CLUSTERS
SURFACE WALL WASH COMBINATIONS

5 YEAR WARRANTY

LUMENWERX

PROJECT: _____

TYPE: _____

NOTES: _____
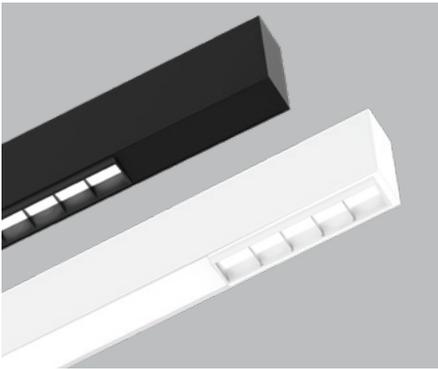
DESCRIPTION

Cluster Combinations integrate the Cluster lighting elements into a 1.5" wide x 3.75" high aluminum channel, creating endless possibilities for visually interesting lighting. Wall wash optics in 3-, 5-, or 10-cell configurations and multiple finishes can be arranged in continuous rows or separated by diffusers for general lighting or by blank covers. All LED's used in the combination have consistent color characteristics.

Channel modules are available from 4' to 12' in 1' increments, can be neatly connected together, and install in accessible grid and drywall ceilings. All drivers are mounted in the channel. For configurations other than those shown here, please consult the factory.

We require a drawing illustrating the combination you would like to order - anything from a simple line drawing to elaborate architectural drawings.
Enter the required **TOTAL LUMINAIRE LENGTH**, CRI, Lumens , Color Temperature and Voltage.

Consult pages 2-4 for details before specifying

GENERAL SPECIFICATIONS CODE:

Luminaire ID	Total Luminaire Length (MIN 4')		Light Source	CRI	Color Temp	Voltage
	FT	IN	SW	90		
WRO					SW	

OPTICS	LOUVER FINISH	LIGHT SOURCE
WRO - Wall Wash	**MF01** - Matte white **MF04** - Matte black	**SW** - Static white

OPTICS LIST CODE:

CLUSTER OPTIONS

CLU03 - Clusters 1x3

CLU05 - Clusters 1x5

CLU10 - Clusters 1x10

Quantity (for actual clusters size see page 2)

Lumen Package Per Unit			
	LOW	MED	HIGH
lm	100 lm	250 lm	400 lm
lm	200 lm	500 lm	800 lm
lm	300 lm	750 lm	1200 lm

CONFIGURATION OPTIONS

*HLO - High-Efficiency Lambertian Optic

**BLA - Blank

Optic Length

	FT		
	FT		IN

	lm/ft	350 lm-750 lm

No minimum length

IMPORTANT

*HLO & CLUSTER CONFIGURATIONS
1) Minimum individual section 4'
2) Specify in increments of 1'
3) Minimum distance between Clusters is 3'

**BLANK & CLUSTER CONFIGURATIONS
1) Minimum individual section 4'
2) Minimum distance between Clusters is 2'

CROSS SECTION

3 3/4"

1 1/2"
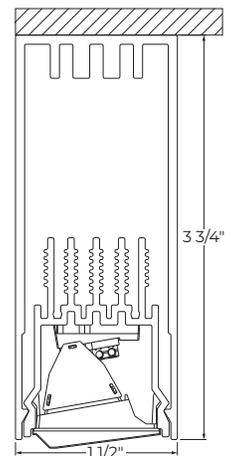
ALL OTHER PARTS OF THE CODE:

DRIVER	ELECTRICAL	MOUNTING	FINISH
D1 - 1% 0-10V **DA** [1] - DALI **LTEA2W** [2] - Lutron 1% - 2 wire FP 120V **LDE1** [1] - Lutron Hi-lume 1% Eco [1] On-site commissioning is required. [2] Available with 120V only.	**1** - 1 circuit **+#EM** - Emergency light circuit **+#NL** - Night light circuit	**GRD** - Grid ceiling **DRC**- Drywall ceiling	**W** - Matte white **B** - Matte black **CF#** - Custom finish, specify RAL#

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WALL WASH OPTICS

MATTE WHITE

MATTE BLACK
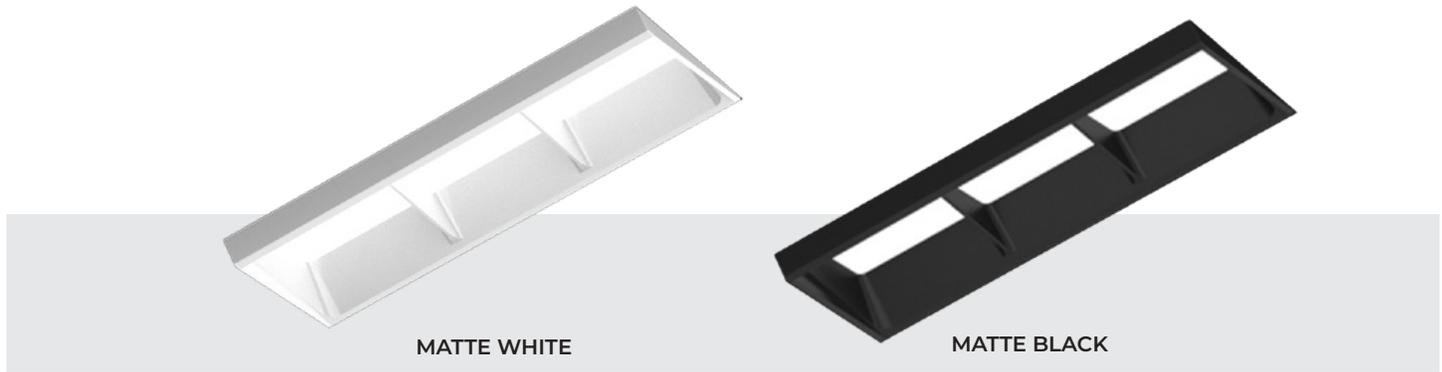
AVAILABLE CLUSTER SIZES

CLU03
← 3 9/16" →
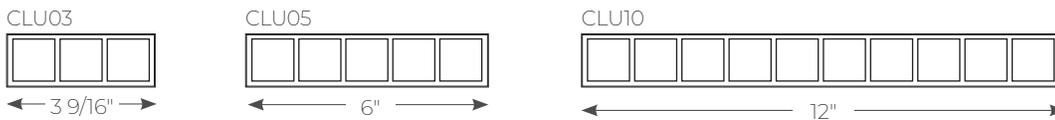
CLU05
← 6" →

CLU10
← 12" →

CONFIGURATION WITH CLUSTER DOWNLIGHTS (HLO & BLANK)

Configuration A - OPTIC CODE: 2xCLU05 - 1x CLU10 - HLO6FT

CLU05 ⊢ HLO 3' ⊣ CLU10 ⊢ HLO 3' ⊣ CLU05

Configuration B - OPTIC CODE: 3xCLU05 -BLA4FT

CLU05 ⊢ BLA 24" ⊣ CLU05 ⊢ BLA 24" ⊣ CLU05

Configuration C - OPTIC CODE: 3xCLU03 - HLO6FT

CLU03 ⊢ HLO 3' ⊣ CLU03 ⊢ HLO 3' ⊣ CLU03

Configuration D - OPTIC CODE: 3xCLU05 - HLO6FT - BLA4IN

BLA 2" ⊢ CLU05 ⊢ HLO 36" ⊣ CLU05 ⊢ HLO 36" ⊣ CLU05 ⊢ BLA2"

LIGHT

LOUVER SHAPE

WRO - Wall Wash

LOUVER FINISH - Louver is injection molded with integral texture and color

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

CLUSTERS-WALLWASH-COMBO-SURFACE-SPEC-REV2   September 12, 2022

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OPTICS

Wall Wash Refractive Optic (WRO) - Clusters 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 2 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.

LUMINAIRE LENGTH

Cluster combinations is made up of standard 4, 8 and 12 foot sections that may be joined together to create longer continuous run lengths. Exact run length must be noted in the product code. The minimum individual section available is 4 feet.

All individual sections are joined together onsite using the joiner kits provided. Lumenwerx offers joiner kits that are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.
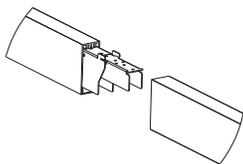
Joining system

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume 1% (specify 2-wire, or Ecosystem Dim-to-Off), and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

MOUNTING OPTIONS

Fixtures can be mounted directly to T-Bar, drywall and hard surface ceilings, hardware supplied by others. Long runs require a minimum of 6" distance from the vertical wall.

FINISH

Interior - 95%, reflective matte powder coated white paint
Exterior - Matte white or matte black powder coating
Louver - Reflective white or reflective black

CONSTRUCTION

Housing - Extruded aluminum (0.095" nominal) up to 90% recycled content
Interior channel - Extruded aluminum (0.095" nominal) up to 90% recycled content
Joining system - 16 gauge galvanized sheet metal
End caps - Die cast aluminum (0.95" nominal)
Louver optics - Polycarbonate

CERTIFICATIONS

ETL - Rated for indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0

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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DRIVER

The 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.

LUMEN PACKAGE [1] (AT 3500K)

LUMINAIRE ID	LUMEN PACKAGE			VOLTAGE	DRIVER	NUMBER OF LIGHTING UNITS PER DRIVER
	LOW	**MEDIUM**	**HIGH**	**120** - 120V	**D1** - 1% 0-10V	See table below for maximum and minimum possible number of lighting units per each driver.
CLU03WRO	100 lm	250 lm	400 lm	**277** - 277V	**DA** [2] - DALI	
CLU05WRO	200 lm	500 lm	800 lm	**UNV** - 120V-277V	**LTEA2W** [3] - Lutron 1% - 2 wire FP 120V	
CLU10WRO	300 lm	750 lm	1200 lm		**LDE1** [2] - Lutron Hi-lume 1% Eco	
					[2] On-site commissioning is required.	
					[3] Available with 120V only.	

[1] 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

NUMBER OF LIGHTING UNITS PER DRIVER - MINIMUM AND MAXIMUM

DRIVER TYPE	CLU03WRO	CLU05WRO	CLU10WRO
D1 - 1% 0-10V	2-13	1-6	1-3
DA - DALI	3-13	2-6	1-3
LTEA2W - Lutron 1% - 2 wire FP 120V	2-7	1-3	1-2
LDE1 - Lutron Hi-lume 1% Eco	2-13	1-6	1-4

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

WALL WASH
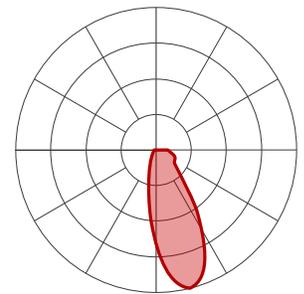
VERTICAL ILLUMINANCE

CLU03C-WW-SB-LED-90-400LMS-35

FC on Wall	18"		24"
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

FC on Wall	18"		24"
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

FC on Wall	18"		24"
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

FC on Wall	36"		24"
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

FC on Wall	36"		24"
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

FC on Wall	36"		24"
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

FC on Wall	36"		30"
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

FC on Wall	36"		30"
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

FC on Wall	36"		30"
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

September 12, 2022

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