

# JUNO®

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

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

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

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

## 5" TC 900 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC20LED (G4 09LM) 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 26W compact fluorescent while consuming only 18W\*

### 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°) 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 50% 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.

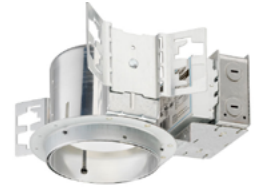
### HOUSING FEATURES

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

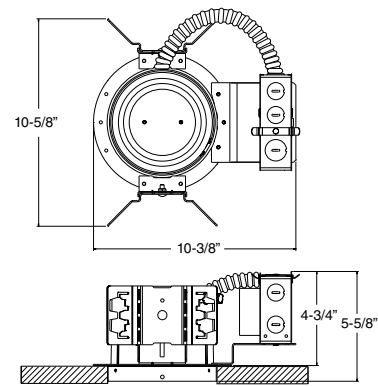
**Junction Box** Pre-wired junction box provided with (5) 1/2" and (1) 3/4" knockouts and ground wire, UL listed and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with 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	16.1W (+/-5%)	16.9W (+/-5%)
Input Current - Max	0.14A	0.06A
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	18.9W (+/-5%)	19.6W (+/-5%)
Input Current - Max	0.16A	0.07A
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 (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 09LM) RECESSED HOUSING LENSED TRIMS

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

**Example:** TC20LED G4 09LM 27K 90CRI MVOLT ZT BR

Series	Generation	Lumens	Color Temperature	CRI	Voltage/Driver
TC20LED 5" LED Downlight Non-IC Housing	G4 Generation 4	09LM 900 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), eldoLED 0-10V, 10% dim
			40K 4000K		MVOLT EZ1 Multi-Volt (120-277), eldoLED 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



- 210N WH \*** 5" Lensed Flat Glass Shower Trim - White  
**210N SC \*** 5" Lensed Flat Glass Shower Trim - Satin Chrome  
**210N ABZ \*** 5" Lensed Flat Glass Shower Trim - Classic Aged Bronze



- 212N WH \*** 5" Lensed Frosted Lens with Clear Center Trim - White  
**212N SC \*** 5" Lensed Frosted Lens with Clear Center Trim - Satin Chrome  
**212N ABZ** 5" Lensed Frosted Lens with Clear Center Trim - Classic Aged Bronze



- 2130 WWH \*** 5" Lensed Baffle with Regressed Frosted Dome Lens Trim - White Baffle, White Trim Ring  
**2130 BWH \*** 5" Lensed Baffle with Regressed Frosted Dome Lens Trim - Black Baffle, Black Trim Ring



- 5101 ABZ \*** 5" Lensed Beveled Frame with Frosted Dome Lens Trim - Classic Aged Bronze  
**5101 SC \*** 5" Lensed Beveled Frame with Frosted Dome Lens Trim - Satin Chrome  
**5101 WH \*** 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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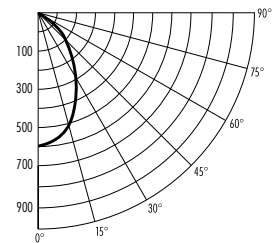
## PHOTOMETRICS

### PHOTOMETRIC REPORT

Test Report #: PT10112502R  
Catalog No: TC20LED G4 09LM 35K  
90CRI MVOLT with 210-WH Trim and  
Standard Wide Flood Optic

Luminaire Spacing Criterion: 0.92

Luminaire LPW: 43



### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees	0°
0	599
5	589
15	526
25	388
35	208
45	101
55	53
65	29
75	14
85	3
90	0

Multiplier: 27K - 0.93  
30K - 0.99  
40K - 1.01

### AVERAGE INITIAL FOOTCANDLES

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

Spacing	RCR1	RCR3	RCR5
4.0'	47	39	33
5.0'	30	25	21
6.0'	21	17	15
7.0'	17	14	12
8.0'	13	11	9
9.0'	10	8	7
10.0'	7	6	5

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0 - 30°	378	N/A	54.9
0 - 40°	511	N/A	74.1
0 - 60°	641	N/A	92.9
0 - 90°	690	N/A	100.0

### INITIAL FOOTCANDLES

(One Unit, 16.1W, 59.6° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	37.4	4.6'
6	16.6	6.9'
8	9.4	9.2'
10	6.0	11.5'

### LUMINANCE (Average cd/m<sup>2</sup>)

Degrees	Average 0° Luminance
45	11295
55	7294
65	5399
75	4408
85	2909

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.