



# eColor Reach Powercore gen2

Premium long-throw exterior LED floodlight with solid color light

**PHILIPS**



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## Premium long-throw exterior LED floodlight with solid color light

eColor Reach Powercore gen2 high-performance LED fixtures are premium exterior long-throw dynamic high-quality solid color luminaires for lighting tall buildings, bridges, and iconic structures. A full range of accessories allow for customizable beam angles for floodlighting, spotlighting, wall washing, and grazing, along with the efficiency and cost-effectiveness of Powercore technology in a rugged die-cast aluminum housing.

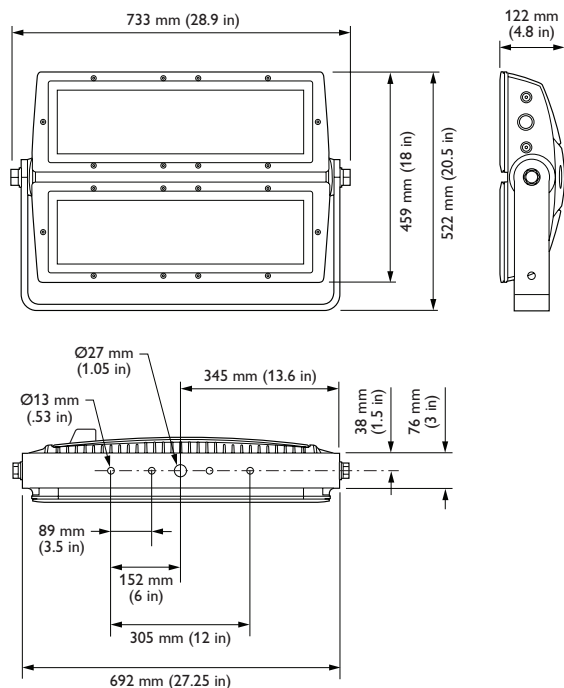
- Superior color consistency and accuracy—Optibin, an advanced binning algorithm, sets a new standard for the color consistency and uniformity of LED sources used in manufacturing.
- Dimming control via DMX—Dim fixtures smoothly and accurately from 1% to 100% with Philips Color Kinetics lighting controllers, including iPlayer 3 and third-party controllers (optional Data Enabler Pro and 4-conductor cable required).
- Expanded customization with a wide range of new Philips accessory options. To complement the native 5° lens, six standard secondary diffuser lenses can customize the fixture to produce 8°, 13°, 23°, 43°, 63°, and 5° x 17° (asymmetric) beam angles. The option to add or combine a louver, full glare shield, or half glare shield creates new aesthetic possibilities for designers and architects.
- Unparalleled light output—eColor Reach Powercore gen2 offers unprecedented output and punch for LED-based illumination of large-scale structures and objects.
- Integrates patented Powercore technology that controls power output to fixtures directly from line voltage—rapidly, efficiently, and accurately. The Philips Color Kinetics Data Enabler Pro merges line voltage with control data and delivers them to fixtures over a single standard cable, dramatically simplifying installation and lowering total system cost.
- Simple fixture positioning—Rugged, slim-profile mounting bracket allows simple positioning and fixture rotation through a full 360°. Side locking bolts reliably secure fixture with a standard wrench.
- Universal power input range of 100 – 277 VAC.



### Unparalleled Light Output

eColor Reach Powercore gen2 offers LED-based solid color light illumination of large-scale structures and objects. New accessories, including a new louver and two glare shields, provide extra flexibility to help with dark sky compliance, discomfort glare, and trespass light.

Due to continuous improvements and innovations, specifications may change without notice.



Item	Specification	Details
Output	Beam Angle	5° primary optic (no spread lens) 8°/13°/23°/43°/63°/5° x 17° (asymmetric) spread lenses
Electrical	Input Voltage	100 – 277 VAC, auto-switching, 50/60 Hz
	Power Consumption	250 W maximum at full output, steady state
	Power Factor	.989 @ 120 VAC
Control		On/Off; digital dimming by 4 connector cable & DE Pro
Physical	Dimensions (Height x Width x Depth)	522 x 733 x 122 mm (20.5 x 28.9 x 4.8 in)
	Weight	34 kg (75 lb)
	Effective Projected Area (EPA)	0.42 m²
	Housing	Die-cast aluminium, powder-coated finish
	Mechanical Impact	IK07
	Lens	Tempered glass
	Fixture Connections	Integral male/female waterproof connector
	Temperature Ranges	-40° – 50° C (-40° – 122° F) Operating -20° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) Storage
	Humidity	0 – 95%, non-condensing
	Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from <a href="http://www.philipscolorkinetics.com/support/install_tool/">www.philipscolorkinetics.com/support/install_tool/</a>
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, PSE
	Environment	Dry/Damp/Wet Location, IP66



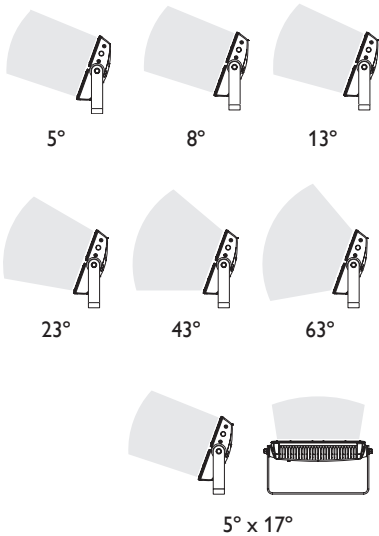
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# Specifications, CQC

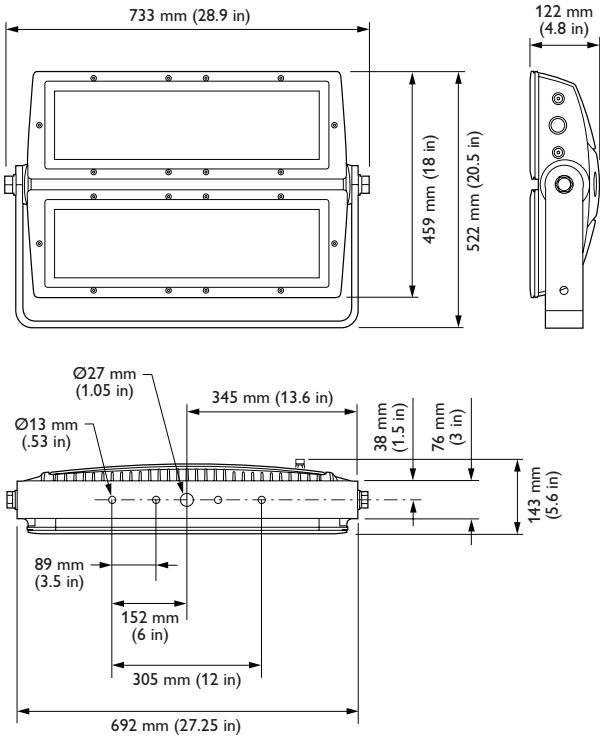
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Output	Beam Angle	5° primary optic (no spread lens) 8°/13°/23°/43°/63°/5° x 17° (asymmetric) spread lenses
	Input Voltage	100 – 240 VAC, auto-switching, 50/60 Hz
	Power Consumption	250 W maximum at full output, steady state
Electrical	Power Factor	.989 @ 120 VAC
	Control	On/Off; digital dimming by 4 connector cable & DE Pro
	Dimensions (Height x Width x Depth)	522 x 733 x 122 mm (20.5 x 28.9 x 4.8 in)
Physical	Weight	34 kg (75 lb)
	Effective Projected Area (EPA)	0.42 m²
	Housing	Die-cast aluminium, powder-coated finish
	Mechanical Impact	IK07
	Lens	Tempered glass
	Fixture Connections	Integral male/female waterproof connector, 1.8 m (6 ft) Leader Cable
	Temperature Ranges	-40° – 50° C (-40° – 122° F) Operating -20° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) Storage
	Humidity	0 – 95%, non-condensing
	Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from <a href="http://www.philipscolorkinetics.com/support/install_tool/">www.philipscolorkinetics.com/support/install_tool/</a>
Certification and Safety	Certification	FCC Class A, CE, PSE, CQC
	Environment	Dry/Damp/Wet Location, IP66

✳ For help estimating the light output and distribution of eColor lighting fixtures, please contact Philips Color Kinetics Applications Engineering Services at [support@colorkinetics.com](mailto:support@colorkinetics.com).



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## Fixtures and Data Enabler Pro

eColor Reach Powercore gen2 fixtures are part of a complete line-voltage system which includes fixtures and:

- One Leader Cable to connect each eColor Reach Powercore gen2 fixture to a power source.
- 3-conductor copper wire to connect eColor Reach Powercore gen2 fixtures in series or in parallel. Standard 12 AWG (2.05 mm) stranded wire is recommended.
- 4-conductor copper wire to connect eColor Reach Powercore gen2 fixtures in series or in parallel, when digital dimming feature will be used, with a Philips Data Enabler Pro. 4-conductor wire is required for all connections downstream from the Data Enabler Pro.
- Philips Data Enabler Pro, when digital dimming feature will be used.

### Fixtures

Item	Type	Item Number	Philips 12NC
eColor Reach Powercore gen2 <i>Leader cable(s) sold separately</i>	Red	223-000084-08	912400133481
	Green	223-000084-09	912400133482
	Blue	223-000084-10	912400133483
	Amber	223-000084-11	912400133484
eColor Reach Powercore gen2 <i>Includes 1.8 m (6 ft) Leader Cable</i>	Red	223-000079-12	912400133508
	Green	223-000079-13	912400133509
	Blue	223-000079-14	912400133510
	Amber	223-000079-15	912400133511

Use Item Number when ordering in North America.

### Data Enabler

Item	Style	Item Number*	Philips 12NC
Data Enabler Pro	3/4 in / 1/2 in NPT (US trade size conduit)	106-000004-00	910503701210
	PG21/PG13 (metric size conduit)	106-000004-01	910503701211






Use Item Number when ordering in North America.

## Accessories

All of the Philips Color Kinetics accessories are designed to provide customizable options for controlling and dispersing light as well as added protection.

Item	Type	Item Number	Philips 12NC
3 Conductor Replacement Leader Cable, 100–240 VAC	6 ft (1.8 m) CE/PSE	108-000046-01	910503700622
3 Conductor Replacement Leader Cable, 100–240 VAC;	6 ft (1.8 m) CQC	108-000046-02	910503704175
3 Conductor Replacement Leader Cable, 100–277 VAC	10 ft (3.0 m) UL/cUL	108-000056-03	910503704071
	CE/PSE	108-000056-04	910503704072
	50 ft (15.2 m) UL/cUL	108-000056-00	910503703138
	CE/PSE	108-000056-01	910503704069
4 Conductor Replacement Leader Cable (required to digitally dim unit, w/ DE Pro), 100–240 VAC	6 ft (1.8 m) CE/PSE	108-000043-03	910503700454
4 Conductor Replacement Leader Cable (required to digitally dim unit, w/ DE Pro), 100–277 VAC	10 ft (3.0 m) UL/cUL	108-000055-03	910503704066
	CE/PSE	108-000055-04	910503704067
	50 ft (15.2 m) UL/cUL	108-000055-00	910503703137
	CE/PSE	108-000055-01	910503704064

Use Item Number when ordering in North America.

Item	Item Number	Philips 12NC	
Louver (Requires Trim Bezel)	120-000187-02	912400133589	
Half Glare Shield (Requires Trim Bezel)	120-000187-01	912400133588	
Full Glare Shield (Requires Trim Bezel)	120-000187-00	912400133587	
Trim Bezel	120-000187-03	912400134263	
8° Spread Lens with Bezel	120-000068-17	912400133598	
13° Spread Lens with Bezel	120-000068-12	912400133593	
23° Spread Lens with Bezel	120-000068-13	912400133594	
43° Spread Lens with Bezel	120-000068-14	912400133595	
63° Spread Lens with Bezel	120-000068-15	912400133596	
5° X 17° Asymmetric Spread Lens with Bezel	120-000068-16	912400133597	

Use Item Number when ordering in North America.

## Installation

eColor Reach Powercore gen2, a high-performance exterior architectural color floodlight, is designed to brilliantly illuminate signature façades. eColor Reach Powercore has digital dimming capability and can be dimmed from 1% – 100% using DMX or Ethernet lighting controllers. Powercore technology integrates LED power and data management within the fixture, easing installation by eliminating the need for external power supplies. The dimming function requires a Philips Color Kinetics Data Enabler Pro (DE Pro) and 4-wire connector cables between the Data Enabler Pro and the fixtures.

Because each eColor Reach Powercore fixture weighs 34 kg (75 lb), you may need two people to lift the fixture out of the box and position it in the mounting location. Optional accessory optics require the installation of both a spread lens and a bezel on each half of the fixture.

### Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate eColor Reach Powercore gen2 fixtures in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector to ensure compliance.

### Installing in Damp or Wet Locations

When installing in damp or wet locations, you must seal all junction boxes with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in wiring compartments, cables, fixtures, or other electrical parts. You must use suitable outdoor-rated junction boxes when installing in wet or damp locations. Additionally, you must use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

\* Refer to the Data Enabler Pro Installation Instructions or Product Guide for guidelines on configuring and positioning the Data Enabler Pro in relation to the controller.

\* For specific warning and caution statements refer to the eColor Reach Powercore Installation Instructions at <http://www.colorkinetics.com/lsl/essentialcolor/ecreach>

## Prepare for the Installation

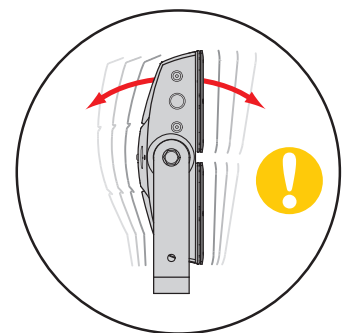
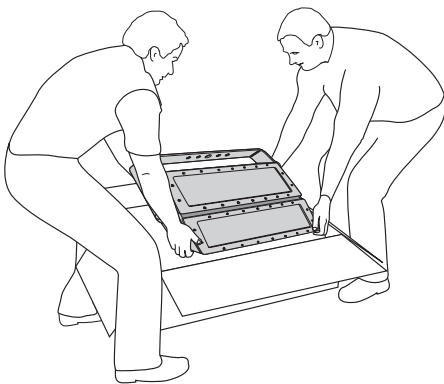
1. Determine the appropriate location of each Data Enabler Pro in relation to the fixtures, and of the fixtures in relation to each other. The Data Enabler Pro and first fixture must be separated by no more than the 3 m (10 ft) length of the Leader Cable.

eColor Reach Powercore gen2 fixtures can be installed in series or in parallel (wired to a common junction box). The maximum number of fixtures each circuit can support depends on specific configuration details such as fixture spacing, circuit size, line voltage, and method of connection (in series or in parallel). For more information, and for help calculating the number of fixtures your specific installation can support, download the Configuration Calculator from [www.philipscolorkinetics.com/support/install\\_tool/](http://www.philipscolorkinetics.com/support/install_tool/), or consult Application Engineering Services at [support@colorkinetics.com](mailto:support@colorkinetics.com).

2. Ensure that all additional parts and tools are available, including:
  - A 28 mm hex or adjustable wrench for adjusting the locking bolts on the fixture bracket.
  - One electrical junction box per fixture, rated for your application. (Refer to the junction box manufacturer's literature for additional items required for mounting or sealing.)
  - A sufficient length of 3- or 4-conductor copper wire. We recommend 12 AWG (2.05 mm) stranded wire.
  - Conduit as required.
  - Electronics-grade room temperature vulcanizing (RTV) silicone sealant.

## Start the Installation

1. If digital dimming is desired, install all Data Enabler Pro devices, including any interfaces with controllers. One Leader Cable is required to make connection to the fixture. The Data Enabler Pro sends power and control signals to the fixtures over the Leader Cable.
2. Verify that all additional supporting equipment (switches, controllers) is in place.
3. Ensure that all additional parts (optional mounting tracks, mounting hardware, terminators) and tools are available.
4. Unpack eColor Reach Powercore gen2 fixtures. You may need two people to lift the fixture out of the box and position it in the mounting location.

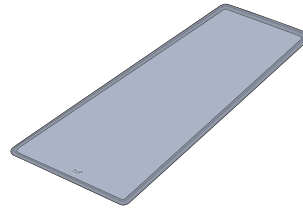


**\* Do not rest eColor Reach Powercore gen2 on its back, as doing so may damage the connector port. Be careful not to tip the fixture over during positioning.**

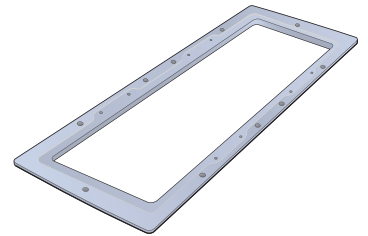
## Attach Accessory Lenses (Optional)

Accessories can be installed to change the beam angle or add extra glare control to the fixture in outdoor environments.

\* For complete instructions on how to install the accessories, refer to the Accessory Installation Instructions at <http://www.colorkinetics.com/l/essentialcolor/ereach>

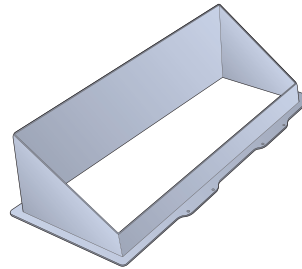


Spread Lens

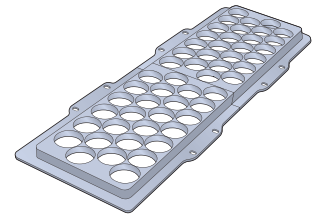


Trim Bezel

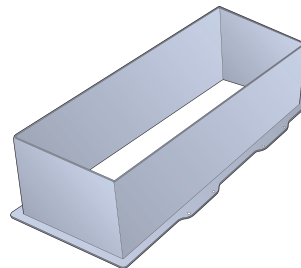
\* For installations in extreme environments, refer to the Reach Spread Lens Kit Installation Instructions at <http://www.colorkinetics.com/l/essentialcolor/ereach> for details on sealing the spread lens and bezel to prohibit water ingress.



Half Glare Shield



Louver



Full Glare Shield

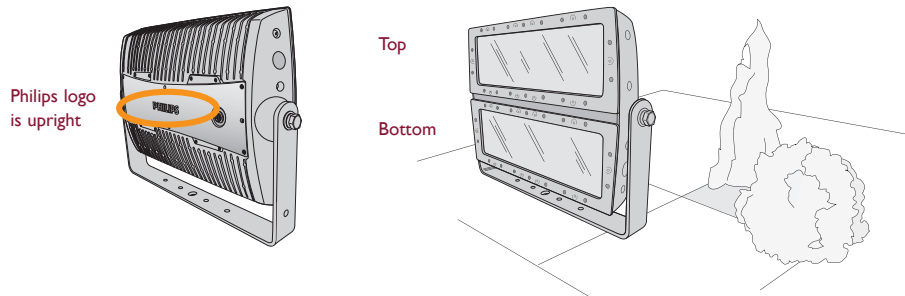


# Position and Mount Fixtures

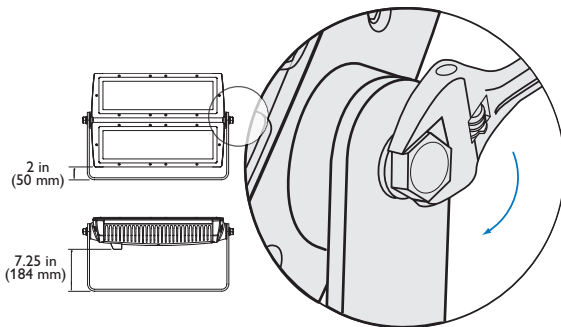
Ensure that the fixture mounting locations and substrates are sufficiently sturdy to bear the weight of each eColor Reach Powercore gen2 fixture. Pre-drill holes in the mounting substrate if necessary, making reference to the mounting bracket dimensions. Use at least two screws to secure each fixture, one on either side of the mounting bracket's central screw hole.

If mounting eColor Reach Powercore gen2 on a lighting pole, make sure the pole can both support the total weight of the fixtures and withstand the maximum velocity winds to which it will be subjected. Each fixture weighs 34 kg (75 lb), and has an effective projected area (EPA) of 0.42 m<sup>2</sup>.

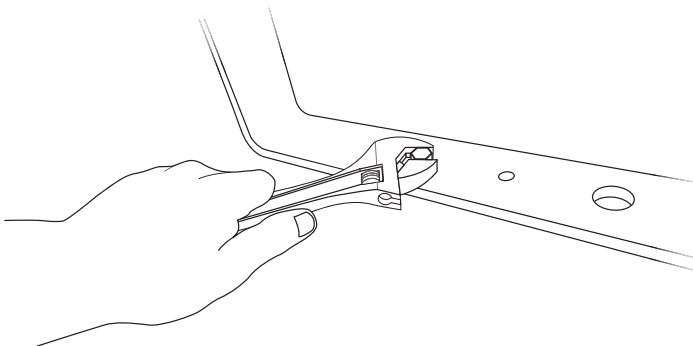
1. Position each eColor Reach Powercore gen2 fixture in its designated mounting location. Make sure the mounting area is clear of debris and other obstructions.



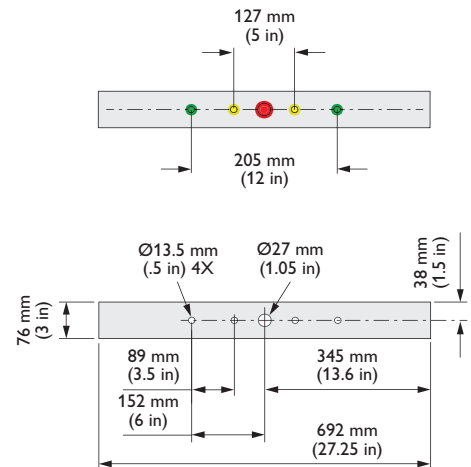
2. Loosen the locking bolts, using a 28 mm hex or adjustable wrench, and rotate the fixture to access the mounting bracket. Tilting the fixture 90° affords 184 mm (7.25 in) clearance.



3. If mounting holes have been pre-drilled, align the mounting bracket's screw holes with the pre-drilled holes. Mount the fixture bracket using hardware appropriate for the mounting substrate. Use at least two screws to secure each fixture, one on either side of the mounting bracket's central screw hole.

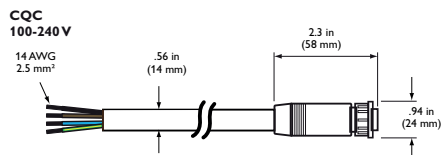
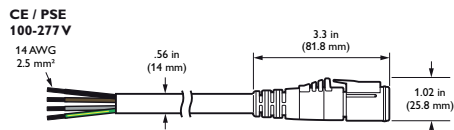
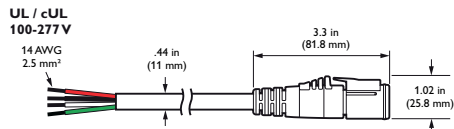


Mounting bracket dimensions for pre-drilling



# Connect Fixtures

## Leader Cable connector dimensions



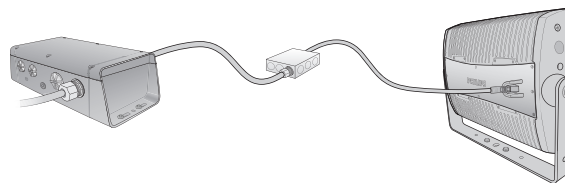
eColor Reach Powercore gen2 fixtures can be installed in series or in parallel (wired to a common junction box). Ensure that all junction boxes are suitable for the environment and that all wiring between junction boxes complies with local codes.

Make sure the power is OFF before connecting eColor Reach Powercore gen2 fixtures.

1. Install junction boxes. (Refer to the manufacturer's literature for additional items required for mounting or sealing.)
2. If installing fixtures in a series, pull 3-conductor copper wire between each junction box in the series. If installing fixtures in parallel, pull 3-conductor copper wire from a power source to a common junction box, and from the common junction box to each fixture's junction box.

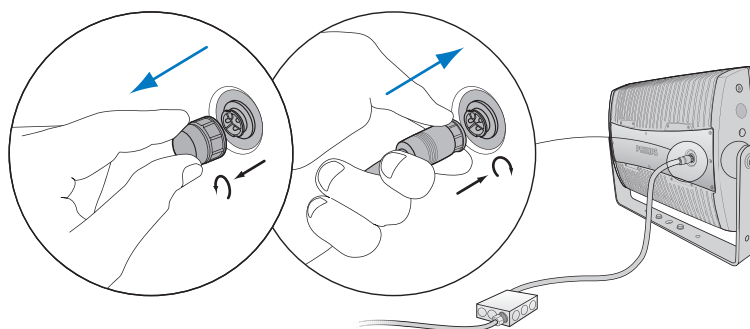
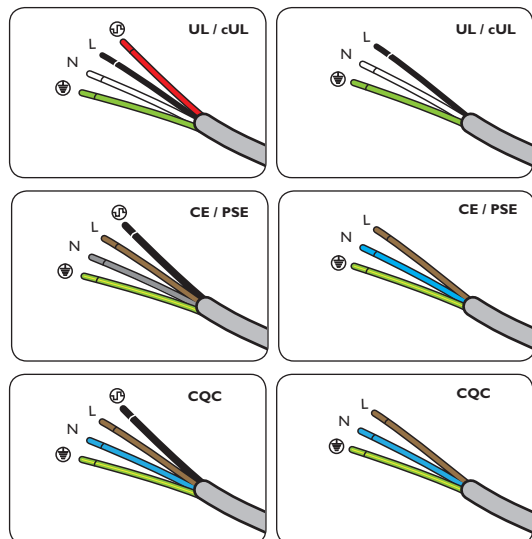
If these fixtures are to use digital dimming and control features, there must be a Philips Color Kinetics Data Enabler Pro between the power mains and the first junction box. All cabling between the Data Enabler Pro and the downstream fixtures must be 4-conductor cables.

The maximum cable run from a Data Enabler Pro to any individual eColor Reach Compact Powercore fixture is 53 m (175 ft). When installing in parallel, the total cable length cannot exceed 122 m (400 ft).

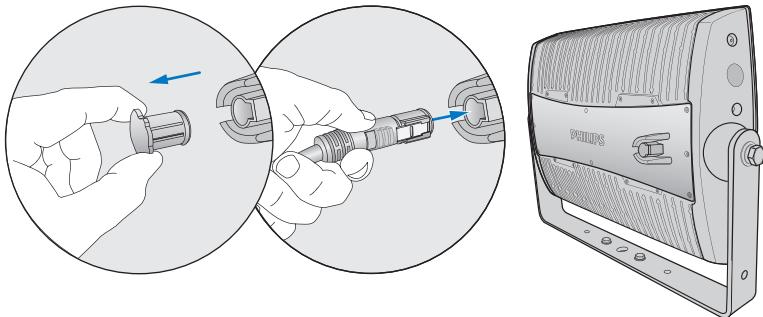


3. If necessary, remove the connector cap from the port on the back of the eColor Reach Powercore gen2 housing. Insert the Leader Cable into the port. Turn the Leader Cable's lock nut to the right until it locks into place.

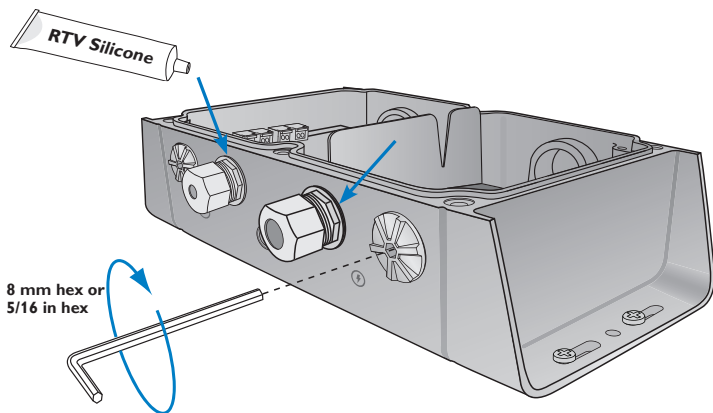
For installations with CQC-compatible (CE) cabling: Turn the Leader Cable's lock nut to the right until it locks into place.



For installations with UL/cUL-compatible cabling: The Leader Cable snaps into place (it must be oriented to the only way it can fit) in the power port on the fixture.

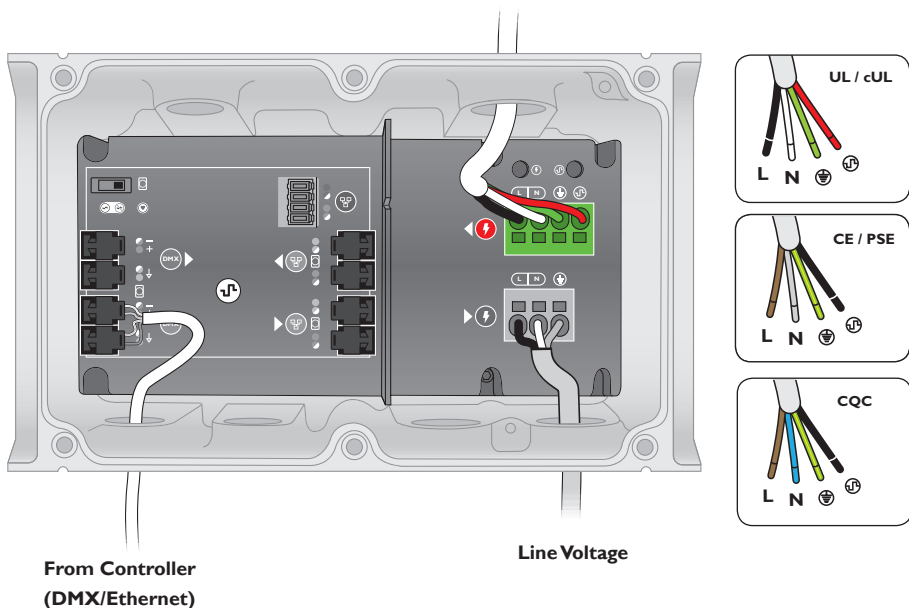


- Use wire nuts to connect line, neutral, and ground. If installing in series, connect the Leader Cable from each fixture to the fixture's junction box. If installing in parallel, connect the Leader Cable from each fixture to the lead wire from the power source in the common junction box.
- Tuck wire connections into the junction box.
- Seal all junction boxes and the Data Enabler Pro with electronics-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.



- Run the wiring from the first junction box in the series to the Data Enabler Pro, or, if installing in parallel, run the wiring from the common junction box to the Data Enabler Pro. Secure connections within the Data Enabler Pro housing.

To Fixtures



## Connect to Power

You can connect the first junction box in a series, or a common junction box in a parallel installation, directly to a power source.

1. Run a sufficient length of 3-conductor wire from the first junction box in the series to the power source, or if installing in parallel, run the wiring from the common junction box to the power source.
2. If installing in a wet or damp location, seal all junction boxes with electronics-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.

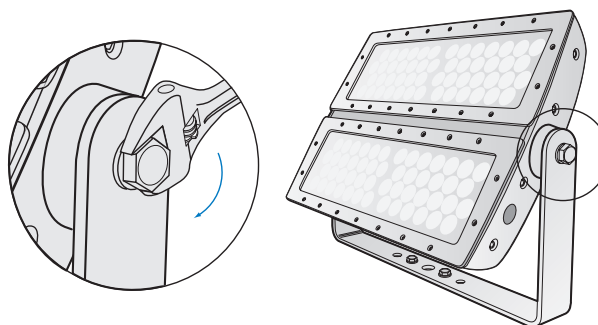
## Aim and Lock the Fixtures

Make sure that the power is ON before aiming fixtures. Do not look directly into the fixture when aiming and locking.

1. Aim the fixtures by rotating each fixture to the correct angle.
2. Lock the fixtures by tightening the locking bolts using a 28 mm hex or adjustable wrench.

✱ Do not look directly into the fixture when aiming and locking.

✱ For exterior applications with direct exposure to water, eColor Reach Powercore gen2 fixtures should not be aimed directly upwards, as water may pool on the lens and affect beam quality. Instead, the fixture should be angled to allow for proper water drainage.



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