



The most energy-efficient reliable white light solution for Outdoor

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

New-generation ceramic metal halide lamps used in Outdoor offering efficient and pleasant white light

Benefits

- Attractive white light
- Best optical efficacy allows greater spacing between luminaires, thereby reducing investment
- Highest energy saving and lowest cost of ownership

Features

- Highly efficient white light
- Long reliable lifetime combined with highest system efficacy
- Unique new burner design and positioning in combination with best lamp fixation (PGZ12) provides best optical efficacy
- Compact size: 50% smaller than SON/HPL systems
- New electronic gear platform including dimming options

Application

- Urban public lighting for city centers, residential areas and roads

Warnings and Safety

- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- Use only with electronic control gear
- Control gear must include end-of-life protection (IEC61167, IEC 62035)

Related products



CPO-TW, 140W, PGZ12



CPO-TW, 45W, PGZ12

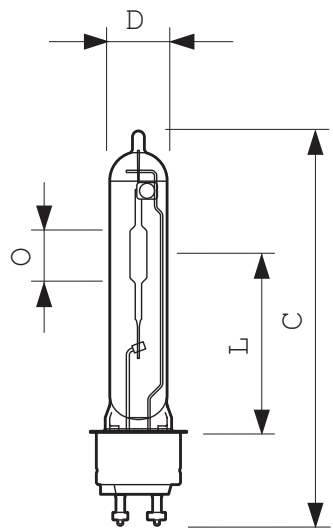


CPO-TW, 60W, PGZ12



CPO-TW, 90W, PGZ12

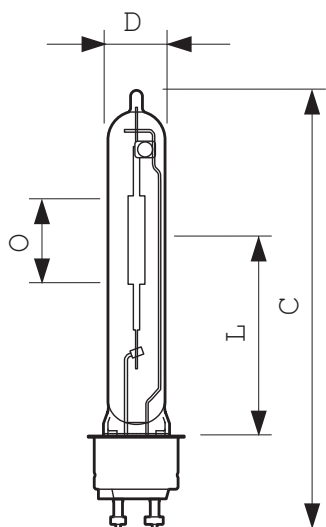
Dimensional drawing



CPO-TW, 45W/60W, PGZ12

Product	C (Max)	D (Norm)	D (Max)	L (Norm)	O (Norm)
CPO-TW Xtra 45W/728 PGZ12	132	19	20	59	14
CPO-TW Xtra 60W/728 PGZ12	132	19	20	59	14

Dimensional drawing



CPO-TW, 90W/140W, PGZ12

Product	C (Max)	D (Norm)	D (Max)	L (Norm)	O (Norm)
CPO-TW 140W/728 PGZ12	149.8	19	20	66	22
CPO-TW Xtra 90W/728 PGZ12	143	19	20	66	18
CPO-TW 90W/840 PGZ12	143	19	20	66	18
CPO-TW 140W/840 PGZ12	149.8	19	20	66	22

General Characteristics (1/3)

Order code	Full product name	Bulb	Bulb Finish	Cap-Base	Burning Position	Life to 10% failures, base up	Life to 10% failures, horiz.	Life to 50% failures, base up	Life to 50% failures, horiz.	LSF EL 12kh Rated, 12h cyc. bup	LSF EL 12kh Rated, 12h cyc. hor
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	T19	Clear	PGZ12	any	11000 hr	16000 hr	19000 hr	24000 hr	86 %	97 %
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	T19	Clear	PGZ12	any	10500 hr	12000 hr	14000 hr	15000 hr	82 %	90 %
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	T19	Clear	PGZ12	any	13000 hr	24000 hr	18000 hr	32000 hr	93 %	99 %
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	T19	Clear	PGZ12	any	13000 hr	24000 hr	18000 hr	32000 hr	93 %	99 %
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	T19	Clear	PGZ12	any	13000 hr	20000 hr	16000 hr	30000 hr	95 %	99 %
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	T19	Clear	PGZ12	any	11000 hr	12000 hr	14500 hr	15000 hr	80 %	90 %

General Characteristics (2/3)

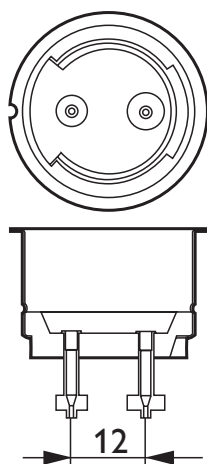
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208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	99 %	99 %	98 %	96 %	99 %	99 %	99 %	99 %	%	%
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	99 %	99 %	98 %	96 %	99 %	99 %	99 %	98 %	%	%
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	99 %	99 %	99 %	99 %	99 %	99 %	99 %	99 %	%	63 %
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	99 %	99 %	99 %	99 %	99 %	99 %	99 %	99 %	%	63 %

Order code	Full product name	LSF EL 2kh Rated, 12h cyc. bup	LSF EL 4kh Rated, 12h cyc. bup	LSF EL 6kh Rated, 12h cyc. bup	LSF EL 8kh Rated, 12h cyc. bup	LSF EL 2kh Rated, 12h cyc. hor	LSF EL 4kh Rated, 12h cyc. hor	LSF EL 6kh Rated, 12h cyc. hor	LSF EL 8kh Rated, 12h cyc. hor	LSF EL 30kh Rated, 12h cyc. bup	LSF EL 30kh Rated, 12h cyc. hor
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	99 %	99 %	99 %	99 %	99 %	99 %	99 %	99 %	%	50 %
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	99 %	99 %	98 %	96 %	99 %	99 %	99 %	98 %	%	%

General Characteristics (3/3)

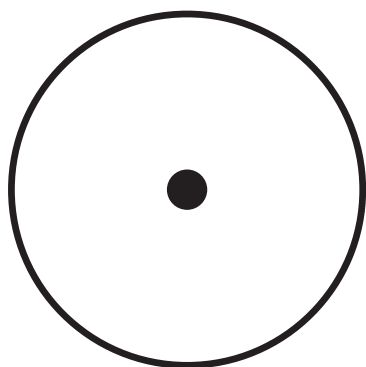
Order code	Full product name	LSF EL 24kh Rated, 12h cyc. bup	LSF EL 24kh Rated, 12h cyc. hor	LSF EL 20kh Rated, 12h cyc. bup	LSF EL 20kh Rated, 12h cyc. hor	LSF EL 16kh Rated, 12h cyc. bup	LSF EL 16kh Rated,12h cyc. hor	Life to 5% fail- ures, base up	Life to 20% fail- ures, base up	Life to 5% fail- ures, horiz.	Life to 20% fail- ures, horiz.
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	%	50 %	43 %	74 %	68 %	90 %	hr	hr	13500 hr	18500 hr
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	%	%	%	%	%	30 %	hr	hr	11000 hr	13000 hr
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	%	90 %	%	97 %	70 %	99 %	hr	hr	21500 hr	27000 hr
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	%	90 %	%	97 %	70 %	99 %	hr	hr	21500 hr	27000 hr
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	%	78 %	%	90 %	50 %	96 %	hr	hr	17000 hr	23500 hr
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	%	%	%	%	%	30 %	hr	hr	11000 hr	13000 hr

Installation diagrams



PGZ12

Installation diagrams



any

Light Technical Characteristics (1/4)

Order code	Full product name	Colour Code	Colour Designation	Chromaticity Coordinate X	Chromaticity Coordinate Y	Lum. Flux EL25°C, Rat. base up	Lum. Flux EL25°C, Rat. horiz.	Lum Effic Rat EL 25°C base up	Lum Effic Rat EL 25°C horiz.	Color Rendering Index, base up	Color Rendering Index, horiz
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	728	White	444 -	401 -	16500 Lm	16500 Lm	118 Lm/W	118 Lm/W	57 (min), 66 (nom) Ra8	57 (min), 66 (nom) Ra8
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	840	White	385 -	400 -	15120 Lm	16100 Lm	110 Lm/W	115 Lm/W	75 Ra8	77 (min), 80 (nom) Ra8
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	728	White	459 -	412 -	4455 Lm	4950 Lm	99 Lm/W	110 Lm/W	57 (min), 60 (nom) Ra8	63 (min), 66 (nom) Ra8
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	728	White	453 -	405 -	6780 Lm	7200 Lm	113 Lm/W	120 Lm/W	64 (min), 67 (nom) Ra8	70 (min), 73 (nom) Ra8
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	728	White	454 -	406 -	10000 Lm	10450 Lm	111 Lm/W	116 Lm/W	49 (min), 58 (nom) Ra8	57 (min), 66 (nom) Ra8
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	840	White	392 -	397 -	9450 Lm	10350 Lm	105 Lm/W	115 Lm/W	69 (min), 72 (nom) Ra8	74 (min), 77 (nom) Ra8

Light Technical Characteristics (2/4)

Order code	Full product name	Color Temperature, base up	Color Temperature, horizontal	Color Temp. Technical, base up	Color Temp. Technical, horiz.	LLMF EL 12000h Rated, base up	LLMF EL 12000h Rated, horiz.	LLMF EL 2000h Rated, base up	LLMF EL 2000h Rated, horiz.	LLMF EL 4000h Rated, base up	LLMF EL 4000h Rated, horiz.
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	2800 K	2800 K	2860 K	2860 K	87 %	88 %	95 %	97 %	92 %	97 %
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	4000 K	4000 K	3750 K	4000 K	90 %	90 %	95 %	98 %	91 %	95 %
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	2800 K	2800 K	2630 K	2725 K	84 %	89 %	90 %	92 %	87 %	90 %
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	2800 K	2800 K	2590 K	2760 K	84 %	89 %	89 %	92 %	87 %	90 %
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	2800 K	2800 K	2640 K	2750 K	88 %	84 %	94 %	94 %	92 %	91 %
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	4000 K	4000 K	3620 K	3850 K	90 %	90 %	95 %	95 %	93 %	93 %

Light Technical Characteristics (3/4)

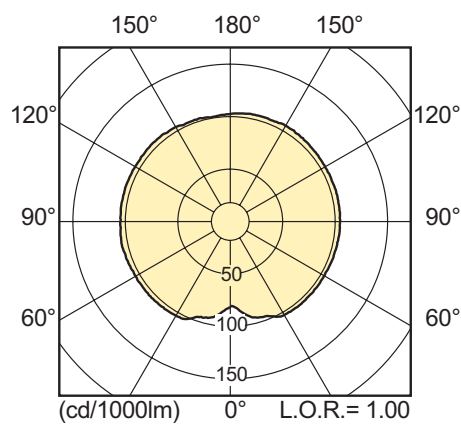
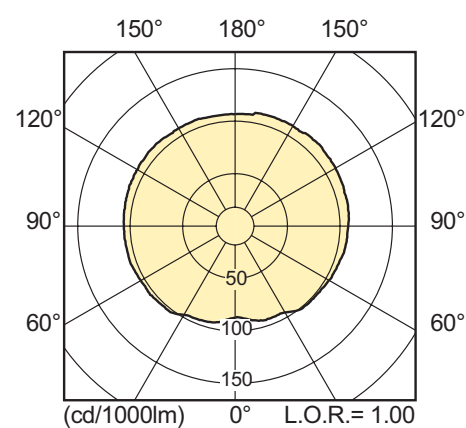
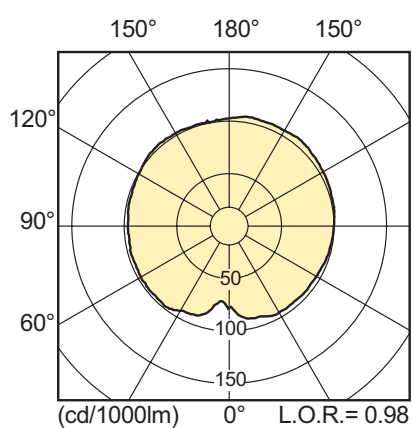
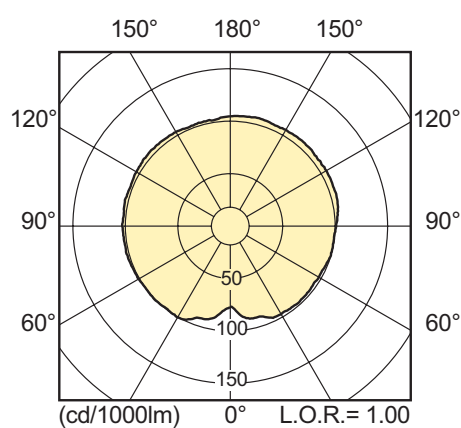
Order code	Full product name	LLMF EL 6000h Rated, base up	LLMF EL 6000h Rated, horiz.	LLMF EL 8000h Rated, horiz.	LLMF EL 8000h Rated, base up	LLMF EL 16000h Rated, base up	LLMF EL 16000h Rated, horiz.	LLMF EL 20000h Rated, base up	LLMF EL 20000h Rated, horiz.	LLMF EL 24000h Rated, base up	LLMF EL 24000h Rated, horiz.
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	91 %	95 %	93 %	90 %	85 %	85 %	%	81 %	%	78 %
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	91 %	94 %	94 %	90 %	%	%	%	%	%	%
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	87 %	90 %	90 %	86 %	77 %	87 %	%	86 %	%	84 %
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	87 %	90 %	90 %	86 %	77 %	87 %	%	86 %	%	84 %
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	92 %	88 %	87 %	92 %	88 %	84 %	%	82 %	%	80 %
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	93 %	93 %	92 %	92 %	%	%	%	%	%	%

Light Technical Characteristics (4/4)

Order code	Full product name	LLMF EL 30000h Rated, base up	LLMF EL 30000h Rated, horiz.	Chrom. Coord. X @ ±60% power	Chrom. Coord. Y @ ±60% power	Colour Temp. @ ±60% power	CRI @ ±60% power	Luminous Efficacy @ ±60% power	Luminous Flux @ ±60% power
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	%	%	449 -	414 -	2880 K	56 -	90 Lm/W	7560 Lm
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	%	%	367 -	372 -	4355 K	71 -	80 Lm/W	6720 Lm

Order code	Full product name	LLMF EL 30000h Rated, base up	LLMF EL 30000h Rated, horiz.	Chrom. Coord. X @ ±60% power	Chrom. Coord. Y @ ±60% power	Colour Temp. @ ±60% power	CRI @ ±60% power	Luminous Efficacy @ ±60% power	Luminous Flux @ ±60% power
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	%	82 %	459 -	424 -	2815 K	59 -	84 lm/W	2520 Lm
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	%	82 %	461 -	414 -	2715 K	62 -	90 lm/W	3240 Lm
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	%	78 %	463 -	414 -	2675 K	55 -	88 lm/W	4752 Lm
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	%	%	377 -	382 -	4125 K	70 -	82 lm/W	4428 Lm

Light technical

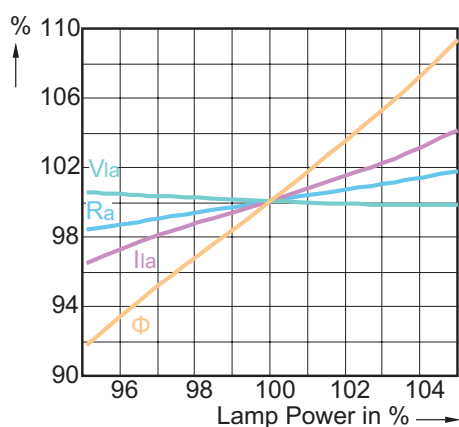


Electrical Characteristics

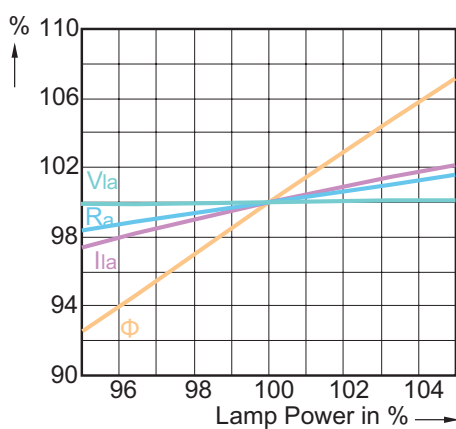
Order code	Full product name	Lamp Wattage	Lamp Voltage	Lamp Current EL	Dimmable	Re-ignition Time [sec]	Lamp Wattage EL 25°C, Rated	Lamp Wattage EL 25°C, Nominal	Ratio scotopic/ photopic lumens
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	140 W	94 V	1.49 A	yes	900 (max) s	140 W	140 W	1.15 -
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	140 W	99 V	1.414 A	yes	900 (max) s	140 W	140 W	1.65 -

Order code	Full product name	Lamp Wattage	Lamp Voltage	Lamp Current EL	Dimmable	Re-ignition Time [sec]	Lamp Wattage EL 25°C, Rated	Lamp Wattage EL 25°C, Nominal	Ratio scotopic/photopic lumens
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	45 W	91 V	0.484 A	yes	900 (max) s	45 W	45 W	1.15 -
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	60 W	92 V	0.644 A	yes	900 (max) s	60 W	60 W	1.15 -
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	90 W	92 V	0.97 A	yes	900 (max) s	90 W	90 W	1.15 -
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	90 W	96 V	0.95 A	yes	900 (max) s	90 W	90 W	1.65 -

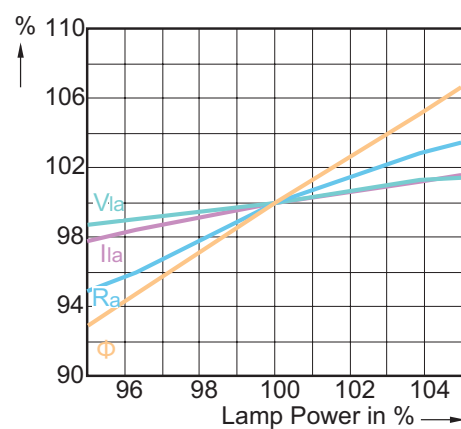
Performance diagrams



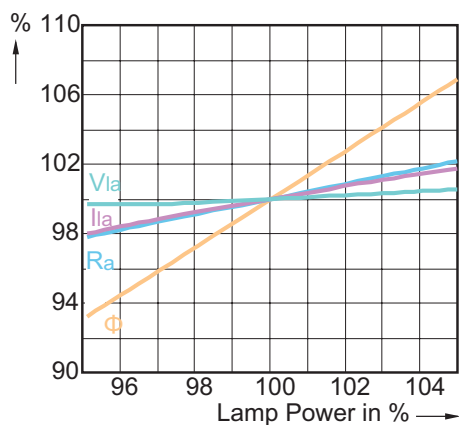
CPO-TW Xtra 45W /728



CPO-TW 60W

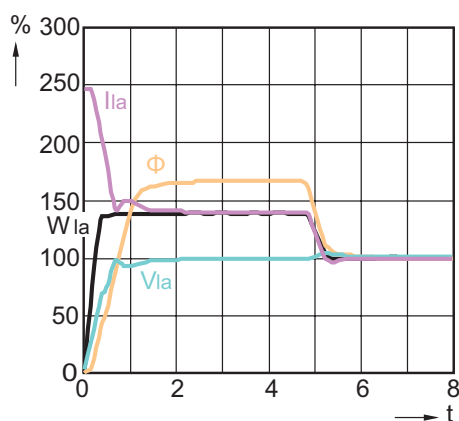


CPO-TW 140W

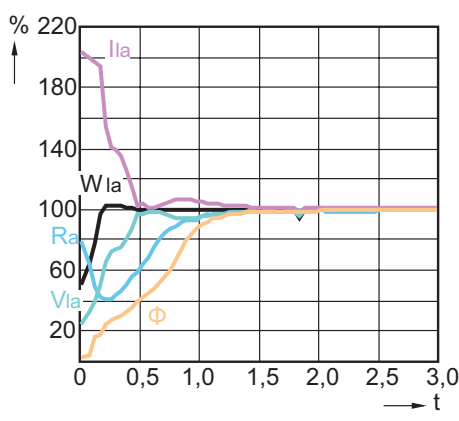


CPO-TW 90W

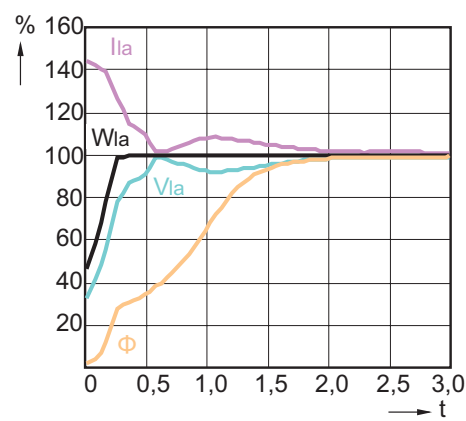
Performance diagrams



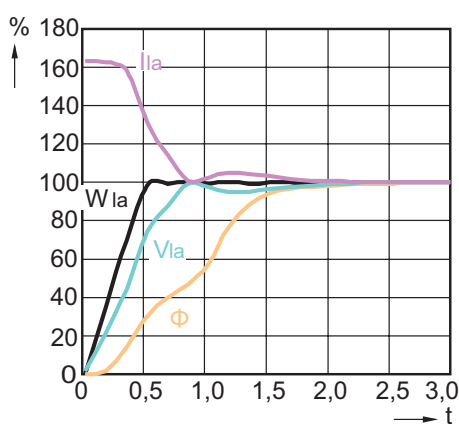
CPO-TW Xtra 45W /728



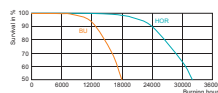
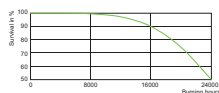
CPO-TW 60W



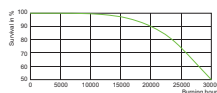
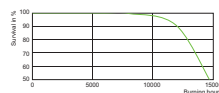
CPO-TW 140W



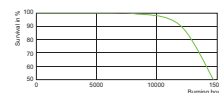
CPO-TW 90W


CPO-TW Xtra 45W,
60W /728


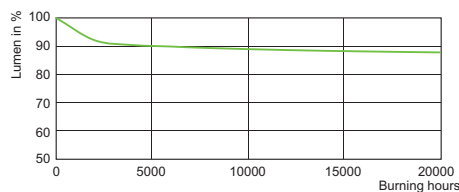
CPO-TW 140W /728


CPO-TW Xtra
90W /728


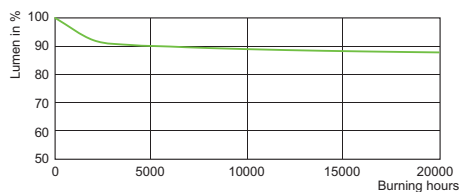
CPO-TW 90W /840



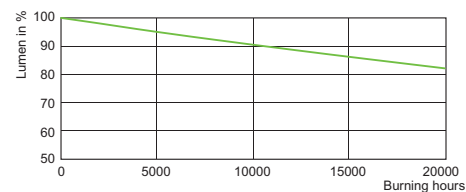
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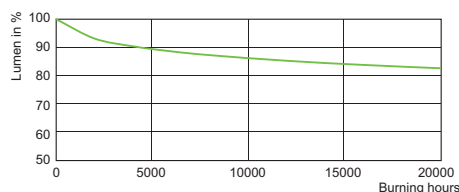
CPO-TW Xtra 45W /728



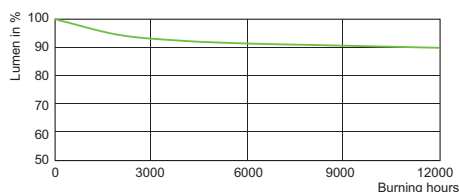
CPO-TW Xtra 60W /728



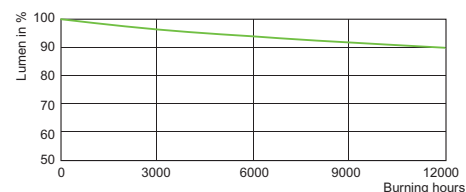
CPO-TW 140W /728



CPO-TW Xtra 90W /728



CPO-TW 90W /840



CPO-TW 140W /840

Environmental Characteristics

Order code	Full product name	Mercury (Hg) Content
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	2.83 mg
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	2 mg
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	2 mg
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	2 mg
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	1.6 mg
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	1.40 mg

Luminaire Design Requirements

Order code	Full product name	Cap-Base Temperature	Bulb Temperature
208538 15	MASTER CosmoWhite CPO-TW 140W/728 PGZ12 1CT	300 (max) C	550 (max) C
137917 00	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	300 (max) C	550 (max) C
150015 00	MASTER CosmoWhite CPO-TW Xtra 45W/728 PGZ12	250 (max) C	380 (max) C
208514 15	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	300 (max) C	400 (max) C
211217 15	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	300 (max) C	470 (max) C
137894 00	MASTER CosmoWhite CPO-TW 90W/840 PGZ12 1CT	300 (max) C	470 (max) C



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www.philips.com/lighting

2012, November 10
data subject to change