

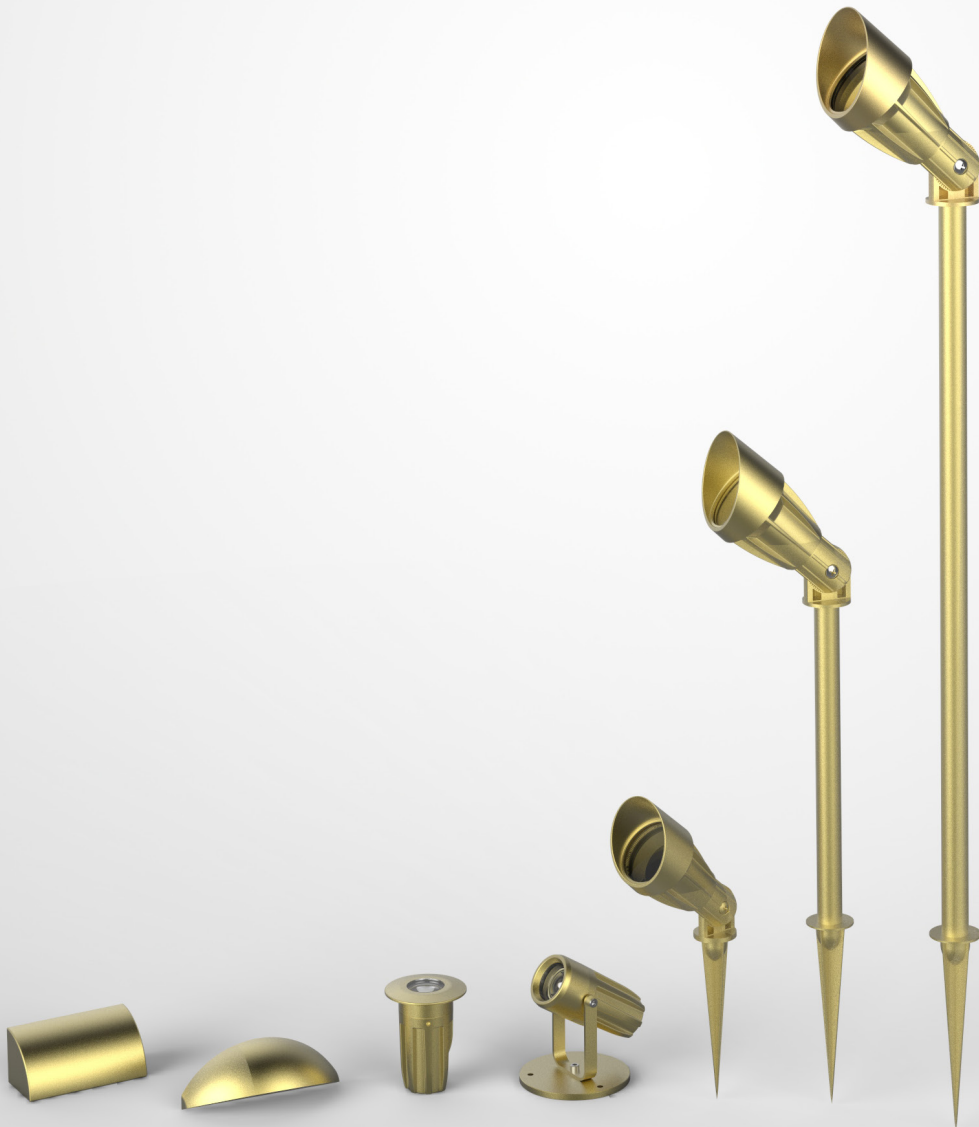
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# Phoenix

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*Cast Brass Lighting*

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June 2014

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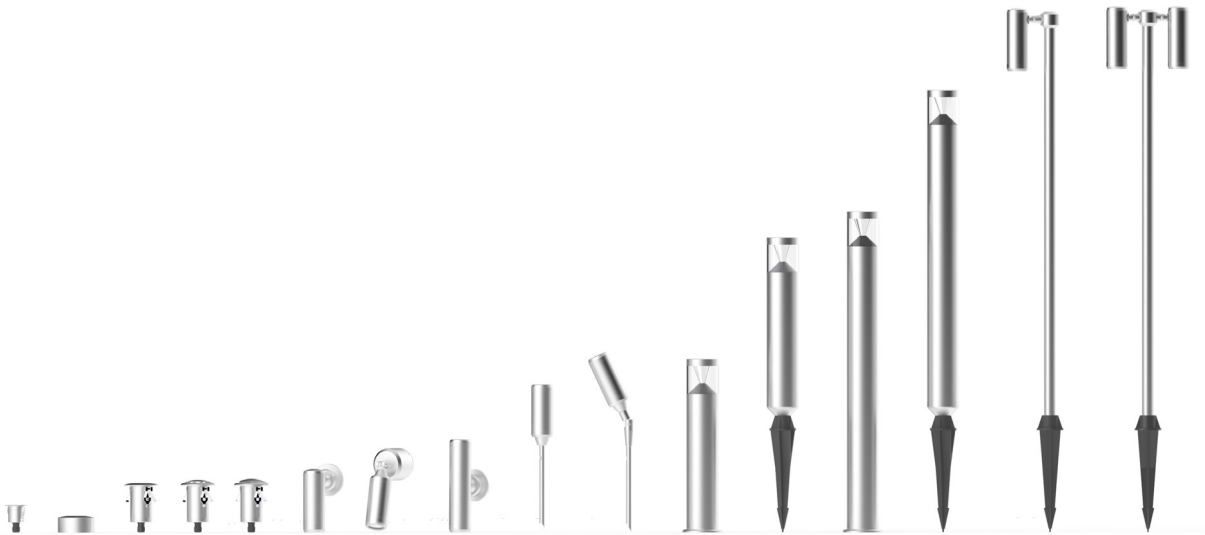
The Phoenix family of cast brass luminaires is designed with the ultimate in reliability and structural stability. Brass, an alloy of copper and zinc, is an ideal material for the creation of long-lasting objects and is used in many different harsh environments.

Available in a range of surface finishes to increase design versatility, the natural appearance of the raw brass will age over time, developing a light green then darker green patina over the course of several years.

The Phoenix range is continually refined with new models and features in development.

## Lumena System

The Lumena System is a comprehensive range of CNC-machined Aluminium light fittings that are assembled on-demand in Sydney, Australia. See the website for more information or call to request a Lumena brochure.



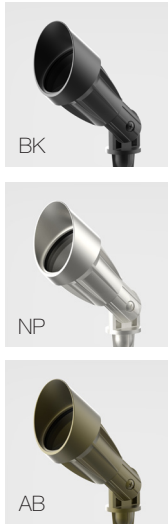
## Assembled In Australia

The Lumena, Phoenix and Artisan product families are assembled in Sydney, Australia upon receipt of an order. Our rapid manufacturing facilities allow us to complete most orders within 2-3 days.

## Aqualux Lighting

Lighting is fundamental to how we perceive the world around us - it enables us to see, it impacts our productivity and it can even alter our mood. Effective lighting in an outdoor area can transform a dark and disused night time garden into a functional after-dark space of subtle beauty and functionality. The art of effective illumination is a combination of skill and experience yet it is also critical to select the best product for the application.

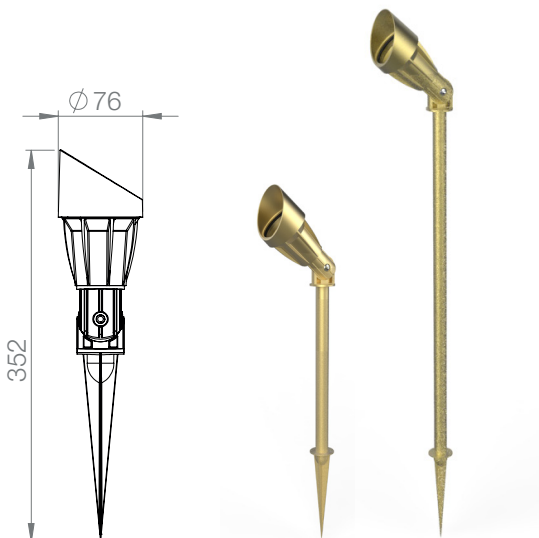
Aqualux Lighting was started from the desire to introduce to the market a range of premium quality outdoor luminaires suitable for both the architectural and residential markets. Through a combination of attention to detail and a desire to respond to the needs of the market and the installers of our fittings, we have developed a series of product families that represent the best available products in their class.



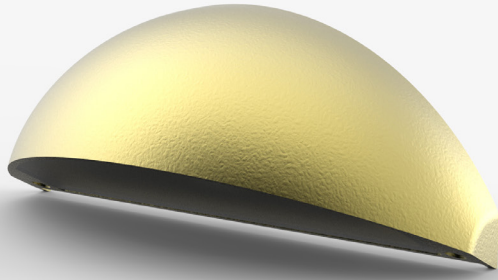
## TECHNICAL

PRODUCT CODE	AQL-503
PRODUCT FAMILY	Phoenix
MOUNTING	Adjustable Inground Spike
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 – 24V AC / DC MultiSource Driver or GU5.3 Drop-In
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	300mm & 600mm Riser Poles Available

## CONFIGURE



BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
MR16	GU5.3 Lampholder Option	LED Drop-in / 20W Halogen		
	Narrow	10°		FWHM
	Medium	25°		FWHM
OPTIC	Wide	40°		FWHM
CABLE	Quick Connect Option	QC		



BK



NP



AB

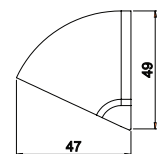
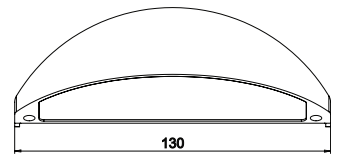
BR

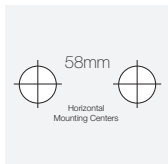
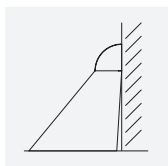
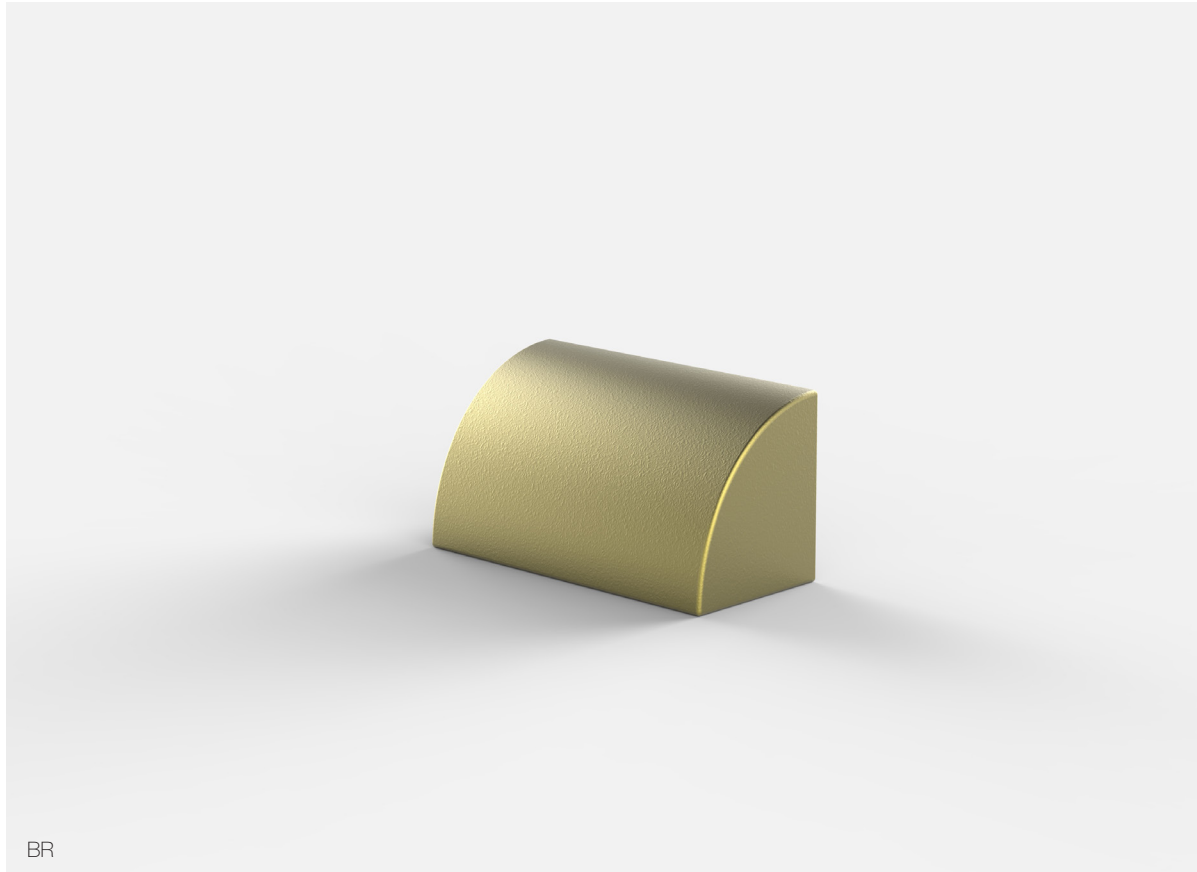
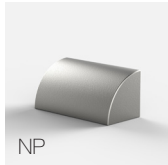
## TECHNICAL

PRODUCT CODE	AQL-510
PRODUCT FAMILY	Phoenix
MOUNTING	Wall / Surface Mount
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	IP67 Resin Filled Option

## CONFIGURE

BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X06: CREE XBD	3000K	250 lms	4W
OPTIC	Clear	-		
	Frosted	-		
CABLE	Quick Connect Option	QC		

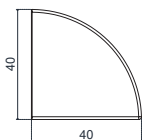
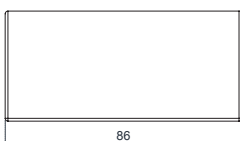




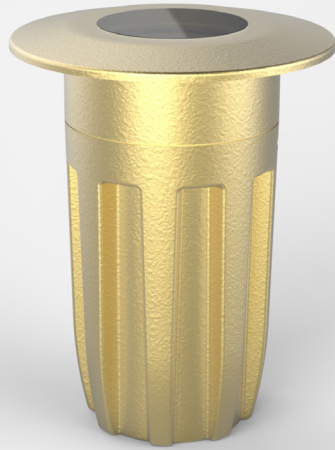
## TECHNICAL

PRODUCT CODE	AQL-520
PRODUCT FAMILY	Phoenix
MOUNTING	Wall / Surface Mount
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	IP67 Resin Filled Option

## CONFIGURE



BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X06: CREE XBD	3000K	250 lms	4W
	Clear	-		
OPTIC	Frosted	-		
	Quick Connect Option	QC		



BR

BK

NP

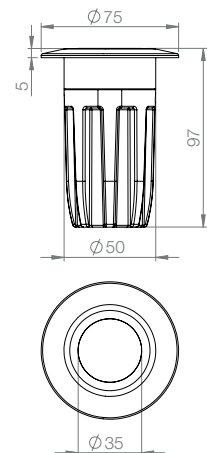
AB

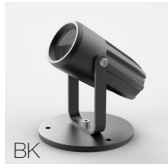
## TECHNICAL

PRODUCT CODE	AQL-530
PRODUCT FAMILY	Phoenix
MOUNTING	Inground / Recessed Uplight
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP68
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

## CONFIGURE

BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
	RGBW	-	-	4.0W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		

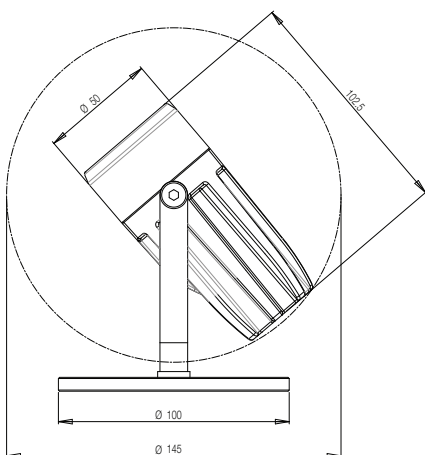




BR

## TECHNICAL

PRODUCT CODE	AQL-540
PRODUCT FAMILY	Phoenix
MOUNTING	Surface Mount Spot Light
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 – 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP68
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option



## CONFIGURE

BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
	RGBW	-	-	4.0W
OPTIC	Narrow	10°		FWHM
	Medium	25°		FWHM
	Wide	40°		FWHM
CABLE	Quick Connect Option	QC		

**AQS-260 LED Strip is designed for 24V AC or DC applications including both outdoor and indoor installations.**

### AC-Compatible

Compatible with our AQO range of toroidal 24V SELV Power Supplies, AQS-260 strip will run off the same AC-trunk cable as other SELV luminaires in the Aqualux range - greatly simplifying cabling and installation issues. With no dedicated DC driver required, system and installation costs are also reduced.

### IPX6 Rated

Coated in a Parylene-C CVD process, AQS-260 is IPX6 rated, providing protection in most damp and exposed1 locations. Should mechanical protection be required, we recommend installation into one our aluminium profiles.

### Dimming

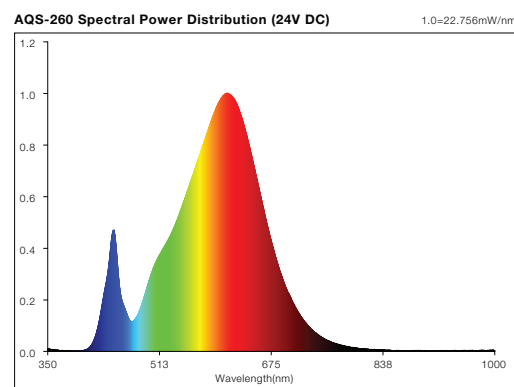
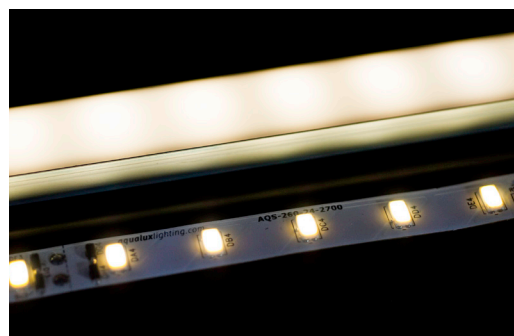
Dimmable via a standard Universal Dimmer in conjunction with our AQO24 range of power supplies, smooth dimming from 0% - 90% is available with unprecedented ease of installation - no more 1-10V/PWM/Resistance confusion.

1. Exposure to direct sunlight (i.e. intense UV) should be avoided.
2. Performance will vary based on dimmer/transformer compatibility. For best results, we recommend Clipsal 32E450UDM
3. Due to the Parylene coating process, solder points should be lightly abraded/scraped to remove coating before attempting to solder. Re-coat using silicone based conformal spray.

- LED strip should be mounted on a compatible surface such as smooth, clean metal or sealed timber. Will not mounted to concrete, raw timber or many plastics.

## Technical

<b>Product Code</b>	AQS-260-24-2700	
<b>Input Voltage</b>	24V AC	24V DC
<b>Watts / M</b>	11.6	14.8
<b>Lumens / M</b>	690	1085
<b>Lumens / W</b>	59.5	73.3
<b>LED</b>	LG 5630	
<b>CCT</b>	2765 K (Duv -0.0020)	
<b>Chromaticity</b>	x=0.4512 y=0.4031 / u'=0.2603 v'=0.5231	
<b>CRI</b>	83 (Ra)	
<b>IP Rating</b>	IPX6	
<b>Protective Coating</b>	Parylene-C	
<b>Max. Run Length</b>	10M	7M
<b>Cut Interval</b>	100mm	
<b>Power Supply Compatibility</b>	24V AC Magnetic	24V DC Constant Voltage
<b>Dimming Support</b>	Universal 32E450UDM	
<b>Notes</b>	Also available in 5500K CCT	

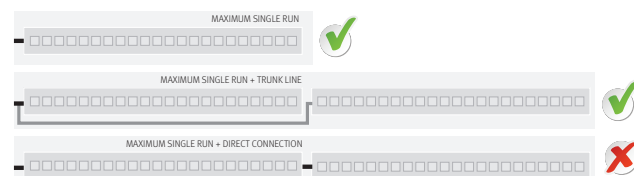


## Ordering Information

Code: AQS-260-24-2700  
 10M Reels.  
 100mm Standard Tail Lengths  
 Cutting & complete run prep service available.

## Installation Note

Do not exceed maximum single run length. Use trunking cable.





AQL-540 Spotlight

AQL-510 Steplight

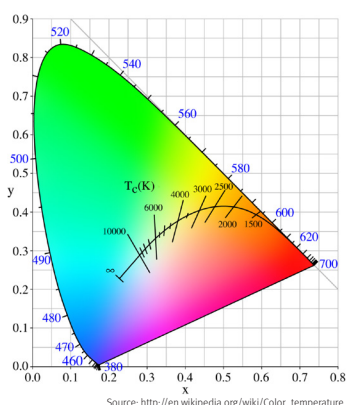
## IP Rating Ingress Protection

The IP (Ingress Protection) rating system provides a means of classifying the degrees of protection from foreign bodies and liquids afforded by electrical equipment and enclosures. The degrees of protection against the ingress of foreign bodies and liquids are indicated by the first two numerals as detailed in the table below.

1st Digit	Description	2nd Digit	Description
0	No Protection	0	No Protection
1	Protected against ingress of objects => 50mm in diameter.	1	Protected against vertically falling drops of water.
2	Protected against ingress of objects => 12,5mm in diameter.	2	Protected against falling drops of water, when enclosure tilted 15 degrees.
3	Protected against ingress of objects => 2,5mm in diameter.	3	Protected against spraying water.
4	Protected against ingress of objects => 1mm in diameter.	4	Protected against splashing water.
5	Dust Protected	5	Protected against water jets.
6	Dust Tight	6	Protected against powerful water jets.
		7	Protected against the effects of temporary immersion in water.
		8	Protected against the effects of continuous immersion in water.

## CCT Correlated Colour Temperature

Color Temperature is the chromacity of a light source as determined by it's position on an imaginary line drawn through a colour space. This line is often referred to as a 'blackbody locus', as it is the locus (line) resulting from graphing the chromacity of a perfect blackbody radiator as it changes temperature. In general, "hotter" CCT's appear "cooler/bluer" whilst "colder" CCT's appear "warmer/more red"



### CCT

- 2000°
- 2470°
- 2565°
- 2665°
- 2755°
- 2900°
- 3100°
- 3250°
- 3400°
- 3900°
- 4200°
- 4700°
- 5100°
- 5500°
- 6100°
- 6700°
- 7400°
- 8300°
- 30,000°

### Example

- Gaslight
- 15 watt incandescent bulb
- 60 watt incandescent bulb
- 100 watt incandescent bulb
- 500 watt incandescent bulb
- 500 watt Krypton bulb
- Projector type filament bulb
- Photo Flood
- Halogen
- Carbon arc
- Moonlight
- Industrial smog
- Hazy weather
- Sun 30° above horizon
- Sun 50° above horizon
- Electronic Flash
- Overcast sky
- Foggy weather
- Blue sky

## Luminaire Construction Materials

### ALUMINIUM

Aluminium can be grouped into two different categories with respect to outdoor lighting - Machined or Cast. Machined aluminium, unlike cast aluminium, is a superior alloy and can be effectively anodized, a process which integrates a layer of extra-hard aluminium oxide into the surface of the metal and protects against corrosion. Machined & Anodised aluminium is used in a number of demanding applications, such as yacht masts, window framing and the aerospace industry, to name a few.

All Aqualux Lumina parts are constructed from high-quality, machined and anodised 6000-Series Aluminium.

### STAINLESS STEEL

Stainless Steel is a popular choice for luminaire construction and fits well with many of the contemporary home and garden designs seen today. Featuring resistance to corrosion and a variety of surface finishes possible, Stainless Steel for luminaire construction comes in two common grades, 304 & 316 ("Marine Grade").

Stainless Steel must be maintained in order for it to retain it's "stainless" appearance. Tea staining, dirt, salt and even rust can build up on any type of "Stainless" fitting unless it is properly maintained by wiping it down every few months with a damp cloth.

### COPPER

Copper is a popular option for more traditional settings and will naturally oxidize over time, turning a dark green colour as the metal reacts with oxygen in the air, unless it is continuously polished. Copper is one of the most expensive materials used in the construction of light fittings but also one of the most enduring.

### BRASS

An alloy of tin & copper, brass is a material in common use for a wide variety of outdoor light fittings. Highly resistant to corrosion, brass will oxidize lightly over time but will generally not degrade structurally even in highly corrosive environments. Most brass fittings are generally cast and then machined.

The information below details the current nominal performance parameters of the Aqualux LED range. This information is subject to change at any time based on our desire to continually improve product performance. Please check our website for the latest version of this guide.

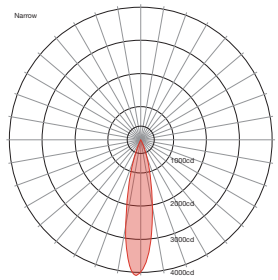
	Lumen Output (lm) <sup>1</sup>	Wattage (W) <sup>1</sup>	Input Voltage <sup>3</sup>	LED Chipsets
<b>X01</b>	50	1	11 ~ 28V AC / DC	CREE XP-C/XP-E/XB-D
<b>X03</b>	120	2.5	11 ~ 28V AC / DC	CREE XT-E / XR-C
<b>X06</b>	220	3	11 ~ 28V AC / DC	CREE XB-D / MX-6
<b>X12</b>	320	4.5	11 ~ 28V AC / DC	CREE MK-R / MC-E / XB-D
<b>D12</b>	50 ~ 320 <sup>2</sup>	4.5	24V AC / DC	CREE MK-R

1. Nominal values given for lumen output and wattages will vary based on the particular optical configuration (lens or diffuser choice), LED colour temperature and input voltage.
2. The maximum & minimum output of the dimmable driver will vary based on the exact dimmer selected & power source used. 0% dimming is not currently possible.
3. Check specific luminaire specification before completing system design.

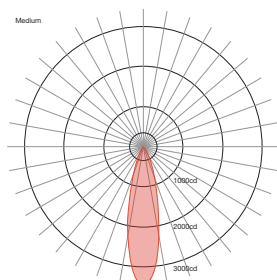
## Optical

Aqualux fittings can generally be configured with a choice of optical lenses. The images and photometric charts below show the difference between the standard choices. In some products a diffuse or frosted option is available - this delivers a much broader, non-focussed light.

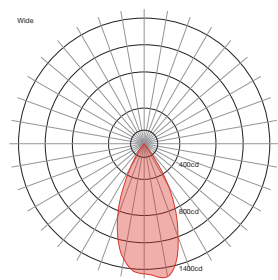
X12 Narrow



X12 Medium



X12 Wide



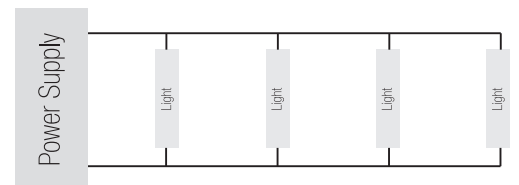
## Power Supply

### Aquatran AQO SELV

All Aqualux LED fittings should be used with the Aquatran AQO SELV power supply. This is a standard magnetic step-down transformer and provides superior reliability over the long-term.

### Parallel Wiring

All Aqualux LED luminaires must be wired in parallel. This is the most common electrical wiring approach used for standard residential & commercial installations.



**In AC circuits there is no polarity.**

If using a DC supply with Aqualux fittings, polarity does not apply as our driver will automatically correct. DC wiring must be in parallel.

## 24V AC : Nominal System Voltage

- Aqualux luminaires can be used with the appropriate power supply on any voltage within the range specified in the above table.
- 24V is the preferred voltage for voltage drop and LED supply reasons. If you can choose, choose 24V AC.
- 12V system compatibility is provided for mixed system, LED / halogen applications.



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# Phoenix

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*Cast Brass Lighting*

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