



## eW Cove MX Powercore

Maximum output linear LED fixture for cove, general, and accent lighting

**PHILIPS**

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## Maximum output linear LED fixture for cove, general, and accent lighting

eW® Cove MX Powercore delivers the highest light output in the line of solid white linear cove lights from Philips Color Kinetics. With its superior light output, wide beam angle, and a range of fixed colors and color temperatures, eW Cove MX Powercore can be used for accent lighting and indirect general illumination, as well as the full range of wall and ceiling cove applications. eW Cove MX Powercore meets or exceeds the performance of comparable linear fluorescent strip cove lights while lowering installation, energy, and maintenance costs. eW Cove MX Powercore offers environmentally conscious buyers a green, energy-efficient lighting solution without sacrificing quality or quantity of light.

- Maximum light output — eW Cove MX Powercore delivers fixed white or solid color light at up to 632 lumens per foot.
- Lower cost than comparable fluorescent strip lighting — With efficacy of up to 53.1 lm / W, competitive pricing, long useful life, and low-maintenance-free operation, eW Cove MX Powercore represents a cost-effective alternative to traditional cove lights. eW Cove MX Powercore offers lower first and total cost than dimmable T5HO and 2-lamp T8 strip lights in typical cove applications.
- Multiple color temperature options for design and application flexibility — Available in four color temperatures, ranging from a warm 2700 K to a cool 4000 K, and four solid colors (Red, Green, Blue, and Amber).
- Integrates patented Powercore® technology — Powercore rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage, eliminating the need for external power supplies and lowering total system cost.
- Superior color consistency and accuracy — Optibin®, an advanced binning algorithm, exceeds the recognized standards for color quality to guarantee uniformity and consistency of hue and color temperature across LED sources, fixtures, and manufacturing runs.
- Support for multiple voltages — Accepts power input of 100, 120, 208, 220 – 240, and 277 VAC, allowing consistent installation in any location around the world.
- Dimming capability — Patented DIMand® technology offers smooth dimming capability with many electronic low voltage (ELV) dimmers for all input voltages.
- Simple installation — Powercore delivers line voltage directly to the fixtures, simplifying installation and allowing product runs of 50 fixtures at 100 VAC to 139 fixtures at 277 VAC. Easy-to-install 4 ft (1.2 m) mounting tracks allow quick project setup in linear applications.
- Easy mounting and positioning — With end-to-end locking power connectors that can make 180° turns, eW Cove MX Powercore fixtures are easy to position in even the most challenging mounting circumstances. Fixtures rotate in 10° increments through a full 170° for precise aiming and color mixing. Optional mounting tracks support vertical and overhead positioning. 1 ft (305 mm) and 5 ft (1.5 m) jumper cables can add extra space between fixtures.



### ENERGY STAR® Certified

As an ENERGY STAR certified LED luminaire, eW Cove MX Powercore meets ENERGY STAR requirements for efficacy, color rendering, color consistency, useful life, and power factor.



## Complex, Clean, and Contemporary

World Market Center, a world-class design center in Las Vegas, Nevada, uses thousands of feet of cove lighting fixtures to transform the atrium of its Building C into a multi-layered visual playground. Multiple levels, an extensive labyrinth of coves, and numerous custom visual features enliven the center with a complex yet clean and contemporary design.



Overall, World Market Center Building C contains approximately 16,000 feet of cove lighting, over 8,000 feet of which consists of eW Cove Powercore fixtures in runs of up to 50 feet. The atrium ceiling alone uses over 1,500 linear feet of eW Cove Powercore fixtures. The low power consumption of these LED cove lights reduces the electric

load by 60% compared with 13-watt CFL cove lights. Their long useful life dramatically reduces the labor and maintenance costs of servicing fixtures installed in difficult-to-access locations, 80 feet above the main floor. In fact, labor costs for lamp replacements, combined with the expense of purchasing or leasing specialty lifts to access the ceiling coves, pushed the total cost of the conventional lamps far beyond their initial cost, making them non-viable as solutions in this phase of the installation.

Flexible mounting and positioning features allowed the installation of eW Cove Powercore in both curved and straight coves. The superior color quality and consistency of the LED fixtures allowed the designers to blend their light output seamlessly with conventional 3000 K T8 fluorescent cove fixtures, also in use in the installation. Mock-ups were done onsite to assure color consistency, and to optimize the blending of the directional LED light output with the fluorescent illumination.



Photography by Darius Kuznickas



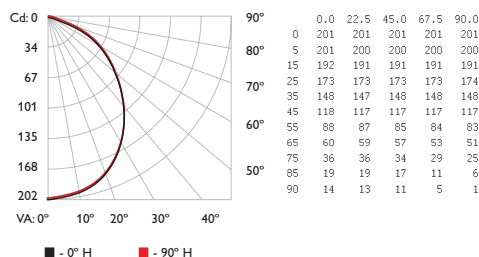
# Photometrics

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at [www.colorkinetics.com/support/ies](http://www.colorkinetics.com/support/ies).

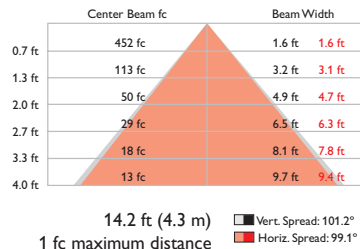
## eW Cove MX Powercore 2700 K, wide beam

Lumens	527
Efficacy	43.9 lm / W

### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	153	29.0
0- 40	245	46.5
0- 60	412	78.1
0- 90	518	98.3
90-120	9	1.7
90-130	9	1.7
90-150	9	1.7
90-180	9	1.7
0-180	527	100.0

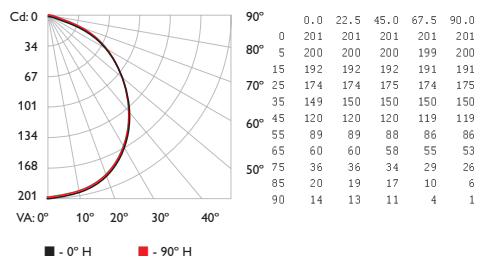
### Coefficients Of Utilization - Zonal Cavity Method

RC	Effective Floor Cavity Reflectance:													
	80			70			50			30			10	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87
2	98	90	83	78	96	88	82	77	84	79	75	81	76	73
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62
4	82	71	62	55	80	69	61	55	67	60	54	64	58	53
5	76	63	55	48	74	62	54	48	60	53	47	58	51	46
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41
7	65	52	43	37	63	51	43	37	49	42	37	48	41	36
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33
9	57	44	36	30	55	43	35	30	42	35	30	41	34	30
10	53	40	33	27	52	40	32	27	39	32	27	38	31	27

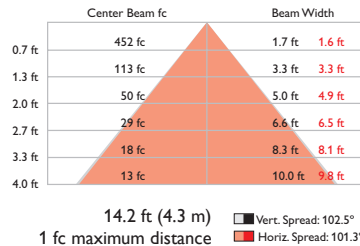
## eW Cove MX Powercore 3000 K, wide beam

Lumens	534
Efficacy	45.3 lm / W

### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	153	29.0
0- 40	245	46.5
0- 60	412	78.1
0- 90	518	98.3
90-120	9	1.7
90-130	9	1.7
90-150	9	1.7
90-180	9	1.7
0-180	527	100.0

### Coefficients Of Utilization - Zonal Cavity Method

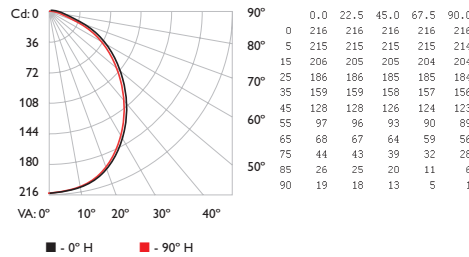
RC	Effective Floor Cavity Reflectance: 20%													
	80			70			50			30			10	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87
2	98	90	83	78	96	88	82	77	84	79	75	81	76	73
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62
4	82	71	62	55	80	69	61	55	66	59	54	64	58	53
5	76	63	54	48	74	62	54	48	60	52	47	58	51	46
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41
7	65	52	43	37	63	51	43	37	49	42	37	48	41	36
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33
9	57	44	36	30	55	43	35	30	42	35	30	41	34	29
10	53	40	33	27	52	40	32	27	39	32	27	38	31	27

For lux multiply fc by 10.7

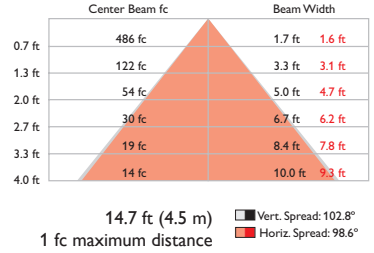
## eW Cove MX Powercore 3500 K, wide beam

Lumens	576
Efficacy	48.4 lm / W

### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	163	28.4
0- 40	262	45.5
0- 60	442	76.8
0- 90	565	98.0
90-120	11	2.0
90-130	11	2.0
90-150	11	2.0
90-180	11	2.0
0-180	576	100.0

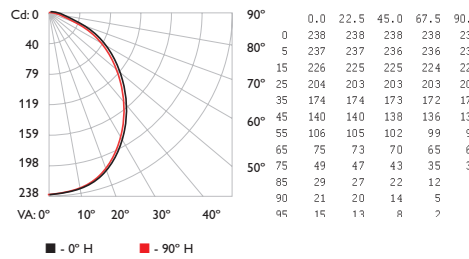
### Coefficients Of Utilization - Zonal Cavity Method

RC	80			70			50			Effective Floor Cavity Reflectance: 20%			
	RW	70	50	30	10	70	50	30	10	50	30	10	0
0	119	119	119	119	119	116	116	116	116	110	110	110	105
1	108	103	98	94	105	100	96	93	96	92	89	92	89
2	98	90	83	77	95	88	81	76	84	79	74	80	76
3	90	79	71	64	87	77	70	64	74	68	62	71	66
4	82	70	61	55	80	69	61	54	66	59	53	63	57
5	76	63	54	47	74	62	53	47	59	52	46	57	51
6	70	57	48	42	68	56	47	41	54	46	41	52	45
7	65	52	43	37	63	51	42	37	49	42	36	47	41
8	61	47	39	33	59	46	38	33	45	38	32	44	37
9	57	43	35	30	55	43	35	30	41	34	29	40	34
10	53	40	32	27	52	39	32	27	38	31	27	37	31

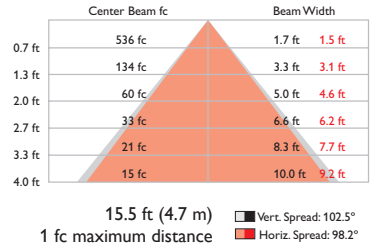
## eW Cove MX Powercore 4000 K, wide beam

Lumens	632
Efficacy	53.1 lm / W

### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	180	28.4
0- 40	288	45.6
0- 60	485	76.8
0- 90	619	98.0
90-120	12	2.0
90-130	12	2.0
90-150	12	2.0
90-180	12	2.0
0-180	632	100.0

### Coefficients Of Utilization - Zonal Cavity Method

RC	80			70			50			Effective Floor Cavity Reflectance: 20%			
	RW	70	50	30	10	70	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	110	110	110	105	105
1	108	103	98	94	105	100	96	93	96	92	89	91	89
2	98	90	83	77	95	88	81	76	84	78	74	80	76
3	90	79	71	64	87	77	70	64	74	67	62	71	65
4	82	70	61	55	80	69	61	54	66	59	53	63	57
5	76	63	54	47	73	62	53	47	59	52	46	57	51
6	70	57	48	41	68	56	47	41	54	46	41	52	45
7	65	52	43	37	63	51	42	37	49	42	36	47	41
8	61	47	39	33	59	46	38	33	45	38	32	43	37
9	57	43	35	30	55	43	35	30	41	34	29	40	34
10	53	40	32	27	52	39	32	27	38	31	27	37	31

For lux multiply fc by 10.7

# Specifications

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

Item	Beam Angle	2700 K*	3000 K*	3500 K*	4000 K*
Lumens†	Wide	527	534	576	632
Efficacy (lm / W)	Wide	43.9	45.3	48.4	53.1
CRI	Wide	83	84	84	81

Item	Specification
Output	Lumen Maintenance‡: 50,000 hours L70 @ 25° C 37,000 hours L70 @ 50° C 90,000 hours L50 @ 25° C 80,000 hours L50 @ 50° C
Electrical	Input Voltage: 100 / 120 / 208 / 220 – 240 / 277 VAC, auto-switching, 50 / 60 Hz
	Power Consumption: 12.0 W maximum at full output, steady state
	Power Factor: .99 @ 120 VAC
Control	Dimming: Compatible with many commercially available ELV, trailing edge, or reverse-phase control dimmers§
Physical	Dimensions (Height x Width x Depth): 1.64 x 12 x 1.5 in (42 x 305 x 38 mm)
	Weight: 0.19 lbs (85 g)
	Housing: Die-cast aluminium, white powder-coated finish
	Lens: Polycarbonate
	Fixture Connections: Integral male / female connectors
	Temperature Ranges: -4° – 122° F (-20° – 50° C) Operating -4° – 122° F (-20° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage
	Humidity: 0 – 95%, non-condensing
Maximum Fixture Run Length	50 @ 100VAC 60 @ 120VAC 104 @ 208VAC 115 @ 220 – 240VAC 139 @ 277VAC  <i>Configuration: Fixtures installed end-to-end, 20 A circuit, standard 10 ft (3.1 m) Leader Cable</i>
Certification and Safety	Certification: UL / cUL, FCC, CE, CCC
	Environment: Dry / Damp Location, IP20
	Energy Efficiency: ENERGY STAR, California Title 24 Compliant

\* Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

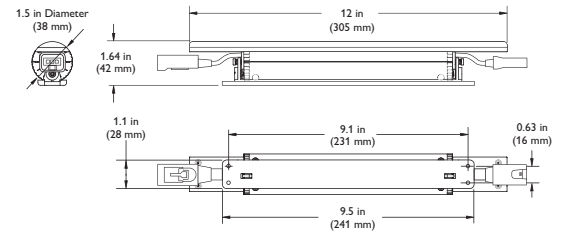
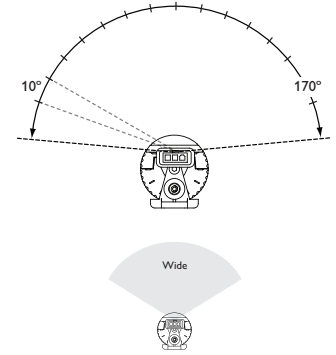


† Lumen measurement complies with IES LM-79-08 testing procedures.

‡ L70 = 70% maintenance of lumen output (when light output drops below 70% of initial output).  
L50 = 50% maintenance of lumen output (when light output drops below 50% of initial output).  
Ambient temperatures specified. Based on measurements that comply with IES LM-80-08 testing procedures. Refer to [www.colorkinetics.com/support/appnotes/lm-80-08.pdf](http://www.colorkinetics.com/support/appnotes/lm-80-08.pdf) for more information.

§ Refer to [www.colorkinetics.com/support/appnotes/](http://www.colorkinetics.com/support/appnotes/) for specific details.

|| These figures, provided as a guideline, are accurate for this configuration only.  
Changing the configuration can affect the fixture run lengths.



✳ To calculate the number of fixtures your specific installation can support, download the Configuration Calculator from [www.colorkinetics.com/support/install\\_tool/](http://www.colorkinetics.com/support/install_tool/)

# Product Selection

To order eW Cove MX Powercore, select a line voltage connection option, a fixture length, and any extra options you might need.

**1** Choose fixture color temperature and / or color

**2** Choose beam angle

**3** Choose line voltage connection option

**4** Choose extra options

		Color Temperature / Color	Beam Angle	Item Number	Philips 12NC
eW Cove MX Powercore fixtures 100 / 120 / 208 / 220 – 240 / 277 VAC 12 in (305 mm)		2700 K	Wide ENERGY STAR	523-000050-02	910503700980
		3000 K	Wide ENERGY STAR	523-000050-06	910503700984
		3500 K	Wide ENERGY STAR	523-000050-10	910503700988
		4000 K	Wide ENERGY STAR	523-000050-14	910503700992
		Red	Wide	223-000050-00	910503701104
		Green	Wide	223-000050-01	910503701105
		Blue	Wide	223-000050-02	910503701106
		Amber	Wide	223-000050-03	910503701107
For connection to standard junction box  Can be used for direct connection to conduit	Leader Cable with terminator and strain relief	UL / cUL	10 ft (3 m)	108-000047-00	910503700972
		CE / CCC	10 ft (3 m)	108-000047-01	910503700973
	Wiring Compartment with terminator	UL / cUL		120-000077-01	910503700994
	Terminators, Quantity 10			120-000058-01	910503701119
Depending on the installation's design, you may need jumper cables to add space between fixtures.	Jumper Cable	UL / cUL	1 ft (305 mm)	108-000048-00	910503700974
			5 ft (1.5 m)	108-000048-01	910503700975
		CE / CCC	1 ft (305 mm)	108-000048-02	910503700976
			5 ft (1.5 m)	108-000048-03	910503700977
Optional mounting track ensures straight runs of fixtures.	Mounting Track, White	1 @ 4 ft (1219 mm)		120-000124-00	910503701787

Use Item Number when ordering in North America.

# Installation

eW Cove MX Powercore offers high-output, energy-efficient indoor white and solid color cove and indirect general lighting with Powercore technology. Powercore technology, which integrates LED power and data management within the fixture, eases installation by eliminating the need for external power supplies.

## Owner / User Responsibilities

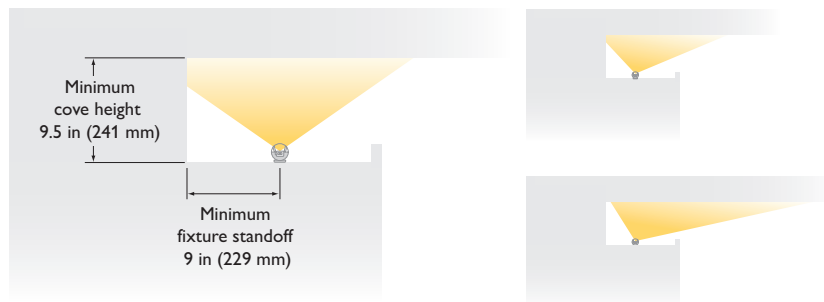
It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate eW Cove MX Powercore fixtures in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector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

# Create a Layout Plan

Regardless of the size and complexity of your installation, the time you spend up front can help minimize installation and configuration issues later. Keep these suggestions in mind as you plan your installation:

1. On an architectural diagram or other diagram that shows the physical layout of the installation, create a layout map that specifies the appropriate location of the light fixtures in relation to each other, and to any dimmer switches, wall switches, and line power sources. Identify any obstacles or physical features requiring flexible jumper cables between fixtures.
2. Using the fixture's power consumption and efficiency ratings, the lighting designer or architect should calculate the cove dimensions to ensure that operating temperatures remain within safe levels. The designer or architect should also determine the cove's fascia design and fixture setback based on the cove dimensions and room width. For consistent results, the cove width and height should accommodate the fixtures' minimum mixing distances. We strongly recommend creating dimensional models and mockups prior to installation.

**eW Cove MX Powercore**  
Wide Beam angle, 170° rotation



3. eW Cove MX Powercore fixtures are installed in series. The in-line connectors allow end-to-end fixture connections for the best visual effects. Joined directly together, the connectors allow for spacing of .4 in (10 mm) to .9 in (23 mm) without a jumper cable. When you need to separate fixtures by more than these minimums, use the 1 ft (305 mm) or 5 ft (1.5 m) jumper cables.
4. You can install a run of eW Cove MX Powercore fixtures using the 10 ft (3 m) Leader Cable with flying leads. This option is preferable when connecting to a third-party junction box, or when retrofitting an existing incandescent or fluorescent cove lighting installation.

In North America, you can use the Wiring Compartment when you want to run branch conduit all the way to the first fixture in a series, or where local codes require it.

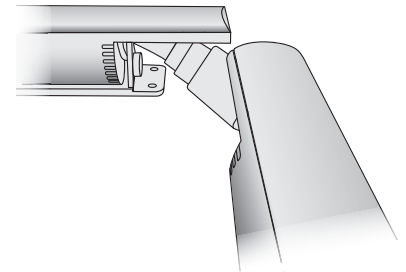
## Included in the box

- eW Cove QLX Powercore fixture
- Installation Instructions

\* Refer to the eW Cove MX Powercore Installation Instructions for specific warning and caution statements.

## Easy turns

End-to-end locking power connectors can make turns of up to 180° without jumper cables.

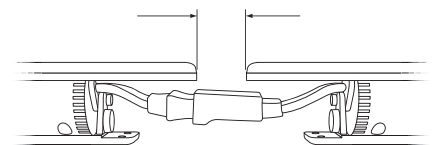


\* These diagrams provide general guidelines for positioning eW Cove MX Powercore fixtures in coves with matte white surfaces. Specific dimensions and positioning depend on the details of your installation.

\* Minimum cove height is mixing distance + height of fixture to LED board.

## Distance between fixtures

.4 in minimum (10 mm minimum) .9 in maximum (23 mm maximum)





\* To calculate the number of fixtures your specific installation can support, download the Configuration Calculator from [www.colorkinetics.com/support/install\\_tool/](http://www.colorkinetics.com/support/install_tool/), or consult Philips Color Kinetics Application Engineering Services at [support@colorkinetics.com](mailto:support@colorkinetics.com).

\* Refer to the installation instructions included with the wall or dimmer switch for installation and wiring information.

- If fixtures are installed end-to-end on a 20 A circuit using the standard 10 ft (3 m) Leader Cable, each run can accommodate from 50 fixtures at 100 VAC to 139 fixtures at 277 VAC. Using the optional jumper cables can decrease the number of fixtures that you can connect in a single run.

## Install Wall and Dimmer Switches (optional)

eW Cove MX Powercore fixtures can be controlled either with a standard wall switch (on / off) or a compatible, commercially available electronic low-voltage (ELV) dimmer. eW Cove MX Powercore fixtures work with trailing edge (reverse-phase) ELV dimmers.

For a list of compatible ELV dimmers, and for details on selecting the appropriate dimmer for your lighting installation, visit [www.colorkinetics.com/support/appnotes/](http://www.colorkinetics.com/support/appnotes/), or consult Application Engineering services at [support@colorkinetics.com](mailto:support@colorkinetics.com).

## Prepare for the Installation

- Verify that all supporting equipment (switches, line power sources) is in place.
- If your installation calls for jumper cables to add space between fixtures, make sure they are available.
- Ensure that all additional parts (optional mounting tracks, mounting hardware, terminators) and tools are available.

## Install the Fixtures

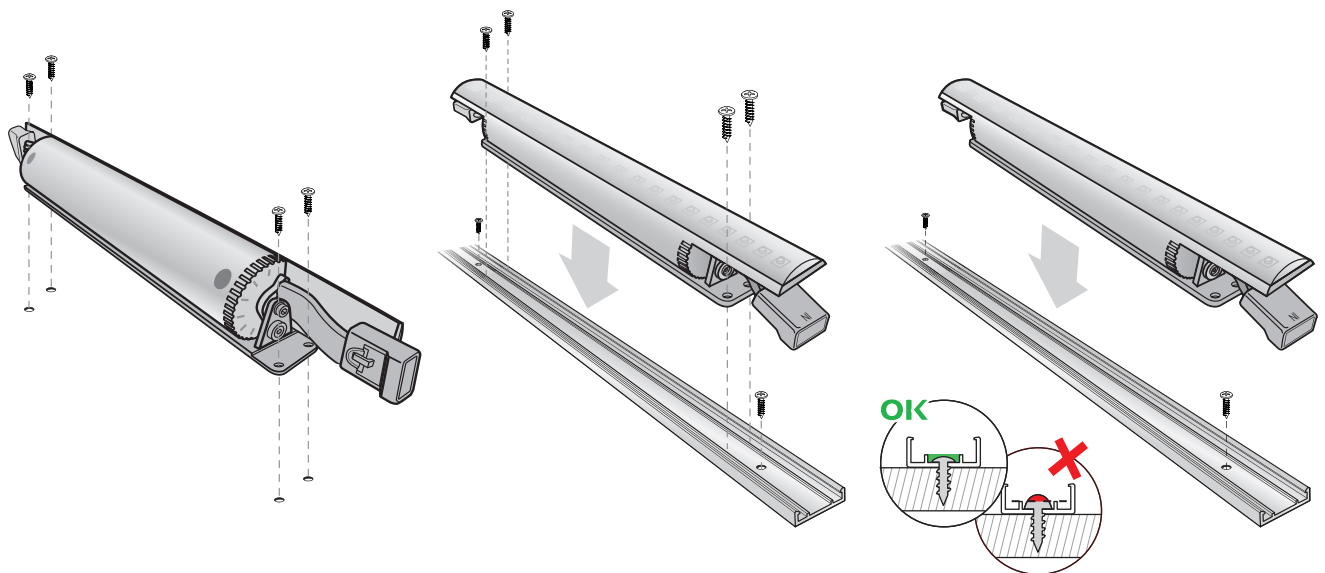
You can mount eW Cove MX Powercore fixtures directly to a wall, ceiling, cabinet, or other secure surface. You can install several eW Cove MX Powercore fixtures in optional 4 ft (1.2 m) lengths of mounting track to ensure a straight run.

### (Optional) Install Mounting Tracks

- Field-cut the mounting tracks to the desired length with a hacksaw or tin snips.
- Install the mounting tracks using hardware suitable for the mounting surface.

To ensure proper fixture fit, hardware must not extend above the track standoffs after installation. The recommended maximum spacing between screws is 12 in (305 mm).

\* You can use the fixture base as a template when pre-drilled pilot holes are required. Hold the fixture in place and mark the four screw holes.



## Mount and Connect the Fixtures

Make sure the power is OFF before mounting and connecting eW Cove MX Powercore fixtures.

1. Rotate an eW Cove MX Powercore fixture as necessary to provide unobstructed access to the mounting holes.

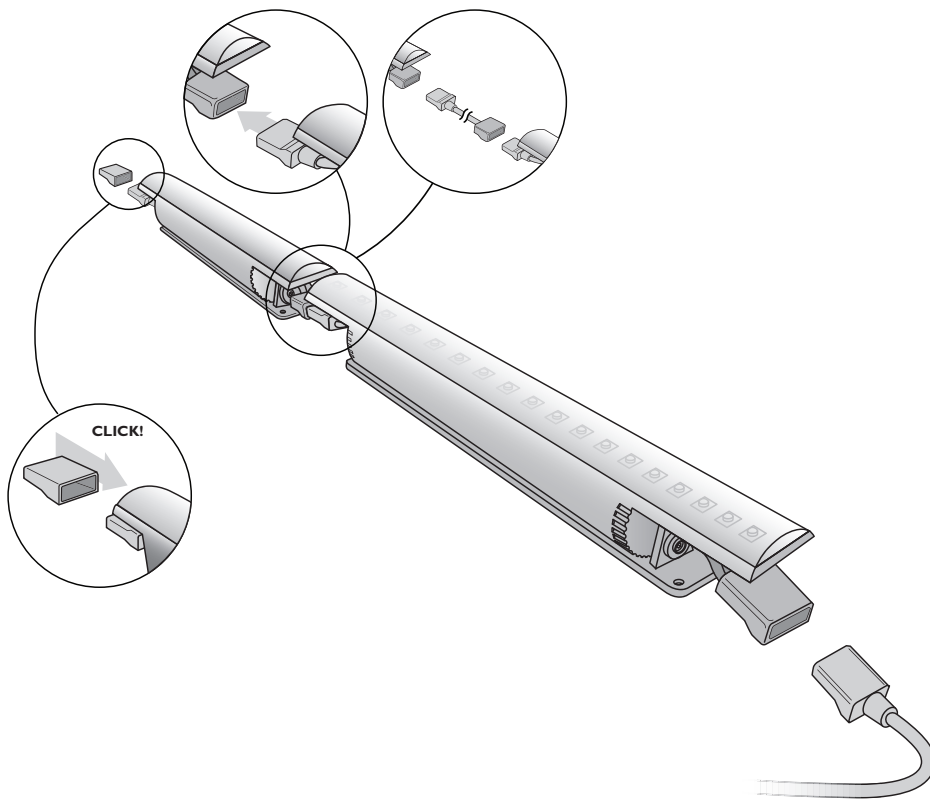
2. Position the first fixture in a series.

If using mounting tracks on a horizontal surface, snap the fixture into the track.

If using mounting tracks on vertical or overhead surfaces, or if not using mounting tracks, attach the fixture with four #6 (3.5 mm) mounting screws (not included) suitable for the mounting surface.

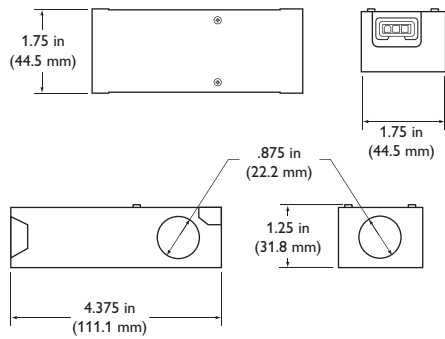
Ensure that the male connector is in position to receive power from the female connector on the Leader Cable or Wiring Compartment.

3. Position the next fixture in the series, matching the male connector end to the female connector of the previously mounted fixture. Attach the fixture to the surface or snap it into the track.

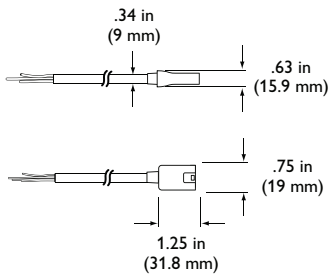


4. Continue mounting the fixtures, making power connections as you go, until all lights in the series are mounted.
5. Insert the provided terminator into the last fixture in the series.
6. Make power connections.

## Wiring Compartment dimensions

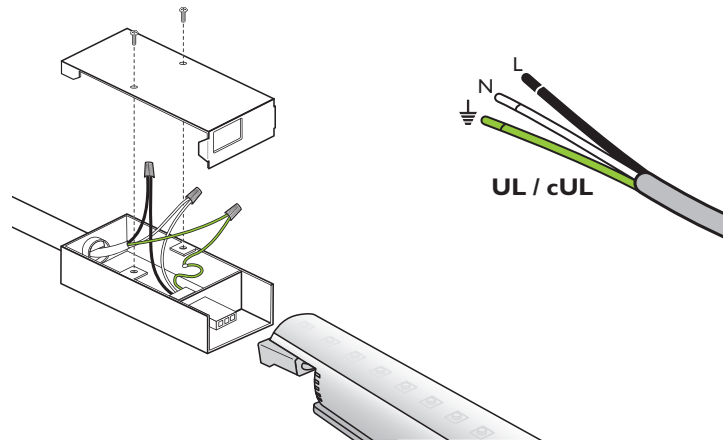


## Leader Cable connector dimensions



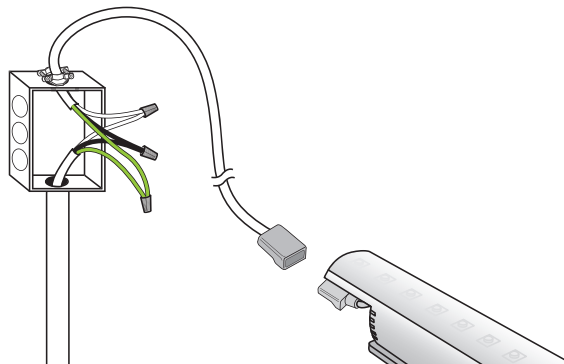
### To run power or conduit to the first fixture in a series (UL / cUL installations):

- Remove the cover from the eW Cove MX Powercore Wiring Compartment.
- Using wire nuts, connect ground, neutral, and line inside the Wiring Compartment housing, then replace the cover.
- Connect the eW Cove Powercore Wiring Compartment to the first fixture in the series.



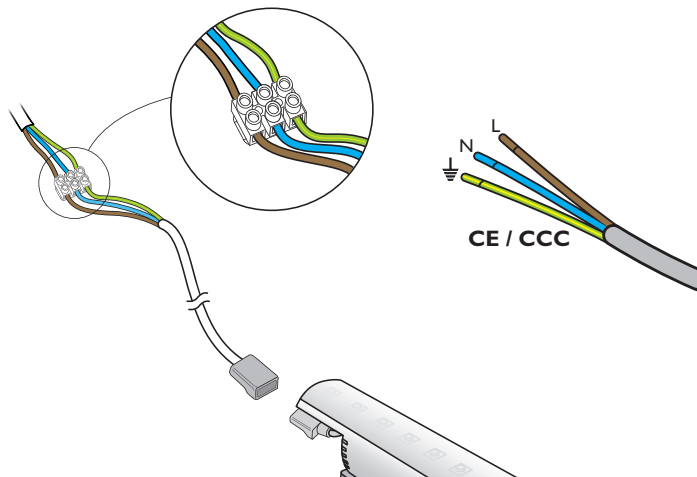
### To connect the first fixture in a series to a third-party junction box using the 10 ft (3 m) Leader Cable (UL / cUL installations):

- Remove the cover of the third-party junction box.
- Connect ground, neutral, and line inside the junction box housing, then replace the junction box cover.
- Connect the 10 ft (3.1m) Leader Cable to the first fixture in the series.



**For CE / CCC installations:**

- Connect the Leader Cable to a terminal block. For CE installation, the terminal block must conform to EN 60998-2-1 or EN 60998-2-2, rated 220 – 240 VAC.
- Connect ground, neutral, and line to a power source.
- Connect the 10 ft (3.1 m) Leader Cable to the first fixture in the series.

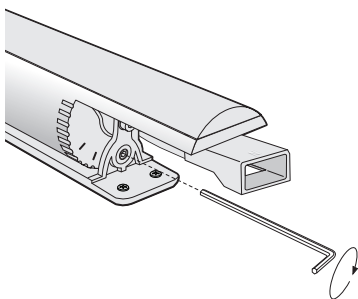
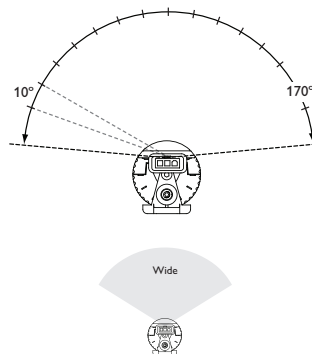


## Aim and Lock the Fixtures

Make sure the power is ON before aiming fixtures. Do not look directly into beam.

Aim the fixtures by rotating each fixture to the correct angle. There are detents every 10° in the bracket that hold the fixture in position.

(Optional) Using a 2 mm hex key wrench, tighten the set screw located on each end of the fixture to lock the fixture in place.



Philips Color Kinetics  
3 Burlington Woods Drive  
Burlington, Massachusetts 01803 USA  
Tel 888.385.5742  
Tel 617.423.9999  
Fax 617.423.9998  
www.philipscolorkinetics.com

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