

iW CAST 14 POWERCORE



IntelliWhite™ iW Cast 14 Powercore is a first-of-its kind LED white light fixture. It is a high-performance union of linear fixture design with maximized light intensity for wall washing, highlighting architectural detail, designs, and lit surfaces to complement ambient scenes and moods. iW Cast Powercore provides flexible color temperature and brightness control through Chromacore®, the proven technology that underlies Color Kinetics' existing intelligent solid-state lighting systems. When applied to IntelliWhite products, Chromacore controls channels of warm white and cool white LEDs to produce output of color temperatures within the range of 3000 - 6500 kelvin from within a single fixture. iW Cast 14 Powercore allows the adjustment of intensity while providing the option to either maintain constant color temperature or vary the color temperature.

iW Cast 14 Powercore, designed to meet the rugged requirements of outdoor applications, is completely sealed and meets specifications for wet locations. iW Cast 14 Powercore is available with either a narrow or wide beam angle. The attached, two-point mounting plate simplifies installation and minimizes required tools. The over-molded, end-to-end locking connectors, capable of making 180° turns, make iW Cast 14 Powercore extremely versatile and easily adaptable for even the most challenging mounting environments.

iW Cast 14 Powercore incorporates patent-pending Powercore® digital power processing technology to drive LED systems, integrating power and data management directly into the fixture and eliminating the need for an external power supply. Powercore surpasses traditional power supply technology by streamlining multiple conversion and regulation stages into a single, flexible, microprocessor-controlled power stage that controls power output to LED systems directly from line voltage and significantly increases overall system efficiency. Built-in active power factor correction (PFC) yields higher system efficiencies and minimizes stress on building wiring making the installation and system more cost effective.

iW Cast 14 Powercore receives data via Color Kinetics iW Data Enabler—a data formatting device specifically designed for use with Color Kinetics IntelliWhite Powercore based fixtures and Color Kinetics line of iW controllers. Each iW Data Enabler will support up to 36 (110VAC) or 61 (240VAC) iW Cast 14 Powercore fixtures, using a 50-foot, field-cutable leader cable. The Data Enabler supports a slightly greater or fewer number of fixtures depending on customized installation parameters, including line voltage, leader and jumper cable lengths. One-foot (30 cm) and five-foot (152 cm) jumper cables are available for installations that require spacing between fixtures.

iW CAST 14 SPECIFICATIONS

TEMPERATURE RANGE	3000K to 6500K
SOURCE	High intensity, power LEDs
BEAM ANGLE	18°
HOUSING	Black or white powder coated, die cast aluminum 13.5" x 2.7" x 2.7" (34.3 cm) x (6.9 cm) x (6.9 cm)
LENS	Polycarbonate with UV and scratch resistant silicone hard coat
CONNECTORS	Over-molded, integral male/female connectors
LISTINGS	UL/cUL, CE

COMMUNICATION SPECIFICATIONS

DATA INTERFACE	Color Kinetics iW Data Enabler
CONTROL	Color Kinetics line of iW Controllers including iW Scene Controller

ELECTRICAL SPECIFICATIONS

POWER REQUIREMENT	100-240VAC, 50-60 Hz
POWER CONSUMPTION	30W at full output
POWER FACTOR	0.95 or greater at 120VAC

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE RANGE	-40°F to 122°F (-40°C to 50°C) operating temperature -4°F to 122°F (-20°C to 50°C) starting temperature
PROTECTION RATING	IP66

LED SOURCE LIFE

In traditional lamp sources, lifetime is defined as the point at which 50% of the lamps fail. This is also termed Mean Time Between Failure [MTBF]. LEDs are semiconductor devices and have a much longer MTBF than conventional sources. However, MTBF is not the only consideration in determining useful life. Color Kinetics uses the concept of useful light output for rating source lifetimes. Like traditional sources, LED output degrades over time (lumen depreciation) and this is the metric for SSL lifetime.

LED lumen depreciation is affected by numerous environmental conditions such as ambient temperature, humidity, and ventilation. Lumen depreciation is also affected by means of control, thermal management, current levels, and a host of other electrical design considerations. Color Kinetics systems are expertly engineered to optimize LED life when used under normal operating conditions. Lumen depreciation information is based on LED manufacturers' source life data as well as other third party testing. Low temperatures and controlled effects have a beneficial effect on lumen depreciation. Overall system lifetime could vary substantially based on usage and the environment in which the system is installed.

Temperature and effects will affect lifetime. Color Kinetics rates product lifetime using lumen depreciation to 70% of original light output. When the fixture is running on warm or cool, at room temperature, the LED lifetime is in the range 50,000 – 70,000 hours. This is LED manufacturers' test data. High output is defined as any LED device that is 1/2 watt or above. For more detailed information on source life, please see www.colorkinetics.com/lifetime.

CHROMACORE™
BY COLOR KINETICS

POWERCORE™
BY COLOR KINETICS

OPTIBIN™
BY COLOR KINETICS



DRY



DAMP



WET



ITEM# 501-000002-00 (White)
501-000002-01 (Black)
501-000003-00 (White, Conduit)
501-000003-01 (Black, Conduit)

This product is protected by one or more of the following patents: U.S. Patent Nos. 6,016,038, 6,150,774 and other patents listed at <http://colorkinetics.com/patents/>. Other patents pending.

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BRO144 Rev 04

Specifications subject to change without notice. Refer to www.colorkinetics.com for the most recent data sheet versions.

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PHOTOMETRIC PERFORMANCE

Photometric data is based on test results from an independent testing lab.

SOURCE SPECIFICATIONS

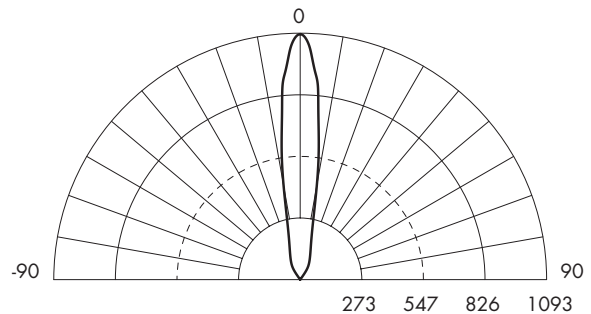
Optics:	Metalized polycarbonate reflectors
Lens:	UV resistant soft focus polycarbonate lens
Source:	18 LEDs (12 warm white, 6 cool white)
Beam Angle:	18° (at 50% of peak illuminance)
Distribution:	Symmetric direct illumination
CCT:	Adjustable 3,000–6,500K
CRI:	82 All, 74 Warm, 87 Cool

ILLUMINANCE DISTRIBUTION

1.4 15.1	4.4 47.4	7.6 81.8	6.5 70.0	3.0 32.3	0.9 9.7	1.0'/0.3m
1.8 19.4	6.5 70.0	12.3 132.4	11.0 118.4	5.3 57.0	1.8 19.4	2.0'/0.6m
1.7 18.3	6.2 66.7	13.2 142.1	13.2 142.1	6.4 68.9	2.0 21.5	3.0'/1.0m
1.4 15.1	3.8 40.9	8.8 94.7	10.6 114.1	5.6 60.3	1.7 18.3	4.0'/1.2m
1.1 11.8	2.1 22.6	4.3 46.3	5.3 57.0	3.2 34.4	1.3 14.0	5.0'/1.5m
0.9 9.7	1.3 14.0	2.0 21.5	2.3 24.8	1.7 18.3	1.0 10.8	6.0'/2.0m
3.0'/1.0m	0'/0m	3.0'/1.0m				

Units: Footcandles (top)/Lux (bottom)
 Location: Ceiling mount. 2'/0.6m from wall with light at a 60° angle off horizontal.
 Measured all on, reflectance model: 80 ceiling, 50 wall, 20 floor

CANDLE POWER DISTRIBUTION



Measured on: All
 Beam center: 1093 cd
 Thin dashed lined: Indicates 50% of peak

LIGHT OUTPUT

	TOTAL OUTPUT (lumens)	POWER (Watts)	EFFICACY (lm/W)
ALL	208	37.3	5.6
WARM	135	28.5	4.7
COOL	80	19.8	4.0

Note: Efficacy figures are for a complete tested fixture not simply a lamp source.

ILLUMINANCE

	3' 1m	6' 2m	9' 3m	15' 5m
ALL	110.0 1184.0	28.9 311.1	13.1 141.0	4.8 51.7

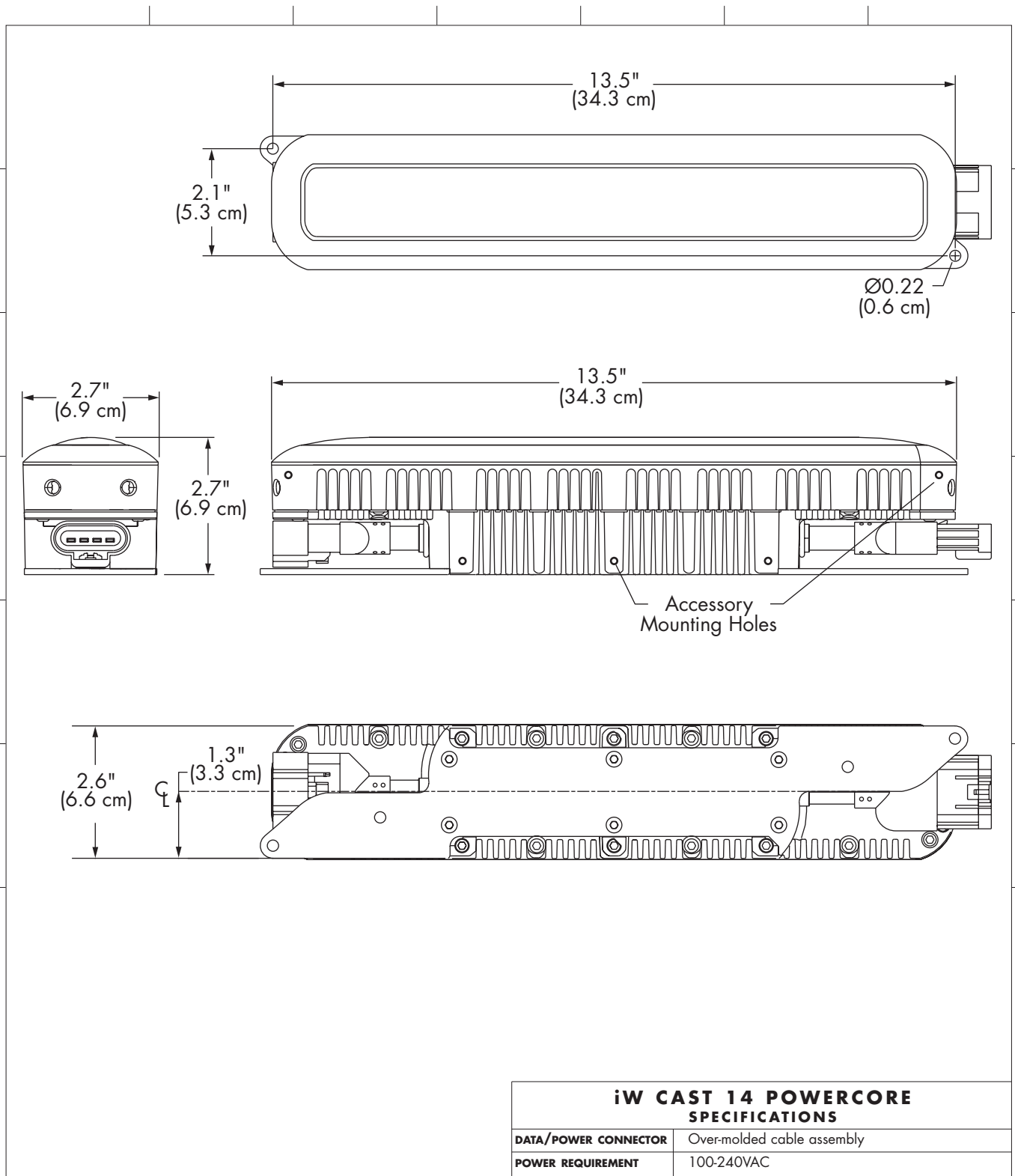
Measured in Footcandles (top)/Lux (bottom) on axis.
 Measured on all, reflectance 0.

CRI

It is common practice in the lighting industry to use color rendering index (CRI) to compare the properties of various light sources. There are known deficiencies and limitations associated with CRI and as a result, it is not always an accurate indicator of good object color appearance. This is especially true for LED-based sources. Until a better method for measuring color rendering in LEDs is accepted, Color Kinetics measures CRI in accordance with the current CIE 13.3-1995 standard using the Ra calculation. The reference illuminants employed are the Planckian locus below 5000K and CIE Daylight reference above 5000K. All measurements for Color Kinetics products are performed by third party laboratories using NIST-traceable instruments.

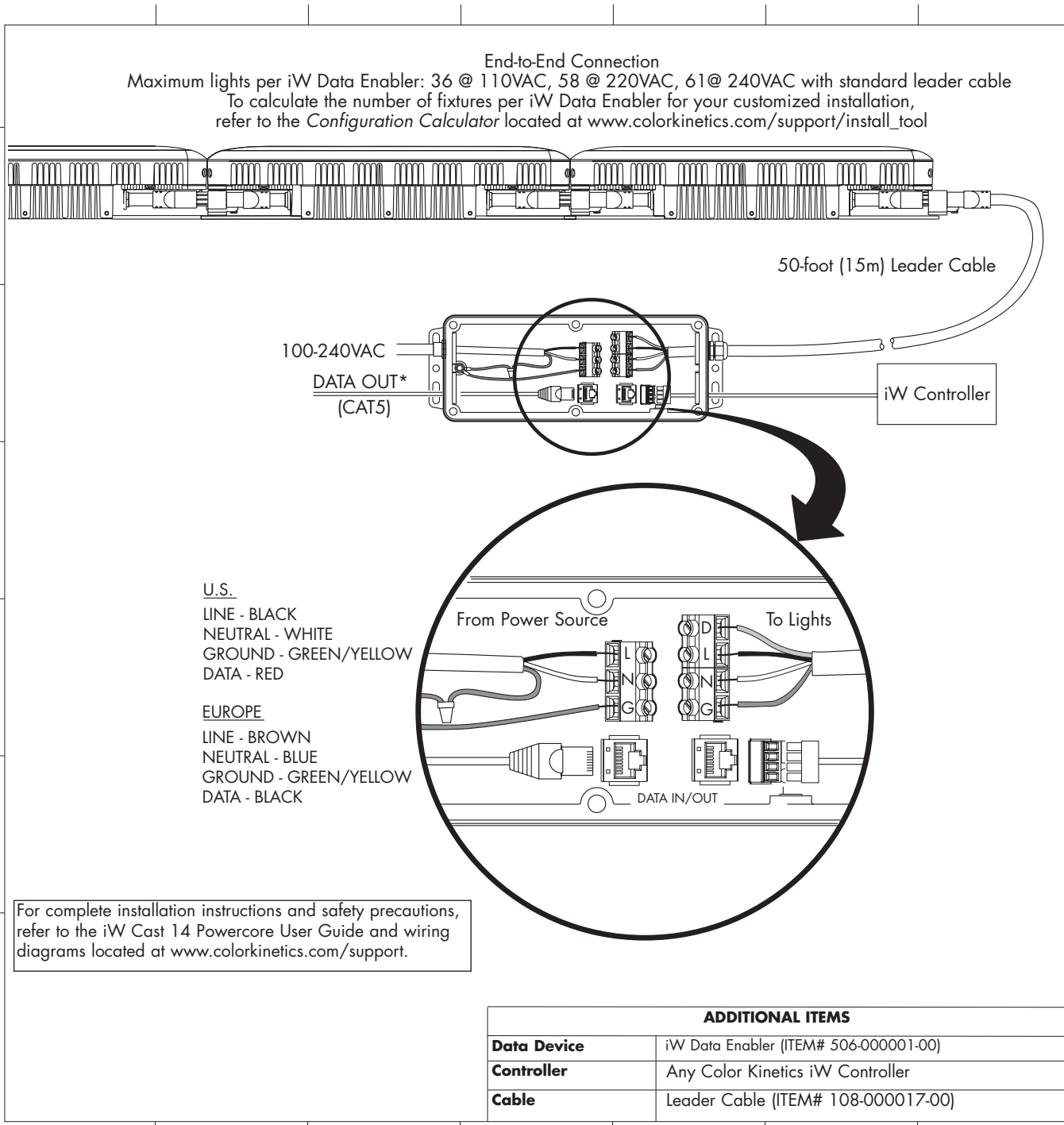
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PHYSICAL DIMENSIONS



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FUNCTIONAL FLOW DIAGRAM



OPTIBIN®

There are inherent variations in the fabrication processes of all semiconductor materials. For LEDs, this variance results in differences in the color and intensity of light output as well as electrical characteristics. Due to these differences, LED manufacturers sort production into "bins," but insuring the availability of a single bin is very difficult. To minimize this issue and achieve optimal color consistency in its products, Color Kinetics has developed and uses a proprietary technology called Optibin. Optibin is an advanced production binning optimization process that minimizes the effects of LED variance for the best possible output uniformity in the final product. Color Kinetics Optibin technology gives the most consistent control of color and intensity from product to product.