LINEAR LIGHTING INTEGRATION
XAL and ARMSTRONG® ZERO PLENUM LIGHTS are making it easier than ever for you to create inspiring ceiling designs with higher ceiling heights, zero plenum interference and on-center continuous or noncontinuous layouts that provide clean, modern aesthetics you love.

Our integrated system design allows the new high performance LENO zero plenum LED light fixture to install from below to eliminate ceiling re-work when specified with factory-finished ARMSTRONG® ceiling panels and 9/16" suspension systems.
SEE THE LIGHT
For more than 25 years, our passion has been the wonder of light. And for just as long, XAL has been synonymous with individual lighting solutions that combine advanced technology with excellent design.

ADDED VALUE
As a trendsetter, especially in the field of LED technology, we continuously make substantial investments in research and development in our facilities. Our light fixtures are developed in Europe and Connecticut, we test them in our labs in Europe and produce them in Connecticut, US. Each of our newly created lights goes through a comprehensive series of tests in our laboratories. Both optical and electromagnetic properties as well as extreme climatic conditions and surface-area parameters are assessed. Thanks to our extensive vertical integration, we produce many of the built-in components ourselves and we can therefore ensure that only high-quality, mature, energy-efficient and environmentally friendly products leave our factories. XAL luminaires impress thanks to their technological superiority, reflected in their high reliability and long life.
LUMINANCE EFFICACY
116 lm/W (4000K HE)

LUMEN OUTPUT
HE 381 lm/ft | MO 562 lm/ft | HO 707 lm/ft

COLOR TEMPERATURE
3000 K | 4000 K

COLOR RENDERING
CRI >84

DIM OPTIONS
0-10V, Hi-lume, DALI

LIFE CYCLE LED
L 90 | 100,000 h

LUMINAIRE MEASUREMENTS
W 3 3/8” | L 2’, 4’, 6’, 8’

HEIGHT LUMINAIRE HEAD
5/16” | 1 1/2”

WARRANTY
5 years
PERFECTION AT 5/16”
Featuring a structural height of only 5/16”, LENO integrates subtle aesthetics with a perfected design in an uniquely understated luminaire. The integrated converter, centrally located on the top of the fixture, and its lean aluminium profile support the ultra-slim overall appearance of this zero plenum luminaire.

BEST LUMEN OUTPUT WITH OPTIMAL UNIFORM ILLUMINATION
The best technology delivers the best results. With 116 lm/W, LENO owes its high lumen output to the use of the latest generation of high-efficiency LEDs (175 lm/W at 4000K). The LGP (Light Guiding Prism) redirects laterally coupled light downward. The reflector creates optimal direct light that is distributed uniformly by the HPO-High Performance Opal flush mounted shielding.

COMPELLING ENERGY EFFICIENCY
With its slim frame, LENO works with absolute energy efficiency. For optimal thermal management, LEDs are powered with low currents and the operating solder point temperature is therefore below 113° F (45° C). The LED output is further optimized by the reflector’s impressive 96% reflectivity. LENO also offers several dimming options.

QUICK AND EASY MOUNTING
No tools are required thanks to patented snap-in mounting for easy installation of the fixture. Simple and fast electrical wiring with either 3-conductor or 5-conductor plug and play conduit through-wire system (please order separately). Fixtures can be mounted after the Armstrong® ceiling installation is finished, therefore minimizing the coordination of the different trades used in light installation.
Armstrong® Ultima® panels with Silhouette® suspension system and 8’ XAL LENO light fixtures.
IMPRESSIVE TECHNOLOGY
BY LENO
THE ZERO DROP SOLUTION FOR BALANCED LINEAR LIGHTING.
At the heart of the fixture is the Light Guiding Prism (LGP) body. It receives the laterally coupled light and directs it through the integrated prisms downward. The LGP body is designed for a smooth, harmonious and glare-free illumination of modern working environments.

LED
For its light source, the luminaire uses only high-efficiency LEDs with CRI >84 and selected color temperatures of 3000K and 4000K. We use the latest generation of long life, 100,000 hour LEDs at 90% lumen maintenance (L 90) with high output performance e2 LEDs with 3.4W/ft, 5.2W/ft or 6.8W/ft.

MODULAR WIRING SYSTEM
Rated for use on 20 ampere branch circuits. Manufactured from Type MC Cable featuring 90°C insulated, #12 AWG, solid copper conductors and a #12 AWG insulated, solid copper ground. Connector housing is zinc-plated .060 inches cold-rolled steel. To eliminate inter-voltage connection, each connector is keyed and color coded to meet specific voltage requirements. Easy and fast electrical wiring with either 3-conductor or 5-conductor plug and play conduit through Flex 2 wire system from American Cable Systems.

www.armstrong.com/XALlighting

ARMSTRONG® SLOT GRID
The Armstrong® Silhouette® XL 9/16 bolt slot grid is made of hot-dipped galvanized steel with a baked polyester paint surface finish. Color and texture coordinated suspension system finish complement Armstrong® ceiling panels. Various wall molding options offer a unique solution to each ceiling system while maintaining a consistent look and performance to each design.

www.armstrong.com/XALlighting

XAL LENO fixture works in Armstrong® 9/16” Suprafine”, Silhouette” and Interlude” grid systems.
REFINED TECHNOLOGY

SNAP-IN MECHANISM
Plug-and-play system through easy connector technology. Snap-in locking mechanism allows for tool-less installation. Patent pending.

HPO COVER
The flush-mounted HPO-High Performance Opal cover provides enhanced glare control for uniform illumination. For the best in modern office lighting.

REFLECTOR
The reflector on top of the luminaire is made up of special material that provides both reflectivity of 96% and diffuse radiation characteristics at the same time. This ensures both optimum efficiency and a perfectly uniform light distribution by the HPO-High Performance Opal cover.

DRIVER
Our drivers are designed to deliver the best efficiency for every fixture size and are perfectly integrated in a central location on top of the luminaire. The converter is connected to the lighting unit through a plug connection for easy installation and removal. Available dimming options range from no dimming, 0-10V, Hi-lume to DALI dimming.
PERFECT SYMMETRY
CONTINUOUS AND NONCONTINUOUS LINEAR LIGHTING

ON-CENTER LINEAR
Using a combination of Armstrong® FastSize™ factory-finished ceiling panels and suspension systems, you can easily specify and achieve perfect lighting layouts.

- Create your ceiling layout to mirror the symmetry of your building design
- Specify factory-finished Armstrong® beveled tegular ceiling panels, 9/16" suspension systems and XAL’s new LENO zero plenum LED light fixture
- Enjoy a perfectly finished ceiling design with continuous or noncontinuous lighting, taller ceiling heights, and zero interference or re-work
- Seamlessly start and stop runs of light
- Perfectly placed runs of light over the work plane
- Design your space with just the right amount of light and never more
CONTINUOUS LINEAR LAYOUT EXAMPLE

**DESCRIPTION**

**ITEM #**

**QUANTITY**

**ARMSTRONG® SILHOUETTE SYSTEM**
Silhouette XL, Interlude XL, Suprafine XL 9/16" suspension systems

12' main beam 8
8' cross tee with special miter and rout locations 6
1' grid adapter 18
6' main beam, mitered and routs on one side 6
8' main beam, mitered and routs on one side 6
46' cross tee mitered and rout at 22" 42
2' Silhouette XL cross tee 60
4' ARMSTRONG® connector bracket LCB4 9

**ARMSTRONG® CEILING PANELS**
Ultima, Optima, Calla Lyra - Beveled Tegular tiles for 9/16" suspension

2' x 2' Ultima Beveled Tegular tile 72
22' x 24' Ultima Beveled Tegular tile 48

**XAL LENO SYSTEM RUN**

**ITEM #**

**QUANTITY**

A 4' system fixture start/end through-wire N243-4K-... 6
B 8' system fixture run/mid through-wire N243-5K-... 3
P Power feeder 4' N243-P-... 3

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**LEN0 4' | 8' 9 pieces**

<table>
<thead>
<tr>
<th>Room dimensions</th>
<th>L 24' x W 20' x H 9'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflection factors</td>
<td>p^2 80</td>
</tr>
<tr>
<td>Lamp lumen depreciation</td>
<td>LDD 0.95</td>
</tr>
<tr>
<td>Above finished floor</td>
<td>AFF 30&quot;</td>
</tr>
</tbody>
</table>

**LEN0 3.4W/ft high efficiency fixture**

| Footcandle average illuminance | Eav 32.2fc |
| Total power consumption | 160W 0.33W/sqft |

**LEN0 5.2W/ft medium output fixture**

| Footcandle average illuminance | Eav 47.6fc |
| Total power consumption | 243W 0.51W/sqft |

**LEN0 6.8W/ft high output fixture**

| Footcandle average illuminance | Eav 76.5fc |
| Total power consumption | 328W 0.68W/sqft |

**LEN0 4' high efficiency, 3000K**

| 20 fc |
| 30 fc |

**LEN0 5.2W/ft medium output, 3000K**

| 30 fc |
| 50 fc |

**LEN0 6.8W/ft high output, 3000K**

| 50 fc |
| 75 fc | 100 fc |
## Staggered Linear Layout Example

### Description

<table>
<thead>
<tr>
<th>SUSPENSION SYSTEM</th>
<th>ITEM #</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silhouette XL, Interlude XL, Suprafine XL 9/16&quot; suspension systems</td>
<td>12' main beam</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>4' cross tee with special miter and rout locations</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>4' cross tee</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>2' cross tee</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>4' cross tee rout and mitered on one side at 24&quot;</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>22&quot; cross tee</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>4&quot; ARMSTRONG® connector bracket</td>
<td>LCB4 13</td>
</tr>
</tbody>
</table>

### ARMSTRONG® Ceiling Panels

<table>
<thead>
<tr>
<th></th>
<th>Item #</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultima, Optima, Calla Lyra - Beveled Tegular tiles for 9/16&quot; suspension</td>
<td>2' x 2' Ultima Beveled Tegular tile</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>22&quot; x 24&quot; Ultima Beveled Tegular tile</td>
<td>52</td>
</tr>
</tbody>
</table>

### XAL LENO SINGLE

- **T**: LENO single 4' through-wire N243-2K-... 13
- **C**: Connection conduit 4' N243-C-... 8
- **P**: Power feeder 4' N243-P-... 5

### Room Dimensions

- **L**: 24' x W: 24' x H: 9'
- **p<sup>c</sup>**: 80 |
- **p<sup>w</sup>**: 50 |
- **p<sup>f</sup>**: 20 |
- **LDD**: 0.95 |
- **AFF**: 30" |

### LEDO 4'

- **13 pieces**
- **Room dimensions**: L: 24' x W: 24' x H: 9'
- **Reflection factors**: p<sup>c</sup>: 80 | p<sup>w</sup>: 50 | p<sup>f</sup>: 20
- **Lamp lumen depreciation**: LDD: 0.95
- **Above finished floor**: AFF: 30"

### LENO 3.4W/ft high efficiency fixture

- **381 lm/ft**
- **Footcandle average illuminance**: Eav: 29.8 fc
- **Total power consumption**: 173W 0.30W/sqft

### LENO 5.2W/ft medium output fixture

- **562 lm/ft**
- **Footcandle average illuminance**: Eav: 43.5 fc
- **Total power consumption**: 263W 0.46W/sqft

### LENO 6.8W/ft high output fixture

- **707 lm/ft**
- **Footcandle average illuminance**: Eav: 56.4 fc
- **Total power consumption**: 355W 0.62W/sqft

### Footcandle Illuminance

- **3.4W/ft high efficiency, 3000K**: 15 fc, 30 fc, 20 fc
- **5.2W/ft medium output, 3000K**: 30 fc, 50 fc
- **6.8W/ft high output, 3000K**: 30 fc, 50 fc, 75 fc
**DESCRIPTION** | **ITEM #** | **QUANTITY**
--- | --- | ---
**SUSPENSION SYSTEM**
Silhouette XL, Interlude XL, Suprafine XL 9/16” suspension systems
12’ main beam | 12
4’ cross tee with special miter and rout locations | 18
4’ cross tee | 18
2’ cross tee | 46
4’ cross tee rout and mitered on one side at 24” | 18
22” cross tee | 18
4” ARMSTRONG® connector bracket | LCB4 9
**ARMSTRONG® CEILING PANELS**
Ultima, Optima, Calla Lyra - Beveled Tegular tiles for 9/16” suspension
2’ x 2’ Ultima Beveled Tegular tile | 92
22” x 24” Ultima Beveled Tegular tile | 52

**XAL LENO SYSTEM RUN** | **ITEM #**
--- | ---
T  | LENO single 4” through-wire | N243-2K-... 9
C  | Connection conduit 4’ | N243-C-... 6
P  | Power feeder 4’ | N243-P-... 3

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**LENNO 4’ 9 pieces**

Room dimensions | L 24’ x W 24’ x H 9’
Reflection factors | pL 80 | pW 50 | pW 20
Lamp lumen depreciation | LDD 0.95
Above finished floor | AFF 30’

**LENNO 3.4W/ft high efficiency fixture**
Footcandle average illuminance | Eav 20.3fc
Total power consumption 120W | 0.21W/sqft

**LENNO 5.2W/ft medium output fixture**
Footcandle average illuminance | Eav 29.9fc
Total power consumption 182W | 0.32W/sqft

**LENNO 6.8W/ft high output fixture**
Footcandle average illuminance | Eav 37.2fc
Total power consumption 246W | 0.43W/sqft
## LENO MOUNTING LAYOUT EXAMPLES

### 2' single

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>4' start/end</td>
<td>2' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>4' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>6' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>8' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>6' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>8' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>6' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>8' run/mid</td>
<td>4' start/end</td>
</tr>
<tr>
<td>4' start/end</td>
<td>8' run/mid</td>
<td>4' start/end</td>
</tr>
</tbody>
</table>

### MOUNTING INSTRUCTION

- Ultra-thin linear recessed luminaire made of aluminium in powder coated white
- Snap-in locking mechanism for easy fixture installation from below the ceiling with no tools required, ceiling can be closed at time of installation
- Driver housing and optional battery backup integrated in fixture housing, driver options include no dimming, 0-10V, Hi-lume and DALI dimming
- Options include individual single fixtures or continuous system fixtures
- The system features modular fixture to fixture 3 or 5 conductor through-wire system for fast and easy plug and play installation
- Lateral light coupling into the Light Guiding Prism (LGP) body made of PMMA for homogeneous and glare-free light output
- Energy-efficient LEDs with up to 116 lm/W at 4000K color temperature and long life 100,000 hour LEDs at 90% lumen maintenance (L 90)
- High output performance LEDs with 3.4W/ft high efficiency, 5.2W/ft medium output or 6.8W/ft high output
- Available in color temperatures of 3000K with a color rendering index CRI >84 and 4000K at CRI >83
- Modular conduit used as through-wire
<table>
<thead>
<tr>
<th>DRAWING</th>
<th>FIXTURE TYPE</th>
<th>LENGTH</th>
<th>CODE</th>
<th>WATTAGE</th>
<th>LED COLOR</th>
<th>EFFICIENCY</th>
<th>LUMEN</th>
<th>LIFETIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENO 4&quot; E</td>
<td>single</td>
<td>2 feet</td>
<td>N243-1K-712-50-H-7-0020</td>
<td>6.8W high efficiency</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>112 lm/W</td>
<td>78%</td>
</tr>
<tr>
<td>4 feet</td>
<td>N243-1K-712-56-H-7-0040</td>
<td>13.6W high efficiency</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>112 lm/W</td>
<td>78%</td>
<td>1523 lm L 90 100,000 h</td>
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<tr>
<td>8 feet</td>
<td>N243-1K-712-50-H-7-0080</td>
<td>27.2W high output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>104 lm/W</td>
<td>78%</td>
<td>2829 lm L 90 100,000 h</td>
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<tr>
<td>LENO 4&quot; T</td>
<td>single</td>
<td>2 feet</td>
<td>N243-2K-712-50-H-7-0020</td>
<td>6.8W high efficiency</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>112 lm/W</td>
<td>78%</td>
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<tr>
<td>4 feet</td>
<td>N243-2K-712-56-H-7-0040</td>
<td>13.6W high output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
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<td>1414 lm L 90 100,000 h</td>
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<tr>
<td>8 feet</td>
<td>N243-2K-712-50-H-7-0080</td>
<td>27.2W high output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>104 lm/W</td>
<td>78%</td>
<td>2829 lm L 90 100,000 h</td>
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<tr>
<td>LENO 4&quot; A</td>
<td>system</td>
<td>4 feet</td>
<td>N243-4K-712-56-H-7-0040</td>
<td>13.6W high efficiency</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>112 lm/W</td>
<td>78%</td>
</tr>
<tr>
<td>4 feet</td>
<td>N243-4K-712-56-H-7-0040</td>
<td>20.8W medium output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>108 lm/W</td>
<td>78%</td>
<td>2246 lm L 90 100,000 h</td>
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<tr>
<td>8 feet</td>
<td>N243-4K-712-50-H-7-0080</td>
<td>43.2W medium output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>108 lm/W</td>
<td>78%</td>
<td>4666 lm L 90 100,000 h</td>
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<tr>
<td>LENO 4&quot; B</td>
<td>system</td>
<td>2 feet</td>
<td>N243-5K-712-50-H-7-0020</td>
<td>6.8W high efficiency</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>112 lm/W</td>
<td>78%</td>
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<tr>
<td>4 feet</td>
<td>N243-5K-712-56-H-7-0040</td>
<td>13.6W high output</td>
<td>3000 K</td>
<td>CRI &gt;84</td>
<td>104 lm/W</td>
<td>78%</td>
<td>1414 lm L 90 100,000 h</td>
<td></td>
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<tr>
<td>6 feet</td>
<td>N243-5K-712-50-H-7-0060</td>
<td>20.4W high output</td>
<td>3000 K</td>
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<td>8 feet</td>
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<td>54.4W high output</td>
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<td>104 lm/W</td>
<td>78%</td>
<td>5658 lm L 90 100,000 h</td>
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</tbody>
</table>

- **No emergency**
- # number of 90 min. EM battery packs (4" only), MO output only when in EM mode

- 1 no DIM
- 2 DIM 0–10V
- 3 DIM DALI
- 4 Hi-lume hot DIM
- 5 Hi-lume digital DIM

Power feeder 4 feet: N243-PO-000-7000-0-00-0040
Connector cable 4 feet: N243-C0-000-7000-0-00-0040
8 feet: N243-C0-000-7000-0-00-0080
The details provided in this catalogue were correct at the time of publication. They do not constitute any kind of obligation on our part and are for information only. We shall not be held liable for any discrepancies between the illustrations or descriptions given and the actual product. The power input of the LEDs is calculated with driver electronics and gear. We reserve the right to make alterations to our products at any time. All orders will be carried out in accordance with the relevant versions of our General Terms of Business and our Terms of Delivery. They can be viewed at www.xalusa.com.

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For ceiling questions:
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(1.877.276.7876)

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