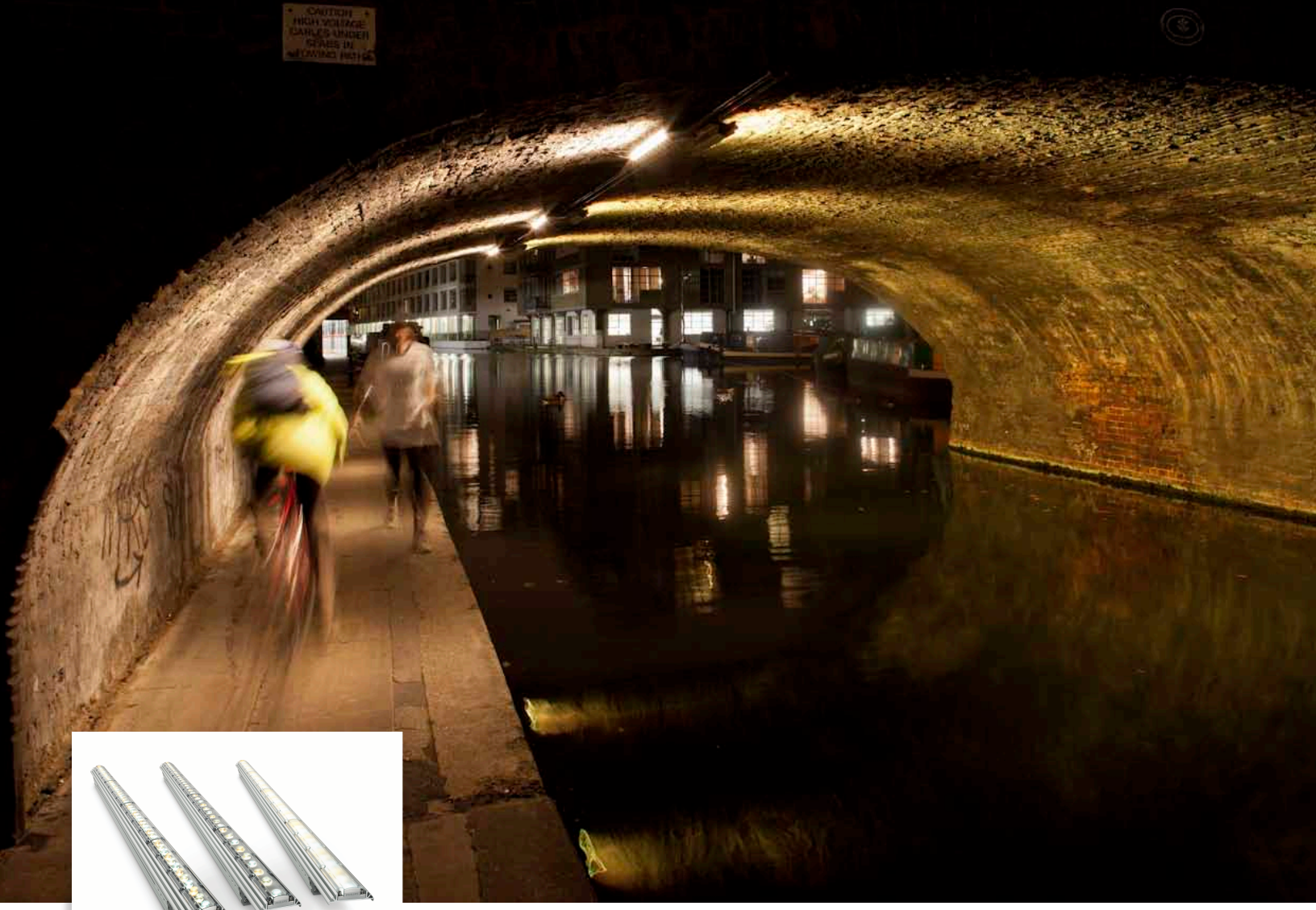


iW Graze Powercore Family

Linear exterior LED wall grazing fixtures with intelligent white light

iW Graze MX Powercore
iW Graze QLX Powercore
iW Graze QLX Powercore 5W
iW Graze EC Powercore

PHILIPS

COLOR KINETICS

iW Graze Powercore Family

Linear exterior LED wall grazing fixtures with intelligent white light

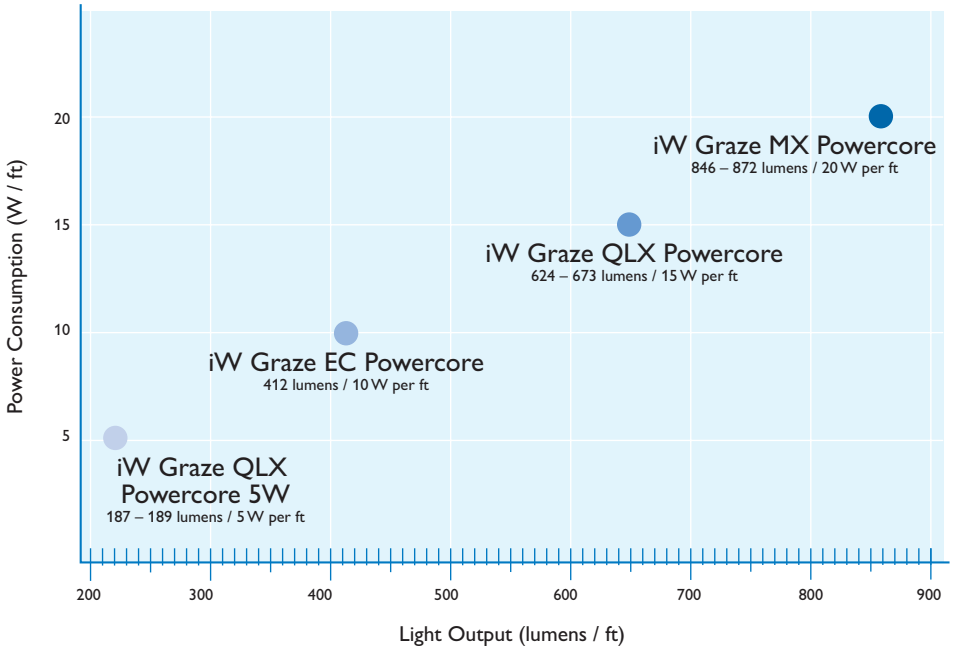
The new iW Graze Powercore family dramatically extends the range and flexibility of the popular line of intelligent white light LED grazing fixtures from Philips Color Kinetics. These high-performance fixtures offer channels of cool, neutral, and warm white LEDs to offer color temperatures ranging from 2700 K – 6500 K. Multiple fixture lengths, beam angles, output levels, and power consumption levels support a large range of façade or surface illumination application. Low-profile housing, connectorized cabling, a universal power input range, and direct line-voltage operation make iW Graze Powercore fixtures easy to install and operate.

- Tailor light output to specific applications — Available in four standard lengths, with standard 9° x 9°, 10° x 60°, 15° x 30°, 30° x 60° and 60° x 30° beam angles. Individually addressable 1 ft (305 mm) segments accommodate fine control of white-only effects and pre-programmed light shows.
- High-performance illumination and beam quality — iW Graze Powercore delivers up to 860 lumens of color temperature-adjustable light per foot. Superior beam quality offers striation-free saturation for several feet from fixture placement with no visible light scalloping between fixtures.
- Integrates Powercore technology — Powercore technology rapidly, efficiently, and accurately controls power output to fixtures directly from line voltage. The Philips Data Enabler Pro merges line voltage with control and delivers them to the fixture over a single standard cable, dramatically simplifying installation and lowering total system cost.
- Versatile installation options — Convenient push-and-click connectors let you easily and rapidly install Leader Cables and Jumper Cables. Multiple cable lengths support a variety of layouts. Constant torque locking hinges offer simple and consistent position control from various angles. The low-profile aluminum housing accommodates placement within most architectural niches.
- 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. Chromasync technology achieves unprecedented consistency of light performance and color precision across multiple fixtures in an installation, while maximizing intensity and color range.
- Universal power input range — Fixtures accept a universal power input range of 100 – 277 VAC for consistent installation anywhere in the world.

High performance + easy installation
With flexible mounting options, multiple fixture length and beam angle options, integrated Powercore technology, and a discreet low-profile housing rated for use in outdoor locations, iW Graze Powercore offers high performance and simple installation.

Illuminate surfaces with the right level of light

The expanded range of iW Graze Powercore intelligent white light grazing fixtuers offer four levels of performance at four levels of power consumption. A range of beam angles lets you select exactly the right light distribution and output for your application.



iW Graze MX Powercore

Features the most light output in our line of intelligent white light grazing fixtures — more than any previous version — for high-intensity multi-story façade and surface illumination.

iW Graze QLX Powercore

Consumes 25% less energy than iW Graze MX Powercore. Perfect for surface illumination applications calling for a balance of cost and performance.

iW Graze QLX Powercore 5W

Fixtures are factory-set to consume a maximum of 5 W per foot, to support ASHRAE standards, LEED green building certification, and other power-limited projects. Offers the same beam spread options as iW Graze MX Powercore and iW Graze QLX Powercore.

iW Graze EC Powercore

Wide beam angle (90° x 90°) produces a soft-edged, volume fill for exterior cove, niche, and architectural detail illumination.

How Different Color Temperatures Affect the Appearance of Objects

Warm Color Temperature

Cool Color Temperature

Adjusting the brightness and color temperature of iW Graze Powercore fixtures, from warm (more yellow and red) through neutral to cool (more blue), alters the emotional effect of a space, and can dramatically affect the appearance of objects on displays in stores, galleries, and museums. Selecting the right color temperature matches light source to environment, positively influences buyer behavior, and increases productivity in the workplace.

Effect, Mood, and Application by Color Temperature					
Color Temperature	Warm 2700 K	White 3000 K	Neutral 3500 K	Cool 4100 K	Daylight 5000 K – 6500 K
Effects and Moods	Warm Cozy Open	Friendly Intimate Personal Exclusive	Friendly Inviting Non-threatening	Neat Clean Efficient	Bright Alert Exacting coloration
Applications	Restaurants Hotel lobbies Boutiques Homes	Libraries Office areas Retail stores	Showrooms Bookstores Office areas	Office areas Classrooms Mass merchandisers Hospitals	Galleries Museums Jewelry stores Medical exam areas

Delivering a Wide Range of Color Temperatures

LED sources can deliver a wide range of color temperatures, equivalent to the color temperatures available from conventional fluorescent, incandescent, halogen, and metal halide light sources. IntelliWhite fixtures from Philips Color Kinetics offer this range in a single fixture.

Light Sources and Their Color Temperatures					
Color Temperature	Fluorescent	Halogen	Incandescent	LED	Metal Halide
Warm 2700 K	✓		✓	✓	
White 3000 K	✓	✓		✓	✓
Normal 3500 K	✓			✓	
Cool 4100 K	✓			✓	✓
Daylight 5000 K – 6500 K	✓			✓	

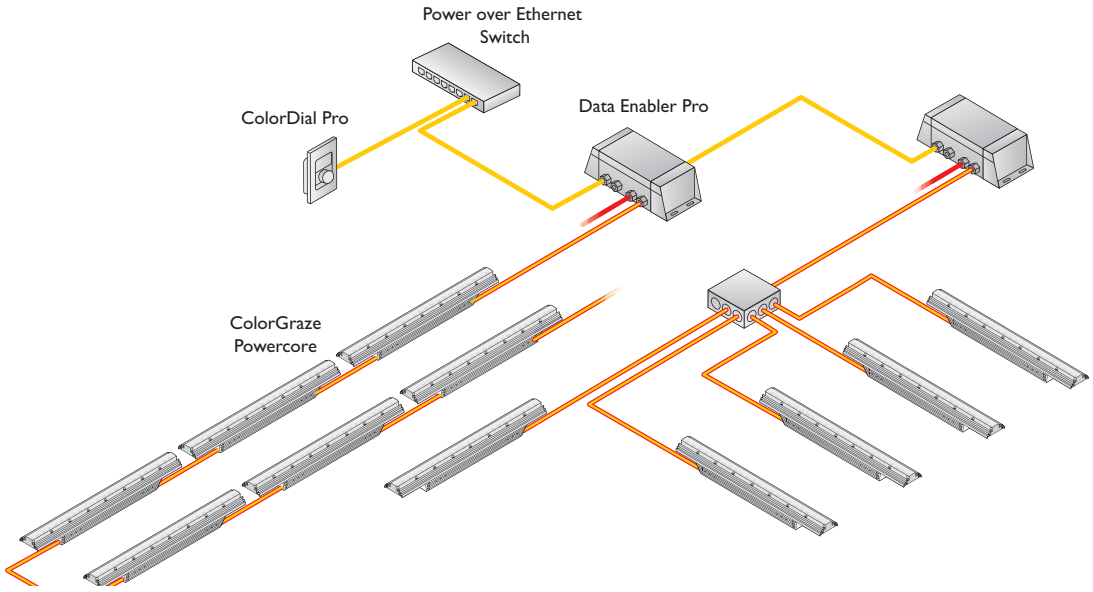
Versatile Installation Options

iW Graze Powercore is designed for grazing and wall washing applications which require variable brightness and color temperature. With a low-profile design, exterior-rated housing, LED sources with long useful life, and ease of installation and maintenance, iW Graze Powercore is ideal for interior and exterior installations where lamp maintenance may be difficult or impossible.

Typical iW Graze Powercore Installations

Thanks to patented Powercore technology, Data Enabler Pro delivers line voltage and control data to iW Graze Powercore fixtures over a single standard wire, eliminating the need for external power supplies,

A simple iW Graze Powercore installation might use a single series of fixtures with one Data Enabler Pro and ColorDial Pro to wash the walls in an office entryway with uniform, surface wash light that reflects a glare-free ambient glow into the surrounding area. A more complex installation might use multiple series of iW Graze Powercore fixtures, with multiple Data Enabler Pro devices, mounted in within compact niches of a building exterior for dramatic highlighting of notable architectural features.



Regardless of the size and complexity of your installation, planning up front can help streamline the installation and configuration of your fixtures.

Create a lighting design plan that identifies and locates all fixtures, power / data supplies, and controllers. Use this Product Guide and the online Configuration Calculator to determine whether to install fixtures in series or in parallel, how many fixtures you can install in a single series, and the maximum distances between Data Enabler Pro devices, fixtures, and controllers.

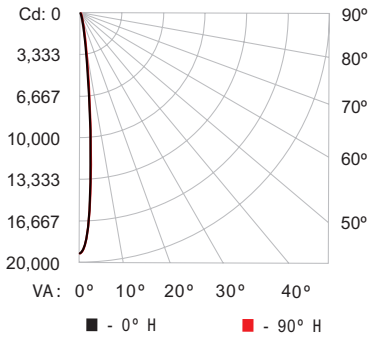
Photometrics / iW Graze MX Powercore

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

1 ft (305 mm), 9° x 9° beam angle

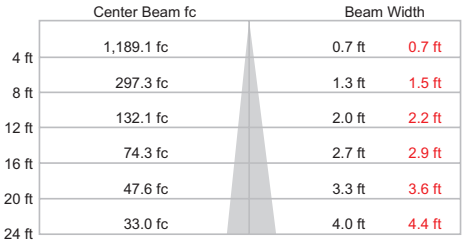
Lumens	Efficacy
872	34.9

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	19025	19025	19025	19025	19025
5	8691	8898	9361	9826	10013
15	665	615	582	615	642
25	83	68	68	64	65
35	23	20	21	22	22
45	8	8	10	9	11
55	6	5	4	5	6
65	4	4	3	3	3
75	1	1	0	0	1
85	1	0	0	0	1
90	0	0	0	0	0

Illuminance at Distance



138 ft (42 m)
1 fc maximum distance

Vert. Spread: 9.5°
Horiz. Spread: 10.4°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	116	114	113	111	114	112	111	109	108	107	106	104	104	103	101	101	100	100	98
2	113	110	108	106	111	109	106	105	105	104	102	103	101	100	100	99	98	97	95
3	111	107	104	102	109	106	103	101	103	101	99	101	99	98	99	98	97	95	93
4	108	104	101	99	107	103	100	98	101	99	97	100	98	96	98	96	95	94	92
5	106	102	99	96	105	101	98	96	100	97	95	98	96	95	97	95	94	93	91
6	105	100	97	95	103	99	96	94	98	96	94	97	95	93	96	94	93	92	90
7	103	98	95	93	102	98	95	93	97	94	92	96	94	92	95	93	92	91	89
8	101	97	94	92	101	96	93	91	95	93	91	95	92	91	94	92	91	90	88
9	100	95	92	90	99	95	92	90	94	92	90	94	91	90	93	91	90	89	87
10	99	94	91	89	98	94	91	89	93	91	89	93	90	89	92	90	89	88	86

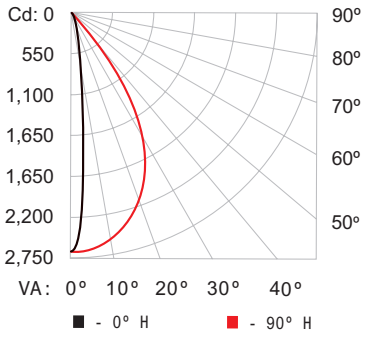
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	842	96.6
0- 40	856	98.2
0- 60	867	99.5
0- 90	872	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	872	100.0

1 ft (305 mm), 10° x 60° beam angle

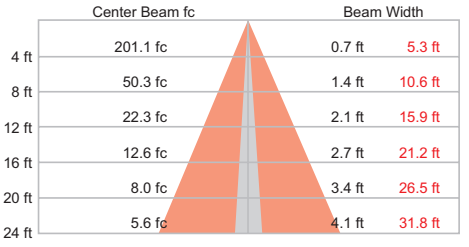
Lumens	Efficacy
860	34.0

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	3217	3217	3217	3217	3217
5	1559	1729	2271	2926	3197
15	199	242	417	1186	3001
25	32	39	101	432	2437
35	13	15	29	167	1448
45	7	8	14	52	501
55	6	6	7	18	114
65	4	4	4	8	35
75	2	2	2	4	12
85	1	1	1	1	1
90	1	1	1	0	0

Illuminance at Distance



56 ft (17 m)
1 fc maximum distance

Vert. Spread: 9.8°
Horiz. Spread: 67.1°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	83
4	99	92	86	82	97	90	86	82	88	84	81	86	83	80	85	82	79	78
5	94	86	81	77	93	86	80	77	84	79	76	82	78	75	81	77	75	73
6	90	82	76	72	89	81	76	72	80	75	72	78	74	71	77	73	71	69
7	86	78	72	68	85	77	72	68	76	71	68	75	71	67	74	70	67	66
8	83	74	69	65	82	74	68	65	72	68	64	71	67	64	71	67	64	63
9	80	71	65	62	79	70	65	62	69	65	61	68	64	61	68	64	61	60
10	77	68	62	59	76	67	62	59	66	62	59	66	61	58	65	61	58	57

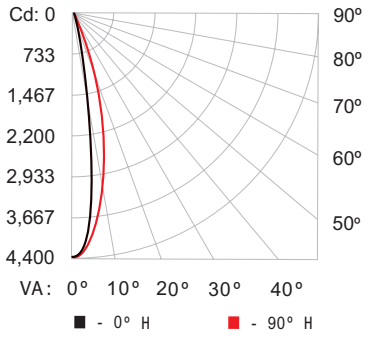
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	638	74.1
0- 40	767	89.1
0- 60	846	98.3
0- 90	860	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	860	100.0

1 ft (305 mm), 15° x 30° beam angle

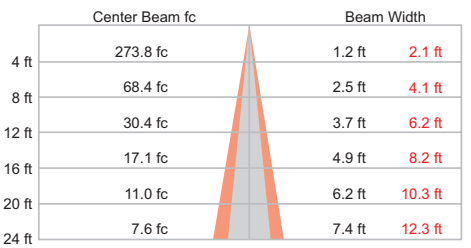
Lumens	Efficacy
846	33.3

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	4380	4380	4380	4380	4380
5	3475	3549	3750	3951	4046
15	693	785	1116	1689	2054
25	97	114	180	351	518
35	26	28	38	62	86
45	13	13	16	21	25
55	9	8	9	11	13
65	6	6	5	7	7
75	3	3	3	3	4
85	2	1	1	1	1
90	1	1	1	1	0

Illuminance at Distance



66 ft (20.1 m)
1 fc maximum distance

Vert. Spread: 17.5°
Horiz. Spread: 28.8°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	115	113	111	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96
2	111	107	104	101	109	105	103	100	102	100	98	99	98	96	97	95	94	92
3	107	102	99	96	105	101	98	95	98	96	93	96	94	92	94	92	91	89
4	104	98	94	91	102	97	93	90	95	92	89	93	91	88	92	89	87	86
5	101	94	90	87	99	94	90	87	92	89	86	90	88	85	89	87	85	83
6	98	91	87	84	96	90	86	84	89	86	83	88	85	83	87	84	82	81
7	95	88	84	81	94	88	84	81	87	83	80	85	82	80	85	82	80	79
8	92	86	81	78	91	85	81	78	84	81	78	83	80	78	82	80	77	76
9	90	83	79	76	89	83	79	76	82	78	76	81	78	76	80	77	75	74
10	88	81	77	74	87	80	77	74	80	76	74	79	76	74	78	76	73	73

Zonal Lumen

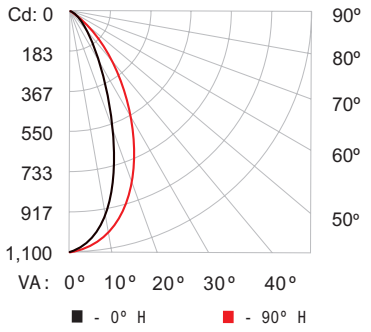
ZONE	LUMENS	%FIXT
0- 30	781	92.3
0- 40	812	96.1
0- 60	835	98.7
0- 90	846	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	846	100.0

For lux multiply fc by 10.7

1 ft (305 mm), 30° x 60° beam angle

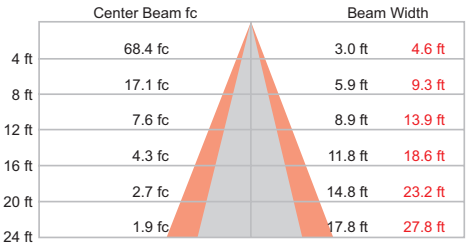
Lumens	Efficacy
855	33.4

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	1094	1094	1094	1094	1094
5	1053	1056	1064	1073	1076
15	752	775	837	905	935
25	379	411	507	630	690
35	131	152	223	342	414
45	41	47	74	141	193
55	20	20	25	47	70
65	11	11	12	17	23
75	4	4	5	6	7
85	2	2	1	1	1
90	1	1	0	0	0

Illuminance at Distance



33 ft (10 m)
1 fc maximum distance

Vert. Spread: 40.6°
Horiz. Spread: 60.2°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	95	94	93	
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	
3	101	94	89	85	99	93	88	84	90	86	83	88	84	82	86	83	80	79	
4	96	88	82	78	94	87	81	77	85	80	76	82	78	75	81	77	74	73	
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	76	72	69	68	
6	86	77	71	66	85	76	70	66	74	69	65	73	68	65	72	68	64	63	
7	82	72	66	61	80	71	65	61	70	65	61	69	64	61	68	64	60	59	
8	78	68	62	57	76	67	61	57	66	61	57	65	60	57	64	60	57	55	
9	74	64	58	54	73	64	58	54	63	57	54	62	57	53	61	56	53	52	
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49	

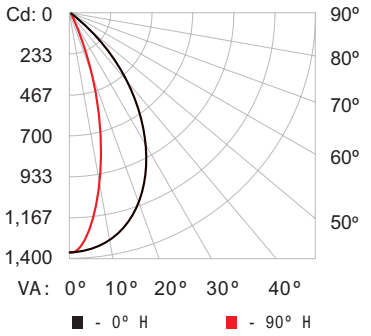
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	569	66.5
0- 40	726	84.8
0- 60	834	97.4
0- 90	855	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	855	100.0

1 ft (305 mm), 60° x 30° beam angle

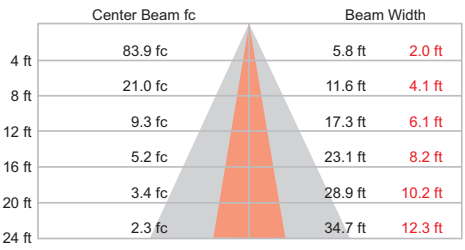
Lumens	Efficacy
872	34.1

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	1342	1342	1342	1342	1342
5	1332	1315	1282	1252	1238
15	1237	1113	872	691	629
25	1036	757	383	213	173
35	703	373	116	54	43
45	336	132	36	23	21
55	109	42	17	14	14
65	28	16	10	9	9
75	8	5	4	4	4
85	4	2	1	1	1
90	2	1	1	0	0

Illuminance at Distance



36 ft (11 m)
1 fc maximum distance

Vert. Spread: 71.7°
Horiz. Spread: 28.7°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86	
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79	
4	96	89	83	79	95	87	82	78	85	81	77	83	79	76	81	78	75	74	
5	92	83	77	73	90	82	76	72	80	75	72	78	74	71	77	73	70	69	
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	
7	83	73	67	63	81	73	67	63	71	66	62	70	66	62	69	65	62	60	
8	79	69	63	59	78	69	63	59	68	62	59	67	62	58	66	61	58	57	
9	75	66	60	56	74	65	59	55	64	59	55	63	58	55	62	58	55	54	
10	72	62	56	53	71	62	56	52	61	56	52	60	55	52	59	55	52	51	

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	596	68.4
0- 40	744	85.4
0- 60	850	97.5
0- 90	871	99.9
90-120	1	0.1
90-130	1	0.1
90-150	1	0.1
90-180	1	0.1
0-180	872	100.0

For lux multiply fc by 10.7

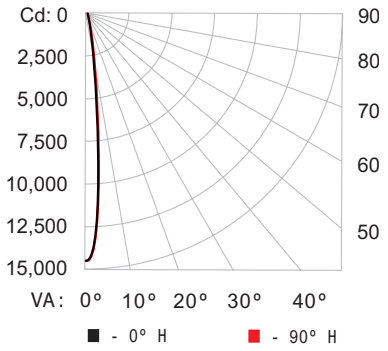
Photometrics / iW Graze QLX Powercore

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

1 ft (305 mm), 9° x 9° beam angle

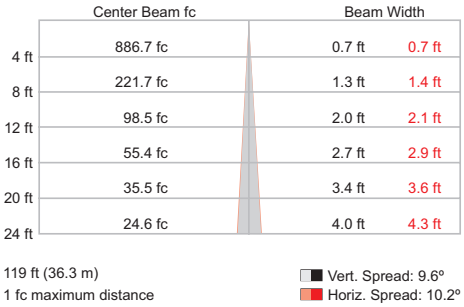
Lumens	Efficacy
661	33.7

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	14187	14187	14187	14187	14187
5	6608	6739	6901	7142	7257
15	512	478	458	481	508
25	66	57	57	56	54
35	18	15	17	20	18
45	8	6	9	9	9
55	5	3	5	5	3
65	3	2	3	3	3
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



119 ft (36.3 m)
1 fc maximum distance

Vert. Spread: 9.6°
Horiz. Spread: 10.2°

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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	101	99		100	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84
3	100	93	87	83	98	92	86	82	89	84	81	86	83	80	84	81	78	77
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70
5	89	80	73	69	87	79	73	68	77	72	68	75	71	67	74	70	66	65
6	84	74	68	63	83	74	67	63	72	67	62	71	66	62	69	65	62	60
7	80	70	63	58	78	69	63	58	67	62	58	66	61	58	65	61	57	56
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52
9	72	61	55	51	70	61	55	51	60	54	50	59	54	50	58	53	50	48
10	68	58	52	47	67	57	51	47	56	51	47	56	51	47	55	50	47	45

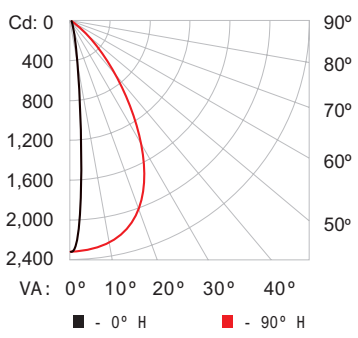
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	636	96.3
0- 40	647	98.0
0- 60	657	99.5
0- 90	661	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	661	100.0

1 ft (305 mm), 10° x 60° beam angle

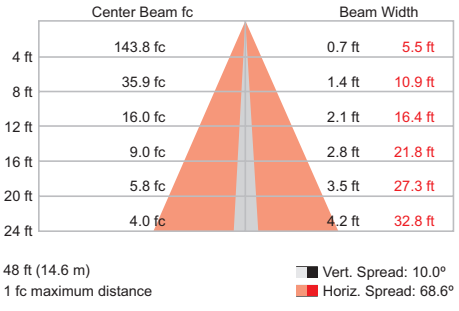
Lumens	Efficacy
624	31.5

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	2300	2300	2300	2300	2300
5	1112	1232	1608	2089	2290
15	139	171	295	852	2161
25	22	28	74	310	1776
35	9	11	22	124	1098
45	5	6	10	41	407
55	3	4	5	15	93
65	2	2	3	6	28
75	1	1	2	3	10
85	0	0	1	1	1
90	0	0	0	0	0

Illuminance at Distance



48 ft (14.6 m)
1 fc maximum distance

Vert. Spread: 10.0°
Horiz. Spread: 68.6°

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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	106	111	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82
4	99	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77
5	94	86	81	77	92	85	80	76	84	79	76	82	78	75	80	77	74	73
6	90	82	76	72	89	81	76	72	79	75	71	78	74	71	77	73	70	69
7	86	77	72	68	85	77	72	68	76	71	67	74	70	67	73	70	67	65
8	83	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	61	59
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57

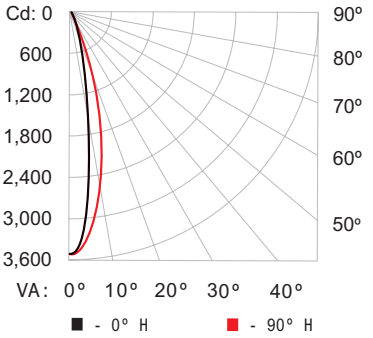
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	457	73.3
0- 40	553	88.6
0- 60	614	98.4
0- 90	624	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	624	100.0

1 ft (305 mm), 15° x 30° beam angle

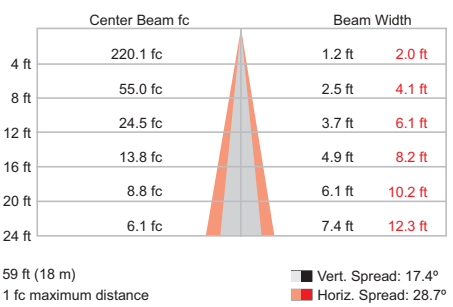
Lumens	Efficacy
673	33.7

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	3522	3522	3522	3522	3522
5	2794	2857	3019	3184	3255
15	548	625	892	1355	1646
25	75	88	142	280	415
35	19	21	28	48	68
45	9	10	11	15	18
55	6	6	6	8	9
65	4	4	4	5	5
75	2	2	2	2	2
85	1	1	1	1	0
90	0	0	0	0	0

Illuminance at Distance



59 ft (18 m)
1 fc maximum distance

Vert. Spread: 17.4°
Horiz. Spread: 28.7°

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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	112	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	100	102	100	98	100	98	96	97	95	94	93
3	107	103	99	96	106	101	98	95	99	96	94	96	94	92	94	92	91	90
4	104	98	94	91	102	97	94	91	95	92	90	94	91	89	92	90	88	87
5	101	95	91	87	99	94	90	87	92	89	86	91	88	86	89	87	85	84
6	98	92	87	84	97	91	87	84	90	86	83	88	85	83	87	84	82	81
7	95	89	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79
8	93	86	82	79	92	85	81	79	85	81	78	84	80	78	83	80	78	77
9	90	83	79	77	89	83	79	76	82	79	76	82	78	76	81	78	76	75
10	88	81	77	74	87	81	77	74	80	77	74	80	76	74	79	76	74	73

Zonal Lumen

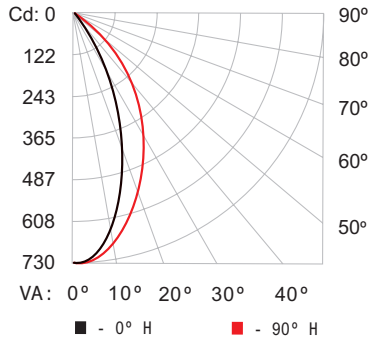
ZONE	LUMENS	%FIXT
0- 30	625	92.9
0- 40	650	96.5
0- 60	666	99.0
0- 90	673	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	673	100.0

For lux multiply fc by 10.7

1 ft (305 mm), 30° x 60° beam angle

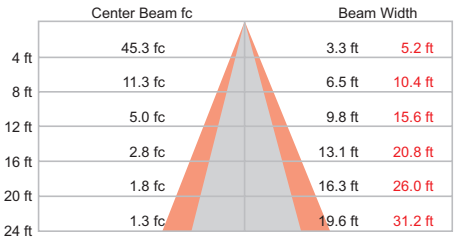
Lumens	Efficacy
658	33.6

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	725	725	725	725	725
5	702	703	707	710	711
15	527	538	570	602	617
25	300	320	379	447	482
35	115	134	194	284	333
45	36	42	72	140	187
55	16	17	24	52	80
65	9	9	11	17	27
75	3	4	4	6	8
85	2	2	2	1	2
90	1	1	1	1	0

Illuminance at Distance



26 ft (7.9 m)
1 fc maximum distance

Vert. Spread: 44.4°
Horiz. Spread: 62.6°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84
3	100	93	87	83	98	92	86	82	89	84	81	86	83	80	84	81	78	77
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70
5	89	80	73	69	87	79	73	68	77	72	68	75	71	67	74	70	66	65
6	84	74	68	63	83	74	67	63	72	67	62	71	66	62	69	65	62	60
7	80	70	63	58	78	69	63	58	67	62	58	66	61	58	65	61	57	56
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52
9	72	61	55	51	70	61	55	51	60	54	50	59	54	50	58	53	50	48
10	68	58	52	47	67	57	51	47	56	51	47	56	51	47	55	50	47	45

Zonal Lumen

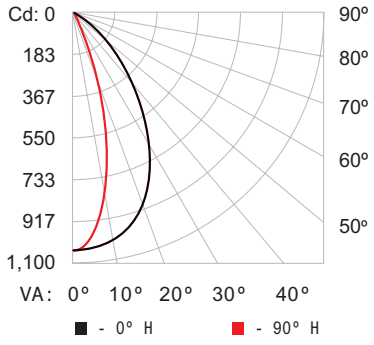
ZONE	LUMENS	%FIXT
0- 30	400	60.7
0- 40	531	80.7
0- 60	636	96.6
0- 90	657	99.9
90-120	1	0.1
90-130	1	0.1
90-150	1	0.1
90-180	1	0.1
0-180	658	100.0

For lux multiply fc by 10.7

1 ft (305 mm), 60° x 30° beam angle

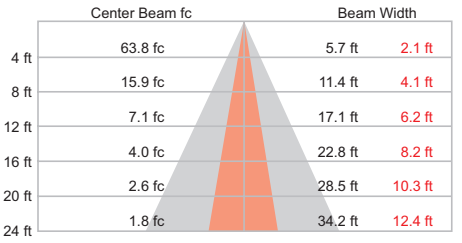
Lumens	Efficacy
658	33.9

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	1020	1020	1020	1020	1020
5	1012	1001	977	951	941
15	934	844	665	529	482
25	772	570	295	167	135
35	523	284	91	43	35
45	255	102	29	17	16
55	86	33	13	11	11
65	23	12	8	7	7
75	6	4	3	3	3
85	3	2	1	1	1
90	1	1	1	0	0

Illuminance at Distance



32 ft (9.8 m)
1 fc maximum distance

Vert. Spread: 70.9°
Horiz. Spread: 28.9°

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100
1	113	110	108	105	111	108	106	104	102	100		100	99	97	97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	96	89	83	79	95	87	82	78	85	81	77	83	79	76	81	78	75	74
5	92	83	77	73	90	82	76	72	80	75	72	78	74	71	77	73	70	69
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64
7	83	73	67	63	81	73	67	63	71	66	62	70	66	62	69	65	62	60
8	79	69	63	59	78	69	63	59	68	62	59	67	62	58	66	61	58	57
9	75	66	60	56	74	65	59	56	64	59	55	63	58	55	62	58	55	54
10	72	62	56	53	71	62	56	52	61	56	52	60	55	52	59	55	52	51

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	450	68.4
0- 40	560	85.2
0- 60	641	97.5
0- 90	657	99.9
90-120	0	0.1
90-130	0	0.1
90-150	0	0.1
90-180	0	0.1
0-180	658	100.0

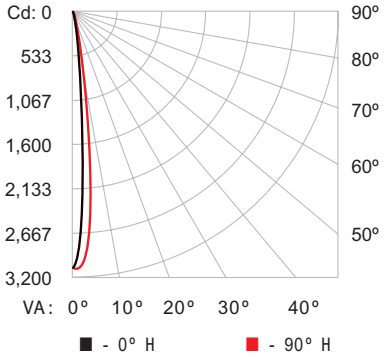
Photometrics / iW Graze QLX Powercore 5W

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

1 ft (305 mm), 9° x 9° beam angle

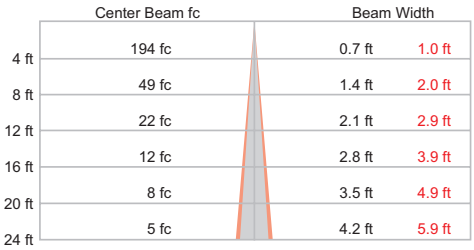
Lumens	Efficacy
189	20.9

Polar Candela Distribution



	0	25	45	70	90
0	985	985	985	985	985
5	741	761	808	869	890
15	152	181	250	395	455
25	21	28	47	97	127
35	5	6	9	18	21
45	2	3	3	5	5
55	2	2	2	2	3
65	1	1	1	1	2
75	1	1	1	1	1
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



55.7 ft (17.0 m)
1 fc maximum distance

Vert. Spread: 10.0°
Horiz. Spread: 13.9°

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	119	119	119	119	116	116	116	100	111	111	111	106	106	106	102	102	102	100
1	116	114	112	111	113	112	110	98	108	107	106	104	103	103	101	100	100	98
2	113	110	107	105	111	108	106	97	105	103	102	102	101	100	100	99	98	96
3	110	107	104	101	109	105	103	95	103	101	99	101	99	97	99	97	96	95
4	108	104	101	98	107	103	100	94	101	98	97	99	97	95	97	96	94	93
5	106	101	98	96	105	100	98	93	99	96	95	98	95	94	96	94	93	92
6	104	99	96	94	103	99	96	91	97	95	93	96	94	92	95	93	92	91
7	102	97	94	92	101	97	94	90	96	93	91	95	93	91	94	92	91	90
8	101	96	93	91	100	95	92	89	94	92	90	94	91	90	93	91	89	89
9	99	94	91	89	98	94	91	88	93	91	89	93	90	89	92	90	88	88
10	98	93	90	88	97	93	90	87	92	90	88	91	89	88	91	89	87	87

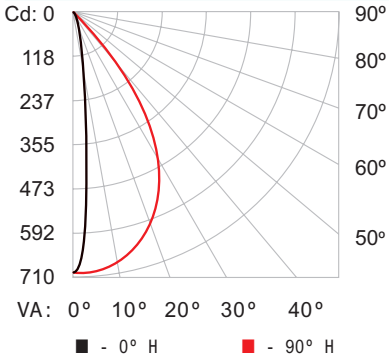
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	190.0	99.4 %
60 - 90	0.9	0.5 %
0 - 90	188.6	100.0 %

1 ft (305 mm), 10° x 60° beam angle

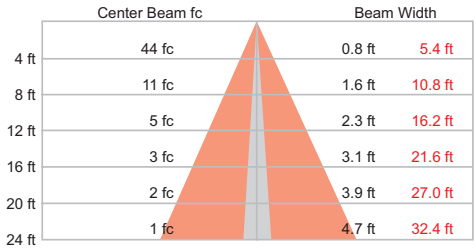
Lumens	Efficacy
189	20.7

Polar Candela Distribution



	0	25	45	70	90
0	701	701	701	701	701
5	330	368	469	637	695
15	38	52	92	314	649
25	6	7	20	127	533
35	2	3	5	54	335
45	1	2	3	19	135
55	1	1	1	6	32
65	1	1	1	2	8
75	0	0	0	1	3
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



26.5 ft (8.1 m)
1 fc maximum distance

Vert. Spread: 11.1°
Horiz. Spread: 68.1°

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	119	119	119	119	116	116	116	100	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	94	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	106	102	99	89	99	96	94	96	94	92	93	91	90	88
3	104	97	93	89	102	96	92	84	93	90	87	91	88	86	89	86	84	83
4	99	92	87	83	97	91	86	79	88	84	81	87	83	80	85	82	79	78
5	94	87	81	77	93	86	81	75	84	80	76	82	79	76	81	78	75	73
6	90	82	77	73	89	81	76	71	80	75	72	78	74	71	77	74	71	70
7	86	78	72	69	85	77	72	67	76	71	68	75	71	68	74	70	67	66
8	83	74	69	65	82	74	69	64	73	68	65	72	67	64	71	67	64	63
9	80	71	66	62	79	70	65	61	70	65	62	69	64	61	68	64	61	60
10	77	68	63	59	76	67	62	58	67	62	59	66	62	59	65	61	59	57

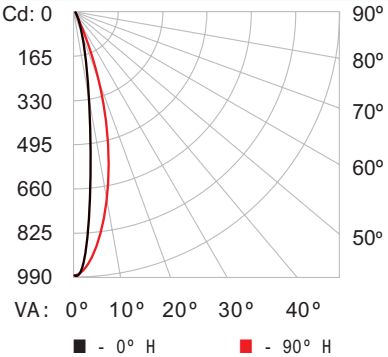
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	185.9	98.6 %
60 - 90	2.6	1.4 %
0 - 90	188.6	100.0 %

1 ft (305 mm), 15° x 30° beam angle

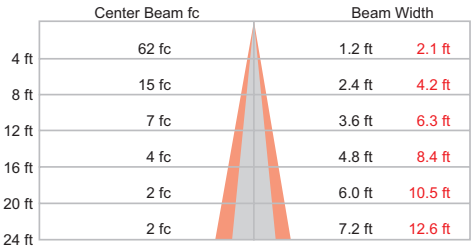
Lumens	Efficacy
187	20.5

Polar Candela Distribution



	0	25	45	70	90
0	985	985	985	985	985
5	741	761	808	869	890
15	152	181	250	395	455
25	21	28	47	97	127
35	5	6	9	18	21
45	2	3	3	5	5
55	2	2	2	2	3
65	1	1	1	1	2
75	1	1	1	1	1
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



31.4 ft (9.6 m)
1 fc maximum distance

Vert. Spread: 17.1°
Horiz. Spread: 29.4°

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	119	119	119	119	116	116	116	100	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	112	111	109	97	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	93	102	100	98	100	98	96	97	95	94	93
3	107	103	99	96	106	101	98	90	99	96	94	96	94	92	94	92	91	90
4	104	98	94	91	102	97	94	87	95	92	90	94	91	89	92	90	88	87
5	101	95	91	88	99	94	90	85	92	89	86	91	88	86	89	87	85	84
6	98	92	87	84	97	91	87	82	90	86	83	88	85	83	87	84	82	81
7	95	89	84	81	94	88	84	80	87	83	81	86	83	80	85	82	80	79
8	93	86	82	79	92	85	81	78	85	81	78	84	80	78	83	80	78	77
9	90	83	79	77	89	83	79	76	82	79	76	82	78	76	81	78	76	75
10	88	81	77	74	87	81	77	74	80	77	74	80	76	74	79	76	74	73

Zonal Lumen

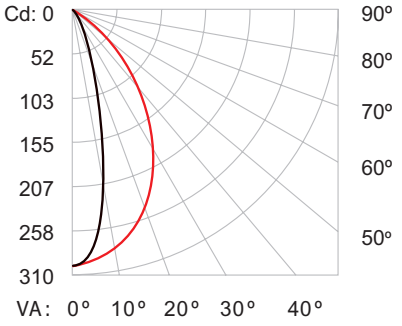
Zone	Lumens	% Fixture
0 - 60	185.4	99.0 %
60 - 90	1.8	1.0 %
0 - 90	187.2	100.0 %

For lux multiply fc by 10.7

1 ft (305 mm), 30° x 60° beam angle

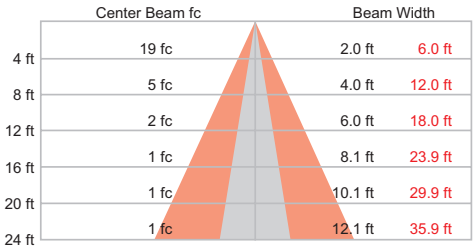
Lumens	Efficacy
188	20.6

Polar Candela Distribution



	0	25	45	70	90
0	299	299	299	299	299
5	280	282	288	294	294
15	135	154	194	254	268
25	33	45	82	181	223
35	8	11	23	99	159
45	4	5	7	38	84
55	3	3	3	11	31
65	2	2	2	4	9
75	1	1	1	1	2
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



17.3 ft (5.3m)
1 fc maximum distance

Vert. Spread: 28.2°
Horiz. Spread: 73.6°

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	119	119	119	119	116	116	116	100	111	111	111	106	106	106	102	102	102	100
1	113	110	108	105	111	108	106	93	104	102	100	100	99	97	97	96	95	93
2	107	102	98	94	105	100	97	87	97	94	91	94	92	89	91	89	88	86
3	102	95	90	86	100	94	89	80	91	87	84	89	85	82	86	83	81	79
4	96	89	83	79	95	87	82	75	85	81	77	83	79	76	81	78	75	74
5	92	83	77	73	90	82	76	70	80	75	72	78	74	71	77	73	70	69
6	87	78	72	67	85	77	71	66	76	70	67	74	70	66	73	69	66	64
7	83	73	67	63	81	73	67	62	71	66	62	70	66	62	69	65	62	60
8	79	69	63	59	78	69	63	58	68	62	59	67	62	58	66	61	58	57
9	75	66	60	56	74	65	59	55	64	59	55	63	58	55	62	58	55	54
10	72	62	56	53	71	62	56	52	61	56	52	60	55	52	59	55	52	51

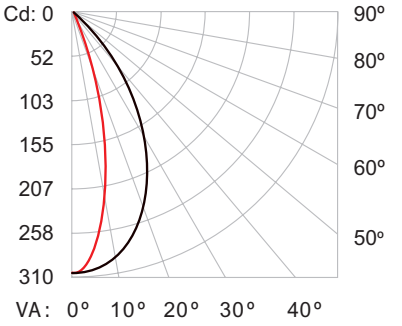
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	183.4	97.6 %
60 - 90	4.4	2.4 %
0 - 90	187.8	100.0 %

1 ft (305 mm), 60° x 30° beam angle

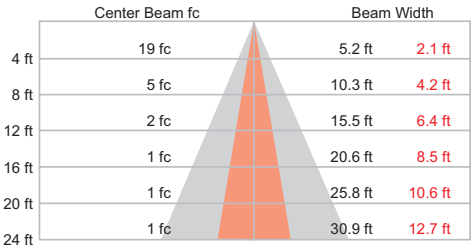
Lumens	Efficacy
189	20.7

Polar Candela Distribution



	0	25	45	70	90
0	305	305	305	305	305
5	300	295	287	278	277
15	271	238	193	154	145
25	212	151	88	51	45
35	130	70	28	13	11
45	56	24	9	5	5
55	17	8	4	3	3
65	4	3	2	2	2
75	1	1	1	1	1
85	1	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



17.3 ft (5.3 m)
1 fc maximum distance

Vert. Spread: 65.6°
Horiz. Spread: 29.7°

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	119	119	119	119	116	116	116	100	111	111	111	107	107	107	102	102	102	100
1	113	111	108	106	111	108	106	94	104	103	101	101	99	98	97	96	95	93
2	108	103	99	95	106	101	97	87	98	95	92	95	92	90	92	90	88	87
3	102	96	91	87	100	94	90	81	92	88	85	89	86	83	87	84	82	80
4	97	89	84	80	95	88	83	76	86	82	78	84	80	77	82	79	76	75
5	92	84	78	74	91	83	77	71	81	76	73	79	75	72	78	74	71	70
6	88	79	73	69	86	78	72	67	77	72	68	75	71	67	74	70	67	66
7	84	74	68	64	82	74	68	63	72	67	64	71	67	63	70	66	63	62
8	80	70	64	60	79	70	64	59	69	64	60	68	63	60	67	63	59	58
9	76	67	61	57	75	66	61	56	65	60	57	64	60	56	64	59	56	55
10	73	63	58	54	72	63	57	53	62	57	54	61	57	53	61	56	53	52

Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	185.5	98.0 %
60 - 90	3.8	2.0 %
0 - 90	189.3	100.0 %

For lux multiply fc by 10.7

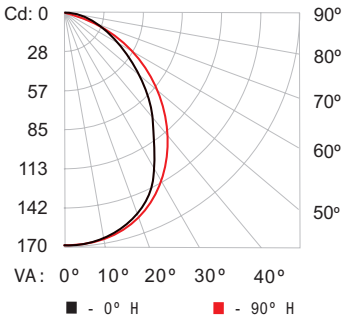
Photometrics / iW Graze EC Powercore

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

1 ft (305 mm), 90° x 90° beam angle

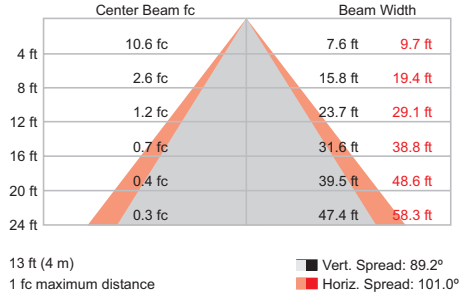
Lumens	Efficacy
412	29.6

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	169	169	169	169	169
5	169	169	169	169	169
15	161	162	162	162	162
25	144	145	147	148	149
35	112	115	123	127	127
45	84	85	91	99	101
55	54	56	62	69	72
65	36	35	37	42	44
75	24	23	21	21	21
85	16	14	10	7	4
90	13	11	7	3	0

Illuminance at Distance



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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	98
1	109	104	100	96	106	102	98	94	97	94	91	93	90	88	83
2	99	91	85	79	97	89	83	78	86	81	76	82	78	74	70
3	91	81	73	67	89	79	72	66	76	70	65	73	68	63	60
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	52
5	77	65	56	50	75	64	56	50	62	54	49	59	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	40
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	34	32
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	27

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	129	31.3
0- 40	204	49.6
0- 60	331	80.5
0- 90	405	98.4
90-120	7	1.6
90-130	7	1.6
90-150	7	1.6
90-180	7	1.6
0-180	412	100.0

For lux multiply fc by 10.7

Specifications / iW Graze MX Powercore

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

Item	Beam Angle	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Lumens*	9° x 9°	872	1744	2616	3488
	10° x 60°	860	1720	2580	3440
	15° x 30°	846	1692	2538	3384
	30° x 60°	855	1710	2565	3420
	60° x 30°	872	1744	2616	3488

Item	Specification	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Output	Color Temperature†	2700 K – 6500 K			
	LED Channels	2700 K / 4000 K / 6500 K			
	Efficacy (lm / W)	34.9 (9° x 9°)	34.0 (10° x 60°)	33.3 (15° x 30°)	33.4 (30° x 60°) 34.1 (60° x 30°)
	CRI	82			
	Lumen Maintenance‡	60,000 hours L_{70} @ 25° C 60,000 hours L_{70} @ 50° C 60,000 hours L_{50} @ 25° C 60,000 hours L_{50} @ 50° C			
Electrical	Input Voltage	100 – 277 VAC, auto-ranging, 50 / 60 Hz			
	Power Consumption	20 W max. at full output, steady state	40 W max. at full output, steady state	60 W max. at full output, steady state	80 W max. at full output, steady state
Control	Interface	Data Enabler Pro (DMX or 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)*	2.7 x 12 x 2.8 in (69 x 305 x 71 mm)	2.7 x 24 x 2.8 in (69 x 610 x 71 mm)	2.7 x 36 x 2.8 in (69 x 914 x 71 mm)	2.7 x 48 x 2.8 in (69 x 1219 x 71 mm)
	Weight	2.1 lb (1.0 kg)	4.6 lb (2.1 kg)	7.1 lb (3.2 kg)	9.3 lb (4.2 kg)
	Housing	Extruded anodized aluminum			
	Lens	Clear polycarbonate			
	Fixture Connectors	Integral male / female waterproof connectors			
	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-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 www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry / Damp / Wet Location, IP66			

* 1 ft (305 mm) lumen output measurements comply with IES LM-79-08 testing procedures. 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1219 mm) measurements are estimated based on the 1 ft (305 mm) measurements.

† Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

‡ L_{70} = 70% lumen maintenance (when light output drops below 70% of initial output). L_{50} = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

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Specifications / iW Graze QLX Powercore

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

Item	Beam Angle	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Lumens*	9° x 9°	661	1322	1983	2644
	10° x 60°	624	1248	1872	2496
	15° x 30°	673	1346	2019	2692
	30° x 60°	658	1316	1974	2632
	60° x 30°	658	1316	1974	2632

Item	Specification	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Output	Color Temperature†	2700 K – 6500 K			
	LED Channels	2700 K / 4000 K / 6500 K			
	Efficacy (lm / W)	33.7 (9° x 9°) 31.5 (10° x 60°) 33.7 (15° x 30°) 33.6 (30° x 60°) 33.9 (60° x 30°)			
	CRI	83			
	Lumen Maintenance‡	60,000 hours L_{70} @ 25° C 60,000 hours L_{70} @ 50° C 60,000 hours L_{50} @ 25° C 60,000 hours L_{50} @ 50° C			
Electrical	Input Voltage	100 – 277 VAC, auto-ranging 50 / 60 Hz			
	Power Consumption	15 W max. at full output, steady state	30 W max. at full output, steady state	45 W max. at full output, steady state	60 W max. at full output, steady state
Control	Interface	Data Enabler Pro (DMX or 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)*	2.7 x 12 x 2.8 in (69 x 305 x 71 mm)	2.7 x 24 x 2.8 in (69 x 610 x 71 mm)	2.7 x 36 x 2.8 in (69 x 914 x 71 mm)	2.7 x 48 x 2.8 in (69 x 1219 x 71 mm)
	Weight	2.1 lb (1.0 kg)	4.6 lb (2.1 kg)	7.1 lb (3.2 kg)	9.3 lb (4.2 kg)
	Housing	Extruded anodized aluminum			
	Lens	Clear polycarbonate			
	Fixture Connectors	Integral male / female waterproof connectors			
	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-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 www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry / Damp / Wet Location, IP66			

* 1 ft (305 mm) lumen output measurements comply with IES LM-79-08 testing procedures. 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1219 mm) measurements are estimated based on the 1 ft (305 mm) measurements.

† Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

‡ L_{70} = 70% lumen maintenance (when light output drops below 70% of initial output). L_{50} = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

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Specifications / iW Graze QLX Powercore 5W

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

Item	Beam Angle	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Lumens*	9° x 9°	189	378	567	756
	10° x 60°	189	378	567	756
	15° x 30°	187	374	561	748
	30° x 60°	188	376	564	752
	60° x 30°	189	378	567	756

Item	Specification	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Output	Color Temperature†	2700 K – 6500 K			
	LED Channels	2700 K / 4000 K / 6500 K			
	Efficacy (lm / W)	20.9 (9° x 9°) 20.7 (10° x 60°) 20.5 (15° x 30°) 20.6 (30° x 60°) 20.7 (60° x 30°)			
	CRI	82			
	Lumen Maintenance‡	60,000 hours L_{70} @ 25° C 60,000 hours L_{70} @ 50° C 60,000 hours L_{50} @ 25° C 60,000 hours L_{50} @ 50° C			
Electrical	Input Voltage	100 – 277 VAC, auto-ranging, 50 / 60 Hz			
	Power Consumption	5 W max. at full output, steady state	10 W max. at full output, steady state	15 W max. at full output, steady state	20 W max. at full output, steady state
Control	Interface	Data Enabler Pro (DMX or 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)*	2.7 x 12 x 2.8 in (69 x 305 x 71 mm)	2.7 x 24 x 2.8 in (69 x 610 x 71 mm)	2.7 x 36 x 2.8 in (69 x 914 x 71 mm)	2.7 x 48 x 2.8 in (69 x 1219 x 71 mm)
	Weight	2.1 lb (1.0 kg)	4.6 lb (2.1 kg)	7.1 lb (3.2 kg)	9.3 lb (4.2 kg)
	Housing	Extruded anodized aluminum			
	Lens	Clear polycarbonate			
	Fixture Connectors	Integral male / female waterproof connectors			
	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-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 www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry / Damp / Wet Location, IP66			

* 1 ft (305 mm) lumen output measurements comply with IES LM-79-08 testing procedures. 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1219 mm) measurements are estimated based on the 1 ft (305 mm) measurements.

† Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

‡ L_{70} = 70% lumen maintenance (when light output drops below 70% of initial output). L_{50} = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

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Specifications / iW Graze EC Powercore

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

Item	Specification	1 ft (305 mm)	2 ft (610 mm)	3 ft (914 mm)	4 ft (1219 mm)
Output	Beam Angle	90° x 90°			
	Color Temperature†	2700 K – 6500 K			
	LED Channels	2700 K / 4000 K / 6500 K			
	Lumens*	412	824	1236	1648
	Efficacy (lm / W)	29.6			
	CRI	82			
	Lumen Maintenance‡	60,000 hours L_{70} @ 25° C 60,000 hours L_{70} @ 50° C 60,000 hours L_{50} @ 25° C 60,000 hours L_{50} @ 50° C			
Electrical	Input Voltage	100 – 277 VAC, auto-ranging, 50 / 60 Hz			
	Power Consumption	10 W max. at full output, steady state	20 W max. at full output, steady state	30 W max. at full output, steady state	40 W max. at full output, steady state
Control	Interface	Data Enabler Pro (DMX or 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)*	2.7 x 12 x 2.8 in (69 x 305 x 71 mm)	2.7 x 24 x 2.8 in (69 x 610 x 71 mm)	2.7 x 36 x 2.8 in (69 x 914 x 71 mm)	2.7 x 48 x 2.8 in (69 x 1219 x 71 mm)
	Weight	2.1 lb (1.0 kg)	4.6 lb (2.1 kg)	7.1 lb (3.2 kg)	9.3 lb (4.2 kg)
	Housing	Extruded anodized aluminum			
	Lens	Clear polycarbonate			
	Fixture Connectors	Integral male / female waterproof connectors			
	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-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 www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry / Damp / Wet Location, IP66			

* 1 ft (305 mm) lumen output measurements comply with IES LM-79-08 testing procedures. 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1219 mm) measurements are estimated based on the 1 ft (305 mm) measurements.

† Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

‡ L_{70} = 70% lumen maintenance (when light output drops below 70% of initial output). L_{50} = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

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Fixtures and Accessories

iW Graze Powercore fixtures are part of a complete system which includes:

- One or more Data Enabler Pro devices
- Any Philips controller, including Light System Manager, iPlayer 3, and ColorDial Pro, or a third-party controller
- Leader Cables to connect the first fixture in each series to a Data Enabler Pro
- Optional Jumper Cables to add space between fixtures in a series, if necessary
- 3 + ground copper wire to connect Data Enabler Pro devices to a common junction box, if installing fixtures in parallel. Standard 12 AWG (2.05 mm) stranded wire is recommended.

Item	Beam Angle	Item Number	Philips 12NC
iW Graze MX Powercore 1 ft (305 mm)	9° x 9°	523-000079-00	910503703151
	10° x 60°	523-000079-01	910503703645
	15° x 30°	523-000079-02	910503703646
	30° x 60°	523-000079-03	910503703647
	60° x 30°	523-000079-04	910503703648
iW Graze MX Powercore 2 ft (610 mm)	9° x 9°	523-000079-05	910503703649
	10° x 60°	523-000079-06	910503703650
	15° x 30°	523-000079-07	910503703651
	30° x 60°	523-000079-08	910503703652
	60° x 30°	523-000079-09	910503703653
iW Graze MX Powercore 3 ft (914 mm)	9° x 9°	523-000079-10	910503703654
	10° x 60°	523-000079-11	910503703655
	15° x 30°	523-000079-12	910503703656
	30° x 60°	523-000079-13	910503703657
	60° x 30°	523-000079-14	910503703658
iW Graze MX Powercore 4 ft (1219 mm)	9° x 9°	523-000079-15	910503703659
	10° x 60°	523-000079-16	910503703660
	15° x 30°	523-000079-17	910503703661
	30° x 60°	523-000079-18	910503703662
	60° x 30°	523-000079-19	910503703663
iW Graze QLX Powercore 1 ft (305 mm)	9° x 9°	523-000079-20	910503703664
	10° x 60°	523-000079-21	910503703665
	15° x 30°	523-000079-22	910503703666
	30° x 60°	523-000079-23	910503703667
	60° x 30°	523-000079-24	910503703668
iW Graze QLX Powercore 2 ft (610 mm)	9° x 9°	523-000079-25	910503703669
	10° x 60°	523-000079-26	910503703670
	15° x 30°	523-000079-27	910503703671
	30° x 60°	523-000079-28	910503703672
	60° x 30°	523-000079-29	910503703673
iW Graze QLX Powercore 3 ft (914 mm)	9° x 9°	523-000079-30	910503703674
	10° x 60°	523-000079-31	910503703675
	15° x 30°	523-000079-32	910503703676
	30° x 60°	523-000079-33	910503703677
	60° x 30°	523-000079-34	910503703678
iW Graze QLX Powercore 4 ft (1219 mm)	9° x 9°	523-000079-35	910503703679
	10° x 60°	523-000079-36	910503703680
	15° x 30°	523-000079-37	910503703681
	30° x 60°	523-000079-38	910503703682
	60° x 30°	523-000079-39	910503703683

Use Item Number when ordering in North America.

Item	Beam Angle	Item Number	Philips 12NC
iW Graze QLX Powercore 5W 1 ft (305 mm)	9° x 9°	523-000085-00	910503704062
	10° x 60°	523-000085-01	910503703819
	15° x 30°	523-000085-02	910503703820
	30° x 60°	523-000085-03	910503703821
	60° x 30°	523-000085-04	910503703822
iW Graze QLX Powercore 5W 2 ft (610 mm)	9° x 9°	523-000085-05	910503703823
	10° x 60°	523-000085-06	910503703824
	15° x 30°	523-000085-07	910503703825
	30° x 60°	523-000085-08	910503703826
	60° x 30°	523-000085-09	910503703827
iW Graze QLX Powercore 5W 3 ft (914 mm)	9° x 9°	523-000085-10	910503703828
	10° x 60°	523-000085-11	910503703829
	15° x 30°	523-000085-12	910503703830
	30° x 60°	523-000085-13	910503703831
	60° x 30°	523-000085-14	910503703832
iW Graze QLX Powercore 5W 4 ft (1219 mm)	9° x 9°	523-000085-15	910503703833
	10° x 60°	523-000085-16	910503703834
	15° x 30°	523-000085-17	910503703835
	30° x 60°	523-000085-18	910503703836
	60° x 30°	523-000085-19	910503703837
iW Graze EC Powercore 1 ft (305 mm)	90° x 90	523-000079-40	910503703684
iW Graze EC Powercore 2 ft (610 mm)	90° x 90°	523-000079-41	910503703685
iW Graze EC Powercore 3 ft (914 mm)	90° x 90°	523-000079-42	910503703686
iW Graze EC Powercore 4 ft (1219 mm)	90° x 90°	523-000079-43	910503703687

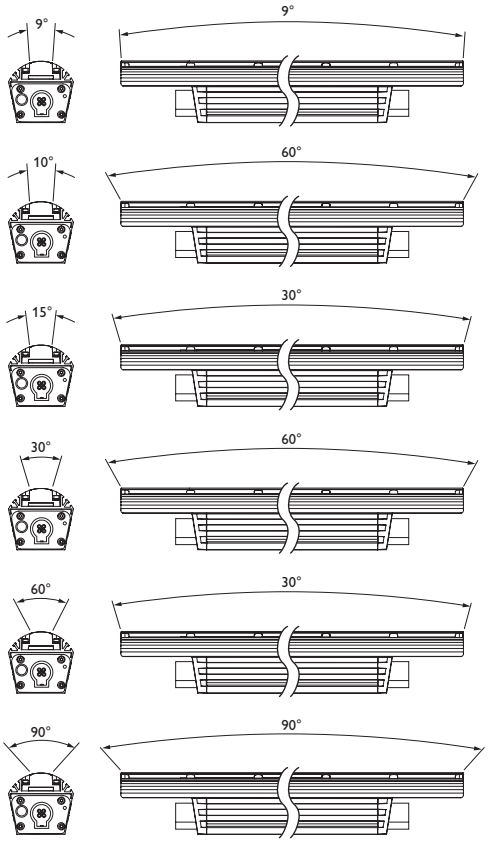
Use Item Number when ordering in North America.

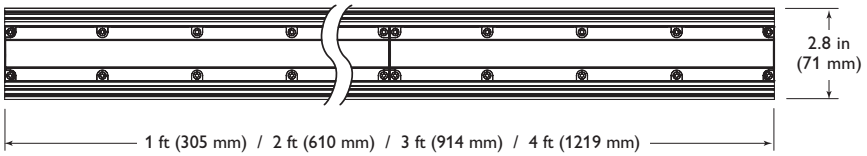
Item	Type	Size	Item Number	Philips 12NC
Leader Cable with Terminator	UL / cUL	10 ft (3.0 m)	108-000055-03	910503704066
		50 ft (15.2 m)	108-000055-00	910503703137
	CE / PSE	10 ft (3.0 m)	108-000055-04	910503704067
		50 ft (15.2 m)	108-000055-01	910503704064
Jumper Cable	UL / cUL	End-to-End	108-000057-00	910503703139
		1 ft (305 mm)	108-000057-03	910503704076
		5 ft (1.5 m)	108-000057-06	910503704079
		10 ft (3.0 m)	108-000057-09	910503704082
	CE / PSE	End-to-End	108-000057-01	910503704074
		1 ft (305 mm)	108-000057-04	910503704077
		5 ft (1.5 m)	108-000057-07	910503704080
		10 ft (3.0 m)	108-000057-10	910503704083
Glare Shield		1 ft (305 mm)	120-000081-00	910503700745
		2 ft (610 mm)	120-000081-01	910503700746
		3 ft (914 mm)	120-000081-02	910503700747
		4 ft (1219 mm)	120-000081-03	910503700748
Additional Terminators		Quantity 10	120-000157-00	910503703142
Additional Hinge		Quantity 1	120-000098-00	910503700772

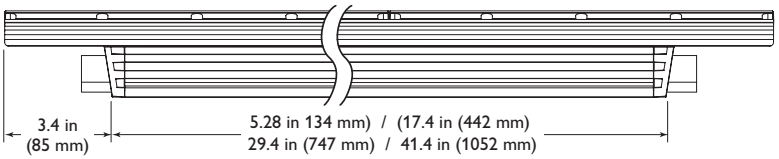
Data Enabler Pro	3/4 in / 1/2 in NPT (U.S. trade size conduit)	106-000004-00	910503701210
	PG21 / PG13 (metric size conduit)	106-000004-01	910503701211

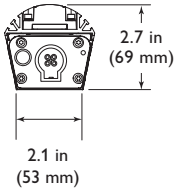
Use Item Number when ordering in North America.

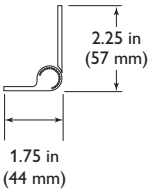
Dimensions

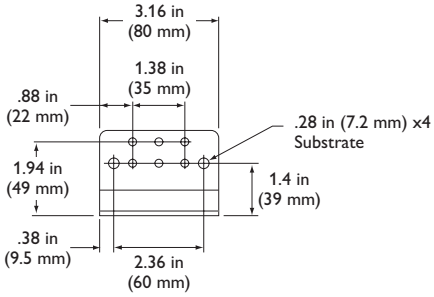

9°
9°
10°
60°
15°
30°
30°
60°
60°
30°
90°
90°

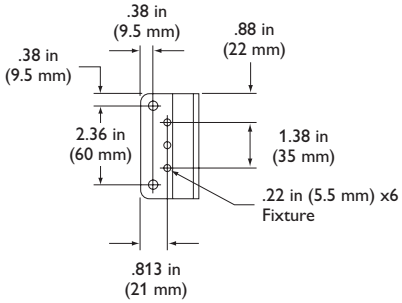

2.8 in
(71 mm)
1 ft (305 mm) / 2 ft (610 mm) / 3 ft (914 mm) / 4 ft (1219 mm)

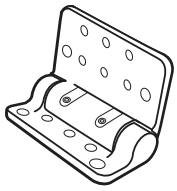

3.4 in
(85 mm)
5.28 in 134 mm) / (17.4 in (442 mm)
29.4 in (747 mm) / 41.4 in (1052 mm)


2.7 in
(69 mm)
2.1 in
(53 mm)


2.25 in
(57 mm)
1.75 in
(44 mm)


3.16 in
(80 mm)
1.38 in
(35 mm)
.88 in
(22 mm)
.28 in (7.2 mm) x4
Substrate
1.94 in
(49 mm)
1.4 in
(39 mm)
.38 in
(9.5 mm)
2.36 in
(60 mm)


.38 in
(9.5 mm)
.88 in
(22 mm)
.38 in
(9.5 mm)
2.36 in
(60 mm)
1.38 in
(35 mm)
.22 in (5.5 mm) x6
Fixture
.813 in
(21 mm)



Installation

iW Graze Powercore offers dimmable, high-intensity white LED illumination with variable color temperature for wall-washing and grazing, enhancing architectural detail, both indoors and outdoors. Patented Powercore technology integrates LED power and data management within the fixture, eases installation by eliminating the need for external power supplies.

Owner / User Responsibilities

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

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

Installing in Damp or Wet Locations

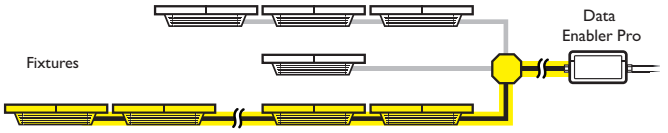
When installing in damp or wet locations, seal all Data Enabler Pro devices and junction boxes with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in wiring compartments, cables, or other electrical parts. Use suitable outdoor-rated junction boxes when installing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

Clean the lens with water and mild detergent using a soft cleaning cloth, and wipe dry. Because they will scratch, soften, pit, haze, yellow, mar, or crack the lens, do not use paper towels, abrasive cleaning products, window cleaners, or cleaning solutions containing chemicals such as ammonia, sodium hydroxide, and isopropyl alcohol.

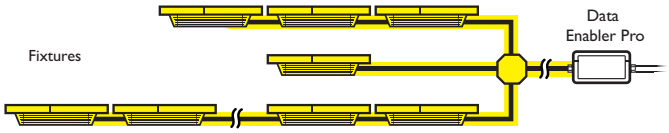
Prepare for the Installation

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.
2. iW Graze 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 length, fixture spacing, circuit size, line voltage, and leader cable length. 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 lengths should not exceed 175 ft (53.3 m), and the total cable length per Data Enabler Pro should not exceed 400 ft (122 m).



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



Data Integrity — total length 400 ft (122 m)

Refer to the Data Enabler Pro Installation Instructions or Product Guide for guidelines on configuring and positioning the Data Enabler Pro in relation to the controller.

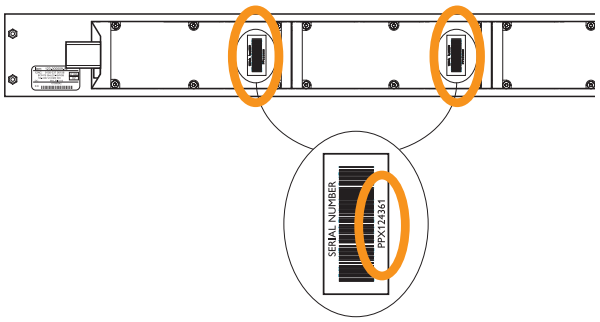
Start the Installation

1. Install all Data Enabler Pro devices, including any interfaces with controllers. Data Enabler Pro devices and external controllers send power and control signals to fixtures over Leader Cables. Jumper Cables are required to connect fixtures together in series.
2. Verify that all additional supporting equipment (switches, controllers) is in place.
3. Ensure that all additional parts and tools are available, including:
   - The included mounting hinges and hardware
   - 2 mm, 2.5 mm, and 4 mm hex key wrenches
   - 1/4 in (5 mm) socket cap fasteners, anchors, or screws for surface mounting
   - 3 + ground copper wire, as needed. Standard 12 AWG (2.05 mm) stranded wire is recommended.
   - Junction boxes, as needed, rated for your application. (Refer to the manufacturer's literature for additional items required for mounting or sealing.)
   - Electronics-grade room temperature vulcanizing (RTV) silicone sealant, as needed

Unpack and Prepare Fixtures

1. Carefully inspect the box containing iW Graze Powercore and the contents for any damage that may have occurred in transit.
2. iW Graze Powercore fixtures are addressable in 1 ft (305 mm) segments. This feature allows playback controllers to send unique light output data to each segment of each fixture within your installation.

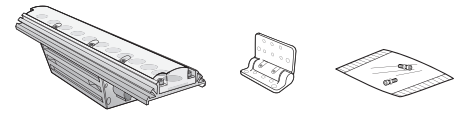
   Each fixture segment, or LED node, come pre-programmed with a unique serial number. Each fixture has from one to four serial numbers, depending on its length. As you unpack the fixtures, record the serial numbers in a layout grid (typically a spreadsheet or list) for easy reference and light addressing.

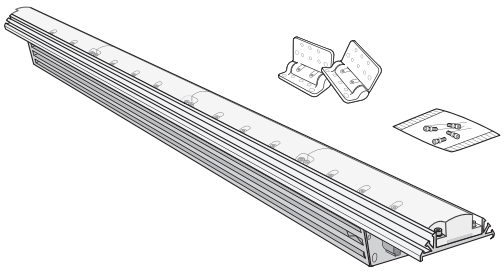


3. Assign each fixture to a position in the lighting design plan.
4. To streamline installation and aid in light address programming, you can affix a weatherproof label identifying the order or placement in the installation to an inconspicuous location on each fixture's housing.

Included in the box

iW Graze Powercore fixture
(1) or (2) Mounting hinges
(2) or (4) M5, 15 mm stainless steel hex bolts for hinge installation
Installation Instructions

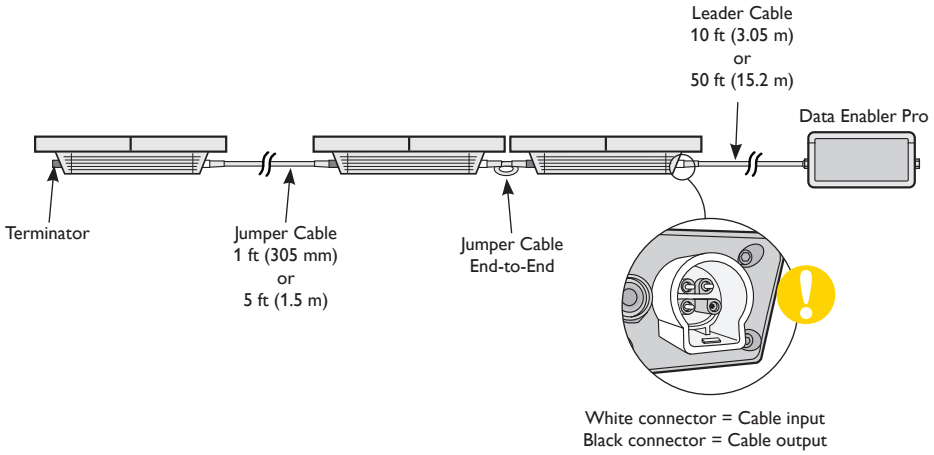




Mount and Connect Fixtures

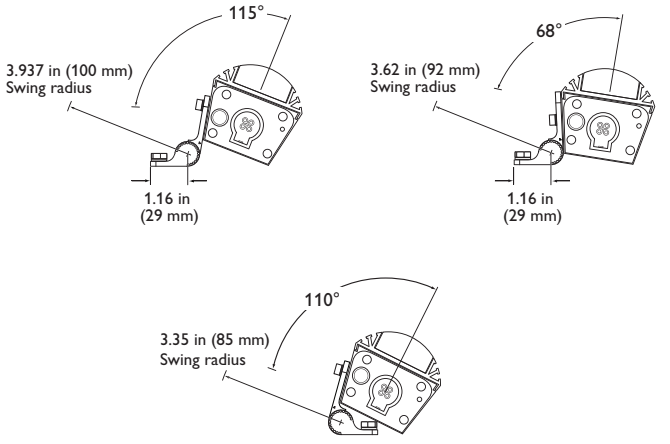
Make sure the power is OFF before mounting and connecting iW Graze Powercore fixtures.

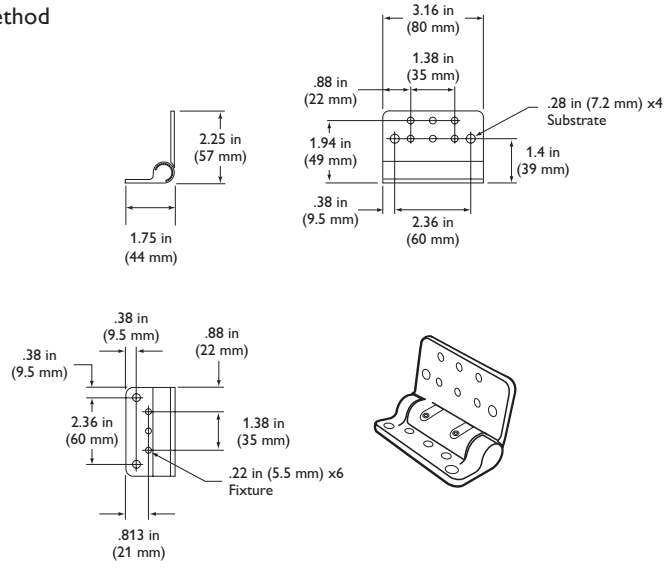
iW Graze Powercore fixtures offer bulkhead connectors that accept the iW Graze Powercore pre-configured Leader and Jumper Cables. Because they have a male connector on one end of the fixture and a female connector on the other end, iW Graze Powercore fixtures are directional, and must all be oriented in the same direction.



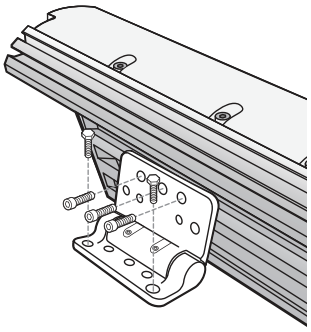
Mount Fixtures

1. Using the included 4 mm hex hardware, attach two hinges to each fixture. There are three possible methods for attaching hinges to the fixtures, each method offering differing degrees of swing radius and space-efficiency. Select the method most suitable for your application.

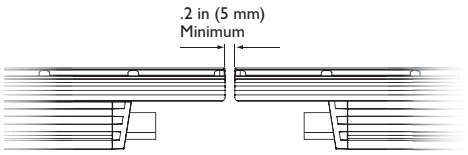




2. If installing iW Graze Powercore fixtures in parallel, mount junction boxes in accordance with the lighting design plan.
3. When installing a linear series of iW Graze Powercore fixtures, make sure that all fixtures are oriented in the same direction. The white connectors are for cable inputs, and the black connectors are for cable outputs. The Leader Cable connects to the male bulkhead connector on the first fixture in each series.
4. Rotate the fixture hinge assemblies into the desired positions. For consistent position control, use the indicators on the side of each hinge knuckle for reference. Use a 2 mm hex key wrench to loosen the set screws, as needed.



Minimum distance between fixtures



Be sure to position fixtures close enough together so that Leader Cables and Jumper Cables are not stretched or taut when installed.

5. To accommodate installation from various angles, each hinge has four set screws designed to lock the hinge position. All four, or only two, of the set screws may be used, depending on the mounting method and swing radius you select for the hinge. For example, if the hinge leaves are to be fully closed, the interior set screws may not be accessible.

   Do not lock the hinges positions at this time; the hinges have a built-in constant torque feature that allows temporary positioning. For optimal light output performance, aim and lock the hinges following installation.

Make Cable Connections

1. Connect Leader Cables:

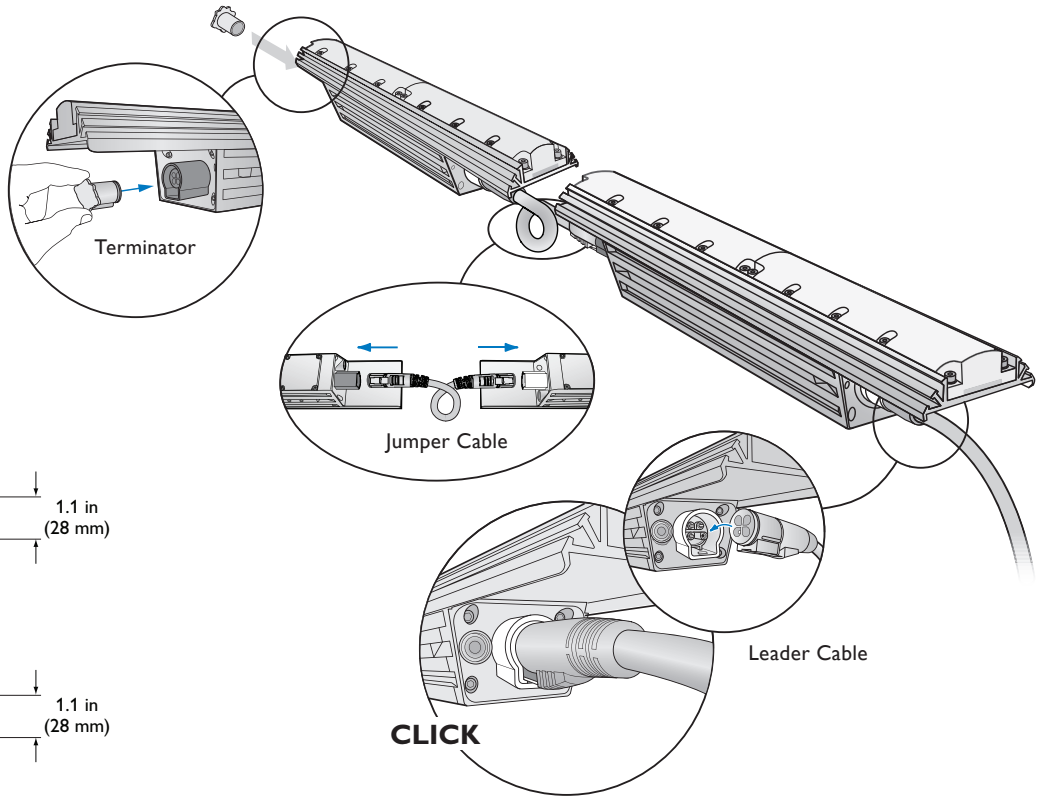
   - If installing fixtures in series, run a 10 ft (3.0 m) or 50 ft (15.2 m) Leader Cable from a Data Enabler Pro device to the input side of the first fixture in the series. Push the Leader Cable into the connector to lock it into place.
   - If installing fixtures in parallel, run 3 + ground copper wire from a Data Enabler Pro device to a common junction box.

     Run Leader Cables from the common junction box to the input side of the first fixture in each series. Push the Leader Cables into the connectors to lock them into place.

     Within the common junction box, use wire nuts to connect line, neutral, ground, and data wires. Tuck wire connections into the junction box.

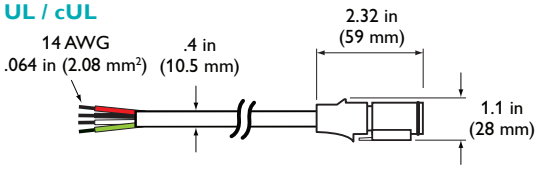
     Secure all junction box covers. If installing in a damp or wet location, seal all junction boxes and points of entry with contractor-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.

3. Connect all Jumper Cables between fixtures. Push the cable ends into the connectors to lock them into place.
4. Insert a terminator into the output side of the last fixture in each series. (Terminators are provided with the iW Graze Powercore Leader Cables.)

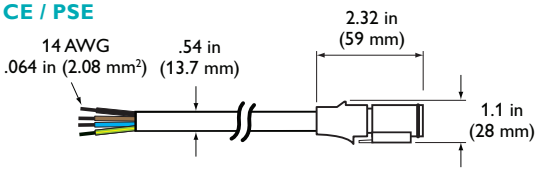


Leader Cable Connector Dimensions

UL / cUL



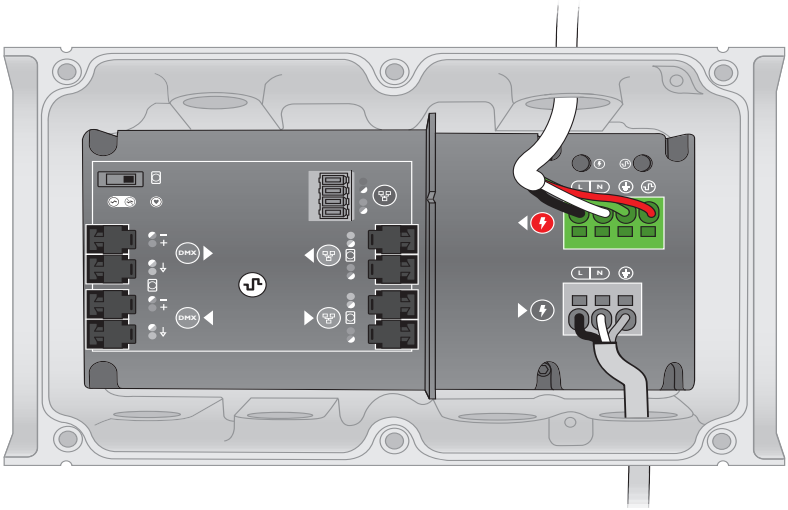
CE / PSE

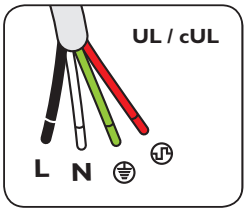


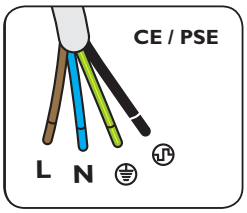
Make Power Connections

Once you've made all fixture and junction box connections, connect the flying leads from a Leader Cable or 3 + ground wire from a common junction box to the 4-wire PC terminal connector block inside the Data Enabler Pro Housing.

Power / data output to fixtures







Refer to the Data Enabler Pro Product Guide for comprehensive installation and configuration instructions. You can view or download the guide from www.philipscolorkinetics.com/ls/pds/dataenablerpro

Mains voltage output

Controlling iW Graze Powercore Fixtures

Philips Color Kinetics offers a number of control options for all iW Graze Powercore fixtures, from simple to complex.

iW Graze Powercore fixtures are addressable in 1 ft (305 mm) segments, or nodes. iW Graze Powercore fixtures have one, two, three, or four nodes, depending on fixture length. Each node is identified by a unique serial number.

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.

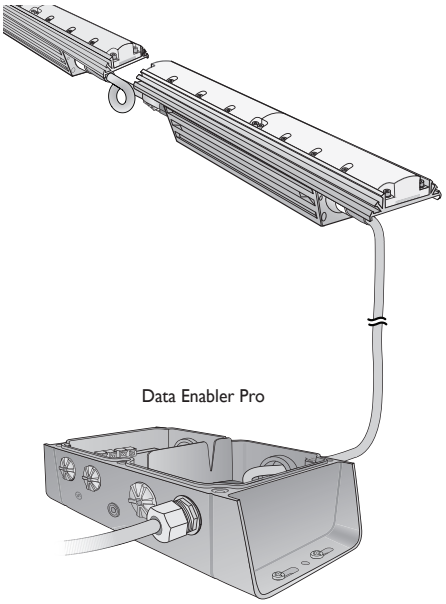
ColorDial Pro and iColor Keypad are Power-Over-Ethernet (PoE) devices that require a PoE switch, or a conventional Ethernet switch with a PoE injector. Refer to the ColorDial Pro or iColor Keypad documentation for details on how to install and use these controllers with iW Graze Powercore fixtures.

iW Graze Powercore has three LED channels, warm, neutral, and cool. By default, iW Graze Powercore is set to two-channel mode. In two-channel mode, fixtures automatically map two channels of data input to the three LED channels. Using QuickPlay Pro addressing and configuration software, you can also set iW Graze Powercore to operate in three-channel mode.

- In three-channel mode, use the Fixed Color effect in iColor Player or iColor Keypad, or the Fixed Color or Variable Color effect in ColorDial Pro.
- In two-channel mode, use the Fixed White effect in iColor Player, iColor Keypad, or ColorDial Pro.

Displaying Dynamic Light Output

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



You can address fixtures and switch between 8-bit mode and 16-bit mode using QuickPlay Pro.You can download QuickPlay Pro from www.philipscolorkinetics.com/support/addressing/

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

Addressing iW Graze Powercore Fixtures

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

You address and configure iW Graze Powercore fixture nodes using QuickPlay Pro addressing and configuration software. Fixture nodes 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 fixture nodes during installation planning.

- In Ethernet installations, you can address and configure fixture nodes using QuickPlay Pro with a computer connected to your lighting installation's network. QuickPlay Pro can automatically discover all of your fixture nodes, controllers, and Data Enabler Pro devices for quick configuration.
- In DMX installations, you can address and configure fixture nodes using QuickPlay Pro with iPlayer 3 or SmartJack Pro. You can manually enter fixture node serial numbers, or you can import a spreadsheet listing each fixture node's serial number and starting DMX address.

iW Graze 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, fixture nodes use one DMX address per LED channel. In 16-bit mode, fixture nodes 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 resolution from 256 dimming steps to 65,536 (256 x 256) dimming steps.

You can address and configure iW Graze Powercore fixture nodes in much the same way as you would address any RGB fixture. Addressing differs depending on whether fixtures are in two-channel mode or three-channel mode:

- In three-channel mode, 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.
- In two-channel mode, the red channel corresponds to the warm LEDs, the green channel corresponds to the cool LEDs, and the blue channel is not used.

  Note that although the blue DMX channel is not used, it is *assigned*, so that each iW Graze Powercore fixture node uses three DMX sequential addresses (or a multiple of three addresses), as in three-channel mode.

iW Graze Powercore fixture nodes come factory-addressed with a starting DMX address of 1. For lighting designs where fixtures work in unison, all fixture nodes can be assigned the same starting DMX address. Changes to the default starting DMX addresses are not necessary, but if nodes were previously readdressed for use in other installations, you must reset them. For light show designs that show different light output on different fixture nodes simultaneously, you must assign unique DMX addresses to your nodes and sort them in a useful order.

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

You will need the layout grid that you created when you recorded the serial numbers of the light fixtures in your installation.

LED Channels

Channel Mode	RGB	iW Graze Powercore
Three-Channel Mode	Red	Warm
	Green	Neutral
	Blue	Cool
Two-Channel Mode	Red	Warm
	Green	Cool
	Blue	Unused

The following table shows the DMX channel assignments per node for 8-bit and 16-bit iW Graze Powercore configurations, assuming a starting DMX address of 1.

DMX Channel Assignments Per Node: Two-Channel Mode

8-bit Mode	1		2		3	
	Warm		Cool		Unused	
16-Bit Mode	1	2	3	4	5	6
	Warm	Warm	Cool	Cool	Unused	Unused

DMX Channel Assignments Per Node: Three-Channel Mode

8-bit Mode	1		2		3	
	Warm		Neutral		Cool	
16-Bit Mode	1	2	3	4	5	6
	Warm	Warm	Neutral	Neutral	Cool	Cool

Setting Fixture Dimming Curves

Dimming curves describe how slowly or quickly a fixture dims at different levels of input. For finer control, iW Graze Powercore offers three different dimming curves for use in different situations and applications:

- **Normal**
  The non-linear (gamma) dimming curve used in most Philips Color Kinetics LED lighting fixtures. iW Graze Powercore fixtures use the normal dimming curve by default.
- **Linear**
  A dimming curve with a linear relationship between power input and DMX output.
- **Tungsten**
  A non-linear dimming curve that emulates the dimming curve of incandescent lamps on a DMX dimmer. This curve offers the most control at low intensities.

Setting LED Transition Speed

Normally, LEDs react to DMX or other control data instantaneously. In some cases, you may want to slow down the reaction speed to achieve smoother transitions when the intensity of different LED channels changes. iW Graze Powercore offers five levels of decreasing LED transition speed, from Fast (instant snap changes) to Delay-4 (slowest transition speed).

Aim and Lock the Fixtures

Make sure power is ON before aiming fixtures.

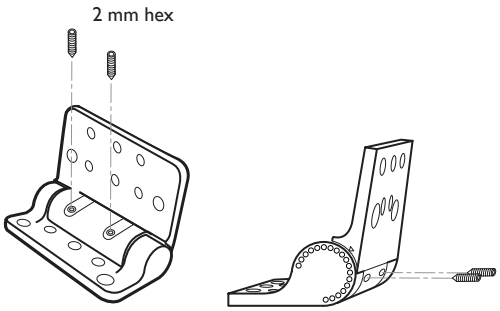
Rotate the fixtures to achieve the optimal angle for light output. For consistent position control, use the indicators on the side of each hinge knuckle as reference.

For fine horizontal adjustment, you can change the position of the hinge mounting block located on the side of each fixture. Loosen the set screw with a 2.5 mm hex key, slide the mounting block to the desired position, then tighten the set screw.

Once satisfied with fixture angles and positioning, use a 2 mm hex key wrench to tighten the hinge position set screws and lock each hinge.

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

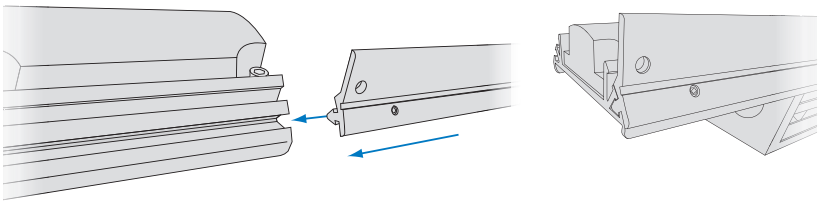
The hinge position set screws have factory applied thread lock. Confirm the fixture angle and positioning before locking each hinge.



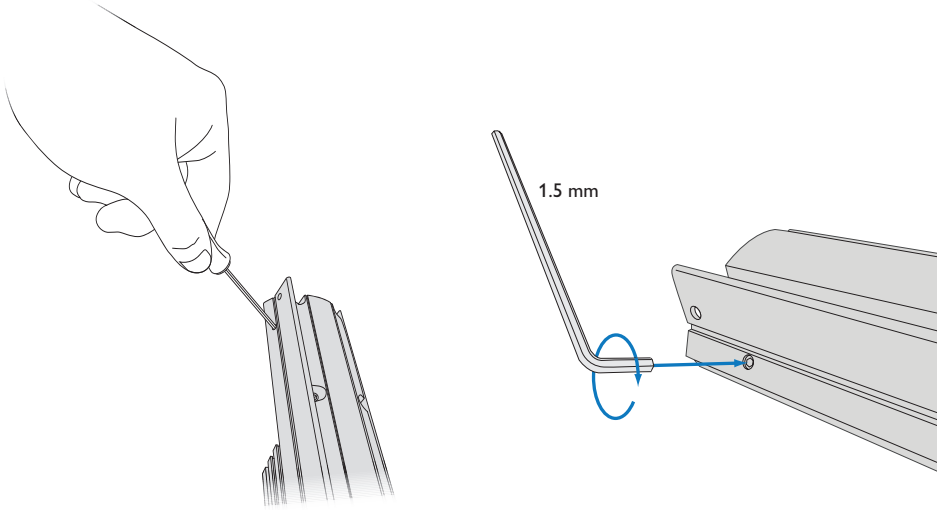
Attach Glare Shields (Optional)

Glare Shields, in 1 ft (305 mm), 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1.2 m) lengths, can be inserted in the grooves in the iW Graze Powercore housing. Glare Shields block unwanted spill light, and can shield the light sources from being directly visible in certain mounting situations.

1. Insert the Glare Shield's triangular tab in the outer groove on the side of the iW Graze Powercore housing.



2. Using a hex wrench, tighten the locking screws to hold the Glare Shield in place.
3. (Optional) Attach a tether to the knockout in the Glare Shield, and affix the tether to a secure anchor point.
4. Using a small screwdriver, hand-tighten all set screws. Using a 1.5 mm hex wrench, torque the set screws to approximately 3.5 in-lbs (4 kgf/cm) to hold the Glare Shield in place.



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