



# ColorReach Powercore gen2

Premium long-throw exterior LED floodlight with intelligent color light



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

ColorReach Powercore gen2 combines all the benefits of LED-based lighting and control in an elegant fixture specifically designed for large-scale installations, such as skyscrapers, casinos, bridges, piers, public monuments, and themed attractions. With levels of light output and projection never before achieved in an LED lighting fixture, ColorReach Powercore gen2 affords entirely new possibilities in exterior illumination. Custom configurations with custom channels of white or color LED sources are available to support special applications.

- Integrates Powercore technology — Powercore technology rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage. Philips Data Enabler Pro merges line voltage and control data and delivers them to fixtures over a single standard cable, dramatically simplifying installation and lowering total system cost.
- Unparalleled light output — With light output of thousands of lumens, light projection of hundreds of feet, and a 5° native beam angle, ColorReach Powercore gen2 offers unprecedented LED-based illumination of large-scale structures and objects.
- Versatile optics — Exchangeable spread lenses of 8°, 13°, 23°, 40°, 63°, and an asymmetric 5° x 17° support a variety of photometric distributions for a multitude of applications, including spotlighting, wall grazing, and asymmetric wall washing. Bezel and gasket are included with spread lenses for easy user installation.
- Saturated, cost-effective color — High-performance LEDs offer rich, saturated color at significantly less cost for installation, operation, and maintenance than traditional light sources.
- Simple fixture positioning — Rugged, slim-profile mounting bracket allows simple positioning and fixture rotation through a full 360°. Side locking bolts reliably secure fixture with a standard wrench.
- Universal power input range — Fixtures accept a universal power input range of 100 – 240 VAC, allowing consistent installation in any location around the world.
- Industry-leading controls — Fixtures work seamlessly with the complete Philips Color Kinetics line of controllers, including Light System Manager, iPlayer 3, and ColorDial Pro, as well as third-party controllers.



### Unique split design supports diffuser combinations

Each half of the fixture is individually addressable and controllable. For instance, you could use one spread lens on the fixture's lower half to bathe a large façade with color at street level, and a different spread lens to project a contrasting or complementary color hundreds of feet up the building's walls.



## A Brilliant Look for Super Bowl XLIII

In 2009, Raymond James Stadium in Tampa, Florida, the host venue for Super Bowl XLIII, was brilliantly and dramatically illuminated with multiple ColorReach Powercore fixtures as part of a city-wide beautification effort for the National Football League's forty-third championship game.

The firm responsible for designing and branding the overall look of the city of Tampa for the Super Bowl chose to accentuate the stadium's exterior. The stadium was illuminated from January 27 through game day on February 1 to create a colorful and dynamic focal point for Tampa residents and visiting fans.

Seventy ColorReach Powercore fixtures lit up the stadium from dusk until dawn. Mounted on a concrete cross beam from within the stadium, the fixtures illuminated the underside of the stadium's upper 30 rows. Using 40° spread lenses, only two fixtures were required to evenly wash each 40 ft (12.2 m) by 80 ft (24.4 m) bay with color. ColorReach Powercore made

the stadium visible from the air and from multiple viewpoints across the city.



Photography: Stephen Kovich

Controlled by the iPlayer 3 digital playback controller from Philips Color Kinetics, the fixtures displayed the colors of the opposing teams and other dazzling, color-changing lighting effects.

Not only did they generate dynamic effects on a scale and intensity that no other available LED floodlight can match, ColorReach Powercore also supported the NFL's recent efforts to make the Super Bowl more green. Although ColorReach Powercore fixtures require minimal energy — just 290 watts per fixture — each is capable of projecting intense color over 500 ft (152 m) with an output of 5,000+ lumens. Even when operating at full intensity, each fixture consumes less than half the energy of a typical coffee maker. In fact, energy consumption for the Super Bowl installation totalled under 22,000 watts. By comparison, traditional metal halide fixtures typically used in such exterior projects consume 1,000 watts each, for a total of well over 70,000 watts. Not only do metal halide fixtures consume 70% more electricity, but they can't match the brilliance and light projection of ColorReach Powercore, nor can they project dynamic color-changing effects.

ColorReach Powercore helped create a visually striking look for the city of Tampa, while matching the excitement of one of the most important sporting events of the year.



Photography: Stephen Kovich



Photography: Stephen Kovich



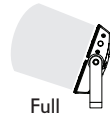
Photography: Stephen Kovich

# Photometrics

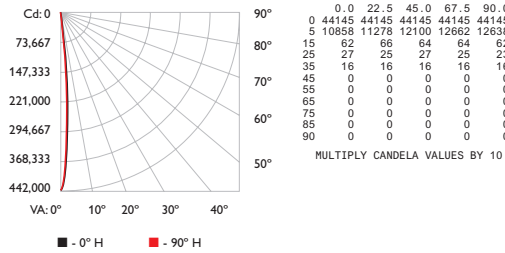
Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at [www.philipscolorkinetics.com/support/ies](http://www.philipscolorkinetics.com/support/ies).

## ColorReach Powercore gen2 5° (no spread lens), full unit

LED	Lumens	Efficacy
RGB	8488	31.0



### Polar Candela Distribution



### Illuminance at Distance

	Center Beam fc	Beam Width
4.0 ft	27591 fc	0.5 ft 0.5 ft
8.0 ft	6898 fc	1.0 ft 1.1 ft
12.0 ft	3066 fc	1.5 ft 1.6 ft
16.0 ft	1724 fc	2.0 ft 2.1 ft
20.0 ft	1104 fc	2.5 ft 2.7 ft
24.0 ft	766 fc	3.0 ft 3.2 ft

665 ft (202.7 m)  
1 fc maximum distance

Vert. Spread: 7.2°  
Horiz. Spread: 7.6°

### Zonal Lumen

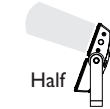
ZONE	LUMENS	%FIXT
0- 30	8374	98.7
0- 40	8481	99.9
0- 60	8488	100.0
0- 90	8488	100.0
90-180	0	0.0
0-180	8488	100.0

### Coefficients Of Utilization - Zonal Cavity Method

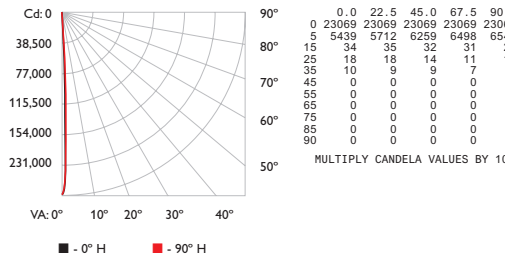
		Effective Floor Cavity Reflectance: 20%											
		80			70			50			30		
RC	RW	70	50	30	10	70	50	30	10	50	30	10	0
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1	117115114112	114113112111	109108107	105105104	102102101	100							
2	114112110108	112110109107	107106105	105104103	102101101	99							
3	113110107105	111108106105	106104103	104103102	102101100	99							
4	111108105103	110107105103	105103102	103102101	102101100	99							
5	110106104102	109105103102	104102101	103101100	101100 99	98							
6	109105103101	108104102101	103101100	102101 99	101100 99	98							
7	108104102100	107104101100	103101 99	102100 99	101100 99	98							
8	107103101 99	106103101 99	102100 99	101100 99	101 99 98	98							
9	106103100 99	105102100 99	102100 99	101 99 98	100 99 98	98							
10	105102100 99	105102100 98	101 99 98	101 99 98	100 99 98	97							

## ColorReach Powercore gen2 5° (no spread lens), half unit

LED	Lumens	Efficacy
RGB	4316	31.5



### Polar Candela Distribution



### Illuminance at Distance

	Center Beam fc	Beam Width
4.0 ft	14418 fc	0.5 ft 0.5 ft
8.0 ft	3605 fc	1.0 ft 1.1 ft
12.0 ft	1602 fc	1.5 ft 1.6 ft
16.0 ft	901 fc	2.0 ft 2.1 ft
20.0 ft	577 fc	2.5 ft 2.6 ft
24.0 ft	401 fc	3.0 ft 3.2 ft

480 ft (146.3 m)  
1 fc maximum distance

Vert. Spread: 7.1°  
Horiz. Spread: 7.6°

### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	4256	98.6
0- 40	4310	99.9
0- 60	4316	100.0
0- 90	4316	100.0
90-180	0	0.0
0-180	4316	100.0

### Coefficients Of Utilization - Zonal Cavity Method

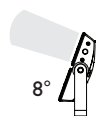
		Effective Floor Cavity Reflectance: 20%											
		80			70			50			30		
RC	RW	70	50	30	10	70	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100							
1	117115114112	114113112111	109108107	105105104	102102101	100							
2	114112110108	112110109107	107106105	105104103	102101101	99							
3	113110107105	111108106105	106104103	104103101	102101100	99							
4	111108105103	110107105103	105103102	103102101	102101100	99							
5	110106104102	109105103102	104102101	103101100	101100 99	98							
6	109105103101	108104102101	103101100	102101 99	101100 99	98							
7	108104102100	107104101100	103101 99	102100 99	101100 99	98							
8	107103101 99	106103101 99	102100 99	101100 99	101 99 98	98							
9	106102100 99	105102100 99	102100 98	101 99 98	100 99 98	97							
10	105102100 98	105102100 98	101 99 98	101 99 98	100 99 98	97							

For lux multiply fc by 10.7

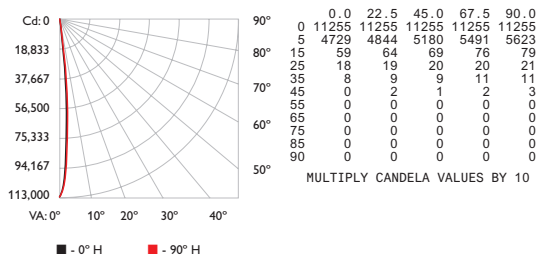


## ColorReach Powercore gen2 8° spread lens, half unit

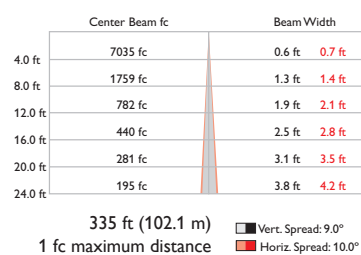
LED	Lumens	Efficacy
RGB	3796	27.7



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

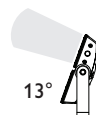
ZONE	LUMENS	%FIXT
0- 30	3717	97.9
0- 40	3780	99.6
0- 60	3796	100.0
0- 90	3796	100.0
90-180	0	0.0
0-180	3796	100.0

### Coefficients Of Utilization - Zonal Cavity Method

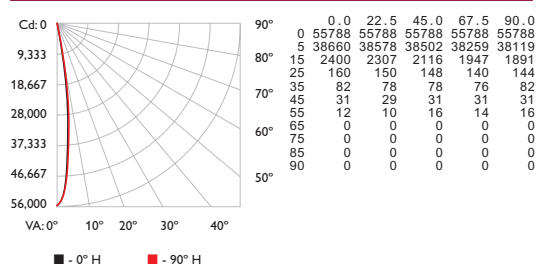
RC RW		Effective Floor Cavity Reflectance: 20%																		
		80				70				50				30				10		
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
0	1	191	191	191	191	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	2	116	115	113	112	114	113	111	111	109	108	107	105	104	104	102	101	101	101	99
2	3	114	111	109	108	112	110	108	106	107	105	104	103	102	101	102	101	100	99	98
3	4	112	109	106	104	110	108	105	104	105	103	102	101	102	101	101	100	99	98	97
4	5	110	107	104	102	109	106	103	102	104	102	101	100	102	101	99	98	97	96	95
5	6	109	105	102	100	108	104	102	100	103	101	99	101	100	98	100	98	97	96	95
6	7	107	104	101	99	106	103	100	99	102	100	98	101	99	98	100	98	97	96	95
7	8	106	102	100	98	105	102	99	98	101	99	97	100	98	97	99	98	96	95	94
8	9	105	101	99	97	104	101	99	97	100	98	97	99	98	96	99	97	96	95	94
9	10	104	100	98	96	104	100	98	96	99	97	96	99	97	96	98	97	96	95	94
10	11	103	100	97	96	103	99	97	96	99	97	95	98	97	95	98	96	95	94	93

## ColorReach Powercore gen2 13° spread lens, half unit

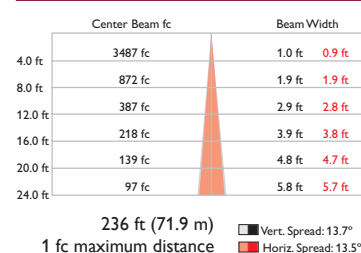
LED	Lumens	Efficacy
RGB	3756	27.4



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	3672	97.7
0- 40	3720	99.0
0- 60	3756	100.0
0- 90	3756	100.0
90-180	0	0.0
0-180	3756	100.0

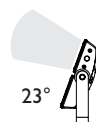
### Coefficients Of Utilization - Zonal Cavity Method

RC RW		Effective Floor Cavity Reflectance: 20%																		
		80				70				50				30				10		
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
0	119119119119	116116116116	111111111111	106106106	102102102	100														
1	116114113111	114112111110	108107106	105104103	101101100	99														
2	113111108106	111109107105	106104103	103102101	101100 99	97														
3	111108105103	109106104102	104102100	102100 99	100 98 97	96														
4	109105102100	108104101 99	102100 98	100 99 97	99 97 96	95														
5	107103100 98	106102 99 97	101 98 97	99 97 96	98 96 95	94														
6	105101 98 96	104100 98 96	99 97 95	98 96 95	97 95 94	93														
7	104 99 97 94	103 99 96 94	98 96 94	97 95 93	96 94 93	92														
8	103 98 95 93	102 98 95 93	97 94 93	96 94 92	95 93 92	91														
9	101 97 94 92	101 96 94 92	96 93 92	95 93 92	94 93 91	91														
10	100 96 93 91	99 95 93 91	95 92 91	94 92 91	94 92 90	90														

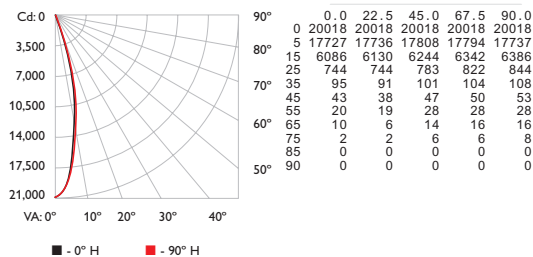
For lux multiply fc by 10.7

## ColorReach Powercore gen2 23° spread lens, half unit

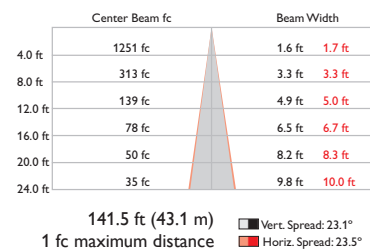
LED	Lumens	Efficacy
RGB	3812	27.8



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

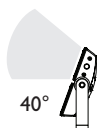
ZONE	LUMENS	%FIXT
0 - 30	3663	96.1
0 - 40	3735	98.0
0 - 60	3793	99.5
0 - 90	3812	100.0
90-180	0	0.0
0-180	3812	100.0

### Coefficients Of Utilization - Zonal Cavity Method

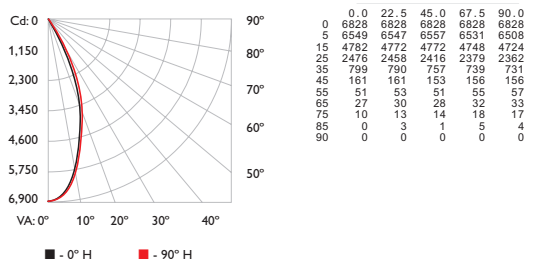
		Effective Floor Cavity Reflectance: 20%									
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	111111111111	106106106	102102102	100					
1	115113111110	113111109108	107106105	103102101	100	99	99	97	98	96	95
2	111108105103	109106104101	103101	99	100	99	97	98	96	95	94
3	108104100	97	106102	99	97	100	97	95	98	95	94
4	105100	96	93	103	99	95	93	97	94	92	91
5	102	96	93	90	101	96	92	89	94	91	88
6	99	93	89	87	98	93	89	86	91	88	86
7	97	91	87	84	96	90	86	84	89	86	83
8	94	88	84	82	93	88	84	81	87	83	81
9	92	86	82	79	91	85	82	79	85	81	79
10	90	84	80	77	89	83	80	77	83	79	76

## ColorReach Powercore gen2 40° spread lens, half unit

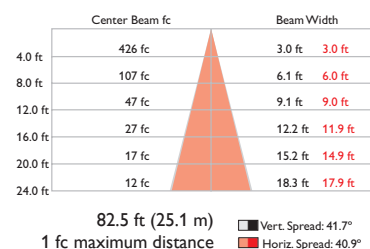
LED	Lumens	Efficacy
RGB	3751	27.4



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0 - 30	3017	80.4
0 - 40	3516	93.7
0 - 60	3702	98.7
0 - 90	3751	100.0
90-180	0	0.0
0-180	3751	100.0

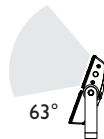
### Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	111111111	106106106	102102102	100					
1	114111109107	11109107105	105103102	101100	99	98	97	96	94	92	90
2	109104100	97	107102	99	96	99	96	94	96	94	90
3	104	98	93	89	102	96	92	89	94	90	87
4	99	92	87	83	97	91	86	83	89	85	83
5	95	87	82	78	93	86	81	77	84	80	78
6	91	82	77	73	89	82	77	73	80	76	72
7	87	78	73	69	85	78	72	69	76	72	68
8	83	74	69	65	82	74	69	65	73	68	65
9	80	71	66	62	79	70	65	62	70	65	62
10	77	68	62	59	76	67	62	59	67	62	59

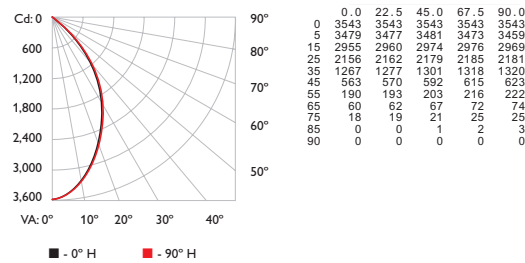
For lux multiply fc by 10.7

## ColorReach Powercore gen2 63° spread lens, half unit

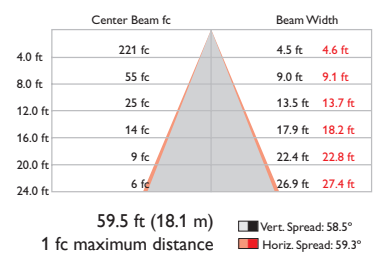
LED	Lumens	Efficacy
RGB	3709	27.1



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

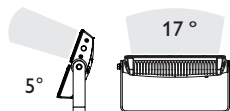
ZONE	LUMENS	%FIXT
0- 30	2146	57.8
0- 40	2956	79.7
0- 60	3613	97.4
0- 90	3709	100.0
90-180	0	0.0
0-180	3709	100.0

### Coefficients Of Utilization - Zonal Cavity Method

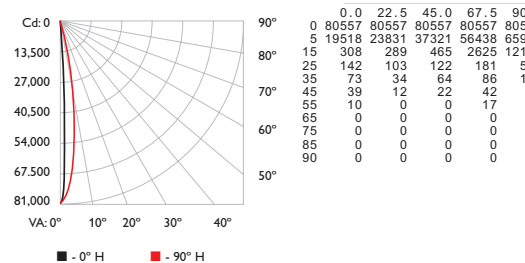
		Effective Floor Cavity Reflectance: 20%											
RC	RW	80			70			50			30		
		70	50	30	10	70	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100							
1	113110107104	110107105103	10310199	1009896	969594	92							
2	1061019692	104999591	969289	939087	908785	84							
3	100938782	98918682	888480	868279	848178	76							
4	94857974	92847874	827773	807672	787471	70							
5	89797368	87787267	767167	757066	736966	64							
6	83736762	82736662	716561	706561	686460	59							
7	79686257	77686157	666157	656056	645956	54							
8	75645753	73635753	625652	615652	605552	50							
9	71605349	69595349	585349	575249	575248	47							
10	67565046	66565046	554946	544945	534945	44							

## ColorReach Powercore gen2 5° x 17° spread lens, half unit

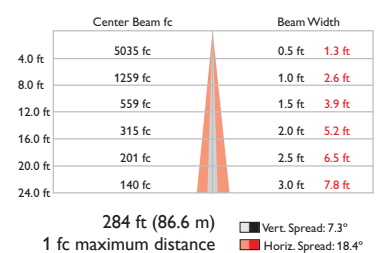
LED	Lumens	Efficacy
RGB	3814	27.9



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	3734	97.9
0- 40	3781	99.1
0- 60	3814	100.0
0- 90	3814	100.0
90-180	0	0.0
0-180	3814	100.0

### Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%											
RC	RW	80			70			50			30		
		70	50	30	10	70	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100							
1	116114113111	114112111110	108107106	105104103	101101100	99							
2	113111108106	111109107105	106104103	103102101	10110099	97							
3	111108105103	109106104102	104102100	10210099	1009997	96							
4	109105102100	10810410199	10210098	1009997	999796	95							
5	10710310098	1061029997	1019897	999796	989695	94							
6	1051019896	1041009896	999795	989695	979594	93							
7	104999795	103999694	989694	979593	969493	92							
8	103989593	102989593	979493	969492	959492	91							
9	101979492	101969492	969392	959392	959391	91							
10	100969391	99959391	959291	949291	949291	90							

For lux multiply fc by 10.7



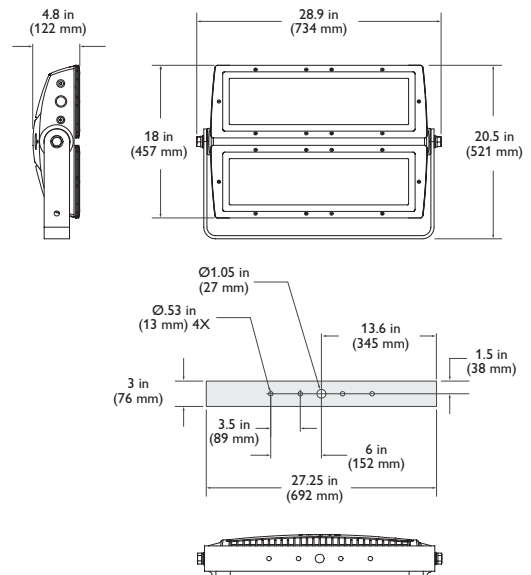
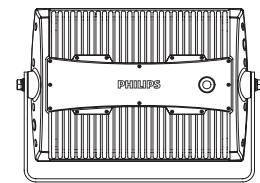
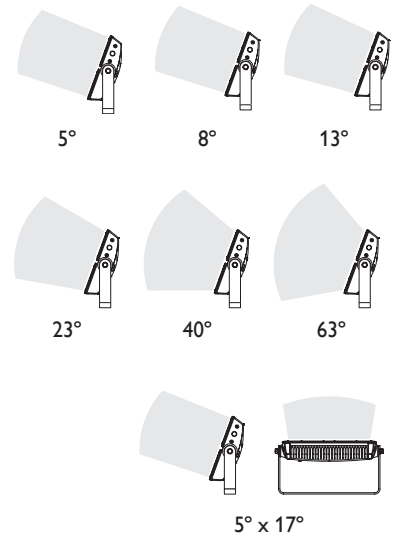
# Specifications

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

Item	Specification	Details
Output	Beam Angle	5° primary optic (no spread lens) 8° / 13° / 23° / 40° / 63° / 5° x 17° (asymmetric) spread lenses
	Lumens*	8,488 (full unit, no spread lens)
	LED Channels	Red / Green / Blue
	Mixing Distance	50 ft (15.2 m) to uniform light
	Lumen Maintenance†	100,000 hours L50 @ 25° C    85,000 hours L50 @ 50° C
Electrical	Input Voltage	100 – 240 VAC, auto-switching, 50 / 60 Hz
	Power Consumption	290 W maximum at full output, steady state
Control	Interface	Data Enabler Pro (DMX / 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)	20.5 x 28.9 x 4.8 in (521 x 734 x 122 mm)
	Weight	75 lb (34 kg)
	Effective Projected Area (EPA)	0.42 m²
	Housing	Die-cast aluminium, powder-coated finish
	Lens	Tempered glass
	Fixture Connections	Integral male / female waterproof connector, 6 ft (1.8 m) unified power / data cable
	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	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick
	Environment	Dry / Damp / Wet Location, IP66

\* 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](http://www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf) for more information.



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## Fixture and Accessories

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

- One or more Data Enabler Pro devices.
- Any Philips controller, including Light System Manager, iPlayer 3, and ColorDial Pro, or a third-party controller.
- One 6 ft (1.8 m) leader cable to connect each ColorReach Powercore gen2 fixture to a junction box or Data Enabler Pro.
- 4-conductor copper wire to connect ColorReach Powercore gen2 fixtures in series or in parallel. Standard 12 AWG (2.05 mm) stranded wire is recommended

### Custom Configurations

In addition to the standard configurations listed here, custom configurations are also available with non-standard colors or color temperatures. See the ColorReach Powercore gen2 Ordering Information sheet at [www.philipscolorkinetics.com/ls/rgb/colorreach/](http://www.philipscolorkinetics.com/ls/rgb/colorreach/) for complete details.

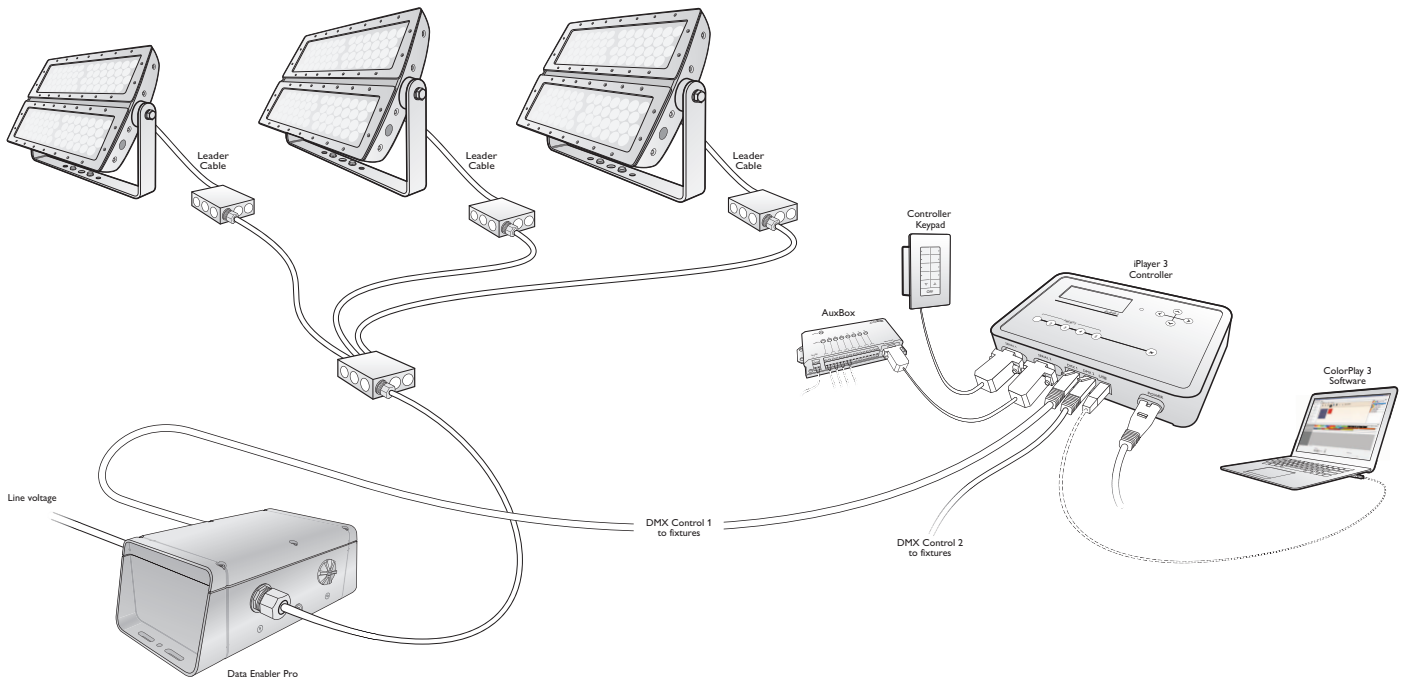
Component	Available Non-Standard Options
Color Temperature	2700K, 3000 K, 3500 K, 4000 K, 5500 K, 6000 K, 6500 K
Color	Royal Blue, Blue, Green, Amber, Red

Item	Type	Item Number	Philips 12NC
ColorReach Powercore gen2 <i>Includes 6 ft (1.8 m) leader cable</i>	UL / cUL and CE / PSE	123-000013-50	910503703934
Replacement Leader Cable 6 ft (1.8 m)	UL / cUL	108-000043-02	910503700453
	CE / PSE	108-000043-03	910503700454
ColorReach Powercore Spread Lens with bezel	13°	120-000068-00	910503700506
	23°	120-000068-01	910503700507
	40°	120-000068-02	910503700508
	63°	120-000068-03	910503700509
	Asymmetric (5° x 17°)	120-000068-04	910503700510
	8°	120-000068-05	910503700511
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.

### Typical ColorReach Powercore gen2 installation

For detailed wiring diagrams visit [www.philipscolorkinetics.com/support/wiring/ls\\_prod.html](http://www.philipscolorkinetics.com/support/wiring/ls_prod.html)



# Installation

ColorReach Powercore gen2, a high-performance exterior architectural floodlight with extended light projection, is designed to brilliantly and dynamically illuminate prominent, signature façades. Because each ColorReach Powercore gen2 fixture weighs 75 lb (34 kg), you may need two people to lift the fixture out of the box and position it in the mounting location. Optional accessory optics require the installation of both a spread lens and a bezel on each half of the fixture.

## Owner / User Responsibilities

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

✱ Refer to the ColorReach Powercore Installation Instructions for specific warning and caution statements.

## Installing in Damp or Wet Locations

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

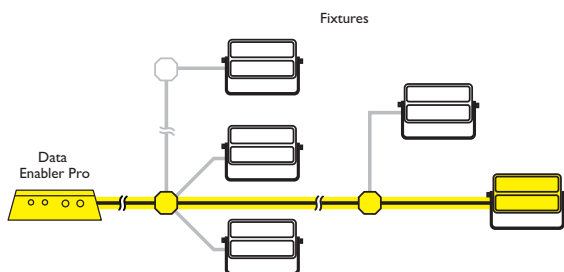
# Prepare for the Installation

1. Refer to the lighting design plan, architectural diagram, or other diagram that shows the physical layout of the installation to identify the locations of all switches, controllers, Data Enabler Pro devices, fixtures, and cables.

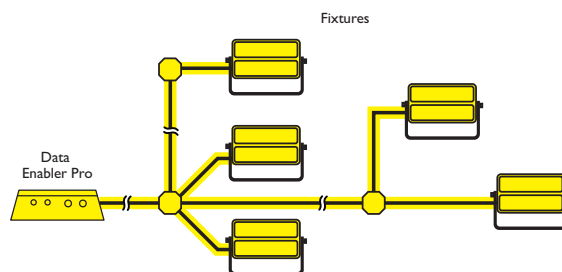
ColorReach Powercore gen2 fixtures can be installed in series or in parallel (wired to a common junction box). The maximum number of fixtures each Data Enabler Pro can support depends on specific configuration details such as fixture spacing, circuit size, line voltage, and method of connection (in series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

✱ To streamline the configuration of complex installations, record the serial number (DMX) or IP address (Ethernet) and location of each Data Enabler Pro..

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 length should not exceed 175 feet (53.3 m), and the total cable length per Data Enabler Pro should not exceed 400 feet (122 m).



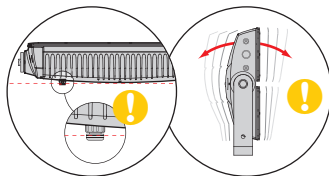
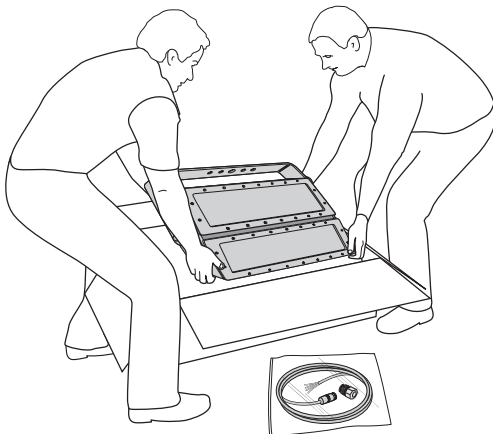
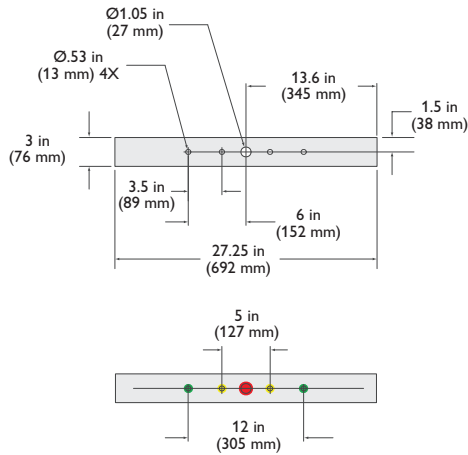
Data Integrity – maximum individual length 175 ft (53.3 m)



Data Integrity – total length 400 ft (122 m)



## Mounting bracket dimensions for pre-drilling



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

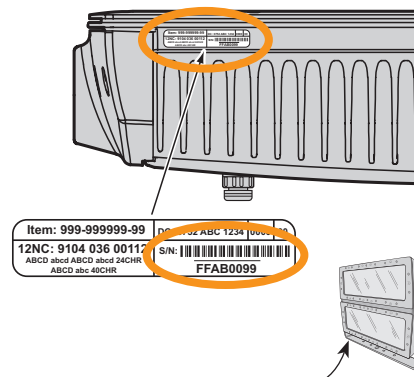
2. Ensure that the fixture mounting locations and substrates are sufficiently sturdy to bear the weight of each ColorReach Powercore gen2 fixture. Pre-drill holes in the mounting substrate if necessary, making reference to the mounting bracket dimensions. Use at least two screws to secure each fixture,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

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

3. Install all Data Enabler Pro devices, including any interfaces with controllers. Data Enabler Pro and external controllers send power and control signals to fixtures over the single leader cable.
4. Verify that all additional supporting equipment (switches, controllers) is in place.
5. Ensure that all additional parts and tools are available, including:
  - A 28 mm hex or adjustable wrench for adjusting the locking bolts on the fixture bracket.
  - One electrical junction box per fixture, rated for your application. (Refer to the junction box manufacturer's literature for additional items required for mounting or sealing.)
  - A sufficient length of 4-conductor copper wire. We recommend 12 AWG (2.05 mm) stranded wire.
  - Conduit as required.
  - Electronics-grade room temperature vulcanizing (RTV) silicone sealant.

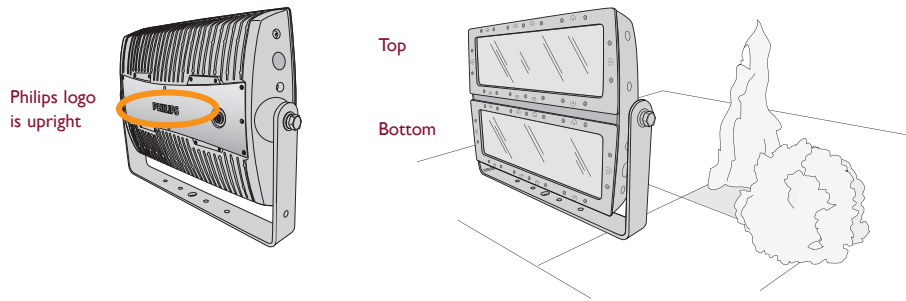
## Position and Mount Fixtures

1. Unpack ColorReach Powercore gen2 fixtures. Because each ColorReach Powercore gen2 fixture weighs 75 lb (34 kg), you may need two people to lift the fixture out of the box and position it in the mounting location.
2. Each ColorReach Powercore gen2 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.

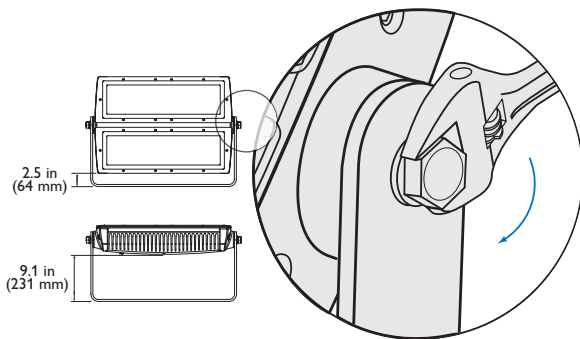


3. Assign each fixture to a position in the lighting design plan.
4. To streamline installation and aid in light show programming, you can affix a weatherproof label identifying the order or placement in the installation to an inconspicuous location on each light fixture's housing.

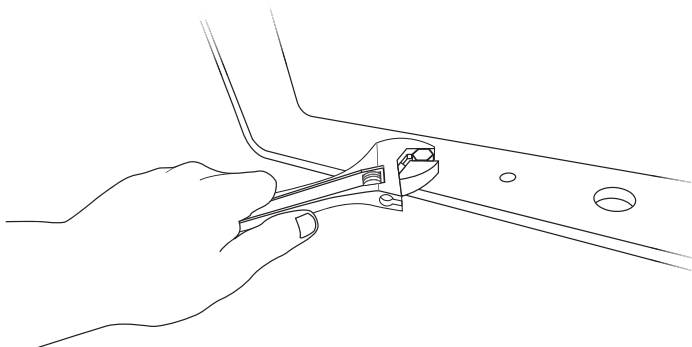
- Position each ColorReach Powercore gen2 fixture in its designated mounting location. Make sure the mounting area is clear of debris and other obstructions.



- Loosen the locking bolts, using a 28 mm hex or adjustable wrench, and rotate the fixture to access the mounting bracket. Tilting the fixture 90° affords 9.1 in (231 mm) clearance.

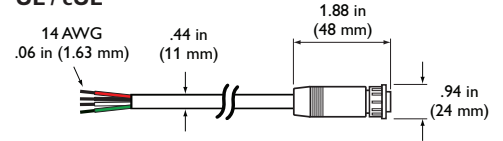


- If mounting holes have been pre-drilled, align the mounting bracket's screw holes with the pre-drilled holes. Mount the fixture bracket using hardware appropriate for the mounting substrate. Use at least two screws to secure each fixture, one on either side of the mounting bracket's central screw hole.

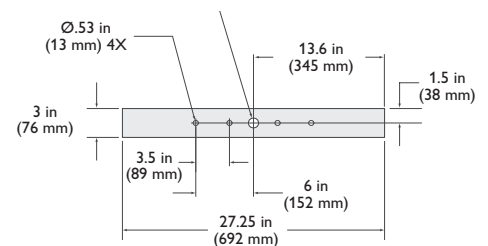
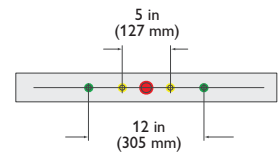
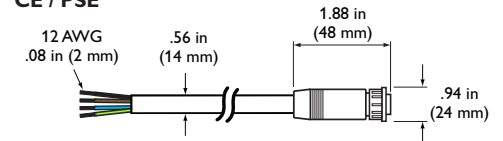


### Leader Cable connector dimensions

#### UL / cUL



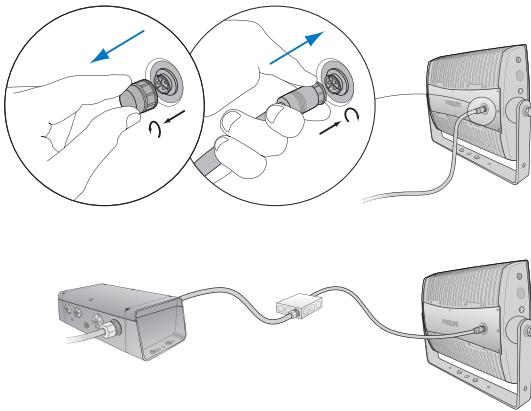
#### CE / PSE



## Connect the Fixtures

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

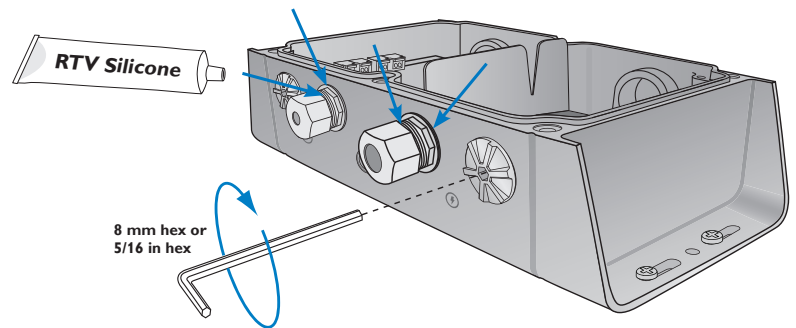
- Mount junction boxes in accordance with the lighting design plan.
- If installing fixtures in a series, pull 4-conductor copper wire between each junction box in the series.  
  
If installing fixtures in parallel, pull 4-conductor copper wire from a common junction box to each fixture's junction box.



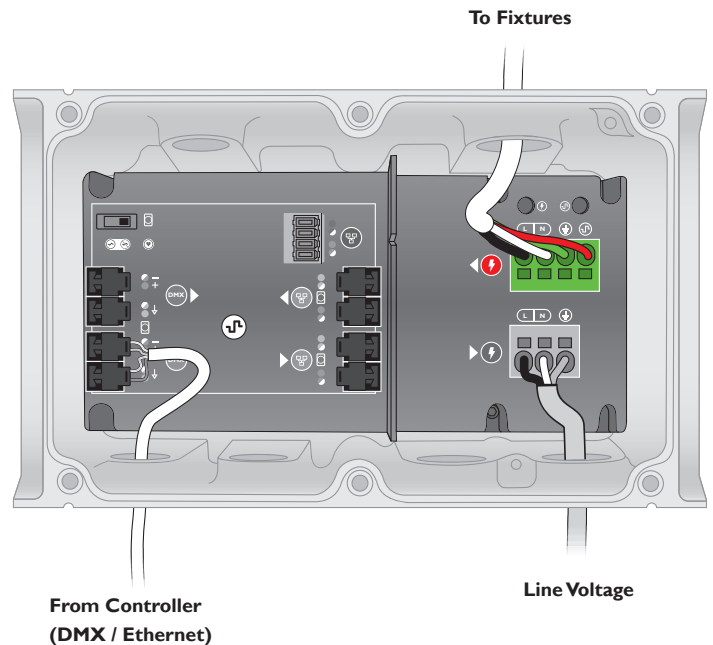
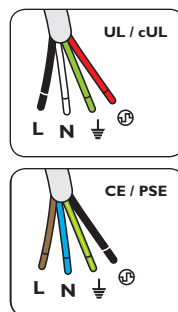
The maximum cable run from a Data Enabler Pro to any individual ColorReach Powercore gen2 fixture is 175 feet (53 m). When installing in parallel, the total cable length cannot exceed 400 feet (122 m).

3. If necessary, remove the connector cap from the port on the back of the ColorReach Powercore gen2 housing. Insert the leader cable into the port. Turn the leader cable's lock nut to the right until it locks into place.
4. Use wire nuts to connect line, neutral, ground, and data. If installing in series, connect the leader cable from each fixture to the fixture's junction box. If installing in parallel, connect the leader cable from each fixture to the lead wire from the Data Enabler Pro in the common junction box.
5. Tuck wire connections into the junction box.
6. Seal all junction boxes with electronics-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.

✱ Refer to the Data Enabler Pro Product Guide for complete installation and operation details.



7. Run the wiring from the first junction box in the series to the Data Enabler Pro, or, if installing in parallel, run the wiring from the common junction box to the Data Enabler Pro. Secure connections within the Data Enabler Pro housing.
8. Secure the Data Enabler Pro cover. Seal the Data Enabler Pro with electronics-grade RTV silicone sealant.

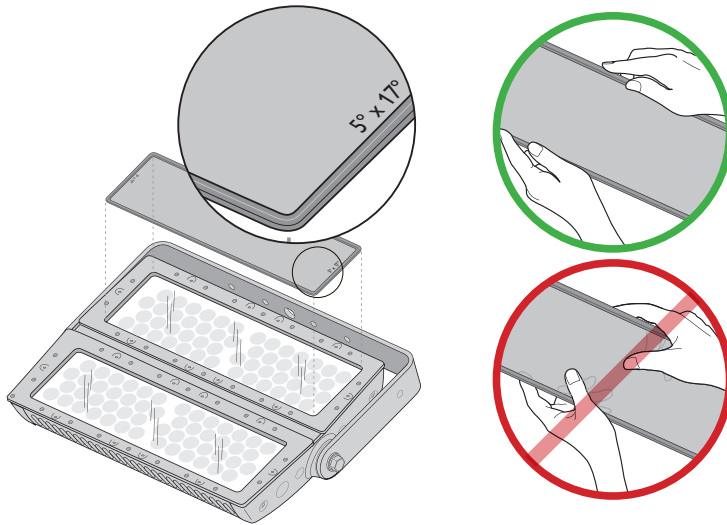




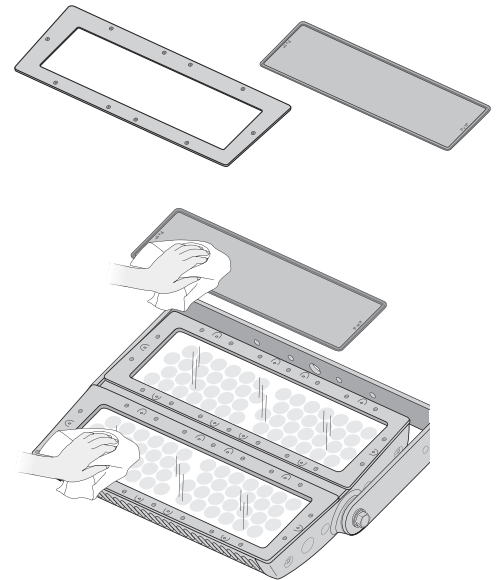
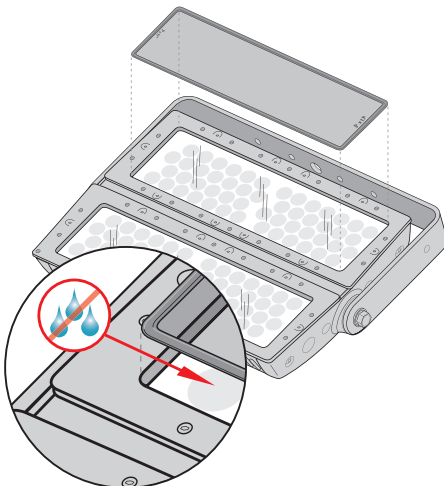
## Attach Spread Lenses (Optional)

Exchangeable ColorReach Powercore gen2 spread lenses of 8°, 13°, 23°, 40°, 63°, and an asymmetric 17° x 5° support a variety of photometric distributions for a multitude of applications, including spotlighting, wall grazing, and asymmetric wall washing. Each half of ColorReach Powercore gen2 can be individually addressed and controlled, and you can install different spread lenses on each half of the fixture's housing for precise control of light diffusion.

1. Unpack and confirm the contents of the box. Each box contains one lens kit, consisting of a spread lens with attached rubber gasket, and a bezel with 10 captured mounting screws.
2. Clean both sides of the spread lens and the face of the ColorReach Powercore gen2 housing, including glass surfaces, using a mild, non-abrasive cleaner. Ensure that all surfaces are dry, and that the gasket is properly fitted to the lens.
3. Position the spread lens so that the beam-angle designation on the side of the lens is face up. Handle the spread lens by the gasket, making sure not to touch or soil either surface of the spread lens.

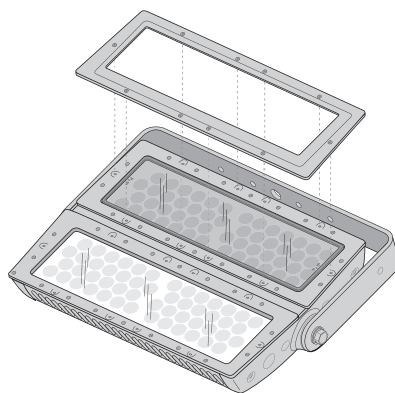


- 4 Place the spread lens on top of the ColorReach Powercore gen2 housing. Make sure that the spread lens and gasket are seated properly within the fixture housing. Also make sure that there is no moisture between the spread lens and the glass, as any moisture will compromise the effectiveness of the spread lens.

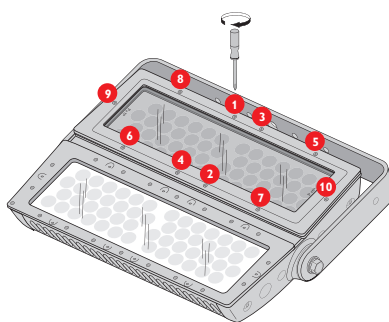


*\* For installation in extreme environments, refer to the Reach Spread Lens Kit Installation Instructions for details on sealing the spread lens and bezel to prohibit water ingress.*

5. Position the bezel over the spread lens.



6. With a standard #2 Phillips screwdriver, attach the bezel to the fixture housing using the provided screws. To ensure a watertight seal, tighten the screws to approximately 20 – 30 in-lbs (2.2 – 3.4 Nm) in the sequence shown below.



## Address and Configure the Fixtures

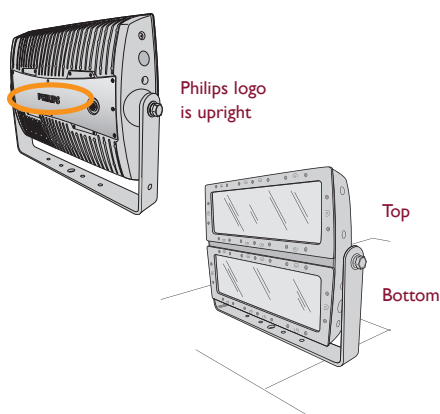
Make sure the power is ON before addressing and configuring fixtures.

ColorReach Powercore gen2 fixtures use DMX addresses to communicate with controllers. The number of DMX addresses each ColorReach Powercore gen2 fixture requires depends on the fixture's configuration.

ColorReach Powercore gen2 fixtures operate in 8-bit mode by default. You can configure fixtures to operate in 16-bit mode, which increases resolution for smoother dimming and more precise control. You can also configure fixtures to operate in full-fixture mode or half-fixture mode. In full-fixture mode, the top and bottom halves of the fixture work in unison (show the same light output simultaneously). In half-fixture mode, the two halves work independently (can show different light output simultaneously).

In 8-bit mode, fixtures use one DMX address per LED channel (one for red, one for green, and one for 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.

ColorReach Powercore gen2 fixtures come 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 addresses are not necessary, but if lights 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 your fixtures and sort them in a useful order.



\* You must use a 16-bit compatible controller to operate fixtures in 16-bit mode.

The following table shows the DMX channel assignments for the different possible ColorReach Powercore gen2 configurations, assuming a starting DMX address of 1.

## DMX Channel Assignments

8-Bit Mode												
Full-Fixture Mode	Top Half / Bottom Half											
	1				2				3			
	Red				Green				Blue			
Half-Fixture Mode	Top Half						Bottom Half					
	1		2		3		4		5		6	
	Red		Green		Blue		Red		Green		Blue	
16-Bit Mode												
Full-Fixture Mode	Top Half / Bottom Half											
	1		2		3		4		5		6	
	Red		Red		Green		Green		Blue		Blue	
Half-Fixture Mode	Top Half						Bottom Half					
	1	2	3	4	5	6	7	8	9	10	11	12
	Red	Red	Green	Green	Blue	Blue	Red	Red	Green	Green	Blue	Blue

You can switch between full-fixture mode and half-fixture mode, assign unique DMX addresses to fixtures, or set all fixtures to the same starting DMX address using QuickPlay Pro software. Fixtures are identified within QuickPlay Pro by serial number, so you will need the layout grid that you created when you recorded the serial numbers of your fixtures during installation planning.

- In Ethernet installations, you can use QuickPlay Pro with a computer connected directly to a switch within the light system's network. QuickPlay Pro can automatically discover all fixtures, controllers, and Data Enabler Pro devices for quick configuration.
- In DMX installations, you can address and configure 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.

For complete details on addressing and configuration, refer to *Addressing and Configuration using QuickPlay Pro* at [www.philipscolorkinetics.com/support/addressing](http://www.philipscolorkinetics.com/support/addressing).

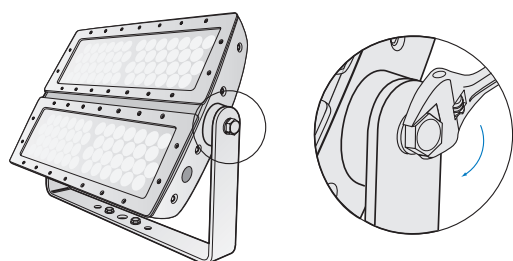
✱ You can download QuickPlay Pro from [www.philipscolorkinetics.com/support/addressing/](http://www.philipscolorkinetics.com/support/addressing/)

## Aim and Lock the Fixtures

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

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

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



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