



# iW Reach Powercore gen2

Premium long-throw exterior floodlight with intelligent white light

**PHILIPS**



# iW Reach Powercore gen2

## Premium long-throw exterior floodlight with intelligent white light

iW Reach Powercore gen2, the intelligent white light version of our flagship, high-performance exterior architectural floodlight, outputs washes of white light in color temperatures ranging from a warm 2700 K to a cool 6500 K. iW Reach Powercore gen2 combines all the benefits of LED-based lighting in an elegant fixture specifically designed for skyscrapers, casinos, large retail exteriors, bridges, piers, public monuments, and themed attractions. With significantly more lumen output than any other competitive fixture and unprecedented light projection, this powerful fixture represents the next generation in exterior illumination.

- Unique split design — Spread lenses fit over each fixture half to support diffuser combinations. Use one spread lens on the lower half to bathe a large façade with light at street level, and a different lens to project light hundreds of feet up the building's walls.
- Integrates Powercore technology — Powercore technology rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage. The Philips Color Kinetics Data Enabler Pro merges line voltage with control data and delivers them over a single standard wire, dramatically simplifying installation and lowering total system cost.
- High-performance illumination in a wide range of color temperatures — Channels of warm, neutral, and cool white LEDs produce temperatures ranging from 2700 K to 6500 K, offering the greatest possible light intensity at all temperatures. Fixture brightness can be varied while maintaining constant temperature.
- Versatile optics — Exchangeable spread lenses of 8°, 13°, 23°, 40°, 63°, and an asymmetric 5° x 17° support a multitude of applications, including spotlighting, wall grazing, and asymmetric wall washing.
- 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 standard wrench.
- Universal power input range — Accepts a universal power input range of 100 – 240 VAC, allowing long fixture runs and consistent installation in any location around the world. Each Data Enabler Pro can support multiple fixtures for illuminating even the largest exterior façades and structures.



### Unparalleled light output

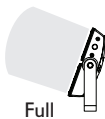
With light output of thousands of lumens and light projection of hundreds of feet, iW Reach Powercore gen2 offers legitimate LED-based, color-controllable white light illumination of large-scale structures and objects.

# Photometrics

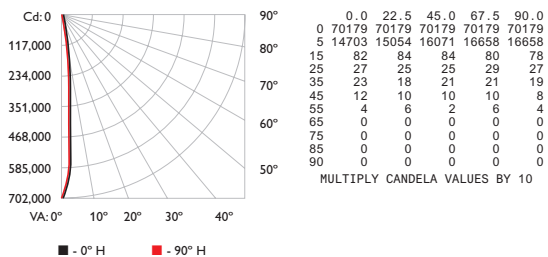
Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at [www.philipscolorkinetics.com/support/ies](http://www.philipscolorkinetics.com/support/ies).

## iW Reach Powercore gen2 5° (no spread lens), full unit All channels full on

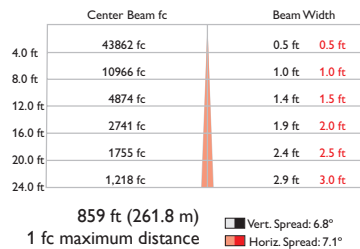
Lumens	12106
Efficacy	50.4 lm / W



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	11870	98.0
0- 40	12007	99.2
0- 60	12106	100.0
0- 90	12106	100.0
90-180	0	0.0
0-180	12106	100.0

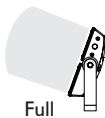
### Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

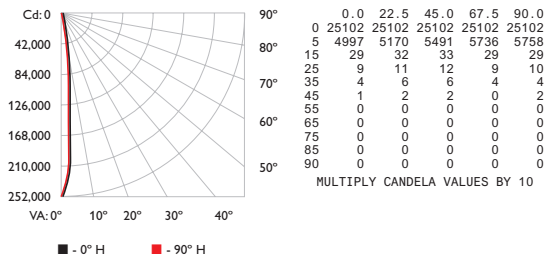
RC	80	70	50	30	10	0		
RW	70	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100		
1	116115114112	114113112111	109108107	105105104	102102101	100		
2	114112110108	112110108107	107106105	104103103	102101100	99		
3	112109107105	111108106104	106104103	104102101	102101100	99		
4	111108105103	110107104103	105103101	103102100	10210099	98		
5	110106104102	108105103101	104102100	102101100	10110099	98		
6	108105102101	107104102100	103101100	10210099	10110099	98		
7	107104101100	107103101100	10210099	10210099	1019998	98		
8	10710310199	10610310099	10210099	1019998	1009998	97		
9	10610210099	10510210098	1019998	1019998	1009998	97		
10	10510210098	1051019998	1019998	1009998	1009997	97		

## iW Reach Powercore gen2 5° (no spread lens), full unit 2700 K channel only

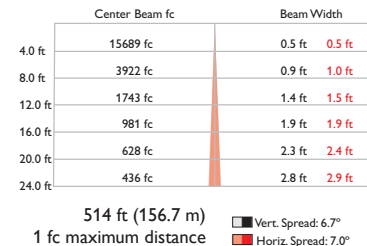
Lumens	4204
Efficacy	41.1 lm / W



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	4156	98.9
0- 40	4195	99.8
0- 60	4204	100.0
0- 90	4204	100.0
90-180	0	0.0
0-180	4204	100.0

### Coefficients Of Utilization - Zonal Cavity Method

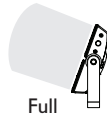
Effective Floor Cavity Reflectance: 20%

RC	80	70	50	30	10	0		
RW	70	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100		
1	117115114113	114113112111	109108107	105105104	102102101	100		
2	114112110108	113110109107	107106105	105104103	102101100	99		
3	113110107106	111108106105	106104103	104103102	102101100	99		
4	111108105104	110107105103	105103102	103102101	102101100	99		
5	110106104102	109106103102	104102101	103101100	10210099	99		
6	109105103101	108105102101	103102100	102101100	10110099	98		
7	108104102100	107104102100	103101100	10210099	10110099	98		
8	107103101100	106103101100	10210099	10210099	10110099	98		
9	10610310199	10610210099	10210099	10110099	1019998	98		
10	10610210099	10510210098	10110098	1019998	1009998	98		

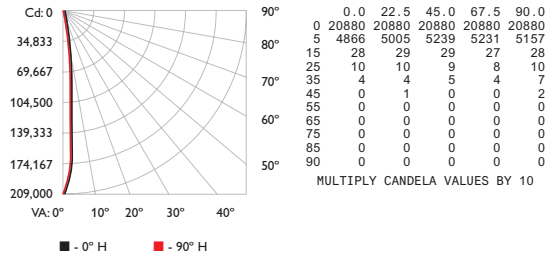
For lux multiply fc by 10.7

iW Reach Powercore gen2  
5° (no spread lens), full unit  
4000 K channel only

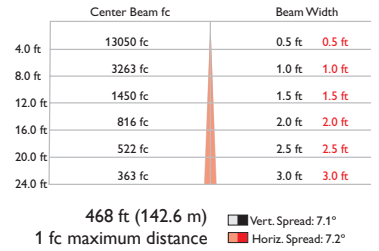
Lumens	3733
Efficacy	47.9 lm / W



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	3694	98.9
0- 40	3728	99.8
0- 60	3733	100.0
0- 90	3733	100.0
90-180	0	0.0
0-180	3733	100.0

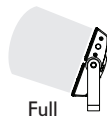
Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

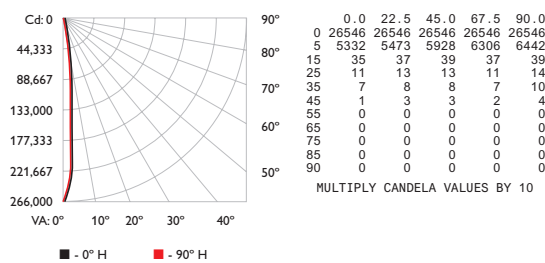
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100					
1	117115114113	114113112111	109108107	105105104	102102101	100					
2	114112110108	113110109107	107106105	105104103	102101101	99					
3	113110107106	11108106105	106105103	104103102	102101100	99					
4	111108105104	110107105103	105103102	103102101	102101100	99					
5	110106104102	109106103102	104102101	103101100	102100	99					
6	109105103101	108105102101	104102100	102101100	101100	99					
7	108104102100	107104102100	103101100	102100	99	99					
8	107103101100	106103101100	102101	99	102100	99					
9	106103101	106102100	99	102100	99	101					
10	106102100	99	105102100	99	101100	99					

iW Reach Powercore gen2  
5° (no spread lens), full unit  
6500 K channel only

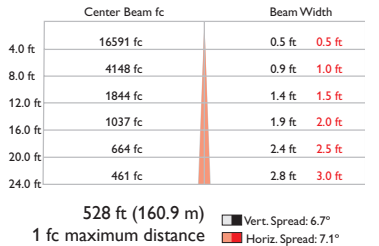
Lumens	4543
Efficacy	58.9 lm / W



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	4474	98.5
0- 40	4525	99.6
0- 60	4543	100.0
0- 90	4543	100.0
90-180	0	0.0
0-180	4543	100.0

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

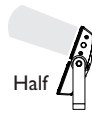
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100					
1	116115114112	114113112111	109108107	105105104	102102101	100					
2	114112110108	112110109107	107106105	105104103	102101101	99					
3	113110107105	111108106105	106104103	104103101	102101100	99					
4	111108105103	110107104103	105103102	103102101	102101100	99					
5	110106104102	109105103101	104102101	103101100	101100	99					
6	109105103101	108104102100	103101100	102101	99	101100					
7	108104102100	107103101100	103101	99	102100	99					
8	107103101	106103101	99	102100	99	101100					
9	106102100	105102100	99	101100	98	100					
10	105102100	98	105102100	98	101	99					

For lux multiply fc by 10.7

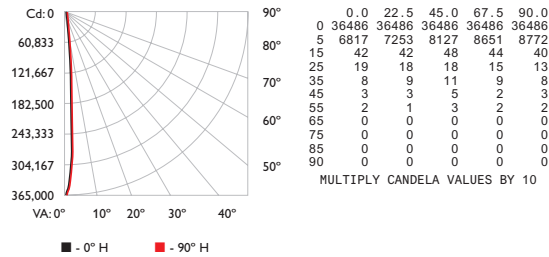


## iW Reach Powercore gen2 5° (no spread lens), half unit

Lumens	6151
Efficacy	49.6 lm / W



### Polar Candela Distribution



### Illuminance at Distance

Center Beam fc	Beam Width
4.0 ft	22803 fc   0.5 ft   0.5 ft
8.0 ft	5701 fc   0.9 ft   1.0 ft
12.0 ft	2534 fc   1.4 ft   1.5 ft
16.0 ft	1425 fc   1.9 ft   2.0 ft
20.0 ft	912 fc   2.3 ft   2.5 ft
24.0 ft	633 fc   2.8 ft   3.0 ft

619 ft (188.7 m) 1 fc maximum distance  
 Vert. Spread: 6.7° Horiz. Spread: 7.1°

### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	6048	98.3
0- 40	6113	99.4
0- 60	6151	100.0
0- 90	6151	100.0
90-180	0	0.0
0-180	6151	100.0

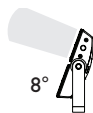
### Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

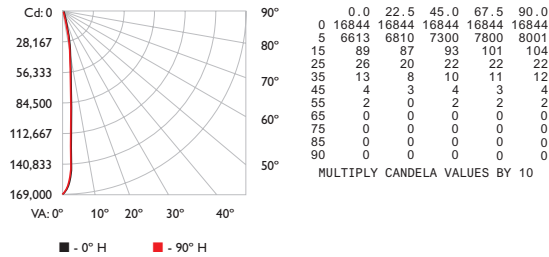
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100					
1	116115114112	114113112111	109108107	105105104	102102101	100					
2	114112110108	112110108107	107106105	105103103	102101101	99					
3	113109107105	111108106104	106104103	104102101	102101100	99					
4	111108105103	110107104103	105103102	103102100	102100	99					
5	110106104102	109105103101	104102101	103101100	101100	99					
6	108105102101	108104102100	103101100	102100	101100	99					
7	108104102100	107103101100	102101	101	100	99					
8	107103101	106103101	102100	101	100	99					
9	106102100	105102100	101100	101	100	99					
10	105102100	105101100	101	100	100	99					

## iW Reach Powercore gen2 8° spread lens, half unit

Lumens	5338
Efficacy	43.0 lm / W



### Polar Candela Distribution



### Illuminance at Distance

Center Beam fc	Beam Width
4.0 ft	10527 fc   0.6 ft   0.7 ft
8.0 ft	2632 fc   1.2 ft   1.4 ft
12.0 ft	1170 fc   1.8 ft   2.0 ft
16.0 ft	658 fc   2.4 ft   2.7 ft
20.0 ft	421 fc   3.0 ft   3.4 ft
24.0 ft	292 fc   3.6 ft   4.1 ft

421 ft (128.3 m) 1 fc maximum distance  
 Vert. Spread: 8.7° Horiz. Spread: 9.7°

### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	5225	97.9
0- 40	5295	99.2
0- 60	5338	100.0
0- 90	5338	100.0
90-180	0	0.0
0-180	5338	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	1111111111	106106106	102102102	100					
1	116115113112	114113111110	109108107	105104104	102101101	99					
2	114111109108	112110108106	107105104	104103102	102101100	99					
3	112109106104	110108105104	105104102	103102101	101100	99					
4	110107104102	109106103102	104102100	102101	101	99					
5	109105102100	108104102100	103101	101	100	99					
6	108104101	107103101	102100	101	100	99					
7	106102100	106102100	101	100	100	99					
8	105101	105101	100	100	100	99					
9	104101	104100	100	100	100	99					
10	104100	103	100	100	100	99					

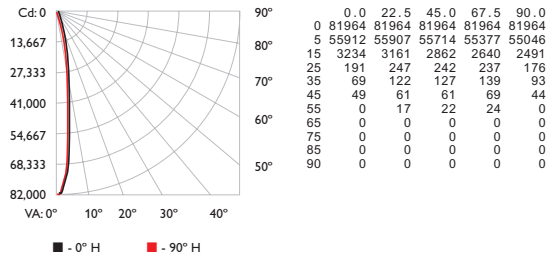
For lux multiply fc by 10.7

## iW Reach Powercore gen2 13° spread lens, half unit

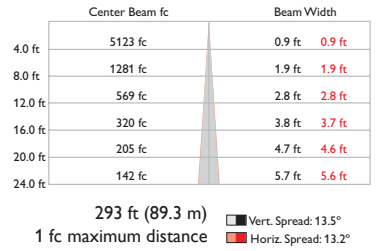
Lumens	5358
Efficacy	43.2 lm / W



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	5221	97.4
0- 40	5294	98.8
0- 60	5358	100.0
0- 90	5358	100.0
90-180	0	0.0
0-180	5358	100.0

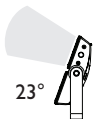
### Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

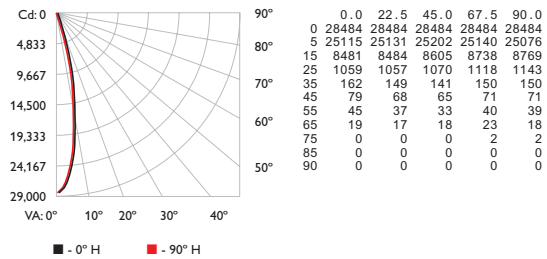
RC	80			70			50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0	
0	119119119119	116116116116	1111111111	106106106	102102102	100										
1	1161141113111	1141121111110	108107106	105104103	101101100	99										
2	113111108106	111109107105	106104103	103102101	10110099	97										
3	111108105103	109106104102	104102100	10210099	1009897	96										
4	109105102100	10810410199	10210098	1009997	999796	95										
5	10710310098	1061029997	1019896	999796	989695	94										
6	1051019896	1041009896	999795	989694	979594	93										
7	104999694	103999694	989694	979593	969493	92										
8	102989593	102989593	979493	969492	959392	91										
9	101979492	101969492	969392	959391	949391	91										
10	100969391	99959391	959291	949291	949290	90										

## iW Reach Powercore gen2 23° spread lens, half unit

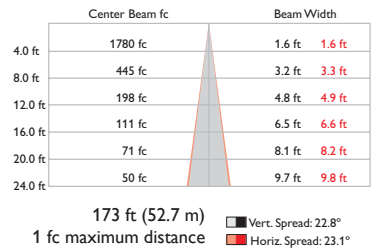
Lumens	5327
Efficacy	43.0 lm / W



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	5109	95.9
0- 40	5216	97.9
0- 60	5305	99.6
0- 90	5327	100.0
90-180	0	0.0
0-180	5327	100.0

### Coefficients Of Utilization - Zonal Cavity Method

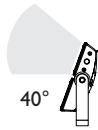
Effective Floor Cavity Reflectance: 20%

RC	80			70			50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0	
0	119119119119	116116116116	1111111111	106106106	102102102	100										
1	1151131111110	113111109108	107106105	103102101	1009999	97										
2	112108105103	109106104102	10310199	1009997	989695	94										
3	10810410097	1061029997	1009795	989694	969492	91										
4	1051009693	103999593	979492	959391	939190	88										
5	102969390	101969289	949189	939088	918987	86										
6	99938987	98938986	918886	908785	898785	84										
7	97918784	96908684	898683	888583	878583	82										
8	94888482	94888481	878481	868381	858381	80										
9	92868279	91858279	858179	848179	838179	78										
10	90848077	89838077	837977	827977	827977	76										

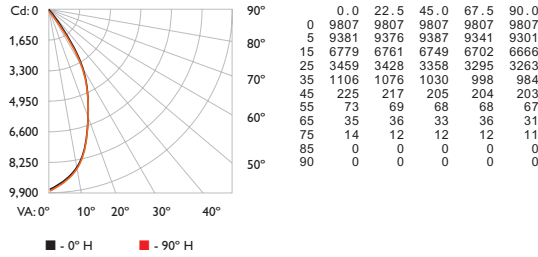
For lux multiply fc by 10.7

iW Reach Powercore gen2  
40° spread lens, half unit

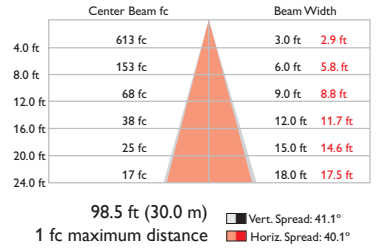
Lumens	5226
Efficacy	42.1 lm / W



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	4250	81.3
0- 40	4930	94.3
0- 60	5177	99.1
0- 90	5226	100.0
90-180	0	0.0
0-180	5226	100.0

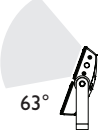
Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

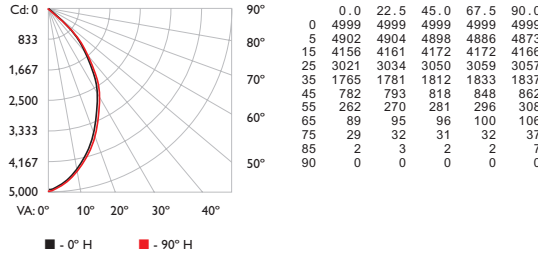
RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100					
1	1141111109107	111109107105	105104102	10110099	989796	94					
2	10910410197	1071039996	999794	979492	949290	89					
3	104989490	102979389	949188	928986	908785	84					
4	99938784	98918783	898582	878481	868380	79					
5	95878278	94878278	858177	837977	827876	75					
6	91837774	90827773	817673	797572	787572	71					
7	87797369	86787369	777269	767269	757168	67					
8	84757066	82746966	736965	726865	716865	64					
9	80716663	79716662	706562	696562	686562	61					
10	77686360	76686359	676259	666259	666259	58					

iW Reach Powercore gen2  
63° spread lens, half unit

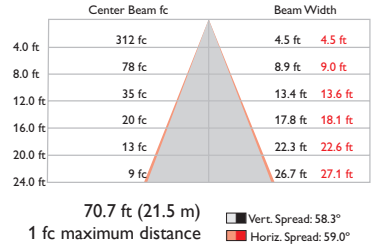
Lumens	5192
Efficacy	41.9 lm / W



Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	3010	58.0
0- 40	4139	79.7
0- 60	5051	97.3
0- 90	5192	100.0
90-180	0	0.0
0-180	5192	100.0

Coefficients Of Utilization - Zonal Cavity Method

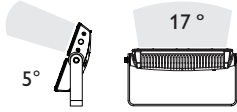
Effective Floor Cavity Reflectance: 20%

RC	80	70	50	30	10	0					
RW	70	50	30	10	50	30	10	50	30	10	0
0	119119119119	116116116116	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	83746762	82736662	716661	706561	686460	59					
7	79686257	77686157	666157	656056	645956	54					
8	75645753	73635753	625752	615652	605552	50					
9	71605349	69595349	585349	585249	575248	47					
10	67565046	66565046	554946	544945	534945	44					

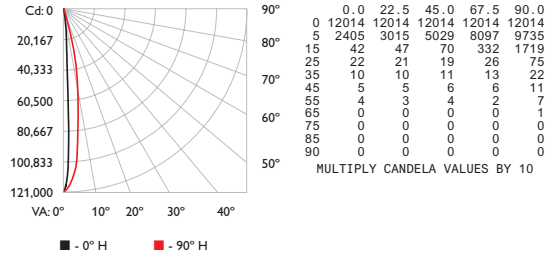
For lux multiply fc by 10.7

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

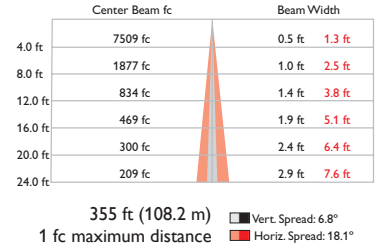
Lumens	5415
Efficacy	43.6 lm / W



### Polar Candela Distribution



### Illuminance at Distance



### Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	5246	96.9
0- 40	5325	98.3
0- 60	5407	99.8
0- 90	5415	100.0
90-180	0	0.0
0-180	5415	100.0

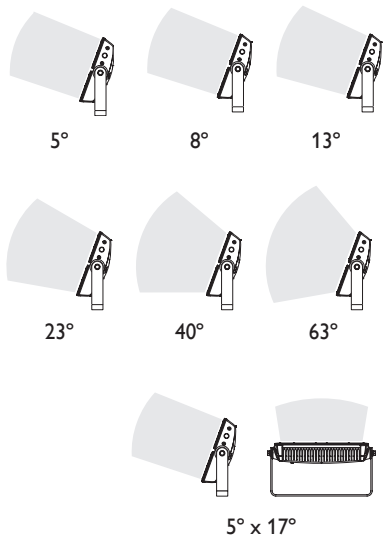
### Coefficients Of Utilization - Zonal Cavity Method

RC	Effective Floor Cavity Reflectance: 20%														
	80			70			50			30			10		
RW	70	50	30	10	70	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	113110108106	111109107105	106104103	103102101	100999997	97									
3	111107104102	109106103101	104102100	10110098	99989796	96									
4	10910510299	10710410199	10210098	1009897	98979695	95									
5	1071029997	1061029997	1009896	999795	97969494	94									
6	1051009795	1041009795	999694	989594	96959393	93									
7	103999694	103989694	979593	969493	96949292	92									
8	102979492	101979492	969492	959392	95939191	91									
9	101969391	100969391	959391	949291	94929190	90									
10	99959290	99959290	949290	949190	93919089	89									

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
	Color Temperature*	2700 K – 6500 K
	Lumens†	12,106 (no spread lens, full unit, all channels full on)
	Efficacy (lm / W)	50.4 (no spread lens, full unit, all channels full on)
	CRI	82 (no spread lens, full unit, all channels full on)
	Lumen Maintenance‡	60,000 hours L70 @ 25° C    50,000 hours L70 @ 50° C 100,000 hours L50 @ 25° C    80,000 hours L50 @ 50° C
Electrical	Input Voltage	100 – 240 VAC, auto-switching, 50 / 60 Hz
	Power Consumption	250 W maximum at full output, steady state
	Power Factor	.99 (no spread lens, full unit, all channels full on) @ 120 VAC
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
	Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from <a href="http://www.philipscolorkinetics.com/support/install_tool/">www.philipscolorkinetics.com/support/install_tool/</a>
	Certification and Safety	Certification
Environment		Dry / Damp / Wet Location, IP66

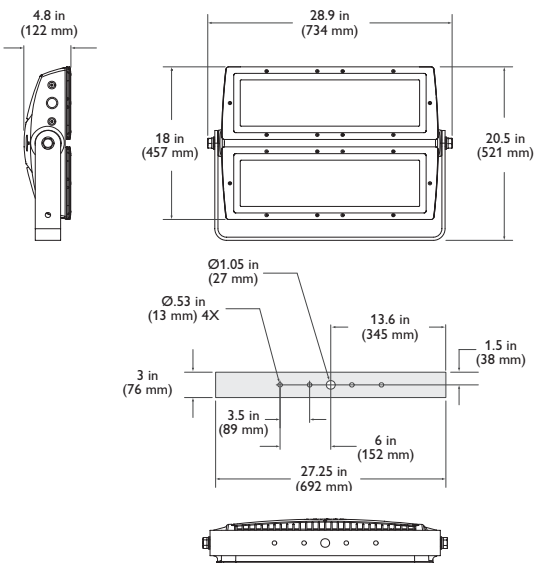
\* Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.



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

‡ L70 = 70% lumen maintenance (when light output drops below 70% of initial output). Ambient luminaire temperatures specified. 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.

CHROMACORE<sup>®</sup> | OPTIBIN<sup>®</sup> | POWERCORE<sup>®</sup>  
CKTECHNOLOGY | CKTECHNOLOGY | CKTECHNOLOGY



## Fixture and Accessories

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

- One or more Data Enabler Pro devices.
- Any Philips Color Kinetics 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 iW Reach Powercore gen2 fixture to a junction box or Data Enabler Pro.
- 4-conductor copper wire to connect iW Reach Powercore gen2 fixtures in series or in parallel. Standard 12 AWG (2.05 mm) stranded wire is recommended.

Item	Type	Item Number	Philips 12NC
iW Reach Powercore gen2 <i>Includes 6 ft (1.8 m) leader cable</i>	UL / cUL and CE / PSE	523-000045-50	910503703935
Replacement Leader Cable 6 ft (1.8 m)	UL / cUL	108-000043-02	910503700453
	CE / PSE	108-000043-03	910503700454
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.

### Included in the box

iW Reach Powercore gen2 fixture
6 ft (1.8 m) Leader Cable
Cable Strain Relief
Installation Instructions

# Installation

iW Reach Powercore gen2, a high-performance exterior architectural floodlight with extended light projection, is designed to brilliantly illuminate signature façades with washes of cool and warm white light. Because each iW Reach 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

✳ Refer to the iW Reach Powercore gen2 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 iW Reach 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.

### Installing in Damp or Wet Locations

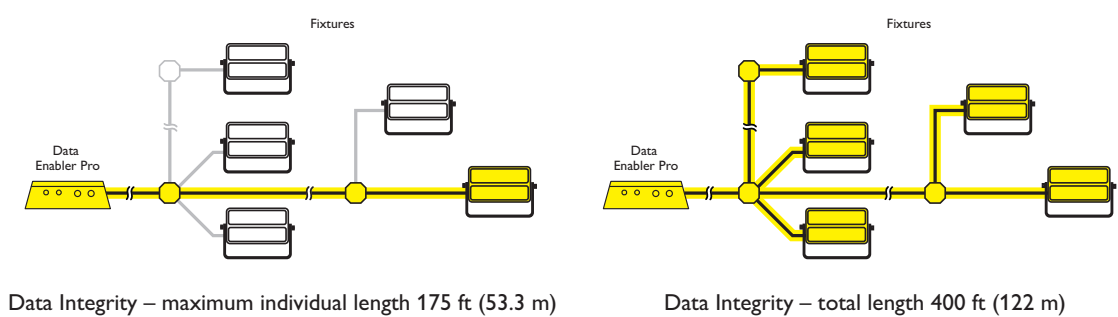
When installing in damp or wet locations, you must seal all junction boxes and iW Data Enablers with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in wiring compartments, cables, fixtures, or other electrical parts. You must use suitable outdoor-rated junction boxes when installing in damp or wet 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.

iW Reach 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).

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).



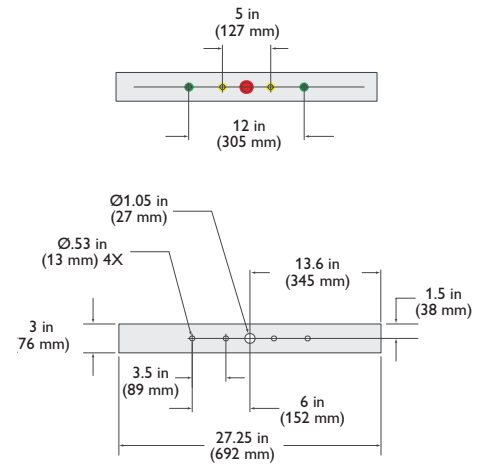


2. Ensure that the fixture mounting locations and substrates are sufficiently sturdy to bear the weight of each iW Reach Powercore gen2 fixture. Pre-drill holes in the mounting substrate if necessary, making reference to the mounting bracket dimensions. Use at least two screws to secure each fixture,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

If mounting iW Reach 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

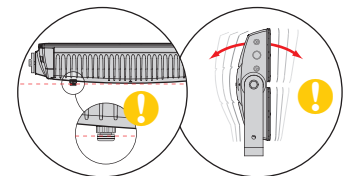
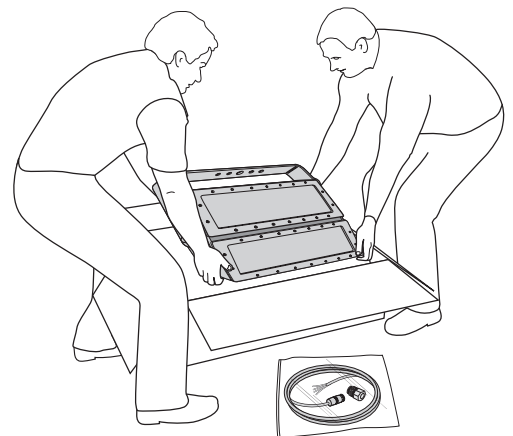
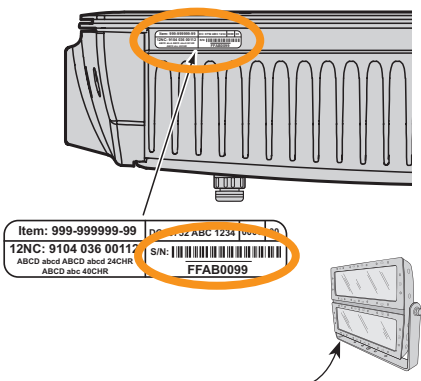
### Mounting bracket dimensions for pre-drilling



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

## Position and Mount Fixtures

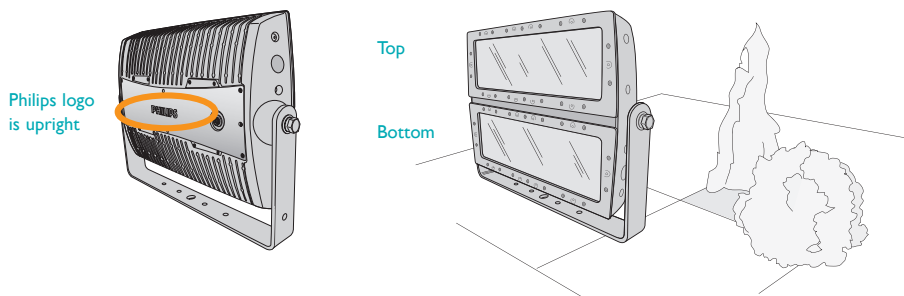
1. Unpack iW Reach Powercore gen2 fixtures. Because each iW Reach Powercore gen2 fixture weighs 75 lb (34 kg), you may need two people to lift the fixture out of the box and position it in the mounting location.
2. Each iW Reach Powercore gen2 fixture comes pre-programmed with a unique serial number. If you plan to control fixtures independently, record the serial numbers in a layout grid (typically a spreadsheet or list) for easy reference and light addressing.



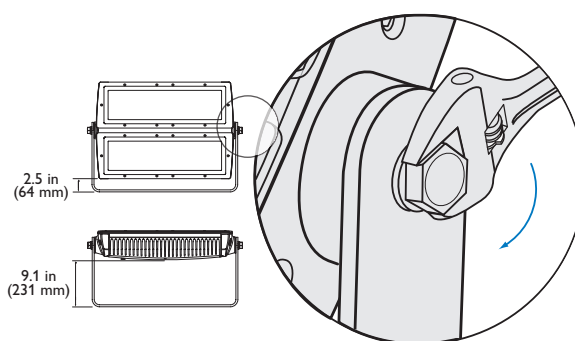
Do not rest iW Reach Powercore gen2 its back, as doing so may damage the connector port. Be careful not to tip the fixture over during positioning.

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.

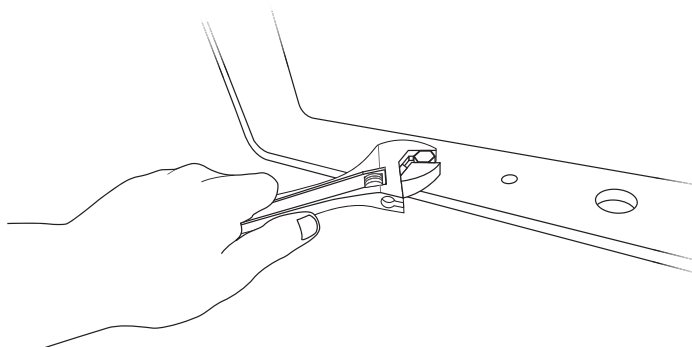
5. Position each iW Reach Powercore gen2 fixture in its designated mounting location. Make sure the mounting area is clear of debris and other obstructions.



6. 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.



7. 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

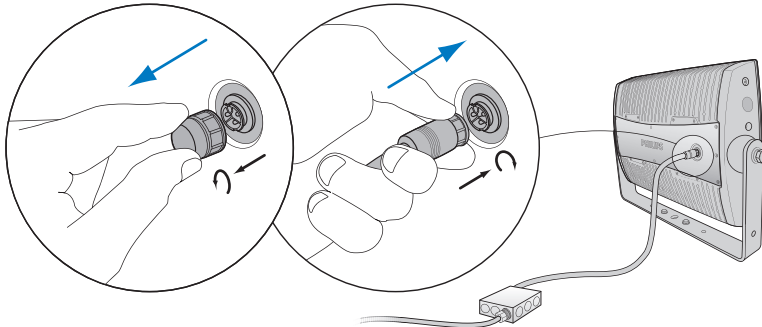
Make sure the power is OFF before connecting iW Reach Powercore gen2 fixtures.

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.

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 iW Reach Powercore gen2 fixture is 175 feet (53 m). When installing in parallel, the total cable length cannot exceed 400 feet (122 m).

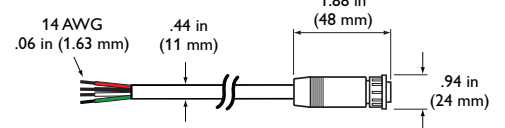
3. If necessary, remove the connector cap from the port on the back of the iW Reach Powercore gen2 housing. Insert the leader cable into the port. Turn the leader cable's lock nut to the right until it locks into place.



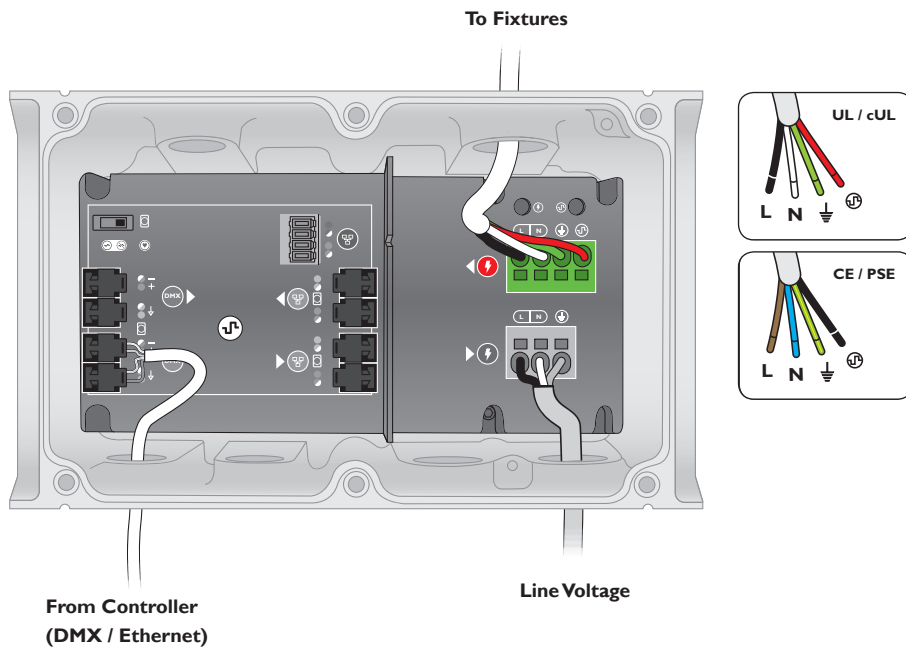
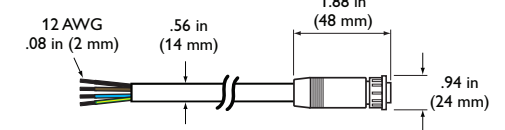
4. Use wire nuts to connect line, neutral, ground, and data. If installing in series, connect the leader cable from each fixture to the fixture's junction box. If installing in parallel, connect the leader cable from each fixture to the lead wire from the Data Enabler Pro in the common junction box.
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.
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.

### Leader Cable connector dimensions

#### UL / cUL

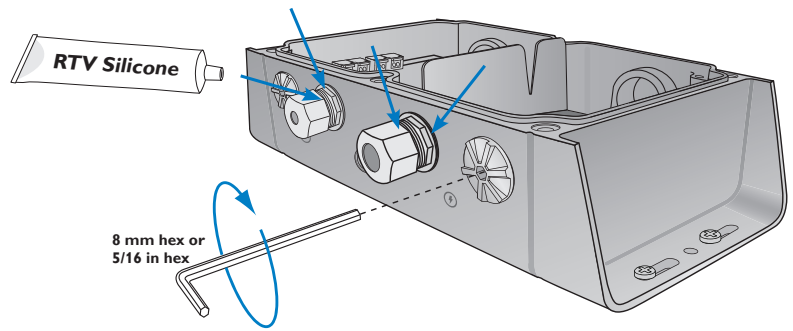
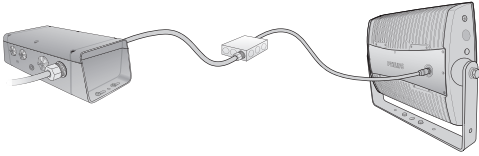


#### CE / PSE



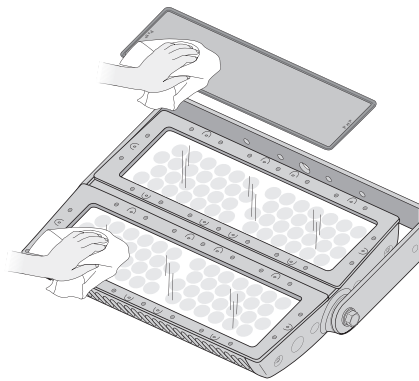
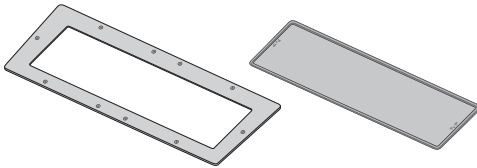
\* Refer to the Data Enabler Pro Product Guide for complete installation and operation details.

- Secure the Data Enabler Pro cover. Seal the Data Enabler Pro with electronics-grade RTV silicone sealant.



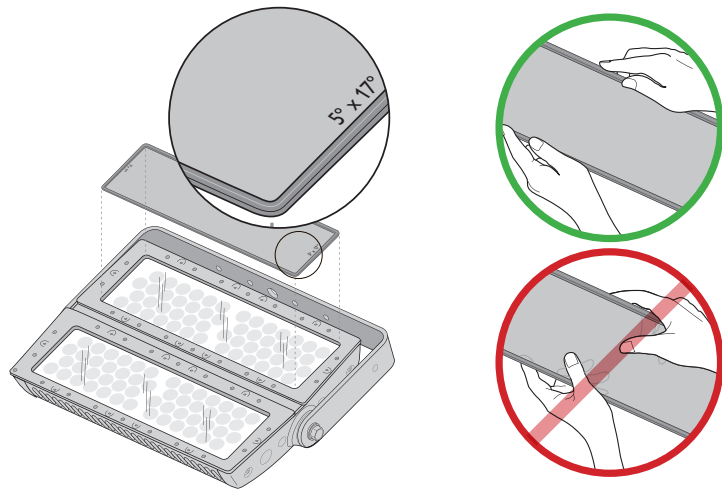
## Attach Spread Lenses (Optional)

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. Each half of iW Reach 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.

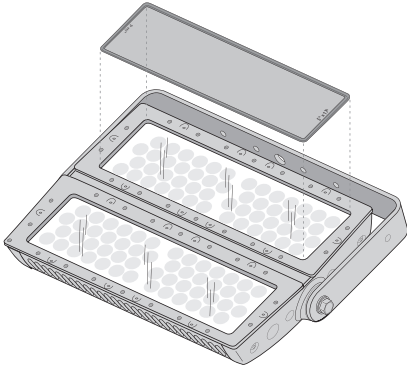


- Unpack and confirm the contents of the box. Each box contains one lens kit, consisting of a spread lens with attached rubber gasket, and a bezel with 10 captured mounting screws.
- Clean both sides of the spread lens and the face of the iW Reach Powercore gen2 housing, including glass surfaces, using a mild, non-abrasive cleaner. Ensure that all surfaces are dry, and that the gasket is properly fitted to the lens.
- 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.

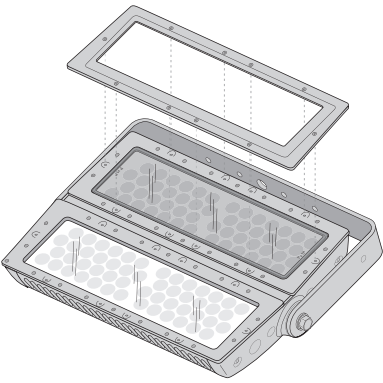
**\*** For installations in extreme environments, refer to the Reach Spread Lens Kit Installation Instructions for details on sealing the spread lens and bezel to prohibit water ingress.



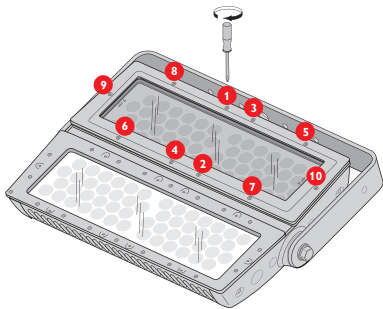
- 4 Place the spread lens on top of the iW Reach Powercore gen2 housing. Make sure that the spread lens and gasket are seated properly within the fixture housing. Also make sure that there is no moisture between the spread lens and the glass lens, as any moisture will compromise the effectiveness of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



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.



# Controlling iW Reach Powercore gen2 Fixtures

Philips Color Kinetics offers a number of control options for iW Reach Powercore gen2 fixtures, from simple to complex

## Displaying Fixed Light Output

For installations in which you want to manually adjust the brightness and color temperature of all fixtures in unison, use ColorDial Pro or iColor Keypad. With these controllers, no fixture node addressing or configuration is necessary.

ColorDial Pro and iColor Keypad are a Power-Over-Ethernet (PoE) devices that require a PoE switch, or a conventional Ethernet switch with a PoE injector. Refer to the ColorDial Pro or iColor Keypad documentation for details on how to install and use these controllers with iW Reach Powercore gen2 fixtures.

iW Reach Powercore gen2 has three LED channels, warm, neutral, and cool. You can easily control all fixtures in unison using the Fixed Color effect in iColor Player or iColor Keypad, or the Fixed Color or Variable Color effect in ColorDial Pro.

## Displaying Dynamic Light Output

For dynamic installations in which you want to display different light output on each iW Reach Powercore gen2 fixture, or each fixture half, simultaneously, you must use an RGB-based DMX or Ethernet controller such as iPlayer 3 or Light System Manager. To support dynamic effects that automatically modify brightness and color temperature on individual fixtures or each half of a fixture, you must address and configure iW Reach Powercore gen2 fixtures as you would any color-changing (RGB) fixture.

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

# Addressing iW Reach Powercore gen2 Fixtures

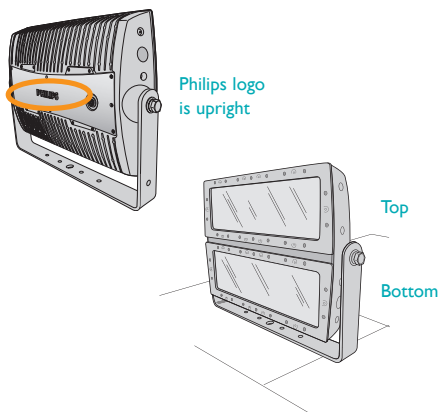
Make sure the power is ON before addressing and configuring fixtures.

You address and configure iW Reach Powercore gen2 fixtures using QuickPlay Pro addressing and configuration 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 address and configure fixtures using QuickPlay Pro with a computer connected to your lighting installation's network. QuickPlay Pro can automatically discover all of your fixtures, controllers, and Data Enabler Pro devices for quick configuration.
- In DMX installations, you can address and configure 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.

iW Reach 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 half-fixture mode or full-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).

\* ColorDial Pro is an 8-bit controller. You must use a 16-bit compatible controller to operate fixtures in 16-bit mode.



\* You can download QuickPlay Pro addressing and configuration software from [www.philipscolorkinetics.com/support/addressing](http://www.philipscolorkinetics.com/support/addressing).

In 8-bit mode, fixtures use one DMX address per LED channel. In 16-bit mode, fixtures use two DMX addresses per LED channel. The first DMX address corresponds to the “coarse” data for that channel, and the second corresponds to the “fine” data. By using double the number of DMX addresses, 16-bit mode increases fixture resolution from 256 dimming steps to 65,536 (256 x 256) dimming steps.

You can address and configure iW Reach Powercore gen2 fixtures in much the same way as you would address any RGB fixture. The red channel corresponds to the warm LEDs, the green channel corresponds to the neutral LEDs, and the blue channel corresponds to the cool LEDs.

iW Reach 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 light output 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 iW Reach Powercore gen2 configurations, assuming a starting DMX address of 1.

## LED Channels

RGB	iW Reach Powercore gen2
Red	Warm
Green	Neutral
Blue	Cool

## DMX Channel Assignments

8-Bit Mode												
Full-Fixture Mode	Top Half / Bottom Half											
	1				2				3			
	Warm				Neutral				Cool			
Half-Fixture Mode	Top Half						Bottom Half					
	1		2		3		4		5		6	
	Warm		Neutral		Cool		Warm		Neutral		Cool	
16-Bit Mode												
Full-Fixture Mode	Top Half / Bottom Half											
	1		2		3		4		5		6	
	Warm		Warm		Neutral		Neutral		Cool		Cool	
Half-Fixture Mode	Top Half						Bottom Half					
	1	2	3	4	5	6	7	8	9	10	11	12
	Warm	Warm	Neutral	Neutral	Cool	Cool	Warm	Warm	Neutral	Neutral	Cool	Cool

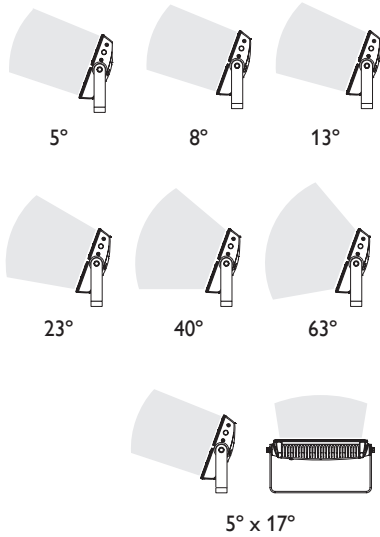
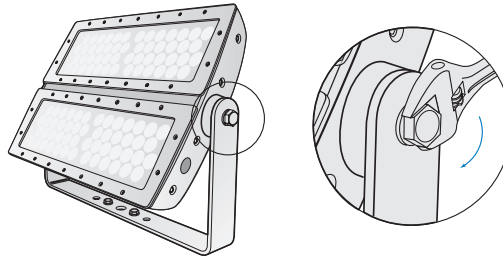


## Aim and Lock the Fixtures

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

✳️ For exterior applications with direct exposure to water, iW Reach Compact 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.

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.





Philips Color Kinetics  
3 Burlington Woods Drive  
Burlington, Massachusetts 01803 USA  
Tel 888.385.5742  
Tel 617.423.9999  
Fax 617.423.9998  
[www.philipscolorkinetics.com](http://www.philipscolorkinetics.com)

Copyright © 2009 – 2012 Philips Solid-State Lighting Solutions, Inc. All rights reserved.  
Chromacore, Chromasic, CK, the CK logo, Color Kinetics, the Color Kinetics logo, ColorBlast,  
ColorBlaze, ColorBurst, eW Fuse, ColorGraze, ColorPlay, ColorReach, iW Reach, eW Reach,  
DIMand, EssentialWhite, eW, iColor; iColor Cove, IntelliWhite, iW, iPlayer, Optibin, and Powercore  
are either registered trademarks or trademarks of Philips Solid-State Lighting Solutions, Inc. in  
the United States and / or other countries. All other brand or product names are trademarks  
or registered trademarks of their respective owners. Due to continuous improvements and  
innovations, specifications may change without notice. DAS-000030-00 R05 12-12