

NORIBACHI



COBRAHEAD

# NORIBACHI PRODUCT FAMILY BROCHURE



Noribachi.com / 855.283.1100



The **Cobrahead** family of fixtures feature a series of rugged, heavy-duty die-cast aluminum housings and polycarbonate lens. Use this fixture to light up municipal areas, roadways and parking lots. These luminaires perform efficiently and reliably in rugged outdoor environments.

**Cobrahead Highlights:**

- L70 rated at +100,000 hours
- CRI 70 minimum
- Operating temp: -40°C to +60°C
- Non-toxic chemical/ROHS compliant
- ETL certified, meets UL and CSA safety standards
- Manufactured in the US
- Up to 140 LPW
- No UV or IR
- Mercury free, lead free

**Electrical Characteristics:**

- Standard AC input: 120/277V
- EMI: Compliance to EN61000-4-2,3,4,5,6,8,11
- FCC Title 47, Part 2, Part 15, Class A
- Power factor: >0.9
- Total harmonic distortion: <20%

**Warranty:**

- 5-year manufacturer's warranty
- First year includes labor
- Optional 10-year manufacturer's warranty
- U.S. manufacturing and quality control

**Appearance:**

- Aluminum housing
- Highly durable grey powder coat
- 5700K (CW) LEDs

**Fixture Upgrades:**

- Custom color
- Epoxy coating
- Marine Grade Coating
- Frosted or clear polycarbonate lens

**Light Engine Upgrades:**

- Neutral white or warm white LEDs
- RGBW options
- Tight bins
- Multiple distribution types

**Electrical Upgrades:**

- 0-10V, step, line voltage and bi-level dimming
- Wireless networking and controls
- Photocell
- Emergency battery backup
- Daylight harvesting sensor
- Enhanced surge protection

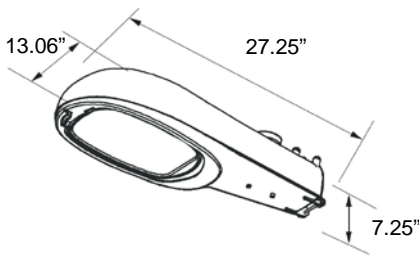
## Cobrahead.A and Cobrahead.APC



CBA



CBAPC



### Performance Ratings and Certifications

UL 1598  
 UL 8750  
 CSA C22.2#250.0  
 CSA C22.2#250.13  
 IP Rating: IP65

### Performance Summary

Lumens: 4,862 lm – 29,172 lm  
 Lumens Per Watt (typ.): 140 LPW  
 Power Consumption: 35 - 208 W  
 Light Engine: L70 Rated Lifetime of 100,000+ hours.  
 CRI: Minimum 70 CRI. Optional custom CRI.  
 CCT (Typical): 3000K, 4000K, 5700K, optional tight bins.  
 Light Dist. Pattern: Multiple distribution patterns available.  
 Manufactured in the U.S. with parts from U.S. and imported.

### Fixture Information

Housing: Die-cast aluminum.  
 Color: Gray with clear coat. Optional custom color  
 Finish: Superior dual coat finish. Chemical resistant epoxy primer and/or Marine Grade coating optional.  
 Lens: Tempered glass lens.  
 Mounting: Pole mount.  
 Length: 27.25"  
 Height: 7.25"  
 Width: 13.06"  
 Weight: 16.6 lbs  
 Shipping Weight: 19.5 lbs

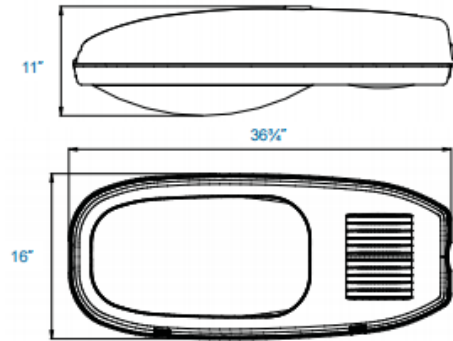
### Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)  
 FCC: Title 47, Part 2, Part 15, Class A  
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A  
 EM Immunity:  
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC  
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH  
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC  
 Total Harmonic Distortion: THD < 20%  
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.  
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2  
 Emergency Batt. Backup: Optional upgrades available.

### Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mesh  
 Network Dimming: 0-10V, step, line voltage or bi-level.  
 Daylight Harvesting Sensor: Optional  
 Photocell: Optional

## Cobrahead.B



### Performance Ratings and Certifications

UL 1598  
 UL 8750  
 CSA C22.2#250.0  
 CSA C22.2#250.13  
 IP Rating: IP65

### Performance Summary

Lumens:	4,862 lm – 29,172 lm
Lumens Per Watt (typ.):	140 LPW
Power Consumption:	35 - 208 W
Light Engine:	L70 Rated Lifetime of 100,000+ hours.
CRI:	Minimum 70 CRI. Optional custom CRI.
CCT (Typical):	3000K, 4000K, 5700K, optional tight bins.
Light Dist. Pattern:	Multiple distribution patterns available.
Manufactured in the U.S. with parts from U.S. and imported.	

### Fixture Information

Housing:	Die-cast aluminum.
Color:	Gray with clear coat. Optional custom color
Finish:	Superior dual coat finish. Chemical resistant epoxy primer and/or Marine Grade coating optional.
Lens:	Molded Sag Glass
Mounting:	Pole Mount
Length:	36.75"
Height:	11"
Width:	16"
Weight:	22 lbs.
Shipping Weight:	25 lbs.

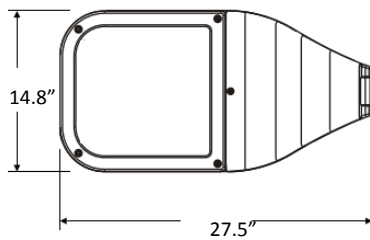
### Electrical System Characteristics / Data

AC Input:	120/277 VAC (standard), 480 VAC (upgrade)
FCC:	Title 47, Part 2, Part 15, Class A
EM:	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
EM Immunity:	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
Withstand Voltage:	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
Isolation Resistance:	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
Power Factor:	PF > 0.98/115VAC, PF > 0.92/277VAC
Total Harmonic Distortion:	THD < 20%
Standard Surge Protection:	All-Around Protection: OVP, SCP, OLP.
Enhanced Surge Protection:	Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
Emergency Batt. Backup:	Optional upgrades available.

### Optional Controls:

Wireless Controls:	Optional via Pulse Wireless Mesh
Network Dimming:	0-10V, step, line voltage or bi-level.
Daylight Harvesting Sensor:	Optional

## Cobrahead.C



Cobrahead.C has a minimum order quantity of 300.

### Performance Ratings and Certifications

UL 1598  
 UL 8750  
 CSA C22.2#250.0  
 CSA C22.2#250.13  
 IP Rating: IP65  
 EPA Rating 1.94

### Performance Summary

Lumens: 4,862 lm – 29,172 lm  
 Lumens Per Watt (typ.): 140  
 Power Consumption: 35 - 208 W  
 Light Engine: L70 Rated Lifetime of 100,000+ hours.  
 CRI: Minimum 70 CRI. Optional custom CRI.  
 CCT (Typical): 3000K, 4000K, 5700K, optional light bins.  
 Light Dist. Pattern: Multiple distribution patterns available.  
 Manufactured in the U.S. with parts from U.S. and imported.

### Fixture Information

Housing: Die-cast aluminum, aerodynamic shape.  
 Color: Grey with clear coat. Optional custom color  
 Finish: UV stabilized powder coat finish. Chemical resistant epoxy primer and/or Marine Grade coating also available.  
 Lens: Tempered Glass  
 Photocell Receptacle: Optional  
 Mounting: Built in slip fitter with 2 1/8" inner diameter  
 Length: 27.5"  
 Height: 5.35"  
 Width: 14.8"  
 Shipping Weight: 35 lbs.

### Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)  
 FCC: Title 47, Part 2, Part 15, Class A  
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3  
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A  
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC  
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH  
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC  
 Total Harmonic Distortion: THD < 20%  
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.  
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2  
 Emergency Batt. Backup: Optional upgrades available.

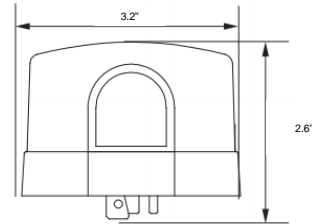
### Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mesh  
 Network Dimming: 0-10V, step, line voltage or bi-level.  
 Daylight Harvesting Sensor: Optional  
 Photocell: Optional

## Cobrahead Options

### Photocell (instant)

Construction	UV Stabilized Polycarbonate Cover and Clear Window, High Impact Polybutylene Terephthalate Base
Type	1" CdS Photocell
Depth:	2.6"
Width:	3.2"

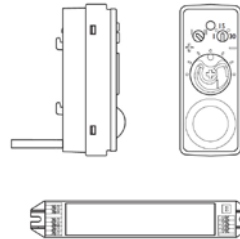


### Photocell (time delay)

Construction	UV Stabilized Polycarbonate Cover and Clear Window
Type	1/2" CdS Photocell
Depth:	2.6"
Width:	3.2"

### Daylight Harvesting Sensor

Sensor Mounting:	Attached to LED plate
Functionality	Enables daylight regulations and dimming when no presence is detected
Delay:	1 to 30 minutes
Sensor Depth:	0.78"
Sensor Height:	0.74"
Sensor Width:	1.84"
Switchbox Length:	7.1"
Switchbox Width:	1.18"



## Fixture Specifications

### Construction

Durable, die cast aluminum housing, with highly durable, textured gray powdercoat finish and heat impact tempered glass (CBA and CBC) or molded sag glass lens (CBB). The CBC has a UV stabilized powder coat finish.

### Optional Finishes

Custom colors available (specify RAL code). Epoxy finish also available. Marine Grade Coating also available (marine grade coating is green).

### Mounting Options

All are pole mounted. CBA and CBB have built in mounting hardware for pole mounting. CBC has a built in slip fitter with 2 1/8" inner diameter. Poles are available for these fixtures. See [noribachi.com/poles](http://noribachi.com/poles) for more information.

### Light Distribution Patterns

T5 distribution pattern standard. T1, T2, T3 and T4 patterns are optional. Right slant and left slant also available.

### Photocell (instant)

Built in surge protector. Electromagnetic AC Relay Switching On-Off Levels: 6Lx On (Dusk); 50Lx Off (Dawn). Not available for CBB.

### Photocell (time delay)

30-120 second time-delay switch-over for Luminaire Protection. On-Off Levels: 10~20Lx(Dusk); 30~60Lx Off (Dawn). Not available for CBB.



## Optics Specifications

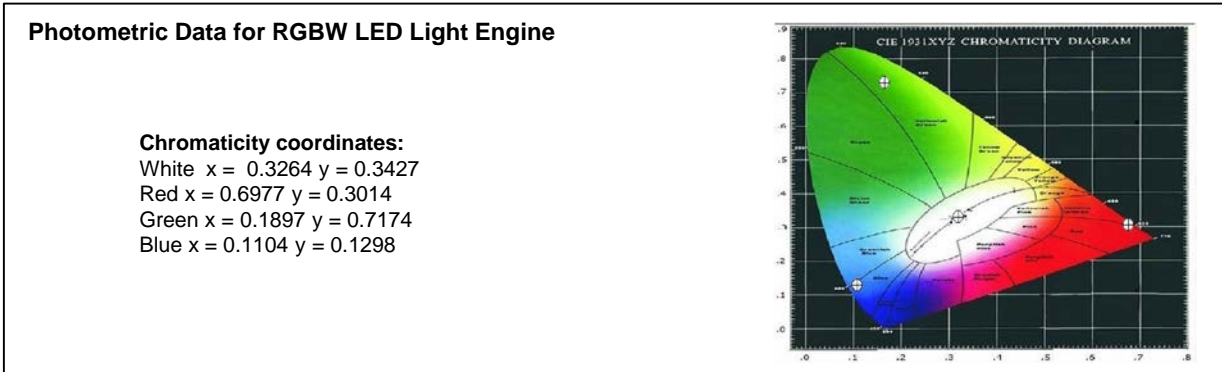
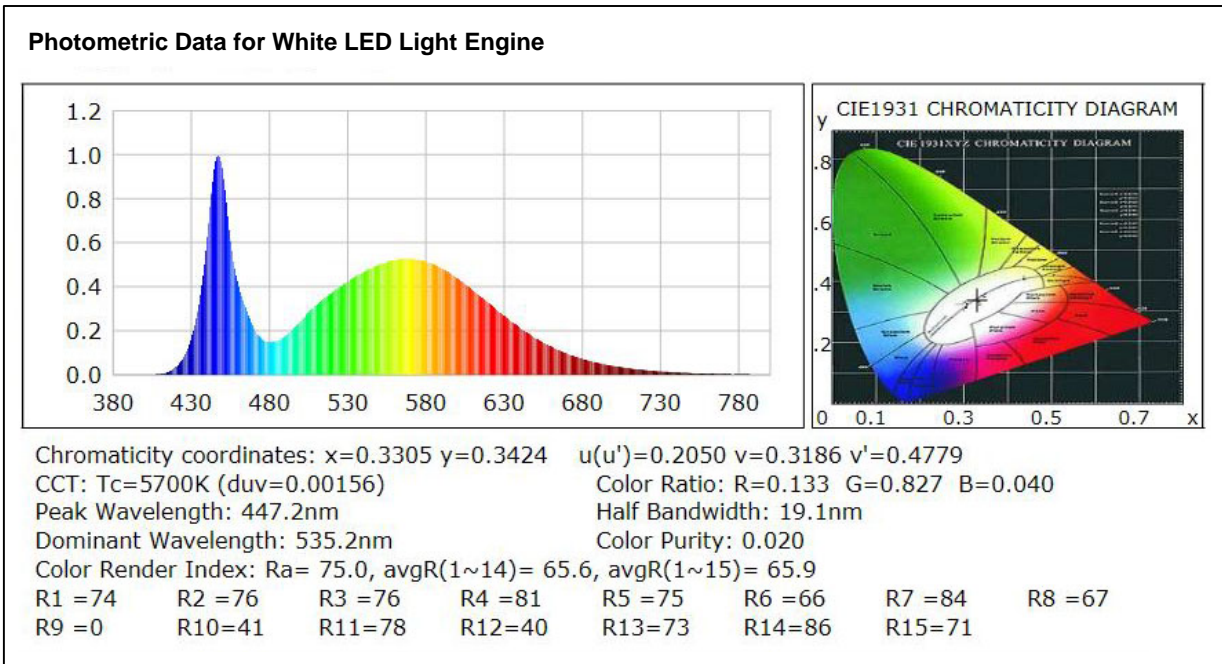
### White LED Optics

High brightness, high efficiency LEDs. Standard color temperature is Cool White (5700K typical). Neutral White (4000K typical) and Warm White (3000K typical) also available. All with minimum 70 CRI. Tight bins (<+/- 50degK variability) also available – recommended for WW installations as the eye is sensitive to variations in this color range. 40deg and 80deg beam angle optional (n/a for RGBW).

### RGBW Light Engine Optics

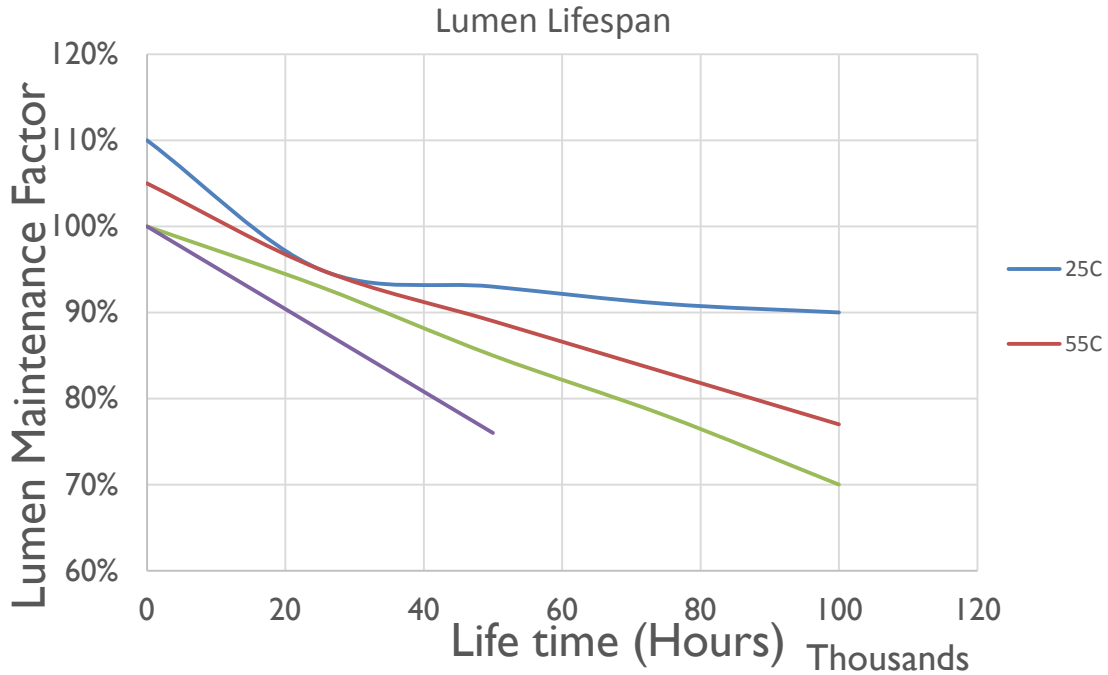
RGBW light engine also available, compatible with DMX controller. RGBW colors, to allow changing from pure white light to any hue available. Multiple channels of LEDs produce a full spectrum of light anywhere from deepest red to farthest violet. CRI great than 75 in the 2700K – 4000K range.

Single color light engines also available. Red=630 nanometers, Green=525 nanometers. Blue=475 nanometers.





## Lumen Performance



Lumen Maintenance Factors (B Drive)					
T <sub>j</sub> (Junction Temp)	INITIAL LMF	25K HR PROJECTED LMF	50K HR PROJECTED LMF	75K HR PROJECTED LMF	100K HR PROJECTED LMF
25°C	1.10	0.95	0.93	0.91	0.90
55°C	1.05	0.95	0.89	0.83	0.77
85°C	1.00	0.93	0.85	0.78	0.70
105°C	1.00	0.88	0.76	N/A	N/A

Each temperature has an independent initial value. In accordance with IESNA TM021011, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip). In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip)

Lumen Multiplier	
AMBIENT TEMPERATURE	LUMEN MULTIPLIER
10°C	1.032
15°C	1.021
25°C	1.000
40°C	0.968
50°C	0.946



## Electrical System Specifications

### Electrical System

Standard AC input of 120 – 277VAC. Optional upgrade to 480VAC. Driver meets maximum harmonic distortion (THD) of 20% and is ROHS compliant. Power Factor = > 0.9. Standard Surge protection according to IEC/EN 61000-4-5 EMC test standard and can protect against up to 4KV transient surge. Optional, enhanced Surge Protection protects Line-Ground, Line-Neutral, and Neutral-Ground. Protects against surges according to IEEE C62.41.2 C(10kA and 10kV) and ANSI C136.2.

### Controls

Optional controls include: 0-10V (010V), Step, line voltage and Bi-Level Dimming functionality (not guaranteed to work with all dimming systems). Occupancy and Daylight Harvest Sensors available. Optional Emergency Battery Backup: Nickel-Cadmium Batteries, 5W, 600 Lumens for 90 minutes. Optional Cold Emergency Battery Backup: 23W, 2000 Lumens for 90 minutes. The battery has a 7-10 year lifespan.

### Driver

All LED drivers provide constant current to give flicker free lighting. Two different drive currents are provided; A (325 mA) and B (575 mA). Highly reliable. Suitable for dry, damp and wet locations. Compliant to worldwide safety regulations for lighting.

### Ambient Temperature

We provide fixtures that can sustain ambient temperature ranging from -40F to 140F (-40C to 60C).

### Wireless Control Options

Optional wireless networking using the Noribachi Pulse Wireless controller. Pulse is an Arduino-based hardware platform that provides communication between fixtures and a base station using Digi's XBEE based mesh network. Pulse controls up to 16 independent LED lighting fixtures using an FCC approved 900 MHz frequency with up to 200 Kbps data transmission speed. Transmit power output 50 mW. Data transmission rate is 156.25 kbps. 128 bit AES Encryption.

### Occupancy Sensor and Daylight Harvesting

Sensor provides 60' diameter coverage from a 40' height. Time can be set from 30 seconds to 30 minutes.

### RGBW Controls

Optional RGBW controls with communication to fixture via DMX512 or DMX256 and four channel controls. Four channel control uses red, green, blue and white (to control intensity). DMX controller optional, either software DMX master (via CD and USB adapter) or a physical DMX master. 2.4 GHz wireless DMX networking optional. Other frequencies available upon request.

### Testing Compliance

Noribachi complies with and exceeds standards set forth by UL and CSA. All luminaires comply with UL 1598 (CSA C22.2#250.13), and UL 8750 (CSA C22.2#250.0) standards for safety.

Performance testing is done in accordance with LM-79 color measurements and LM-79 distribution measurements, and LM-80 lumen maintenance testing.

### Manufacturing

Manufactured in beautiful Harbor City, CA. ARRA Compliant. NAFTA Compliant. Test and burn-in of 100% of all luminaires before shipment. No less than 8-years experience in manufacturing LED-based products.

### Warranty

Standard limited 5-year warranty, first year includes labor. Optional 10-year warranty available. See details at [www.Noribachi.com](http://www.Noribachi.com).

### Note

All safety tests and performance data is done in ambient (STP) conditions. Specifications subject to change without notice. Actual performance may differ as a result of end-user environment application. Actual wattage may differ by +/- 8%. Lumen values may vary within compliance with ANSI C78-377 (unless specifying tight color bins).

## Electrical System Specifications

Electrical Load				
Light Engine	Drive Current (Amps @120VAC)	Drive Current (Amps @277VAC)	Drive Current (Amps @480VAC)	System Power (Watts)*
HEX-021-B-CW-MT	0.29	0.13	0.07	34.73
HEX-042-B-CW-MT	0.58	0.25	0.14	69.46
HEX-063-B-CW-MT	0.87	0.38	0.22	104.19
HEX-084-B-CW-MT	1.16	0.50	0.29	138.92
HEX-105-B-CW-MT	1.45	0.63	0.36	173.64
HEX-126-B-CW-MT	1.74	0.75	0.43	208.37
				* ideal wattage

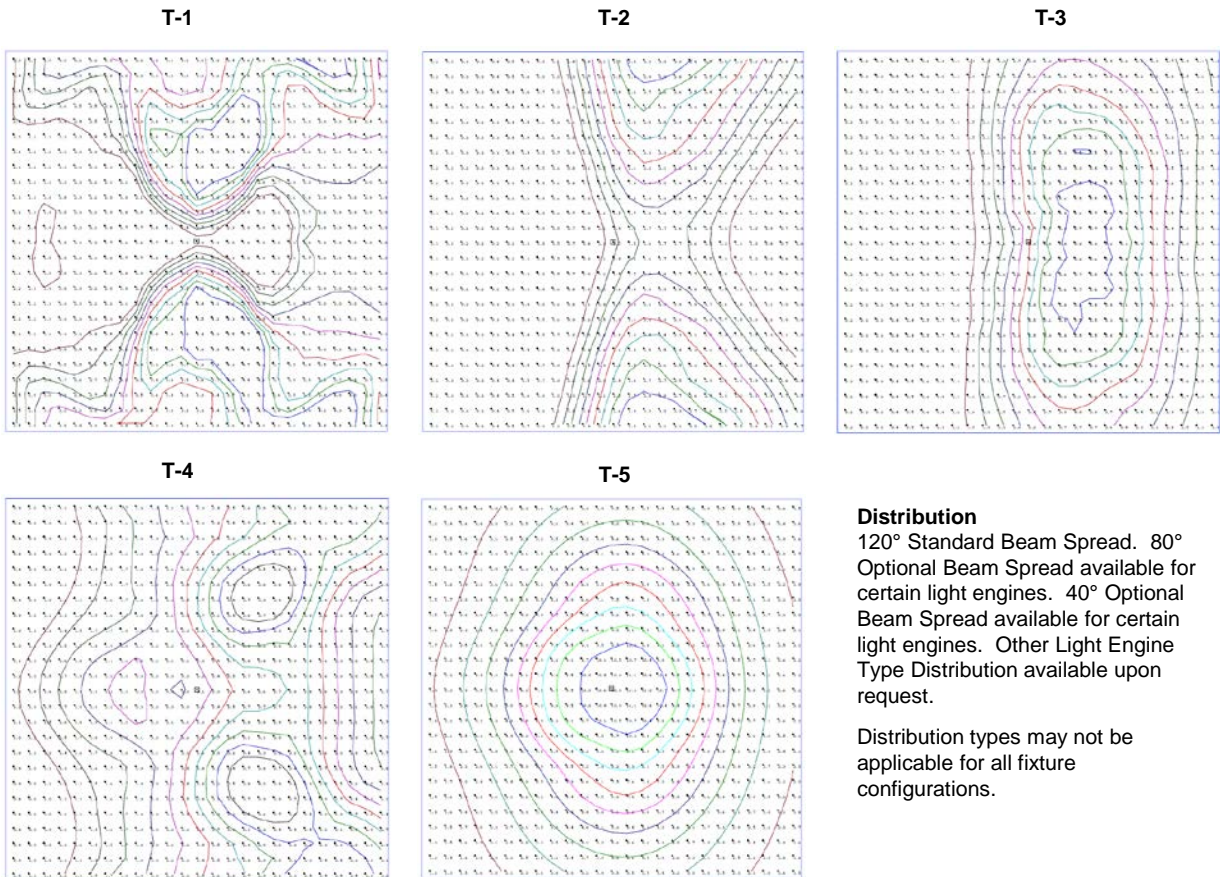
Operating Characteristics (Typical @5700K CCT)			
Light Engine	Lumens	Input Power (Watts)	Lumens per Watt
HEX-021-B-CW-MT	4,862	34.73	140.00
HEX-042-B-CW-MT	9,724	69.46	140.00
HEX-063-B-CW-MT	14,586	104.19	140.00
HEX-084-B-CW-MT	19,448	138.92	140.00
HEX-105-B-CW-MT	24,310	173.64	140.00
HEX-126-B-CW-MT	29,172	208.37	140.00



## Distribution Types

Power and Lumens by Light Engine and Distribution Type							
Light Engine	Drive	CCT	T1	T2	T3	T4	T5
HEX-021-B-CW-MT	B	5700	4,777	3,786	4,619	4,376	4,862
HEX-042-B-CW-MT	B	5700	9,555	7,571	9,238	8,752	9,724
HEX-063-B-CW-MT	B	5700	14,332	11,357	13,857	13,127	14,586
HEX-084-B-CW-MT	B	5700	19,110	15,142	18,476	17,503	19,448
HEX-105-B-CW-MT	B	5700	23,887	18,928	23,095	21,879	24,310
HEX-126-B-CW-MT	B	5700	28,665	22,713	27,714	26,255	29,172

### Type Distribution HEX-126



**Distribution**  
 120° Standard Beam Spread. 80°  
 Optional Beam Spread available for  
 certain light engines. 40° Optional  
 Beam Spread available for certain  
 light engines. Other Light Engine  
 Type Distribution available upon  
 request.

Distribution types may not be  
 applicable for all fixture  
 configurations.

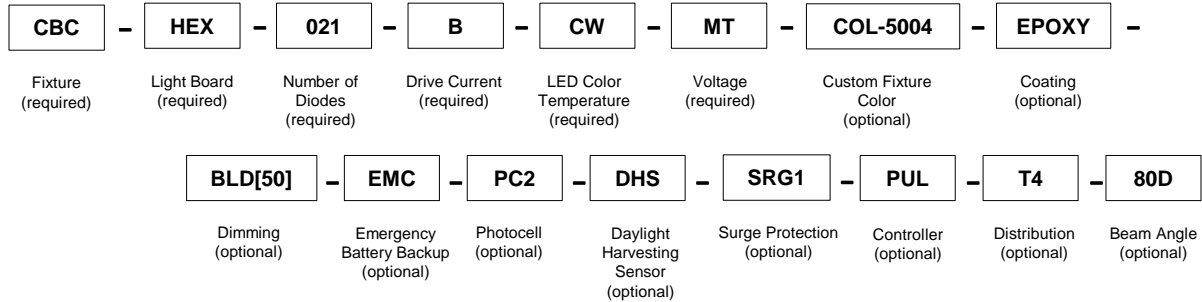
- IES Type Distributions are generated in an open space.
- Light Distribution images are mounted at 10 feet.

## Available Light Engines

Fixture	Standard Order Code	Lumens	Watts	Voltage	Color Temp
<b>CBA</b>	CBA-HEX-021-B-CW-MT	4,862	35	120 - 277VAC	5700K (cool white)
	CBA-HEX-042-B-CW-MT	9,724	69	120 - 277VAC	5700K (cool white)
	CBA-HEX-063-B-CW-MT	14,586	104	120 - 277VAC	5700K (cool white)
	CBA-HEX-084-B-CW-MT	19,448	139	120 - 277VAC	5700K (cool white)
	CBA-HEX-105-B-CW-MT	24,310	174	120 - 277VAC	5700K (cool white)
	CBA-HEX-126-B-CW-MT	29,172	208	120 - 277VAC	5700K (cool white)
<b>CBA.PC</b>	CBA.PC-HEX-021-B-CW-MT	4,862	35	120 - 277VAC	5700K (cool white)
	CBA.PC-HEX-042-B-CW-MT	9,724	69	120 - 277VAC	5700K (cool white)
	CBA.PC-HEX-063-B-CW-MT	14,586	104	120 - 277VAC	5700K (cool white)
	CBA.PC-HEX-084-B-CW-MT	19,448	139	120 - 277VAC	5700K (cool white)
	CBA.PC-HEX-105-B-CW-MT	24,310	174	120 - 277VAC	5700K (cool white)
	CBA.PC-HEX-126-B-CW-MT	29,172	208	120 - 277VAC	5700K (cool white)
<b>CBB</b>	CBB-HEX-021-B-CW-MT	4,862	35	120 - 277VAC	5700K (cool white)
	CBB-HEX-042-B-CW-MT	9,724	69	120 - 277VAC	5700K (cool white)
	CBB-HEX-063-B-CW-MT	14,586	104	120 - 277VAC	5700K (cool white)
	CBB-HEX-084-B-CW-MT	19,448	139	120 - 277VAC	5700K (cool white)
	CBB-HEX-105-B-CW-MT	24,310	174	120 - 277VAC	5700K (cool white)
	CBB-HEX-126-B-CW-MT	29,172	208	120 - 277VAC	5700K (cool white)
<b>CBC</b>	CBC-HEX-021-B-CW-MT	4,862	35	120 - 277VAC	5700K (cool white)
	CBC-HEX-042-B-CW-MT	9,724	69	120 - 277VAC	5700K (cool white)
	CBC-HEX-063-B-CW-MT	14,586	104	120 - 277VAC	5700K (cool white)
	CBC-HEX-084-B-CW-MT	19,448	139	120 - 277VAC	5700K (cool white)
	CBC-HEX-105-B-CW-MT	24,310	174	120 - 277VAC	5700K (cool white)
	CBC-HEX-126-B-CW-MT	29,172	208	120 - 277VAC	5700K (cool white)

## How to Order

Sample Order Code: Only include the optional upgrades you need.



## How to Order (continued)

Numbering Order	Specification	Required or Optional	Allowed Values	Description
1	Fixture	Required	CBA	For CBA
			CBAPC	For CBA with photocell
			CBB	For CBB
			CBC	For CBC
2	Light Board	Required	HEX	For all
3	Number of Diodes	Required	021	For HEX-021 models
			042	For HEX-042 models
			063	For HEX-063 models
			084	For HEX-084 models
			105	For HEX-105 models
4	Drive Current	Required	126	For HEX-126 models
			B	B (525mA) drive current
5	LED Color Temperature	Required	CW	Standard Cool white LEDs (5700K)
			NW	Neutral White LEDs (4000K)
			WW	Warm White LEDs (3000K)
			[Specific degree Kelvin]	Specific color temp LEDs [Specific degree Kelvin]
			T1 [Specific degree Kelvin]	Tight Bin LED Color [Specific degree Kelvin] for <150W
			T2 [Specific degree Kelvin]	Tight Bin LED Color [Specific degree Kelvin] for >150W
			RGBW	Red/Green/Blue/White light engine
6	Voltage	Required	COL[R/G/B]	Single color light engine
			MT	Standard AC input: 120VAC - 277VAC
			HV1	High Voltage (480VAC) option for <150W
			HV2	High Voltage (480VAC) option for >150W
7	Custom Fixture Color	Optional	COL-[RAL]	Custom Fixture Color (RAL code)
8	Coating	Optional	COAT	Marine Grade Coating
9	Dimming	Optional	EPOXY	Epoxy coating
			010V	0 - 10V dimming
			STEP	Step dimming
			LVDIM	Line voltage dimming
10	Emergency Battery Backup	Optional	BLD[%]	Bi-level dimming
			EM	Emergency Battery Backup
			EMC	Emergency Battery Backup - Cold
11	Photocell	Optional	PC1	Photocell (instant) for 120V applications
			PC2	Photocell (instant) for 277V applications
			PCTD1	Photocell (time delay) for 120V applications
			PCTD2	Photocell (time delay) for 277V applications
12	Daylight Harvesting Sensor	Optional	DHS	Daylight Harvesting Sensor
13	Surge Protection	Optional	SRG1	Enhanced surge protection for 120-277VAC
			SRG2	Enhanced surge protection for 480VAC
14	Controller	Optional	PUL	Pulse Wireless Controller
15	Distribution	Optional	T1	Type 1 Distribution
			T2	Type 2 Distribution
			T3	Type 3 Distribution
			T4	Type 4 Distribution
			TRS	Optional Right Slant
			TLS	Optional Left Slant
16	Beam Angle	Optional	40D	40 degree Beam Angle Optics
			80D	80 degree Beam Angle Optics



ELECTRICAL CHARACTERISTICS AND PERFORMANCE DATA VERIFIED BY NATIONALLY RECOGNIZED TESTING LABS (NRTL). FOR FULL REPORTS AND RESULTS, VISIT [WWW.NORIBACHI.COM/REPORTS](http://WWW.NORIBACHI.COM/REPORTS). ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. ALL VALUES TYPICAL UNLESS OTHERWISE NOTED. LUMEN VALUES MAY VARY BY +/- 10%. COLOR TEMPERATURE MAY VARY ACCORDING TO ANSI C78.377.

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