CLUSTER
RECESSED ADJUSTABLE WALL WASH

LUMENWERX

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 deliver lighting that is optically sophisticated and aesthetically refined. Cluster recessed adjustable wall wash is available in 3, 5 and 10 cell configurations and aim 30° from vertical. The diffusion film optics deliver an effective, asymmetrical wash of light on target surfaces. Nominal light output of 400 or 800 lumens.
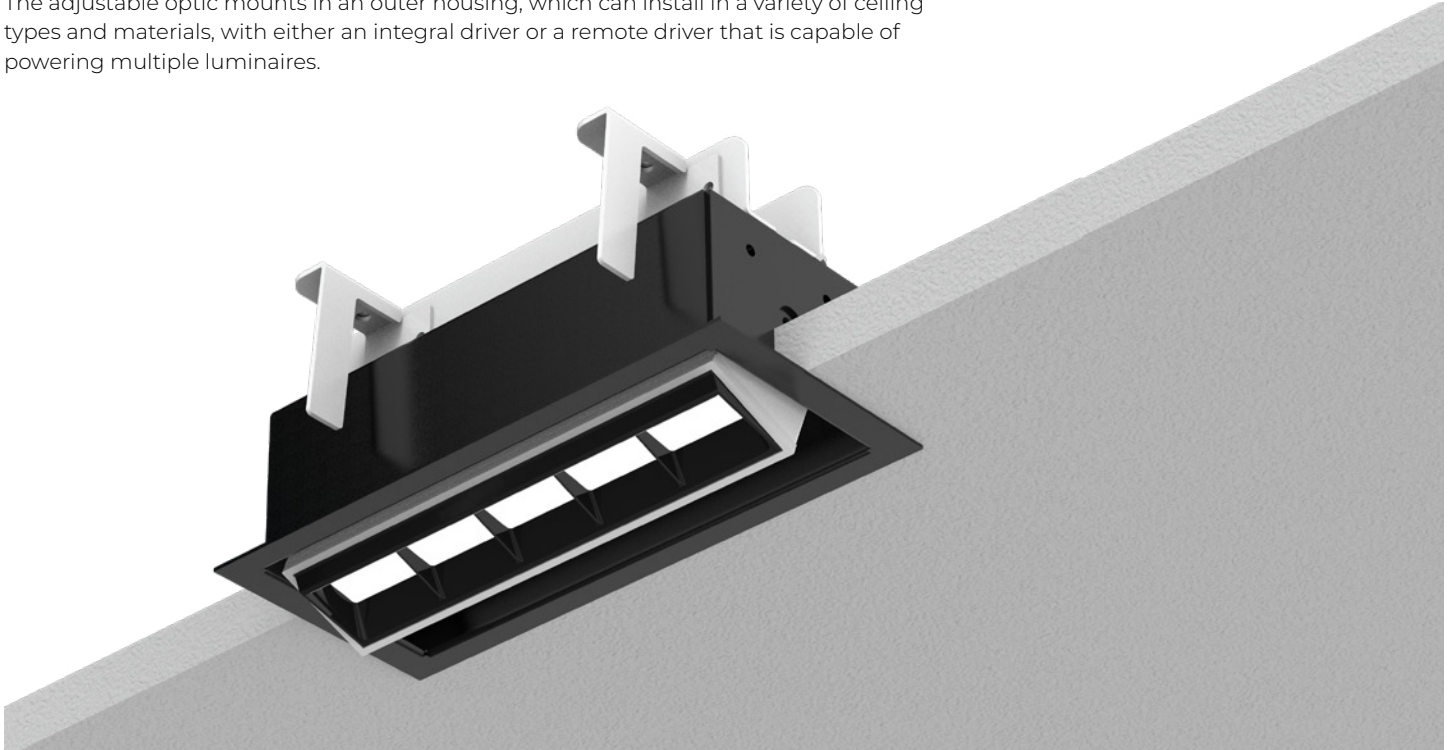
The adjustable optic mounts in an outer housing, which can install in a variety of ceiling types and materials, with either an integral driver or a remote driver that is capable of powering multiple luminaires.
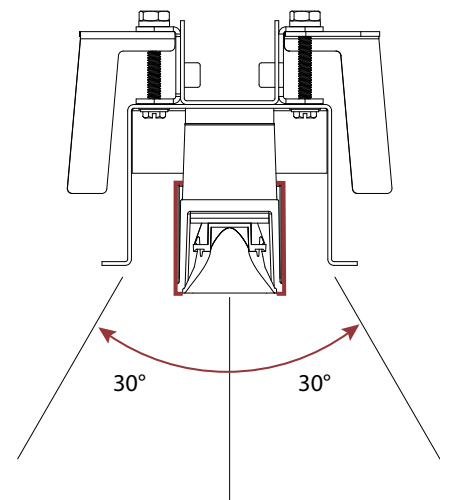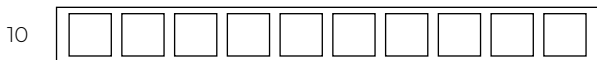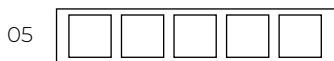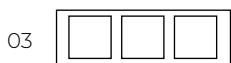

SIZES

03

05

10

30°   30°

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1 - MOUNTING (Example: CLUADJ03-OF-FMB-TRM-INTEGRAL-120-400-D1) Consult pages 3-4 for details before specifying

Mounting can be ordered separately.

LUMINAIRE ID	INSTALLATION TYPE	MOUNTING OPTION [1,2]	TRIM TYPE	DRIVER	VOLTAGE	LUMEN PACKAGE [3]	DIMMING
CLUADJ03 - Cluster Adjustable 3x1 **CLUADJ05** - Cluster Adjustable 5x1 **CLUADJ10** - Cluster Adjustable 10x1	**OF** - Open Frame Type Non-IC **IC** - Type-IC **RM** - Remodel Type Non-IC **CP** - Chicago Plenum Type-IC (CCEA)	**ASB** - Adjustable standard bar hangers **FMB** - Flush mount bars **ACB** - Adjustable commercial bar hangers **AHC** - Adjustable hat channel bars **NA** - Not applicable [1] See page 4 for more details. [2] Specify NA for remodel (RM) installation type.	**TRM** - Flanged trim **TLMP** - Trimless drywall mudplate	**INTEGRAL**	**120** - 120V **277** - 277V	**400** - 400 lm (CLUADJ03) **800** - 800 lm (CLUADJ05) **1200** - 1200 lm (CLUADJ10) [3] Lumen packages shown at 3500K, with WRO. For other, see lumen output multipliers on page 6.	**D1** - 1% 0-10V **ELV** [4] - ELV 120V **TRI** [4] - TRIAC 120V [4] Available with 120V only.
				REMOTE	**FOR FULL REMOTE DRIVER SPECIFICATION, SEE "REMOTE DRIVER" SECTION BELOW.**		

2 - LIGHT (Example: CLUADJL03-TRM-SW-WRO-90-30-TMW-TMW-MF01)   Consult page 5 for details before specifying

		SW	WRO	90					
LUMINAIRE ID	**TRIM TYPE**	**LIGHT SOURCE**	**OPTIC**	**CRI**	**CLR. TEMP.**	**TRIM FINISH** [5]		**LIGHT ELEMENT FINISH**	**LOUVER FINISH**
CLUADJL03 - Cluster Adjustable 3x1 **CLUADJL05** - Cluster Adjustable 5x1 **CLUADJL10** - Cluster Adjustable 10x1	**TRM** - Flanged trim **TLMP** - Trimless drywall mudplate	**SW** - Static white	**WRO** - Wall wash	**90** - 90 CRI	**27** - 2700K **30** - 3000K **35** - 3500K **40** - 4000K	**TMW** - Textured matte white **TMB** - Textured matte black **CF#** - Custom finish, specify RAL# [5] Applicable for trim and trimless.		**TMW** - Textured matte white **TMB** - Textured matte black **CF#** - Custom finish, specify RAL#	**MF01** - Matte white **MF04** - Matte black

3 - REMOTE DRIVER OPTIONAL (Ex: RDB1-4X-CLUADJ05-120-500-RD1)   Consult page 6 for details before specifying

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

REMOTE DRIVER [6]	LUM. QTY. [7]	LUMINAIRE ID	VOLTAGE	LUMEN PACKAGES [8,9]	DIMMING [10]
RDB# - Remote driver [6] If multiple driver boxes needed, specify a line number for each driver type used. (e.g. **RDB1**-**4X**-**CLUR05**-...-**RD1** **RDB2**-**2X**-**CLUR05**-...-**RD1** ...)	**#X** - Number of luminaires [7] Specify number of luminaires per remote driver. (e.g. **3X**)	**CLUADJ03** - Cluster Adjustable 3x1 **CLUADJ05** - Cluster Adjustable 5x1 **CLUADJ10** - Cluster Adjustable 10x1	**120** - 120V **277** - 277V **UNV** - 120V-277V	**###** - Low **100** lm - Med **250** lm - High **400** lm (CLUADJ03) **###** - Low **200** lm - Med **500** lm - High **800** lm (CLUADJ05) **###** - Low **300** lm - Med **750** lm - High **1200** lm (CLUADJ10) [8] 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. [9] Low and medium lumen packages are not available with RELV and RTRI dimming options.	**RD1** - 1% 0-10V **RELV** [11] - ELV 120V **RTRI** [11] - TRIAC 120V **RDA** [12] - DALI **RLTEA2W** [11] - Lutron 1% - 2 wire FP 120V **RLDE1** [12] - Lutron Hi-lume 1% Eco [10] For configurations involving different cluster sizes on a remote driver, please consult factory. [11] Available with 120V only. [12] On-site commissioning is required.

EXAMPLE ORDER CODES

WHEN SPECIFYING WITH INTEGRAL DRIVER	
MOUNTING	CLUADJ03-OF-FMB-TRM-INTEGRAL-120-400-D1
LIGHT	CLUADJL03-TRM-SW-WRO-90-30-TMW-TMW-MF01
REMOTE DRIVER	N/A

WHEN SPECIFYING WITH REMOTE DRIVER [13]	
MOUNTING	CLUADJ03-OF-FMB-TRM-REMOTE
LIGHT	CLUADJL03-TRM-SW-WRO-90-30-TMW-TMW-MF01
REMOTE DRIVER	Remote driver 1: RDB1-4X-CLUADJ05-120-500-RD1 Remote driver 2: RDB2-2X-CLUADJ05-120-500-RD1

[13] When specifying with multiple remote driver boxes, each driver used needs to be on a separate line and be numbered for the ordering codes.

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

INSTALLATION TYPE [3]

| OF
Open Frame | IC or CP
Type-IC/ Chicago Plenum | RM
Remodel | TRM
Flanged trim | TLMP
Trimless drywall mudplate |
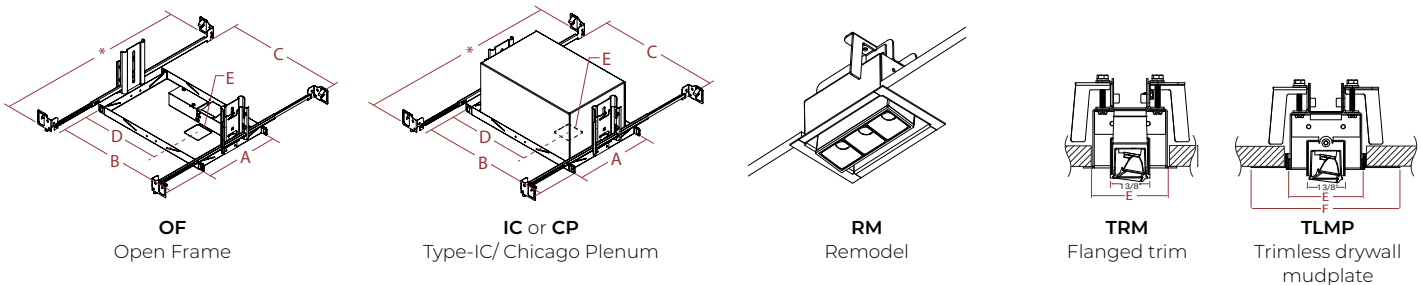
[3] Drawings shown with adjustable standard bar hangers.

	A HOUSING WIDTH	B HOUSING LENGTH	C SPACING BETWEEN BARS	D DISTANCE FROM CUT-OUT		E CUT-OUT DIMENSIONS	F MUDPLATE DIMENSIONS
CLUADJ03	11"	12 11/16"	12 1/8"	6 3/8"		4 3/8" x 3"	6 7/8" x 5 3/8"
CLUADJ05	11"	13 11/16"	13 1/8"	6 7/8"		6 3/4" x 3"	9 1/4" x 5 3/8"
CLUADJ10	13"	15 1/2"	14 3/8"	7 7/16"		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	
CLUADJ03	4 13/16"	5 3/8"	4"	3 1/4"	
CLUADJ05	4 13/16"	5 3/8"	4"	3 1/4"	
CLUADJ10	4 13/16"	5 3/8"	4"	3 1/4"	

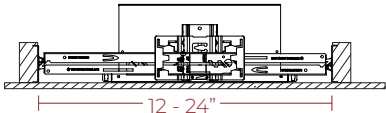CLUSTERS-RECESSED-ADJUSTABLE-WALLWASH-SPEC-REV4 September 20, 2022
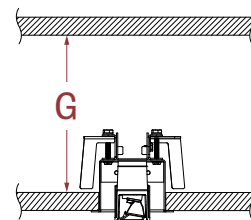
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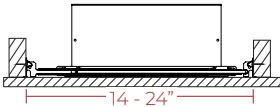
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MOUNTING OPTIONS

14 - 24"
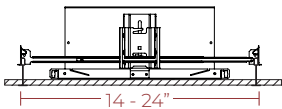
ASB - Adjustable standard bar hangers
Grid ceiling or drywall with variable height
(Commercial applications)

12 - 24"

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)

14 - 24"

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

24"
36"
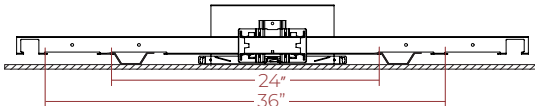
AHC - Adjustable hat channel bars
With adjustable height

FIXTURE DIMENSIONS

	BODY TYPE	
	TRM Flanged trim	**TLMP** Trimless drywall mudplate
CLUADJL03	3 1/4" 3 1/4" 4 7/8"	3 1/4" 2 11/16" 4 1/8"
CLUADJL05	3 1/4" 3 1/4" 7 1/4"	3 1/4" 2 11/16" 6 9/16"
CLUADJL10	3 1/4" 3 1/4" 13 1/4"	3 1/4" 2 11/16" 12 9/16"

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LOUVER SHAPE

WRO - Wall wash

LOUVERS FINISH

Louvers is injection molded with integral texture and color

MF01 - Matte white   **MF04** - Matte black

Body

Trim

Wall wash
louver

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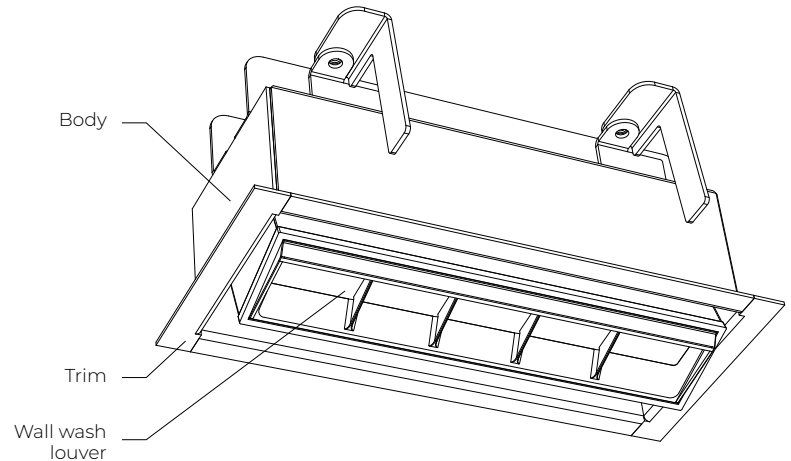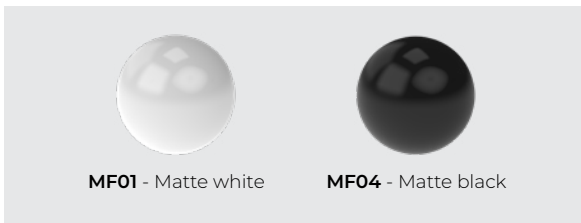
DRIVER

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.

Driver Enclosure — Quick-Splice Connector — Lighting Element
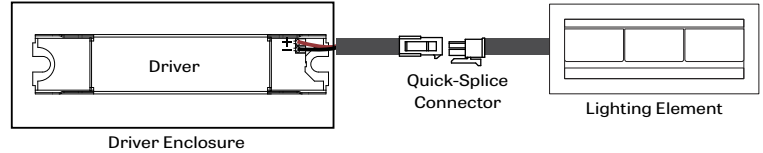
MULTIPLIER

GENERAL LUMEN OUTPUT MULTIPLIER AT 90 CRI

	2700K	3000K	3500K	4000K
LUMEN OUTPUT MULTIPLIER	0.94	0.97	1	1.02

LUMEN PACKAGE (AT 3500K, WRO) - INTEGRAL DRIVER

LUMINAIRE ID	LUMEN OUTPUT	WATTS	EFFICACY LM/W
CLUR03ADJ	400 lm	6.35 W	63 lm/W
CLUR05ADJ	800 lm	12.7 W	63 lm/W
CLUR10ADJ	1200 lm	18.2 W	66 lm/W

LUMEN PACKAGE	VOLTAGE	INTEGRAL DRIVER
Use the multiplier tables to calculate the lumen package	**120** - 120V **277** - 277V	**D1** - 1% 0-10V **ELV** [1] - ELV 120V **TRI** [1] - TRIAC 120V [1] 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 [1] (AT 3500K, WRO) - REMOTE DRIVER

LUMINAIRE ID	LUMEN PACKAGE [2]			VOLTAGE	REMOTE DRIVER	NUMBER OF LIGHTING UNITS PER DRIVER
CLUR03ADJ CLUR05ADJ CLUR10ADJ	**LOW** 100 lm 200 lm 300 lm	**MEDIUM** 250 lm 500 lm 750 lm	**HIGH** 400 lm 800 lm 1200 lm	**120** - 120V **277** - 277V **UNV** - 120V-277V	**RD1** - 1% 0-10V **RELV** [3] - ELV 120V **RTRI** [3] - TRIAC 120V **RDA** [4] - DALI **RLTEA2W** [3] - Lutron 1% - 2 wire FP 120V **RLDE1** [4] - Lutron Hi-lume 1% Eco	See table below for maximum and minimum possible number of lighting units per each driver. For configurations involving different cluster sizes, please consult factory.
	[2] Low and medium options are not available with RELV and RTRI.				[3] Available with 120V only. [4] On-site commissioning is required.	

[1] 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	CLUR03ADJ	CLUR05ADJ	CLUR10ADJ
D1 - 1% 0-10V	2-12	1-6	1-3
ELV - ELV 120V	1-4	1	1
TRI - TRIAC 120V	1-4	1	1
DA - DALI	3-12	2-6	1-3
LTEA2W - Lutron 1% - 2 wire FP 120V	2-6	1-3	1-2
LDE1 - Lutron Hi-lume 1% Eco	2-11	1-6	1-4

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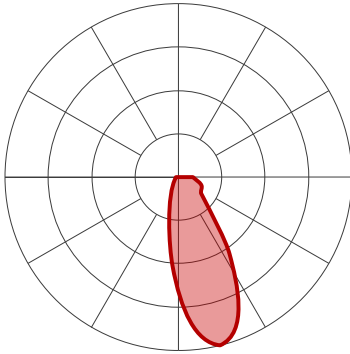

DRIVER — CONNECTION IN PARALLEL — FIXTURES

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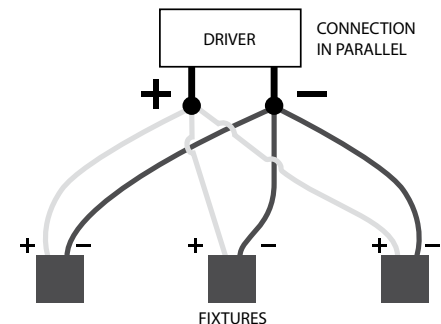
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RECESSED ADJUSTABLE WALL WASH

WALL WASH

VERTICAL ILLUMINANCE

CLU03C-WW-SB-LED-90-400LMS-35 (24" / 18")

FC on Wall			
Distance from Ceiling			
1'	20	19	20
2'	24	24	24
3'	24	24	24
4'	19	19	19
5'	14	14	14
6'	10	10	10
7'	9	9	9
8'	7	7	7

CLU05C-WW-SB-LED-90-800LMS-35 (24" / 18")

FC on Wall			
Distance from Ceiling			
1'	40	38	40
2'	48	48	48
3'	48	48	48
4'	37	37	37
5'	28	28	28
6'	21	21	21
7'	17	17	17
8'	15	14	15

CLU10C-WW-SB-LED-90-1200LMS-35 (24" / 18")

FC on Wall			
Distance from Ceiling			
1'	59	57	59
2'	72	71	72
3'	71	71	71
4'	55	55	55
5'	40	40	40
6'	30	30	30
7'	24	24	24
8'	20	20	20

CLU03C-WW-SB-LED-90-400LMS-35 (24" / 36")

FC on Wall			
Distance from Ceiling			
1'	10	9	10
2'	11	11	11
3'	13	12	13
4'	12	12	12
5'	10	10	10
6'	8	8	8
7'	6	6	6
8'	5	5	5

CLU05C-WW-SB-LED-90-800LMS-35 (24" / 36")

FC on Wall			
Distance from Ceiling			
1'	21	17	21
2'	23	21	23
3'	25	25	25
4'	24	24	24
5'	20	20	20
6'	15	16	15
7'	12	12	12
8'	11	11	11

CLU10C-WW-SB-LED-90-1200LMS-35 (24" / 36")

FC on Wall			
Distance from Ceiling			
1'	31	26	31
2'	34	32	34
3'	38	37	38
4'	36	35	36
5'	29	29	29
6'	23	23	23
7'	19	19	19
8'	16	16	16

CLU03C-WW-SB-LED-90-400LMS-35 (30" / 36")

FC on Wall			
Distance from Ceiling			
1'	8	7	8
2'	9	8	9
3'	10	10	10
4'	10	10	10
5'	10	10	10
6'	8	8	8
7'	7	7	7
8'	6	6	6

CLU05C-WW-SB-LED-90-800LMS-35 (30" / 36")

FC on Wall			
Distance from Ceiling			
1'	16	15	16
2'	17	17	17
3'	19	19	19
4'	20	20	20
5'	19	19	19
6'	17	17	17
7'	14	14	14
8'	12	12	12

CLU10C-WW-SB-LED-90-1200LMS-35 (30" / 36")

FC on Wall			
Distance from Ceiling			
1'	24	22	24
2'	26	25	26
3'	29	28	29
4'	31	31	31
5'	29	29	29
6'	25	25	25
7'	21	21	21
8'	18	18	18

CLUSTER
RECESSED ADJUSTABLE WALL WASH

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Technical Specifications

OPTICS

WALL WASH REFLECTOR OPTICS (WRO)
Cluster Linear Wall Wash optics use multiple mid-flux emitters in a continuous array, supported by an angled board. An aluminum reflector collects and redirects emitter flux, while a refractive film adjusts both vertical and horizontal intensity and eliminates source image. The result is excellent uniformity up and down the wall, as well as between luminaires.

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
CLUR03ADJ	1.59	0.69	2.52	1.14	5.90	2.68
CLUR05ADJ	2.18	0.97	2.57	1.17	6.20	2.81
CLUR10ADJ	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 - Cold rolled Steel, 18GA
Mounting bracket - Cold rolled Steel, 16GA
Fixture Case - Cold rolled Steel, 24GA

CERTIFICATIONS

ETL - Rated for indoor dry/damp locations. Conforms to ANSI/UL Std. 1598 and certified to CAN/CSA Std 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.

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