ColorBurst IntelliHue Powercore

Architectural and landscape LED spotlight with intelligent white and color light

PHILIPS

COLOR KINETICS

ColorBurst IntelliHue Powercore
Architectural and landscape LED spotlight with intelligent white and color light

ColorBurst IntelliHue Powercore brings the precise control of color and high-quality tunable white light in the same luminaire for outdoor wall washing and spot lighting applications. The IntelliHue technology delivers 80+ CRI (2700K-4000K) and the ability to tint any CCT between 2000K and 10000K above and below the black-body curve.

- Expands customization with a wide range of new Philips accessory options. In addition to the native 8° lens, six different diffuser lenses can customize the luminaire to produce 10°, 20°, 40°, 60°, 80°, and 10° x 40° (asymmetric) beam angles. Four housing color choices (black, gray, white, and bronze)—plus the option to add a louver, full glare shield, and half glare shield—create new aesthetic possibilities for designers and architects.

- Color-changing and high-quality white light from the same luminaire — IntelliHue is an advanced approach to color mixing that enables high-quality intelligent color and white light from a single luminaire. Multiple channels of LED light sources combine to produce a full spectrum of precisely controllable light, including millions of saturated colors, pastels, and uniform white light with CRI of greater than 83 in the 2700 K to 4000 K range

- Improves color consistency between all LED luminaires in a family with Chromasync technology. During the manufacturing process a calibrated light measurement device creates an algorithm to define a common color gamut for an entire family of LED luminaires. When Chromasync is enabled, color consistency between luminaires is achieved without having to manually adjust color points on each luminaire.

- Meets ASTM G85 corrosion resistance and ANSI C136.31-2010 standard with a 3G vibration rating.

- Delivers R9 values that can reach up to 81. Saturated red light gives objects and surfaces a vibrant and rich color that is ideal for spaces where ambience is important.

- Features an innovative, redesigned optical system that improves the quality of light from each LED, enhancing the color uniformity and color mixing capabilities of each ColorBurst IntelliHue Powercore luminaire.

- Improves durability with new flat lens that prevents water from pooling into the luminaire, keeping the LEDs protected and secure over the course of a luminaire's lifetime.

- Integrates patented Powercore technology that controls power output to luminaires directly from line voltage – rapidly, efficiently, and accurately. The Philips Color Kinetics Data Enabler Pro merges line voltage with control data and delivers them to luminaires over a single standard cable, dramatically simplifying installation and lowering total system cost.

- Universal power input range of 100 to 277 VAC.

- Works seamlessly with the complete Philips Color Kinetics line of controllers, including ColorDial Pro, iPlayer 3, and Light System Manager—as well as third-party controllers.


Two Versions
ColorBurst IntelliHue Powercore Architectural luminaires feature integrated yoke with canopy base for mounting to standard US junction boxes or directly to flat surfaces. ColorBurst IntelliHue Powercore Landscape luminaires feature a 1/2 in NPT threaded post for mounting to standard junction boxes and third-party mounting accessories.

Dynamic and Dramatic Spotlighting with ColorBurst IntelliHue Powercore

ColorBurst IntelliHue Powercore is designed with a fully-sealed die-cast aluminium housing for use in exterior and wet locations. Its focused beam and ease of installation make it the perfect choice for both spotlighting and accent lighting.

Spotlight on the Helix Garage

Lexington, Kentucky, USA, is known as the "City in the Park" because it is a big city just a short distance from picturesque horse farms. Downtown Lexington offers the amenities of an urban center, such as historical monuments, sports arenas, museums, and theaters, along with small town charm.
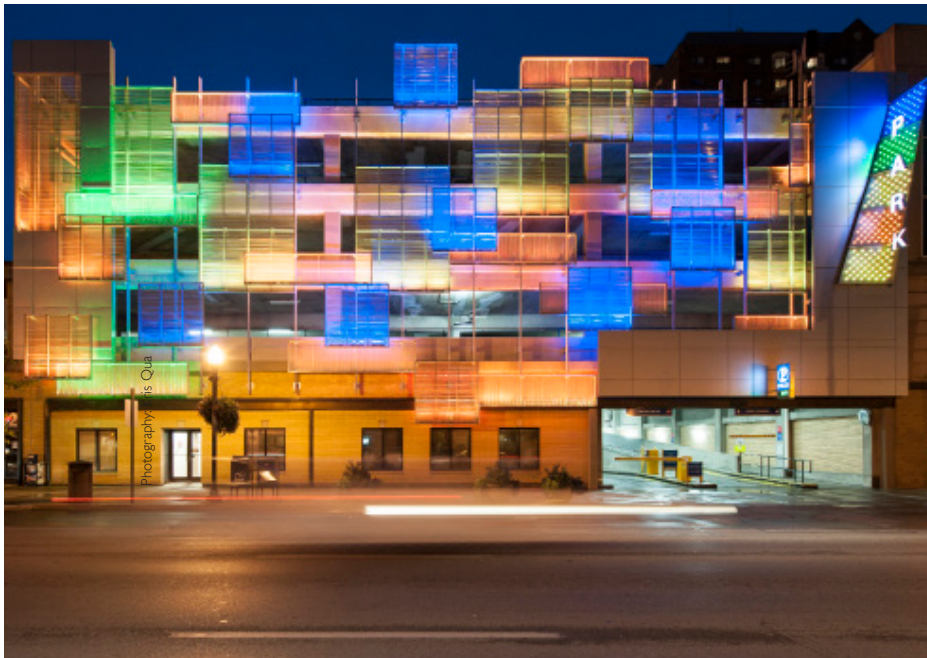
Looking to increase tourism and revitalize the area, the Lexington and Fayette County Parking Authority (LFCPA) decided to renovate a bland concrete garage on a prominent block on Main Street. The Helix Garage first underwent renovations to address the structural and safety issues of the aging edifice. Then to add visual interest and create a large scale public art installation, Philips Color Kinetics LED lighting solutions lit the decorative stainless steel panels. The Helix Garage was the first LED lighting installation commissioned by the city.

The Philips Color Kinetics LED lighting solution met the requirements for the project's green initiatives and offered the color versatility needed to add movement and variety to the project. Once installed, the luminaires would not be easily accessible so it was important that the luminaires require little to no maintenance.

This multifaceted project used a variety of Philips Color Kinetics products. Eighty ColorBurst Powercore luminaires lie along on the inside ledge of the garage ramp, roughly 1.37 m (4.5 ft) apart. On each of the street-facing metal rectangular frames, ColorGraze MX4 Powercore luminaires fill the rectangles with color. On the signage of the garage, iColor Flex LMX strands (now specified using iColor Flex LMX gen2) line the borders of the "park" letters. More iColor Flex LMX bulbs illuminate the openings in the metal panels surrounding the sign.

The Helix Garage was recently awarded the Landscape and Streetscape Award by the Downtown Lexington Corporation for "outstanding effort in maintaining a visual pleasantness to the downtown area."
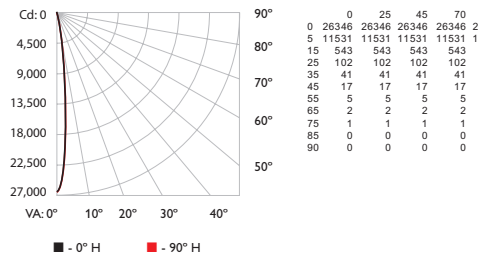
Photometrics

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.colorkinetics.com/support/ies.
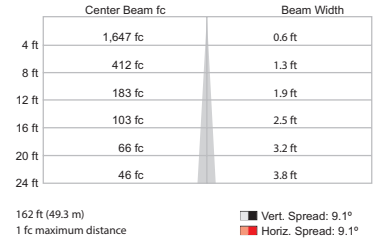
ColorBurst IntelliHue Powercore
2700K, 8° native lens

Lumens	Efficacy	CRI	R9
1,093	59	83	77

Polar Candela Distribution

	0	25	45	70
0	26346	26346	26346	26346
5	11531	11531	11531	11531
15	543	543	543	543
25	102	102	102	102
35	41	41	41	41
45	17	17	17	17
55	5	5	5	5
65	2	2	2	2
75	1	1	1	1
85	0	0	0	0
90	0	0	0	0

■ - 0° H   ■ - 90° H

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	1,647 fc	0.6 ft
8 ft	412 fc	1.3 ft
12 ft	183 fc	1.9 ft
16 ft	103 fc	2.5 ft
20 ft	66 fc	3.2 ft
24 ft	46 fc	3.8 ft

162 ft (49.3 m)
1 fc maximum distance

■ Vert. Spread: 9.1°
■ Horiz. Spread: 9.1°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1,048.3	95.8%
0-40	1,073.9	98.1%
0-60	1,092.5	99.8%
0-90	1,094.8	100.0%
60-90	2.2	0.2%
70-100	0.6	0.1%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	1,094.8	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

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

ColorBurst IntelliHue Powercore
4000K, 8° native lens

Lumens	Efficacy	CRI	R9
1,105	56	85	55

Polar Candela Distribution

	0	25	45	70
0	26133	26133	26133	26133
5	11640	11640	11640	11640
15	559	559	559	559
25	105	105	105	105
35	42	42	42	42
45	18	18	18	18
55	5	5	5	5
65	2	2	2	2
75	1	1	1	1
85	0	0	0	0
90	0	0	0	0

■ - 0° H   ■ - 90° H

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	1,633 fc	0.6 ft
8 ft	408 fc	1.3 ft
12 ft	182 fc	1.9 ft
16 ft	102 fc	2.6 ft
20 ft	65 fc	3.2 ft
24 ft	45 fc	3.9 ft

162 ft (49.3 m)
1 fc maximum distance

■ Vert. Spread: 9.2°
■ Horiz. Spread: 9.2°
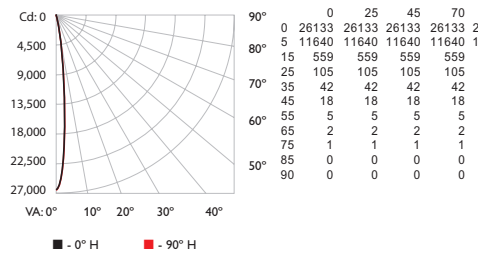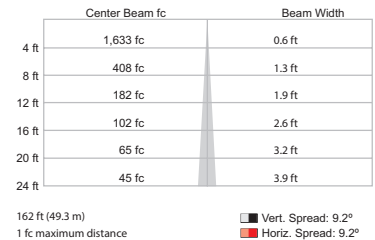
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1,059.3	95.7%
0-40	1,085.4	98.1%
0-60	1,104.4	99.8%
0-90	1,106.7	100.0%
60-90	2.3	0.2%
70-100	0.7	0.1%
90-120	0.0	0.0%
90-180	0.0	0.0%
0-180	1,106.7	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

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

ColorBurst IntelliHue Powercore All LED channels full on 8° native lens

Lumens	Efficacy
1,481	47

Polar Candela Distribution

Cd: 0 / 6,000 / 12,000 / 18,000 / 24,000 / 30,000 / 36,000

VA: 0° 10° 20° 30° 40°

■ - 0° H   ■ - 90° H
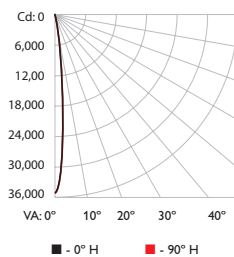
	0	25	45	70	90
0	35275	35275	35275	35275	35275
5	15370	15370	15370	15370	15370
15	691	691	691	691	691
25	136	136	136	136	136
35	55	55	55	55	55
45	20	20	20	20	20
55	6	6	6	6	6
65	2	2	2	2	2
75	1	1	1	1	1
85	4	4	4	4	4
90	2	2	2	2	2

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	2,205 fc	0.6 ft
8 ft	551 fc	1.3 ft
12 ft	245 fc	1.9 ft
16 ft	138 fc	2.5 ft
20 ft	88 fc	3.2 ft
24 ft	61 fc	3.8 ft
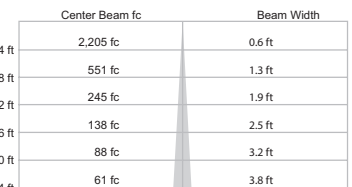
188 ft (57.3 m)
1 fc maximum distance

■ Vert. Spread: 9.1°
■ Horiz. Spread: 9.1°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1,398.9	94.3%
0-40	1,433.1	96.6%
0-60	1,457.3	98.2%
0-90	1,467.6	98.9%
60-90	10.3	0.7%
70-100	8.1	0.5%
90-120	6.1	0.4%
90-180	16.3	1.1%
0-180	1,483.9	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

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

ColorBurst IntelliHue Powercore All LED channels full on 10° diffuser lens

Lumens	Efficacy
1,322	42

Polar Candela Distribution

Cd: 0 / 4,167 / 8,333 / 12,500 / 16,667 / 20,833 / 25,000

VA: 0° 10° 20° 30° 40°

■ - 0° H   ■ - 90° H
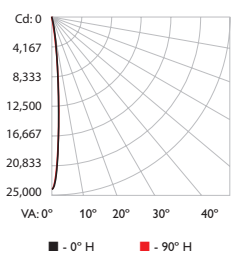
	0	25	45	65	90
0	24138	24138	24138	24138	24138
5	13278	13278	13278	13278	13278
15	762	762	762	762	762
25	141	141	141	141	141
35	52	52	52	52	52
45	22	22	22	22	22
55	7	7	7	7	7
65	3	3	3	3	3
75	1	1	1	1	1
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	1,508.62 fc	0.8 ft
8 ft	377.15 fc	1.5 ft
12 ft	167.62 fc	2.3 ft
16 ft	94.29 fc	3.1 ft
20 ft	60.34 fc	3.8 ft
24 ft	41.91 fc	4.6 ft
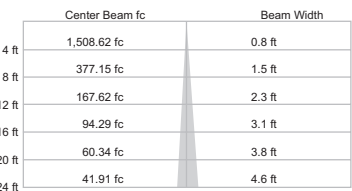
155 ft (47.2 m)
1 fc maximum distance

■ Vert. Spread: 11°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1259.8	95.3%
0-40	1292.8	97.8%
0-60	1316.9	99.6%
60-90	4.1	0.3%
70-100	1.5	0.1%
90-120	0.0	0.0%
0-90	1321.0	99.9%
90-180	0.7	0.1%

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	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.16	1.14	1.12	1.11	1.13	1.12	1.10	0.98	1.08	1.07	1.06	1.04	1.03	1.03	1.01	1.00	1.00	0.98
2	1.13	1.10	1.07	1.05	1.11	1.08	1.06	0.97	1.05	1.03	1.02	1.02	1.01	1.00	1.00	0.99	0.98	0.96
3	1.10	1.06	1.04	1.01	1.09	1.05	1.03	0.95	1.03	1.01	0.99	1.01	0.99	0.97	0.99	0.97	0.96	0.95
4	1.08	1.04	1.00	0.98	1.06	1.03	1.00	0.94	1.01	0.98	0.96	0.99	0.97	0.95	0.97	0.96	0.94	0.93
5	1.06	1.01	0.98	0.96	1.05	1.00	0.97	0.93	0.99	0.96	0.94	0.97	0.95	0.94	0.96	0.94	0.93	0.92
6	1.04	0.99	0.96	0.94	1.03	0.98	0.95	0.91	0.97	0.95	0.93	0.96	0.94	0.92	0.95	0.93	0.92	0.91
7	1.02	0.97	0.94	0.92	1.01	0.97	0.94	0.90	0.96	0.93	0.91	0.95	0.92	0.91	0.94	0.92	0.90	0.90
8	1.01	0.96	0.93	0.91	1.00	0.95	0.92	0.89	0.94	0.92	0.90	0.94	0.91	0.90	0.93	0.91	0.89	0.89
9	0.99	0.94	0.91	0.89	0.98	0.94	0.91	0.88	0.93	0.91	0.89	0.92	0.90	0.88	0.92	0.90	0.88	0.88
10	0.98	0.93	0.90	0.88	0.97	0.93	0.90	0.87	0.92	0.89	0.88	0.91	0.89	0.87	0.91	0.89	0.87	0.87

ColorBurst IntelliHue Powercore
All LED channels full on 20° diffuser lens

Lumens	Efficacy
1,286	41

Polar Candela Distribution

Cd: 0, 1,483, 2,967, 4,450, 5,933, 7,417, 8,900

VA: 0° 10° 20° 30° 40°

■ - 0° H   ■ - 90° H
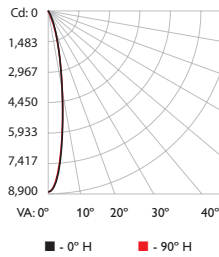
	0	25	45	65	90
0	8817	8817	8817	8817	8817
5	7201	7201	7201	7201	7201
15	1694	1694	1694	1694	1694
25	222	222	222	222	222
35	62	62	62	62	62
45	26	26	26	26	26
55	11	11	11	11	11
65	4	4	4	4	4
75	2	2	2	2	2
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	551.04 fc	1.3 ft
8 ft	137.76 fc	2.7 ft
12 ft	61.23 fc	4 ft
16 ft	34.44 fc	5.3 ft
20 ft	22.04 fc	6.7 ft
24 ft	15.31 fc	8 ft

94 ft (28.6 m)
1 fc maximum distance
■ Vert. Spread: 18.9°
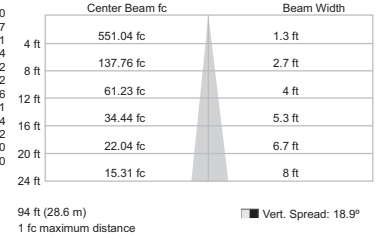
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1191.1	93.8%
0-40	1231.7	97.0%
0-60	1262.2	99.4%
60-90	6.7	0.5%
70-100	2.2	0.2%
90-120	0.1	0.0%
0-90	1268.9	100.0%
90-180	0.6	0.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.15	1.13	1.11	1.10	1.13	1.11	1.09	0.97	1.07	1.06	1.05	1.03	1.02	1.02	1.00	0.99	0.99	0.97
2	1.12	1.08	1.05	1.03	1.10	1.06	1.04	0.94	1.03	1.01	1.00	1.01	0.99	0.97	0.98	0.97	0.95	0.94
3	1.08	1.04	1.00	0.98	1.07	1.03	0.99	0.92	1.00	0.98	0.95	0.98	0.96	0.94	0.96	0.94	0.93	0.91
4	1.05	1.00	0.96	0.94	1.04	0.99	0.96	0.89	0.97	0.94	0.92	0.95	0.93	0.91	0.94	0.92	0.90	0.89
5	1.02	0.97	0.93	0.90	1.01	0.96	0.92	0.87	0.94	0.91	0.89	0.93	0.90	0.88	0.92	0.89	0.88	0.87
6	1.00	0.94	0.90	0.87	0.99	0.93	0.90	0.85	0.92	0.89	0.86	0.91	0.88	0.86	0.90	0.87	0.85	0.84
7	0.97	0.91	0.87	0.85	0.96	0.91	0.87	0.83	0.90	0.86	0.84	0.89	0.86	0.84	0.88	0.85	0.83	0.82
8	0.95	0.89	0.85	0.83	0.94	0.89	0.85	0.81	0.88	0.84	0.82	0.87	0.84	0.82	0.86	0.83	0.81	0.81
9	0.93	0.87	0.83	0.81	0.92	0.86	0.83	0.80	0.86	0.82	0.80	0.85	0.82	0.80	0.84	0.82	0.80	0.79
10	0.91	0.85	0.81	0.79	0.90	0.84	0.81	0.78	0.84	0.81	0.78	0.83	0.80	0.78	0.83	0.80	0.78	0.77

ColorBurst IntelliHue Powercore
All LED channels full on 40° diffuser lens

Lumens	Efficacy
1,276	40

Polar Candela Distribution

Cd: 0, 283, 567, 850, 1,133, 1,417, 1,700

VA: 0° 10° 20° 30° 40°

■ - 0° H   ■ - 90° H
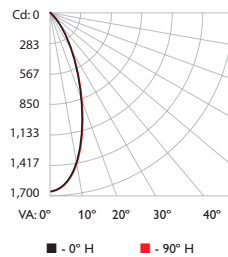
	0	25	45	70	
0	1647	1647	1647	1647	1
5	1579	1579	1579	1579	1
15	1146	1146	1146	1146	1
25	584	584	584	584	
35	199	199	199	199	
45	52	52	52	52	
55	18	18	18	18	
65	8	8	8	8	
75	3	3	3	3	
85	0	0	0	0	
90	0	0	0	0	

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	103 fc	3.0 ft
8 ft	26 fc	6.0 ft
12 ft	11 fc	9.0 ft
16 ft	6 fc	12.1 ft
20 ft	4 fc	15.1 ft
24 ft	3 fc	18.1 ft

40.5 ft (12.3 m)
1 fc maximum distance
■ Vert. Spread: 41.3°
■ Horiz. Spread: 41.3°
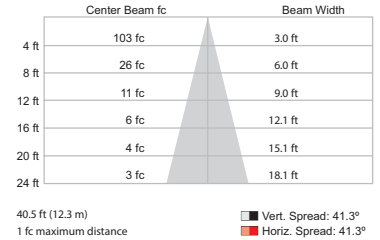
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	726.4	78.5%
0-40	854.1	92.3%
0-60	913.9	98.7%
0-90	925.4	100.0%
60-90	11.4	1.2%
70-100	3.7	0.4%
90-120	0.1	0.0%
90-180	0.4	0.0%
0-180	925.7	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.09	1.07	1.11	1.09	1.07	0.94	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.94
2	1.09	1.04	1.00	0.97	1.06	1.02	0.99	0.89	0.99	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.90	0.88
3	1.03	0.97	0.93	0.89	1.02	0.96	0.92	0.84	0.93	0.90	0.87	0.91	0.88	0.85	0.89	0.86	0.84	0.83
4	0.99	0.92	0.86	0.82	0.97	0.91	0.86	0.79	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.79	0.78
5	0.94	0.86	0.81	0.77	0.93	0.86	0.80	0.74	0.84	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.73
6	0.90	0.82	0.76	0.72	0.89	0.81	0.76	0.70	0.80	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.69
7	0.86	0.78	0.72	0.68	0.85	0.77	0.72	0.67	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.65
8	0.82	0.74	0.68	0.64	0.81	0.73	0.68	0.63	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.62
9	0.79	0.70	0.65	0.61	0.78	0.70	0.64	0.60	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.59
10	0.76	0.67	0.62	0.58	0.75	0.66	0.61	0.57	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.56

ColorBurst IntelliHue Powercore
All LED channels full on 60° diffuser lens

Lumens	Efficacy
1,266	40

Polar Candela Distribution
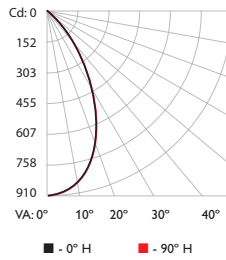
Cd: 0, 152, 303, 455, 607, 758, 910
VA: 0° 10° 20° 30° 40°

	0	25	45	70	90
0	908	908	908	908	908
5	895	895	895	895	895
15	792	792	792	792	792
25	590	590	590	590	590
35	328	328	328	328	328
45	120	120	120	120	120
55	34	34	34	34	34
65	11	11	11	11	11
75	4	4	4	4	4
85	1	1	1	1	1
90	1	1	1	1	1

■ - 0° H   ■ - 90° H

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	57 fc	4.7 ft
8 ft	14 fc	9.3 ft
12 ft	6 fc	14.0 ft
16 ft	4 fc	18.6 ft
20 ft	2 fc	23.3 ft
24 ft	2 fc	27.9 ft

30.2 ft (9.2 m)
1 fc maximum distance

■ Vert. Spread: 60.4°
■ Horiz. Spread: 60.4°
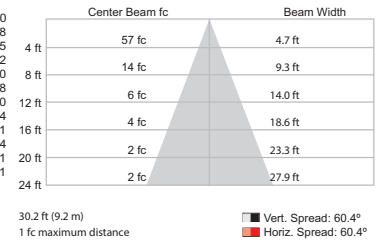
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	573.2	62.1%
0-40	776.9	84.1%
0-60	905.0	98.0%
0-90	923.0	99.9%
60-90	18.1	2.0%
70-100	6.7	0.7%
90-120	0.4	0.0%
90-180	0.6	0.1%

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	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.13	1.10	1.07	1.05	1.10	1.08	1.05	0.93	1.04	1.02	1.00	1.00	0.98	0.97	0.96	0.95	0.94	0.92
2	1.07	1.01	0.97	0.93	1.04	1.00	0.96	0.85	0.96	0.93	0.90	0.93	0.91	0.88	0.91	0.88	0.86	0.85
3	1.01	0.94	0.88	0.84	0.99	0.92	0.87	0.79	0.90	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.79	0.78
4	0.95	0.87	0.81	0.76	0.93	0.86	0.80	0.73	0.83	0.79	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.71
5	0.90	0.81	0.74	0.70	0.88	0.80	0.74	0.67	0.78	0.73	0.69	0.76	0.72	0.68	0.75	0.71	0.67	0.66
6	0.85	0.75	0.69	0.64	0.83	0.74	0.68	0.62	0.73	0.67	0.63	0.71	0.67	0.63	0.70	0.66	0.62	0.61
7	0.80	0.70	0.64	0.59	0.79	0.70	0.63	0.58	0.68	0.63	0.59	0.67	0.62	0.58	0.66	0.61	0.58	0.57
8	0.76	0.66	0.59	0.55	0.75	0.65	0.59	0.54	0.64	0.59	0.55	0.63	0.58	0.54	0.62	0.57	0.54	0.53
9	0.72	0.62	0.55	0.51	0.71	0.61	0.55	0.50	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.49
10	0.69	0.58	0.52	0.48	0.67	0.58	0.52	0.47	0.57	0.51	0.48	0.56	0.51	0.48	0.55	0.51	0.47	0.46

ColorBurst IntelliHue Powercore
All LED channels full on 80° diffuser lens

Lumens	Efficacy
1,248	40

Polar Candela Distribution
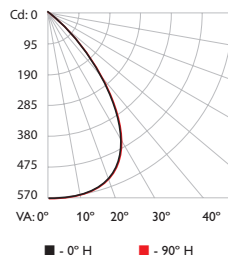
Cd: 0, 95, 190, 285, 380, 475, 570
VA: 0° 10° 20° 30° 40°

	0	25	45	70	90
0	611	611	611	611	611
5	611	611	611	611	611
15	594	594	594	594	594
25	534	534	534	534	534
35	386	386	386	386	386
45	187	187	187	187	187
55	61	61	61	61	61
65	17	17	17	17	17
75	5	5	5	5	5
85	1	1	1	1	1
90	1	1	1	1	1

■ - 0° H   ■ - 90° H

Illuminance at Distance

	Center Beam fc	Beam Width	
4 ft	38 fc	6.5 ft	6.5 ft
8 ft	10 fc	12.9 ft	12.9 ft
12 ft	4 fc	19.4 ft	19.4 ft
16 ft	2 fc	25.8 ft	25.9 ft
20 ft	2 fc	32.3 ft	32.4 ft
24 ft	1 fc	38.7 ft	38.8 ft

24.7 ft (7.5 m)
1 fc maximum distance

■ Vert. Spread: 77.8°
■ Horiz. Spread: 77.9°
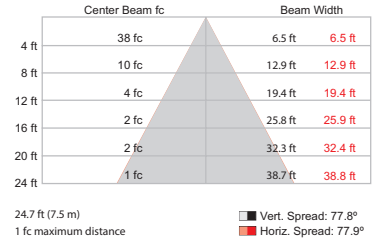
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	469.7	50.2%
0-40	707.8	75.7%
0-60	908.2	97.2%
0-90	934.1	99.9%
60-90	25.9	2.8%
70-100	8.1	0.9%
90-120	0.4	0.0%
90-180	0.6	0.1%
0-180	934.7	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:																		
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.09	1.06	1.03	1.10	1.07	1.04	0.92	1.03	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.91
2	1.05	1.00	0.95	0.91	1.03	0.98	0.93	0.83	0.94	0.91	0.88	0.91	0.88	0.86	0.89	0.86	0.84	0.82
3	0.99	0.91	0.85	0.80	0.97	0.90	0.84	0.75	0.87	0.82	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.74
4	0.92	0.83	0.77	0.72	0.90	0.82	0.76	0.68	0.80	0.75	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.67
5	0.87	0.77	0.70	0.65	0.85	0.76	0.69	0.62	0.74	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.62	0.61
6	0.81	0.71	0.64	0.58	0.80	0.70	0.63	0.57	0.68	0.62	0.58	0.67	0.61	0.57	0.65	0.61	0.57	0.55
7	0.76	0.65	0.58	0.53	0.75	0.65	0.58	0.52	0.63	0.57	0.53	0.62	0.56	0.52	0.61	0.56	0.52	0.51
8	0.72	0.61	0.54	0.49	0.70	0.60	0.53	0.48	0.59	0.53	0.48	0.58	0.52	0.48	0.57	0.52	0.48	0.46
9	0.68	0.56	0.49	0.45	0.66	0.56	0.49	0.44	0.55	0.49	0.45	0.54	0.48	0.44	0.53	0.48	0.44	0.43
10	0.64	0.53	0.46	0.41	0.63	0.52	0.46	0.41	0.51	0.45	0.41	0.50	0.45	0.41	0.50	0.45	0.41	0.39

ColorBurst IntelliHue Powercore
All LED channels full on
10° x 40° asymmetric lens

Lumens	Efficacy
1,288	41

Polar Candela Distribution
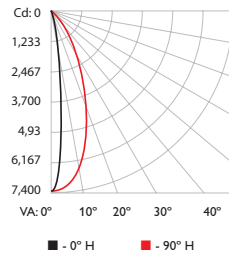
90°	0	25	45	65	90
Cd: 0					
0	7357	7357	7357	7357	7357
1,233					
5	3780	4178	5046	6239	7126
80 15	335	414	752	2069	5286
2,467					
25	90	112	178	476	2679
70 35	38	44	65	135	814
3,700					
45	16	21	30	51	160
55	6	8	15	22	47
4,93					
60 65	3	4	6	9	20
75	1	1	2	3	6
6,167					
85	1	0	0	1	0
50 90	0	0	0	0	0
7,400					

VA: 0°   10°   20°   30°   40°

■ - 0° H   ■ - 90° H

Illuminance at Distance

	Center Beam fc	Beam Width	
4 ft	459.82 fc	0.7 ft	3.1 ft
8 ft	114.95 fc	1.4 ft	6.2 ft
12 ft	51.09 fc	2.2 ft	9.3 ft
16 ft	28.74 fc	2.9 ft	12.4 ft
20 ft	18.39 fc	3.6 ft	15.5 ft
24 ft	12.77 fc	4.3 ft	18.6 ft
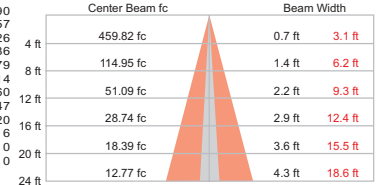
85.8 ft (26.1 m)
1 fc maximum distance

■ Vert. Spread: 10.3°
■ Horiz. Spread: 42.4°

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	1115.0	87.0%
0-40	1217.5	95.0%
0-60	1270.5	99.2%
60-90	10.6	0.8%
70-100	3.2	0.3%
90-120	0.0	0.0%
0-90	1281.1	100.0%
90-180	0.0	0.0%
0-180	1281.1	100.0%

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80			70			50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0

RCR:																	
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.15	1.12	1.10	1.08	1.12	1.10	1.08	0.96	1.06	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96
2	1.10	1.06	1.03	1.00	1.08	1.05	1.02	0.92	1.01	0.99	0.97	0.98	0.97	0.95	0.96	0.94	0.93	0.91
3	1.06	1.01	0.97	0.94	1.04	1.00	0.96	0.88	0.97	0.94	0.92	0.95	0.92	0.90	0.93	0.91	0.89	0.87
4	1.02	0.96	0.92	0.89	1.01	0.95	0.91	0.85	0.93	0.90	0.87	0.91	0.88	0.86	0.90	0.87	0.85	0.84
5	0.99	0.92	0.88	0.84	0.97	0.91	0.87	0.81	0.90	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.82	0.81
6	0.95	0.88	0.84	0.80	0.94	0.88	0.83	0.78	0.86	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.78
7	0.92	0.85	0.80	0.77	0.91	0.85	0.80	0.76	0.83	0.79	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.75
8	0.89	0.82	0.77	0.74	0.88	0.82	0.77	0.73	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.72
9	0.87	0.79	0.75	0.72	0.86	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.74	0.71	0.77	0.73	0.71	0.70
10	0.84	0.77	0.72	0.69	0.83	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.68

8 °   10 °

20 °   40 °

60 °   80 °

10 °   40 °

ColorBurst IntelliHue Powercore Specifications

Due to continuous improvements and innovations, specifications may change without notice.
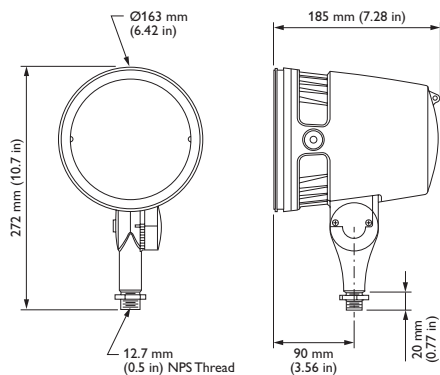
Item	Specification	Details		
Output	Beam Angle	8° primary optic Optional diffusers: 10°/20°/40°/60°/80°/10° x 40° (asymmetric)		
	Color Temperature	All LED channels full on	2700K	4000K
	Lumens*	1,481	1,093	1,105
	Efficacy	47	59	56
	CRI		83	85
	R9		77	55
	Lumen Maintenance†	27,000 hours L90 @ 25° C 25,000 hours L90 @ 50° C 48,000+ hours L80 @ 25° C 48,000+ hours L80 @ 50° C 48,000+ hours L70 @ 25° C 48,000+ hours L70 @ 50° C		
	Effective Projected Area (EPA)	26053 mm^2		
Electrical	Input Voltage	100 to 277 VAC, auto-switching, 50/60 Hz via Data Enabler Pro		
	Power Consumption	33 W maximum at full output, steady state		
	Power Factor	> 0.9 @ 100 - 240 VAC, > 0.85 @ 277 VAC		
Control	Interface	Data Enabler Pro (DMX/Ethernet)		
	Control System	Philips Color Kinetics full range of controllers, including Light System Manager, Video System Manager Pro, iPlayer 3, Antumbra iColor Keypad, and ColorDial Pro, or third-party controllers		
Physical	Dimensions (Height x Width x Depth)	287 x 210 x 186 mm (11.3 x 8.3 x 7.3 in) Architectural 272 x 163 x 185 mm (10.7 x 6.42 x 7.28 in) Landscape		
	Weight	5.5 kg (12.1 lb) Architectural 3.5 kg (7.7 lb) Landscape		
	Housing	Die-cast aluminium, powder-coated finish		
	Lens	Clear tempered glass		
	Luminaire Connections	1.8 m (6 ft) combined power data whip Architectural 152 mm (6 in) flying leads Landscape		
	Temperature Ranges	-40 to 50 °C (-40 to 122 °F) Operating -20 to 50 °C (-4 to 122 °F) Startup -40 to 80 °C (-40 to 176 °F) Storage		
	Humidity	0 to 95%, non-condensing		
	Luminaire Run Lengths	To calculate luminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.colorkinetics.com/support/install_tool/		
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, PSE, CQC, C-Tick, SAA		
	Environment	Dry/Damp/Wet Location, IP66		
	Corrosion Resistance	Complies with ASTM B117 standard for > 1,500 hours		
	Vibration Resistance	Complies with ANSI C136.31, 3G Architectural		
	Mechanical Impact	IK08		

210 mm (8.3 in)   186 mm (7.3 in)

287 mm (11.3 in)

Ø163 mm (6.4 in)   45 mm (1.8 in)   15 mm (0.6 in)

120.5 mm (4.74 in)

ColorBurst IntelliHue Powercore Architectural

Ø163 mm (6.42 in)   185 mm (7.28 in)

272 mm (10.7 in)

12.7 mm (0.5 in) NPS Thread   90 mm (3.56 in)   20 mm (0.77 in)

ColorBurst IntelliHue Powercore Landscape

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

† 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 luminaires are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.colorkinetics.com/support/appnotes/notes/lm-80-08.pdf for more information.

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Luminaires and Data Enabler Pro

ColorBurst IntelliHue Powercore luminaires 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.

- 4-conductor copper wire to connect ColorBurst IntelliHue Powercore luminaires in series or in parallel. Standard 12 AWG 2.05mm (0.08 in) stranded wire is recommended.

Item	Type	Housing Color	Item Number*	Philips 12NC
ColorBurst IntelliHue Powercore	Landscape	Gray	423-000003-20	912400135469
		Black	423-000003-23	912400135471
		White	423-000003-26	912400135473
		Bronze	423-000003-29	912400135475
ColorBurst IntelliHue Powercore	Architectural	Gray	423-000003-21	912400135470
		Black	423-000003-24	912400135472
		White	423-000003-27	912400135474
		Bronze	423-000003-30	912400135476

Item	Style	Item Number*	Philips 12NC
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.

Accessories

❋ *You can attach either one Louver or one Spread Lens at a time.*

❋ *Diffuser and Louver must be ordered with a trim ring or a glare shield.*

Item	Housing Color	Item Number*	Philips 12NC
Trim Ring	Gray	120-000189-20	912400135449
	Black	120-000189-21	912400135450
	White	120-000189-22	912400135451
	Bronze	120-000189-23	912400135452
Half Glare Shield	Gray	120-000189-24	912400135453
	Black	120-000189-25	912400135454
	White	120-000189-26	912400135455
	Bronze	120-000189-27	912400135456
Full Glare Shield	Gray	120-000189-28	912400135457
	Black	120-000189-29	912400135458
	White	120-000189-30	912400135459
	Bronze	120-000189-31	912400135460
Louver	Black	120-000189-17	912400133447
10° Spread Lens		120-000189-18	912400135371
20° Spread Lens		120-000189-12	912400133442
40° Spread Lens		120-000189-13	912400133443
60° Spread Lens		120-000189-14	912400133444
80° Spread Lens		120-000189-15	912400133445
10° x 40° Asymmetric Spread Lens		120-000189-16	912400133446

Use Item Number when ordering in North America.

Item	Housing Color	Item Number*	Philips 12NC
Mounting Arm, Short, White, Architectural		120-000201-06	912400135846
Mounting Arm, Medium, White, Architectural		120-000201-07	912400135847
Mounting Arm, Long, White, Architectural		120-000201-08	912400135848
Mounting Arm, Short, Gray, Architectural		120-000201-03	912400135843
Mounting Arm, Medium, Gray, Architectural		120-000201-04	912400135844
Mounting Arm, Long, Gray, Architectural		120-000201-05	912400135845
Mounting Arm, Short, Black, Architectural		120-000201-00	912400135840
Mounting Arm, Medium, Black, Architectural		120-000201-01	912400135841
Mounting Arm, Long, Black, Architectural		120-000201-02	912400135842

Use Item Number when ordering in North America.

Installation

ColorBurst IntelliHue Powercore offers saturated, color-changing LED spotlighting, site, and accent lighting with Powercore technology. Powercore, which integrates LED power and data management within the luminaire, eases installation by eliminating the need for external power supplies.

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

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate ColorBurst IntelliHue Powercore luminaires 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, it is good practice to seal all luminaires and junction boxes with electronics-grade RTV silicone sealant to ensure that moisture cannot enter or accumulate in any wiring compartments, cables, or other electrical parts. You must use suitable outdoor-rated junction boxes when installing in wet or damp locations. Additionally, you must use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes

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

Plan 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, luminaires, and cables.

   ColorBurst IntelliHue Powercore luminaires can be installed in series or in parallel (wired to a common junction box).
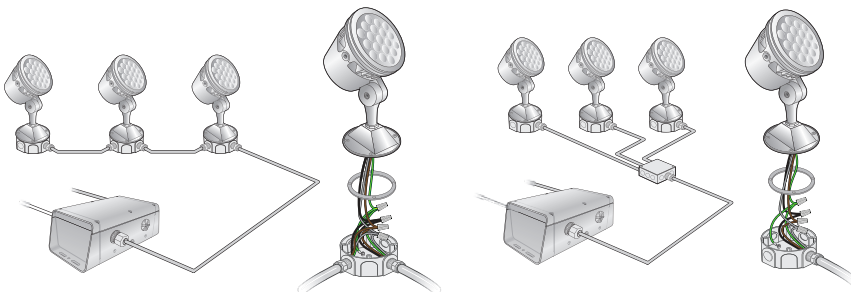
- ColorBurst IntelliHue Powercore Architectural luminaires feature a canopy base for mounting to standard US junction boxes. luminaires can be mounted directly to a surface or substrate by removing the nylon cable clamp and disengaging the 1.8 m (6 ft) integrated power/data cable from the canopy base.

Maximum luminaire run lengths

ColorBurst IntelliHue Powercore
29 @ 100 VAC
34 @ 120 VAC
53 @ 220 VAC
54 @ 230 VAC
59 @ 277 VAC

Assuming a 20 A circuit, 6.1 m (20 ft) leader cable from Data Enabler Pro to the first junction box, and 610 mm (2 ft) jumper cables between luminaires

✳ *For more information, and for help calculating the number of luminaires your specific installation can support, download the Configuration Calculator from www. colorkinetics.com/support/install_tool/, or consult Application Engineering Services at support@colorkinetics.com.*

• ColorBurst IntelliHue Powercore Landscape luminaires feature a 1/2 in NPT threaded post for mounting to standard junction boxes and third-party mounting accessories such as stanchion mounts, posts, and stakes.

The maximum number of luminaires each Data Enabler Pro can support depends on specific configuration details such as length of leader and jumper cables, wire gauge, luminaire spacing, circuit size, line voltage, and method of connection (in series or in parallel). As an example, the tables to the left list the maximum number of ColorBurst IntelliHue Powercore Landscape luminaires each Data Enabler Pro can support at various voltages, assuming a 20 A circuit, a 6.1 m (20 ft) leader cable from Data Enabler Pro to the first junction box, and 610 mm (2 ft) jumper cables between luminaires. Keep in mind that these figures, provided as a guideline, are accurate for the specified configuration only. Changing the configuration can affect the luminaire run lengths.

In addition to maximum luminaire run lengths determined by the electrical configuration, each Data Enabler Pro imposes maximum run lengths based on data integrity. To ensure data integrity, maximum individual run length should not exceed 53.3 m (175 ft), and the total cable length per Data Enabler Pro should not exceed 122 m (400 ft).

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

Data integrity — 122 m (400 ft) maximum total length
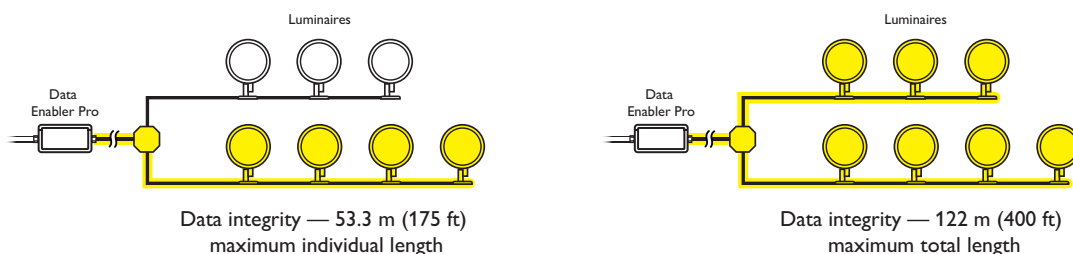
✳ *For complete instructions on how to wire the Data Enabler Pro, refer to the Data Enabler Pro Product Guide.*

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 the luminaires over a single luminaire cable. Additional cabling is required to connect luminaires together in parallel or 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:

   ColorBurst IntelliHue Powercore Architectural Installations

   • The provided stainless steel screws for outdoor installations

   • The provided junction box gasket for outdoor installations

   • Unless surface-mounting, one 102 mm (4 in) round US electrical junction box per luminaire, rated for your application, with 89 mm (3.5 in) center-to-center screw holes for attaching the luminaire's base. (Refer to the manufacturer's literature for additional items required for mounting or sealing.)

   • A 6 mm hex wrench for luminaire tilting and locking

   • A 1/8 in hex wrench for luminaire swiveling and locking

ColorBurst IntelliHue Powercore Landscape Installations

- The provided locking nut

- One electrical junction box or mounting accessory per luminaire, rated for your application. (Refer to the junction box or accessory manufacturer's literature for specific information on mounting or sealing.)

- A 6 mm hex wrench for luminaire tilting and locking

- A 33 mm wrench for locking luminaires in place

All Installations

- A sufficient length 4-conductor wire. We recommend 12 AWG 4 mm² (0.1 in) stranded copper wire.

- Conduit as required.

- Electronics-grade room temperature vulcanizing (RTV) silicone sealant as required.

- A 5/32 in hex wrench for installing accessories.

Unpack and Position Luminaires

1. Carefully inspect the box containing ColorBurst IntelliHue Powercore and the contents for any damage that may have occurred in transit.

2. Each ColorBurst IntelliHue Powercore luminaire comes pre-programmed with a unique serial number. As you unpack the luminaires, record the serial numbers in a layout grid (typically a spreadsheet or list) for easy reference and light addressing.
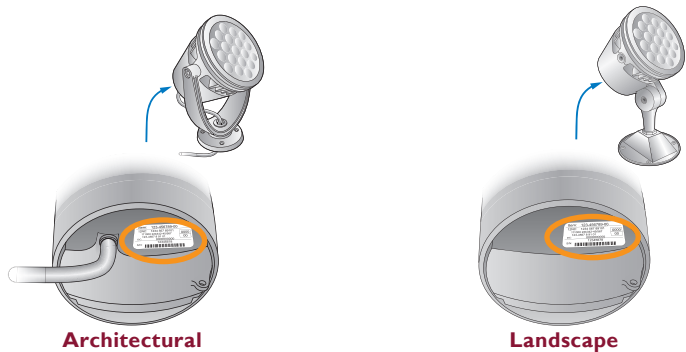
Included in the box

ColorBurst IntelliHue Powercore Architectural
ColorBurst IntelliHue Powercore Architectural luminaire
(4) 10-24 stainless steel screws for outdoor installation
Junction box gasket
Installation Instructions
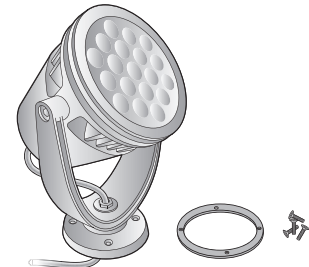
ColorBurst IntelliHue Powercore Landscape
ColorBurst IntelliHue Powercore Landscape luminaire
Locking nut
Installation Instructions

Architectural **Landscape**

3. Assign each luminaire 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 luminaire's housing.
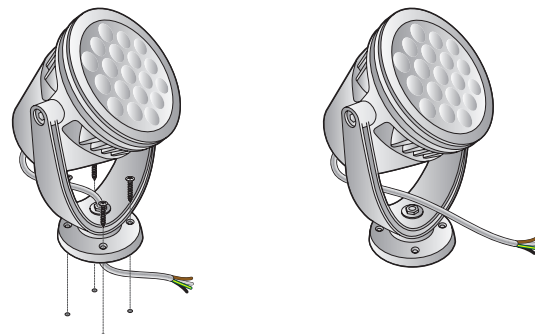
Connecting and Mounting ColorBurst IntelliHue Powercore Architectural Luminaires

ColorBurst IntelliHue Powercore Architectural luminaires can be mounted to standard US junction boxes, or they can be mounted to a flat surface or substrate.

Make sure the power is OFF before mounting and connecting ColorBurst IntelliHue Powercore luminaires.

Connecting ColorBurst IntelliHue Powercore Architectural Luminaires to Junction Boxes

1. Mount junction boxes in accordance with the lighting design plan. Each luminaire is designed for mounting in a 102 mm (4 in) round US electrical junction box, rated for your application, with 89 mm (3.5) center-to-center screw holes for attaching the luminaire's base.

   Architectural luminaires are supplied with a grounding wire attached to the luminaire's base (canopy). The canopy ground wire can be attached to a grounding point in the junction box, or connected with the ground in the luminaire cable.

   Wiring between junction boxes must comply with local codes.

2. If installing luminaires in a series, pull copper wire between the junction boxes.

   If installing luminaires in parallel, pull copper wire from a Data Enabler Pro to a common junction box, and from the common junction box to each luminaire's junction box.

   We recommend the use of 12 AWG 4 mm² (0.1 in), stranded 4-conductor copper wire. With the recommended wiring, the maximum cable run from a Data Enabler Pro device to any individual ColorBurst IntelliHue Powercore luminaire is 53 m (174 ft). When installing in parallel, the total cable length cannot exceed 122 m (400 ft).

3. Trim the cable from the luminaire to fit in the junction box, leaving enough cable to make wiring connections.

4. Use wire nuts to connect line, neutral, ground, and data. If installing in a damp or wet location, use the included junction box gasket.

   Attach the canopy ground wire to a grounding point in the junction box, or combine it with the luminaire cable ground with a wire nut.
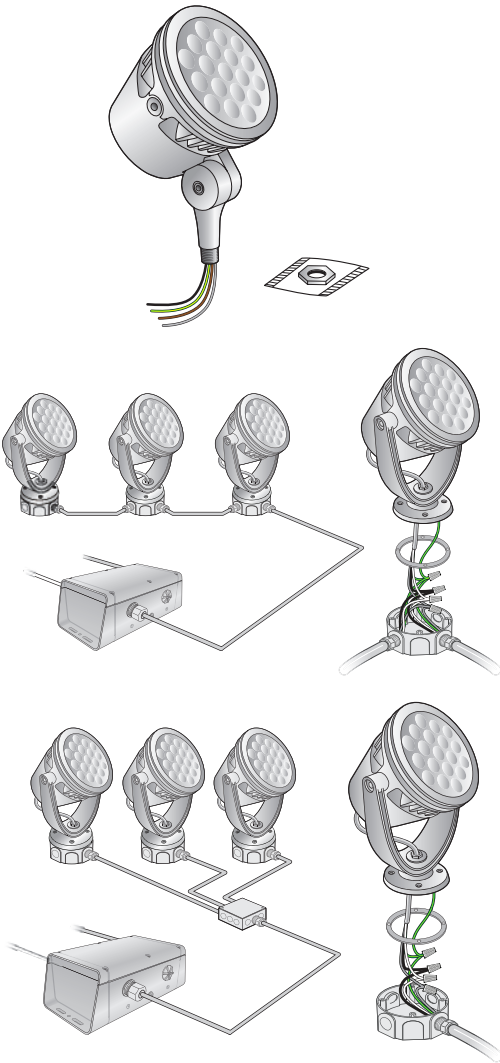
5. Tuck wire connections into the junction box.

9.5 mm
(0.375 in)

18 AWG
1 mm (0.04 in)

CE/PSE
CQC

L N
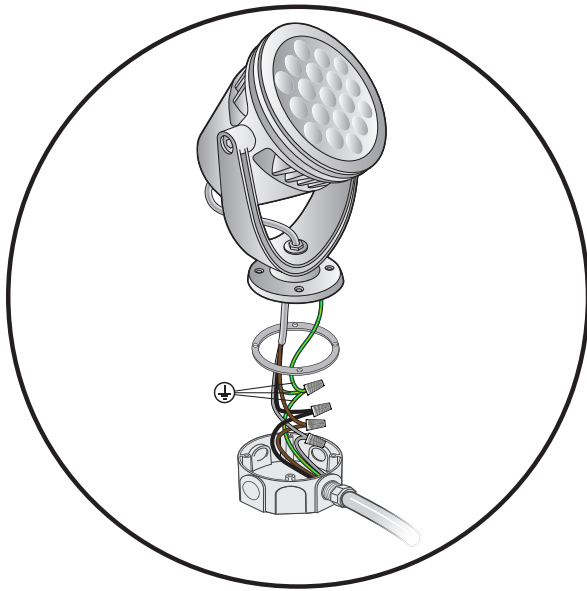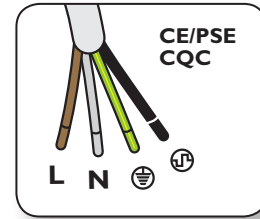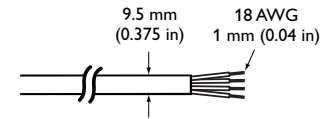
6. Screw the luminaire's canopy base into the junction box using the four included 10-24 stainless steel screws. If installing in a damp or wet location, seal all junction boxes with electronics-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.
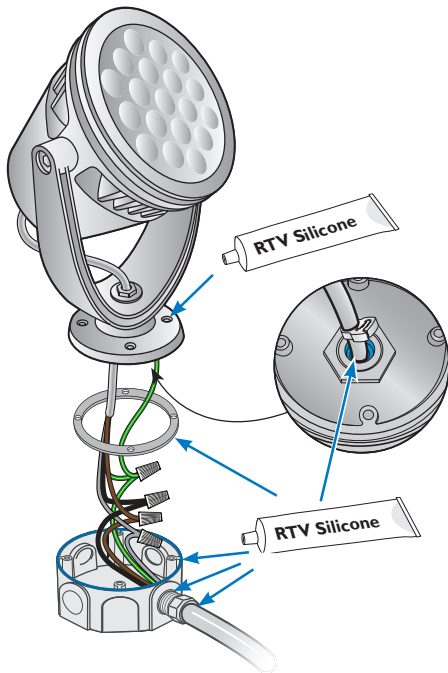
✳ *When there is a solo green or yellow wire attached to the canopy, it is a canopy ground wire that must not be removed. Connect this wire to a suitable grounding point in the junction box or elsewhere nearby.*

RTV Silicone

RTV Silicone
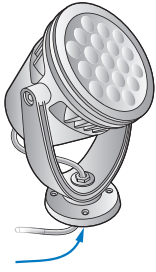
Surface-Mounting ColorBurst IntelliHue Powercore Architectural Luminaires

1. Prepare ColorBurst IntelliHue Powercore Architectural luminaires for surface-mounting:

    • Loosen the cable compression ring on the luminaire yoke.

    • Remove the nylon cable clamp from the luminaire's leader cable where it exits the underside of the canopy base.

    • Disengage the leader cable from the luminaire's canopy base.
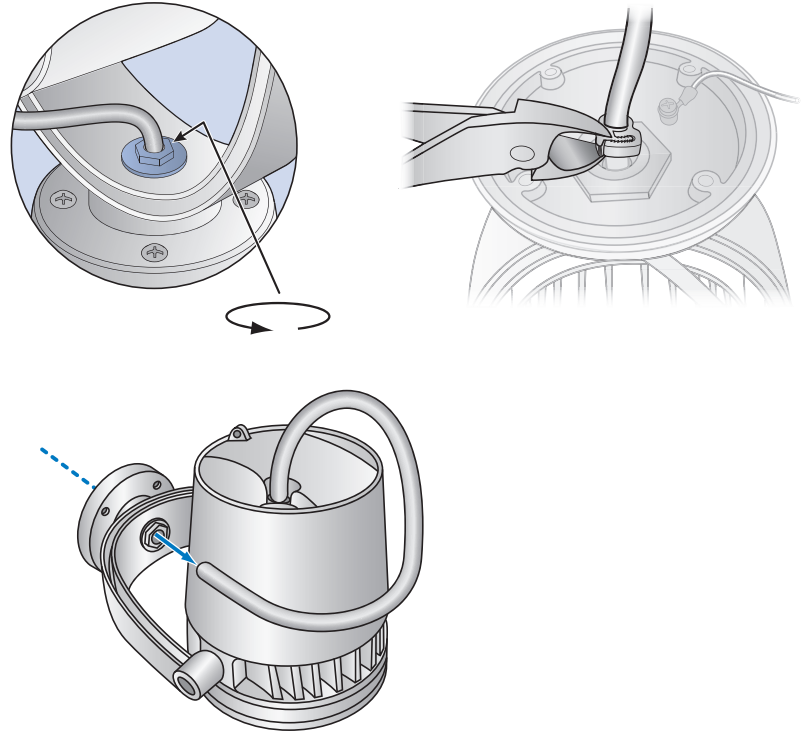
2. Mount junction boxes in accordance with the lighting design plan.

3. Position each ColorBurst IntelliHue Powercore Architectural luminaire in its designated mounting location. Make sure the mounting surface is flat, suitable for the mounting hardware, and clear of debris and other obstructions.

4. Use four suitable mounting screws to secure each ColorBurst IntelliHue Powercore Architectural luminaire to the mounting location

5. If installing luminaires in a series, pull copper wire between the junction boxes.

   If installing luminaires in parallel, pull copper wire from a Data Enabler Pro to a common junction box.

   We recommend the use of 12 AWG 4 mm² (0.1 in), stranded 4-conductor copper wire. With the recommended wiring, the maximum cable run from a Data Enabler Pro device to any individual ColorBurst IntelliHue Powercore luminaire is 53 m (175 ft). When installing in parallel, the total cable length cannot exceed 122 m (400 ft).

6. Use wire nuts to connect line, neutral, ground, and data. If installing in a damp or wet location, use the included junction box gasket.

7. Tuck wire connections into the junction box.

8. Secure all junction box covers. If installing in a damp or wet location, 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.

Leader Cable connector dimensions
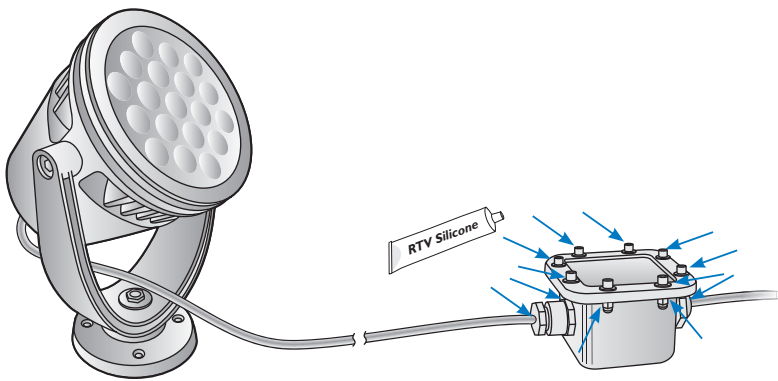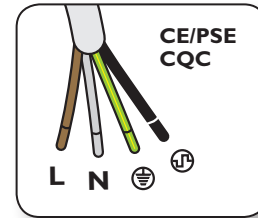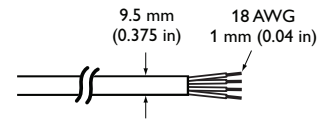
Connecting and Mounting ColorBurst Powercore Landscape Luminaires

ColorBurst IntelliHue Powercore Landscape luminaires feature a 1/2 in NPT threaded post for installing to standard junction boxes, stanchion mounts, posts, stakes, and other landscape mounting accessories.

Make sure the power is OFF before mounting and connecting ColorBurst IntelliHue Powercore luminaires.

1. Mount junction boxes and any landscape mounting accessories in accordance with the lighting design plan.

2. If installing luminaires in a series, pull copper wire between the junction boxes, and from the junction boxes to the luminaires as needed.

   If installing luminaires in parallel, pull copper wire from a Data Enabler Pro to a common junction box, and from the common junction box to the luminaires.

   We recommend the use of 12 AWG 4 mm² (0.1 in), stranded 4-conductor copper wire. With the recommended wiring, the maximum cable run from a Data Enabler Pro device to any individual ColorBurst IntelliHue Powercore luminaire is 53 m (175 ft). When installing in parallel, the total cable length cannot exceed 122 m (400 ft).

3. Thread the locking nut onto the ColorBurst IntelliHue Powercore Landscape threaded post.

4. Use wire nuts to connect line, neutral, ground, and data.

Install luminaires in series or in parallel
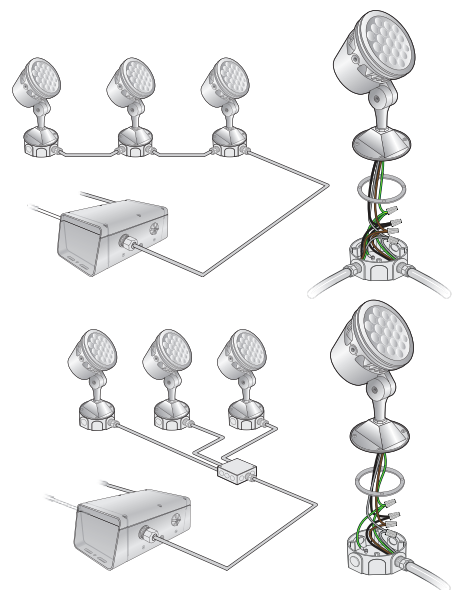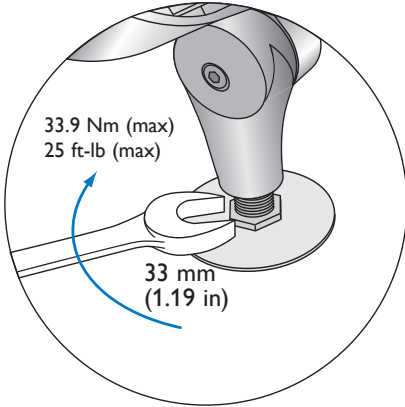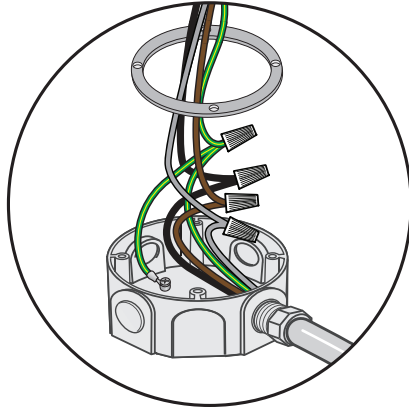
5. Tuck wire connections into the junction box or mounting accessory.

6. Using a 33 mm wrench, torque the locking nut to 33.9 Nm (25 ft-lb). Do not overtighten.

7. If installing in a damp or wet location, seal all junction boxes and mounting accessories with electronics-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.

Connect Luminaire Cable to Power
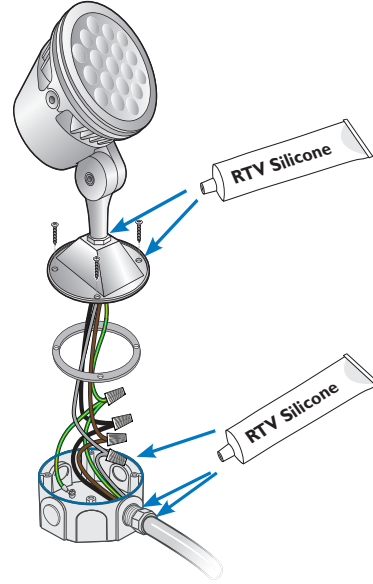
Once you've made all luminaire and junction box connections, connect the lead cable to the 4-wire PC terminal connector block inside the Data Enabler Pro Housing.

Attach Safety Cable (Optional)

When installing ColorBurst IntelliHue Powercore luminaires to a wall or overhead,

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

CE/PSE CQC

L N ⏚

Power/data output to luminaires

Mains voltage input
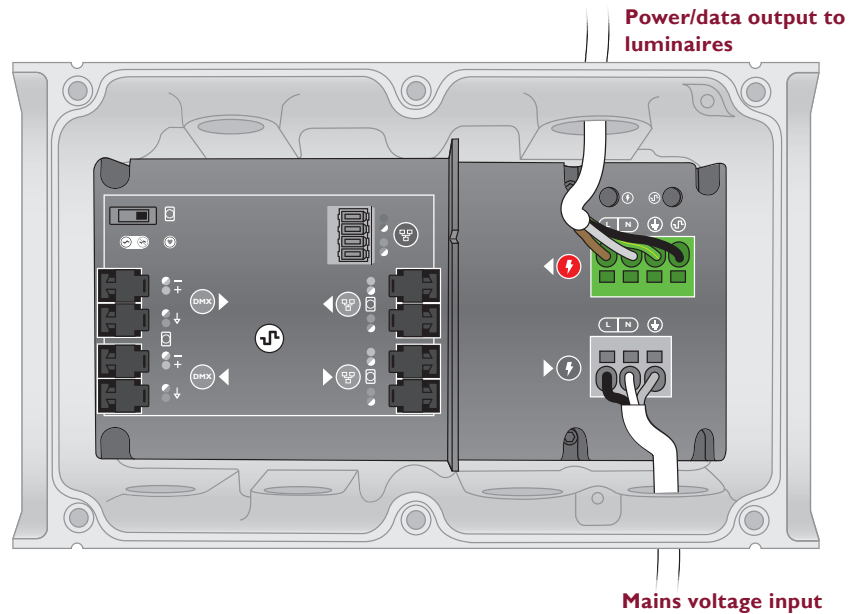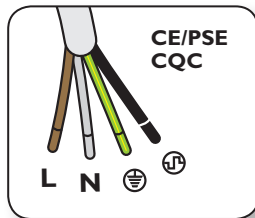
use a safety cable to tether it to a secure anchor point. When dictated by local or state code or advised by a structural engineer, attach a safety cable to the ColorBurst IntelliHue Powercore luminaire housing and tether it to a secure anchor point.

1. Thread a safety cable through the luminaire housing as shown.

2. Attach the safety cable to the mounting surface using a method that follows the code or engineer's requirements.

Attach Accessories (Optional)

Safety cable minimum requirements

Material	304 or 316 Stainless Steel
Size	5/32 in (4 mm) nominal diameter Minimum break load must be greater than 1,089 kg (2,400 lb)

Architectural

Landscape
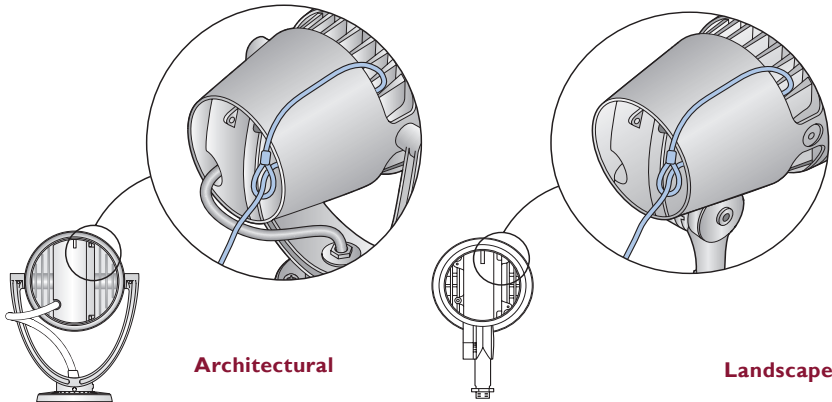
Accessories can be installed to change the beam angle or add extra protection to the luminaire in outdoor environments.

❋ *For complete instructions on how to install the accessories, refer to the Accessory Installation Instructions.*

Trim Ring   45° Glare Shield   Full Glare Shield

Louver

Spread Lenses

10°   20°   40°   60°   80°   10° x 40°
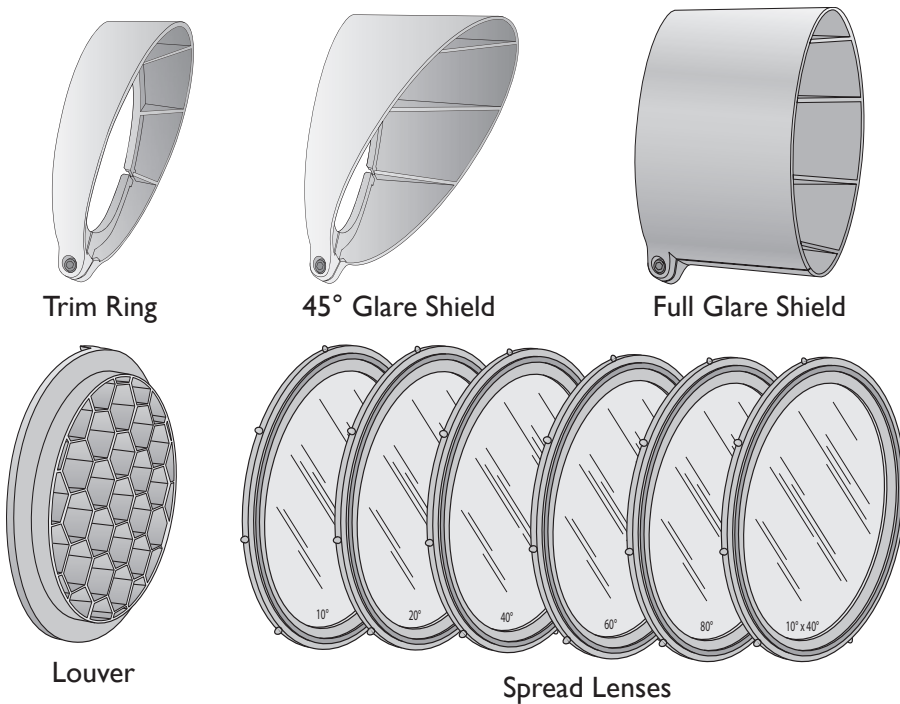
Address and Configure the Luminaires

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

ColorBurst IntelliHue Powercore luminaires operate in 8-bit mode by default. You can configure ColorBurst IntelliHue Powercore to operate in 16-bit mode, which increases luminaire resolution for smoother dimming.

In 8-bit mode, luminaires use one DMX address per LED channel (red, green, and blue). In 16-bit mode, luminaires 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 luminaire resolution from 256 dimming steps to 65,536 (256 x 256) dimming steps.

DMX Channel Assignments (3 channel mode)					
8-Bit Mode	1		2		3	
	Red		Green		Blue	
16-Bit Mode	1	2	3	4	5	6
	Red Coarse	Red Fine	Green Coarse	Green Fine	Blue Coarse	Blue Fine

DMX Channel Assignments (4 channel mode)							
8-Bit Mode	1		2		3		4	
	Red		Green		Blue		Mint White	
16-Bit Mode	1	2	3	4	5	6	7	8
	Red Coarse	Red Fine	Green Coarse	Green Fine	Blue Coarse	Blue Fine	Mint White Coarse	Mint White Fine

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

• In Ethernet installations, you can address and configure your luminaires using QuickPlay Pro with a computer connected to your lighting installation's network. QuickPlay Pro can automatically discover all of your luminaires, controllers, and Data Enabler Pro devices for quick configuration.

• In DMX installations, you can address and configure your luminaires using QuickPlay Pro with iPlayer 3 or SmartJack Pro. You can manually enter luminaire serial numbers, or you can import a spreadsheet listing each luminaire's serial number and starting DMX address.

For complete details on addressing and configuring ColorBurst IntelliHue Powercore luminaires with QuickPlay Pro, refer to the *Addressing and Configuration Guide*, which you can view or download at www.colorkinetics.com/support/addressing.

Setting Luminaire Dimming Curves

Dimming curves describe how slowly or quickly a luminaire dims at different levels of input. For finer control, ColorBurst IntelliHue 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 luminaires. ColorBurst IntelliHue Powercore luminaires 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. ColorBurst IntelliHue Powercore offers five levels of decreasing LED transition speed, from Fast (instant snap changes) to Delay-4 (slowest transition speed).

Chromasync: Maximizing Luminaire-to-Luminaire Consistency

Optibin, our advanced binning algorithm, sets an industry-leading standard for the color consistency and uniformity of LED sources used in manufacturing. Chromasync technology enhances the performance of Optibin by maximizing luminaire-to-luminaire color consistency within an installation. By using active measurements of each luminaire's color range taken during manufacturing, Chromasync achieves a common gamut for all ColorBurst IntelliHue Powercore luminaires, regardless of LED sources used or date of manufacture.

Chromasync is especially valuable in lighting designs that feature combinations of two or more saturated colors (RGB white, yellow, cyan, and so on). In the case of RGB white, for example, Chromasync can reduce color variations across ColorBurst IntelliHue Powercore luminaires from 10 or more MacAdam ellipse steps to as little as four MacAdam ellipse steps. You can find more information about Chromasync from http://www.colorkinetics.com/ls/guides-brochures/PCK-Technology-Overview-Chromasync.pdf

While Chromasync does not calibrate colors with an external reference or standard, it accelerates commissioning of systems by eliminating the need for tedious fine-tuning of individual luminaires.

Chromasync technology supports three basic data operation modes for use with ColorBurst IntelliHue Powercore: 4-to-4, 3-to-4, and 3-to-3.

- **4-to-4 Configuration**
  The 4-to-4 configuration works with newer controllers that deliver four channels of control data to four-channel LED luminaires. This is the default configuration for ColorBurst IntelliHue Powercore luminaires.

- **3-to-4 Configuration**
  The 3-to-4 configuration works with controllers that employ three output data channels. ColorBurst IntelliHue Powercore maps three channels of control data to all four LED channels. This is the default configuration for ColorBurst IntelliHue Powercore luminaires.

- **3-to-3 Configuration**
  The 3-to-3 configuration allows legacy RGB light shows to be carried over to four-channel light luminaires; however, the fourth channel (White or Amber) is ignored. Therefore, this configuration does not utilize the full color palette available on the ColorBurst IntelliHue Powercore.

Aim and Lock Luminaires

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

180°

180°
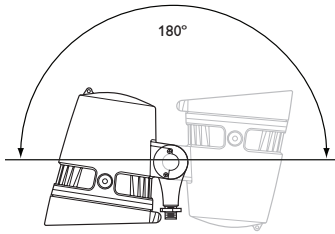
Make sure power is ON before aiming luminaires.

ColorBurst IntelliHue Powercore luminaires can tilt through a full **180°**. ColorBurst IntelliHue Powercore Architectural luminaires can also rotate through a full **360°** for precise aiming. Locking nuts use standard hex wrenches to secure luminaires firmly in position.

Aiming and Locking ColorBurst IntelliHue Powercore Landscape Luminaires

1. Using a **6 mm hex wrench**, loosen the locking nut on the side of the luminaire base.

2. Aim the luminaire by tilting the beam as desired.

3. When the luminaire is aimed as desired, re-tighten the locking nut to secure the luminaire in place. Torque to 33.9 Nm (25 ft-lbs). Do not over-tighten.

6 mm hex

33.9 Nm (max)
25 ft-lb (max)

10°   360°
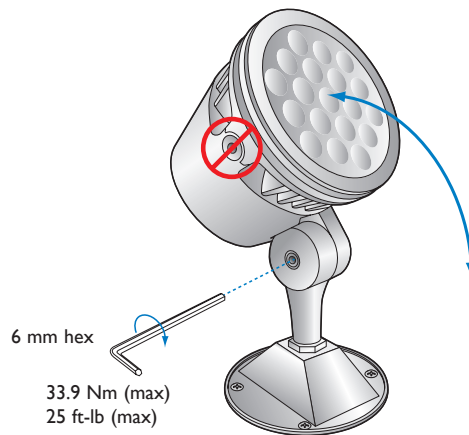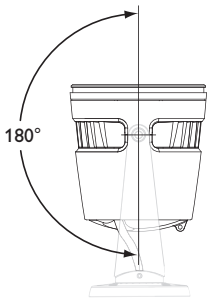
Aiming and Locking ColorBurst IntelliHue Powercore Architectural Luminaires

1. To tilt the beam:

   • Loosen the locking nuts on either side of the luminaire yoke using a **6 mm hex wrench**.

   • Tilt the beam as desired.

   • Re-tighten the locking nuts to secure the luminaire in place. Torque to 28 Nm (21 ft-lbs). Do not over-tighten.

2. To rotate the luminaire:

10°   360

6 mm hex

28 Nm (max)
21 ft-lb (max)
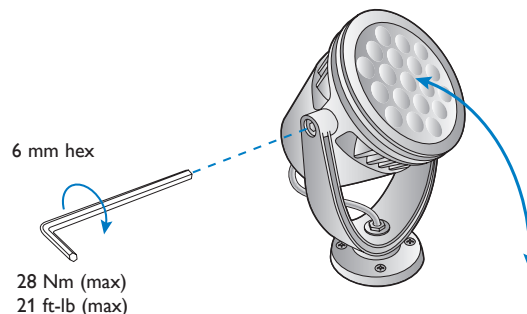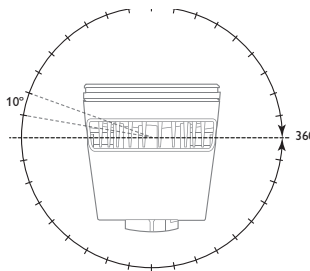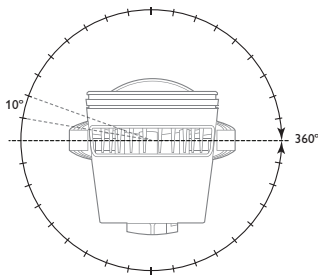
- Loosen the locking nuts on either side of the luminaire yoke's base using a 3 mm hex wrench.

- Rotate the luminaire as desired. Note that the luminaire can be rotated in 10˚ increments.

- Re-tighten the locking nuts to secure the luminaire in place.

3 mm hex

1.5 N-m (max)
1.1 ft-lb (max)

PHILIPS