

# YOA



Designer : Michel Tortel



## Efficiency and style throughout the city

The YOA range offers a complete solution to light urban spaces with the same efficiency and the same astonishing elegance throughout the city.

From large avenues to narrow streets and squares, the various configurations (side-entry, post-top and catenary solutions) provide aesthetic ensembles to create a distinctive identity for the city landscape.

The YOA luminaire is equipped with the second generation LensoFlex®2 photometric engine, which offers a high-performance photometry optimised for each specific application with minimum energy consumption.



IP 66

IK 10

IK 08



UL 1598  
CSA C22.2  
No. 250.0

CE



005  
certification



## Concept

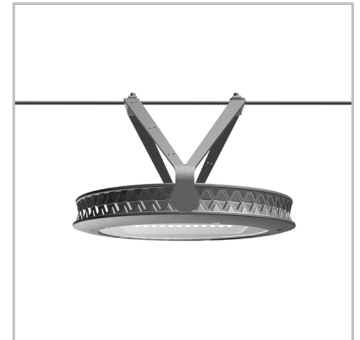
Built with recyclable materials - aluminium and glass - the YOA luminaire is available in two sizes: YOA Midi with up to 48 LEDs and YOA Maxi with up to 96 LEDs. YOA Midi is particularly suited to lighting residential areas, urban roads, parks, squares, pedestrian zones whereas YOA Maxi is ideal for large avenues and main roads.

The YOA range offers flexible combinations of LED modules, driving currents and dimming options to provide a cost-effective solution while improving comfort and safety for people.

To simplify installation and maintenance operations, YOA introduces patented technologies such as the IzyHub compact connection and connectivity module, for quick, error-proof wiring. This connected-ready luminaire offers a realistic platform for smart cities.

YOA also offers various mounting possibilities: side-entry for Ø48mm or Ø60mm spigots, post-top or side-entry with a double bracket or catenary (YOA Midi only).

To offer complete aesthetic solutions, YOA is available with three ranges of dedicated brackets (Tressa, Lucea and Lyre).



YOA offers numerous mounting options: post-top, side-entry and catenary.



YOA is available with TRESSA, LUCEA and LYRE brackets.

## TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS
- ROADS & MOTORWAYS

## KEY ADVANTAGES

- Maximised savings in energy and maintenance costs
- LensoFlex®2 offering high performance photometry, comfort and safety
- High-end aesthetic finish
- Flexible number of LED modules and photometry
- ThermiX® for long lasting performance
- Smart-city ready (NEMA) and ZD4i compliant (Zhaga)



YOA offers a high-quality finish.

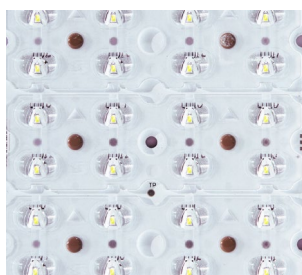


YOA can be fitted with a Back Light Control system to prevent intrusive light.



LensoFlex®2

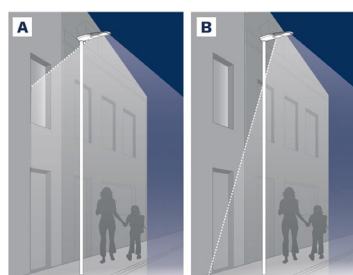
LensoFlex®2 is based upon the addition principle of photometric distribution. Each LED is associated with a specific PMMA lens that generates the complete photometric distribution of the luminaire. The number of LEDs in combination with the driving current determines the intensity level of the light distribution.



Back Light control

As an option, the LensoFlex®2 and LensoFlex®4 modules can be equipped with a Back Light control system.

This additional feature minimises light spill from the back of the luminaire to avoid intrusive light towards buildings.



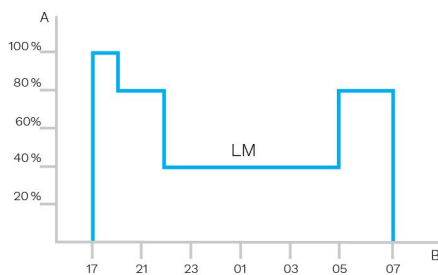
A. Without Back Light control | B. With Back Light control



## Custom dimming profile

Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.

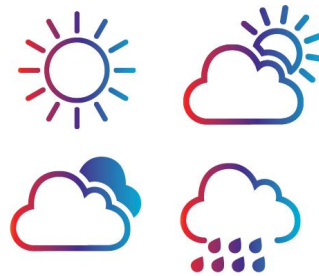


A. Dimming level | B. Time



## Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.

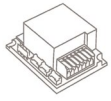


## PIR sensor: motion detection

In places with little nocturnal activity, lighting can be dimmed to a minimum most of the time. By using passive infrared (PIR) sensors, the level of light can be raised as soon as a pedestrian or a slow vehicle is detected in the area.

Each luminaire level can be configured individually with several parameters such as minimum and maximum light output, delay period and ON/OFF duration time. PIR sensors can be used in an autonomous or interoperable network.





## IzyHub

IzyHub is an innovative device that aims to keep luminaire installation and maintenance hassle-free. This single central connection hub distributes electricity and control information to all parts of the luminaire, ensuring that all components work together and offering reliable, long-term performance.

Its compact size and error-proof connections enable smaller and lighter luminaires that are easier to maintain and upgrade.



### Surge Protection

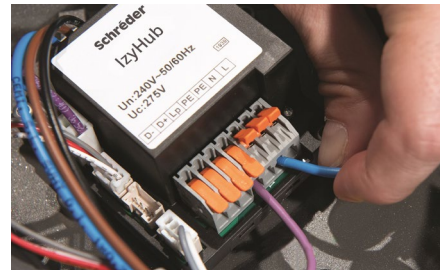
IzyHub features a built-in surge protection device. This prevents electrical surges resulting from lightning strikes and other transient voltages that originate from the mains network from damaging the luminaire, even in the most demanding conditions. The protective device also includes an end-of-life LED warning light, indicating that the luminaire is protected correctly.

### User-friendly

Installing a luminaire has never been easier. IzyHub features tool-free connector as the main connection terminal. It enables 30% shorter installation times compared with standard solutions. Lever actuated spring-loaded electrical connectors provide optimal contact throughout the entire life of the product.

### Easy maintenance

On the rare occasion that a component needs to be replaced in the luminaire, IzyHub makes sure that operations are carried out quickly and easily. Luminaire component connections are keyed so that mixing up electrical connections is physically impossible. Installers do not need to trace wires individually: plug it in, and it works straight away.



### Versions and upgrades

IzyHub has several versions featuring different connectivity options. IzyHub can include an SPD, can work with external dimming and operate with all type of control sockets. It is also able to provide bi-power control and to include fuse options.

These options provide flexibility for future upgrades by only having to replace the IzyHub to connect the new equipment. No complicated re-wiring needed.





## Cost-effective solution

A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.

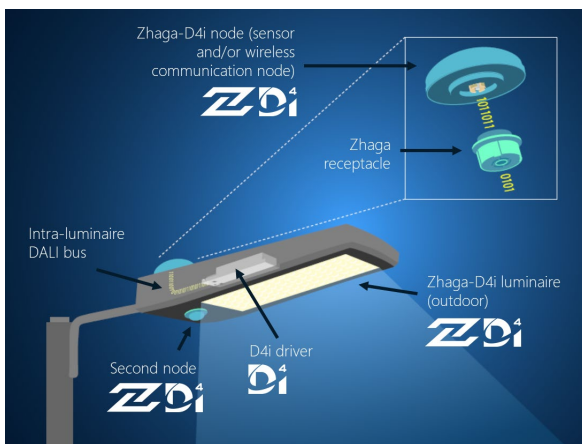
The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.

## Standardisation for interoperable ecosystems

As a founding member of the Zhaga consortium, Schröder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire. According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

## Certification program

The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.





Schröder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.



## Tailored experience

Schröder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

## A powerful tool for efficiency, rationalisation and decision making

Data is gold. Schröder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and aggregates, analyses and intuitively displays them to help end-users take the right actions.

## Protected on every side

Schröder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services.

## Standardisation for interoperable ecosystems

Schröder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schröder EXEDRA system relies on shared and open technologies.

Schröder EXEDRA also relies on Microsoft™ Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

## Breaking the silos

With EXEDRA, Schröder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schröder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

## A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface.

## GENERAL INFORMATION

Recommended installation height	4m to 12m   13' to 39'
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
UL certified	Yes
ROHS compliant	Yes
Zhaga-D4i certified	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
BE 005 certified	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

## HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 08, IK 10
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)

## OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +40°C / -22°F up to 104°F
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· Depending on the luminaire configuration. For more details, please contact us.

## ELECTRICAL INFORMATION

Electrical class	Class 1US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz 347-480V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-4-5 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schröder EXEDRA
Sensor	PIR (optional)

## OPTICAL INFORMATION

LED colour temperature	2200K (WW 822) 2700K (WW 727) 3000K (WW 730) 3000K (WW 830) 4000K (NW 740)
Colour rendering index (CRI)	>80 (WW 822) >70 (WW 727) >70 (WW 730) >80 (WW 830) >70 (NW 740)
ULOR	0%
ULR	0%

· ULOR may be different according to the configuration. Please consult us.  
· ULR may be different according to the configuration. Please consult us.

## LIFETIME OF THE LEDS @ TQ 25°C

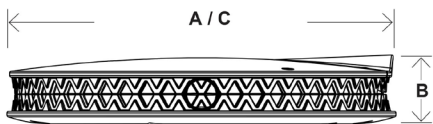
All configurations	100,000h - L90
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DIMENSIONS AND MOUNTING

AxBxC (mm   inch)	YOA MIDI - 500x92x500   19.7x3.6x19.7 YOA MAXI - 650x92x650   25.6x3.6x25.6
Weight (kg   lbs)	YOA MIDI - 13   28.6 YOA MAXI - 20   44.0
Aerodynamic resistance (CxS)	YOA MIDI - 0.02 YOA MAXI - 0.02
Mounting possibilities	Side-entry slip-over - Ø48mm Side-entry slip-over - Ø60mm Post-top slip-over - Ø76mm Catenary

· Only Yoa Midi is available for a catenary mounting





			Luminaire output flux (lm) Warm White 727		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 822		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Neutral White 740		Power consumption (W)	Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to		Photometry
YOA MIDI	8	350	700	1000	800	1200	500	800	700	1000	800	1200	10	120	LENZO FLEX* 2
	8	380	700	1100	800	1300	600	900	700	1100	900	1300	10.7	121	LENZO FLEX* 2
	8	400	800	1200	900	1300	600	900	800	1200	900	1400	11.2	125	LENZO FLEX* 2
	8	470	900	1400	1000	1500	700	1100	900	1400	1100	1600	12.9	124	LENZO FLEX* 2
	8	500	1000	1400	1100	1600	800	1100	1000	1400	1100	1700	13.7	124	LENZO FLEX* 2
	8	600	1100	1700	1300	1900	900	1300	1100	1700	1300	1900	16.6	114	LENZO FLEX* 2
	8	700	1300	1900	1400	2100	1000	1500	1300	1900	1500	2200	19.5	113	LENZO FLEX* 2
	8	800	1400	2100	1600	2300	1100	1700	1400	2100	1600	2400	22.4	107	LENZO FLEX* 2
	8	900	1500	2300	1700	2500	1200	1800	1500	2300	1800	2600	25.1	104	LENZO FLEX* 2
	8	940	1400	2100	1500	2300	1100	1600	1400	2100	1600	2400	26.1	92	LENZO FLEX* 2
	16	250	1000	1500	1100	1700	800	1200	1000	1500	1200	1800	13.3	135	LENZO FLEX* 2
	16	260	1100	1600	1200	1800	800	1300	1100	1600	1200	1800	13.7	131	LENZO FLEX* 2
	16	300	1200	1800	1400	2100	1000	1400	1200	1800	1400	2100	15.6	135	LENZO FLEX* 2
	16	350	1400	2100	1600	2400	1100	1700	1400	2100	1700	2500	18.1	138	LENZO FLEX* 2
	16	400	1600	2400	1800	2700	1300	1900	1600	2400	1900	2800	20.6	136	LENZO FLEX* 2
	16	500	2000	2900	2200	3300	1600	2300	2000	2900	2300	3400	25.8	132	LENZO FLEX* 2
	16	600	2300	3400	2600	3800	1800	2700	2300	3400	2700	3900	31	126	LENZO FLEX* 2
	16	700	2600	3900	2900	4300	2100	3000	2600	3900	3000	4400	35.9	123	LENZO FLEX* 2
	16	800	2900	4300	3200	4700	2300	3400	2900	4300	3300	4900	41.5	118	LENZO FLEX* 2
	16	820	2900	4300	3300	4800	2300	3400	2900	4300	3400	5000	42.5	118	LENZO FLEX* 2
	16	850	3000	4400	3300	4900	2400	3500	3000	4400	3500	5100	44	116	LENZO FLEX* 2
	24	200	1300	1900	1400	2100	1000	1500	1300	1900	1500	2200	15.8	139	LENZO FLEX* 2
	24	300	1900	2800	2100	3100	1500	2200	1900	2800	2200	3200	23	139	LENZO FLEX* 2
	24	330	2100	3000	2300	3400	1600	2400	2100	3000	2400	3500	25.2	139	LENZO FLEX* 2
	24	400	2500	3600	2700	4100	1900	2900	2500	3600	2800	4200	30.4	138	LENZO FLEX* 2
	24	500	3000	4400	3300	4900	2400	3500	3000	4400	3400	5100	38.1	134	LENZO FLEX* 2
	24	550	3200	4800	3600	5300	2600	3800	3200	4800	3700	5500	42	131	LENZO FLEX* 2
	24	560	3300	4900	3700	5400	2600	3800	3300	4900	3800	5600	42.5	132	LENZO FLEX* 2
	24	590	3400	5100	3800	5700	2700	4000	3400	5100	4000	5900	44.5	133	LENZO FLEX* 2
	24	600	3500	5100	3900	5700	2700	4100	3500	5100	4000	5900	45	131	LENZO FLEX* 2
	24	700	3900	5800	4400	6500	3100	4600	3900	5800	4500	6700	53	126	LENZO FLEX* 2
	24	800	4300	6400	4800	7100	3400	5100	4300	6400	5000	7400	60.5	122	LENZO FLEX* 2

Tolerance on LED flux is  $\pm 7\%$  and on total luminaire power  $\pm 5\%$



			Luminaire output flux (lm) Warm White 727		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 822		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Neutral White 740		Power consumption (W)	Luminaire efficacy (lm/W)	
Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to		Photometry
YOA MIDI	24	900	4700	6900	5200	7700	3700	5500	4700	6900	5400	8000	68.5	117	
	24	1000	5000	7400	5600	8200	4000	5800	5000	7400	5800	8500	76	112	
	32	200	1700	2500	1900	2800	1300	2000	1700	2500	1900	2900	20.5	141	
	32	230	1900	2900	2200	3200	1500	2300	1900	2900	2200	3300	23.3	142	
	32	250	2100	3100	2300	3500	1700	2500	2100	3100	2400	3600	25.1	143	
	32	280	2400	3500	2600	3900	1900	2800	2400	3500	2700	4000	27.9	143	
	32	300	2500	3700	2800	4200	2000	2900	2500	3700	2900	4300	29.8	144	
	32	400	3300	4900	3700	5400	2600	3800	3300	4900	3800	5600	39.5	142	
	32	450	3600	5400	4000	6000	2900	4200	3600	5400	4200	6200	44.5	139	
	32	500	4000	5900	4500	6600	3200	4700	4000	5900	4600	6800	49	139	
	32	600	4700	6900	5200	7700	3700	5400	4700	6900	5400	7900	59.5	133	
	32	700	5300	7800	5900	8600	4200	6100	5300	7800	6100	8900	69.5	128	
	32	770	5600	8300	6300	9300	4500	6600	5600	8300	6500	9600	77	125	
	32	800	5800	8600	6500	9500	4600	6800	5800	8600	6700	9900	79	125	
	40	200	2200	3200	2400	3600	1700	2500	2200	3200	2500	3700	25.3	146	
	40	220	2300	3500	2600	3800	1800	2700	2300	3500	2700	4000	27.7	144	
	40	280	3000	4400	3300	4900	2300	3500	3000	4400	3400	5000	34.7	144	
	40	300	3200	4700	3500	5200	2500	3700	3200	4700	3600	5400	37.1	146	
	40	350	3600	5400	4100	6000	2900	4300	3600	5400	4200	6200	43	144	
	40	400	4100	6100	4600	6800	3200	4800	4100	6100	4700	7000	49	143	
	40	500	4900	7300	5500	8100	3900	5800	4900	7300	5700	8400	61.5	137	
	40	600	5700	8500	6400	9400	4500	6700	5700	8500	6600	9800	73	134	
	40	800	7000	10400	7800	11500	5600	8200	7000	10400	8100	11900	100	119	
	48	200	2500	3800	2800	4200	2000	3000	2500	3800	2900	4400	29.6	149	
	48	300	3800	5600	4200	6300	3000	4400	3800	5600	4400	6500	44	148	
	48	400	5000	7300	5500	8200	3900	5800	5000	7300	5700	8500	58.5	145	
	48	500	6000	8900	6700	9900	4800	7000	6000	8900	6900	10300	73	141	
	48	550	6500	9600	7300	10700	5200	7600	6500	9600	7500	11100	80	139	
	48	600	7000	10300	7800	11500	5500	8200	7000	10300	8100	11900	89	134	
	48	700	7900	11700	8800	13000	6300	9200	7900	11700	9100	13400	104	129	
	48	760	8400	12400	9400	13800	6700	9800	8400	12400	9700	14300	112	128	

Tolerance on LED flux is  $\pm 7\%$  and on total luminaire power  $\pm 5\%$



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Luminaire	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to		Photometry
YOA MAXI	64	200	4200	5300	4700	5900	3300	4200	4200	5300	4800	6100	39.6	154	
	64	220	4600	5800	5100	6400	3600	4600	4600	5800	5300	6700	43	156	
	64	300	6100	7700	6800	8600	4800	6100	6100	7700	7100	8900	58	153	
	64	400	7900	10000	8800	11100	6300	7900	7900	10000	9100	11500	77	149	
	64	420	8300	10400	9200	11600	6500	8300	8300	10400	9500	12000	81	148	
	64	500	9600	12100	10700	13500	7600	9600	9600	12100	11000	13900	99	140	
	64	600	11100	14000	12400	15600	8800	11100	11100	14000	12800	16100	118	136	
	64	700	11800	14900	13100	16600	9300	11800	11800	14900	13600	17100	139	123	
	80	200	5200	6600	5800	7400	4100	5200	5200	6600	6000	7600	48.5	157	
	80	300	7700	9700	8500	10800	6100	7700	7700	9700	8800	11200	72	156	
	80	400	9900	12500	11100	13900	7900	9900	9900	12500	11400	14400	96	150	
	80	500	12000	15100	13400	16900	9500	12000	12000	15100	13800	17400	121	144	
	80	600	13900	17500	15500	19500	11000	13900	13900	17500	16000	20200	147	137	
	80	690	15500	19500	17200	21700	12300	15500	15500	19500	17800	22500	171	132	
	96	200	6300	8000	7000	8900	5000	6300	6300	8000	7300	9200	58	159	
	96	300	9200	11600	10300	13000	7300	9200	9200	11600	10600	13400	86	156	
	96	400	11900	15000	13300	16700	9400	11900	11900	15000	13700	17300	114	152	
	96	500	14400	18200	16100	20200	11400	14400	14400	18200	16600	20900	145	144	
	96	530	15100	19100	16800	21200	12000	15100	15100	19100	17400	22000	153	144	
	96	580	16300	20500	18100	22800	12900	16200	16300	20500	18700	23600	168	140	

Tolerance on LED flux is  $\pm 7\%$  and on total luminaire power  $\pm 5\%$

