

Project \_\_\_\_\_

Type \_\_\_\_\_

Notes \_\_\_\_\_

## PERFORMANCE/LINEAR FT AT 3000K AND 3500K

| NOMINAL LUMEN OUTPUT | INPUT WATTS* | EFFICACY* |
|----------------------|--------------|-----------|
| 300 lm/ft            | 3.1 W/ft     | 98 lm/W   |
| 400 lm/ft            | 4.2 W/ft     | 95 lm/W   |
| 500 lm/ft            | 5.4 W/ft     | 93 lm/W   |

REFER TO PHOTOMETRIC DATA SECTION FOR EXACT VALUES

\*for 2700K use 0.94 multiplier on watts and efficacy

\*for 4000K use 1.02 multiplier on watts and efficacy

Axitune  
Dim-to-WarmAxitune  
Tunable WhiteAxitune  
Color Tuning

PoE

CONTROL  
SENSORSbios  
ILLUMINATEDUL  
ListedLED BOARD & DRIVER  
5 Year  
WARRANTY

LED Product Partner

CCEA  
APPROVED

Perfekt™



SurroundLite™

## Ordering Guide

| CCH                                   | SL                     |   |   |  |  |
|---------------------------------------|------------------------|---|---|--|--|
| PRODUCT ID                            | LIGHT ENGINE           | NOMINAL LUMENS/FT   | CRI   | COLOR TEMP.  |  |
| <b>CCL</b> Cove LED ceiling LO-output | <b>SL</b> surroundlite | <b>300</b> 300 lm/ft - Minimum<br><b>500</b> 500 lm/ft - Maximum  | <b>80</b> 80 CRI*<br><b>90</b> 90 CRI**   | <b>27</b> 2700 K<br><b>30</b> 3000 K<br><b>35</b> 3500 K<br><b>40</b> 4000 K   | <b>B30</b> 3000 K - Bios*<br><b>B35</b> 3500 K - Bios*<br><b>B40</b> 4000 K - Bios*<br><b>TW2750</b> 2700-5000 K - Tunable White<br><b>TW2765</b> 2700-6500 K - Tunable White<br><b>DW3020</b> 3000-2000 K - Dim to Warm<br><b>TC1680</b> 1650-8000 K - Color Tuning |
|                                       |                        | Outputs between listed min and max are available. Consult factory for outputs outside of the listed range. Consult factory for max output with BIOS | * Not available with Color Tuning.<br>** Maximum 1000 lumens/ft; Not available with Bios. | Consult Axitune technical sheet for more information of color technology.<br>*Consult BIOS guide for more information on BIOS technology |  |

| COVE OPENING FT (MM)   | W FINISH       | VOLTAGE  | DRIVER  | CIRCUITS   |
|--|----------------|--|---|--|
| <b>CL(#)</b> Cove linear<br><b>CP(#)</b> Cove pattern  | <b>W</b> white | <b>120</b> 120 V<br><b>277</b> 277 V<br><b>347</b> 347 V<br><b>UNV</b> universal<br><b>DC</b> low voltage* | <b>DP</b> dimming (0-10V) 1%<br><b>LT(#)</b> Lutron*<br><b>BI</b> bi-level dimming<br><b>O(#)</b> other**<br><b>DPB(#)</b> dimming (0-10V) 1% with Bios*<br><b>TW(#)</b> tunable white drivers*<br><b>CT(#)</b> color tuning drivers*<br><b>POE(#)</b> POE drivers* | <b>1</b> 1 circuit<br><b>2</b> 2 circuits *<br><b>+E(#)</b> emergency section**<br><b>+NL(#)</b> night light section** |
| Please specify the indirect light Cove opening length. Please provide configuration drawings. Fixture optimization provided by factory; Cove minimum length is 2 ft. |                | * Only available with POE drivers.   | *See page 4 to specify system<br>**Please consult factory; see page 4<br>Not available with 347V<br>Please consult factory  | * Cannot combine with E or NL<br>** Specify quantity   |

| MOUNTING/SUSPENSION  | BATTERY (OPTIONAL)  | OTHER (OPTIONAL)  | REMOTE IC CONTROLS (OPTIONAL)   | CUSTOM (OPTIONAL) |
|--|---|---|---|-------------------|
| <b>AC</b> Armstrong Axiom Cove <sup>(5)</sup><br><b>C</b> Other Cove | <b>B(#)</b> battery pack  | <b>F</b> fuse<br><b>CP</b> Chicago plenum*  | <b>DS(#)</b> daylight sensor<br><b>OS(#)</b> occupancy sensor<br><b>DOS(#)</b> daylight & occupancy sensor<br><b>ENR(#)</b> Enlighted remote <sup>(6)</sup><br><b>WC(#)</b> wireless control dimming  | <b>C</b> custom   |
| (5) Ordered separately from Armstrong.                               | For minimum 4' long fixture only<br>Not available with 347V.<br>Not available with Color Tuning<br>Please consult factory | Not available with 347V<br>* Luminaires with Chicago plenum option are shipped with 6' of FMT cable. See page 6 for more details. | *Please consult factory<br>Specify quantity. Remote only.<br>See integrated controls guide for more details.<br>Not available with Color Tuning. Consult factory for Tunable White.<br>Not available with DPB (DY) driver for BIOS with Dynamic Spectrum. | Please specify    |

# Cove Lighting Redefined



Few luminaires have been more in need of an upgrade than cove lights, long stifled by complicated details and inconsistent, time-consuming aiming.

So Armstrong and Axis joined forces to codevelop the best possible cove lighting solution from the ground up.

Introducing Axiom® Indirect Light Coves and CovePerfekt™... The new standard for cove lighting.

**Up to twice the efficiency of other cove products.**

**Multiple features packed into only four luminaires.**

**Foolproof mounting. Aim-free lighting.**

**Cove lighting will never be the same...**

For more information on Axiom® Indirect Light Coves, go to [armstrong.com/axiomlightcoves](http://armstrong.com/axiomlightcoves)

## AESTHETICS

- No lamp images • No socket shadows
- No color shifting • No bright spots
- No dark ends • Just total visual comfort

## PERFORMANCE

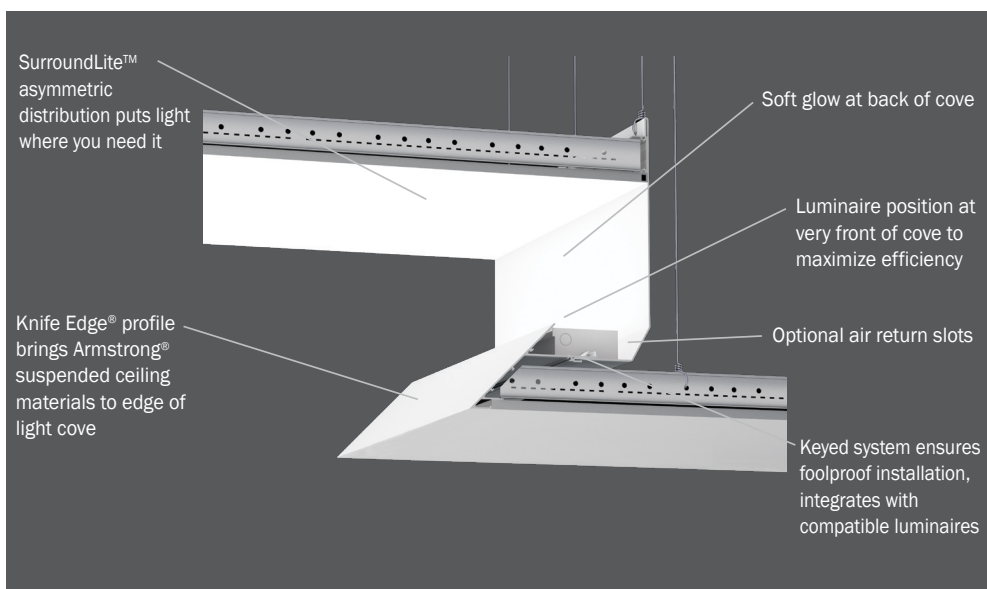
- SurroundLite™ optics with 180-degree distribution eliminates trapped light
- Improved LED lighting effectiveness – Same amount of ambient light using as little as half the watts.
- Integrated driver (Ceiling, Wall) and battery (Ceiling).

## SPECIFICATION

- No need for complex cove details.
- No need to select beam angles, figure out cove dimensions and locate remote drivers.

## INSTALLATION (in AXIOM® Light Coves).

- Tool-free installation of luminaires.
- Up to 90% less labor to install coves.
- Easy onsite trade coordination
- Long runs conveniently connected to a single line-voltage circuit (up to 100 feet)



**The ultimate cove lighting solution...**  
**CovePerfekt in an Axiom® Indirect Light Cove.**

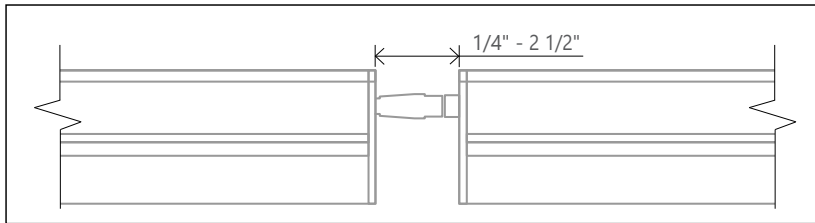
**i** Axiom® Indirect Light Coves ordered separately from Armstrong .

### INDIRECT LIGHT COVE OPENING



**i** Axis will determine the best fixture length combination to fill the Cove opening.

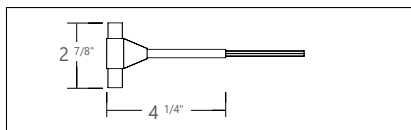
### CABLE CONNECTION - LENGTH RANGE



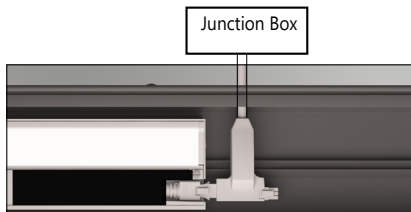
### ● ACCESSORIES

Straight or T power feeds available to feed power anywhere along run

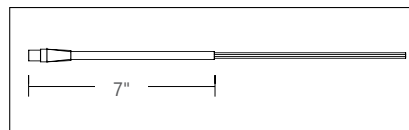
|      | Item Number       | Item                         | Housing Color | Dimensions      | Description   |  |                                       |
|------|-------------------|------------------------------|---------------|-----------------|---|--|---------------------------------------|
| STD  | <b>WR14443</b>    | T-connector                  | White         | 2 7/8" x 4 1/4" | End feed or middle feed connector from cove fixture to junction box located behind the cove |  | Feed up to 100' @ 120V<br>200' @ 277V |
|      | <b>WR14433</b>    | Panel mount female connector | White         | 22" (length)    | End feed connector from cove fixture to connect next Cove fixture in the run                |  | Feed up to 100' @ 120V<br>200' @ 277V |
|      | <b>WR14434</b>    | Straight male connector      | White         | 7" (length)     |   |  |                                       |
| CCEA | <b>EL18832</b>    | 90° Connector                |               | 6' (length)     | Chicago plenum approved 90° Connector   |  | Feed up to 100' @ 120V<br>200' @ 277V |
|      | <b>PWHP-72-5W</b> | FMT, Chicago Plenum Rated    |               |                 | Custom plenum flex whip   |  |                                       |



**T-connector**



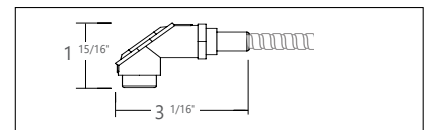
**T - End Power Feed**



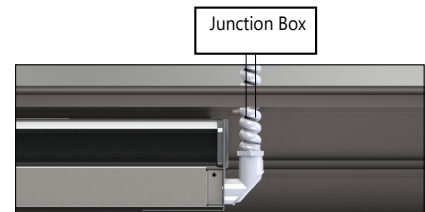
**Straight connector**



**Straight End - Power Feed**



**90°-connector + FMT, CCEA**



**T - End Power Feed**

**i** Connector types and locations to be indicated on the shop drawings.

## ● CONSTRUCTION

|                   |  |
|-------------------|--|
| <b>Housing</b>    | Extruded aluminum (0.060" nominal)         |
| <b>End Cap</b>    | Die cast aluminum (0.080" nominal)         |
| <b>Top Covers</b> | Cold rolled sheet steel painted (22 gauge) |

## ● ELECTRICAL

|   |  |
|---|--|
| <b>Lutron driver*</b>                   | LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-Black<br>LDE5 - 5-Series EcoSystem<br>LTEA - Hi-lume 1% 2-wire (120V forward phase only)<br>*Consult factory   |
| <b>Other drivers</b>                    | DALI - Digital Addressable Lighting Interface<br>DMX - Digital Multiplex<br>LV - line voltage - Advance Mark 10<br>Xitanium SR - For wireless sensor   |
| <b>BIOS DPB drivers*</b>                | STC - BIOS control 0-10V with static spectrum and BIOS SkyBlue enabled from 100% to 1%.<br>DYN - BIOS control 0-10V with dynamic spectrum and BIOS SkyBlue® with Bio-Dimmng™ enabled 100% to 50%, light output dimming from 49% to 1%. |
| <b>Tunable White TW drivers*</b>        | DALIDT6 - DALI Type 6 (Two DALI Addresses)<br>DALIDT8 - DALI Type 8 (One DALI Address)<br>LTTW - Lutron T-Series Tunable White   |
| <b>Color Tuning CT drivers*</b>         | DMX - Standard (required for full color control)<br>LTA5 - Lutron Araya 5 Ecosystem<br>DALIDT8 - DALI Type 8 (Single DALI Address)<br>DLM - Wattstopper DLM  |
| <b>Power over Ethernet POE drivers*</b> | MOLEX<br>IGOR<br>O - Other (Consult factory)   |
| <b>Emergency</b>                        | Integral emergency battery pack or emergency circuit optional.   |
| <b>Input Voltage</b>                    | 120V, 277V, 347V, UNV, DC.   |

\*Choose driver from available options.

**i** Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

## ● WEIGHT

|                   |                 |
|-------------------|-----------------|
| <b>COVE 4 ft</b>  | 6 lbs / 2.7 kg  |
| <b>COVE 8 ft</b>  | 12 lbs / 5.4 kg |
| <b>COVE 12 ft</b> | 18 lbs / 8.2 kg |

## ● FINISH

White paint.

## ● LED SYSTEM

|                            |  |
|----------------------------|--|
| <b>CRI</b>                 | Minimum 80 or 90 color rendering index.  |
| <b>CRI BIOS</b>            | Minimum 80 color rendering index with R9>90 for all CCTs.  |
| <b>CRI Color Tuning</b>    | Minimum 90 color rendering index.  |
| <b>CCT Single Color</b>    | Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.    |
| <b>CCT BIOS</b>            | BIOS Static (STC) Choice of 3000K, 3500K and 4000K.<br>BIOS SkyBlue® Dynamic (DYN) Choice of 3000K, 3500K, and 4000K with Bio-Dimmng™                                    |
| <b>CCT Axitune Systems</b> | <a href="#">Consult BIOS guide for more information on BIOS technology.</a><br><a href="#">Consult Axitune technical sheet for more information on color technology.</a> |
| <b>LED life</b>            | Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.  |
| <b>Thermal Management</b>  | Aluminum housing acting as the heat sink to maximize life.   |
| <b>Environment</b>         | Dry and damp rated in operating ambient temperatures of 0-40°C (32-104°F).   |

## ● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

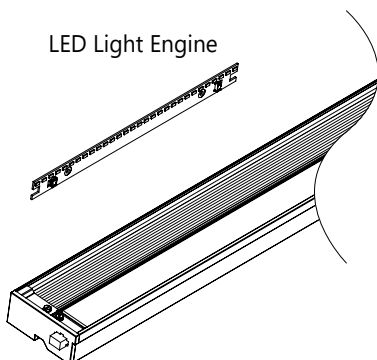
### ● LIGHT GUIDE

High precision light guide made of PMMA material, allows distribution of controlled light in all 3-dimensions to put light on both vertical and horizontal planes within the space. Patented lightguide design featuring molecular optics and precision-coupled optic components yield a high efficiency luminaire. In-plane mixing maximizes color uniformity while light emitting area is uniform and diffuse without 'head lighting' from the LED's.

### ● LED UPGRADE / REPLACEMENT

All LED light engines used are field replaceable and upgradable to ensure the lighting system will last for years. Future-proof design comes with easy access to LED light engines from above using quick connectors (included in luminaire) and a screwdriver.

- i** For more information on LED light engine upgrade and replacement, please refer to the COVE LED Light Engine Replacement sheet available at: [www.axislighting.com](http://www.axislighting.com) under 'Downloads' tab.



### ● SYSTEMS (S#)

Runs of COVE that are greater than 12ft in length are designated as systems (S#). This means that the run is comprised of a combination 4ft and/or 8ft sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the COVE installation sheets available at: [www.axislighting.com](http://www.axislighting.com) under 'Downloads' tab.

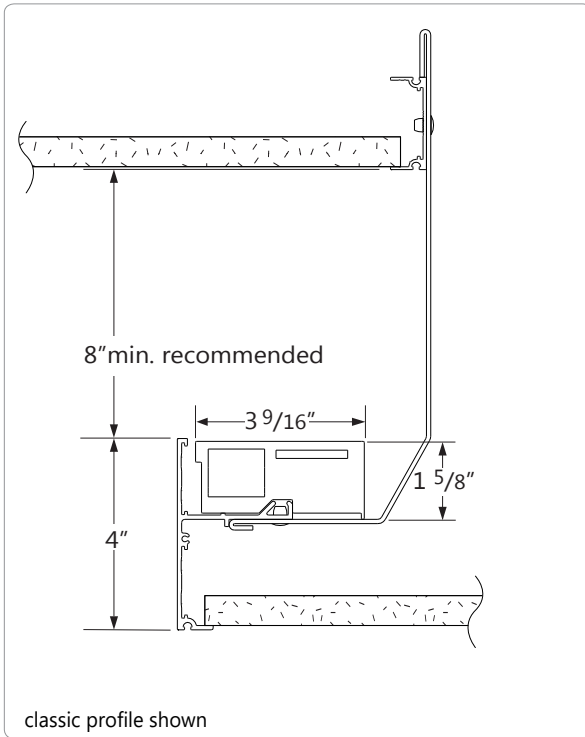
### ● APPROVALS

Certified to UL and CSA standards  
Suitable for damp locations.

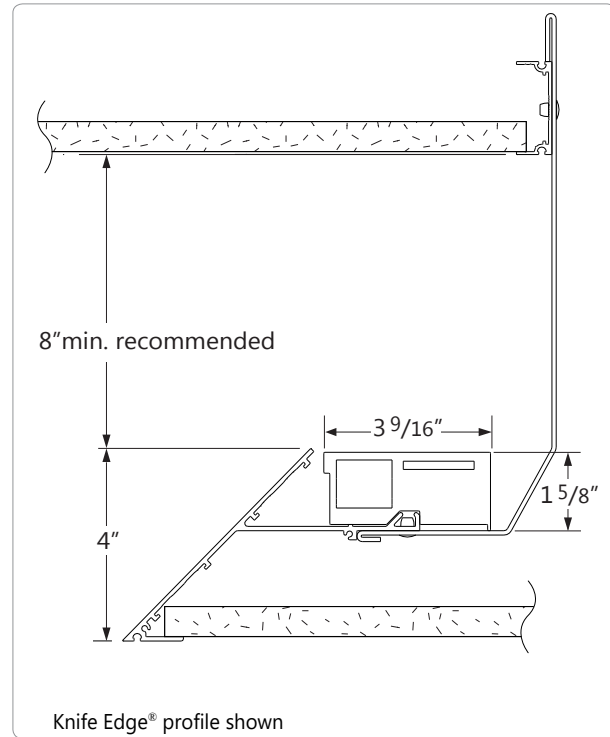


**i** Armstrong and other cove ceiling systems provided by others.

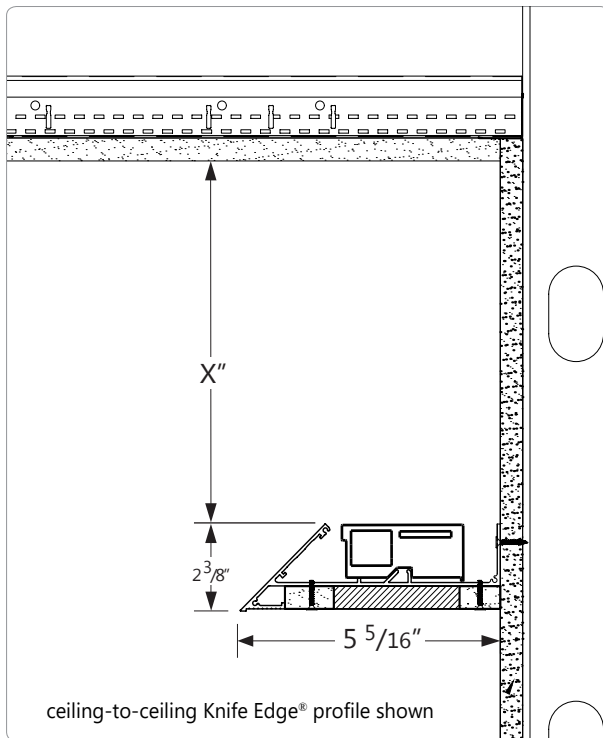
### ● CEILING MOUNTING OPTIONS



**AC** ARMSTRONG AXIOM COVE

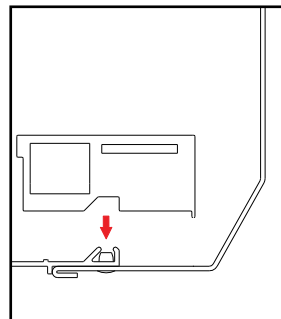


**AC** ARMSTRONG AXIOM COVE

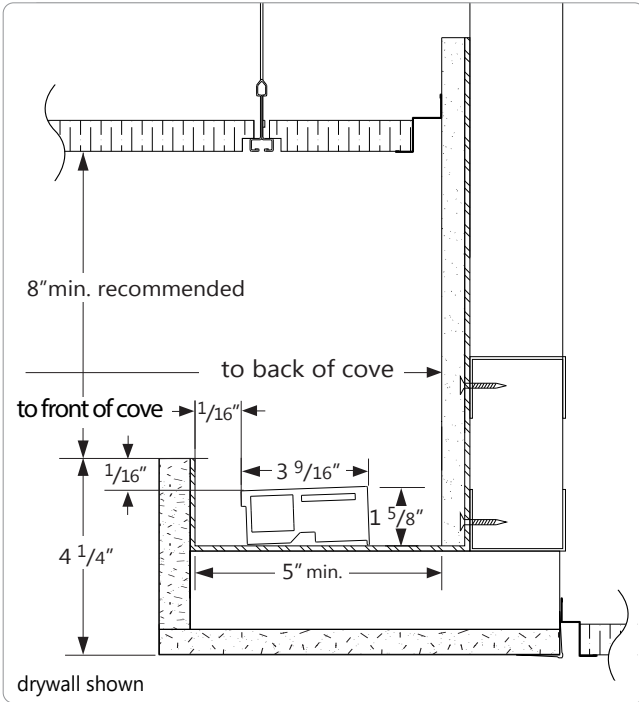


**AC** ARMSTRONG AXIOM INDIRECT LIGHT LEDGE

### WITH ARMSTRONG CEILING

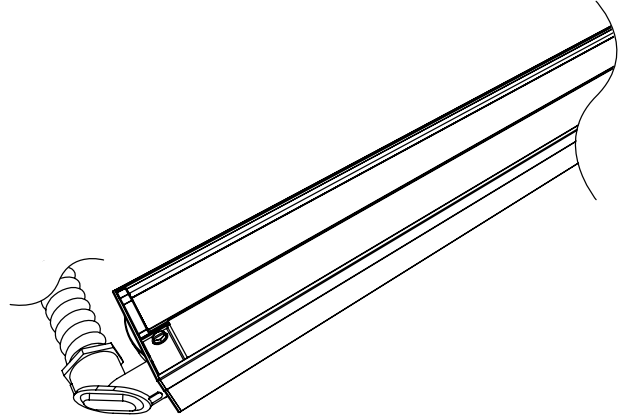


Axis Cove Perfekt - For use with Armstrong Axiom Indirect Light Coves and Ledges



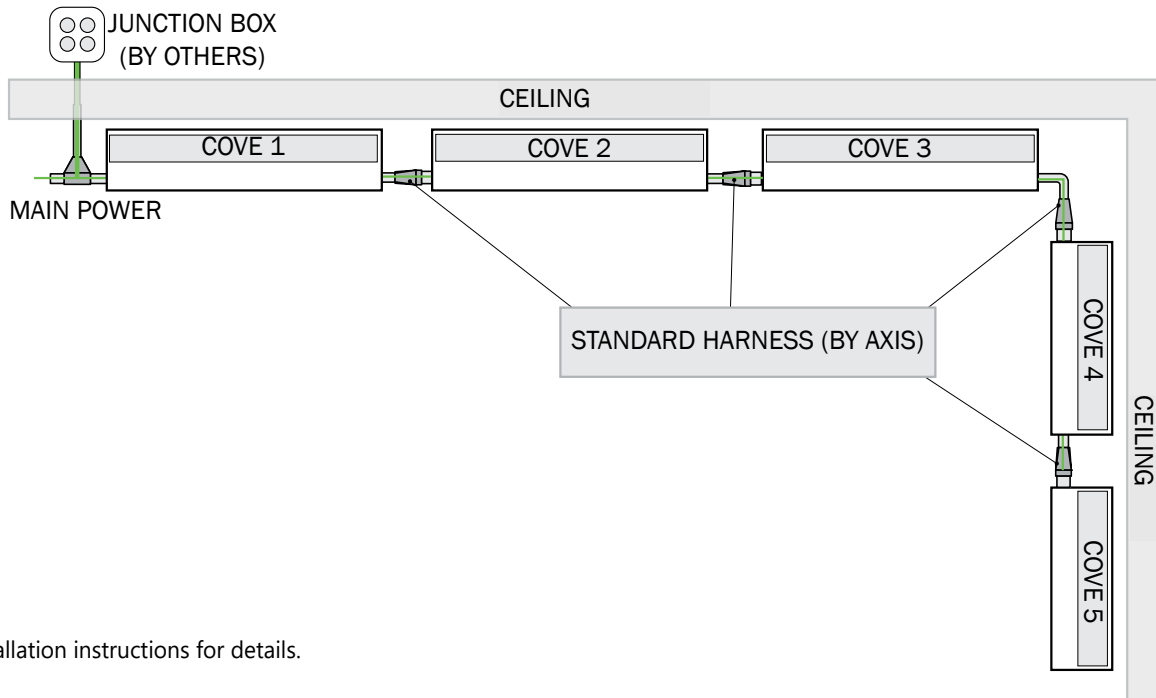
### C OTHER COVE

### ● CHICAGO PLENUM OPTION



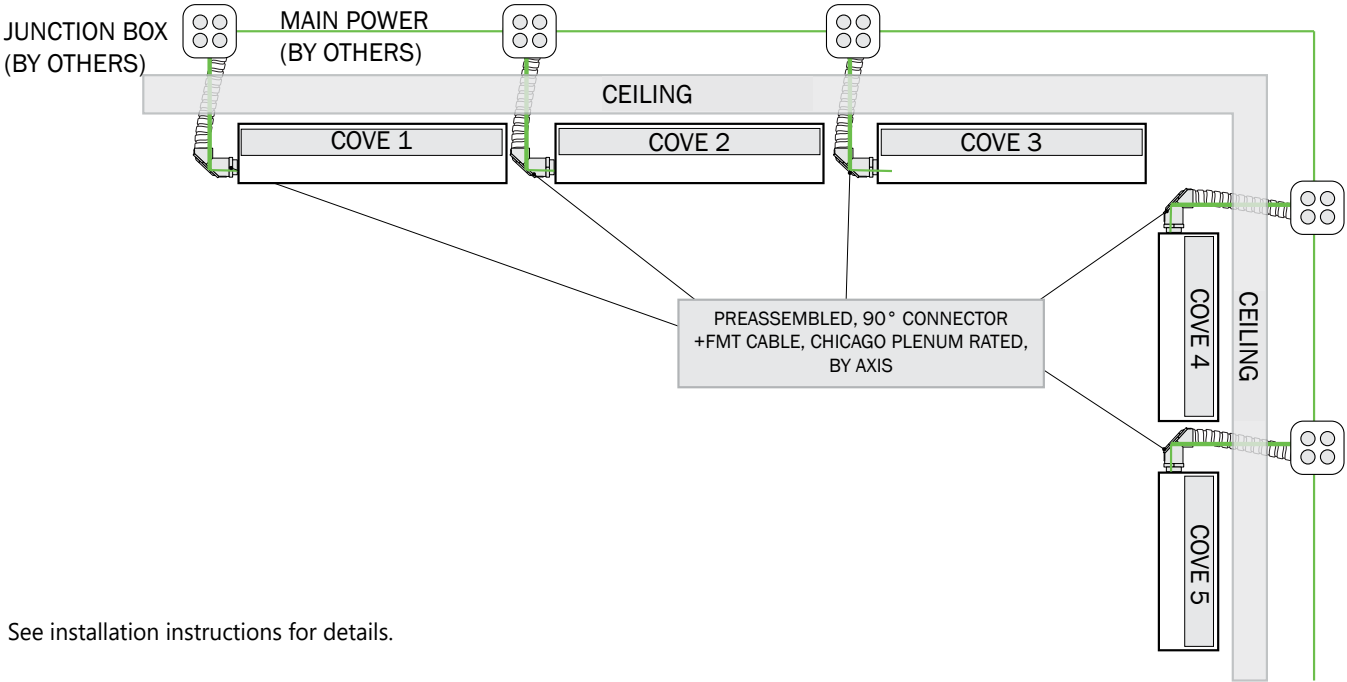
**i** Luminaires with Chicago plenum option are shipped with 6' of FMT cable + 90° Connector.

### ● STANDARD HARNESS OPTION



**i** See installation instructions for details.

● CHICAGO PLENUM OPTION



**i** See installation instructions for details.



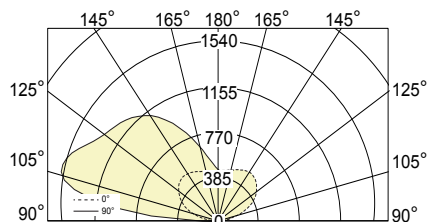
# ● PHOTOMETRIC DATA

## NO SHIELDING (NO)

CCL-SL-100/0-300-80-35-4-W

100% up at 300 lm/ft

## PHOTOMETRIC CURVE



**Lumen/ft up: 300 lm/ft**  
**Total Lumens: 1200 lm (for 4ft)**  
**Input Watts: 12.3 W**  
**Efficacy: 98 lm/W**

80 CRI shown. For 90 CRI, divide wattage by 0.8 and multiply efficacy by 0.8.  
3500K shown. For 2700K, divide wattage by 0.94 and multiply efficacy by 0.94.  
For 4000K, divide wattage by 1.02 and multiply efficacy by 1.02.

IES FILE: CCL-SL-100-0-300-80-35-4-W.IES

TESTED ACCORDING TO IES LM-79-2008

## CANDELA DISTRIBUTION

| Vertical Angle | Horizontal Angles |      |     |      |     |       |     |       |     |
|----------------|-------------------|------|-----|------|-----|-------|-----|-------|-----|
|                | 0                 | 22.5 | 45  | 67.5 | 90  | 112.5 | 135 | 157.5 | 180 |
| 90             | 25                | 34   | 24  | 13   | 5   | 1     | 1   | 1     | 1   |
| 95             | 348               | 306  | 129 | 58   | 29  | 23    | 14  | 11    | 1   |
| 105            | 650               | 499  | 236 | 142  | 98  | 63    | 39  | 32    | 26  |
| 115            | 629               | 497  | 327 | 215  | 155 | 95    | 55  | 43    | 39  |
| 125            | 548               | 492  | 390 | 273  | 190 | 120   | 66  | 50    | 49  |
| 135            | 517               | 487  | 413 | 304  | 213 | 143   | 96  | 64    | 55  |
| 145            | 475               | 451  | 389 | 296  | 214 | 159   | 131 | 107   | 84  |
| 155            | 390               | 369  | 321 | 258  | 202 | 169   | 154 | 145   | 136 |
| 165            | 283               | 272  | 248 | 217  | 192 | 174   | 166 | 161   | 167 |
| 175            | 206               | 204  | 200 | 194  | 188 | 181   | 177 | 174   | 178 |
| 180            | 188               | 188  | 188 | 188  | 188 | 188   | 188 | 188   | 188 |

## ZONAL LUMENS

| Zone    | Lumens |
|---------|--------|
| 90      |        |
| 90-100  | 74     |
| 100-110 | 176    |
| 110-120 | 206    |
| 120-130 | 206    |
| 130-140 | 191    |
| 140-150 | 158    |
| 150-160 | 111    |
| 160-170 | 60     |
| 170-180 | 18     |
| 180     |        |

LED

lighting facts®

A Program of the U.S. DOE

Light Output (Lumens)

1218

Watts

12.39

Lumens per Watt (Efficacy)

98.3

Color Accuracy

Color Rendering Index (CRI)

81

Light Color

Correlated Color Temperature (CCT)

3479 (Bright White)

Warm White

Bright White

Daylight

2700K

3000K

4500K

6500K

LED Lumen Maintenance Projection

at 50,000 Hours at 25°C Ambient\*

84.7%

Warranty\*\*

Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008.

Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

The U.S. Department of Energy (DOE) verifies product test data and results.

\* Based on TM-21 projections for the light source.

\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: AEYL-0X2NH2 (11/23/2015)

Model Number: CCL-B4-SL-300-80-35-4-W-UNV-LT-1-C

Type: Luminaire - Cove

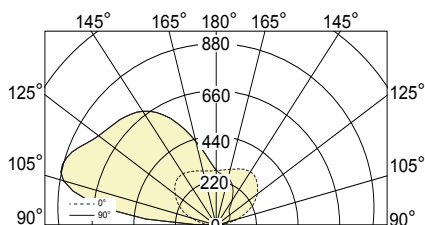
*i* All IES files are available for download at: [www.axislighting.com](http://www.axislighting.com)

## ● PHOTOMETRIC DATA

**NO SHIELDING (NO)**

CCL-SL-100/0-400-80-35-4-W

100% up at 400 lm/ft

**PHOTOMETRIC CURVE**

**Lumen/ft up: 400 lm/ft**  
**Total Lumens: 1600 lm (for 4ft)**  
**Input Watts: 16.8 W**  
**Efficacy: 95 lm/W**

80 CRI shown. For 90 CRI, divide wattage by 0.8 and multiply efficacy by 0.8.  
 3500K shown. For 2700K, divide wattage by 0.94 and multiply efficacy by 0.94.  
 For 4000K, divide wattage by 1.02 and multiply efficacy by 1.02.

IES FILE: CCL-SL-100-0-400-80-35-4-W.IES

TESTED ACCORDING TO IES LM-79-2008

**CANDELA DISTRIBUTION**

| Vertical Angle | Horizontal Angles |      |     |      |     |       |     |       |     |
|----------------|-------------------|------|-----|------|-----|-------|-----|-------|-----|
|                | 0                 | 22.5 | 45  | 67.5 | 90  | 112.5 | 135 | 157.5 | 180 |
| 90             | 34                | 46   | 32  | 18   | 6   | 2     | 1   | 2     | 2   |
| 95             | 464               | 408  | 172 | 78   | 39  | 31    | 19  | 14    | 2   |
| 105            | 867               | 666  | 315 | 189  | 130 | 84    | 52  | 42    | 34  |
| 115            | 838               | 663  | 436 | 287  | 206 | 126   | 73  | 57    | 53  |
| 125            | 731               | 656  | 520 | 364  | 253 | 160   | 88  | 67    | 65  |
| 135            | 689               | 650  | 551 | 406  | 284 | 190   | 128 | 85    | 73  |
| 145            | 634               | 602  | 518 | 395  | 286 | 212   | 174 | 143   | 112 |
| 155            | 519               | 492  | 428 | 344  | 270 | 225   | 205 | 193   | 182 |
| 165            | 377               | 362  | 330 | 290  | 256 | 232   | 221 | 215   | 222 |
| 175            | 275               | 272  | 267 | 259  | 250 | 242   | 236 | 231   | 238 |
| 180            | 250               | 250  | 250 | 250  | 250 | 250   | 250 | 250   | 250 |

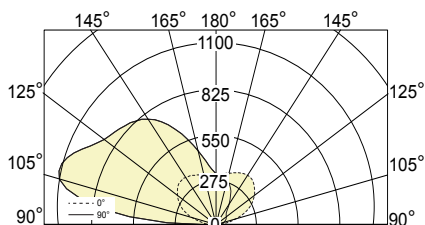
**ZONAL LUMENS**

| Zone    | Lumens |
|---------|--------|
| 90      |        |
| 90-100  | 99     |
| 100-110 | 234    |
| 110-120 | 274    |
| 120-130 | 275    |
| 130-140 | 254    |
| 140-150 | 211    |
| 150-160 | 147    |
| 160-170 | 80     |
| 170-180 | 25     |
| 180     |        |

**NO SHIELDING (NO)**

CCL-SL-100/0-500-80-35-4-W

100% up at 500 lm/ft

**PHOTOMETRIC CURVE**

**Lumen/ft up: 500 lm/ft**  
**Total Lumens: 2000 lm (for 4ft)**  
**Input Watts: 21.5 W**  
**Efficacy: 93 lm/W**

80 CRI shown. For 90 CRI, divide wattage by 0.8 and multiply efficacy by 0.8.  
 3500K shown. For 2700K, divide wattage by 0.94 and multiply efficacy by 0.94.  
 For 4000K, divide wattage by 1.02 and multiply efficacy by 1.02.

IES FILE: CCL-SL-100-0-500-80-35-4-W.IES

TESTED ACCORDING TO IES LM-79-2008

**CANDELA DISTRIBUTION**

| Vertical Angle | Horizontal Angles |      |     |      |     |       |     |       |     |
|----------------|-------------------|------|-----|------|-----|-------|-----|-------|-----|
|                | 0                 | 22.5 | 45  | 67.5 | 90  | 112.5 | 135 | 157.5 | 180 |
| 90             | 42                | 57   | 40  | 22   | 8   | 2     | 2   | 2     | 2   |
| 95             | 580               | 511  | 214 | 97   | 48  | 39    | 23  | 18    | 2   |
| 105            | 1084              | 832  | 393 | 237  | 163 | 105   | 65  | 53    | 43  |
| 115            | 1048              | 828  | 544 | 359  | 258 | 158   | 91  | 71    | 66  |
| 125            | 914               | 820  | 650 | 455  | 317 | 200   | 110 | 84    | 81  |
| 135            | 862               | 812  | 689 | 507  | 354 | 238   | 160 | 107   | 92  |
| 145            | 792               | 752  | 648 | 494  | 357 | 265   | 218 | 179   | 140 |
| 155            | 649               | 615  | 534 | 430  | 337 | 281   | 256 | 242   | 227 |
| 165            | 471               | 453  | 413 | 362  | 319 | 291   | 276 | 269   | 278 |
| 175            | 344               | 341  | 334 | 323  | 313 | 302   | 295 | 289   | 297 |
| 180            | 313               | 313  | 313 | 313  | 313 | 313   | 313 | 313   | 313 |

**ZONAL LUMENS**

| Zone    | Lumens |
|---------|--------|
| 90      |        |
| 90-100  | 124    |
| 100-110 | 293    |
| 110-120 | 343    |
| 120-130 | 343    |
| 130-140 | 318    |
| 140-150 | 264    |
| 150-160 | 184    |
| 160-170 | 100    |
| 170-180 | 31     |
| 180     |        |