

C R U Z E R



CRUZER

The Cruzler introduces the concept of unifying the style and design of the site lighting shape and function with the building mounted lighting shape and function. A unique decorative arm facilitates pole mounting in five different configurations thereby providing a unified approach to site lighting. This unique high performance LED pole mounted luminaire is a new design which is as functional as it is architectural. With easy hinged access, field replaceable optical bezel and heat dissipating fins it is easily one of the highest performing luminaires with up to 11,000 delivered lumens.

Additionally, its unique thermal management system yields a 150,000 hr. rated life for both the LEDs.

For a total look at the 'family', please refer to the TRAVERSE which can be found on page 43.

FEATURING

4 wattages

6 lighting distributions

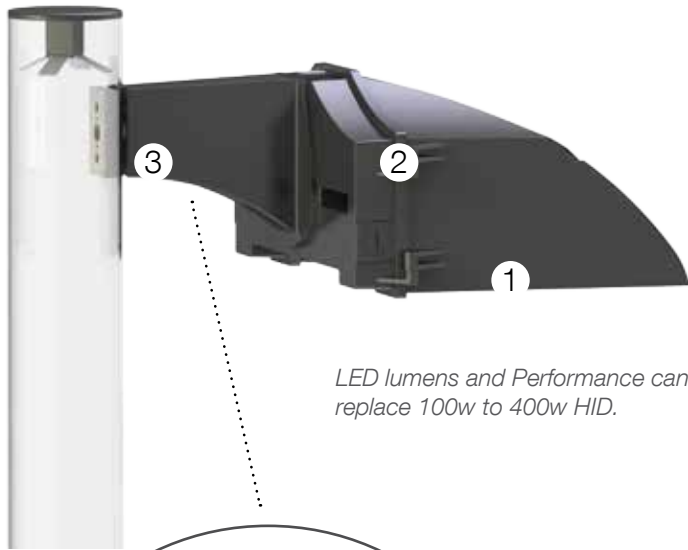
smarter circuit technology

5 mounting configurations on round or square poles

7 standard colors

companion to wall mounted luminaire

LifeShield™ thermal regulator



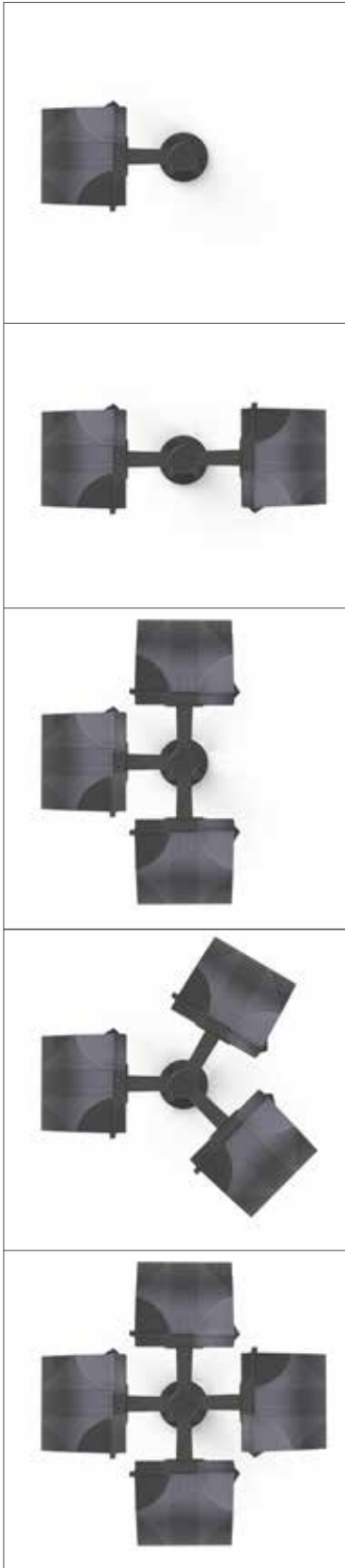
LED lumens and Performance can replace 100w to 400w HID.

- ① **Uses 24, 36, or 60 LED field replaceable Bezel System.** The Cruzeiro LED engine is designed to be fully upgradeable.
- ② **Quick maintenance via hinged access.** Maintenance and bezel replacements or upgrades are made quickly using the hinged access.
- ③ **Simple mounting.** The Cruzeiro is mounted with a simple two-bolt assembly.



This unique arm is designed to accommodate both square poles and round poles up to 6" in diameter. A simple 2-bolt assembly facilitates the wide variety of mounting options

unify



Single-Arm

Two Arms @ 180°

Three Arms @ 90°

Three Arms @ 120°

Four Arms @ 90°



Type:

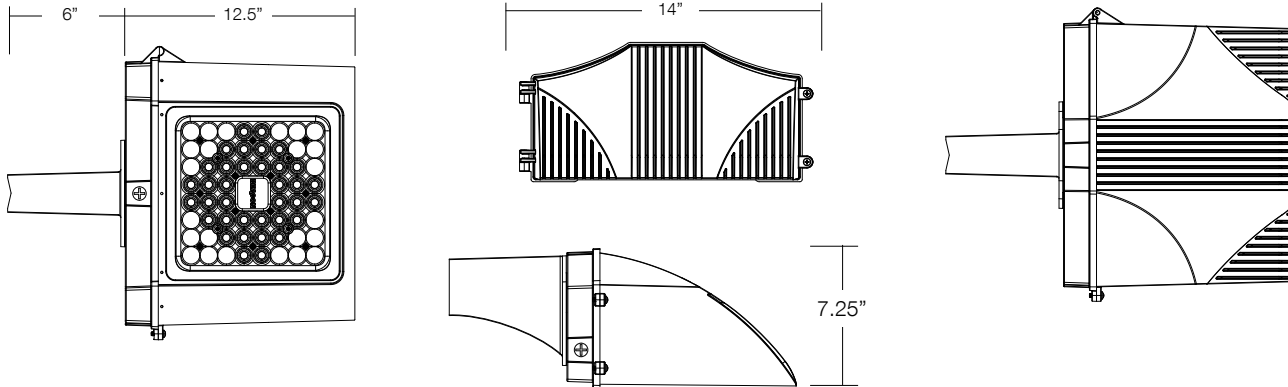
Ordering Code:

Job Name:

Notes:

CRUZER

Dimensions



EPA: 0.80 ft²

ORDERING EXAMPLE: CRZ / 60NB-136 / T2 / UNV / MOB - 4 - 50 - 15 / MT

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model	engine-watts	optics	voltage	electrical options	color
CRZ	24NB-27	T2 type II	UNV 120-277V	PEC button photocell (<i>specify voltage</i>)	BB black
	24NB-55	T3 type III	347V	2PF dual power feed	BZ bronze
	36NB-80	T4 type IV	480V	MOB motion sensor 33% or 50% dimming	BW white
	48NB-110	T5R rectangular	12VDC	(<i>not available on 48NB-110 & 60NB-136</i>)	BG green
	60NB-136	T5QM square wide	(<i>consult factory</i>)	OC occupancy sensor (on/off only)	BY gray
	(see chart)	T5QM square medium		standard electrical options	MB metallic bronze
		T5W round wide		Lifesield™ thermal protection	MT metallic titanium
				20K - surge protection	___ RAL
				dimming drivers	___ other

When ordering a fixture with the motion detection option (MOB), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

CRZ / 48NB-110 / T5SW / UNV / **MOB** - 1 to 30 min. - 33% or 50% - ?? / MT
 High to Dim Delay Low Level Mounting Height (ft.)

Power/Lumens & Distributions

Engine	nominal wattage	lumen output (5k) varies by optic	delivered LPW	TM21 reported L95/85C	TM21 calculated L70/85C
CRZ-24NB	27	2752-3014	105-115	60,000	215,000
CRZ-24NB	55	5125-5615	93-103	60,000	215,000
CRZ-36NB	80	7680-8215	93-103	60,000	215,000
CRZ-48NB	110	10240-10950	93-103	60,000	215,000
CRZ-60NB	136	12800-14100	93-103	60,000	215,000

Amber LEDs available (consult factory for watts and lumens)

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and calculated lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory of Beacon's web site.

GENERAL: The Beacon CRZ luminaire is a pole mounted luminaire with a field replaceable LED light engine & optical bezel system. Internal components are totally enclosed in rain-tight and corrosion-resistant die cast aluminum housing. The CRZ Luminaire is CSA listed and suitable for wet locations.

HOUSING/LED THERMAL MANAGEMENT: The Beacon CRZ luminaire consists of a die cast aluminum two-piece housing. The die cast main (thermal) housing provides direct heat exchange between the LED light engine and the cool outdoor air by drawing heat through integral heat channels and out to the sculptured and functional luminaire surface. LED drivers are thermally isolated from the main housing, mechanically attached and heat sunk to the rear housing. The main housing is designed with heat dissipating fins for LED thermal management without the use of metallic screens, cages, or fans. The shape of the main housing is designed to prevent debris accumulation and as a bird nesting deterrent. The back and main housings are designed to hinge open for easy mounting and easy access.

MOUNTING & INSTALLATION: The rear housing (back plate) is designed with various bolt patterns for direct wall mounting or mounting to a recessed 4" junction box. The rear housing has three integral 3/4" NPT power feed locations (bottom and each side) for surface mounted conduit applications. After mounting the rear housing to the wall or junction box the main housing is designed to hang and hinge closed after connecting the male and female quick connectors. The mounting design permits a simple retrofit to existing wall luminaires that utilize surface mount or recessed junction boxes.

Bezel Optical System: Each Cruiser luminaire is supplied with an optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece Optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the Cruiser luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the extruded housing with fasteners and a heat pad to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

PRINTED CIRCUIT BOARD (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LIFESHIELD™ CIRCUIT: (OPTIONAL) Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The LifeShield™ thermal regulation circuit will allow higher maximum wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

LifeShield™ shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

LifeShield™ shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

MOTION ACTIVATED LUMINAIRES: Beacon CRZ luminaires are available with an optional passive infrared (PIR) motion sensor capable of detecting motion within 24 feet of the sensor, 360° around the luminaire, when placed at an 8 foot mounting height. When no motion is detected for 5 minutes, the Motion Response system reduces the wattage from 10% to 50% (factory set at 50% reduction) of the maximum wattage, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.

ELECTRICAL: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. 15A rating applies to primary (AC) side only.

SURGE PROTECTOR: The onboard surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 10,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 320V and surge rating of 372J. The case shall be a high-temperature, flame resistant plastic enclosure.

COLD WEATHER BATTERY PACK: The emergency driver shall be capable of operating an LED load of up to 23.1 watts at rated current (700 mA) for a minimum of 90 minutes. It is suitable for damp locations as well as sealed and gasketed fixtures. The BPC shall have 37 watts of input power and a 54.0 Watt-hour battery capacity and shall comply with emergency standards set forth by the current NEC.

FASTENERS: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

AGENCY CERTIFICATION: The luminaire shall bear a CSA label and be marked suitable for wet locations.

WARRANTY: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.