

# A-51™ LED Factory Sealed Luminaires

For Group A, B, C, D Locations. Explosionproof

Hazardous Locations. Suitable for use in Wet Locations. UNILETS™ for use with Threaded Metal Conduit.

NEC/CEC — For Group A ① and B: Class I, Division 1, Groups A, B, C, D | Class II, Division 1, Groups F, G | Class III | Suitable for use in Wet Locations

## Applications

- Ideal for use in:
  - Chemical and petrochemical plants
  - Hydrogen and Biofuels plants
  - LNG (Liquid Natural Gas) plants
  - Other heavy process areas where ignitable vapors, dust, moisture and corrosive atmospheres may be present
- Suitable for use in wet locations.
- Model for Class I, Division 1 applications where acetylene is always present.

## Features

- All A-51™ LED fixtures are factory sealed; no external sealing fittings required.
- Fixture unit easily threads off mounting hood for convenient servicing or for immediate exchange with new fixture.
- Specially formulated two coat baked epoxy enamel provides superior protective finish to resist corrosion. Applied to all mounting hoods, fixture units and guards.
- Light outputs up to 3,200 lumens.

Nominal Lumens	HID Equivalent	Incandescent Equivalent	Model
1700	50W	100 - 150W	AALL1CBU AALL1WBU
3200	70 - 100W	200 - 300W	AALL2CBU AALL2WBU

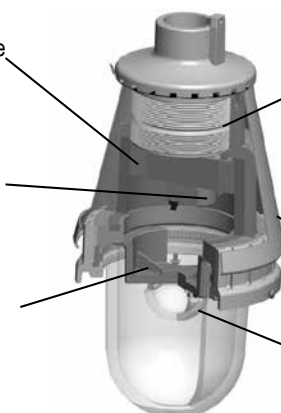
- Globes in A-51™ fixtures are explosionproof, heat- and impact-resistant glass.
- Guards to protect globe are easily mounted to globe ring with 3 screws.
- Fixture units have standardized threads to fit all A-51™ LED mounting hoods.
- Ambient Temperature: -25 °C to +55 °C (-13 °F to +131 °F)
- 6 kV Surge Protection.
- Reported L70 is > 55k hours.
- Choice of mountings:
  - Group A, B, C, D:
    - Pendant
  - Group B, C, D:
    - Ceiling and 15° short bracket
- 5 year standard warranty.

## Illustrated Features A-51™ LED Class I, Division 1, Groups A, B, C, D

Thermally conductive polymer based potting compound maintains low LED driver temperature ensuring long life.

Internal 6 kV protection to prevent voltage spikes from possibly damaging the driver.

Diecast Aluminum heatsink contributes to a reported L70 life of 60,000 hours; CRI > 80.



Socket block with wireless connector ring and pin. As fixture is threaded onto mounting hood, connector ring and pin enter terminal recesses of connection block making electrical contact.

Aluminum heatsink with gray epoxy powder coat, electrostatically applied paint that resists corrosion.

Silicone optic provides a smooth light distribution with a uniform light coverage.



Group A, B, C, D

## Options

- Aluminum guards available, *purchase separately*.
- Reflectors available, *purchase separately*.

## Standard Materials

- Fixtures and guards: copperfree (4/10 of 1% max.) aluminum
- Pendant mounting hoods: copperfree (4/10 of 1% max.) aluminum
- Ceiling and bracket mounting hoods: malleable iron with aluminum adapters
- Reflectors: powder coated aluminum

## Standard Finishes

- Fixtures, guards and mounting hoods: electrostatically applied for complete, uniform surface protection
- Steel reflectors: white porcelain enamel

## NEC/CEC Certifications and Compliances

- UL Standard: UL 1598; UL 844
- CSA Standard: C22.2 No. 137; C22.2 No 250.0-08
- cULus Listed: E10444
- Suitable for use in Wet Locations

## Design Lights™ Consortium

- Check DLC QPL for current list of products

## Related Products

- Code•Master™ LED Factory Sealed Luminaires
- Code•Master™ Jr. LED Factory Sealed Luminaires

① For Group A applications, Pendant mounting hood must be used.

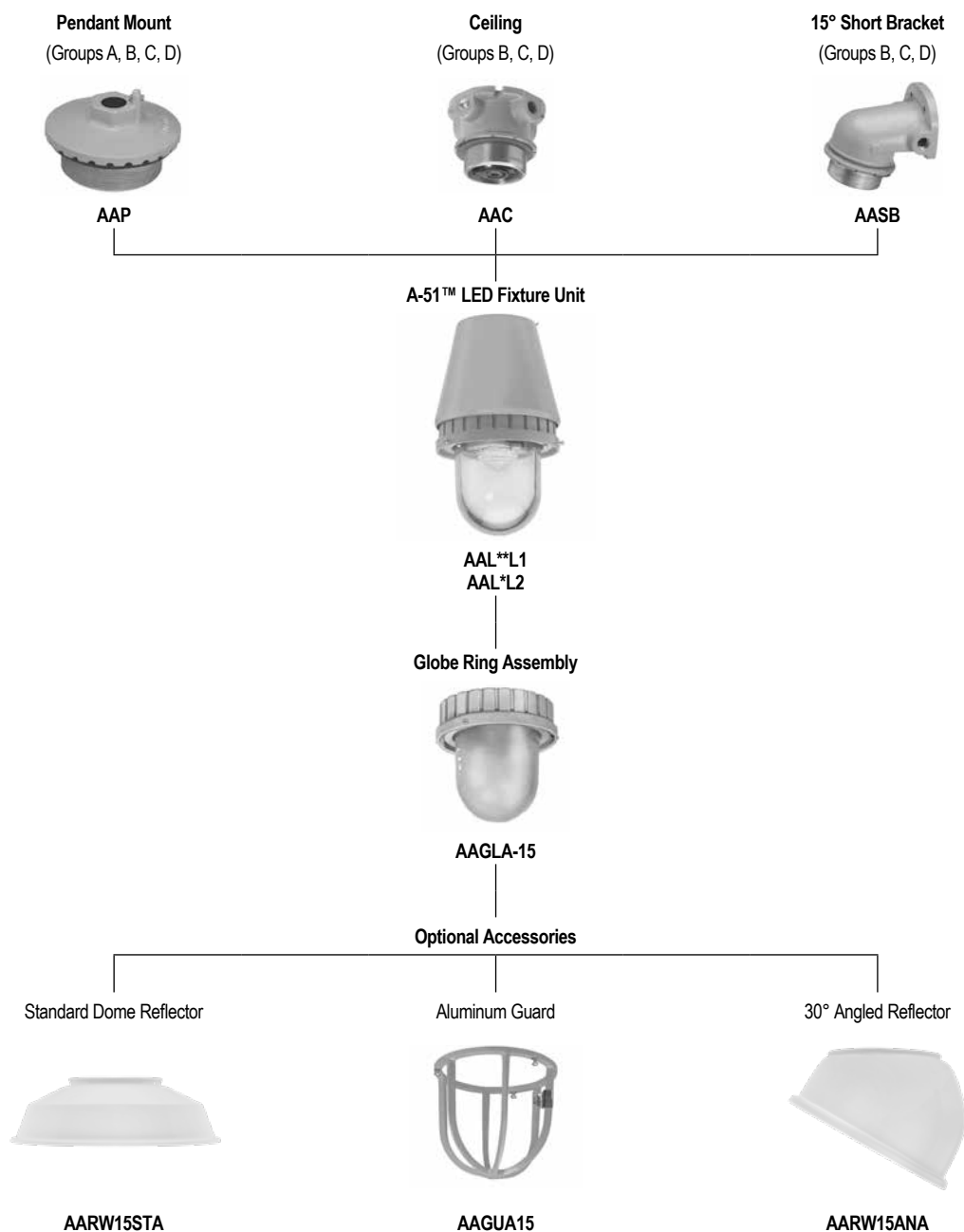
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## A-51™ LED Factory Sealed Luminaires Family Tree — Groups A ①, B, C, D



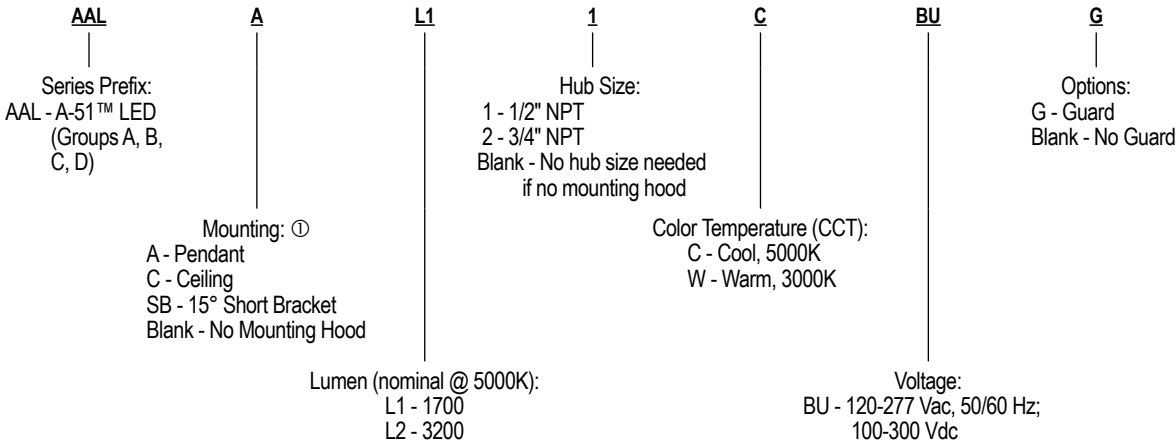
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Order Using Catalog Numbering Guide — A-51™ LED Factory Sealed Luminaires — For Groups A, B, C, D



Lumen Output (Efficacy) ②

Model	HID Equivalent	Incandescent Equivalent	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)
AAL*L1	50	100 - 150W	Type V	3000K	80	1600	126	5000K	80	1700	131
AAL*L2	70 - 100W	200 - 300W	Type V	3000K	80	3000	114	5000K	80	3100	122

① For Group A applications, Pendant mounting hood must be used.  
② All lumen values are typical (tolerance +/-10%).

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## Electrical Specifications ①

Model	Voltage (V)	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)
AAL*L1	120 Vac	12.7	0.11	>.98	<20%
	277 Vac	13.6	0.05	>.91	<20%
	100 Vdc	12.7	0.13	>.99	<20%
	300 Vdc	13.9	0.05	>.99	<20%
AAL*L2	120 Vac	26.3	0.22	>.94	<20%
	277 Vac	26.8	0.10	>.92	<20%
	100 Vdc	26.4	0.26	>.99	<20%
	300 Vdc	27.0	0.09	>.99	<20%

## NEC/CEC Temperature Codes

Model	Ambient Temperature °C (°F)	Supply Wire °C (°F)	Class I, Division 1	Class II, Division 1
<b>Class I Division 1 and Division 2 Groups A ①, B, C and D</b>				
AALL1CBU				
AALL1WBU				
AALL2CBU	-25 to +55 (-13 to +131)	+110 (+230)	T6	T6
AALL2WBU				

“T” Numbers Represent the Maximum Surface Temperature for Class I, Division 1 locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations. ③ ④

“T” #	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	+351 to +450 (+664 to +842)	+326 to +350 (+619 to +662)	+301 to +325 (+574 to +617)	+281 to +300 (+538 to +572)	+261 to +280 (+502 to +536)	+231 to +260 (+448 to +500)	+216 to +230 (+421 to +446)	+201 to +215 (+394 to +419)	+181 to +200 (+358 to +392)	+166 to +180 (+331 to +356)	+161 to +165 (+322 to +329)	+136 to +160 (+277 to +320)	+121 to +135 (+250 to +275)	+101 to +120 (+214 to +248)	+86 to +100 (+187 to +212)	+85 (+185)

① For Group A applications, Pendant mounting hood must be used.

② All values are typical (tolerance +/-10%).

③ T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.

④ T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 as designated by the NEC.


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### Catalog Number for Driver Housing and Globe

	Lumen Level	CCT	Optics	Weight in kg (lbs)	Catalog Number ②
	1700	5000K	Type V	6.1 (13.4)	AALL1CBU
	3200	5000K	Type V		AALL2CBU
	1600	3000K	Type V		AALL1WBU
	3100	3000K	Type V		AALL2WBU

### Mounting Hoods

	Hub Size (Inches)	Weight in kg (lbs)	Catalog Number
Pendant — One Hub, Rigid or Flexible Mounting			
	1/2" NPT	0.6 (1.3)	AAP-50 ①
	3/4" NPT		AAP-75 ①
Ceiling — Four Hubs, Three Close-up Plugs			
	1/2" NPT	2.2 (4.8)	AAC-50
	3/4" NPT		AAC-75
15° Short Bracket — Two Hubs, One Close-up Plug			
	1/2" NPT	2.2 (4.8)	AASB-50
	3/4" NPT		AASB-75

### Accessories and Replacement Parts

Type	Description	Weight in kg (lbs)	Catalog Number
	Globe and Ring Assembly For use with AAL1CBU, AALL2CBU, AALL1WBU or AALL2WBU	2.5 (5.6)	AAGLA15
	Aluminum Guard For use with (AAL1CBU, AALL2CBU, AALL1WBU or AALL2WBU)	0.2 (0.4)	AAGUA15
	Connection block for all A-51™ LED mounting hoods	0.05 (0.12)	VPT7
	Standard dome reflector	0.32 (0.72)	AARW15STA
	30° angled reflector	0.52 (1.16)	AARW15ANA

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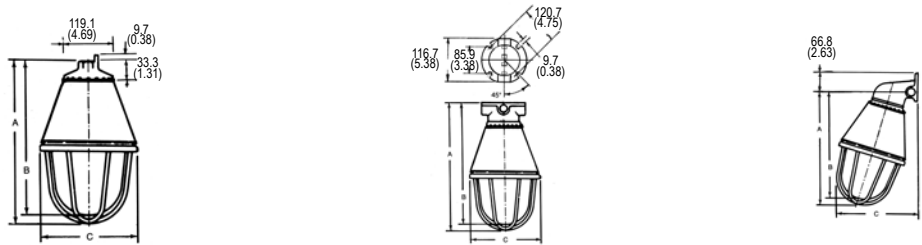
② For guard, add suffix -G to catalog number.

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Dimensions in Millimeters (Inches)

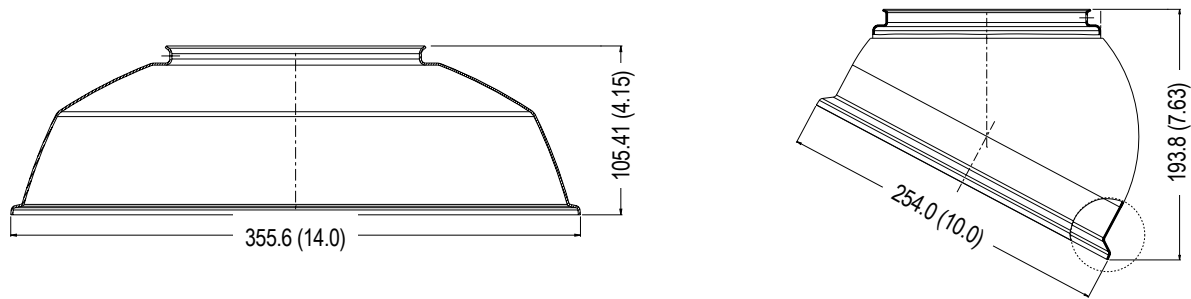


Model	Pendant			Ceiling			Short Bracket		
	A	B	C	A	B	C	A	B	C
AAL*L1 or AAL*L2	347.7 (13.69)	333.5 (13.13)	179.3 (7.06)	419.1 (16.50)	404.9 (15.94)	179.3 (7.06)	381.0 (15.00)	366.8 (14.44)	241.3 (9.50)

Dimensional Drawings in Millimeters (Inches) — Reflector

AARW15STA

AARW15ANA



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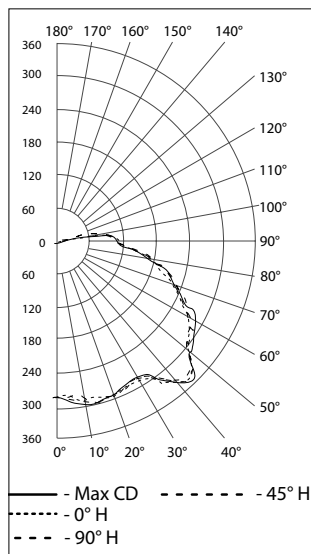
## Photometric Data — DATA SHOWN IS ABSOLUTE

Clear Glass, 5000K CCT

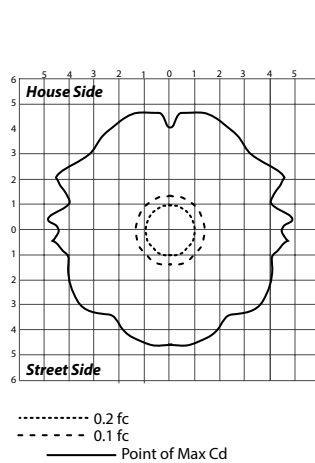
REPORT NUMBER: AALL1CBU

Luminaire Lumens 1,700

### POLAR CANDELA DISTRIBUTION



### ISOFOOT CANDLE PLOT



### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	246.9	14.5%
0-40	439.2	25.8%
0-60	946.0	55.6%
60-90	587.7	34.6%
70-100	458.6	27%
90-120	162.4	9.5%
0-90	1,533.7	90.2%
90-180	167.0	9.8%
0-180	1,700.7	100%

### LUMENS PER ZONE

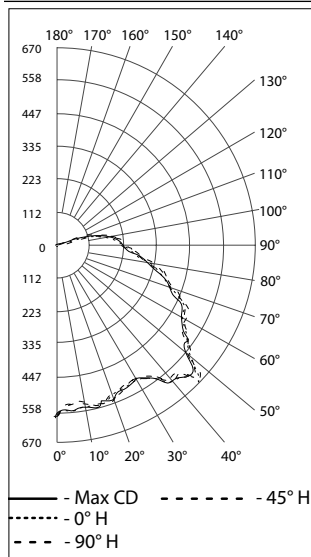
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	28.3	1.7%	90-100	108.7	6.4%
10-20	85.2	5.0%	100-110	49.7	2.9%
20-30	133.4	7.8%	110-120	4.0	0.2%
30-40	192.3	11.3%	120-130	3.3	0.2%
40-50	253.5	14.9%	130-140	1.2	0.1%
50-60	253.2	14.9%	140-150	0.1	0%
60-70	237.7	14.0%	150-160	0	0%
70-80	202.7	11.9%	160-170	0	0%
80-90	147.3	8.7%	170-180	0	0%

Clear Glass, 5000K CCT

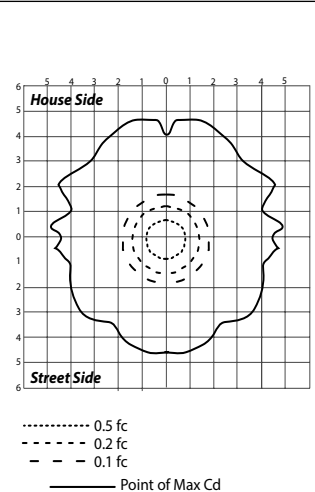
REPORT NUMBER: AALL2CBU

Luminaire Lumens 3,200

### POLAR CANDELA DISTRIBUTION



### ISOFOOT CANDLE PLOT



### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	456.9	14.4%
0-40	802.3	25.2%
0-60	1,706.4	53.7%
60-90	1,091.4	34.3%
70-100	878.5	27.6%
90-120	372.9	11.7%
0-90	2,797.8	88%
90-180	382.7	12%
0-180	3,180.5	100%

### LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	52.6	1.7%	90-100	225.5	7.1%
10-20	158.4	5.0%	100-110	132.9	4.2%
20-30	245.9	7.7%	110-120	14.5	0.5%
30-40	345.4	10.9%	120-130	6.6	0.2%
40-50	455.7	14.3%	130-140	2.3	0.1%
50-60	448.4	14.1%	140-150	0.7	0%
60-70	438.4	13.8%	150-160	0.1	0%
70-80	371.1	11.7%	160-170	0	0%
80-90	281.9	8.9%	170-180	0	0%

① For Group A applications, Pendant mounting hood must be used.