.
3. OPEN WIREWAY COVER FROM BELOW BY INSERTING A FLAT BLADE SCREWDRIVER INTO NOTCHES IN WIREWAY COVER AND PRY OPEN. TAKE CARE NOT TO DAMAGE THE FIXTURE. WIREWAY COVER IS CAPTIVE AND WILL FREELY HANG OPEN (HANDS FREE).
4. FOR FIXTURES WITH NO CORD AND CTOPEND: THREAD LOCKNUT (SUPPLIED) THROUGH HOOK, AND HOOK THROUGH HOLE IN TOP OF WIREWAY COVER.
5. FOR FIXTURES WITH A CORD: PICK UP HOOK AND PULL CORD THROUGH TO WHERE HOOK IS CLOSE TO FIXTURE.

6. REACH INSIDE WIREWAY AND THREAD WASHER (SUPPLIED) ONTO BOTTOM OF HOOK. FINGER TIGHTEN WASHER.
7. HOLD WASHER WITH WRENCH. PASS FLAT BLADE SCREWDRIVER THROUGH HOOK AND TORQUE TO SECURELY TIGHTEN.
8. TO HANG FIXTURE, RAISE HOOK TO LOOP (NOT PROVIDED) AND LATCH HOOK IN PLACE.
9. ATTACH BALANCING CABLE (SUPPLIED) OR CHAIN (NOT INCLUDED) TO ONE OF THE FOUR (4) MOUNTING TABS. SECURE BALANCING CABLE OR CHAIN TO STRUCTURE AND LEVEL FIXTURE PLUMB TO BUILDING LINES.
10. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION).
11. CLOSE COVER AND INSERT SAFETY SCREW (SUPPLIED) INTO HOLE IN WIREWAY COVER.

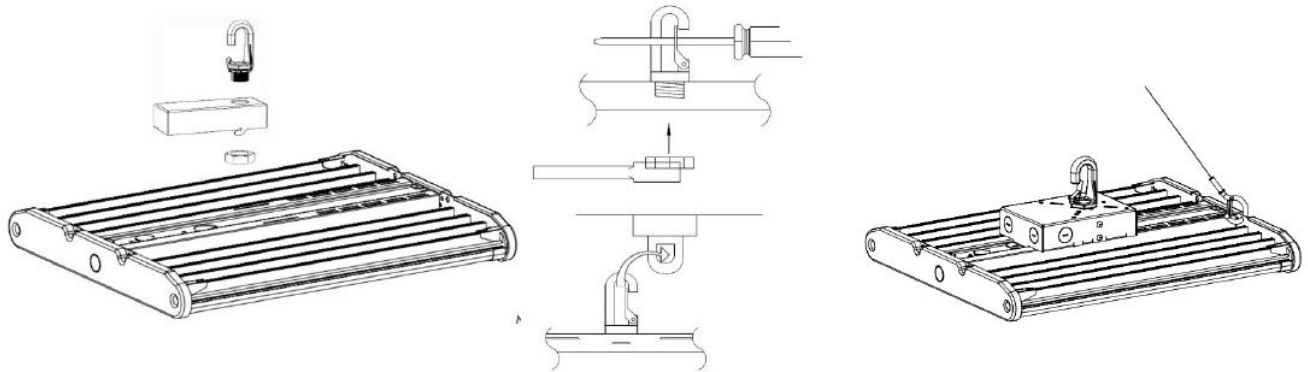


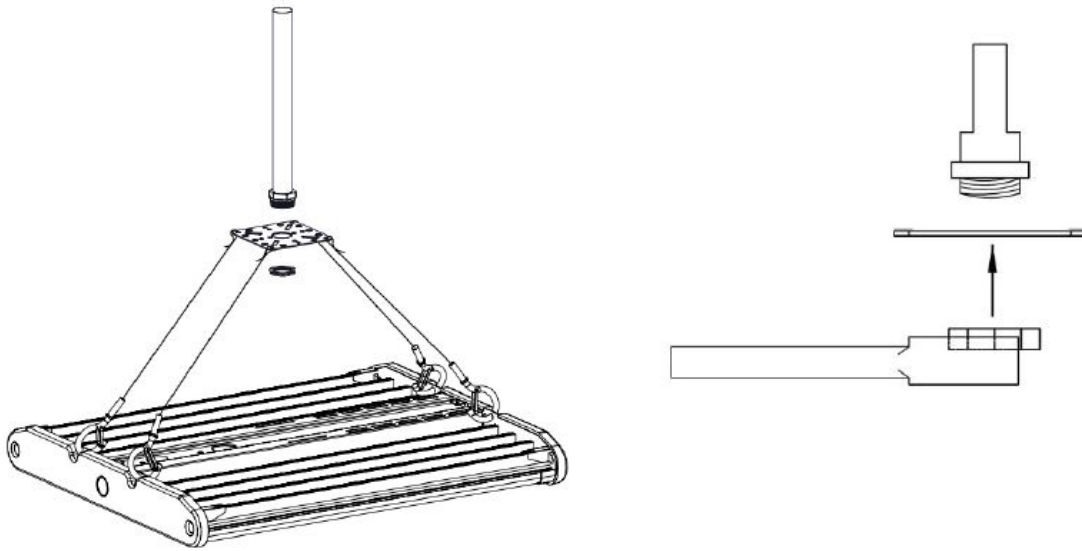
PLATE MOUNT (CRM)

INSTALLATION

1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 5 AT THE BEGINNING OF THIS SECTION.
2. INSTALL 3/4" RIGID STEM (PROVIDED BY CONTRACTOR) IN ACCORDANCE WITH LOCAL BUILDING CODES AND AUTHORITY HAVING JURISDICTION. MAKE SURE THE RIGID STEM IS CAPABLE OF SUPPORTING WEIGHT OF FIXTURE.
3. RAISE PLATE TO RIGID STEM.
4. THREAD WASHER (PROVIDED BY CONTRACTOR) ONTO BOTTOM OF THREADED RIGID STEM, SECURING PLATE IN PLACE. FINGER TIGHTEN, THEN USE WRENCH TO SECURELY TIGHTEN LOCKNUT.
5. ATTACH SUSPENSION CABLES (FOUR (4) SUPPLIED) TO ALL FOUR (4) MOUNTING TABS ON FIXTURE AND ON MOUNTING HOLES ON PLATE. LEVEL FIXTURE PLUMB TO BUILDING LINES.
6. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT END OF THIS SECTION).

INSTALLING OPTIONAL SAFETY CABLE

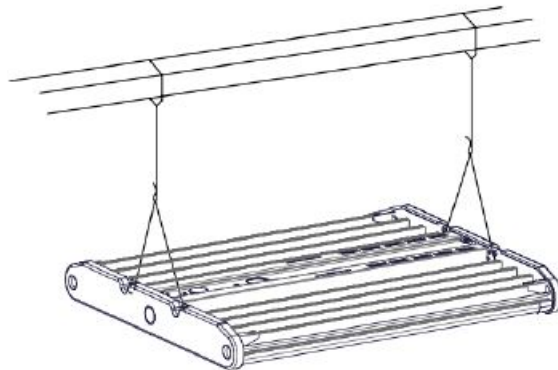
7. SECURE SAFETY CABLE (ORDERED SEPARATELY) TO STRUCTURE.
8. ATTACH SAFETY CABLE TO ONE OF THE FOUR (4) MOUNTING TABS.



HANGER MOUNT (CRM)

INSTALLATION – CONNECTION IN MIDDLE OF WIREWAY OR CTOPEND

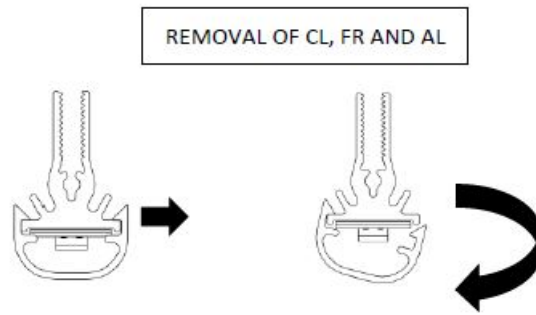
1. REFER TO GENERAL INSTRUCTIONS 1 THROUGH 5 AT THE BEGINNING OF THIS SECTION.
2. SECURE HANGER CABLES (SUPPLIED) TO STRUCTURE.
3. ATTACH HANGERS TO FIXTURE THROUGH FOUR (4) MOUNTING TABS.
4. ATTACH CABLES TO HANGERS.
5. MAKE FINAL WIRING CONNECTIONS (REFER TO WIRING INSTRUCTIONS AT THE END OF THIS SECTION).



CHANGING LENSES

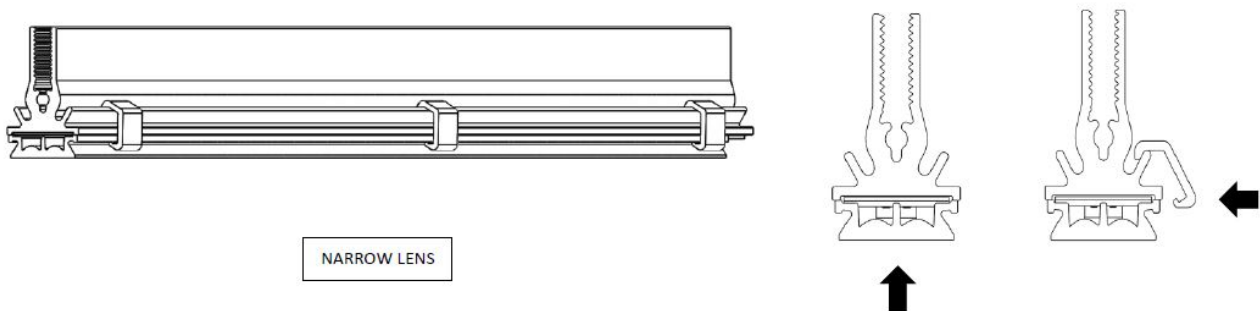
THERE ARE FOUR DIFFERENT LENSES FOR THE ES5.
FROSTED, CLEAR AND AISLE LENSES ARE CHANGED OUT BY USING THE FOLLOWING METHOD

1. GRAB LENS AND PRY ONE EDGE OUTWARD. IT WILL RELEASE.
2. ROTATE UNTIL IT COMES FREE.
3. REPLACE LENS BY SECURING ONE EDGE TO THE LED EXTRUSION AND THEN ROTATING UNTIL THE OTHER END SNAPS INTO PLACE OVER THE OPPOSITE EDGE OF THE EXTRUSION



THE NARROW LENS IS CHANGED OUT BY USING THE FOLLOWING METHOD.

1. CAUTION, REMOVING THE NARROW LENS MAY CAUSE IT OR THE CLIPS SECURING IT TO FAIL. IT IS NOT RECCOMENDED TO REMOVE AND THEN REPLACE THE SAME, NARROW LENS.
2. THERE ARE CLIPS SECURING THE NARROW LENS TO THE EXTRUSION. THESE MUST BE REMOVED. PRY THE CLIPS OFF WITH A SCREWDRIVER, THE LENS WILL FALL FREE.
3. TO SECURE THE LENS HOLD IT UP TO THE LED EXTRUSION, ALIGNING THE LENS WITH THE EXTRUSION.
4. THEN SECURE TOP OF CLIP TO THE EXTRUSION AND ROTATE DOWNWARDS TOWARDS THE LENS, SECURING IT TO THE EDGE OF THE NARROW LENS UNTIL IT SNAPS INTO PLACE.



WIRING INSTRUCTIONS

MAKING FINAL ELECTRICAL CONNECTIONS – HARDWIRED

1. **WIRING THROUGH MIDDLE HOLE IN WIREWAY:** EXTEND BUILDING POWER WIRING TO TOP OF FIXTURE AND FEED THROUGH 3/4" OPENING IN MIDDLE OF FIXTURE. PROVIDE UL/ETL APPROVED STRAIN RELIEF.
2. **WIRING THROUGH CTOPEND IN WIREWAY:** LOCATE KNOCKOUT ON TOP OF FIXTURE NEAR ONE OF THE ENDCAPS. WITH A FLAT BLADE SCREWDRIVER, REMOVE KNOCKOUT. EXTEND BUILDING POWER WIRING TO END OF FIXTURE AND FEED THROUGH KNOCKOUT OPENING. PROVIDE UL/ETL APPROVED STRAIN RELIEF.
3. OPEN WIREWAY COVER FROM BELOW BY INSERTING A FLAT BLADE SCREWDRIVER INTO NOTCHES AND PRY OPEN. TAKE CARE NOT TO DAMAGE THE FIXTURE. WIREWAY COVER IS CAPTIVE AND WILL FREELY HANG OPEN (HANDS FREE).
4. MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES – BLACK TO BLACK (HOT/LINE/LIVE); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.

5. DIMMING (IF APPLICABLE): MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES – VIOLET TO VIOLET (DIM +), GREY TO GREY (DIM -). MAKE SURE ELECTRICAL CONNECTIONS ARE CONTINUOUS AND ENSURE NO BARE WIRES ARE EXPOSED.
5. EMERGENCY BATTERY BACKUP (EMB & EMB2) OPTION (WITH SWITCH LEG): MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES – BLACK TO BLACK (HOT/LINE/LIVE); RED (SWITCH LEG) TO RED (WITH FLAG); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.
6. EMERGENCY BATTERY BACKUP (EMB & EMB2) OPTION (WITHOUT SWITCH LEG): MAKE FINAL ELECTRICAL CONNECTIONS INSIDE WIREWAY PER ALL APPLICABLE CODES – BLACK TO BLACK (HOT/LINE/LIVE); REMOVE WAGO FROM FIXTURE RED (WITH FLAG) WIRE AND PLACE IN WAGO WITH BLACK WIRES (HOT/LINE/LIVE); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND). MAKE SURE ELECTRICAL CONNECTIONS ARE SECURE AND ENSURE NO BARE WIRES ARE EXPOSED.
7. NEATLY ARRANGE WIRES IN WIREWAY. PAY CLOSE ATTENTION ALL WIRES AND CONNECTIONS ARE PROPERLY LAYING INSIDE FIXTURE WIREWAY BEFORE CLOSING.
8. CLOSE COVER: GENTLY PRESS DOWN ON THE COVER UNTIL IT “SNAPS” SHUT.
9. INSERT SAFETY SCREW (PROVIDED) INTO WIREWAY COVER.
10. TURN ELECTRICITY ON AT THE CIRCUIT BREAKER, PANELBOARD, OR FUSE BOX – FIXTURE SHOULD ILLUMINATE. IF IT DOESN'T, REFER TO TROUBLESHOOTING INSTRUCTIONS OR CALL TECHNICAL SUPPORT (559.485.6010).

MAKING FINAL ELECTRICAL CONNECTIONS – FIXTURES WITH OPTIONAL FACTORY INSTALLED CORD (CORD/PLUG):

11. FIXTURES WITH CORD AND NO PLUG (WIRE ENDS):

1. MAKE FINAL ELECTRICAL CONNECTIONS PER ALL APPLICABLE CODES – BLACK TO BLACK (HOT); WHITE TO WHITE (NEUTRAL) AND GREEN (OR BARE) TO GREEN (GROUND).
2. EXTEND CORD WITH WIRE ENDS TO NEAREST ELECTRICAL JUNCTION BOX (PROVIDED BY OTHER) AND ENSURE NO BARE WIRES ARE EXPOSED.

12. FIXTURE WITH CORD AND PLUG:

1. EXTEND CORD AND PLUG TO NEAREST APPROPRIATELY RATED RECEPTACLE (PROVIDED BY CONTRACTOR) AND CONNECT.

13. FIXTURE WITH CORD AND WINSTA OPTION :

1. EXTEND CORD AND SNAP INTO WINSTA DISTRIBUTION CONNECTOR (PROVIDED BY CONTRACTOR).

MANUFACTURER WARNINGS FOR EMERGENCY BATTERY BACKUP (EMB & EMB2)

IMPORTANT SAFETY INSTRUCTIONS

WHEN USING ELECTRICAL EQUIPMENT AND THIS LIGHTING DEVICE BASIC SAFETY PRECAUTION SHOULD BE FOLLOWED AT ALL TIMES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS FOR YOUR OWN SAFETY

1. **IMPORTANT:** AN UN-SWITCHED AC POWER SOURCE OF 100VAC TO 277VAC IS REQUIRED.
2. THIS DEVICE IS DESIGNED FOR USE IN FIXTURES LISTED FOR DRY AND DAMP LOCATIONS.
3. **CAUTION:** MAKE SURE ALL ELECTRICAL CONNECTIONS CONFORM TO THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL REGULATIONS.
4. **CAUTION:** DO NOT LET POWER SUPPLY CORDS TOUCH HOT SURFACES.
5. **CAUTION:** DO NOT MOUNT NEAR GAS OR ELECTRIC HEATERS.
6. **CAUTION:** BATTERY IS RECHARGEABLE NIMH TYPE AND MUST BE RECYCLED OR DISPOSED OF PROPERLY. DO NOT USE THIS EMERGENCY DRIVER WITH ACCESSORY EQUIPMENT OTHER THAN RECOMMENDED BY MANUFACTURER; FAILURE TO FOLLOW THIS MAY CAUSE AN UNSAFE CONDITION. SERVICING SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL. DO NOT USE THIS EMERGENCY DRIVER FOR OTHER THAN INTENDED USE. NOT SUITABLE FOR HIGH-RISK TASK AREA LIGHTING.
EQUIPMENT SHALL BE MOUNTED IN LOCATIONS AND AT HEIGHTS ENSURING IT WILL NOT BE SUBJECT TO TAMPERING BY UNAUTHORIZED PERSONNEL.
KO'S ON THE EMB BOX ITSELF NEED TO BE LOOSENEED WITH A SCREWDRIVER BEFORE USE.
7. **IMPORTANT:** THE OUTPUT EM POWER WILL NOT EXCEED THE MAX POWER RATING OF THE BATTERY.

OPERATION/TESTING

• OPERATION

WHEN AC POWER IS APPLIED, THE LED TEST SWITCH IS ILLUMINATED, INDICATING THAT THE BATTERIES ARE BEING CHARGED. WHEN AC POWER FAILS, THE LEM-PXX-060-A-U-PT AUTOMATICALLY SWITCHES TO EMERGENCY (BATTERY) POWER, WHICH CAN BE MAINTAINED FOR >90 MINUTES, OPERATING THE LED LOAD SPECIFIED EMERGENCY POWER LEVEL. THE LED TEST SWITCH (LTS) IS SWITCHED OFF. WHEN THE AC POWER IS RESTORED THE EMERGENCY MODULE SWITCHES THE SYSTEM BACK TO NORMAL MODE AND RESUMES BATTERY CHARGING. THE CHARGING TIME FOR THE FULL DISCHARGED BATTERY IS 24 HOURS.

• TESTING AND MAINTENANCE

PERIODIC TESTS ARE RECOMMENDED TO ENSURE THE SYSTEM IS FUNCTIONING NORMALLY:

- VISUALLY INSPECT THE LED TEST SWITCH (LTS) MONTHLY. IT SHOULD BE ILLUMINATED WHEN AC POWER IS APPLIED.
- CONDUCT A 30 SECOND DISCHARGE TEST BY SWITCHING OFF THE MAINS POWER EVERY MONTH. THE LTS IS SWITCHED OFF AND LED LOADS SHOULD OPERATE AT REDUCED ILLUMINATION.
- CONDUCT A 90 MINUTE DISCHARGE TEST ONCE A YEAR. THE LED LOADS SHOULD OPERATE AT REDUCED ILLUMINATION FOR AT LEAST 90 MINUTES.

• AUTO TEST

THE LEM-PXX-060-A-U-PT SERIES HAS INTEGRATED AUTO TEST FUNCTIONS AS FOLLOWS.

◦ INSTANT AUTO TEST

WHEN THE SYSTEM IS CONNECTED AND POWERED ON, THE LEM-PXX-060-A-U-PT MODEL WILL AUTO TEST TO VERIFY PROPER CONNECTION OF LED LOAD AND CONNECTION/CHARGING OF BATTERY PACK. IN CASE OF LED LOAD OR BATTERY PACK PROBLEM, THE LTS WILL FLASH.

WHEN THE ABNORMAL CONDITION IS CORRECTED, THE LTS WILL STOP FLASHING.

- **PREPROGRAMMED AUTO TESTS**

THE INITIAL MONTHLY AUTO TEST BEGINS 24 HOURS TO 7 DAYS AFTER INITIAL POWER UP;
MONTHLY AUTO TESTS REPEAT ONCE EVERY 30 DAYS.

ANNUAL AUTO TESTS REPEAT EVERY 52 WEEKS AFTER INITIAL POWER UP.

- **MONTHLY AUTO TEST**

MONTHLY AUTO TEST IS EXECUTED EVERY 30 DAYS, TESTING:

- SWITCHING OF NORMAL TO EMERGENCY MODE, AND THE REVERSE;
- EMERGENCY OPERATION AND BATTERY CHARGING AND DISCHARGING; AUTO TEST TIME IS ~30 SECONDS.

- **ANNUAL AUTO TEST**

ANNUAL AUTO TEST IS EXECUTED EVERY 52 WEEKS AFTER 24 HOURS FULL CHARGING,
TESTING:

- BATTERY VOLTAGE IS EQUAL OR HIGHER THAN 87.5% OF INITIAL VOLTAGE AFTER 24 HOURS FULL CHARGING;
- EMERGENCY OPERATION MEETS 90 MINUTES MINIMUM; AND BATTERY VOLTAGE AFTER 90 MINUTES EMERGENCY OPERATION IS EQUAL OR HIGHER THAN 87.5% OF INITIAL VOLTAGE.

DURING ANNUAL AUTO TEST, IN CASE OF POWER FAILURE AND CANNOT BE ON TILL THE AUTO TEST COMPLETES, THE AUTO TEST WILL BE EXECUTED AGAIN 24 HOURS AFTER THE POWER HAS BEEN RESUMED.

IF THE EMERGENCY MODE CAUSES THE BATTERY DISCHARGED COMPLETELY UNDER THE POWER-OFF CONDITION, THE ANNUAL AUTO TEST WILL BE RESET AFTER POWER HAS BEEN RESUMED.

MANUAL TEST

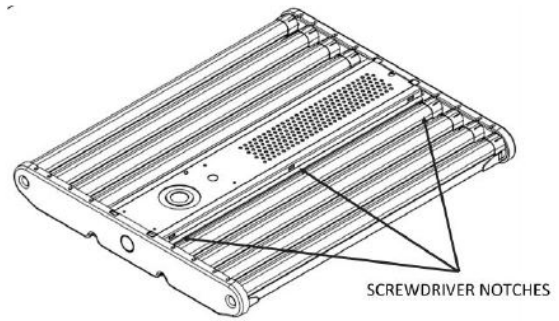
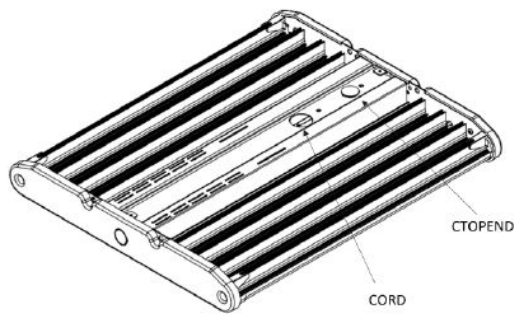
- PRESS LTS ONE TIME TO SIMULATE EMERGENCY MODE.
- PRESS LTS 2 TIMES WITHIN 5 SECONDS TO INITIATE MONTHLY TEST. UPON COMPLETION OF THIS TEST, THE MONTHLY AUTO-TEST COUNTER IS SET TO REPEAT AFTER 30 DAYS.
- PRESS LTS 3 TIMES WITHIN 5 SECONDS TO INITIATE ANNUAL TEST. UPON COMPLETION OF THIS TEST, THE ANNUAL AUTO-TEST COUNTER IS SET TO REPEAT AFTER 52 WEEKS.
- DURING THE MANUAL TEST, PRESS AND HOLD THE LTS FOR LONGER THAN 3 SECONDS OR PRESS LTS 3 TIMES TO TERMINATE THE TEST. (THE NEXT-OCCURRING PREPROGRAMMED AUTO TESTS – MONTHLY AND ANNUAL — WILL REMAIN SCHEDULED). LED TEST SWITCH (LTS)

INDICATION

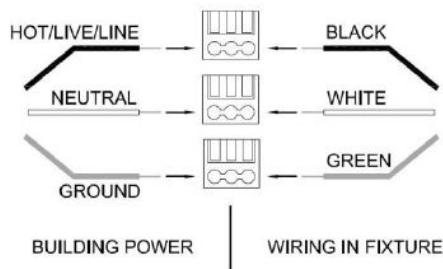
TS SLOW FLASHING: IN CHARGING

- LTS ON: NORMAL
- LTS OFF: POWER FAILURE
- LTS GRADUAL CHANGE: IN TESTING
- LTS QUICK FLASHING: ABNORMAL

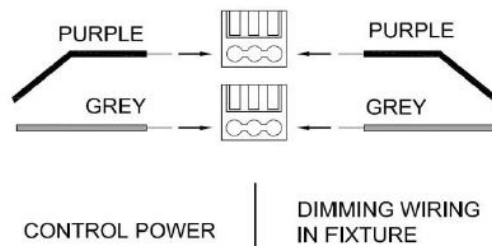
SERVICING SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL. DO NOT USE THIS EMERGENCY DRIVER FOR OTHER THAN INTENDED USE. EQUIPMENT SHOULD BE MOUNTED IN LOCATIONS AND AT HEIGHTS WHERE IT WILL NOT READILY BE SUBJECTED TO TAMPERING BY UNAUTHORIZED PERSONNEL.



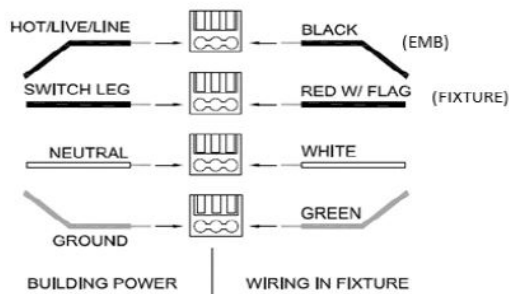
NORMAL POWER WIRING



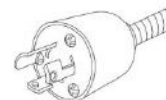
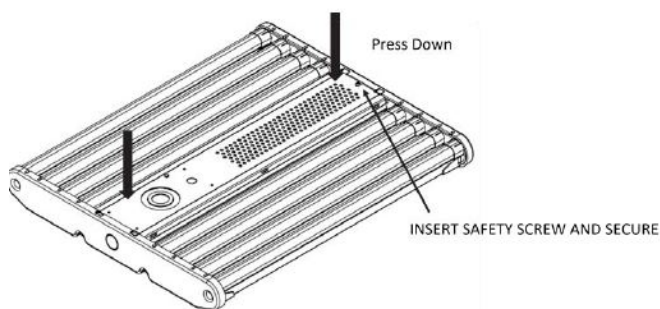
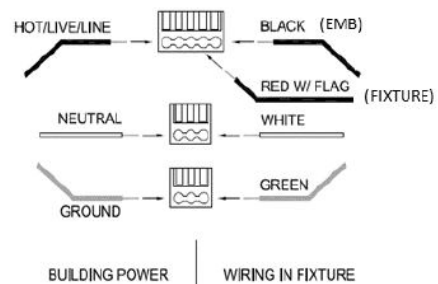
DIMMING WIRING



EMB AND EMB2 WIRING (WITH SWITCH LEG)



EMB AND EMB2 WIRING (WITHOUT SWITCH LEG)



OPTIONAL CORD/PLUG (ORDERED SEPARATELY). PLUG INTO CONTRACTOR PROVIDED RECEPTACLE. THE CORD YOU ORDERED MAYBE BE DIFFERENT THAN THE CORD SHOWN HERE.

ROTATABLE MODULE INSTRUCTIONS:

NOTE: ONLY OUTER MODULES ARE ROTATABLE. ROTATING ANGLE OPTIONS: 0°, 45°, 90°, 135°

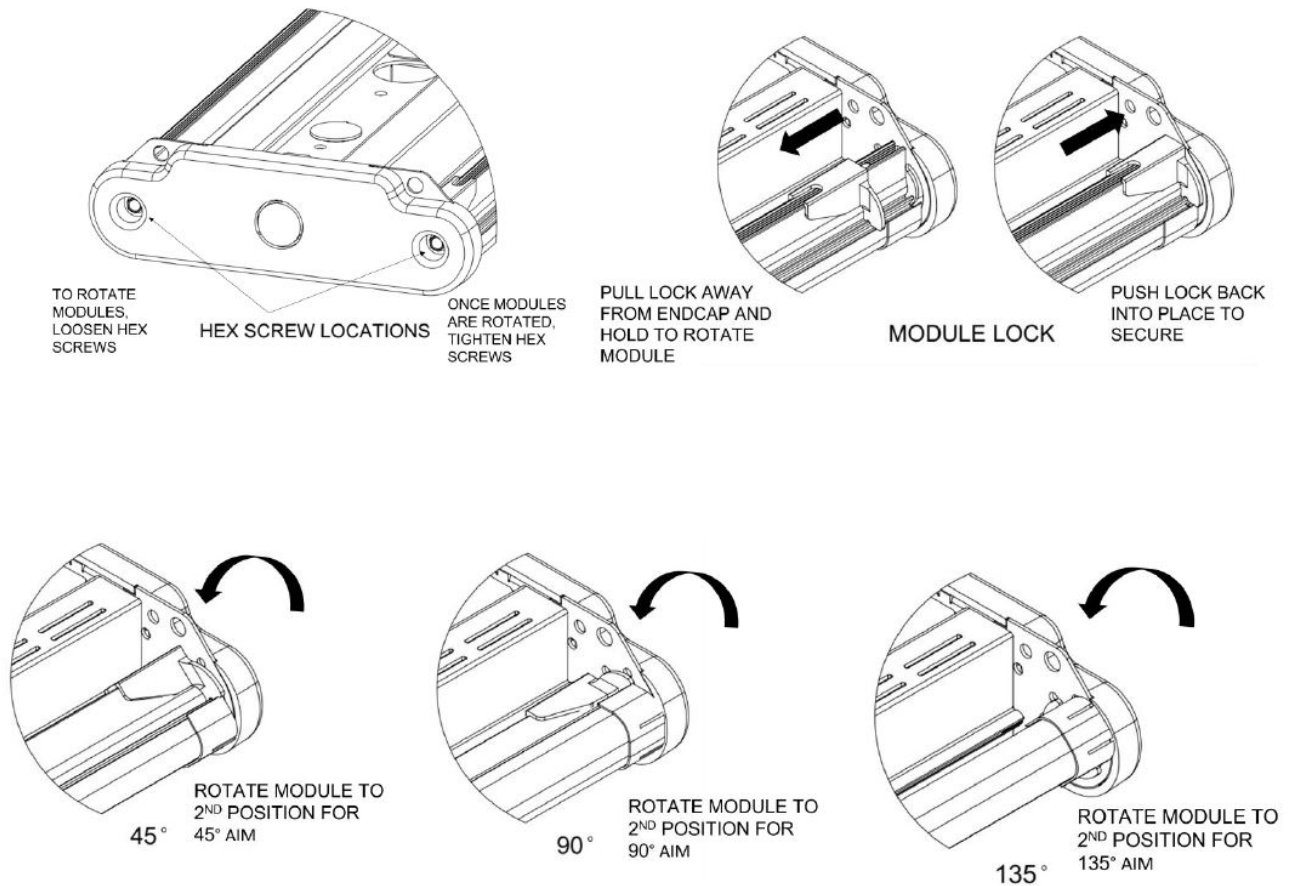
WARNING: DO NOT OVER ROTATE MODULES OR ROTATE BACKWARDS

WARNING: MODULES ON WET LOCATION RATED FIXTURES (IF SO ORDERED) ARE NOT FIELD ROTATABLE.

SETTING ROTATABLE MODULES:

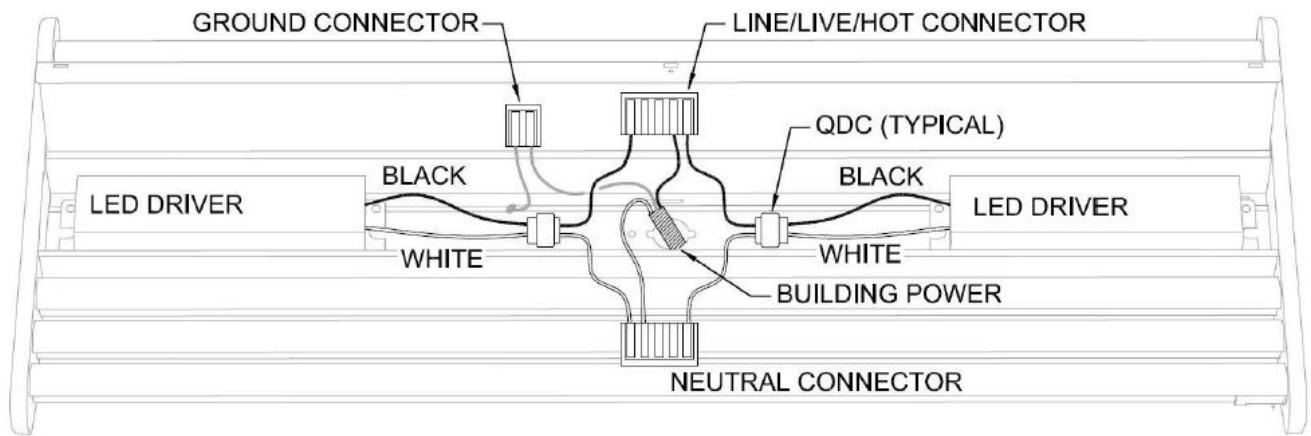
1. FACTORY SETTING: OUTER MODULES ARE AT 0 DEGREE, NORMAL ORIENTATION.

2. REMOVE WARNING LABELS ON ROTATING MODULES.
3. WARNING: DO NOT OVER-ROTATE MODULES OR ROTATE BACKWARDS (LENS INWARDS TOWARDS WIREWAY).
4. WARNING: MODULES ON WET LOCATION RATED FIXTURES (IF SO ORDERED) ARE NOT FIELD ROTATABLE.
5. WARNING: DO NOT ROTATE MODULES WHILE FIXTURE IS IN USE.
6. LOOSEN THE SCREWS ON THE OUTERMOST MODULES WITH A 1/4" HEX DRIVER.
7. LOCATE THE LOCKS AT THE ENDS OF THE OUTERMOST MODULES.
8. PULL THE LOCK TOWARDS THE CENTER OF THE FIXTURE, ALONG THE WIREWAY, TO DISENGUAGE.
9. GENTLY ROTATE THE MODULE TO THE DESIRED DETENT AND THEN PUSH THE LOCK INTO THE DETENT. THE LOCK SHOULD SNAP IN PLACE.
10. TIGHTEN THE SCREWS TO LOCK THE MODULES INTO PLACE AT THE SET ANGLES.



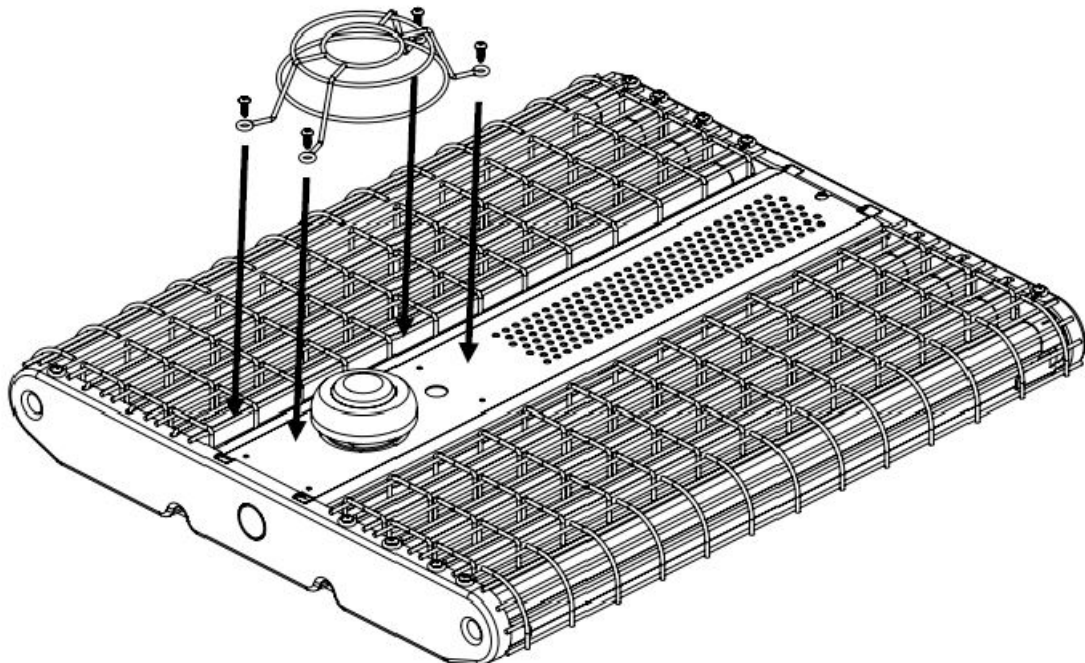
OPTIONAL QUICK DISCONNECT (QDC):

TO SERVICE LED DRIVER IN PLACE: QDC DISCONNECTS DRIVER FROM BUILDING POWER FEED.



OPTIONAL OCCUPANCY SENSOR WIREGUARD INSTRUCTIONS (OWG):

1. REMOVE ACCESSORY FROM PACKAGING.
2. ATTACHED OCCUPANCY WIREGUARD TO WIREWAY COVER USING SUPPLIED SCREWS THROUGH PRE-DRILLED HOLES IN WIREWAY COVER.



OPTIONAL GENERATOR TRANSFER DEVICE

APPLICATION:

THE GTD GENERATOR TRANSFER DEVICE WORKS IN CONJUNCTION WITH AN AUXILIARY GENERATOR OR A CENTRAL INVERTER SYSTEM TO POWER EXISTING LED FIXTURES FOR EGRESS LIGHTING REGARDLESS OF FIXTURE WALL SWITCH POSITION. ONE GENERATOR TRANSFER DEVICE PER FXTURE IS USED TO BYPASS THE FXTURE WALL SWITCH, ALLOWING THE BUILDING'S GENERATOR (OR CENTRAL INVERTER) TO BRING ON SWITCHABLE FXTURES. THE GENERATOR TRANSFER DEVICE IS SUITABLE FOR INDOOR OR DAMP LOCATIONS, 120-277V ONLY.

OPERATION:

THE GTD10DIM WILL ACTIVATE AN EMERGENCY LIGHTING LOAD AUTOMATICALLY UPON THE LOSS OF NORMAL POWER. IF NORMAL POWER IS ABSENT, THE STATUS OF THE LOAD CANNOT BE OVERRIDDEN. HOWEVER, IF THE NORMAL POWER IS PRESENT, THE EMERGENCY LIGHTING LOAD CAN BE CONTROLLED BY OTHER MEANS IN ORDER TO USE IT AS A NORMAL LIGHTING LOAD, DEPENDING ON

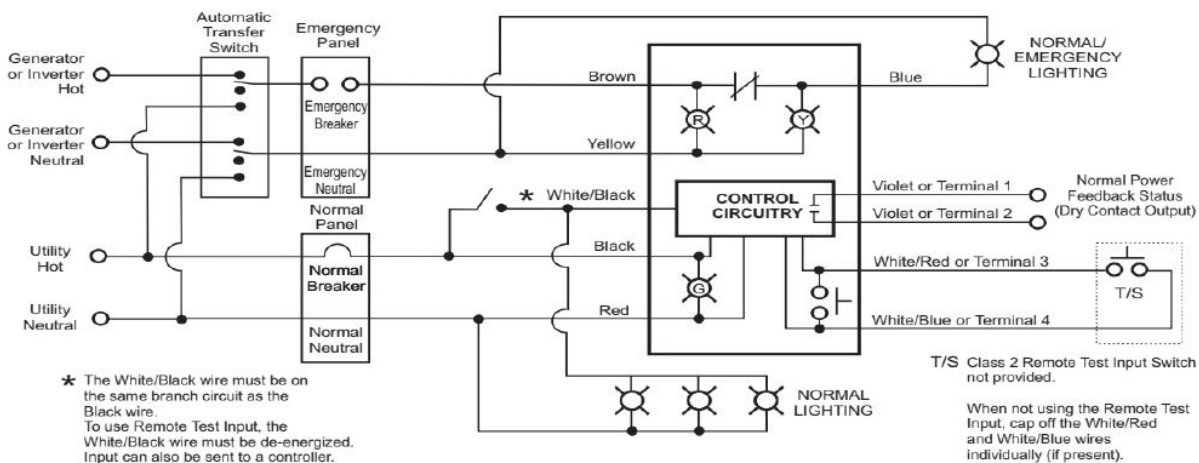
THE WIRING SETUP. WHEN USED AS NORMAL LIGHTING, A TWO SECOND DELAY WILL KEEP THE LOAD ON, EVEN AFTER WALL SWITCH IS TURNED OFF, TO PERFORM A SELF-TEST ON THE UNIT. WHEN NORMAL POWER IS PRESENT, A STATUS CONTACT WILL AUTOMATICALLY CLOSE. THEREFORE, WHEN NORMAL POWER IS ABSENT, THE STATUS CONTACT WILL OPEN (PERFECT FOR 0-10V DIMMING CONTROLS). A RED LED INDICATES THE EMERGENCY POWER IS AVAILABLE. A GREEN LED INDICATES THAT NORMAL POWER IS PRESENT. A YELLOW LED COPIES THE STATUS OF THE LOAD; IF THE LED IS ON, THE LOAD IS ON.

TEMPERATURE RATING (AMBIENT) — 0°C TO +60°C (32°F TO 140°F). NOT TO EXCEED AMBIENT LIMIT OF ESSENTIALS FIXTURE.

INSTALLATION:

THE GTD GENERATOR TRANSFER DEVICE DOES NOT AFFECT NORMAL FIXTURE OPERATION AND COMES FULLY INTEGRATED INTO THE FIXTURE.

WIRING: USING EMERGENCY LIGHTING AS NORMAL LIGHTING



WIRING DESCRIPTIONS

WIRE COLOR	DESCRIPTION	NOTES
BLACK	NORMAL HOT	N/A
WHITE/BLACK	WALL SWITCH INPUT (SELF-TEST INPUT)	MUST BE FROM SAME BRANCH CIRCUIT AS BLACK AND RED. WHEN SWITCHED OFF, A TWO SECOND DELAY KEEPS THE LOAD ON TO TEST EMERGENCY POWER. DOES NOT TEST FEEDBACK/DIMMER OUTPUT.
RED	NORMAL NEUTRAL OR OTHER PHASE	N/A
BROWN	EMERGENCY HOT	N/A
BLUE	EMERGENCY HOT SWITCHED TO LOAD	SWITCHES OUT THE VOLTAGE PUT IN ON BROWN
YELLOW	EMERGENCY NEUTRAL OR OTHER PHASE	N/A
WHITE/BLUE (GTD10DIM) TERMINAL SCREW 4 (BLCD16DIM)	REMOTE TEST INPUT (CLASS 2, DRY CONTACT INPUT)	WHEN WIRING MULTIPLE UNITS TOGETHER, WHITE/BLUE OR TERMINAL SCREW 4 MUST BE A SHARED COMMON. TEST IS PERFORMED WHEN INPUT IS CLOSED.
WHITE/RED (GTD10DIM) TERMINAL SCREW 3 (BLCD16DIM)		
VIOLETS (GTD10DIM) TERMINAL SCREWS 1,2 (BLCD16DIM)	FEEDBACK/DIMMER CONTACT (DRY CONTACT OUTPUT)	OPEN WHEN NORMAL POWER IS ABSENT OR REMOTE TEST INPUT IS CLOSED. CLOSED WHEN NORMAL POWER IS PRESENT OR REMOTE TEST INPUT IS OPEN. WALL SWITCH INPUT DOES NOT TEST THIS OUTPUT.

www.linmoreled.com

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559.485.6010

Documents / Resources

LinmoreLED Essential Series [pdf] Installation Guide

Essential Series, Essential Series Light, Essential Light, Essential, Light

References

-  [Linmore LED | Ultra Performance Lighting](#)

Manuals+.