GLARE FREE LED FLOODLIGHT

DarkLicht D

Shown: DarkLicht D200, 34,200 lm, cut off set to 69°.

CE | IP67 | IK08 | Class II | C5 ISO 9223 | Ta −45 … +50 °C | 90–305 VAC | internal driver | ULOR 0 % | DarkSky DS-1 | cut off 63–75° | NSVV

The straightforward terrain floodlight of the DarkLicht family. 10,300 to 34,200 lumens on mains supply with the driver inside the housing, full cut off, and all of the light on the site instead of on the neighbours, the road or the sky.

LUMINOUS FLUX	POWER	EFFICACY
34,200 lm	200 W	171 lm/W
ULOR	**CUT OFF**	**DRIVER**
0 %	63–75°	internal

Values apply to the standard version at 4000 K, Ta 25 °C, including reflector losses and driver consumption, with the cut off set to the standard position.

WHY IT IS SPECIFIED

The simple version of the cut off principle. Mains supply, driver inside the housing, fixed bracket, one cable. Every part that is not there is a part that cannot fail on a column eight metres up.

171 lm per watt, and the light lands on the site. A shielded conventional floodlight loses part of its output to the shield, so the site needs more columns to reach the same illuminance.

It makes the permit condition provable. An obtrusive light condition is checked with a calculation and, after a complaint, with a measurement. Measured photometry and a stated ULOR of 0 % turns that from a discussion into a document.

WHERE IT IS USED

- Industrial yards and hardstanding
- Car parks and staff parking
- Loading and unloading zones
- Temporary construction site lighting
- Distribution and logistics yards
- Perimeter and fence line lighting
- Rail yards and depots
- Storage and laydown areas
- Business park roads and forecourts
- Municipal depots and service yards
- Agricultural yards near dwellings
- Sites with an obtrusive light condition

VERSIONS

	D200	D120	D60
Code	DRKD03	DRKD02	DRKD01
Flux	34,200 lm	20,500 lm	10,300 lm
Power	200 W	120 W	60 W
Driver	Internal BLD200	Internal BLD120	Internal BLD120
Dimensions	540 × 270 × 110	440 × 270 × 110	440 × 270 × 110
Weight	8.5 kg	7.1 kg	6.9 kg

The D series is rated IP66 and IP67, not IP68 or IP69K. That is deliberate: these are differently designed products for terrain positions. Where washdown or submersion is a real condition, choose the **DarkLicht M** or, in a marine environment, the **Barracuda**.

Light output and optics

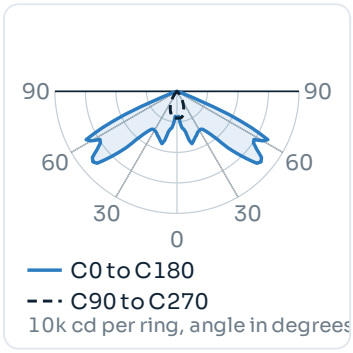
Values apply to the D200 at Ta 25 °C with the cut off in the standard position. The whole DarkLicht line shares one light distribution, so the diagrams below apply to every type at its own luminous flux.

BEAM CHARACTERISTICS

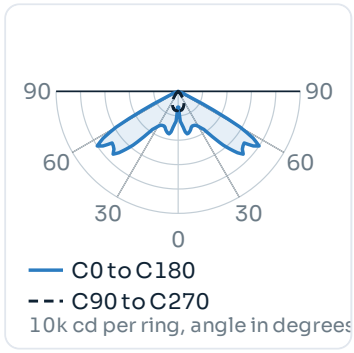
Setting	Distribution	Cut off	Beam angle 50 % of peak	Typical use
63°	Full cut off, asymmetric	63°	–	Tight boundaries, a site directly against housing or a carriageway
66° and 69°	Full cut off, asymmetric	66° and 69°	–	The usual settings for a yard or a car park
72°	Full cut off, asymmetric	72°	123°	Wider cover where the boundary allows it
75°	Full cut off, asymmetric	75°	132°	Maximum reach, sites without a sensitive boundary

The DarkLicht does not use lenses. A patented parabolic reflector throws the light forward and down and cuts it off completely above the set angle, which is adjusted on site between 63 and 75 degrees rather than chosen at order. The two diagrams show the two shielding positions of the reflector. The whole DarkLicht line shares one light distribution, so one measured set covers every type in the range and a lighting designer works with one photometric behaviour at every mounting height.

LIGHT DISTRIBUTION



Shielding position 1



Shielding position 2

OBTRUSIVE LIGHT

ULOR at 0° tilt	**0 %**
Cut off angle	Adjustable in the field from 63° to 75°
Standards	NSVV guideline · DarkSky DS-1 · EN 12464-2 · EN 12193

A conventional floodlight lights everything in front of it, including the sky, the neighbour and the driver approaching the site. The DarkLicht range is built the other way around: a patented parabolic reflector, not a lens, cuts the light off completely above an angle that is set in the field between 63 and 75 degrees. Upward light output ratio is 0 %, and the luminaires have been third party tested against the DarkSky DS-1 requirements at colour temperatures between 1700 and 2200 K.

COLOUR AND CONSISTENCY

Colour temperatures	5700 K, 5000 K, 4000 K, 3000 K, 2700 K, amber 2200 K, 1800 K, 1700 K
Tuneable white	4000 K with 2200 K and 1700 K, switchable in operation
DarkSky DS-1	Met at 1700 to 2200 K, third party tested
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 103,500 h

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.

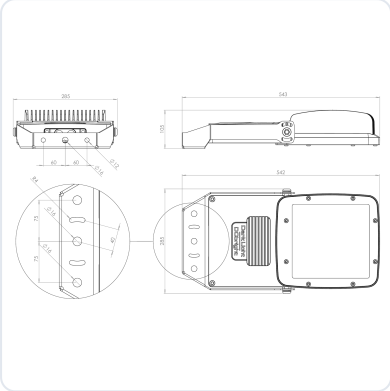
	D200	D120	D60
PERFORMANCE			
Luminous flux	34,200 lm	20,500 lm	10,300 lm
Power consumption	200 W	120 W	60 W
Efficacy	171 lm/W	171 lm/W	171 lm/W
Upward light output ratio	0 % at 0° tilt		
Cut off angle	63°, 66°, 69°, 72° or 75°, set in the field		
ELECTRICAL AND DRIVER			
Supply voltage range	90–305 VAC, 50/60 Hz		
Current draw	1.7 A at 120 V · 0.9 A at 220 V	1.0 A at 120 V · 0.55 A at 220 V	0.5 A at 120 V · 0.27 A at 220 V
Power factor at full load	> 0.9 at 60 to 100 % load		
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		
Driver	Internal BLD200	Internal BLD120	Internal BLD120
CONSTRUCTION			
Housing	Cast aluminium, less than 0.08 % copper		
Optic	Patented parabolic reflector, no lens		
Bracket	High tensile 316L stainless steel, unlimited rotation from -20° to +20°		
Front	Impact resistant glass, IK08		
Protection class	Class II		
Ingress protection	IP66 and IP67		
Impact resistance	IK08 (IEC 62262)		
Corrosion class	C5 industrial and marine (ISO 9223)		
DURABILITY AND DIMENSIONS			
Ambient temperature	−45 to +50 °C		
LED service life	TM-21 L90B05 > 103,500 h		
Cable and termination	Optional, H07BQ-F		
Dimensions	540 × 270 × 110 mm	440 × 270 × 110 mm	440 × 270 × 110 mm
Weight	8.5 kg	7.1 kg	6.9 kg
Wind load, frontal at 0°	18,750 mm²	18,750 mm²	18,750 mm²
Wind load, frontal at 20°	49,500 mm²	44,500 mm²	44,500 mm²
Wind load, side	35,500 to 41,500 mm²	26,800 to 33,000 mm²	26,800 to 33,000 mm²
Drag coefficient	Cd 1.15		
Warranty	5 years, extendable to 10 years under a maintenance agreement		

Wind load data is from the DarkLicht wind rating report. The D, WP, One, Two and Three can be extended to ten years on the complete luminaire under a maintenance agreement with JEL or a party appointed by JEL; the seal on these types needs maintenance, so an unconditional ten years is not offered.

Mechanics, mounting and driver

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

HOUSING AND BRACKET



D200	540 × 270 × 110 mm, 8.5 kg
D120 and D60	440 × 270 × 110 mm, 7.1 and 6.9 kg
Bracket	High tensile 316L, unlimited from -20° to +20°
Front	Impact resistant glass, IK08
Optic	Patented parabolic reflector
Driver	Inside the housing, no external box

WIND LOAD, TESTED

Frontal at 0°	18,750 mm², all three
Frontal at 10°	30,500 to 31,500 mm²
Frontal at 20°	44,500 to 49,500 mm²
Side, D200	35,500 to 41,500 mm²
Side, D120 and D60	26,800 to 33,000 mm²
Drag coefficient	Cd 1.15

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Cable	Optional, H07BQ-F, length on request
Ten year warranty	Under a maintenance agreement with JEL or an appointed party
Mobile version	DarkLicht M, in AC and 24 V DC, IP69K
High mast version	DarkLicht One, Two and Three
Wall mounted version	DarkLicht WP Wallpack

INTERNAL DRIVER

D200	BLD200, inside the housing
D120 and D60	BLD120, inside the housing
External box	None
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
Control	0–10 V, PWM, DALI-2, or over NFC

Everything in one housing. On a terrain column there is nowhere to put a driver box and nobody to maintain it. The D carries its driver inside, so the installation is one luminaire and one cable.

MOUNTING

Bracket	316L, adjustable from -20° to +20°
Column	Top mount or side mount
Cable	Optional, or terminated in the column base
Setting the cut off	On the column, before hoisting

Ordering, standards and documents

ORDER CODE

Example **DRKD03-40K**

DarkLicht D200, 4000 K

DRKD03 · DRKD02 · DRKD01	D200 · D120 · D60
57K · 50K · 40K · 30K · 27K	5700 K · 5000 K · 4000 K · 3000 K · 2700 K
22K · 18K · 17K	Amber 2200 K · 1800 K · 1700 K, DarkSky DS-1 range
TW	Tuneable white, 4000 K with 2200 K and 1700 K
Cut off	Set on site, not part of the order code

The cut off angle is not ordered, it is set on site before the luminaire goes up the column. Cable and control protocol are confirmed at order.

COMBINATIONS

Tuneable white with DS-1 colours	Possible
DALI-2 and NFC	Standard
Ten year warranty	Under a maintenance agreement
IP68 or IP69K	Not on the D series
DC supply	Not available, see the DarkLicht M
High temperature	Not available

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 · IEC 60533 marine, bridge and open deck	TÜV
Ingress	IEC 60529 and ISO 20653. IP66, IP67	In-house test
Impact	IEC 62262 IK08	In-house test
Corrosion	ISO 9223 class C5, industrial and marine	In-house test
Obtrusive light	NSVV guideline · DarkSky DS-1 at 1700 to 2200 K · EN 12464-2 · EN 12193	Third party 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/darklicht-d

WHERE IT EARNS ITS PLACE

The DarkLicht D earns its place on ordinary sites with one demanding condition. A yard, a car park or an access road is not a marine environment and does not need to survive submersion, but it increasingly does have a line in the permit about upward and spill light. The D answers the requirement that is actually there and does not charge for the ones that are not.

Notes. Values are for the standard configuration. The cut off angle is set on site and does not change the luminous flux, only where the light lands. The stated LED service life of L90B05 > 103,500 hours is the figure for the DarkLicht range and is lower than the 360,000 hours of the floodlight range; that is a property of this reflector platform. The JEL range is not ATEX or Ex certified.