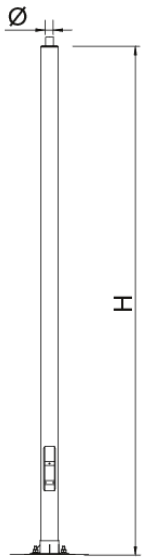
BENITO
–Street Lighting

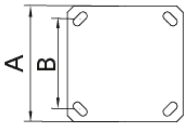
Pole
Zebra
ACZ+ALFUM

ZEBRA light point, the solution for the lighting of pedestrian crossings, designed to reduce the number of pedestrian impacts and increase security. Thanks to the **ZEBRA**, people don't remain in half-light and are adequately lit, thus avoiding possible accidents caused by an incorrect lighting. It also ensures that the driver isn't dazzled as the light is pointed at pedestrians. Moreover, these new solutions allow to light up a part of the pavement so that the driver sees the pedestrian.

POLE:

Pole manufactured in S-235 JR hot-galvanized steel, with lateral Ø60 mm fixing.





-	H	Ø	A	B	T
CILINDRICA 40	4000	60	300	200	M18X500
CILINDRICA 50	5000	60	300	200	M18X500
CILINDRICA 70	7000	60	400	300	M22X500
CILINDRICA 80	8000	60	400	300	M18X500

Project sheet | CAD | Catalogue | HD image

The constant improvement and evolution of our products may result in some modifications of the technical specifications and characteristics of the products without prior notice.

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Projects:

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ALFUM

Luminaire

FUSION M

A complete road luminaire family at the forefront of LED technology to offer excellent lighting performance thanks to its aerodynamic design, which increases the dissipation surface. Comprehensive range available in three sizes with extensive optical and light distributions from 20W up to 240W. Housing composed of two parts that can be disassembled without tools. Ready for any smart lighting control solutions.

MAIN FEATURES:

- High efficacy. Up to 145 lm/W net
- 3 different sizes. From 20W to 240W
- Double compartment: driver and LED module
- Tool-less opening - 18 light distribution curves
- Zhaga Standard (Book 15)
- Ready 4IoT. Ready for any intelligent lighting control solution

APPLICATIONS:

- Cycle lanes and ≤30km/h areas
- Urban and residential areas
- Avenues
- Industrial areas and car parks
- Interurban roads and roundabouts
- Motorways and highways

DETAILS:

Project sheet | CAD | Catalogue | Mounting instructions | BIM | HD image

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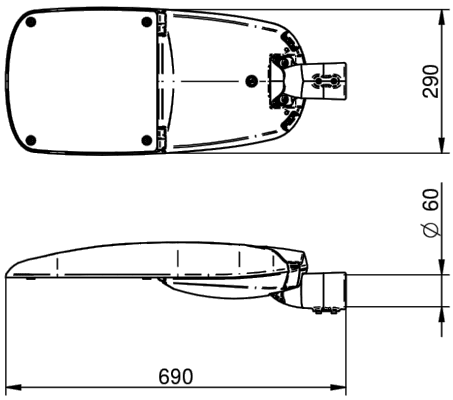
SPECIFICATIONS :

Housing material:	High pressure die-cast aluminium EN AC-43000, EN AC-43100, EN AC-43400, EN AC-44100, EN AC-47100 according to the UNE EN 1706 standard
Diffuser (optic system enclosure):	5mm tempered safety glass. UV filter
Fixing elements:	Stainless steel 18/8 - AISI 304
Housing:	Double compartment: driver / LED module
Sealing gaskets:	Silicone foam
IP rating (luminaire):	IP66
IP rating (optic system):	IP66
IK rating (impact resistance):	IK10
LEDs thermal dissipation:	Thermal dissipation through finless luminaire body, without conductive fluids. Passive convection dissipation ensuring thermal contact with the LED modules through a high-conductivity thermal transfer material
Anti-condensation valve:	Pressure-balancing valve to ensure moisture release, avoid condensation and maintain the luminaire IP tightness
Finish:	Polyester powder paint coating, electrostatically sprayed and sublimated in the oven. Resistant to corrosion
Colour:	RAL 9022. Optional: other colours
Mounting:	Post-Top Ø60mm
Tilt range:	From -15º to +15º
Maintenance:	Easy, tool-less opening. Modular concept for easy component replacement: LEDs, drivers, SPD
Recommended mounting height:	6 - 8 m
Driver:	Constant current adjustable and programmable driver. Embedded in the luminaire, pre-wired on a galvanised steel plate
Driver control:	Dimmable driver 0-10V. Programmable on 5 levels. Optional: DALI 2. Includes the characteristics of Wireless, AOC, MTP, DTL
Dimming options:	- Autonomous multiple-level dimming or virtual midnight - Ready4IoT - Dimming by main voltage - Line switch
Surge protection device (SPD):	Type 2, 10kV and 20kA transient surge protector. Series connection with thermofuse disconnector for a more effective protection at the end of its service life

DRAWING:



INSTALLATION:

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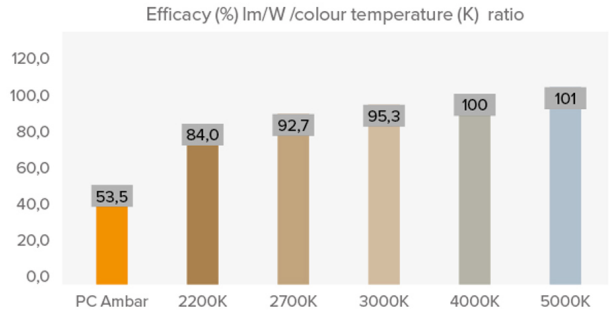
AMBAR 2200K 2700K 3000K 4000K 5000K

lm/€ CRI >70% TRIPLE PROTECTION

TECHNICAL DATA:

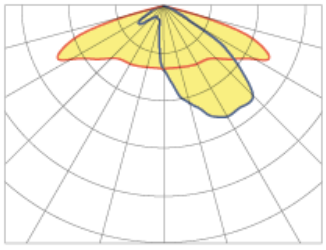
	REF.	Nº LEDs	Power W	I Driver mA	Real luminous flux (T) =85ºC) Flux lm	Real luminous flux (T) =85ºC) Efficacy lm/W	Initial luminous flux (T) =25ºC) Flux lm	Initial luminous flux (T) =25ºC) Efficacy lm/W
FUSION M	ALFUM80	32	60	563	8520	142	9713	162
		32	80	750	11193	140	12760	160
	ALFUM120	48	100	625	14066	141	16035	160
		48	120	750	16800	140	19152	160

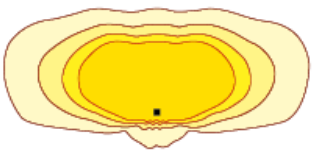
LEDs: 5050
Nominal efficacy LED: 172 lm/W.
Maximum LED current: 1000 mA.
LED current = Driver current/2
Lifetime L90B10: >100,000 hours.
Luminous flux and efficacy at 4000ºK and CRI>70.
Luminous flux tolerance < +/-3%.
Values may be subject to change due to LED binning.



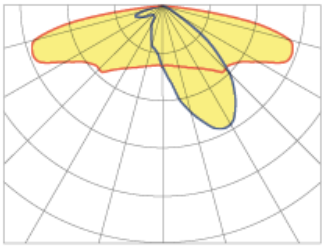
PHOTOMETRY:

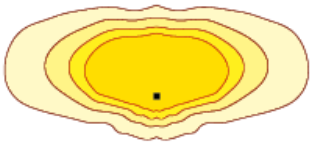
Super-Extensive Asymmetric (AE)



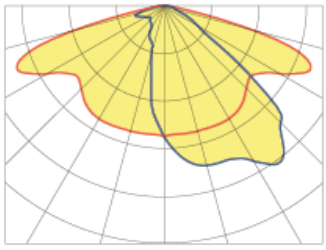


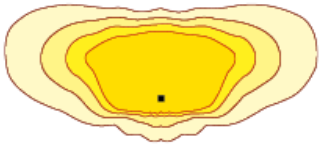
Super-Extensive Asymmetric (A2)



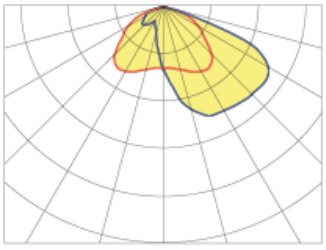


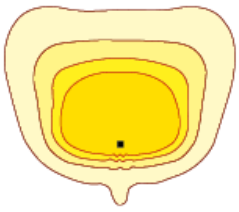
Extensive Asymmetric (AM)





Asymmetric (A4)





*Check the other available light distribution curves

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LEDs MODULE:

LEDs module:	BENITO-NOVATILU Zhaga standard for 8, 12 and 16 LEDs. Check colour temperature, CRI and light distributions
Replaceable module:	Yes
LED:	5050
Number of LEDs:	32-48
PCBs format:	2 or 3 Zhaga (Book 15) 2x4
LED nominal efficacy:	172
Colour temperature:	PC Amber, 2K2, 2K7, 3K, 4K, 5K
Colour rendering index CRI:	>70 (optional >80)
Average LED useful time L90B10:	L90B10 >100,000 hours

OPTIC SPECIFICATIONS:

Optic system:		PMMA lenses 2x2
Light distributions:		18 light distribution curves
Upward light output ratio ULOR:		0%
Downward light output ratio DLOR:		100%
Glare index:		Between D5 and D6 (depending on the light distribution)
Luminous intensity category:		Between G*4 and G*6 (depending on the light distribution)
Luminous flux CIE nº3:		>95%
Photobiological safety:		RG0 (exempt of risk)
Initial luminous flux Tj=25ºC (up to):	lm	19152
Initial luminaire efficacy Tj=25ºC (up to):	lm/W	160
Real luminous flux Tj=85ºC (UNE EN 13032-4) (up to):	lm	16800
Real luminaire efficacy Tj=85ºC (UNE EN 13032-4) (up to):	lm/W	140

ELECTRIC SPECIFICATIONS:

Nominal maximum power (LEDs):		108
Maximum power consumed (luminaire):	W	120
Power range:	W	60 - 120W
Maximum current of LED:	mA	<400 (<50% Imax)
Power supply protection classes IEC:		Class I and II
Surge protection device (SPD):		Type 2, 10kV and 20kA transient surge protector. Series connection with thermofuse disconnector for a more effective protection at the end of its service life
Common and differential mode protection (SPD) Udc:	kV	10 with optional NTC
Max current (8/20) (SPD):	kA	20
Thermal phase disconnection (SPD):		Yes
Input voltage:	Vac	220-240
Input voltage (max rate):	Vac	198-264
Input frecquency:	Hz	47-63
Starting current:	A	<65
Duration of the starting voltage peak:	ms	<0.3
Driver efficacy:		>90%
Power factor 100% consumption:		>0.98
Power factor 50% consumption:		>0.95
Total harmonic distortion (THD):		<10
Power consumption on standby mode:	W	<0.4
Energy class:		A++ IPEA>1.15

OPERATING CONDITIONS:

Average LED useful time L90B10:		>100,000
Average driver useful life to Tp <70ºC:		100,000
Average luminaire useful life L80B10 (TM-21):		72,167
Ambient temperature (Ta):	ºC	From -35°C to +50°C
Aerodynamic resistance (CxS):	m2	0.042
Vibration test (15Hz 3 axis):		
Wind load test:		
Guarantee:	years	5 years (extensible up to 10 years)

PACKAGING DIMENSIONS:

Net weight	kg	8.5
Gross weight	kg	
Luminaire dimensions (LxWxH)	mm	690x300x140
Packaging dimensions (LxWxH)	mm	
Pieces per box		1
Quantity per container 20ft		
Quantity per container 40ft		

CERTIFICATES:

Security certificates:	EMC certificates:	Other certifications:
EN 60598-1 / EN 60598-2-3 / EN 62493 / IEC 62471	EN 55015 / EN 61547 / EN 61000-3-2 / EN 61000-3-3 / EN 61347-2-13 / EN 61347-1 / EN 62384	EN 13032-4

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