ETC®

D60X

Desire® Series

100V 115/120V 230/240V

GENERAL INFORMATION

ETC's Desire Series D60X brings the amazing control of the x7 Color System™ and the long throw of a D60 to a portable, IP66 rated fixture. This luminaire is ready for mounting inside or outside-wherever you need it. The Selador® x7 Color System produces the widest range of spectrally-balanced saturated and tinted color choices available. The D60X offers a rugged die-cast enclosure, noiseless fan-free operation and multiple lens options that can be changed on site.

D60X LED ARRAY OPTIONS

D60X luminaires are based on the x7 Color System that uses seven different LED colors to achieve true, usable broad spectrum color. The D60X luminaire is available with any one of the following x7 color arrays to best suit the intended application:

- D60X Vivid™ – the x7 Color System array balanced for best all-around use as a color-changing wash luminaire
- D60X Lustr+™ – optimized with six colors plus high-intensity white LEDs to create an ideal front-light wash fixture. Full range color, with an emphasis on lighter colors and white
- D60X Studio HD™ – Studio HD combines warm white and cool white LEDs for variable color temperature mixing. Added to this are five carefully chosen LED colors from the Selador x7 Color System to fill in the white LED spectral gaps. D60X Studio HD provides the richest variable white light possible in an LED luminaire

Also available in the following static white arrays:

- D60X Studio Daylight – Studio Daylight contains sixty 5600K LEDs for high-intensity, non-variable cool-white output
- D60X Studio Tungsten – Studio Tungsten contains sixty 3000K LEDs for high-intensity, non-variable warm-white output

ORDERING INFORMATION

Selador D60X

MODEL	DESCRIPTION
SELD60X-V	D60X Vivid wash luminaire
SELD60X-L	D60X Lustr+ front-light wash luminaire
SELD60X-H	D60X Studio HD wash luminaire
SELD60X-D	D60X Studio Daylight wash luminaire
SELD60X-T	D60X Studio Tungsten wash luminaire

Note: D60X luminaires ship with hanging yoke and attached leads equipped with watertight Molex power connectors and watertight DMX connectors.

C-clamp, lenses or separate power lead are not included. Order DPA-M Bare-end to Molex adaptors separately for XT luminaires if required

SPECIFICATIONS

GENERAL

- Easy setup via any RDM device, such as ETC Gateways and Gadget
- 60 LED variable color-mixing light wash luminaire (color-mixing luminaires)
- 60 LED white-light wash luminaire (static white luminaires)
- ETL listed to UL1573
- IP66-rated for exterior wet-location use

PHYSICAL

- Rugged die-cast, all-metal housing
- Accessory ring for installation of secondary lenses
- Available in black (standard), white or silver (optional) or custom colors (contact factory)
- Hanging yoke standard.
- Cable diameter: power 0.36"/ data 0.34"

ELECTRICAL

- 100VAC to 240VAC 50/60Hz universal power input
- Waterproof, 39" outdoor-rated power lead
- Up to 10 fixtures (15A max) may be fed on the same circuit
- Requires power from a non-dimmable source
- Inrush
  - 120V: 46A (First half-cycle)
  - 240V: 77A (First half-cycle)

LED*

- 50,000-hour LED life (50,000 hours to 70% intensity)
- 60 LUXEON® Rebel LED emitters
- Studio Daylight and Studio Tungsten use Rebel ES white light emitters for higher output

*See additional LED notes on page three

COLOR

- Exclusive x7 color system seven-color LED array
- Broad spectrum color interacts seamlessly with conventional sources
- Beautifully illuminates skin tones and other objects for a natural appearance and high color rendering
- Exclusive red-shift option emulates tungsten dimming performance (not available on static white luminaires)
- Studio HD array uses warm and cool white light emitters with additional deep-color emitters to allow variable color temperature from 2700K-6500K
- Studio Tungsten and Studio Daylight provide good color rendering at very high brightness

OPTICAL

- Primary field angle of 17° and beam angle of 8°
- Secondary lenses available for multiple beam spread options
- Lenses must be ordered separately
- Refer to accessories chart for lenses available

CONTROL

- DMX512 in and thru via watertight five-pin XLR connectors on 39" leads
- See DMX Input Channel Profiles for operation modes
- 15-bit virtual dimming engine provides smooth, high-quality theatrical fades and minimizes color shift during dimming
- RDM functionality for address and setting changes

SPECIFICATIONS

THERMAL

- Ambient operating temperature of -4° to 104°F (-20° to 40°C)
- Active electronic thermal management for droop-free operation
- Noiseless, fan-free convection cooling for acoustically sensitive installations
- Luminaire is designed for continuous operation up to 104°F (40°C) ambient temperature and requires free flow of air around luminaire housing

ADDITIONAL ORDERING INFORMATION

Fixtures Accessories

MODEL	DESCRIPTION
D40XTIWM	Wall-Mount Kit (black)
D40XTIWM-1	Wall-Mount Kit (white)
D40XTISPM	Single Pole Mount Kit (black)
D40XTISPM-1	Single Pole Mount Kit (white)
D40XTIDPM	Double Pole Mount Kit (black)
D40XTIDPM-1	Double Pole Mount Kit (white)
D60XTIL	Egg Crate (black)
D60XTIL-1	Egg Crate (white)
D60XTIHH	Half-Shield (black)
D60XTIHH-1	Half-Shield (white)
400CC	C-Clamp (does not ship with luminaire)
400SC	Safety Cable (32")

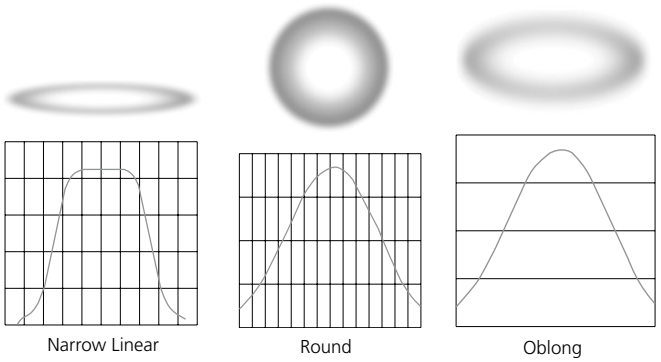
ADDITIONAL ORDERING INFORMATION

Secondary Lens Options

MODEL	DESCRIPTION: The following lenses are cut for D60X luminaires and create round, linear or oblong field patterns as described below. These lenses are not for use in Selador® Classic (Vivid™, Lustr®, Paletta®) fixtures.
Narrow Linear Field	Note: This is the same material as Selador Classic lenses. Not UV-stable, not for outdoors.
Round Field	Any one of the following round lenses may be installed permanently in the luminaires at the factory as a special order. UV-stable for outdoor use.
D60XTI-RVN	Very Narrow lens (round field)
D60XTI-RN	Narrow lens (round field)
D60XTI-RM	Medium lens (round field)
D60XTI-RW	Wide lens (round field)
D60XTI-REW	Extra Wide lens (round field)
Oblong Field	UV-stable for outdoor use
D60XTI-ON	Narrow lens (oblong field)
D60XTI-OM	Medium lens (oblong field)
D60XTI-OW	Wide lens (oblong field)

http://www.etcconnect.com/docs/docs_downloads/miscdocs/Desire_vs_PAR_EA_revB.pdf

Typical Lens Field Profiles



Power Consumption at Full Intensity (Average)

MODEL	VOLTAGE (V)	CURRENT (A)	WATTS
D60X	120 / 240	1	124

NOTES ABOUT LED LUMINAIRES

All LED sources experience some lessening of light output and color shift over time. LED output will vary with thermal conditions, which can be affected by ambient temperatures and orientation (see the D40 Ambient Temperature and Power Budgeting Guide for more details). Based on the LED manufacturer's B50 L70 specification, a Selador luminaire will achieve ~70% of its initial output after 50,000 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 color performance, necessitating slight adjustment to presets, cues or programs.

CRI AND CQS RATINGS

Desire luminaires were evaluated for CRI and CQS performance using measured output spectrum and optimized mix solutions for a best spectral match to black body sources at 3200K and 5600K.

Fixture	CRI	CQS	Color Fidelity	Duv
D60X Vivid at 3200K	87	89	89	0.000
D60X Vivid at 5600K	90	92	92	0.000
D60X Lustr+ at 3200K	86	88	88	0.000
D60X Lustr+ at 5600K	93	92	90	0.000
D60X Studio HD at 3200K	89	90	91	0.000
D60X Studio HD at 5600K	92	94	94	0.000
D60X Studio Daylight at 5600K	71	70	69	0.001
D60X Studio Tungsten at 3000K	86	86	86	0.001

All D60X Studio luminaire versions provide excellent color rendering to the eye, particularly at higher color temperature settings such as 5600K. In most cases the Duv is 0.000. A Duv rating of 0.000 indicates that the color mix used is exactly on the black body line, with no green or magenta tint.

Notes to videographers:

- All Desire luminaires use LUXEON Rebel ES emitters specified by the strictest binning standards. However, on-camera LED response varies with different cameras and settings. Daylight LEDs can appear slightly greener than other 5600K sources on camera.
- Luminaires with non-variable single-color daylight arrays such as Studio Daylight may use standard color correction filters (Rosco 3314, Rosco 3316 or similar) to achieve the desired on-camera result.
- Camera tests using your specific set up are recommended to determine the best configuration.

LENS INFORMATION

Desire diffusion angle measurements

NOMINAL									
	No Lens	Very Narrow	Narrow	Medium	Wide	Extra Wide	Narrow Oval	Medium Oval	Wide Oval
		25°	35°	45°	75°	N/A	20° x 40°	30° x 70°	35° x 80°
D60X									
LUSTR+	18	22	27	42	69	104	20 x 37	25 x 60	30 x 82
VIVID	18	22	27	42	69	104	20 x 37	25 x 60	30 x 82
FIRE	18	23	28	42	69	103	21 x 38	25 x 60	30 x 82
ICE	18	22	28	42	69	99	20 x 37	25 x 60	30 x 82
STUDIO HD	18	23	28	42	69	104	21 x 29	25 x 61	30 x 82
STUDIO D	22	25	30	43	70	105	24 x 39	28 x 62	32 x 80
STUDIO T	23	25	30	43	70	105	24 x 39	28 x 62	32 x 80

Values in black refer to old lens descriptions.

CONTROL OPTIONS

User settings on D60X luminaires allow multiple operational modes and settings for console operation via DMX protocol. Some of the setting options are:

- Multiple DMX options ranging from a simple RGB profile – which effectively controls all seven LED colors via three channels – to nine-channel direct color and intensity control
- Multiple dimming curve options
- Preset colors and sequences for stand-alone (no console required) operation
- White point selection – white light and color behavior based on a specific color temperature white light (i.e. 3200K, 5600K, etc)
- Loss of data behavior options – instant-off, hold last look for two minutes, etc.
- Output modes – three output options that offer the user a choice between maximum output and maximum consistency

See the user manual for a complete explanation of all of the control settings and options for the D60X

Quick Setups

To assist in managing the numerous control and luminaire behavior choices, five combinations of operational settings are available to quickly get started. These settings are specifically created for different applications and are easily accessible at the luminaire display. Each setting can then be modified as required to take advantage of all of the possible control features.

Setting Title	Profile	Description	Typical Features*
General	Direct	Factory default: For general purpose use including interior architectural applications.	• Standard dimming curve • Regulated output for color consistency
Stage	HSI Plus 7 Enabled	Theatrical lighting: Duplicates the color and dimming behavior of tungsten stage lighting fixtures.	• Incandescent dimming curve • Regulated output for color consistency • 3200K white point setting
XT Arch	HSI	Exterior architectural lighting: Provides a high degree of color consistency in high ambient temperature environments.	• Standard dimming curve • Protected output • 3200K white point setting
High Impact	RGB	Event lighting: Enables quickest response, simple RGB control and strobe channel for maximum effect usage.	• Quick dimming curve • Boost mode for maximum intensity • 5600K white point setting
Studio	Studio	Video/film lighting: Enables three parameter control of white light (intensity, white point and tint) via DMX from console	• Linear dimming curve • Regulated output mode for color consistency

*See user manual for complete list of features for each Quick Setup.

CONTROL OPTIONS

DMX Input Channel Profiles

DMX Profile	DMX Channels	Channel Assignments	Notes
Direct	9	1 – Red 2 – Orange (white if Lustr+) 3 – Amber 4 – Green 5 – Cyan 6 – Blue 7 – Indigo 8 – Intensity 9 – Strobe	Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The nine-channel profile will produce the highest quality color crossfades.
HSI	5	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe	High-resolution hue (two-channels), saturation and intensity control. HSI mode will produce color crossfades around the color space.
HSIC	6	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – Color Point (CCT)	High-resolution hue, saturation and intensity control as above, with the addition of a color point channel to adjust the color temperature of the luminaire in both white light and color. Color crossfade performance is the same as EHSI.
RGB	5 (Ch. 4 not used)	1 – Red 2 – Green 3 – Blue 4 – n/a 5 - Strobe	Effectively addresses all seven colors via three channels of control. RGB profile will produce medium quality color crossfades.
Studio	3	1 – Intensity 2 – Color Point (CCT) 3 – Tint	Controls luminaire as a white light unit. If no DMX (i.e. console input) is present, fixture can be adjusted for these three parameters on the U/I at the back of the unit.
Additional profile options			
Plus 7		Seven additional color control channels are available in RGB, HSI, HSIC and Studio profile settings. For example: HSI with Plus 7 enabled becomes a 14-channel profile-	
		1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – n/a 7 – Plus 7 control on/off 8 – Red 9 – Orange (white if Lustr+) 10 – Amber 11 – Green 12 – Cyan 13 – Blue 14 – Indigo	The desired color and intensity is achieved by using the HSI or RGB channels. Placing channel seven at a value over 51% gives the luminaire a 14-channel profile. Channels 8-14 represent the native colors of the luminaire and allow the operator to adjust individual color channels to fine-tune the color output.
Strobe		Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe channel value approaches 100%.	

CONTROL OPTIONS

Studio Daylight and Studio Tungsten (only)

Quick Set-Ups

Setting Title	Profile	Description	Typical Features*
Studio	Studio	Simple mode for linear intensity control	• Linear dimming curve • Regulated output for intensity stability
Single Channel	Direct	For general purpose architectural use	• Standard dimming curve • Regulated output for consistency
Stage	Direct	Matches conventional luminaire performance	• Incandescent dimming curve • Regulated output

CONTROL OPTIONS

DMX Input Channel Profiles

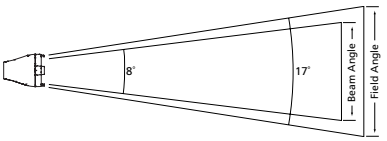
DMX Profile	DMX Channels	Channel Assignments	Notes
Studio	3	1 – Intensity 2 – Strobe 3 – N/A (only used in D60)	Control of parameters is also enabled from the luminaire's user interface. No console required.
Direct	3	1 – Intensity 2 – Strobe 3 – N/A (only used in D60)	

PHOTOMETRICS

D60X Vivid™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	17˚	170,540	3,760	1,667	31.9
Regulated	17˚	132,451	3,050	1,305	30

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

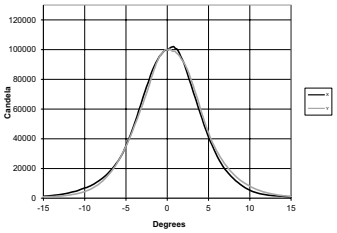


Throw Distance (d)	10.0′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	319′ 97m
Field Diameter	3.0′ .9m	4.4′ 1.4m	5.9′ 1.8m	7.4′ 2.3m	–
Illuminance (fc)	1,617	719	404	259	1
Illuminance (lux)	17,405	7,736	4,351	2,785	10.76

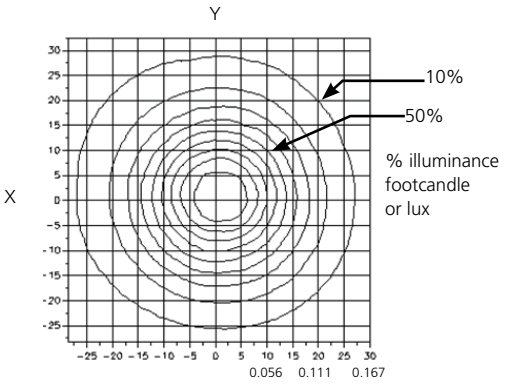
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.295
For beam diameter at any distance, multiply by 0.145

Cosine Candela Plot



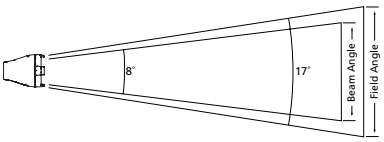
Iso-Illuminance Diagram
(Flat Surface Distribution)



D60X Lustr+™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	16°	195,012	4,317	1,931	34.9
Regulated	16˚	180,097	3,850	1,748	34.3

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

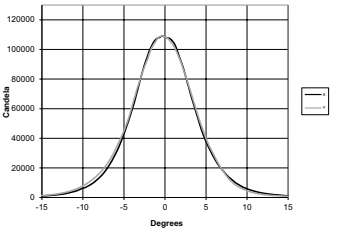


Throw Distance (d)	10′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	348′ 106m
Field Diameter	2.9′ .9m	4.3′ 1.3m	5.8′ 1.8m	7.2′ 2.2m	–
Illuminance (fc)	1,828	812	457	292	1
Illuminance (lux)	19,676	8,745	4,919	3,148	10.76

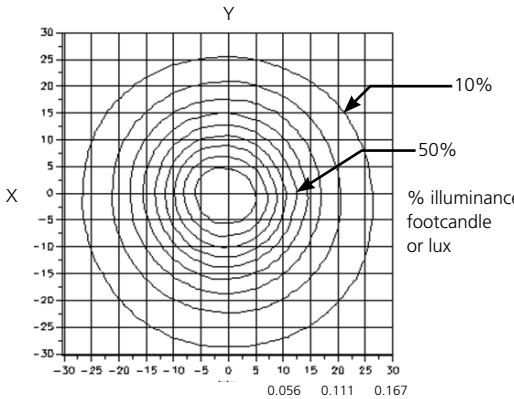
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.288
For beam diameter at any distance, multiply by 0.112

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

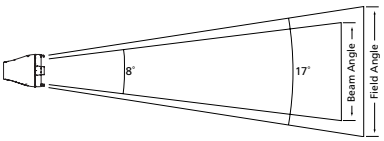


PHOTOMETRICS

D60X Studio HD

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	16˚	198,209	4,532	1,916	33.4
Regulated	16˚	185,414	4,224	1,780	33.7

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

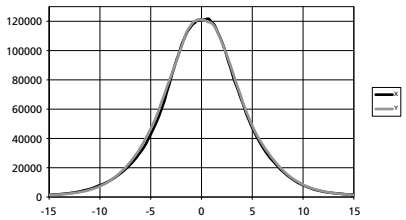


Throw Distance (d)	10.0′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	471.4′ 143.7m
Field Diameter	2.8′ 0.9m	4.2′ 1.3m	5.6′ 1.7m	7.0′ 2.1m	–
Illuminance (fc)	2,222	988	556	356	1
Iluminance (lux)	23,917	10,630	5,979	3,827	10.76

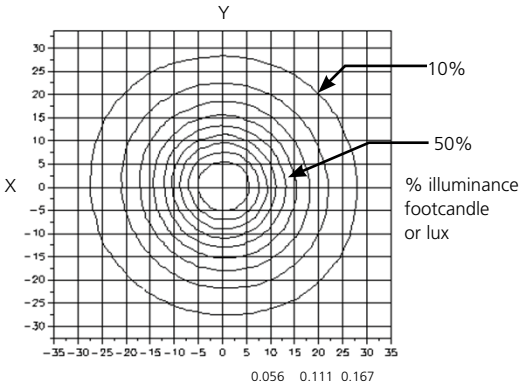
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.281
For beam diameter at any distance, multiply by 0.142

Cosine Candela Plot



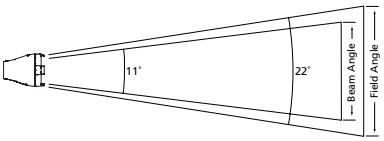
Iso-Illuminance Diagram
(Flat Surface Distribution)



D60X Studio Daylight

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	22˚	209,556	8,216	4,068	55.3
Regulated	22˚	193,045	7,610	3,860	54.8

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

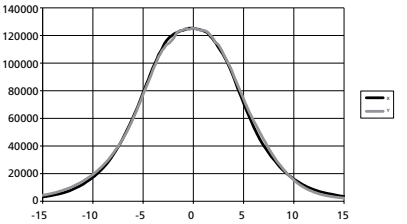


Throw Distance (d)	10′ 3.0m	15′ 4.6m	20′ 6.1m	25′ 7.6m	435.3′ 132.7m
Field Diameter	3.9′ 1.2m	5.8′ 1.8m	7.7′ 2.4m	9.7′ 2.9m	–
Illuminance (fc)	1,895	842	474	303	1
Illuminance (lux)	20,398	9,066	5,099	3,264	10.76

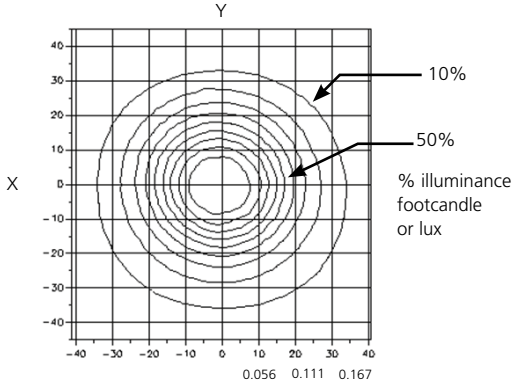
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.387
For beam diameter at any distance, multiply by 0.194

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

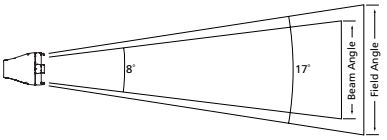


PHOTOMETRICS

D60X Studio Tungsten

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	23˚	171,089	6,482	3,001	43.2
Regulated	23˚	162,409	6,172	2,918	39.6

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



Throw Distance (d)	10′ 3.0m	15′ 4.6m	20′ 6.1m	25′ 7.6m	373.6′ 113.9m
Field Diameter	4.1′ 1.3m	6.2′ 1.9m	8.3′ 2.5m	10.4′ 3.2m	–
Illuminance (fc)	1,395	620	349	223	1
Illuminance (lux)	15,020	6,676	3,755	2,403	10.76

For field diameter at any distance, multiply distance by 0.414
For beam diameter at any distance, multiply by 0.189

Throw Distance Multiplier (TDM)

To determine the distance from the center of the beam (Origin) to a certain illuminance level at a particular distance, multiply the desired throw distance by the TDM desired on the Iso-Illuminance diagram.

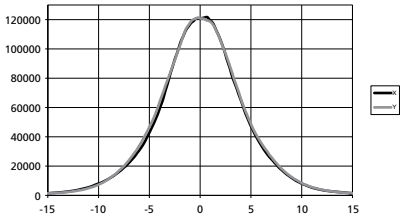
Throw Distance (TD) x Throw Distance Multiplier (TDM) = Distance from the Origin (DfO) (distance from the center of the beam)

Example: 25 feet (TD) x 0.047 (TDM) = 1.175 feet from center of beam (DfO)

For illumination with any lamp, multiply the candlepower of a beam spread by the multiplying factor (mf) shown for that lamp.

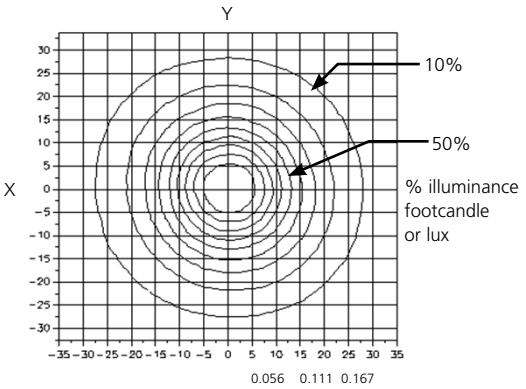
To determine illumination in footcandles or lux at any throw distance, divide candlepower by distance squared.

Cosine Candela Plot



Iso-Illuminance Diagram

(Flat Surface Distribution)



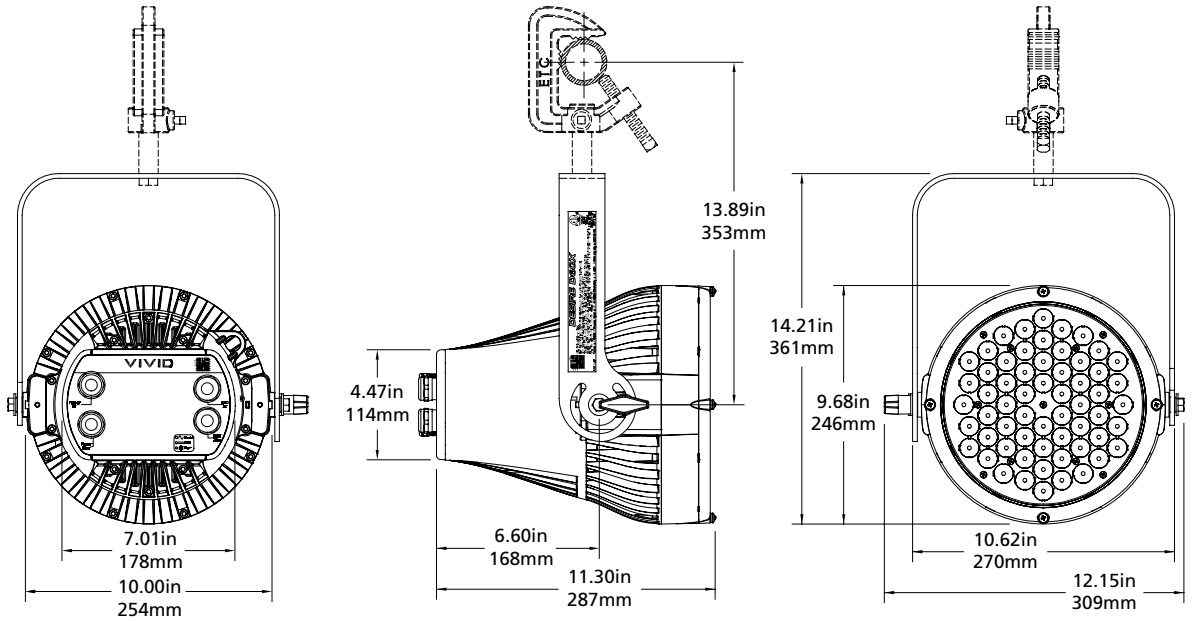
PHYSICAL

Selador D60X Weights and Dimensions

Total weight depends on how the individual luminaire is configured.

WEIGHT*		SHIPPING WEIGHT	
lbs	kgs	lbs	kgs
23	10.43	24.7	11.2

* Does not include mounting hardware



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