

# FIREWALL™ LED Downlight Series 4" Fire-Rated Gimbal LED Downlight

New Construction

# **IC1ALEDFW Series**





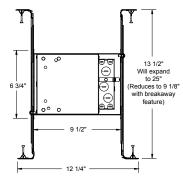


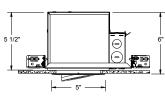


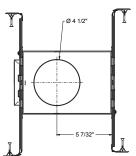




# **Dimensions**







4 1/2" CEILING CUTOUT WEIGHT: 4lbs

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 servicability

- 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**

	1
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

For use with standard Juno trims:

440LED trim module





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## **ORDERING INFORMATION**

#### 4" Housings

Example: IC1ALEDFW 06LM 120V FRPC

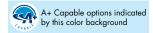
Series		Genera	ıtion	Lumens		Voltage/Drive	r
IC1ALEDFW	4" LED Fire-rated IC New Construction Gimbal	G4N	Generation 4 New	06LM	600 Nominal Lumens	120 FRPC	120V Forward/Reverse Phase Cut, 5% dim
						MVOLT ZT10	Multi-Volt (120-277), 0-10V, 10% dim
						MVOLT ZT1	Multi-Volt (120-277), 0-10V, 1% dim
						MVOLT EZ10	Multi-Volt (120-277), eldoLED 0-10V, 10% dim
						MVOLT EZ1	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
440LED	4" LED Adjustable Trim	G4N Generation 4 New	<b>06LM</b> 600 Nominal Lumens	<b>27K</b> 2700K	<b>90CRI</b> 90+ CRI	BRZ Bronze
				<b>30K</b> 3000K		BL Black
				<b>35K</b> 3500K		SC Satin Chrome
				<b>40K</b> 4000K		WH White





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# **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.

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 1/2" 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

## **Real Nail 3 Bar Hangers**

Patented (US Patent D552,969) Real Nail® 3 bar hangers: telescoping system permits guick 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 ČAN/ULC-S101 • May be used in fire resistance floor-ceiling and roofceiling designs per UL Fire Classified Directories CDHW and CDHW7 ASTM E283 certified Air-Loc

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

All values are design or typical values, measured under laboratory conditions at 25  $^{\circ}\text{C}.$ 

Specifications subject to change without notice.

## **ELECTRICAL DATA**

# Dedicated 120V Only Driver Option (120 FRPC)

120V	
8.75W (+/-5%)	
A80.0	
50/60Hz	,
FCC Title 47 CFR, Part 15,	
Class B (residential)	
-40°C	
	8.75W (+/-5%) 0.08A 50/60Hz FCC Title 47 CFR, Part 15, Class B (residential)

## **ELECTRICAL DATA**

# Universal Voltage

Omitorsan Tomag	,-			
	MVOLT EZ	10 and EZ1	MVOLT ZT	10 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
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# **PHOTOMETRICS**

**Distribution Curve** 

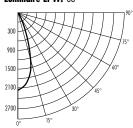
**Distribution Data** 

Coefficient of Utilization

Illuminance Data for Single Luminaire

#### PHOTOMETRIC REPORT

**Test Report #:** PT10161204 Cataloa No: IC1ALED 440LED G4N 06LM 30K 120 BL, 30° Narrow Flood Optic **Luminaire Spacing Criterion: 0.5** Luminaire LPW: 83



# CANDLEPOWER DISTRIBUTION

(Candela:	5)
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'

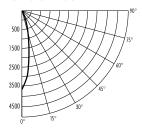
LUMINANCE (Average cd/m²)

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

#### PHOTOMETRIC REPORT

Test Report #: PT10161205 Catalog No: IC1ALED 440LED G4N 06LM 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:	

# **AVERAGE INITIAL FOOTCANDLES**

Multiple Units (Square Array, 60'x60' room) Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR1 RCR3							
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						
10.01	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)

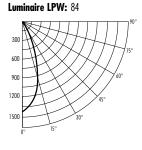
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	231.9	1.4′
6	103.1	2.1′
8	58.0	2.7'
10	37.1	3.4'

LUMINANCE (Average cd/m²)

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

#### PHOTOMETRIC REPORT

**Test Report #:** PT10161206 Catalog No: IC1ALED 440LED G4N 06LM 30K 120 BL, 40° Flood Optic Luminaire Spacing Criterion: 0.6



#### **CANDLEPOWER** DISTRIBUTION

35K - 1.03

40K - 1.06

27K - 0.96

30K - 1.00

#### 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
10.01	8	7	6

#### ZONAL LUMEN SUMMARY

LOITAL LOMEIT SOMMAKI										
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	1// 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.



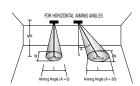


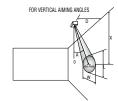
FIREWALL™ LED Downlight Series
4" Fire-Rated Gimbal LED Downlight
New Construction

# **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°).









3	0°	30°

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