JEL PRODUCTS
SUSTAINABLE | LIGHTING | SOLUTIONS

COLLECTED TECHNICAL DATASHEETS

Barracuda

The reference floodlight of the range, in cast aluminium, in solid 316L and in a high temperature build to +120 °C. One housing, one bracket line and one accessory line across all three.

DATASHEETS	OUTPUT RANGE	POWER	TYPE
3	20,600 to 44,100 lm	120 to 320 W	Industrial LED floodlight



Barracuda | Barracuda SS | Barracuda HT

Contents

Every datasheet in this document has the same five sections: what it is and where it is used, the light output and the optics, the full specification, the mechanics and the driver, and the ordering information. The page numbers run through the whole document.

THE DATASHEETS IN THIS DOCUMENT

2	**Barracuda**	**44,100 lm luminous flux · 320 W power** The wide-body heavy-duty floodlight for large areas: 44,100 lumens at 320 W out of one cast aluminium housing, rated IP69K and IK10.
7	**Barracuda SS**	**44,100 lm luminous flux · 320 W power** The Barracuda in solid 316L stainless steel: 44,100 lumens at 320 W, identical light and identical optics to the cast aluminium version, in a.
12	**Barracuda HT**	**20,600 lm luminous flux · 120 W power** The floodlight for oven zones and heavy industry, and the proven choice at Tata Steel and Rockwool: 20,600 lumens at 120 W, rated for +120 °C.

HOW TO READ THIS DOCUMENT

This is the complete set for one product. Every version has its own datasheet with the same five sections, so a specification can be compared line by line between the versions without opening a second document.

The photometry is measured per optic and the IES files are on the product page. Where a figure depends on the build, the specification states the condition next to it rather than in a footnote.

WHAT IS NOT IN THIS DOCUMENT

Crane Light Stabilizer	The bracket that holds the aim while the boom moves. See the Floodlights collection
Lighter alternative	The Shark, at 50,000 lm in a smaller housing

INDUSTRIAL LED FLOODLIGHT

Barracuda



Shown: Barracuda 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 · ULOR 0 % · 5-year warranty

The wide-body heavy-duty floodlight for large areas: 44,100 lumens at 320 W out of one cast aluminium housing, rated IP69K and IK10. For container terminals, quays, yards and process plants where output and mechanical robustness weigh heavier than the last kilogram.

LUMINOUS FLUX	POWER	EFFICACY
44,100 lm	320 W	138 lm/W
INGRESS	**IMPACT**	**BEAM ANGLES**
IP69K	IK10	14 to 69°

Values apply to the AC 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

Serviceable driver. The remote driver is the wear part and is replaced without opening the luminaire, so a driver fault is a ground level job.

10.1 kg for 44,100 lm. Lighter brackets, smaller mast loads and a faster installation than any comparable output in this class.

One housing, four optics. Beam angles can be mixed within one project and even within one luminaire.

WHERE IT IS USED

- Container terminals and stacking yards
- Ship to shore and RTG crane booms
- Quays, jetties and ro-ro ramps
- Bulk terminals and stockpiles
- Shipyards and dry docks
- Process plants and tank farms
- Outdoor storage and log yards
- Recycling and waste transfer sites
- Heavy vehicle and equipment yards
- Perimeter and high mast area lighting

VERSIONS

	Barracuda AC	DC 24 V
Article base code	BAAC01	BADC01
Luminous flux	44,100 lm	40,800 lm
Power	320 W	320 W
Efficacy	138 lm/W	128 lm/W
Supply	90–305 / 180–528 VAC	20–35 VDC
Driver	Remote	On board
Weight incl. bracket	10.1 kg	10.1 kg

Light output and optics

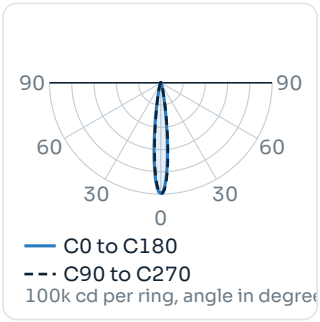
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

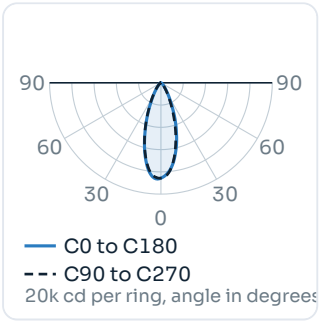
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Very long throw, beyond 100 m: high masts, crane booms, stockpiles
38°	Medium, symmetric	37°	70°	Long throw, typically beyond 30 to 35 m: yards, quays, terminals
69°	Wide, symmetric	69°	100°	Up to around 35 m: decks, aprons, platforms, work areas
14° × 46°	Flare, asymmetric	13° × 46°	31° × 70°	Throws far forward and stays wide across: quay edges, roadways

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.

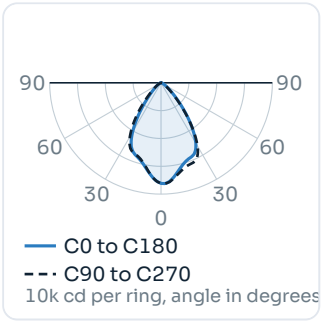
LIGHT DISTRIBUTION



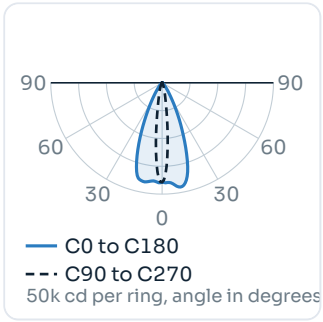
14° spot



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, for sites with a night regime

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a terminal 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.

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
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
IES files	Download per optic, product page

Full specification

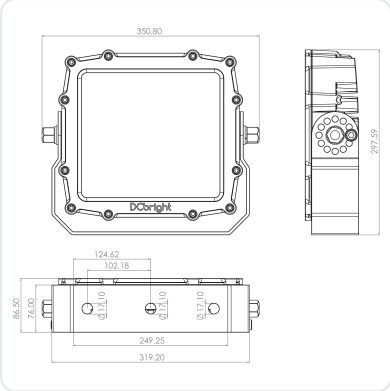
All values apply to the standard configuration at 25 °C ambient, including lens losses and driver consumption. A hyphen means the entry does not apply to that version.

	Barracuda AC	Barracuda DC 24 V
PERFORMANCE		
Luminous flux	44,100 lm	40,800 lm
Power consumption	320 W	320 W
Efficacy	138 lm/W	128 lm/W
ELECTRICAL AND DRIVER		
Supply voltage range	90–305 VAC via BLD320, or 180–528 VAC via TLD320, 50/60 Hz	20–35 VDC, 24 V nominal
Current draw	BLD320: 2.9 A at 120 V · 1.5 A at 220 V. TLD320: 1.3 A at 277 V · 0.75 A at 480 V	13.4 A at 24 V
Power factor at full load	> 0.95 with BLD320, 0.96 measured at 230 V · > 0.9 with TLD320	-
THD at full load	< 15 % at 60 to 100 % load	-
Inrush current at 220 V	BLD320: 31.2 A peak, T50 1.3 ms · TLD320: 64 A peak, T50 400 µs	-
Luminaires per MCB	BLD320: B16 2 · C16 4 · C25 7 · D16 8. TLD320: B16 4 · C16 7 · C25 11 · D16 8	-
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)	-
Leakage current	0.7 mA max (IEC 60598-1)	-
Dimming	0–10 V, PWM, DALI-2, or over NFC	On request
Driver	Remote BLD320 or TLD320, 225 × 68 × 38.5 mm, 1,120 or 1,150 g	DC drivers on board
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 280,000 h, Tc −40 to +90 °C. 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, fully rotatable through 360° in 30° steps	
Front	Polycarbonate IK10 as standard, impact-resistant glass IK09 on request	
Protection class	Class II	
Ingress protection	IP66, IP67, IP68 to 5 m and IP69K, each class tested separately, so IP69K does not imply IP68	
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 × 2.5 mm² + 2 × 0.5 mm²), 2.0 m, pre-fitted with free wire ends	H07BQ-F, 2 cores (2 × 2.5 mm²), 2.0 m
Dimensions	Luminaire 320 × 290 × 90 mm · with standard bracket 351 × 298 · with rear mount 331 × 297 × 338 (w × d × h)	
Weight	10.1 kg incl. bracket · 11.25 kg with loose driver · 14.3 kg with DRB-1	10.1 kg incl. bracket
Wind load area, frontal	0.104 m² standard bracket · 0.112 m² rear mount · 0.026 m² side view. Cd 1.2 gives Cd·A 0.125 and 0.134 m². Warranty 5 years	

Mechanics, mounting and driver

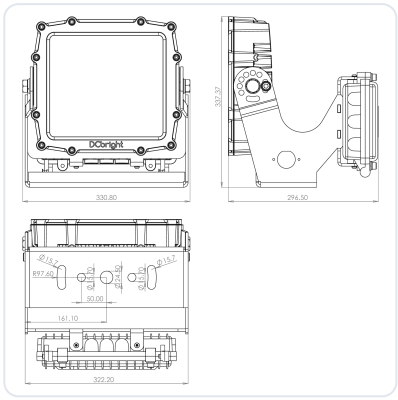
All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

STANDARD BRACKET



Luminaire	320 × 290 × 90 mm
Incl. bracket	350.80 × 297.59 mm
Mounting foot	319.20 × 86.50 mm
Fixing holes	3 × Ø 17.10 mm
Hole centres	249.25 mm between outer holes
Adjustment	360° in 30° steps

REAR MOUNT BRACKET



Availability	AC version, flat against a structure
Incl. bracket	331 × 297 × 338 mm (w × d × h)
Mounting plate	322.20 mm wide
Fixing holes	2 × Ø 15.70 mm at ± 50.00 mm from centre
Slots	2 × Ø 15.7 obround on R 97.60 mm
Cable entry	Ø 24.50 mm central

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Rear mount bracket	Option on the AC version
Retrofit bracket	On request, codes issued per structure
Boom and tenon mount	On request
Safety cable	Optional, supplied with the luminaire
Cable	Lengths beyond 2.0 m on request, same H07BQ-F type
Crane Light Stabilizer	AC and DC, for crane boom mounting
Crane boom lighting frame	AC version

REMOTE DRIVER

Type	BLD320 for 90–305 VAC · TLD320 for 180–528 VAC
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 × 38.5 mm, 1,120 or 1,150 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 the 320 W TLD320 which is the largest that fits. 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	14.3 kg, luminaire with bracket and DRB-1

Ordering, standards and documents

ORDER CODE

Example **BAAC01-65K.38**

Barracuda, AC, 6500 K, 38° optic

BAAC01	AC, 90–305 or 180–528 VAC, remote driver
BADC01	DC, 20–35 VDC, drivers on board
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
BI	Bi-colour 4000 K with amber 2200 K
.14 · .38 · .69 · .14x46	Optic suffix, selected from the light calculation

The optic suffix follows the colour temperature, so one project can carry several beam angles. Bracket type, control protocol, cable length and the Ra 80 or Ra 90 option are confirmed at order and are not part of the code.

COMBINATIONS

Optics within one luminaire	Possible
Amber 2200 K with flare optic	Possible
Bi-colour with DALI-2	Possible
Ra 90 with 6500 K	Possible
Rear mount bracket	AC version only
DC version with dimming	On request

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 to 5 m, IP69K	In-house test
Impact	IEC 62262, IK10 with polycarbonate	In-house test
Vibration	IEC 60068-2-6, 6 G at resonant frequency	In-house test
Shock	IEC 60068-2-27	In-house test
Corrosion	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/barracuda

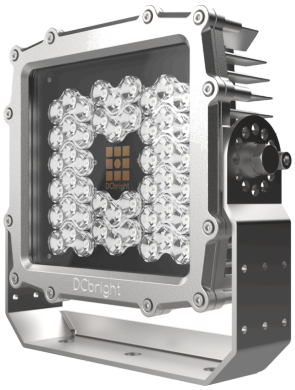
WHERE IT EARNS ITS PLACE

Where a work light or a lightweight floodlight becomes the weak link, the Barracuda keeps working: a cast housing under a titanium-based e-coating, a glass or polycarbonate front and a bracket in high tensile 316L. For permanent salt exposure, choose the Barracuda SS.

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. The number of luminaires per MCB is the manufacturer figure for ABB S200 at 220 V, a guide for the engineering phase and not a substitute for the installation calculation. Packaging dimensions depend on the order quantity and are stated at quotation. North American models on request.

INDUSTRIAL LED FLOODLIGHT

Barracuda SS



Shown: Barracuda SS, 316L stainless steel, 14° lens, high tensile 316L bracket.

CE · IP69K · IK10 · Class II · 316L stainless steel · C5 and CX ISO 9223 · Ta −45 … +50 °C · 90–305 / 180–528 VAC · 24 VDC · DALI-2 · 0–10 V · PWM · NFC · 20-year housing warranty

The Barracuda in solid 316L stainless steel: 44,100 lumens at 320 W, identical light and identical optics to the cast aluminium version, in a housing that keeps working where corrosion is the deciding factor. For fishing and lift vessels, offshore platforms, chemical plants and quays under permanent salt exposure.

LUMINOUS FLUX	POWER	EFFICACY
44,100 lm	320 W	138 lm/W
INGRESS	**IMPACT**	**BEAM ANGLES**
IP69K	IK10	14 to 69°

Values apply at 6500 K, Ta 25 °C, including lens losses and driver consumption. 4000 K delivers the same luminous flux as 6500 K. Photometry is identical to the cast aluminium Barracuda.

WHY IT IS SPECIFIED

Twenty years of warranty on the housing. Solid 316L, electrolytically polished. Corrosion resistance does not depend on a finish staying intact, so a scratch from a container corner is cosmetic.

Same light, same optics. Identical LED engine and the same four optics as the aluminium Barracuda, so a mixed site keeps one light calculation.

Serviceable driver. The remote driver is the wear part and is replaced without opening the luminaire.

WHERE IT IS USED

- Fishing vessels and lift vessels
- Offshore platforms and jack-ups
- Quays with permanent salt exposure
- Chemical plants and tank farms
- Fertiliser and salt handling
- Waste water and sludge treatment
- Fish processing and cold stores
- Dredging and marine construction
- Shipyards and dry docks
- Container terminals in coastal wind

COMPARED WITH THE CAST ALUMINIUM BARRACUDA

	Barracuda SS	Barracuda
Article base code	BASS01	BAAC01
Housing	316L stainless steel	Cast aluminium, e-coated
Luminous flux	44,100 lm	44,100 lm
Power and efficacy	320 W · 138 lm/W	320 W · 138 lm/W
Weight incl. bracket	16.0 kg	10.1 kg
Corrosion class	C5 and CX (ISO 9223)	C5 (ISO 9223)
Warranty	20 years housing, 5 years electrical	5 years

Light output and optics

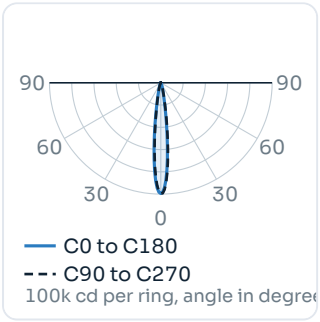
Photometry is identical to the cast aluminium Barracuda and is measured in house to IES LM-79. The IES files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

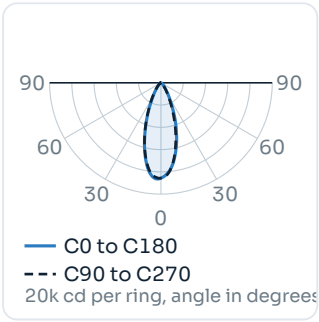
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Very long throw, beyond 100 m: high masts, crane booms, stockpiles
38°	Medium, symmetric	37°	70°	Long throw, typically beyond 30 to 35 m: yards, quays, terminals
69°	Wide, symmetric	69°	100°	Up to around 35 m: decks, aprons, platforms, work areas
14° × 46°	Flare, asymmetric	13° × 46°	31° × 70°	Throws far forward and stays wide across: quay edges, roadways

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.

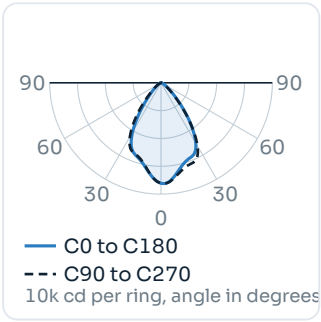
LIGHT DISTRIBUTION



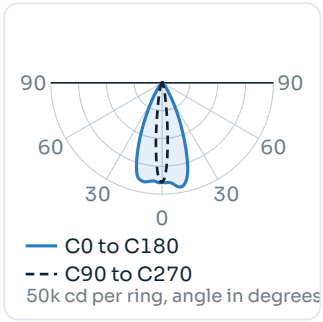
14° spot



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, for sites with a night regime

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a terminal 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.

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
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
IES files	Download per optic, product page

Full specification

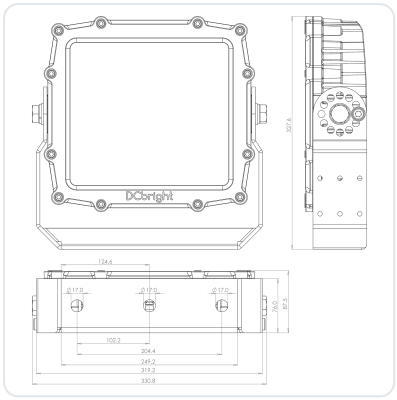
All values apply to the standard configuration at 25 °C ambient, including lens losses and driver consumption.

	Barracuda SS, AC	Barracuda SS, DC 24 V
PERFORMANCE		
Luminous flux	44,100 lm	40,800 lm
Power consumption	320 W	320 W
Efficacy	138 lm/W	128 lm/W
ELECTRICAL AND DRIVER		
Supply voltage range	90–305 VAC via BLD320, or 180–528 VAC via TLD320, 50/60 Hz	20–35 VDC, 24 V nominal
Current draw	BLD320: 2.9 A at 120 V · 1.5 A at 220 V. TLD320: 1.3 A at 277 V · 0.75 A at 480 V	13.4 A at 24 V
Power factor at full load	> 0.95 with BLD320, 0.96 measured at 230 V · > 0.9 with TLD320	-
THD at full load	< 15 % at 60 to 100 % load	-
Inrush current at 220 V	BLD320: 31.2 A peak, T50 1.3 ms · TLD320: 64 A peak, T50 400 µs	-
Luminaires per MCB	BLD320: B16 2 · C16 4 · C25 7 · D16 8. TLD320: B16 4 · C16 7 · C25 11 · D16 8	-
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)	-
Leakage current	0.7 mA max (IEC 60598-1)	-
Dimming	0–10 V, PWM, DALI-2, or over NFC	Custom
Driver	Remote BLD320 or TLD320, 225 × 68 × 38.5 mm, 1,120 or 1,150 g	DC drivers on board
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 280,000 h, Tc −40 to +90 °C. Replaced without opening the luminaire	-
CONSTRUCTION		
Housing	316L stainless steel	
Surface finish	Electrolytically polished	
Colour	Stainless steel	
Bracket	High tensile 316L stainless steel, fully rotatable through 360° in 30° steps	
Front	Polycarbonate IK10 as standard, impact-resistant glass IK09 on request	
Protection class	Class II	
Ingress protection	IP66, IP67, IP68 to 5 m and IP69K, each class tested separately, so IP69K does not imply IP68	
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)	
Corrosion class	C5 and CX (ISO 9223). 316L is CRC III per EN 1993-1-4, PREN approximately 24	
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 × 2.5 mm² + 2 × 0.5 mm²), 2.0 m, pre-fitted with free wire ends	H07BQ-F, 2 cores (2 × 2.5 mm²), 2.0 m
Dimensions	Luminaire 320 × 290 × 90 mm · with standard bracket 331 × 328 · with rear mount 412 × 295 × 328 (w × d × h)	
Weight	14.3 kg luminaire · 1.7 kg bracket · 16.0 kg incl. bracket · 17.2 kg with loose driver	
Wind load area, frontal	0.108 m² standard bracket · 0.135 m² rear mount · 0.026 m² side view. Cd 1.2 gives Cd·A 0.130 and 0.162 m²	
Warranty	20 years on the housing. 5 years on the electrical components and the seals	

Mechanics, mounting and driver

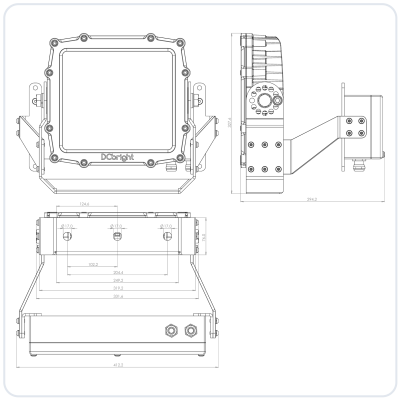
All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

STANDARD BRACKET



Luminaire	320 × 290 × 90 mm
Incl. bracket	331 × 328 mm
Mounting foot	319.20 × 87.50 mm
Fixing holes	3 × Ø 17.00 mm
Hole centres	249.20 mm between outer holes
Adjustment	360° in 30° steps

REAR MOUNT BRACKET



Availability	Flat against a structure
Incl. bracket	412 × 295 × 328 mm (w × d × h)
Mounting foot	319.20 mm
Fixing holes	3 × Ø 17.00 mm
Hole centres	249.20 mm between outer holes

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
SS rear mount bracket	Option
Retrofit bracket	On request, codes issued per structure
Boom and tenon mount	On request
Safety cable	Optional, supplied with the luminaire
Cable	Lengths beyond 2.0 m on request, same H07BQ-F type
Crane Light Stabilizer	On request
Crane boom lighting frame	On request

REMOTE DRIVER

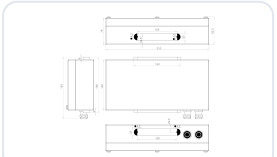
Type	BLD320 for 90–305 VAC · TLD320 for 180–528 VAC
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 280,000 h at 75 °C case
Size and weight	225 × 68 × 38.5 mm, 1,120 or 1,150 g
Enclosure	Bare as standard, or in the DRB-1

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



Aluminium DRB



316L Power Box BLD320

Use	Optional housing for the remote driver, mounted outside the wash-down zone
DRB-1	One driver, up to the 320 W TLD320 which is the largest that fits. 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
316L Power Box	Power Box BLD320, solid 316L, 360 × 180 × 85 mm. For the same driver as the DRB, chosen where the box sits in the same wash-down or salt zone as the luminaire
Ingress protection	IP66 and IP67
System weight	20.2 kg, luminaire with bracket and DRB-1

Ordering, standards and documents

ORDER CODE

Example **BASS01-65K.38**

Barracuda SS, 6500 K, 38° optic

BASS01	316L stainless steel, AC, 90–305 or 180–528 VAC, remote driver
BASS02	316L stainless steel, DC, 20–35 VDC, drivers on board
65K · 40K · 27K · 22K	6500 K · 4000 K · 2700 K · amber 2200 K. 50K on request
BI	Bi-colour 4000 K with amber 2200 K
.13 · .38 · .69 · .13x46	Optic suffix, selected from the light calculation

The optic suffix follows the colour temperature, so one project can carry several beam angles. Bracket type, control protocol, cable length and the Ra 80 or Ra 90 option are confirmed at order and are not part of the code.

COMBINATIONS

Optics within one luminaire	Possible
Amber 2200 K with flare optic	Possible
Bi-colour with DALI-2	Possible
Ra 90 with 6500 K	Possible
Rear mount bracket	Available
24 V DC version	BASS02

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 to 5 m, IP69K	In-house test
Impact	IEC 62262, IK10 with polycarbonate	In-house test
Vibration	IEC 60068-2-6, 6 G at resonant frequency	In-house test
Shock	IEC 60068-2-27	In-house test
Corrosion	ISO 9223 class C5 and CX. EN 1993-1-4 CRC III, PREN approximately 24	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/barracuda-ss

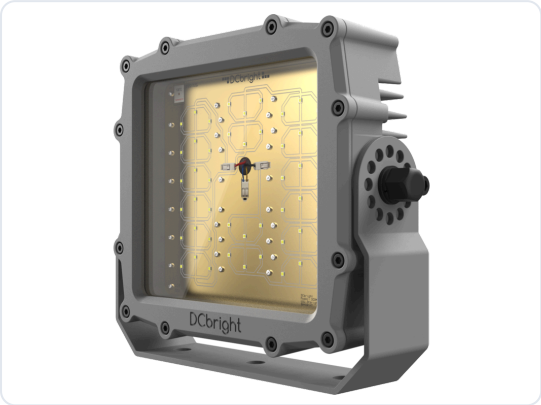
WHERE IT EARNS ITS PLACE

Where a coating is the weakest link, the Barracuda SS removes it from the equation. Solid 316L, electrolytically polished, with twenty years of warranty on the housing, at the cost of six kilograms over the aluminium version. Where mast load decides and the atmosphere is merely industrial, the cast aluminium Barracuda is the better buy.

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. Photometry, optics and light output are identical to the cast aluminium Barracuda. North American models on request.

HIGH TEMPERATURE LED FLOODLIGHT

Barracuda HT



Shown: Barracuda HT, aluminium housing, chemically hardened glass front, high tensile 316L bracket.

CE | IP69K | IK09 | Class II | Ta −45 … +120 °C | peaks +130 °C | 90–305 VAC | aluminium or 316L | C5 ISO 9223 | IR-reflective print | silicone cable to 150 m | 5-year warranty to +120 °C

The floodlight for oven zones and heavy industry, and the proven choice at Tata Steel and Rockwool: 20,600 lumens at 120 W, rated for +120 °C continuous ambient. The luminaire sits in the heat, the driver sits outside it, because in almost every failure of LED lighting in a hot environment the driver is what gives up first.

LUMINOUS FLUX	POWER	EFFICACY
20,600 lm	120 W	172 lm/W
AMBIENT	**INGRESS**	**BEAM ANGLE**
+120 °C	IP69K	133°

Values apply to BAHT01 at 4000 K, Ta 25 °C, including driver consumption. 6500 K delivers the same luminous flux as 4000 K. Lumen maintenance at elevated ambient is on page 3.

WHY IT IS SPECIFIED

The driver sits outside the heat. Standard industrial luminaires stop at roughly +50 °C because the driver does. Splitting the system moves the weak part out of the hot zone entirely.

+120 °C continuous, +130 °C in peaks. Full warranty at continuous +120 °C, with short excursions to +130 °C permitted.

IR-reflective print as standard. Radiant heat from the process is reflected instead of absorbed, which is what keeps the LED junction temperature down next to a casting platform.

WHERE IT IS USED

- Steel industry: rolling mills
- Casting platforms and ladle bays
- Mineral wool production
- Building materials and kilns
- Oven zones in heavy process industry
- Paper machines and drying sections
- Glass and ceramics production
- Foundries and heat treatment
- Asphalt and cement plants
- Aluminium smelters and anode plants

MODELS

	Housing	Optic
BAHT01	Cast aluminium, e-coated	No lens, 133°
BAHT02	Cast aluminium, e-coated	HT glass optic
BAHT03	316L stainless steel	No lens, 133°
BAHT04	316L stainless steel	HT glass optic

All models 120 W at 90–305 VAC, with a colour temperature suffix -65K, -40K or -27K. Every model uses a remote BLD320 driver outside the hot zone. HT glass optics of 20°, 40° or 60° are available on request.

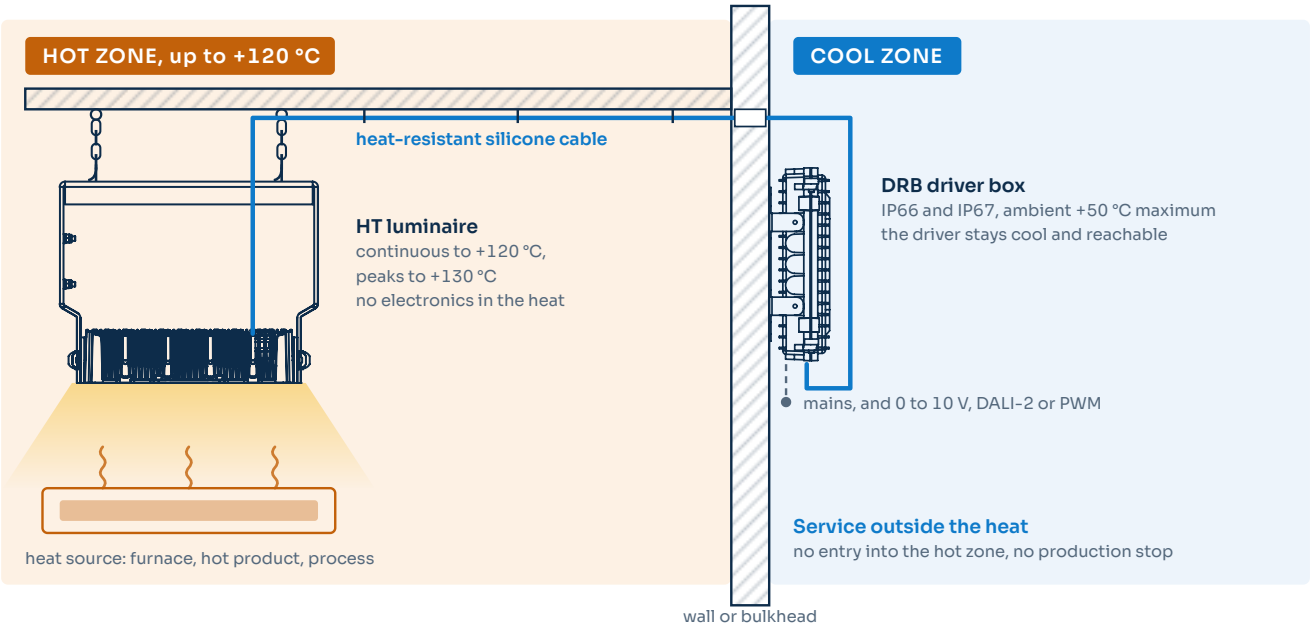
The HT system

Engineered as a system for heat, not as a luminaire that tolerates it.

Standard industrial LED luminaires are specified to roughly +50 °C ambient. Above that the driver electronics fail first: in virtually every failure of LED lighting in a hot environment, the driver is the weak link. Every installation in the HT line therefore consists of two parts. The heat-resistant luminaire sits in the hot zone and the driver sits outside it, supplied bare as standard or built into a DRB driver box, joined by heat-resistant silicone cable. Nothing that fails at temperature is left in the heat.

+120 °C	+130 °C	150 m	130,000 h	IP67
continuous, with full warranty	short peaks permitted	heat-resistant silicone cable	driver life at Tc 50 °C	remote driver and DRB box

THE HIGH TEMPERATURE SYSTEM



The HT system: the luminaire in the heat, the driver outside it.

BUILT-IN SELF-PROTECTION

The luminaire protects itself with internal temperature feedback. As the internal temperature rises it dims back automatically, and on overheating it switches itself off. That feedback runs through the four-core supply of every luminaire: two cores of 2.5 mm² for power and two of 0.5 mm² for temperature control. It is the reason the cable specification on page 4 has four cores rather than two.

Above +130 °C, or unsure about the thermal load? Our engineers calculate the thermal load per mounting position and design the complete system, including the driver location, cable route and DRB selection. Photometric values are measured at a +50 °C reference ambient. HT luminaires are not ATEX certified by default.

Light output and optics

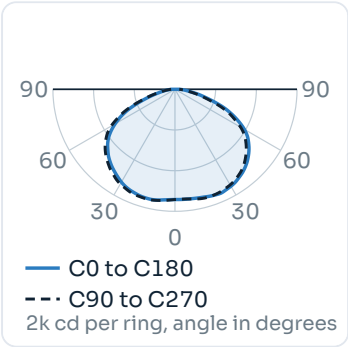
Values apply at Ta 25 °C and include driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per model from the product page.

BEAM CHARACTERISTICS

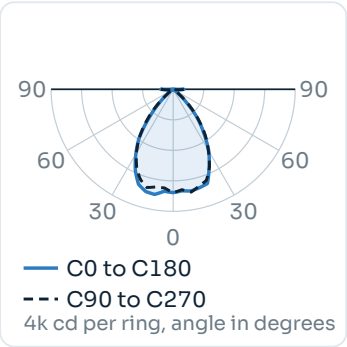
Model	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
BAHT01 / 03	No lens, very wide	133°	165°	Close range over a wide field, up to around 15 m: oven fronts, casting platforms, walkways and machine bays
BAHT02 / 04	HT glass optic	72°	98°	Longer throw in the same heat: crane bays, high roof lines and drying sections. Optics of 20° and 40° on request

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. The HT glass optic is measured on a coarse 5° grid, so its figures are indicative until a finer measurement is available.

LIGHT DISTRIBUTION



BAHT01 / 03, no lens



BAHT02 / 04, HT glass optic

OBTRUSIVE LIGHT

ULOR at 0° tilt	**0 %**
Colour temperatures	6500 K, 4000 K, 2700 K
Glare control	The HT glass optic shows a rising intensity toward the horizontal, so aim it with care near walkways and control cabins

Nothing is emitted above the horizontal at 0° tilt. Inside a plant that matters less than outdoors, but for roof lines, yard extensions and installations near a plant boundary it is the figure a permitting authority asks for.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 4000 K, 2700 K
Flux at 6500 K	Identical to 4000 K
Colour rendering	Ra > 70
Colour consistency	MacAdam step 3 or better
IR-reflective print	Standard on every model
LED service life	TM-21 L90B05, see the temperature table on page 3
IES files	Download per model, product page

Full specification

All values apply to the standard configuration at 25 °C ambient unless stated otherwise, including driver consumption. Lumen maintenance at elevated ambient governs, not the headline figure.

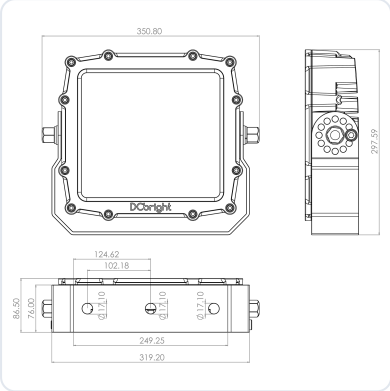
	Barracuda HT
PERFORMANCE	
Luminous flux	20,600 lm
Power consumption	120 W
Efficacy	172 lm/W
Colour rendering	Ra > 70, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
TEMPERATURE AND LIFETIME	
Ambient temperature	−45 to +120 °C continuous
Temperature peaks	Up to +130 °C permitted
LED service life, TM-21 L90B05	360,000 h at +50 °C · 103,000 h at +85 °C · 71,700 h at +105 °C · 51,400 h at +120 °C
Driver location	Remote, outside the hot zone. IR-reflective print standard, so radiant heat is reflected
ELECTRICAL AND DRIVER	
Supply voltage range	90–305 VAC, 50/60 Hz. 380 VAC for up to 2 h
Current draw	1.1 A at 110 V · 0.6 A at 220 V
Power factor at full load	> 0.95 at 60 to 100 % load
THD at full load	< 15 % at 60 to 100 % load
Inrush current	31.2 A peak, T50 1.3 ms at 220 V
Luminaires per MCB	B16: 2 · C16: 4 · C25: 7 · D16: 8
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)
Leakage current	0.7 mA max at 240 VAC (IEC 60598-1)
Dimming and control	0 to 10 V standard. PWM, DALI-2, LoRa Mesh or NFC optional
Driver	Remote BLD320, 225 × 68 × 38.5 mm, 1,120 g. Bare, or in the DRB-1 or DRB-2
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 280,000 h, Tc −40 to +90 °C. Replaced without opening the luminaire
CONSTRUCTION	
Housing	Cast aluminium, less than 0.08 % copper, or 316L stainless steel
Surface finish	Conversion layer plus 2-layer titanium-based e-coating, or electrolytically polished 316L
Colour	Titanium Light Grey, or bare stainless steel
Bracket	High tensile 316L stainless steel, fully rotatable through 360° in 30° steps
Front	Chemically hardened glass IK09, or borosilicate glass
Protection class	Class II
Ingress protection	IP66, IP67, IP68 to 5 m and IP69K, resistant to steam and high pressure cleaning
Impact resistance	IK09. The front cover is the limiting factor (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
DIMENSIONS AND CONNECTION	
Cable and termination	SiHF-OB heat resistant silicone, 4 cores (2 × 2.5 mm² + 2 × 0.5 mm²), 15.0 m as standard, up to 150 m on request, pre-fitted with free wire ends
Dimensions	Luminaire 320 × 290 × 90 mm, excluding bracket
Weight	10.1 kg cast aluminium · 16.0 kg 316L stainless steel, incl. bracket
Wind load area, frontal	0.104 m² with standard bracket · 0.026 m² side view. Cd 1.2 gives Cd·A 0.125 m²
Warranty	5 years on the complete luminaire up to +120 °C. Stainless housings 20 years on the housing

MCB counts are manufacturer figures for ABB S200 at 220 V, a guide for the engineering phase and not a substitute for the installation calculation.

Mechanics, mounting and driver

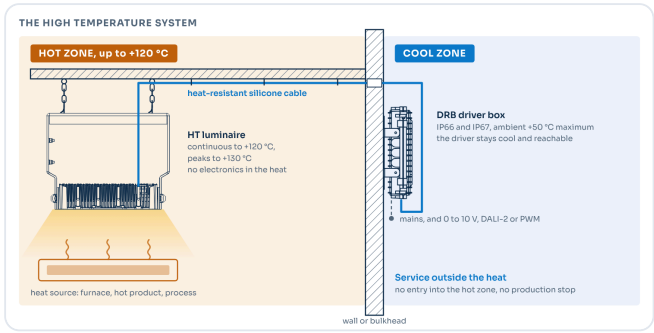
All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

STANDARD BRACKET



Luminaire	320 × 290 × 90 mm
Incl. bracket	351 × 298 mm
Mounting foot	319.20 × 86.50 mm
Fixing holes	3 × Ø 17.10 mm
Hole centres	249.25 mm between outer holes
Adjustment	360° in 30° steps
Weight	10.1 kg aluminium · 16.0 kg stainless steel

THE HT SYSTEM



In the hot zone	The luminaire, rated to +120 °C continuous
Outside the hot zone	The remote driver, bare or in a DRB box
Between them	Heat resistant silicone cable, 15.0 m standard, up to 25 m
Cable limit	Up to 150 m on request. Beyond that is custom
Why	Above roughly +50 °C ambient the driver electronics fail first, so the driver is moved out

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Retrofit bracket	On request, codes issued per structure
Boom and tenon mount	On request
Safety cable	Optional, supplied with the luminaire
Cable	15.0 m as standard, up to 150 m on request, same SiHF-OB type
HT glass optic	BAHT02 and BAHT04
Stainless steel housing	BAHT03 and BAHT04
HT optics	20°, 40° or 60° glass optics on request

REMOTE DRIVER

Type	BLD320, 90–305 VAC
Location	Outside the hot zone
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 × 38.5 mm, 1,120 g
Enclosure	Bare as standard, or in the DRB-1 or DRB-2

Every AC installation is two parts. The heat resistant luminaire in the hot zone and the driver outside it, joined by silicone cable. That split is the whole reason the system holds at +120 °C where a conventional luminaire stops at +50 °C.

DRB DRIVER BOX



DRB-1	One driver, up to the 320 W type which is the largest that fits. 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
Use	Mounted outside the hot zone and outside the wash-down zone
Bare driver	Also possible where a cabinet is already present

Ordering, standards and documents

ORDER CODE

Example **BAHT01-65K**

Barracuda HT, aluminium, no lens, 6500 K

BAHT01	Aluminium housing, no lens, 133°
BAHT02	Aluminium housing, HT glass optic
BAHT03	316L stainless steel housing, no lens, 133°
BAHT04	316L stainless steel housing, HT glass optic
65K · 40K · 27K	6500 K · 4000 K · 2700 K
HT optic	20°, 40° or 60° glass optic on request, article BAHT02 or BAHT04

Cable length, bracket type and driver enclosure are confirmed at order and are not part of the code. State the continuous and peak ambient temperature at the mounting position with the enquiry, because that is what sets the expected lumen maintenance.

COMBINATIONS

HT optic with stainless housing	BAHT04
HT optics 20°, 40°, 60°	On request
24 V DC version	Not available on the HT
Borosilicate front	Available on every model
Cable up to 150 m	On request, beyond that custom
Bi-colour or amber	Not standard

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 to 5 m, IP69K	In-house test
Impact	IEC 62262, IK09, set by the front cover	In-house test
Vibration and shock	IEC 60068-2-6 at 6 G, IEC 60068-2-27	In-house test
Corrosion	ISO 9223 class C5, industrial and marine	In-house test
Lumen maintenance	IES LM-80 and TM-21, L90B05 per ambient	In-house test
Photometry	IES LM-79, IES files per model	In-house test
Substances	RoHS, REACH	Self-declaration

BEFORE YOU ORDER

A sample luminaire to hang in the hot zone before you commit to a project quantity.

State the continuous and peak ambient at the mounting position.

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

PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

Standard industrial LED luminaires are specified to roughly +50 °C, and above that the driver fails first. The Barracuda HT keeps the luminaire in the heat and the driver outside it, so the failure mode is removed rather than derated. Below +50 °C ambient, the standard Barracuda is the better and cheaper choice.

Notes. Values are for the standard configuration. Lumen maintenance depends strongly on ambient temperature, so the table on page 3 governs, not a single headline figure. Packaging dimensions depend on the order quantity and are stated at quotation. North American models on request.