



iColor Cove EC

Cost-effective linear interior LED cove and accent fixture with intelligent color light

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iColor Cove EC is the most cost-effective option in the popular iColor Cove family. This low-profile fixture is designed for accent, perimeter, or cove lighting where lower light intensity and lower costs are desired. iColor Cove EC offers an economical way to bring color-changing light and lighting effects to alcoves, task areas, and other tight spaces.

- Soft-edge light projection — Each fixture projects a soft-edge strip of light at a 120° x 120° beam angle.
- Simple, rapid installation — The sleek, low-profile housing enables installation in tight areas, and easy through-hole mounting and in-line power and data connections reduce installation time.
- Versatile positioning — In addition to end-to-end locking connectors for rapid installation of solid runs, optional 1 ft (305 mm) and 5 ft (1.5 m) jumper cables can add extra space between fixtures, depending on your lighting requirements. Optional mounting tracks ensure straight runs in linear applications, and support vertical and overhead positioning.
- 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.
- Highly consistent color — Optibin, our proprietary binning optimization process, ensures optimal color consistency from fixture to fixture and run to run.
- Industry-leading controls — iColor Cove EC fixtures work seamlessly with the complete line of Philips controllers, including ColorDial Pro, iPlayer3 and Light System Manager, as well as third-party controllers.



Two Standard Lengths

Available in 7 in (178 mm)
and 12 in (305 mm) lengths.

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.

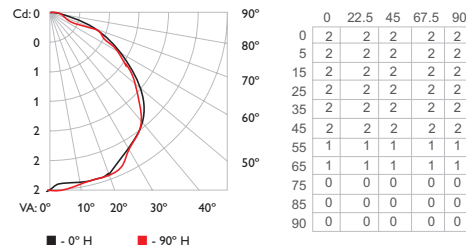
Photometrics

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

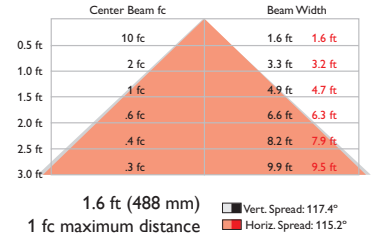
iColor Cove EC 7 in (178 mm)

LED	Lumens	Efficacy
RGB	7.4	3.7

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Lamp	% Luminaire
0-30	2.0	28.6%	27.2%
0-40	3.3	47.8%	45.4%
0-60	6.0	86.3%	81.9%
60-90	1.3	19.1%	18.1%
0-90	7.4	105.3%	100%
90-180	0	0%	0%
0-180	7.4	105.3%	100%
Total Efficiency: 105.3%			

Coefficients Of Utilization - Zonal Cavity Method

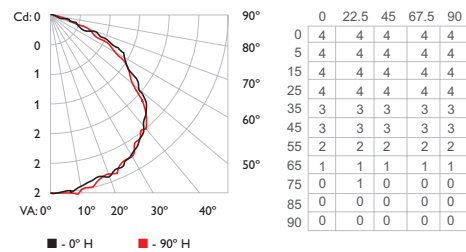
		Effective Floor Cavity Reflectance: 20%											
RCC %:		80			70			50			30		
RW %:		70	50	30	0	70	50	30	0	50	30	20	10
RCR:		0	1.25	1.25	1.25	1.25	1.22	1.22	1.22	1.05	1.17	1.17	1.12
1	1.15	1.10	1.06	1.02	1.12	1.08	1.04	.90	1.04	1.00	.98	1.00	.97
2	1.05	.97	.90	.84	1.02	.95	.88	.76	.91	.85	.81	.87	.83
3	.96	.85	.76	.70	.93	.83	.75	.65	.80	.73	.68	.77	.71
4	.88	.75	.66	.59	.85	.74	.65	.56	.71	.64	.58	.62	.57
5	.80	.67	.58	.51	.78	.66	.57	.48	.64	.56	.50	.62	.55
6	.74	.60	.51	.44	.72	.59	.50	.43	.57	.49	.44	.56	.48
7	.69	.54	.45	.39	.67	.54	.45	.38	.52	.44	.38	.50	.43
8	.64	.50	.41	.35	.62	.49	.40	.34	.48	.40	.34	.46	.39
9	.60	.45	.37	.31	.58	.45	.37	.30	.44	.36	.31	.42	.36
10	.56	.42	.34	.28	.54	.41	.33	.27	.40	.33	.28	.39	.32

For lux multiply fc by 10.7

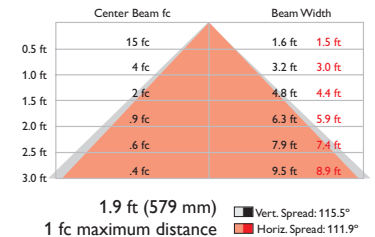
iColor Cove EC 12 in (305 mm)

LED	Lumens	Efficacy
RGB	11	5.5

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Lamp	% Luminaire
0-30	3.1	27.7%	27.3%
0-40	5.1	46.5%	45.7%
0-60	9.2	83.3%	81.9%
60-90	2.0	18%	17.7%
0-90	11.1	101.3%	99.6%
90-180	0.0	0.4%	0.4%
0-180	11.2	101.7%	100%
Total Efficiency: 101.7%			

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%											
RCC %:		80			70			50			30		
RW %:		70	50	30	0	70	50	30	0	50	30	20	10
RCR:		0	1.21	1.21	1.21	1.18	1.18	1.18	1.01	1.13	1.13	1.13	1.08
1	1.11	1.06	1.02	.98	1.08	1.04	1.00	.87	1.00	.97	.94	.96	.93
2	1.01	.93	.86	.81	.99	.91	.85	.73	.87	.82	.78	.84	.80
3	.92	.82	.74	.67	.90	.80	.73	.63	.77	.71	.66	.74	.69
4	.85	.73	.64	.57	.82	.71	.63	.54	.69	.62	.56	.66	.60
5	.78	.65	.56	.49	.76	.64	.55	.47	.61	.54	.48	.59	.53
6	.72	.58	.49	.43	.70	.57	.49	.41	.55	.48	.42	.54	.47
7	.66	.53	.44	.38	.65	.52	.44	.37	.50	.43	.37	.49	.42
8	.62	.48	.39	.34	.60	.47	.39	.33	.46	.39	.33	.45	.38
9	.58	.44	.36	.30	.56	.43	.35	.29	.42	.35	.30	.41	.34
10	.54	.41	.33	.27	.53	.40	.32	.27	.39	.32	.27	.38	.31

Specifications

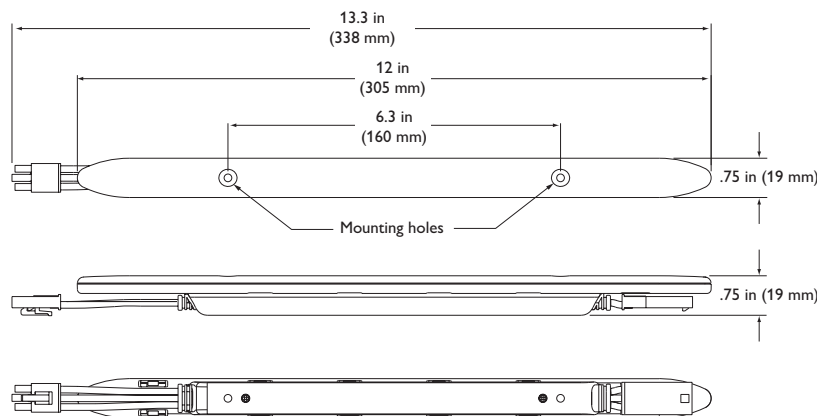
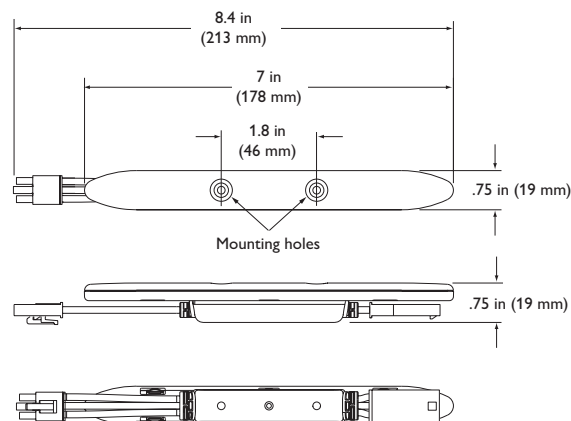
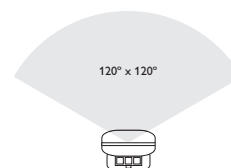
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	7 in (178 mm)	12 in (305 mm)
Output	Beam Angle	120° x 120°	
	Lumens*	7.4	11
	LED Channels	Red / Green / Blue	
	Mixing Distance	2 in (51 mm) to uniform light	
	Lumen Maintenance†	50,000 hours L50 @ 50° C (full output)	
Electrical	Input Voltage	24 VDC via PDS-60ca 24V, sPDS-60ca 24V, or sPDS-480ca 24V	
	Power Consumption	2 W maximum at full output, steady state	
Control	Interface	PDS-60ca 24V (DMX, Preprogrammed, or Ethernet), sPDS-60ca 24V (DMX / Ethernet), or sPDS-480ca 24V	
	Control System	Philips full range of controllers, including Light System Manager, iPlayer 3, and ColorDial Pro, or third-party controllers	
Physical	Dimensions (Height x Width x Depth)	.75 x 7 x .75 in (19 x 178 x 19 mm)	.75 x 12 x .75 in (19 x 305 x 19 mm)
	Weight	2 oz (57 g)	3 oz (85 g)
	Housing	Rigid plastic	
	Lens	Clear polycarbonate	
	Fixture Connections	Integral male / female connectors	
	Temperature Ranges	-40° – 122° F (-40° – 50° C) Operating -4° – 122° F (-20° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage	
	Humidity	0 – 95%, non-condensing	
Certification and Safety	Maximum Fixtures Per Power / Data Supply	PDS-60ca 24V or sPDS-60ca 24V: 30 fixtures total sPDS-480ca 24V: 240 fixtures total	
	Certification	UL / cUL, CE	
	Environment	Dry Location, IP20	

* 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 EC 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
- (Optional) Jumper cables to add extra space between fixtures
- Any Philips controller, including Light System Manager, iPlayer 3, and ColorDial Pro, or a third-party controller

Included in the box

iColor Cove EC fixture
(2) Mounting screws
Installation Instructions

iColor Cove EC fixtures

Item	Type	Item Number	Philips 12NC
iColor Cove EC	7 in (178 mm)	101-000022-01	910503700014
	12 in (305 mm)	101-000022-00	910503700013

Optional mounting track ensures straight runs of fixtures.

Mounting Track	4 ft (1.2 m)	101-000038-00	910503700024
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

Depending on the installation's design, you may need jumper cables to add space between fixtures.

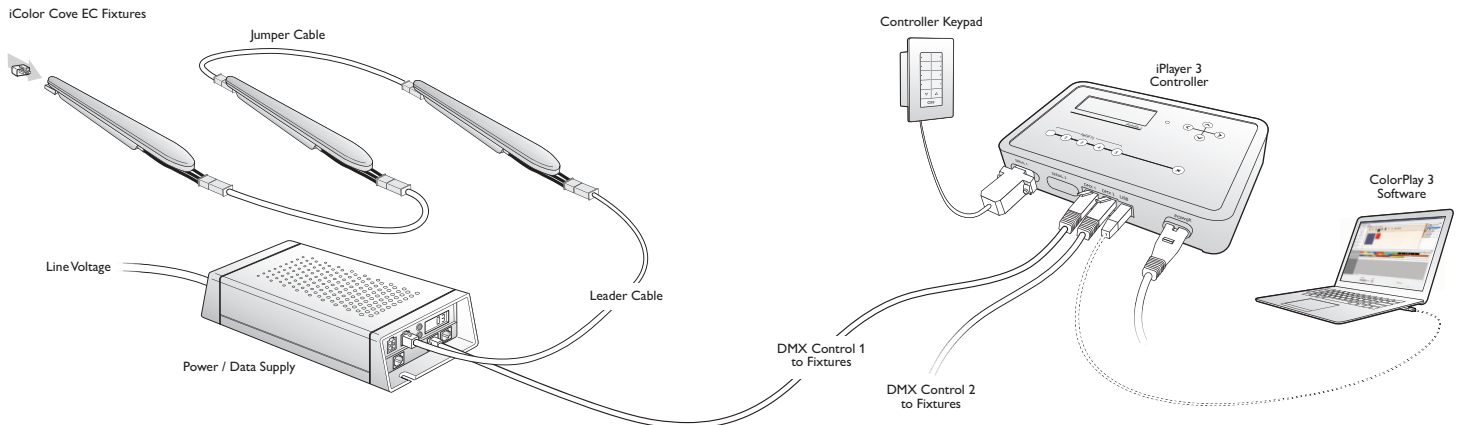
Power / data supplies

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 EC installation

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



Installation

iColor Cove EC fixtures generate full-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 EC 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 EC 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.

iColor Cove EC 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 1 in (25 mm) spacing without a Jumper Cable.

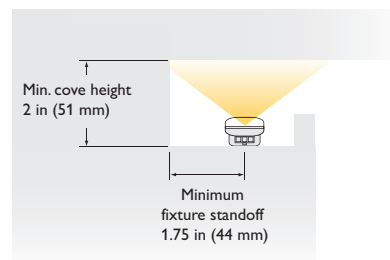
The number of iColor Cove EC fixtures that you can connect together in a single run depends on the power / data supply and the distance between fixtures. When fixtures are installed end-to-end, the PDS-60ca 24 V and sPDS-60ca 24 V power / data supplies can support 30 total iColor Cove EC fixtures, while the sPDS-480ca 24 V can support 240 total, 30 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.

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.
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, and leader and jumper cables.
4. Assign each fixture to a position in the lighting design plan.

✳ 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 EC
120° × 120° beam angle



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 series of fixtures to a power / data supply.
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/lis_prod.html.

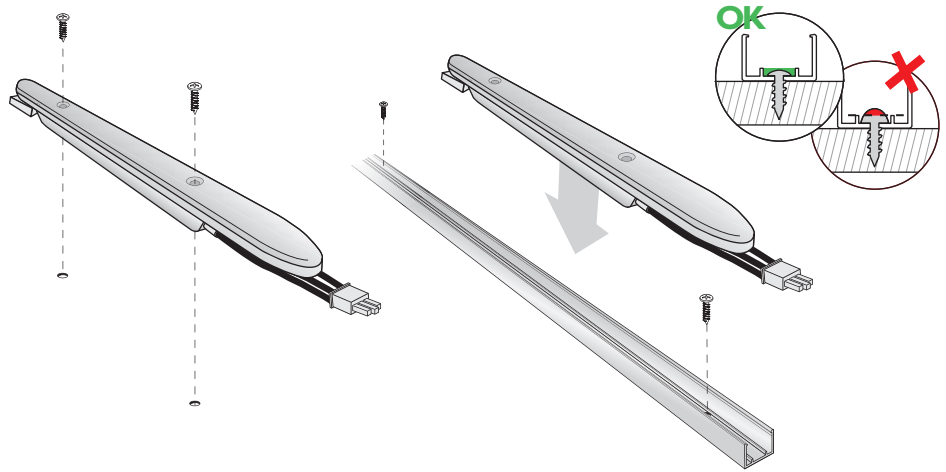
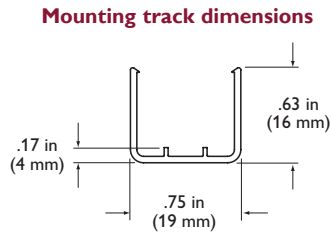
Install the Fixtures

You can mount iColor Cove EC 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 EC fixtures in mounting tracks to ensure straight runs.

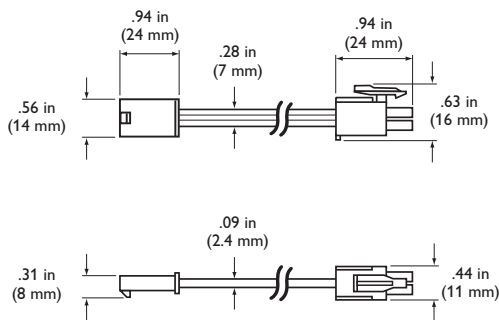
(Optional) Install Mounting Tracks

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).



Leader Cable connector dimensions



Mount and Connect the Fixtures

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

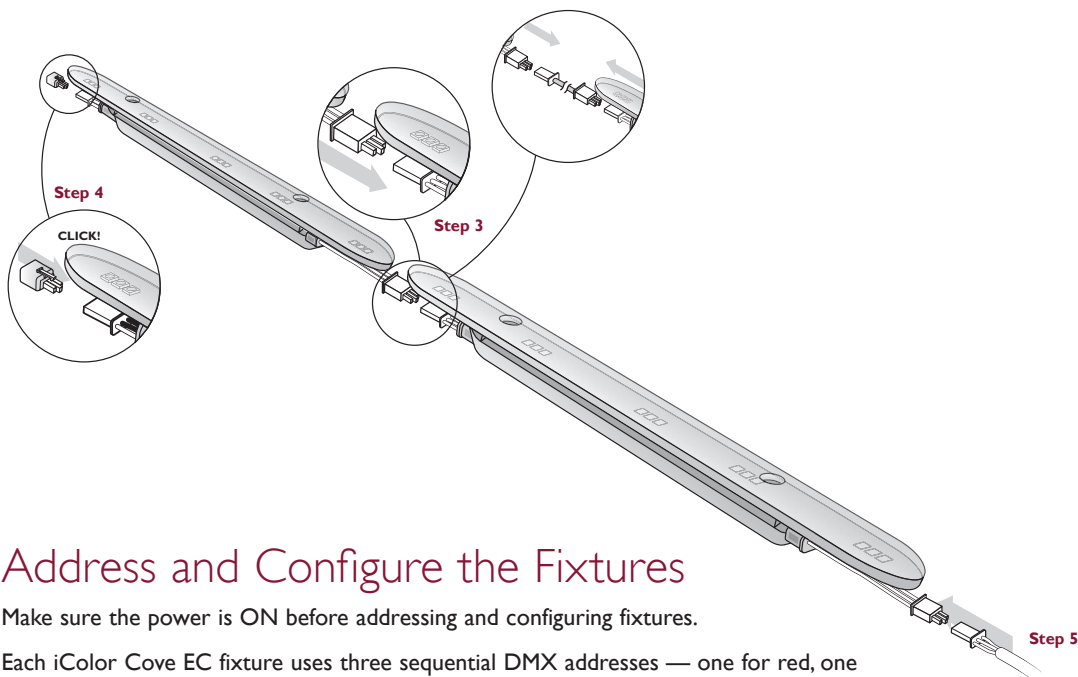
1. Position the first fixture in a series.

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

If not using mounting tracks, attach the fixture with two provided mounting screws.

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

2. 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.
3. Continue mounting the fixtures, making power / data connections as you go, until all lights in the series are mounted.
4. Insert the provided terminator into the last fixture in the series.
5. Connect the 30 ft (9.2 m) Leader Cable from an available power port on a power / data supply to the first fixture in the series.
6. Repeat steps 1 – 5 for each series of fixtures in the installation.



Address and Configure the Fixtures

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

Each iColor Cove EC fixture uses three sequential DMX addresses — one for red, one for green, and one for blue. Unlike many color-changing fixtures, however, iColor Cove EC fixtures are not directly programmed with DMX addresses. Instead, power / data supplies are programmed with a base number, and fixtures are automatically addressed in reference to that number.

For convenience, sPDS-60ca 24 V and PDS-60ca 24 V power / data supplies use *light numbers* for addressing. A light number corresponds to three sequential DMX addresses. Each DMX universe, therefore, contains 170 light numbers ($170 \times 3 = 510$, with two DMX addresses left over).

For light show designs where fixtures work in unison, groups of fixtures are assigned the same light number. For light show designs that show different output on different fixtures simultaneously, fixtures are addressed sequentially, starting with the power / data supply's base light number.

- You configure an sPDS-60ca 24V (DMX) and the iColor Cove EC fixtures connected to it using the power / data supply's onboard controls. You set a base light number for output port 1, then automatically discover and address all connected fixtures.
- You configure a PDS-60ca 24V (DMX) and the iColor Cove EC 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 sPDS-480ca 24 V power / data supply is assigned a unique IP address. You can automatically discover all sPDS-480ca 24 V power / data supplies in an installation using QuickPlay Pro, and determine how many fixtures are connected to each power / data supply's output port. Instead of addressing the fixtures, you map them using a controller such as Light System Manager or Video System Manager Pro. Mapping uniquely identifies each fixture as a node in the system.

✳ 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/

✳ For information on creating light maps, refer to the *Light System Composer User Guide* or *Video System Manager Pro User Guide*, available to download at www.philipscolorkinetics.com/support/userguides/



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