

# JUNO®

## FIREWALL™ LED Downlight Series

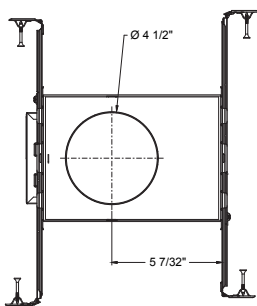
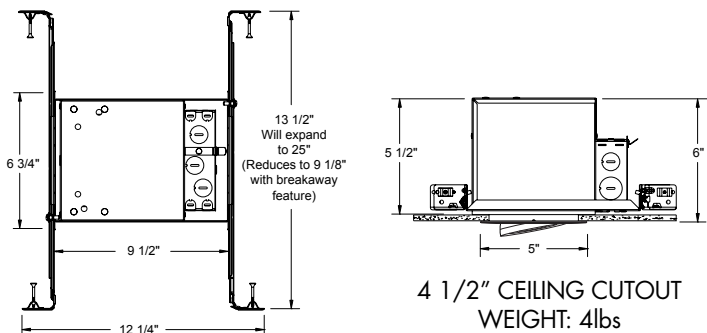
### 4" Fire-Rated Gimbal LED Downlight

### New Construction

#### IC1ALEDFW Series



#### Dimensions



For use with standard Juno trims:

440LED trim module



|                |
|----------------|
| Project:       |
| Fixture Type:  |
| Location:      |
| Contact/Phone: |

#### Product Features

Dedicated small aperture 4" LED fire-rated downlight solution with accent light engine trim module

Patent pending integrated low smoke intumescent barrier

- Eliminates the need for installers to build additional boxes around fixtures to meet fire ratings
- Provides protection against the spread of heat and flames into the ceiling cavity for 1 hour or 2 hour fire ratings
- Reduces sound transmission between floors

Easy installation and servicing

- Low profile integrated LED downlight less than 6" in height
- Easy to handle compact size weighing only 4 lbs
- Installs into wood joists with Real Nail® 3 bar hangers

#### Applications

- Residential and commercial applications including multi-family, hotels, assisted living, dormitories and other multi-level construction
- Shallow plenum, new construction
- IC rated - for direct contact with insulation

#### Fire Resistance Specifications:

- Conforms to UL263, ASTM STD E119 and CAN/ULC-S101 for US and Canadian installations
- May be used in fire resistance floor-ceiling and roof-ceiling designs per UL Fire Classified Directories CDHW and CDHW7
- 1 hour fire rated floor/ceiling and roof/ceiling gypsum assembly per UL Design No. L500 & P500
- 2 hour fire rated floor/ceiling gypsum assembly per UL Design No. L500, L505, L511, L536, L538, L541, L556, L577, M500, M510, M521 & M543

#### Performance

|                       |                                    |
|-----------------------|------------------------------------|
| Delivered Lumens      | up to 700L                         |
| LED Color Temperature | 27K, 30K, 35K, 40K                 |
| CRI                   | 90+                                |
| Voltage               | Dedicated 120V or MVOLT (120-277V) |
| Dimming               | Forward/Reverse Phase or 0-10V     |
| Optics                | Spot, Narrow Flood or Flood        |



# FIREWALL™ LED Downlight Series

## 4" Fire-Rated Gimbal LED Downlight New Construction



### ORDERING INFORMATION

#### 4" Housings

Example: IC1ALEDFW 06LM 120V FRPC

| Series  | Generation                  | Lumens                         | Voltage/Driver   |
|---|-----------------------------|--------------------------------|--|
| <b>IC1ALEDFW</b> 4" LED Fire-rated IC New Construction Gimbal | <b>G4N</b> Generation 4 New | <b>06LM</b> 600 Nominal Lumens | <b>120 FRPC</b> 120V Forward/Reverse Phase Cut, 5% dim<br><b>MVOLT ZT10</b> Multi-Volt (120-277), 0-10V, 10% dim<br><b>MVOLT ZT1</b> Multi-Volt (120-277), 0-10V, 1% dim<br><b>MVOLT EZ10</b> Multi-Volt (120-277), eldoLED 0-10V, 10% dim<br><b>MVOLT EZ1</b> Multi-Volt (120-277), eldoLED 0-10V, 1% dim |

### IC1ALEDFW - Compatible Trims

#### 440LED Trim Module

Example: 440LED G4N 06LM 27K 90CRI WH

| Series                               | Generation                  | Lumens                         | Color Temperature  | CRI                  | Trim Finish  |
|--------------------------------------|-----------------------------|--------------------------------|--|----------------------|--|
| <b>440LED</b> 4" LED Adjustable Trim | <b>G4N</b> Generation 4 New | <b>06LM</b> 600 Nominal Lumens | <b>27K</b> 2700K<br><b>30K</b> 3000K<br><b>35K</b> 3500K<br><b>40K</b> 4000K | <b>90CRI</b> 90+ CRI | <b>BL</b> Black<br><b>SC</b> Satin Chrome<br><b>WH</b> White |



A+ Capable options indicated by this color background



# FIREWALL™ LED Downlight Series

4" Fire-Rated Gimbal LED Downlight  
New Construction

## Specifications

### 440LED Light Engine

LED array attached to die cast trim provides superior heat transfer to ensure long life of the LED • Replaceable light engine incorporates the latest generation, high lumen output LED array • LEDs are binned within a 3-step MacAdam Ellipse exceeding ENERGY STAR® requirements for superior fixture to fixture color uniformity • 2700K, 3000K, 3500K, or 4000K color temperatures available • 90 CRI minimum • 440LED G4N Light engine module features a plug-in connector

### 440LED Optical System

Three field interchangeable, TIR optics available in 18°, 30° and 40° beam angles • Light engine trim module is supplied with a 30° optic installed • Module can accommodate one 2-inch diameter beam control lens or filter • Gimbal provides up to 35° tilt adjustment.

### LED Driver

Driver choice of dedicated 120 volt (120) driver or universal voltage drivers that accommodate input voltages from 120-277 volts AC at 50/60Hz • Power factor > 0.9 at 120V input • 120 volt only driver is dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage wall box dimmers • Universal voltage drivers are dimmable with the use of most 0-10V wall box dimmers • For a list of compatible dimmers, see [JUNOICLED-DIM](#) • Easily accessible from below the ceiling via patent pending integrated intumescent flaps.

### Housing

Designed for use in IC (insulated ceiling) or non-IC construction • Powder coated steel housing sealed for Air-Loc® compliance • Integrated patent pending continuous single layer low smoke intumescent barrier ships assembled in housing for fire resistance • Housing is vertically adjustable to accommodate up to a 1 ½" ceiling thickness

### Junction Box

Pre-wired junction box provided with (6) ½" and (1) ¾" knockouts, (4) knockouts for 12/2 or 14/2 NM cable and ground wire • UL listed and cUL listed for through-branch wiring, maximum of 6 #12 branch circuit conductors • Junction box provided with removable access plates • Knock-outs equipped with pryout slots • Quick connect electrical connectors supplied as standard for fast, secure installation.

### Mounting Frame

22-gauge die-formed galvanized steel mounting frame • Rough-in section (junction box, mounting frame, housing and bar hangers) fully assembled for ease of installation • Pre-installed flame resistant Air-Loc gasket applied to frame

### Real Nail 3 Bar Hangers

Patented (US Patent D552,969) Real Nail® 3 bar hangers: telescoping system permits quick placement of housing any where within 24" O.C. joists • Includes removable nail for repositioning of fixture in wood joist construction

### Certifications

ENERGY STAR® Certified • Certified to the high efficacy requirements of California T24 JA8-2016 • UL listed for U.S. and Canada through-branch wiring, damp locations • UL and cUL • Conforms to UL 263, ASTM STD E119 and CAN/ULC-S101 • May be used in fire resistance floor-ceiling and roof-ceiling designs per UL Fire Classified Directories CDHW and CDHW7 • ASTM E283 certified Air-Loc

### Life

LED housing is designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

**Note:** Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

## ELECTRICAL DATA

### Dedicated 120V Only Driver Option (120 FRPC)

|                       | 120V   |
|-----------------------|--|
| Input Power           | 8.75W (+/-5%)                                    |
| Input Current - Max   | 0.08A  |
| Frequency             | 50/60Hz  |
| EMI/RFI               | FCC Title 47 CFR, Part 15, Class B (residential) |
| Minimum starting temp | -40°C  |

## ELECTRICAL DATA

### Universal Voltage

|                       | MVOLT EZ10 and EZ1                               |  | MVOLT ZT10 and ZT1                               |  |
|-----------------------|--|--|--|--|
|                       | 120V   | 277V   | 120V   | 277V   |
| Input Power           | 8.1W (+/-5%)                                     | 8.8W (+/-5%)                                     | 8.1W (+/-5%)                                     | 8.8W (+/-5%)                                     |
| Input Current - Max   | 0.07A  | 0.03A  | 0.07A  | 0.03A  |
| Frequency             | 50/60Hz  | 50/60Hz  | 50/60Hz  | 50/60Hz  |
| EMI/RFI               | FCC Title 47 CFR, Part 15, Class B (residential) | FCC Title 47 CFR, Part 15, Class B (residential) | FCC Title 47 CFR, Part 15, Class B (residential) | FCC Title 47 CFR, Part 15, Class B (residential) |
| Minimum starting temp | -20°C  | -20°C  | -20°C  | -20°C  |



# FIREWALL™ LED Downlight Series

## 4" Fire-Rated Gimbal LED Downlight New Construction

### PHOTOMETRICS

#### Distribution Curve

#### Distribution Data

#### Coefficient of Utilization

#### Illuminance Data for Single Luminaire

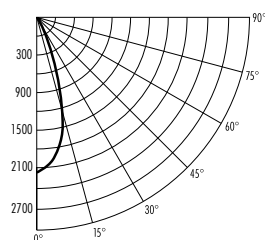
#### PHOTOMETRIC REPORT

Test Report #: PT10161204

Catalog No: ICTALED 440LED G4N O6LM  
30K 120 BL, 30° Narrow Flood Optic

Luminaire Spacing Criterion: 0.5

Luminaire LPW: 83



#### CANDLEPOWER DISTRIBUTION (Candelas)

| Degrees Vertical | 0°   |
|------------------|------|
| 0                | 2182 |
| 5                | 2085 |
| 15               | 1243 |
| 25               | 208  |
| 35               | 54   |
| 45               | 18   |
| 55               | 7    |
| 65               | 2    |
| 75               | 0    |
| 85               | 0    |
| 90               | 0    |

Multiplier:

|            |            |
|------------|------------|
| 27K - 0.96 | 35K - 1.03 |
| 30K - 1.00 | 40K - 1.06 |

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60'x60' room)

Ceiling 80%, Wall 50%, Floor 20%

| Spacing | RCR1 | RCR3 | RCR5 |
|---------|------|------|------|
| 4.0'    | 49   | 44   | 40   |
| 5.0'    | 31   | 28   | 26   |
| 6.0'    | 22   | 20   | 18   |
| 7.0'    | 18   | 16   | 14   |
| 8.0'    | 14   | 12   | 11   |
| 9.0'    | 11   | 10   | 9    |
| 10.0'   | 8    | 7    | 6    |

#### ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp | %Fixture |
|---------|--------|-------|----------|
| 0 - 30° | 628    | N/A   | 91.6     |
| 0 - 40° | 663    | N/A   | 96.7     |
| 0 - 60° | 684    | N/A   | 99.7     |
| 0 - 90° | 686    | N/A   | 100.0    |

#### INITIAL FOOTCANDLES (One Unit, 8.2W , 32.2° Beam)

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Beam Diameter |
|--------------------------------------|-------------------------|---------------|
| 4                                    | 136.4                   | 2.3'          |
| 6                                    | 60.6                    | 3.5'          |
| 8                                    | 34.1                    | 4.6'          |
| 10                                   | 21.8                    | 5.8'          |

#### LUMINANCE (Average cd/m²)

| Degrees | Average Luminance |
|---------|-------------------|
| 45      | 13144             |
| 55      | 5763              |
| 65      | 2073              |
| 75      | 0                 |
| 85      | 0                 |

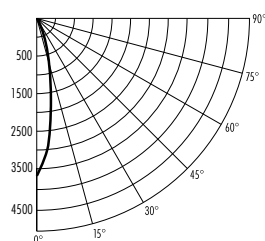
#### PHOTOMETRIC REPORT

Test Report #: PT10161205

Catalog No: ICTALED 440LED G4N O6LM  
30K 120 BL, 18° Spot Optic

Luminaire Spacing Criterion: 0.3

Luminaire LPW: 82



#### CANDLEPOWER DISTRIBUTION (Candelas)

| Degrees Vertical | 0°   |
|------------------|------|
| 0                | 3710 |
| 5                | 3053 |
| 15               | 873  |
| 25               | 226  |
| 35               | 59   |
| 45               | 22   |
| 55               | 9    |
| 65               | 3    |
| 75               | 0    |
| 85               | 0    |
| 90               | 0    |

Multiplier:

|            |            |
|------------|------------|
| 27K - 0.96 | 35K - 1.03 |
| 30K - 1.00 | 40K - 1.06 |

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60'x60' room)

Ceiling 80%, Wall 50%, Floor 20%

| Spacing | RCR1 | RCR3 | RCR5 |
|---------|------|------|------|
| 4.0'    | 48   | 43   | 40   |
| 5.0'    | 31   | 28   | 26   |
| 6.0'    | 21   | 19   | 18   |
| 7.0'    | 17   | 16   | 14   |
| 8.0'    | 14   | 12   | 11   |
| 9.0'    | 10   | 9    | 9    |
| 10.0'   | 8    | 7    | 6    |

#### ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp | %Fixture |
|---------|--------|-------|----------|
| 0 - 30° | 608    | N/A   | 89.9     |
| 0 - 40° | 647    | N/A   | 95.7     |
| 0 - 60° | 673    | N/A   | 99.5     |
| 0 - 90° | 676    | N/A   | 100.0    |

#### INITIAL FOOTCANDLES (One Unit, 8.2W , 19.4° Beam)

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Beam Diameter |
|--------------------------------------|-------------------------|---------------|
| 4                                    | 231.9                   | 1.4'          |
| 6                                    | 103.1                   | 2.1'          |
| 8                                    | 58.0                    | 2.7'          |
| 10                                   | 37.1                    | 3.4'          |

#### LUMINANCE (Average cd/m²)

| Degrees | Average Luminance |
|---------|-------------------|
| 45      | 15744             |
| 55      | 7966              |
| 65      | 3719              |
| 75      | 85                |
| 85      | 0                 |

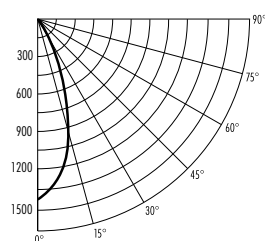
#### PHOTOMETRIC REPORT

Test Report #: PT10161206

Catalog No: ICTALED 440LED G4N O6LM  
30K 120 BL, 40° Flood Optic

Luminaire Spacing Criterion: 0.6

Luminaire LPW: 84



#### CANDLEPOWER DISTRIBUTION (Candelas)

| Degrees Vertical | 0°   |
|------------------|------|
| 0                | 1410 |
| 5                | 1353 |
| 15               | 963  |
| 25               | 430  |
| 35               | 114  |
| 45               | 30   |
| 55               | 9    |
| 65               | 2    |
| 75               | 0    |
| 85               | 0    |
| 90               | 0    |

Multiplier:

|            |            |
|------------|------------|
| 27K - 0.96 | 35K - 1.03 |
| 30K - 1.00 | 40K - 1.06 |

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60'x60' room)

Ceiling 80%, Wall 50%, Floor 20%

| Spacing | RCR1 | RCR3 | RCR5 |
|---------|------|------|------|
| 4.0'    | 49   | 43   | 39   |
| 5.0'    | 31   | 28   | 25   |
| 6.0'    | 22   | 19   | 17   |
| 7.0'    | 18   | 16   | 14   |
| 8.0'    | 14   | 12   | 11   |
| 9.0'    | 11   | 9    | 8    |
| 10.0'   | 8    | 7    | 6    |

#### ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp | %Fixture |
|---------|--------|-------|----------|
| 0 - 30° | 583    | N/A   | 84.0     |
| 0 - 40° | 659    | N/A   | 94.9     |
| 0 - 60° | 691    | N/A   | 99.6     |
| 0 - 90° | 694    | N/A   | 100.0    |

#### INITIAL FOOTCANDLES (One Unit, 8.2W , 39.2° Beam)

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Beam Diameter |
|--------------------------------------|-------------------------|---------------|
| 4                                    | 88.1                    | 2.8'          |
| 6                                    | 39.2                    | 4.3'          |
| 8                                    | 22.0                    | 5.7'          |
| 10                                   | 14.1                    | 7.1'          |

#### LUMINANCE (Average cd/m²)

| Degrees | Average Luminance |
|---------|-------------------|
| 45      | 21483             |
| 55      | 7772              |
| 65      | 2704              |
| 75      | 134               |
| 85      | 0                 |

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.



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# FIREWALL™ LED Downlight Series

## 4" Fire-Rated Gimbal LED Downlight

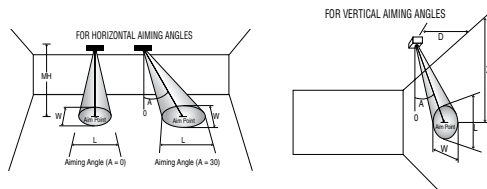
### New Construction

### PHOTOMETRICS

**CBCP** • Centerbeam candlepower

**FC** • Footcandles at beam center (aim point)

In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°).



Horizontal Aiming Angles

Vertical Aiming Angles



| Beam Type                      | Beam Spread° | Rated Life | CBCP | 0° |     |     | 30° |     |     | 30° |   |     |      |      |     |
|--------------------------------|--------------|------------|------|----|-----|-----|-----|-----|-----|-----|---|-----|------|------|-----|
|                                |              |            |      | MH | FC  | L   | W   | FC  | L   | W   | D | FC  | X    | L    | W   |
| IC1ALED G4N Flood Optic        | 40°          | 50000      | 1410 | 3  | 157 | 2.2 | 2.2 | 102 | 3.0 | 2.5 | 1 | 176 | 1.7  | 4.8  | 1.5 |
|                                |              |            |      | 4  | 88  | 2.9 | 2.9 | 57  | 4.1 | 3.4 | 2 | 44  | 3.5  | 9.7  | 2.9 |
|                                |              |            |      | 5  | 56  | 3.6 | 3.6 | 37  | 5.1 | 4.2 | 3 | 20  | 5.2  | 14.5 | 4.4 |
|                                |              |            |      | 6  | 39  | 4.4 | 4.4 | 25  | 6.1 | 5.0 | 4 | 11  | 6.9  | 19.3 | 5.8 |
|                                |              |            |      | 7  | 29  | 5.1 | 5.1 | 19  | 7.1 | 5.9 | 5 | 7   | 8.7  | 24.2 | 7.3 |
| IC1ALED G4N Narrow Flood Optic | 30°          | 50000      | 2182 | 3  | 242 | 1.6 | 1.6 | 157 | 2.2 | 1.9 | 1 | 273 | 1.7  | 2.7  | 1.1 |
|                                |              |            |      | 4  | 136 | 2.1 | 2.1 | 89  | 2.9 | 2.5 | 2 | 68  | 3.5  | 5.5  | 2.1 |
|                                |              |            |      | 5  | 87  | 2.7 | 2.7 | 57  | 3.7 | 3.1 | 3 | 30  | 5.2  | 8.2  | 3.2 |
|                                |              |            |      | 6  | 61  | 3.2 | 3.2 | 39  | 4.4 | 3.7 | 4 | 17  | 6.9  | 10.9 | 4.3 |
|                                |              |            |      | 7  | 45  | 3.8 | 3.8 | 29  | 5.1 | 4.3 | 5 | 11  | 8.7  | 13.7 | 5.4 |
| IC1ALED G4N Spot Optic         | 18°          | 50000      | 3710 | 4  | 232 | 1.3 | 1.3 | 151 | 1.7 | 1.5 | 2 | 116 | 3.5  | 2.7  | 1.3 |
|                                |              |            |      | 5  | 148 | 1.6 | 1.6 | 96  | 2.1 | 1.8 | 3 | 52  | 5.2  | 4.1  | 1.9 |
|                                |              |            |      | 6  | 103 | 1.9 | 1.9 | 67  | 2.6 | 2.2 | 4 | 29  | 6.9  | 5.5  | 2.5 |
|                                |              |            |      | 7  | 76  | 2.2 | 2.2 | 49  | 3.0 | 2.6 | 5 | 19  | 8.7  | 6.9  | 3.2 |
|                                |              |            |      | 8  | 58  | 2.5 | 2.5 | 38  | 3.4 | 2.9 | 6 | 13  | 10.4 | 8.2  | 3.8 |

For 2700K fixtures, use 0.96 multiplier; for 3000K fixtures, use 1.00 multiplier; for 3500K fixtures, use 1.03 multiplier; for 4000K fixtures, use 1.06 multiplier.