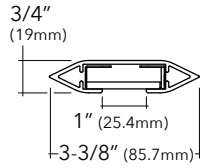




FACTORY DRAWING AND SIGN OFF REQUIRED WITH THIS PRODUCT.



# CUBRA CU1AJ

1" Direct and Indirect Linear  
with Alternating Joint

## Key Features

- Ultra-Slim 3/4" profile
- 3-3/8", extruded aluminum housing with 1" aperture
- Direct illuminated luminaire utilizes light guide plate (LGP) for high optical efficiency
- Batwing and Lambertian optics deliver quality light while maintaining visual continuity
- Up to 1000 lumens per ft and up to 120 LPW
- Up to 18 ft on center spacing with batwing optic and 14 ft with lambertian
- Design patterns with non-illuminated connectors
- 3/16" wide Alternating Joint allows for combination of direct and indirect light in your space



Example Part #: CU1AJ-A-835HO-6'-CAC48G1-U-FSD-1-0-V



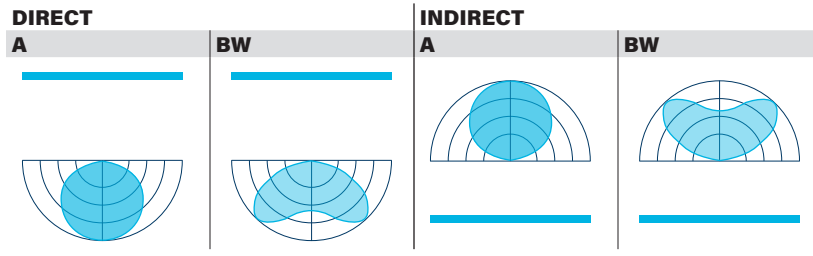
SHIELDING	SHIELDING	CRI, CCT & OUTPUT <sup>1</sup>	LENGTH OR PATTERN <sup>2</sup>
<b>CU1AJ</b> - Curba 1 with Alternating Joint  <i>For straight runs, specify overall nominal length. Use page 6 to draw out the straight run and include all alternating joints while indicating light directionality and shielding.</i>	<b>A</b> - Lambertian <b>BW</b> - Batwing <i>Indirect Shielding pg. 2</i>	_ <b>27</b> _ - 2700K _ <b>30</b> _ - 3000K _ <b>35</b> _ - 3500K _ <b>40</b> _ - 4000K <b>CL</b> - Custom Lumens <b>CW</b> - Custom Watts <i>CRI, CCT &amp; Output pg. 2</i>	__ - Individual Fixture __ - Continuous Row <b>SS</b> - Square, Square connector <b>SR</b> - Square, Round connector <b>RS_x</b> - Rectangle, Square connector <b>RR_x</b> - Rectangle, Round connector <b>US_x</b> - U Shape, Square connector <b>UR_x</b> - U Shape, Round connector <b>LS_x</b> - L Shape, Square connector <b>LR_x</b> - L Shape, Round connector <i>Length of Pattern pg. 2-3</i>
MOUNTING <sup>3</sup>	VOLTAGE	REMOTE DRIVER	CIRCUITING
<b>CAC__GX</b> - Conductive AC to Grid <b>CAC__JB</b> - Conductive AC to J Box <b>PAC__GX</b> - Power over AC to Grid <b>PAC__JB</b> - Power over AC to J Box <i>Mounting pg. 3</i>	<b>U</b> - Universal <i>(120 thru 277V)</i> <b>1</b> - 120V <b>2</b> - 277V <b>3</b> - 347V <i>Voltage pg. 4</i>	<b>FSD</b> - Factory Select Driver (1%, 0-10v) <b>PL2</b> - Advance Xitanium (1%, 0-10v) <b>OL2</b> - Osram (1%, 0-10v) <b>PL4</b> - Advance Xitanium 347v (1%, 0-10v) <b>EE1</b> - eldoLED ECOdrive (1%, 0-10v) <b>ES1</b> - eldoLED SOLOdrive (0%, 0-10v) <b>LH1</b> - Lutron Hi-lume (1%, EcoSystem) <b>EH1</b> - ERP Power (1%, 0-10v) <i>Driver pg. 4</i>	<b>1</b> - Single Circuit <b>E</b> - Emergency (entire fixture) <b>N</b> - Night Light (entire fixture) <i>Circuiting pg. 4</i>
BATTERY & EMERGENCY <sup>4</sup>	FINISH	FIXTURE OPTIONS <sup>5</sup>	CONTROLS
<b>0</b> - None <b>FSG</b> - Factory Select ALCR <b>F SB</b> - Factory Select Battery <b>GI</b> - Iota ETS DR <b>GB</b> - Bodine GTD <b>PLL</b> - Bodine 10W (remote) <b>ILL</b> - Iota 10W (remote) <b>E</b> - Emergency Section <b>N</b> - Night Light Section <i>Battery &amp; Emergency pg. 4-5</i>	<b>W</b> - White <b>S</b> - Metallic Silver <b>BL</b> - Textured Black <b>BR</b> - Bronze <b>GR</b> - Graphite <b>CC</b> - Custom Color <i>Finish pg. 5</i>	<b>ECC__</b> - End cap color <b>MOD</b> - MOD option available <i>Fixture Options pg. 5</i>	<i>Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.</i>

<sup>1</sup>When specifying CRI, CCT & OUTPUT the first \_ is for specifying either **8** - 80CRI or **9** - 90CRI. The ending \_\_ are for specifying output, example **HO** - High Output. See output charts for more information. <sup>2</sup>Individual fixtures come in **1', 2', 3', 4', 5', 6', 7' & 8'** lengths. Continuous rows available in 1' increments. Connectors for patterns can either be closed (**C**) or open (**O**), closed is the standard if you would like the connector to be open specify by adding an **O** to the ordering code. example: if you want a square pattern with open round connectors - **SRO\_\_** <sup>3</sup>Specify AC Cable length, standard AC are 48" & 120" <sup>4</sup>All Battery options are REMOTE ONLY. Enter quantity for Battery and Emergency, Example 2PL. <sup>5</sup>Use ECC\_\_ to specify endcap finish other than fixture finish. Fill in the "\_\_" with a code from the FINISH section.

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## Shielding



## CRI, CCT & Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory
- 90 CRI = R9≥50

## Custom Output - Lumens OR Wattage

<b>CL</b> _____	Specify CRI, CCT and desired lumens (i.e. CL835500)	Max Lumens: A = 1,840 and BW = 1,640. Max lumens dependent on color temp. Consult factory for more information
<b>CW</b> _____	Specify CRI, CCT and desired wattage (i.e. CW9407)	Max Watts: 16.5 watts/ft. Consult factory for more information.

## 80 CRI

	Color	Lumens per foot	Shielding <sup>1</sup>			
			A Lambertian		BW Batwing	
			LPW	Watts/ft	LPW	Watts/ft
<b>830LO</b>	3000K	500	109	4.6	97	5.2
<b>830MO</b>	3000K	750	107	7.0	95	7.9
<b>830HO</b>	3000K	1000	105	9.5	93	10.8
<b>835LO</b>	3500K	500	115	4.3	103	4.9
<b>835MO</b>	3500K	750	114	6.6	101	7.4
<b>835HO</b>	3500K	1000	112	8.9	99	10.1
<b>840LO</b>	4000K	500	120	4.2	107	4.7
<b>840MO</b>	4000K	750	119	6.3	105	7.1
<b>840HO</b>	4000K	1000	117	8.6	103	9.7

## 90 CRI

<b>927LO</b>	2700K	500	90	5.6	80	6.3
<b>927MO</b>	2700K	750	88	8.5	78	9.7
<b>927HO</b>	2700K	1000	87	11.5	77	13.0
<b>930LO</b>	3000K	500	99	5.1	88	5.7
<b>930MO</b>	3000K	750	97	7.8	85	8.8
<b>930HO</b>	3000K	1000	95	10.5	84	11.9
<b>935LO</b>	3500K	500	103	4.9	91	5.5
<b>935MO</b>	3500K	750	101	7.4	89	8.4
<b>935HO</b>	3500K	1000	99	10.1	88	11.3
<b>940LO</b>	4000K	500	99	5.0	88	5.7
<b>940MO</b>	4000K	750	97	7.7	86	8.7
<b>940HO</b>	4000K	1000	95	10.5	85	11.8

<sup>1</sup>LPW and watts/ft based off 47" fixture size.

## Length

- All individual units are not intended to be joined.
- Tapered endcap ands 1-1/4" per end.

1	2	3	4	5	6	7	8	-
Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Cont. Run
12" (304.8mm)	24" (609.6mm)	36" (914.4mm)	48" (1219.2mm)	60" (1524mm)	72" (1828.8mm)	84" (2133.6mm)	96" (2438.4mm)	Specify nominal overall row length to the 1'

Specify to the 1'

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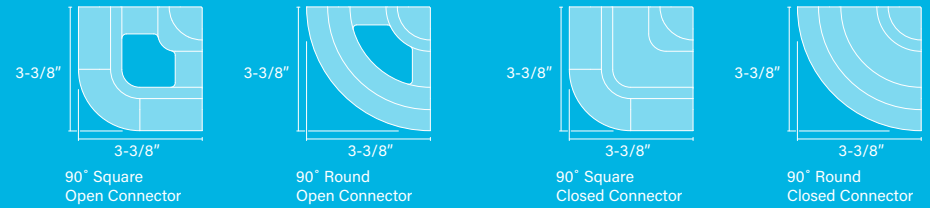
## Patterns

- Specify open (O) or closed (C) connector when ordering.  
Example: SRO4 - 4' Square Rounded Open connector
- Specify pattern shape and requested fixture length
- Length specified will not reflect overall pattern dimensions
- All connectors are NON ILLUMINATED
- Minimum length for any single part of a pattern is 1'
- All lengths are TO THE FOOT ONLY
- Driver/Battery Count dictated by product configuration
- Example part number: CU1D-A-835HO-RSO3x4-CAC48JB-U-FSD-1-0

SS __	SR __	RS _x	RR _x	US _x	UR _x	LS _x x	LR _x x
Square, Square Connector Provide A dimension Example: <b>SSO4'</b>	Square, Round Connector Provide A dimension Example: <b>SRO4'</b>	Rectangle, Square Connector Provide AxB dimensions Example: <b>RSO4'x3'</b>	Rectangle, Round Connector Provide AxB dimensions Example: <b>RRO4'x3'</b>	U-Shape, Square Connector Provide AxBxC dimensions Example: <b>USO4'x3'x4'</b>	U-Shape, Round Connector Provide AxBxC dimensions Example: <b>URO4'x3'x4'</b>	L-Shape, Square Connector Provide AxB dimensions Example: <b>LSO4'x3'</b>	L-Shape, Round Connector Provide AxB dimensions Example: <b>LRO4'x3'</b>

### Non-illuminated Connector Details

Specify open (O) or closed (C) connector when ordering.  
Example: SRO4 - 4' Square Rounded Open Connector



## Mounting

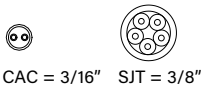
- Specify cable length in ordering code example: PAC48JB
- Standard specifiable lengths are 48", 120", 240" and 350"
- Canopies are painted to match fixture finish, power cords are white, grey, or black depending on fixture finish. See Finish section for additional details
- PAC NOT rated for dry/damp

- Refer to installation instructions during installation at the job site
- Maximum fixture weight is 8 lbs for a standard 4' fixture
- Remote box will be included for all specifications
- Output limitations exist with Power over AC (PAC). Consult factory.

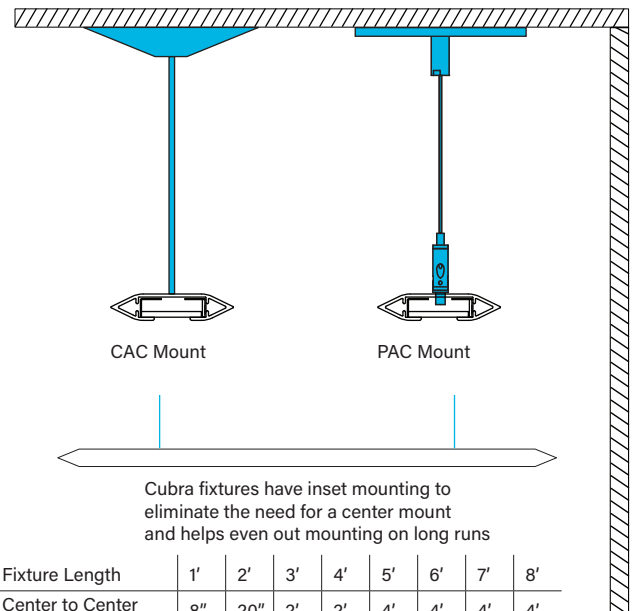
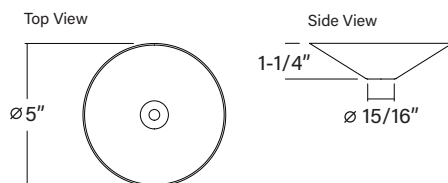
<b>CAC __ G</b>	Conductive AC to Grid (specify grid type: G1, G9, GS)
<b>CAC __ JB</b>	Conductive AC to Junction Box
<b>PAC __ JB</b>	Power over Aircraft Cable Junction Box
<b>PAC __ ST</b>	Power over Aircraft Cable Structure

### CAC Canopy Details

- CAC is an integrated power and suspension cable that is smaller in diameter than a traditional SJT cable. CAC is 2 conductive cables and suspension, standard power cable (SJT) is 5 conductive cables and no suspension.



- A larger power side canopy allows for adjustability of the CAC cable inside of the canopy.



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## Voltage

- Some CUBRA configurations will not accommodate all voltage options; consult with factory

<b>U</b>	Universal
<b>1</b>	120 volt
<b>2</b>	277 volt
<b>3</b>	347 volt

## Remote Driver

- Driver/Battery Count dictated by product configuration
- Standard Driver Option = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more driver options, see Pinnacle Resource Guide
- Some CUBRA configurations will not accommodate all driver options; consult with factory

- Configurations with no PLL, ILL or Emergency Control Device options will use Slim Remote Box
- All others will use Standard Remote Box

### 0-10V Drivers

<b>FSD</b>	Factory Select Driver (1%, 0-10v)
<b>PL2</b>	Advance Xitanium 1%, 0-10v
<b>PL4</b>	Advance Xitanium 1%, 0-10v, requires 347v option
<b>OL2</b>	Osram Optotronic, 1%, 0-10v
<b>OL4</b>	Osram Optotronic 347v, 1% 0-10v, requires 347v option
<b>EE1</b>	eldoLED ECOdrive 1%, 0-10v Logarithmic
<b>EE2</b>	eldoLED ECOdrive 1%, 0-10v Linear
<b>ES1</b>	eldoLED SOLOdrive 0-10v, 0% Logarithmic
<b>ES2</b>	eldoLED SOLOdrive 0-10v, 0% Linear

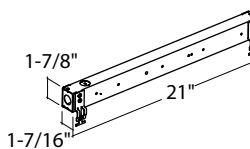
### DALI Drivers

<b>EE3</b>	eldoLED SOLOdrive .1%, DALI (logarithmic)
<b>EE4</b>	eldoLED SOLOdrive .1%, DALI (linear)

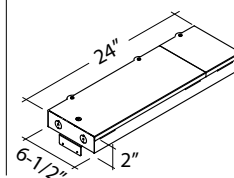
### Lutron Drivers

<b>LH1</b>	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
<b>LH4</b>	Lutron Hi-Lume 1%, 2-wire, Lutron-LTEA2W, 120v only

Slim Remote Box



Standard Remote Box



## How to specify Circuiting, Battery and Emergency

- Select fixture circuiting from options below
  - Some LUGE configurations will not accommodate all circuiting options, consult with factory

## Circuiting

<b>1</b>	Single Circuit
<b>E</b>	Emergency Circuit only
<b>N</b>	Night Light Circuit only

- Battery and emergency section options are available in addition to fixture circuit
  - Select battery and emergency section options below; factory shop drawing required
  - Some LUGE configurations will not accommodate all circuiting options, consult with factory

## Battery and/or Emergency If Required

**0** No battery or specific emergency section required

## Battery

- Select battery section type if required, indicate total QTY. *Example 2PL*
- 90 minute battery runtime; test button is remote to fixture

- For more battery options available, see Pinnacle Resource Guide
- ALL battery options are REMOTE ONLY

<b>0</b>	No battery
<b>_FSB</b>	Factory Select Battery (10w option, remote in box)
<b>_FSBST</b>	Factory Select Battery (Self Testing, remote in box)
<b>_ILL</b>	lota 10w Integral (low profile, remote in box)
<b>_IRC</b>	lota 10w Integral (remote with conduit)
<b>_PLL</b>	Philips Bodine 10w Integral (low profile, remote in box)
<b>_PRC</b>	Philips Bodine 10w Integral (remote with conduit)

### For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

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## Emergency

- Select emergency section type if required, indicate total QTY. *Example 1E*
- Combine battery and emergency section ordering codes if both options are selected
- For use when specifying sections in continuous runs

<b>_FSG</b>	Factory Select ALCR, Automatic Load Control Relay
<b>_GI</b>	Iota ETS DR, Emergency Lighting Control Device
<b>_GB</b>	Bodine GTD, Emergency Lighting Control Device
<b>_E</b>	Emergency circuit
<b>_N</b>	Night Light circuit

### Battery OR Emergency Ordering Examples

- Single circuit, 10w Battery      Ordering Code: 1-1PLL
- Emergency only, 10w Battery      Ordering Code: E-1PLL
- Single circuit, GTD required      Ordering Code: 1-1GB

### Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section      Ordering Code: 1-1PL1E
- Multi circuit, (2) 10w battery, (2) emergency sections      Ordering Code: M-2PLL2E
- Single circuit, (1) night light section      Ordering Code: 1-1N

## Finish

- Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes
- Selecting a fixture finish other than white may impact lumen output; consult factory for more information

<b>W</b>	White
<b>S</b>	Metallic Silver
<b>BL</b>	Textured Black
<b>GR</b>	Graphite
<b>BR</b>	Bronze
<b>CC</b>	Custom Color

## Fixture Options

- Additional options to enhance the fixture and finish of the product

<b>ECC</b>	End Cap Color
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## Fixture Options: MOD Options

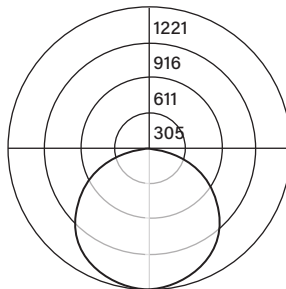
- Specify **MOD** in the part number for any of the below options
- MOD specifications are subject to longer lead-times. Consult factory for more information

<b>MOD</b>	Flat Endcap
------------	-------------

## Photometrics

### Lambertian

Test #	L012210110
Catalog #	CU1D-A-840VHO-4
Lumens	4229 lm
Watts	36.3 W
Efficacy	116.5 LPW



### Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1218	1218	1218	1218	1218
5	1212	1213	1214	1216	1217
10	1200	1201	1203	1206	1210
15	1185	1186	1188	1192	1198
20	1164	1165	1168	1172	1179
25	1139	1139	1140	1144	1152
30	1109	1108	1106	1110	1117
35	1069	1068	1066	1068	1075
40	1022	1021	1018	1016	1023
45	965	964	959	956	961
50	895	896	891	885	889
55	814	815	812	805	806
60	721	722	721	712	710
65	614	618	616	607	602
70	497	501	500	489	480
75	372	375	373	361	347
80	246	248	244	230	212
85	128	130	128	113	90
90	0	0	0	0	0

### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	45862	45577	45672
55	47692	47575	47223
65	48824	48983	47870
75	48301	48431	45055
85	49355	49355	34702

For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com). Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

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## Multi Connector Layout

- Use the below to sketch your desired pattern. Available fixture and connectors are listed in the legend. Label your pattern components according to legend to simplify specification.
- Label the linear sections with length, and light direction - Direct (**D**) or Indirect (**I**), and shielding - Lambertian (**A**) or Batwing (**BW**); example 4D-A would be 4' Direct with Lambertian Lens.
- Cannot use connector with another connector.
- Fixtures available in 1', 2', 3', 4', 5', 6', 7', and 8' lengths. All lengths are TO THE FOOT ONLY.

**Joint**

**AJ**  
Alternating Joint

3-3/8" 3-3/8" 3-3/8" 3-3/8"

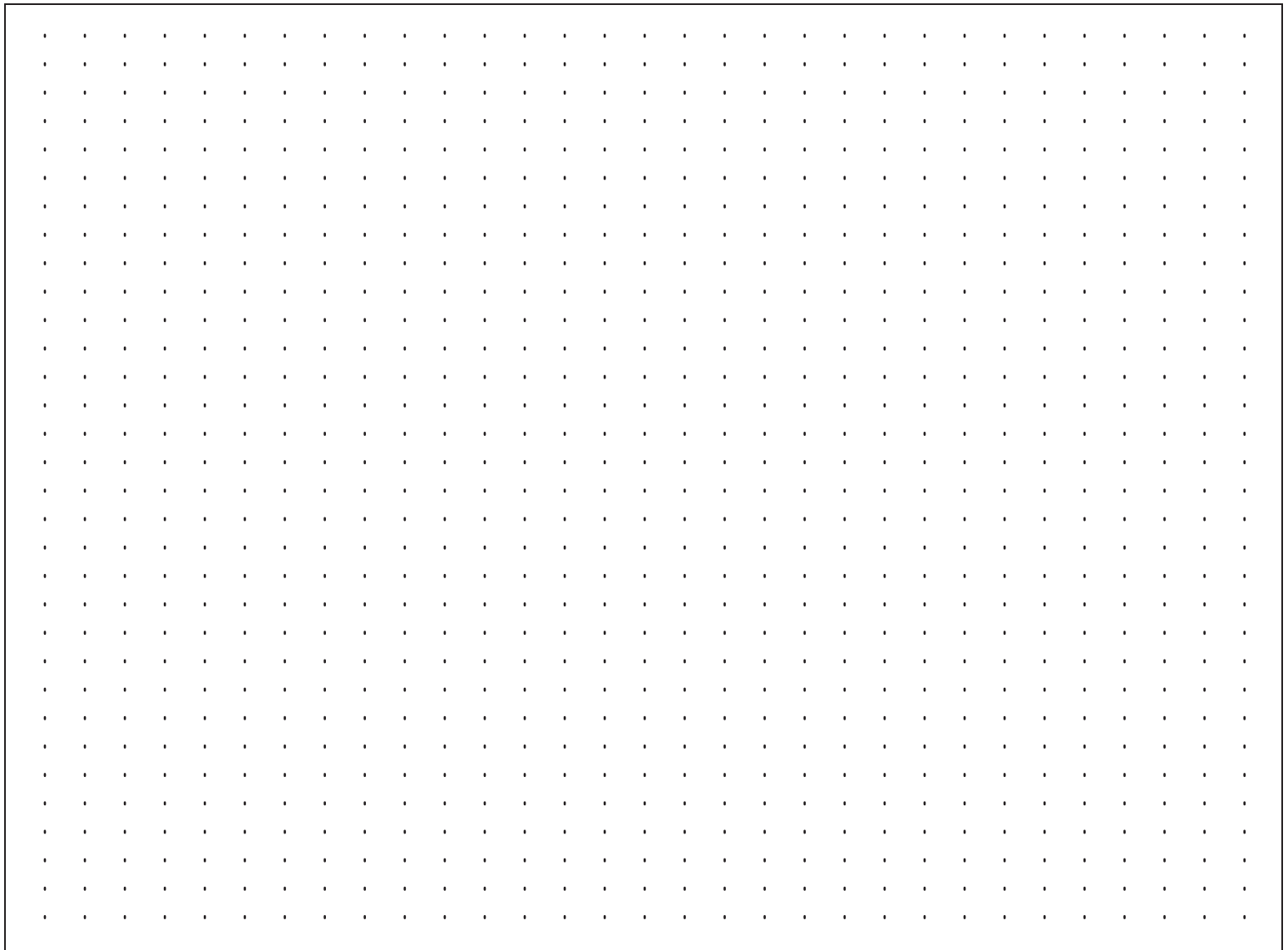
90° Square Open Connector    90° Round Open Connector    90° Square Closed Connector    90° Round Closed Connector

**How to draw it out:**

6' D-BW    6' I-A    6' D-BW

Joint    Joint

**Example Part Number using Alternating Joint:**  
CU1AJ-A-830-18'-CAC48JB-U-FSD-1-0-W-ET





## Approvals & Certifications

**Construction:** 6063-T6 Extruded aluminum housing. Diecast aluminum end caps.

**Shielding:** Direct distribution utilizes light guide plate technology (LGP). Single or dual side light is transmitted through the clear, acrylic engraved structure and controlled by highly reflective reflector material to achieve high optical efficiency. Specify between Lambertian (A) or Batwing (BW) optical distributions.

**Mounting:** Conductive Aircraft Cable (CAC), Power over AC (PAC) mount available. Power mount supplied with conductive aircraft cable and round canopy 5" diameter that narrows to 15/16" and 1-1/4" tall. Non-power supplied with aircraft cable and 2" (50.8mm) canopy. Each fixture consists of two mounting points inset from the ends. 1' = 8" mount spacing, 2' = 20"; 3', 4' are 2 ft apart and 5', 6', 7', 8' are 4 ft apart. Refer to installation instructions for appropriate ceiling and mounting detail. Canopies are painted white unless otherwise specified.

**LED:** 25°C test environment. Lumen output/wattage has a margin of +/- 5%; 2' or 3' lengths may have a greater wattage deviation. Luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. Calculated L70 = 224,000 hours and calculated L90 = 65,500 hours. MacAdam 3-Step Ellipses. For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com).

**CRI, CCT & Lumen Output:** Three lumen packages available. Low (LO), Medium (MO) and High (HO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 90 CRI = R9≥50

**Voltage:** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify PL4 or OL4 in Driver section when 347 volt (3) is selected. Some CUBRA configurations will not accommodate all voltage options; consult with factory.

**Remote Driver:** Standard Driver option is Factory Select Driver (FSD). FSD driver specification = 0-10V, 1% dimming. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 110°F/43°C. For more driver options, see Pinnacle Resource Guide. Some CUBRA configurations will not accommodate all driver options.

### Remote Mounting Guide

*Distance limited by max input watts shown.*

Max Distance	56' (.53A)	42' (.7A)	28' (1.05A)	20' (1.5A)	12' (2A)
4' Housing	4.9w/ft	6.4w/ft	9.7w/ft	13.6w/ft	17.0w/ft
8' Housing	2.4w/ft	3.2w/ft	4.8w/ft	6.7w/ft	9.1w/ft

**Circuiting:** Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some CUBRA configurations will not accommodate all circuiting options; consult with factory.

**Battery & Emergency:** Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

**Finish:** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes. Canopies are painted to match the fixture finish (i.e. bronze fixture, bronze canopy). Contact factory for additional custom color and finish options.

**Labels:** UL and cUL Listed. Low, Medium and High Output lumen packages are approved for dry/ damp location unless otherwise noted.

**Fixture Weight:** Maximum fixture weight is 8 lbs for a standard 4' fixture.

**Buy American Act Compliant**

**Warranty:** CUBRA offered with a 5-year limited warranty. Covers LED, driver and fixture.