ephesus
SPORTS LIGHTING

PLAYBOOK

NEW INSTALLATIONS

CONTENTS

We are a team of insight-driven global innovators with an uncompromising commitment to transforming the places we live, work and play. We build and deliver high performance sports lighting solutions. We strive to provide exceptional customer service from idea to implementation.

Ephesus Sports Lighting
125 East Jefferson Street
Syracuse, NY 13202
1-800-573-3600

EPHESUSLIGHTING.COM

SAFETY STATEMENT

Before You Begin

This playbook is only a summary. It is not intended to be a detailed set of installation instructions. For detailed installation instructions, please refer to the relevant product installation manual(s). If you have any questions regarding the product or installation, contact Cooper Lighting Customer Service at 1-800-573-3600.

Follow all safety items outlined here as well as any local safety procedures.

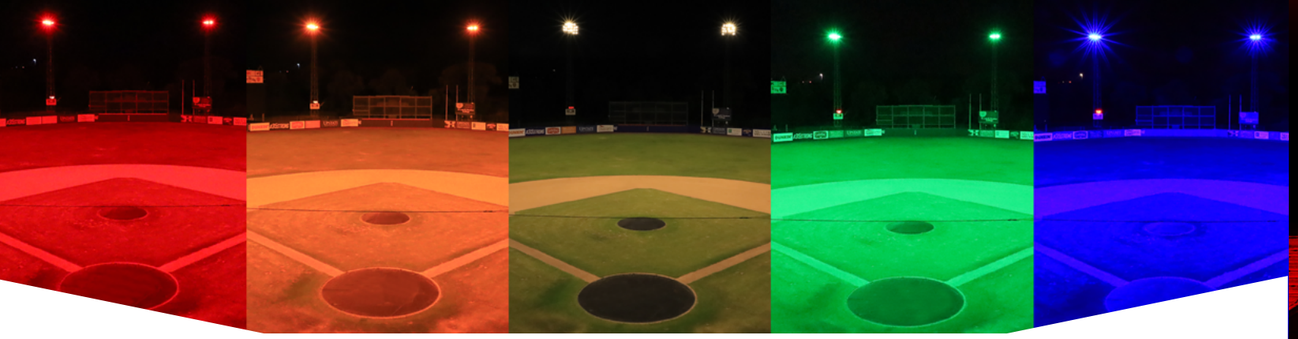
1. All electrical work must conform to National Electrical Code (NFPA 70), IEEE Emerald book, and all applicable local codes and ordinances.
2. Verify the capacity and integrity of existing power distribution system and correct branch circuit voltage before beginning installation.
3. Verify the structural capacity and safety of all facility/venue/pole supports and mounting apparatus before installation. See fixture specification sheet for weight and wind loading data.
4. In harsh settings where the system is subjected to factors such as extreme temperatures, high corrosion, hurricanes, or lightning, always follow local codes and additional protocols to ensure the cabling and other system components can withstand the environmental stress for the life of the system.
5. DO NOT make or alter any open holes in the luminaire. Do not modify the luminaire, internal wiring, or fixture mounting features. Opening or modifying the luminaire or bracket will void the warranty.
6. Use Personal Protective Equipment including hardhats, safety glasses, reflective vests, electrical safety gloves, fall protection equipment, and safety toe boots during installation, operation, and maintenance of luminaire.
7. Verify compliance with local standards to prevent access to the area below where installation activities are occurring to prevent injury from accidental drops of fixtures, tools or hardware.

Disclaimer of Liability:

Cooper Lighting Solutions and Ephesus Sports Lighting assumes no liability for damages or losses of any kind that may arise from the improper, careless, or negligent installation, handling or use of these products.

LOWEST TOTAL COST OF OWNERSHIP

Ephesus Luminaires combine interchangeable modular power, controls, and easy-to-install mounting options. An Ephesus Sports Lighting system delivers the optimum solution for every indoor and outdoor sports venue with industry-leading reliability.



PRODUCT LINE

	LUMINAIRE TYPE	LUMADAPT 8 Integrated white & RGBA Color LED	LUMASPORT 8 White LED	LUMASPORT 16 White LED	LUMAVISION White LED	PRISM RGBA RGBA Color LED
USE	INDOOR	●	●	●	●	●
	OUTDOOR	◒	●	●	●	●
APPLICATION	PROFESSIONAL	●	◒	●	○	●
	COLLEGIATE	●	●	●	●	●
	RECREATIONAL/MUNICIPAL	○	●	◒	●	●
	K-12 SCHOOLS	○	●	◒	●	●
PERFORMANCE	SYSTEM WATTAGE	400W	320W | 640W	1200W	180W - 550W	675W
	LUMEN OUTPUT (lm)	UP TO 50,000	48,303 - 55,419 | 80,572 - 92,929	143,050 - 158,312	20,200 - 58,000	R >10,840 | G >12,900 B >2,450 | A >10,800
	INPUT VOLTAGE (LOW)	120-240VAC, 50/60 HZ	120-277VAC	208-277VAC	120-277VAC	120-240VAC
	INPUT VOLTAGE (HIGH)	277-480VAC, 50/60 HZ	347-480VAC	347-480VAC	347-480VAC	277-480VAC
	EFFICACY RANGE (lm/W)	110	140.4 - 163.5 | 117.5 - 139.3	113-123	111-121	—
	CRI (VALUES ARE +/- 2%)	>/+ 85	70, 80	80	70, 90	—
	CCT RANGE	5000K nominal (3000K-6500K tunable)	4000K, 5000K, 5700K	5700K	3000K-6000K	—
	DISTRIBUTION (NEMA)	3-5, 5-7	3-5, 7	2-3	1-6, Asymmetric & Symmetric Options	2-5
	EPA (sq. ft.)	1.4	1.8	2.9	1.61- 2.99	1.4
	TLCI (+/- 3 POINTS)	>70	75	75	92	—

KEY: ● Best ◒ Better ○ Good

TRANSFORMING THE GAME

Ephesus has developed the first true LED sports-lighting system, giving you more than just a fixture to power your performance. Today's venues demand lights that have proven performance at the highest levels. With crisp lighting and dynamic scenes for the fans at the game, Ephesus provides the most exciting game-day experience for your audience—and the best light for the athletes, so they can perform at their peak

CLICK OR SCAN TO WATCH

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SITE PRE-ASSESSMENT CHECKLIST

Collect information during a pre-assessment of the field to help the Ephesus Sales Team more accurately quote the project. Information collected before the fixtures are shipped to the site will also allow the project delivery team to address installation challenges by implementing the ideal configurable solution.

☐ **Site Evaluation**
- ☐ *Geotechnical & Topology Report*
- ☐ *Wind Rating*
- ☐ *Infrastructure*
- ☐ *Electrical*
- ☐ *Controls*

☐ **Images of the site location**

SITE DOCUMENTS & DRAWINGS

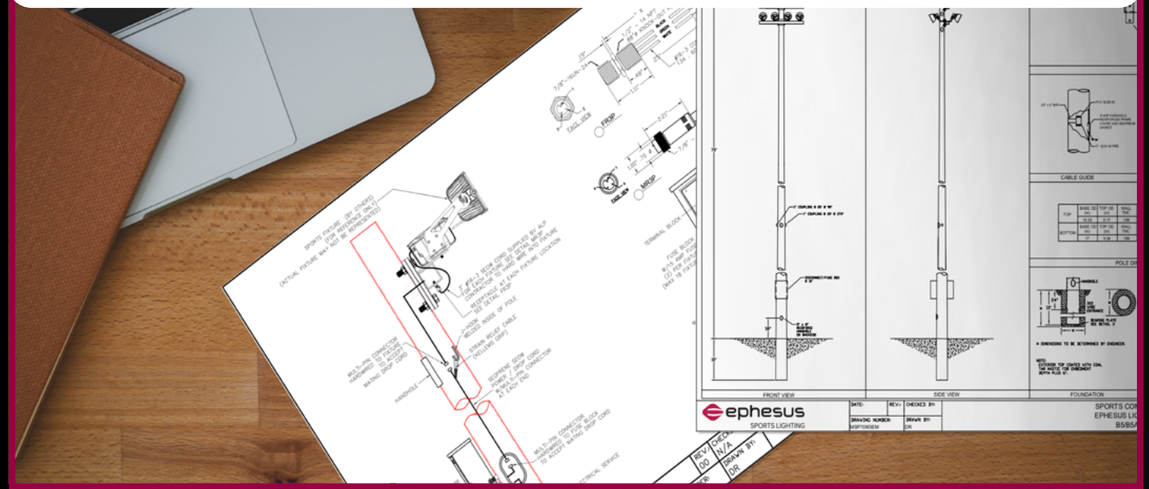
- **Lighting Design Proposal**
  - *Quotation/ Bill of Materials (BoM)*
  - *Photometric Drawing Design Plan*
  - *Product Specification Sheets*
  - *Product Installation Manuals*
  - *Installation Drawings*
- *Foundation Design*
- *Project Management Services*
- *Warranty & Order Confirmation Packet*

1 PREPARATION

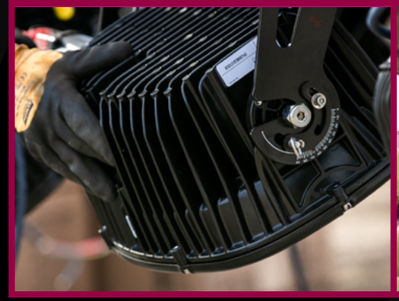
- **Accept delivery**
- **Bring Electrical Conduit to Pole locations**
- **Auger the Foundation Hole**

2 POLE ASSEMBLY

- **Slip-fit the Pole sections together**
- **Install & connect the Pole Assembly electrical components**
- **Install Pre-Wired Crossarms**
- **Mount and pre-aim Ephesus luminaires**
- **Finish luminaire electrical connections in accordance with NEC and IEEE Emerald Standards**



2 POLE ASSEMBLY



3 RAISE THE POLE ASSEMBLY

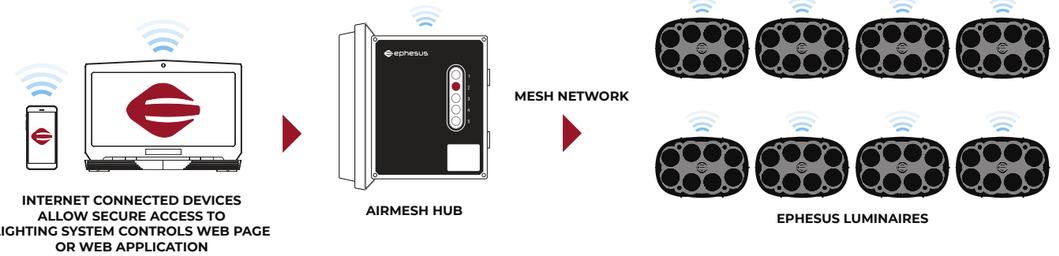
- **Set Pole in place**
- **Plumb Pole with Leveling Wedges**
- **Pour concrete into Pole Foundation**
- **Connect electrical power and grounding in accordance with NEC & IEEE Emerald Standards**
- **Complete backfilling the Pole Foundation**
- **Power up, commission system controls and check light levels on site**

TAKE CONTROL OF YOUR SPORTS LIGHTING

CONTROLS OVERVIEW

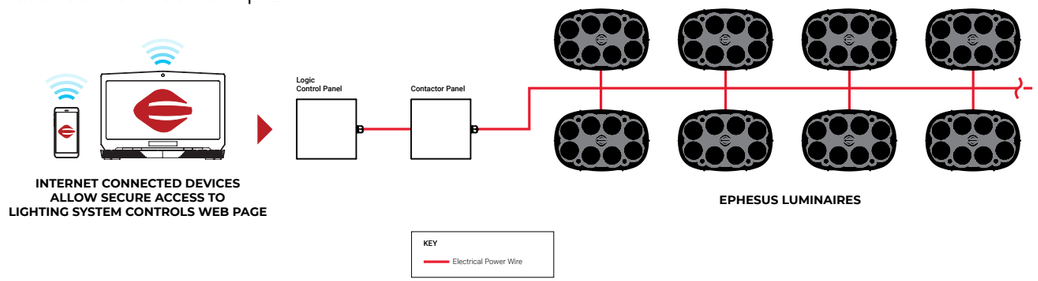
EXAMPLE SYSTEM TOPOLOGY (WIRELESS AIRMESH CONTROLS)

Example system topology showing the LUMA**SPORT 8** System in a Wireless AirMesh Control Installation. *Note:* Laptop or mobile device not included. A cellular network connection requires a cellular carrier network plan.



EXAMPLE SYSTEM TOPOLOGY (CONTACTOR CONTROLS)

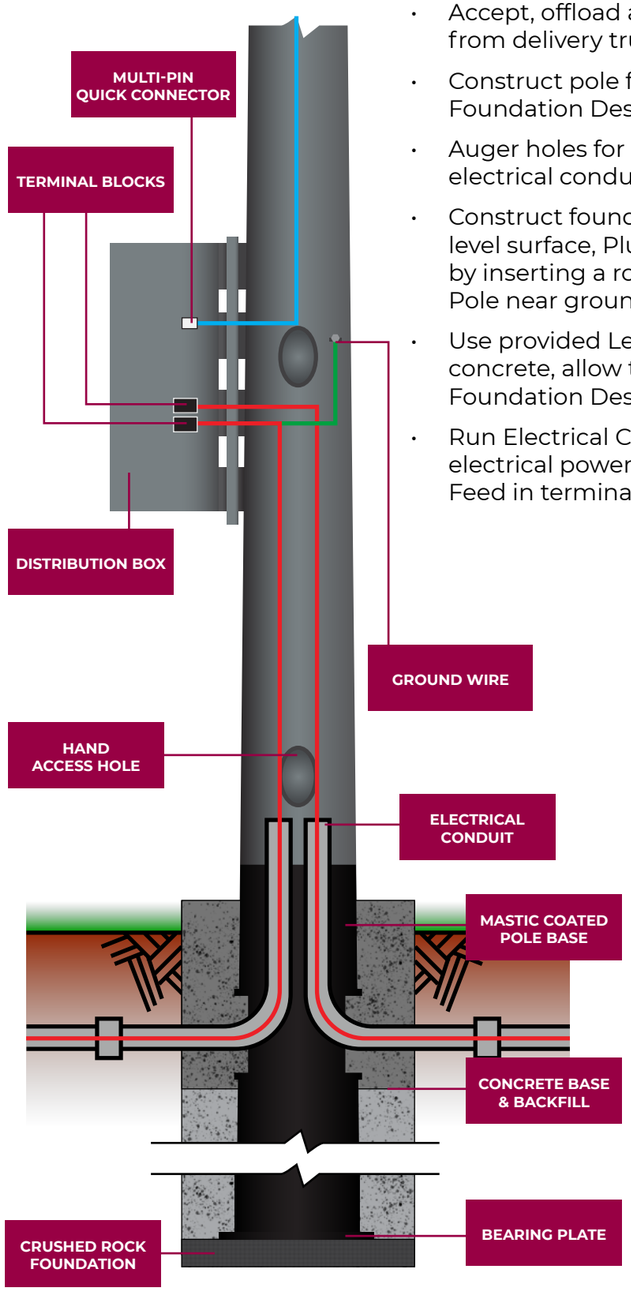
Example system topology showing the LUMA**SPORT 8** System in a Wired Contactor Controls Installation. *Note:* Laptop or mobile device not included. A cellular network connection requires a cellular carrier network plan.



DIRECT BURIAL BASE

OVERVIEW

- Accept, offload and handle lighting system materials from delivery trucks to the staging area.
- Construct pole foundation according to the provided Foundation Design.
- Auger holes for poles at defined locations and bring electrical conduits to the pole location.
- Construct foundation floor using crushed rock to create a level surface, Plumb Pole with Level, Pole may be rotated by inserting a rod into an open Hand Hole Access in the Pole near ground.
- Use provided Leveling Wedges to hold Pole plumb, pour concrete, allow to cure and place back fill material per Foundation Design requirements.
- Run Electrical Conduit below grade for incoming electrical power and land incoming Electrical Distribution Feed in terminal blocks inside the Distribution Box.



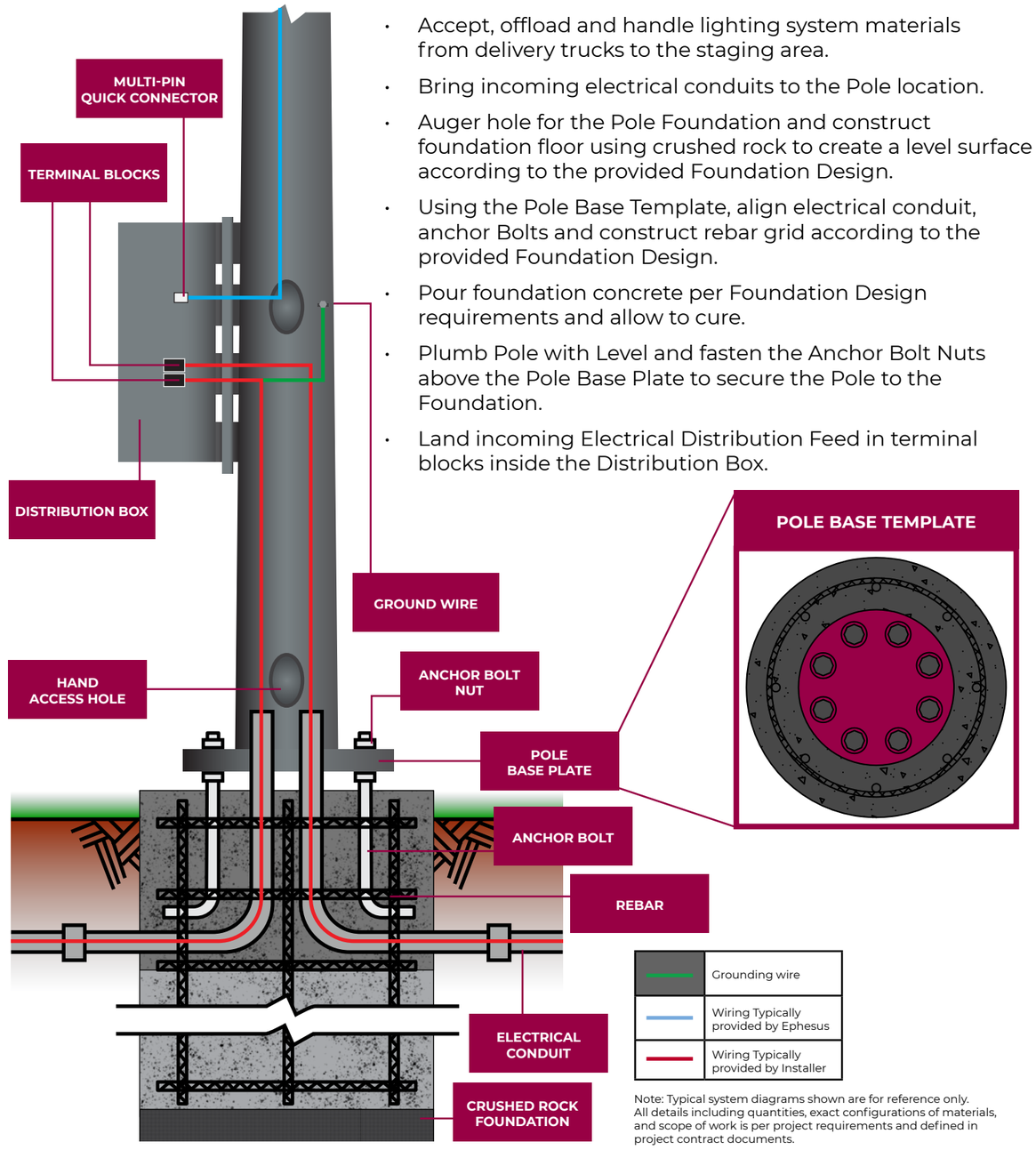
	Grounding wire
	Wiring Typically provided by Ephesus
	Wiring Typically provided by Installer

Note: Typical system diagrams shown are for reference only. All details including quantities, exact configurations of materials, and scope of work is per project requirements and defined in project contract documents.

ANCHOR BASE

OVERVIEW

- Accept, offload and handle lighting system materials from delivery trucks to the staging area.
- Bring incoming electrical conduits to the Pole location.
- Auger hole for the Pole Foundation and construct foundation floor using crushed rock to create a level surface according to the provided Foundation Design.
- Using the Pole Base Template, align electrical conduit, anchor Bolts and construct rebar grid according to the provided Foundation Design.
- Pour foundation concrete per Foundation Design requirements and allow to cure.
- Plumb Pole with Level and fasten the Anchor Bolt Nuts above the Pole Base Plate to secure the Pole to the Foundation.
- Land incoming Electrical Distribution Feed in terminal blocks inside the Distribution Box.



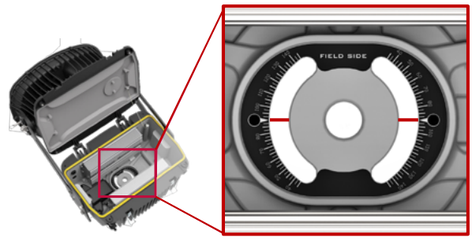
	Grounding wire
	Wiring Typically provided by Ephesus
	Wiring Typically provided by Installer

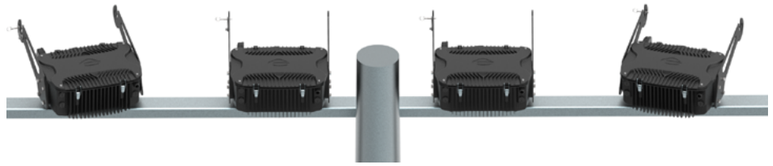
Note: Typical system diagrams shown are for reference only. All details including quantities, exact configurations of materials, and scope of work is per project requirements and defined in project contract documents.

MOUNT & PRE-AIM

STEP 1: MOUNT DRIVER BOX WITH ORIENTATION

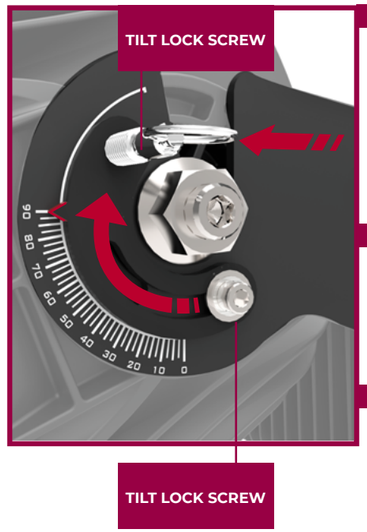
- Mount driver boxes to crossarm, laterally Pre-Aim driver boxes according to the provided Photometric Design Plan and connect power according to the provided Luminaire Installation Manual(s)





STEP 2: SET “QUICK MOUNT YOKE” FOR TILT

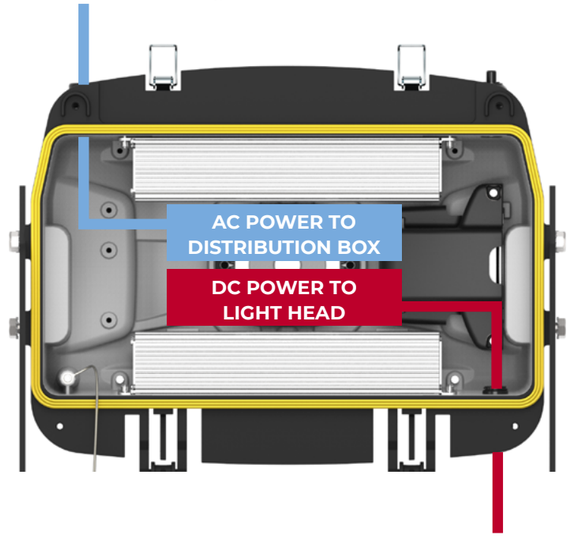
- Vertically Pre-Aim Mounting Arms according to provided Photometric Design Plan, place the Light Heads into the Mounting Arms and tighten Tilt Lock Screws.



PLUG & PLAY

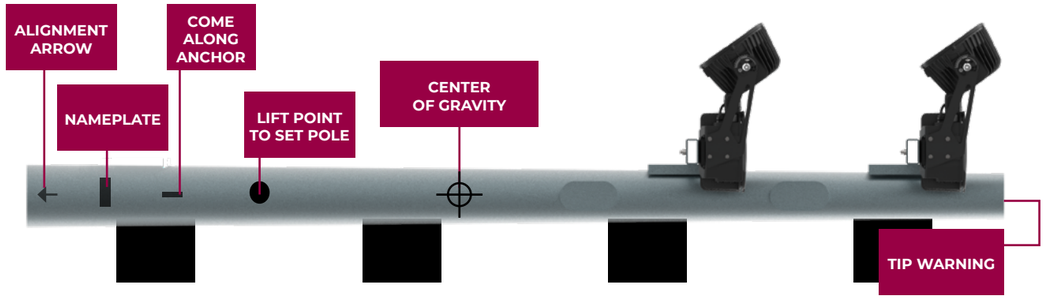
STEP 3: CONNECT POWER

- Wire the Pre-Aimed Crossarm to the Driver Box and wire the Light Head to the Driver Box



- Attach all Kellem Grip Drop Cables to the Strain Relief Clips located above each Pre-Wired crossarm and connect electrical with the Multi-Pin Quick Connectors in the Distribution Box at Pole Base.

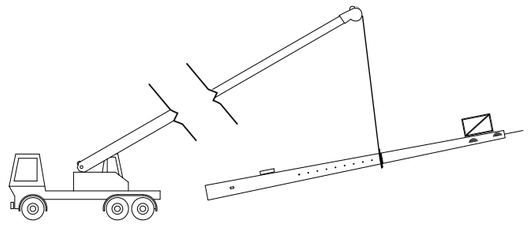
RAISING THE POLE



IMPORTANT:

READ ALL LABELS, ASSEMBLY AND POLE RAISING GUIDES, DRAWINGS AND NOTES BEFORE LIFTING POLE.

- Center of gravity of the pole will vary depending on the pole size
- Use actual weight shown on pole name plate for lifting requirements



HANDLING

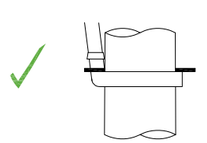
- Use 2-Point Pickup when handling or offloading Pole in Horizontal position. See labels at the center of gravity and at the horizontal lift points

STORING

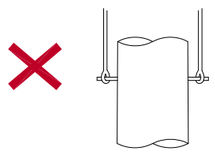
- Block Pole into level in at least 4 blocking locations uniformly spaced along length of Pole

SETTING POLE

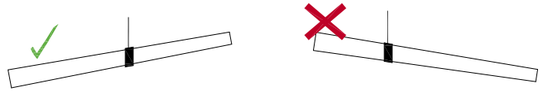
- The Pole can be set in the foundation by using a 1-point pick. Use marked lifting location on Pole. Insert single piece rod in lifting location hole. Choke Pole tightly, using a nylon or padded choke just below rod. Do not lift Pole using the hole or rod alone.



CHOKE TIGHTLY

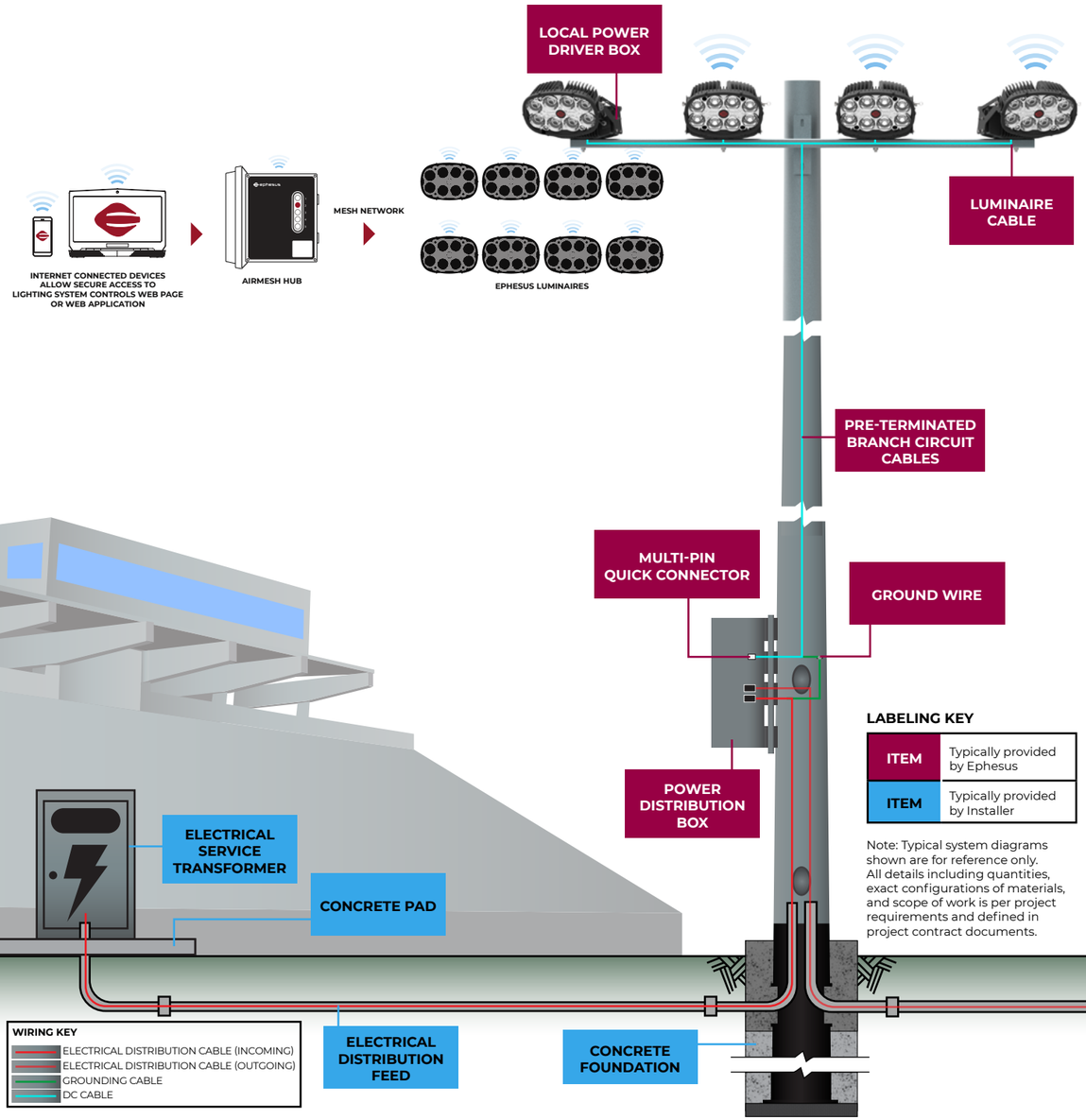


DO NOT LIFT WITH ROD OR HOLES



INTEGRAL SYSTEM DIAGRAM

Once your system has been installed, the final step is to power up your system, commission the controls and check light levels on site.



LABELING KEY

ITEM	Typically provided by Ephesus
ITEM	Typically provided by Installer

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