

iColor Cove QLX

Performance linear interior LED cove and accent fixture with intelligent color light

PHILIPS

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iColor Cove QLX is a compact linear LED fixture that generates saturated color and dynamic effects in alcoves, accent areas, and other interior spaces. The fixture is available in two standard lengths and wide or medium beam angles. An integrated rotating mount provides precise positioning, while optional mounting tracks allow quick project setup in linear applications. Flexible mounting and positioning options let you install fixtures in virtually any desired configuration.

- Cost-effective and energy-efficient — Auto-addressing through Chromasic technology simplifies installation, addressing, and programming. Chromasic integrates power, communication, and control to lower power consumption and overall system cost.
- Versatile applications — iColor Cove QLX delivers illumination and color-changing effects to alcoves, task and accent spaces, and other confined areas in a wide range of applications, from large-scale commercial installations to simpler residential installations.
- Superior color mixing — iColor Cove QLX offers excellent mixing at 2 in (51 mm), with no shadowing between fixtures in a long run.
- Industry-leading controls — iColor Cove QLX works seamlessly with the complete Philips line of controllers, including iPlayer 3, Light System Manager, and ColorDial Pro, as well as third-party DMX controllers.
- Flexible mounting and positioning — With end-to-end locking power connectors that can make 180° turns, these compact cove fixtures are easy to position in even the most challenging mounting circumstances. Optional mounting tracks ensure straight runs in linear applications, and support vertical and overhead positioning. Optional 1 ft (305 mm) and 5 ft (1.5 m) Jumper Cables can add extra space between fixtures, depending on your lighting requirements.



Two Standard Lengths and Beam Angles

Available in 6 in (152 mm) and 12 in (305 mm) lengths, with wide (120° x 120°) and medium (100°x 40°) beam angles. End-to-end mounting or staggered positioning lets you achieve curves and other geometries to fill alcoves and interior spaces of any shape or complexity.

Lighting Design with iColor Cove QLX

With their low-profile housing, 2 in (51 mm) mixing distance, and low-maintenance LEDs, iColor Cove QLX fixtures are well suited for lighting tight and difficult-to-access niches. Since the fixtures do not heat illuminated surfaces, they will not damage objects on display,

Because iColor Cove QLX fixtures are installed in linear runs with flexible connectors capable of making turns of up to 180°, they are ideal for lighting curved and complex accent spaces. The Waratarah Room at the Rooty Hill RSL club in Sydney, Australia (on the cover and below) is designed to host a range of events, from weddings and parties to seminars and product launches. The room's visual centerpiece is a flower-shaped lighting installation in the ceiling that dynamically changes color to suit varying moods and events. Surrounding the flower, a circular cove measuring approximately 40 ft (12 m) in diameter is lit by 160 cove fixtures, which fill the groove with saturated, changing colors that complement the flower's dynamic patterns.



Photography: Rooty Hill RSL by Michel Goupy, Xenian Living Light



iColor Cove QLX provides a functional and aesthetically pleasing lighting scheme for an innovative check-in facility at Dublin Airport (below). A series of 58 illuminated disks measuring approximately 10 ft (3 m) in diameter hang from the ceiling. The interior rim of each disk is lit by a series of 12 in cove fixtures, for a total of 2,000 linear ft (610 m) of fixtures across the 58 disks. Since each fixture is individually controllable light shows can be designed that change the color of the disks in unison or independently.



Photography: DAA

Photometrics

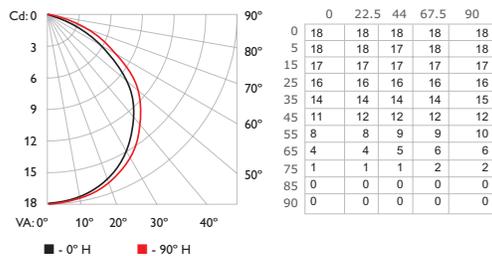
Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

iColor Cove QLX 12 in (305 mm) 120° x 120° (wide) beam angle

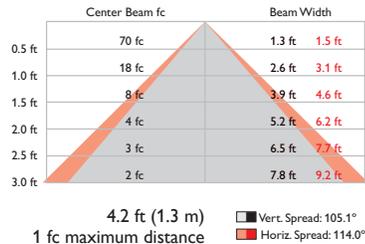
LED	Lumens	Efficacy
RGB	46	15.3



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens %	Lamp %	Luminaire %
0-30	13.8	29.8%	29.9%
0-40	22.8	49.2%	49.2%
0-60	39.8	86%	86%
60-90	6.5	14%	14%
0-90	46.3	99.9%	100%
90-180	0	0%	0%
0-180	46.3	99.9%	100%
Total Efficiency: 99.9%			

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0	
RW %:	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
RCR:	1	1.10	1.06	1.02	.99	1.07	1.04	1.00	.87	.99	.97	.94	.96	.93	.91	.92	.90	.89	.86
	2	1.01	.93	.87	.82	.98	.91	.86	.75	.88	.83	.79	.85	.81	.77	.82	.78	.76	.74
	3	.92	.83	.75	.69	.90	.81	.74	.64	.78	.72	.67	.75	.70	.66	.73	.68	.65	.63
	4	.85	.73	.65	.59	.82	.72	.64	.56	.70	.63	.58	.67	.61	.57	.65	.60	.56	.54
	5	.78	.66	.57	.51	.76	.65	.57	.49	.63	.55	.50	.61	.54	.49	.59	.53	.49	.47
	6	.72	.59	.51	.44	.70	.58	.50	.43	.57	.49	.44	.55	.48	.43	.53	.48	.43	.41
	7	.67	.54	.45	.39	.65	.53	.45	.38	.51	.44	.39	.50	.43	.39	.49	.43	.38	.36
	8	.62	.49	.41	.35	.61	.48	.40	.34	.47	.40	.35	.46	.39	.35	.45	.39	.34	.32
	9	.58	.45	.37	.32	.57	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
	10	.54	.41	.34	.29	.53	.41	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26

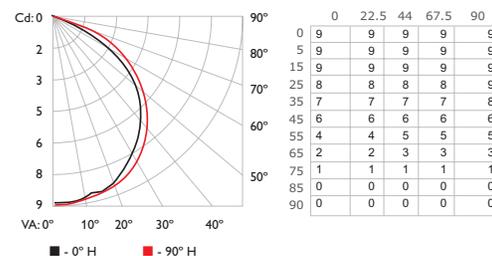
RCC %: Ceiling reflectance percentage, RW %: Wall reflectance percentage, RCR: Room cavity ratio

iColor Cove QLX 6 in (152 mm) 120° x 120° (wide) beam angle

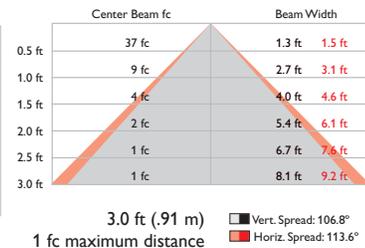
LED	Lumens	Efficacy
RGB	25	12.5



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens %	Lamp %	Luminaire %
0-30	7.2	29.4%	29.5%
0-40	11.9	48.4%	48.5%
0-60	20.7	84.6%	84.8%
60-90	3.7	15.2%	15.2%
0-90	24.5	99.8%	100%
90-180	0	0%	0%
0-180	24.5	99.8%	100%
Total Efficiency: 99.8%			

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0	
RW %:	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
RCR:	1	1.10	1.05	1.02	.98	1.07	1.03	1.00	.87	.99	.96	.93	.95	.93	.91	.91	.90	.88	.86
	2	1.00	.93	.86	.81	.98	.91	.85	.74	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
	3	.92	.82	.74	.68	.89	.80	.73	.63	.77	.71	.66	.75	.69	.65	.72	.68	.64	.62
	4	.84	.73	.64	.58	.82	.71	.64	.55	.69	.62	.57	.67	.61	.56	.65	.59	.55	.53
	5	.77	.65	.56	.50	.75	.64	.56	.48	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
	6	.72	.59	.50	.44	.70	.58	.50	.42	.56	.49	.43	.54	.48	.43	.53	.47	.42	.40
	7	.66	.53	.45	.39	.65	.52	.44	.38	.51	.44	.38	.49	.43	.38	.48	.42	.38	.36
	8	.62	.49	.40	.35	.60	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
	9	.58	.45	.37	.31	.56	.44	.36	.30	.43	.36	.31	.42	.35	.31	.41	.35	.31	.29
	10	.54	.41	.33	.28	.53	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26

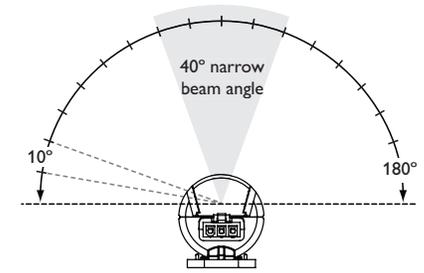
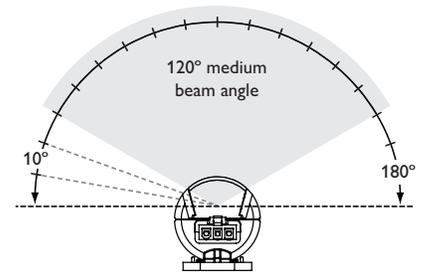
RCC %: Ceiling reflectance percentage, RW %: Wall reflectance percentage, RCR: Room cavity ratio

For lux multiply fc by 10.7

Specifications

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

Item	Specification	6 in (152 mm)	12 in (305 mm)	
Output	Beam Angle	120° x 120° (wide) / 100° x 40° (medium)		
	Lumens*	120° x 120°	25	46
		100° x 40°	21	39
	LED Channels	Red / Green / Blue		
	Mixing Distance	2 in (51 mm) to uniform light		
	Lumen Maintenance†	50,000 hours L50 @ 25° C 23,000 hours L50 @ 50° C		
Electrical	Input Voltage	24 VDC via sPDS-60ca, PDS-60ca, and sPDS-480ca.		
	Power Consumption	2 W maximum at full output, steady state	3 W maximum at full output, steady state	
Control	Interface	sPDS-60ca 24V (DMX or Ethernet) PDS-60ca 24V (Pre-programmed, DMX, or Ethernet) sPDS-480ca 24V (Ethernet)		
	Control System	Philips full range of controllers, including Light System Manager and iPlayer 3, and ColorDial Pro, or third-party controllers		
Physical	Dimensions (Height x Width x Depth)	1.2 x 6 x 1.4 in (30 x 152 x 36 mm)	1.2 x 12 x 1.4 in (30 x 305 x 36 mm)	
	Weight	3 oz (85 g)	5 oz (142 g)	
	Housing	Charcoal gray injection-molded plastic		
	Lens	Clear 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 (-20° – 80° C) Storage		
	Humidity	0 – 95%, non-condensing		
	Maximum Fixtures Per Power / Data Supply	PDS-60ca 24V	30 total	20 total
		sPDS-60ca 24V	30 total	20 total
		sPDS-480ca 24V	240 total, 30 per power port	160 total, 20 per power port
Certification and Safety	Certifications	UL / cUL, FCC Class B, CE, PSE, C-Tick, SAA		
	Environment	Dry Location, IP20		



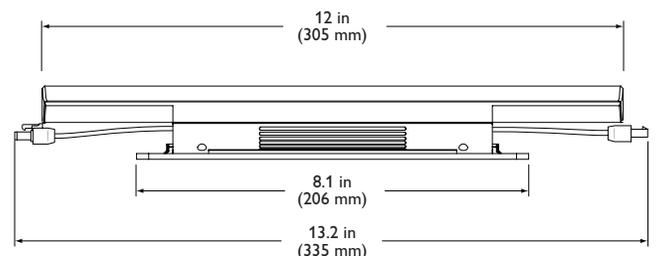
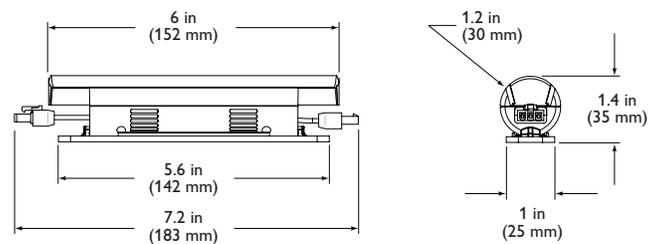
* Installed end-to-end with the standard 30 ft (9.1 m) leader cable. Using Jumper Cables to add space between fixtures can reduce the maximum number of fixtures per run. Please contact support@colorkinetics.com if you need help planning your specific configuration.

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

† L50 = 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



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Fixtures and Accessories

iColor Cove QLX fixtures are part of a complete low-voltage system which includes fixtures and:

- One or more power / data supplies
- One 30 ft (9.1 m) Leader Cable to connect each power / data supply output to a series of fixtures
- Any Philips controller, including Light System Manager, ColorDial Pro, and iPlayer 3, or a third-party controller

Item	Type	Item Number	Philips 12NC
iColor Cove QLX 6 in (152 mm)	120° x 120°	101-000066-02	910503700218
	100° x 40°	101-000066-03	910503700220
iColor Cove QLX 12 in (305 mm)	120° x 120°	101-000066-00	910503700217
	100° x 40°	101-000066-01	910503700219

Optional mounting track ensures straight runs of fixtures.

Mounting Track	4 ft (1.2 m)	523-000006-01	910503700452
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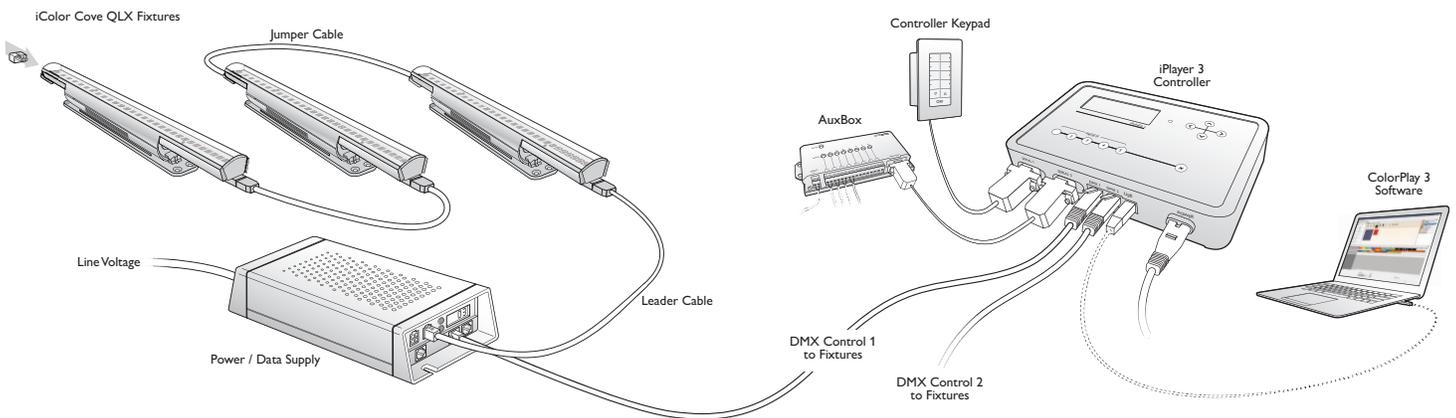
Depending on the installation's design, you may need Jumper Cables to add space between fixtures.

Leader Cable with terminator	30 ft (9.1 m)	108-000015-00	910503700072
Jumper Cable	1 ft (305 mm)	108-000020-00	910503700079
	5 ft (1.5 m)	108-000020-01	910503700080

Power / data supplies

sPDS-60ca 24V	DMX / Ethernet	109-000021-02	910503700106
	Preprogrammed	109-000016-00	910503700095
PDS-60ca 24V	DMX	109-000016-01	910503700333
	Ethernet	109-000016-02	910503700334
sPDS-480ca 24V	Ethernet	109-000026-00	910503700110

Use Item Number when ordering in North America.



Basic iColor Cove QLX installation

For detailed wiring diagrams visit www.philipscolorkinetics.com/support/wiring/l_s_prod.html

Installation

iColor Cove QLX fixtures generate saturated color and dynamic effects in alcoves, accent areas, and other interior spaces. Chromasic technology enables simplified installation and auto-addressing. You can install fixtures end-to-end, or with Jumper Cables for added space or staggered positioning. You can also install fixtures in optional mounting tracks for easy vertical or ceiling mounting, or to ensure straight runs.

Owner / User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate the iColor Cove QLX fixture 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 Installation Instructions for specific warning and caution statements.

Create a Lighting Design Plan

1. Determine the appropriate location of each power / data supply in relation to the fixtures, and of the fixtures in relation to each other. The power / data supply and first fixture must be separated by no more than the 30 ft (9.1 m) length of the Leader Cable.

✳ Refer to the power / data supply's Installation Instructions for guidelines on configuring and positioning the power / data supply in relation to the controller.

iColor Cove QLX 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 up to .85 in (22 mm) spacing without a Jumper Cable.

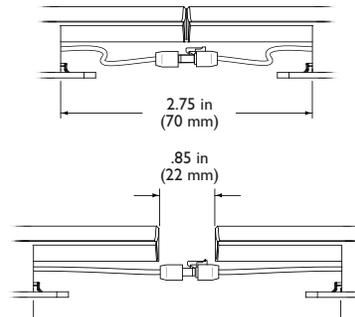
The number of iColor Cove QLX fixtures that you can connect together in a single run depends on the power / data supply, the size of the fixtures, and the distance between fixtures. The following table lists the number of fixtures each power / data supply can support, when fixtures are installed end-to-end.

Maximum number of fixtures per power / data supply

Fixtures Per Power / Data Supply	iColor Cove QLX 6 in	iColor Cove QLX 12 in
PDS-60ca 24V	30 total	20 total
sPDS-60ca 24V	30 total	20 total
sPDS-480ca 24V	240 total, 30 per power port	160 total, 20 per power port

To separate fixtures by more than an inch, use the 1 ft (305 mm) or 5 ft (1.5 m) Jumper Cables. When you use Jumper Cables, you can connect a maximum of 20 fixtures in a single run using one Jumper Cable between each fixture.

Distance between fixtures

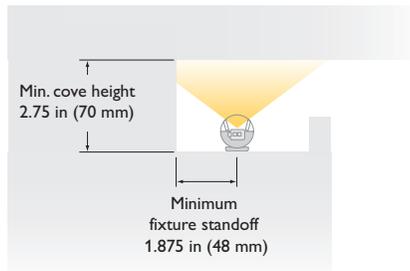


✳ For more information, and for help calculating the number of fixtures your specific installation can support, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool, or consult Philips Application Engineering Services at support@colorkinetics.com.

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

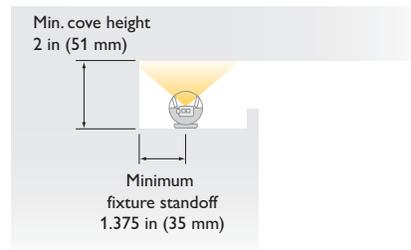
iColor Cove QLX

120° x 120° beam angle, 180° rotation



iColor Cove QLX

100° x 40° beam angle, 180° rotation



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.

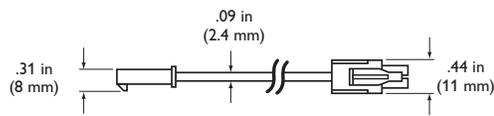
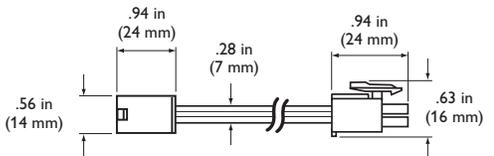
3. On an architectural diagram or other diagram that shows the physical layout of the installation, identify the locations of all switches, controllers, power supplies, fixtures, Leader Cables, and Jumper Cables.
4. Assign each fixture to a position in the lighting design plan.

Start the Installation

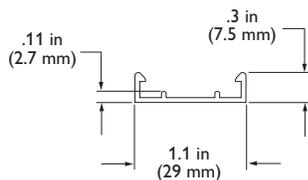
1. Install all power / data supplies, including any interfaces with controllers. One 30 ft (9.1 m) Leader Cable is required to connect each run or series of fixtures to a power / data supply. The power / data supply sends power and control signals to the fixtures over the Leader Cable .
2. Ensure that the number of free power / data supply power ports is adequate.
3. Verify that all additional supporting equipment (switches, controllers) is in place.
4. If your installation calls for Jumper Cables to add space between fixtures, make sure they are available.
5. Ensure that all additional parts (optional mounting tracks, mounting hardware, terminators) and tools are available.

* For complete instructions on how to wire the power / data supply, refer to the specific power / data supply's Installation Guide. For sample wiring diagrams, visit www.philipscolorkinetics.com/support/wiring/ls_prod.html.

Leader Cable connector dimensions



Mounting track dimensions



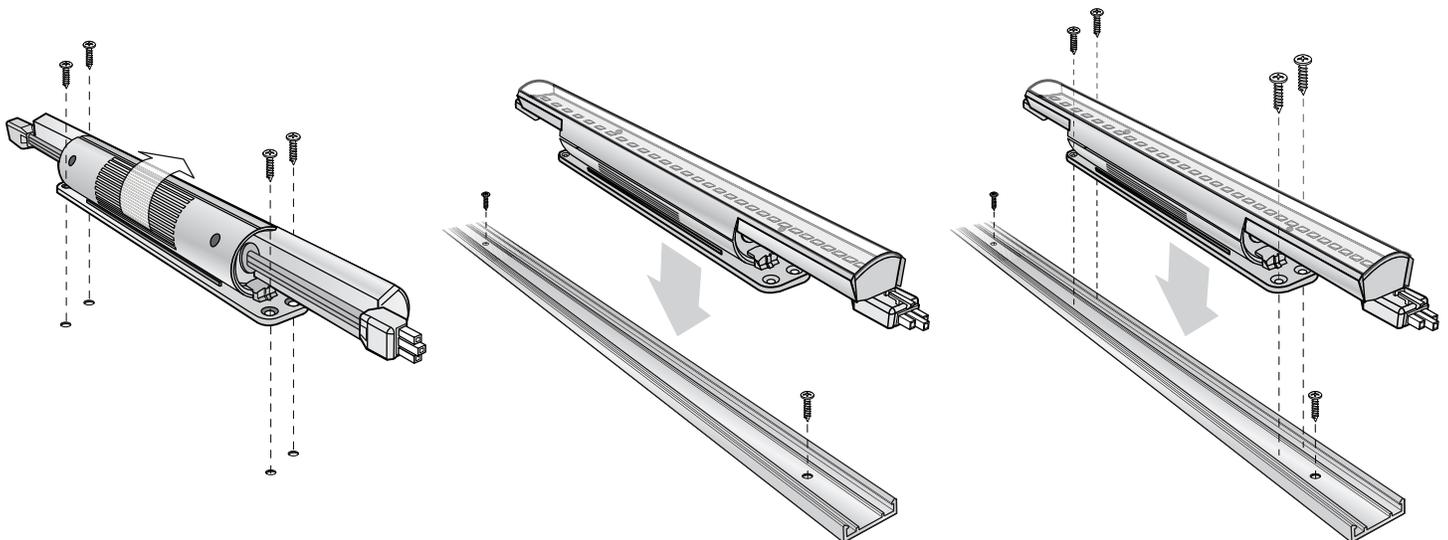
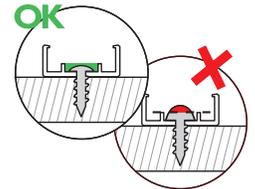
Install the Fixtures

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

(Optional) Install Mounting Tracks

1. Cut the mounting tracks to the desired length with a hacksaw or tin snips.
2. Install the mounting tracks using hardware suitable for the mounting surface.

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



Mount and Connect the Fixtures

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

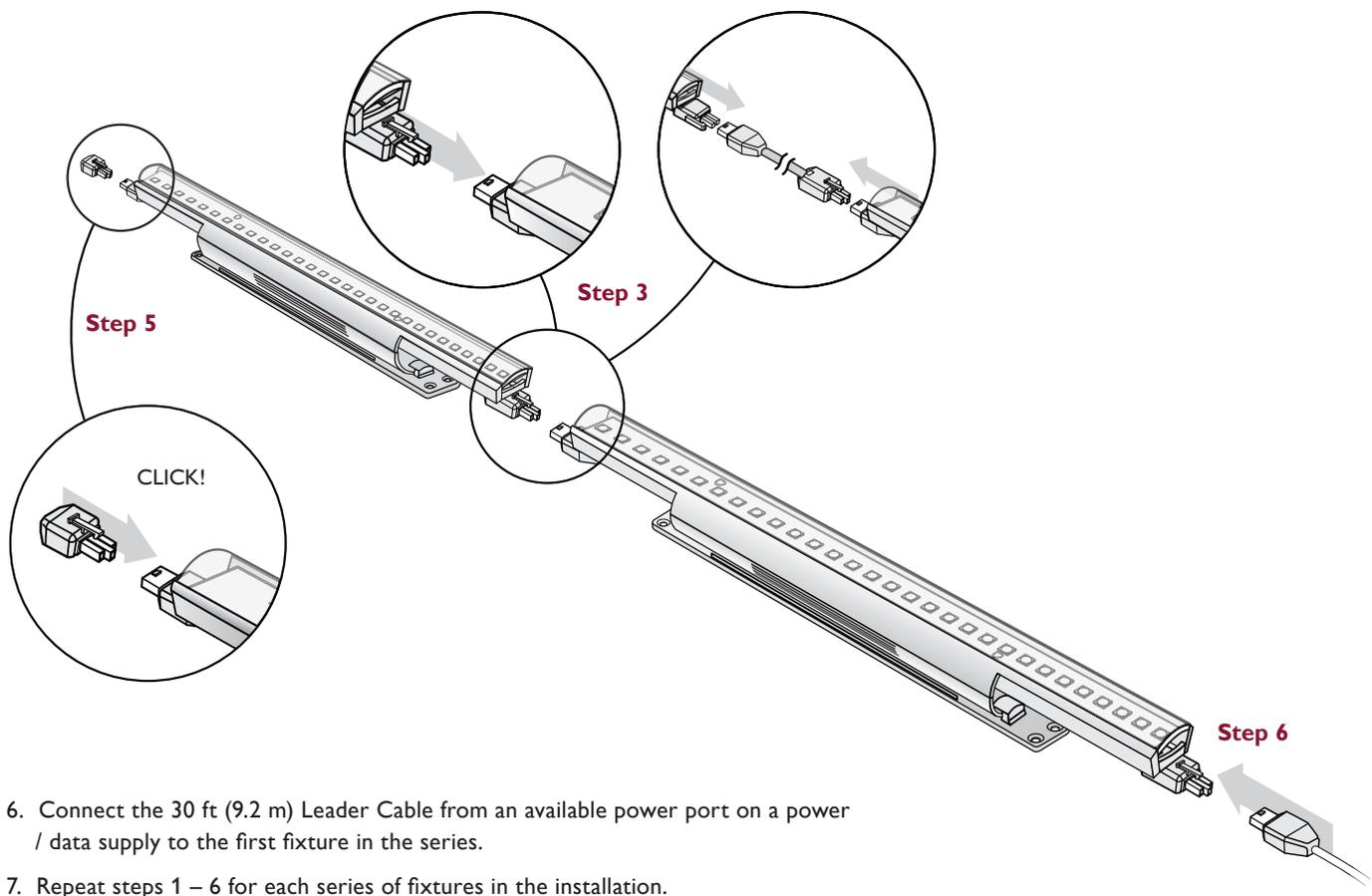
1. Rotate an iColor Cove QLX fixture as necessary to provide unobstructed access to the mounting holes.
2. Position the first fixture in a series.

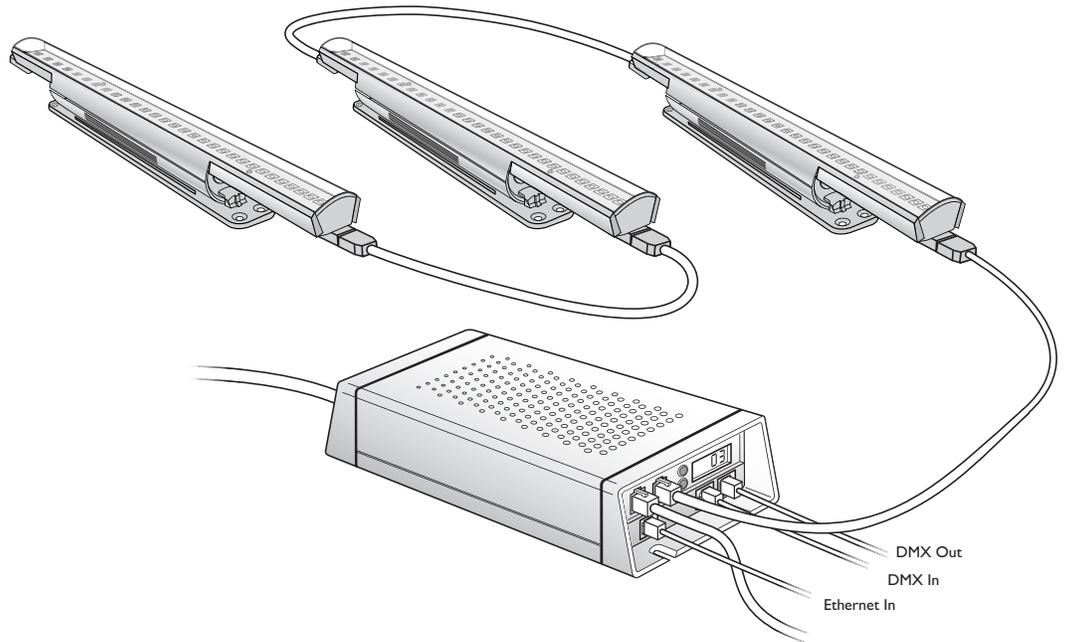
If using mounting tracks on a horizontal surface, snap the fixture into the track.

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 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.

 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.





Address and Configure the Fixtures

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

Addressing and configuration methods differ depending on your environment (DMX or Ethernet) and the power / data supply you're using. In DMX systems, controllers use DMX addresses to communicate with iColor Cove QLX fixtures. Each iColor Cove QLX fixture receives three sequential DMX addresses, one for red, one for green, and one for blue. Unlike many color-changing fixtures, iColor Cove QLX fixtures are not directly programmed with DMX addresses. Instead, the power / data supply is programmed with a base *light number*, and fixtures are automatically addressed in reference to that light number.

A light number corresponds to three sequential DMX addresses. Since a DMX universe consists of 512 DMX addresses, there are 170 light numbers per universe ($170 \times 3 = 510$, with two DMX addresses left over). Light number 1 corresponds to DMX addresses 1, 2, and 3; light number 2 corresponds to DMX addresses 4, 5, and 6; light number 3 corresponds to DMX addresses 7, 8, and 9; and so on.

For light show designs where fixtures work in unison, all fixtures are assigned the same set of DMX addresses (defined by the power / data supply's base light number).

For light show designs that show different colors on different fixtures simultaneously, fixtures are addressed sequentially, starting with the DMX addresses that correspond to the power / data supply's base light number.

✳ For complete details on addressing and configuring fixtures, refer to the *Addressing and Configuration Guide*. You can download the *QuickPlay Pro* software and the *Addressing and Configuration Guide* from www.philipscolorkinetics.com/support/addressing/

- You configure an sPDS-60ca 24V (DMX) and the iColor Cove QLX fixtures connected to it using the power / data supply's onboard controls.
- You configure a PDS-60ca 24V (DMX) and the iColor Cove QLX fixtures connected to it using SmartJack Pro, QuickPlay Pro, and a computer. Note that you must configure each PDS-60ca 24V separately (disconnected from all other power / data supplies in the network).

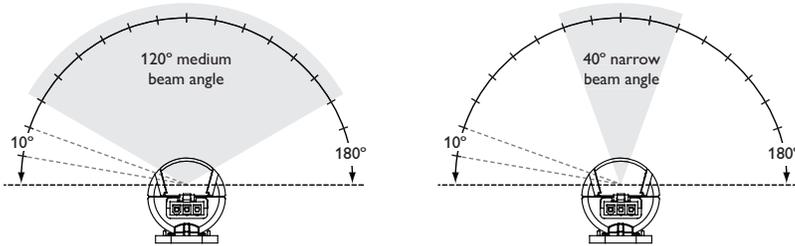
In Ethernet systems, each power / data supply is assigned a unique IP address. You can discover all power / data supplies in an installation using *QuickPlay Pro*, which automatically determines how many fixtures are connected to each power / data supply's output port and addresses them. *Light System Manager* and *Video System Manager Pro* Ethernet controllers also automatically discover and address all connected fixtures.

Aim the Fixtures

Make sure the power is ON before aiming iColor Cove QLX fixtures.

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

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



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