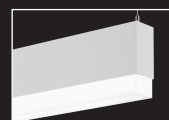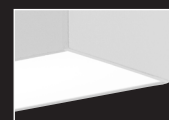# Seem® 2

**LED**



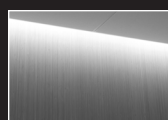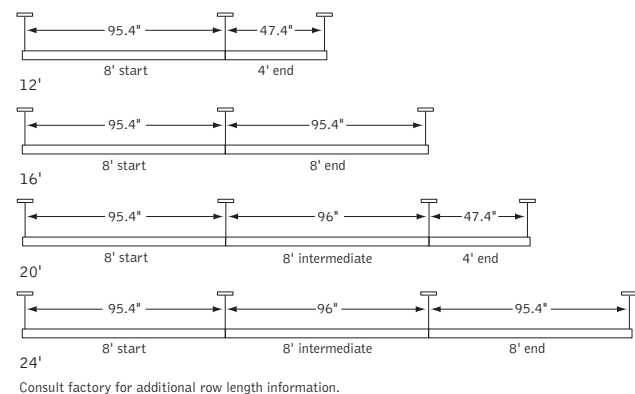| | | |
|---|---|---|
| 0.5" pop-down lens | 1.5" pop-down lens | end detail |
| wall mount companion | recessed companion | wall to ceiling companion |
| perimeter companion | direct/indirect companion | |
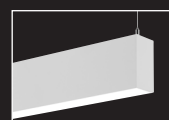
## DIMENSIONAL DATA

**Asymmetric, Batwing & Flush Lens**

**Additional Shielding Options**

4.50in
114.30mm

2.64in
67.06mm

0.5" Pop-Down Lens

1.5" Pop-Down Lens

## MOUNTING INFORMATION

**12'**
95.4" | 47.4"
8' start | 4' end

**16'**
95.4" | 95.4"
8' start | 8' end

**20'**
95.4" | 96" | 47.4"
8' start | 8' intermediate | 4' end

**24'**
95.4" | 96" | 95.4"
8' start | 8' intermediate | 8' end
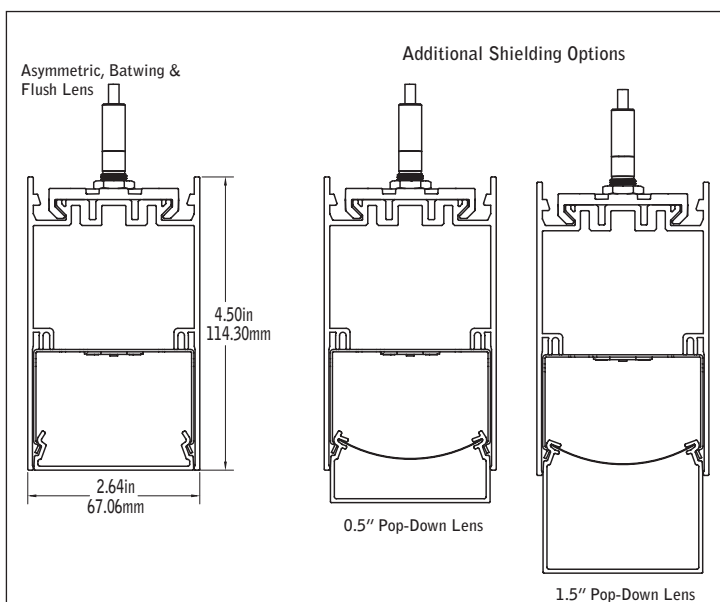
Consult factory for additional row length information.

## FEATURES

Narrow 2.5" linear direct LED with Asymmetric, Batwing, Flush, 0.5" or 1.5" Pop-Down lens.

Frosted acrylic lens provides uninterrupted illumination, without pixels or shadows.

Individual units and continuous runs in 1' increments.

Preferred Light: Lighting for better color rendition and human preference.

Connected Solutions: Integrates with wired and wireless building lighting control systems.

PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

## DISTRIBUTIONS

| | | |
|---|---|---|
| Asymmetric Lens | Batwing Lens | Flush Lens |
| 0.5" Pop-Down Lens | 1.5" Pop-Down Lens | |

Photometric performance is measured in accordance with IESNA LM-79.
Visit focalpointlights.com for complete photometric data.

# MOUNTING INFORMATION

### Standard Patterns with 90° Corners

**'L' Patterns - A'xB'**



Overall Length 'B'
Overall Length 'A'
start
Order: 8'x6'

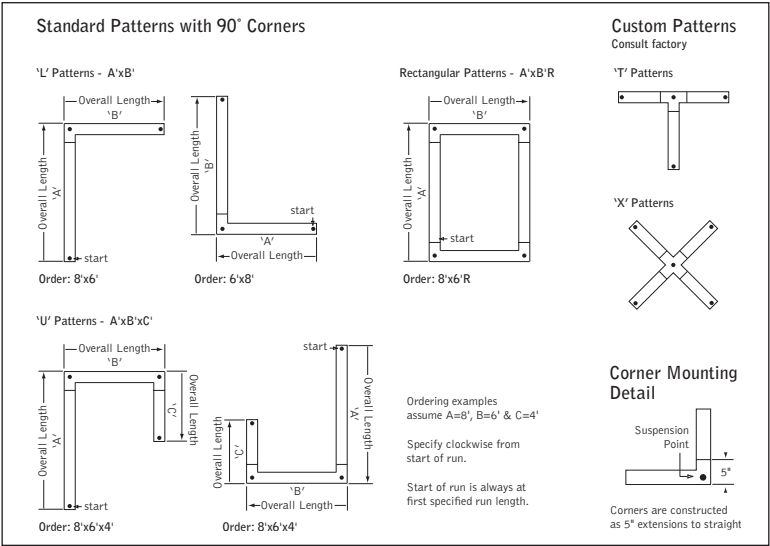Overall Length 'B'
Overall Length 'A'
start
Overall Length 'A'
Order: 6'x8'

**Rectangular Patterns - A'xB'R**

Overall Length 'B'
Overall Length 'A'
start
Order: 8'x6'R

**'U' Patterns - A'xB'xC'**

Overall Length 'B'
Overall Length 'A'
Overall Length 'C'
start
Order: 8'x6'x4'

start
Overall Length 'A'
Overall Length 'C'
Overall Length 'B'
start
Order: 8'x6'x4'

### Custom Patterns
Consult factory

**'T' Patterns**

**'X' Patterns**

### Corner Mounting Detail

Suspension Point
5"

Corners are constructed as 5" extensions to straight

Ordering examples assume A=8', B=6' & C=4'

Specify clockwise from start of run.

Start of run is always at first specified run length.

# SPECIFICATIONS

## LED System
Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 2700K, 3000K, 3500K or 4000K with CRI>80 or CRI>90, 3 SDCM. 3500K and 4000K with CRI>90 have a cyanosis observation index (COI) of 3.3 or less. LED modules and drivers are replaceable from below.

## Construction
One piece extruded aluminum housing. Cast aluminum end caps. 8' unit weight: 30 lbs.

## Optic
Reflectors fabricated of 22 Ga. steel finished in matte white powder coat.
Extruded acrylic lens with satin finish, up to 8' continuous.

## Electrical
Luminaires are pre–wired with factory installed branch circuit wiring and over-molded quick connects. Standard 120-277V constant current driver includes 0-10V analog dimming. Power factor > .9. PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires. PoE runs require an independent PoE node and power feed for each luminaire section.

## Emergency
Emergency Battery output - 10 watts for 90 minutes. Maximum mounting height: 20 ft. Emergency Circuit with Connected Solutions (NLT1, ENL1, CLM1, CLMZ1, DLM1) shipped standard with leads to connect UL924 compliant device, by others.

## Labels
UL and cUL listed. Suitable for Dry or Damp Locations, indoor use only.

## Finish
Polyester powder coat applied over a multi-stage pre–treatment. Canopy and cord white as standard.

## Lumen Maintenance
Reported:  L70 at >61,000 hours          Calculated:  L70 at 385,000 hours
L90 at >61,000 hours                         L90 at 103,000 hours
Derived from EPA TM-21 calculator. Based on typical conditions, consult factory for additional data.

## Reliability
At Focal Point, our products are designed to stand the test of time. Each luminaire is engineered using superior components, manufactured with the utmost care and rigorously tested. Contact us for reliability data.

## Warranty
LED system rated for operation in ambient environments up to 25°C. 5-year limited warranty.

# 4' PERFORMANCE CHART
See page 3.

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## ORDERING

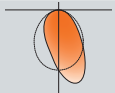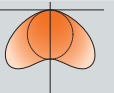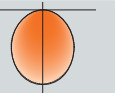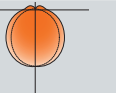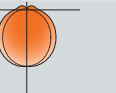| | | FSM2LS |
|---|---|---|
| **Luminaire Series** | | |
| Seem 2 LED | FSM2LS | |
| **Shielding** | | _____ |
| Asymmetric Lens | AS | |
| Batwing Lens | BW | |
| Flush Satin Lens | FL | |
| 0.5" Pop-Down Lens | PD05 | |
| 1.5" Pop-Down Lens (Individual units only) | PD15 | |
| **Lumen Output** | | _____ |
| 125 Lumens per foot (LD1 & L11 only. 4' minimum.) | 125LF | |
| 250 Lumens per foot (3' minimum with LH1.) | 250LF | |
| 375 Lumens per foot | 375LF | |
| 500 Lumens per foot | 500LF | |
| 625 Lumens per foot | 625LF | |
| 750 Lumens per foot | 750LF | |
| 875 Lumens per foot | 875LF | |
| 1000 Lumens per foot | 1000LF | |
| **Color Temperature** | | _____ |
| 2700K, 80+ CRI **or** 90+ CRI | 27K **or** 927K | |
| 3000K, 80+ CRI **or** 90+ CRI | 30K **or** 930K | |
| 3500K, 80+ CRI **or** 90+ CRI | 35K **or** 935K | |
| 4000K, 80+ CRI **or** 90+ CRI | 40K **or** 940K | |
| 3500K, Preferred Light (Not available with EM) | P35K | |
| **Circuits & Zones** | | _____ |
| 1 Circuit, non-emergency | 1C | |
| Consult Ordering Guide on page 5 for multiple circuiting and zoning options | _C_Z_DL | |
| **Voltage** | | _____ |
| 120/277 UNV Volt | UNV | |
| 347V (LD1 & L11 only) | 347 | |
| Low voltage | LV | |
| **Control System & Dimming Level** | | _____ |
| 0-10V - 10% Dimming | LD1 | |
| 0-10V - 1% Dimming | L11 | |
| Low-voltage, PoE compatible (No driver. Not available with EM or EC. LV Voltage only.) | LVN | |
| Lutron Hi-Lume EcoSystem (LDE1) - 1% Dimming | LH1 | |
| DALI - 1% Dimming (For 750LF, 875LF & 1000LF consult factory.) | D11 | |
| Acuity nLight - 1% Dimming** (3' minimum length. Individual units only. For 750LF, 875LF & 1000LF consult factory.) | NLT1 | |
| Enlighted Smart Sensor - 1% Dimming* (3' minimum length) | ENL1 | |
| Osram Connected Lighting Module for ENCELIUM systems - 1% Dimming** (3' minimum length. Compatible with Osram ENCELIUM and ENCELIUM EDGE systems only) | CLM1 | |
| Osram Connected Lighting Module for ZigBee Wireless Networks - 1% Dimming** (3' minimum length. Not compatible with Osram ENCELIUM systems) | CLMZ1 | |
| Wattstopper DLM - 1% Dimming** (3' minimum length, Individual units only.) | DLM1 | |
| **Mounting** | | _____ |
| 24" Cable Suspension | C24__ | |
| 48" Cable Suspension | C48__ | |
| 96" Cable Suspension | C96__ | |
| (Specify canopy color White (WH), Black (BK) or Titanium Silver (TS). Example: C24WH.) (Specify one of the following in place of "C" J - for 2" canopies at non–feed locations. CS - for sloped ceiling applications.) | | |
| Surface Mount (Not available with CLM1, CLMZ1, DLM1 or NLT1) | SM | |
| **Factory Options** (See Ordering Guide on page 5 for ordering details for DC, EC, EM & ECD.) | | |
| Black Cord | BKCD | _____ |
| Daylight Circuit | _DC | _____ |
| Emergency Circuit | _EC | _____ |
| Emergency Battery Pack† | _EM | _____ |
| Emergency Control Device† | _ECD | _____ |
| †(3' minimum. 4' minimum with CLM1, CLMZ1, DLM1, ENL1, & NLT1. 120/277 Volt only.) | | |
| **Finish** | | _____ |
| Black | BK | |
| Titanium Silver | TS | |
| Matte White Housing | WH | |
| **Luminaire Length** | | _____ |
| Specify luminaire/row length in 1' increments | X' | |
| (2' minimum. Leave blank for patterns. Smaller increments available, consult factory.) | | |
| **Pattern Options** (2' minimum length) | | _____ |
| 'L' pattern | A' x B' | |
| 'U' pattern | A' x B' x C' | |
| Rectangular pattern | A' x B' R | |
| (Consult factory for other pattern options) | | |

*Not available with Pop-Down Lens options.   **Not available with Surface Mount or Pop-Down Lens options.

## 4' PERFORMANCE CHART

| Lumen Output | Delivered Lumens | Tested System Watts | Lumens Per Watt (LPW) | | | | |
|---|---|---|---|---|---|---|---|
| | | | AS | BW | FL | PD05 | PD15 |
| 125LF | 500 | 6 | 95 | 91 | 88 | 81 | 82 |
| 250LF | 1000 | 10 | 113 | 108 | 103 | 94 | 98 |
| 375LF | 1500 | 14 | 120 | 116 | 105 | 101 | 100 |
| 500LF | 2000 | 19 | 123 | 118 | 107 | 103 | 102 |
| 625LF | 2500 | 24 | 121 | 116 | 105 | 101 | 101 |
| 750LF | 3000 | 28 | 122 | 117 | 108 | 101 | 100 |
| 875LF | 3500 | 34 | 120 | 115 | 104 | 100 | 100 |
| 1000LF | 4000 | 39 | 119 | 114 | 105 | 101 | 100 |

Based on 3500K, 4' length. Lumen multipliers: Preferred Light = 0.65, 90 CRI = 0.87.
Delivered lumens may vary +/- 5%. Actual wattage may vary +/- 5%

# CONNECTED SOLUTIONS

Focal Point provides flexibility in meeting the needs of each project by integrating with several building lighting control systems. A variety of sensors, drivers and other components can be specified that allow the luminaires to communicate with wired and wireless networks. All zoning can be digitally reconfigured through the application software. Daylight harvesting, occupancy sensing, integration with HVAC systems, and individual controls enable the monitoring and modulating of light levels and temperature in order to save energy, reduce costs and maximize occupants' comfort. All Connected Solutions luminaires require a compatible building control system.†

## nLIGHT

Connections located under access panel.

Runs
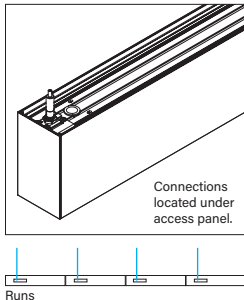
nLight® provides a two-way wired digital lighting system allowing for on/off and dimming functionality, occupancy sensing, and multi-zone daylight harvesting.

**Acuity nLight - 1% Dimming (NLT1)**
Acuity Model #nEPS-60-IO

CAT-5 Cable provided by others. Serial labels will be provided on outside of luminaires and control unit.

## enlighted
A Siemens Company

Enlighted smart sensor allows for occupancy sensing, daylight harvesting, energy usage, temperature and light level control. Communicates wirelessly with the Enlighted network.

**Enlighted Smart Sensor - 1% Dimming (ENL1)**
Enlighted Model SU-5E-IOT
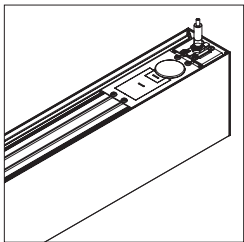
## OSRAM

Connected Lighting Module (CLM) enables each luminaire to be independently controlled and configured. Communicates wirelessly with Daintree Networks®, Osram ENCELIUM®, Osram ENCELIUM EDGE™, and other networks using the ZigBee® HA communication protocol to allow for on/off and dimming functionality, occupancy sensing and multi-zone daylight harvesting.

**Osram CLM - 1% Dimming (CLM1 & CLMZ1)**
Osram Model #ZBHA-CLM DIM

Serial labels will be provided on outside of luminaires and control unit.

## legrand®   WATTSTOPPER®
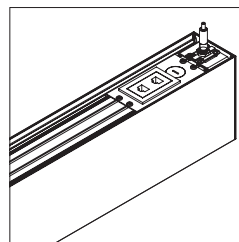
A Digital Lighting Management (DLM) system that provides two-way wired communication between networked luminaires and control system to allow for on/off and dimming functionality, occupancy sensing and multi-zone daylight harvesting.

**Wattstopper DLM - 1% Dimming (DLM1)**
Wattstopper Model #LMFC-011

Runs

Segment Network Wire provided by others. Serial labels will be provided on outside of luminaires and control unit.
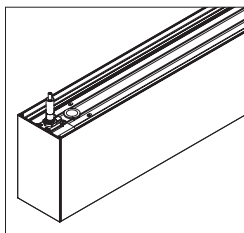
## LUTRON®

A two-way digital network that enables on/off and dimming functionality, occupancy sensing, and multi-zone daylight harvesting working with Quantum®, Energi Savr Node™, and Energi TriPak® using EcoSystem® communication protocol.

**Lutron Hi-Lume EcoSystem - 1% Dimming (LH1)**
Lutron Model #LDE1
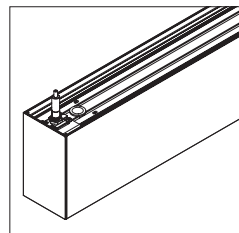
## CRESTRON®

A two-way digital network that enables on/off and dimming functionality, occupancy sensing, and multi-zone daylight harvesting. Communicates with Zūm wireless and SpaceBuilder working with Zūm hub scheduling or FUSION management.

**DALI - 1% Dimming (D11)**
**0-10V - 1% Dimming (L11)**
*Note: 0-10V is not a digital network but is compatible with Creston Zūm™ system.*

## CONNECTED SOLUTIONS DETAILS

| Connected Solution | Model # | Protocol | Compatible Networks* | Occupancy | Daylight | Temperature Reporting | Communication to Luminaire | Drivers |
|---|---|---|---|---|---|---|---|---|
| Acuity nLight (NLT1) | nEPS-60-IO** | nLight | nLight | Enabled | Enabled | No | Wired | **eldoLED ECOdrive,** eldoLED SOLOdrive |
| Crestron (D11, L11) | Specified Driver | DALI 0-10V | Crestron Zūm Wireless & SpaceBuilder | Enabled | Enabled | No | Wired | **eldoLED ECOdrive (DALI), Advance by Signify (0-10V)** |
| Enlighted Smart Sensor (ENL1) | SU-5E-IOT** | Enlighted RF | Enlighted | Integrated | Integrated | Yes | Wireless | **Advance by Signify**, Osram Optotronic |
| Legrand Wattstopper DLM (DLM1) | LMFC-011** | DLM | DLM | Enabled | Enabled | No | Wired | **Advance by Signify**, Osram Optotronic |
| Lutron EcoSystem (LH1) | LDE1** | EcoSystem | Quantum, Energi Savr Node, Energi TriPak | Enabled | Enabled | No | Wired | **Lutron Hi-Lume** |
| Osram CLM for ENCELIUM systems (CLM1) | ZBHA-CLM** | ZigBee HA | Osram ENCELIUM & ENCELIUM EDGE | Enabled | Enabled | No | Wireless | **Osram Optotronic** |
| Osram CLM for ZigBee Wireless Networks (CLMZ1) | ZBHA-CLM** | ZigBee HA | Daintree Networks & open ZigBee Networks | Enabled | Enabled | No | Wireless | **Osram Optotronic** |

*Not all compatible networks may be listed. **For performance data and additional control system details please visit the connected solutions manufacturer websites. Primary drivers are listed in **bold**. To specify a particular driver please consult factory.
†Controls systems supplied by others.

# Ordering Guide

**Linear Circuitry, Zones & Factory Options**

FOCAL POINT®

## HOW TO USE THIS GUIDE

Fill out the worksheet on the following page to specify your requirements for circuitry, zones, and factory options.
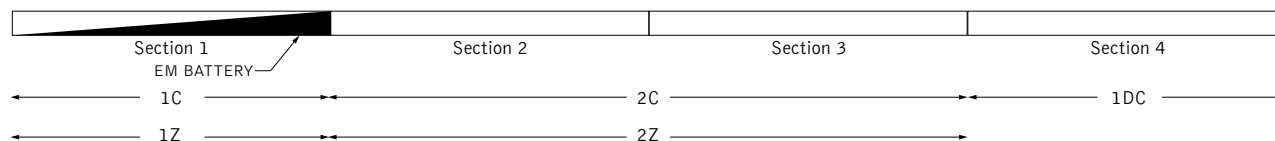
Refer to the run chart for standard run configurations, consult factory for custom configurations.

Complete the Totals / Ordering Codes at the bottom of the worksheet and add to your ordering logic on the cut sheet.

Submit the worksheet along with your order.

**TOTAL RUN LENGTH:** _____32ft_____     **JOB NAME:** _____     **FIXTURE TYPE:** _____

| EXAMPLE | HOUSING SECTION | SECTION LENGTH | SHARED ELECTRICAL FEED, NORMAL POWER | | | FACTORY OPTIONS | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | SEPARATE ELECTRICAL FEEDS | | | EM |
| | | | SWITCHING CIRCUIT | DIMMING ZONE | DAYLIGHT ZONE | DAYLIGHT CIRCUIT | EMERGENCY CIRCUIT | ECD | |
| | 1 | 8 | 1C | 1Z | | | | | 1EM |
| | 2 | 8 | 2C | 2Z | | | | | |
| | 3 | 8 | 2C | 2Z | | | | | |
| | 4 | 8 | | | | 1DC | | | |
| | **Totals / Ordering Codes** | | **2C** | **2Z** | | **1DC** | | | **1EM** |

ORDERING: FSM4L-FL-625LF-35K- **2C2Z** -UNV-LD1-G2- **1DC-1EM** -WH-32ft

| Section 1 | Section 2 | Section 3 | Section 4 |

EM BATTERY

1C — 2C — 1DC

1Z — 2Z

---

### KEY

**C = Switching Circuit**
Switched Hot / Shared Neutral

**Z = Dimming Zone**
Dimming Control Wires

**DL = Daylight Zone**
Daylight Dimming Control Wires

**DC = Daylight Circuit**
Switched Hot / Separate Neutral

**EC = Emergency Circuit**
Switched Hot / Separate Neutral

**EM = Emergency Battery**
Unswitched Hot / Shared Neutral

**ECD = Emergency Control Device**
Unswitched Hot / Separate Neutral

### DEFAULTS

- Zones and Factory Options illuminate entire sections from 4' to 8' in length.
- One shared or isolated circuit and zone required per housing section.
- Limit of one EM or ECD per housing section.
- Additional electrical feed required for applications greater than three shared circuits and zones.
- Each DC, EC and ECD require an additional electrical feed.
- ECD not available in the same housing section as EC.
- Longer lead times and additional pricing may apply for custom run configurations.

### CUSTOM LENGTHS

- If partial illumination of emergency or daylight section is required, indicate in ordering guide and add "partial illumination" in Order Notes. Drawing required.
- Engineering validation required, longer lead times may apply.

# Ordering Guide Worksheet

**Linear Circuitry, Zones & Factory Options**

FOCAL POINT®

**TOTAL RUN LENGTH:** _____  **JOB NAME:** _____  **FIXTURE TYPE:** _____

| HOUSING SECTION | SECTION LENGTH | SHARED ELECTRICAL FEED, NORMAL POWER | | | FACTORY OPTIONS | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | SEPARATE ELECTRICAL FEEDS | | | |
| | | SWITCHING CIRCUIT | DIMMING ZONE | DAYLIGHT ZONE | DAYLIGHT CIRCUIT | EMERGENCY CIRCUIT | ECD | EM |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| **Totals / Ordering Codes** | | | | | | | | |

Combine to create Circuits & Zones ordering code

Enter as individual Factory Options

## RUN CHART

| Run length (ft) | Housing Configuration Section Lengths | Run length (ft) | Housing Configuration Section Lengths | Run length (ft) | Housing Configuration Section Lengths | Run length (ft) | Housing Configuration Section Lengths |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 5 + 4 | 21 | 8 + 8 + 5 | 33 | 8 + 8 + 8 + 5 + 4 | 45 | 8 + 8 + 8 + 8 + 8 + 5 |
| 10 | 6 + 4 | 22 | 8 + 8 + 6 | 34 | 8 + 8 + 8 + 6 + 4 | 46 | 8 + 8 + 8 + 8 + 8 + 6 |
| 11 | 7 + 4 | 23 | 8 + 8 + 7 | 35 | 8 + 8 + 8 + 7 + 4 | 47 | 8 + 8 + 8 + 8 + 8 + 7 |
| 12 | 8 + 4 | 24 | 8 + 8 + 8 | 36 | 8 + 8 + 8 + 8 + 4 | 48 | 8 + 8 + 8 + 8 + 8 + 8 |
| 13 | 8 + 5 | 25 | 8 + 8 + 5 + 4 | 37 | 8 + 8 + 8 + 8 + 5 | | |
| 14 | 8 + 6 | 26 | 8 + 8 + 6 + 4 | 38 | 8 + 8 + 8 + 8 + 6 | | |
| 15 | 8 + 7 | 27 | 8 + 8 + 7 + 4 | 39 | 8 + 8 + 8 + 8 + 7 | | |
| 16 | 8 + 8 | 28 | 8 + 8 + 8 + 4 | 40 | 8 + 8 + 8 + 8 + 8 | | |
| 17 | 8 + 5 + 4 | 29 | 8 + 8 + 8 + 5 | 41 | 8 + 8 + 8 + 8 + 5 + 4 | | |
| 18 | 8 + 6 + 4 | 30 | 8 + 8 + 8 + 6 | 42 | 8 + 8 + 8 + 8 + 6 + 4 | | |
| 19 | 8 + 7 + 4 | 31 | 8 + 8 + 8 + 7 | 43 | 8 + 8 + 8 + 8 + 7 + 4 | | |
| 20 | 8 + 8 + 4 | 32 | 8 + 8 + 8 + 8 | 44 | 8 + 8 + 8 + 8 + 8 + 4 | | |

Standard run configurations, consult factory for custom configurations.