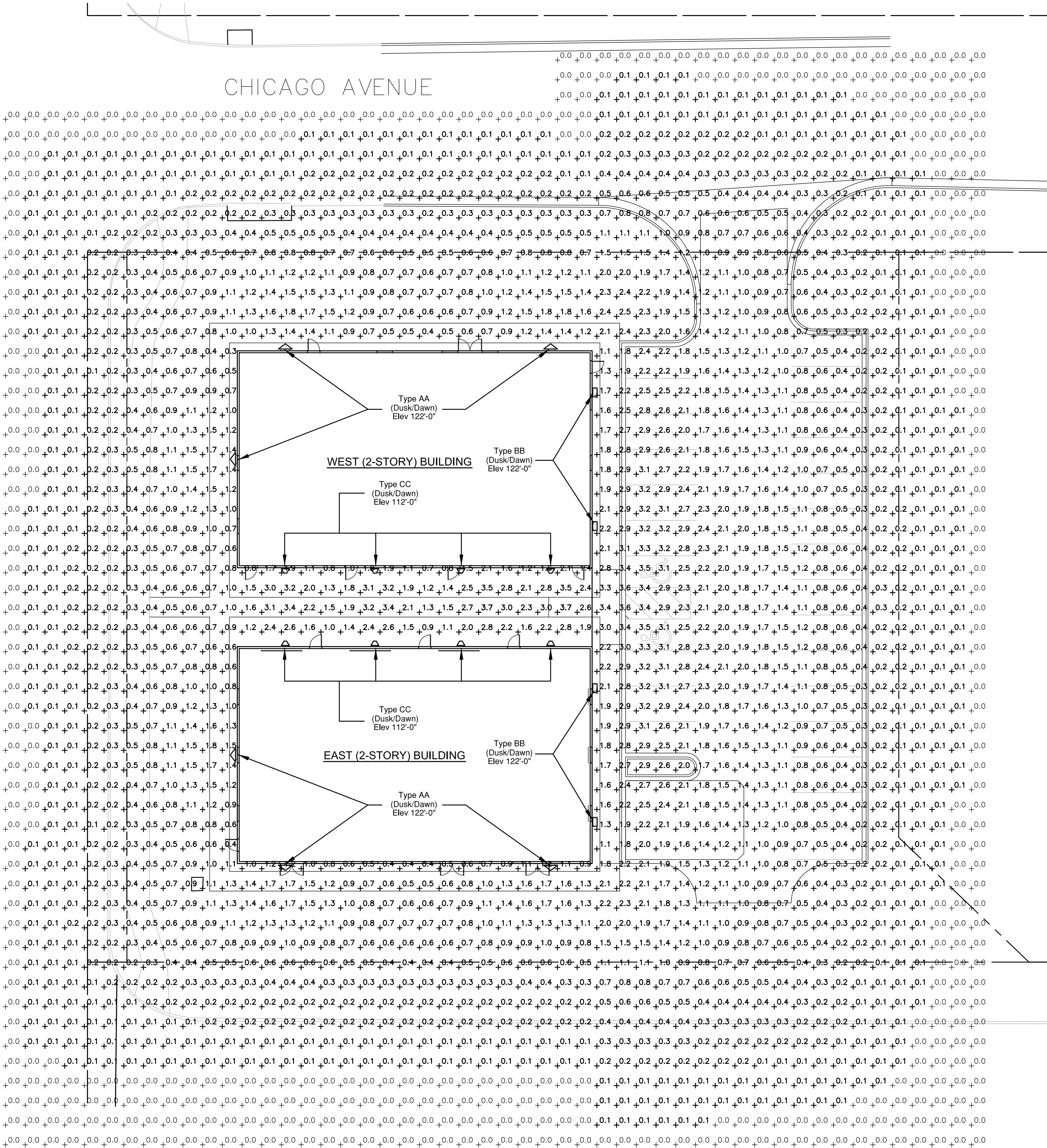
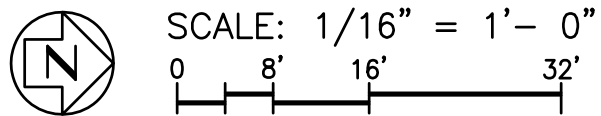


OLD MERIDIAN ROAD



Exterior Site Lighting Calculation Plan



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc. Zone #1	+	0.4 fc	3.7 fc	0.0 fc	N/A	N/A

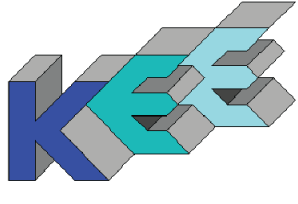
GENERAL NOTES:

- REFER TO SHEET ELC.2 FOR FIXTURE SPECIFICATION SHEETS.
- ALL LIGHTING WILL BE CONTROLLED BY PHOTOCELL FOR (DUSK/DAWN) OPERATION FOR SECURITY PURPOSES.
- LIGHTING CALCULATIONS WERE COMPLETED UTILIZING VISUAL LIGHTING PROGRAM WITH ASSOCIATED, FIXTURE MANUFACTURE'S, PUBLISHED IES FILES.
- ALL CALCULATIONS WERE DONE BY THE ENGINEER OF RECORD.

JOHN DAVIS
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INTERIORS
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COLORADO SPRINGS,
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KOHNERT ELECTRICAL
ENGINEER'S, INC.

911 S. 8th Street, Ste 200
Colorado Springs, Co 80905
Phone (719) 633-2637

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Exterior Site Lighting Calculation Plan

NEW METAL BUILDINGS FOR:
**KENSHIN MARTIAL ARTS
COMPLEX**
CHICAGO AVENUE AND OLD MERIDIAN ROAD
FALCON, COLORADO 80813

INDEX TO EXTERIOR LIGHTING CALCULATION DRAWINGS

- ELC.1 EXTERIOR SITE LIGHTING POINT BY POINT CALCULATION AND STATISTICS
- ELC.2 LIGHTING FIXTURE SPECIFICATION SHEETS



SHEET

ELC.1

RATIO Wall

RWL1/RWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, Wiscapex and 7-pin with networked controls
- Battery backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada
- Stock versions available in 3500lm and 5500lm configurations at 4000K



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations.

INSTALLATION

- Quick-mount adapter provides easy installation to wall or recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, Wiscapex and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V/277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W

DATE: 10-22-21 | LOCATION: Falcon Colorado

TYPE: BB PROJECT: Kenshin Martial Arts Complex

CATALOG #: RWL1 48L 4K7 4W UNV



RELATED PRODUCTS

Ratio Family Ratio Area Ratio Flood

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90 power factor and less than 2.0% Total Harmonic Distortion
- Driver RoHS and IP65
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C2. Automatically takes fixture off-line for protection when device is compromised
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- Wiscapex™ available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
 - Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.
- CERTIFICATIONS**
- Listed to UL1998 and CSA C22.2 #250.0-24 for wet locations
 - IP65 rated housing
 - This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- WARRANTY**
- 5 year limited warranty
 - See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,000–19,500
Wattage Range	10–155
Efficacy Range (LPW)	118–148
Fixture Projected Life (Hours)	1,700–60K
Weights lbs. (kg)	6.5/16.5 (2.9/7.5)

PRELUDE

PRL SERIES - WALLPACK

FEATURES

- Cut off and Refractor Form Wall Pack
- Low profile LED wall luminaire for lighting applications such as retail, commercial and industrial building mount
- Field Selectable Wattages from 18 to 60 Watts
- Lumen Range from 2500-8500 lumens
- Type III Distribution for Full Cut Off configuration, (PRL-C) for applications requiring no up-light
- Type IV Distribution for Refractor Form configuration, (PRL-R) provides a further throw and higher angle light
- Wall Mounted Stylish Fixture contemporary architectural form provides an updated appearance compared to traditional HID wall packs
- Standard back profile makes the prelude perfect for retrofitting old HID glass refractor wall packs.



IP65

DLC

DLC

DATE: 10-22-21 | LOCATION: Falcon, Colorado

TYPE: AA PROJECT: Kenshin Martial Arts Complex

CATALOG #: PRL-C-L5-4K (18W) (2537 Lumen)



RELATED PRODUCTS

RWL1 Ratio Wall WGH Switchable PRS

KEY DATA	
Lumen Range	2500–8500
Wattage Range	18–60
Efficacy Range (LPW)	139–144
Fixture Projected Life (Hours)	>60K
Weights lbs. (kg)	5.29 (2.4)

ORDERING GUIDE

STOCK ORDERING INFORMATION

Catalog Number	Mounting	CRI	CCT	Lumens	Distribution	Wattage	Voltage	LPW	Weight	Finish
PRL-R-L5-4K	Wall	70	4000K	2553-8510	Type IV	18-60 Watts	120-277V	142-144	5.29 lbs	Br/white
PRL-C-L5-4K	Wall	70	4000K	2537-8460	Type III	18-60 Watts	120-277V	139-141	5.29 lbs	Br/white

RATIO WALL

RWL1/RWL2 LED WALLPACK

ORDERING GUIDE

CATALOG #

ORDERING INFORMATION

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Ratio Wall 1	48L-10 1,000 Lumens ¹	3K7 3000K, 70 CRI	2 IES TYPE II ²	UNV 120-277V	BLT Black Matte Textured
	48L-15 2,000 Lumens ²	4K7 4000K, 70 CRI	3 IES TYPE III	120 120V	BLS Black Gloss Smooth
	48L-20 3,500 Lumens ³	5K7 5000K, 70 CRI	4W IES TYPE IV	208 208V	DBT Dark Bronze Matte Textured
	48L-25 5,500 Lumens ⁴			240 240V	DBS Dark Bronze Gloss Smooth
	48L-35 4,500 Lumens			277 277V	GT1 Graphite Matte Textured
RWL2 Ratio Wall 2	48L-45 6,500 Lumens ⁵			347 347V	LSS Light Gray Gloss Smooth
	56L-45 8,500 Lumens			480 480V	LGT Light Gray Matte Textured
	56L-50 11,000 Lumens				PSS Platinum Silver Smooth
	56L-65 9,500 Lumens				WHT White Matte Textured
	56L-80 11,000 Lumens				WHS White Gloss Smooth
	56L-95 15,000 Lumens				VGT Verde Green Textured
	56L-115 15,000 Lumens				Color Option
	56L-155 19,500 Lumens				CC Custom Color

Control Options Network	
NXWIE	NX Wireless (wired module + radio) ⁹
NXSPW_F	NX Wireless, PIR Occ. Sensor, Daylight Harvesting ¹⁰
NXSP_F	NX, PIR Occ. Sensor, Daylight Harvesting ¹⁰
WIE	Wireless Controls, WISCAPEx ¹¹
Stand Alone Sensors	
SCA-8P	Remote control programmable line voltage sensor ¹⁴
SCA-20P	Remote control programmable line voltage sensor ¹⁴
Control Options	
7PRL	7-pin Receptacle ⁸

Options	
#	Housing (must specify voltage)
E	Emergency Battery Backup ¹⁵
EH	Emergency Battery w/ Heater Option ¹⁶
2DR	Dual Driver ¹⁷
2PF	Dual Power Feed ¹⁸
PC	Button Photocontrol ¹⁹

- Notes:
- Only available with PRL2
 - WISCAPEx technology required for system programming
 - 2-pin photo control sensor module required
 - Not available with 480V
 - Product "C" with "W" for up to 16' mounting height, "M" for up to 40' mounting height
 - The item is located in the integral backbox which will be automatically added to the fixture
 - 7-pin
 - The item is located in the integral backbox for RWL2 configurations only
 - Option only available at 120 or 277V
 - Only available with RWL1

STOCK ORDERING INFORMATION

Catalog Number	Lumens	Wattage	LED Count	CCT/CRI	Voltage	Distribution	Finish
RWL1-48L-25-4K-3	3500lm	25	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-25-4K-4W	3500lm	25	48L	4000K/XXCRI	120-277V	Type IV Wide	Dark Bronze Textured
RWL1-48L-45-4K-3	8500lm	45	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-45-4K-4W	8500lm	45	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured

CONTROLS

Control Options	
Standalone	
SCREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

Catalog Number	Description
WP-BB-XXX	Accessory for conduit only ³

Notes:
1 replace "xxx" with color option

LED wall luminaire - shielded with forward throw

BEGA

Application

This wall mounted LED luminaire features a forward throw light distribution and is designed for the general illumination of pathways and walkways from various mounting heights. Downlight applications only.

Materials

Luminaire housing constructed of die-cast marine grade, copper free (c.0.3% copper content) A360.0 aluminum alloy
Clear safety glass with optical texture
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP64
Weight: 2.7 lbs

Electrical

Operating voltage 120-277V AC
Minimum start temperature -20°C
LED module wattage 7.9 W
System wattage 11 W
Controllability 0-10V dimmable
Ra > 80
Color rendering index
Luminaire lumens 775 lumens (3000K)
Lifetime at Ta = 15°C >600,000 h (L70)
Lifetime at Ta = 25°C 393,000 h (L70)

LED color temperature

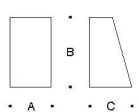
- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors ☐ Black (BLK) ☐ White (WHT) ☐ RAL: ☐ Bronze (BRZ) ☐ Silver (SLV) ☐ OUS:



LED wall luminaire - shielded with forward throw				
	LED	A	B	C
33815	7.9W	4%	7 1/4"	4 1/4"

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 info@bega-us.com
Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Exterior Fixture Specification Sheets

NEW METAL BUILDINGS FOR:
KENSHIN MARTIAL ARTS COMPLEX
CHICAGO AVENUE AND OLD MERIDIAN ROAD
FALCON, COLORADO 80813

PROJECT NO.	202130
DATE	22 October 2021
DRAWN BY	msk
CHECKED	lmsk
APPROVED	msk
REVISED	

SHEET

ELC.2