



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

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

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

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

# 6" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC2022LED4 RECESSED HOUSING  
**HYPERBOLIC 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.

**Hyperbolic Optical System** Unique hyperbolic reflector shape optimized for small, directional LED source provides unique aperture appearance with reduced brightness • NMC™ nano mixing chamber (provided with trim) with high reflectance white finish coupled with a high transmission diffusing lens conceals the LED and integrates with the hyperbolic trim to create a low glare, efficient system.

**Aesthetic Trim Selections** Patent pending hyperbolic reflector available in clear Alzak®, haze, wheat haze, black Alzak® and white • Shadow free, knife edge design blends seamlessly into ceiling • Installs with torsion springs.

**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-150), 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 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.

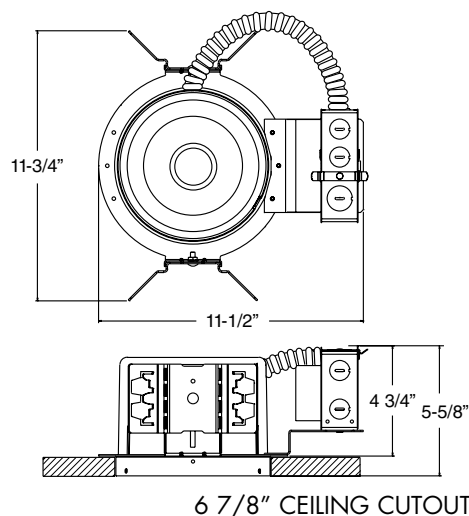
**Junction Box** Pre-wired junction box provided with (5) 1/2" and (1) 3/4" knockouts and ground wire, UL listed and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with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

REV-1/16

## 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 HYPERBOLIC 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 <b>3K</b> 3000K <b>35K</b> 3500K <b>41K</b> 4100K	<b>U</b> Universal Voltage 120-277V (0-10V dimming) <b>L</b> Lutron Hi-Lume 3-wire Dimming Ecosystem® Compatible	<b>BR</b> <sup>1</sup> Emergency Battery Back-up w/Remote Switch <b>CP</b> Chicago Plenum 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>TR6-ABZ</b> <sup>2</sup>	Trim Ring - Classic Age Bronze
<b>HB-26</b>	Two 26" C-channel bar hangers	<b>TR6-BL</b> <sup>2</sup>	Trim Ring - Black
<b>HB-50</b>	Two 50" C-channel bar hangers	<b>TR6-SC</b> <sup>2</sup>	Trim Ring - Satin Chrome
<b>LB-27</b>	Two 27" linear bar hangers	<b>TR6-WH</b> <sup>2</sup>	Trim Ring - White

Example: **27HYP3-HZ-WH**

Trim/Description
 <b>27HYP3-C-WH</b> Clear Alzak®
<b>27HYP3-B-WH</b> <sup>1</sup> Black Alzak®
<b>27HYP3-W-WH</b> White
<b>27HYP3-HZ-WH</b> Haze
<b>27HYP3-WHZ-WH</b> <sup>1</sup> Wheat Haze
<b>27HYP3-WHZ-ABZ</b> <sup>1</sup> Wheat Haze

Trim Size: 7 5/8" O.D.

Trim Finish: ABZ - Classic Aged Bronze, WH - White.

Alzak is a registered trademark of Alcoa Corp.

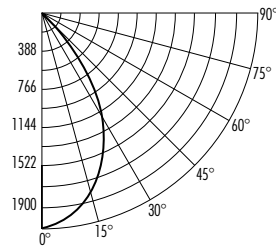
Note: In Canada when insulation is present, Type IC fixtures must be used.

Notes: <sup>1</sup>Not ENERGY STAR® Qualified.

<sup>2</sup>Trim ring compatible with 24 and 27 trims.

### PHOTOMETRIC REPORT

Test Report#: PT09151103R  
Catalog No: TC2022LED4-35K-U  
with 27HYP3-C-WH Trim and standard nano mixing chamber  
Luminaire Spacing Criteria: 0.98  
Luminaire LPW: 81



### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2089
5	2063
15	1820
25	1481
35	879
45	257
55	5
65	0
75	0
85	0
90	0
Multiplier:	27K - 0.93 3K - 0.97 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	127	109
5.0'	94	81	70
6.0'	65	56	49
7.0'	53	46	39
8.0'	42	36	31
9.0'	32	28	24
10.0'	23	20	18

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	1376	N/A	64.5
0-40°	1911	N/A	89.5
0-60°	2135	N/A	100.0
0-90°	2135	N/A	100.0

### INITIAL FOOTCANDLES

(One Unit, 26.3W, 65.5° Beam)

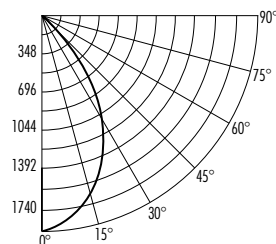
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	130.6	5.1
6	58.0	7.7
8	32.6	10.3
10	20.9	12.9

### LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	21624
55	497
65	0
75	0
85	0

### PHOTOMETRIC REPORT

Test Report#: PT09151104R  
Catalog No: TC2022LED4-35K-U  
with 27HYP3-HZ-WH Trim and standard nano mixing chamber  
Luminaire Spacing Criteria: 1.00  
Luminaire LPW: 77



### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1915
5	1883
15	1677
25	1391
35	866
45	256
55	14
65	0
75	0
85	0
90	0
Multiplier:	27K - 0.93 3K - 0.97 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'	140	121	104
5.0'	89	77	67
6.0'	62	54	46
7.0'	50	43	37
8.0'	40	34	30
9.0'	30	26	23
10.0'	22	19	17

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	1282	N/A	63.1
0-40°	1808	N/A	89.0
0-60°	2031	N/A	100.0
0-90°	2031	N/A	100.0

### INITIAL FOOTCANDLES

(One Unit, 26.3W, 67.4° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	119.7	5.3
6	53.2	8.0
8	29.9	10.7
10	19.2	13.3

### LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	21482
55	1451
65	0
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.