

## Highbay and Lowbay LED Luminaires

Energy-efficient, low-maintenance lighting for commercial and industrial applications





# High Performance Highbay and Lowbay LED Luminaires

AccuLite Highbay and Lowbay LED Luminaires incorporate the very latest large format LED chip technology, innovative hybrid TIR/reflector optics and an ultra-thin, thermally efficient housing design, produce up to 34,000 lumens of uniform area illumination and industry leading efficacies approaching 100 lumens per watt.

Highbay and Lowbay LED industrial fixtures are available in 16" or 22" sizes with your choice of lumen packages and optical distributions. Choose between premium efficacy or standard efficacy models to solve virtually any highbay or lowbay lighting project challenge.

These advanced solid state luminaires deliver equivalent photopic illumination levels to traditional metal halide and fluorescent fixtures with better uniformity and coverage. They use substantially lower energy than traditional light sources with substantially longer life (100,000 hours  $L_{70}$  \*).

Engineered for longevity and upgradeability, AccuLite Highbay and Lowbay LEDs feature proprietary encapsulated LED light engine technology, a thermally isolated driver housing and a field replaceable LED housing.

## Advantages

- Industry leading photometric performance and efficacies
- 100,000  $L_{70}$  hours\*
- Custom-tailored combinations of lumen outputs, fixture sizes and distributions to solve virtually any highbay or lowbay lighting application
- Optional IP65 rating to protect the fixture from dust and moisture and extend fixture life
- Wireless Control option compatible with Daintree Controls with ZigBee™ protocol
- Ambient temperature range of -40°F to +104°F
- Hazardous locations certified

\*  $L_{70}$  is the predicted time when LED performance depreciates to 70% of initial lumen output while operating at 25°C ambient temperature.





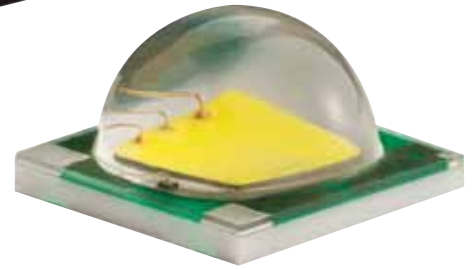


## Technologically advanced, environmentally responsible and performance driven

Take a closer look to see how AccuLite Highbay and Lowbay LEDs bring new levels of performance, innovation and design to the art and science of illuminating large commercial and industrial spaces.

# Highbay and Lowbay LED Luminaires

## Advanced optics



AccuLite Highbay and Lowbay LED Luminaires offer a unique balance of advanced, state-of-the-art technology and functional design. Unparalleled performance and reliability are the sum of the following key features:

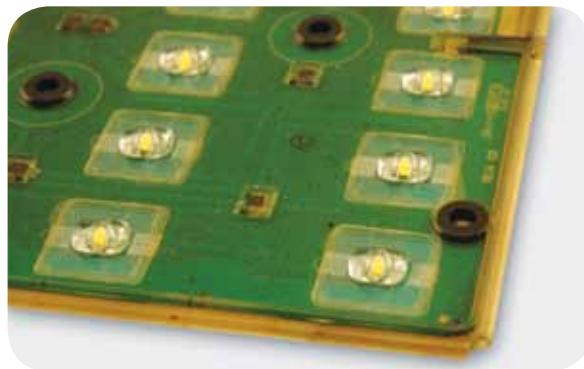
### Independent TIR optics

Proprietary highbay and lowbay total internal reflection optics are installed over each individual LED independently from the LED position on the board. This assures proper LED-optic alignment and consistent optical performance regardless of LED placement tolerances.



### Latest Generation Large Format LED Technology

Larger die offers up to 20% higher efficacy with significantly improved thermal performance and ability to drive the LED more efficiently at higher currents versus smaller format chips used in typical competitive fixtures.



### Encapsulated LED Modules

Each LED module is encapsulated to ensure precise/permanent alignment between the LED and optic and to protect against moisture infiltration.



# Innovative design

## Flexible Mounting Options

Three mounting methods provide the freedom to configure fixtures to perfectly fit the project:

- Surface mount to ceiling with separate power cord
- Pendant mount with cord for hook or other pendant accessories
- Pendant mount for rigid conduit with integral wiring chamber



Pendant Mount with Accessory Hook



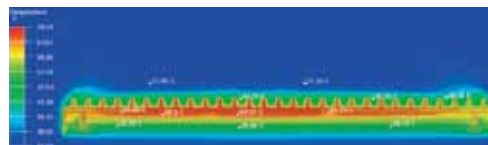
Breather Vent

## Optional IP65 Sealed Housing

AccuLite Highbay and Lowbay LED fixtures can be ordered with a gasket-sealed 90% transmission tempered glass lens to exclude dirt and moisture and protect the optics from environmental contaminants and physical damage. An optional 95% high transmission glass can be specified, as well as a chemically frosted glass lens to soften the light and reduce glare. An integral membrane breather vent equalizes the internal/external air pressure to further enhance the quality and longevity of the seal.

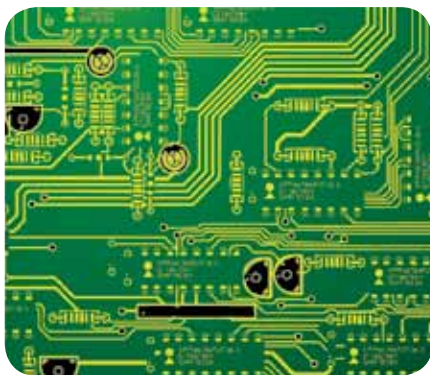
## Hazardous Locations

When ordered with option "C1", the AccuLite LED highbay luminaires are approved for use in hazardous locations classified as Class 1, Div 2, Groups A, B, C and D. Temperature Class T5. Ambient range -20° to 40°C (-4°F to 104°C). These are areas where flammable gases or vapors may be present in the air during abnormal conditions.



## Efficient Thermal Management

Each luminaire has a computer designed and optimized heat sink that delivers outstanding thermal management in a small footprint design. The LED circuit boards are in direct contact with the finely machined surface for best heat transfer. The drivers are located in a thermally independent compartment.



## Superior Electronics Topology

Universal drivers accommodate inputs of 120-277VAC or 347-480VAC and have internal 2.5kV surge protection. Each fixture is equipped with a separate surge protector that protects Line-Ground, Line-Neutral and Neutral-Ground in accordance with IEEE/ANSI C62.41.2 guidelines and is rated for 10,000 Amps. A 0-10V dimming driver is optional.

# Highbay LED Luminaires



## Uncompromising performance

AccuLite Highbay LED fixtures deliver uncompromising performance and a safe working environment. While other fixture manufacturers give you the photopic/scotopic lumen runaround, AccuLite gives you a true one-to-one replacement for 400W HID or linear fluorescent fixtures.

### One-to-One LED Retrofit:

#### 120' x 150' Space

18' mounting height • 2.5' high work plane

#### 400W Metal Halide

- 25 fixtures
- LLF = 0.60
- Average foot candles at work plane = 21
- Energy used = 11,350 watts



#### AccuLite Highbay LED with A18 Engine

- 25 fixtures
- LLF = 0.85
- Average foot candles at work plane = 21
- Energy used = 4,850 watts

#### 6 x 54W Linear Fluorescent

- 25 fixtures
- LLF = 0.85
- Average foot candles at work plane = 28
- Energy used = 8,150 watts



#### AccuLite Highbay LED with A24 Engine

- 25 fixtures
- LLF = 0.85
- Average foot candles at work plane = 28
- Energy used = 6,350 watts

## AccuLite Highbay LED delivers

- **57% Energy reduction compared to HID**
- **22% Energy reduction compared to linear fluorescent**
- **Same foot candle levels**
- **100,000 hour lamp life (L<sub>70</sub>)\***
- **NO COMPROMISES**

\* L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output while operating at 25°C ambient temperature.

### Premium Efficacy Fixtures @ 4500K - 80 CRI

IP65 Rated Catalog No.	Damp Location Catalog No.	Spacing Criteria	Fixture Size	Delivered Lumens (IP65 Rated)	Delivered Lumens (Damp Location)	System Watts
IS1-A06-4K-UN-5H	SH1-A06-4K-UN-5H	1.2:1	16"	5,859	5,724	67
IS1-A06-4K-UN-5L	SH1-A06-4K-UN-5L	1.9:1	16"	5,637	6,055	67
IS1-A09-4K-UN-5H	SH1-A09-4K-UN-5H	1.2:1	16"	8,789	8,587	97
IS1-A09-4K-UN-5L	SH1-A09-4K-UN-5L	1.9:1	16"	8,456	9,083	97
IS1-A12-4K-UN-5H	SH1-A12-4K-UN-5H	1.2:1	16"	11,718	11,449	128
IS1-A12-4K-UN-5L	SH1-A12-4K-UN-5L	1.9:1	16"	11,275	12,111	129
IL1-A18-4K-UN-5H	LH1-A18-4K-UN-5H	1.2:1	22"	17,577	17,173	194
IL1-A18-4K-UN-5L	LH1-A18-4K-UN-5L	1.9:1	22"	16,912	18,166	194
IL1-A24-4K-UN-5H	LH1-A24-4K-UN-5H	1.2:1	22"	23,437	22,898	254
IL1-A24-4K-UN-5L	LH1-A24-4K-UN-5L	1.9:1	22"	22,550	24,222	254

For 6500K CCT apply a 1.1 multiplier to above values.  
All tests were performed according to IES LM-79-08.

### Standard Efficacy Fixtures @ 4500K - 80 CRI

IP65 Rated Catalog No.	Damp Location Catalog No.	Spacing Criteria	Fixture Size	Delivered Lumens (IP65 Rated)	Delivered Lumens (Damp Location)	System Watts
IS2-B08-4K-UN-5H	SH2-B08-4K-UN-5H	1.2:1	16"	8,267	8,077	107
IS2-B08-4K-UN-5L	SH2-B08-4K-UN-5L	1.9:1	16"	7,954	8,544	107
IS2-B12-4K-UN-5H	SH2-B12-4K-UN-5H	1.2:1	16"	12,401	12,116	153
IS2-B12-4K-UN-5L	SH2-B12-4K-UN-5L	1.9:1	16"	11,932	12,816	153
IS2-B16-4K-UN-5H	SH2-B16-4K-UN-5H	1.2:1	16"	16,535	16,154	200
IS2-B16-4K-UN-5L	SH2-B16-4K-UN-5L	1.9:1	16"	15,909	17,088	200
IL2-B24-4K-UN-5H	LH2-B24-4K-UN-5H	1.2:1	22"	24,802	24,231	295
IL2-B24-4K-UN-5L	LH2-B24-4K-UN-5L	1.9:1	22"	23,863	25,633	295
IL2-B33-4K-UN-5H	LH2-B33-4K-UN-5H	1.2:1	22"	33,069	32,308	385
IL2-B33-4K-UN-5L	LH2-B33-4K-UN-5L	1.9:1	22"	31,818	34,177	385

For 6500K CCT apply a 1.1 multiplier to above values.  
All tests were performed according to IES LM-79-08.

## Ordering Information

Example: SH1-A06-6K-UN-5H-6HC

### Damp Location Rated Fixture (with NO glass lens)

Model	Light Engine <sup>1</sup>	CCT	Voltage	Mounting	Distribution	Options
SH1-	A06	-6K	-UN		-5H	-6HC

#### Premium Efficacy Fixtures:

Model	Light Engine	CCT	Voltage	Mounting	Distribution	Options
SH1 16" Fixture	A06 67 watts	-6K 6500K 65 CRI	-UN - 120V thru 277V	No Suffix Standard 3/4" NPS female hub (Includes 10' cord)	-5H High bay optics	-6HC Factory wired 6' cord 16/3 SOW and hook
	A09 97 watts	-4K 4500K 80 CRI	-E12 - 120V -E20 - 208V -E24 - 240V -E27 - 277V		-5L Low bay optics	-6CT* Factory wired 6' cord 16/3 SOW and NEMA twist lock plug
	A12 127 watts					-6CD Factory wired 6' cord (line voltage) and 0-10V dimming leads (includes dimming driver)
LH1 22" Fixture	A18 194 watts		-UH - 347V thru 480V	CE Surface mount (Includes 10' cord)		-SH Brackets for sister hooks
	A24 254 watts		-E34 - 347V -E48 - 480V	PD Rigid conduit mount (Includes wiring compartment)		-F1' Fuse single pole line to neutral
						-F2' Fuse two pole line to line

#### Standard Efficacy Fixtures:

SH2 16" Fixture	B08 107 watts					
	B12 153 watts					
	B16 200 watts					
LH2 22" Fixture	B24 295 watts					
	B33† 385 watts					

† Available only with "PD" mounting configuration

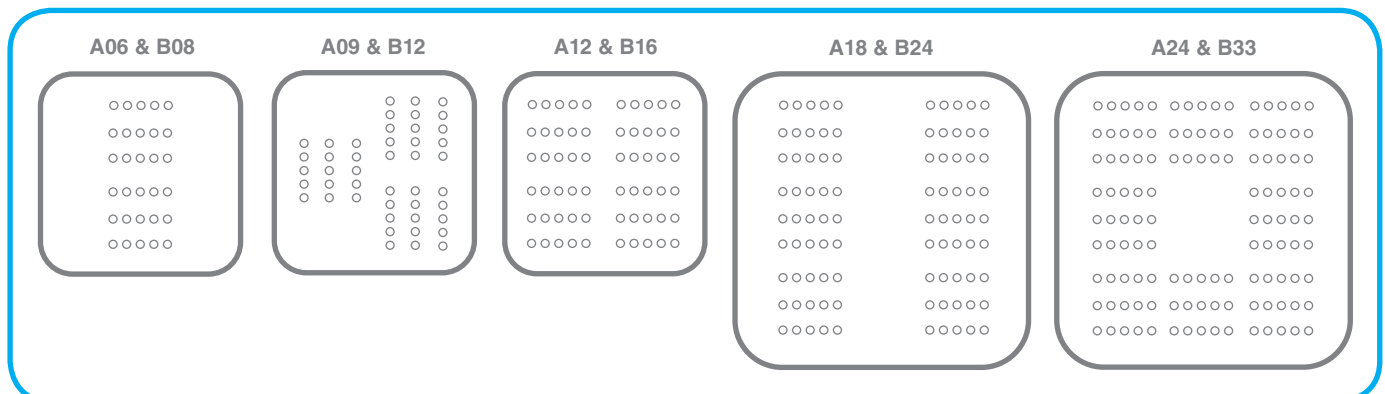
<sup>1</sup> Options "F1", "F2", and "M" can *not* be combined with option "C1". Must specify voltage.

<sup>2</sup> See specifications sheets for more details

## Accessories

Description	Cat. No.
3/4" male hook	HK75SS
22" wire guard	ILWG
16" wire guard	ISWG

## Light Engine Configurations



NOTE: For delivered lumen values including optical distribution, CCT, and glass lens effects refer to LED Performance and Data Table on page 6.



## Ordering Information

Example: IS1-A06-6K-UN-5H-6HC

### Wet Location, IP65 Rated Fixture (with clear glass lens)

Model	Light Engine <sup>1</sup>	CCT	Voltage	Mounting	Distribution	Options
IS1-	A06	-6K	-UN		-5H	-6HC

#### Premium Efficacy Fixtures:

Model	Light Engine <sup>1</sup>	CCT	Voltage	Mounting	Distribution	Options
<b>IS1</b> 16" Fixture	<b>A06</b> 67 watts <b>A09</b> 97 watts <b>A12</b> 123 watts	<b>- 6K</b> 6500K 65 CRI <b>- 4K</b> 4500K 80 CRI	<b>- UN -</b> 120V thru 277V <b>- E12 -</b> 120V <b>- E20 -</b> 208V <b>- E24 -</b> 240V <b>- E27 -</b> 277V	<b>No Suffix</b> Standard 3/4" NPS female hub (Includes 10' cord) <b>CE</b> Surface mount (Includes 10' cord) <b>PD</b> Rigid conduit mount (Includes wiring compartment)	<b>- 5H</b> High bay optics <b>- 5L</b> Low bay optics	<b>- 6HC</b> Factory wired 6' cord 16/3 SOW and hook <b>- 6CT*</b> Factory wired 6' cord 16/3 SOW and NEMA twist lock plug <b>- 6CD</b> Factory wired 6' cord (line voltage) and 0-10V dimming leads (includes dimming driver) <b>- SH</b> Brackets for sister hooks <b>- F1'</b> Fuse single pole line to neutral <b>- F2'</b> Fuse two pole line to line <b>- D</b> 0-10V dimming driver <b>- M'</b> On/off motion sensor <b>- HT</b> High transmission lens <b>- FG</b> Frosted glass lens <b>- C1</b> Class 1, Div 2, Groups A, B, C, D.
<b>IL1</b> 22" Fixture	<b>A18</b> 194 watts <b>A24</b> 254 watts	<b>- 4K</b> 4500K 80 CRI	<b>- UH -</b> 347V thru 480V <b>- E34 -</b> 347V <b>- E48 -</b> 480V			
<b>IS2</b> 16" Fixture	<b>B08</b> 107 watts <b>B12</b> 153 watts <b>B16</b> 200 watts					
<b>IL2</b> 22" Fixture	<b>B24</b> 295 watts <b>B33†</b> 385 watts					

\* Must specify voltage

† Available only with "PD" mounting configuration

<sup>1</sup> Options "F1", "F2", and "M" can *not* be combined with option "C1".  
Must specify voltage.

## Accessories

Description	Cat. No.
3/4" male hook with gasket	<b>EHK75SS</b>
22" wire guard	<b>ILWG</b>
16" wire guard	<b>ISWG</b>

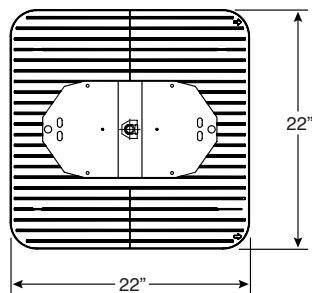
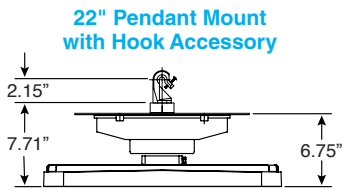


NOTE: For delivered lumen values including optical distribution, CCT, and glass lens effects refer to LED Performance and Data Table on page 6.



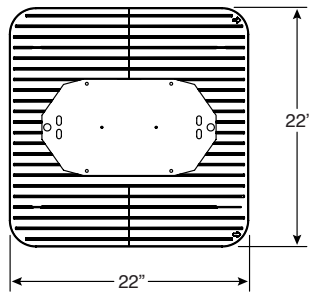
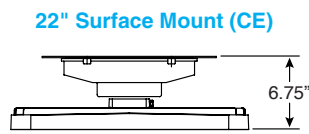
**Dimensions & Mounting Options**

Fixture	Weight
<b>16" Surface Mount</b>	28 lb.
<b>22" Surface Mount</b>	48 lb.
<b>16" Pendant Mount with Hook</b>	29 lb.
<b>22" Pendant Mount with Hook</b>	49 lb.
<b>16" Rigid Conduit Mount</b>	31 lb.
<b>22" Rigid Conduit Mount and fixtures with B33 Engine</b>	49 lb.

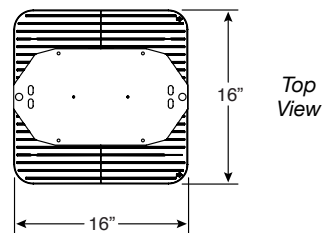
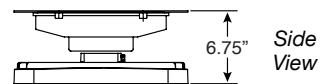


Side View

Top View



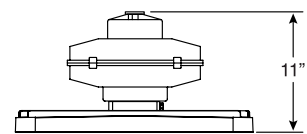
**16" Surface Mount (CE)**



Side View

Top View

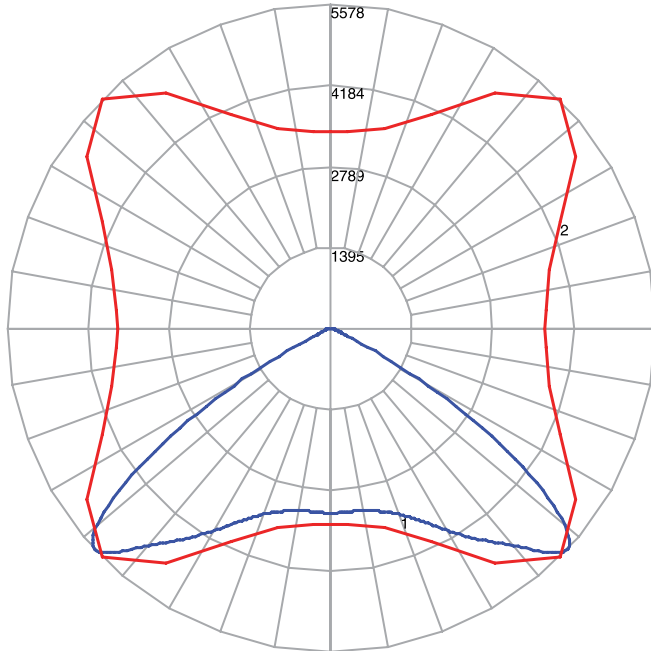
**22" Rigid Conduit Mount (PD) and fixtures with B33**



Side View

## Photometry

### Lowbay Optics – Light Engine A12 (IP65 Rated) with glass lens



**Maximum Candela = 5578.1**

**Located At Horizontal Angle = 45, Vertical Angle = 47**

# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)

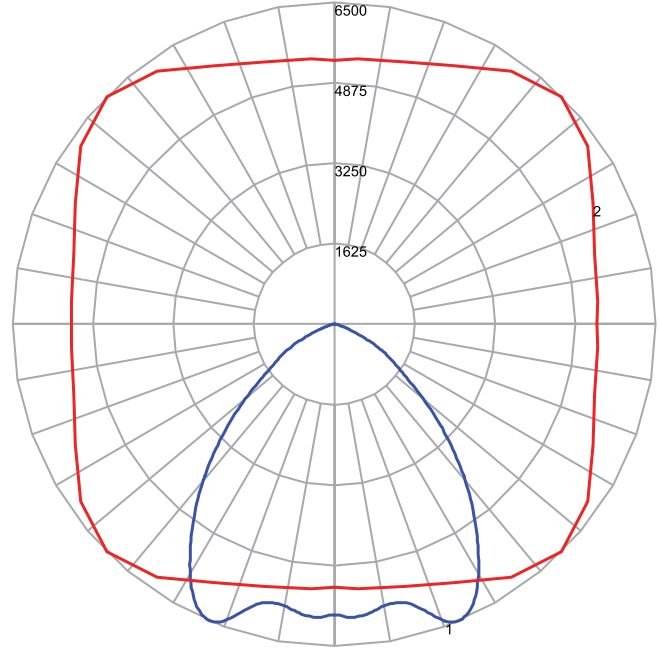
# 2 - Horizontal Cone Through Vertical Angle (47) (Through Max. Cd.)

Spacing Criteria (0-180) .....	1.86
Spacing Criteria (90-270) .....	1.84
Spacing Criteria (Diagonal) .....	1.98

### Zonal Lumen Summary

Zone	Lumens
0-10	303
10-20	920
20-30	1647
30-40	2569
40-50	3355
50-60	2116
60-70	286
70-80	68
80-90	3
90-180	0

### Highbay Optics – Light Engine A12 (IP65 Rated) with glass lens



**Maximum Candela = 6500.4**

**Located At Horizontal Angle = 45, Vertical Angle = 23**

# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (23) (Through Max. Cd.)

Spacing Criteria (0-180) .....	1.16
Spacing Criteria (90-270) .....	1.16
Spacing Criteria (Diagonal) .....	1.30

### Zonal Lumen Summary

Zone	Lumens
0-10	563
10-20	1672
20-30	2579
30-40	2747
40-50	2138
50-60	1217
60-70	610
70-80	152
80-90	22
90-180	0



To learn more about AccuLite™ Highbay and Lowbay LED Luminaires, please visit us at [www.junolightinggroup.com](http://www.junolightinggroup.com)



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