

**JUNO**®

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

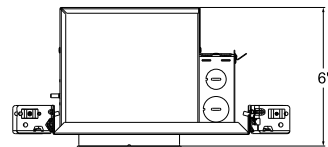
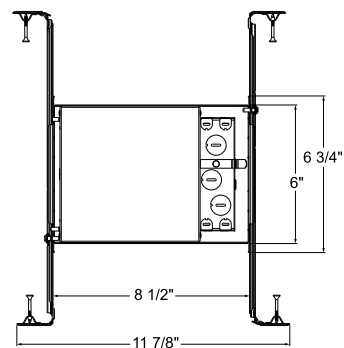
**Housing** IC4AL designed for use in IC (insulated ceiling) or non-IC construction • TC4AL designed for use in non-IC construction • Aluminum housing sealed for Air-Loc® compliance • Housing is vertically adjustable to accommodate up to a 1 1/2" ceiling thickness.

**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 ECOD)

	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)

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

## 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	Territory
IC4AL 4" LED Internally Adjustable New Const. IC Downlight	10LM 1000 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	120 120V MVOLT Multi-Volt (120-277V)	FRPC Forward/ Reverse Phase Cut	CP Chicago Plenum
		30K 3000K		NFL Narrow Flood		ZT 0 - 10V Dimming Driver	
		35K 3500K		SP Spot			
		40K 4000K					

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

Example: TC4AL 10LM 27K 90CRI FL MVOLT ECOD

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver	Territory
TC4AL 4" LED Internally Adjustable New Const. Non IC Downlight	10LM 1000 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	MVOLT Multi-Volt	ECOD Lutron Hi-Lume EcoSystem, 1% Dimming	CP Chicago Plenum
		30K 3000K		NFL Narrow Flood			
		35K 3500K		SP Spot			
		40K 4000K					

TC4AL is not ENERGY STAR® or T24 compliant

### Trim/Description



<b>47L BBL</b>	4" Adjustable Angle Cut Cone Trim - Black Alzak® Cone, Black Trim Ring
<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 WHZBRZ</b>	4" Adjustable Angle Cut Cone Trim - Wheat Haze Cone, 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 - Gloss 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 DLBLUE</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

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

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

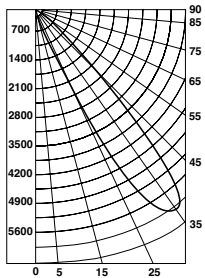
### PHOTOMETRICS

#### 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

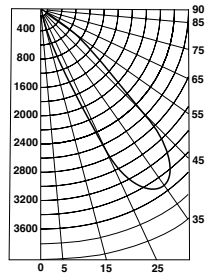


#### PHOTOMETRIC REPORT

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

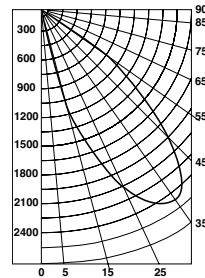


#### PHOTOMETRIC REPORT

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

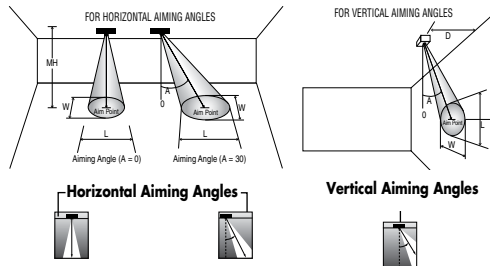
#### Candlepower Distribution (Candelas)

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
				12	43	3.8	3.8	28	5.1	4.4	6	21	10.4	8.2	3.8
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
				12	25	6.4	6.4	16	8.8	7.4	6	12	10.4	16.4	6.4
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