



Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

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

IC4RAL, TC4RAL (07LM) RECESSED HOUSING ANGLE CUT 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 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 ENERGY STAR® Certified • Certified to the high efficacy requirements of California T24 JA8-2016 • 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.

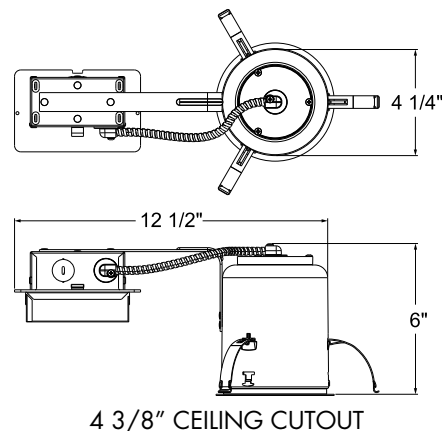
HOUSING FEATURES

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 ECOD)

	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)

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IC4RAL (07LM), TC4RAL (07LM) RECESSED HOUSING ANGLE CUT 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
IC4RAL 4" LED Internally Adjustable Remodel IC Downlight	07LM 700 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	120 120V	FRPC Forward/ Reverse Phase Cut
		30K 3000K		NFL Narrow Flood	MVOLT Multi-Volt (120-277V)	ZT 0 - 10V Dimming Driver
		35K 3500K		SP Spot		
		40K 4000K				

Example: TC4RAL 07LM 30K 90CRI FL MVOLT ECOD

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

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
TC4RAL 4" LED Internally Adjustable Remodel Non IC Downlight	07LM 700 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	MVOLT Multi-Volt	ECOD† Lutron Hi-Lume EcoSystem, 1% Dimming
		30K 3000K		NFL Narrow Flood		
		35K 3500K		SP Spot		
		40K 4000K				

†: ECOD driver not ENERGY STAR® certified

Trim/Description



47L BWH	4" Adjustable Angle Cut Coned Trim - Black Alzak® Cone, White Trim Ring
47L CWH	4" Adjustable Angle Cut Coned Trim - Clear Alzak® Cone, White Trim Ring
47L HZWH	4" Adjustable Angle Cut Coned Trim - Haze Cone, White Trim Ring
47L PTSC	4" Adjustable Angle Cut Coned Trim - Pewter Alzak® Cone, Satin Chrome Trim Ring
47L WHZBRZ	4" Adjustable Angle Cut Coned Trim - Wheat Haze Cone, Bronze Trim Ring
47L WHZWH	4" Adjustable Angle Cut Coned Trim - Wheat Haze Cone, White Trim Ring
47L WWH	4" Adjustable Angle Cut Coned 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
CGF 200 MPINK	Color Glass Filter - 2" Diameter - Medium Pink
CGF 200 WRED	Color Glass Filter - 2" Diameter - Warm Red
CGF 200 DLTBLUE	Color Glass Filter - 2" Diameter - Daylight Blue
CGF 200 MBLU	Color Glass Filter - 2" Diameter - Medium Blue
CGF 200 MAMB	Color Glass Filter - 2" Diameter - Medium Amber
CGF 200 MGRN	Color Glass Filter - 2" Diameter - Medium Green
DGF 200 DRED	Dichroic Glass Filter - 2" Diameter Red
DGF 200 MGRN	Dichroic Glass Filter - 2" Diameter Medium Green
DGF 200 MBLU	Dichroic Glass Filter - 2" Diameter Medium Blue
DGF 200 DYEL	Dichroic Glass Filter - 2" Diameter Yellow (Dichroic)
DGF 200 MAGEN	Dichroic Glass Filter - 2" Diameter Magenta
DGF 200 CYAN	Dichroic Glass Filter - 2" Diameter Cyan
DCCF 200 HL4250	Dichroic Color Correction Filter - 2" Diameter - Halogen - to - Daylight
DIFF 200	Diffusion Glass Lens - 2" Diameter
UVF 200	UV Filter Lens - 2" Diameter
HCLBL 200	Hexagonal Cell Louver - Black - 2" Diameter
LSPREAD 200	Linear Spread Glass Lens - 2" Diameter
PRISM 200	Prismatic Glass Lens - 2" Diameter
TIR2 SPT	TIR Optic - Spot
TIR2 NFLD	TIR Optic - Narrow Flood
TIR2 FLD	TIR Optic - Flood

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ANGLE CUT TRIMS

PHOTOMETRIC REPORT

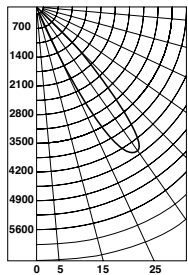
Test Report: PT09153001R

Catalog No: IC4AL 07LM 35K 90CRI
SP 120 FRPC with 47L HZWH and Spot
Optic

Watts: 10.5

Lumens: 799

Luminaire LPW: 76



Candlepower Distribution

(Candelas)

Degrees Vertical	Candela
0°	135
5°	193
10°	320
15°	571
20°	979
25°	1908
30°	3570
35°	4589
40°	3376
45°	1694
50°	833
55°	486
60°	167
65°	40
70°	15
75°	5
80°	0
85°	0
90°	0

PHOTOMETRIC REPORT

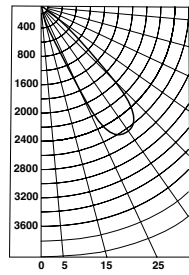
Test Report: PT09152921R

Catalog No: IC4AL 07LM 35K 90CRI
NFL 120 FRPC with 47L HZWH and
Narrow Flood Optic

Watts: 10.5

Lumens: 809

Luminaire LPW: 77



Candlepower Distribution

(Candelas)

Degrees Vertical	Candela
0°	131
5°	199
10°	297
15°	561
20°	1203
25°	2004
30°	2488
35°	2637
40°	2434
45°	2225
50°	1201
55°	589
60°	228
65°	70
70°	33
75°	11
80°	1
85°	0
90°	0

PHOTOMETRIC REPORT

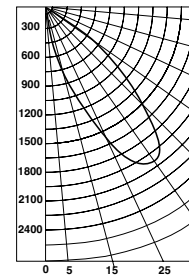
Test Report: PT09152901R

Catalog No: IC4AL 07LM 35K 90CRI
FL 120 FRPC with 47L HZWH and Flood
Optic

Watts: 10.5

Lumens: 835

Luminaire LPW: 80



Candlepower Distribution

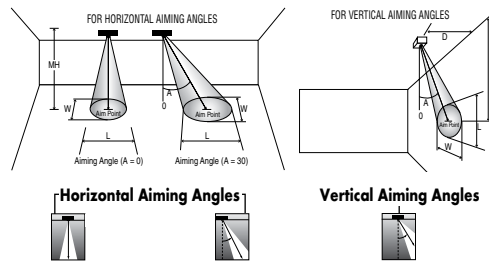
(Candelas)




Degrees Vertical	Candela
0°	164
5°	293
10°	518
15°	831
20°	1232
25°	1611
30°	1858
35°	1923
40°	1790
45°	1501
50°	1105
55°	721
60°	345
65°	164
70°	65
75°	19
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 (07LM) LED, 3500K Spot	SP	18° 	4589	4	287	1.3	1.3	186	1.7	1.5	2	143	3.5	2.7	1.3
				6	127	1.9	1.9	83	2.6	2.2	3	64	5.2	4.1	1.9
				8	72	2.5	2.5	47	3.4	2.9	4	36	6.9	5.5	2.5
				10	46	3.2	3.2	30	4.3	3.7	5	23	8.7	6.9	3.2
				12	32	3.8	3.8	21	5.1	4.4	6	16	10.4	8.2	3.8
IC4AL (07LM) LED, 3500K Narrow Flood	NFL	30° 	2637	4	165	2.1	2.1	107	2.9	2.5	2	82	3.5	5.5	2.1
				6	73	3.2	3.2	48	4.4	3.7	3	37	5.2	8.2	3.2
				8	41	4.3	4.3	27	5.9	5.0	4	21	6.9	10.9	4.3
				10	26	5.4	5.4	17	7.3	6.2	5	13	8.7	13.7	5.4
				12	18	6.4	6.4	12	8.8	7.4	6	9	10.4	16.4	6.4
IC4AL (07LM) LED, 3500K Flood	FL	40° 	1923	4	120	2.9	2.9	78	4.1	3.4	2	60	3.5	9.7	2.9
				6	53	4.4	4.4	35	6.1	5.0	3	27	5.2	14.5	4.4
				8	30	5.8	5.8	20	8.1	6.7	4	15	6.9	19.3	5.8
				10	19	7.3	7.3	12	10.2	8.4	5	10	8.7	24.2	7.3
				12	13	8.7	8.7	9	12.2	10.1	6	7	10.4	29.0	8.7

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