



# LOW PROFILE 3-1/4" LED RECESSED DOWNLIGHT

## 800/1200/1500/2000 LUMEN

DOWNLIGHT CONE

**TC420LP, IC415LP, IC412LP, IC408LP**  
with 437N Trim



### PRODUCT DESCRIPTION

Low Profile recessed downlight LED luminaire is less than 4" tall with 3 1/4" downlight cone produces up to 2000 delivered lumens. Fixture has 45° visual cutoff and features precision geared hot-aiming. Available in both IC and Non-IC rated configurations.

### PRODUCT SPECIFICATIONS

**LED Light Engine** Consistent fixture to fixture color within 3-step MacAdam ellipse • 2700K, 3000K, 3500K, or 4000K color temperatures are available with 80 CRI minimum • 2700K and 3000K also available with 90 CRI minimum.

**Modular Optics** Available with 12° Spot, 24° Narrow Flood, 35° Flood and 50° wide flood field interchangeable optics • Additional distributions of 20°, 30°, 40°, 45° and 60° FWHM can be achieved with the use of the diffusing films and spot primary optic • Patented (US Patent 8,950,911) auto-adjusting optic holder maximizes luminaire efficiency by maintaining optimal LED optic position • Accommodates up to two (2) additional beam control lenses and/or filters.

**Reflector** .040" aluminum parabolic reflector in clear, black, haze, or wheat haze Alzak finish provides 50° cut-off.

**Trims Style** Trim Ring, Self Flanged and Flush Mount reflectors utilize torsion spring retention for tight, secure fit to ceiling • Trim ring features beveled knife edge for clean ceiling interface • Self Flanged reflectors with polished or optional white painted flange • For flush mount installations in drywall ceilings use the FMA4 flush mount adapter • For flush mount installations in wood, stone, or tile ceilings the FMA4-SC\*\*\* must be used (specify ceiling thickness and adapter finish).

**LED Driver** Seven (7) driver options available to accommodate 120-277V input and multiple control protocols • For a list of compatible dimmers, refer to [ACLXLED3-DIM](#) • Power Factor > 0.9 • Field replaceable from below or above ceiling.

**Life** Rated for 50,000 hrs at 70% lumen maintenance.

**Warranty** 5 years from date of purchase on LED components • Standard Juno Lighting Group product guarantee terms and conditions apply.

**Codes/Labels** UL and cUL listed for through branch wiring, damp locations • IC housings meet energy code Air Leakage requirements per ASTM E283 • ENERGY STAR® Qualified with select trims • IC rated luminaires with 90CRI light engine are certified to high efficacy requirements of California T24 with select color temperatures and trims • IC housings are rated for direct contact with insulation • IC408LP and IC412LP are compatible with spray foam insulation with an R-Value of 3.7 per inch or less • Union made.

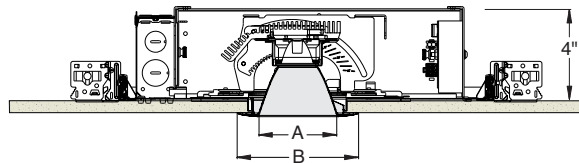
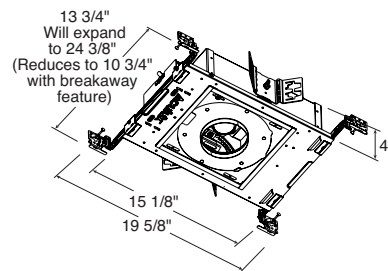
**New Construction Mounting** Shallow new construction fixture is less than 4" tall for applications with limited space • Features patented (US Patent 8,038,113) Pro-V™ bar hanger system, permitting quick placement of housing with 24" on-center joists or suspended ceilings and vertically adjustable mounting brackets (butterfly brackets) • Centerline indicators on plaster frame and patented (US Patent 8,277,090) Tru-Line™ Platform featuring +/- 1/2" translation aids fixture alignment after installation, prior to drywall.

**Junction Box** Rated for 4 No. 12 AWG 90° C through branch circuit conductors and includes (6) 1/2", (1) 3/4", and (4) Non-metallic sheathed cable knock-outs • Push-in electrical connectors for field connections.

**Ceiling Thickness** 1/2" - 7/8" ceiling standard • For thicker ceilings, order CTA4N-125 (7/8"-1 1/4"), CTA4N-163 (1 1/4"-1 5/8") or CTA4N-200 (1 5/8"-2") • CTA4N not required for wood, stone, or tile flush mount applications.

Type	Cat. No.
_____	_____
Project: _____	
Notes: _____	

### DIMENSIONS



4 1/4" CEILING CUTOUT  
(REFER TO INSTRUCTION SHEET FOR FLUSH MOUNT CEILING CUTOUT)

	A	B
Trim Ring	3 1/4"	5"
Self Flanged	3 3/8"	4 5/8"
Flush Mount	3 3/8"	3 7/8"

### ELECTRICAL DATA

Lumen Package	800		1200		1500		2000	
Voltage	120	277	120	277	120	277	120	277
Input Power	9.6W	9.7W	15.1W	15.3W	19.8W	19.8W	27.0W	26.7
Input Current	0.08	0.04	0.13	0.06	0.17	0.08	0.23	0.10
Frequency	50/60Hz		50/60Hz		50/60Hz		50/60Hz	
Power Factor	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9




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**Ordering Information** Housing, trim and accessories each ordered separately


Example: **IC412LP-830-N-1**


Series	CRI/Color Temperature	Optic	Driver	Options
<b>IC408LP</b>	800 Lumen, IC Rated <b>827</b> 2700K, 80CRI	<b>S</b> 12° Spot	<b>I</b> 120V, Forward & Reverse Phase Dimming, 5%	<b>CP*</b> Chicago Plenum
<b>IC412LP</b>	1200 Lumen, IC Rated <b>830</b> 3000K, 80CRI	<b>N</b> 24° Narrow Flood	<b>EZ1</b> 120-277V, eldoLED ECOdrive 0-10V Dimming, 1%	<b>N1<sup>1</sup></b> nLight® dimming pack, 120V
<b>IC415LP</b>	1500 Lumen, IC Rated <b>835</b> 3500K, 80CRI	<b>F</b> 35° Flood	<b>EZB</b> 120-277V, eldoLED SOLOdrive 0-10V Dimming, 0.1%	<b>N2<sup>1</sup></b> nLight® dimming pack, 277V
<b>TC420LP</b>	2000 Lumen, Non-IC Rated <b>840</b> 4000K, 80CRI <b>927</b> 2700K, 90CRI <b>930</b> 3000K, 90CRI	<b>W</b> 50° Wide Flood	<b>L</b> 120-277V, Lutron Hi-Lume 3-Wire Dimming, Ecosystem Compatible, 1%	<b>CPNL<sup>1,2</sup></b> nLight® dimming pack and Chicago Plenum rated
			<b>D</b> 120V, Lutron Hi-Lume 2-Wire Dimming, 1%	*Chicago Plenum not available on TC420LP
			<b>M</b> 120-277V, DMX512/RDM	<sup>1</sup> Available with eldoLED drivers only
			<b>A</b> 120-277V, DALI Dimming	<sup>2</sup> nLight® NPS80EZ ships loose for remote mounting

Example: **437NB-WH**

Trim			
Trim Ring <sup>1</sup>	Self Flanged <sup>2</sup>	Flush Mount <sup>3</sup>	Description
			
<b>437NB-WH</b>	<b>437NB-SF</b>	<b>437NB-FM</b>	Black Cone
<b>437NB-ABZ</b>	-	-	Black Cone
<b>437NB-SC</b>	-	-	Black Cone
<b>437NC-WH</b>	<b>437NC-SF</b>	<b>437NC-FM</b>	Clear Cone
<b>437NHZ-SC</b>	-	-	Haze Cone
<b>437NHZ-WH</b>	<b>437NHZ-SF</b>	<b>437NHZ-FM</b>	Haze Cone
<b>437NWHZ-ABZ</b>	-	-	Wheat Haze Cone
<b>437NWHZ-WH</b>	<b>437NWHZ-SF</b>	<b>437NWHZ-FM</b>	Wheat Haze Cone

<sup>1</sup>Trim Ring Finish: ABZ - Classic Aged Bronze, SC - Satin Chrome, WH - White.  
<sup>2</sup>For self flanged reflector with optional white painted flange, replace "SF" suffix with "SFWH".  
<sup>3</sup>Flush Mount trims must be used with Flush Mount Adapter, ordered separately.  
 Product specifications subject to change without notice.

	<b>Construction:</b>	Type IC & Non-IC
	<b>CCT/CRI:</b>	827, 830, 835, 840, 930
	<b>Optic:</b>	S, N, F, W
	<b>Trim Finish:</b>	C, HZ, WHZ

	<b>Construction:</b>	Type IC
	<b>CCT/CRI:</b>	927, 930
	<b>Optic:</b>	S, N, F, W
	<b>Trim Finish:</b>	C, HZ, WHZ



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To achieve the desired beam angle (FWHM), specify the following primary LED optic on the luminaire and order the diffusing film from the table below

Desired FWHM	Primary Optic	Film
12°	S	-
20°	S	AF3-10
24°	N	-
30°	S	AF3-20
35°	F	-
40°	S	AF3-30
45°	S	AF3-40
50°	W	-
60°	S	AF3-50
20°x60°	S	AF3-60x1

### Flush Mount Adapters

Cat. #	Description
<b>FMA4</b>	Drywall Ceiling Adapter
<b>FMA4-SC087-WH</b>	Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, White
<b>FMA4-SC087-BL</b>	Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, Black
<b>FMA4-SC125-WH</b>	Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, White
<b>FMA4-SC125-BL</b>	Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, Black
<b>FMA4-SC163-WH</b>	Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, White
<b>FMA4-SC163-BL</b>	Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, Black

### Optical Accessories

Cat. #	Description	Cat. #	Description
<b>TIR-ACLX3-SP</b>	12° Spot Optic	<b>T746</b>	Med. Green Color Filter
<b>TIR-ACLX3-NFL</b>	24° Narrow Flood Optic	<b>T7401</b>	Red Dichroic Lens
<b>TIR-ACLX3-FL</b>	35° Flood Optic	<b>T7403</b>	Med. Green Dichroic Lens
<b>TIR-ACLX3-WFL</b>	50° Wide Flood Optic	<b>T7404</b>	Med. Blue Dichroic Lens
<b>AF3-10</b>	10° Film (Use with Spot Optic)	<b>T7405</b>	Yellow Dichroic Lens
<b>AF3-20</b>	20° Film (Use with Spot Optic)	<b>T7406</b>	Magenta Dichroic Lens
<b>AF3-30</b>	30° Film (Use with Spot Optic)	<b>T7411</b>	Blue Green Dichroic Lens
<b>AF3-40</b>	40° Film (Use with Spot Optic)	<b>T7416</b>	Daylight Blue Correction Lens
<b>AF3-50</b>	50° Film (Use with Spot Optic)	<b>T7420</b>	Diffuse Spread Lens
<b>AF3-60x1</b>	60°x1° Film (Use with Spot Optic)	<b>T7421</b>	Uniformity Lens
<b>T741</b>	Med. Pink Color Filter	<b>T7422</b>	UV Filter Lens
<b>T742</b>	Warm Red Color Filter	<b>T7477</b>	Prismatic Lens
<b>T743</b>	Daylight Blue Color Filter	<b>T7478</b>	Linear Spread Lens
<b>T744</b>	Med. Blue Color Filter	<b>T7459BL</b>	Hexcell Louver
<b>T745</b>	Med. Amber Color Filter		

Product specifications subject to change without notice.

### Misc. Accessories

Cat. #	Description
<b>CTA4N-125</b>	1 1/4" Thick Ceiling Adapter
<b>CTA4N-163</b>	1 5/8" Thick Ceiling Adapter
<b>CTA4N-200</b>	2" Thick Ceiling Adapter
<b>HB-1</b>	(2) Real Nail 3 Bar Hangers
<b>HB-26</b>	(2) 26" C-Channel Bar Hangers
<b>HB-50</b>	(2) 50" C-Channel Bar Hangers
<b>LB-27</b>	(2) 27" Linear Bar Hangers
<b>EMI-20</b>	20W Emergency Lighting Inverter

To order, specify catalog number.

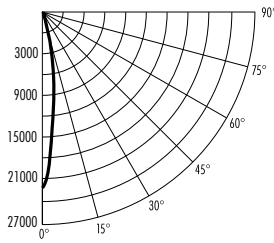
### LUMEN OUTPUT MULTIPLIERS

Color Temperature	CRI	Multiplier	Lumen Package	Multiplier
2700K	80	0.95	800	0.40
3000K	80	1.00	1200	0.61
3500K	80	1.05	1500	0.75
4000K	80	1.10	2000	1.00
2700K	90	0.83		
3000K	90	0.87		



**SPOT  
PHOTOMETRIC REPORT**

Test Report #: PT04151705  
 Catalog No: IC/TC420L-830-S-1  
 with 437NC trim  
 Luminaire Spacing Criterion: 0.24  
 Luminaire LPW: 73



**CANDLEPOWER  
DISTRIBUTION  
(Candelas)**

Degrees Vertical	0°
0	21853
5	14278
15	2074
25	203
35	48
45	3
55	0
65	0
75	0
85	0
90	0

**AVERAGE INITIAL FOOTCANDLES  
Multiple Units (Square Array, 60°x60' room)  
Ceiling 80% Wall 50% Floor 20%**

Spacing	RCR1	RCR3	RCR5
4.0'	137	127	121
5.0'	88	81	78
6.0'	61	57	54
7.0'	49	46	44
8.0'	39	36	34
9.0'	30	28	26
10.0'	22	20	19

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixture
0-30°	1888	98.3
0-40°	1915	99.7
0-60°	1919	99.9
0-90°	1921	100.0

**INITIAL FOOTCANDLES  
(One Unit, 26.1W, 13.8° Beam)**

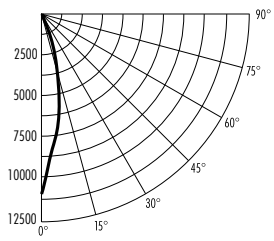
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	607.0	1.5'
8	341.5	1.9'
10	218.5	2.4'
12	151.8	2.9'

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

Degrees	Average Luminance
45	903
55	229
65	267
75	435
85	647

**NARROW FLOOD  
PHOTOMETRIC REPORT**

Test Report #: PT04152001  
 Catalog No: IC/TC420L-830-N-1  
 with 437NC trim  
 Luminaire Spacing Criterion: 0.40  
 Luminaire LPW: 75



**CANDLEPOWER  
DISTRIBUTION  
(Candelas)**

Degrees Vertical	0°
0	10606
5	8067
15	3346
25	590
35	50
45	3
55	0
65	0
75	0
85	0
90	0

**AVERAGE INITIAL FOOTCANDLES  
Multiple Units (Square Array, 60°x60' room)  
Ceiling 80% Wall 50% Floor 20%**

Spacing	RCR1	RCR3	RCR5
4.0'	140	129	120
5.0'	89	82	77
6.0'	62	57	53
7.0'	50	46	43
8.0'	40	37	34
9.0'	30	28	26
10.0'	22	21	19

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixture
0-30°	1935	97.9
0-40°	1974	99.8
0-60°	1977	100.0
0-90°	1977	100.0

**INITIAL FOOTCANDLES  
(One Unit, 26.2W, 23.4° Beam)**

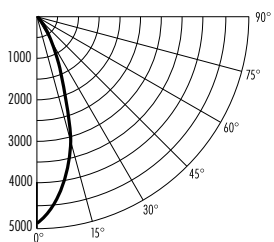
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	294.6	2.5'
8	165.7	3.3'
10	106.1	4.1'
12	73.7	5.0'

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

Degrees	Average Luminance
45	717
55	65
65	44
75	0
85	0

**FLOOD  
PHOTOMETRIC REPORT**

Test Report #: PT04152101  
 Catalog No: IC/TC420L-830-F-1  
 with 437NHZ trim  
 Luminaire Spacing Criterion: 0.60  
 Luminaire LPW: 72



**CANDLEPOWER  
DISTRIBUTION  
(Candelas)**

Degrees Vertical	0°
0	4935
5	4587
15	3143
25	1254
35	159
45	6
55	1
65	0
75	0
85	0
90	0

**AVERAGE INITIAL FOOTCANDLES  
Multiple Units (Square Array, 60°x60' room)  
Ceiling 80% Wall 50% Floor 20%**

Spacing	RCR1	RCR3	RCR5
4.0'	139	125	114
5.0'	89	80	73
6.0'	62	56	51
7.0'	23	21	19
8.0'	39	36	32
9.0'	30	27	25
10.0'	22	20	18

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixture
0-30°	1845	93.1
0-40°	1970	99.5
0-60°	1980	100.0
0-90°	1980	100.0

**INITIAL FOOTCANDLES  
(One Unit, 26.2W, 36.6° Beam)**

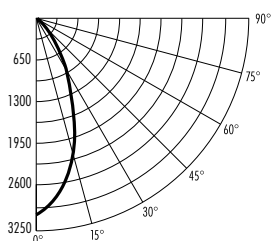
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	137.1	4.0'
8	77.1	5.3'
10	49.4	6.6'
12	34.3	7.9'

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

Degrees	Average Luminance
45	1700
55	164
65	89
75	73
85	0

**WIDE FLOOD  
PHOTOMETRIC REPORT**

Test Report #: PT04152201  
 Catalog No: IC/TC420L-830-W-1  
 with 437NHZ trim  
 Luminaire Spacing Criterion: 0.68  
 Luminaire LPW: 67



**CANDLEPOWER  
DISTRIBUTION  
(Candelas)**

Degrees Vertical	0°
0	3061
5	2875
15	2116
25	1187
35	471
45	20
55	2
65	1
75	0
85	0
90	0

**AVERAGE INITIAL FOOTCANDLES  
Multiple Units (Square Array, 60°x60' room)  
Ceiling 80% Wall 50% Floor 20%**

Spacing	RCR1	RCR3	RCR5
4.0'	121	107	95
5.0'	78	69	61
6.0'	54	48	42
7.0'	44	39	34
8.0'	35	21	27
9.0'	26	23	21
10.0'	19	17	15

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixture
0-30°	1393	79.5
0-40°	1697	96.9
0-60°	1750	99.9
0-90°	1751	100.0

**INITIAL FOOTCANDLES  
(One Unit, 26.2W, 42.7° Beam)**

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	85.0	4.7'
8	47.8	6.3'
10	30.6	7.8'
12	21.3	9.4'

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

Degrees	Average Luminance
45	5180
55	524
65	311
75	218
85	216

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. Photometry is at 3000K CCT, 80CRI.

