



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

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

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

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

# 4" IC AND TC 700 LUMEN INTERNALLY ADJUSTABLE LED DOWNLIGHT REMODEL

## IC4RAL, TC4RAL (07LM) RECESSED HOUSING SLOT ADJUSTABLE TRIMS

### PRODUCT DESCRIPTION

Patent pending dedicated LED, Air-Loc® remodel housing with integral internally adjustable light engine • IC4RAL series can be completely covered with insulation and installs in shallow 2 x 6 construction • TC4RAL 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) • Remodel housing for remodel application where back side of ceiling is not accessible • Installs through an opening in the ceiling from below • Secured in place by factory installed remodel springs • 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 65W 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** Adjustable slot aperture features a white trim ring • 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** UL listed for U.S. and Canada for 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.

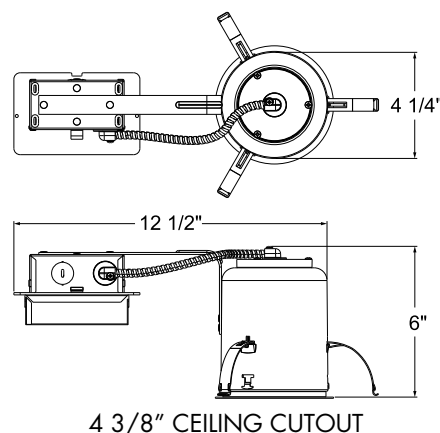
### HOUSING FEATURES

**Housing** IC4RAL designed for use in IC (insulated ceiling) or non-IC construction • TC4RAL 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 (5) 1/2" knockouts, (4) knockouts for 12/2 or 14/2 NM cable and ground wire • Junction box provided with removable access plates • Knockouts equipped with pryout slots • Quick connect electrical connectors supplied as standard for fast, secure installation.



### DIMENSIONS



### ELECTRICAL DATA

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

Input Power	10.5W (+/-5%)
Input Current	0.10A
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	10.0W (+/-5%)	10.0W (+/-5%)
Input Current	0.04A	0.09A
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	11.1W (+/-5%)	11.3W (+/-5%)
Input Current	0.10A	0.05A
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 700 LUMEN INTERNALLY ADJUSTABLE LED DOWNLIGHT REMODEL

IC4RAL (07LM), TC4RAL (07LM) RECESSED HOUSING  
**SLOT ADJUSTABLE TRIMS**

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

**Example:** IC4RAL 07LM 30K 90CRI FL 120 FRPC

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
<b>IC4RAL</b> 4" LED Internally Adjustable Remodel IC Downlight	<b>07LM</b> 700 Nominal Lumens	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>90CRI</b> 90+ CRI	<b>FL</b> Flood <b>NFL</b> Narrow Flood <b>SP</b> Spot	<b>120</b> 120V <b>MVOLT</b> Multi-Volt (120-277V)	<b>FRPC</b> Forward/ Reverse Phase Cut <b>ZT</b> 0 - 10V Dimming Driver

**Example:** TC4RAL 07LM 30K 90CRI FL MVOLT ECOS3

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

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
<b>TC4RAL</b> 4" LED Internally Adjustable Remodel Non IC Downlight	<b>07LM</b> 700 Nominal Lumens	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>90CRI</b> 90+ CRI	<b>FL</b> Flood <b>NFL</b> Narrow Flood <b>SP</b> Spot	<b>MVOLT</b> Multi-Volt	<b>ECOS3</b> Lumen Hi - Lume A Series, 3-wire fluorescent controls & Lutron Ecosystem

## Trim/Description



**45L WH** 4" Adjustable Slot Trim - White

Trim Size: 5" O.D.

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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IC4RAL (07LM), TC4RAL (07LM) RECESSED HOUSING  
SLOT ADJUSTABLE TRIMS

## PHOTOMETRIC REPORT

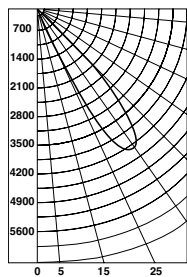
Test Report: PT09153005R

Catalog No: IC4AL 07LM 35K 90CR  
SP 120 FRPC with 45L WH and Spot Optic

Watts: 10.5

Lumens: 634

Luminaire LPW: 60



## Candlepower Distribution

(Candelas)

Degrees	Vertical	Candela
0°	44	
5°	59	
10°	136	
15°	400	
20°	832	
25°	1660	
30°	3163	
35°	4310	
40°	3368	
45°	1728	
50°	835	
55°	481	
60°	106	
65°	36	
70°	14	
75°	5	
80°	0	
85°	0	
90°	0	

## PHOTOMETRIC REPORT

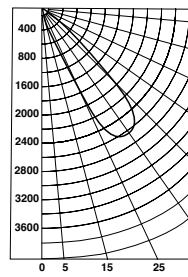
Test Report: PT09152925R

Catalog No: IC4AL 07LM 35K 90CR  
NFL 120 FRPC with 45L WH and Narrow Flood Optic

Watts: 10.5

Lumens: 648

Luminaire LPW: 62



## Candlepower Distribution

(Candelas)

Degrees	Vertical	Candela
0°	51	
5°	71	
10°	106	
15°	356	
20°	1068	
25°	1871	
30°	2346	
35°	2500	
40°	2329	
45°	1858	
50°	1164	
55°	554	
60°	160	
65°	65	
70°	29	
75°	10	
80°	1	
85°	0	
90°	0	

## PHOTOMETRIC REPORT

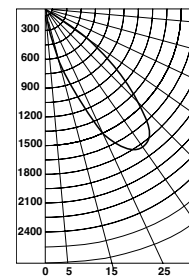
Test Report: PT09152905R

Catalog No: IC4AL 07LM 35K 90CR  
FL 120 FRPC with 45L WH and Flood Optic

Watts: 10.5

Lumens: 709

Luminaire LPW: 68



## Candlepower Distribution

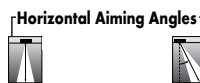
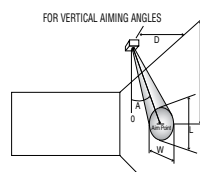
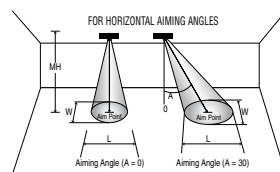
(Candelas)

Degrees	Vertical	Candela
0°	97	
5°	189	
10°	364	
15°	690	
20°	1121	
25°	1501	
30°	1759	
35°	1831	
40°	1714	
45°	1445	
50°	1069	
55°	670	
60°	309	
65°	156	
70°	62	
75°	15	
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°			30°		
				MH	FC	L	W	FC	L	W	D	FC	X	L	W
IC4AL (07LM) LED, 3500K Spot	SP	18°	4310	4	269	1.3	1.3	175	1.7	1.5	2	135	3.5	2.7	1.3
				6	120	1.9	1.9	78	2.6	2.2	3	60	5.2	4.1	1.9
				8	67	2.5	2.5	44	3.4	2.9	4	34	6.9	5.5	2.5
				10	43	3.2	3.2	28	4.3	3.7	5	22	8.7	6.9	3.2
				12	30	3.8	3.8	19	5.1	4.4	6	15	10.4	8.2	3.8
IC4AL (07LM) LED, 3500K Narrow Flood	NF	30°	2499	4	156	2.1	2.1	101	2.9	2.5	2	78	3.5	5.5	2.1
				6	69	3.2	3.2	45	4.4	3.7	3	35	5.2	8.2	3.2
				8	39	4.3	4.3	25	5.9	5.0	4	20	6.9	10.9	4.3
				10	25	5.4	5.4	16	7.3	6.2	5	12	8.7	13.7	5.4
				12	17	6.4	6.4	11	8.8	7.4	6	9	10.4	16.4	6.4
IC4AL (07LM) LED, 3500K Flood	FL	40°	1831	4	114	2.9	2.9	74	4.1	3.4	2	57	3.5	9.7	2.9
				6	51	4.4	4.4	33	6.1	5.0	3	25	5.2	14.5	4.4
				8	29	5.8	5.8	19	8.1	6.7	4	14	6.9	19.3	5.8
				10	18	7.3	7.3	12	10.2	8.4	5	9	8.7	24.2	7.3
				12	13	8.7	8.7	8	12.2	10.1	6	6	10.4	29.0	8.7

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