



BLACK BODY DIMMING & TUNABLE WHITE 700/1000 LUMEN ADJUSTABLE LED

3-1/4" LENSED ANGLE CUT CONE

**IC(9)43T-431N, IC49T-431N,
TC(9)49T-431N**



PRODUCT DESCRIPTION

Recessed adjustable LED luminaire features both Black Body Dimming and Tunable White technology in a single fixture. In Black Body Dimming mode, the luminaire duplicates halogen dimming, creating a natural warm glow as the CCT shifts from 3000K to less than 1800K when dimmed. In Tunable White mode, the CCT can be adjusted anywhere along the Planckian locus from 2000K through 4350K independent of dimming. Aculux Black Body Dimming and Tunable White luminaires feature a sealed Air-Loc® housing and is available in both IC and Non-IC rated configurations.

PRODUCT SPECIFICATIONS

LED Light Engine With single dimmer connected, the light engine duplicates halogen, with the CCT shifting from 3000K at 100% to 1800K when dimmed to 1% • Connect a second dimmer to engage Tunable White mode, featuring independent dimming and CCT tuning from 2000K through 4350K • Superb color consistency within 2 SDCM of the Planckian locus over CCT range • Accurate color rendition with 90 CRI at 3000K, and 85 CRI/70 R9 throughout CCT range.

Dimming and CCT Control Black Body Dimming and CCT Tuning are compatible with most 0-10V protocol dimmers • IC rated housings are rated for 120-277V input • For Non-IC housings, specify 120V or 277V. Refer to installation instructions for detailed wiring schematics.

Modular Optics Field interchangeable optics available with 21° Very Narrow Flood, 27° Narrow Flood, or 36° Flood distributions • 50° distribution is available when AF3-50DEG accessory lens is used with 27° Narrow Flood optic • Patent pending auto-adjusting optic holder maximizes luminaire efficiency by maintaining optimal LED optic position relative to trim • Accommodates up to three (3) beam control lenses and/or filters.

Adjustability Acu-Aim™ precision geared hot-aiming achieves 370° rotation, 45° tilt • Optimized center beam optics translates light engine forward as it is aimed off nadir

Reflector Lensed .040" aluminum angle-cut reflector in clear, gold, black, haze, or wheat haze Alzak finish provides 50° cut-off.

Trims Style Trim Ring, Self Flanged and Flush Mount reflectors available • Trim ring features beveled knife edge for clean ceiling interface • Self Flanged reflectors with polished or optional white painted flange • For flush mount installations in drywall ceilings use the FMA4 flush mount adapter • For flush mount installations in wood, stone, or tile ceilings the FMA4-SC*** must be used (specify ceiling thickness and adapter finish).

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

Warranty 5 years from date of purchase on LED components • Standard Juno Lighting Group product guarantee terms and conditions apply.

Codes/Labels UL and cUL listed for through branch wiring, wet locations • Meets energy code Air Leakage requirements per ASTM E283 • Union made.

Mounting Available with either Patented (US Patent 8,038,113) Pro-VI™ bar hanger system, permitting quick placement of housing with 24" on-center joists or suspended ceilings, or with vertically adjustable mounting brackets (butterfly brackets). Specify mounting style when ordering.

Junction Box IC housings are rated for 4 No. 12 AWG 90°C through branch circuit conductors. • Non-IC housings are rated for 8 No. 12 AWG 90°C through branch circuit conductors. • Includes (5) 1/2", (1) 3/4", and (4) Non-metallic sheathed cable knock-outs. • Push-in electrical connectors for field connections.

Housing/Mounting Frame Housing painted black for visually dark interior • V-Notch in plaster frame and Patented (US Patent 8,277,090) Tru-Line™ Platform featuring +/- 1/2" translation aids fixture alignment after installation, prior to drywall.

Ceiling Thickness 1/2" - 7/8" ceiling standard • For thicker ceilings, order CTA4N-125 (7/8"-1 1/4"), CTA4N-163 (1 1/4"-1 5/8") or CTA4N-200 (1 5/8"- 2") • CTA4N not required for wood, stone, or tile flush mount applications.

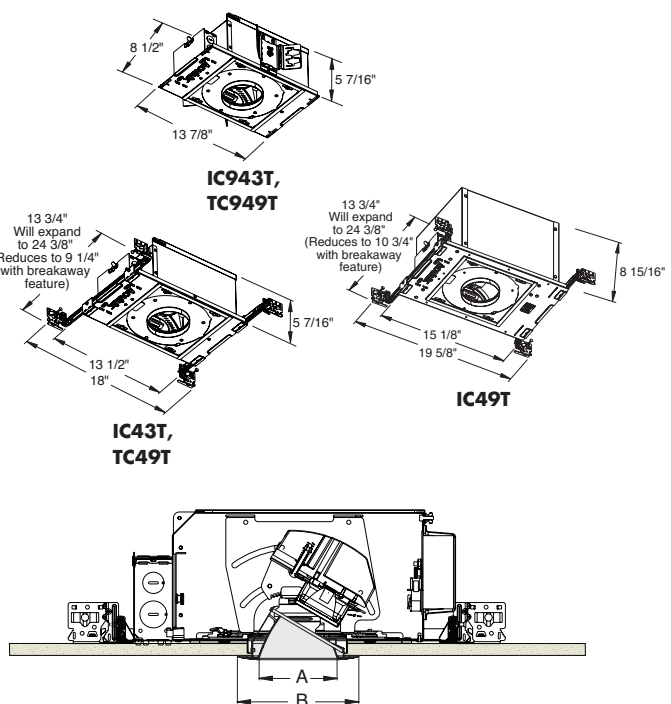
ELECTRICAL DATA

| Housing | IC(9)43T | | IC49T | | TC(9)49T | |
|-------------------|----------|------|---------|------|----------|------|
| Voltage | 120 | 277 | 120 | 277 | 120 | 277 |
| Input Power (W) | 13.0 | 14.3 | 20.5 | 21.6 | 22.5 | 23.6 |
| Input Current (A) | 0.11 | 0.06 | 0.17 | 0.09 | 0.18 | 0.09 |
| Frequency | 50/60Hz | | 50/60Hz | | 50/60Hz | |
| Power Factor | 0.99 | 0.92 | 0.99 | 0.92 | 0.99 | 0.92 |

REV-11/14

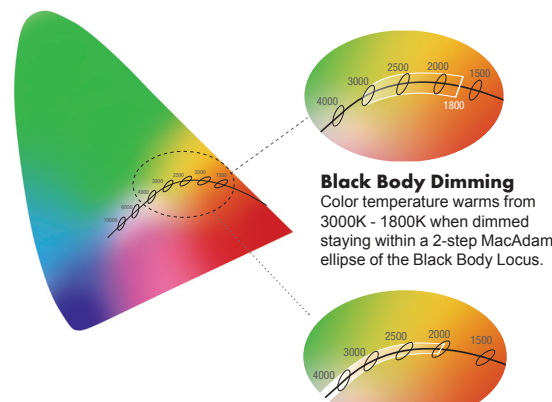
| Type | Cat. No. |
|----------------|----------|
| _____ | _____ |
| Project: _____ | |
| Notes: _____ | |

DIMENSIONS



4 1/4" CEILING CUTOUT
(REFER TO INSTRUCTION SHEET FOR
FLUSH MOUNT CEILING CUTOUT)

| | A | B |
|--------------|--------|--------|
| Trim Ring | 3 1/4" | 5" |
| Self Flanged | 3 3/8" | 4 5/8" |
| Flush Mount | 3 3/8" | 3 7/8" |



Black Body Dimming
Color temperature warms from 3000K - 1800K when dimmed staying within a 2-step MacAdam ellipse of the Black Body Locus.

Tunable White
Color temperature can be tuned from 4350K - 2000K while staying within a 2-step MacAdam ellipse of the Black Body Locus.



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TC(9)49T-431N**

Ordering Information




Housing, trim and accessories each ordered separately

Example: **TC949T-W-N-U1**

| Housing | Tunable White Range | Beam Spread | Voltage/Dimming ¹ | Options |
|---|-------------------------------|--------------------------------|----------------------------------|---------------------------|
| <input type="text"/> | W <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| IC43T 700 Lumen, Bar Hangers (IC) | W 4350K - 2000K | V 21° Very Narrow Flood | U 120-277V, 0-10V Dimming | CP* Chicago Plenum |
| IC943T 700 Lumen, Butterfly Brackets (IC) | | N 27° Narrow Flood | U1 120V, 0-10V Dimming | |
| IC49T 1000 Lumen, Bar Hangers (IC) | | F 36° Flood | U2 277V, 0-10V Dimming | |
| TC49T 1000 Lumen, Bar Hangers (Non-IC) | | | | |
| TC949T 1000 Lumen, Butterfly Brackets (Non-IC) | | | | |

*Not available on IC49T Housing.
¹ IC is Universal voltage. Specify voltage for Non-IC products.

Example: **431NB-WH**

| Trim | | | |
|--|--|--|-----------------------------|
|  |  |  | |
| Trim Ring ¹ | Self Flanged ² | Flush Mount ³ | Description |
| 431NB-WH | 431NB-SF | 431NB-FM | Black Cone |
| 431NC-WH | 431NC-SF | 431NC-FM | Clear Cone |
| 431NG-WH | 431NG-SF | 431NG-FM | Gold Cone |
| 431NHZ-SC | - | - | Haze Cone |
| 431NHZ-WH | 431NHZ-SF | 431NHZ-FM | Haze Cone, White Ring |
| 431NWHZ-ABZ | - | - | Wheat Haze Cone |
| 431NWHZ-WH | 431NWHZ-SF | 431NWHZ-FM | Wheat Haze Cone, White Ring |

¹Trim Ring Finish: ABZ - Classic Aged Bronze, SC - Satin Chrome, WH - White.

²For self flanged reflector with optional white painted flange, replace "SF" suffix with "-SFWH".

³Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

Flush Mount Adapters

| Cat. # | Description |
|----------------------|--|
| FMA4 | Drywall Ceiling Adapter |
| FMA4-SC087-WH | Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, White |
| FMA4-SC087-BL | Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, Black |
| FMA4-SC125-WH | Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, White |
| FMA4-SC125-BL | Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, Black |
| FMA4-SC163-WH | Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, White |
| FMA4-SC163-BL | Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, Black |

Optical Accessories

| Cat. # | Description | Cat. # | Description |
|------------------|--|----------------|-------------------------------|
| TIR-TW-V | 21° Very Narrow Flood Optic | T7403 | Med. Green Dichroic Lens |
| TIR-TW-N | 27° Narrow Flood Optic | T7404 | Med. Blue Dichroic Lens |
| TIR-TW-F | 36° Flood Optic | T7405 | Yellow Dichroic Lens |
| AF3-50DEG | 50° Optic Film (Use with 27° Optic) | T7406 | Magenta Dichroic Lens |
| T741 | Med. Pink Color Filter | T7411 | Blue Green Dichroic Lens |
| T742 | Warm Red Color Filter | T7416 | Daylight Blue Correction Lens |
| T743 | Daylight Blue Color Filter | T7420 | Diffuse Spread Lens |
| T744 | Med. Blue Color Filter | T7422 | UV Filter Lens |
| T745 | Med. Amber Color Filter | T7477 | Prismatic Lens |
| T746 | Med. Green Color Filter | T7478 | Linear Spread Lens |
| T7401 | Red Dichroic Lens | T7459BL | Hexcell Louver |

Misc. Accessories

| Cat. # | Description |
|------------------|---------------------------------|
| CTA4N-125 | 1 1/4" Thick Ceiling Adapter |
| CTA4N-163 | 1 5/8" Thick Ceiling Adapter |
| CTA4N-200 | 2" Thick Ceiling Adapter |
| HB-1 | (2) Real Nail 3 Bar Hangers |
| HB-26 | (2) 26" C-Channel Bar Hangers |
| HB-50 | (2) 50" C-Channel Bar Hangers |
| LB-27 | (2) 27" Linear Bar Hangers |
| EMI-20 | 20W Emergency Lighting Inverter |

To order, specify catalog number.



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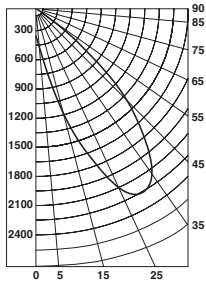
3-1/4" LENSED ANGLE CUT CONE

**IC(9)43T-431N, IC49T-431N,
TC(9)49T-431N**

PHOTOMETRIC REPORT
Test Report: PT10131809R
Catalog No: IC49T-W-F-U (Aim at 30°)
with 431NC-WH trim
Watts: 19.8
Lumens: 858
Luminaire LPW: 43

Candlepower Distribution (Candelas)

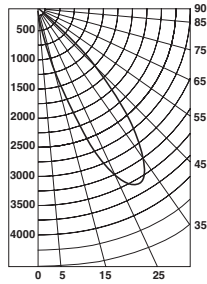
| Degrees | Vertical Candela |
|---------|------------------|
| 0° | 369 |
| 5° | 490 |
| 10° | 779 |
| 15° | 1222 |
| 20° | 1720 |
| 25° | 2103 |
| 30° | 2264 |
| 35° | 2164 |
| 40° | 1840 |
| 45° | 1297 |
| 50° | 722 |
| 55° | 172 |
| 60° | 39 |
| 65° | 7 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |
| 90° | 0 |



PHOTOMETRIC REPORT
Test Report: PT10131815R
Catalog No: IC49T-W-N-U (Aim at 30°)
with 431NC-WH trim
Watts: 19.8
Lumens: 933
Luminaire LPW: 47

Candlepower Distribution (Candelas)

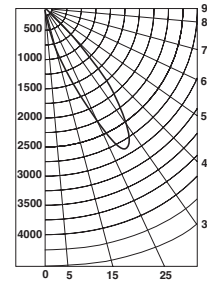
| Degrees | Vertical Candela |
|---------|------------------|
| 0° | 309 |
| 5° | 416 |
| 10° | 691 |
| 15° | 1295 |
| 20° | 2324 |
| 25° | 3169 |
| 30° | 3538 |
| 35° | 3360 |
| 40° | 2681 |
| 45° | 1518 |
| 50° | 556 |
| 55° | 75 |
| 60° | 19 |
| 65° | 4 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |
| 90° | 0 |



PHOTOMETRIC REPORT
Test Report: PT10131812R
Catalog No: IC49T-W-V-U (Aim at 30°)
with 431NC-WH trim
Watts: 19.8
Lumens: 686
Luminaire LPW: 35

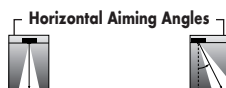
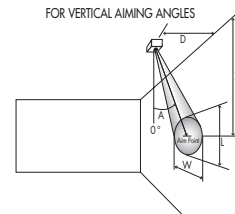
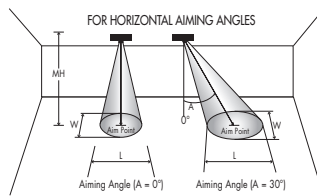
Candlepower Distribution (Candelas)

| Degrees | Vertical Candela |
|---------|------------------|
| 0° | 406 |
| 5° | 417 |
| 10° | 514 |
| 15° | 870 |
| 20° | 1524 |
| 25° | 2414 |
| 30° | 2865 |
| 35° | 2575 |
| 40° | 1739 |
| 45° | 665 |
| 50° | 275 |
| 55° | 56 |
| 60° | 21 |
| 65° | 6 |
| 70° | 0 |
| 75° | 0 |
| 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°).



| Beam Type | Beam Spread | CBCP | 0° | | | | 30° | | | 30° | | | | 40° | | | | |
|-----------|-------------|------|----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|
| | | | MH | FC | L | W | FC | L | W | D | FC | X | L | W | FC | X | L | W |
| VNFL | 21° | 2865 | 4 | 179 | 1.6 | 1.6 | 116 | 2.1 | 1.8 | 2 | 90 | 3.5 | 3.5 | 1.6 | 190 | 2.4 | 2.0 | 1.2 |
| | | | 6 | 80 | 2.3 | 2.3 | 52 | 3.1 | 2.7 | 3 | 40 | 5.2 | 5.3 | 2.3 | 85 | 3.6 | 3.0 | 1.8 |
| | | | 8 | 45 | 3.1 | 3.1 | 29 | 4.2 | 3.6 | 4 | 22 | 6.9 | 7.0 | 3.1 | 48 | 4.8 | 4.0 | 2.4 |
| | | | 10 | 29 | 3.9 | 3.9 | 19 | 5.2 | 4.5 | 5 | 14 | 8.7 | 8.8 | 3.9 | 30 | 6.0 | 5.0 | 3.0 |
| | | | 12 | 20 | 4.7 | 4.7 | 13 | 6.3 | 5.4 | 6 | 10 | 10.4 | 10.5 | 4.7 | 21 | 7.2 | 6.0 | 3.6 |
| NFL | 27° | 3538 | 4 | 221 | 1.9 | 1.9 | 144 | 2.6 | 2.2 | 2 | 111 | 3.5 | 4.7 | 1.9 | 235 | 2.4 | 2.5 | 1.5 |
| | | | 6 | 98 | 2.9 | 2.9 | 64 | 3.9 | 3.3 | 3 | 49 | 5.2 | 7.0 | 2.9 | 104 | 3.6 | 3.8 | 2.2 |
| | | | 8 | 55 | 3.9 | 3.9 | 36 | 5.2 | 4.5 | 4 | 28 | 6.9 | 9.3 | 3.9 | 59 | 4.8 | 5.1 | 3.0 |
| | | | 10 | 35 | 4.8 | 4.8 | 23 | 6.6 | 5.6 | 5 | 18 | 8.7 | 11.7 | 4.8 | 38 | 6.0 | 6.4 | 3.7 |
| | | | 12 | 25 | 5.8 | 5.8 | 16 | 7.9 | 6.7 | 6 | 12 | 10.4 | 14.0 | 5.8 | 26 | 7.2 | 7.6 | 4.5 |
| FL | 36° | 2264 | 4 | 142 | 2.4 | 2.4 | 92 | 3.2 | 2.7 | 2 | 71 | 3.5 | 6.4 | 2.4 | 150 | 2.4 | 3.2 | 1.8 |
| | | | 6 | 63 | 3.5 | 3.5 | 41 | 4.8 | 4.1 | 3 | 31 | 5.2 | 9.5 | 3.5 | 67 | 3.6 | 4.9 | 2.7 |
| | | | 8 | 35 | 4.7 | 4.7 | 23 | 6.5 | 5.4 | 4 | 18 | 6.9 | 12.7 | 4.7 | 38 | 4.8 | 6.5 | 3.7 |
| | | | 10 | 23 | 5.9 | 5.9 | 15 | 8.1 | 6.8 | 5 | 11 | 8.7 | 15.9 | 5.9 | 24 | 6.0 | 8.1 | 4.6 |
| | | | 12 | 16 | 7.1 | 7.1 | 10 | 9.7 | 8.2 | 6 | 8 | 10.4 | 19.1 | 7.1 | 17 | 7.2 | 9.7 | 5.5 |

Fc/Lumen Multipliers: IC(9)43T - 0.70 Photometry is at 3000K CCT
 IC49T - 1.00
 TC(9)49T - 1.00

