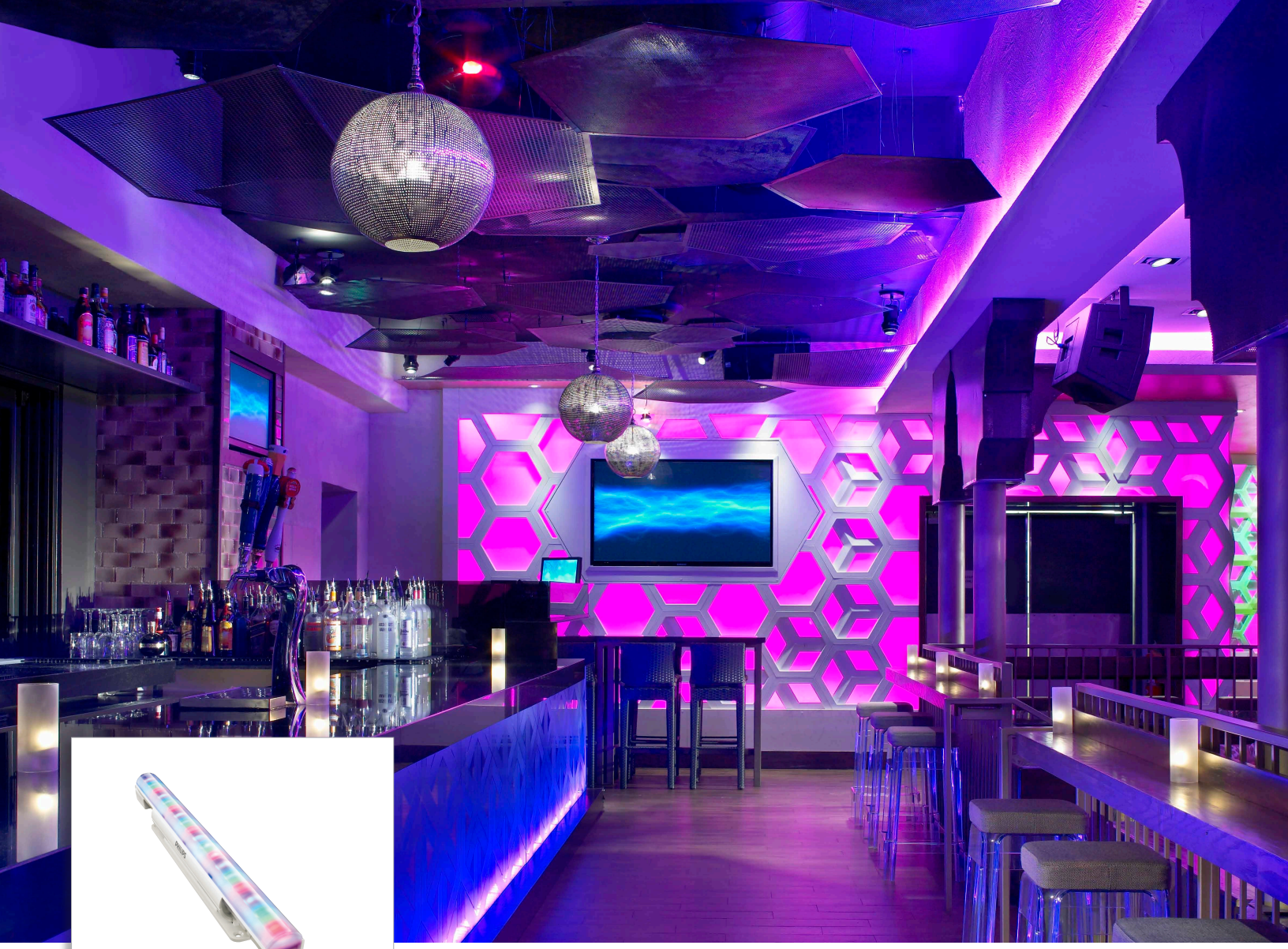


iColor Cove QLX Powercore

Performance line-voltage LED cove and accent fixture with intelligent color light

PHILIPS

COLOR KINETICS

iColor Cove QLX Powercore

Performance line-voltage LED cove and accent fixture with intelligent color light

At up to 132 lumens per foot, iColor Cove QLX Powercore compact linear LED cove fixtures deliver saturated color and dynamic effects in an economical, energy-efficient package. Wide and medium beam angles, an integrated rotating mount for precise positioning, and flexible mounting options support a wide range of backlighting, cove lighting, and accent lighting applications

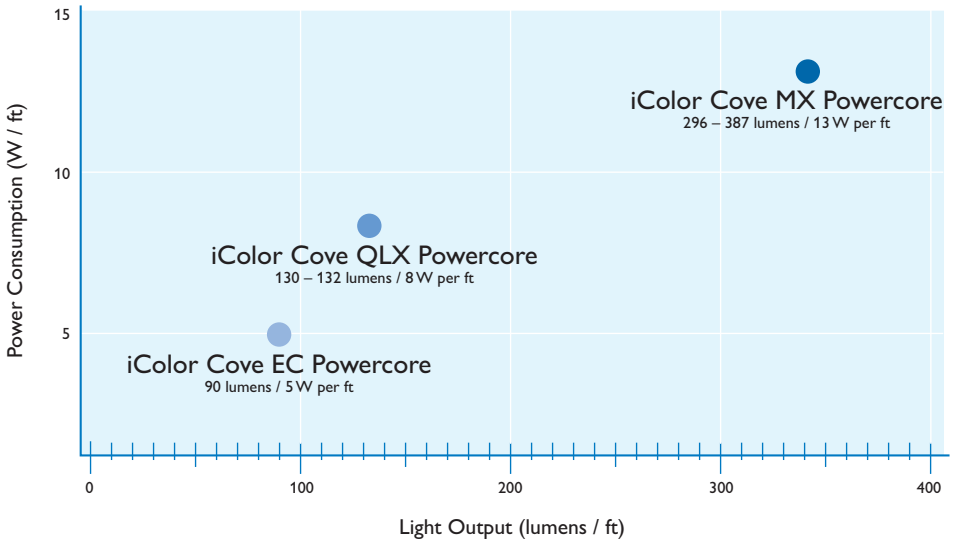
- Generous light output, low power consumption — iColor Cove QLX Powercore delivers professional-grade illuminance with total light output of up to 132 lumens per foot, while consuming only 8 W per foot.
- Integrates patented Powercore technology — Powercore rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage, eliminating the need for an external power supply. Contractor-friendly installation dramatically simplifies installation and lowers total system cost.
- Superior color consistency — Optibin, a proprietary binning optimization process, guarantees uniformity and consistency of hue across LEDs, fixtures, and manufacturing runs.
- Advanced color mixing — Patented Chromacore technology, pioneered by Philips Color Kinetics, enables precise control over individual LED channels to produce millions of colors and full-color, dynamic effects.
- Easy installation — Powercore delivers line voltage directly to the fixtures, simplifying installation by eliminating the need for external power supplies and allowing long product runs.
- Universal power input range — iColor Cove QLX Powercore fixtures accepts power input of 100 – 277 VAC for consistent installation anywhere in the world.
- Industry-leading controls — iColor Cove QLX Powercore fixtures works seamlessly with the complete Philips line of controllers, including ColorDial Pro, iPlayer 3, and Light System Manager, as well as third-party controllers.
- Flexible mounting and positioning — With end-to-end locking power connectors that can make 180° turns, iColor Cove QLX Powercore fixtures are easy to position in even the most challenging mounting circumstances. Fixtures rotate in 10° increments through a full 180° for precise aiming and beam 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.

Generous light output, low power consumption

iColor Cove QLX Powercore delivers professional-grade illuminance with total light output of up to 132 lumens per foot, while consuming only 7 W per foot.

High-performance, full-color LED cove lights for any application

iColor Cove MX Powercore, iColor Cove QLX Powercore, and iColor EC Powercore offer three levels of performance at three levels of power consumption to support virtually any cove or accent lighting application.



iColor Cove MX Powercore

The premium member of the iColor Cove Powercore family, iColor Cove MX Powercore delivers over 350 lumens per foot of intense, full-color illumination at 13 W per foot. Wide and medium beam angles and lengths of 1 ft (305 mm) and 4 ft (1219 mm) afford design flexibility for a variety of cove and accent applications.

iColor Cove QLX Powercore

iColor Cove QLX Powercore affords a high level of performance at about half the power consumption of iColor Cove MX Powercore. Delivering up to 132 lumens per foot of high-quality color-changing light, iColor Cove QLX Powercore offers the perfect balance of performance and price.

iColor Cove EC Powercore

The most cost-effective member of the popular iColor Cove Powercore family, this compact fixture is designed for accent, perimeter, cove lighting, and backlighting where lower light intensity, low power consumption, and lower costs are desired.

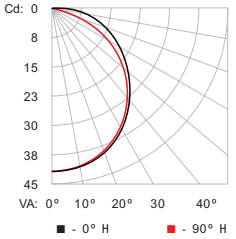
Photometrics

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

iColor Cove QLX Powercore 1 ft, 115° x 110° (wide) beam angle

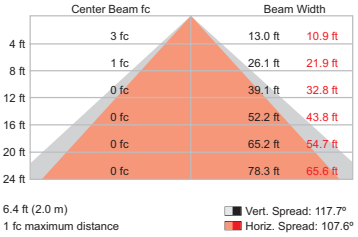
LED	Lumens	Efficacy
RGB	130	12.1

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	41.6	41.6	41.6	41.6	41.6
5	41.6	41.5	41.6	41.5	41.5
15	40.3	40.2	40.2	40.0	40.0
25	37.6	37.5	37.4	37.1	37.0
35	33.5	33.4	33.1	32.6	32.4
45	28.5	28.3	27.8	27.0	26.6
55	22.8	22.6	21.8	20.6	20.0
65	17.2	16.9	15.7	14.2	13.3
75	12.0	11.5	10.2	8.1	6.9
85	7.6	7.1	5.6	3.1	1.6
90	5.7	5.3	3.8	1.5	0.4

Illuminance at Distance



Zonal Lumen

0- 30	32	25.0
0- 40	53	41.0
0- 60	94	72.4
0- 90	125	96.6
90-120	4	3.1
90-130	4	3.2
90-150	4	3.4
90-180	4	3.4
0-180	130	100.0

Coefficients Of Utilization - Zonal Cavity Method

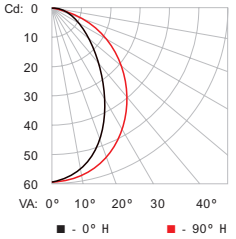
Effective Floor Cavity Reflectance: 20%

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	107	101	97	92	104	99	95	91	94	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	79	73	82	76	71	78	73	69	74	70	67	65
3	88	77	68	62	85	75	67	61	72	65	59	68	63	58	65	61	56	54
4	80	68	59	52	78	66	58	51	63	56	50	61	54	49	58	53	48	46
5	74	61	51	45	72	59	51	44	57	49	43	54	48	43	52	47	42	40
6	68	55	45	39	66	53	45	39	51	44	38	49	43	37	47	41	37	35
7	63	49	41	34	61	48	40	34	47	39	34	45	38	33	43	37	33	31
8	59	45	36	31	57	44	36	30	43	35	30	41	34	30	40	34	29	27
9	55	41	33	27	53	41	33	27	39	32	27	38	31	27	37	31	26	24
10	52	38	30	25	50	38	30	25	36	29	24	35	29	24	34	28	24	22

iColor Cove QLX Powercore 1 ft, 70° x 105° (medium) beam angle

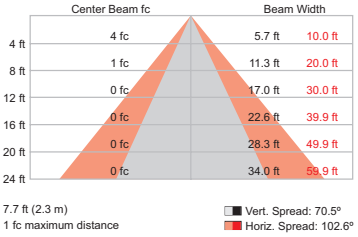
LED	Lumens	Efficacy
RGB	132	12.5

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	59.4	59.4	59.4	59.4	59.4
5	58.7	58.8	59.0	59.1	59.2
15	52.6	53.1	54.6	56.0	56.6
25	42.0	43.2	46.3	49.9	51.5
35	29.8	31.4	35.8	41.3	44.2
45	19.4	20.8	25.3	31.7	35.5
55	12.7	13.7	16.8	22.4	26.3
65	8.9	9.4	11.0	14.3	17.3
75	6.7	6.8	7.1	7.9	8.9
85	5.1	5.0	4.5	3.4	2.0
90	4.3	4.2	3.5	2.0	0.4

Illuminance at Distance



Zonal Lumen

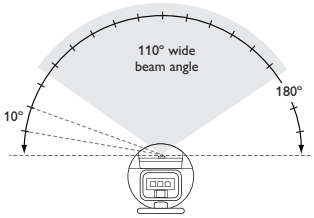
0- 30	42	32.0
0- 40	65	49.3
0- 60	102	77.0
0- 90	126	95.5
90-120	5	3.8
90-130	6	4.2
90-150	6	4.5
90-180	6	4.5
0-180	132	100.0

Coefficients Of Utilization - Zonal Cavity Method

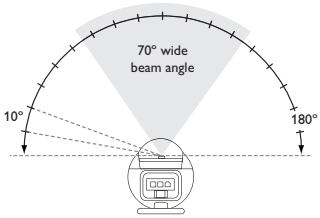
Effective Floor Cavity Reflectance: 20%

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	95
1	108	103	99	95	105	100	96	93	95	92	89	90	88	86	86	84	82	80
2	99	91	84	78	96	88	82	77	84	79	75	80	76	72	76	73	70	68
3	90	80	73	66	88	78	71	65	75	69	64	72	66	62	68	64	60	58
4	83	72	64	57	81	70	62	56	67	61	55	64	59	54	62	57	53	51
5	77	65	56	50	75	63	55	49	61	54	48	58	52	48	56	51	47	45
6	72	59	50	44	69	58	50	44	55	48	43	53	47	42	51	46	42	40
7	67	54	45	39	65	53	45	39	51	44	39	49	43	38	47	42	37	35
8	62	49	41	36	60	48	41	35	47	40	35	45	39	34	44	38	34	32
9	58	45	38	32	57	45	37	32	43	36	32	42	36	31	41	35	31	29
10	55	42	35	30	53	42	34	29	40	34	29	39	33	29	38	32	28	27

For lux multiply fc by 10.7



115° x 110° (wide beam angle)



70° x 105° (medium beam angle)

Specifications

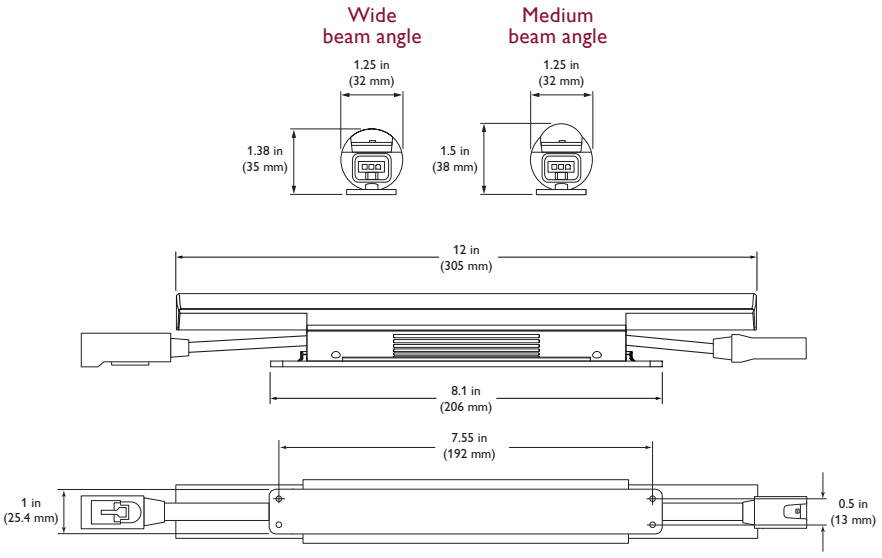
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	1 ft (305 mm)
Output	Lumens*	130 (115° x 110°) 132 (70° x 105°)
	Lumen Maintenance†	30,000 hours L_{70} @ 50° C 45,000 hours L_{70} @ 25° C 100,000 hours L_{50} @ 50° C 100,000 hours L_{50} @ 25° C
	LED Channels	Red / Green / Blue
Electrical	Input Voltage	100 – 277 VAC, auto-ranging, 50 / 60 Hz
	Power Consumption	8 W maximum at full output, steady state
Control	Interface	Data Enabler Pro (DMX or Ethernet)
	Control System	Philips Color Kinetics full range of controllers, including Light System Manager, iPlayer 3, and ColorDial Pro, or third-party controllers
Physical	Dimensions *(Height x Width x Depth)*	1.38 x 12 x 1.25 in (35 x 305 x 32 mm) (115° x 110°) 1.5 x 12 x 1.25 in (38 x 305 x 32 mm) (70° x 105°)
	Weight	6.7 oz (190 g) (115° x 110°) 7.5 oz (212 g) (70° x 105°)
	Housing	Injection-molded plastic, white 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
	Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/
Certification and Safety	Certification	UL / cUL, FCC Class B, CE, CSA, CQC, C-Tick
	Environment	Dry / Damp Location, IP20

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

† L_{70} = 70% lumen maintenance (when light output drops below 70% of initial output). L_{50} = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

CHROMACORE® CK TECHNOLOGY | OPTIBIN® CK TECHNOLOGY | POWERCORE® CK TECHNOLOGY



Fixtures and Accessories

iColor Cove QLX Powercore fixtures are part of a complete system which includes fixtures and:

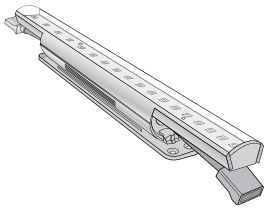
- One or more Data Enabler Pro devices.
- One Leader Cable to connect each Data Enabler Pro output to a series of fixtures, or one Wiring Compartment with a sufficient length of 3 + ground copper wire. Standard 12 AWG stranded wire is recommended.
- Any Philips controller, including Light System Manager, iPlayer 3, and ColorDial Pro, or a third-party controller.

Item	Type		Item Number	Philips 12NC
iColor Cove QLX Powercore 1 ft (305 mm)	115° x 110°	UL / cUL / CE / CCC	123-000024-00	910503702815
	70° x 105°	UL / cUL / CE / CCC	123-000024-01	910503702816
Mounting Track 1 @ 4 ft (1219 mm)	White		120-000125-00	910503701788
	Black		523-000006-01	910503700452
Leader Cable with Terminator	10 ft (3.1 m)	UL / cUL	108-000060-02	910503703201
		CE / CCC	108-000060-03	910503703202
Jumper Cable	1 ft (305 mm)	UL / cUL	108-000062-00	910503703257
		CE / CCC	108-000062-02	910503703259
	5 ft (1.5 m)	UL / cUL	108-000062-01	910503703258
		CE / CCC	108-000062-03	910503703260
Wiring Compartment with Terminator		UL / cUL	120-000077-01	910503700994
Terminators, Quantity 10			120-000099-00	910503701120
Data Enabler Pro	3/4 in / 1/2 in NPT (U.S. trade size conduit)		106-000004-00	910503701210
	PG21 / PG13 (metric size conduit)		106-000004-01	910503701211

Use Item Number when ordering in North America.

Included in the box

- iColor Cove QLX Powercore fixture
- Installation Instructions



Installation

iColor Cove QLX Powercore offers high-quality indoor cove lighting at moderate power consumption. Powercore, 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 iColor Cove QLX 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.

Refer to the iColor Cove QLX Powercore Installation Instructions for specific warning and caution statements.

Create a Lighting Design Plan and Layout Grid

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 10 ft (3.1 m) length of the Leader Cable.

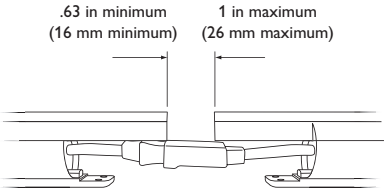
   iColor Cove QLX Powercore fixtures are installed in series. The in-line connectors allow end-to-end fixture connections for the best visual effects. Joined directly together, the connectors allow for spacing of .63 in (16 mm) to 1 in (26 mm) without a jumper cable. When you need to separate fixtures by more than the maximum, use the 1 ft (305 mm) or 5 ft (1.5 m) jumper cables.

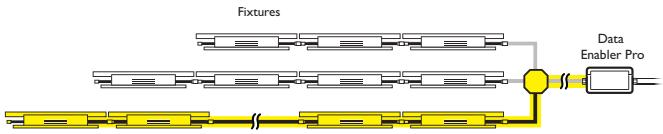
   The maximum number of fixtures each Data Enabler Pro can support depends on specific configuration details such as fixture spacing, circuit size, line voltage, and Leader Cable length. For help calculating the number of fixtures your specific installation can support, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/, or consult Application Engineering Services at support@colorkinetics.com.

   In addition to maximum fixture run lengths determined by the electrical configuration, each Data Enabler Pro imposes maximum run lengths based on data integrity. To ensure data integrity, maximum individual run lengths should not exceed 175 ft (53.3 m), and the total cable length per Data Enabler Pro should not exceed 400 ft (122 m).

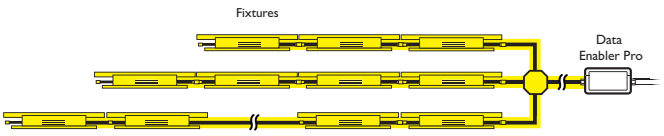
Refer to the Data Enabler Pro Installation Instructions or Product Guide for guidelines on configuring and positioning the Data Enabler Pro in relation to the controller.

Distance between fixtures joined end-to-end





Data Integrity — maximum individual length 175 ft (53.3 m)



Data Integrity — total length 400 ft (122 m)

2. iColor Cove QLX Powercore fixtures should be set back horizontally from illuminated surfaces to ensure smooth color mixing.

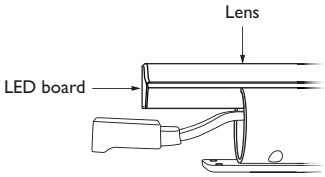
   If installing iColor Cove QLX Powercore in a cove, make sure that you use the fixture's power consumption and efficiency ratings to ensure that coves are large enough to keep operating temperatures within safe levels. The designer or architect should also determine the cove's fascia design and fixture setback based on the cove dimensions and room width. We strongly recommend creating dimensional models and mockups prior to installation.

iColor Cove QLX Powercore
Wide beam angle (115° x 110°)

iColor Cove QLX Powercore
Medium beam angle (70° x 105°)

These diagrams provide general guidelines for positioning iColor Cove QLX 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.

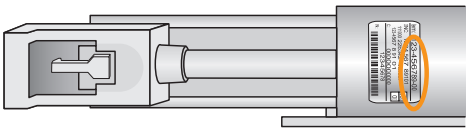


Start the Installation

1. Install all Data Enabler Pro devices, including any interfaces with controllers. One Leader Cable is required to connect each run or series of fixtures to a Data Enabler Pro. 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. If your installation calls for Jumper Cables to add space between fixtures, make sure they are available.
4. Ensure that all additional parts (optional mounting tracks, mounting hardware, terminators) and tools are available.

Unpack and Prepare Fixtures

1. Carefully inspect the box containing iColor Cove QLX Powercore and the contents for any damage that may have occurred in transit.
2. On an architectural diagram or other diagram that shows the physical layout of the installation, identify the locations of all switches, controllers, power supplies, fixtures, and Leader and Jumper Cables.
3. Each iColor Cove QLX Powercore fixture is individually addressable so that playback controllers can send unique light output data to each fixture within your installation.



Location of serial number

Each fixture comes pre-programmed with a unique serial number. As you unpack the fixtures, record the serial numbers in a layout grid (typically a spreadsheet or list) for easy reference and light addressing.

4. Assign each fixture to a position in the lighting design plan.
5. To streamline installation and aid in light show programming, you can affix a weatherproof label identifying the order or placement in the installation to an inconspicuous location on each fixture's housing.

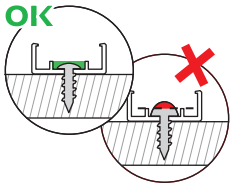
Install the Fixtures

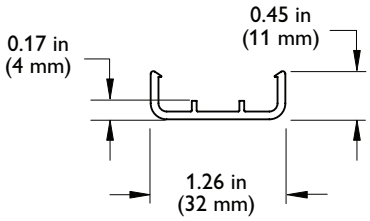
You can mount iColor Cove QLX Powercore fixtures directly to a wall, ceiling, cabinet, or other secure surface. For linear applications, you can install several iColor Cove QLX Powercore fixtures in optional 4 ft (1.2 m) lengths of mounting track to ensure straight runs.

(Optional) Install Mounting Tracks

1. Field-cut the mounting tracks to the desired length with hacksaws or tin snips.
2. 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 holes are required. Hold the fixture in place and mark the four screw holes.

Mount and Connect the Fixtures

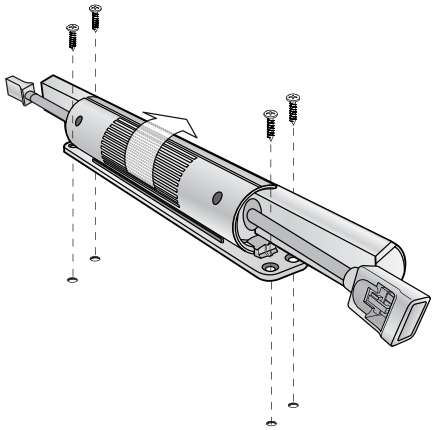
Make sure the power is OFF before mounting and connecting fixtures.

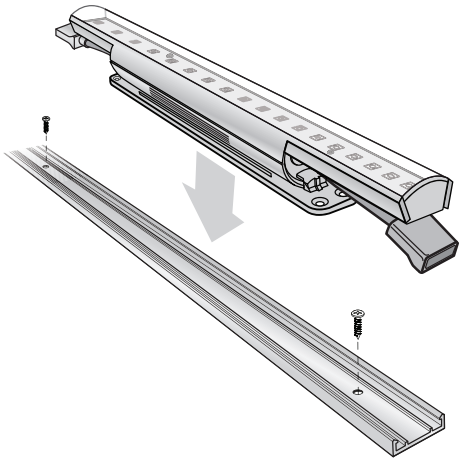
1. Rotate an iColor Cove QLX Powercore fixture as necessary to provide unobstructed access to the mounting holes.
2. Position the first fixture in a series.

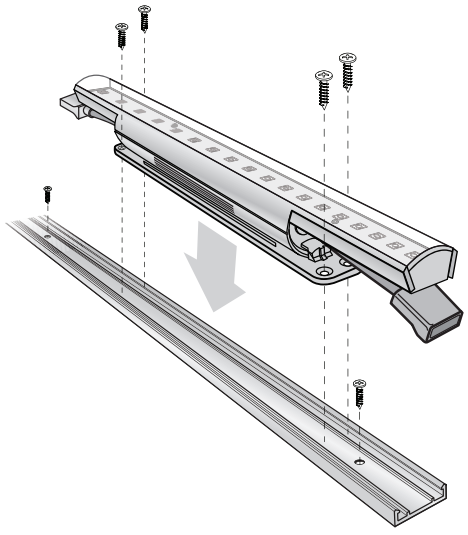
   If using mounting tracks on a horizontal surface, snap the fixture into the track.

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

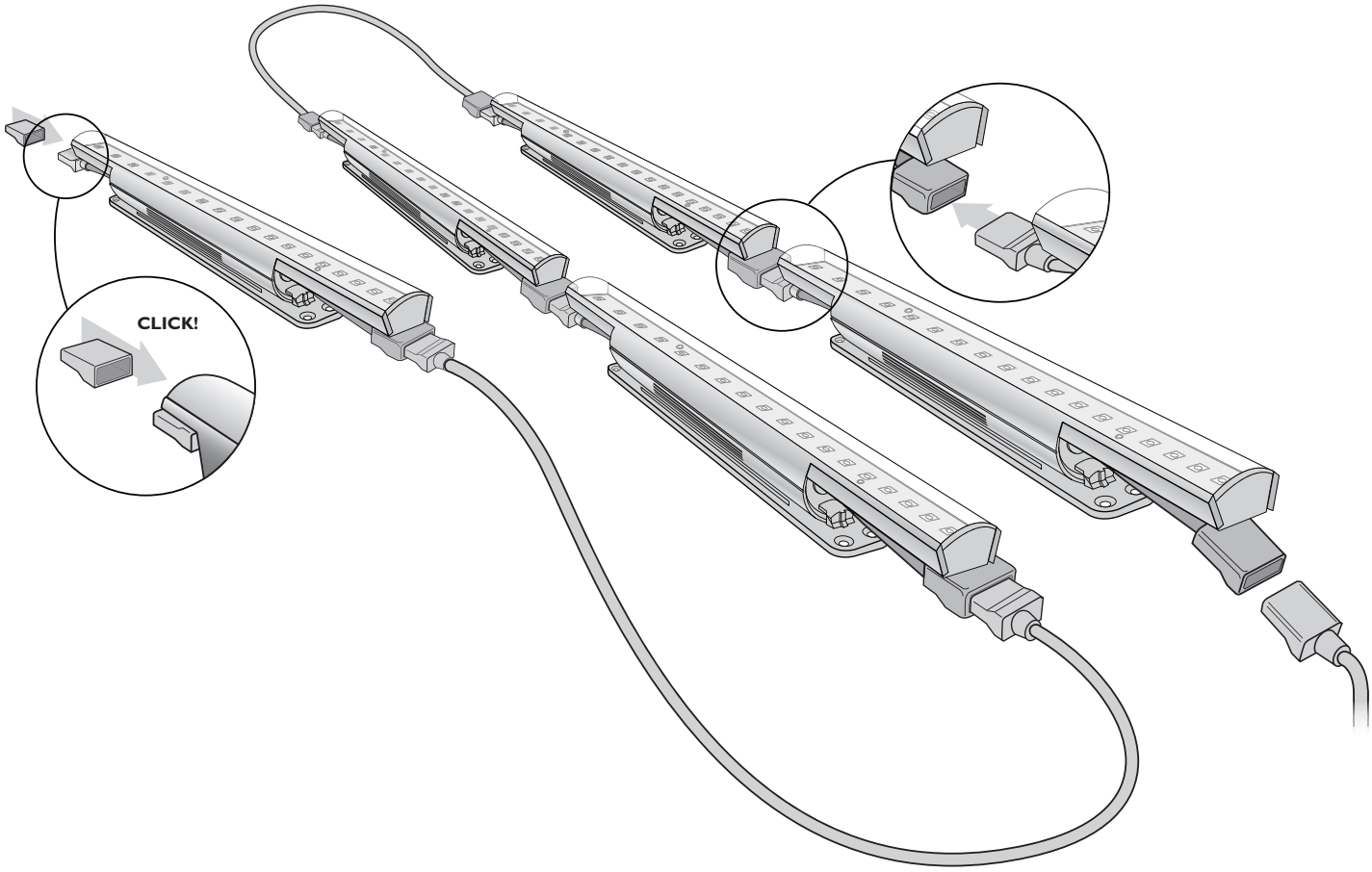
   Ensure that the male connector is in position to receive data and power from the leader cable's female connector.



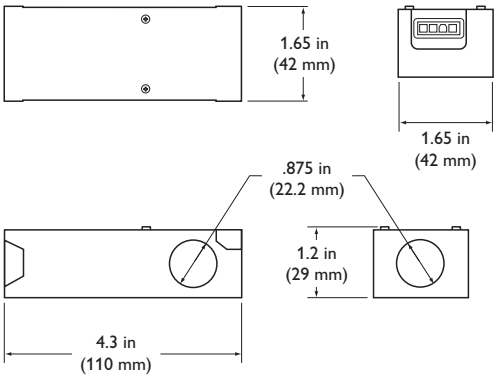




3. Position the next fixture in the series, matching the male connector end to the female connector of the previously mounted fixture. Attach the fixture to the surface or snap it into the track.
4. Continue mounting the fixtures, making power / data connections as you go, until all lights in the series are mounted.
5. Insert the provided terminator into the last fixture in the series.



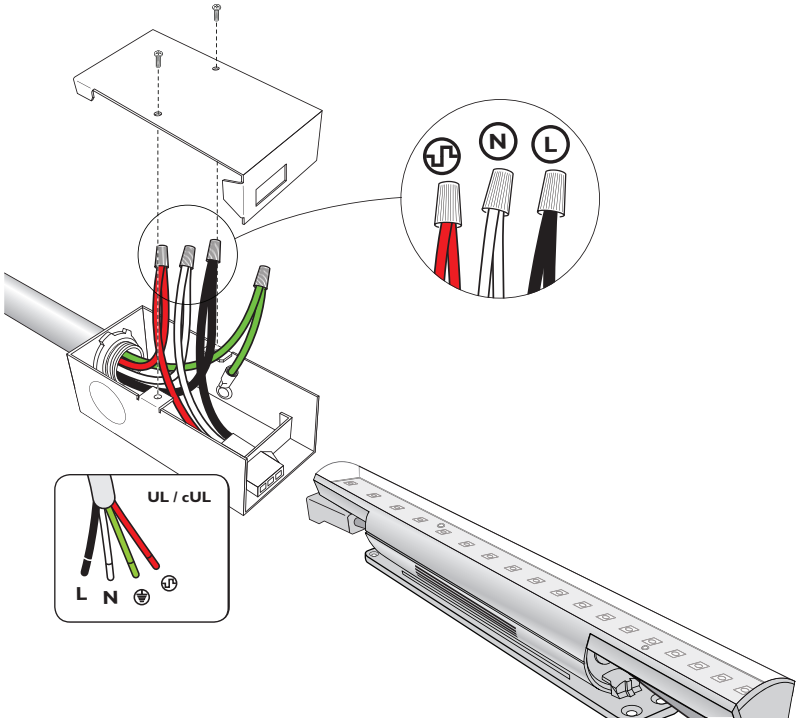
Wiring Compartment dimensions



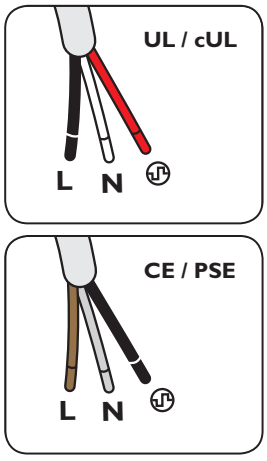
If using the Wiring Compartment to run conduit from Data Enabler Pro to the first fixture in a run, make sure you leave enough space at the end of the run to accommodate the Wiring Compartment.

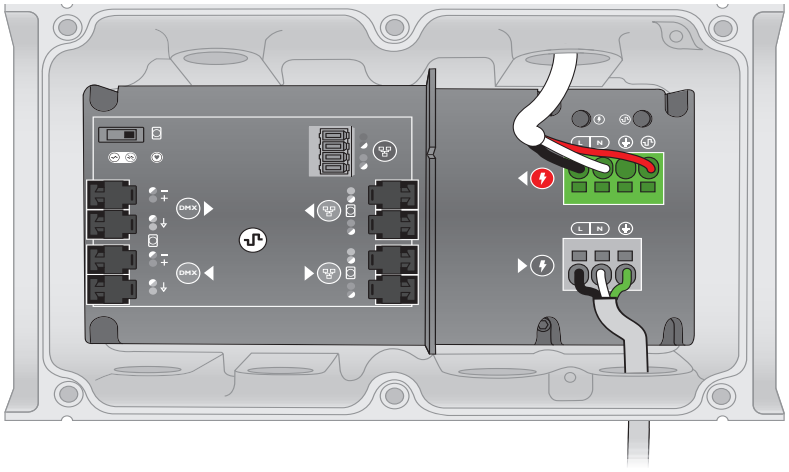
6. Make power connections:
   - If using a Leader Cable, connect the Leader Cable to the first fixture in the series. Run the Leader Cable to the Data Enabler Pro.
   - If using the iColor Cove QLX Powercore Wiring Compartment to run conduit from the Data Enabler Pro to the first fixture in a series, pull cable through conduit. (We recommend standard 4-conductor 12 AWG copper wire.)

     Remove the cover from the Wiring Compartment. Using wire nuts, make wire connections inside the Wiring Compartment housing, then replace the cover. Connect the Wiring Compartment to the first fixture in the series.



7. Secure connections within the Data Enabler Pro housing.





8. Repeat steps 1 – 7 for each Data Enabler Pro in the installation.

Address and Configure the Fixtures

Make sure the power is ON before addressing and configuring fixtures.

Each iColor Cove QLX Powercore fixture is individually addressable, and is identified by a unique serial number.

iColor Cove QLX Powercore fixtures operate in 8-bit mode by default. You can configure iColor Cove QLX Powercore to operate in 16-bit mode, which increases fixture resolution for smoother dimming. In 8-bit mode, fixtures use one DMX address per LED channel (red, green, and blue). In 16-bit mode, fixtures use two DMX addresses per LED channel. The first DMX address corresponds to the "coarse" data for that channel, and the second corresponds to the "fine" data. By using double the number of DMX addresses, 16-bit mode increases fixture resolution from 256 dimming steps to 65,536 (256 x 256) dimming steps.

You can address fixtures and switch between 8-bit mode and 16-bit mode using QuickPlay Pro. You can download QuickPlay Pro from www.philipscolorkinetics.com/support/addressing/

DMX Channel Assignments

8-Bit Mode	1		2		3	
	Red		Green		Blue	
16-Bit Mode	1	2	3	4	5	6
	Red Coarse	Red Fine	Green Coarse	Green Fine	Blue Coarse	Blue Fine

Each iColor Cove QLX Powercore fixture comes factory-addressed with a starting DMX address of 1. For lighting designs where fixtures work in unison, all fixtures can be assigned the same starting DMX address. Changes to the default starting DMX address are not necessary, but if fixtures were previously readdressed for use in other installations, you must reset them. For light show designs that show different colors on different fixtures, you must assign unique DMX addresses to fixtures and sort them in a useful order.

- In Ethernet installations, you can address and configure your fixtures using QuickPlay Pro with a computer connected to your lighting installation's network. QuickPlay Pro can automatically discover all of your fixtures, controllers, and Data Enabler Pro devices for quick configuration.
- In DMX installations, you can address and configure your fixtures using QuickPlay Pro with iPlayer 3 or SmartJack Pro. You can manually enter fixture serial numbers, or you can import a spreadsheet listing each fixture's serial number and starting DMX address.

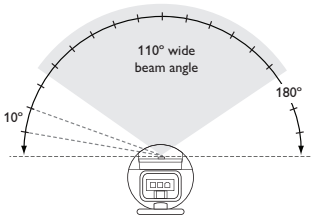
You will need the layout grid that you created when you recorded the serial numbers of the light fixtures in your installation.

For complete details on addressing and configuring iColor Cove QLX Powercore fixtures with QuickPlay Pro, refer to the *Addressing and Configuration Guide*, which you can view or download at www.philipscolorkinetics.com/support/addressing.

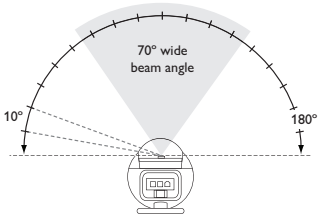
Aim the Fixtures

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

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



115° x 110° (wide beam angle)



70° x 105° (medium beam angle)

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