

CLUSTERS

RECESSED WALL WASH COMBINATIONS

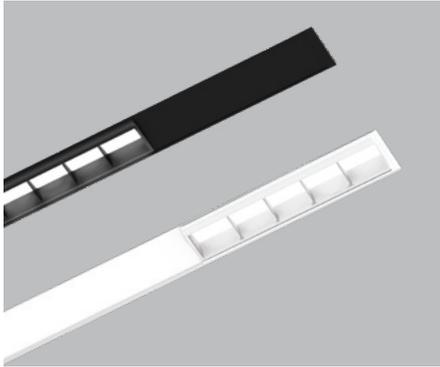


LUMENWERX

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 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 2-5 for details before specifying

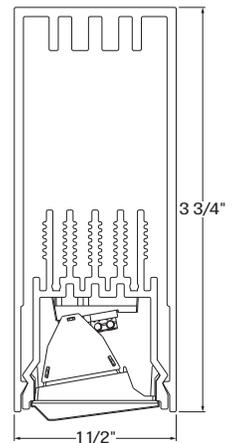
GENERAL SPECIFICATIONS CODE:

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	Quantity (for actual clusters size see page 2)	Lumen Package Per Unit		
		LOW	MED	HIGH
CLU03 - Clusters 1x3	<input type="text"/>	100 lm	250 lm	400 lm
CLU05 - Clusters 1x5	<input type="text"/>	200 lm	500 lm	800 lm
CLU10 - Clusters 1x10	<input type="text"/>	300 lm	750 lm	1200 lm
CONFIGURATION OPTIONS	Optic Length	Im/ft		
*HLO - High-Efficiency Lambertian Optic	<input type="text"/> FT	350 lm-750 lm		
**BLA - Blank	<input type="text"/> FT <input type="text"/> IN	No minimum length		
IMPORTANT		**BLANK & CLUSTER CONFIGURATIONS		
*HLO & CLUSTER CONFIGURATIONS		1) Minimum individual section 4'		
1) Minimum individual section 4'		2) Minimum distance between Clusters is 2'		
2) Specify in increments of 1'				
3) Minimum distance between Clusters is 3'				

CROSS SECTION



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 - 1 circuit 2 - 2 circuits +#EM - Emergency light circuit +#NL - Night light circuit	TC9 - Tegular 9/16" TG15 - Tegular 15/16" TB9 - T-bar 9/16" TB15 - T-bar 15/16" ST - Screw slot t-bar DTR - Drywall trim DTL - Drywall trimless DMF - Drywall mud flange	W - Matte white B - Matte black CF# - Custom finish, specify RAL#
¹ On-site commissioning is required. ² Available with 120V only.			

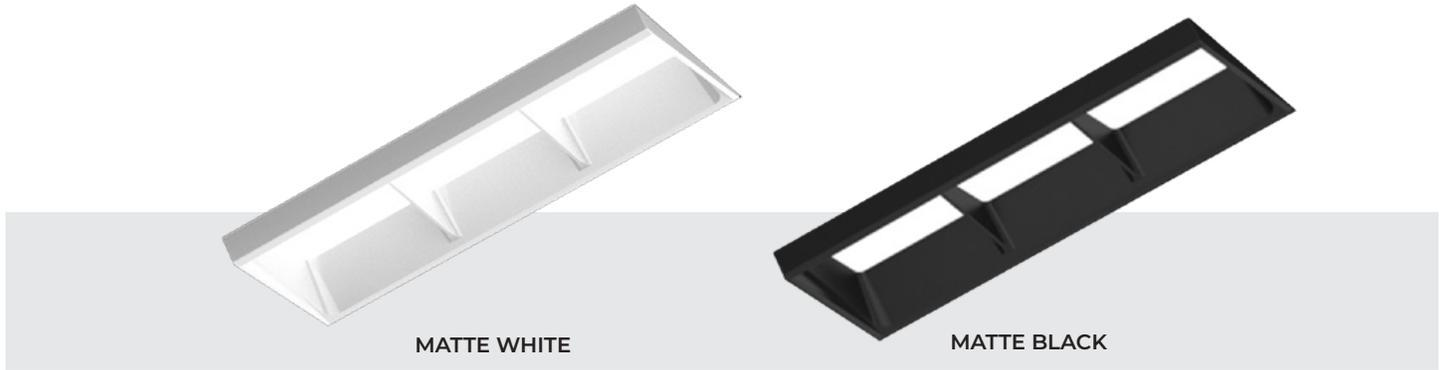


CLUSTERS

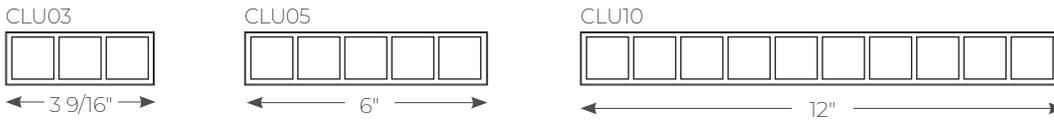
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WALL WASH OPTICS



AVAILABLE CLUSTER SIZES



CONFIGURATION WITH CLUSTER DOWNLIGHTS (HLO & BLANK)

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



Configuration B - OPTIC CODE: 3xCLU05 - BLA4FT



Configuration C - OPTIC CODE: 3xCLU03 - HLO6FT



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



LIGHT

LOUVER SHAPE



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



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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.

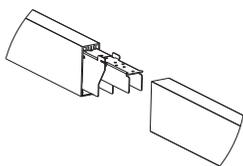
LIGHT SOURCE

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 foot.

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.



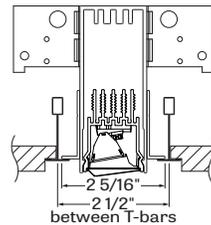
Joining system

ELECTRICAL

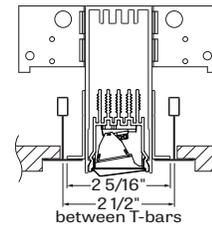
Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency > 84%, PF > 0.9, THD < 20%. 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

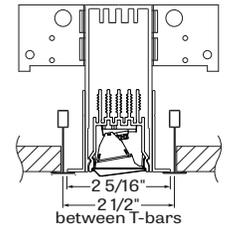
Recessed fixtures can be mounted into exposed or concealed T-Bar or Tegular grid ceiling.



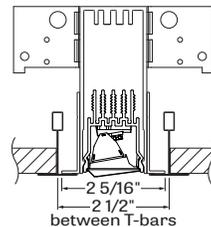
TG9 - tegular 9/16"



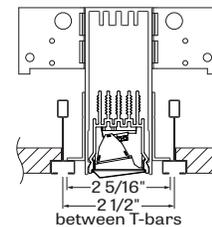
TG15 - tegular 15/16"



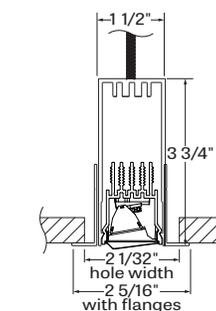
TB9 - t-bar 9/16"



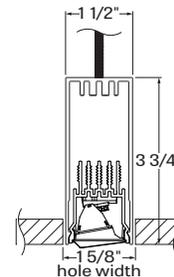
TB15 - t-bar 15/16"



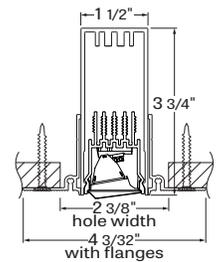
ST - screw slot t-bar



DTR - drywall trim



DTL - drywall trimless



DMF - drywall mud flange

Mounting options for drywall ceilings are available with visible trim, mud flange trim or trimless.

FINISH

Interior - 95%, reflective matte powder coated white paint

Exterior - Matte white or matte black powder coating

Louwer - Reflective white or reflective black

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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

Mud flange - Extruded aluminum (0.075" nominal) up to 90% recycled content

Slip-through bracket - Die-formed galvanized sheet 18 gauge

End plate - Die-formed cold rolled sheet steel 18 gauge thick

Louver optics - Polycarbonate

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.

CERTIFICATIONS

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

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
CLU03WRO	LOW 100 lm	MEDIUM 250 lm	HIGH 400 lm	120 - 120V 277 - 277V	D1 - 1% 0-10V DA ² - DALI LTEA2W ³ - Lutron 1% - 2 wire FP 120V LDE1 ² - Lutron Hi-lume 1% Eco	See table below for maximum and minimum possible number of lighting units per each driver.
CLU05WRO	200 lm	500 lm	800 lm	UNV -		
CLU10WRO	300 lm	750 lm	1200 lm	120V-277V		

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

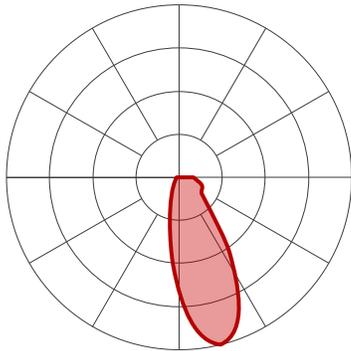
For any quantities of lighting units per driver that fall outside the minimum and maximum listed above, please consult factory.

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WALL WASH



VERTICAL ILLUMINANCE

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