COMPACT HEAVY DUTY LED FLOODLIGHT

Marlin



Shown: Marlin AC, titanium-based e-coating, 14° lens, high tensile 316L bracket.

CE · IP69K · IK10 · Class II · C5 ISO 9223 · Ta −45 … +50 °C · 90–305 / 180–528 VAC · 24 VDC · DALI-2 · 0–10 V · PWM · NFC · Vibration 6 G · Crane Light Director · 5-year warranty

18,000 lumens at 5.5 kg in a housing of 235 × 215 × 90 mm. The Marlin is the luminaire for the positions where a work lamp is not enough and a Barracuda or an Orca does not fit, and it is the largest luminaire the Crane Light Director carries.

LUMINOUS FLUX	POWER	EFFICACY
18,000 lm	120 W	150 lm/W
WEIGHT	**INGRESS**	**IMPACT**
5.5 kg	IP69K	IK10

Values apply to the standard version at 6500 K, Ta 25 °C, including lens losses and driver consumption. 6500 K delivers the same luminous flux as 4000 K.

WHY IT IS SPECIFIED

It is what the Crane Light Director carries at full output. The system takes the Goby Mini, the Goby, the Piranha, the DarkLicht S and the Marlin. A twin Marlin configuration reaches 33,800 lm from the boom.

5.5 kg on a moving structure. A crane luminaire accelerates and stops all day. Mass on a jib or a trolley is a fatigue load on the structure and on the luminaire itself.

Heavy duty class in a compact format. IK10 at the front cover, IP69K, corrosion class C5 and the full JEL optic set, in a housing that fits where a floodlight physically cannot.

WHERE IT IS USED

- Mobile crane booms, on the Crane Light Director
- Tower crane jibs and cab positions
- Overhead and gantry crane runways
- Ship to shore crane trolley lighting
- Machine mounted and mobile equipment lighting
- Offshore and maritime work decks
- Service platforms and gantries
- Steel, bulk handling and production plant
- Technical installations and service points
- Confined mounting positions on heavy plant
- Workshop crane bays
- Supporting positions alongside larger floodlights

VERSIONS

	Marlin AC	Marlin DC
Article base code	MAAC01	MADC01
Luminous flux	18,000 lm	16,900 lm
Power	120 W	120 W
Efficacy	150 lm/W	141 lm/W
Supply	90–305 / 180–528 VAC	20–35 VDC
Driver	Remote TLD160	On board
Weight incl. bracket	5.5 kg	5.5 kg

There is no stainless steel and no high temperature version of the Marlin. For 316L see the **Barracuda SS** or the **Snapper SS**, and for high ambient temperatures the **Barracuda HT** or the **Snapper HT**.

Light output and optics

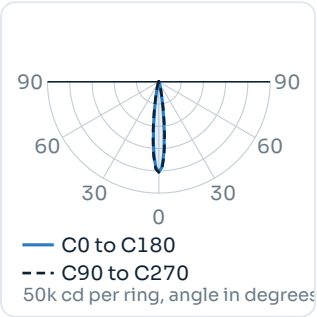
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

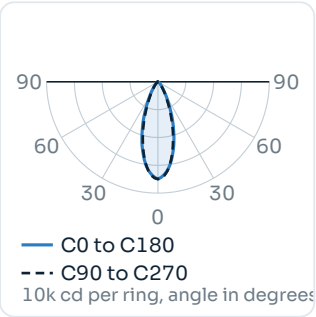
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Very long throw: masts, booms, distant targets
38°	Medium, symmetric	37°	69°	Long throw: yards, decks, machine areas
69°	Wide, symmetric	72°	103°	Wide cover at short range: platforms, work zones
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: roadways, edges
No lens (.NOP)	Very wide, symmetric	136°	168°	Close range over a very wide field

The beam angle is the full angle between the two directions where the intensity has fallen to 50 % of the peak. The field angle uses 10 %. Both are read from the IES files, available per optic on the product page. Lens combinations within one luminaire are possible, and the optic is part of the order code as a suffix, for example .38.

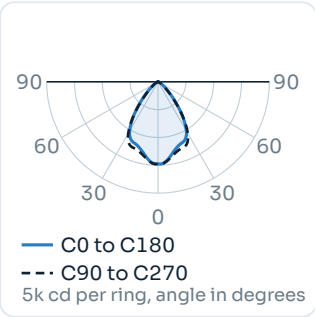
LIGHT DISTRIBUTION



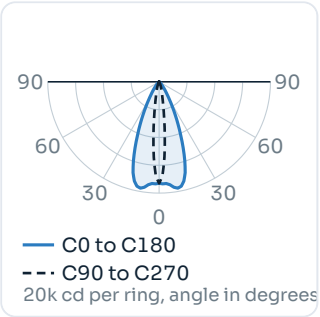
14° spot



38° medium



69° wide



14° × 46° flare

OBTRUSIVE LIGHT

ULOR at 0° tilt	**0 %**
Amber 2200 K	Available on every optic, for light sensitive surroundings
Bi-colour 4000 K with amber 2200 K	Switchable in operation, for fog, dust and night regimes

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a site borders a residential area or a protected zone, and it is the starting point for any assessment against NEN-EN 12464-2 and the NSVV guidance on obtrusive light. Where the site condition demands a cut off optic rather than a controlled floodlight, see the DarkLicht range.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 5000 K, 4000 K, 2700 K, amber 2200 K
Flux at 6500 K	Identical to 4000 K
Bi-colour	4000 K with amber 2200 K, switchable in operation
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 360,000 h at 50 °C

Full specification

All values apply to the standard configuration at 25 °C ambient, including lens losses and driver consumption. A hyphen means the entry does not apply to that version.

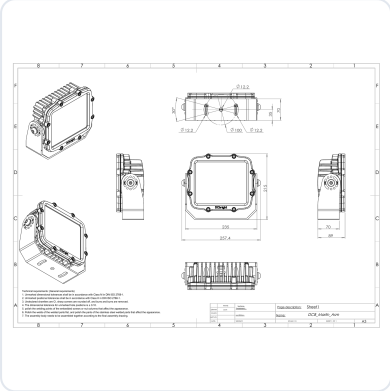
	Marlin AC	Marlin DC 24 V
PERFORMANCE		
Luminous flux	18,000 lm	16,900 lm
Power consumption	120 W	120 W
Efficacy	150 lm/W	141 lm/W
ELECTRICAL AND DRIVER		
Supply voltage range	90–305 VAC or 180–528 VAC via TLD160, 50/60 Hz	20–35 VDC, 24 V nominal
Current draw	1.0 A at 120 V · 0.43 to 0.55 A at 220 to 277 V · 0.25 to 0.32 A at 380 to 480 V	5.0 A at 24 V
Power factor at full load	> 0.9 at 70 to 100 % load	-
THD at full load	< 15 % at 70 to 100 % load	-
Inrush current at 220 V	60 A peak, T50 250 µs	-
Luminaires per MCB	B16 8 · C16 13 · C25 21 · D16 15	-
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)	-
Dimming	0–10 V, PWM, DALI-2, or over NFC	On request
Driver	Remote TLD160, 225 × 68 × 33.5 mm, 1,100 g. Fits the DRB-1	DC drivers on board
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 280,000 h. Replaced without opening the luminaire	-
CONSTRUCTION		
Housing	Cast aluminium, less than 0.08 % copper	
Surface finish	Conversion layer plus 2-layer titanium-based e-coating	
Colour	Titanium Black	
Bracket	High tensile 316L stainless steel, adjustable through ±240° in 30° steps	
Front	Polycarbonate IK10 as standard, chemically hardened glass IK09 on request	
Protection class	Class II	
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately	
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)	
Corrosion class	C5 industrial and marine (ISO 9223)	
Vibration and shock	6 G at resonant frequency (IEC 60068-2-6), shock tested to IEC 60068-2-27	
DURABILITY AND DIMENSIONS		
Ambient temperature	−45 to +50 °C	−45 to +50 °C
LED service life	TM-21 L90B05 > 360,000 h at 50 °C, so the driver is the wear part	
Cable and termination	H07BQ-F, 4 cores (2 × 1.5 mm² + 2 × 0.5 mm²), 2.0 m	H07BQ-F, 2 cores (2 × 1.5 mm²), 2.0 m
Dimensions	235 × 215 × 90 mm including bracket	
Weight	5.5 kg incl. bracket	5.5 kg incl. bracket
Warranty	5 years on the complete luminaire	

Power is a driver setting. Every AC version can be ordered programmed to a lower wattage by adding the wanted power as a suffix to the article code. DC versions run at a fixed constant current, so another power level there is a custom build. High voltage DC between 250 and 740 V is available on request.

Mechanics, mounting and driver

All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

STANDARD BRACKET



Incl. bracket	235 × 215 × 90 mm
Weight	5.5 kg with bracket
Material	High tensile 316L stainless steel
Adjustment	±240° in 30° steps
Mounting	Machine frame, jib, trolley or platform
Related	Crane Light Director, separate datasheet

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Luminaires	Goby Mini, Goby, Piranha, DarkLicht S and Marlin
Maximum output	33,800 lm with a twin Marlin
Control	From the cabin, over a LoRa controller or a cabin switch
Supply	12 and 24 V DC from the machine, or 230 and 400 V AC from site power
Rotation	360°, unlimited

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Crane Light Director	Steerable boom system, separate datasheet
Safety cable	Optional, supplied with the luminaire
Cable and retrofit brackets	Lengths beyond 2.0 m and structure specific brackets on request
Glare control on a crane	DarkLicht S on the Crane Light Director

REMOTE DRIVER

Type	TLD160, 180–528 VAC or 250–740 VDC
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 280,000 h at 75 °C case
Size and weight	225 × 68 × 33.5 mm, 1,100 g
Enclosure	Bare as standard, or in the DRB-1

The LEDs outlive three drivers. The driver sits outside the luminaire and is replaced without opening the housing, so a driver fault is a ground level job instead of a lift and a dismantled luminaire.

DRB DRIVER BOXES



Use	Optional housing for the remote driver, mounted outside the wash-down zone
DRB-1	One driver up to 320 W. 276 × 194 × 86.5 mm, 4.2 kg, IP66 and IP67
DRB-2	Systems up to 2,000 W. 441 × 290 × 145 mm, 10.4 kg, IP66 and IP67
Ingress protection	IP66 and IP67
System weight	9.7 kg, luminaire with bracket and DRB-1

Ordering, standards and documents

ORDER CODE

Example **MAAC01-65K.38**

Marlin, AC, 6500 K, 38° optic

MAAC01	AC, 90–305 or 180–528 VAC, remote TLD160
MADC01	DC, 20–35 VDC, drivers on board
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
BIC	Bi-colour 4000 K with amber 2200 K
.14 · .38 · .69 · .14x46 · .NOP	Optic suffix, .NOP is supplied without optics

The optic suffix follows the colour temperature and a lower wattage is ordered as an extra suffix. Bracket, control protocol and cable length are confirmed at order.

COMBINATIONS

Optics within one luminaire	Possible
Amber 2200 K with flare optic	Possible
Bi-colour with DALI-2	Possible
Crane Light Director	AC and DC
316L housing	Not available, see the Barracuda SS
High temperature	Not available, see the Barracuda HT

STANDARDS AND VERIFICATION

Subject	Standard	Verification
Luminaire safety	IEC/EN 60598-1, -2-5	In-house test
EMC emission and immunity	EN 55015, EN 61547	Third party test
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27 · ISO 9223 class C5, industrial and marine	In-house test
Photometry	IES LM-79, IES files per optic	In-house test
Substances	RoHS, REACH	Self-declaration

BEFORE YOU ORDER

A sample luminaire to hang before you commit to a project quantity.

Five years warranty on the complete luminaire.

A DIALux calculation from our engineers, on your site drawing.

PRODUCT PAGE

IES files and revision history, DXF and STEP on request, and project references.
jelproducts.nl/en/products/marlin

WHERE IT EARNS ITS PLACE

The Marlin earns its place in the positions that are too small for a floodlight and too important for a work lamp. On a crane boom, a machine frame or a service platform the available space is fixed and the light requirement is not negotiable. The Marlin is dimensioned for exactly that gap.

Notes. Values are for the standard configuration; a bi-colour or high-CRI build changes the luminous flux and the quotation states the figure that applies. Luminaires per MCB is the manufacturer figure for ABB S200 at 220 V, a guide for engineering and not a substitute for the installation calculation. North American models on request. The JEL range is not ATEX or Ex certified.