



# LOW PROFILE 3-1/4" LED RECESSED ADJUSTABLE 800/1200/1500/2000 LUMEN 1-1/4" PINHOLE TC420LP, IC415LP, IC412LP, IC408LP with 433N Trim

## PRODUCT DESCRIPTION

Low Profile recessed adjustable LED luminaire is less than 4" tall with 1 1/4" pinhole produces up to 1200 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.

**Adjustability** Acu-Aim™ precision geared hot-aiming achieves 370° rotation, 45° tilt • Optimized center beam optics translates light engine forward as it is aimed off nadir, ensuring maximum light and low brightness • Black aiming mechanism preserves dark aperture.

**Reflector** .040" aluminum angle-cut reflector in black Alzak finish shields housing interior.

**Trims Style** Trim Ring and Flush Mount reflectors utilize torsion spring retention for tight, secure fit to ceiling • Trim ring features beveled knife edge for clean ceiling interface • 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 [ACCLXLED3-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 • 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.

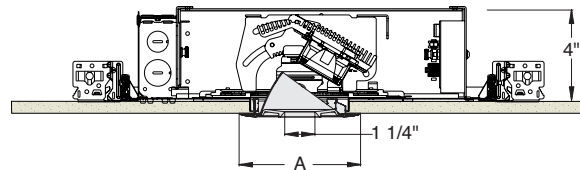
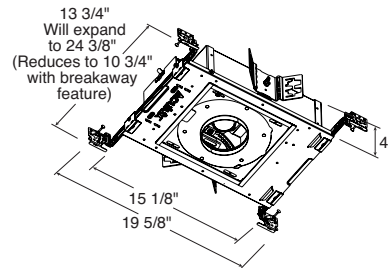
**New Construction Mounting** Shallow new construction fixture is less than 4" tall for applications with limited space • Features patented (US Patent 8,038,113) Pro-VI™ bar hanger system, permitting quick placement of housing with 24" on-center joists or suspended ceilings and vertically adjustable 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
Trim Ring	5"
Flush Mount	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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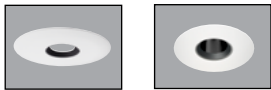
**Ordering Information** Housing, trim and accessories each ordered separately

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>D</b> 120V, Lutron Hi-Lume 2-Wire Dimming, 1% <b>M</b> 120-277V, DMX512/RDM <b>A</b> 120-277V, DALI Dimming	<b>CPNL<sup>1,2</sup></b> nLight® dimming pack and Chicago Plenum rated  *Chicago Plenum not available on TC420LP  <sup>1</sup> Available with eldoLED drivers only  <sup>2</sup> nLight® NPS80EZ ships loose for remote mounting

Example: **433N-WH**

**Trim**



Trim Ring	Flush Mount <sup>1</sup>	Description
<b>433N-WH</b>	<b>433N-WH-FM</b>	White Trim, Black Alzak® Reflector
<b>433N-ABZ</b>	-	Aged Bronze Trim, Black Alzak® Reflector
<b>433N-SC</b>	-	Satin Chrome Trim, Black Alzak® Reflector
<b>433N-BL</b>	<b>433N-BL-FM</b>	Black Trim, Black Alzak® Reflector

<sup>1</sup>Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

# 3-1/4" LED RECESSED ADJUSTABLE 800/1200/1500/2000 LUMEN

1-1/4" PINHOLE

NEW CONSTRUCTION

**IC/TC420L, IC415L, IC412L, IC408L  
with 433N Trim**

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.



# 3-1/4" LED RECESSED ADJUSTABLE 800/1200/1500/2000 LUMEN

1-1/4" PINHOLE  
NEW CONSTRUCTION

**IC/TC420L, IC415L, IC412L, IC408L  
with 433N Trim**

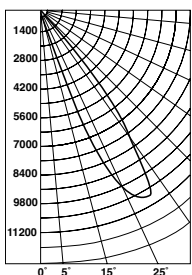
### SPOT PHOTOMETRIC REPORT

Test Report: PTO4152503  
Catalog No: IC/TC420L-830-S-1  
(Aim at 30°)  
with 433N trim

Watts: 26.2  
Lumens: 877  
Luminaire LPW: 33

### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	0	10
5°	5	57
10°	10	218
15°	15	1107
20°	20	4343
25°	25	9541
30°	30	10623
35°	35	7901
40°	40	2434
45°	45	181
50°	50	55
55°	55	4
60°	60	0
65°	65	0
70°	70	0
75°	75	0
80°	80	0
85°	85	0
90°	90	0



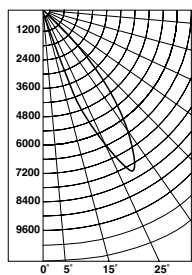
### NARROW FLOOD PHOTOMETRIC REPORT

Test Report: PTO4152703  
Catalog No: IC/TC420L-830-N-1  
(Aim at 30°)  
with 433N trim

Watts: 26.2  
Lumens: 1085  
Luminaire LPW: 41

### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	0	20
5°	5	62
10°	10	103
15°	15	797
20°	20	3305
25°	25	6358
30°	30	8085
35°	35	7032
40°	40	4661
45°	45	2349
50°	50	717
55°	55	69
60°	60	1
65°	65	0
70°	70	0
75°	75	0
80°	80	0
85°	85	0
90°	90	0



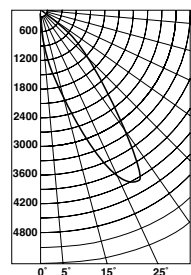
### FLOOD PHOTOMETRIC REPORT

Test Report: PTO4152803  
Catalog No: IC/TC420L-830-F-1  
(Aim at 30°)  
with 433N trim

Watts: 26.2  
Lumens: 1192  
Luminaire LPW: 46

### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	0	279
5°	5	763
10°	10	1321
15°	15	2246
20°	20	3302
25°	25	4089
30°	30	4268
35°	35	3511
40°	40	2374
45°	45	1528
50°	50	808
55°	55	149
60°	60	1
65°	65	0
70°	70	0
75°	75	0
80°	80	0
85°	85	0
90°	90	0



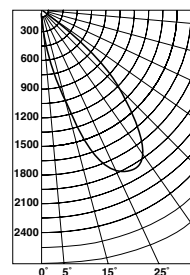
### WIDE FLOOD PHOTOMETRIC REPORT

Test Report: PTO4152903  
Catalog No: IC/TC420L-830-W-1  
(Aim at 30°)  
with 433N trim

Watts: 26.2  
Lumens: 713  
Luminaire LPW: 27

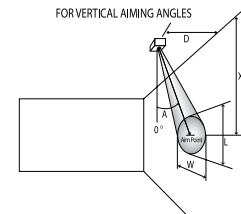
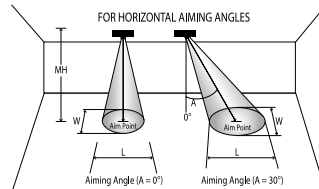
### Candlepower Distribution (Candelas)

Degrees	Vertical	Candela
0°	0	109
5°	5	387
10°	10	652
15°	15	1084
20°	20	1658
25°	25	1979
30°	30	2040
35°	35	2005
40°	40	1747
45°	45	1264
50°	50	690
55°	55	8
60°	60	1
65°	65	0
70°	70	0
75°	75	0
80°	80	0
85°	85	0
90°	90	0



### LUMEN OUTPUT MULTIPLIERS

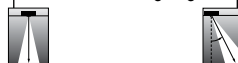
Color Temperature	CRI	Multiplier	Lumen Package	Multiplier
2700K	80	0.95	800	0.40
3000K	80	1.00	1200	0.61
3500K	80	1.05	1500	0.75
4000K	80	1.10	2000	1.00
2700K	90	0.83		
3000K	90	0.87		



**CBCP** • Centerbeam candlepower  
**FC** • Footcandles at beam center (aim point)

In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°, 1.0 for 45°).

Horizontal Aiming Angles



Vertical Aiming Angles



Beam Type	Beam Spread°	CBCP	0°			30°			30°			45°						
			MH	FC	L W	FC	L W	D	FC	X	L W	FC	X	L W				
<b>SPT</b>	<b>12°</b>	10623	6	295	1.5	1.5	192	2.0	1.8	3	148	5.2	3.2	1.5	417	3.0	1.6	1.1
			8	166	2.0	2.0	108	2.7	2.4	4	83	6.9	4.3	2.0	235	4.0	2.1	1.4
			10	106	2.5	2.5	69	3.4	2.9	5	53	8.7	5.3	2.5	150	5.0	2.6	1.8
			12	74	3.1	3.1	48	4.1	3.5	6	37	10.4	6.4	3.1	104	6.0	3.1	2.2
<b>NFL</b>	<b>24°</b>	8085	4	505	1.5	1.5	328	2.0	1.7	2	253	3.5	3.2	1.5	715	2.0	1.5	1.0
			6	225	2.2	2.2	146	3.0	2.5	3	112	5.2	4.9	2.2	318	3.0	2.3	1.5
			8	126	2.9	2.9	82	3.9	3.4	4	63	6.9	6.5	2.9	179	4.0	3.0	2.1
			10	81	3.7	3.7	53	4.9	4.2	5	40	8.7	8.1	3.7	114	5.0	3.8	2.6
<b>FL</b>	<b>35°</b>	4268	4	56	4.4	4.4	36	5.9	5.1	6	28	10.4	9.7	4.4	79	6.0	4.5	3.1
			6	267	1.9	1.9	173	2.6	2.2	2	133	3.5	4.6	1.9	377	2.0	2.0	1.3
			8	119	2.8	2.8	77	3.9	3.3	3	59	5.2	6.9	2.8	168	3.0	3.0	2.0
			10	67	3.8	3.8	43	5.2	4.4	4	33	6.9	9.1	3.8	94	4.0	4.0	2.7
<b>WFL</b>	<b>50°</b>	2040	4	43	4.7	4.7	28	6.4	5.5	5	21	8.7	11.4	4.7	60	5.0	5.0	3.4
			6	30	5.7	5.7	19	7.7	6.6	6	15	10.4	13.7	5.7	42	6.0	6.0	4.0
			8	128	2.4	2.4	83	3.3	2.8	2	64	3.5	6.5	2.4	180	2.0	2.6	1.7
			10	57	3.6	3.6	37	4.9	4.1	3	28	5.2	9.8	3.6	80	3.0	3.9	2.5
			8	32	4.8	4.8	21	6.6	5.5	4	16	6.9	13.0	4.8	45	4.0	5.2	3.4
			10	20	6.0	6.0	13	8.2	6.9	5	10	8.7	16.3	6.0	29	5.0	6.5	4.2
			12	14	7.2	7.2	9	9.8	8.3	6	7	10.4	19.5	7.2	20	6.0	7.9	5.1