ETC®

ColorSource® CE Linear

ColorSource Series

CE   230/240V

GENERAL INFORMATION

ColorSource Linear combines the bright, bold output of the ColorSource family with a sleek linear design to create a versatile and affordable batten. Whether being used to create a stunning wash of light on your stage or to light a wall, the ColorSource Linear uses ETC's unique RGB-L colour system to provide beautiful LED lighting.

APPLICATIONS
- House of worship
- Universities and schools
- Assembly halls
- Retail
- Exhibition and conference centres
- Meeting rooms
- Clubs
- Cafetoriums

PRODUCT FEATURES
- Available in three lengths
  - Linear 1 (0.5m) - one cell of control
  - Linear 2 (1m) - two cells of control
  - Linear 4 (2m) - four cells of control
- ETC's RGB-L chipset (Red, Green, Blue and Lime)
  - Available in Original or Deep Blue arrays
- Homogenised optics
- Simple user interface with seven-segment display
- PowerCON in and thru power connections
- DMX in and thru (5-pin XLR or RJ45 connectors)
- RDM or local configuration
- LED droop compensation for consistent output
- Optically calibrated
- Tour-ready, aluminium housing

ORDERING INFORMATION

ColorSource CE Linear

PART NO.	DESCRIPTION
7414A1200	ColorSource Linear 1, XLR, Black
7414A1210	ColorSource Linear 1, RJ45, Black
7414A1240	ColorSource Linear 1 Deep Blue, XLR, Black
7414A1230	ColorSource Linear 1 Deep Blue. RJ45, Black
7414A1201	ColorSource Linear 2, XLR, Black
7414A1211	ColorSource Linear 2, RJ45, Black
7414A1241	ColorSource Linear 2 Deep Blue, XLR, Black
7414A1231	ColorSource Linear 2 Deep Blue, RJ45, Black
7414A1202	ColorSource Linear 4, XLR, Black
7414A1212	ColorSource Linear 4, RJ45, Black
7414A1242	ColorSource Linear 4 Deep Blue, XLR, Black
7414A1232	ColorSource Linear 4 Deep Blue, RJ45, Black

Colour Options: Please use colour code suffix -1 for white or -5 for silver grey

Notes: ColorSource CE Linear luminaires ship with a pair of trunnions and a 1.8m PowerCON to bare ends power cable.

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SPECIFICATIONS

GENERAL
- RGB-L chipset colour-mixing wash luminaire with eight emmitters
- IP20-rated for dry location indoor use
- Power- and DMX-in/thru connections for simple setup
- Seven-segment, three-button interface
- 12 onboard, customisable presets and five sequences

PHYSICAL
- Rugged, die-cast, aluminium housing
- Two secondary lens slots
- Available in black, white or silver grey
  - Custom colours available upon request (contact ETC)
- Trunnions included

ELECTRICAL
- 100VAC to 240VAC 50/60Hz universal power input
- PowerCON in and thru power connections
- Up to 10 cells (15A max) may be linked via power thru connector
- Up to 10 cells total per circuit when used with ETC Sensor or Unison 16A relay module or Unison® EchoDIN Relay.
  - Consult breaker trip curves when used with other equipemnt
- Requires power from a non-dimmable source
- Inrush (Linear 1/Linear 2/Linear 4):
  - 230V: 49A/85.6A/153A (First half-cycle)
- CE compliant

LED*
- 20,000-hour LED life (at 70% intensity)
- 40 Luxeon® Z LED emitters (five per optic)
- *See additional LED notes and photometrics on page 3

COLOUR
- Exclusive RGB-L Colour array
  - Also available in Deep Blue array
- Unparrallelled brightness and color range
- Droop compensation maintains color accuracy during use
- Optically calibrated to ensure consistency across fixture

OPTICAL
- Homoginised optics for a consistent, smooth beam
- Primary field angle of 24.9° and beam angle of 14.5°
- Secondary lenses available for multiple beam-spread options. Refer to accessories chart (Page 6) for lenses available

CONTROL
- DMX512 in and thru via five-pin XLR or RJ45 connectors (End-of-line termination required)
- RGB, IRGBS, Direct and single channel control (See DMX control table for additional information)
- 15-bit virtual dimming engine provides smooth, high-quality theatrical fades
- RDM support for address and setting changes
- Local control of presets (12) and sequences (5)

THERMAL
- Luminiare is designed for continuous operation up to 40°C ambient temperature and requires free flow of air around fixture housingAmbient operating temperature of 0° to 40°C
- Active electronic thermal management using variable-speed fan

ADDITIONAL ORDERING INFORMATION

Power cables Power Thru Jumpers
Power thru jumpers connect to luminaire's output (thru) connector to provide power to a successive luminaire in-line

PART NO.	DESCRIPTION
7410B7013	1.8m PowerCON to bare ends power input cable (Replacement)
7410K1101	1m PowerCON to bare ends power thru cable 3x1mm2
7410K1102	1m PowerCON to PowerCON power thru cable 3x1mm2
7410K1103	2m PowerCON to PowerCON power thru cable 3x1mm2
7410K1104	5m PowerCON to PowerCON power thru cable 3x1mm2
7410K1105	1m twin jumper cable with both PowerCON to PowerCON and DMX (XLR5) control cable
7410K1106	2m twin jumper cable with both PowerCON to PowerCON and DMX (XLR5) control cable
7410K1107	5m twin jumper cable with both PowerCON to PowerCON and DMX (XLR5) control cable

Luminaire Accessories

PART NO.	DESCRIPTION
7414K1017	ColorSource Linear 1 Yoke Kit, Black
7414K1018	ColorSource Linear 1 Double-Yoke Kit, Black
7414K1020	ColorSource Linear Barndoor (2x 0.5m sections), Black
7414K1019	ColorSource Linear Louvre (0.5m section), Black
7414K1023	ColorSource Linear Diffusion Spacer (Replacement) (Shipping with Linear 2 and Linear 4 fixtures)

PHOTOMETRICS

COLORSOURCE LINEAR PHOTOMETRY NOTE:

The Photometry information shown below is for the Linear 1 (0.5m) fixture. Each longer Linear fixture is made up of multiple half meter sections.

When figuring photometry for the Linear 2 multiply the information shown below by two. When figuring photometry for the Linear 4, multiply the information below by four.

Due to the physical properties of linear products, this is the best method for determining photometry for longer fixtures.

For a detailed explanation of linear photometry, please visit: http://www.etcconnect.com/WorkArea/DownloadAsset.aspx?id=10737489380

For .ies files or lensing information, use the ColorSource PAR files and assume you have multiple fixtures (for the Linear 2 and the Linear 4) hung 0.5m on centre.

ColorSource Linear 1

Mode	Degree	Candela	Field Lumens	Beam Lumens	Power Consumption	Lumens Per Watt
Full / RGB	27.6	35,621	2,481	1,382	93.2	26.6
Full / Direct	27.6	37,616	2,611	1,439	104	25.1
3200K / RGB	27.6	33,601	2,363	1,330	78.9	29.9
5600K / RGB	27.6	35,269	2,461	1,387	93.9	26.2
Red / RGB	27.6	8,190	568	305	27.8	20.4
Green / RGB	27.6	11,073	699	366	30.4	23.0
Blue / RGB	27.6	3,369	225	121	32.9	32.9

Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76

Candela Plot

Iso-Illuminance Diagram
(Flat Surface Distribution)
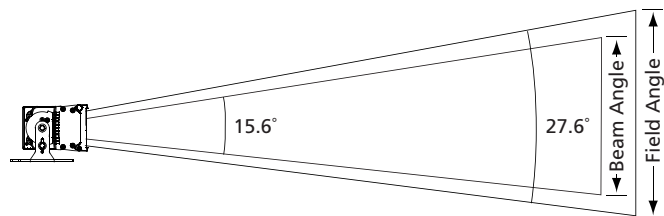
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	1.5m	2.2m	3.0m	3.7m
Illuminance (fc)	356	158	89	57
Illuminance (lux)	3,834	1,704	959	613

To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared
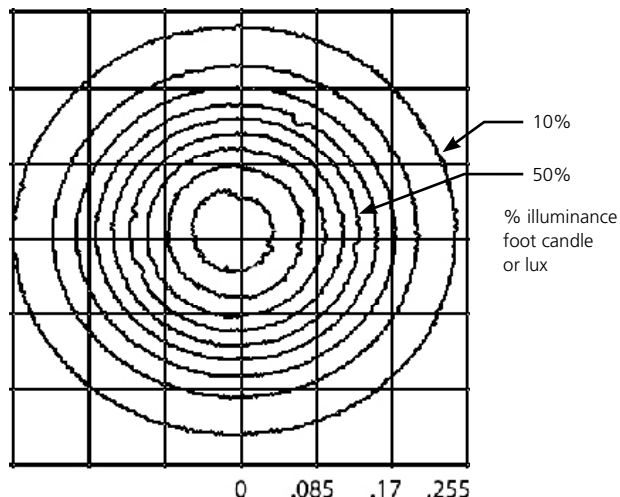
For field diameter at any distance, multiply distance by 0.491
For beam diameter at any distance, multiply by 0.274
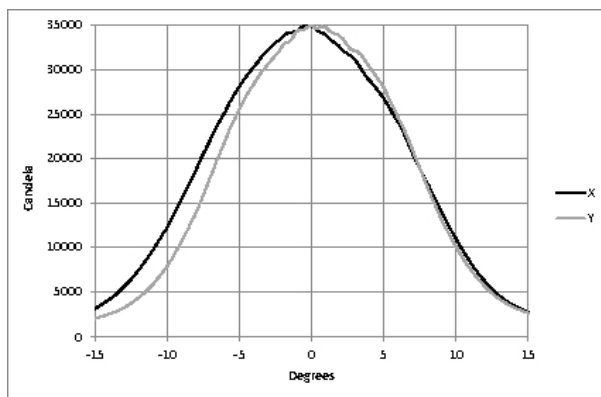
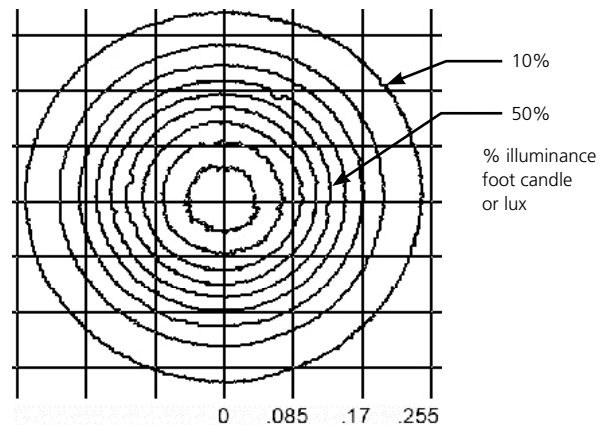## PHOTOMETRICS

ColorSource Linear 1 Deep Blue

Mode	Degree	Candela	Field Lumens	Beam Lumens	Power Consumption	Lumens Per Watt
Full / RGB	27.2	31,917	2,141	1,173	71.8	29.8
Full / Direct	27.2	36,097	2,429	1.329	101.7	23.9
3200K / RGB	27.2	35,356	2,366	1,296	77.5	30.5
5600K / RGB	27.2	31,760	2,126	1,165	71.6	29.7
Red / RGB	27.2	8,221	566	308	27.5	27.5
Green / RGB	27.2	11,022	675	354	30.3	30.3
Blue / RGB	27.2	27	81	44	31.2	31.2

Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76

Candela Plot

15.3°   27.2°   Beam Angle   Field Angle
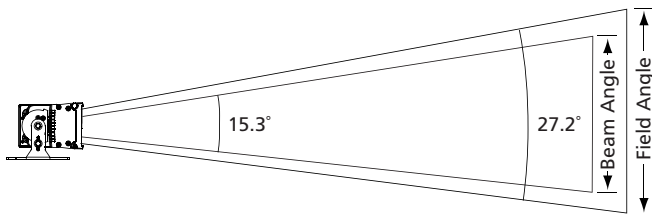
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	1.5m	2.2m	2.9m	3.7m
Illuminance (fc)	319	142	80	51
Illuminance (lux)	3,436	1,527	859	550

To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.484
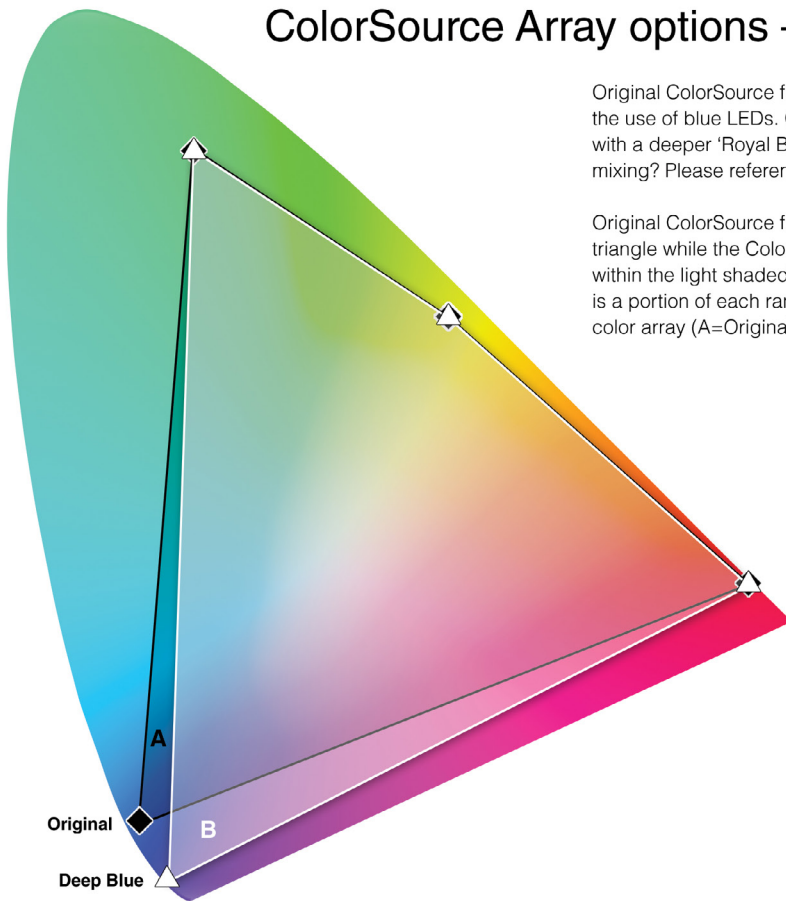For beam diameter at any distance, multiply by 0.269

Iso-Illuminance Diagram
(Flat Surface Distribution)

10%

50%

% illuminance foot candle or lux

0   .085   .17   .255
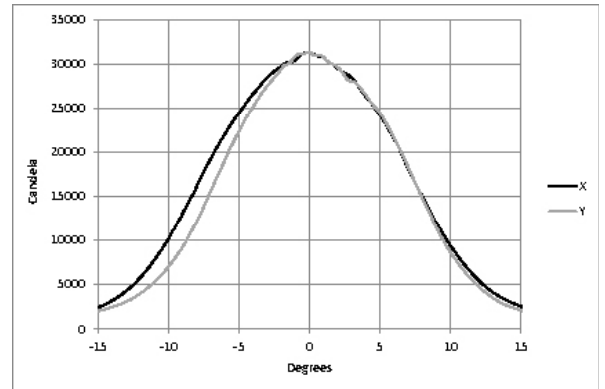
COLORSOURCE LINEAR VS COLORSOURCE LINEAR DEEP BLUE

ColorSource Array options – Original vs. Deep Blue

Original ColorSource fixtures use an RGB-L array where the 'B' represents the use of blue LEDs. ColorSource Deep Blue replaces those blue LEDs with a deeper 'Royal Blue' (indigo) LED. How does this impact your color mixing? Please reference the color chart.

Original ColorSource fixtures can reach any color within the dark shaded triangle while the ColorSource Deep Blue fixtures can reach any color within the light shaded triangle. While much of these areas overlap, there is a portion of each range that can only be reached by the respective color array (A=Original, B=Deep Blue).
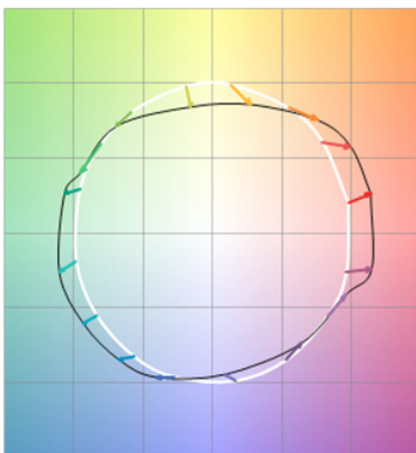
Common gels found in original ColorSource
Roscolux 095, 075, 076
Lee 363, 119, 721, 722, 132, 141, 183, 172, 325

Common gels found in ColorSource Deep Blue
Roscolux 384, 385, 382, 059, 358, 347, 049, 349, 046, 124, 027, 120
Lee 126, 049, 798, 707, 181, 071, 120, 716

TM30

Rf - 71
Rg - 105

ADDITIONAL ORDERING INFORMATION

Secondary Lens Options

PART NO.	DESCRIPTION: The following lenses are cut for ColorSource luminaires and create round, linear or oblong field patterns as described below. These lenses are not sized for use in Selador® Classic fixtures.	
HORIZONTAL		
7414K1001	Very Narrow Linear Horizontal lens	Linear lenses may be combined to create desired field size
7414K1003	Narrow Linear Horizontal lens	
7414K1005	Medium Linear Horizontal lens	
7414K1007	Wide Linear Horizontal lens	
7414K1009	Extra Wide Linear Horizontallens	
VERTICAL		
7414K1002	Very Narrow Linear Vertical lens	
7414K1004	Narrow Linear Vertical lens	
7414K1006	Medium Linear Vertical lens	
7414K1008	Wide Linear Vertical lens	
7414K1010	Extra Wide Linear Vertical lens	
ROUND		
7414K1011	Very Narrow Round Lens	
7414K1012	Narrow Round Lens	
7414K1013	Medium Round Lens	
7414K1014	Wide Round Lens	
7414K1015	Extra Wide Round Lens	

Typical Lens Field Profiles

Narrow Linear   Round   Oblong
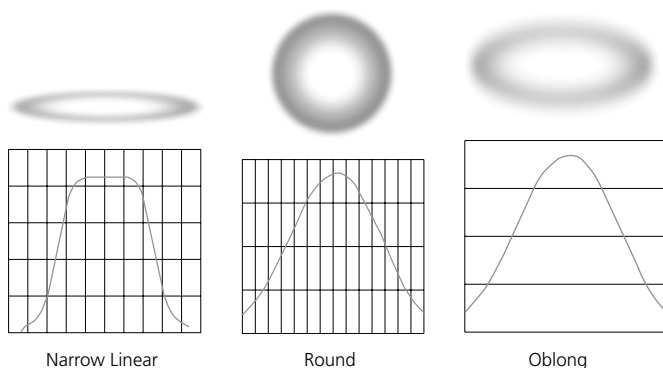
Power Consumption at Full Intensity

MODEL	VOLTAGE (V)	CURRENT (A)	WATTS	PWR F
CS Linear 1	230	0.5	112	0.98
CS Linear 2	230	0.93	210	0.978
CS Linear 4	230	1.85	415	0.976

NOTES ABOUT LED LUMINAIRES

All LED sources experience some lessening of light output and some colour shift over time. LED output will vary with thermal conditions. Thermal conditions can be affected by ambient temperatures and orientation. Based on the LED manufacturer's B50 L70 specification, a ColorSource luminaire will achieve ~70% of its initial output after 20,000 hours of typical usage. In individual situations, LEDs will be used for different durations and at different levels. This can eventually lead to minor alterations in colour performance, necessitating slight adjustments to presets, cues or programs.

CONTROL

DMX Input Channel Profiles

DMX Profile	DMX Channels	Channel Assignments	Notes
5ch-Default	5	1-INT 2-Red 3-Green 4-Blue 5-Strobe	
RGB	3	1-Red 2-Green 3-Blue	
1ch	1	1-INT	This mode controls the intensity of Preset 1
Direct	6	1-INT 2-Red 3-Green 4-Blue/Indigo* 5-Lime 6-Strobe	*Original ColorSource Linear fixture uses blue in channel 4; Deep Blue ColorSource Linear fixture uses Indigo in channel 4.

PHYSICAL

ColorSource Linear Dimensions

MODEL	HEIGHT	WIDTH	DEPTH
	mm	mm	mm
Linear 1	109	499	153
Linear 2	109	1000	153
Linear 4	109	1991	153

*Does not include mounting hardware

ColorSource Linear Weights

MODEL	WEIGHT*	SHIPPING WEIGHT
	kgs	kgs
Linear 1	2.90	3.58
Linear 2	9.12	10.66
Linear 4	TBD	TBD

*Does not include mounting hardware

COLORSOURCE LINEAR 1
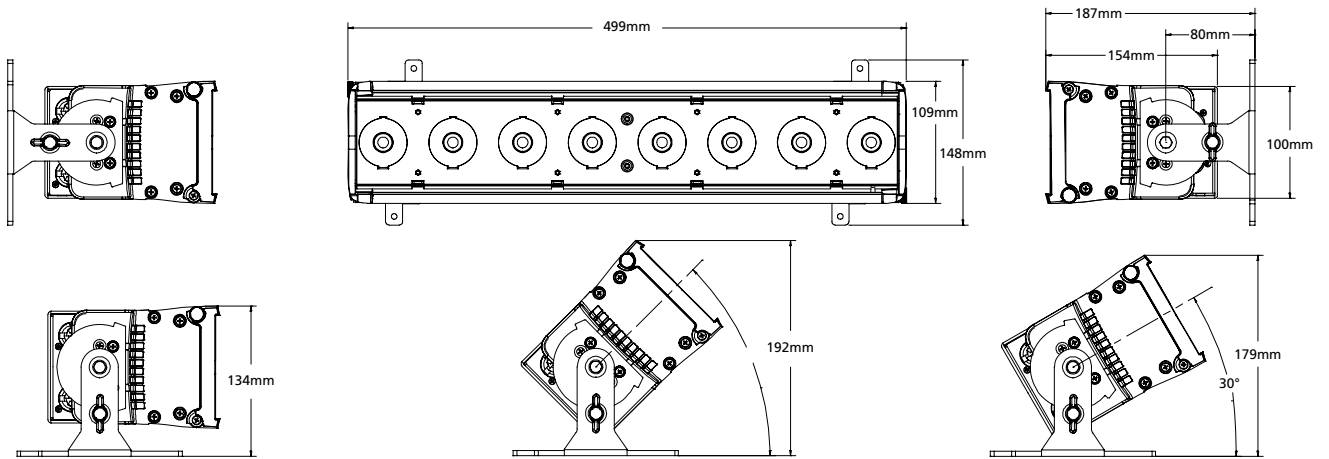
COLORSOURCE LINEAR 2

PHYSICAL

COLORSOURCE LINEAR 4

1895 mm.

1991 mm.

147 mm.

187 mm.

109 mm.

100 mm.

46 mm.

153 mm.