



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

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

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

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

# 6" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC2022LED4 RECESSED HOUSING  
**OPEN TRIMS**



## PRODUCT DESCRIPTION

Dedicated LED new construction housing with integral light engine • Shallow housing allows for fit in 2 x 6 construction • TC housing design 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 • LED housing is designed to provide 50,000 hours of life and is compatible with many standard Juno trims • 5 year limited warranty on LED components.

## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury
- Comparable light output to two 26W or one 57W compact fluorescent, while consuming 26W\*

## PRODUCT SPECIFICATIONS

**LED Light Engine** LED array integrated to one piece high purity aluminum, thermally conductive housing provides uninterrupted heat transfer to ensure long life of the LED • Replaceable light engine mounts directly to housing and incorporates the latest generation, high lumen output LED array • LEDs are binned within a 3-Step MacAdam Ellipse exceeding ENERGY STAR® requirements yielding superior fixture to fixture color uniformity • 2700K, 3000K, 3500K or 4100K color temperatures available • 90 CRI minimum.

**Optical System** Computer-optimized reflector design with high reflectance white finish coupled with a high transmission diffusing lens conceals the LEDs and produces uniform aperture luminance • Deep regression of lens produces a low glare, efficient system that can produce over 2000 lumens with select trims (see page 2 for details) using 26W\* • Wide flood (>70° typical) distribution shipped as standard with optional optic accessories available and sold separately.

**Aesthetic Trim Selections** Compatible with wide selection of existing Juno trims • Shadow free, knife edge design blends seamlessly into ceiling.

**LED Driver** Universal voltage driver that accommodates input voltage from 120-277 volts AC at 50/60Hz is standard and is dimmable with the use of most 0-10V dimmers • Power factor > 0.9 at 120V input • Optional Lutron Hi-Lume® A-Series driver accommodates 120-277 volts AC at 50/60Hz • Mounted between the j-box and housing for easy access and cool operation • For a list of compatible dimmers, see [JUNOTCLED-DIM](#).

**Emergency Battery Option** Battery factory assembled to housing with remote mounted test switch included • Drives LED array for 90 minutes to meet Life Safety Code (NFPA-LSC), National Electrical Code (NEC) and UL requirements • Provides 24% light output in emergency mode.

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

**Labels** ENERGY STAR® Qualified when used with select baffle and cone trims • UL listed for U.S. and Canada through-branch wiring, damp locations • Union made • UL and cUL listed.

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

Product specifications subject to change without notice.

## HOUSING FEATURES

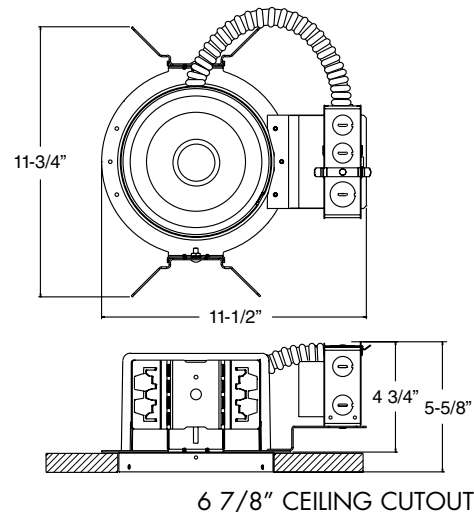
**Housing** Designed for use in TC applications (non-insulated) • Aluminum housing • Housing is vertically adjustable to accommodate up to a 2" ceiling thickness.

**Junction Box** Pre-wired junction box provided with (5) 1/2" and (1) 3/4" knockouts and ground wire, UL listed and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with pryout slots.

**Mounting Frame** 16-gauge galvanized steel mounting ring equipped with vertically adjustable mounting brackets that accept 1/2" conduit or "C" channels (HB-26 or HB-50), linear flat bars (LB-27) or Patented (US Patent D552,969) Real Nail® 3 bar hangers (HB-1).

\*Nominal input wattage @ 120V with standard universal voltage driver under stable operating conditions

## DIMENSIONS



## ELECTRICAL DATA

### STANDARD UNIVERSAL VOLTAGE DRIVER (-U)

|                       | 120V  | 277V  |
|-----------------------|---|---|
| Input Power           | 26.3W (+/-5%)                                   | 26.0W (+/-5%)                                   |
| Input Current         | 0.22A   | 0.10A   |
| 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 | -40°C (-40°F)                                   | -40°C (-40°F)                                   |

### UNIVERSAL VOLTAGE DRIVER WITH EMERGENCY OPTION (-UBR)

|                       | 120V  | 277V  |
|-----------------------|---|---|
| Input Power           | 29.1W (+/-5%)                                   | 28.8W (+/-5%)                                   |
| Input Current         | 0.27A   | 0.15A   |
| 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)                                      |

### LUTRON HI-LUME® LED DRIVER (-L)

|                       | 120V  | 277V  |
|-----------------------|---|---|
| Input Power           | 27.0W (+/-5%)                                   | 27.0W (+/-5%)                                   |
| Input Current         | 0.23A   | 0.10A   |
| 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)                                      |

### LUTRON HI-LUME® LED DRIVER WITH EMERGENCY OPTION (-LBR)

|                       | 120V  | 277V  |
|-----------------------|---|---|
| Input Power           | 29.7W (+/-5%)                                   | 29.7W (+/-5%)                                   |
| Input Current         | 0.27A   | 0.15A   |
| 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)                                      |

# 6" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

## TC2022LED4 RECESSED HOUSING OPEN TRIMS

**ORDERING INFORMATION:** Housing, trim and accessories each ordered separately.

Example: **TC2022LED4-27K-UBR**

| Catalog No.       | Color Temp.   | Voltage   | Options   |
|-------------------|---|---|---|
| <b>TC2022LED4</b> | <b>27K</b> 2700K<br><b>3K</b> 3000K<br><b>35K</b> 3500K<br><b>41K</b> 4100K | <b>U</b> Universal Voltage 120-277V (0-10V dimming)<br><b>L</b> Lutron Hi-Lume 3-wire Dimming Ecosystem® Compatible | <b>BR</b> <sup>1</sup> Emergency Battery Back-up w/Remote Switch<br><b>CP</b> Chicago Plenum<br>Chicago Plenum is not available with emergency option |


















Example: **HB-26**

### Accessories

| Cat. #       | Description                                | Cat. #                      | Description                    |
|--------------|--|-----------------------------|--------------------------------|
| <b>HB-1</b>  | Two 13 1/2" - 25" Real Nail® 3 bar hangers | <b>LEDOPTICG3-M</b>         | Medium Flood Optic (50°)       |
| <b>HB-26</b> | Two 26" C-channel bar hangers              | <b>LEDOPTICG3-N</b>         | Narrow Flood Optic (37°)       |
| <b>HB-50</b> | Two 50" C-channel bar hangers              | <b>LEDOPTICG3-S</b>         | Spot Optic (10°)               |
| <b>LB-27</b> | Two 27" linear bar hangers                 | <b>TR6-ABZ</b> <sup>2</sup> | Trim Ring - Classic Age Bronze |
|              |  | <b>TR6-BL</b> <sup>2</sup>  | Trim Ring - Black              |
|              |  | <b>TR6-SC</b> <sup>2</sup>  | Trim Ring - Satin Chrome       |
|              |  | <b>TR6-WH</b> <sup>2</sup>  | Trim Ring - White              |

Notes: <sup>1</sup>Not ENERGY STAR® Qualified.  
<sup>2</sup>Trim ring compatible with 24 and 27 trims.

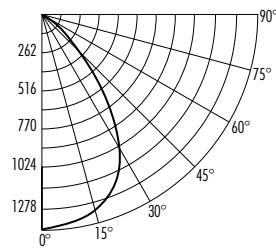
Example: **24W-WH**

| Trim/Description  |   |  |
|---|---|--|
|  <b>24W-WH</b> Conical White Baffle                      |   |  |
|  <b>24B-WH</b> <sup>1</sup> Conical Black Baffle         |   |  |
|  <b>24B-SC</b> <sup>1</sup> Conical Black Baffle         |   |  |
|  <b>24B-ABZ</b> <sup>1</sup> Conical Black Baffle        |   |  |
|  <b>24B-BL</b> <sup>1</sup> Conical Black Baffle         |   |  |
|  <b>27C-WH</b> Conical Cone in Clear Alzak®              |   |  |
|  <b>27G-WH</b> Conical Cone in Gold Alzak®               |   |  |
|  <b>27B-WH</b> <sup>1</sup> Conical Cone in Black Alzak® |   |  |
|  <b>27PT-SC</b> Conical Cone in Pewter Alzak®            |   |  |
|  <b>27W-WH</b> Conical Cone in Gloss White               |   |  |
|  <b>27HZ-WH</b> Conical Cone in Haze                     |   |  |
|  <b>27WHZ-WH</b> Conical Cone in Wheat Haze              |   |  |
|  <b>27WHZ-ABZ</b> Conical Cone in Wheat Haze            |   |  |
|  <b>9024W-WH</b> White Octagonal w/ White Baffle       |  <b>9524-SC</b> Chrome Band            |  |
|  <b>9324-SC</b> Luminous Disc (Frosted)                |  <b>9702</b> Luminous Collar (Frosted) |  |

Trim Size: 24, 27, 9324, 9524 - 7 5/8" O.D.; 9702 - 7 3/4" O.D.; 9024 - 8" O.D.  
Trim Finish: ABZ - Classic Aged Bronze, BL - Black, SC - Satin Chrome, WH - White.  
Alzak is a registered trademark of Alcoa Corp.  
Note: In Canada when insulation is present, Type IC fixtures must be used.

### PHOTOMETRIC REPORT

Test Report#: PT09151102R  
Catalog No: TC2022LED4-35K-U  
with 24W-WH White Baffle Trim and  
Standard Wide Flood Optic  
Luminaire Spacing Criteria: 1.12  
Luminaire LPW: 83



### CANDLEPOWER DISTRIBUTION (Candelas)

| Degrees Vertical | 0°                                    |
|------------------|---------------------------------------|
| 0                | 1405                                  |
| 5                | 1397                                  |
| 15               | 1311                                  |
| 25               | 1132                                  |
| 35               | 877                                   |
| 45               | 387                                   |
| 55               | 169                                   |
| 65               | 88                                    |
| 75               | 54                                    |
| 85               | 14                                    |
| 90               | 0                                     |
| Multiplier:      | 27K - 0.93<br>3K - 0.97<br>41K - 1.02 |

### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)  
Ceiling 80%, Wall 50%, Floor 20%

| Spacing | RCR1 | RCR3 | RCR5 |
|---------|------|------|------|
| 4.0'    | 147  | 122  | 101  |
| 5.0'    | 94   | 78   | 65   |
| 6.0'    | 66   | 54   | 45   |
| 7.0'    | 53   | 44   | 36   |
| 8.0'    | 42   | 35   | 29   |
| 9.0'    | 32   | 26   | 22   |
| 10.0'   | 24   | 19   | 16   |

### ZONAL LUMEN SUMMARY

| Zone  | Lumens | %Lamp | %Fixture |
|-------|--------|-------|----------|
| 0-30° | 1021   | N/A   | 46.7     |
| 0-40° | 1557   | N/A   | 71.3     |
| 0-60° | 2025   | N/A   | 92.7     |
| 0-90° | 2185   | N/A   | 100.0    |

### INITIAL FOOTCANDLES

(One Unit, 26.3W, 77.6° Beam)

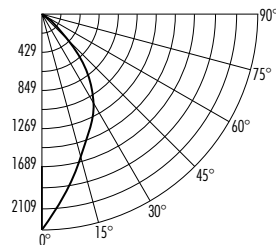
| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Beam Diameter |
|--------------------------------------|-------------------------|---------------|
| 4                                    | 87.8                    | 6.4           |
| 6                                    | 39.0                    | 9.6           |
| 8                                    | 22.0                    | 12.9          |
| 10                                   | 14.1                    | 16.1          |

### LUMINANCE (Average cd/m²)

| Degrees | Average 0° Luminance |
|---------|----------------------|
| 45      | 32508                |
| 55      | 17551                |
| 65      | 12374                |
| 75      | 12284                |
| 85      | 9410                 |

### PHOTOMETRIC REPORT

Test Report#: 25978R  
Catalog No: TC2022LED4-35K-U  
with 27C-WH Clear Alzak Trim and  
Standard Wide Flood Optic  
Luminaire Spacing Criteria: 0.78  
Luminaire LPW: 89



### CANDLEPOWER DISTRIBUTION (Candelas)

| Degrees Vertical | 0°                                    |
|------------------|---------------------------------------|
| 0                | 2319                                  |
| 5                | 2173                                  |
| 15               | 1650                                  |
| 25               | 1294                                  |
| 35               | 926                                   |
| 45               | 442                                   |
| 55               | 140                                   |
| 65               | 29                                    |
| 75               | 0                                     |
| 85               | 0                                     |
| 90               | 0                                     |
| Multiplier:      | 27K - 0.93<br>3K - 0.97<br>41K - 1.02 |

### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)  
Ceiling 80%, Wall 50%, Floor 20%

| Spacing | RCR1 | RCR3 | RCR5 |
|---------|------|------|------|
| 4.0'    | 161  | 134  | 114  |
| 5.0'    | 103  | 86   | 73   |
| 6.0'    | 71   | 60   | 51   |
| 7.0'    | 58   | 48   | 41   |
| 8.0'    | 46   | 38   | 32   |
| 9.0'    | 35   | 29   | 25   |
| 10.0'   | 26   | 21   | 18   |

### ZONAL LUMEN SUMMARY

| Zone  | Lumens | %Lamp | %Fixture |
|-------|--------|-------|----------|
| 0-30° | 1256   | N/A   | 53.8     |
| 0-40° | 1827   | N/A   | 78.3     |
| 0-60° | 2303   | N/A   | 98.7     |
| 0-90° | 2335   | N/A   | 100.0    |

### INITIAL FOOTCANDLES

(One Unit, 26.3W, 58° Beam)

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Beam Diameter |
|--------------------------------------|-------------------------|---------------|
| 4                                    | 144.9                   | 4.4           |
| 6                                    | 64.4                    | 6.7           |
| 8                                    | 36.2                    | 8.9           |
| 10                                   | 23.2                    | 11.1          |

### LUMINANCE (Average cd/m²)

| Degrees | Average 0° Luminance |
|---------|----------------------|
| 45      | 37315                |
| 55      | 14612                |
| 65      | 4031                 |
| 75      | 0                    |
| 85      | 0                    |

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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