

ADVANCED ENERGY SOLUTIONS

URBAN LIGHT SOLUTIONS

LED

**PRODUCTS
PORTFOLIO**

LIGHT IS LIFE

*Lighting says everything about the working environment.
Lighting is at the heart of the way people think and build.*

Modern lighting requires products and services of the highest standards, innovative solutions, technical excellence, design flexibility and consistent performance.

ADVANCED ENERGY SOLUTIONS COMPANY was established to meet the highly growing demands of energy management and energy efficiency.

Either you own small facility or large plant we are here to give you the best solution in the field.

With a talented highly qualified engineering team we are striving to meet the highest standards using state of the art technologies to meet all requirements of our customers.

Our team also provide scientifically certified lighting studies.



MADE IN KSA

Our collection are manufactured with high quality in accordance with national/international standards with specifications to meet the harsh climate of the Arab Gulf countries.

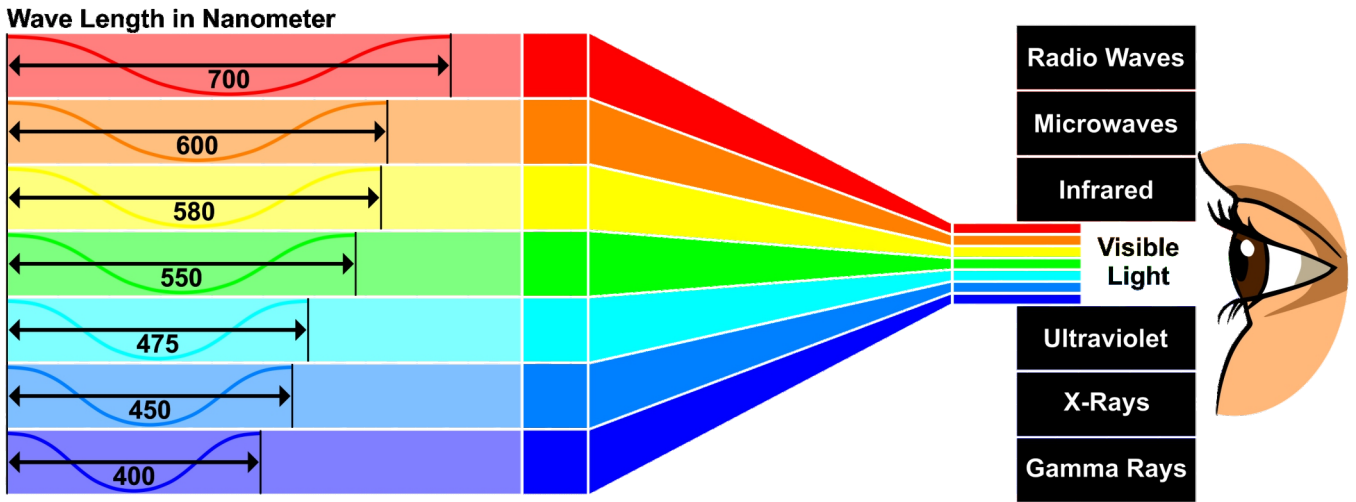
We offer a five-years warranty on all of our fixtures, as we design and calculate the body of the fixture in accordance with the LED chip and the driver to ensure the efficiency and quality of the product.

Whether indoor or outdoor fixtures with 50K hours working life and up to 100K hours as an option.



50,000 working hours

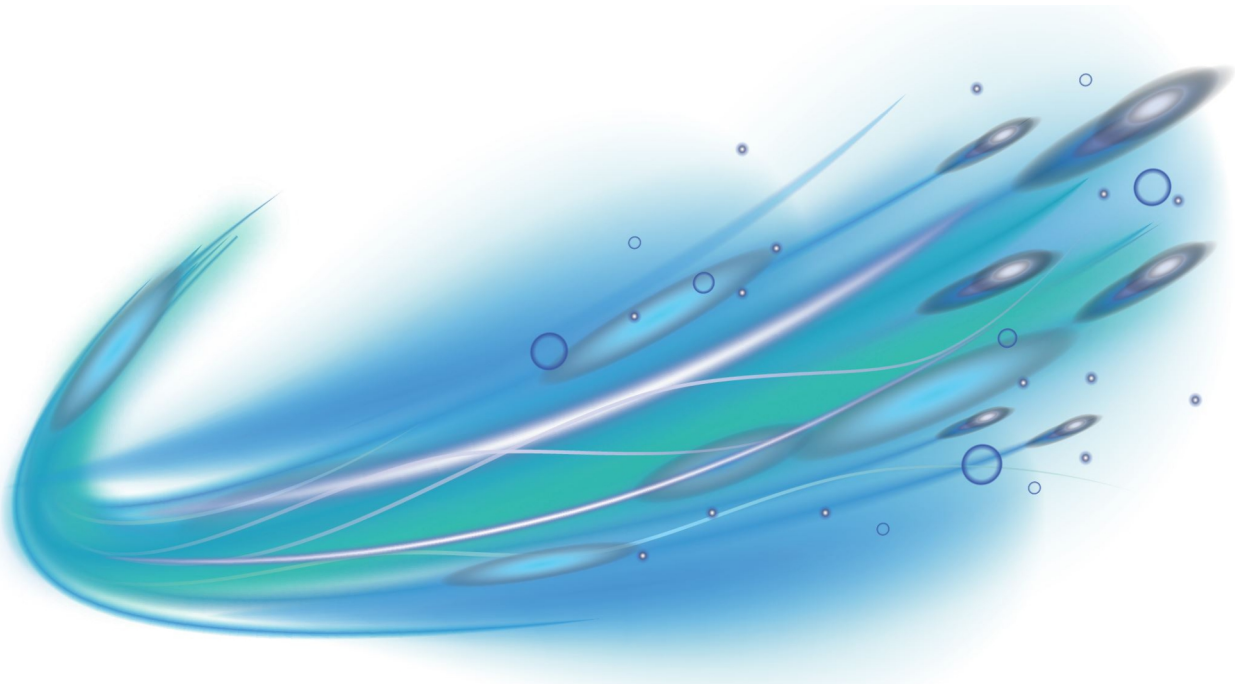
INTRODUCTION TO LIGHT SCIENCE



Light or visible light is electromagnetic radiation within the portion of the electromagnetic spectrum that can be perceived by the human eye. Visible light is usually defined as having wavelengths in the range of 400–700 nm, between the infrared (with longer wavelengths) and the ultraviolet (with shorter wavelengths).

The main source of light on Earth is the Sun. Historically, another important source of light for humans has been fire, from ancient campfires to modern LED lamps, the development of solid state materials and electronic systems give the chance of artificial lighting to simulate sun light with maximum efficiency.

The primary properties of visible light are intensity, propagation direction, frequency or wavelength spectrum.





CORRELATED COLOR TEMPERATURE (CCT)

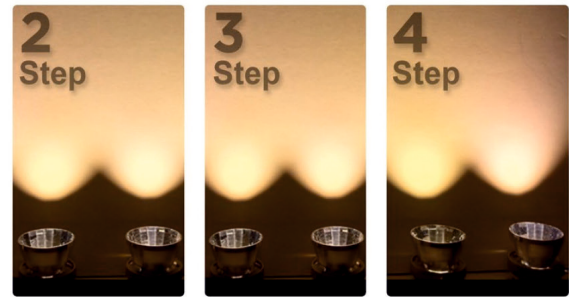
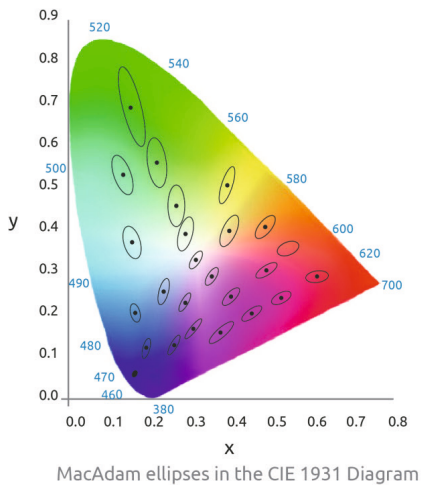


COLOR RENDERING INDEX (CRI)



It is a quantitative measure of the ability of a light source to reveal the colors of various objects faithfully in comparison with an ideal or natural light source like sunlight, the CRI of the sunlight is 100, that means if the CRI is close to 100 the colors will be reflected truly and naturally, the illustration above shows how CRI can affect the appearance of colors.

MACADAM ELLIPSE



n-steps MacAdam ellipses

MacAdam ellipse is a region on a chromaticity diagram (CIE 1931) which contains all colors which are indistinguishable to the average human eye, from the color at the center of the ellipse.

Slight color differences in the appearance of LED light are measured in steps, the higher the N-steps, the greater the visual difference between two white light sources.

DIMMING OF LIGHT



Dimmers are devices connected to a light fixture and used to lower the brightness of light, you can use several different dimming options to dim LED Lighting, as phase cut (Triac), 0/1-10v dimming and DALI system, but beware that the driver must support type of dimming you use.

A-Phase Cut (Triac) dimming:

This type of control is a traditional one, accomplished without any need for an additional control wires. It involves connecting a dimmer in series between one of the mains wire and the equipment.

B-0/1-10v dimming:

The 0/1-10V system enables dimming of the brightness from around 10% to 100%. This is done by sending an analogue signal (0/1-10v) to the equipment over an additional two wires control system.

C-DALI system:

Digital Addressable Lighting Interface, DALI is a digital and addressable communication interface for lighting systems. Digital signals are transmitted over a bus of two-wire control wire, used for control of large systems.

BEAMS OF LIGHT

Beam of light is a directional projection of light energy radiating from a light source. Different beam angles are better for certain cases;

For example :

A display of shop goods might need a spotlight with a very narrow beam, while for office lighting you will need a wide beam fixture.

There are also special cases where beams are not symmetrical, as in street light where special type of lenses are used to distribute light.

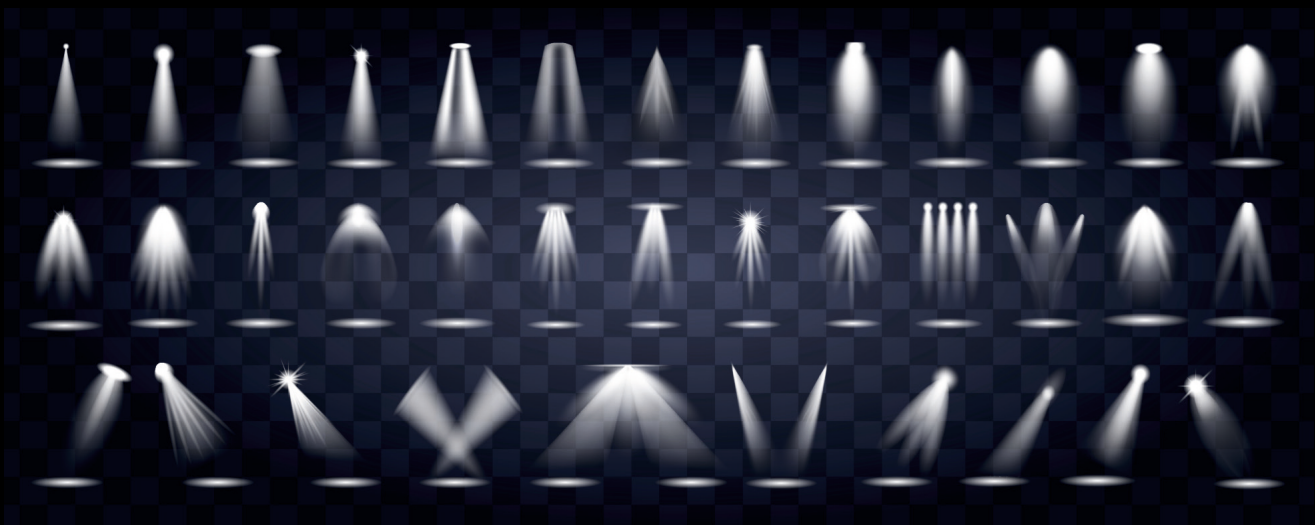
• HOMOGENEOUS BEAMS

• Wide Beams

Wide beam angle is usually used for general lighting, like office rooms and school rooms, wide beam fixtures are characterize by soft and anti-glare diffusing system with low UGR.

• Narrow Beams

Narrower beam angle is preferable when you need to illuminate surfaces and focus on smaller details.



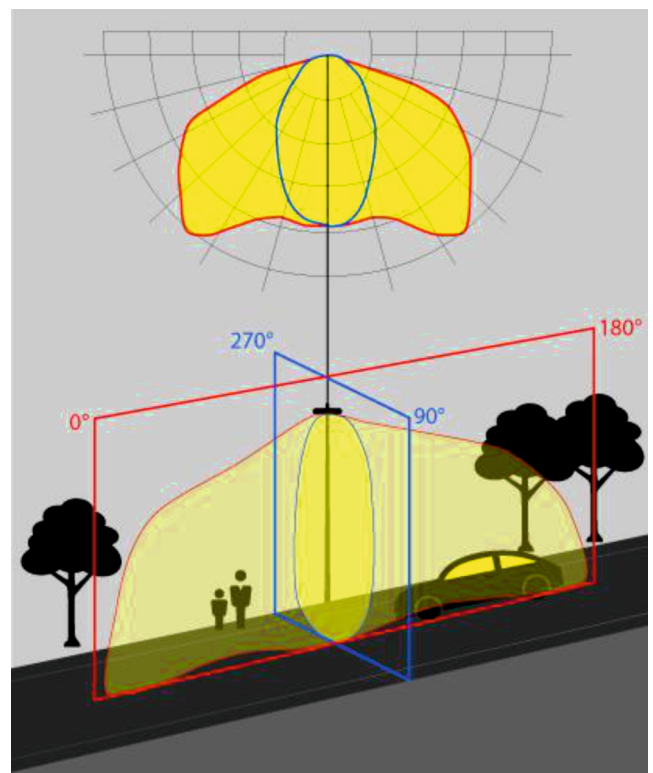
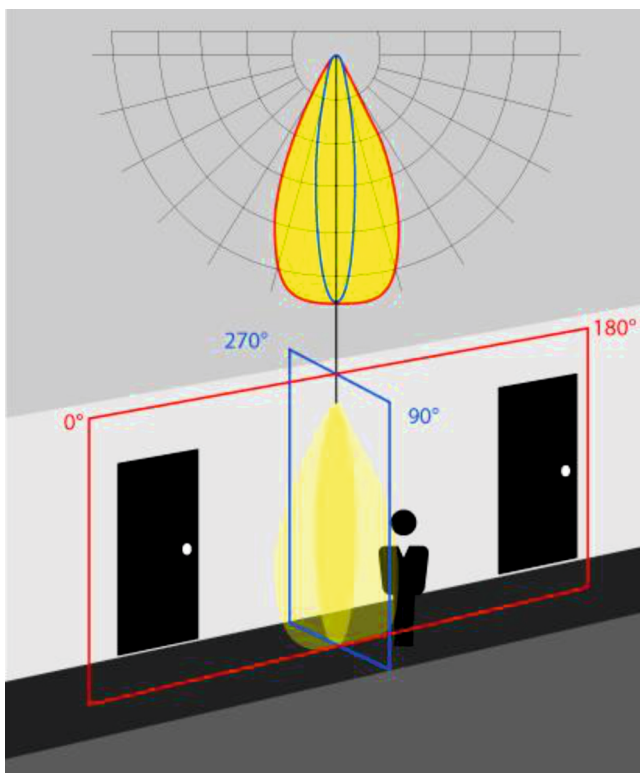
• SPECIAL BEAMS

• Street Light Beams

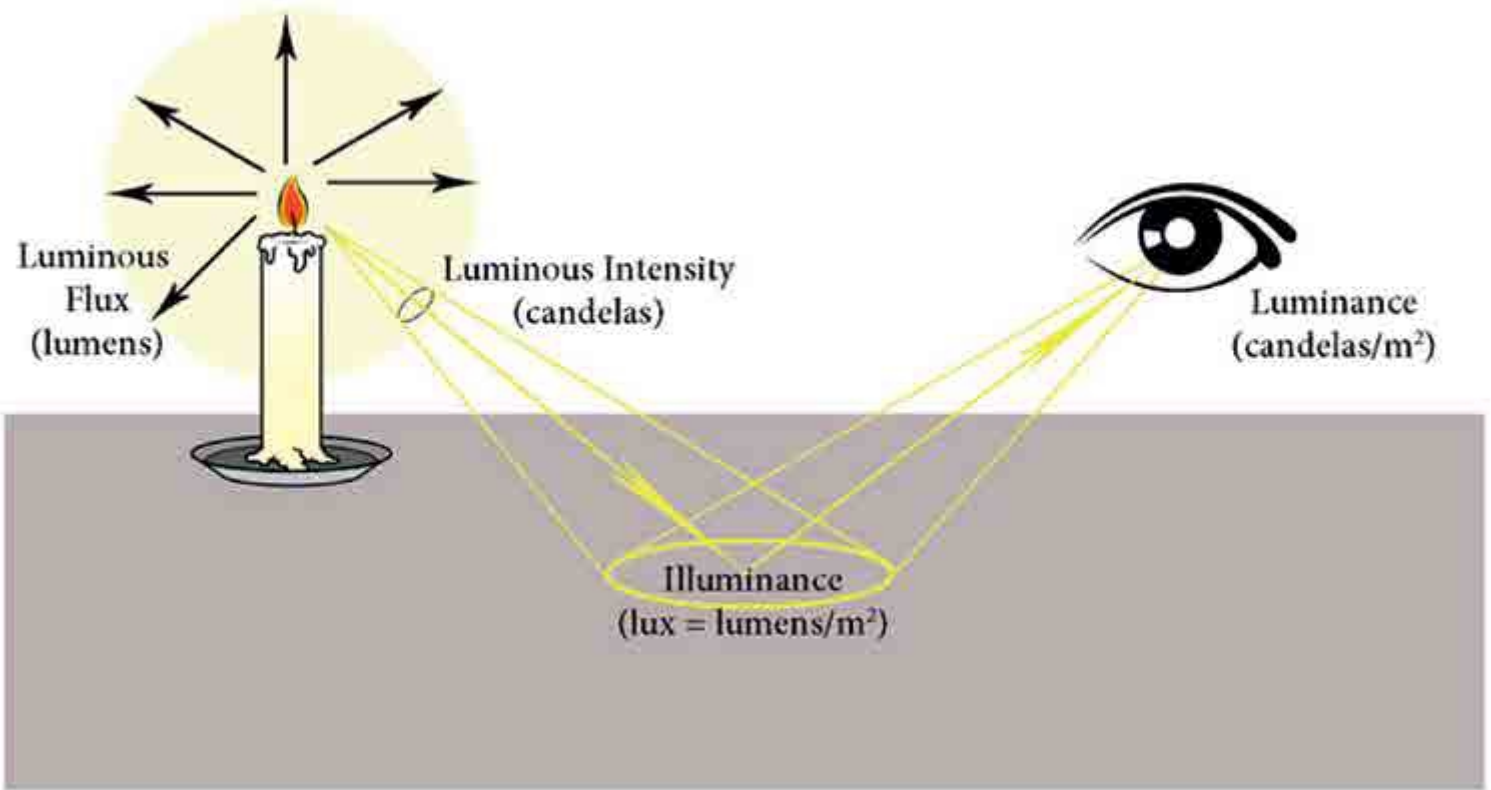
We use special lenses for street light, because beam angles of the street light need to be guided to specific direction to meet the requirement of the road, highways, multi-lane wide street, alleys.

LIGHT DISTRIBUTION CURVE

Light distribution curve is a visual representation of the light diffused by a luminaire. This graph tries to transpose a three dimensional concept (the light diffusion of a lamp or fixture in a space) onto a two dimensional medium.



MEASUREMENTS OF LIGHT



LUMINOUS FLUX (LUMENS-LM)

The luminous flux describes the quantity of light emitted by a light source.

Radiant flux is the measure of the total power of electromagnetic radiation (including infrared, ultra violet, and visible light), luminous flux describe the quantity derived from radiant flux (radiant power) by evaluating the radiation in accordance with the spectral sensitivity of the human eye. Without further specification, it refers to the initial luminous flux.

LUMINOUS EFFICACY (lm/w)

It is the ratio of the luminous flux to the electrical power consumed (lm/W). It is a measure of a light source's economic efficiency, and it indicates of how well a light source produces visible light.

LUMINOUS INTENSITY (CANDELA OR cd) $I = \frac{\Phi}{\Omega}$

Means the total of the luminous flux leaving the source and propagated in the element of solid angle containing the given direction.

ILLUMINANCE (LUX) $E = \frac{\Phi}{A}$

Illuminance means the quantity of light (luminous flux) hitting the surface A.

LUMINANCE (CD/M²) $L = \frac{I}{A_L \cdot \cos\epsilon}$ $L = \frac{E \cdot \rho^*}{\pi}$

It describes on one hand a light source's impression of brightness, and on the other hand a surface specific-ations, and therefore depends to a large extent on the degree of reflection.

FEATURE ICONS

COLOR TEMPERATURE TUNING



ADJUSTABLE ANGLES



COLOR RENDERING INDEX 80



ALUMINUM BODY



RED, GREEN, BLUE & WHITE COLOR MODEL



INGRESS PROTECTION 20 OR 54



INGRESS PROTECTION 67



INDOOR INSTALLATION



INSULATION CONTACT

Recessed Luminaires that have the IC rating Can have insulation up to the sides and covering them.



INSULATION CONTACT - FIRE RESISTANT

Recessed Luminaires that have the IC-Frating can have insulation abutted to and/or covering them. These down lights are also sealed so insulation cannot get into the fitting.



CYANOSIS OBSERVATION INDEX

Visual detection of cyanosis in a patient. For Hospital and medical tasks.



EASY TO INSTALL



DIMMABLE



LUMINAIRE SUITABLE FOR DIRECT MOUNTING ON NORMALLY FLAMMABLE SURFACES



ONLY SUITABLE FOR MOUNTING ON NON COMBUSTIBLE SURFACES.



IMPACT PROTECTION



APPROVAL ICONS

ILLUMINATING ENGINEERING SOCIETY



CLASSIFICATION

THREE STEP MACADAM CHIPS



FIVE YEARS WARRANTY



GERMAN CONFORMITY



EUROPE CONFORMITY



RESTRICTION OF HAZARDOUS SUBSTANCES



QUALITY ASSURED FIRM ISO9001 CERTIFICATE



**FEDERAL COMMUNICATIONS COMMISSION
CERTIFICATE**



REGULATORY COMPLIANCE MARK



CERTIFICATE BODY



SAUDI ARABIA CONFORMITY



APPLIANCE CLASS I



APPLIANCE CLASS II




APPLIANCE CLASS III



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DOWN LIGHTS

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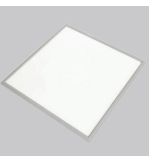


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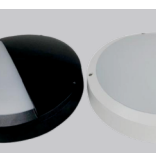
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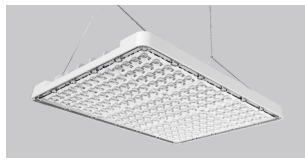


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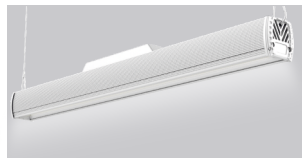
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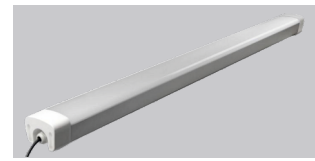
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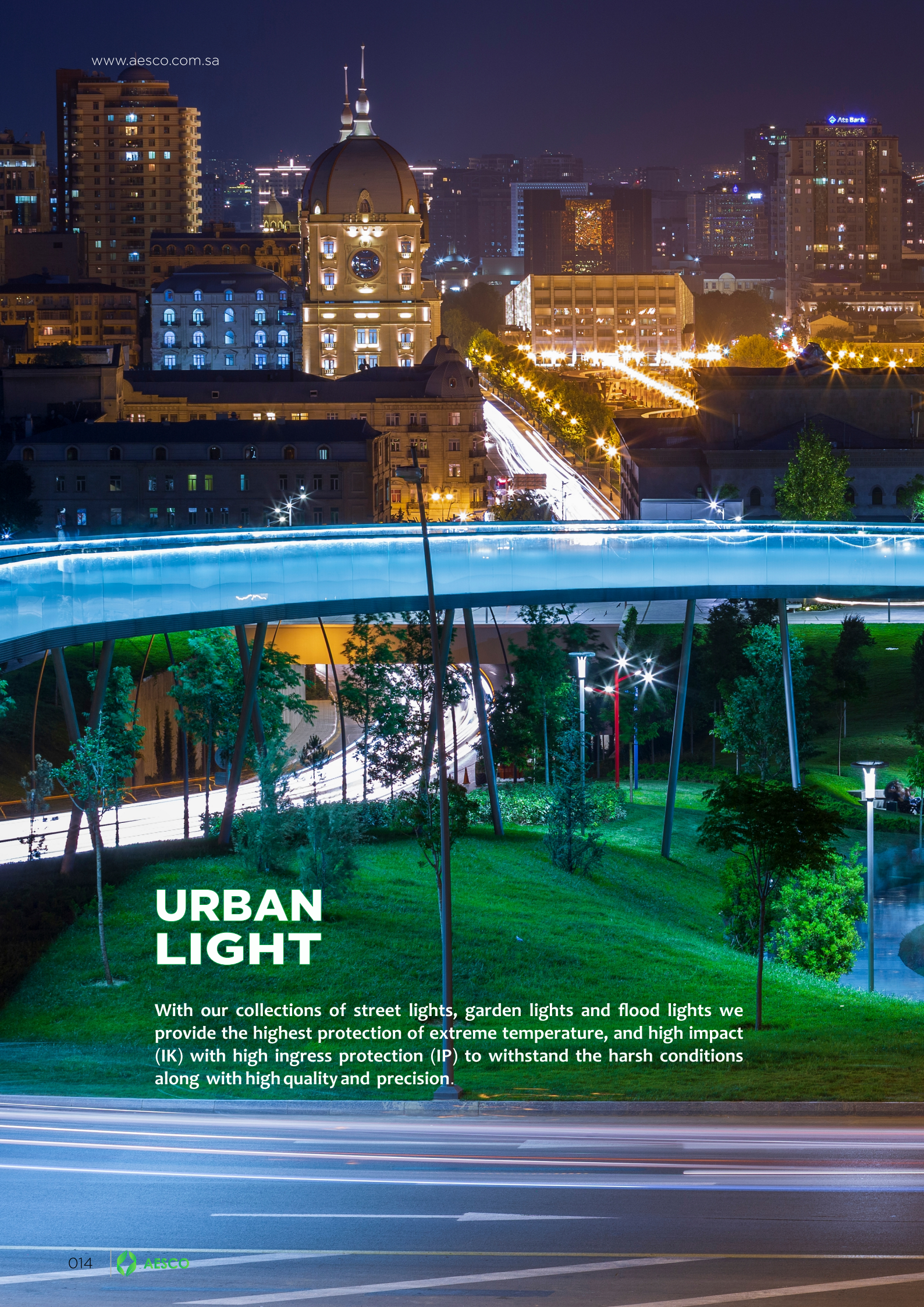
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URBAN LIGHT

With our collections of street lights, garden lights and flood lights we provide the highest protection of extreme temperature, and high impact (IK) with high ingress protection (IP) to withstand the harsh conditions along with high quality and precision.





101100

LED Street Light

LB1 PREMIUM SERIES STREET LIGHT

Slim type die cast Aluminum Body streetlight, with tool free opening clips for easy maintenance, efficacy up to 140L/W, device is equipped with 10KV surge arrestor, and standard dimming capability through NEMA socket for smart city applications.

General Information

Lamp family code	AES-LB1
Wattage	70W- 100W
Nominal working voltage	110-277V, 47-63Hz
Light color temperature range	2200-6500K
Lumen /Watt for fixture	Up to 140 L/W
LED type	Cree or Lumiled 5050 SMD
Lumen /Watt for LED engine	Up to 166L/W For CT 6500K @CRI 70 140 L/W for CT 2200 @CRI 70



Rendering Index	CRI >70, 80 & 90 as an option
Lifetime	50000h at L70
Lens types	HERCULUX/DARKOO/NATA/LEDIL
Beam angle options	Type II, Type III, Type IV
Driver type	Philips/Tridonic
Control type	0/1-10V dimming as standard
NEMA socket	Yes, as standard
Optical cover	Tempered glass
Mechanical impact	IK >08 according to IEC 62262
Protection class	IP66 according to IEC 60529
Ingress Protection class	Standard SPD 10KV/10KA
Surge protection	7.3Kg
Net weight	8.3Kg
Gross weight	780*370*200mm
Packing Size	5 years
Warranty period	





Saudi Standard SASO 2902
Saudi Standard SASO 2927
IECEE certificate
Electrical shock & surge protection
Power supply approval marks
THD test
Degree of protection provided by enclosures
Mechanical impact Protection
Electrical and photo measurements of solid-state lighting products
Integrated LED lamps for electrical properties as a function of temperature
In-SITU temperature measurements testing
Photo logical test
Blue light Hazard
EU RoHS compliant

Energy Efficiency, functionality & labeling requirements for lighting products -Part2-
Energy Efficiency functionality and labeling requirements for lighting products -Part3- street lighting
As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017 IEC 61643-11:2012 Class II
UL/CSA/CE/ENEC/CCB/CCC
As per IEC 61000 IEC 60529:2013
IEC 62262
LM79-08
LM82-12
ISTMT
IEC 62471, IEC 62778 IEC/TR 62778 EU RoHS compliant

LED Characteristic Curves

Spectral Power Distribution Characteristics

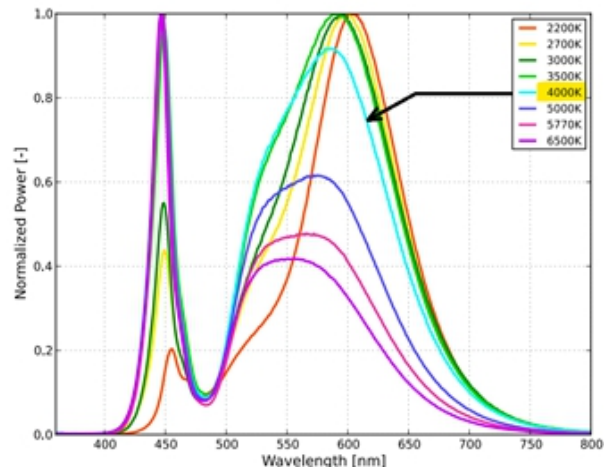


Figure 1: Typical normalized power vs. wavelength for L150-407050xx000x0 at TJ=25°C.

Main Electrical Characteristics

Input Voltage	110 to 277 V
Input Frequency	47 to 63 Hz
Nominal Power	70W for AES-LB1-70W-Cx-xx-xx-xx 100W for AES-LB1-100W-Cx-xx-xx-xx
Power supply type	Philips - Xitanium Dim 100W 0.70A 1-10V
Input current	0.45A
Inrush current	48A at 230V
Inrush current time	460 μs
Efficiency of power supply	>91%
Power Factor	>0.95 for 100W type and >0.92 for 70W type < 15% as per IEC61000
Total Harmonic Distortion THD (I)	Constant Current
Power supply output Regulation Method	700 mA
Power supply nominal output current	1-10V
Dimming Control Method	10-100%
Dimming Range	80 C°
Power supply maximum case Temperature	IP66
Power supply protection class	4KV
Power supply Interior Surge protection	

Color Definitions

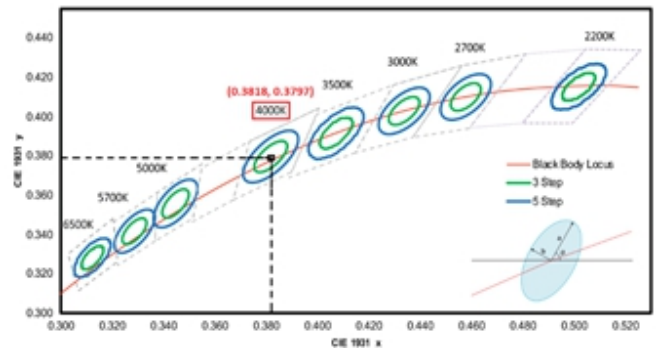


FIGURE 2: THE CIE 1931 CHROMATICITY COORDINATES FOR L150-407050XX000X0 AT TJ=25°C.

Working Conditions

Ambient temperature range	-40 to +50 °C
Test Performance ambient temperature	25.3 °C
Standard tilt angle post top	0° to 15°
Standard tilt angle side entry	-15° to 15°

Controls and Dimming

Dimmable	YES 0/1-10V through standard NEMA socket
DALI	Optional

Photometric characteristics

Initial luminous flux (system flux)	14835lm for 100W type
Luminous flux tolerance	±5%
Initial LED luminaire efficacy	141
Corr. Color Temperature	2200k - 6500k
Color Rendering Index	70

Luminaire's Photometric Curves

Intensity Distribution Diagram (Normalized)

For figure 2, 3 & 4

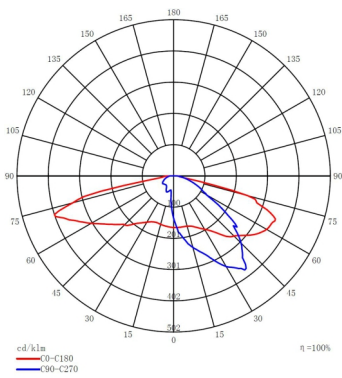


FIGURE 2: LUMINOUS INTENSITY C-DIAGRAM FOR T3-M 6H1 AT TJ=25°C.

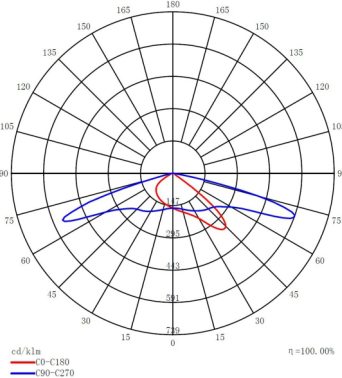


Figure 3: Luminous intensity C-Diagram T2-M 6H1 IN 1 at TJ=25°C.

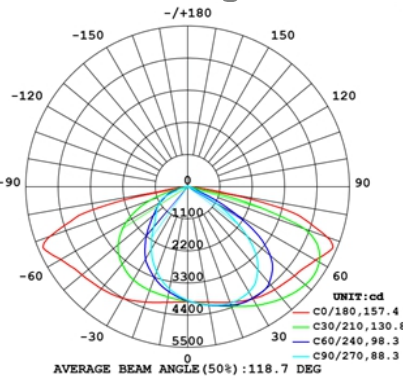


FIGURE 1: LUMINOUS INTENSITY C-DIAGRAM FOR LB2-50 T2-M HK 6 IN 1 AT TJ=25°C.

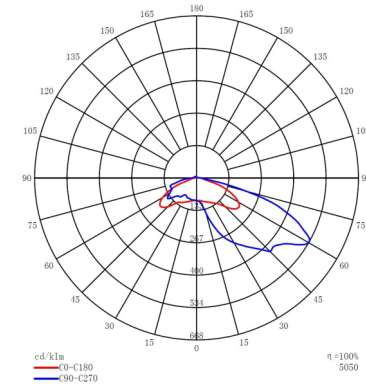


FIGURE 4: LUMINOUS INTENSITY C-DIAGRAM FOR T4-M 4H1 AT TJ=25°C.

Housing & Mechanical Data

Housing Material	Die cast Aluminum
Optical & control gear compartments	Separated with easy access for maintenance
LED circuit cover	Clear, Heat resistant, toughened UV stabilized Glass cover
Mounting Position	Horizontally & Vertically
Installation pipe diameter	φ60mm
Net weight	7.3Kg
Mounting weight	8.3Kg
Packing Size	780*370*200mm

NOTE: If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.

NOTE: "The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person."

ORDERING INFORMATION

EXAMPLE : AESLB1-100W-C8-30-T2-Ph

Model	Wattage	CRI	CCT	Beam	DriverType
AESLB1	100W	C8	30	T2	Ph
AESLB1	70W	C7 70	22 2200K	T2 Type II	Tr Tridonic
	100W	C8 80	27 2700K	T3 Type III	Ph Philips
			30 3000K	T4 Type IV	
			35 3500K		
			40 4000K		
			50 5000K		
			57 5700K		
			65 6500K		

Dimensions

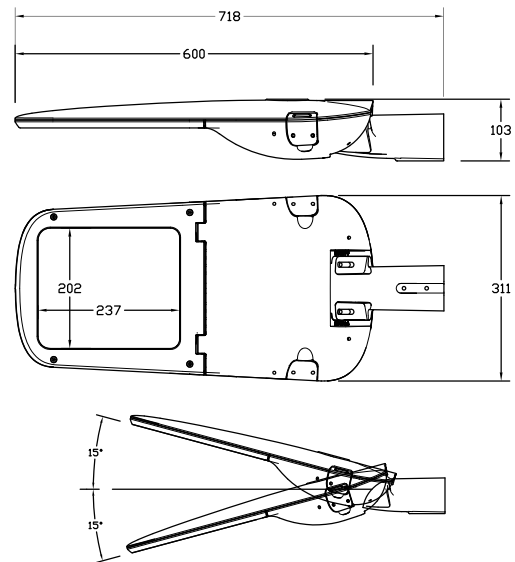


Figure 5: Product Dimensions.







101200

LED Street Light

LB2 PREMIUM SERIES STREET LIGHT

Slim type die cast Aluminum Body streetlight, with tool free opening clips for easy maintenance, efficacy up to 140L/W, device is equipped with 10KV surge arrestor, and standard dimming capability through NEMA socket for smart city applications.

General Information

Lamp family code	AES-LB2
Wattage	30W- 50W
Nominal working voltage	110-277V, 47-63Hz
Light color temperature range	2200-6500K
Lumen /Watt for fixture	Up to 140 L/W
LED type	Cree or Lumiled 5050 SMD
Lumen /Watt for LED engine	Up to 166L/W For CT 6500K @CRI 70 140 L/W for CT 2200 @CRI 70



Rendering Index	CRI >70, 80 & 90 as an option
Lifetime	50000h at L70
Lens types	HERCULUX/DARKOO/NATA/LEDIL
Beam angle options	Type II, Type III, Type IV
Driver type	Philips/Tridonic
Control type	0/1-10V dimming as standard
NEMA socket	Yes, as standard
Optical cover	Tempered glass
Mechanical impact	IK >08 according to IEC
Protection class	62262
Ingress Protection class	IP66 according to IEC 60529
Surge protection	Standard SPD 10KV/10KA
Net weight	5.5Kg
Gross weight	6.5Kg
Packing Size	660*340*180mm
Warranty period	5 years





Saudi Standard SASO 2902	Energy Efficiency, functionality & labeling requirements for lighting products -Part2-
Saudi Standard SASO 2927	Energy Efficiency functionality and labeling requirements for lighting products -Part3- street lighting
IECEE certificate	As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017 IEC 61643-11:2012 Class II
Electrical shock & surge protection	UL/CSA/CE/ENEC/CCB/CCC
Power supply approval marks	As per IEC 61000 IEC 60529:2013
THD test	IEC 62262
Degree of protection provided by enclosures	LM79-08
Mechanical impact Protection	LM82-12
Electrical and photo measurements of solid-state lighting products	ISTMT
Integrated LED lamps for electrical properties as a function of temperature	IEC 62471, IEC 62778 IEC/TR 62778
In-SITU temperature measurements testing	EU RoHS compliant
Photo logical test	
Blue light Hazard	
EU RoHS compliant	

Energy Efficiency, functionality & labeling requirements for lighting products -Part2-
Energy Efficiency functionality and labeling requirements for lighting products -Part3- street lighting
As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017 IEC 61643-11:2012 Class II
UL/CSA/CE/ENEC/CCB/CCC
As per IEC 61000 IEC 60529:2013
IEC 62262
LM79-08
LM82-12
ISTMT
IEC 62471, IEC 62778 IEC/TR 62778
EU RoHS compliant

LED Characteristic Curves

Spectral Power Distribution Characteristics

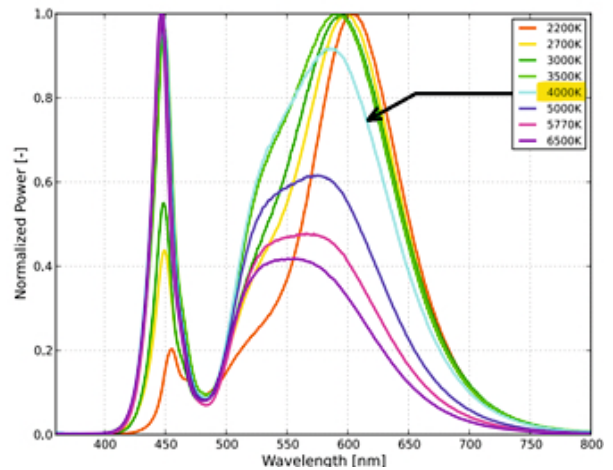


Figure 1: Typical normalized power vs. wavelength for L150-407050xx000x0 at Tj=25°C.

Main Electrical Characteristics

Input Frequency	110 to 277 V 47 to 63 Hz
Nominal Power	30W for AES-LB2-30W-Cx-xx-xx-xx 50W for AES-LB2-50W-Cx-xx-xx-xx
Power supply type	Philips - Xitanium Dim 65W 0.3A-1.05A 1-10V
Rated input current	0.27A up to 0.65A @ minimum input voltage
Inrush current	35A at 230V
Inrush current time	210 μS
Efficiency of power supply	>90%
Power Factor	>0.95
Total Harmonic Distortion THD (I)	< 10% as per IEC61000
Power supply output Regulation Method	Constant Current
Power supply nominal output current	700 mA, adjustable 70mA To 1050mA
Dimming Control Method	1-10V
Dimming Range	10-100%
Power supply maximum case Temperature	85 C°
Power supply protection class	IP66
Power supply Interior Surge protection	6KV

Color Definitions

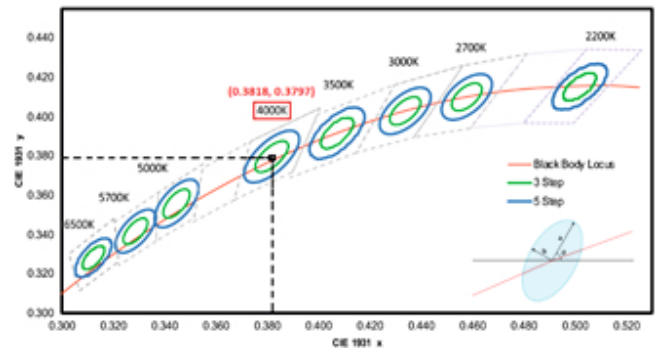


FIGURE 2: THE CIE 1931 CHROMATICITY COORDINATES FOR L150-407050XX000X0 AT Tj=25°C.

Working Conditions

Ambient temperature range	-40 to +55 °C
Test Performance ambient temperature	25 C°
Standard tilt angle post top	0° to 15°
Standard tilt angle side entry	-15° to 15°

Controls and Dimming

Dimmable	YES 0/1-10V through standard NEMA socket
DALI	Optional

Luminaire's Photometric Curves

Photometric characteristics

Initial luminous flux (system flux)	7000lm for 50W type
Luminous flux tolerance	4200 for 30W type
Initial LED luminaire efficacy	+/-5%
Corr. Color Temperature	140
Color Rendering Index	2200k - 6500k
	70

Luminaire's Photometric Curves

Intensity Distribution Diagram (Normalized)

For figure 2, 3 & 4

Intensity Distribution Diagram in C Planes

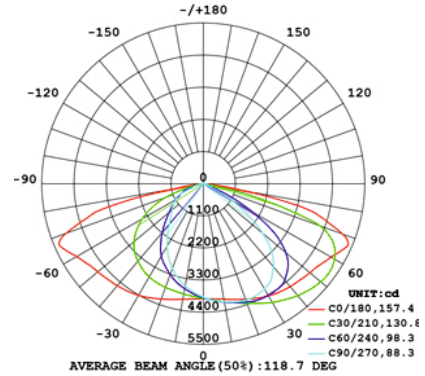


FIGURE 1: LUMINOUS INTENSITY C-DIAGRAMS FOR LB2-50 T2-M HK 6 IN 1 AT TJ=25°C.

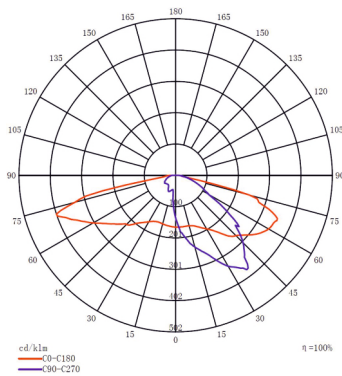


FIGURE 2: LUMINOUS INTENSITY C-DIAGRAM FOR T3-M 6H1 AT TJ=25°C.

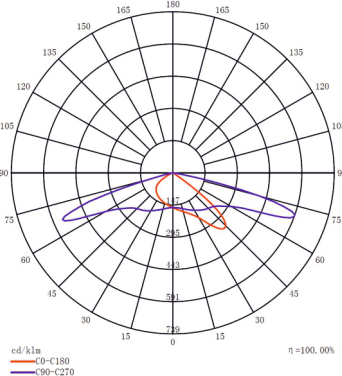


Figure 3: Luminous intensity C-Diagram T2-M 6H1 IN 1 at TJ=25°C.

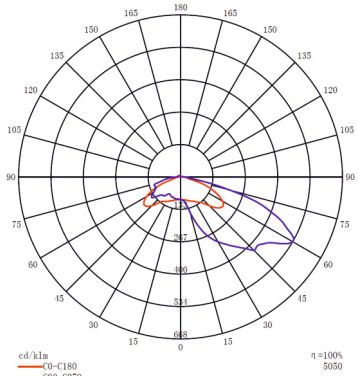


FIGURE 4: LUMINOUS INTENSITY C-DIAGRAM FOR T4-M 4H1 AT TJ=25°C.

Housing & Mechanical Data

Housing Material	Die cast Aluminum
Optical & control gear compartments	Separated with easy access for maintenance
LED circuit cover	Clear, Heat resistant, toughened UV stabilized Glass cover
Mounting Position	Horizontally & Vertically
Installation pipe diameter	φ60mm
Net weight	5.5Kg
Mounting weight	6.5Kg
Packing Size	660*340*180mm

NOTE: If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.

NOTE: "The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person."

ORDERING INFORMATION

EXAMPLE : AESLB2-50W-C8-30-T2-Ph

Model	Wattage	CRI	CCT	Beam	DriverType
AESLB2	50W	C8	30	T2	Ph
AESLB2	30W	C7 70	22 2200K	T2 Type II	Tr Tridonic
	50W	C8 80	27 2700K	T3 Type III	Ph Philips
			30 3000K	T4 Type IV	
			35 3500K		
			40 4000K		
			50 5000K		
			57 5700K		
			65 6500K		

Dimensions

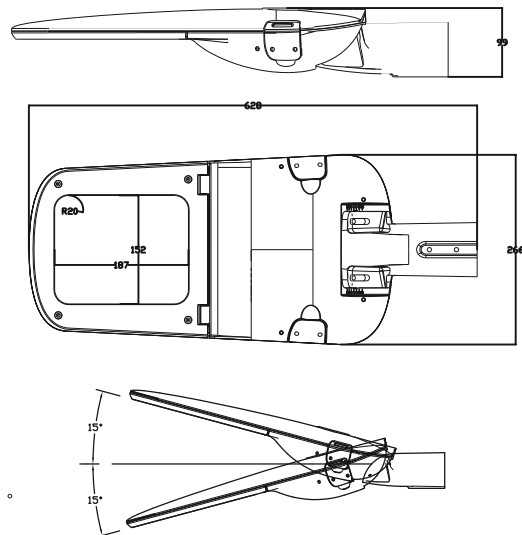


Figure 5: Product Dimensions.







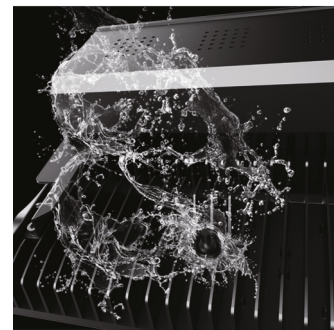
FLOOD LIGHT

VENUS FAMILY



APPLICATION

Flood light for outdoor installation with high efficacy up to 140lm/w, and with 10kv surge protection. The modular design of the VENUS family along with different choices of lenses cover all needed outdoor general lighting. The mounting brackets come with clear easy angles setting which ease installation, and provide quick selection for buyers as needed. Suitable for commercial and industrial premises, such as manufacturing plants, construction Sites, airport, façade lighting, stadiums, etc...



APPROVALS & STANDARDS

Saudi Standard SASO 2902 *	Energy Efficiency, functionality & labeling requirements for lighting products -Part2- As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017
IECEE certificate *	As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017
Power supply approval marks	UL/CSA/CE/ENEC/CCB/CCC
Degree of protection provided by enclosures, ingress protection(IP)	IEC 60529:2013

*: Approvals and certificate are under process.

TECHNICAL INFORMATION

FAMILY	VENUS
Wattage	100W 200W 300W 400W 480W 600W
CRI	80
CCT	3000K 4000K 5000K 5700K 6000K 6500K
Beam	A09 (Type II-S) A10 (Type III-M) A11 (Type IV) A16 (60x90deg) S06 (30deg) S08 (60deg) S09 (100deg) S13 (Type V)
Lumen	14000lm 28000lm 42000lm 56000lm 67200lm 84000lm
Finish	Matte black
Efficacy	140 lm/w
Material	Die-casting aluminum body and heatsink, PMMA lenes
Driver	Tridonic Philips Lifud
Ambient (Ta) Temperature	-30°C to +50°C



400W/480W

600W



OSRAM

CREE

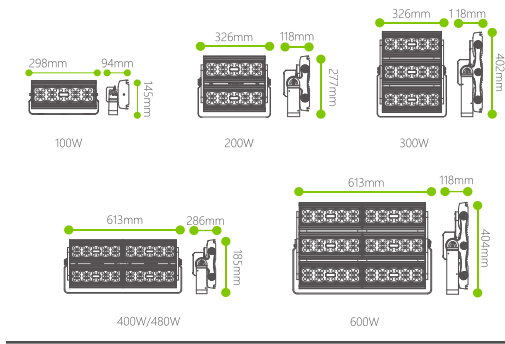
LUMILEDS

bridgelux



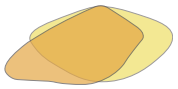
DIMENSION

MODEL	POWER	DIMENSION
AESHM3	100W	L298mm * W94mm*H145mm
	200W	L326mm * W118mm*H277mm
	300W	L326mm * W118mm*H402mm
	400W	L613mm * W286mm*H185mm
	480W	L613mm * W286mm*H185mm
	600W	L613mm * W118mm*H404mm

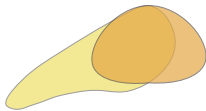


TYPE OF LENSES

A11 (Type IV)



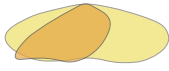
A16 (60x90deg)



S13 (Type V)



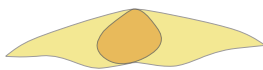
A10 (Type III-M)



S09 (100deg)



A09 (Type II-S)



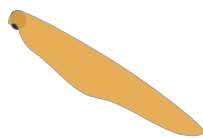
S08 (60deg)



S06 (30deg)



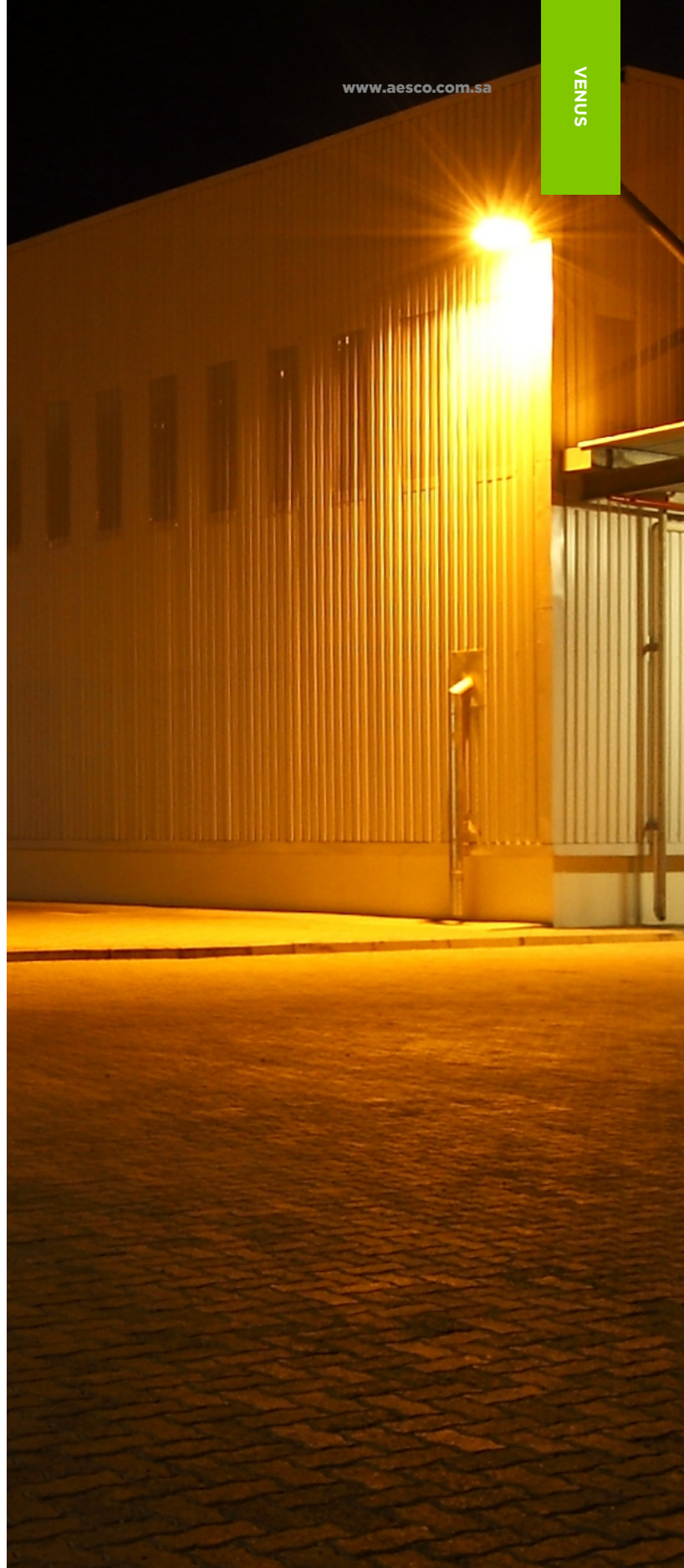
A24(110x20deg, polarized 60deg)



ORDERING INFORMATION

EXAMPLE : AESHM3-100W-30-A09-Ph-ND

Model	Wattage	CCT	Beam	DriverType	Dimming
AESHM3	100W	30	A09	Ph	ND
AESHM3	100W	27 2700K	A09 (Type II-S)	Tr Tridonic	ND Non Dim
	200W	30 3000K	A10 (Type III-M)	Ph Philips	VD 0/1-10VDim
	200W	40 4000K	A11 (Type IV)	Lf Lifud	DA DALI Dim
	400W	50 5000K	A16 (60x90deg)		
	480W	57 5700K	S06 (30deg)		
	600W	60 6000K	S08 (60deg)		
		65 6500K	S09 (100deg)		
			S13 (Type V)		





GARDEN LIGHT

ALPHA FAMILY



APPLICATION

Round pole-top mounted luminaire for outdoor installation on a pole diameter 60 mm, single or double supporting arm, with downward light distribution, and different beam types, high corrosion resistance die-cast copper-free aluminum body. Suitable for garden, pedestrian, parks, etc...

APPROVALS & STANDARDS

Saudi Standard SASO 2902 *	Energy Efficiency, functionality & labeling requirements for lighting products -Part2-
IECEE certificate *	As per IEC60598-2-3:2002+A1:2011 IEC60598-1:2014+A1:2017
Power supply approval marks	UL/CSA/CE/ENEC/CCB/CCC
Degree of protection provided by enclosures, ingress protection(IP)	IEC 60529:2013

*: Approvals and certificate are under process.

TECHNICAL INFORMATION

FAMILY	ALPHA
Wattage	36W 72W
CRI	80
CCT	3000K 4000K 5000K 5700K 6000K 6500K
Beam	SYMMETRICAL CYCLE ROUTE / PEDESTRIAN STREET
Lumen	4320lm 8640lm
Finish	Silver Gray Black
Efficacy	120 lm/w
Material	Die-casting aluminum body and heatsink, PMMA lenes
Driver	Tridonic Philips Lifud
Ambient (Ta) Temperature	-30°C to +50°C

BEAM TYPES

SYMMETRICAL



CYCLEROUTE/PEDESTRAIN



STREET



OSRAM

CREE

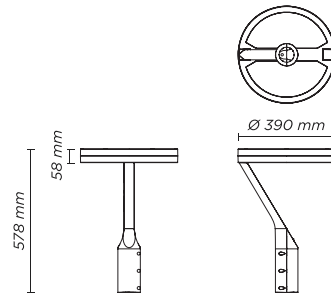
LUMILEDS

bridgelux



DIMENSION

MODEL	POWER	DIMENSION
AESAP	36W	Ø390mm * H578mm
	72W	



ORDERING INFORMATION

















EXAMPLE : AESAP-36W-30-CR-S-Ph-ND

Model	Wattage	CCT	BeamType	BodyColor	DriverType	Dimming
AESAP	36W	30	CR	S	Ph	ND
AESAP	36W	27 2700K	SY SYMMETRICAL	S Silver	Tr Tridonic	ND Non Dim
	72W	30 3000K	CR CYCLEROUTE/PEDESTRAIN	B Black	Ph Philips	VD 0/1-10VDim
		40 4000K	SL STREET	G Gray	Lf Lifud	DA DALI Dim
		50 5000K				
		57 5700K				
		60 6000K				
		65 6500K				

INGRESS PROTECTION

IP Ratings are an international numeric classification to indicate the degrees of protection provided by enclosures for electrical equipment against water and solid object accordance with IEC 60598-1:2003.

IPXX

	0 No protection against contact and ingress of objects.		0 No protection against ingress of water.
	1 Protected against solid objects Ø>50 mm and greater, such as the back of a hand.		1 Protected against dripping water; vertically falling drops shall have no harmful effect on the device when mounted in a normal position.
	2 Protected against solid objects Ø>12.5 mm and greater, such as fingers or similar objects.		2 Protected against dripping water; vertically falling drops shall have no harmful effect on the device when the enclosure is tilted at an angle of 15° from its normal position.
	3 Protected against solid objects Ø>2.5 and greater, such as tools, thick wires, etc.		3 Protected against water falling as a spray at any angle up to 60° from the vertical line.
	4 Protected against solid objects Ø>1 mm and greater, such as wires, large ants etc.		4 Protected against splashing water; water splashed against the enclosure from any direction shall have no harmful effect.
	5 Dust protected, ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.		5 Water projected by a nozzle (6.3 mm) under 30kPa pressure at distance of 3 meters from any direction shall have no harmful effects.
	6 Dust-tight, no ingress of dust; complete protection against dust (dusttight).		6 Water projected in powerful jets (12.5 mm) under 100kPa pressure at distance of 3 meters from any direction shall have no harmful effects.
			7 protected against the effects of temporary immersion of water; no harmful effect is possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 meter maximum of submersion).
			8 The equipment is suitable for continuous immersion in water as per the conditions specified by the manufacturer.

IMPACT PROTECTION

IK Ratings are an international numeric classification to indicate the degrees of protection provided by enclosures against external mechanical impacts in accordance with IEC 62262:2002.

IKXX

00	No protection.	06	Protected against 0.25kg mass of impact dropped from 400mm above the impacted surface.
01	Protected against 0.25kg mass of impact dropped from 56mm above the impacted surface.	07	Protected against 0.5kg mass of impact dropped from 400mm above the impacted surface.
02	Protected against 0.25kg mass of impact dropped from 80mm above the impacted surface.	08	Protected against 1.7kg mass of impact dropped from 300mm above the impacted surface.
03	Protected against 0.2kg mass of impact dropped from 140mm above the impacted surface.	09	Protected against 5kg mass of impact dropped from 200mm above the impacted surface.
04	Protected against 0.25kg mass of impact dropped from 200mm above the impacted surface.	10	Protected against 5kg mass of impact dropped from 400mm above the impacted surface.
05	Protected against 0.25kg mass of impact dropped from 280mm above the impacted surface.		

REFERENCE STANDARDS

• SASO 2902	Energy efficiency, functionality and labeling requirements for lighting products (part 2).
• SASO 2927:2019	Energy efficiency functionality and labeling requirements for lighting products-part 3: Street lighting.
• IES 610000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits for harmonic current emissions (equipment input current 16 A per phase).
• IEC 62471	Photo biological Safety of Lamps and Lamp Systems.
• IEC TR 62778	Application of 62471 to light sources and luminaires (blue light).
• IEC 60598-1/2017	Luminaires - Part 1: General requirements and tests.
• IEC 61547:2009	Equipment for general lighting purposes - EMC immunity requirements.
• IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems Requirements and test methods.
• IES LM-79-08	Electrical and photometric measurements of Solid State lighting products.
• IES LM-80-08	Measuring lumen maintenance of LED Light sources.
• IES LM-82-12	Method for characterisation of LED light Engines and Integrated LED lamps for Electrical properties as a function of the temperature.
• IES LM-84-14	Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires.
• ISTMT	In-SITU Temperature Measurement Testing.
• IES TM21-11	Projecting long term lumen maintenance of LED light sources.
• IES TM28-14	Projecting long-term luminous flux maintenance of LED lamps and luminaires.
• IEC 60529:2013	Degrees of protection provided by enclosures (IP Code).
• ISO 9227:2017	Corrosion tests in artificial atmospheres Salt spray tests.
• ISO 4628-2:2016	Paints and varnishes - Evaluation of degradation of coatings Designation of quantity and size of defects, and of intensity.



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