



ColorReach Powercore

Premium long-throw exterior LED floodlight with intelligent color light

PHILIPS

COLOR KINETICS

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ColorReach Powercore high-performance LED fixtures are premium exterior long-throw dynamic color changing luminaires for lighting tall buildings, bridges, and iconic structures. ColorReach Powercore offers a range of accessories that allow for customizable beam angles for floodlighting, spotlighting, wall washing, and grazing, along with the efficiency and cost-effectiveness of Powercore technology in a rugged die-cast aluminum housing.

- Improved color mixing—Updated ColorReach Powercore provides more punch and light quality for exterior long throw applications. End users will appreciate the clean mixed beam with higher application efficiency, allowing placement of light exactly where desired.
- Unparalleled light output—ColorReach Powercore offers unprecedented ouput and punch for LED-based illumination of large-scale structures and objects.
- Expanded customization with a wide range of new Philips accessory options. To complement the native 5° lens, six standard secondary diffuser lenses can customize the fixture to produce 8°, 13°, 23°, 43°, 63°, and 5° x 17° (asymmetric) beam angles. The option to add or combine a louver, full glare shield, or half glare shield creates new aesthetic possibilities for designers and architects.
- Superior color consistency and accuracy—Optibin, an advanced binning algorithm, sets a new standard for the color consistency and uniformity of LED sources used in manufacturing.
- Integrates patented Powercore technology that controls power output to fixtures directly from line voltage—rapidly, efficiently, and accurately. The Philips Color Kinetics Data Enabler Pro merges line voltage with control data and delivers them to fixtures over a single standard cable, dramatically simplifying installation and lowering total system cost.
- 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 of 100 – 277 VAC.
- Works seamlessly with the complete Philips Color Kinetics line of controllers, including ColorDial Pro, iPlayer 3, and Light System Manager—as well as third-party controllers.



Unique split design supports diffuser combinations

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 the beam angle hundreds of feet up the building's walls. New accessories, including a new louver and two glare shields, provide extra flexibility to help with dark sky compliance, discomfort glare, and trespass light.

A New Look for the Next Century

Completed in 1915, nine years after a devastating earthquake, the steadfast San Francisco City Hall has been a constant participant in the city's historic events. Known as the People's Palace, the impressive dome, which is taller than the United States capitol dome, celebrated its centennial anniversary in 2015 with an event at the U.S. Conference of Mayors Annual Meeting.

The venerable city hall is entering a new era of sustainability and forward-thinking technology. It is the oldest U.S. building to achieve LEED Platinum Certification for Building Operations and Maintenance in Existing Buildings. With significant water and energy savings, San Francisco City Hall hopes to set an example for other cities' civic centers.



Photography: Darius Kuzmickas

Contributing to the LEED certification is the new LED lighting system from Philips Color Kinetics. This lighting system saves money and energy, and promotes civic engagement, all goals of the city hall façade lighting project.



Photography: Darius Kuzmickas



Photography: Darius Kuzmickas



Photography: Darius Kuzmickas

The former lighting system consumed over 31,600 watts to light the façade. If the city wanted to use colored lighting to highlight a special event or cause, several people had to spend hours placing theatrical gels on each of the 220 fixtures.

The new Philips Color Kinetics lighting system uses a combination of ColorReach Powercore, ColorBlast Powercore, and iW Blast Powercore fixtures to produce color-changing and dynamic white light. The fixtures work harmoniously to project high-quality light on the intricate details of the historic façade, bringing out its architectural details and helping the hall remain a center of activity. With colleagues from Arup, lighting designer Toby Lewis contributed her precision and artistry to the final lighting design. They created a design that allows both white-light illumination and dynamic, colorful light shows for celebrations and special events.

The Philips LED lighting system consumes 14,120 watts while lighting the façade, less than half of the previous system. The efficiency, long useful life, and flexibility of control offered by a Philips LED lighting system all contributed to the decision to switch from conventional light sources to an advanced technology.

San Francisco's City Hall is entering a new century with its traditional focus on civic issues. City officials are conscious of how a colorful city hall can boost civic engagement while remaining mindful of its environmental footprint. The new lighting system promises to reduce exterior lighting costs by 70%.

Photometrics

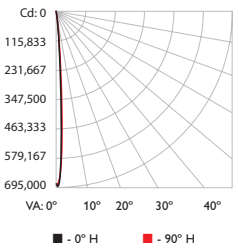
Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

ColorReach Powercore RGBA 5° native lens, full unit

Lumens	Efficacy
10,144	42.2

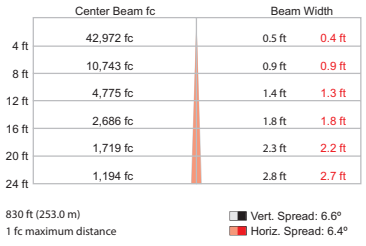


Polar Candela Distribution



	0	25	45	70	90
0	687545	687545	687545	687545	687545
5	132050	140832	142429	141887	142917
15	0	0	0	0	0
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



830 ft (253.0 m)
1 fc maximum distance

Vert. Spread: 6.6°
Horiz. Spread: 6.4°

Zonal Lumen

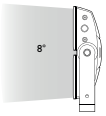
Zone	Lumens	% Luminaire
0-30	10,143.9	100.0%
0-40	10,143.9	100.0%
0-60	10,143.9	100.0%
0-90	10,143.9	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,143.9	100.0%

Coefficients Of Utilization - Zonal Cavity Method

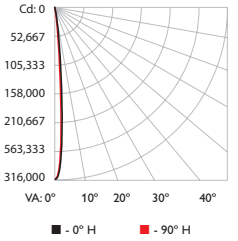
	Effective Floor Cavity Reflectance:																					
RCC %:	80					70					50				30				10			0
RW %:	70	50	30	0		70	50	30	0		50	30	20		50	30	20		50	30	20	0
RCR:																						
0	1.19	1.19	1.19	1.19		1.16	1.16	1.16	1.00		1.11	1.11	1.11		1.06	1.06	1.06		1.02	1.02	1.02	1.00
1	1.17	1.15	1.14	1.13		1.14	1.13	1.12	1.00		1.09	1.08	1.08		1.06	1.05	1.05		1.02	1.02	1.02	1.00
2	1.15	1.12	1.11	1.09		1.13	1.11	1.09	1.00		1.08	1.07	1.05		1.05	1.04	1.03		1.03	1.02	1.01	1.00
3	1.13	1.10	1.08	1.06		1.12	1.09	1.07	1.00		1.07	1.05	1.04		1.05	1.03	1.02		1.03	1.02	1.01	1.00
4	1.12	1.09	1.06	1.05		1.11	1.08	1.06	1.00		1.06	1.04	1.03		1.04	1.03	1.02		1.03	1.02	1.01	1.00
5	1.11	1.07	1.05	1.04		1.10	1.07	1.05	1.00		1.05	1.04	1.02		1.04	1.03	1.02		1.03	1.02	1.01	1.00
6	1.10	1.07	1.04	1.03		1.09	1.06	1.04	1.00		1.05	1.03	1.02		1.04	1.02	1.01		1.03	1.02	1.01	1.00
7	1.09	1.06	1.04	1.02		1.08	1.05	1.03	1.00		1.04	1.03	1.01		1.04	1.02	1.01		1.03	1.02	1.01	1.00
8	1.08	1.05	1.03	1.02		1.08	1.05	1.03	1.00		1.04	1.02	1.01		1.03	1.02	1.01		1.03	1.01	1.01	1.00
9	1.08	1.05	1.03	1.01		1.07	1.04	1.02	1.00		1.04	1.02	1.01		1.03	1.02	1.01		1.03	1.01	1.00	1.00
10	1.07	1.04	1.02	1.01		1.07	1.04	1.02	1.00		1.03	1.02	1.01		1.03	1.02	1.01		1.03	1.01	1.00	1.00

ColorReach Powercore RGBA 8° diffuser lens, full unit

Lumens	Efficacy
10,013	41.6

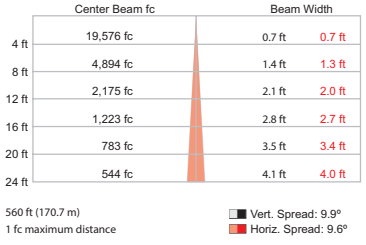


Polar Candela Distribution



	0	25	45	70	90
0	313213	313213	313213	313213	313213
5	153885	149213	144566	135355	134763
15	0	0	0	0	0
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



560 ft (170.7 m)
1 fc maximum distance

Vert. Spread: 9.9°
Horiz. Spread: 9.6°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	10,012.9	100.0%
0-40	10,012.9	100.0%
0-60	10,012.9	100.0%
0-90	10,012.9	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,012.9	100.0%

Coefficients Of Utilization - Zonal Cavity Method

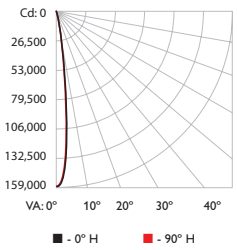
	Effective Floor Cavity Reflectance:																					
RCC %:	80					70					50				30				10			0
RW %:	70	50	30	0		70	50	30	0		50	30	20		50	30	20		50	30	20	0
RCR:																						
0	1.19	1.19	1.19	1.19		1.16	1.16	1.16	1.00		1.11	1.11	1.11		1.06	1.06	1.06		1.02	1.02	1.02	1.00
1	1.17	1.15	1.14	1.13		1.14	1.13	1.12	1.00		1.09	1.08	1.07		1.06	1.05	1.04		1.02	1.02	1.01	1.00
2	1.15	1.12	1.10	1.09		1.13	1.11	1.09	1.00		1.08	1.06	1.05		1.05	1.04	1.03		1.02	1.02	1.01	1.00
3	1.13	1.10	1.08	1.06		1.11	1.09	1.07	1.00		1.06	1.05	1.03		1.04	1.03	1.02		1.02	1.01	1.00	0.99
4	1.11	1.08	1.06	1.04		1.10	1.07	1.05	1.00		1.05	1.04	1.02		1.04	1.02	1.01		1.02	1.01	1.00	0.99
5	1.10	1.07	1.04	1.03		1.09	1.06	1.04	0.99		1.05	1.03	1.01		1.03	1.02	1.01		1.02	1.01	1.00	0.99
6	1.09	1.06	1.03	1.02		1.08	1.05	1.03	0.99		1.04	1.02	1.01		1.03	1.01	1.00		1.02	1.01	1.00	0.99
7	1.08	1.05	1.03	1.01		1.07	1.04	1.02	0.99		1.03	1.02	1.00		1.03	1.01	1.00		1.02	1.00	0.99	0.99
8	1.07	1.04	1.02	1.00		1.07	1.04	1.02	0.99		1.03	1.01	1.00		1.02	1.01	1.00		1.02	1.00	0.99	0.99
9	1.07	1.03	1.01	1.00		1.06	1.03	1.01	0.99		1.02	1.01	1.00		1.02	1.00	0.99		1.01	1.00	0.99	0.99
10	1.06	1.03	1.01	1.00		1.06	1.03	1.01	0.99		1.02	1.00	0.99		1.02	1.00	0.99		1.01	1.00	0.99	0.98

ColorReach Powercore RGBA 13° diffuser lens, full unit

Lumens	Efficacy
9,465	39.3

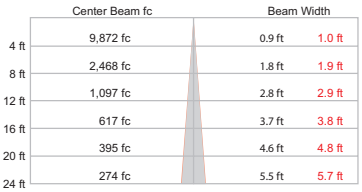


Polar Candela Distribution



	0	25	45	70	90
0	157955	157955	157955	157955	157955
5	109812	108674	108841	109320	110271
15	3726	3489	3719	3969	4204
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



398 ft (121.3 m)
1 fc maximum distance

Vert. Spread: 13.2°
Horiz. Spread: 13.6°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	9,464.8	100.0%
0-40	9,464.8	100.0%
0-60	9,464.8	100.0%
0-90	9,464.8	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	9,464.8	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

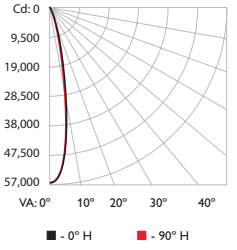
RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.16	1.15	1.13	1.12	1.14	1.13	1.11	0.99	1.09	1.08	1.07	1.05	1.04	1.04	1.02	1.01	1.01	0.99
2	1.14	1.11	1.09	1.07	1.12	1.10	1.08	0.99	1.07	1.05	1.04	1.04	1.03	1.02	1.01	1.01	1.00	0.99
3	1.12	1.09	1.06	1.04	1.10	1.07	1.05	0.98	1.05	1.03	1.02	1.03	1.02	1.00	1.01	1.00	0.99	0.98
4	1.10	1.07	1.04	1.02	1.09	1.06	1.03	0.98	1.04	1.02	1.00	1.02	1.00	0.99	1.00	0.99	0.98	0.97
5	1.09	1.05	1.02	1.00	1.07	1.04	1.02	0.97	1.03	1.00	0.99	1.01	0.99	0.98	1.00	0.98	0.97	0.97
6	1.07	1.03	1.01	0.99	1.06	1.03	1.00	0.96	1.01	0.99	0.98	1.00	0.99	0.97	0.99	0.98	0.97	0.96
7	1.06	1.02	0.99	0.98	1.05	1.01	0.99	0.96	1.00	0.98	0.97	1.00	0.98	0.96	0.99	0.97	0.96	0.95
8	1.05	1.01	0.98	0.97	1.04	1.00	0.98	0.95	1.00	0.98	0.96	0.99	0.97	0.96	0.98	0.97	0.95	0.95
9	1.04	1.00	0.97	0.96	1.03	0.99	0.97	0.95	0.99	0.97	0.95	0.98	0.96	0.95	0.98	0.96	0.95	0.94
10	1.03	0.99	0.97	0.95	1.02	0.99	0.96	0.94	0.98	0.96	0.95	0.98	0.96	0.94	0.97	0.95	0.94	0.94

ColorReach Powercore RGBA 23° diffuser lens, full unit

Lumens	Efficacy
9,320	38.7

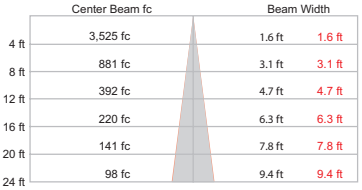


Polar Candela Distribution



	0	25	45	70	90
0	56399	56399	56399	56399	56399
5	50365	50466	50223	49686	49764
15	15345	14912	14857	14767	14343
25	1433	1392	1320	1263	1255
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



238 ft (72.5 m)
1 fc maximum distance

Vert. Spread: 22.1°
Horiz. Spread: 22.2°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	9,312.8	99.9%
0-40	9,319.7	100.0%
0-60	9,319.7	100.0%
0-90	9,319.7	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	9,319.7	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

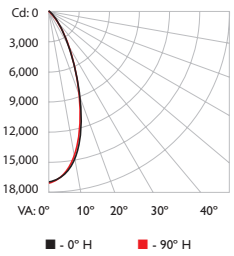
RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.15	1.14	1.12	1.10	1.13	1.11	1.10	0.98	1.07	1.06	1.05	1.04	1.03	1.02	1.00	1.00	0.99	0.98
2	1.12	1.09	1.06	1.04	1.10	1.07	1.05	0.96	1.04	1.02	1.01	1.01	1.00	0.99	0.99	0.98	0.97	0.95
3	1.09	1.05	1.02	0.99	1.08	1.04	1.01	0.94	1.01	0.99	0.97	0.99	0.97	0.96	0.97	0.96	0.94	0.93
4	1.06	1.02	0.98	0.96	1.05	1.01	0.98	0.92	0.99	0.96	0.94	0.97	0.95	0.93	0.95	0.94	0.92	0.91
5	1.04	0.99	0.95	0.93	1.03	0.98	0.95	0.90	0.96	0.94	0.91	0.95	0.93	0.91	0.94	0.92	0.90	0.89
6	1.02	0.96	0.92	0.90	1.00	0.95	0.92	0.88	0.94	0.91	0.89	0.93	0.90	0.89	0.92	0.90	0.88	0.87
7	0.99	0.94	0.90	0.88	0.98	0.93	0.90	0.86	0.92	0.89	0.87	0.91	0.88	0.87	0.90	0.88	0.86	0.85
8	0.97	0.91	0.88	0.85	0.96	0.91	0.88	0.84	0.90	0.87	0.85	0.89	0.87	0.85	0.89	0.86	0.84	0.84
9	0.95	0.89	0.86	0.84	0.94	0.89	0.86	0.83	0.88	0.85	0.83	0.88	0.85	0.83	0.87	0.84	0.83	0.82
10	0.93	0.87	0.84	0.82	0.92	0.87	0.84	0.81	0.86	0.84	0.81	0.86	0.83	0.81	0.85	0.83	0.81	0.80

ColorReach Powercore RGBA
43° diffuser lens, full unit

Lumens	Efficacy
9,200	38.2

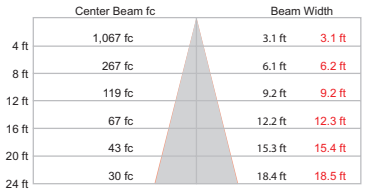


Polar Candela Distribution



	0	25	45	70	90
0	17069	17069	17069	17069	17069
5	16607	16381	16393	16296	16284
15	12160	12007	11815	11910	11717
25	6064	5904	5835	5823	5903
35	1832	1788	1786	1821	1871
45	315	314	306	308	318
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



130.5 ft (39.8 m)
1 fc maximum distance

Vert. Spread: 41.9°
Horiz. Spread: 42.1°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	7,712.0	83.8%
0-40	8,926.7	97.0%
0-60	9,200.1	100.0%
0-90	9,200.1	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	9,200.1	100.0%

Coefficients Of Utilization - Zonal Cavity Method

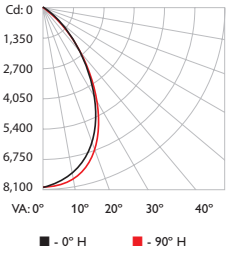
	Effective Floor Cavity Reflectance:															
RCC %:	80				70				50			30			10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.12	1.09	1.07	1.12	1.10	1.08	0.95	1.05	1.04	1.02	1.02	1.01	0.99	0.98	0.97	0.97	0.95
2	1.09	1.05	1.01	0.98	1.07	1.03	1.00	0.90	1.00	0.97	0.95	0.97	0.95	0.93	0.94	0.93	0.91	0.90
3	1.05	0.99	0.95	0.91	1.03	0.98	0.94	0.86	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.88	0.86	0.85
4	1.00	0.94	0.89	0.85	0.98	0.92	0.88	0.81	0.90	0.87	0.83	0.88	0.85	0.83	0.87	0.84	0.82	0.80
5	0.96	0.89	0.83	0.80	0.94	0.88	0.83	0.77	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.77	0.76
6	0.92	0.84	0.79	0.75	0.91	0.83	0.78	0.73	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.72
7	0.88	0.80	0.75	0.71	0.87	0.79	0.74	0.70	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.68
8	0.85	0.76	0.71	0.67	0.83	0.76	0.71	0.66	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.65
9	0.81	0.73	0.67	0.64	0.80	0.72	0.67	0.63	0.71	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.62
10	0.78	0.69	0.64	0.61	0.77	0.69	0.64	0.60	0.68	0.64	0.61	0.68	0.63	0.61	0.67	0.63	0.60	0.59

ColorReach Powercore RGBA
63° diffuser lens, full unit

Lumens	Efficacy
9,202	38.2

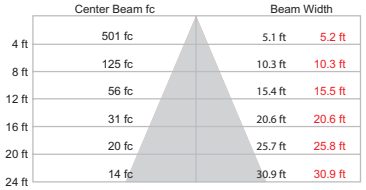


Polar Candela Distribution



	0	25	45	70	90
0	8018	8018	8018	8018	8018
5	7847	7920	7947	7932	7990
15	7016	7127	7196	7255	7345
25	5522	5602	5651	5725	5862
35	3441	3427	3428	3443	3512
45	1476	1409	1360	1329	1353
55	441	406	372	340	336
65	105	93	77	56	51
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



89.5 ft (27.3 m)
1 fc maximum distance

Vert. Spread: 65.5°
Horiz. Spread: 65.6°

Zonal Lumen

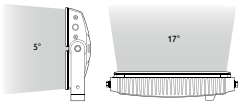
Zone	Lumens	% Luminaire
0-30	5,376.0	58.4%
0-40	7,573.1	82.3%
0-60	9,112.0	99.0%
0-90	9,202.1	100.0%
60-90	90.1	1.0%
70-100	2.3	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	9,202.1	100.0%

Coefficients Of Utilization - Zonal Cavity Method

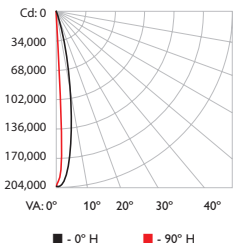
	Effective Floor Cavity Reflectance:															
RCC %:	80				70				50			30			10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.13	1.10	1.07	1.05	1.10	1.08	1.05	0.93	1.04	1.02	1.00	1.00	0.98	0.97	0.97	0.95	0.94	0.92
2	1.07	1.01	0.97	0.93	1.04	0.99	0.95	0.85	0.96	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.84
3	1.00	0.93	0.88	0.83	0.98	0.92	0.87	0.78	0.89	0.85	0.81	0.87	0.83	0.80	0.84	0.81	0.79	0.77
4	0.95	0.86	0.80	0.75	0.93	0.85	0.79	0.72	0.83	0.78	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.71
5	0.89	0.80	0.73	0.69	0.87	0.79	0.73	0.66	0.77	0.72	0.68	0.75	0.71	0.67	0.74	0.70	0.66	0.65
6	0.84	0.74	0.68	0.63	0.82	0.73	0.67	0.61	0.72	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.61	0.60
7	0.79	0.69	0.62	0.58	0.78	0.68	0.62	0.56	0.67	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.55
8	0.75	0.64	0.58	0.53	0.74	0.64	0.58	0.52	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.51
9	0.71	0.60	0.54	0.50	0.70	0.60	0.54	0.49	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.47
10	0.67	0.57	0.50	0.46	0.66	0.56	0.50	0.46	0.55	0.50	0.46	0.55	0.49	0.46	0.54	0.49	0.46	0.44

ColorReach Powercore RGBA
5° x 17° asymmetric lens, full unit

Lumens	Efficacy
9,442	39.2

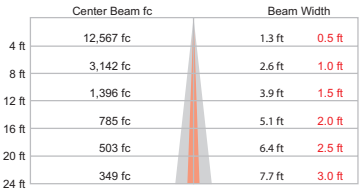


Polar Candela Distribution



	0	25	45	70	90
0	201072	201072	201072	201072	201072
5	174050	128533	84658	56853	50726
15	36140	5248	221	0	0
25	658	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



448 ft (136.6 m)
1 fc maximum distance

Vert. Spread: 18.3°
Horiz. Spread: 7.2°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	9,441.8	100.0%
0-40	9,441.8	100.0%
0-60	9,441.8	100.0%
0-90	9,441.8	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	9,441.8	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance:	20%														
RCC %:	80				70				50			30		10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	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
1	1.16	1.15	1.13	1.12	1.14	1.13	1.11	0.99	1.09	1.08	1.07	1.05	1.04	1.04	1.02	1.01	1.01	0.99
2	1.14	1.11	1.09	1.07	1.12	1.10	1.08	0.98	1.06	1.05	1.04	1.04	1.03	1.02	1.01	1.00	0.99	0.98
3	1.12	1.08	1.06	1.04	1.10	1.07	1.05	0.98	1.05	1.03	1.01	1.03	1.01	1.00	1.01	0.99	0.98	0.97
4	1.10	1.06	1.03	1.01	1.08	1.05	1.03	0.97	1.03	1.01	1.00	1.02	1.00	0.99	1.00	0.99	0.97	0.97
5	1.08	1.04	1.01	0.99	1.07	1.03	1.01	0.96	1.02	1.00	0.98	1.01	0.99	0.97	0.99	0.98	0.97	0.96
6	1.07	1.03	1.00	0.98	1.06	1.02	0.99	0.96	1.01	0.99	0.97	1.00	0.98	0.96	0.99	0.97	0.96	0.95
7	1.05	1.01	0.98	0.97	1.04	1.01	0.98	0.95	1.00	0.97	0.96	0.99	0.97	0.95	0.98	0.96	0.95	0.94
8	1.04	1.00	0.97	0.95	1.03	0.99	0.97	0.94	0.99	0.96	0.95	0.98	0.96	0.95	0.97	0.96	0.94	0.94
9	1.03	0.99	0.96	0.94	1.02	0.98	0.96	0.93	0.98	0.96	0.94	0.97	0.95	0.94	0.97	0.95	0.94	0.93
10	1.02	0.98	0.95	0.94	1.01	0.97	0.95	0.93	0.97	0.95	0.93	0.96	0.94	0.93	0.96	0.94	0.93	0.92

Photometrics

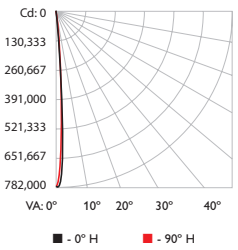
Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

ColorReach Powercore RGBW 5° native lens, full unit

Lumens	Efficacy
11,432	48.7

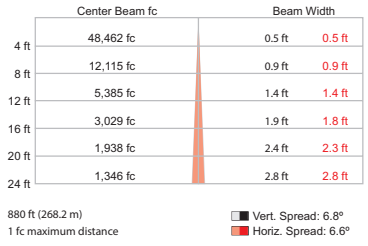


Polar Candela Distribution



	0	25	45	70	90
0	775387	775387	775387	775387	775387
5	170303	143406	133248	128390	132038
15	0	0	0	0	0
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



880 ft (268.2 m)
1 fc maximum distance

Vert. Spread: 6.8°
Horiz. Spread: 6.6°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	11,869.1	100.0%
0-40	11,869.1	100.0%
0-60	11,869.1	100.0%
0-90	11,869.1	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	11,869.1	100%

Coefficients Of Utilization - Zonal Cavity Method

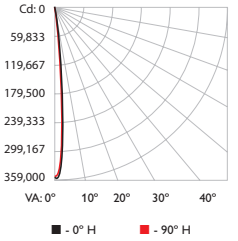
	Effective Floor Cavity Reflectance:																					
RCC %:	80				70				50			30			10			0					
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0				
RCR:																						
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00				
1	1.17	1.15	1.14	1.13	1.14	1.13	1.12	1.00	1.09	1.08	1.08	1.06	1.05	1.05	1.02	1.02	1.02	1.00				
2	1.15	1.12	1.11	1.09	1.13	1.11	1.09	1.00	1.08	1.07	1.05	1.05	1.04	1.03	1.03	1.02	1.01	1.00				
3	1.13	1.10	1.08	1.06	1.12	1.09	1.07	1.00	1.07	1.05	1.04	1.05	1.03	1.02	1.03	1.02	1.01	1.00				
4	1.12	1.09	1.06	1.05	1.11	1.08	1.06	1.00	1.06	1.04	1.03	1.04	1.03	1.02	1.03	1.02	1.01	1.00				
5	1.11	1.07	1.05	1.04	1.10	1.07	1.05	1.00	1.05	1.04	1.02	1.04	1.03	1.02	1.03	1.02	1.01	1.00				
6	1.10	1.07	1.04	1.03	1.09	1.06	1.04	1.00	1.05	1.03	1.02	1.04	1.02	1.01	1.03	1.02	1.01	1.00				
7	1.09	1.06	1.04	1.02	1.08	1.05	1.03	1.00	1.04	1.03	1.01	1.04	1.02	1.01	1.03	1.02	1.01	1.00				
8	1.08	1.05	1.03	1.02	1.08	1.05	1.03	1.00	1.04	1.02	1.01	1.03	1.02	1.01	1.03	1.01	1.01	1.00				
9	1.08	1.05	1.03	1.01	1.07	1.04	1.02	1.00	1.04	1.02	1.01	1.03	1.02	1.01	1.03	1.01	1.00	1.00				
10	1.07	1.04	1.02	1.01	1.07	1.04	1.02	1.00	1.03	1.02	1.01	1.03	1.02	1.01	1.03	1.01	1.00	1.00				

ColorReach Powercore RGBW 8° diffuser lens, full unit

Lumens	Efficacy
10,997	45.1

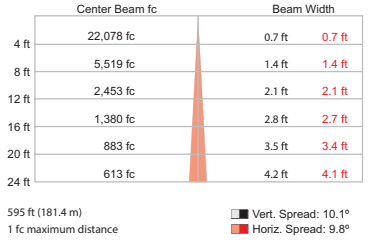


Polar Candela Distribution



	0	25	45	70	90
0	353243	353243	353243	353243	353243
5	168970	164163	154542	148842	149308
15	0	0	0	0	0
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



595 ft (181.4 m)
1 fc maximum distance

Vert. Spread: 10.1°
Horiz. Spread: 9.8°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	10,996.9	100.0%
0-40	10,996.9	100.0%
0-60	10,996.9	100.0%
0-90	10,996.9	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,996.9	100.0%

Coefficients Of Utilization - Zonal Cavity Method

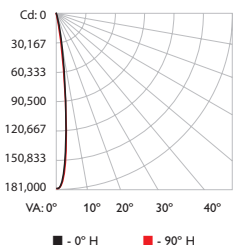
	Effective Floor Cavity Reflectance:																					
RCC %:	80				70				50			30			10			0					
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0				
RCR:																						
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00				
1	1.17	1.15	1.14	1.13	1.14	1.13	1.12	1.00	1.09	1.08	1.08	1.06	1.05	1.04	1.02	1.02	1.01	1.00				
2	1.15	1.12	1.10	1.09	1.13	1.11	1.09	1.00	1.08	1.06	1.05	1.05	1.04	1.03	1.02	1.02	1.01	1.00				
3	1.13	1.10	1.08	1.06	1.11	1.09	1.07	1.00	1.07	1.05	1.04	1.04	1.03	1.02	1.02	1.02	1.01	1.00				
4	1.12	1.08	1.06	1.04	1.10	1.07	1.05	1.00	1.06	1.04	1.03	1.04	1.03	1.02	1.02	1.01	1.00	1.00				
5	1.10	1.07	1.05	1.03	1.09	1.06	1.04	1.00	1.05	1.03	1.02	1.04	1.02	1.01	1.02	1.01	1.00	1.00				
6	1.09	1.06	1.04	1.02	1.09	1.05	1.03	1.00	1.04	1.03	1.01	1.03	1.02	1.01	1.02	1.01	1.00	0.99				
7	1.09	1.05	1.03	1.02	1.08	1.05	1.03	1.00	1.04	1.02	1.01	1.03	1.02	1.00	1.02	1.01	1.00	0.99				
8	1.08	1.05	1.02	1.01	1.07	1.04	1.02	1.00	1.03	1.02	1.01	1.03	1.01	1.00	1.02	1.01	1.00	0.99				
9	1.07	1.04	1.02	1.01	1.07	1.04	1.02	1.00	1.03	1.01	1.00	1.02	1.01	1.00	1.02	1.01	1.00	0.99				
10	1.07	1.04	1.02	1.00	1.06	1.03	1.01	1.00	1.03	1.01	1.00	1.02	1.01	1.00	1.02	1.01	1.00	0.99				

ColorReach Powercore RGBW 13° diffuser lens, full unit

Lumens	Efficacy
10,423	42.8

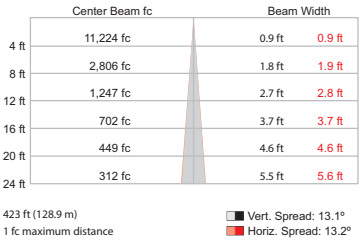


Polar Candela Distribution



	0	25	45	70	90
0	179591	179591	179591	179591	179591
5	122008	121764	122242	123292	124009
15	3570	3275	3503	3968	4205
25	0	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



423 ft (128.9 m)
1 fc maximum distance

Vert. Spread: 13.1°
Horiz. Spread: 13.2°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	10,422.6	100.0%
0-40	10,422.6	100.0%
0-60	10,422.6	100.0%
0-90	10,422.6	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,422.6	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

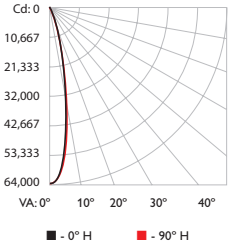
RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.16	1.15	1.13	1.12	1.14	1.13	1.11	0.99	1.09	1.08	1.07	1.05	1.04	1.04	1.02	1.01	1.01	0.99
2	1.14	1.11	1.09	1.07	1.12	1.10	1.08	0.99	1.07	1.05	1.04	1.04	1.03	1.02	1.01	1.01	1.00	0.99
3	1.12	1.09	1.06	1.04	1.10	1.08	1.05	0.98	1.05	1.03	1.02	1.03	1.02	1.00	1.01	1.00	0.99	0.98
4	1.10	1.07	1.04	1.02	1.09	1.06	1.03	0.98	1.04	1.02	1.00	1.02	1.01	0.99	1.01	0.99	0.98	0.97
5	1.09	1.05	1.02	1.00	1.08	1.04	1.02	0.97	1.03	1.01	0.99	1.01	1.00	0.98	1.00	0.99	0.98	0.97
6	1.07	1.03	1.01	0.99	1.06	1.03	1.00	0.97	1.02	1.00	0.98	1.01	0.99	0.97	1.00	0.98	0.97	0.96
7	1.06	1.02	1.00	0.98	1.05	1.02	0.99	0.96	1.01	0.99	0.97	1.00	0.98	0.97	0.99	0.97	0.96	0.96
8	1.05	1.01	0.99	0.97	1.04	1.01	0.98	0.96	1.00	0.98	0.96	0.99	0.97	0.96	0.98	0.97	0.96	0.95
9	1.04	1.00	0.98	0.96	1.03	1.00	0.97	0.95	0.99	0.97	0.96	0.98	0.97	0.95	0.98	0.96	0.95	0.95
10	1.03	0.99	0.97	0.95	1.02	0.99	0.97	0.95	0.98	0.96	0.95	0.98	0.96	0.95	0.97	0.96	0.95	0.94

ColorReach Powercore RGBW 23° diffuser lens, full unit

Lumens	Efficacy
10,015	41.1

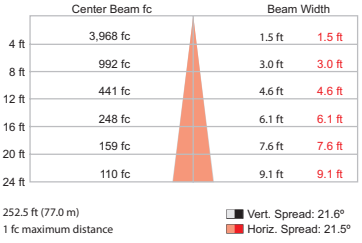


Polar Candela Distribution



	0	25	45	70	90
0	63490	63490	63490	63490	63490
5	55754	55566	55373	54723	54746
15	16160	15831	15291	15211	15034
25	1432	1327	1270	1246	1268
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



252.5 ft (77.0 m)
1 fc maximum distance

Vert. Spread: 21.6°
Horiz. Spread: 21.5°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	10,009.4	99.9%
0-40	10,014.6	100.0%
0-60	10,014.6	100.0%
0-90	10,014.6	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,014.6	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

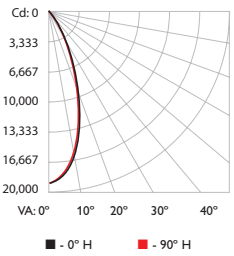
RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.16	1.14	1.12	1.10	1.13	1.11	1.10	0.98	1.08	1.06	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98
2	1.12	1.09	1.06	1.04	1.10	1.07	1.05	0.96	1.04	1.02	1.01	1.02	1.00	0.99	0.99	0.98	0.97	0.95
3	1.09	1.05	1.02	1.00	1.08	1.04	1.01	0.94	1.02	0.99	0.97	0.99	0.97	0.96	0.97	0.96	0.94	0.93
4	1.07	1.02	0.98	0.96	1.05	1.01	0.98	0.92	0.99	0.96	0.94	0.97	0.95	0.93	0.96	0.94	0.92	0.91
5	1.04	0.99	0.95	0.93	1.03	0.98	0.95	0.90	0.97	0.94	0.92	0.95	0.93	0.91	0.94	0.92	0.90	0.89
6	1.02	0.96	0.93	0.90	1.01	0.96	0.92	0.88	0.94	0.91	0.89	0.93	0.91	0.89	0.92	0.90	0.88	0.87
7	0.99	0.94	0.90	0.88	0.98	0.93	0.90	0.86	0.92	0.89	0.87	0.91	0.89	0.87	0.90	0.88	0.86	0.86
8	0.97	0.92	0.88	0.86	0.96	0.91	0.88	0.85	0.90	0.87	0.85	0.90	0.87	0.85	0.89	0.86	0.85	0.84
9	0.95	0.90	0.86	0.84	0.95	0.89	0.86	0.83	0.89	0.86	0.84	0.88	0.85	0.83	0.87	0.85	0.83	0.82
10	0.93	0.88	0.84	0.82	0.93	0.87	0.84	0.81	0.87	0.84	0.82	0.86	0.84	0.82	0.86	0.83	0.81	0.81

ColorReach Powercore RGBW
43° diffuser lens, full unit

Lumens	Efficacy
10,129	41.6

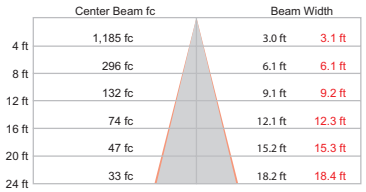


Polar Candela Distribution



	0	25	45	70	90
90°					
0	18958	18958	18958	18958	18958
5	18259	18277	18222	18072	18192
80°					
15	13401	13241	13141	12890	13047
25	6661	6440	6392	6417	6515
70°					
35	2005	1930	1906	1954	1965
45	333	312	297	288	294
60°					
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
50°					
90	0	0	0	0	0

Illuminance at Distance



138 ft (42.1 m)
1 fc maximum distance

■ Vert. Spread: 41.5°
■ Horiz. Spread: 41.9°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	8,517.2	84.1%
0-40	9,844.7	97.2%
0-60	10,129.3	100.0%
0-90	10,129.3	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,129.3	100.0%

Coefficients Of Utilization - Zonal Cavity Method

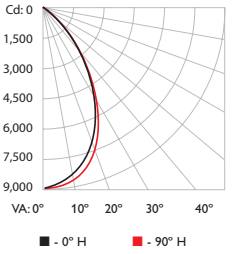
	Effective Floor Cavity Reflectance:															
RCC %:	80				70				50			30			10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50 30 20	0
RCR:																
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02 1.02 1.02	1.00
1	1.14	1.12	1.09	1.07	1.12	1.10	1.08	0.95	1.06	1.04	1.02	1.02	1.01	0.99	0.98 0.97 0.97	0.95
2	1.09	1.05	1.01	0.98	1.07	1.03	1.00	0.90	1.00	0.98	0.95	0.97	0.95	0.93	0.95 0.93 0.91	0.90
3	1.05	0.99	0.95	0.91	1.03	0.98	0.94	0.86	0.95	0.92	0.89	0.93	0.90	0.88	0.91 0.88 0.86	0.85
4	1.00	0.94	0.89	0.85	0.99	0.93	0.88	0.81	0.90	0.87	0.84	0.89	0.85	0.83	0.87 0.84 0.82	0.80
5	0.96	0.89	0.84	0.80	0.94	0.88	0.83	0.77	0.86	0.82	0.79	0.84	0.81	0.78	0.83 0.80 0.77	0.76
6	0.92	0.84	0.79	0.75	0.91	0.83	0.79	0.73	0.82	0.78	0.74	0.81	0.77	0.74	0.79 0.76 0.73	0.72
7	0.88	0.80	0.75	0.71	0.87	0.79	0.74	0.70	0.78	0.74	0.71	0.77	0.73	0.70	0.76 0.73 0.70	0.69
8	0.85	0.76	0.71	0.67	0.84	0.76	0.71	0.66	0.75	0.70	0.67	0.74	0.70	0.67	0.73 0.69 0.67	0.65
9	0.81	0.73	0.68	0.64	0.80	0.72	0.67	0.63	0.71	0.67	0.64	0.71	0.67	0.64	0.70 0.66 0.63	0.62
10	0.78	0.70	0.65	0.61	0.77	0.69	0.64	0.60	0.68	0.64	0.61	0.68	0.64	0.61	0.67 0.63 0.61	0.59

ColorReach Powercore RGBW
63° diffuser lens, full unit

Lumens	Efficacy
10,113	41.5

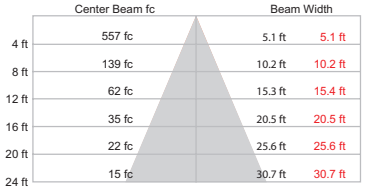


Polar Candela Distribution



	0	25	45	70	90
90°					
0	8910	8910	8910	8910	8910
5	8721	8776	8803	8790	8851
80°					
15	7783	7876	7944	8008	8113
25	6112	6160	6205	6293	6423
70°					
35	3780	3710	3703	3720	3793
45	1611	1514	1448	1412	1437
60°					
55	478	430	387	350	347
65	112	96	75	55	50
75	0	0	0	0	0
85	0	0	0	0	0
50°					
90	0	0	0	0	0

Illuminance at Distance



94.5 ft (28.8 m)
1 fc maximum distance

■ Vert. Spread: 65.2°
■ Horiz. Spread: 65.2°

Zonal Lumen

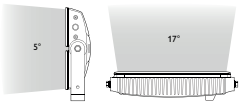
Zone	Lumens	% Luminaire
0-30	5,948.2	58.8%
0-40	8,354.0	82.6%
0-60	10,020.5	99.1%
0-90	10,112.8	100.0%
60-90	92.3	0.9%
70-100	2.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,112.8	100.0%

Coefficients Of Utilization - Zonal Cavity Method

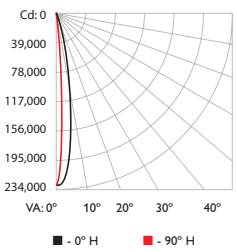
	Effective Floor Cavity Reflectance:															
RCC %:	80				70				50			30			10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50 30 20	0
RCR:																
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02 1.02 1.02	1.00
1	1.13	1.10	1.07	1.05	1.10	1.08	1.05	0.93	1.04	1.02	1.00	1.00	0.98	0.97	0.97 0.95 0.94	0.92
2	1.07	1.01	0.97	0.93	1.04	1.00	0.96	0.85	0.96	0.93	0.90	0.93	0.91	0.88	0.90 0.88 0.86	0.85
3	1.01	0.93	0.88	0.84	0.98	0.92	0.87	0.78	0.89	0.85	0.82	0.87	0.83	0.80	0.85 0.82 0.79	0.77
4	0.95	0.86	0.80	0.76	0.93	0.85	0.80	0.72	0.83	0.78	0.74	0.81	0.77	0.73	0.79 0.75 0.72	0.71
5	0.89	0.80	0.74	0.69	0.87	0.79	0.73	0.66	0.77	0.72	0.68	0.75	0.71	0.67	0.74 0.70 0.67	0.65
6	0.84	0.74	0.68	0.63	0.83	0.73	0.67	0.61	0.72	0.66	0.62	0.70	0.66	0.62	0.69 0.65 0.61	0.60
7	0.79	0.69	0.63	0.58	0.78	0.69	0.62	0.57	0.67	0.62	0.57	0.66	0.61	0.57	0.65 0.60 0.57	0.55
8	0.75	0.65	0.58	0.54	0.74	0.64	0.58	0.53	0.63	0.57	0.53	0.62	0.57	0.53	0.61 0.56 0.53	0.51
9	0.71	0.61	0.54	0.50	0.70	0.60	0.54	0.49	0.59	0.53	0.49	0.58	0.53	0.49	0.57 0.53 0.49	0.48
10	0.67	0.57	0.51	0.46	0.66	0.56	0.50	0.46	0.56	0.50	0.46	0.55	0.50	0.46	0.54 0.49 0.46	0.44

ColorReach Powercore RGBW
5° x 17° asymmetric lens, full unit

Lumens	Efficacy
10,619	43.6

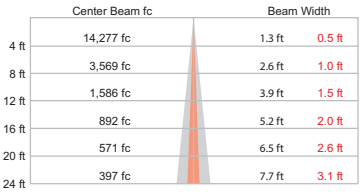


Polar Candela Distribution



	0	25	45	70	90
0	228431	228431	228431	228431	228431
5	194809	131958	85003	54616	48060
15	40621	3811	0	0	0
25	1603	0	0	0	0
35	0	0	0	0	0
45	0	0	0	0	0
55	0	0	0	0	0
65	0	0	0	0	0
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



478 ft (145.7 m)
1 fc maximum distance

Vert. Spread: 18.3°
Horiz. Spread: 7.3°

Zonal Lumen

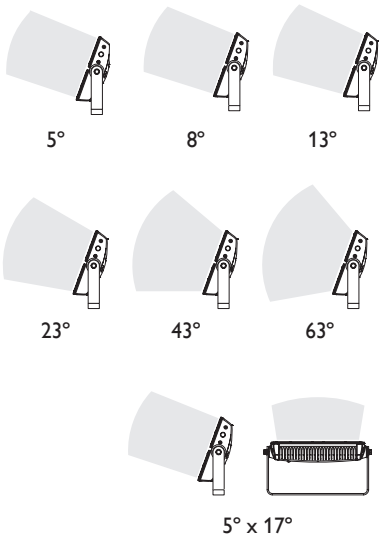
Zone	Lumens	% Luminaire
0-30	10,619.4	100.0%
0-40	10,619.4	100.0%
0-60	10,619.4	100.0%
0-90	10,619.4	100.0%
60-90	0.0	0.0%
70-100	0.0	0.0%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	10,619.4	100.0%

Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance:	20%													
RCC %:	80				70				50			30			10	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	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
1	1.16	1.15	1.13	1.12	1.14	1.13	1.11	0.99	1.09	1.08	1.07	1.05	1.04	1.04	1.02	1.01	1.01	0.99
2	1.14	1.11	1.09	1.07	1.12	1.10	1.08	0.99	1.07	1.05	1.04	1.04	1.03	1.02	1.01	1.00	0.99	0.98
3	1.12	1.08	1.06	1.04	1.10	1.07	1.05	0.98	1.05	1.03	1.01	1.03	1.01	1.00	1.01	0.99	0.98	0.97
4	1.10	1.06	1.03	1.01	1.08	1.05	1.03	0.97	1.03	1.01	1.00	1.02	1.00	0.99	1.00	0.99	0.98	0.97
5	1.08	1.04	1.01	0.99	1.07	1.03	1.01	0.96	1.02	1.00	0.98	1.01	0.99	0.97	0.99	0.98	0.97	0.96
6	1.07	1.03	1.00	0.98	1.06	1.02	0.99	0.96	1.01	0.99	0.97	1.00	0.98	0.96	0.99	0.97	0.96	0.95
7	1.05	1.01	0.98	0.97	1.04	1.01	0.98	0.95	1.00	0.97	0.96	0.99	0.97	0.95	0.98	0.96	0.95	0.94
8	1.04	1.00	0.97	0.95	1.03	0.99	0.97	0.94	0.99	0.97	0.95	0.98	0.96	0.95	0.97	0.96	0.94	0.94
9	1.03	0.99	0.96	0.95	1.02	0.98	0.96	0.94	0.98	0.96	0.94	0.97	0.95	0.94	0.97	0.95	0.94	0.93
10	1.02	0.98	0.95	0.94	1.01	0.97	0.95	0.93	0.97	0.95	0.93	0.96	0.95	0.93	0.96	0.94	0.93	0.92

Specifications, UL/CE

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

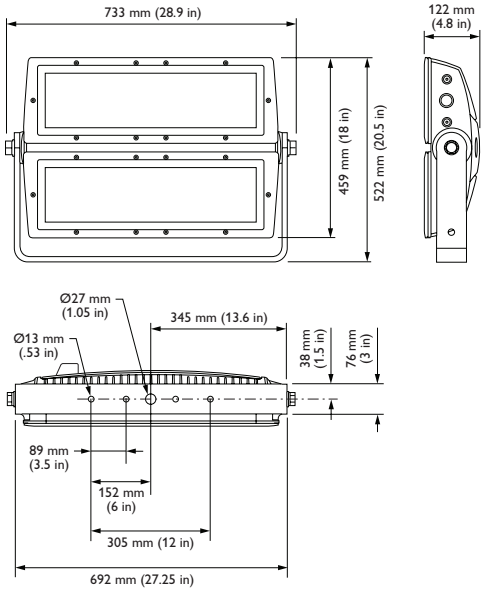


Item	Specification	Details
Output	Beam Angle	5° primary optic (no spread lens) 8°/13°/23°/43°/63°/5° x 17° (asymmetric) spread lenses
	Lumens†	10,144 (RGBA), 11,432 (RGBW)
	LED Channels	Red/Green/Blue/Amber, Red/Green/Blue/4000 K
	Lumen Maintenance§¶	100,000 hours L70 @ 25° C 100,000 hours L70 @ 50° C
Electrical	Input Voltage	100 – 277 VAC, auto-switching, 50/60 Hz
	Power Consumption	270 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)*	522 x 733 x 122 mm (20.5 x 28.9 x 4.8 in)
	Weight	34 kg (75 lb)
	Effective Projected Area (EPA)	0.42 m^2
	Housing	Die-cast aluminium, powder-coated finish
	Mechanical Impact	IK07
	Lens	Tempered glass
	Fixture Connections	Integral male/female waterproof connector
	Temperature Ranges	-40° – 50° C (-40° – 122° F) Operating -40° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) 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/CE, FCC Class A, PSE
	Environment	Dry/Damp/Wet Location, IP66

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

§ Lxx = xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B10, or the median value where 90% of the LED population is better than the reported or calculated lumen maintenance measurement.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, Figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calucated values represent time durations that exceed six times the total test duration.



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Specifications, CQC

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

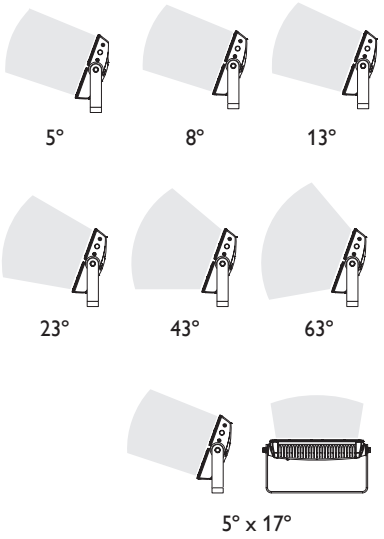
Item	Specification	Details
Output	Beam Angle	5° primary optic (no spread lens) 8°/13°/23°/43°/63°/5° x 17° (asymmetric) spread lenses
	Lumens†	10,144 (RGBA), 11,432 (RGBW)
	LED Channels	Red/Green/Blue/Amber, Red/Green/Blue/4000 K
	Lumen Maintenance§¶	100,000 hours L70 @ 25° C 100,000 hours L70 @ 50° 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)*	522 x 733 x 122 mm (20.5 x 28.9 x 4.8 in)
	Weight	34 kg (75 lb)
	Effective Projected Area (EPA)	0.42 m^2
	Housing	Die-cast aluminium, powder-coated finish
	Mechanical Impact	IK07
	Lens	Tempered glass
	Fixture Connections	Integral male/female waterproof connector 1.8 m (6 ft) unified power/data cable
	Temperature Ranges	-40° – 50° C (-40° – 122° F) Operating -40° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) 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	CQC, FCC Class A, CE, PSE, C-Tick
	Environment	Dry/Damp/Wet Location, IP66

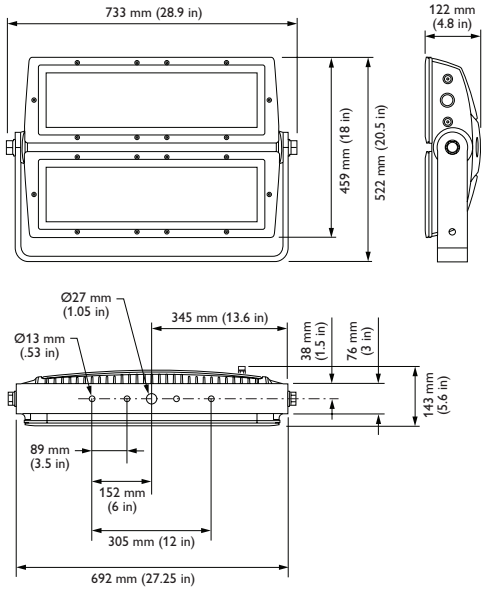
† Lumen measurement complies with IES LM-79-08 testing procedures

§ Lxx = xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B10, or the median value where 90% of the LED population is better than the reported or calculated lumen maintenance measurement.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, Figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calucated values represent time durations that exceed six times the total test duration.

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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 Ordering Information sheet at www.philipscolorkinetics.com/ls/rgb/colorreach/ for complete details.

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

Fixtures and Data Enabler Pro

ColorReach Powercore fixtures are part of a complete line-voltage system that 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 1.8 m (6 ft) leader cable (included with CQC fixture) or one 3 m (10 ft) leader cable to connect each ColorReach Powercore fixture to a junction box or Data Enabler Pro.
- 4-conductor copper wire to connect ColorReach Powercore fixtures in series or in parallel. Standard 12 AWG (2.05 mm) stranded wire is recommended

Fixtures

Item	LED	Item Number*	Philips 12NC
ColorReach Powercore UL/CE	RGBW	423-000014-00	912400133577
(Leader cable sold seperately)	RGBA	423-000014-01	912400133578
ColorReach Powercore CQC	RGBW	423-000014-02	912400133579
(Includes 1.8 m (6 ft) leader cable)	RGBA	423-000014-03	912400133580

Data Enabler

Item	Style	Item Number*	Philips 12NC
Data Enabler Pro	3/4 in / 1/2 in NPT (US trade size conduit)	106-000004-00	910503701210
	PG21/PG13 (metric size conduit)	106-000004-01	910503701211

Use Item Number when ordering in North America.

Accessories

All of the Philips Color Kinetics accessories are designed to provide customizable options for controlling and dispersing light as well as added protection.

For complete instructions on how to install the accessories, refer to the ColorReach Powercore Accessory Installation Instructions at http://www.colorkinetics.com/ls/accessories/Reach-Powercore/

Item	Item Number	Philips 12NC
Leader Cable, 100–277 VAC, UL, 3 m (10 ft)	108-000055-03	910503704066
Leader Cable, 100–277 VAC, UL, 15.2 m (50 ft)	108-000055-00	910503703137
Leader Cable, 100–277 VAC, CE/PSE, 3 m (10 ft)	108-000055-04	910503704067
Leader Cable, 100–277 VAC, CE/PSE, 15.2 m (50 ft)	108-000055-01	910503704064
Leader Cable, 100–277 VAC, CE/PSE, 1.8 m (6 ft)	108-000043-03	910503700454

Item	Item Number	Philips 12NC	
Louver *(Requires Trim Bezel)*	120-000187-02	912400133589	
Half Glare Shield *(Requires Trim Bezel)*	120-000187-01	912400133588	
Full Glare Shield *(Requires Trim Bezel)*	120-000187-00	912400133587	

Use Item Number when ordering in North America.

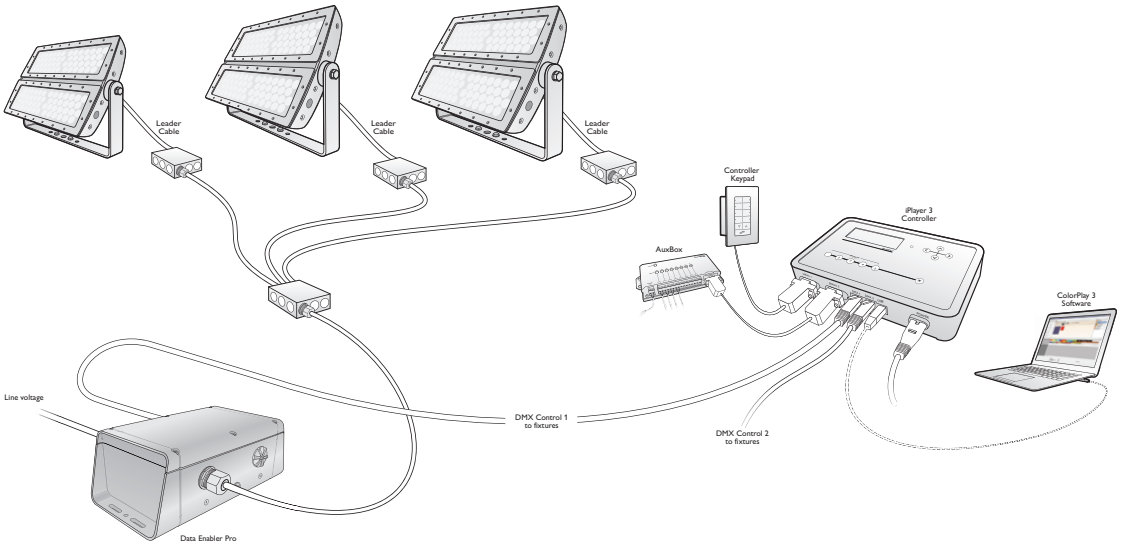
Item	Item Number	Philips 12NC
Trim Bezel	120-000187-03	912400134263
8° Spread Lens with Bezel	120-000068-17	912400133598
13° Spread Lens with Bezel	120-000068-12	912400133593
23° Spread Lens with Bezel	120-000068-13	912400133594
43° Spread Lens with Bezel	120-000068-14	912400133595
63° Spread Lens with Bezel	120-000068-15	912400133596
5° X 17° Asymmetric Spread Lens with Bezel	120-000068-16	912400133597



Use Item Number when ordering in North America.

Typical ColorReach Powercore installation

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



Installation

ColorReach Powercore, a high-performance exterior architectural floodlight with extended light projection, is designed to brilliantly and dynamically illuminate prominent, signature façades. Because each ColorReach Powercore fixture weighs 34 kg (75 lb), 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.

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

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate ColorReach 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.

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.

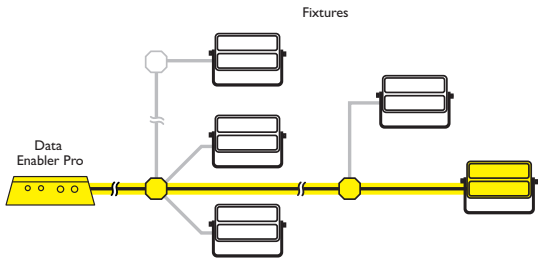
Prepare for the Installation

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

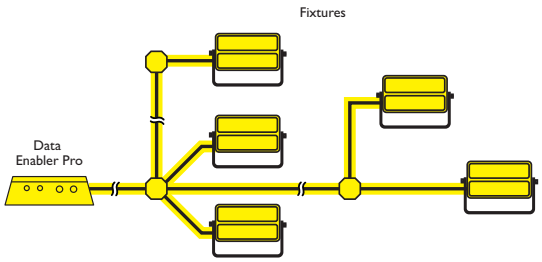
1. Refer to the lighting design plan, architectural diagram, or other diagram that shows the physical layout of the installation to identify the locations of all switches, controllers, Data Enabler Pro devices, fixtures, and cables.

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

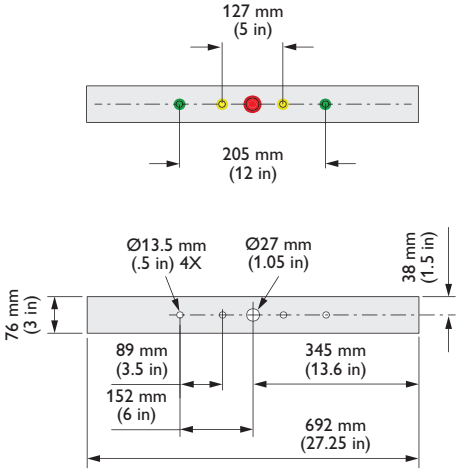


Data Integrity – maximum individual length 53.3 m (175 ft)



Data Integrity – total length 122 m (400 ft)

Mounting bracket dimensions for pre-drilling



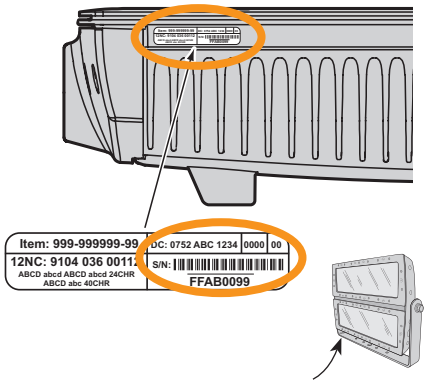
2. Ensure that the fixture mounting locations and substrates are sufficiently sturdy to bear the weight of each ColorReach Powercore fixture. Pre-drill holes in the mounting substrate if necessary, making reference to the mounting bracket dimensions. Use at least two screws to secure each fixture, one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

   If mounting ColorReach Powercore 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 34 kg (75 lb), and has an effective projected area (EPA) of 0.42 m^2.

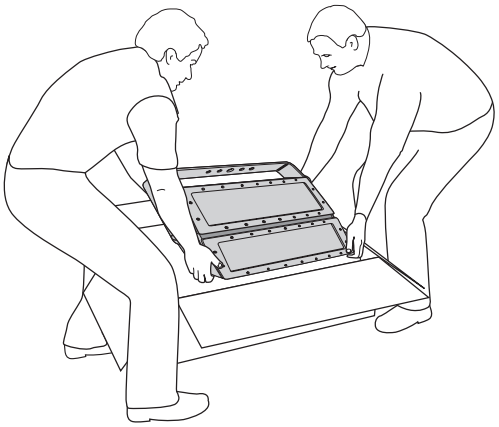
3. Install all Data Enabler Pro devices, including any interfaces with controllers. Data Enabler Pro and external controllers send power and control signals to fixtures over the single leader cable.
4. Verify that all additional supporting equipment (switches, controllers) is in place.
5. Ensure that 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.

Unpack the Fixtures

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



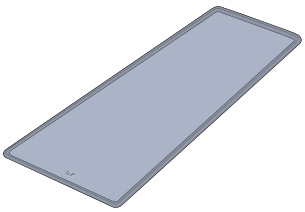


Do not rest ColorReach Powercore on its back, as doing so may damage the connector port. Be careful not to tip the fixture over during positioning.

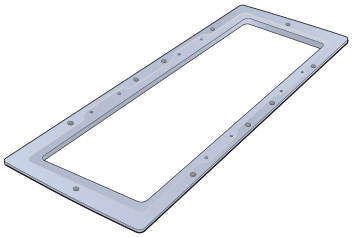
Attach Accessory Lenses (Optional)

Accessories can be installed to change the beam angle or add extra glare control protection to the fixture in outdoor environments.

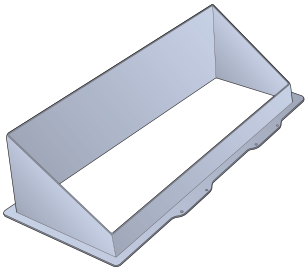
For complete instructions on how to install the accessories, refer to the Accessory Installation Instructions at http://www.colorkinetics.com/ls/accessories/Reach-Powercore/



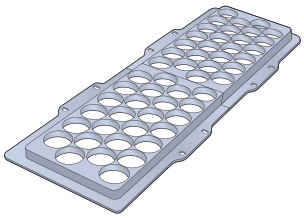
Spread Lens



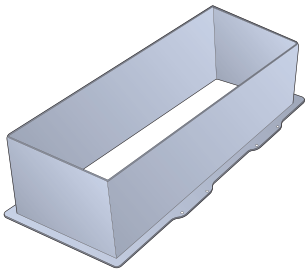
Trim Bezel



Half Glare Shield



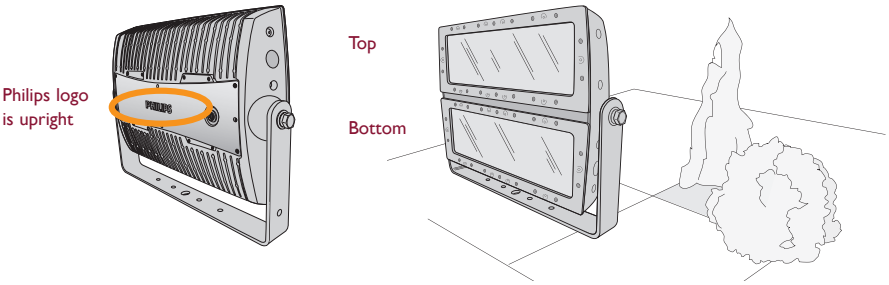
Louver



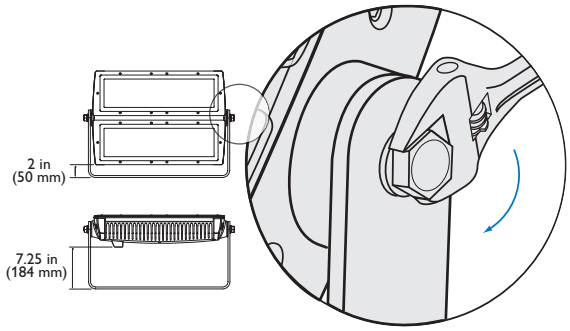
Full Glare Shield

Position and Mount Fixtures

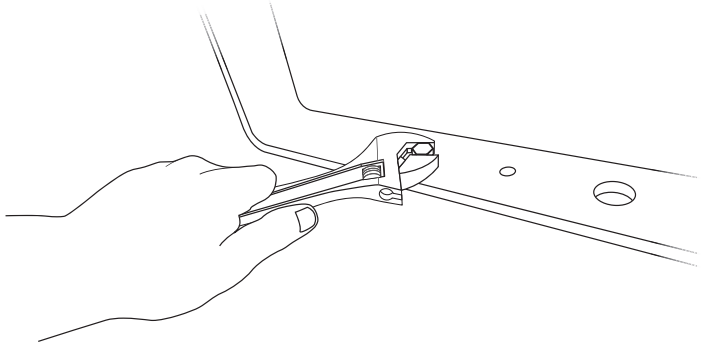
1. Position each ColorReach Powercore fixture in its designated mounting location. Make sure the mounting area is clear of debris and other obstructions.



2. 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 184 mm (7.25 in) clearance.



3. 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.

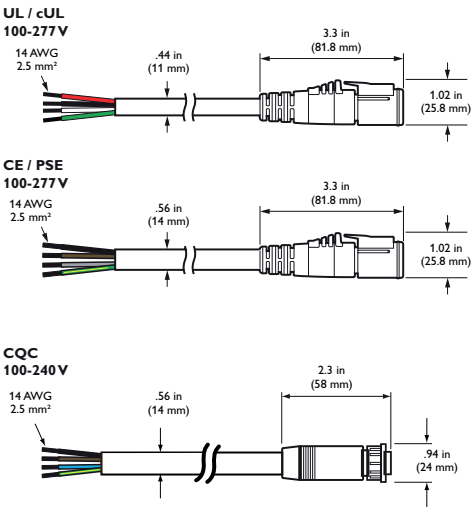


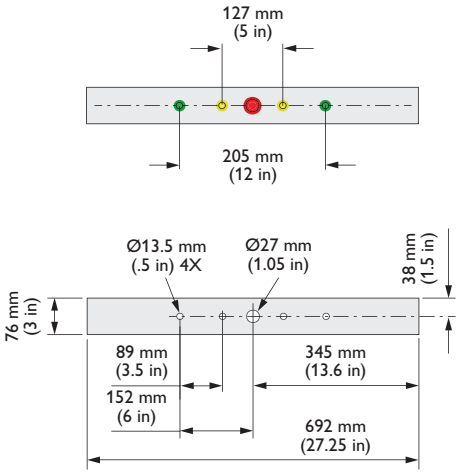
Connect the Fixtures

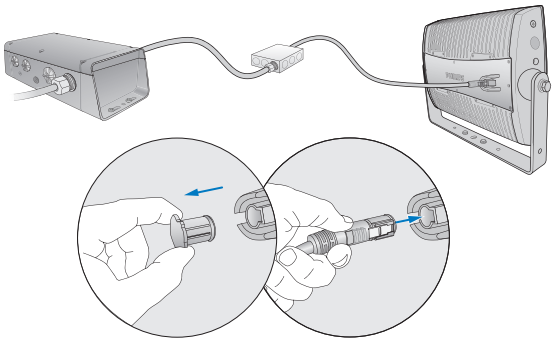
Make sure the power is OFF before connecting ColorReach Powercore fixtures.

1. Mount junction boxes in accordance with the lighting design plan.
2. If installing fixtures in a series, pull 4-conductor copper wire between each junction box in the series.

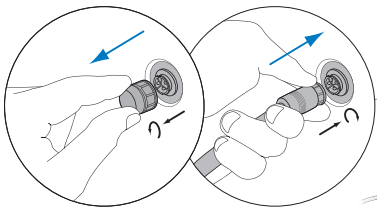
Leader Cable connector dimensions







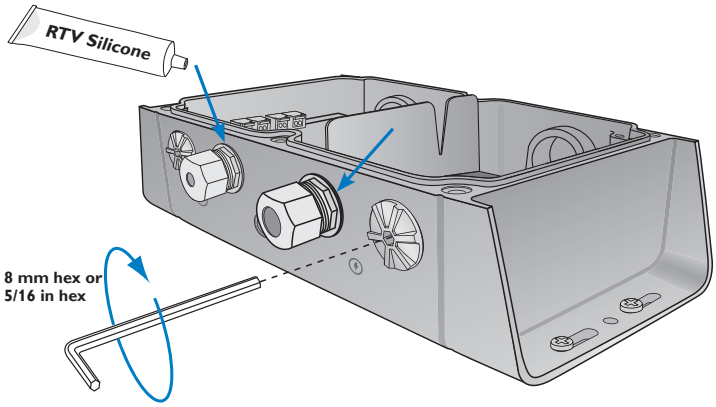
UL/CE (100–277 VAC)



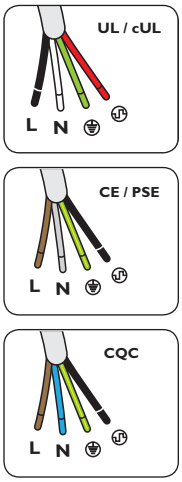
CQC (100–240 VAC)

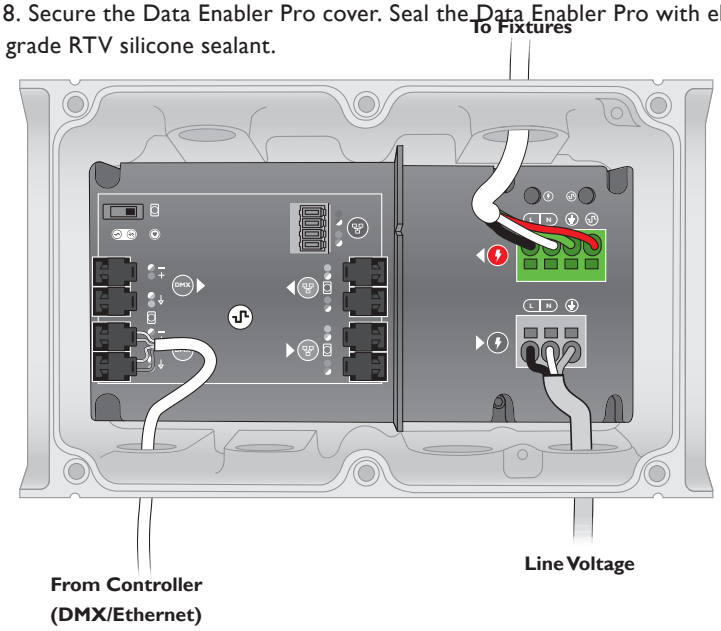
The maximum cable run from a Data Enabler Pro to any individual ColorReach Powercore fixture is 53 m (175 ft). When installing in parallel, the total cable length cannot exceed 122 m (400 ft).

3. If necessary, remove the connector cap from the port on the back of the ColorReach Powercore housing, and insert the leader cable into the port. For UL/CE fixtures, push the cable until the connector clicks and locks in place. For CQC fixtures, 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.



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.





If installing fixtures in parallel, pull 4-conductor copper wire from a common junction box to each fixture's junction box.

Address and Configure the Fixtures

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

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

ColorReach Powercore 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.

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 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.

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

DMX 4-Channel Assignments

8-Bit Mode				
Full Fixture	1	2	3	4
	Red	Green	Blue	White/Amber

16-Bit Mode								
Full Fixture	1	2	3	4	5	6	7	8
	Red	Red	Green	Green	Blue	Blue	White/Amber	White/Amber

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 you 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.

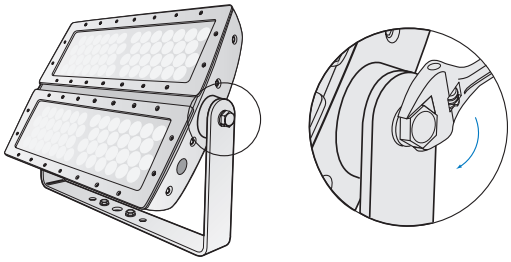
You can download QuickPlay Pro from www.philipscolorkinetics.com/support/addressing/

Aim and Lock the Fixtures

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

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.

For exterior applications with direct exposure to water, ColorReach Powercore 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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