

Project: \_\_\_\_\_

Fixture Type: \_\_\_\_\_

Location: \_\_\_\_\_

Contact/Phone: \_\_\_\_\_

# 4" IC AND TC 1000 LUMEN INTERNALLY ADJUSTABLE LED DOWNLIGHT NEW CONSTRUCTION

IC4AL, TC4AL (10LM) RECESSED HOUSING



ANGLE CUT TRIMS

## PRODUCT DESCRIPTION

Patent pending dedicated LED, Air-Loc® sealed new construction housing with integral internally adjustable light engine • Double wall, shallow housing construction • IC4AL series can be completely covered with insulation and installs in 2 x 6 construction • TC4AL series for use in non-insulated areas (If installed where insulation is present, the insulation must be pulled back 3" from all sides of the TC housing) • Fully sealed housing stops infiltration and exfiltration of air, reducing heating and cooling costs without the use of additional gaskets • LED housing is designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury, RoHS compliant
- Comparable light output to 75W incandescent

## PRODUCT SPECIFICATIONS

**LED Light Engine** LED array attached to cast aluminum sliding heatsink integrated directly with housing provides superior heat transfer to ensure long life of the LED • Replaceable light engine mounts directly to inner housing assembly and 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.

**Optics** Three field interchangeable, TIR optics available in 18°, 30° and 40° beam angles • Module can accommodate one 2-inch diameter beam control lens or filter • Adjustable light engine module provides up to 35° vertical adjustment and 360° rotation.

**Aesthetic Trim Selections** Aluminum angle-cut reflector in clear, black, pewter, white, haze and wheat haze • Shadow free, knife edge design blends seamlessly into ceiling.

**LED Driver** Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) driver that accommodates 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 driver is dimmable with the use of most 0-10V wall box dimmers • For a list of compatible dimmers, see [JUNOICLED-DIM](#).

**Life** Rated for 50,000 hours at 70% lumen maintenance.

**Labels** IC4AL is ENERGY STAR® certified • IC4AL is certified to the high efficacy requirements of California T24 JA8-2016 • UL listed for U.S. and Canada for through-branch wiring, damp locations • Union made • UL and cUL.

**Testing** All reports are based on published industry procedures; field performance may differ from laboratory performance.

Specifications subject to change without notice.

## HOUSING FEATURES

**Housing** IC4AL designed for use in IC (insulated ceiling) or non-IC construction • TC4AL designed for use in non-IC construction • Aluminum housing sealed for Air-Loc® compliance • Housing is vertically adjustable to accommodate up to a 1 1/2" ceiling thickness.

**Junction Box** Pre-wired junction box provided with (6) 1/2" and (1) 3/4" knockouts, (4) knockouts for 12/2 or 14/2 NM cable and ground wire • UL listed and cUL listed for through-branch wiring, maximum 4 #12 branch circuit conductors • Junction box provided with removable access plates • Knockouts equipped with pryout slots • Quick connect electrical connectors supplied as standard for fast, secure installation.

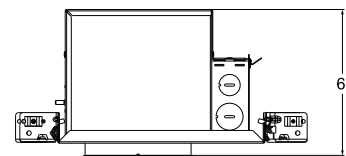
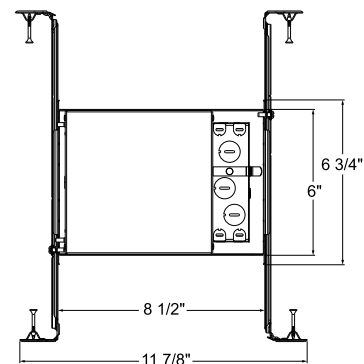
**Mounting Frame** 22-gauge die-formed galvanized steel mounting frame • Rough-in section (junction box, mounting frame, housing and bar hangers) fully assembled for ease of installation.

**Real Nail 3 Bar Hangers** Patented (US Patent D552,969)

Real Nail® 3 bar hangers: telescoping system permits quick placement of housing anywhere within 24" O.C. joists or suspended ceilings • Includes removable nail for repositioning of fixture in wood joist construction • Integral T-bar notch and clip for suspended ceilings.



## DIMENSIONS



4 1/2" CEILING CUTOUT

## ELECTRICAL DATA

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

Input Power	16.4W (+/-5%)	
Input Current	0.15A	
Frequency	50/60Hz	
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (Residential)	
Minimum starting temp	-25°C (-13°F)	

### Universal Voltage Driver (MVOLT ZT)

	120V	277V
Input Power	16.0W (+/-5%)	16.0W (+/-5%)
Input Current	0.15A	0.06A
Frequency	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class A (Commercial)	FCC Title 47 CFR, Part 15, Class A (Commercial)
Minimum starting temp	-20°C (-4°F)	-20°C (-4°F)

### Lutron Hi-Lume® LED Driver (MVOLT ECOS3)

	120V	277V
Input Power	16.4W (+/-5%)	16.6W (+/-5%)
Input Current	0.15A	0.07A
Frequency	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class A (Commercial)	FCC Title 47 CFR, Part 15, Class A (Commercial)
Minimum starting temp	0°C (32°F)	0°C (32°F)

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## IC4AL, TC4AL (10LM) RECESSED HOUSING ANGLE CUT TRIMS

**ORDERING INFORMATION** Housing and trim can be ordered together or separate, but will always ship separately.

**Example:** IC4AL 10LM 27K 90CRI FL 120 FRPC

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
<b>IC4AL</b> 4" LED Internally Adjustable New Const. IC Downlight	<b>10LM</b> 1000 Nominal Lumens	<b>27K</b> 2700K	<b>90CRI</b> 90+ CRI	<b>FL</b> Flood	<b>120</b> 120V	<b>FRPC</b> Forward/Reverse Phase Cut
		<b>30K</b> 3000K		<b>NFL</b> Narrow Flood		
		<b>35K</b> 3500K		<b>SP</b> Spot		
		<b>40K</b> 4000K				<b>ZT</b> 0 - 10V Dimming Driver

Notes: 120 must be ordered with FRPC. MVOLT must be ordered with ZT

**Example:** TC4AL 10LM 27K 90CRI FL MVOLT ECOS3

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
<b>TC4AL</b> 4" LED Internally Adjustable New Const. Non IC Downlight	<b>10LM</b> 1000 Nominal Lumens	<b>27K</b> 2700K	<b>90CRI</b> 90+ CRI	<b>FL</b> Flood	<b>MVOLT</b> Multi-Volt	<b>ECOS3</b> Lumen Hi - Lume A Series, 3-wire fluorescent controls & Lutron Ecosystem
		<b>30K</b> 3000K		<b>NFL</b> Narrow Flood		
		<b>35K</b> 3500K		<b>SP</b> Spot		
		<b>40K</b> 4000K				

TC4AL is not ENERGY STAR® or T24 compliant

### Trim/Description



<b>47L BWH</b>	4" Adjustable Angle Cut Cone Trim - Black Alzak® Cone, White Trim Ring
<b>47L CWH</b>	4" Adjustable Angle Cut Cone Trim - Clear Alzak® Cone, White Trim Ring
<b>47L HZWH</b>	4" Adjustable Angle Cut Cone Trim - Haze Cone, White Trim Ring
<b>47L PTSC</b>	4" Adjustable Angle Cut Cone Trim - Pewter Alzak® Cone, Satin Chrome Trim Ring
<b>47L WHZABZ</b>	4" Adjustable Angle Cut Cone Trim - Wheat Haze Cone, Classic Aged Bronze Trim Ring
<b>47L WHZWH</b>	4" Adjustable Angle Cut Cone Trim - Wheat Haze Cone, White Trim Ring
<b>47L WWH</b>	4" Adjustable Angle Cut Cone Trim - Glass White Cone, White Trim Ring

Trim Size: 5" O.D.

Alzak is a registered trademark of Alcoa Corp.

Note: In Canada when insulation is present, Type IC fixtures must be used.

### Accessories (ordered separately)

Catalog Number	Description
<b>CGF 200 MPINK</b>	Color Glass Filter - 2" Diameter - Medium Pink
<b>CGF 200 WRED</b>	Color Glass Filter - 2" Diameter - Warm Red
<b>CGF 200 DLTBLUE</b>	Color Glass Filter - 2" Diameter - Daylight Blue
<b>CGF 200 MBLU</b>	Color Glass Filter - 2" Diameter - Medium Blue
<b>CGF 200 MAMB</b>	Color Glass Filter - 2" Diameter - Medium Amber
<b>CGF 200 MGRN</b>	Color Glass Filter - 2" Diameter - Medium Green
<b>DGF 200 DRED</b>	Dichroic Glass Filter - 2" Diameter Red
<b>DGF 200 MGRN</b>	Dichroic Glass Filter - 2" Diameter Medium Green
<b>DGF 200 MBLU</b>	Dichroic Glass Filter - 2" Diameter Medium Blue
<b>DGF 200 DYEL</b>	Dichroic Glass Filter - 2" Diameter Yellow (Dichroic)
<b>DGF 200 MAGEN</b>	Dichroic Glass Filter - 2" Diameter Magenta
<b>DGF 200 CYAN</b>	Dichroic Glass Filter - 2" Diameter Cyan
<b>DCCF 200 HL4250</b>	Dichroic Color Correction Filter - 2" Diameter - Halogen - to - Daylight
<b>DIFF 200</b>	Diffusion Glass Lens - 2" Diameter
<b>UVF 200</b>	UV Filter Lens - 2" Diameter
<b>HCLBL 200</b>	Hexagonal Cell Louver - Black - 2" Diameter
<b>LSPREAD 200</b>	Linear Spread Glass Lens - 2" Diameter
<b>PRISM 200</b>	Prismatic Glass Lens - 2" Diameter
<b>TIR2 SPT</b>	TIR Optic - Spot
<b>TIR2 NFLD</b>	TIR Optic - Narrow Flood
<b>TIR2 FLD</b>	TIR Optic - Flood

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## IC4AL, TC4AL (10LM) RECESSED HOUSING ANGLE CUT TRIMS

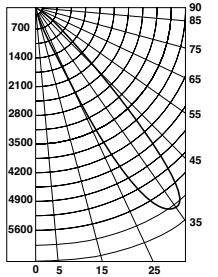
### PHOTOMETRICS

#### PHOTOMETRIC REPORT

**Test Report:** PT09153001R  
**Catalog No:** IC4AL 10LM 35K 90CRI  
 SP 120 FRPC with 47L HZWH and Spot Optic  
**Watts:** 16.4  
**Lumens:** 1077  
**Luminaire LPW:** 66

#### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	183	
5°	260	
10°	431	
15°	770	
20°	1320	
25°	2571	
30°	4811	
35°	6185	
40°	4549	
45°	2283	
50°	1123	
55°	656	
60°	225	
65°	54	
70°	20	
75°	7	
80°	1	
85°	0	
90°	0	

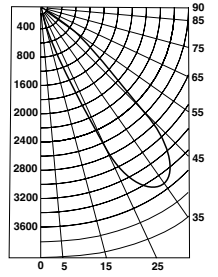


#### PHOTOMETRIC REPORT

**Test Report:** PT09152921R  
**Catalog No:** IC4AL 10LM 35K 90CRI  
 NFL 120 FRPC with 47L HZWH and Narrow Flood Optic  
**Watts:** 16.4  
**Lumens:** 1091  
**Luminaire LPW:** 67

#### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	177	
5°	268	
10°	400	
15°	756	
20°	1621	
25°	2700	
30°	3352	
35°	3554	
40°	3280	
45°	2600	
50°	1618	
55°	794	
60°	308	
65°	94	
70°	44	
75°	14	
80°	1	
85°	0	
90°	0	

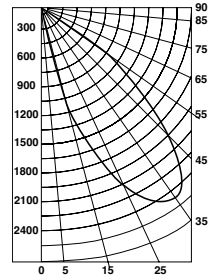


#### PHOTOMETRIC REPORT

**Test Report:** PT09152901R  
**Catalog No:** IC4AL 10LM 35K 90CRI  
 SP 120 FRPC with 47L HZWH and Flood Optic  
**Watts:** 16.4  
**Lumens:** 1126  
**Luminaire LPW:** 69

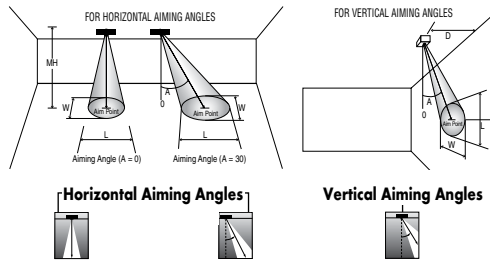
#### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	220	
5°	395	
10°	698	
15°	1120	
20°	1661	
25°	2171	
30°	2504	
35°	2591	
40°	2413	
45°	2023	
50°	1489	
55°	972	
60°	465	
65°	220	
70°	87	
75°	78	
80°	0	
85°	0	
90°	0	



**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°, 1.0 for 45°).



FIXTURE	Beam Type	Beam Spread°	CBCP	0°			30°			30°					
				MH	FC	L	W	FC	L	W	D	FC	X	L	W
IC4AL (10LM) LED, 3500K Spot	SP	18°	6185	4	387	1.3	1.3	251	1.7	1.5	2	193	3.5	2.7	1.3
				6	172	1.9	1.9	112	2.6	2.2	3	86	5.2	4.1	1.9
				8	97	2.5	2.5	63	3.4	2.9	4	48	6.9	5.5	2.5
				10	62	3.2	3.2	40	4.3	3.7	5	31	8.7	6.9	3.2
IC4AL (10LM) LED, 3500K Narrow Flood	NFL	30°	3554	4	222	2.1	2.1	144	2.9	2.5	2	111	3.5	5.5	2.1
				6	99	3.2	3.2	64	4.4	3.7	3	49	5.2	8.2	3.2
				8	56	4.3	4.3	36	5.9	5.0	4	28	6.9	10.9	4.3
				10	36	5.4	5.4	23	7.3	6.2	5	18	8.7	13.7	5.4
IC4AL (10LM) LED, 3500K Flood	FL	40°	2591	4	162	2.9	2.9	105	4.1	3.4	2	81	3.5	9.7	2.9
				6	72	4.4	4.4	47	6.1	5.0	3	36	5.2	14.5	4.4
				8	40	5.8	5.8	26	8.1	6.7	4	20	6.9	19.3	5.8
				10	26	7.3	7.3	17	10.2	8.4	5	13	8.7	24.2	7.3
				12	18	8.7	8.7	12	12.2	10.1	6	9	10.4	29.0	8.7

Multipliers: 27K - 0.93  
 30K - 0.96  
 35K - 1.00  
 40K - 1.03