Pauluhn™ ECOS
Fluorescent luminaire for harsh, hazardous and marine use

F·T·N
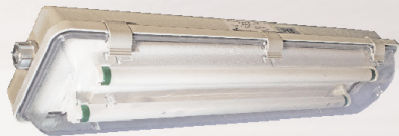
Powering Business Worldwide

Pauluhn™ ECOS linear fluorescent

Harsh.
Hazardous.
Marine.

Eaton's Crouse-Hinds Pauluhn series delivers a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

Why Crouse-Hinds?

Industry-best reliability
Built to withstand a wide array of applications

Quality of light
Custom reflector designed to maximize light distribution and intensity

Thermal management
Effective heat sinking ensures longer life

Versatile mounting
Numerous mounting configurations for easy installation

Why Pauluhn ECOS?

Reliable mid and low bay solutions. Pauluhn ECOS luminaires are engineered to provide maintenance-free performance while delivering long life and high lumen performance in hazardous, harsh and marine environments.

Rugged design
- UV stabilized, impact-resistant fiberglass-reinforced polyester housing
- Shock- and vibration-resistant lamp holders reduce premature lamp failure

Multiple configurations
- Available in two and four foot lengths
- T8, T5, T5HO lamps in 1, 2 or 3 lamp configurations

Multiple mounting options
- Ceiling, wall and pipe clamp (all models)
- Eye bolts (ED2N and EHAR models only)
- Shock mount (ED2N and EMAR models only)

Easy to install
- Tool-less entry for ease of installation
- Up to three gland entries at each end, suitable for dead end, through feed or single-ended "T" wiring
- Lens is removable at 120°, allowing for narrow gap mounting between obstructions

Designed to meet your challenges

Three ECOS models available
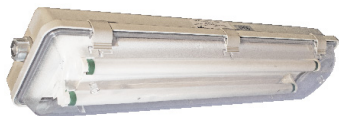
ED2N
For use in hazardous areas
- Class I, Division 2 rated
- Applications include oil and gas exploration, petrochemical facilities and wastewater treatment

EMAR
For use in marine environments
- Marine rated
- Applications include shipyards, docks ports and marine vessels

EHAR
For use in harsh environments
- Type 4X rated
- Applications include heavy industrial, food and beverage, pulp and paper and wastewater treatment

General specifications

Electrical ratings:

- 120 - 277 VAC at 50/60 Hz
- Optional emergency battery back-up ballast (self-contained 90 minute minimum with LED charge status indicator for all lamp types)

Temperature ratings:

E2DN model

Lamp wattage (2 ft./4 ft.)	Ballast/ socket type	ANSI lamp code	T-code	Maximum ambient	Supply wire
14/28	T5 mini bi-pin G5	F14/F28-T5	T4A	55°C	90°C
24/54	T5HO mini bi-pin G5	F24/F54-T5HO	T3C	55°C	90°C
17/32	T8 bi-pin G13	F17/32-T8	T4A	55°C	90°C
17/32	T8 bi-pin G13	F17/32-T8	T6	55°C	90°C
18/36	T8 bi-pin G13	F18/36-T8	T4A	55°C	90°C

EMAR and EHAR models

Lamp wattage (2 ft./4 ft.)	Ballast/ socket type	ANSI lamp code	Supply wire
14/28	T5 mini bi-pin G5	F14/F28-T5	90°C
24/54	T5HO mini bi-pin G5	F24/F54-T5HO	90°C
17/32	T8 bi-pin G13	F17/32-T8	90°C
17/32	T8 bi-pin G13	F17/32-T8	90°C
18/36	T8 bi-pin G13	F18/36-T8	90°C

Weights:
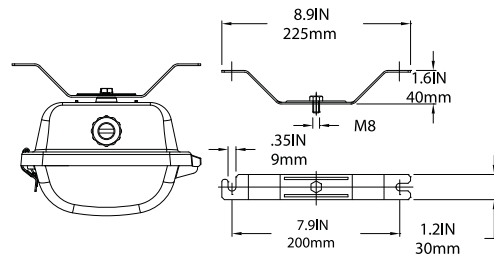
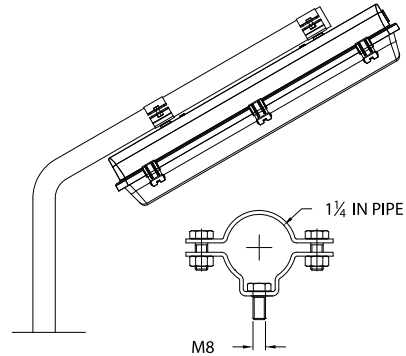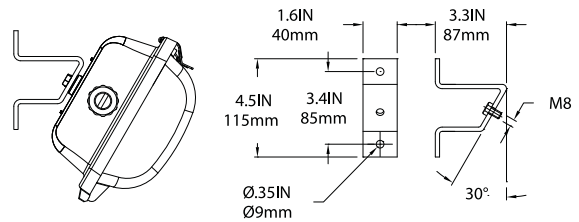|	Lbs.	Kg.
2 foot models	9.0	4.0
4 foot models	17.0	8.0

Dimensions:
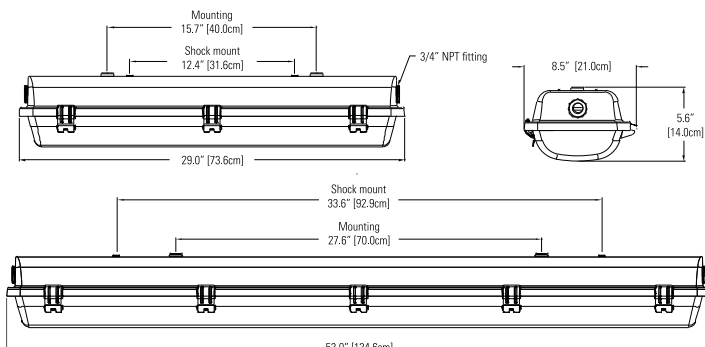
Mounting options:
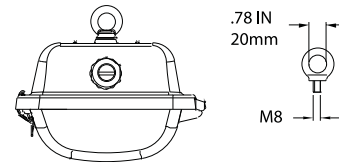
Ceiling mount (ECO1091MTK)

Pipe clamp bracket (ECOPMKT)
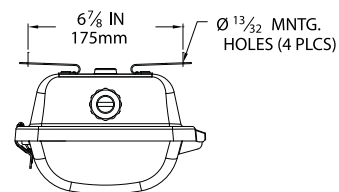

Wall mount (ECOWMKT)

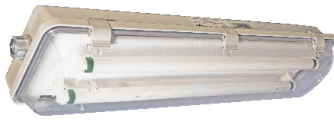### Cable suspension eye bolts (ECOEBKIT)

ED2N & EHAR only

Shock mount cornice bracket (factory installed)

ED2N & EMAR only

ED2N: For use in hazardous areas

Primary applications:
- Oil and gas exploration and production, petrochemical facilities, wastewater treatment

Environmental ratings:
- Type 4X
- IP66

Certifications and compliances:
- Class I, Div. 2, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III
- UL844 – Hazardous Locations
- CSA – Class 3428 83; Class 3428 03
- EN 60529 – Ingress Protection
- ABS

Standard materials:
- Housing – UV stabilized fiberglass-reinforced polyester
- Lens – injection molded polycarbonate
- Reflector – engineered plastic
- Gaskets – silicone
- Latches – stainless steel
- Lamp holders – shock- and vibration-resistant polycarbonate

Ordering information:

Part number example

ED2N42171012L

| ED2N | 4 | 2 | 1 | 7 | 1 | 012 | L |

Length (nominal)

2	2 foot
4	4 foot

Number of lamps

1	1 lamp
2	2 lamps
3	3 lamps

* Emergency ballast not available with 2 foot, 3 lamp fixtures.

Lamp types

1	2 ft. 17 or 4 ft. 32 watt T8 bi-pin
3	2 ft. 18 or 4 ft. 36 watt T8 bi-pin
5	2 ft. 24 or 4 ft. 54 watt T5HO bi-pin
6	2 ft. 14 or 4 ft. 28 watt T5 bi-pin

Voltage/frequency

7	120 - 277 VAC 50/60 Hz
6	347 VAC 60 Hz
9	480 VAC 60 Hz

Mounting options

X	No mounting style, M8 nuts
1	Ceiling bracket, stainless steel
2	Wall mount cornice bracket
3	Pipe clamp bracket
4	Cable suspension eye bolts
5	Shock mount brackets (factory installed only)

Options

SW	Internal safety disconnect switch
EM1	Emergency ballast, 1 lamp
L	Lamps
T	Terminal block, 5-pole
T2	Terminal block each end, 5-pole

Entry

012	Myers™ conduit hubs, zinc, ¾" NPT, one entry at each end
022	Myers™ conduit hubs, zinc, ¾" NPT, two entries at each end
112	Myers™ conduit hubs, stainless steel, ¾" NPT, one entry at each end
122	Myers™ conduit hubs, stainless steel, ¾" NPT, two entries at each end
113	Myers™ conduit hubs, 316 stainless steel, ¾" NPT, one entry each end
123	Myers™ conduit hubs, 316 stainless steel, ¾" NPT, two entries each end
212	Gland plate, plastic, one ¾" entry at each end
222	Gland plate, plastic, two ¾" entries at each end
232	Gland plate, plastic, three ¾" entries at each end

EMAR: For use in marine environments

Primary applications:
- Shipyards, docks, marine vessels

Environmental ratings:
- Type 4X
- IP66
- Marine Outside Type Saltwater

Certifications and compliances:
- UL924 – Emergency Lighting Equipment
- UL1598A – Luminaire for Marine Vessels
- ABS

Standard materials:
- Housing – fiberglass-reinforced polyester
- Lens – injection molded polycarbonate
- Reflector – engineered plastic
- Gaskets – silicone
- Latches – stainless steel
- Lamp holders – polycarbonate

Ordering information:

Part number example
EMAR42174000L

EMAR 4 2 1 7 4 000 L

Length (nominal)

2	2 foot
4	4 foot

Number of lamps

1	1 lamp
2	2 lamps
3*	3 lamps

* Emergency ballast not available with 2 foot, 3 lamp fixtures.

Lamp types

1	2 ft. 17 or 4 ft. 32 watt T8 bi-pin
3	2 ft. 18 or 4 ft. 36 watt T8 bi-pin
5	2 ft. 24 or 4 ft. 54 watt T5HO bi-pin
6	2 ft. 14 or 4 ft. 28 watt T5 bi-pin

Voltage/frequency

7	120 - 277 VAC 50/60 Hz
6*	347 VAC 60 Hz
9	480 VAC 60 Hz

* Emergency ballast not available with 347 VAC model, 2 ft. fixtures or 4 ft. fixtures with wall bracket.

Options

EM2	Emergency ballast, 1 lamp, 277V max.
EM3	Emergency ballast, high lumen, 1 lamp, 277V max.
EMT2	Emergency ballast, 1 lamp, 277V max., test switch
EMT3	Emergency ballast, high lumen, 1 lamp, 277V max., test switch
L	Lamps
T	Terminal block, 5-pole
T2	(2) terminal blocks, 5-pole, one on each end
RV-1*	Red filter tube on single lamp ballast
BV-1*	Blue filter tube on single lamp ballast
YV-1*	Yellow filter tube on single lamp ballast

* Not available on 24W or 54W T5HO lamps.

Entry

000	¾" plastic gland at one end, plugged ¾"entry
412	One gland at each end
422	Two glands at each end
432	Three glands at each end

Mounting options

1	Ceiling bracket, stainless steel
2	Wall mount cornice bracket
3	Pipe clamp bracket
5	Shock mount brackets (factory installed only)

EHAR: For use in harsh environments

Primary applications:

- Harsh and heavy industrial, food and beverage, pulp and paper, wastewater treatment

Environmental ratings:

- Type 4X
- IP66
- Enclosed and Gasketed

Certifications and compliances:

- UL924 – Emergency Lighting Equipment
- UL1598 – Luminaires
- cUL
- ABS

Standard materials:

- Housing – fiberglass-reinforced polyester
- Lens – injection molded polycarbonate
- Reflector – engineered plastic
- Gaskets – silicone
- Latches – engineered plastic (standard), stainless steel (optional)
- Lamp holders – polycarbonate

Ordering information:

Part number example
EHAR42174012L

| EHAR | 4 | 2 | 1 | 7 | 4 | 012 | L |

Length (nominal)

2	2 foot
4	4 foot

Number of lamps

1	1 lamp
2	2 lamps
3*	3 lamps

* Emergency ballast not available with 2 foot, 3 lamp fixtures.

Lamp types

1	2 ft. 17 or 4 ft. 32 watt T8 bi-pin
3	2 ft. 18 or 4 ft. 36 watt T8 bi-pin
5	2 ft. 24 or 4 ft. 54 watt T5HO bi-pin
6	2 ft. 14 or 4 ft. 28 watt T5 bi-pin

Voltage/frequency

7	120 - 277 VAC 50/60 Hz
6*	347 VAC 60 Hz

* Consult factory for application; emergency ballast not available with 347 VAC model, 2 ft. fixtures or 4 ft. fixtures with wall bracket.

Mounting options

1	Ceiling bracket, stainless steel
2	Wall mount cornice bracket
3	Pipe clamp bracket
4	Cable suspension eye bolts

Options

EM2	Emergency ballast, 1 lamp, 277V max.
EM3	Emergency ballast, high lumen, 1 lamp, 277V max.
EMT2	Emergency ballast, 1 lamp, 277V max., test switch
EMT3	Emergency ballast, high lumen, 1 lamp, 277V max., test switch
L	Lamps
S	Stainless steel latch
T	Terminal block, 5-pole
T2	(2) terminal blocks, 5-pole, one on each end

Entry

012	Myers™ conduit hubs, zinc, ¾" NPT, one entry at each end
022	Myers™ conduit hubs, zinc, ¾" NPT, two entries at each end
112	Myers™ conduit hubs, stainless steel, ¾" NPT, one entry at each end
122	Myers™ conduit hubs, stainless steel, ¾" NPT, two entries at each end
712	¾" NPT entry, one entry at each end
722	¾" NPT entry, two entries at each end
733	¾" NPT entry, three entries at each end

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