

# CLUSTER

## RECESSED LINEAR ADJUSTABLE

### DESCRIPTION

Cluster is the precise, and scalable family of downlights, wall washers, and adjustables, available in both linear and planar configurations and for recessed, pendant, and surface mounting. Based on a fundamental 1.2" square cell, Cluster delivers lighting that is optically sophisticated and aesthetically refined. Cluster recessed linear adjustables are available in 3 cell, 5 cell and 10 cell configurations and aim 30° in either direction. A choice of precision optics, beam spreads and subtle louver treatments matches Cluster linear downlights. Nominal light output is 200 lumens per cell.

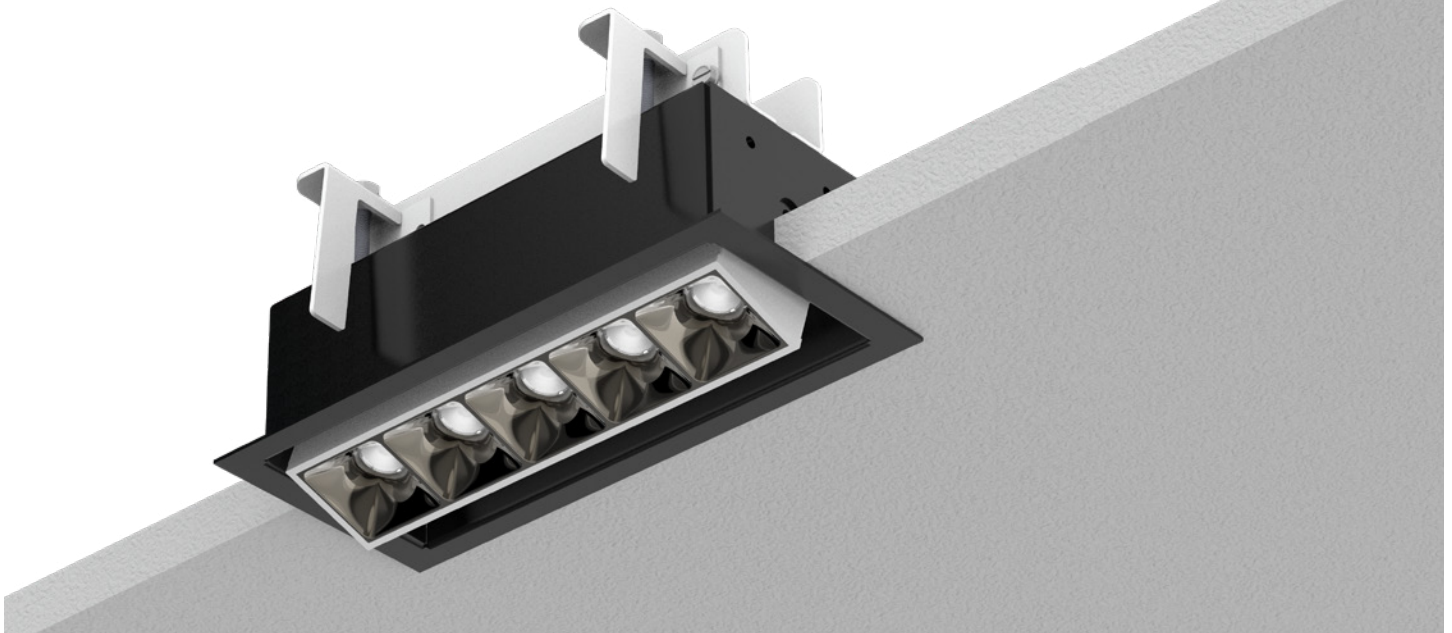
The adjustable optic mounts in an outer housing, which can install in a variety of ceiling types and materials, with either an integral driver or a remote driver that is capable of powering multiple luminaires.

# LUMENWERX

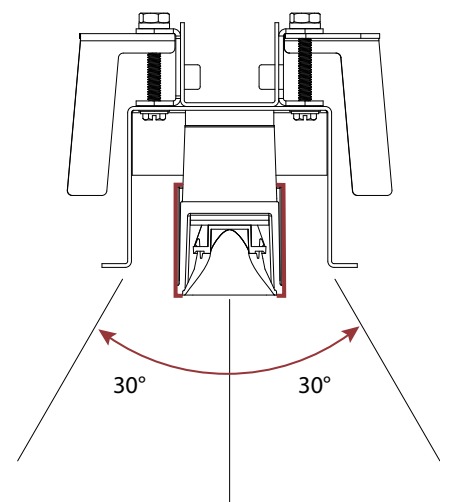
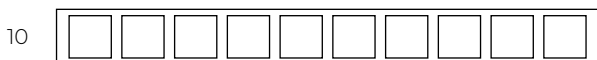
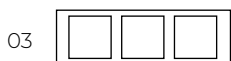
PROJECT: \_\_\_\_\_

TYPE: \_\_\_\_\_

NOTES: \_\_\_\_\_



### SIZES



## 1 - MOUNTING (Example: CLUADJ05-OF-FMB-TRM-INTEGRAL-120-923-D1) Consult pages 3-4 for details before specifying

Mounting can be ordered separately.

LUMINAIRE ID	INSTALLATION TYPE	MOUNTING OPTION <sup>1,2</sup>	TRIM TYPE	DRIVER	VOLTAGE	LUMEN PACKAGE <sup>3</sup>	DIMMING
<b>CLUADJ03</b> - Cluster Adjustable 3x1 <b>CLUADJ05</b> - Cluster Adjustable 5x1 <b>CLUADJ10</b> - Cluster Adjustable 10x1	<b>OF</b> - Open Frame Type Non-IC <b>IC</b> - Type-IC <b>RM</b> - Remodel Type Non-IC <b>CP</b> - Chicago Plenum Type-IC (CCEA)	<b>ASB</b> - Adjustable standard bar hangers <b>FMB</b> - Flush mount bars <b>ACB</b> - Adjustable commercial bar hangers <b>AHC</b> - Adjustable hat channel bars <b>NA</b> - Not applicable <sup>1</sup> See page 4 for more details. <sup>2</sup> Specify NA for remodel (RM) installation type.	<b>TRM</b> - Flanged trim <b>TLMP</b> - Trimless drywall mudplate	<b>INTEGRAL</b>	<b>120</b> - 120V <b>277</b> - 277V	<b>578</b> - 578 lm (CLUR03) <b>923</b> - 923 lm (CLUR05) <b>1791</b> - 1791 lm (CLUR10) <sup>3</sup> Lumen packages shown at 3500K, with SOF-NFL 25°. For other, see lumen output multipliers on page 6.	<b>D1</b> - 1% 0-10V <b>ELV</b> <sup>4</sup> - ELV 120V <b>TRI</b> <sup>4</sup> - TRIAC 120V <sup>4</sup> Available with 120V only.
				<b>REMOTE</b>	<b>FOR FULL REMOTE DRIVER SPECIFICATION, SEE "REMOTE DRIVER" SECTION BELOW.</b>		

## 2 - LIGHT (Example: CLUADJL05-TRM-SW-SOF-NFL-90-30-TMW-TMW-CON-MF01) Consult page 5 for details before specifying

LUMINAIRE ID	TRIM TYPE	SW	OPTIC	BEAM	CRI	COLOR TEMP.	TRIM FINISH <sup>7</sup>	LIGHT ELEMENT FINISH	LOUVER	LOUVER FINISH
<b>CLUADJL03</b> - Cluster Adjustable 3x1 <b>CLUADJL05</b> - Cluster Adjustable 5x1 <b>CLUADJL10</b> - Cluster Adjustable 10x1	<b>TRM</b> - Flanged trim <b>TLMP</b> - Trimless drywall mudplate	<b>SW</b> - Static white	<b>SOF</b> - Soft edge downlight <b>REF</b> - Sharp edge downlight	<b>SPT</b> <sup>5</sup> - Spot <b>NFL</b> <sup>6</sup> - Narrow flood <b>FLD</b> - Flood <b>WFL</b> - Wide flood <sup>5</sup> Available with REF only. <sup>6</sup> Available with SOF only.	<b>90</b> - 90 CRI	<b>27</b> - 2700K <b>30</b> - 3000K <b>35</b> - 3500K <b>40</b> - 4000K	<b>TMW</b> - Textured matte white <b>TMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL# <sup>7</sup> Applicable for trim and trimless.	<b>TMW</b> - Textured matte white <b>TMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL#	<b>CON</b> <sup>8</sup> - Conical <b>HYP</b> - Hyperbolic <b>SQR</b> - Square <sup>8</sup> Faceplate matches body finish black and white only.	<b>MF01</b> - Matte white <b>MF04</b> - Matte black <b>BL05</b> - Black chrome <b>GL06</b> - Gold <b>CP06</b> - Copper

## 3 - REMOTE DRIVER OPTIONAL (Ex: RDB1-3X-CLUADJ03-120-362-RD1) Consult page 6 for details before specifying

Continue here for full remote driver specifications. Remote driver can be ordered separately.

REMOTE DRIVER <sup>9</sup>	LUM. QTY. <sup>10</sup>	LUM. ID	VOLTAGE	LUMEN PACKAGE <sup>11,12</sup>	DIMMING <sup>13</sup>
<b>RDB#</b> - Remote driver <sup>9</sup> If multiple driver boxes needed, specify a line number for each driver type used. (e.g. <b>RDB1-4X-CLUADJ05-...-RD1</b> <b>RDB2-2X-CLUADJ05-...-RD1</b> ...)	<sup>10</sup> Specify number of luminaires per remote driver. (e.g. <b>3X</b> )	<b>CLUADJ03</b> - Cluster Adjustable 3x1 <b>CLUADJ05</b> - Cluster Adjustable 5x1 <b>CLUADJ10</b> - Cluster Adjustable 10x1	<b>120</b> - 120V <b>277</b> - 277V <b>UNV</b> - 120V-277V	<b>###</b> - Low <b>145</b> lm - Med <b>362</b> lm - High <b>578</b> lm (CLUADJ03) <b>###</b> - Low <b>230</b> lm - Med <b>577</b> lm - High <b>923</b> lm (CLUADJ05) <b>###</b> - Low <b>448</b> lm - Med <b>1120</b> lm - High <b>1791</b> lm (CLUADJ10) <sup>11</sup> Watts and lumen per watts will vary based on the number of light units per remote driver as well as on the type of driver selected. <sup>12</sup> Low and medium lumen packages are not available with RELV and RTRI dimming options.	<b>RD1</b> - 1% 0-10V <b>RELV</b> <sup>14</sup> - ELV 120V <b>RTRI</b> <sup>14</sup> - TRIAC 120V <b>RDA</b> <sup>15</sup> - DALI <b>RLTEA2W</b> <sup>14</sup> - Lutron 1% - 2 wire FP 120V <b>RLDE1</b> <sup>15</sup> - Lutron Hi-lume 1% Eco <sup>13</sup> For configurations involving different cluster sizes on a remote driver, please consult factory. <sup>14</sup> Available with 120V only. <sup>15</sup> On-site commissioning is required.

### EXAMPLE ORDER CODES

WHEN SPECIFYING WITH INTEGRAL DRIVER	
<b>MOUNTING</b>	CLUADJ05-OF-FMB-TRM-INTEGRAL-120-923-D1
<b>LIGHT</b>	CLUADJL05-TRM-SW-SOF-NFL-90-30-TMW-TMW-CON-MF01
<b>REMOTE DRIVER</b>	N/A

WHEN SPECIFYING WITH REMOTE DRIVER <sup>16</sup>	
<b>MOUNTING</b>	CLUADJ05-OF-FMB-TRM-REMOTE
<b>LIGHT</b>	CLUADJL05-TRM-SW-SOF-NFL-90-30-TMW-TMW-CON-MF01
<b>REMOTE DRIVER</b>	Remote driver 1: RDB1-4X-CLUADJ05-120-362-RD1 Remote driver 2: RDB2-2X-CLUADJ05-120-1120-RDA

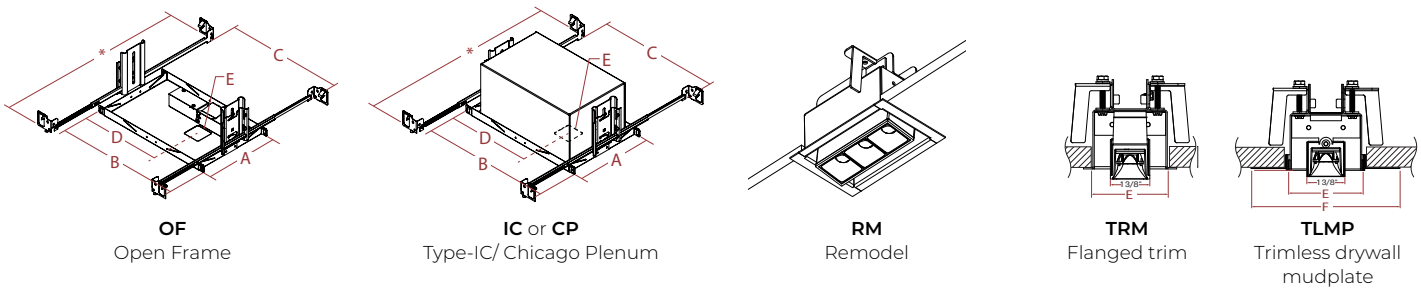
<sup>16</sup> When specifying with multiple remote driver boxes, each driver used needs to be on a separate line and be numbered for the ordering codes.

## MOUNTING

Cluster can be installed in a wide range of ceiling conditions and with various ceiling trim options. Spring clips clamp the lighting unit to the mounting frame (or directly to the ceiling for remodel). Maximum ceiling thickness is 1.25".

INSTALLATION TYPE	MOUNTING OPTION <sup>1,2</sup>	TRIM TYPE
<b>OF</b> - Open Frame Type Non-IC <b>IC</b> - Type-IC <b>RM</b> - Remodel Type Non-IC <b>CP</b> - Chicago Plenum Type-IC (CCEA)	<b>ASB</b> - Adjustable standard bar hangers <b>FMB</b> - Flush mount bars <b>ACB</b> - Adjustable commercial bar hangers <b>AHC</b> - Adjustable hat channel bars <b>NA</b> - Not applicable  <sup>1</sup> For detailed mounting option dimensions, see page 4. <sup>2</sup> Specify NA for remodel (RM) installation type.	<b>TRM</b> - Flanged trim <b>TLMP</b> - Trimless drywall mudplate

### INSTALLATION TYPE <sup>3</sup>



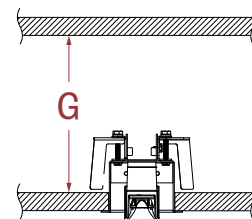
<sup>3</sup> Drawings shown with adjustable standard bar hangers.

	A HOUSING WIDTH	B HOUSING LENGTH	C SPACING BETWEEN BARS	D DISTANCE FROM CUT-OUT
<b>CLUADJ03</b>	11"	12 11/16"	12 1/8"	6 3/8"
<b>CLUADJ05</b>	11"	13 11/16"	13 1/8"	6 7/8"
<b>CLUADJ10</b>	13"	15 1/2"	14 3/8"	7 7/16"

E CUT-OUT DIMENSIONS	F MUDPLATE DIMENSIONS
4 3/8" x 3"	6 7/8" x 5 3/8"
6 3/4" x 3"	9 1/4" x 5 3/8"
12 3/4" x 3"	15 1/4" x 5 3/8"

### PLENUM CLEARANCE DIMENSIONS

	G PLENUM CLEARANCE HEIGHT			
	REMOTE & INTEGRAL		INTEGRAL	REMOTE
	OPEN FRAME	IC / CP	REMODEL	REMODEL
<b>CLUADJ03</b>	4 13/16"	5 3/8"	4"	3 1/4"
<b>CLUADJ05</b>	4 13/16"	5 3/8"	4"	3 1/4"
<b>CLUADJ10</b>	4 13/16"	5 3/8"	4"	3 1/4"

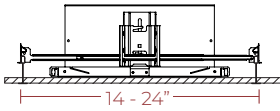


# CLUSTER

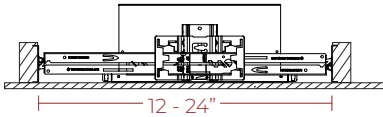
## RECESSED LINEAR ADJUSTABLE

LUMENWERX

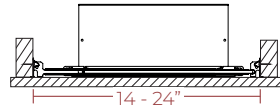
### MOUNTING OPTIONS



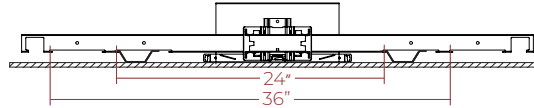
**ASB** - Adjustable standard bar hangers  
Grid ceiling or drywall with variable height  
(Commercial applications)



**ACB** - Adjustable commercial bar hangers  
Grid ceiling, drywall, metal, wood, frame mounting  
(Also openings for multiple hanging options such as hat channel, IC channel and metal tubing, supplied by others)



**FMB** - Flush mount bracket  
Drywall/metal/wood frame mounting  
(Residential applications)



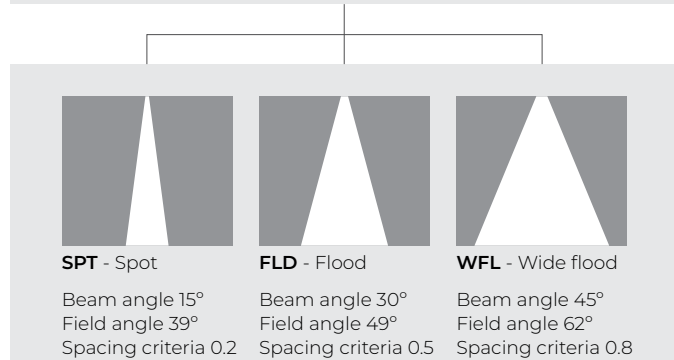
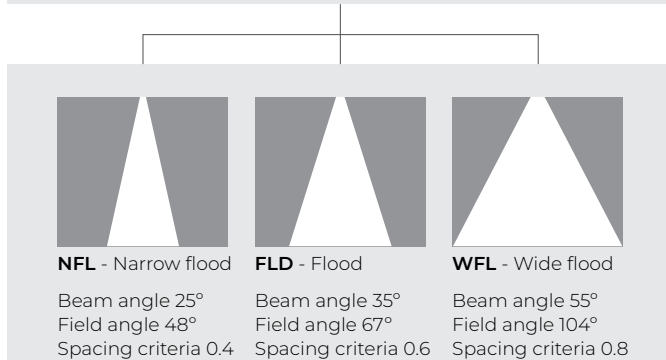
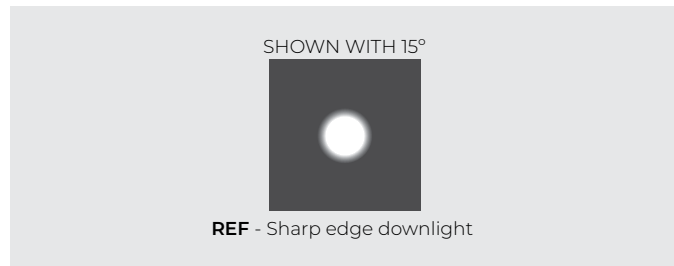
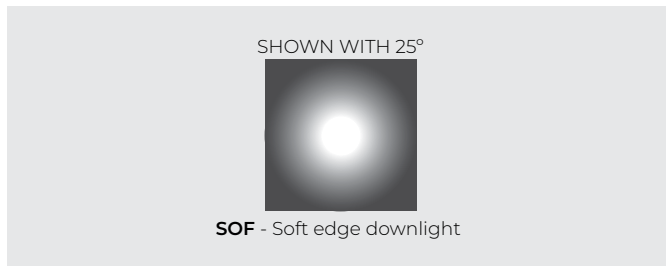
**AHC** - Adjustable hat channel bars  
With adjustable height

### FIXTURE DIMENSIONS

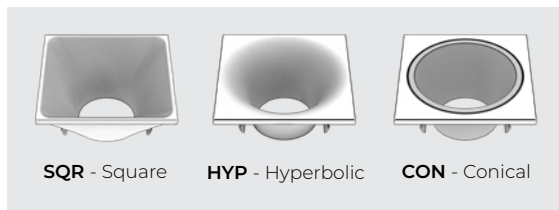
	BODY TYPE	
	TRM Flanged trim	TLMP Trimless drywall mudplate
CLUADJL03		
CLUADJL05		
CLUADJL10		

## LIGHT

### OPTICS & BEAM ANGLE

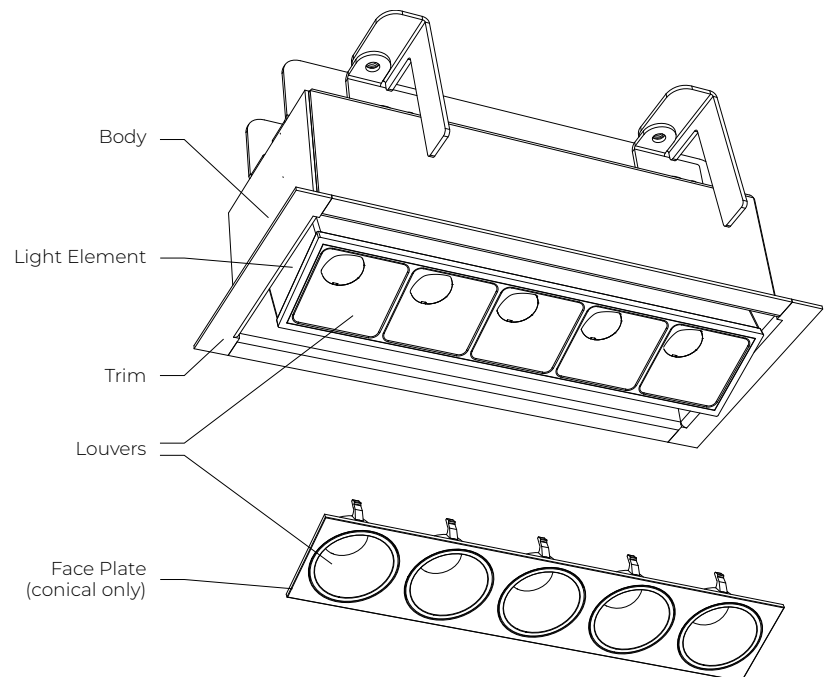


### LOUVER SHAPE



### LOUVER FINISH

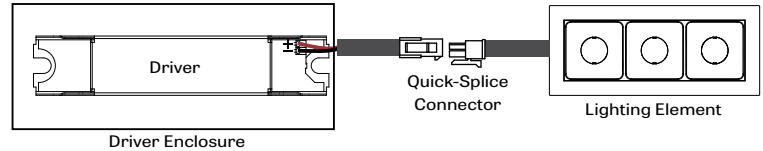
Louver is injection molded with integral texture and color



## DRIVER

### INTEGRAL DRIVER

The integral driver is sized to the lighting unit and is connected directly to it with Class 2 wiring and quick-splice connectors. The driver enclosure can be serviced through the ceiling by removing the lighting unit.



### MULTIPLIER

#### GENERAL LUMEN OUTPUT MULTIPLIER AT 90 CRI

OPTICS	2700K						3000K						3500K						4000K					
	SOFT			SHARP			SOFT			SHARP			SOFT			SHARP			SOFT			SHARP		
BEAM ANGLE	25	35	55	15	30	45	25	35	55	15	30	45	25	35	55	15	30	45	25	35	55	15	30	45
LUMEN OUTPUT MULTIPLIER	0.87	0.92	0.82	0.80	0.84	0.86	0.93	0.99	0.87	0.86	0.89	0.92	1	1.06	0.94	0.92	0.96	0.99	1.03	1.09	0.97	0.95	0.99	1.02

#### LUMEN PACKAGE (AT 3500K, SOFT 25° BEAM) - INTEGRAL DRIVER

LUMINAIRE ID	LUMEN OUTPUT	WATTS	EFFICACY LM/W	LUMEN PACKAGE	VOLTAGE	INTEGRAL DRIVER
CLUADJ03	578 lm	7.8 W	74 lm/W	Use the multiplier tables to calculate the lumen package	120 - 120V 277 - 277V	D1 - 1% 0-10V ELV <sup>1</sup> - ELV 120V TRI <sup>1</sup> - TRIAC 120V
CLUADJ05	923 lm	11.8 W	78 lm/W			
CLUADJ10	1791 lm	23.6 W	76 lm/W			

<sup>1</sup> Available with 120V only.

### REMOTE DRIVER

The remote driver can power several lighting units, depending on their total power. The minimum and maximum number of lighting units and driver type are shown in the table below and must be observed. The remote driver and lighting units are wired together through connection boxes, which are furnished pre-wired to the driver enclosure. All wiring is Class 2 with quick-splice connectors. The remote driver requires access from above the ceiling (or an access panel).

#### LUMEN PACKAGE<sup>1</sup> (AT 3500K) - REMOTE DRIVER

LUMINAIRE ID	LUMEN PACKAGE <sup>2</sup>			VOLTAGE	REMOTE DRIVER	NUMBER OF LIGHTING UNITS PER DRIVER
CLUADJ03 CLUADJ05 CLUADJ10	LOW 145 lm 230 lm 448 lm	MEDIUM 362 lm 577 lm 1120 lm	HIGH 578 lm 923 lm 1791 lm	120 - 120V 277 - 277V UNV - 120V-277V	RD1 - 1% 0-10V RELV <sup>3</sup> - ELV 120V RTRI <sup>3</sup> - TRIAC 120V RDA <sup>4</sup> - DALI RLTEA2W <sup>3</sup> - Lutron 1% - 2 wire FP 120V RLDE1 <sup>4</sup> - Lutron Hi-lume 1% Eco	See table below for maximum and minimum possible number of lighting units per driver.  For configurations involving different cluster sizes on a remote driver, please consult factory.

<sup>2</sup> Low and medium options are not available with RELV and RTRI.

<sup>3</sup> Available with 120V only.

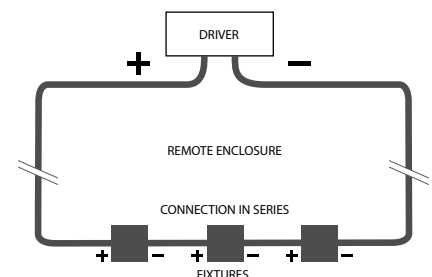
<sup>4</sup> On-site commissioning is required.

<sup>1</sup> Watts and lumen per watts will vary based on the number of lighting units per remote driver as well as on the type of driver selected.

#### NUMBER OF LIGHTING UNITS PER DRIVER - MINIMUM AND MAXIMUM

DRIVER TYPE	CLUADJ03	CLUADJ05	CLUADJ10
D1 - 1% 0-10V	3-8	2-4	1-2
ELV - ELV 120V	3-4	2	1
TRI - TRIAC 120V	3-4	2	1
DA - DALI	3-8	2-4	1-2
LTEA2W - Lutron 1% - 2 wire FP 120V	2-5	1-3	1
LDE1 - Lutron Hi-lume 1% Eco	3-5	2-3	1

For any quantities of lighting units per driver that fall outside the minimum and maximum listed above, please consult factory.



# CLUSTER

## RECESSED LINEAR ADJUSTABLE

# LUMENWERX

### OPTICS

#### SOFT-EDGED FEATHERED BEAM (SOF)

The Soft-Edged Feathered Beam blends the light into darker areas for a gentle brightness transition. Each LED emitter directs light through a single, custom molded circular optic using total internal reflection (TIR) to shape the light. A 0.5" reflective square louver provides a cut off with a UGR of 10. Three different TIR elements create a choice of beam spread: 25° narrow flood (NFL), 35° flood (FLD), or 55° wide flood (WFL).

#### SHARP-EDGED CUT-OFF BEAM (REF)

The Sharp-Edged Cut-Off Beam creates dramatic impact, limiting the spread of light outside of the primary beam. A molded conical reflector redirects light from each emitter into the desired beam angle. A 0.5" reflective square louver provides a cut off with a UGR of 10. Three different TIR elements create a choice of beam spread: 15° spot (SPT), 30° flood (FLD), or 45° wide flood (WFL).

### LIGHT SOURCE

Custom array of high-flux LEDs mounted onto aluminum-backed circuitry. Available in 2700K, 3000K, 3500K and 4000K with a minimum 90 CRI with elevated R9 value. Color consistency is maintained to within 3 SDCM. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

### WEIGHT

	BODY		OPEN FRAME		TYPE-IC WITH CHICAGO PLENUM	
	Lb	Kg	Lb	Kg	Lb	Kg
CLUADJ03	1.59	0.69	2.52	1.14	5.90	2.68
CLUADJ05	2.18	0.97	2.57	1.17	6.20	2.81
CLUADJ10	3.57	1.62	3.33	1.51	7.75	3.52

### CONSTRUCTION

**Housing** - Die-cast aluminum (0.95" nominal)

**Optics** - Polycarbonate

**Mounting frame** - 22 gauge galvanized sheet metal

**Driver housing** - 18 gauge galvanized sheet

**Mounting clips** - Ø1.0-1.4mm spring clips

**Adjustable structure** - 18 gauge cold rolled steel

**Mounting bracket** - 16 gauge cold rolled steel

**Fixture case** - 24 gauge cold rolled steel

### CERTIFICATIONS

**ETL** - Rated for indoor dry/damp locations.

Conforms to UL 1598 Standard and certified to CAN/CSA Standard C22.2 No. 250.0

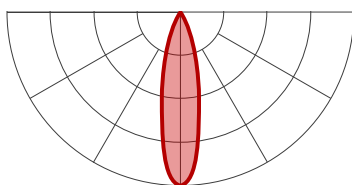
**Chicago plenum** - City of Chicago approved (CCEA) when specified with CP installation type option.

**IC rated** - Suitable for direct contact with insulation when specified with IC or CP installation type options.

### WARRANTY

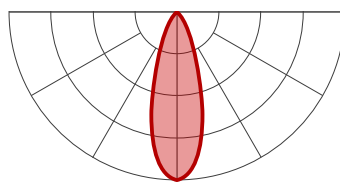
Lumenwerx provides a five-year limited warranty on electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

### SOFT-EDGE DOWNLIGHT



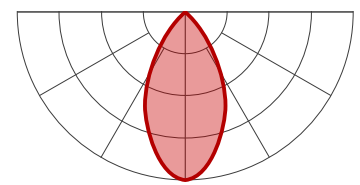
**NFL** - Narrow flood

Beam angle 25°  
Field angle 48°  
Spacing criteria 0.4



**FLD** - Flood

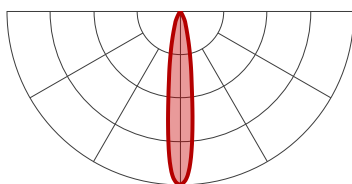
Beam angle 35°  
Field angle 67°  
Spacing criteria 0.6



**WFL** - Wide flood

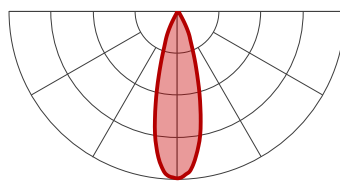
Beam angle 55°  
Field angle 104°  
Spacing criteria 0.8

### SHARP-EDGE DOWNLIGHT



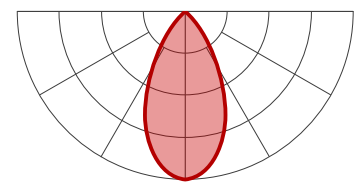
**SPT** - Spot

Beam angle 15°  
Field angle 39°  
Spacing criteria 0.2



**FLD** - Flood

Beam angle 30°  
Field angle 49°  
Spacing criteria 0.5



**WFL** - Wide flood

Beam angle 45°  
Field angle 62°  
Spacing criteria 0.8