MK11 J30 WALL SIGN

PREFERRED WALL SIGN FOR MOST STANDARD BUILDINGS

'JACK' CABINET

FACES: LEXAN W/ 2ND SURFACE GRAPHICS
CABINET: FABRICATED ALUMINUM
CABINET COLOR: JIB RED (3mm SILVER ACM BACKER/ BORDER)
ILLUMINATION: INTERNAL AND HALO LED

'IN THE BOX' CABINET

PAN FACE: 1/2" ACRYLIC PUSH-THRU COPY "IN THE BOX"
CABINET: FABRICATED ALUMINUM
CABINET COLOR: SILVER
ILLUMINATION: INTERNAL AND HALO LED

MK11 J30 WALL SIGN

SIDE VIEW

MK11 J30 WALL SIGN SHOWN

SINGLE FACED J40/30/20 WALL SIGN

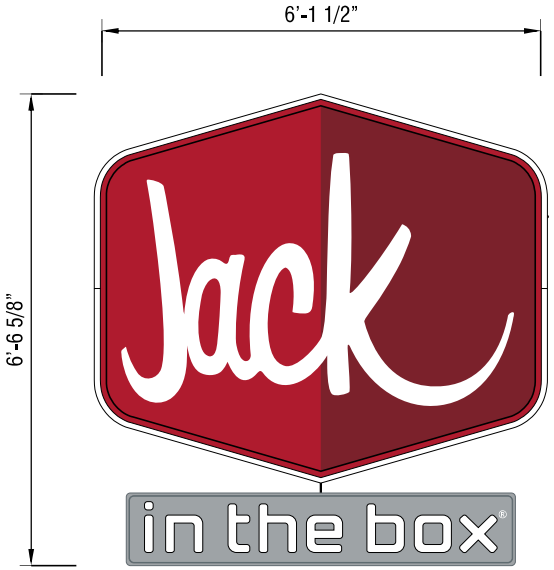
PREFERRED WALL SIGN FOR MOST STANDARD BUILDINGS

'JACK' CABINET

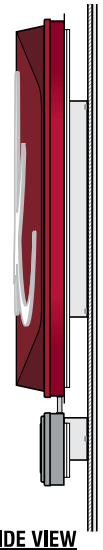
FACES: LEXAN W/ 2ND SURFACE GRAPHICS
CABINET: FABRICATED ALUMINUM
CABINET COLOR: JIB RED (WHITE BACKER/BORDER)
ILLUMINATION: INTERNAL AND HALO LED

'IN THE BOX' CABINET

FACES: LEXAN W/ 2ND SURFACE GRAPHICS
CABINET: FABRICATED ALUMINUM
CABINET COLOR: JIB SLATE GRAY
ILLUMINATION: INTERNAL AND HALO LED

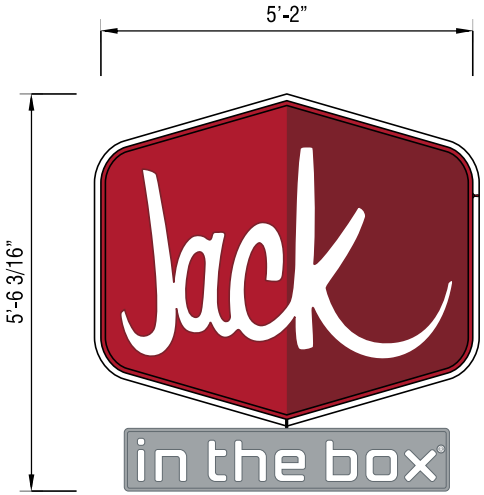


J40 WALL SIGN

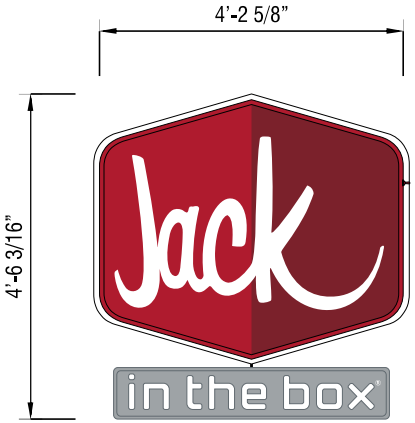


SIDE VIEW

J30 WALL SIGN SHOWN



J30 WALL SIGN



J20 WALL SIGN

NEIGHBORHOOD WALL SIGN

LETTERS: 3/4" RED ACRYLIC PAINTED TO MATCH JIB RED W/ SATIN FINISH

FONT: NEUTRA DISPLAY TITLING

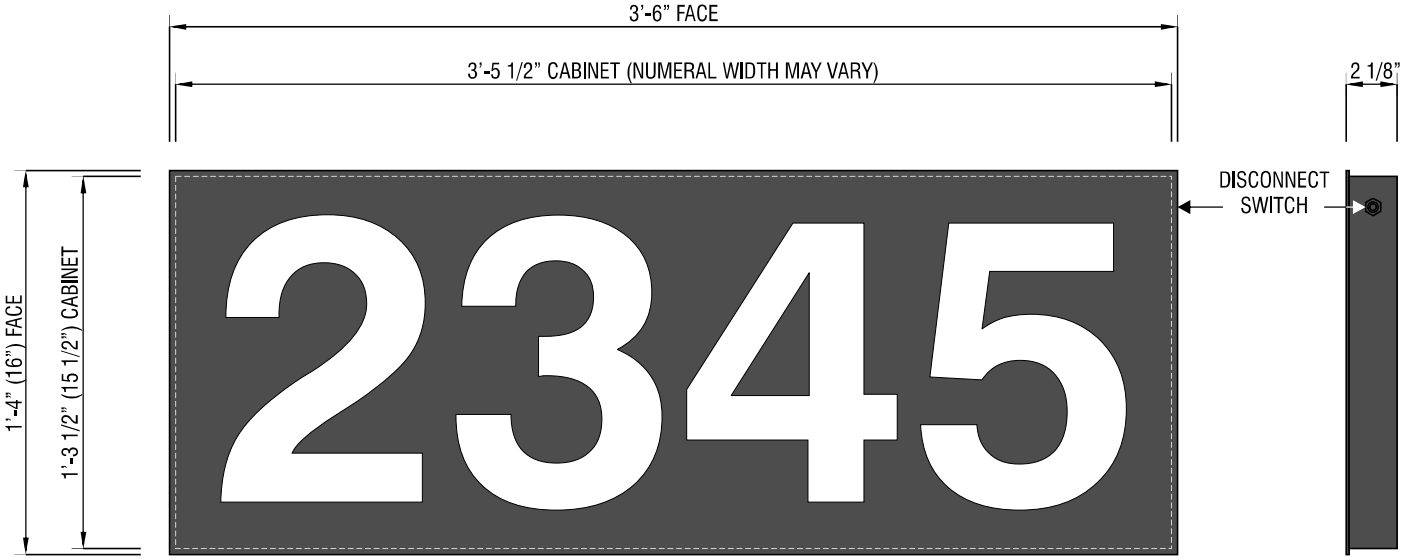
ADDRESS NUMERALS

NUMERALS: 1/4" WHITE ACRYLIC BACKER

CABINET: POWDER COAT RAL7022
"UMBRA GRAY" W/ SATIN FINISH

ILLUMINATION: INTERNAL LED

FONT: SWISS 721 BOLD CONDENSED BT

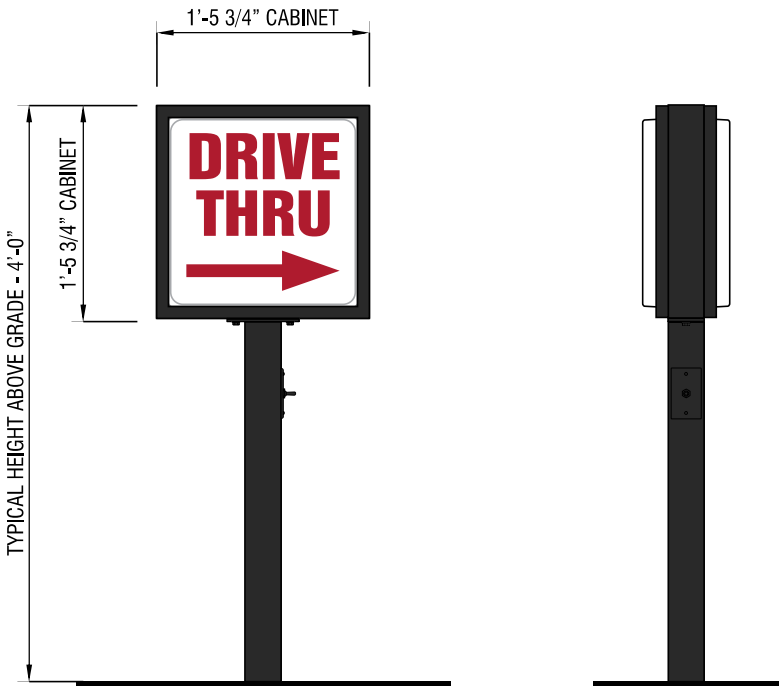


ELEVATION VIEW **END VIEW**

DOUBLE FACED DIRECTIONAL SIGN

TYPICAL HEIGHT 4'; 3' AND CUSTOM HEIGHTS ARE AVAILABLE

FACES:	LEXAN W/ 1ST SURFACE GRAPHICS
CABINET:	EXTRUDED ALUMINUM
CABINET COLOR:	POWDER COAT RAL9004 'SIGNAL BLACK'
ILLUMINATION:	INTERNAL LED
POLE SUPPORT:	3" STEEL SQUARE TUBE
POLE COLOR:	POWDER COAT RAL9004 'SIGNAL BLACK'

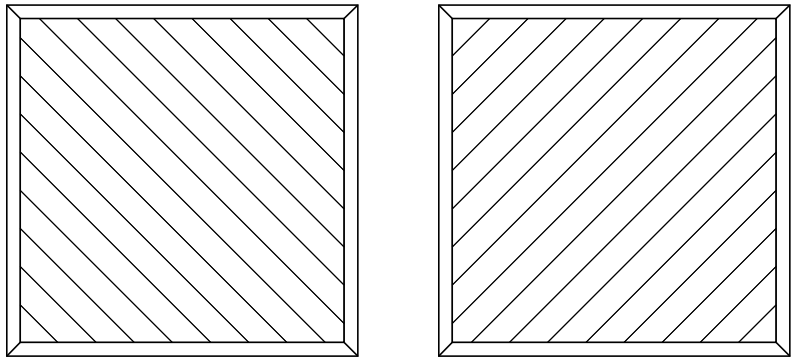


ELEVATION VIEW
SINGLE DIRECTIONAL

TYP. SIDE VIEW

DIRECTIONAL FACE OPTIONS

CORRUGATION CONFIGURATION



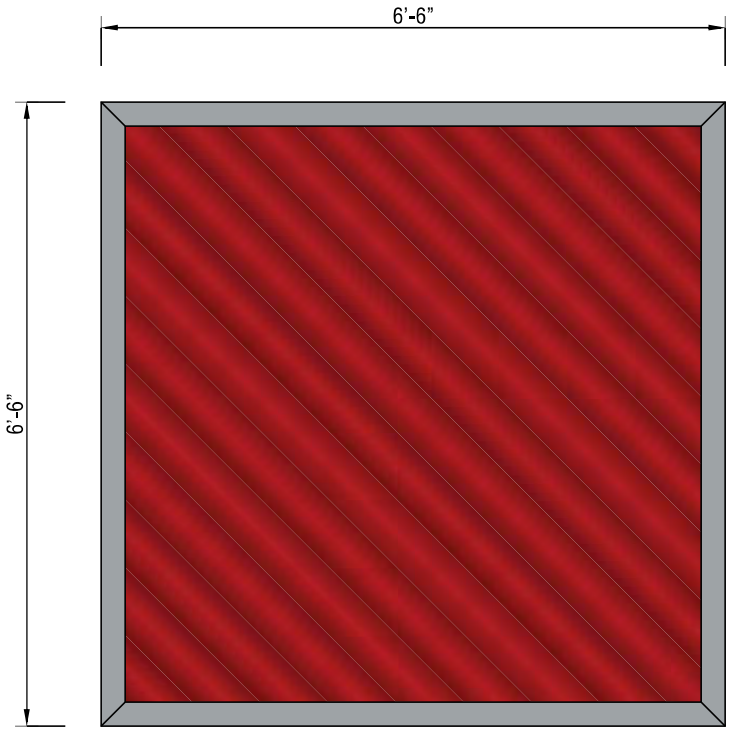
PANEL TYPE A

PANEL TYPE B

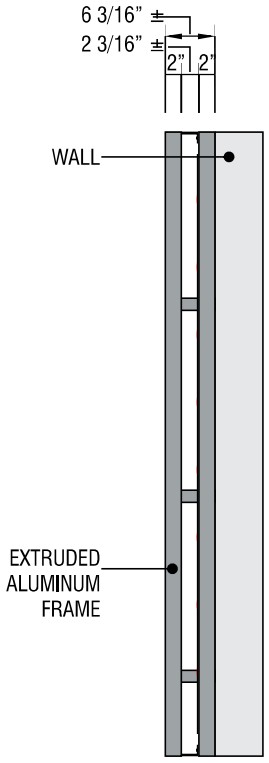
BRANDING PANELS

'RED' BRANDING PANEL FRAMES: POWDER COAT RAL 7039 'QUARTZ GREY'
'GREY' BRANDING PANEL FRAMES: POWDER COAT RAL 9004 'SIGNAL BLACK'

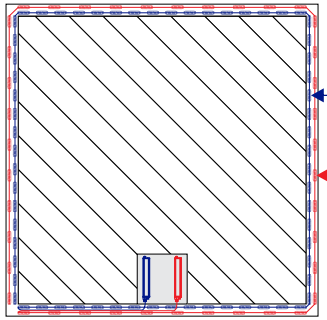
'RED' FORMED CORRUGATED PANELS: PAINT SW 6321 'RED BAY'
'RED' FORMED CORRUGATED PANELS: PAINT SW 7019 'GAUNTLET GREY'



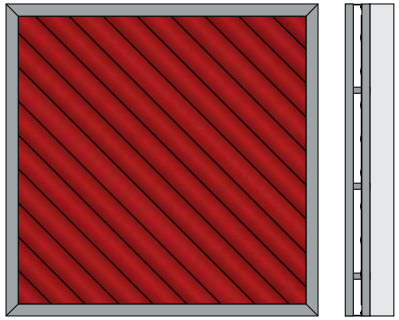
ELEVATION VIEW



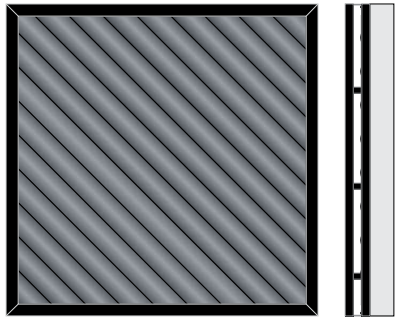
END VIEW
(TOP ROW)



LED ILLUMINATION



RED COLOR SCHEME



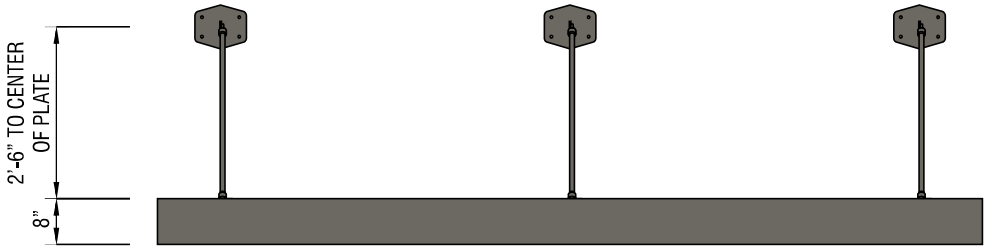
GREY COLOR SCHEME

BUILDING CANOPIES

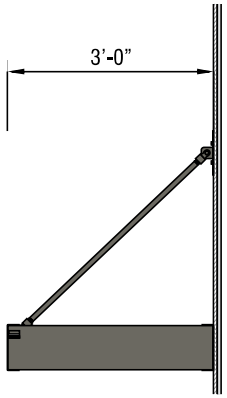
CANOPY FRAME: FABRICATED ALUMINUM CHANNEL
RAIN COVER: FABRICATED ALUMINUM
SUPPORT RODS: 7/8" O.D. STEEL PIPE
WALL BRACKETS: 3/16" STEEL PLATE
COLOR: RAL9004 'SIGNAL BLACK' *OR* RAL7039 'QUARTZ GREY'

ROD ASSEMBLIES AND CANOPY STRUCTURE TO BE POWDER COATED TO MATCH BRANDING PANEL FRAME COLOR. CANOPIES SHOWN ARE 'QUARTZ GREY'

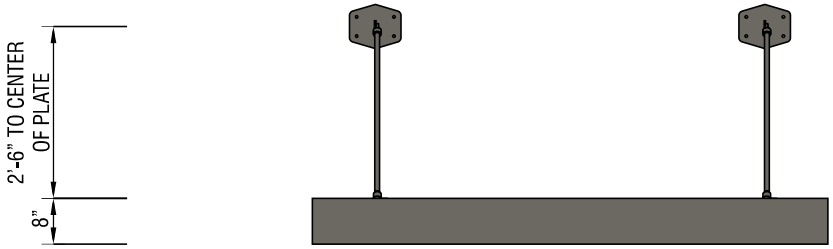
NOTE: CANOPIES CAN BE ASSEMBLED AT ANY LENGTH FROM 3' X 3' AND UP IN 6" INCREMENTS



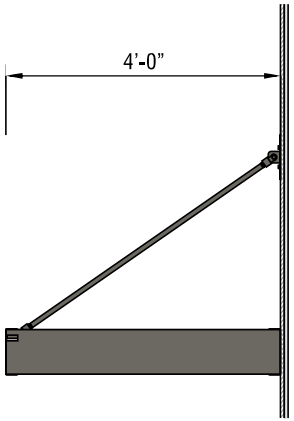
3' DEEP CANOPY
(LENGTHS VARY PER LOCATION, 12' SHOWN)



SIDE VIEW



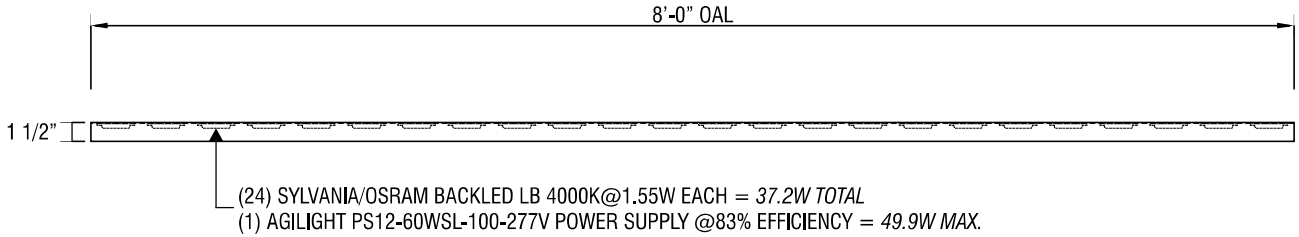
4' DEEP DRIVE THRU WINDOW CANOPY
(TYPICALLY 7'-6")

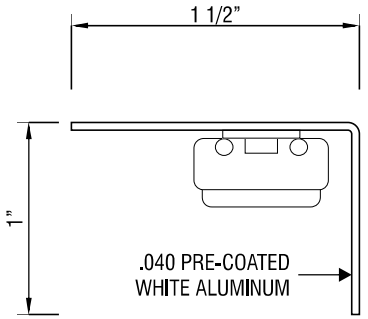


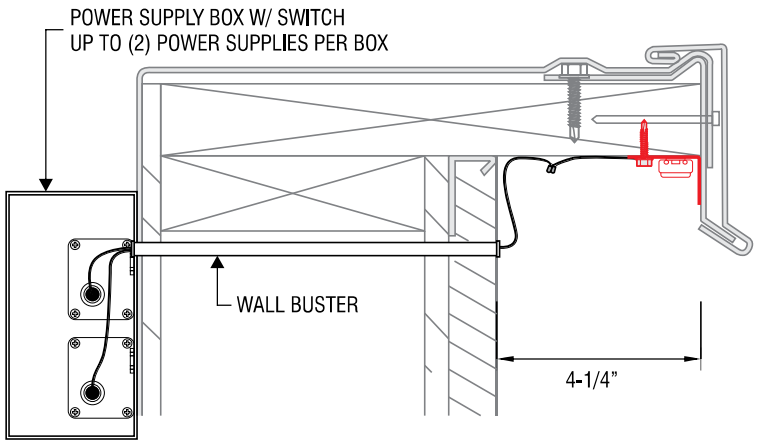
SIDE VIEW

LED COPING LIGHTING

LED CHANNEL: FABRICATED ALUMINUM
PRE-COATED WHITE







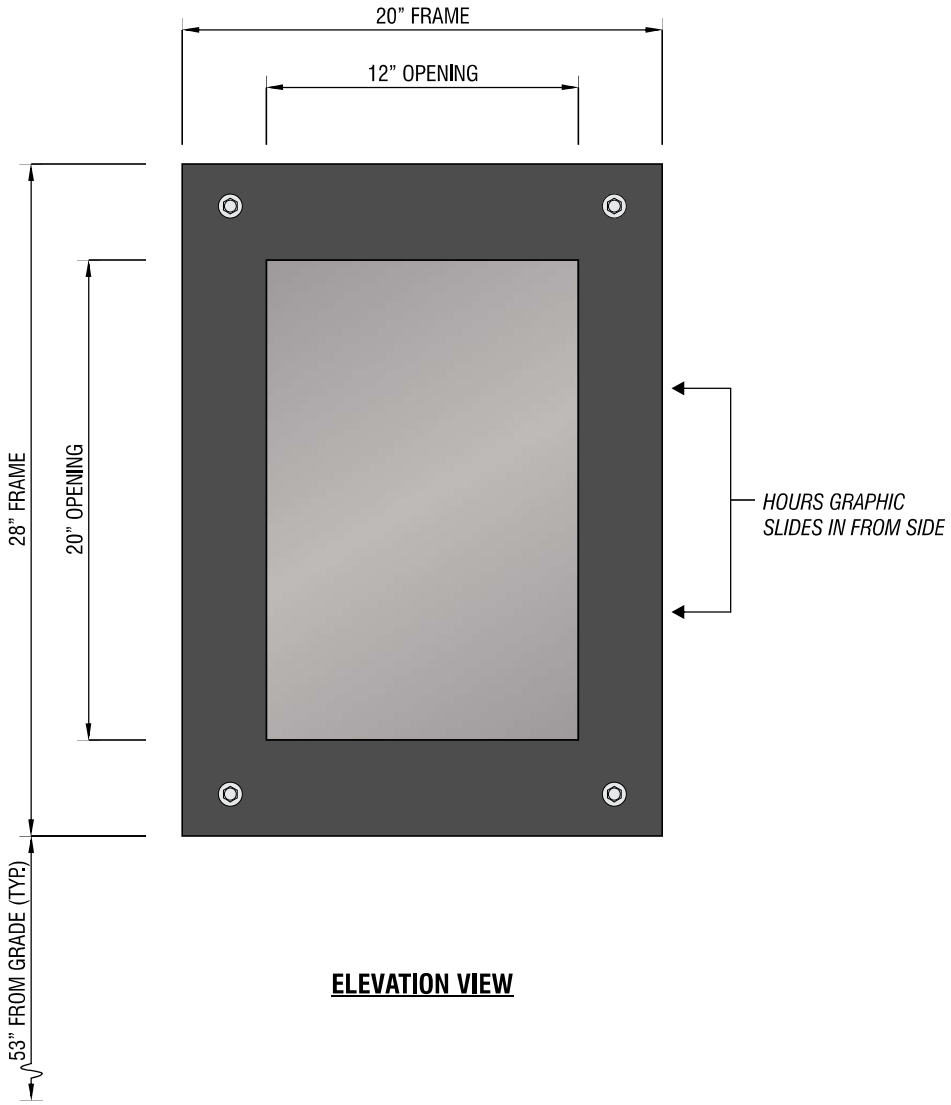
STANDARD BUILDING APPLICATION

HOURS PANEL

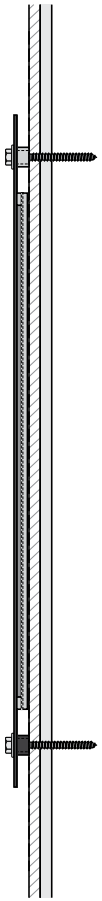
FRAME: ALUMINUM

BACKER: ALUMINUM

ATTACHMENTS: GALVANIZED LAG BOLTS W/ WASHERS & PVC SPACERS



ELEVATION VIEW



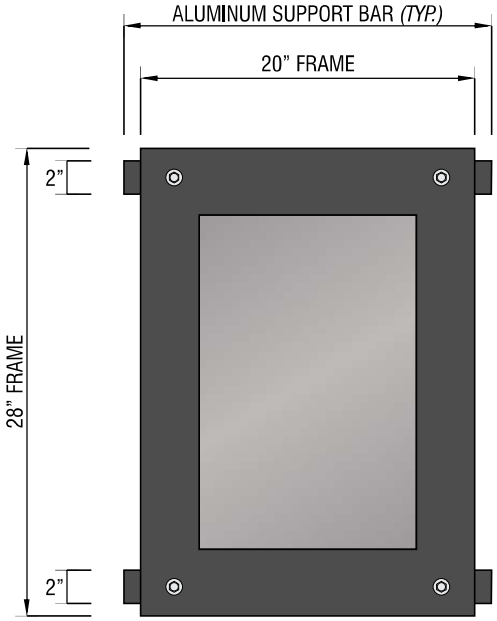
SIDE VIEW

DRIVE THRU WINDOW PANELS

FRAME:	ALUMINUM
BACKER:	ALUMINUM
SUPPORT BAR:	EXTRUDED ALUMINUM
ATTACHMENTS:	GALVANIZED LAG BOLTS W/ WASHERS & PVC SPACERS

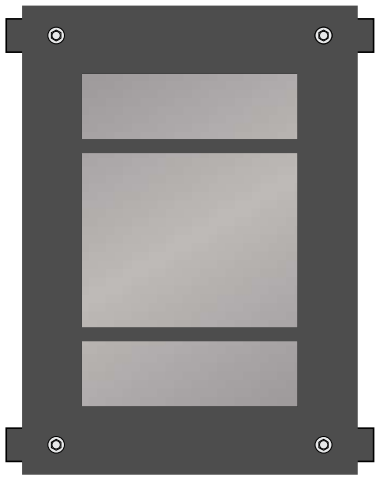
PLAN VIEW

PLAN VIEW



GRAPHICS PROVIDED BY OTHERS

ELEVATION VIEW



GRAPHICS PROVIDED BY OTHERS

ELEVATION VIEW

TYP. PANEL POSITIONING @ DRIVE THRU WINDOW

MARQUEE POSTER PANELS

CABINET/SURROUND: FABRICATED ALUMINUM POWDER COATED RAL7022 'UMBRA GRAY' W/ SATIN FINISH.

POSTER FRAME: SNAP-LOCK POSTER FRAME (SATIN SILVER FINISH)

ILLUMINATION: INTERNAL LED

GRAPHICS PROVIDED BY OTHERS

ELEVATION VIEW

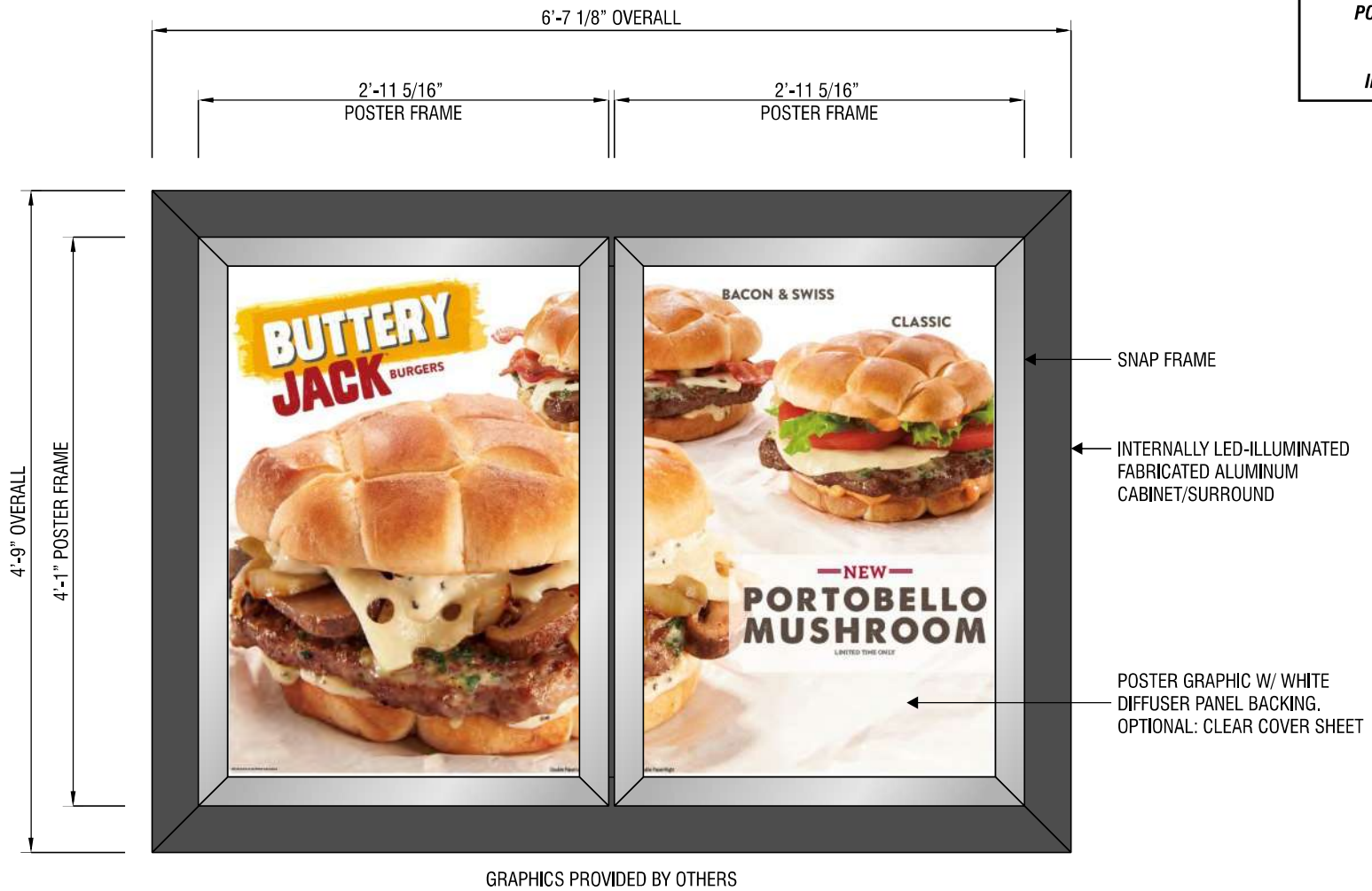
SIDE VIEW

MARQUEE POSTER PANELS

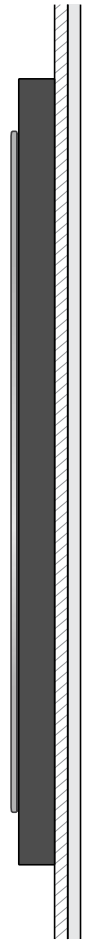
CABINET/SURROUND: FABRICATED ALUMINUM POWDER COATED RAL7022 'UMBRA GRAY' W/ SATIN FINISH.

POSTER FRAME: SNAP-LOCK POSTER FRAME (SATIN SILVER FINISH)

ILLUMINATION: INTERNAL LED



GRAPHICS PROVIDED BY OTHERS



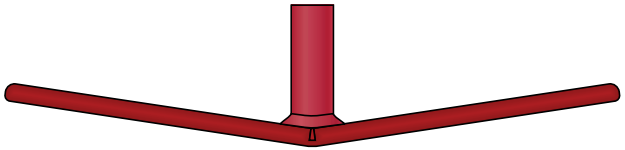
ELEVATION VIEW

SIDE VIEW

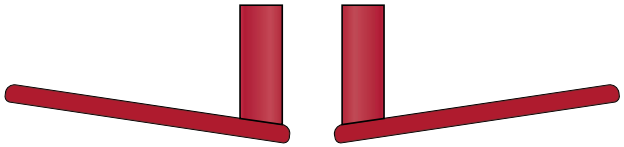
JIB DOOR HANDLES

MATERIAL: 3/8" ALUMINUM

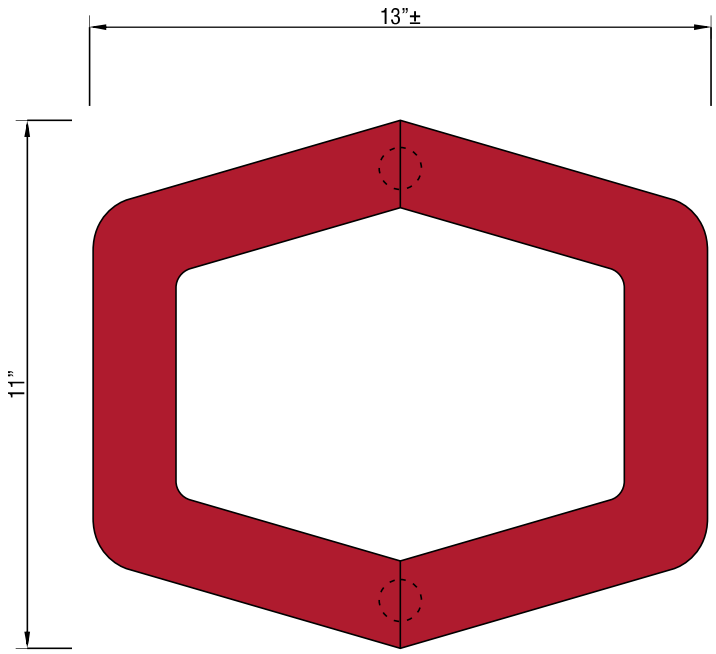
COLOR: POWDER COAT TO MATCH 'JIB RED' W/ GLOSS FINISH



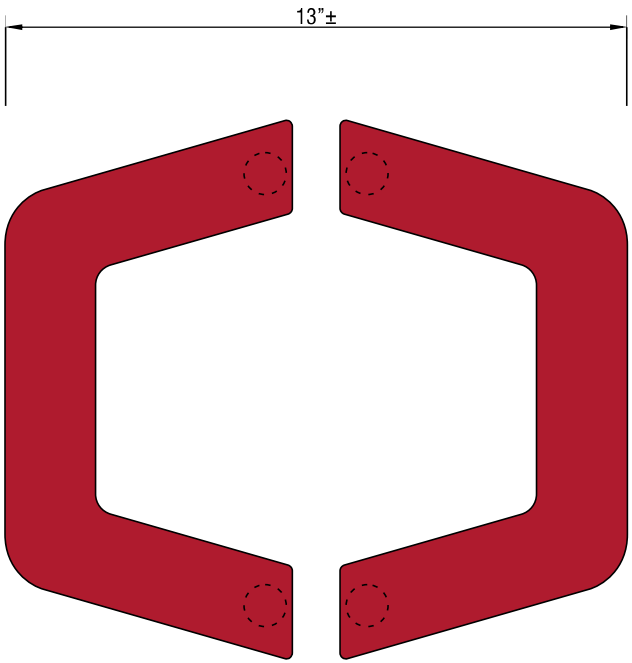
PLAN VIEW



PLAN VIEW



SINGLE DOOR (OPEN SHAPE)

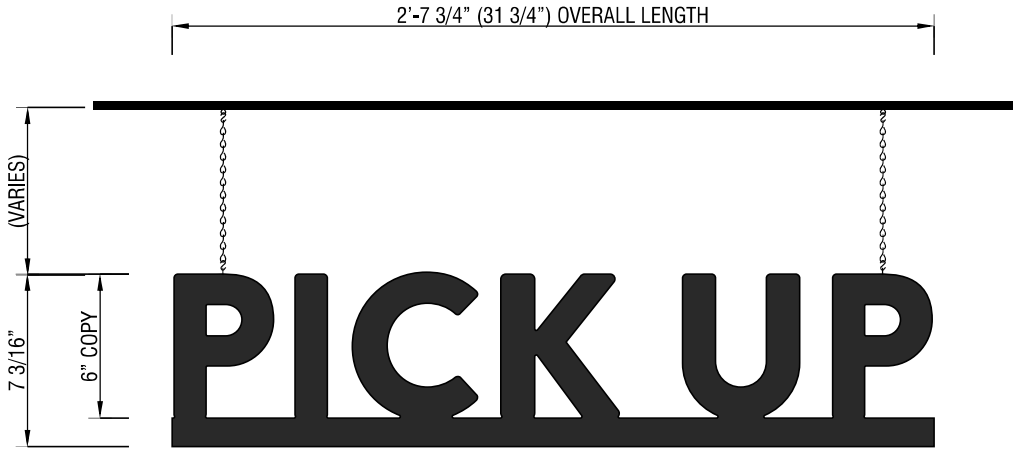


DOUBLE DOOR (SPLIT SHAPE)

INTERIOR 'PICK UP' SIGN

MATERIAL: 1" THICK SINTRA

COLOR: PAINT TO MATCH RAL9004 'SIGNAL BLACK' W/ SATIN FINISH



ELEVATION VIEW

SIDE VIEW

SINGLE FACE HANGING WINDOW SIGN

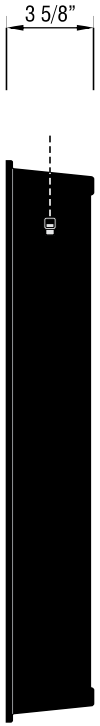
FACE: ACRYLIC WITH 1ST SURFACE APPLIED GRAPHICS

CABINET: FORMED LEXAN (JIB BLACK)

ILLUMINATION: LED

SUPPORTS: AIRCRAFT CABLE

FRONT VIEW



SIDE VIEW

A - "24 HR DRIVE THRU"

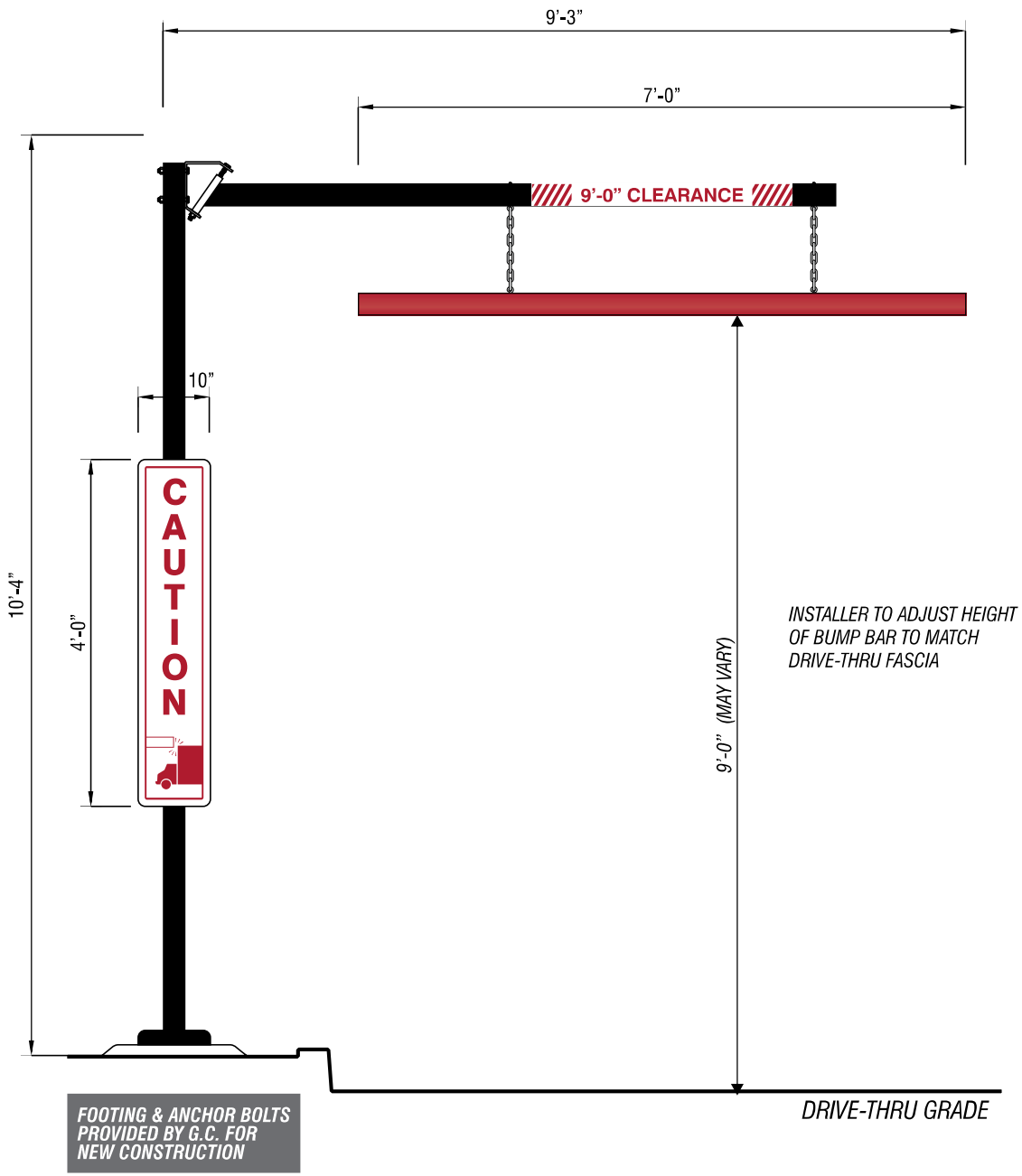
B - "OPEN 24 HOURS"

C - "DRIVE THRU OPEN"

D - "OPEN"

E - "OPEN LATE NIGHT"

FACE GRAPHIC OPTIONS



HEIGHT DETECTOR

POLE & ARM:	STEEL SQUARE TUBE POWDER COAT RAL9004 'SIGNAL BLACK'
BUMP BAR:	ALUMINUM TUBE (JIB RED WITH APPLIED WHITE GRAPHICS)
BUMP BAR SUPPORT:	STAINLESS STEEL CHAIN
ARM BRACKET:	3/8" STAINLESS STEEL
BASE PLATE COVER:	FORMED BLACK ABS
GRAPHIC PANEL:	ALUMINUM (REFLECTIVE WHITE) WITH TRANSLUCENT RED GRAPHICS

NOTE: STANDARD MENU SHOWN WITH TYPICAL OPTIONS. CITY/CENTER CRITERIA MAY REQUIRE A NON-STANDARD MENU OR CONFIGURATION WHICH MAY BE AVAILABLE. CONTACT CNP FOR ADDITIONAL OPTIONS.

SINGLE FACED PREVIEW MENU

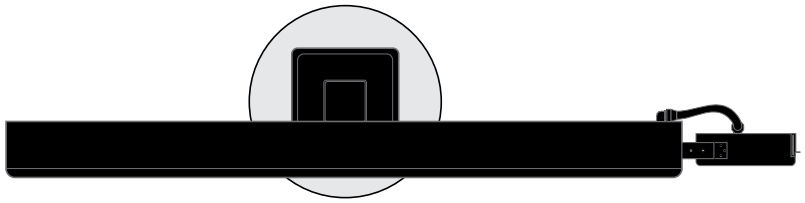
STANDARD OPTIONS SHOWN; SEE DETAIL ON FOLLOWING PAGES

CABINET: EXTRUDED ALUMINUM (POWDER COATED RAL9004 'SIGNAL BLACK') WITH UV POLYCARBONATE PANELS

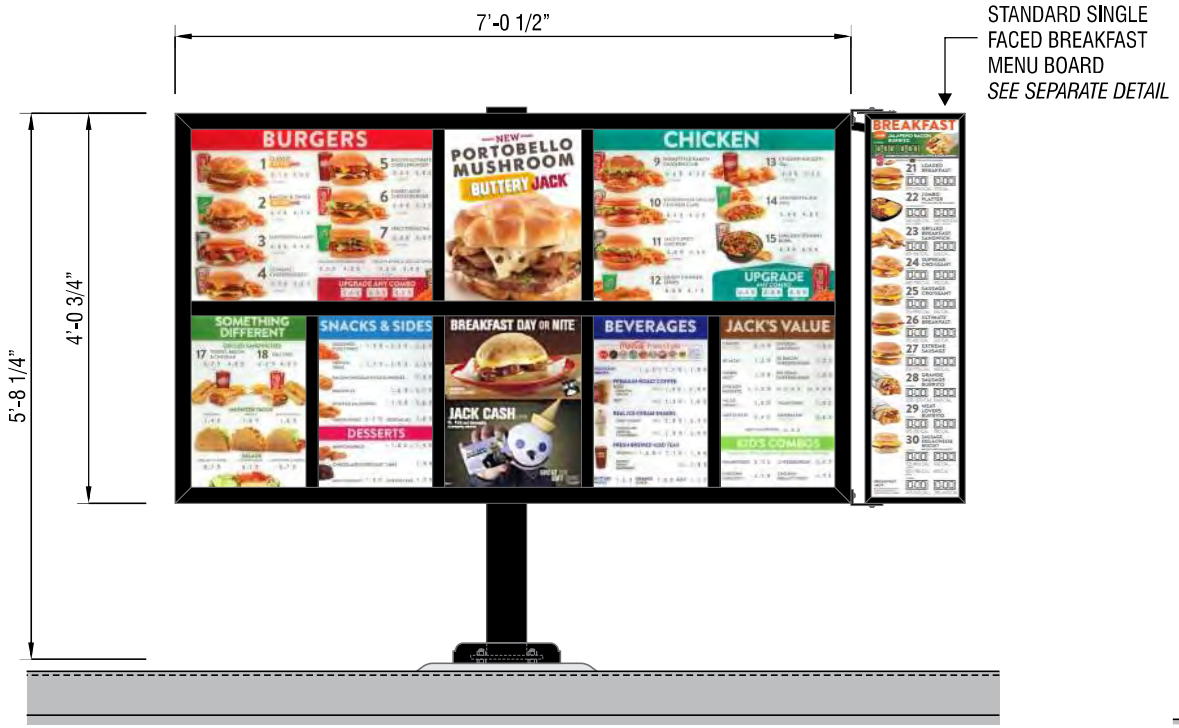
ILLUMINATION: INTERNAL LED

POLE SUPPORT: 5" STEEL SQUARE TUBE (POWDER COATED RAL9004 'SIGNAL BLACK')

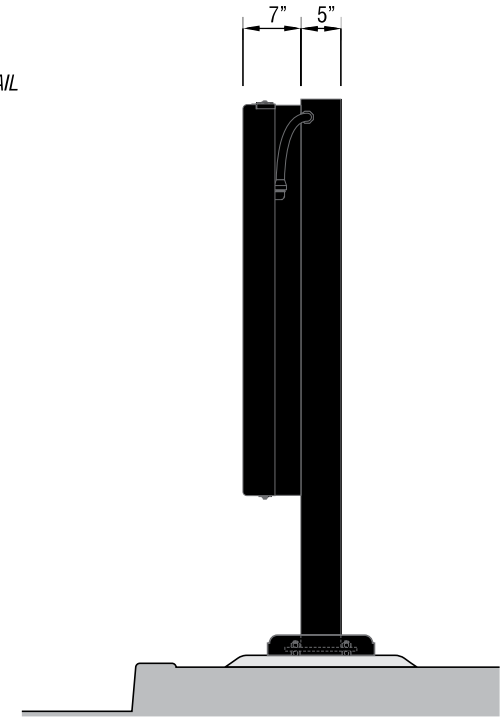
BASE PLATE COVER: FORMED BLACK ABS (PAINTED TO MATCH 'SIGNAL BLACK')



PLAN VIEW



ELEVATION VIEW



SIDE VIEW

NOTE: STANDARD MENU SHOWN WITH TYPICAL OPTIONS. CITY/CENTER CRITERIA MAY REQUIRE A NON-STANDARD MENU OR CONFIGURATION WHICH MAY BE AVAILABLE. CONTACT CNP FOR ADDITIONAL OPTIONS.

SPEAKER MENU

STANDARD OPTIONS SHOWN; SEE DETAIL ON FOLLOWING PAGES

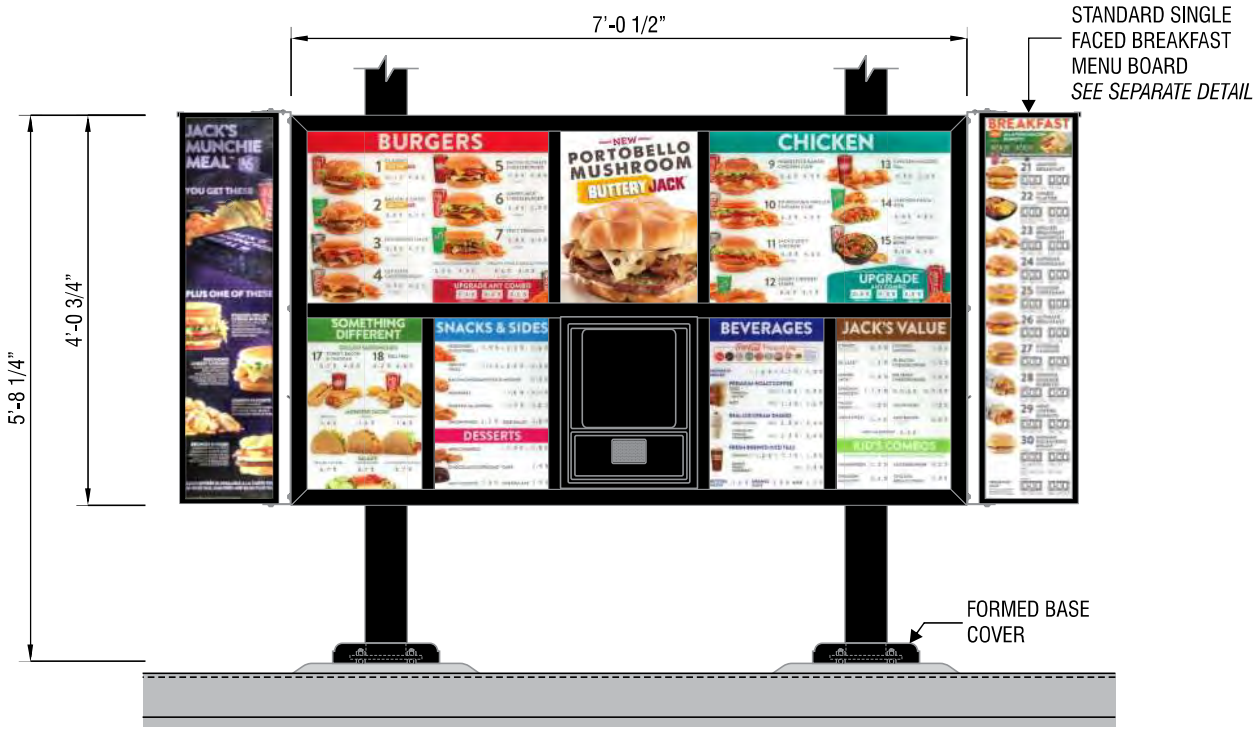
CABINET: EXTRUDED ALUMINUM (POWDER COATED RAL9004 'SIGNAL BLACK') WITH UV POLYCARBONATE PANELS

ILLUMINATION: INTERNAL LED

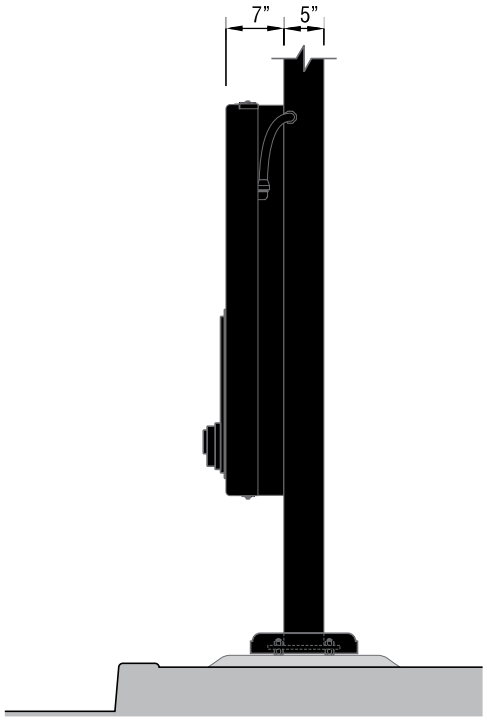
POLE SUPPORT: 5" STEEL SQUARE TUBE (POWDER COATED RAL9004 'SIGNAL BLACK')

BASE PLATE COVER: FORMED BLACK ABS (PAINTED TO MATCH 'SIGNAL BLACK')

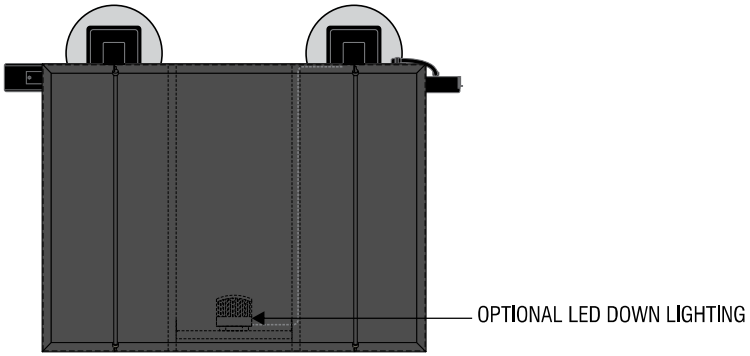
PLAN VIEW



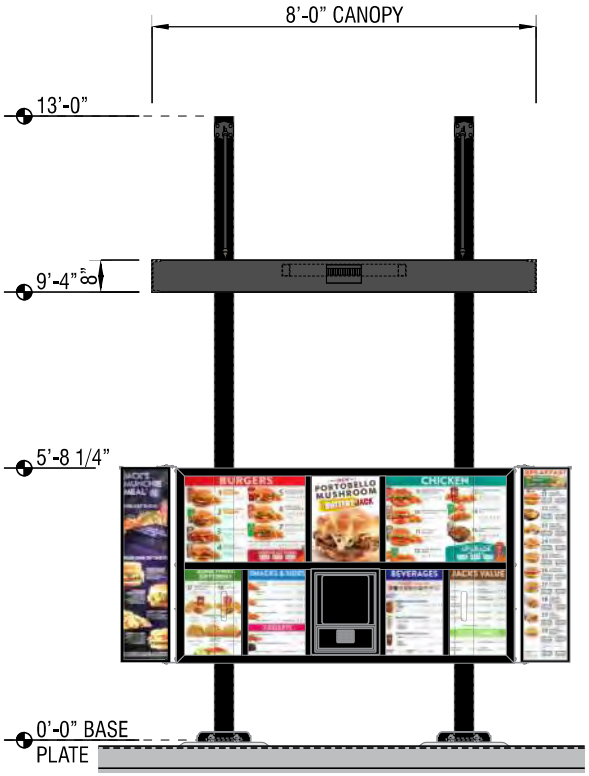
ELEVATION VIEW



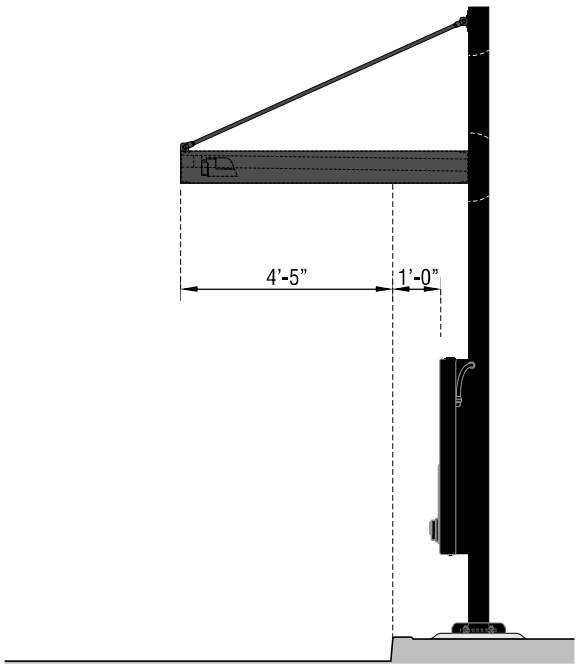
SIDE VIEW



PLAN VIEW



ELEVATION VIEW



SIDE VIEW

SPEAKER MENU CANOPY

STANDARD OPTIONS SHOWN; SEE DETAIL ON FOLLOWING PAGES

CABINET: EXTRUDED ALUMINUM (POWDER COATED RAL9004 'SIGNAL BLACK') WITH UV POLYCARBONATE PANELS

ILLUMINATION: INTERNAL LED

POLE SUPPORT: 5" X 5" STEEL SQUARE TUBE POWDER COATED RAL9004 'SIGNAL BLACK'

BASE PLATE COVER: FORMED BLACK ABS PAINTED TO MATCH 'SIGNAL BLACK'

OCS HOUSING: FORMED BLACK ABS

CANOPY FRAME: FABRICATED ALUMINUM CHANNEL POWDER COATED RAL7022 'UMBRA GREY'

RAIN COVER: FABRICATED ALUMINUM

SUPPORT RODS: 7/8" O.D. STEEL PIPE

PLATES: 3/16" STEEL PLATE

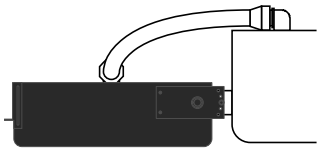
ROD ASSEMBLIES AND CANOPY STRUCTURE TO BE POWDER COATED RAL7022 'UMBRA GREY'

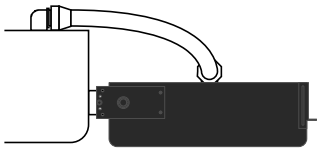
EXTERIOR LATE NIGHT/BKFST MENUS

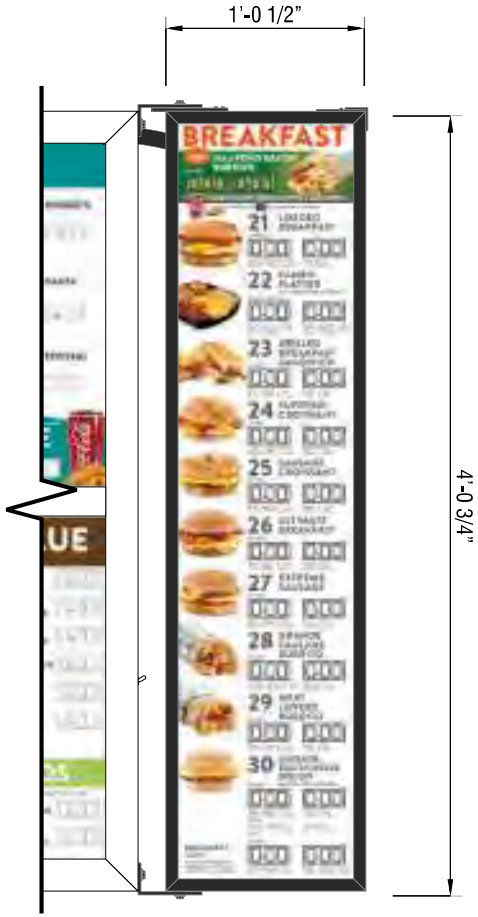
CABINET: EXTRUDED ALUMINUM POWDER COAT RAL9004 'SIGNAL BLACK' WITH UV POLYCARBONATE PANELS

ILLUMINATION: INTERNAL LED

MENU ATTACHMENT: STEEL BRACKET POWDER COAT RAL9004 'SIGNAL BLACK'







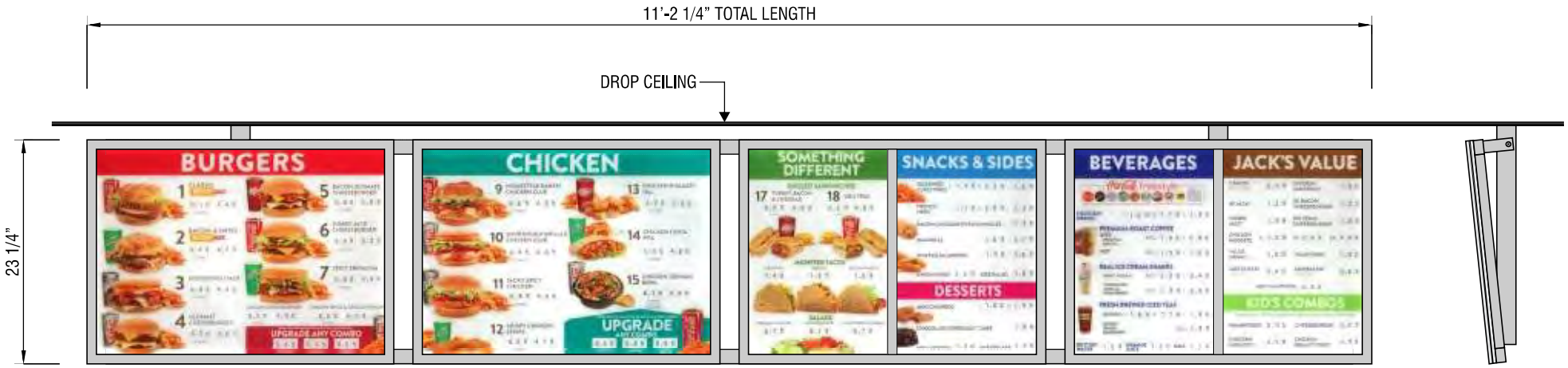
LATE NIGHT MENU BOARD

BREAKFAST MENU BOARD

INTERIOR MENU

ILLUMINATION: EDGE-LIT LIGHT PANELS

MENU FRAME AND SUPPORT: ALUMINUM (“ANODIZED SILVER”)



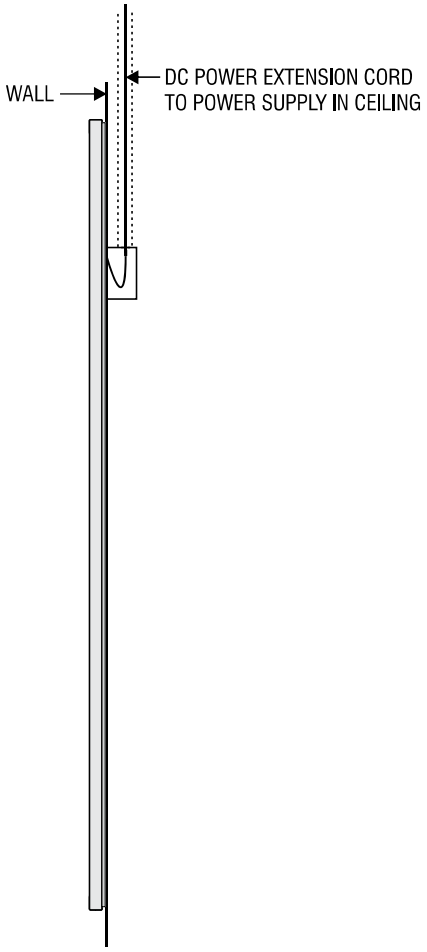
ELEVATION VIEW **SIDE VIEW**

INTERIOR 3-PANEL BREAKFAST MENU

ILLUMINATION: EDGE-LIT LIGHT PANELS

MENU FRAME: FABRICATED ALUMINUM ("ANODIZED SILVER")

ELEVATION VIEW

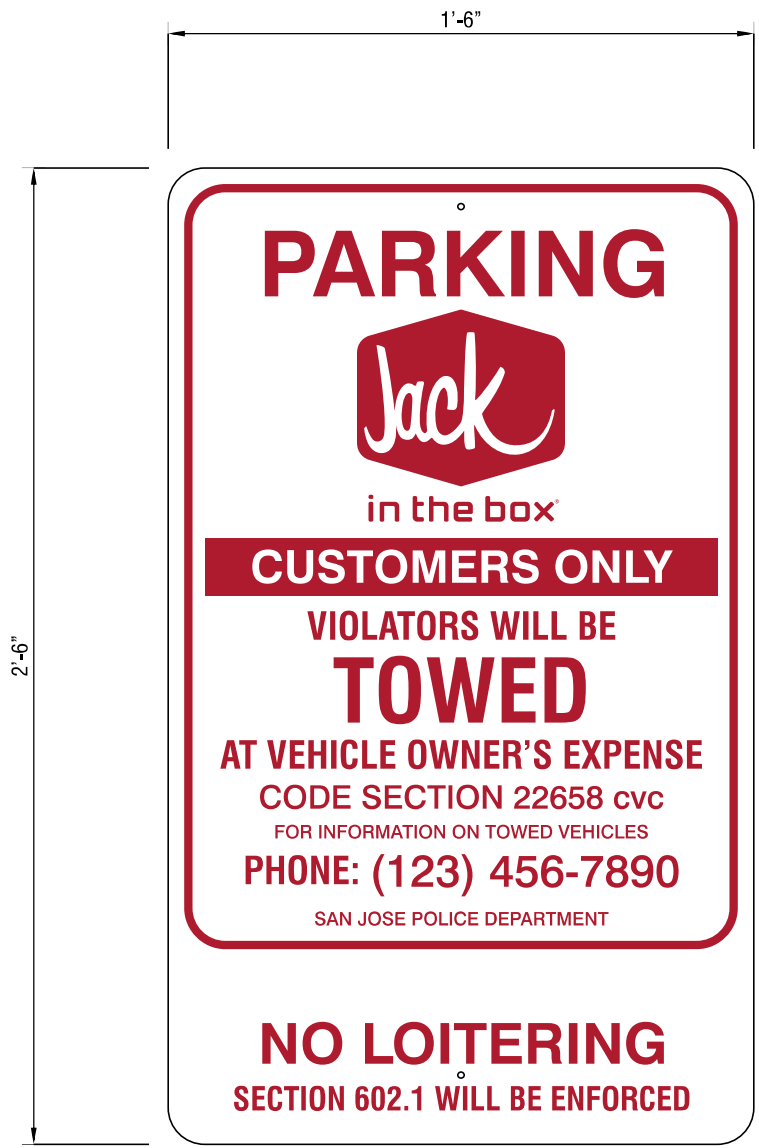


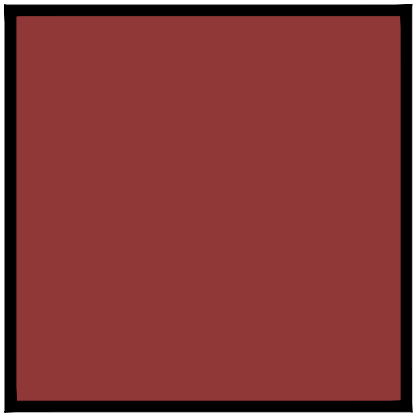
SIDE VIEW

TOW AWAY SIGN

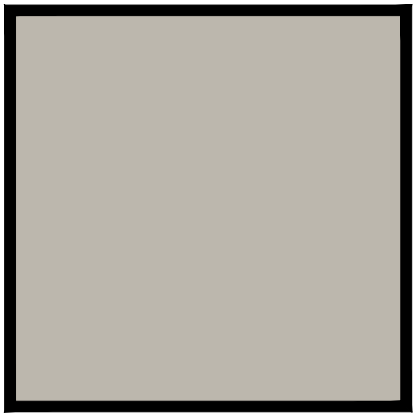
SIGN PANEL: WHITE .080" ALUMINUM

COPY: 1ST SURFACE JIB RED COPY

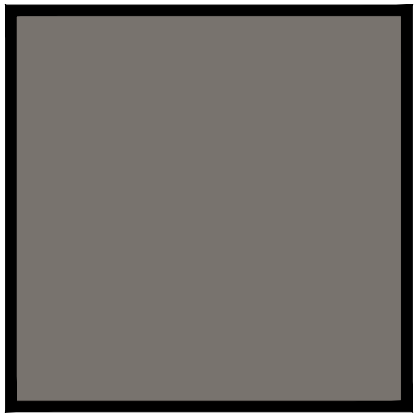




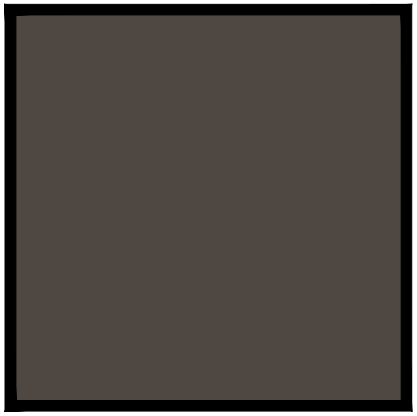
SHERWIN WILLIAMS
COLOR: SW 6321
RED BAY



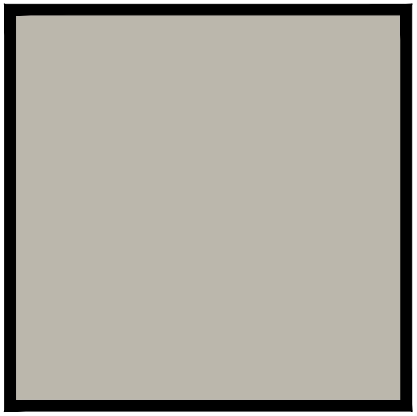
SHERWIN WILLIAMS
COLOR: SW 7016
MINDFUL GRAY



RAL-7039
QUARTZ GREY



SHERWIN WILLIAMS
COLOR: SW 7020
BLACK FOX



CLEAR ANODIZED

PORCELAIN TILE
CROSSVILLE
SPEAK EASY

JACK IN THE BOX
9113 E. GUADALUPE RD.
MESA, AZ 85212
MK9DS_MD

marks architects

71905 hwy. 111 suite f ■ rancho mirage, ca 92270 ■ tel: 760-610-5264
2643 fourth ave. ■ san diego, ca 92103 ■ tel: 619-702-9448

marks architects inc

January 11th, 2019

New Jack in the Box Drive-thru restaurant
Narrative Description

Along with the submitted drawings and documents, please refer to this narrative for the Planning & Zoning submittal and Design Review submittal request for the new 2,718 sq ft Jack in the Box restaurant. The site (APN no. 312-12-858) consists of 42, 923 sq. ft. and it is located at 9113 E. Guadalupe Rd., Mesa, AZ 85212. The property is in the Mixed Use Activity Area under the City of Mesa jurisdiction in the Limited Commercial PAD zoning.

The project consists of a new 2,739 sq. ft., 1-story, 23'- 4 ¼" high, "Jack in the Box" drive thru restaurant. The type of construction is proposed as VB - Sprinklered with an occupancy A-2. A total of 64 indoor seats and 10 outdoor seats are being proposed. Site development includes 38 parking spaces (125% of min. required), a new trash enclosure i.a.w. city standards, new LED light poles, new drive thru equipment and new landscape. Signage and canopies are not part of our scope, these will be permitted by the sign vendor under a different permit.

The development regulations under Chapter 6, 30, 31, 32 and 33 of the Mesa Zoning Ordinance, as well as the Pre-Submittal comments, have been considered and incorporated into the project.

If you have any questions, please contact me at (619) 702-9448 or carolina@marksarchitects.com.

Sincerely,

Carolina A. Salgado M.
Associate
Marks Architects, Inc.

Jack In The Box
Type 1C
KR6-20L-35K-120V
KR6T-SSGC-FF-WW

KR6™ Series

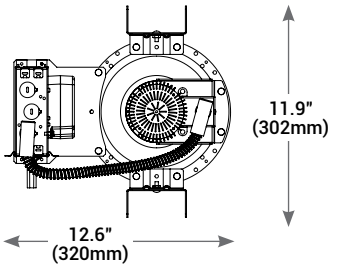
LED Specification Downlight – Round 6" Aperture

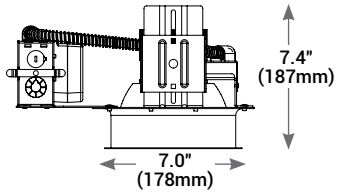
Product Description

The KR6™ LED specification downlight features Cree TrueWhite® Technology and delivers beautiful, high-quality light with efficacy up to 75 lumens per watt. Designed for new construction applications, the KR Series is available in variety of color temperatures, round and square trims with high-quality anodized aluminum reflector finishes, a sloped ceiling adapter and a variety of dimming options including Cree Sunset Dimming Technology providing rich, warm light that transitions from 2700K to 1800K as naturally as an incandescent source.

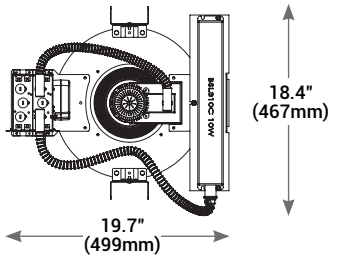
Performance Summary

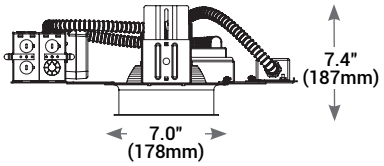
- Utilizes Cree TrueWhite® Technology
- Made in the U.S.A. of U.S. and imported parts
- **Delivered Light Output:** 683-5265 lumens; Delivered lumen output is typical when using a SSGC type reflector
- **Input Power:** 13-87 Watts
- **Emergency Performance:** Up to 1210 Lumens; 10W; Minimum 90 Minutes
- **CRI:** 90
- **CCT:** 2700K , 3000K , 3500K, 4000K
- **Dimming:** Triac, 0/1-10V, Cree SmartCast™ Technology, Lutron EcoSystem® Dimming, Lutron® Forward Phase Dimming; See control availability chart on page 3
- **Limited Warranty†:** 10 years on KR6™ luminiare/5 years on KR6 luminiare with Cree SmartCast™ Technology/1 year on emergency battery pack





Emergency Backup





Accessories

Field-Installed		
Sloped Ceiling Adaptor KRKS6**WW ** 0-35 (order in 5 degree increments)	**C-Channel Hanger Bars** RBH30C - Pair of 30" (762mm) rigid 3/4" x 1/2" (19mm x 13mm) C-Channel bars	**T-Bar Clips** RARC7 - Set of four
Control Module CIF-10VC1-CWC-SNSR - Cree SmartCast™ Technology with ambient light and motion sensors		**Trim Ring** KR6TA - White

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Housing:** KR6 20L 35K 120V 10V + **Reflector:** KR6T SSGC FF

Reflector (Housing must be ordered separately)			
KR6T			
Series	**Reflector Finish**	**Flange Finish**	**Options**
KR6T	SSGC Soft Satin Glow, Clear SSGCG Soft Satin Glow, Champagne Gold	FF Matches Reflector WF White Paint	WW Wall Wash

Housing (Reflector must be ordered separately)									
KR6									
Series	**Size**	**Reflector**	**Initial Delivered Lumens**	**Optic**	**CCT**	**Voltage**	**Controls**		**Options**
KR	6 6 inch	Blank Round	9L 13W, 683 Lumens - 53 LPW 13L 18W, 1060 Lumens - 59 LPW 20L 30W, 1664 Lumens - 55 LPW 30L 39W, 2545 Lumens - 62 LPW 40L 44W, 3337 Lumens - 76 LPW 60L 87W, 5265 Lumens - 60- LPW	Blank 70° Beam Angle (Standard)	27K 2700K - 9L thru 40L Only 30K 3000K 35K 3500K 40K 4000K	120V 120 Volts 277V 277 Volts 347V 347 Volts	Blank - For standard control offering refer to control availability chart on page 3 LES Lutron EcoSystem® Dimming - Refer to control availability chart on page 3	10V 0/1-10V Dimming - Refer to control availability chart on page 3 LFP Lutron Forward Phase Dimming - Refer to control availability chart on page 3	WD Sunset Dim - 9L and 13L @ 27K with Triac Dimming only 10R Cree SmartCast™ Technology EB7* Emergency Backup - Minimum 90 minutes - 120V, 277V only

† See www.cree.com/lighting/products/warranty for warranty terms
* Available for U.S. only.

Rev. Date: V4 08/08/2014

US: www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

Product Specifications

CREE SMARTCAST™ TECHNOLOGY

Cree SmartCast™ Technology changes the paradigm of lighting control. With the press of a single button, Cree SmartCast™ Technology enabled luminaires and controls create their own secure network and auto-associate to form logical groups throughout every space. Integrated sensors and robust wireless communication included in every luminaire combined with revolutionary OneButton™ Setup enables automated setup and configuration of luminaires and wall controls. With no extra wires or interfaces, Cree SmartCast™ Technology products reduce installation time and complexity.

CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology is a patented approach that delivers an exclusive combination of 90+ CRI, beautiful light characteristics, and lifelong color consistency, all while maintaining high luminous efficacy – a true no compromise solution.

CONSTRUCTION & MATERIAL

- Initial color within a 3-step MacAdam Ellipse.
- Low brightness parabolic spun Alzak aluminum cone, 0.06" (2mm) thick with polished radius and continuous self-flange
- Soft Satin Glow Clear finish, standard
- 2" (51mm) aperture throat to accommodate all standard and up to 3" (76mm) thick ceilings and provide flexibility in mounting within grid
- Provided with quick mounting brackets for optional carrying channels
- Light engine, optics, and driver accessible from below ceiling

ELECTRICAL SYSTEM

- **Power Factor:** > 0.9 for 120V and 277V
- **Input Power:** 120, 277V, or 347V, 50/60Hz

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for thru-wiring 8#12AWG-90°C
- Suitable for damp locations
- Thermally protected Type NON-IC in accordance with Article 410 of the NEC and UL 1598
- Meets Buy American requirements within ARRA
- EnergyStar® Qualified. Please refer to http://www.energystar.gov for most current information

Recommended Cree® KR Series Lumen Maintenance Factors (LMF)[1]

Ambient	Initial Delivered Lumens	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5°C (41°F)	9L and 13L	1.05	1.04	1.03	1.03	1.02
	20L and 30L	1.03	0.99	0.94	0.90	0.86
	40L and 60L	1.03	0.96	0.90	0.83	0.77
10°C (50°F)	9L and 13L	1.04	1.03	1.03	1.02	1.02
	20L and 30L	1.02	0.97	0.93	0.89	0.85
	40L and 60L	1.03	0.95	0.88	0.82	0.76
15°C (59°F)	9L and 13L	1.03	1.02	1.02	1.01	1.01
	20L and 30L	1.01	0.96	0.91	0.88	0.84
	40L and 60L	1.02	0.94	0.87	0.81	0.75
20°C (68°F)	9L and 13L	1.02	1.01	1.00	1.00	0.99
	20L and 30L	1.01	0.95	0.90	0.87	0.83
	40L and 60L	1.01	0.93	0.86	0.80	0.74
25°C (77°F)	9L and 13L	1.00	1.00	0.99	0.99	0.99
	20L and 30L	1.00	0.94	0.89	0.86	0.82
	40L and 60L	1.00	0.92	0.85	0.79	0.74
30°C (86°F)	9L and 13L	0.99	0.99	0.98	0.98	0.98
	20L and 30L	0.97	0.93	0.88	0.85	0.81
	40L and 60L	0.98	0.91	0.84	0.78	0.73
35°C (95°F)	9L and 13L	0.98	0.97	0.97	0.97	0.97
	20L and 30L	0.96	0.92	0.87	0.84	0.80
	40L and 60L	0.96	0.90	0.83	0.77	0.72

[1] Lumen maintence values at 25°C (77°F) are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)

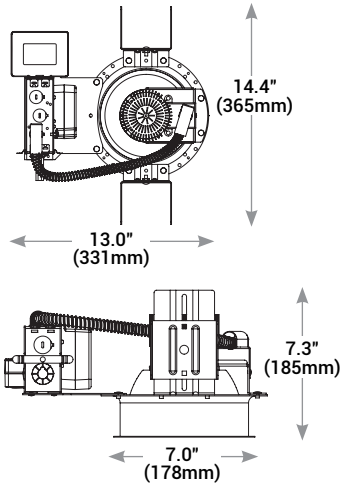
Installation

- Recommended ceiling cutout 6.5" (165mm)

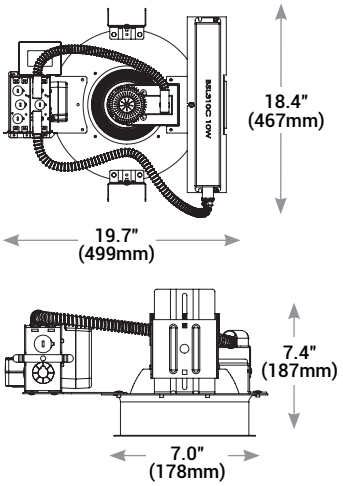
Note: 30L versions require marked spacing: 24" (600mm) X 12" (300mm) X ½" (12mm). 24" (600mm) luminaire to luminaire, 12" (300mm) luminaire to side wall, ½" (12mm) above luminaire

60L versions require marked spacing: 48" (1219mm) X 24" (600mm) X 1" (25mm). 48" (1219mm) luminaire to luminaire, 24" (600mm) luminaire to side wall, 1" (25mm) above luminaire

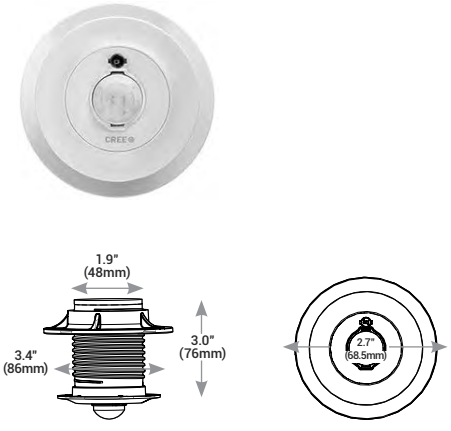
Cree SmartCast™ Technology



Emergency Backup and Cree SmartCast™ Technology

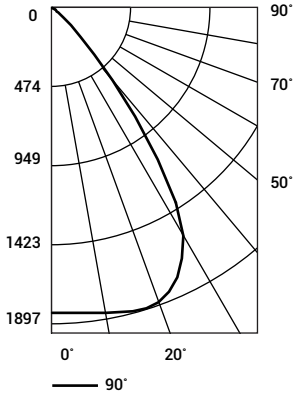


Occupancy Sensor included with Cree SmartCast™ Technology



Photometry

KR6 30L 27K 120V W/KR6T SSGC FF BASED ON UL REPORT TEST #: 157473
Fixture photometry has been conducted in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



UL Test Report #: 157473
KR6 30L 27K 120V SSGC FF
Initial Delivered Lumens: 2,479
Efficacy: 66 LPW
S/M: 1.2

Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	113	110	108	105
2	107	102	97	94
3	101	94	89	84
4	95	87	81	77
5	90	81	75	70
6	85	75	69	64
7	80	70	64	59
8	76	66	59	55
9	72	61	55	51
10	68	58	51	47

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m2)				
Horizontal Angle				
Vertical Angle		0°	45°	90°
	45°	19,317	19,317	19,317
	55°	4,459	4,459	4,459
	65°	2,074	2,074	2,365
	75°	931	931	931
	85°	0	0	0

Cone of Light		
Distance from Workplane	Footcandles	Beam Diameter
6' (1.8m)	51	7.3' (2.2m)
8' (2.4m)	29	9.7' (3.0m)
10' (3.0m)	18	12.3' (3.7m)
12' (3.7m)	13	14.5' (4.4m)
14' (4.3m)	9	17.4' (5.3m)

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	1,524	N/A	61.5%
0-40	2,206	N/A	88.8%
0-60	2,462	N/A	99.1%
0-90	2,483	N/A	100.0%
0-180	2,483	N/A	100.0%

For exact photometric data, please reference our available IES and LM-79 test results at http://www.cree.com/Lighting/Products/Indoor/Architectural-Downlights/KR-Series

Application Reference

Based on KR6 30L 27K 120V W/KR6T SSGC FF Luminaire

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4 x 4	2483	39	64	2.34	152
6 x 6				1.09	73
8 x 8				0.59	41
10 x 10				0.39	29

10' Ceiling, 80/50/20 Reflectances, 2.5 workplane. LLF: 1.0 Initial. Open Space: 50' x 40' x 10'

Corridor					
Spacing	Lumens	Wattage	LPW	w/ft²	Average FC
4' on Center	2483	39	64	1.63	84
6' on Center				1.11	57
8' on Center				0.78	41
10' on Center				0.65	34

10' Ceiling, 80/20/50 Reflectances, Light levels on the ground. LLF: 1.0 Initial. Corridor: 6' Wide x 100' Long

Control Availability Chart

Initial Delivered Lumens	Non Dimming			Triac Dimming to 5%			0/1-10V Dimming to 10%			LES Dimming to 1%			LFP Dimming to 1%		
	120V	277V	347V	120V	277V	347V	120V	277V	347V	120V	277V	347V	120V	277V	347V
9L	N/A	S	N/A	S	N/A	N/A	O	O	O	N/A	N/A	O	N/A	N/A	N/A
13L	N/A	S	N/A	S	N/A	N/A	O	O	O	O	O	O	O	N/A	N/A
20L	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	O	O	O	O	N/A	N/A
30L	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	O	O	O	O	N/A	N/A
40L	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	O	O	O	N/A	N/A	N/A
60L	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	O	O	O	N/A	N/A	N/A

S = Standard Offering
O = Optional Offering

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TYPE 5A

Edge 30 Suspension

1294018A

SPECIFICATIONS

Design By

Alessandro Mendini

Collection

Design

Specifications

Lamp type	CFL Mini Twist
Lamp	MAX 24W E26/A19
Lamp Included	No
Control type	On/Off
Input Voltage	120V
Power consumption	N/A
Ballast	N/A

Colors & Finishes

White

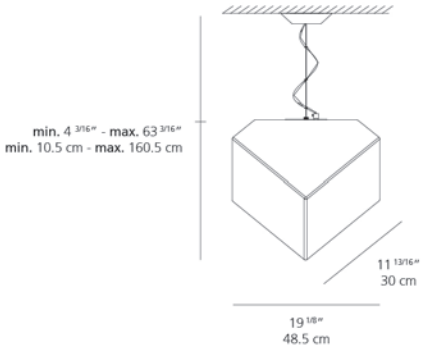
Materials

- Diffuser in thermoplastic material

Features & Accessories

- Not suitable for incandescent lighting

Dimensions



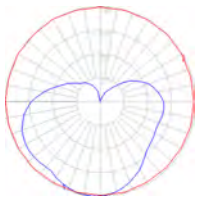
Packaging

1 Box

1 x 13" x 13" x 13-7/8" / 6.17 lbs - 33 cm x 33 cm x 35 cm / 2.8 kg

Light distribution

DIFFUSED



Red = Max Cd. Through Vertical plane

Blue = Max Cd. Through Horizontal plane

Luminaire weight

4.19 lbs / 1.9 kg

Warranty

5 year Limited warranty

We reserve the right to change specifications of our products.
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VEX REMOTE Series

Contractor Grade Remote Capable Thermoplastic LED Exit

VEX-U-BP-WB-WH-G2-R6

Model: _____ Date: _____

Accessories: _____

Job Name: JACK IN THE BOX Type: 7A

Attractive and easy to install, the VEX Remote Series combines quality LED illumination with contemporary, soft corner styling to complement any application.

FEATURES

- Compact, low profile design
- Easy to install, snap together design
- Rugged, injection-molded UL94 5VA flame retardant, high-temperature thermoplastic housing
- Ceiling, wall or end mounted
- Low voltage disconnect eliminates deep discharge
- Maintenance-free NiCad battery with 6 watts remote capacity (Option: R6)
- Maintenance-free Lead Acid battery with 11 watts remote capacity (Option: R11)
- UL listed 90 minute emergency run time, 24 hour recharge time
- Constant, uniform illumination by long-life, high intensity, red or green LEDs
- Fully-illuminated 6” characters with 3/4” stroke
- Field selectable directional chevron knockouts
- 120/277V dual primary, 60Hz input
- Standard finishes: Black or White
- Suitable for damp location

VEX-R6

VEX-R11

WARRANTY

Any component that fails due to manufacturers defect is guaranteed for 5 years with a separate pro-rated battery warranty: 5 years pro-rated warranty for NiCAD battery, and 2 year pro-rated warranty for Lead Acid battery. The warranty does not cover physical damage, abuse or acts of God. See the full Exitronix warranty document for detailed information.

ORDERING INFORMATION Example: VEX-U-BP-WB-WH-R11

Series	Style	Housing Type	Power Source	Finish	Remote Capacity	Accessories[5] (Field Installed)
VEX = Red	U[1] = Universal	BP = Plastic	WB = With Battery	WH = White	R6[2] = 6 Watts Remote Capacity	ER1-KIT = 1’ Pendant Mount Kit
GVEX = Green				BL = Black	R11[3] = 11 Watts Remote Capacity	ER2-KIT = 2’ Pendant Mount Kit
						VEPA[4] = Pendant Adapter
Notes						WG-1 = Wire Guard (Back Mount)
[1] Universal includes 2nd exit face and backplate						WG-2 = Wire Guard (End Mount)
[2] R6 option will operate up to (4) CLED remote heads only						WG-3 = Wire Guard (Ceiling Mount)
[3] R11 option will operate up to 11 watts incandescent						XG-1 = Poly Guard (Back Mount)
[4] Requires VEPA option						XG-3 = Poly Guard (Ceiling Mount)
[5] Order as separate line item						

CONSTRUCTION
The VEX remote series is constructed of a precision-molded housing utilizing 5VA flame retardant, corrosion proof, UV stable thermoplastic. Units resist denting, peeling, scratching and corrosion.

ILLUMINATION
Illumination of the VEX remote series is achieved with high output, long lasting red or green LEDs. An exclusive color-matched diffuser eliminates hot spots and striations, providing optimal light output. LEDs are a maintenance-free solution, providing up to 100,000 hours of use without failure.

ELECTRICAL
Input
Dual-voltage input 120 or 277VAC @ 60Hz.

Sealed Nickel Cadmium Battery – NiCad (R6 Only)
Exitronix nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. Nickel cadmium batteries offer high discharge rates and continue to perform in a vast temperature range from 32°F - 104°F (0°C - 40°C).

Sealed Lead Acid Battery - SLA (R11 ONLY)
Exitronix sealed lead acid batteries are maintenance-free with a life expectancy of 5 years. Sealed lead acid batteries provide a relatively large power-to-weight ratio making them ideal for emergency applications. Lead Acid batteries perform optimally in temperatures ranging from 59°F - 104°F (15°C - 40°C).

Emergency
The VEX remote series exit will operate for a minimum of 90 minutes during a loss of power with a 24 hour maximum recharge time for the battery

Low Voltage Disconnect
Low Voltage Disconnect (LVD) measures the battery terminal voltage. The LVD continuously monitors the battery terminal voltage and if it should fall below a preset voltage threshold, the LVD will disconnect the load. When the battery is recharging and voltage is raised above another preset voltage threshold, the load is automatically reconnected.

Solid-State Transfer
The circuit features solid-state switching for emergency lamps, eliminating concerns of damaged contact or mechanical failures associated with relays. The switching circuit detects a loss of line voltage and automatically switches to emergency mode.

Test Button
The test button is easy to locate and provides manual verification of the transfer circuit and emergency lamps.

Remote Capacity
R6 provides this unit with up to 6 watts of remote for use with CLED lamp heads.

R11 provides this unit with up to an additional 11 watts of remote for use with incandescent lamp heads.

Wattage Consumption (VEX-R6)

	Input Watts		Input Amps	
	120V	**277V**	**120V**	**277V**
Green LED Watts	3.0	3.2	0.030	0.014
Red LED Watts	3.4	3.6	0.033	0.015

Wattage Consumption (VEX-R11)

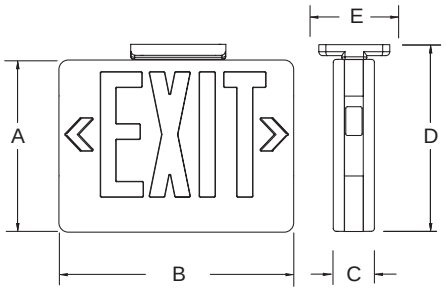
	Input Watts		Input Amps	
	120V	**277V**	**120V**	**277V**
Green/Red Watts	10.0	10.0	0.100	0.050

INSTALLATION
Simple snap together universal design allows for faceplate and back plate to be fully interchangeable. Mounting canopy is supplied with all signs and snaps into enclosure with two positive locking tabs.

Damp Location Rated
Damp location rated fixture that is normally or periodically subject to condensation of moisture in, on or adjacent to, and includes partially protected locations.

CONFORMANCE TO CODES & STANDARDS
The VEX remote Series is UL listed and meets or exceeds the following: UL 924, NEC requirements and NFPA 101.

DIMENSIONS



	A	B	C	D	E
VEX-R6	8"	12"	2"	9"	4.8125"
VEX-R11	10.125"	13"	2.5"	10.9375"	4.375"

Specifications are subject to change without notice.
Installation must be performed in accordance with
Barron Lighting Group installation instructions.

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MLED Series

Remote Lamp For LED Exit, Combo or Emergency Units

The MLED Series is a multi-voltage, high performance, high-impact thermoplastic adjustable LED lamp head designed to increase center-to-center spacing. Suitable for indoor and outdoor applications.

Model: MLED1-G-G2-WP Date:

Accessories:

Job Name: JACK IN THE BOX Type: 7B

FEATURES

- Compatible with CLED, VLED, LED-RX, VEX-RC, VEX-WPC or LED-90 exits only
- Each 1.5W lamp head contains twelve long lasting, efficient, ultra-bright white LEDs in a high performance reflector with glass lens (outdoor) or plastic lens (indoor)
- Rugged, injection-molded 5VA flame retardant, high-temperature thermoplastic housing
- Adjustable LED lamp heads optimize spacing
- Low cost - easy installation
- Multi-voltage (3.6V, 6V, 9.6V, 12V)
- Single and double head configurations available
- Suitable for ceiling or wall mount
- Optional wet location rating (WP) available for outdoor applications
- Standard finishes: Black or White for indoor, Black or Gray for outdoor
- All options include mounting plate

MLED1-G-WP

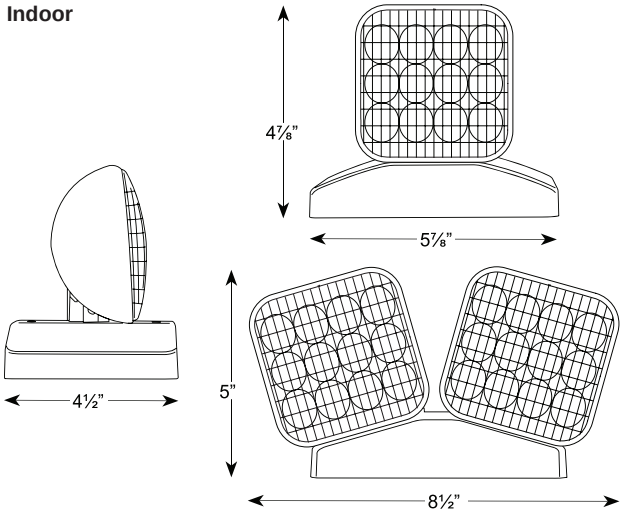
MLED2-W

5 YEAR WARRANTY

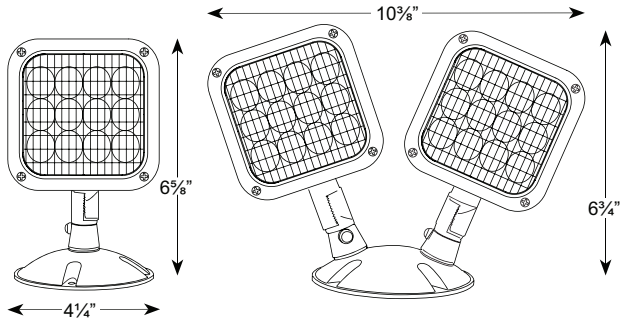
WARRANTY

Any component that fails due to manufacturers defect is guaranteed for 5 years. The warranty does not cover physical damage, abuse or acts of God. See the full Exitronix warranty document for detailed information.

Indoor



Outdoor (WP Option)



ORDERING INFORMATION **Example:** MLED1-B-G2-WP

Series[3]	Finish	Options
MLED1 = Single Remote Lamp	B[2] = Black	G2[1] = Self-Test/Self-Diagnostics Compatible
MLED2 = Double Remote Lamp	G[2] = Gray	WP[2] = Weatherproof Applications
	W = White	

Notes

[1] Unit powering remote lamp head must also have G2 option

[2] WP option available in Black or Gray finish only

[3] MLED series only compatible with CLED, VLEC, LED-RX, VEX-RC, VEX-WPC and LED-90 exits

Specifications are subject to change without notice.
Installation must be performed in accordance with
Barron Lighting Group installation instructions.

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VX200-3/4

product

Box mount, die cast aluminum with built-in junction box and sturdy mounting lugs. Medium base socket, 1/2" or 3/4" NPS hub size and a variety of globes. incandescent lamp A21 for 100 Series, PS25 for 200 Series. Lamp not supplied.

Color: Natural

Weight: 3.3 lbs

Project:	JACK IN THE BOX	**Type:**	10A
Prepared By:		**Date:**	

Lamp Info		Ballast Info	
Type:	A19	Type:	N/A
Watts:	300W	120V:	N/A
Shape/Size:	N/A	208V:	N/A
Base:	N/A	240V:	N/A
ANSI:	N/A	277V:	N/A
Hours:	N/A	Input Watts:	0W
Lamp Lumens:	N/A		
Efficacy:	N/A		

Technical Specifications

Listings

UL Listing:

Suitable for wet locations. Suitable for use in dwellings. Suitable for use with 90°C supply wiring. Complies with UL Standard 1598. For non-hazardous locations where the lamp, socket and wiring require protection from rain, corrosive fumes, non-combustible dusts, moisture, non-explosive vapors and gases. For lamp base up installation only when outdoors.

Construction

Globes:

Supplied with clear thermal shock resistant soda lime glass unless otherwise stated. Colored and white glass globes available. Unbreakable Permaglobes available in clear and in color.

No Guard Supplied:

Hub Size:

3/4" Tapped.

Electrical

Maximum Watts:

300 watts

Colored Globe Maximum Watts:

200 watts.

Other

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

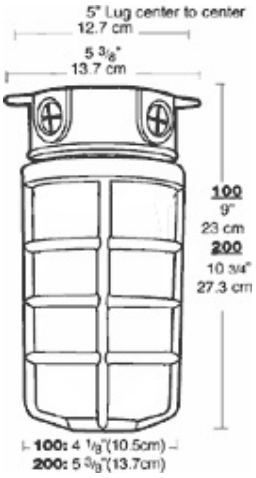
Trade Agreements Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

Dimensions



Features

- All stainless steel hardware
- Close-up plugs allow Phillips or slotted screwdrivers for easy installation
- Junction box with sturdy mounting lugs
- UL Listed for use with 90°C supply wiring OK for use in dwellings and wet locations
- High temperature silicone internal gaskets
- Premium porcelain socket with 150C 8" long leads
- Clear heat resistant glass globes standard Polycarbonate Permaglobes available

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GL200R

Threaded glass globes fit RAB and other standard Vaporproof fixtures and Lawn Lights

Color: Ruby

Weight: 2.4 lbs

Project:	Type:
JACK IN THE BOX	10A
Prepared By:	**Date:**

Technical Specifications

Listings

UL Listing:

Suitable for wet locations when used with Vaporproof fixtures. Suitable for dry, damp or wet locations when used as replacement globes for listed fixtures. Fixtures must be installed with lamp base up when outdoors.

Construction

Glass Globes:

Clear thermal shock resistant soda lime glass standard.

Electrical

Maximum Wattage:

200 watts.

Other

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

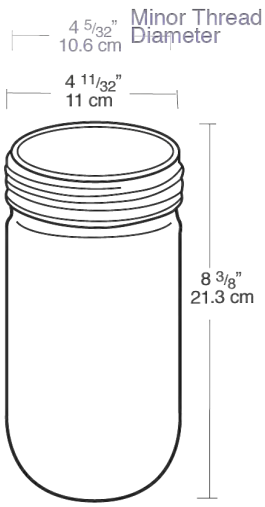
Trade Agreements Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

Dimensions



Features

Crystal Lime glass in six colors

Colors available for signaling or decorative applications

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GD200DG

Die cast aluminum one piece guard with distinctive flat bottom for contemporary look. Machined threads for smooth fit. A headless set screw is provided to lock guard in place.

Color: Natural

Weight: 0.6 lbs

Project:	Type:
JACK IN THE BOX	10A
Prepared By:	**Date:**

Technical Specifications

Listings

UL Listing:

Suitable for wet locations when used with RAB Vapor proof fixtures.

Other

Die Cast Guards:

One pieced die cast aluminum. Set screw locks guard in place. Also a wire clamp guard is available.

Country of Origin:

Designed by RAB in New Jersey and assembled in Taiwan.

Trade Agreements Act Compliant:

This product is a product of Taiwan and a "designated country" end product that complies with the Trade Agreements Act.

GSA Schedule:

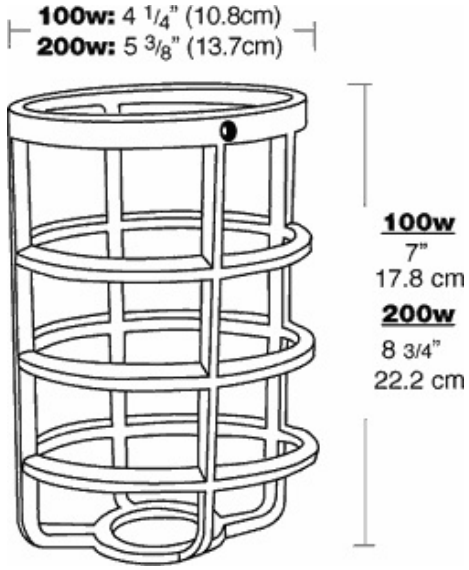
Suitable in accordance with FAR Subpart 25.4.

Construction

Wire Clamp Guards:

No. 8 gauge steel wire rod welded to clamping band with captive clamping screw.

Dimensions



Features

- Set screw locks guard in place
- Machined threads for smooth running fit on Vaporproof fixtures
- Heavy, one-piece aluminum die casting
- Captive clamping screw won't fall out
- Threaded aluminum ring secures reflector to fixture

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228 Series™

LED Soffit Luminaire – IC Rated

TYPE 13A
SFT-228-PS-RM-03-E-UL-SV-350-IC-40K

JACK IN THE BOX

Product Description

High performance energy-efficient LED down light designed for use in new construction or remodel applications where there is direct contact with insulation. The recessed mount is for use in drywall, plywood or hard lid ceilings with 16" (406mm) to 24" (610mm) on center building construction. Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling. An oversized junction box is listed for eight #12 AWG feed through wires. The recessed remodel mount is entirely supported by the ceiling material and is designed to accept ceiling thickness from 0.375" (10mm) to 2.25" (57mm) and is an ideal replacement for recessed 12" (305mm) square HID luminaires.

Applications: Petroleum canopies, soffits, indoor retail or industrial spaces

Performance Summary

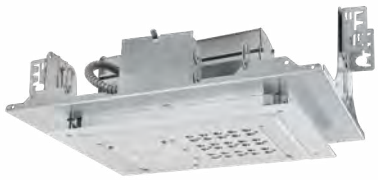
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 4000K (+/- 300K), 5700K (+/- 500K) standard
- **Limited Warranty†:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

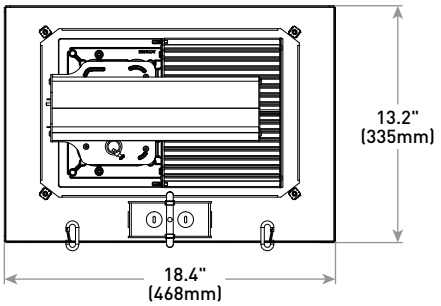
† See http://lighting.cree.com/warranty for warranty terms

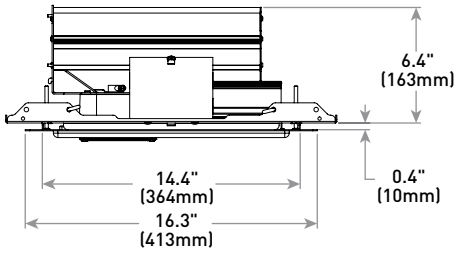
Accessories

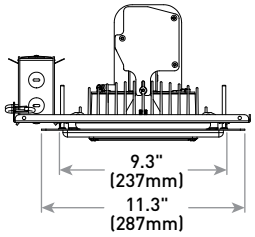
Field-Installed	
RM Mount Accessories **Mounting C-Channel** XA-MC14 - Pair of 14" (356mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars XA-MC22 - Pair of 22" (559mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars XA-MC30 - Pair of 30" (762mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars	**Hanger Bar** **Mounting Brackets** XA-MB4 - Kit contains 4

RM Mount









LED Count (x10)	Weight
03	28.7 lbs. (13.0kg)

RR Mount - see page 3 for weight & dimensions

Ordering Information

Example: SFT-228-SL-RM-03-E-UL-WH-350

SFT-228			03	E			350	IC
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Series**	**Voltage**	**Color Options**	**Drive Current**	**Options**
SFT-228	**SL** Sparkle Petroleum **PS** Petroleum Symmetric	RM Recessed **RR** Recessed Remodel	03	E	UL Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** SV SILVER	350 350mA	IC **IC Rated** 40K **4000K Color Temperature** - Color temperature per luminaire - Minimum 70 CRI

NOTE: Price adder may apply depending on configuration

Product Specifications

CONSTRUCTION & MATERIALS

- Luminaire sides are rugged die cast aluminum with high performance extruded aluminum heat sinks specifically designed for high power LEDs, factory assembled to the trim and wired to the driver
- Driver compartment is constructed of anodized extruded aluminum for exceptional thermal performance
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze and white are available
- **Weight:** See Weight Chart on pages 1 and 3

RM

- High performance energy-efficient LED down light, designed for use in new construction applications with drywall, plywood or hard lid ceilings and 16" (406mm) to 24" (610mm) on center building construction
- Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling includes an oversized junction box is listed for eight #12 AWG feed through wires

RR

- High performance energy-efficient LED down light, designed for remodel application
- Entirely supported by the ceiling material and is designed to fit through 12" (305mm) x 12" (305mm) opening
- Accepts ceiling thicknesses from 0.375" (10mm) to 2.25" (57mm)
- An ideal replacement for 12" (305mm) x 12" (305mm) recessed HID luminaires

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations under covered ceilings
- Meets FCC Part 15 standards for conducted and radiated emissions
- Consult factory for CE Certified products
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Type IC in accordance with Article 410 of the NEC and UL 1598, suitable for direct contact with insulation
- RM mount listed for eight #12 AWG, 75˚C rated through branch circuit wires
- Meets Buy American requirements within ARRA

Electrical Data*

LED Count (x10)	System Watts 120-480V	Total Current					
		120V	208V	240V	277V	347V	480V
350mA							
03	34	0.30	0.19	0.18	0.20	0.11	0.09

* Electrical data at 25˚C (77˚F)

Recommended 228 Series™ Luminaire Lumen Maintenance Factors (LMF)[1]

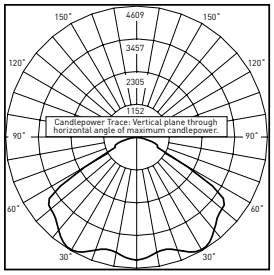
Ambient	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5˚C (41˚F)	1.04	0.99	0.97	0.95	0.93
10˚C (50˚F)	1.03	0.98	0.96	0.94	0.92
15˚C (59˚F)	1.02	0.97	0.95	0.93	0.91
20˚C (68˚F)	1.01	0.96	0.94	0.92	0.90
25˚C (77˚F)	1.00	0.95	0.93	0.91	0.89

[1] Lumen maintenance values at 25˚C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)

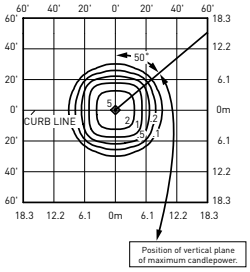
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/canopy-and-soffit/228-series

SL



RESTL Test Report #: PL05297-001
CAN-228-SL-**-06-E-UL-700-40K
Initial Delivered Lumens: 13,102

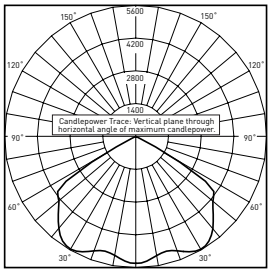


SFT-228-SL-**-03-E-UL-350-IC-40K
Mounting Height: 15' (4.6m) A.F.G.
Initial Delivered Lumens: 3,635
Initial FC at grade

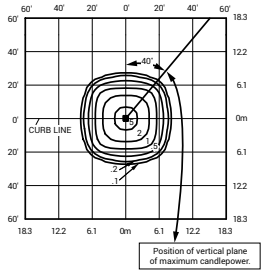
Sparkle Petroleum Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
03	3,635	B2 U0 G1	3,774	B2 U0 G1

* Initial delivered lumens at 25°C (77°F)
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

PS



RESTL Test Report #: PL05295-001
CAN-228-PS-**-06-E-UL-700-40K
Initial Delivered Lumens: 13,753



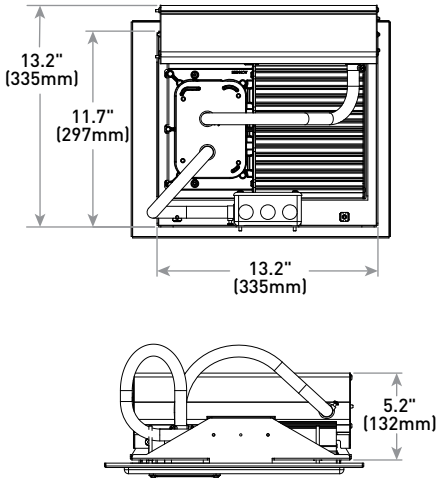
SFT-228-PS-**-03-E-UL-350-IC-40K
Mounting Height: 15' (4.6m) A.F.G.
Initial Delivered Lumens: 3,757
Initial FC at grade

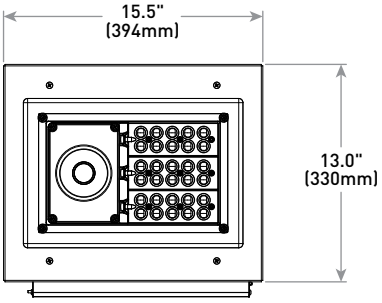
Petroleum Symmetric Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
03	3,757	B2 U0 G0	3,902	B2 U0 G0

* Initial delivered lumens at 25°C (77°F)
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

RR Mount

LED Count (x10)	Weight
03	19.9 lbs. (9.0kg)





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228 Series™

LED Soffit Luminaire – IC Rated

TYPE 13B
SFT-228-PS-RM-03-E-UL-SV-350-IC-40K

JACK IN THE BOX

Product Description

High performance energy-efficient LED down light designed for use in new construction or remodel applications where there is direct contact with insulation. The recessed mount is for use in drywall, plywood or hard lid ceilings with 16" (406mm) to 24" (610mm) on center building construction. Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling. An oversized junction box is listed for eight #12 AWG feed through wires. The recessed remodel mount is entirely supported by the ceiling material and is designed to accept ceiling thickness from 0.375" (10mm) to 2.25" (57mm) and is an ideal replacement for recessed 12" (305mm) square HID luminaires.

Applications: Petroleum canopies, soffits, indoor retail or industrial spaces

Performance Summary

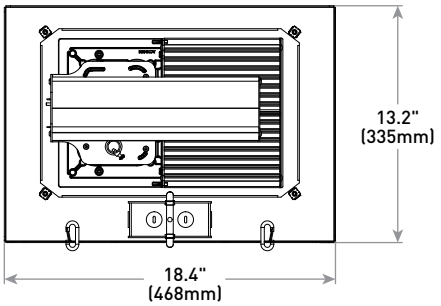
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 4000K (+/- 300K), 5700K (+/- 500K) standard
- **Limited Warranty†:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

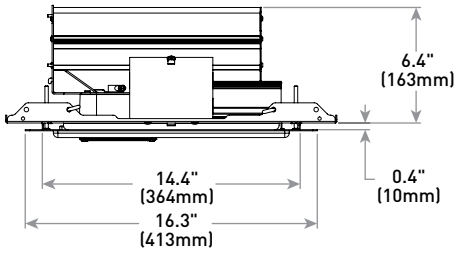
† See http://lighting.cree.com/warranty for warranty terms

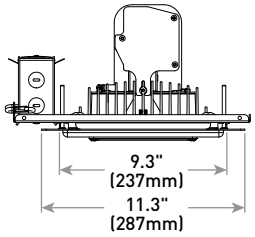
Accessories

Field-Installed	
RM Mount Accessories **Mounting C-Channel** XA-MC14 - Pair of 14" (356mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars XA-MC22 - Pair of 22" (559mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars XA-MC30 - Pair of 30" (762mm) rigid 3/4" x 1/2" (19mm x 13mm) galvanized C-Channel bars	**Hanger Bar** **Mounting Brackets** XA-MB4 - Kit contains 4

RM Mount







LED Count (x10)	Weight
03	28.7 lbs. (13.0kg)

RR Mount - see page 3 for weight & dimensions

Ordering Information

Example: SFT-228-SL-RM-03-E-UL-WH-350

SFT-228			03	E			350	IC
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Series**	**Voltage**	**Color Options**	**Drive Current**	**Options**
SFT-228	**SL** Sparkle Petroleum **PS** Petroleum Symmetric	RM Recessed **RR** Recessed Remodel	03	E	UL Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** SV SILVER	350 350mA	IC **IC Rated** 40K **4000K Color Temperature** - Color temperature per luminaire - Minimum 70 CRI

NOTE: Price adder may apply depending on configuration

Product Specifications

CONSTRUCTION & MATERIALS

- Luminaire sides are rugged die cast aluminum with high performance extruded aluminum heat sinks specifically designed for high power LEDs, factory assembled to the trim and wired to the driver
- Driver compartment is constructed of anodized extruded aluminum for exceptional thermal performance
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze and white are available
- **Weight:** See Weight Chart on pages 1 and 3

RM

- High performance energy-efficient LED down light, designed for use in new construction applications with drywall, plywood or hard lid ceilings and 16" (406mm) to 24" (610mm) on center building construction
- Heavy gauge steel recessed mounting frame features 1.5" (38mm) deep aperture throat to accommodate most standard ceiling thicknesses, and a universal mounting bracket that accepts 0.5" (13mm) EMT conduit, C-channel mounting bars or flat bar hangers with 5" (127mm) vertical adjustment from either above or below the ceiling includes an oversized junction box is listed for eight #12 AWG feed through wires

RR

- High performance energy-efficient LED down light, designed for remodel application
- Entirely supported by the ceiling material and is designed to fit through 12" (305mm) x 12" (305mm) opening
- Accepts ceiling thicknesses from 0.375" (10mm) to 2.25" (57mm)
- An ideal replacement for 12" (305mm) x 12" (305mm) recessed HID luminaires

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations under covered ceilings
- Meets FCC Part 15 standards for conducted and radiated emissions
- Consult factory for CE Certified products
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Type IC in accordance with Article 410 of the NEC and UL 1598, suitable for direct contact with insulation
- RM mount listed for eight #12 AWG, 75˚C rated through branch circuit wires
- Meets Buy American requirements within ARRA

Electrical Data*

LED Count (x10)	System Watts 120-480V	Total Current					
		120V	208V	240V	277V	347V	480V
350mA							
03	34	0.30	0.19	0.18	0.20	0.11	0.09

* Electrical data at 25˚C (77˚F)

Recommended 228 Series™ Luminaire Lumen Maintenance Factors (LMF)[1]

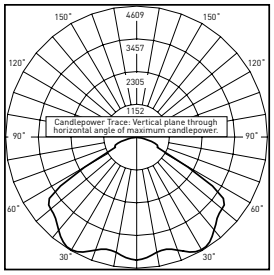
Ambient	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5˚C (41˚F)	1.04	0.99	0.97	0.95	0.93
10˚C (50˚F)	1.03	0.98	0.96	0.94	0.92
15˚C (59˚F)	1.02	0.97	0.95	0.93	0.91
20˚C (68˚F)	1.01	0.96	0.94	0.92	0.90
25˚C (77˚F)	1.00	0.95	0.93	0.91	0.89

[1] Lumen maintenance values at 25˚C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)

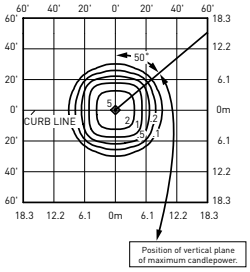
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/canopy-and-soffit/228-series

SL



RESTL Test Report #: PL05297-001
CAN-228-SL-**-06-E-UL-700-40K
Initial Delivered Lumens: 13,102

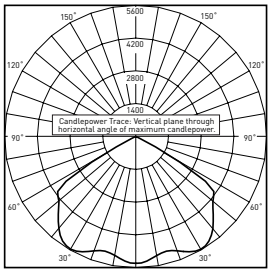


SFT-228-SL-**-03-E-UL-350-IC-40K
Mounting Height: 15' (4.6m) A.F.G.
Initial Delivered Lumens: 3,635
Initial FC at grade

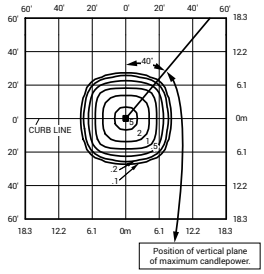
Sparkle Petroleum Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
03	3,635	B2 U0 G1	3,774	B2 U0 G1

* Initial delivered lumens at 25°C (77°F)
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

PS



RESTL Test Report #: PL05295-001
CAN-228-PS-**-06-E-UL-700-40K
Initial Delivered Lumens: 13,753



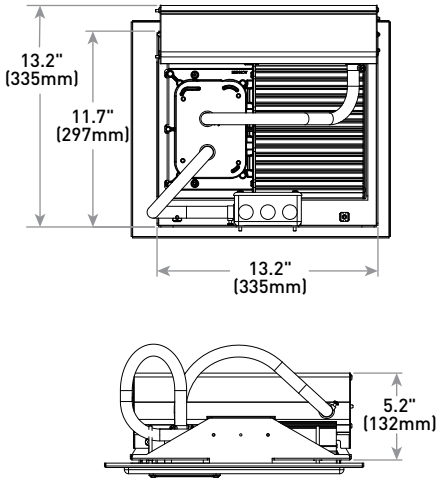
SFT-228-PS-**-03-E-UL-350-IC-40K
Mounting Height: 15' (4.6m) A.F.G.
Initial Delivered Lumens: 3,757
Initial FC at grade

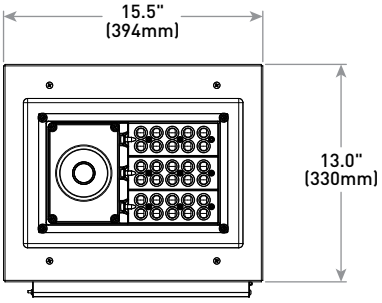
Petroleum Symmetric Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
03	3,757	B2 U0 G0	3,902	B2 U0 G0

* Initial delivered lumens at 25°C (77°F)
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

RR Mount

LED Count (x10)	Weight
03	19.9 lbs. (9.0kg)





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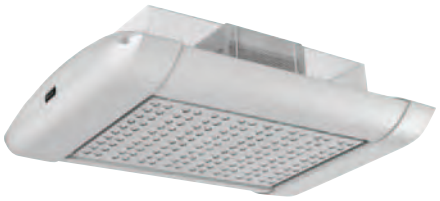
THE EDGE® CAN-EDG-5M-DM

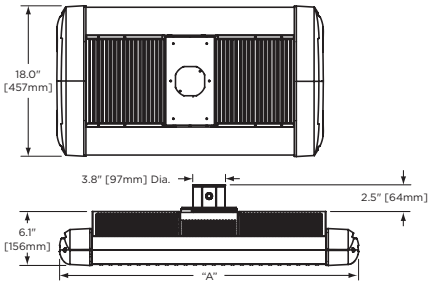
Canopy Luminaire – Type V Medium – Direct Mount

JACK IN THE BOX
TYPE 13C
CAN-EDG-5M-DM-04-D-UL-SV-700-40K

Product Description

Slim, low profile, easy mounting below deck. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks specifically designed for LED applications. J-Box sized to fit through existing 4" (102mm) diameter mount holes and is designed to for through wiring and wet location installations. Luminiare mounts directly to canopy with lag bolts (by others). When mounting to solid surfaces, Adaptor Plate Kit accessory (XA-CLSB16) is required. Mating surface is gasketed to prevent water leak through. Bug and bird guard is included.





LED Count (x10)	DIM. "A"
04	16.1" [408mm]
06	18.1" [459mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Performance Summary

- Utilizes BetaLED® Technology
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 5700K (+/- 500K) Standard, 4000K (+/- 300K)
- **Warranty:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish†

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes
XA-CLSB16 Adaptor Plate Kit - For use when mounting luminaire to solid surfaces

Ordering Information

Example: CAN-EDG-5M-DM-04-D-UL-WH-350-OPTIONS

CAN-EDG	5M	DM		D				
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Version**	**Voltage**	**Color Options**	**Drive Current**	**Options**
CAN-EDG	**5M** Type V Medium	**DM** Direct	**04*** **06**** **08** **10** **12** **14** **16** **20** **24**	**D**	**UL** Universal 120–277V **UH** Universal 347–480V **34** 347V	**WH** White (Standard) **SV** Silver **BK** Black **BZ** Bronze **PB** Platinum Bronze	**350** 350mA **525***** 525mA **700****** 700mA	**40K** 4000K Color Temperature - Color temperature per luminaire **DIM** 0–10V Dimming - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F** Fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Not available with UH voltage **HL** Hi/Low (175/350/525, Dual Circuit Input) - Refer to ML spec sheet for details - Sensor not included **P** Photocell - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specify voltage other than UL or UH - 120 LED maximum when 34 voltage is selected **ML** Multi-Level - Refer to ML spec sheet for details **PML Programmable Multi-Level** - Refer to PML spec sheet for details

† See www.cree.com/lighting for warranty terms.
* Uses 80 LED size with two blanks in outside positions
** Uses 100 LED size with two blanks in outside positions
*** Available on luminaires with 40–160 LEDs
**** Available on luminaires with 40–60 LEDs

BetaLED TECHNOLOGY

Rev. Date: 10/31/2012

CREE®

www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, easy mounting below deck design
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks specifically designed for LED applications
- J-Box sized to fit through existing 4" (102mm) diameter mount holes and designed for through wiring and wet location installations
- Mounts directly to canopy with lag bolts (by others). XA-CLSB16 accessory kit required when mounting to solid surfaces. Mating surface is gasketed to prevent water leak through
- Includes bug and bird guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is white. Bronze, black, silver, and platinum bronze are also available

ELECTRICAL SYSTEM

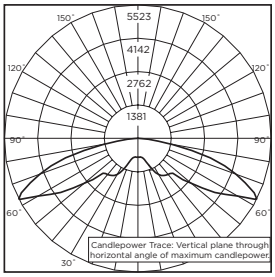
- **Input Voltage:** 120–277V or 347–480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

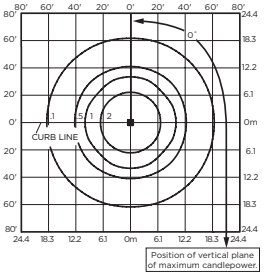
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or ML options
- Consult factory for CE Certified products
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- RoHS Compliant
- Dark Sky Friendly, IDA Approved
- Meets Buy American requirements within ARRA

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.





ITL Test Report #: 68282
ARE-EDG-5M-**-12-D-UL-525-43K
Initial Delivered Lumens: 16,029

CAN-EDG-5M-**-06-D-UL-700
Mounting Height: 15" (4.6m) A.F.G.
Initial Delivered Lumens: 10,191
Initial FC at grade

Luminaire Weight

LED Count (x10)	04	06	08	10	12	14	16	20	24
Weight	32lbs (14kg)	33lbs (14kg)	35lbs (15kg)	38lbs (17kg)	38lbs (17kg)	45lbs (20kg)	46lbs (20kg)	52lbs (23kg)	55lbs (24kg)

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type V Medium Distribution												
LED Count (x10)	5700K		4000K		System Watts 120–480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15˚C (59˚F)**
	Initial Delivered Lumens	BUG Ratings* Per TM-15-11	Initial Delivered Lumens	BUG Ratings* Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25˚C (77˚F)												
04	4,025	B2 U0 G1	3,710	B2 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	93%
06	5,960	B3 U0 G1	5,493	B3 U0 G1	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	7,946	B3 U0 G1	7,324	B3 U0 G1	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	9,908	B3 U0 G2	9,131	B3 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	
12	11,889	B4 U0 G2	10,958	B3 U0 G2	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	13,808	B4 U0 G2	12,726	B4 U0 G2	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	15,781	B4 U0 G2	14,544	B4 U0 G2	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	19,726	B4 U0 G3	18,180	B4 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	23,671	B5 U0 G3	21,816	B5 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25˚C (77˚F)												
04	5,635	B3 U0 G1	5,194	B3 U0 G1	70	0.57	0.33	0.29	0.26	0.21	0.16	92%
06	8,344	B3 U0 G2	7,690	B3 U0 G1	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	11,125	B3 U0 G2	10,253	B3 U0 G2	133	1.14	0.65	0.56	0.49	0.39	0.29	
10	13,871	B4 U0 G2	12,784	B4 U0 G2	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	16,645	B4 U0 G2	15,341	B4 U0 G2	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	19,331	B4 U0 G2	17,817	B4 U0 G2	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	22,092	B4 U0 G2	20,362	B4 U0 G2	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25˚C (77˚F)												90%
04	6,883	B3 U0 G1	6,344	B3 U0 G1	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	10,191	B3 U0 G2	9,393	B3 U0 G2	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

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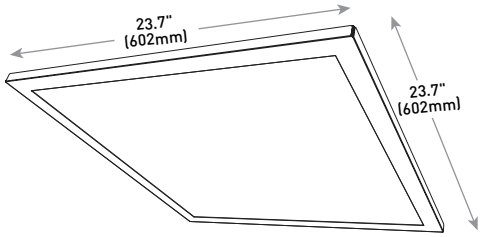
FLAT PANEL

2' X 2'



TYPE 14A

PRODUCT DESCRIPTION

The Essentia® by Cree LED flat panel troffer transforms any space into a modern, visually comfortable environment with superior 90 CRI light quality. The remarkably thin 2.8" (70mm) depth of the flat panel easily accommodates narrow plenums or can be suspended for a more stylish look. The 2' x 2' flat panel delivers up to 5,000 lumens of highly efficacious 100 lumens per watt light with great color quality. The enhanced optics enable the flat panel troffer to meet spaces with low glare requirements and improve the customer experience by reducing lighting fatigue.

Applications: Office, retail, education, petroleum

PRODUCT SPECIFICATIONS

OVERVIEW

- **Efficacy:** Up to 100 LPW
- **Intitial Delivered Lumens:** 3,400 - 5,000 lumens
- **Input Power:** 34-50 Watts
- **CCT:** 3500K, 4000K, 5000K
- **CRI:** Minimum 90
- **Input Voltage:** 120-277 VAC
- **L_{70} Lifetime:** 79,500 hours at 25˚C
- **Controls:** 0-10V dimming to 10%
- **Limited Warranty†:** 5 years
- **Mounting:** Recessed* or Suspended w/suspension kit accessory

ACCESSORIES

SUSPENSION KIT

FPAC-45-1

- Suspension Kit with canopy kit and cables

SURFACE MOUNT KIT

SMK-CR22

DRYWALL GRID ADAPTOR

DGA-22WHT

- Above ceiling access required

ORDERING INFORMATION

Example: FP22-34L-35K-10V

FP22			10V		
PRODUCT	INITIAL DELIVERED LUMENS	CCT	CONTROL	VOLTAGE	OPTIONS
FP22 Essentia® by Cree 2' x 2' Flat Panel	**34L** 34W, 3,400 lumens - 100 LPW **50L** 50W, 5,000 lumens - 100 LPW	**35K** 3500K **40K** 4000K **50K** 5000K	**10V** 0-10V	**Blank** 120-277 Volt	**EB14** Emergency Backup 1,400 lumens

† See http://lighting.cree.com/warranty for warranty terms

* Acceptable for use with standard 9/16 T-Bar or larger when installed per installation instructions. Consult factory for non-standard grid applications

NOTE: Price adder may apply depending on configuration

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Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

FLAT PANEL

2' X 2'

PRODUCT SPECIFICATIONS

CONSTRUCTION & MATERIALS

- Solid aluminum frame provides strength and uniformity
- Ultra-thin 2.8" (70mm) luminaire height and design effectively target a broad range of plenum spaces and allow for easy installations
- Luminaire is post-painted with a soft matte white paint
- Compatible with standard 15/16" and 9/16" T-Bar ceilings[1]
- Compatible with drywall ceilings via accessory kit[2]
- Surface or cable mounting via accessory kits
- Frosted polycarbonate lens for non-pixelated appearance

OPTICAL SYSTEM

- Edge-lit flat panel optics produce soft balanced low glare illumination
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces

[1] Installation in 9/16" T-bar ceilings requires that fixture be aligned to grid aperture by securing four integral hanging clips to T-bar
[2] Above ceiling access required.

ELECTRICAL SYSTEM

- Integral, high-efficiency driver
- **Power Factor:** > 0.9
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 50/60Hz
- **Operating Temperature Range:** 0˚C - + 35˚C (32˚F - + 95˚F)
- **Total Harmonic Distortion:** < 20%
- **10V Source Current:** 0.10mA

CONTROLS

- Continuous dimming to 10% with 0-10V DC control protocol
- For use with Class 2 dimming systems only. Reference www.creelink.com/exLink.asp?7098214OZ58R34I26620963 for recommended dimming controls and wiring diagrams

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- DLC qualified. Please refer to www.designlights.org/QPL for most current information
- RoHS compliant. Consult factory for additional details
- Suitable for damp locations
- Designed for indoor use
- **Ingress Protection:** IP40
- UL924 (EB14 option)
- Type IC rated for direct contact with insulation
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions

ELECTRICAL DATA*

Initial Delivered Lumens	System Watts 120-277V	Total Current			
		120V	208V	240V	277V
34L	34	0.35	0.20	0.18	0.15
50L	50	0.52	0.30	0.26	0.22

* Electrical data at 25˚C (77˚F). Actual wattage may differ by +/- 10% when operating between 120-277V +/-10%

RECOMMENDED ESSENTIA BY CREE FLAT PANEL LUMEN MAINTENANCE FACTORS (LMF)[1]

Ambient	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
25˚C	1.00	0.91	0.81	0.72	0.64

[1] Lumen maintenance values at 25˚C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)

APPLICATION REFERENCE

Open Space						
Spacing (ft)	Initial Delivered Lumens	Lumens	Wattage	LPW	w/ft²	Average fc
8x8	34L	3,400	34	100	0.51	50
	50L	5,000	50	100	0.75	73
8x10	34L	3,400	34	100	0.43	41
	50L	5,000	50	100	0.63	61
10x10	34L	3,400	34	100	0.34	33
	50L	5,000	50	100	0.50	48
10x12	34L	3,400	34	100	0.27	26
	50L	5,000	50	100	0.40	39

9' ceiling: 80/50/20 reflectances; 2.5' workplane, open room.
LLF: 1.0 Initial Open Space: 50' x 40' x 9'

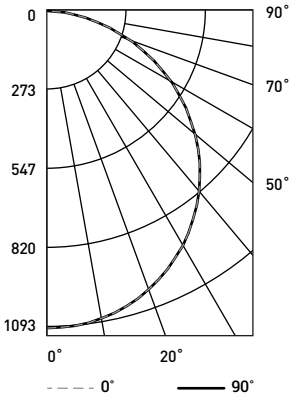
FLAT PANEL

2' X 2'

PHOTOMETRY

FP22-34L-35K-10V BASED ON DTC REPORT TEST #: PL07123-001

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Initial Delivered Lumens: 3,189
Efficacy: 98.0 LPW
S/M: 1.28

Coefficients Of Utilization – Zonal Cavity Method

RCC%:	80			
RW%:	70	50	30	10
RCR: 0	119	119	119	119
1	109	104	99	95
2	99	90	83	77
3	90	79	71	64
4	82	70	61	54
5	75	62	53	47
6	70	56	47	41
7	64	51	42	36
8	60	46	38	32
9	56	42	34	29
10	53	39	31	26

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary

Zone	Lumens	%Lamp	Luminaire
0-30	852	N/A	26.7%
0-40	1,400	N/A	43.9%
0-60	2,493	N/A	78.2%
0-90	3,190	N/A	100%

Reference www.cree.com/lighting for detailed photometric data

Average Luminance Table (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	2,823	2,820	2,823
55°	2,732	2,731	2,726
65°	2,583	2,579	2,572
75°	2,284	2,270	2,258
85°	1,780	1,718	1,697

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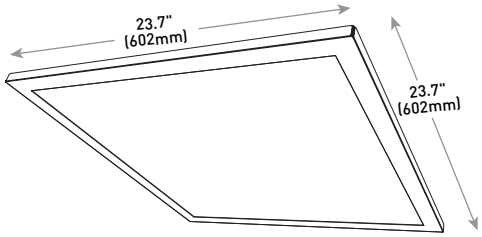
FLAT PANEL

2' X 2'



TYPE 14B

PRODUCT DESCRIPTION

The Essentia® by Cree LED flat panel troffer transforms any space into a modern, visually comfortable environment with superior 90 CRI light quality. The remarkably thin 2.8" (70mm) depth of the flat panel easily accommodates narrow plenums or can be suspended for a more stylish look. The 2' x 2' flat panel delivers up to 5,000 lumens of highly efficacious 100 lumens per watt light with great color quality. The enhanced optics enable the flat panel troffer to meet spaces with low glare requirements and improve the customer experience by reducing lighting fatigue.

Applications: Office, retail, education, petroleum

PRODUCT SPECIFICATIONS

OVERVIEW

- **Efficacy:** Up to 100 LPW
- **Intitial Delivered Lumens:** 3,400 - 5,000 lumens
- **Input Power:** 34-50 Watts
- **CCT:** 3500K, 4000K, 5000K
- **CRI:** Minimum 90
- **Input Voltage:** 120-277 VAC
- **L_{70} Lifetime:** 79,500 hours at 25˚C
- **Controls:** 0-10V dimming to 10%
- **Limited Warranty†:** 5 years
- **Mounting:** Recessed* or Suspended w/suspension kit accessory

ACCESSORIES

SUSPENSION KIT

FPAC-45-1

- Suspension Kit with canopy kit and cables

SURFACE MOUNT KIT

SMK-CR22

DRYWALL GRID ADAPTOR

DGA-22WHT

- Above ceiling access required

ORDERING INFORMATION

Example: FP22-34L-35K-10V

FP22			10V		
PRODUCT	INITIAL DELIVERED LUMENS	CCT	CONTROL	VOLTAGE	OPTIONS
FP22 Essentia® by Cree 2' x 2' Flat Panel	34L 34W, 3,400 lumens - 100 LPW 50L 50W, 5,000 lumens - 100 LPW	35K 3500K 40K 4000K 50K 5000K	10V 0-10V	Blank 120-277 Volt	EB14 Emergency Backup 1,400 lumens

† See http://lighting.cree.com/warranty for warranty terms

* Acceptable for use with standard 9/16 T-Bar or larger when installed per installation instructions. Consult factory for non-standard grid applications

NOTE: Price adder may apply depending on configuration

Rev. Date: V4 07/26/2016

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Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

FLAT PANEL

2' X 2'

PRODUCT SPECIFICATIONS

CONSTRUCTION & MATERIALS

- Solid aluminum frame provides strength and uniformity
- Ultra-thin 2.8" (70mm) luminaire height and design effectively target a broad range of plenum spaces and allow for easy installations
- Luminaire is post-painted with a soft matte white paint
- Compatible with standard 15/16" and 9/16" T-Bar ceilings[1]
- Compatible with drywall ceilings via accessory kit[2]
- Surface or cable mounting via accessory kits
- Frosted polycarbonate lens for non-pixelated appearance

OPTICAL SYSTEM

- Edge-lit flat panel optics produce soft balanced low glare illumination
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces

[1] Installation in 9/16" T-bar ceilings requires that fixture be aligned to grid aperture by securing four integral hanging clips to T-bar
[2] Above ceiling access required.

ELECTRICAL SYSTEM

- Integral, high-efficiency driver
- **Power Factor:** > 0.9
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 50/60Hz
- **Operating Temperature Range:** 0˚C - + 35˚C (32˚F - + 95˚F)
- **Total Harmonic Distortion:** < 20%
- **10V Source Current:** 0.10mA

CONTROLS

- Continuous dimming to 10% with 0-10V DC control protocol
- For use with Class 2 dimming systems only. Reference www.creelink.com/exLink.asp?7098214OZ58R34I26620963 for recommended dimming controls and wiring diagrams

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- DLC qualified. Please refer to www.designlights.org/QPL for most current information
- RoHS compliant. Consult factory for additional details
- Suitable for damp locations
- Designed for indoor use
- **Ingress Protection:** IP40
- UL924 (EB14 option)
- Type IC rated for direct contact with insulation
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions

ELECTRICAL DATA*

Initial Delivered Lumens	System Watts 120-277V	Total Current			
		120V	208V	240V	277V
34L	34	0.35	0.20	0.18	0.15
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9' ceiling: 80/50/20 reflectances; 2.5' workplane, open room.
LLF: 1.0 Initial Open Space: 50' x 40' x 9'

FLAT PANEL

2' X 2'

PHOTOMETRY

FP22-34L-35K-10V BASED ON DTC REPORT TEST #: PL07123-001

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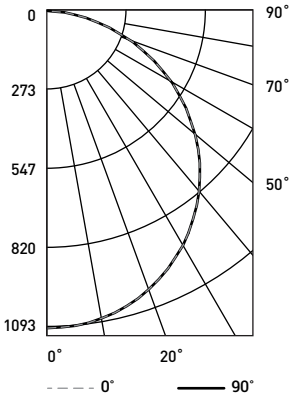

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Type 17A

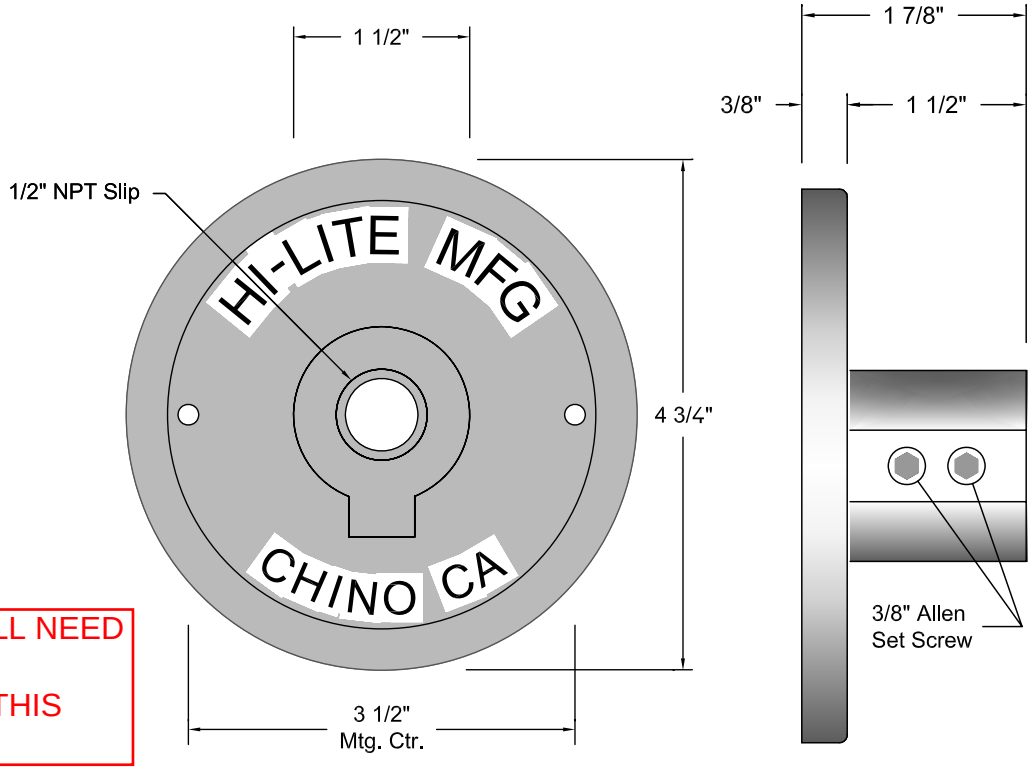
LED Floodlight - Small
21W LED
E.CF2L Series

Applications – Security, building facades, displays, signs, and other residential uses.
Typical Mounting Height: 8 to 15 feet

E.CF2L21N2Z WITH 18" CUSTOM ARM AND CANOPY - DARK BRONZE FINISH

4-3/4"H x **6-1/8"**W x **4-3/4"**D

NOTE - CONTRACTOR WILL NEED TO USE SEALANT AT INSTALLATION TO MAKE THIS WATER TIGHT



Catalog #	Description	Input Voltage	Delivered Lumen Output	CCT	CRI	Lifetime	Weight	Comparable To:
E.CF2L21N2Z (dark bronze) **E.CF2L21N2W (white)**	21W LED, Neutral white	120V-277V	1600 Lumens	4000K	80	50,000 Hours	2 lbs	50W PSMH

Features

- 50,000 hours of maintenance-free operation
- Non-dimmable
- 21W LED
- 1600 lumens, comparable to 50W PSMH
- Neutral white (4000K) color temperature at 80 CRI
- Low-copper, die-cast aluminum housing and lens frame
- Dark bronze or white polyester powder-coat finish
- Tempered glass lens, thermal shock and impact resistant
- 1/2-inch NPS aluminum die-cast swivel fitter attaches to standard J-box
- Universal voltage (120V through 277V)
- Minimum starting temperature: -22° F
- CREE® LEDs inside
- UL Listed for wet locations
- Five-year limited warranty. Certain exclusions apply. For details, visit www.cree.com/lighting/ILS.

Accessories

None Available

INTEGRATED LIGHTING SOLUTIONS

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Cree Integrated Lighting Solutions offers a full line of quality lighting products from Cree, Inc. and other manufacturers, including the product depicted above.

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XSP Series

XSPW™ Wall Mount Luminaire

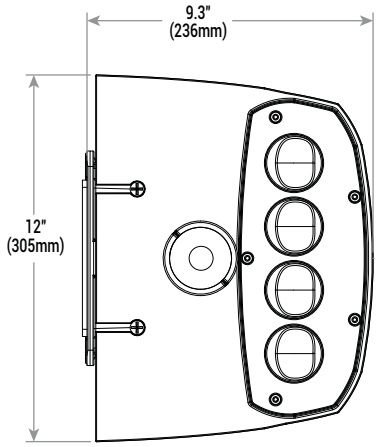
JACK IN THE BOX
TYPE 19A
XSPWA03FGUS

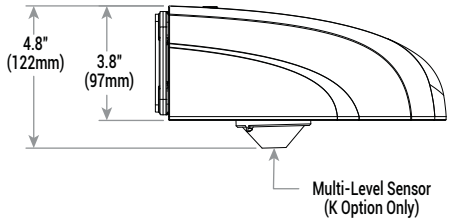
Product Description

The XSPW™ wall mount luminaire has a slim, low profile design intended for outdoor wall mounted applications. The rugged lightweight aluminum housing and mounting box are designed for installation over standard and mud ring single gang J-Boxes. The luminaire allows for through-wired or conduit entry from the top, bottom, sides and rear. The housing design is intended specifically for LED technology including a weathertight LED driver compartment and thermal management. Optic design features industry-leading NanoOptic® Precision Delivery Grid™ system in multiple distributions.
Applications: General area and security lighting

Performance Summary

- Utilizes BetaLED® Technology
- NanoOptic® Precision Delivery Grid™ optic
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 4000K (+/- 300K), 5700K (+/- 500K)
- **Limited Warranty†:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish





Ordering Information

Example: XSPWA02FC-UZ

Click below to select Quick Ship products

QUICK SHIP™

For full list of Cree Quick Ship products visit www.cree.com/lighting/quickship

XSPW	A	0	2	F	G		U	T	
Product	**Version**	**Mounting**	**Optic**	**Modules**	**Input Power Designator**	**-**	**Voltage**	**Color Options**	**Options**
XSPW	A	0 Wall	2 Type II 3 Type III	F 4000K M 5000K	C 42W G 25W	- US * Canada	U Universal 120-277V 1 120V 2 280-277V 6* 347V	Z Bronze S Silver T Black B Platinum Bronze W White	Y 0-10V Dimming - Control by others - Available with Input Power Designator C only - Refer to Dimming spec sheet for details P **Photocell** - Not available with K options - Must specify voltage other than U K **Multi-Level** - Refer to ML spec sheet for details - Available with Input Power Designator C only

† See www.cree.com/lighting/products/warranty for warranty terms
* Available in Canada only

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile design
- Luminaire housing specifically designed for LED applications with advanced LED thermal management and driver
- Luminaire mounting box designed for installation over standard and mud ring single gang J-Boxes
- Luminaire can also be direct mounted to a wall and surface wired
- Secures to wall with four 3/16" (5mm) screws (by others)
- Conduit entry from top, bottom, sides, and rear
- Designed and UL approved for easy through-wiring
- Designed for downlight applications only
- Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Bronze, silver, black, white, and platinum bronze are available
- **Weight:** 9.5lbs. (4.3kg)

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347V, 50/60Hz, Class 2 driver
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529
- Please refer to http://www.designlights.org/QPL for most current information
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Meets Buy American requirements within ARRA

Electrical Data*

Input Power Designator	System Watts 120-277V	System Watts 347V	Total Current				
			120V	208V	240V	277V	347V
C	42	46	0.35	0.20	0.18	0.15	0.14
G	25	27	0.21	0.12	0.10	0.09	0.15

* Electrical data at 25˚C (77˚F)

Recommended Cree® Outdoor Luminaire Lumen Maintenance Factors (LMF)[1]

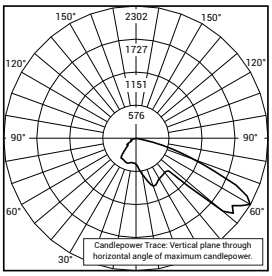
Ambient	Input Power Designator	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5˚C (41˚F)	C	1.04	1.02	1.01	1.00	1.00
	G					
10˚C (50˚F)	C	1.03	1.01	1.00	0.99	0.99
	G					
15˚C (59˚F)	C	1.02	1.00	0.99	0.98	0.98
	G					
20˚C (68˚F)	C	1.01	0.99	0.98	0.97	0.97
	G					
25˚C (77˚F)	C	1.00	0.98	0.97	0.96	0.96
	G					

[1] Lumen maintence values at 25˚C (77˚F) are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)

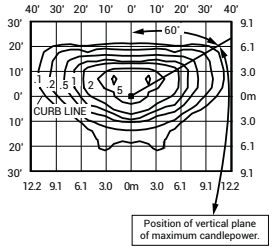
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory. To obtain an IES file specific to your project consult: http://www.cree.com/lighting.

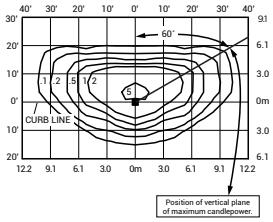
2



CESTL Test Report #: 2014-0017
BXSPWA*2FG-US
Initial Delivered Lumens: 2,739



BXSPWA*2FC-US
Mounting Height: 10' (3.0m)
Initial Delivered Lumens: 3,819
Initial FC at grade

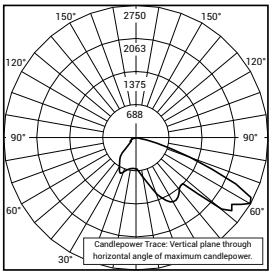


BXSPWA*2FG-US
Mounting Height: 10' (3.0m)
Initial Delivered Lumens: 2,529
Initial FC at grade

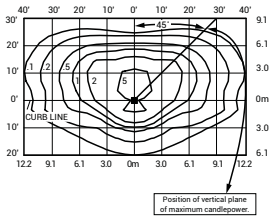
Type II Distribution				
Input Power Designator	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
C	3,819	B1 U0 G1	4,109	B1 U0 G1
G	2,529	B1 U0 G1	2,722	B1 U0 G1

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -4 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf. Valid with no tilt

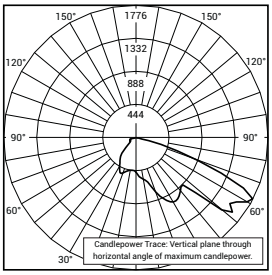
3



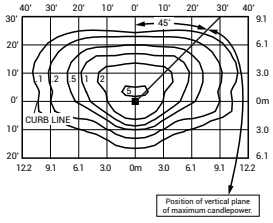
CESTL Test Report #: 2014-0018
BXSPWA*3FC-US
Initial Delivered Lumens: 4,187



BXSPWA*3FC-US
Mounting Height: 10' (3.0m)
Initial Delivered Lumens: 3,819
Initial FC at grade



CESTL Test Report #: 2014-0019
BXSPWA*3FG-US
Initial Delivered Lumens: 2,692



BXSPWA*3FG-US
Mounting Height: 10' (3.0m)
Initial Delivered Lumens: 2,529
Initial FC at grade

Type III Distribution				
Input Power Designator	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
C	3,819	B1 U0 G1	4,109	B1 U0 G1
G	2,529	B1 U0 G1	2,722	B1 U0 G1

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -4 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf. Valid with no tilt

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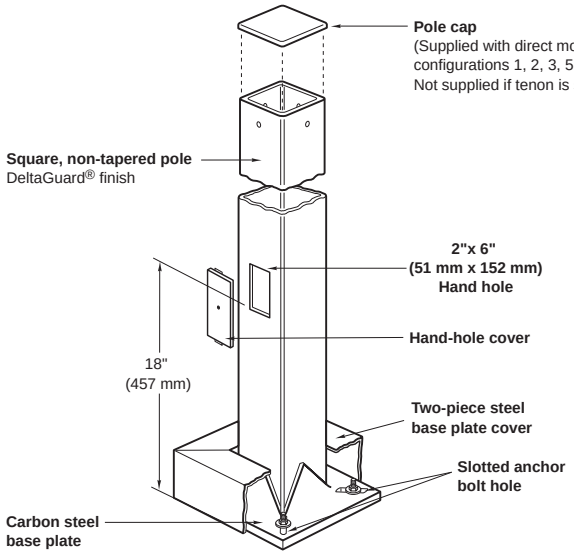
PREMIUM STEEL

CROWN-WELD® POLES

JACK IN THE BOX
PS4S POLE SERIES

PS SERIES



JACK IN THE BOX

SPEC #	CATALOG #	POLE SIZE	
Square Steel Poles			
		H (ft) x W (in) x Wall (in)	H (m) x W (mm) x Wall (mm)
SPEC #	PS3S10C(a)BZ	10 x 3 x 0.125	3.0 x 76 x 3
SPEC #	PS3S15C(a)BZ	15 x 3 x 0.125	4.6 x 76 x 3
SPEC #	PS3S20C(a)BZ	20 x 3 x 0.125	6.1 x 76 x 3
SPEC #	PS4S10C(a)BZ	10 x 4 x 0.125	3.0 x 102 x 3
SPEC #	PS4S12C(a)BZ	12 x 4 x 0.125	3.7 x 102 x 3
SPEC #	PS4S15C(a)BZ	15 x 4 x 0.125	4.6 x 102 x 3
SPEC #	PS4S17C(a)BZ	17 x 4 x 0.125	5.2 x 102 x 3
SPEC #	PS4S20C(a)SV	20 x 4 x 0.125	6.1 x 102 x 3
SPEC #	PS4S22C(a)SV	22 x 4 x 0.125	6.7 x 102 x 3
SPEC #	PS4S22S(a)BZ	22 x 4 x 0.188	6.7 x 102 x 5
SPEC #	PS4S25C(a)BZ	25 x 4 x 0.125	7.6 x 102 x 3
SPEC #	PS4S25S(a)BZ	25 x 4 x 0.188	7.6 x 102 x 5
SPEC #	PS4S27R(a)BZ	27 x 4 x 0.125	8.2 x 102 x 3
SPEC #	PS4S30R(a)BZ	30 x 4 x 0.125	9.1 x 102 x 3
SPEC #	PS4S30H(a)BZ	30 x 4 x 0.188	9.1 x 102 x 5
SPEC #	PS5S25S(a)BZ	25 x 5 x 0.188	7.6 x 127 x 5
SPEC #	PS5S30S(a)BZ	30 x 5 x 0.188	9.1 x 127 x 5
	PS6S30S(a)BZ	30 x 6 x 0.188	9.1 x 152 x 5

Specify **(a)** pole configuration.

(a) POLE CONFIGURATION

1	Single (direct mount)	5	Triple (direct mount)
2	Twin @ 180° (direct mount)	6	Quad (direct mount)
3	Twin @ 90° (direct mount)	T	Tenon (order tenon separately)

For fixtures with fixed 20° mount, add prefix **2** to configuration numbers:
i.e. 21, 22, 23, 25 and 26.

GENERAL DESCRIPTION

Non-tapered steel poles are supplied with welded base with cover, four galvanized anchor bolts, masonite mounting template and a pole cap (except tenon mount). Each bolt is provided with two washers and two nuts. Steel pole base has slotted holes. Per National Electrical Code requirements, pole is standard with a 2" x 6" (51 x 152 mm) hand hole, located 18" (457 mm) above bottom of pole base. A #10-32 stainless-steel weld stud with grounding lug is located inside pole, opposite hand hole; a hand hole cover is supplied but shipped separately. In addition, 4" x 27' and 4" x 30' poles include an internal 5/16" steel reinforced sleeve welded inside the bottom 24" of the pole, as well as a reinforcement welded around the hand hole for added strength. For EPA ratings, see "Windloading" sheet.

PATENT

US 5,820,255; 6,640,517; Patent pending

MATERIALS

Square, non-tapered pole of structural steel tubing (ASTM A 500); with a minimum yield strength of 46,000 p.s.i. Welded to a formed carbon steel base plate with a minimum yield strength of 36,000 p.s.i.

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

LABELS

Ruud Lighting square poles meet or exceed National Electrical Code Requirements. In the US, Ruud square poles are classified by Underwriters Laboratories Inc. for electrical ground bonding; in Canada, they are CSA certified for electrical ground bonding and structural strength.

ACCESSORY

Catalog # REC-GFIBZ (120V)
Wet Listed In-use cover

GFI Outlet Accessory

9201 Washington Avenue Racine, Wisconsin 53406-3772 USA PHONE (262) 886-1900 FAX (262) 884-3309

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CROWN-WELD® POLES

PS3S10C(a)BZ
10' (3.0 m) x 3" (76 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.50" (13 mm) thick
Anchor bolts – 3/4"-10 x 18" (457 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 250 lbs. (114 Kg)
Approximate shipping weight – 58 lbs. (26 Kg)

PS3S15C(a)BZ
15' (4.6 m) x 3" (76 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 18" (457 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 250 lbs. (114 Kg)
Approximate shipping weight – 82 lbs. (37 Kg)

PS3S20C(a)BZ
20' (6.1 m) x 3" (76 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 18" (457 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 250 lbs. (114 Kg)
Approximate shipping weight – 119 lbs. (54 Kg)

PS4S10C(a)BZ
10' (3.0 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 18" (457 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 350 lbs. (159 Kg)
Approximate shipping weight – 78 lbs. (35 Kg)

PS4S12C(a)BZ
12' (3.7 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 18" (457 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 300 lbs. (136 Kg)
Approximate shipping weight – 99 lbs. (45 Kg)

PS4S15C(a)BZ
15' (4.6 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 350 lbs. (159 Kg)
Approximate shipping weight – 119 lbs. (54 Kg)

PS4S17C(a)BZ
17' (5.2 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 300 lbs. (136 Kg)
Approximate shipping weight – 131 lbs. (59 Kg)

PS4S20C(a)BZ
20' (6.1 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 350 lbs. (159 Kg)
Approximate shipping weight – 150 lbs. (68 Kg)

PS4S22C(a)BZ
22' (6.7 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 310 lbs. (141 Kg)
Approximate shipping weight – 163 lbs. (74 Kg)

PS4S22S(a)BZ
22' (6.7 m) x 4" (102 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 310 lbs. (141 Kg)
Approximate shipping weight – 225 lbs. (102 Kg)

PS4S25C(a)BZ
25' (7.6 m) x 4" (102 mm)
Wall thickness – 0.125" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 350 lbs. (159 Kg)
Approximate shipping weight – 182 lbs. (83 Kg)

PS4S25S(a)BZ
25' (7.6 m) x 4" (102 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 350 lbs. (159 Kg)
Approximate shipping weight – 252 lbs. (114 Kg)

PS4S27R(a)BZ
27' (8.2 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 280 lbs. (127 Kg)
Approximate shipping weight – 232 lbs. (105 Kg)

PS4S30R(a)BZ
30' (9.1 m) x 4" (102 mm)
Wall thickness – 0.125" (3 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 315 lbs. (143 Kg)
Approximate shipping weight – 301 lbs. (137 Kg)

PS4S30H(a)BZ
30' (9.1 m) x 4" (102 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 3/4"-10 x 30" (762 mm) + 3" (76 mm)
Bolt circle diameter – 10" (254 mm) 9.3" – 11"
(235 mm – 279 mm)
Maximum fixture weight – 340 lbs. (155 Kg)
Approximate shipping weight – 337 lbs. (153 Kg)

PS5S25S(a)BZ
25' (7.6 m) x 5" (127 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 1"-8 x 36" (914 mm) + 4" (102 mm)
Bolt circle diameter – 10" (254 mm) 9.7" – 11.3"
(248 mm – 287 mm)
Maximum fixture weight – 450 lbs. (204 Kg)
Approximate shipping weight – 320 lbs. (145 Kg)

PS5S30S(a)BZ
30' (9.1 m) x 5" (127 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 10" (254 mm) square x 0.750" (19 mm) thick
Anchor bolts – 1"-8 x 36" (914 mm) + 4" (102 mm)
Bolt circle diameter – 10" (254 mm) 9.7" – 11.3"
(248 mm – 287 mm)
Maximum fixture weight – 375 lbs. (170 Kg)
Approximate shipping weight – 379 lbs. (172 Kg)

PS6S30S(a)BZ
30' (9.1 m) x 6" (152 mm)
Wall thickness – 0.188" (5 mm)
Base plate – 12" (305 mm) square x 1" (25 mm) thick
Anchor bolts – 1"-8 x 36" (914 mm) + 4" (102 mm)
Bolt circle diameter – 11.5" (292 mm) 11.3" – 12.8"
(286 mm – 324 mm)
Maximum fixture weight – 525 lbs. (238 Kg)
Approximate shipping weight – 457 lbs. (207 Kg)

RUUD LIGHTING®

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SQUARE, INTERNAL MOUNT

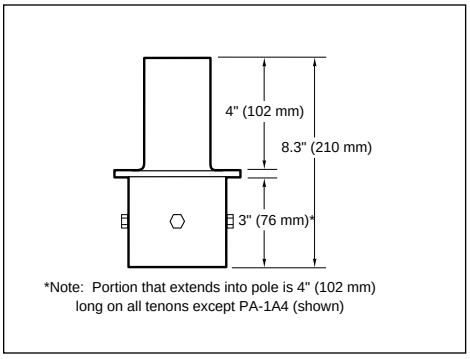
VERTICAL TENONS/IN-LINE BRACKETS

JACK IN THE BOX
PB - SERIES

PA/PB SERIES

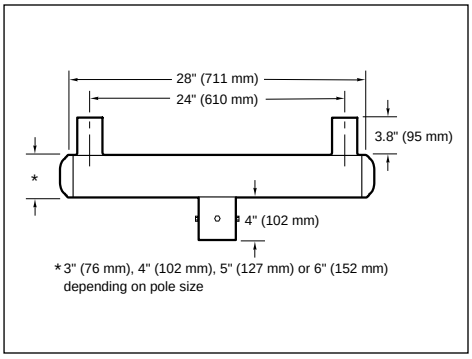
SPEC #	CATALOG #	DESCRIPTION
	PB-1A3	Steel Single Tenon for 3" (76 mm) Square Pole
	PB-1A5	Steel Single Tenon for 5" (127 mm) Square Pole
	PB-1A6	Steel Single Tenon for 6" (152 mm) Square Pole
	PA-1A3	Aluminum Single Tenon for 3" (76 mm) Square Pole
	PB-1A4	Steel Single Tenon for 4" (102 mm) Square Aluminum or Steel Pole
	PA-1A5	Aluminum Single Tenon for 5" (127 mm) Square Pole
	PA-1A6	Aluminum Single Tenon for 6" (152 mm) Square Pole
	PB-2A3	Steel Twin Tenon for 3" (76 mm) Square Pole
	PB-2A4	Steel Twin Tenon for 4" (102 mm) Square Pole
	PB-2A5	Steel Twin Tenon for 5" (127 mm) Square Pole
	PB-2A6	Steel Twin Tenon for 6" (152 mm) Square Pole
	PA-2A4	Aluminum Twin Tenon for 4" (102 mm) Square Pole
	PA-2A5	Aluminum Twin Tenon for 5" (127 mm) Square Pole
	PA-2A6	Aluminum Twin Tenon for 6" (152 mm) Square Pole
	PB-2R2.375	Steel Twin Tenon for Round Pole (2.4" [62 mm] I.D. Base)
	PB-3R2.375	Steel Triple Tenon for Round Pole (2.4" [62 mm] I.D. Base)
	PB-3A3	Steel Triple Tenon for 3" (76 mm) Square Pole
	PB-3A4	Steel Triple Tenon for 4" (102 mm) Square Pole
	PB-3A5	Steel Triple Tenon for 5" (127 mm) Square Pole
	PB-3A6	Steel Triple Tenon for 6" (152 mm) Square Pole
	PB-4A4(90)	Steel 90° Quad Tenon for 4" (102 mm) Square Pole
	PB-4A5(90)	Steel 90° Quad Tenon for 5" (127 mm) Square Pole
	PB-4A6(90)	Steel 90° Quad Tenon for 6" (152 mm) Square Pole
	PB-4A4(180)	Steel Straight In-Line Quad Tenon for 4" (102 mm) Square Pole
	PB-4A5(180)	Steel Straight In-Line Quad Tenon for 5" (127 mm) Square Pole
	PB-4A6(180)	Steel Straight In-Line Quad Tenon for 6" (152 mm) Square Pole
	PBD-2A4	Steel Direct Arm Double In-Line Bracket for 4" (102 mm) Square Pole
	PBD-3A4	Steel Direct Arm Triple In-Line Bracket for 4" (102 mm) Square Pole

PA-1A, PB-1A



*Note: Portion that extends into pole is 4" (102 mm) long on all tenons except PA-1A4 (shown)

PA-2A, PB-2A



*3" (76 mm), 4" (102 mm), 5" (127 mm) or 6" (152 mm) depending on pole size

GENERAL DESCRIPTION

For use with square, non-tapered steel and aluminum poles. The square base of the PB Series steel brackets are designed to be inserted into square, non-tapered steel poles ranging in size from 3" (76 mm) to 6" (152 mm) square with a maximum wall thickness of 0.188" (5 mm). PBD Series is similar except is designed for 4" (102 mm) square poles only. All are supplied with snap-on steel end caps (except PA-2A*, which is supplied with aluminum end caps) to enclose the wiring chamber. Furnished with four 5/16" hex head stainless-steel black oxide bolts. Vertical tenons featured on the PB Series measure 2-3/8" (60 mm) O.D., and are made of steel tubing. Fixtures mounted to these brackets can be adjusted both vertically and horizontally. PBD Series brackets include 1.5"-(38 mm) long mounting arms, support rods and backing plates. The PA Series brackets are similar in design and function, but are made of extruded aluminum (except PA-1A4, which is sand-cast aluminum).

FINISH

Exclusive DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

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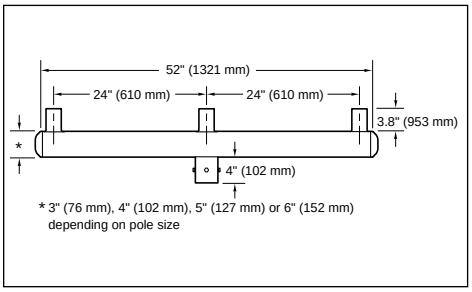
PA/PB SERIES

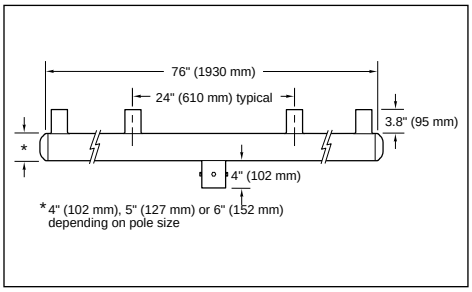
SQUARE, INTERNAL MOUNT

VERTICAL TENONS/IN-LINE BRACKETS

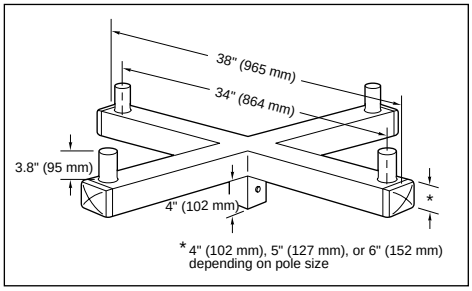
PB-3A_



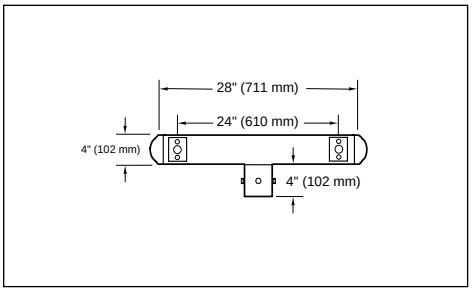
PB-4A_(180)



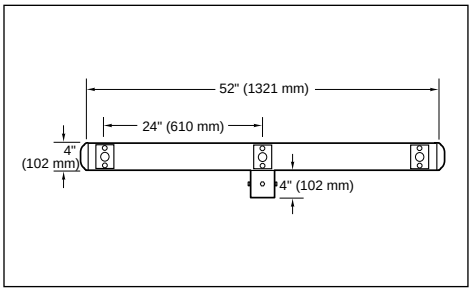
PB-4A_(90)



PBD-2A4



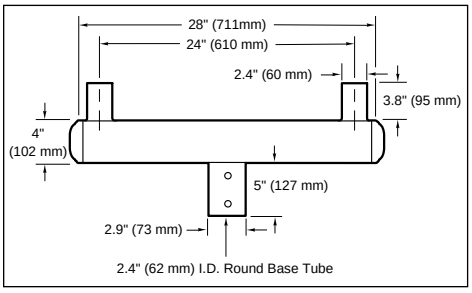
PBD-3A4



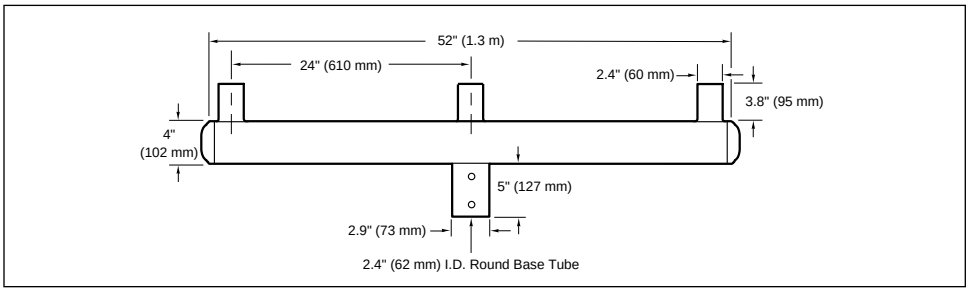
BASE DIMENSIONS

Size	Type	Inside Dimensions	Outside Dimensions
3" (76 mm)	Aluminum	2.0" (50 mm)	2.7" (69 mm)
3" (76 mm)	Steel	2.0" (51 mm)	2.5" (64 mm)
4" (102 mm)	Aluminum	2.8" (69 mm)	3.5" (88 mm)
4" (102 mm)	Steel	3.0" (76 mm)	3.5" (89 mm)
5" (127 mm)	Aluminum	3.7" (94 mm)	4.5" (113 mm)
5" (127 mm)	Steel	4.0" (102 mm)	4.5" (114 mm)
6" (152 mm)	Aluminum	4.7" (120 mm)	5.5" (139 mm)
6" (152 mm)	Steel	5.0" (127 mm)	5.5" (140 mm)

PB-2R2.375



PB-3R2.375



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