

JUNO®

Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

5" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC20LED (G4 20LM) 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 4000K 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 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 [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® Certified 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.

Specifications subject to change without notice.

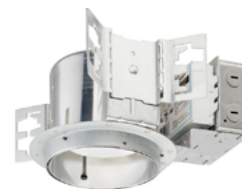
HOUSING FEATURES

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

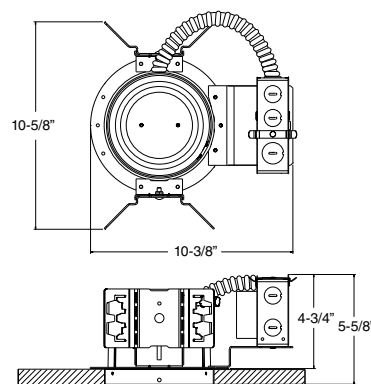
Junction Box Pre-wired junction box provided with (5) 1/2" and (1) 3/4" knockouts and ground wire, UL listed and cUL listed for through-branch wiring, maximum 8 No. 12 AWG 90° C branch circuit conductors (4 in, 4 out) • Junction box provided with removable access plates • Knockouts equipped with pryout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

5" TC 2000 LUMEN LED DOWNLIGHT NEW CONSTRUCTION

TC20LED (G4 20LM) RECESSED HOUSING HYPERBOLIC 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



204HYP3 BWH ¹	5" Hyperbolic Cone Trim - Black, White Trim Ring	¹ Not ENERGY STAR® Certified
204HYP3 CWH	5" Hyperbolic Cone Trim - Clear Alzak®, White Trim Ring	
204HYP3 HZWH	5" Hyperbolic Cone Trim - Haze, White Trim Ring	
204HYP3 WHZABZ ¹	5" Hyperbolic Cone Trim - Wheat Haze, Classic Aged Bronze Trim Ring	
204HYP3 WHZWH ¹	5" Hyperbolic Cone Trim - Wheat Haze, White Trim Ring	
204HYP3 WWH	5" Hyperbolic Cone Trim - White, White Trim Ring	

Trim Size: 6 1/4" O.D.

Alzak® is a registered trademark of Alcoa Corp.

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

Accessories (ordered separately)

Catalog Number	Description
HB1	Two 13 1/2" - 25" Real Nail® 3 bar hangers
HB26	Two 26" C-channel bar hangers
HB50	Two 50" C-channel bar hangers
LB27	Two 27" linear bar hangers
TR5 ABZ	5" Trim Ring - Classic Aged Bronze
TR5 BL	5" Trim Ring - Black
TR5 SC	5" Trim Ring - Satin Chrome
TR5 WH	5" Trim Ring - White

To order, specify catalog number.

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PHOTOMETRICS

PHOTOMETRIC REPORT

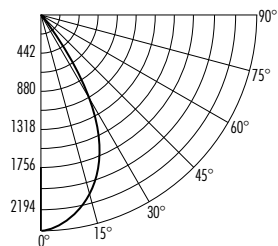
Test Report#: PT09151402R

Catalog No: TC20LED G4 20LM 35K 90CRI

MVOLT with 204HYP3 CWH Trim and standard nano mixing chamber

Luminaire Spacing Criteria: 0.90

Luminaire LPW: 84



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2414
5	2356
15	2017
25	1520
35	775
45	189
55	0
65	0
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'	147	127	111
5.0'	94	81	71
6.0'	65	56	49
7.0'	53	46	40
8.0'	42	36	32
9.0'	32	28	24
10.0'	23	20	18

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	1475	N/A	69.7
0-40°	1956	N/A	92.5
0-60°	2115	N/A	100.0
0-90°	2115	N/A	100.0

INITIAL FOOTCANDLES

(One Unit, 25.1W, 59.5° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	150.9	4.6
6	67.1	6.9
8	37.7	9.1
10	24.1	11.4

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	25344
55	17
65	0
75	0
85	0

PHOTOMETRIC REPORT

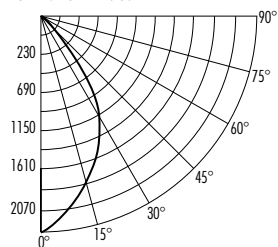
Test Report#: PT09151403R

Catalog No: TC20LED G4 20LM 35K 90CRI

MVOLT with 204HYP3 HZWH Trim and standard nano mixing chamber

Luminaire Spacing Criteria: 0.88

Luminaire LPW: 80



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2298
5	2233
15	1851
25	1418
35	761
45	178
55	3
65	0
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'	139	120	105
5.0'	89	77	67
6.0'	62	53	47
7.0'	50	43	38
8.0'	40	34	30
9.0'	30	26	23
10.0'	22	19	17

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	1374	N/A	68.6
0-40°	1845	N/A	92.1
0-60°	2002	N/A	100.0
0-90°	2002	N/A	100.0

INITIAL FOOTCANDLES

(One Unit, 25.1W, 60.1° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	143.6	4.6
6	63.8	6.9
8	35.9	9.3
10	23.0	11.6

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	23910
55	529
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.