

# JUNO®

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

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

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

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

## 5" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC20LED (G4 20LM) RECESSED HOUSING



## LENSED 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 • 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 wall box 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** 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.

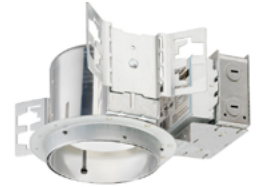
### HOUSING FEATURES

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

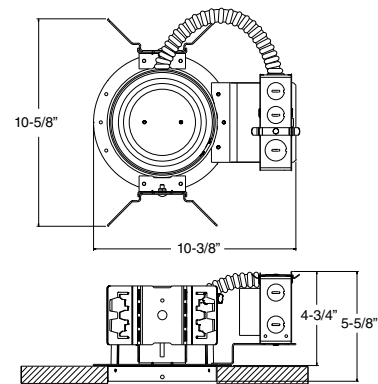
**Junction Box** Pre-wired junction box provided with (5) 1/2" and (1) 3/4" knockouts and ground wire, UL listed and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with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



5 5/8" CEILING CUTOUT

### 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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## TC20LED (G4 20LM) RECESSED HOUSING LENSED TRIMS

**ORDERING INFORMATION** Housing and trim can be ordered together or separate, but will always ship separately.

**Example:** TC20LED G4 20LM 27K 90CRI MVOLT ZT BR

Series	Generation	Lumens	Color Temperature	CRI	Voltage/Driver
TC20LED 5" LED Downlight Non-IC Housing	G4 Generation 4	20LM 2000 Nominal Lumens	27K 2700K	90CRI 90+ CRI	MVOLT ZT10 Multi-Volt (120-277), 0-10V, 10% dim
			30K 3000K		MVOLT ZT1 Multi-Volt (120-277), 0-10V, 1% dim
			35K 3500K		MVOLT EZ10 Multi-Volt (120-277), eidoLED 0-10V, 10% dim
			40K 4000K		MVOLT EZ1 Multi-Volt (120-277), eidoLED 0-10V, 1% dim
					MVOLT ECOS3 Multi-Volt (120-277), Lutron Hi-Lume A series 3 wire fluorescent controls and Lutron Ecosystem

Emergency Battery	Territory
BR Emergency Battery	CP 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>210N WH *</b>	5" Lensed Flat Glass Shower Trim - White
	<b>210N SC *</b>	5" Lensed Flat Glass Shower Trim - Satin Chrome
	<b>210N ABZ *</b>	5" Lensed Flat Glass Shower Trim - Classic Aged Bronze
	<b>212N WH *</b>	5" Lensed Frosted Lens with Clear Center Trim - White
	<b>212N SC *</b>	5" Lensed Frosted Lens with Clear Center Trim - Satin Chrome
	<b>212N ABZ</b>	5" Lensed Frosted Lens with Clear Center Trim - Classic Aged Bronze
	<b>2130 WWH *</b>	5" Lensed Baffle with Regressed Frosted Dome Lens Trim - White Baffle, White Trim Ring
	<b>2130 BWH *</b>	5" Lensed Baffle with Regressed Frosted Dome Lens Trim - Black Baffle, Black Trim Ring
	<b>5101 ABZ *</b>	5" Lensed Beveled Frame with Frosted Dome Lens Trim - Classic Aged Bronze
	<b>5101 SC *</b>	5" Lensed Beveled Frame with Frosted Dome Lens Trim - Satin Chrome
	<b>5101 WH *</b>	5" Lensed Beveled Frame with Frosted Dome Lens Trim - White

UL Listed for use in wet location.

\* Do not use reflector shipped with trim for LED housing.

Trim Size: 210, 212, 2130 - 6 1/4" O.D.; 5101 - 6 1/2" O.D.

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

 JUNO IC housings meet IECC Energy Code requirements per ASTM E283.

Air-Loc® rated trims are pre-gasketed for minimum air leakage with IC housings.

### 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")

To order, specify catalog number.

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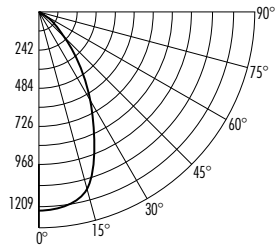
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LENSED TRIMS

## PHOTOMETRICS

### PHOTOMETRIC REPORT

Test Report#: PT08152705R  
Catalog No: TC20LED G4 20LM 35K 90CRI  
MVOLT with 210 WH Lensed Trim and Standard  
Wide Flood Optic

Luminaire Spacing Criteria: 0.94  
Luminaire LPW: 56



### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1226
5	1214
15	1081
25	814
35	426
45	194
55	105
65	60
75	30
85	8
90	1

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'	95	79	68
5.0'	61	51	43
6.0'	42	35	30
7.0'	34	28	24
8.0'	27	22	19
9.0'	21	17	15
10.0'	15	13	11

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	785	N/A	55.9
0-40°	1055	N/A	75.1
0-60°	1303	N/A	92.8
0-90°	1405	N/A	100.0

### INITIAL FOOTCANDLES

(One Unit, 25.1W, 60.5° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	76.6	4.7
6	34.1	7.0
8	19.2	9.3
10	12.3	11.7

### LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	32446
55	21703
65	16704
75	13683
85	11416

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.