

OPERATING INSTRUCTION DARK LICHT SERIES

Operating Instruction

dcbright.com

--- DCbright ---

Dark Licht Operating Instruction

date: 06/12/23 page: 2/19

no.:

sales@dcbright.com

Attention

Please read the following instructions carefully to ensure that the installation work is carried out correctly. Keep these instructions safe for future reference.

Safety instructions

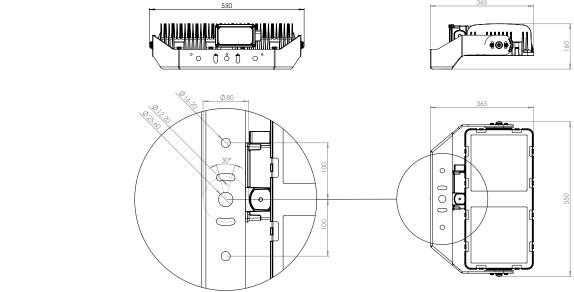
- 1. The safety of the fixture is only guaranteed if it is properly installed and maintained. Also, the product must be used for its intended purpose. If the fixture is modified or used unintentionally, there is a risk of danger to life or fire due to electric shock or short circuit.
- 2. Before each use, check the lamp or power supply for possible damage. Never use the lamp or power supply if you find any damage anywhere. In case of damage, contact an electrician or the manufacturer's customer service department. If not, there is possible danger to life from electric shock!
- 3. Do not use the lamp in explosive environments and where flammable liquids, gases or dust are present. Danger to life!
- 4. Keep the lamp out of the reach of children. Children cannot assess the danger of electric current.
- 5. Use only the supplied driver and cable to operate the device.
- 6. Do not look directly into the light source from a short distance.
- 7. If the light source needs to be replaced, the complete fixture must be replaced by the manufacturer or your supplier.
- Keep the fixture away from strong electromagnetic radiation sources and provide adequate protection against lightning strikes.
- 9. The tensile strength of the luminaire fixture must be guaranteed. According to the EN 60598-1 standard, the luminaire must be tested at each suspension point with four times its mass, plus its own weight.
- 10. Adjustment of the parameters or modification must be carried out only in a voltage-free condition.

TDCbright

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 3/19

Technical data (Dark Licht ONE)			
Brand	DCbright		
Product	DL1-AC-320W-51 DL1-AC-400W-64 DL1-AC-600W-96		
Light source	3-step MacAdam Ellipse LED's		
Expected life span	320W: L80 B10 - 106 564 hrs 400W: L80 B10 - 196 013 hrs 600W: L80 B10 - 196 030 hrs		
Light cut-off angle	\$1: \$2: \$3: \$4: \$5:	75° 72° 69° 66° 63°	
CRI	Standard: Optional:	>70 >80, >90	
Operation temp range	-40°C ~ +50°C		
Impact rating	IK07		
Waterproof rating	IP65, IP67		
LED driver	CE, ENEC, UL, CB,	FCC	
LED driver safety class	Class I		
Voltage range	320W: 400W: 600W:	90-305Vac / 127-420Vdc 90-305Vac / 127-420Vdc 220-480V ~ 50/60Hz	
Lamp weight	320W 400W 600W	14.9 kg (internal driver) 15.0 kg (internal driver) 13.9 kg (external driver)	
Driver weight	Box 600W Tray 600W	9.1 kg 5.1 kg	
550		365	



TDCbright ...

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 4/19

Brand	DCbright	
Product	DL2-AC-800W-1 DL2-AC-1200W-	
Light source	3-step MacAdan	ı Ellipse LED's
Expected life span	800W: 1200W:	L80 B10 - 196 013 hrs L80 B10 - 196 030 hrs
Light cut-off angle	\$1: \$2: \$3: \$4: \$5:	75° 72° 69° 66° 63°
CRI	Standard: Optional:	>70 >80, >90
Operation temp range	-40°C ~ +50°C	
Impact rating	IK07	
Waterproof rating	IP65, IP67	
LED driver	CE, ENEC, UL, CE	B, FCC
LED driver safety class	Class I	
Voltage range	800W: 1200W:	220-480V ~ 50/60Hz 220-480V ~ 50/60Hz
Lamp weight	800W 1200W	24.5 kg (external driver) 25.4 kg (external driver)
Driver weight	Box 800W Tray 800W Box 1200W Tray 1200W	9.1 kg 5.4 kg 11.3 kg 7.8 kg
\$550 • • • • • • •		635 •@•}
Ø80 Ø80 Ø80 Ø80 Ø80		635

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 5/19

Brand	DCbright			
Product	DL3-AC-1800W	-288		
Light source	3-step MacAdar	n Ellipse LED's		
Expected life span	1800W:	L80 B10 - 196 030 hrs		
Light cut-off angle	\$1: \$2: \$3: \$4: \$5:	75° 72° 69° 66° 63°		
CRI	Standard: Optional:	>70 >80, >90		
Operation temp range	-40°C ~ +50°C			
Impact rating	IK07			
Waterproof rating	IP65, IP67			
LED driver	CE, ENEC, UL, CI	CE, ENEC, UL, CB, FCC		
LED driver safety class	Class I			
Voltage range	1800W:	220-480Vac ~ 50/60Hz		
Lamp weight	1800W	33.5 kg (external driver)		
Driver weight	Box 1800W Tray 1800W	13.8 kg 10.4 kg		
550 ° 0 ° 0 ° °	101)	905 •		
Ø 80 Ø 80		905		

Dark Licht Operating Instruction

date: 06/12/23 6/19 page:

no.:

sales@dcbright.com

Technical data (product code)

M	Model encoding system for Dark Licht product series				
	3 Light tomn	4 CRI	Į.		

1. Product	2. Bracket	3. Light temp	4. CRI	5. Driver	6. Light setting
DL1-AC-320W-51 ¹	In (industrial)	22 (2200k)	70 (>70)	l (internal driver) ¹	S1 (setting 1)
DL1-AC-400W-64 ¹	Ar (Architectural)	27 (2700k)	80 (>80)	B (driver on back) ²	S2 (setting 2)
DL1-AC-600W-96 ²		40 (4000k)	90 (>90)	R (remote driver) ²	S3 (setting 3)
DL2-AC-800W-128 ²		50 (5000k)		P (internal pole driver) ²	S4 (setting 4)
DL2-AC-1200W-192 ²					S5 (setting 5)
DL3-AC-1800W-288 ²					

Product code is created by using categories in the following order: 1 | 2-3-4-5 | 6

For example: DL1-AC-600W-96 | In-50-70-R | S2

 $^{^1}$ Standard equipped with Driver option: "I (internal driver)". Driver options: B, R and P are available on request. 2 Can only be equipped with "B (driver on Back)", "R (remote driver) and (P (internal pole driver).

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 7/19

Technical data (industrial series)	
Dark Licht ONE (DL1-AC-320-51 & DL1-AC-400-64)	
	Luminaire with 6 reflectors Version with internal driver Titanium gray housing
Dark Licht ONE (DL1-AC-600-96)	
	Luminaire with 8 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 8 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht TWO (DL2-AC-800-128)	
	Luminaire with 12 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 12 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht TWO (DL2-AC-1200-192)	
	Luminaire with 16 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 16 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht THREE (DL3-AC-1800-288)	
	Luminaire with 24 reflectors Version with bracket mounted driver box Titanium gray housing
	Luminaire with 24 reflectors Version with bracket mounted driver box Titanium gray housing

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 8/19

Technical data (architectural series)	
Dark Licht ONE (DL1-AC-320-51 & DL1-AC-400-64)	
	Luminaire with 6 reflectors Version with internal driver Titanium gray housing
Dark Licht ONE (DL1-AC-600-96)	
	Luminaire with 8 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 8 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht TWO (DL2-AC-800-128)	
	Luminaire with 12 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 12 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht TWO (DL2-AC-1200-192)	
	Luminaire with 16 reflectors Version with external driver box/tray Titanium gray housing
	Luminaire with 16 reflectors Version with bracket mounted driver box Titanium gray housing
Dark Licht THREE (DL3-AC-1800-288)	
	Luminaire with 24 reflectors Version with bracket mounted driver box Titanium gray housing
	Luminaire with 24 reflectors Version with bracket mounted driver box Titanium gray housing

Dark Licht Operating Instruction

no.: Dark Licht date: 06/12/23 page: 9/19 sales@dcbright.com

Technical data (product details)

Electrical junction box of Darklicht fixture with cable gland and pushin terminals for electrical connection to driver box, driver tray or in the case of internal driver box to 3 core power cable. Adjusting bolts to adjust the tilt angle of the Darklight fixture.

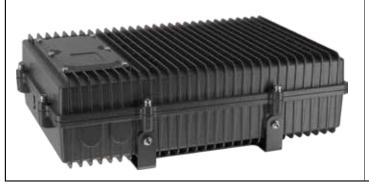




Driver types per luminaire

Dark Licht driver box







Dark Licht Operating Instruction

date: 06/12/23 page: 10/19

no.:



sales@dcbright.com

Installation - scope of supply

Check whether the contents of the package are complete.

Contents:

1x Dark Licht fixture as specified

1x Instruction manual

1x Cable entry open-end wrench

1x Stainless steel (304) flexible tube

Shrinking tube

Vulcanizing tape (3M J20)

Installation - general notes

- 1. Assembly, installation, and maintenance may only be performed by qualified persons.
- Before installing or replacing the fixture, ensure that the power supply is turned off to prevent accidents.
- 3. Prior and during installation, closely follow the instructions provided in this manual.
- 4. Before installing a luminaire, the load-bearing capacity of the lamppost or other installation location and the fixing elements must be ensured. If these values are unknown, have this calculated and/or checked by a certified company.
- 5. Electrical connection must be carried out in accordance with all applicable standards and directives.
- The fixture can only be used within the specified voltage range.
- Recommended cable: Supply cord: EPDM H07RN-F 3G1.5mm² · Dim cord: Dcbright H07BQ-F 4G0.5mm²
- 8. Make sure that the corresponding IP class is met when connecting the luminaire. For the Dark Licht fixture this is IP67
- Disassembly, assembly and adjustment of the luminaire should only be carried out with the power switched off.
- 10. Ensure proper sealing by adding shrink tubing and vulcanizing tape around the cable glands, providing a secure and watertight connection.
- 11. Position the luminaire in such a way that it prevents prolonged staring from a distance less than 11.688m into the luminaire.
- The luminaire is designed to be suitable for both indoor and outdoor use.
- 13. The distance between the luminaire and a radio should be at least one meter to avoid possible interference with the radio reception.
- Fixtures that are attached to a moving object must be secured with a safety cord or chain.
- 15. Make sure the fixture is not exposed to heat sources beyond the specified operating temperature and vibration and avoid contact with corrosive chemicals
- 16. The luminaire must not be covered or wrapped with insulating material. Because the maximum operating temperature around the luminaire can lead to temperatures of 70°C, a minimum distance of 75mm must be maintained between the luminaire and thermal insulation materials and components. Direct ceiling mounting is therefore excluded.
- 17. Never remove the glass plate or other parts of the fixture yourself.
- 18. The fixture must not be used if the housing is damaged or broken. Parts that have broken must be replaced immediately. Do not switch on power as long as the fixture is damaged or broken. If damage has occurred to the luminaire, please contact your supplier immediately
- 19. Commissioning and storage must be within the rated temperature range
- 20. In order to prevent light nuisance and to guarantee proper functioning of the full-cut-off reflectors, the luminaire must always be installed
- 21. in accordance with the pre-made lighting plan; For this reason, it is not recommended to tilt the fixture more than 15 degrees in a permanent installation
- 22. Never attempt to repair the fixture yourself; repairs must be conducted by the manufacturer or a designated company.
- 23. Maximum mounting height: 50 meter Maximum elevation height: none

TEDCbright ...

Dark Licht Operating Instruction

date: 06/12/23 page: 11/19

no.:

Effective Projected Area (EPA) - Wind Rating Specifications (per product)							
		Tilt Angle	0°	5°	10°	15°	20°
DL3							
		Front Surface	75400mm²	104000mm ²	130000mm²	158600mm²	182000mm²
Cd	1.22	Side Surface	94875mm²	94875mm²	94875mm²	94875mm²	94875mm²
DL2							
		Front Surface	75400mm²	91000mm²	106600mm²	122200mm²	135200mm²
Cd	1.22	Side Surface	63825mm²	63825mm²	63825mm²	63825mm²	63825mm²
DL1							
		Front Surface	75400mm²	78000mm²	83200mm ²	85800mm²	88400mm²
Cd	1.22	Side Surface	32775mm²	32775mm²	32775mm ²	32775mm²	32775mm²
DL2 + Driver							
		Front Surface	75400mm²	91000mm²	106600mm ²	122200mm²	135200mm²
Cd	1.23	Side Surface	104325mm²	104325mm²	104325mm²	104325mm²	104325mm²
DL1 + Driver							
		Front Surface	75400mm²	78000mm²	83200mm²	85800mm²	88400mm²
Cd	1.23	Side Surface	73275mm²	73275mm²	73275mm²	73275mm²	73275mm²

Dark Licht Operating Instruction

date: 06/12/23 page: 12/19

no.:

sales@dcbright.com

Installation - installation instructions





WARNING = DANGER

Make sure that the power supply is switched off before connecting the LED fixture.





WARNING - DANGER

Installation of the LED fixtures may only be carried out by authorized persons with sufficient knowledge.





WARNING - DANGER

Do not stare at the operating light source.

- 1. To determine the correct angle of adjustment of the luminaire, follow the instructions of the lighting plan and/or the supplier. Before installation, always check that the installation site is completely level.
- 2. Only install the fixtures at mounting locations that have been pre-approved or inspected by a certified company.
- 3. It is recommended to start installation as close to the power point as possible.
- 4. The weight of the connecting cable must not load the luminaire.
- 5. To protect the light module and to avoid the risk of injury, gloves should be worn during assembly and installation.
- 6. The drivers, driver box or driver tray and other components must be properly grounded. For example by means of an earth claw or a pre-installed earth cable.
- 7. Check that the degree angle is set correctly before tightening the bolts
- 8. Check that all bolts and cable glands are properly tightened. see tables: "Cable gland Advised tightening in mm" and "Bolt tightening information" below
- 9. After installation, the point furthest from the grounding installation should be professionally checked in accordance with local law.

TDCbright ...

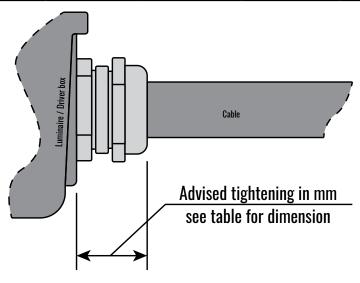
Dark Licht Operating Instruction

date: 06/12/23 page: 13/19

no.:

sales@dcbright.com

Cable gland - Advised tightening in mm



Cable gland type :	M12*1.5-D-SI 4-8mm	M20*1.5-2H 4-8mm	M20*1.5-H 5-10mm	M20*1.5 6-12mm	M20*1.5-D 8-14mm
Dcbright H07BQ-F 4G0.5mm² (Ø6.7mm)	+/-17.7mm	+/-19.8mm	Х	Х	Х
Dcbright H07BQ-F 2G2mm² (Ø7.3mm)	+/-18.4mm	+/-19.9mm	Х	Х	Х
Dcbright H07BQ-F 2G1.5 + 2G0.5mm² (Ø8mm)	+/-18.9mm	+/-20mm	+/-20.4mm	Х	Х
Dcbright H07BQ-F 4G1.5 + 2G0.5mm² (Ø10.4mm)	X	Х	+/-21.3mm	+/-22.2mm	Х
Dcbright H07BQ-F 6G1.5 + 2G0.5mm² (Ø13.6mm)	Х	Х	χ	χ	+/-20.8mm
Dcbright H07BQ-F 2G2.5 + 2G0.5mm² (Ø9.5mm)	Х	Х	+/-21.1mm	Х	Х
Dcbright H07BQ-F 4G2.5 + 2G0.5mm² (Ø12.3mm)	Х	Х	χ	Х	+/-21mm
Dcbright H07BQ-F 6G2.5 + 2G0.5mm² (Ø13.8mm)	Х	Х	Х	Х	+/-21.1mm
Dcbright SiHF-08 2x1mm² (Ø7.9mm)	+/-18.9mm	+/-20mm	Х	Х	Х
Debright SiHF-08 2x2.5mm²+2x0.5mm² (Ø10.7mm)	X	Х	+/-21.3mm	Х	Х
EPDM H07RN-F 3G1.5mm² (Ø10mm)	χ	Х	+/-21.3mm	Х	Х

Bolt - tightenin	g information
------------------	---------------

gg		
Bolts on luminaire	M8	20N
	M16	175N
Bolts on bracket (8.8 rated)	M20	341N
	M24	590N
Bolts on bracket (12.9 rated)	M20	576N
	M24	995N

sales@dcbright.com

no.: Dark Licht Operating Instruction date: 06/12/23 page: 14/19

Installation - installation instructions

Cable connection labeling



Connection - DR1-AC-600-1200-1800

Connection - DR3-AC-1800+DIM

Connection - DR3-AC-1800

Connection - DR2-AC-1200+DIM

Connection - DR2-AC-1200

Connection - DR1-AC-600+DIM

Connection - DR1-AC-600

Connection - DR1-AC-400

Connection - DR1-AC-320

©DCbright

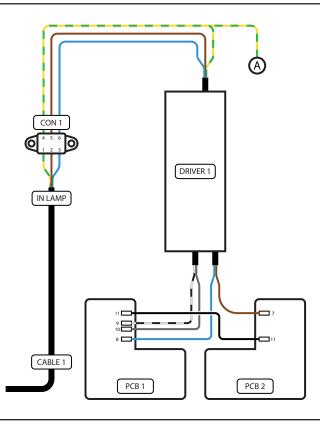
no.: Dark Licht Operating Instruction

date: 06/12/23 page: 15/19

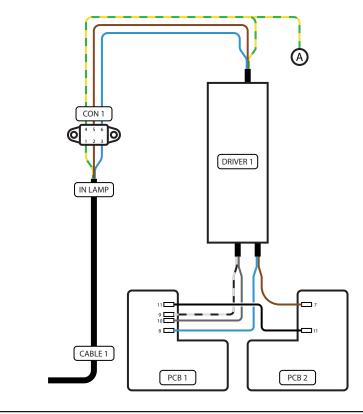
sales@dcbright.com

Installation - electrical schematic

Dark Licht ONE



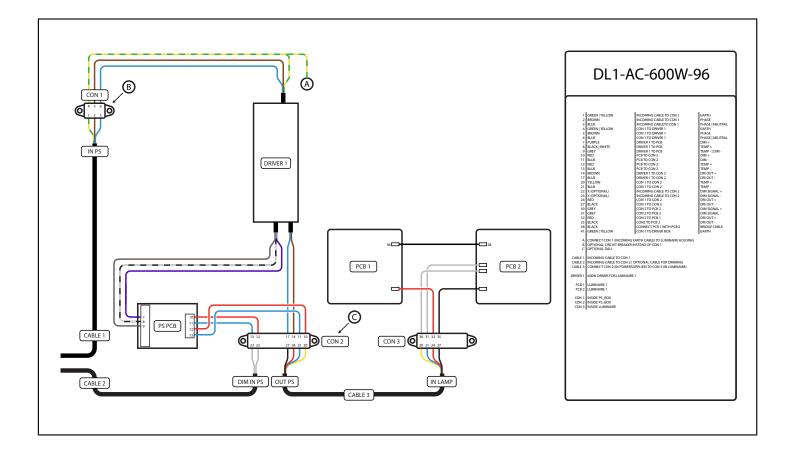
DL1-AC-320W-51



DL1-AC-400W-64

no.: Dark Licht Operating Instruction

date: 06/12/23 page: 16/19



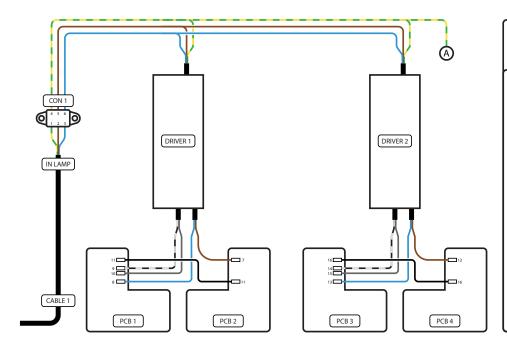
TDCbright ...

no.: Dark Licht Operating Instruction

date: 06/12/23 page: 17/19 sales@dcbright.com

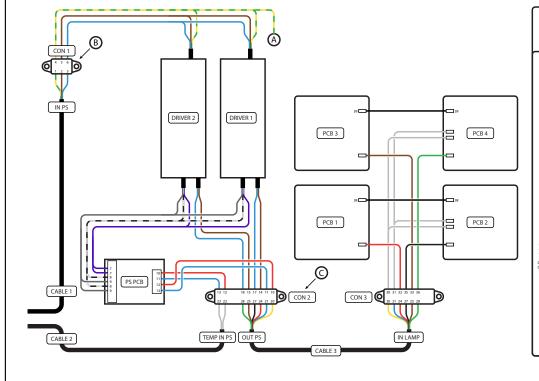
Installation - electrical schematic

Dark Licht TWO



DL2-AC-800W-128





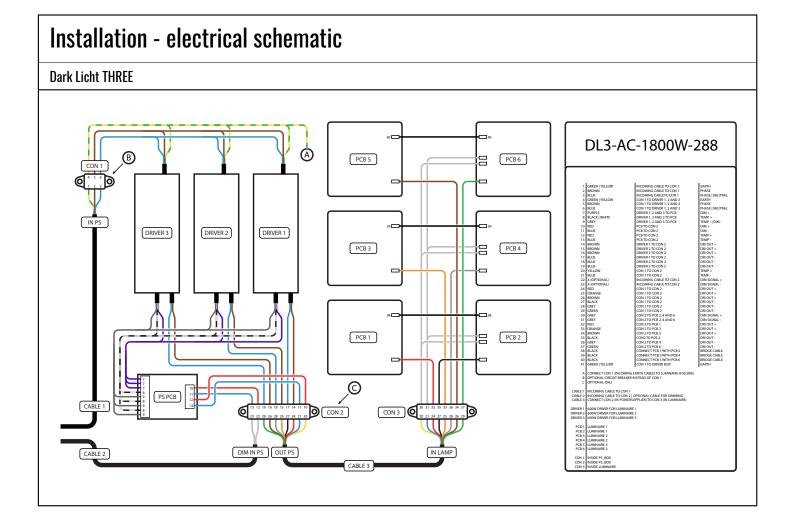
DL2-AC-1200W-192

1	GREEN YELLOW	INCOMING CABLE TO CON 1	EARTH
	BROWN	INCOMING CABLE TO CON 1	PHASE
3	BLUE	INCOMING CABLETO CON 1	PHASE NEUTRAL
4	GREEN YELLOW	CON 1 TO DRIVER 1 AND 2	EARTH
5	BROWN	CON 1 TO DRIVER 1 AND 2	PHASE
6	BLUE	CON 1 TO DRIVER 1 AND 2	PHASE NEUTRAL
7	PURPLE	DRIVER 1 AND 2 TO PCB	DIM +
8	BLACK WHITE	DRIVER 1 AND 2 TO PCB	TEMP +
9	GREY	DRIVER 1 AND 2 TO PCB	TEMP - DIM -
10	RED	PCB TO CON 2	DIM +
11	BLUE	PCB TO CON 2	DIM -
12	RED	PCB TO CON 2	TEMP +
	BLUE	PCB TO CON 2	TEMP -
14	BROWN	DRIVER 1 TO CON 2	DRI OUT +
	BROWN	DRIVER 2 TO CON 2	DRI OUT +
	BLUE	DRIVER 1 TO CON 2	DRI OUT -
	BLUE	DRIVER 2 TO CON 2	DRI OUT -
	YELLOW	CON 1 TO CON 2	TEMP +
	BLUE	CON 1 TO CON 2	TEMP -
	X (OPTIONAL)	INCOMING CABLE TO CON 2	DIM SIGNAL +
	X (OPTIONAL)	INCOMING CABLE TO CON 2	DIM SIGNAL -
	RED	CON 1 TO CON 2	DRI OUT +
	BROWN	CON 1 TO CON 2	DRI OUT +
	BLACK	CON 1 TO CON 2	DRI OUT -
	GREEN	CON 1 TO CON 2	DRI OUT -
	GREY	CON 2 TO PCB 2 AND 4	DIM SIGNAL +
	GREY	CON 2 TO PCB 2 AND 4	DIM SIGNAL -
	RED	CON 2 TO PCB 1	DRI OUT +
	BROWN	CON 2 TO PCB 3	DRI OUT +
	BLACK	CON2 TO PCB 2	DRI OUT -
	GREEN	CON 2 TO PCB 4	DRI OUT -
	BLACK	CONNECT PCB 1 WITH PCB 2	BRIDGE CABLE
	BLACK	CONNECT PCB 3 WITH PCB 4	BRIDGE CABLE
41	GREEN YELLOW	CON 1 TO DRIVER BOX	EARTH
		ARTH CABLE) TO LUMINAIRE HOUSING	
	OPTIONAL CIRCUIT BREAKER IN	ISTEAD OF CONT	
C	OPTIONAL DALI		
CARLET	INCOMING CABLE TO CON 1		
	INCOMING CABLE TO CON 2 C	OTTONAL CARLE FOR DIMMING	
		PPLIER) TO CON 3 (IN LUMINAIRE)	
CABLES	CONNECT CON 2 (IN POWERSO	PPLIER) TO CON'S (IN LUMINAIRE)	
DOMED 1	600W DRIVER FOR LUMINAIRE	1	
	600W DRIVER FOR LUMINAIRE		
Louis ER 2	COUNT DIVINENT ON LUMINDAINE	•	
PCB 1	LUMINAIRE 1		
	LUMINAIRE 1		
	LUMINAIRE 2		
	LUMINAIRE 2		
CON 1	INSIDE PS BOX		
	INSIDE PS BOX		
CON 3	INSIDE LUMINAIRE		

****DCbright ****

no.: Dark Licht Operating Instruction

date: 06/12/23 page: 18/19



sales@dcbright.com

date: 06/12/23 page: 19/19

no.:

Maintenance



Dark Licht Operating Instruction



WARNING = DANGER

When performing maintenance work, disconnect the voltage from the LED fixture before starting the work.

General warning





WARNING = DANGER

Do not stare at the operating light source.

Cleaning

Do not use solvents, caustic cleaners or similar agents. Use only a dry or slightly damp cloth to clean the lamp. Clean the glass plate, bolts and housing. Always keep the space between the cooling fins on the back of the fixture free, if dirt accumulates between these cooling fins it should be cleaned as soon as possible. With intensive use and for proper maintenance of the product, this cleaning should take place once a year.

Waste disposal



Dispose of electrical appliances in an environmentally friendly way! Electrical devices do not belong in household waste! According to European Directive 2012/19/EU on waste electrical and electronic equipment, electrical equipment must be collected separately and disposed of in an environmentally friendly recycling facility. You can obtain information about the disposal of waste equipment from your municipality or city administration.