ENVIRONMENTAL PRODUCT DECLARATION

Independent verification of the declaration and data in compliance with ISO 14025: 2006

LEDVANCE

Damp Proof Gen 2

Reference product: DP 5TH 1500 46W 840 IP65 GY

Registration number	**LEDV-00002-V01.01-EN**	**Drafting rules**	**PEP-PCR–ED4-EN-2021 09 06**
Verifier accreditation number	**VH08**	**Supplemented by**	**PSR-0014-ED2.0-EN-2023 07 13**
Date of issue	**11-2023**	**Validity period**	**5 years**
EPD prepared by	**LEDVANCE GmbH**		
Independent verification of the declaration and data in compliance with ISO 14025: 2006			
Internal		External	X
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEP are compliant with XP C08-100-1:2016 or EN 50693:2019			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025: 2006 « Environmental labels and declarations. Type III environmental declarations»			

1. General information

1.1 Company information

Further technical information can be obtained by contacting:

- LEDVANCE GmbH, Parkring 1-5, 85748 Garching, Germany
- or on the website www.ledvance.com
- or by E-Mail LCA@ledvance.com.

1.2 Reference product information

The name of the product under study is “DP 5TH 1500 46W 840 IP65 GY” with the following product description:

Product benefits

- Low flicker ≤ 10 %
- Evenly distributed light
- Energy savings of up to 60 % (compared to luminaires that use fluorescent lamps)
- Easy installation, no tools required for connection

Areas of application

- Industrial and storage facilities
- Car parks and underpasses
- Garages
- Workshops, assembly lines

Product features

- High luminous efficacy: up to 139 lm/W
- Type of protection: IP65
- Beam angle: 110°
- Through-wiring 5x2.5mm² already installed
- Polycarbonate housing

Equipment / Accessories

- Stainless steel clamps with safety screws included
- Mounting accessories included (suspension kit, theft protection kit)

Reference Service Life

LEDVANCE declares for the luminaire following service lifetimes:

- Lifespan L70/B50 at 25 °C: 70,000 h
- Lifespan L80/B10 at 25 °C: 50,000 h
- Lifespan L90/B10 at 25 °C: 34,000 h

The key information to the product is summarized in the following table.

Table 1: Key technological data

Information	
Type of luminaire	Damp Proof
Short Text Product	DP 5TH 1500 46W 840 IP65 GY
Operating mode	Integrated LED driver
Lamp type	Integrated LED not exchangeable
Color temperature	4000 K
Nominal wattage	46.00 W
Luminous flux	6,400 lm
Color rendering index Ra	> 80
Protection class IK	IK08
Type of protection	IP65
Nominal voltage	220…240 V
Nominal lifetime (L70/B50)	70,000 h
Dimmable	No
Length (incl. round luminaires)	1500.00 mm
Width (incl. round luminaires)	82.00 mm
Height (incl. cylin. luminaires)	68.00 mm
Area of Application	Indoor Industry and Residential Building

Based on the assigned lifetime according EN 15193-1:2017 for indoor industry application and the annual operating hours of 4,000 h taken from the PSR, the luminaire has the following annual service time:

Type of building	Annual operating hours by default	Operational lifetime (years)
Industry (manufacturing plants)	4,000	17.5

Following the requirements of the PSR, the operational lifetime is 17.5 years.

The LOR (light output ratio) of the luminaire has been determined applying measurements of the luminous flux of the luminaire and the luminous flux of the light source. The LOR has been determined to be η = 88.9%. Details are given by TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch test report No 70.402.21.065.27-04 for luminaire AC29187 with light source AC33513 according to test specification given by Regulation (EU) 2017/1369, COMMISSION REGULATION (EU) 2019/2020 COMMISSION DELEGATED REGULATION (EU) 2019/2015, COMMISSION DELEGATED REGULATION (EU) 2021/340 and COMMISSION REGULATION (EU) 2021/341.

1.3 Overview

The general information used for the EPD are listed below:

Table 2: Basic EPD information

Information	
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 35,000 hours
Reference flow / declared unit*	0.078 product(s)
Life cycle stages covered (according to EN15804+A2)	Cradle-to-grave and Module D
Product category according to PSR	Luminaires
Product family name (if family EPD)	DP Gen 2

* The reference flow is calculated as: (1,000/outgoing luminous flux of the analyzed product in lumens) x (35,000/declared product lifetime of the analyzed product in hours)

Consequently, the reference flow of the following product corresponds to:

(1,000/6,400) x (35,000/70,000) = 0.078

1.4 Homogeneous environmental family

The reference product represents the DP Gen 2 family, which differs in terms of power (W), useful output flux (lumen) of the integrated LED installed in the luminaries, already installed through-wiring and dimension (length and weight).

The range of variations for the products in the same family are the following:

Table 3: Range of variation for homogeneous environmental family

Criteria	Unit	Value for the reference product	Minimum value in product range	Maximum value in product range
Electrical Power	W	46	18	81
Useful output flux	Lumen	6400	2400	11000
Weight (Product)	kg	1.930	1.310	1.930
Length	mm	1500	1200	1500

The present PEP declaration is valid for all the products in the described homogenous environmental family. The spreadsheet provided in section 5 Extrapolation of this document shall be used by the PEP user to extrapolate the impact of the other products from the DP Gen 2 Family, based on the technical parameters of the considered product, as requested by the PSR.

2 Constituent materials

2.1 Overview

Table 4: Product composition

Information	Weight [in kg]	Share [in %]
Total weight	2.428	100
Product	1.930	79.5
Packaging	0.498	20.5
Additional equipment	0	0

2.2 Product

Table 5: Material composition - product

Information	Weight [in g]	*Sum of weight [in g]*	Share [in %]
TOTAL		**1929.4**	**100**
Metals		**640.1**	**33.2**
- Steel plate	588.8		30.5
- Stainless Steel	20.2		1.0
- Galvanized steel	12.1		0.6
- Other	19.0		<1.0
Plastics		**912.8**	**47.3**
- Polycarbonate (PC)	804.0		41.7
- Silicone	52.9		2.7
- PA6 / PA6.6	38.0		2.0
- Other	17.9		<1.0
Other		**376.5**	**19.5**
- Internal & External Cable	223.5		11.6
- Electronics	153.0		7.9

2.3 Packaging

Table 6: Material composition - packaging

Information	Weight [in kg]	Share [in %]
Total weight	0.498	100
Plastics	0.008	1.6
Paper/cardboard	0.413	83.0
Wood	0.077	15.4

Plywood pallet and other secondary packaging with cardboard are used for shipping. In addition, Packaging of raw materials and components is considered according to /PSR-0014-ED2.0-EN-2023 07 13/ as an average quantity of 5 % in mass of the luminaire. This additional packaging is not considered in Table 6 as it is an additional assumption.

3 Information on life cycle stages

3.1 Manufacturing

The manufacturer sources all parts from international suppliers. Within the manufacturing site in China, the product is assembled using energy. Afterwards the product is packed in packaging materials and distributed to the client.

3.2 Distribution

The main market for the product is Europe. For this reason, an Intercontinental transport following PEP-PCR-ed4-EN-2021 09 06 is considered in the model:

- Ship: 19,000 km
- Truck: 1,000 km

The background assumptions for the transportation are listed below.

Table 7: Background information distribution

Information	Unit	Truck	Ship
Fuel type	-	Diesel	Heavy fuel oil
Fuel consumption	l/(kg*km)	2.80E-03	2.30E-04
Total distance	km	1,000	19,000
Capacity utilisation (including empty runs)	%	85	48
Bulk density of transported products	kg/m3	n.a.	n.a.
Volume capacity utilisation factor	-	n.a.	n.a.

3.3 Installation

The product is designed for tool-free installation. No energy or material input is required. During installation, the product is unpacked. The packaging materials is treated by applying default values following PSR-0014-ED2.0-EN-2023 07 13.

Table 8: End of life data for packaging in Europe

Treatment scenario	Metal	Paper & Cardboard	Wood	Plastics
Incineration without energy recovery	0 %	0 %	0 %	0 %
Incineration with energy recovery	2 %	9 %	31 %	37 %
Landfill	21 %	9 %	38 %	23 %
Recycling rate	77 %	82 %	31 %	41 %

3.4 Use stage

The product has no direct emissions (B1) and is designed so that no maintenance is required (B2) or parts need to be replaced (B4). Furthermore, no standard repairs (B3) or refurbishments (B5) are foreseen. The use of the product does consume electricity (B6), but no water (B7).

The main market for the product is Europe. Therefore, the European average grid mix has been used.

3.5 End of life

The product falls under the Waste from Electrical and Electronic Equipment (WEEE) directive 2012/19/EU and its main market is Europe. Therefore, European statistics on the treatment of lighting equipment as subcategory of WEEE from 2018 has been used. The EoL scenario displays a European average and is the following:

- Incineration without energy recovery: 6.5 %
- Incineration with energy recovery: 7.6 %
- Landfilling: 6.5 %
- Recycling: 79.4 %

3.6 Benefits and loads beyond the system boundaries stage

The incineration with energy recovery and recycling of the product (incl. packaging) generates environmental benefits by avoiding the production of primary materials or energy. The amount and type of material flows used for the calculation of benefits are listed in Table 9.

Table 9: Material flows for benefits and loads beyond the system boundaries

Information	Unit	Value
Total weight going into re-use	kg/functional unit	0
Total weight going into recycling	kg/functional unit	0.119
- Share of metals	%	33.2
- Share of plastics	%	47.3
- Share of others	%	19.5
Total weight going into incineration with energy recovery	kg/functional unit	0.050
- Share of paper	%	64.1
- Share of others	%	35.9

4 Environmental impacts

4.1 Introduction

The following table summarizes the key information for the calculation of the environmental impacts:

Table 10: Basic information LCA model

Information	Value
Used LCA software	GaBi / LCA for experts 10
Used LCI database	GaBi Professional 2023.2 + Electronics Extension 2023.2
PCR version	PEP-PCR–ED4-EN-2021 09 06
PSR version	PEP-PSR-0014-ED2.0-EN-2023 07 13
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1.000 lumens during a reference lifetime of 35.000 hours

4.2 Results per functional unit

The following results of the environmental declaration have been developed by considering an outgoing artificial luminous flux of 1.000 lumens over a reference lifetime of 35.000 hours. The results refer to the core environmental impact indicators and indicators describing resource use. waste categories. and output flows according to EN 15804:2012+A2:2019.

Table 11: Results core environmental impact indicators per functional unit

	Total (excl. D)	Raw materials & parts		Manufac-turing	Distribu-tion	Installa-tion	Use	End of life			Benefits and loads beyond the system boundaries
		A1	A2	A3	A4	A5	B6	C2	C3	C4	D
GWP - total [kg CO2 eq.]	8.32E+01	1.07E+00	1.35E-02	7.63E-02	4.91E-02	3.75E-02	8.17E+01	1.02E-02	1.77E-01	7.19E-03	-2.17E-01
GWP - fossil [kg CO2 eq.]	8.25E+01	1.14E+00	1.34E-02	6.72E-02	4.89E-02	1.57E-02	8.10E+01	1.01E-02	1.77E-01	7.19E-03	-2.56E-01
GWP - biogenic [kg CO2 eq.]	6.65E-01	-7.07E-02	3.11E-05	9.05E-03	6.35E-05	2.17E-02	7.04E-01	2.36E-05	1.60E-04	-3.15E-06	3.93E-02
GWP - luluc [kg CO2 eq.]	1.00E-02	7.52E-04	1.26E-04	4.13E-05	1.21E-04	4.73E-05	8.81E-03	9.54E-05	5.95E-06	5.98E-07	-2.63E-04
ODP [kg CFC-11 eq.]	1.50E-09	7.12E-12	1.19E-15	2.91E-13	3.61E-15	2.90E-14	1.50E-09	9.02E-16	3.51E-13	5.84E-15	-1.29E-12
AP [Mole of H+ eq.]	1.80E-01	5.65E-03	2.02E-05	2.25E-04	8.53E-04	2.88E-05	1.73E-01	1.53E-05	7.85E-05	6.10E-06	-1.74E-03
EP - freshwater [kg P eq.]	3.10E-04	7.29E-06	4.96E-08	6.12E-08	5.55E-08	4.46E-07	3.02E-04	3.76E-08	8.12E-08	2.17E-09	-1.02E-06
EP - marine [kg N eq.]	4.27E-02	8.48E-04	7.77E-06	4.97E-05	3.06E-04	1.42E-05	4.14E-02	5.88E-06	2.30E-05	2.61E-06	-2.12E-04
EP - terrestrial [Mole of N eq.]	4.46E-01	9.07E-03	8.96E-05	5.31E-04	3.35E-03	1.21E-04	4.33E-01	6.79E-05	3.07E-04	3.07E-05	-2.27E-03
POCP [kg NMVOC eq.]	1.14E-01	2.61E-03	1.78E-05	1.45E-04	8.39E-04	2.93E-05	1.10E-01	1.35E-05	7.05E-05	6.84E-06	-6.40E-04
ADPE [kg Sb eq.]	1.21E-04	1.09E-04	8.84E-10	2.94E-09	1.17E-09	6.37E-09	1.25E-05	6.69E-10	3.16E-09	2.59E-11	-5.36E-05
ADPF [MJ]	1.73E+03	1.80E+01	1.85E-01	6.83E-01	6.18E-01	2.09E-01	1.71E+03	1.40E-01	3.25E-01	8.26E-03	-3.61E+00
WDP [m³ world equiv.]	1.84E+01	3.04E-01	1.57E-04	2.05E-02	2.10E-04	1.32E-03	1.81E+01	1.19E-04	1.90E-02	1.57E-03	-5.86E-02

Table 12: Results indicators describing resource use. waste categories. and output flows per functional unit

Indicator	Acronym [Unit]	Value
Renewable primary energy (without raw material)	PERE [MJ]	1.02E+03
Renewable primary energy (raw material)	PERM [MJ]	6.89E-01
Total use of renewable primary energy	PERT [MJ]	1.03E+03
Non-renewable primary energy (without raw material)	PENRE [MJ]	1.72E+03
Non-renewable primary energy (raw material)	PENRM [MJ]	2.01E+00
Total use of non-renewable primary energy	PENRT [MJ]	1.73E+03
Use of secondary materials	SM [kg]	6.84E-02
Use of renewable secondary fuels	RSF [MJ]	0.00E+00
Use of non-renewable secondary fuels	NRSF [MJ]	0.00E+00
Net use of fresh water	FW [m3]	1.84E+01
Hazardous waste disposed	HWD [kg]	-1.01E-07
Non-hazardous waste disposed	NHWD [kg]	1.36E+00
Radioactive waste disposed	RWD [kg]	2.72E-01
Components for reuse	CRU [kg]	0.00E+00
Materials for recycling	MFR [kg]	8.11E-02
Materials for energy recovery	MER [kg]	7.41E-02
Exported electricity	EEE [MJ]	2.85E-01
Exported thermal energy	EET [MJ]	6.35E-01
Biogenic carbon content of the product	Biog. C in product [kg]	0.00E+00
Biogenic carbon content of the associated packaging	Biog. C in packaging [kg]	1.65E-02

4.3 Results per unit of product

The following results of the environmental declaration have been developed by considering the entire life cycle of one product with the technical properties described in 1. The results refer to the core environmental impact indicators and indicators describing resource use. waste categories. and output flows according to EN 15804:2012+A2:2019.

Table 13: Results core environmental impact indicators per unit of product

	Total (excl. D)	Raw materials & parts		Manufac-turing	Distribu-tion	Installa-tion	Use	End of life			Benefits and loads beyond the system boundaries
		A1	A2	A3	A4	A5	B6	C2	C3	C4	D
GWP - total [kg CO2 eq.]	1.07E+03	1.37E+01	1.73E-01	9.78E-01	6.29E-01	4.81E-01	1.05E+03	1.31E-01	2.27E+00	9.22E-02	-2.78E+00
GWP - fossil [kg CO2 eq.]	1.06E+03	1.46E+01	1.71E-01	8.61E-01	6.27E-01	2.01E-01	1.04E+03	1.30E-01	2.27E+00	9.22E-02	-3.28E+00
GWP - biogenic [kg CO2 eq.]	8.52E+00	-9.06E-01	3.99E-04	1.16E-01	8.14E-04	2.79E-01	9.03E+00	3.02E-04	2.05E-03	-4.04E-05	5.04E-01
GWP - luluc [kg CO2 eq.]	1.28E-01	9.64E-03	1.62E-03	5.29E-04	1.55E-03	6.06E-04	1.13E-01	1.22E-03	7.63E-05	7.66E-06	-3.37E-03
ODP [kg CFC-11 eq.]	1.93E-08	9.12E-11	1.53E-14	3.73E-12	4.63E-14	3.72E-13	1.92E-08	1.16E-14	4.49E-12	7.49E-14	-1.66E-11
AP [Mole of H+ eq.]	2.31E+00	7.25E-02	2.59E-04	2.88E-03	1.09E-02	3.69E-04	2.22E+00	1.96E-04	1.01E-03	7.82E-05	-2.23E-02
EP - freshwater [kg P eq.]	3.98E-03	9.35E-05	6.36E-07	7.84E-07	7.11E-07	5.72E-06	3.88E-03	4.81E-07	1.04E-06	2.78E-08	-1.31E-05
EP - marine [kg N eq.]	5.47E-01	1.09E-02	9.96E-05	6.37E-04	3.92E-03	1.82E-04	5.31E-01	7.54E-05	2.95E-04	3.35E-05	-2.71E-03
EP - terrestrial [Mole of N eq.]	5.72E+00	1.16E-01	1.15E-03	6.81E-03	4.30E-02	1.55E-03	5.55E+00	8.70E-04	3.93E-03	3.94E-04	-2.92E-02
POCP [kg NMVOC eq.]	1.46E+00	3.34E-02	2.29E-04	1.86E-03	1.08E-02	3.75E-04	1.42E+00	1.73E-04	9.04E-04	8.77E-05	-8.21E-03
ADPE [kg Sb eq.]	1.56E-03	1.40E-03	1.13E-08	3.77E-08	1.50E-08	8.16E-08	1.61E-04	8.58E-09	4.04E-08	3.32E-10	-6.87E-04
ADPF [MJ]	2.21E+04	2.30E+02	2.37E+00	8.75E+00	7.92E+00	2.68E+00	2.19E+04	1.80E+00	4.17E+00	1.06E-01	-4.63E+01
WDP [m³ world equiv.]	2.36E+02	3.90E+00	2.01E-03	2.62E-01	2.69E-03	1.69E-02	2.31E+02	1.52E-03	2.43E-01	2.01E-02	-7.51E-01

Table 14: Results indicators describing resource use. waste categories. and output flows per unit of product

Indicator	Acronym [Unit]	Value
Renewable primary energy (without raw material)	PERE [MJ]	1.31E+04
Renewable primary energy (raw material)	PERM [MJ]	8.83E+00
Total use of renewable primary energy	PERT [MJ]	1.31E+04
Non-renewable primary energy (without raw material)	PENRE [MJ]	2.21E+04
Non-renewable primary energy (raw material)	PENRM [MJ]	2.57E+01
Total use of non-renewable primary energy	PENRT [MJ]	2.21E+04
Use of secondary materials	SM [kg]	8.77E-01
Use of renewable secondary fuels	RSF [MJ]	0.00E+00
Use of non-renewable secondary fuels	NRSF [MJ]	0.00E+00
Net use of fresh water	FW [m3]	2.36E+02
Hazardous waste disposed	HWD [kg]	-1.29E-06
Non-hazardous waste disposed	NHWD [kg]	1.75E+01
Radioactive waste disposed	RWD [kg]	3.48E+00
Components for reuse	CRU [kg]	0.00E+00
Materials for recycling	MFR [kg]	1.04E+00
Materials for energy recovery	MER [kg]	9.50E-01
Exported electricity	EEE [MJ]	3.65E+00
Exported thermal energy	EET [MJ]	8.15E+00
Biogenic carbon content of the product	Biog. C in product [kg]	0.00E+00
Biogenic carbon content of the associated packaging	Biog. C in packaging [kg]	2.11E-01

5 Extrapolation

5.1 Extrapolation rules

Extrapolations rules have been calculated following PCR-ed4-EN-2021 09 14 and PSR-0014-ed2.0- EN-2023 07 18. The defined rules shall be applied using the Extrapolation rules file provided in the following tables.

Table 15: Extrapolation parameters for reference product

Parameter	Value for reference product (DP 5TH 1500 46W 840 IP65 GY)
Lighting output [lumens]	6400
Weight of light source [kg]	0.06
Weight of luminaire structure [kg]	1.70
Weight of control gear [kg]	0.16
Weight of light management system [kg]	-
Weight of packaging [kg]	0.50
Power [W]	46
Length [mm]	1,500
Throug-wiring [y/n]	y

The extrapolation coefficients calculation at the functional unit level shall be taken into account with the following formula:

$$\text{Extrapolation coefficent at the product level} \times \frac{\text{Lighting output of reference product (lumen)}}{\text{Lighting output of concerned product (lumen)}}$$

5.2 Extrapolation coefficients

The reported extrapolation coefficients are intended at product level (declared unit) and not at functional unit.

Table 16: Calculated Extrapolation coefficients per product

Product Name	Manufacturing	Distribution	Installation	Use	EoL
DP 1200 18W 840 IP65 GY	0.70	0.68	0.69	0.39	0.68
DP 1200 18W 865 IP65 GY	0.70	0.68	0.69	0.39	0.68
DP 1200 32W 830 IP65 GY	0.71	0.71	0.69	0.70	0.72
DP 1200 32W 840 IP65 GY	0.71	0.71	0.69	0.70	0.72
DP 1200 32W 865 IP65 GY	0.71	0.71	0.69	0.70	0.72
DP 1500 26W 840 IP65 GY	0.87	0.85	0.98	0.57	0.81
DP 1500 26W 865 IP65 GY	0.87	0.85	0.98	0.57	0.81
DP 1500 46W 830 IP65 GY	0.90	0.89	0.98	1.00	0.87
DP 1500 46W 840 IP65 GY	0.90	0.89	0.98	1.00	0.87
DP 1500 46W 865 IP65 GY	0.90	0.89	0.98	1.00	0.87
DP 1500 58W 840 IP65 GY	0.90	0.89	0.98	1.26	0.87
DP 1500 58W 865 IP65 GY	0.90	0.89	0.98	1.26	0.87

DP 1500 81W 840 IP65 GY	0.89	0.89	0.98	1.76	0.86
DP 1500 81W 865 IP65 GY	0.89	0.89	0.98	1.76	0.86
DP 5TH 1200 32W 840 IP65 GY	0.80	0.80	0.70	0.70	0.82
DP 5TH 1500 46W 840 IP65 GY	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**

- As the concerned product does not provide any light management functions, the extrapolation coefficient for the light management function components is zero.
- As the concerned product does not provide any energy saving functions, its energy saving coefficient is one. No replacement of the light source is possible.

5.3 List of homogeneous environmental family

The following table reports the information of the products included in the homogeneous environmental family.

Table 17: Parameter information about homogeneous environmental family

Product Name	Lumi-nous flux [lm]	Length [mm]	System power [W]	Product weight (excl. Packag-ing) [kg]	Packag-ing Weight [kg]	Lumi-naire structure weight [kg]	Control gear weight [kg]	Light source weight [kg]
DP 1200 18W 840 IP65 GY	2400	1200	18	1.31	0.34	1.21	0.05	0.05
DP 1200 18W 865 IP65 GY	2400	1200	18	1.31	0.34	1.21	0.05	0.05
DP 1200 32W 830 IP65 GY	4000	1200	32	1.38	0.34	1.21	0.12	0.05
DP 1200 32W 840 IP65 GY	4400	1200	32	1.38	0.34	1.21	0.12	0.05
DP 1200 32W 865 IP65 GY	4400	1200	32	1.38	0.34	1.21	0.12	0.05
DP 1500 26W 840 IP65 GY	3500	1500	26	1.57	0.49	1.44	0.06	0.06
DP 1500 26W 865 IP65 GY	3500	1500	26	1.57	0.49	1.44	0.06	0.06
DP 1500 46W 830 IP65 GY	5750	1500	46	1.67	0.49	1.45	0.16	0.06
DP 1500 46W 840 IP65 GY	6400	1500	46	1.67	0.49	1.45	0.16	0.06
DP 1500 46W 865 IP65 GY	6400	1500	46	1.67	0.49	1.45	0.16	0.06
DP 1500 58W 840 IP65 GY	8000	1500	58	1.68	0.49	1.44	0.17	0.06
DP 1500 58W 865 IP65 GY	8000	1500	58	1.68	0.49	1.44	0.17	0.06
DP 1500 81W 840 IP65 GY	11000	1500	81	1.66	0.49	1.46	0.14	0.06
DP 1500 81W 865 IP65 GY	11000	1500	81	1.66	0.49	1.46	0.14	0.06
DP 5TH 1200 32W 840 IP65 GY	4400	1200	32	1.58	0.35	1.40	0.12	0.05
DP 5TH 1500 46W 840 IP65 GY	**6400**	**1500**	**46**	**1.93**	**0.50**	**1.70**	**0.16**	**0.06**