

Philips Energy Advantage  
CDM Lamps with  
AllStart Technology

*Ideal for high-ceiling  
industrial, retail and  
distribution centers as well  
as outdoor applications*

Energy Advantage

**ALLSTART**<sup>™</sup>  
TECHNOLOGY



## Direct retrofit with immediate energy savings!

**Philips Energy Advantage CDM lamps with AllStart Technology.** A high-efficiency protected “O” rated CDM lighting solution that provides energy savings without compromising light quality.

### **Introducing AllStart Technology**

- Direct retrofit lamp to both probe and pulse start magnetic ballasts (not suitable for operation on electronic ballasts)
- A true universal operation that does not affect lamp life

### **Better for the environment**

- Reduced maintenance and recycling costs
- Energy savings up to 18%\*
- Long life  $\geq 20,000$  hours rated average life

### **Light quality**

- Excellent color rendering of CRI  $\geq 85$
- Crisp white light
- 100 lumens per watt

\* 330W CDM lamp with AllStart Technology compared to 400W quartz metal halide lamp.

**PHILIPS**

sense and simplicity

# Philips Energy Advantage CDM Lamps with AllStart Technology

## Ordering, Electrical and Technical Data (Subject to change without notice)

Product Number	Base	Ordering Code	ANSI Code	Watts	Bulb Finish	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) <sup>1</sup>	Approx. Initial Lumens <sup>2</sup>	Approx. Mean Lumens <sup>3</sup>	CRI	Color Temp (K)	Burn Position
41107-4	EX39 Excl. Mog.	ED28 CDM145/U/O/4K/ED28 EA AllStart	TBD*	145	Clear	5	8 $\frac{1}{16}$	20,000	13,500	10,125	87	4000	Universal
41319-5	EX39 Excl. Mog.	ED28 CDM145/C/U/O/4K/ED28 EA AllStart	TBD*	145	Coated	—	8 $\frac{1}{16}$	20,000	12,500	9,375	87	4000	Universal
23256-1	EX39 Excl. Mog.	ED28 CDM205/U/O/4K EA AllStart	C184**	205	Clear	5	8 $\frac{1}{16}$	20,000	19,500	15,600	85	4100	Universal
23692-7	EX39 Excl. Mog.	ED28 CDM205/C/U/O/4K EA AllStart	C184**	205	Coated	—	8 $\frac{1}{16}$	20,000	18,000	14,400	85	4100	Universal
41105-8	EX39 Excl. Mog.	ED28 CDM330/U/O/4K/ED28 EA AllStart	C185***	330	Clear	5	8 $\frac{1}{16}$	20,000	33,000	26,400	90	4000	Universal
23259-5	EX39 Excl. Mog.	ED37 CDM330/U/O/4K EA AllStart	C185***	330	Clear	7	11 $\frac{1}{2}$	24,000	33,000	26,400	90	4000	Universal
23693-5	EX39 Excl. Mog.	ED37 CDM330/C/U/O/4K EA AllStart	C185***	330	Coated	—	11 $\frac{1}{2}$	24,000	31,000	24,800	90	4000	Universal

1) Rated average life is the life obtained on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average.

2) Measured at 100 hours of life in a vertical operating position.

3) Approximate mean lumen output at 40% of lamp rated average life.

\* 145W compatible with M57 probe start ballast. Also compatible with M152 pulse start ballast.

\*\* 205W compatible with M58 probe start ballast. Also compatible with M138 and M153 pulse start ballasts.

\*\*\* 330W compatible with M59 and M165 probe start ballast. Also compatible with M128, M135, M155 and M172 pulse start ballast.

Note: 145W ED28 will be available November 2010.

### WARNINGS, CAUTIONS, AND OPERATING INSTRUCTIONS

**WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J, (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

**If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.**

**WARNING:** The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.

**RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.**

**This lamp contains an arc tube with a filling gas containing less than 65 nCi Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.**

**CAUTION:** TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING LAMP OPERATING INSTRUCTIONS MUST BE FOLLOWED:

#### LAMP OPERATING INSTRUCTIONS:

- RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
- Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
- Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
  - Operate lamp only within specified limits of operation.
  - For total supply load refer to ballast manufacturers electrical data.
  - These lamps can be used in both probe start and pulse start magnetic ballast. Reference the technical data sheet for proper ANSI ballast code compatibility. Do not operate lamps on electronic ballasts.
  - All pulse start mogul based lamps require a socket rated to withstand a 4000 volt pulse.
- Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage
- If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
- Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
- Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
- Lamps may require 10 to 15 minutes to re-light if there is a power interruption. Less than 10 minutes on pulse start ballasts.
- Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.



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Philips Lighting Company  
200 Franklin Square Drive  
Somerset, NJ 08873  
1-800-555-0050

Philips Lighting  
281 Hillmount Road  
Markham, Ontario  
Canada L6C 2S3  
1-800-555-0050  
A Division of Philips Electronics Ltd.