

# XFFL range

## Tubular LED fitting



### Certification



Polycarbonate version



Glass version

### Features

- Operating life above 100 000 h (according items)
- High lumen output - 5 000 lumens with 100% yield (according items)
- LED module with diffuser
- All components mounted on sliding gear tray for easy installation and maintenance
- Possibility to retro-fit LED gear tray into existing fixtures mounted with T8 lamps
- Available in polycarbonate or in glass
- Including accessories (cable gland & fixing brackets)
- Supplied with offshore grade paint

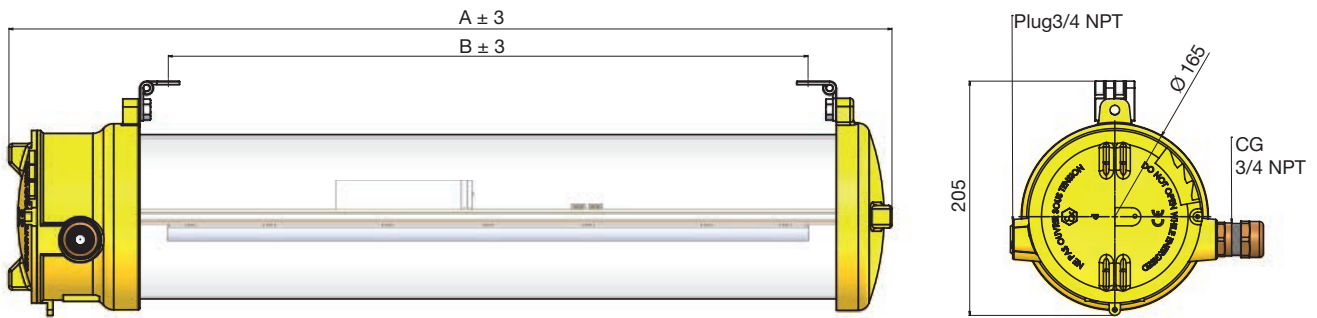
### Certification and standards

Approved to	EN60079-0, 60079-1, 60079-31
EC Type examination certificate	Directive 94/9/CE INERIS 13 ATEX 0050X Ex II 2 G Ex d IIC T6 Gb for -20°C to +55°C Ex d IIB T6 Gb for -20°C to +55°C (for XFRL140V, XFRL240V, XFRL165V, and XFRL265V) Ex II 2 D Ex tb IIIC T 70°C for -20°C to +55°C (for XFRL120, XFRL140, XFRL120V, XFRL140V, XFRL220, XFRL220V) Ex tb IIIC T 80°C for -20°C to +55°C (for XFRL165, XFRL165V, XFRL240)
Glow wire test	960°C EN60598-2-22
Safe operating temperature range	-20°C to +55°C
IP test	IP66 IEC 60529 (2001)
Directive EMC (2004/108/CE)	EN 55015: 2006+ A1 2007 + A2 2009 (Conducted emission test & radiated emission test) EN 61547 : 2009 (CEM immunity) EN 61000-3-2 : 2006+ A1 2009 +A2 2009 (Harmonic current Emissions Class C) EN61000-3-3 : 2008 (Limitation of voltage changes, and flickers)
Directive Low voltage (2006/95/CE)	EN 60598-1 : 2009+A1 2009 (Luminaire general requirements and tests) EN 62493 : 2010 (Assessment of lighting equipment related to human exposure to electromagnetic fields)
Rohs (2002/95/CE)	In accordance
Dielectric strength	EN 60598-1 (1800V/50Hz/6s)
Isolation resistance	EN 60598-1 (200 Mohms/ 25A/ 12W/10s)

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## Dimensions

	XFRL120	XFRL220	XFRL140	XFRL240	XFRL165	XFRL265
Dimensions (mm) A	780	780	1385	1385	1690	1690
Dimensions (mm) B	565	565	1170	1170	1475	1475



## Photometric data

### 3D view T8 fluo lamp - XFF240-0G000

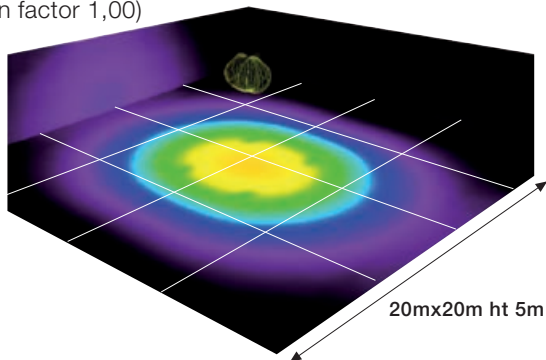
Lumen output (Luminair) : 3546 lm

Lumen output (Lamp) : 6700 lm

Yield : 52%

Rating per luminair : 73.5 W

Light source : 2 x L36W/840 OSRAM Lumilux Coolwhite (correction factor 1,00)



### 3D view LED module - XFFL240-00000

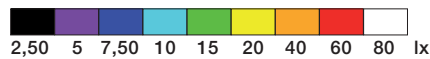
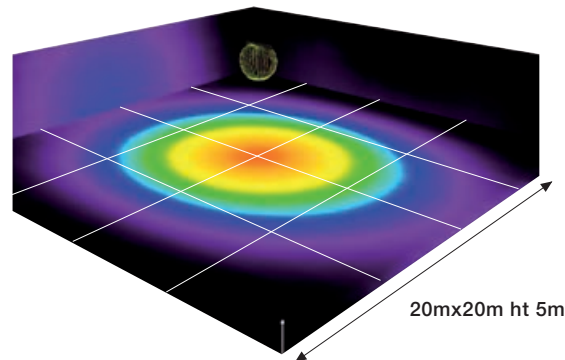
Lumen output (Luminair) : 4188 lm

Flux lumineux (Lampes) : 4257 lm

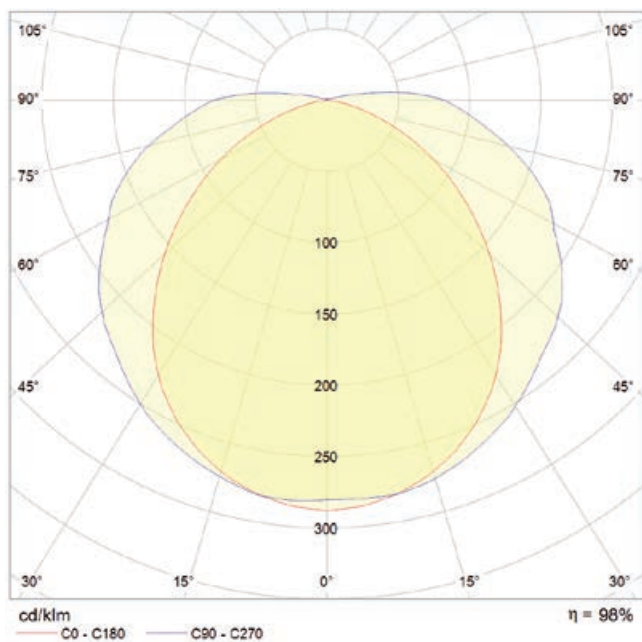
Yield : 98%

Rating per luminair : 58.0 W

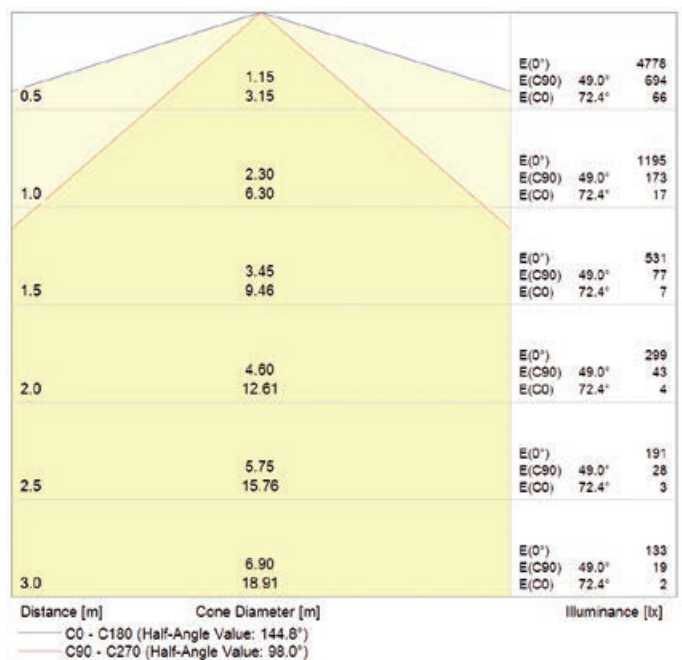
Light source : 1 x LED module (correction factor 1,00)




### Photometric curve LED - XFFL240-00000



### Lighting diagram LED - XFFL240-00000

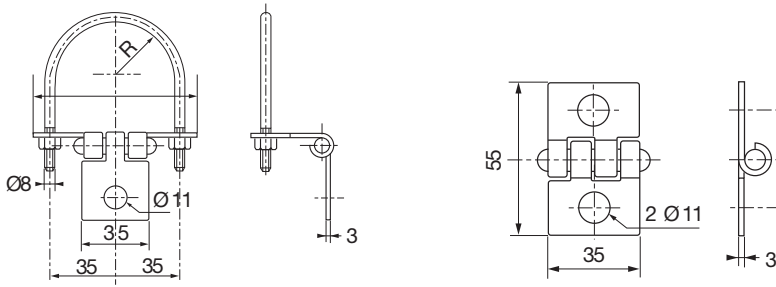


## Technical characteristics

	XFRL120	XFFL220	XFRL140	XFFL240	XFRL165	XFFL265
Part Number polycarbonate tube	XFRL120-00000	XFFL220-00000	XFRL140-00000	XFFL240-00000	XFRL165-00000	XFFL265-00000
Part Number glass tube	XFRL120V-00000	XFFL220V-00000	XFRL140V-00000	XFFL240V-00000	XFRL165-00000	XFFL265-00000
<b>Photometric specifications</b>						
Light Source	LED module with 120° integrated diffuser					
CRI	80					
Colour temperature (°K)	4000					
Operating life (h) at 25°C L70/B10*	> 100 000	85 000	> 90 000	75 000	>80 000	70 000
Operating life (h) at 55°C L70/B10*	45 000	> 35 000	75 000	> 50 000	60 000	> 50 000
*Efficiency rate of LED module L70/B10 : 70% lumen output/ 90% active population at end of life						
Light Typ. Power (LED) (W)	12,6	19	25	56	31	71
Lumen output (lm)	1194	1613	2353	4257	2450	5076
Efficiency (lm/W)	95	85	94	76	79	71
<b>Electrical specifications</b>						
Wiring configuration	5 wires					
Rated voltage and frequency	100 - 254 Vac ±10% 50-60Hz					
Power 230V / 110V (W)	15/15	22/22	28/28	59/59	35/35	74/74
Nominal current 230V (A)	0,07	0,10	0,12	0,26	0,16	0,33
Nominal current 110V (A)	0,13	0,20	0,25	0,54	0,32	0,68
Power factor 230V	0,90	0,91	0,96	0,96	0,95	0,95
Power factor 110V	0,99	0,99	0,99	0,99	0,99	0,98
Dielectrical class	I					
Inrush current	40A - 200 µs - 220 Vac - 25°C	40A - 240 µs - 220 Vac - 25°C		60A - 275 µs - 230 Vac- 25°C		60A - 410 µs - 230 Vac- 25°C
Over-current protection	The power supply shall be self-recovery when the fault condition is removed					
Grounding system	TNS, TNC, TT, IT regime					
External grounding lug	Screw M4x20 (stainless steel 316L) (closed to cable gland)					
Terminal block	L1, L2, L3, N, PE					
Torque for locking screw	maxi 10mm <sup>2</sup> rigid wire, 6mm <sup>2</sup> flexible wire					
Cable entry	2 entries 3/4" NPT					
Dimension and type of cable gland included	One 3/4" Nickel plated brass plug (EXN/075/SP) One cable gland -3/4"NPT Nickel plated brass for non- armoured cable - diameter 6 - 12mm (EXN05ASC3)					
	The fixture is supplied with non-barrier cable glands. For installations in either Zone 1 or in the presence of Group IIC gases, barrier glands are required. Please refer to EN 60079-14					
<b>Mechanical Specifications</b>						
Enclosure	Marine grade aluminium alloy according to standard : EN 1706 : EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF UV protected extruded polycarbonate tube, thickness 2,5mm or borosilicate glass thickness 7mm					
Storage temperature and humidity	-30°C to +80°C, 10 to 90% RH					
Painting- standard grade	■ XF***-00000 - Yellow offshore, RAL 1003					
Painting - optional colours	■ XF***-B0000 - Grey, RAL 7035					
	■ XF***-C0000 - Black, RAL 9004					
	■ XF***-D0000 - Hammered Blue, RAL 5015					
	■ XF***-F0000 - Red, RAL 3001					
	■ XF***-G0000 - Blue, RAL 5010					
	■ XF***-J0000 - Green, RAL 6032					
	□ XF***-M0000 - White, RAL 9010					
Salt mist test / rust	Resistant to 500h according to ISO 9227					
Weight (Kg) - polycarbonate tube	4,8	4,8	7,6	7,6	8,8	8,8
Weight (Kg) - glass tube	8,0	8,0	12,5	12,5	13,8	13,8
Fixing included	D023 - 2 zinc plated steel articulated brackets for ceiling mounting					
Total cost of ownership (TCO)	Contact					

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## Fixing brackets

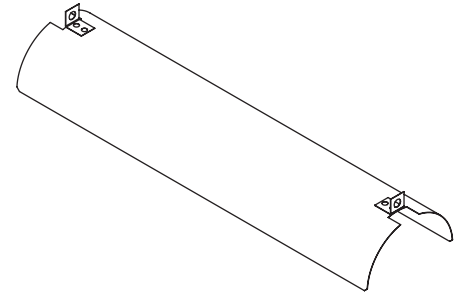


### U-bolt for pole mounting

- D025 : zinc plated steel for pole mounting 1" 1/4
- D026 : zinc plated steel for pole mounting 1" 1/2
- D027 : zinc plated steel for pole mounting 2"
- D029 : stainless steel 304L - for pole mounting 1" 1/2

### Articulated Bracket

- D023 (standard) : zinc plated steel
- D024 : stainless steel 304L

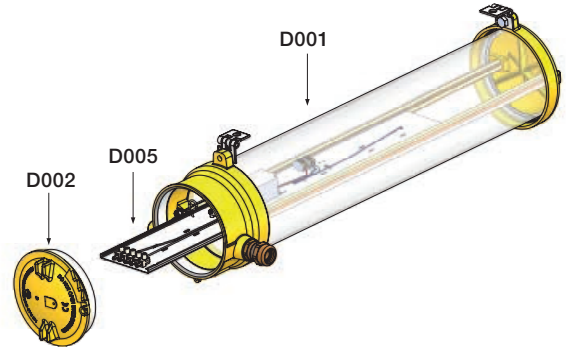


### Shock proof kit

- Stainless steel 304L
- D034 for XFRL120, XFFL220
- D035 for XFRL140, XFFL240
- D036 for XFRL165, XFFL265

## Spare parts

Spare parts	designation	related Items	
D00120WC	Sealed tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003	Polycarbonate	
D00140WC			
D00165WC			
D001V20WC			
D001V40WC			
D001V65WC	Glass	XFFL220, XFRL120	
D002			Cover, chain, gasket
D0052X20WEL			
D0052X40WEL			
D0052X65WEL			
D0051X20WEL			
D0051X40WEL	LED gear tray with electronic driver 100-254 Vac 50/60Hz and LED module included		
D0051X65WEL			
4GRA00002S		Grease 1 KG	



## Spare parts to convert "fluorescent" to "LED" fitting

LED gear tray with driver 100-254V 50-60Hz	
D0052X20WEL	To convert XFF220 => XFFL220
D0052X40WEL	To convert XFF240 => XFFL240
D0052X65WEL	To convert XFF265 => XFFL265
D0051X20WEL	To convert XFR120 => XFRL120
D0051X40WEL	To convert XFR140 => XFRL140
D0051X65WEL	To convert XFR165 => XFRL165



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