



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

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

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

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

# 6" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC22LED (G4 20LM) 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 4000K 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 using less than 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 drivers that accommodate input voltage from 120-277 volts AC at 50/60Hz are available and 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 [JUNOTCLEDDIM](#).

**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® Certified 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.

Specifications subject to change without notice.

## HOUSING FEATURES

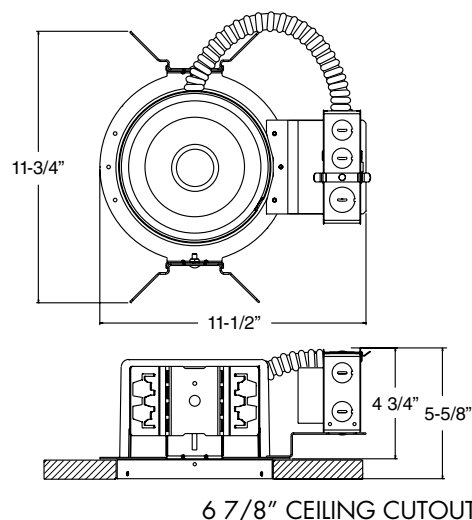
**Housing** Designed for use in TC applications (non-insulated) • Aluminum housing • Housing is vertically adjustable to accommodate up to a 2" ceiling thickness.

**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 (HB26 or HB50), linear flat bars (LB27) or Patented (US Patent D552,969) Real Nail® 3 bar hangers (HB1).

\*Nominal input wattage with universal voltage driver under stable operating conditions

## DIMENSIONS



## ELECTRICAL DATA

### STANDARD UNIVERSAL VOLTAGE DRIVER (MVOLT EZ10, MVOLT ZT10, MVOLT EZ1 and MVOLT ZT1)

	120V	277V
Input Power	25.1W (+/-5%)	25.6W (+/-5%)
Input Current - Max	0.21A	0.10A
Frequency	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)
Minimum starting temp	-20°C (-40°F)	-20°C (-40°F)

### UNIVERSAL VOLTAGE DRIVER WITH EMERGENCY OPTION (MVOLT ZT10 BR, EZ10 BR, ZT1 BR and EZ1 BR)

	120V	277V
Input Power	27.8W (+/-5%)	28.3W (+/-5%)
Input Current - Max	0.24A	0.11A
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 (MVOLT ECOS3)

	120V	277V
Input Power	17.8W (+/-5%)	17.8W (+/-5%)
Input Current - Max	0.15A	0.06A
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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**ORDERING INFORMATION** Housing and trim can be ordered together or separate, but will always ship separately.

**Example:** TC22LED G4 20LM 27K 90CRI MVOLT ZT BR

Series	Generation	Lumens	Color Temperature	CRI	Voltage/Driver
<b>TC22LED</b> 6" LED Downlight Non-IC Rated Housing	<b>G4</b> Generation 4	<b>20LM</b> 2000 Nominal Lumens	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>90CRI</b> 90+ CRI	<b>MVOLT ZT10</b> Multi-Volt (120-277), 0-10V, 10% dim <b>MVOLT ZT1</b> Multi-Volt (120-277), 0-10V, 1% dim <b>MVOLT EZ10</b> Multi-Volt (120-277), eidoLED 0-10V, 10% dim <b>MVOLT EZ1</b> Multi-Volt (120-277), eidoLED 0-10V, 1% dim <b>MVOLT ECOS3</b> Multi-Volt (120-277), Lutron Hi-Lume A series 3 wire fluorescent controls and Lutron Ecosystem

Emergency Battery	Territory
<b>BR</b> Emergency Battery	<b>CP</b> Chicago Plenum













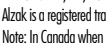
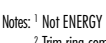
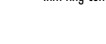


Note: Chicago Plenum (CP) is not available with emergency option (BR)

Note: Lutron driver (MVOLT ECOS3) is not available with emergency battery pack (BR)



A+ Capable options indicated by this color background

## Trim/Description

	<b>24 WWH</b> 6" Downlight Tapered Baffle Trim - White Baffle, White Trim Ring
	<b>24 BWH</b> <sup>1</sup> 6" Downlight Tapered Baffle Trim - Black Baffle, White Trim Ring
	<b>24 BSC</b> <sup>1</sup> 6" Downlight Tapered Baffle Trim - Black Baffle, Satin Chrome Trim Ring
	<b>24 BABZ</b> <sup>1</sup> 6" Downlight Tapered Baffle Trim - Black Baffle, Classic Age Bronze Trim Ring
	<b>24 BBL</b> <sup>1</sup> 6" Downlight Tapered Baffle Trim - Black Baffle, Black Trim Ring
	<b>27 BWH</b> <sup>1</sup> 6" Downlight Tapered Cone Trim - Black Cone, White Trim Ring
	<b>27 CWH</b> 6" Downlight Tapered Cone Trim - Clear Alzak® Cone, White Trim Ring
	<b>27 GWH</b> 6" Downlight Tapered Cone Trim - Gold Cone, White Trim Ring
	<b>27 HZWH</b> 6" Downlight Tapered Cone Trim - Haze Cone, White Trim Ring
	<b>27 PTSC</b> 6" Downlight Tapered Cone Trim - Pewter Cone, Satin Chrome Trim Ring
	<b>27 WHZABZ</b> 6" Downlight Tapered Cone Trim - Wheat Haze Cone, Classic Aged Bronze Trim Ring
	<b>27 WHZWH</b> 6" Downlight Tapered Cone Trim - Wheat Haze Cone, White Trim Ring
	<b>27 WWH</b> 6" Downlight Tapered Cone Trim - White Cone, White Trim Ring
	<b>9024 WWH</b> 6" Decorative Octagonal Trim - White, White Trim Ring
	<b>9324 SC</b> 6" Decorative Luminous Disc Frosted Trim - Satin Chrome
	<b>9524 SC</b> 6" Decorative Metal Band Trim - Satin Chrome
	<b>9702</b> 6" Decorative Luminous Collar Frosted Trim - Luminous Collar (Frosted)

## Accessories (ordered separately)

Catalog Number	Description
<b>HB1</b>	Two 13 1/2" - 25" Real Nail® 3 bar hangers
<b>HB26</b>	Two 26" C-channel bar hangers
<b>HB50</b>	Two 50" C-channel bar hangers
<b>LB27</b>	Two 27" linear bar hangers
<b>LEDOPTICG3 MFL</b>	Medium Flood Optic (50°)
<b>LEDOPTICG3 NFL</b>	Narrow Flood Optic (37°)
<b>LEDOPTICG3 SP</b>	Spot Optic (10°)
<b>TR6 ABZ</b> <sup>2</sup>	6" Trim Ring - Classic Age Bronze
<b>TR6 BL</b> <sup>2</sup>	6" Trim Ring - Black
<b>TR6 SC</b> <sup>2</sup>	6" Trim Ring - Satin Chrome
<b>TR6 WH</b> <sup>2</sup>	6" Trim Ring - White

Trim Size: 24, 27, 9324, 9524 - 7 5/8" O.D.; 9702 - 7 3/4" O.D.; 9024 - 8" O.D.

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® Certified.

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

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## PHOTOMETRICS

### PHOTOMETRIC REPORT

Test Report#: PT09151102R

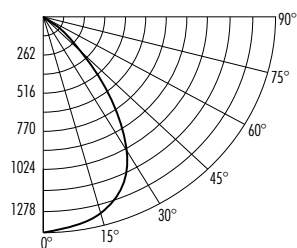
Catalog No: TC22LED G4 20LM 35K 90CRI

AVOLT with 24 WWH White Baffle Trim and

Standard Wide Flood Optic

Luminaire Spacing Criteria: 1.12

Luminaire LPW: 87



### 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  
30K - 0.97  
40K - 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, 25.1W, 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

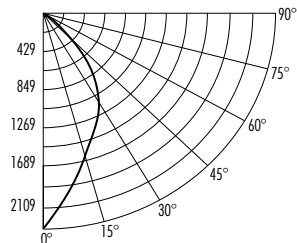
Catalog No: TC22LED G4 20LM 35K 90CRI

AVOLT with 27 CWH Clear Alzak Trim and

Standard Wide Flood Optic

Luminaire Spacing Criteria: 0.78

Luminaire LPW: 93



### 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  
30K - 0.97  
40K - 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, 25.1W, 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.