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May 13, 2021

Puerto Rico Housing Finance Authority
Puerto Rico Government
PO Box 71261 San Juan, PR 00936-8461

Low Income Housing Tax Credit Program
Project Name: Mirador Las Casas Apartments Full Rehabilitation
Owner: El Mirador, LLC
Annex V - HUD CPD Green Building Retrofit Checklist

Dear all:

In response to your request, we submit to your consideration the supporting documentation for the HUD CPD Green Building Retrofit Checklist (Exhibit A) and a summary of the action for each measure.

WATER AND ENERGY CONSERVATION MEASURES

- Water-Conserving Fixtures

  All water fixtures to be used in the project will be Water Sense Labeled and meet EPA's specifications for water efficiency and performance. See Exhibit B for specifications.

- ENERGY STAR Appliances

  The project administration only provides refrigerators in units and common areas, such as the Administration Office and Community Center. The refrigerator to be installed will be ENERGY STAR-labeled. See Exhibit C for specifications.

- Air Sealing: Building Envelope

  This measure does not apply to the referenced project, because the residential buildings have natural ventilation and do not have and will not have Heating or Central Air Conditioning. However, all windows and doors in the buildings envelop will be sealed with low VOC caulk; including the buildings provided with natural ventilation and air conditioning such as the Administration Office, Network Center and Community Center.

- Insulation: Attic

  This measure does not apply to the referenced project, because the buildings will not have an attic space.

- Insulation: Flooring

  This measure does not apply to the referenced project, because the buildings have concrete floors, and no crawl space is provided.

- Duct Sealing

  This measure does not apply to the referenced project, because the buildings have natural ventilation and do not have and will not have Heating or Central Air Conditioning. Other buildings provided with natural ventilation and air conditioning such as the Administration Office, Network Center and Community Center; the air conditioning equipment will be ductless mini-split system.

- Air Barrier System

  This measure does not apply to the referenced project, because the buildings have natural ventilation and do not have and will not have Heating or Central Air Conditioning. Other buildings provided with natural ventilation and air conditioning such as the Administration Office, Network Center and Community Center.

- Radiant Barriers: Roofing

  All buildings will have a new water proofing system, which includes an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam core. See Exhibit D for specifications.

- Windows

  This measure does not apply to the referenced project, because the buildings have natural ventilation and do not have and will not have Heating or Central Air Conditioning. All buildings will be provided with jalousie type windows.

- Sizing of Heating and Cooling Equipment

  This measure does not apply to the referenced project, because the buildings have natural ventilation and do not have and will not have Heating or Central Air Conditioning. Nevertheless, buildings provided with ductless mini-split system air conditioning will follow the industry standards.

- Domestic Hot Water Systems

  This measure does not apply to the referenced project, residential units electric tank water heaters will be replaced with electric tankless water heaters. Available products in local market do not meet Energy Star ratings. Other products such as hybrid electric heat pump water heaters are not economically feasible and there is no available infrastructure to consider gas powered units.

- Efficient Lighting: Interior Units

  Energy Star Multifamily High Rise (MFHR) Program will be exceeded since all specified lighting fixtures within units are ENERGY STAR-qualified or use ENERGY STAR-qualified lamps. See Exhibit E for specifications.

- Efficient Lighting: Common Areas and Emergency Lighting

  Common Areas and Emergency Lighting will be replaced with ENERGY STAR-labeled fixtures or any equivalent high-performance lighting fixtures and bulbs. See Exhibit F for specifications.

- Efficient Lighting: Exterior

  Energy Star Multifamily High Rise (MFHR) Program will be exceeded since all specified exterior lighting fixtures are ENERGY STAR-qualified or use ENERGY STAR-qualified lamps. See Exhibit G for specifications.

INDOOR AIR QUALITY

- Air Ventilation: Single Family and Multifamily
  Residential units natural air ventilation will be provided. Jalousie windows will be installed in all bedrooms, kitchen, dining and living rooms. Additionally, an Energy Star ceiling fan will be installed in the living room area. Bathroom will be ventilated by means of a compliance exhaust fan or naturally (jalousie windows). See Exhibit H for specifications.

- Air Ventilation: Multifamily

  This measure does not apply to the referenced project, all buildings are three stories or less.

- Composite Wood Products that Emit Low/No Formaldehyde

  Composite wood products were considered for the kitchen cabinets, but they were replaced by PVC board. No composite wood products are specified for the project.

- Environmentally Preferable Flooring

  This measure does not apply to the referenced project, existing flooring will not be replaced. Existing flooring is ceramic tile.

- Low/No VOC Paints and Primers

  All specified interior paints and primers meet the required VOC levels. See Exhibit I for specifications.

- Low/No VOC Adhesives and Sealants

  All needed adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants comply with regulation 8, rule 51 of the Bay Area Air Quality Management District. See Exhibit J for specifications.

- Clothes Dryer Exhaust

  The project administration does not provide dryers, but electrical and exhaust connection will be provided at unit balconies. Exhaust connection will be directly to the outdoors using rigid-type duct work and vent. See Exhibit K for specifications.

- Mold Inspection and Remediation

  An inspection of the building interior and exterior was conducted, and moisture problems were only observed in a few interior walls, where sanitary stacks are located. Sanitary stacks will be replaced in the project. Buildings envelops did not show moisture problems, but an Exterior Insulation and Finish System (EIFS) will be provided. Please refer to the construction drawings, sheets A-1.13, P1.01 to P1.04.

- Combustion Equipment

  This measure does not apply to the referenced project, combustion equipment will not be installed.

- Mold Prevention: Water Heaters

  Residential units electric tank water heaters will be replaced with electric tankless water heaters. See Exhibit L for specifications.

- Mold Prevention: Surfaces

  All bathrooms and kitchens surfaces exposed to water will be covered in ceramic tiles, all existing and proposed walls in bathrooms, kitchen and laundry rooms are reinforced concrete or concrete masonry unit walls. Please refer to the

construction drawings.

- Mold Prevention: Tub and Shower Enclosures

  All bathroom tubs will be removed and replaced with concrete shower pans with ceramic tile, all shower enclosures will be reinforced concrete or concrete masonry unit walls. Please refer to the construction drawings.

- Integrated Pest Management

  All doors, windows and joint penetrations will be sealed with low-VOC caulking. See Exhibit J for specifications.

- Lead-Safe Work Practices

  A Lead-Based Paint Inspection was performed in April 2016, identifying bathtubs, some shelves and cleats, some walls and some curbs as positive materials. Nevertheless, a second inspection was conducted to verify the bathtubs results and it was found that none of the units' bathtubs were painted, but factory lead glazed bathtubs. Therefore, the consultant concludes that since the bathtubs are not painted, they shall not be considered as "lead-based paint as per current regulation and are not regulated at this time." Since selective demolition will be performed, only the impacted components will be mitigated. Painted surfaces to remain will be properly encapsulated with paint. See Exhibit M for Lead-Based Paint Surveys.

- Radon Testing and Mitigation

  This measure does not apply to the referenced project, project site is not located in an EPA Radon Zone 1 nor 2.

Respectfully,



Carlos M. Pérez Rivera, PE
License 19137

Exhibit A

MIRADOR LAS CASAS FULL REHABILITATION

HUD CPD Green Building Retrofit Checklist

The CPD Green Retrofit Checklist promotes energy efficiency and green building practices for residential retrofit projects. Grantees must follow the checklist in its entirety and apply all measures within the Checklist to the extent applicable to the particular building type being retrofitted. The phrase "when replacing" in the Checklist refers to the mandatory replacement with specified green improvements, products, and fixtures only when replacing those systems during the normal course of the retrofit.

WATER AND ENERGY CONSERVATION MEASURES

☑ **Water-Conserving Fixtures**
Install or retrofit water conserving fixtures in any unit and common facility, use the following specifications: Toilets-- 1.28 gpf; Urinals-- 0.5 gpf; Showerheads-- 2.0 gpm; Kitchen faucets-- 2.0 gpm; and Bathroom faucets-- 1.5gpm. [gpf = gallons per flush; gpm = gallons per minute]

☑ **ENERGY STAR Appliances**
Install ENERGY STAR-labeled clothes washers, dishwashers, and refrigerators, if these appliance categories are provided in units or common areas.

N/A ☐ **Air Sealing: Building Envelope**
Seal all accessible gaps and penetrations in the building envelope. If applicable, use low VOC caulk or foam.

N/A ☐ **Insulation: Attic** (if applicable to building type)

For attics with closed floor cavities directly above the conditioned space, blow in insulation per manufacturer's specifications to a minimum density of 3.5 Lbs. per cubic foot (CF). For attics with open floor cavities directly above the conditioned space, install insulation to meet or exceed IECC levels.

N/A ☐ **Insulation: Flooring** (if applicable to building type)
Install ≥ R-19 insulation in contact with the subfloor in buildings with floor systems over vented crawl spaces. Install a 6-mil vapor barrier in contact with 100% of the floor of the crawl space (the ground), overlapping seams and piers at least 6 inches.

N/A ☐ **Duct Sealing** (if applicable to building type)

In buildings with ducted forced-air heating and cooling systems, seal all penetrations of the air distribution system to reduce leakage in order to meet or exceed ENERGY STAR for Homes' duct leakage standard.

N/A ☐ **Air Barrier System**
Ensure continuous unbroken air barrier surrounding all conditioned space and dwelling units. Align insulation completely and continuously with the air barrier.

☑ **Radiant Barriers: Roofing**
When replacing or making a substantial repair to the roof, use radiant barrier sheathing or other radiant barrier material; if economically feasible,also use cool roofing materials.

N/A ☐ **Windows**
When replacing windows, install geographically appropriate ENERGY STAR rated windows.

N/A ☐ **Sizing of Heating and Cooling Equipment**

When replacing, size heating and cooling equipment in accordance with the Air Conditioning Contractors of America (ACCA) Manuals, Parts J and S, or 2012 ASHRAE Handbook--HVAC Systems and Equipment or most recent edition.

N/A ☐ **Domestic Hot Water Systems**
When replacing domestic water heating system(s), ensure the system(s) meet or exceed the efficiency requirements of ENERGY STAR for Homes' Reference Design. Insulate pipes by at least R-4.

☑ **Efficient Lighting: Interior Units**
Follow the guidance appropriate for the project type: install the ENERGY STAR Advanced Lighting Package (ALP); ***OR*** follow the ENERGY STAR MFHR program guidelines, which require that 80% of installed lighting fixtures within units must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; ***OR*** when replacing, new fixtures and ceiling fans must meet or exceed ENERGY STAR efficiency levels.

☑ **Efficient Lighting: Common Areas and Emergency Lighting** (if applicable to building type)
Follow the guidance appropriate for the project type: use ENERGY STAR-labeled fixtures or any equivalent high-performance lighting fixtures and bulbs in all common areas; ***OR*** when replacing, new common space and emergency lighting fixtures must meet or exceed ENERGY STAR efficiency levels. For emergency lighting, if installing new or replacing, all exist signs shall meet or exceed LED efficiency levels and conform to local building codes.

☑ **Efficient Lighting: Exterior**
Follow the guidance appropriate for the project type: install ENERGY STAR-qualified fixtures or LEDs with a minimum efficacy of 45 lumens/watt; ***OR*** follow the ENERGY STAR MFHR program guidelines, which require that 80% of outdoor lighting fixtures must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; ***OR*** when replacing, install ENERGY STAR compact fluorescents or LEDs with a minimum efficacy of 45 lumens/watt.

INDOOR AIR QUALITY

☑ **Air Ventilation: Single Family and Multifamily** (three stories or fewer)
Install an in-unit ventilation system capable of providing adequate fresh air per ASHRAE 62.2 requirements.

N/A ☐ **Air Ventilation: Multifamily** (four stories or more)
Install apartment ventilation systems that satisfy ASHRAE 62.2 for all dwelling units and common area ventilation systems that satisfy ASHRAE 62.1 requirements. If economically feasible, consider heat/energy recovery for 100% of corridor air supply.

☑ **Composite Wood Products that Emit Low/No Formaldehyde**
Composite wood products must be certified compliant with California 93120. If using a composite wood product that does not comply with California 93120, all exposed edges and sides must be sealed with low-VOC sealants.

N/A ☐ **Environmentally Preferable Flooring**
When replacing flooring, use environmentally preferable flooring, including the FloorScore certification. Any carpet products used must meet the Carpet and Rug Institute's Green Label or Green Label Plus certification for carpet, pad, and carpet adhesives.

☑ **Low/No VOC Paints and Primers**

All interior paints and primers must be less than or equal to the following VOC levels: Flats--50 g/L; Non-flats--50 g/L; Floor--100 g/L. [g/L = grams per liter; levels are based on a combination of the Master Painters Institute (MPI) and GreenSeal standards.]

☑ **Low/No VOC Adhesives and Sealants**
All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District.

☑ **Clothes Dryer Exhaust**
Vent clothes dryers directly to the outdoors using rigid-type duct work.

☑ **Mold Inspection and Remediation**
Inspect the interior and exterior of the building for evidence of moisture problems. Document the extent and location of the problems, and implement the proposed repairs according to the Moisture section of the EPA Healthy Indoor Environment Protocols for Home Energy Upgrades.

N/A ☐ **Combustion Equipment**
When installing new space and water-heating equipment, specify power-vented or direct vent combustion equipment.

☑ **Mold Prevention: Water Heaters**
Provide adequate drainage for water heaters that includes drains or catch pans with drains piped to the exterior of the dwelling.

☑ **Mold Prevention: Surfaces**
When replacing or repairing bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.

☑ **Mold Prevention: Tub and Shower Enclosures**
When replacing or repairing tub and/or shower enclosures, use non-paper-faced backing materials such as cement board, fiber cement board, or equivalent in bathrooms.

☑ **Integrated Pest Management**
Seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate sealing methods to prevent pest entry. [If applicable, provide training to multifamily buildings staff.]

☑ **Lead-Safe Work Practices**
For properties built before 1978, if the project will involve disturbing painted surfaces or cleaning up lead contaminated dust or soil, use certified renovation or lead abatement contractors and workers using lead-safe work practices and clearance examinations consistent with the more stringent of EPA's Renovation, Repair, and Painting Rule and HUD's Lead Safe Housing Rule.

N/A ☐ **Radon Testing and Mitigation** (if applicable based on building location)

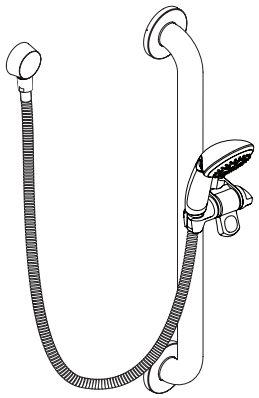
For buildings in EPA Radon Zone 1 or 2, test for radon using the current edition of American Association of Radon Scientists and Technologists (AARST)'s Protocols for Radon Measurement in Homes Standard for Single-Family Housing or Duplexes, or AARST's Protocol for Conducting Radon and Radon Decay Product Measurements in Multifamily Buildings. To install radon mitigation systems in buildings with radon level of 4 pCi/L or more, use ASTM E 2121 for single-family housing or duplexes, or AARST's Radon Mitigation Standards for Multifamily Buildings. For new construction, use AARST's Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses, or ASTM E 1465.



Exhibit B

A Moen Incorporated Brand

Models:
40124 Chrome
40124BN Brushed Nickel



Capstone 3F Handheld Shower with Grab Bar/Slide Bar

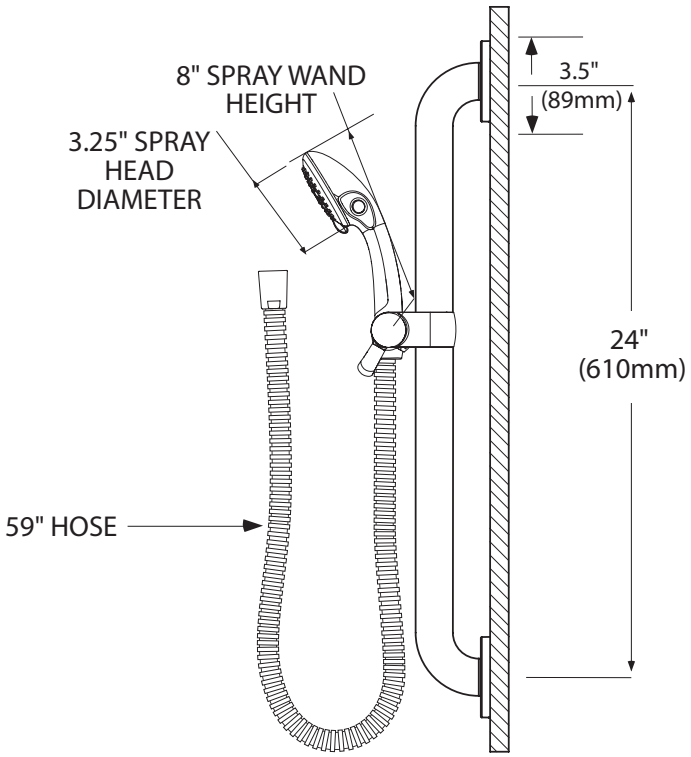
DESCRIPTION
- Various finishes identified by suffix
- 3-Function Handshower with integrated double check valves
- 59" metal hose
- Grab Bar/Slide Bar
- Drop ell

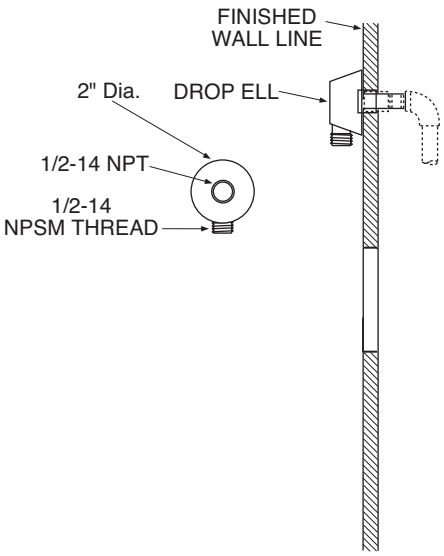
OPERATION
- Three function: massage, full and pause control
- Grab Bar/Slide Bar with adjustable lever

FLOW
- Designed to deliver 1.5 gpm (5.7 L/min) max. at 80 psi

STANDARDS
- Designed and manufactured to comply with the applicable requirements of WaterSense®, ASME A112.18.1/CSA B-125.1 and all applicable specifications referenced therein
- Features ADA compliant handheld shower
- Grab Bar/Slide Bar meets ANSI standard 250lb pull test

WARRANTY
- 10 year warranty against materials or manufacturing defects





CRITICAL DIMENSIONS
(DO NOT SCALE)

09/29/2016 SPC13899 5000018648 Released01

S P E C I F I C A T I O N S H E E T

Model: **40311CGR– 40315CGR Series**

CLEVELAND CFG FAUCET GROUP™
A Moen Incorporated Brand



CORNERSTONE™

Trims for Pressure Balancing Cycling In-Wall Valve w/Water-Saving Showerhead

DESCRIPTION
- Metal construction with chrome plated or LifeShine® Brushed Nickel finishes
- 40315CGR–shower only trim
- 40311CGR–tub/shower trim w/ slip fit tub spout
- Twelve (12) individual boxes per master carton

OPERATION
- Rotating style metal lever handle
- Temperature control by 150° arc
- Will operate with less than 5 lbs of torque
- Metal escutcheon features back printed polycarbonate overlay with red/blue international temperature marking
- Protective gaskets surround interior and exterior rim
- Weep hole located at bottom of escutcheon
- Slip fit tub spout connects to 1/2" pipe with bottom 5/32" set screw
- IPS tub spout connects to 1/2" mips pipe

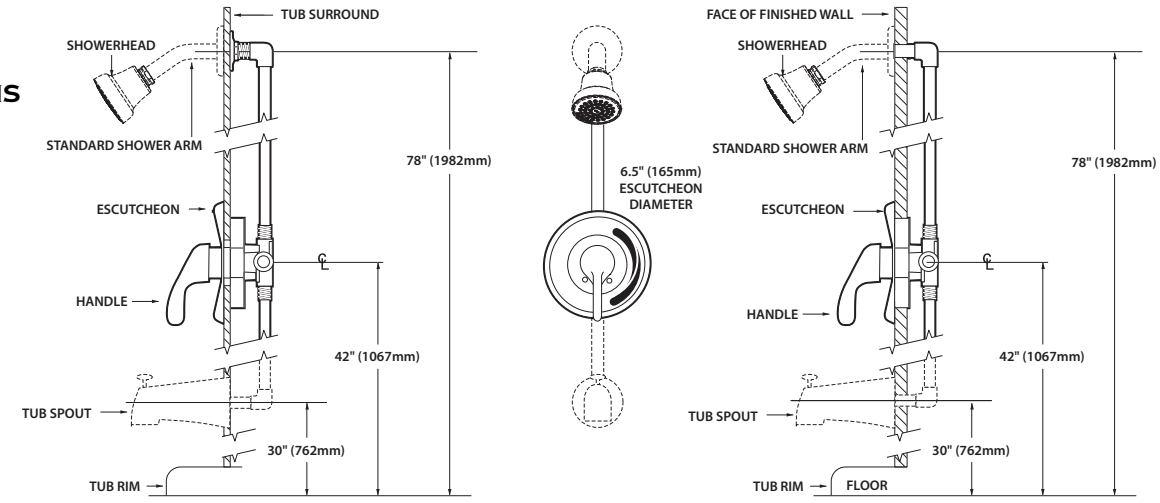
FLOW
- Showerhead limited to 1.75 gpm (6.65 L/min) MAX at 80 psi

IN-WALL VALVE SOLD SEPARATELY
- 45311 CC/Male IPS with stops
- 45312 CC/Male IPS
- 45317 Female IPS with stops
- 45318 Female IPS
- 45319 PEX connections

STANDARDS
- Third party certified to WaterSense®, ASME A112.18.1/CSA B-125.1, and all applicable requirements referenced therein
- IAPMO Green Listed
- Features red/blue hot/cold temperature indicators
- **ADA** for lever handle

WARRANTY — RESIDENTIAL, COMMERCIAL
- Ten (10) year limited warranty against defects in materials and manufacturing workmanship
- Refer to the installation instructions enclosed with each CFG product or call 1-888-450-4910 for complete warranty information

CRITICAL DIMENSIONS



THIN WALL THICK WALL

STERLING
A KOHLER COMPANY

Windham™

All-in-one HET-High Efficiency Toilet

404705

Features

- Crafted of Grade A vitreous china to provide a durable, non-porous product with a hard, glossy finish
- Optimized siphonic flush action maximizes bulk waste removal; one flush performance
- Elongated bowl has an extended rim length for comfortable use by adults
- Three-bolt quick-connect installation system
- Includes toilet seat, wax ring, and toilet bolts for easy installation
- ADA-adaptable when installed per requirements of the Accessibility Guidelines, Section 604 Water Closets, of the Act



Components

Additional included component/s: Trip lever, Bolt cap accessory pack, Bowl, Tank, Tank lid, Toilet seat, and Wax ring and hardware installation kit.

WaterSense Meets EPA Criteria
Certified by IAPMO R&T

ADA	CSA B651	OBC

Codes/Standards

ASME A112.19.2/CSA B45.1
EPA WaterSense®
ADA
ICC/ANSI A117.1
CSA B651
OBC

See website for detailed warranty information.

Available Color/Finishes

Color tiles intended for reference only.

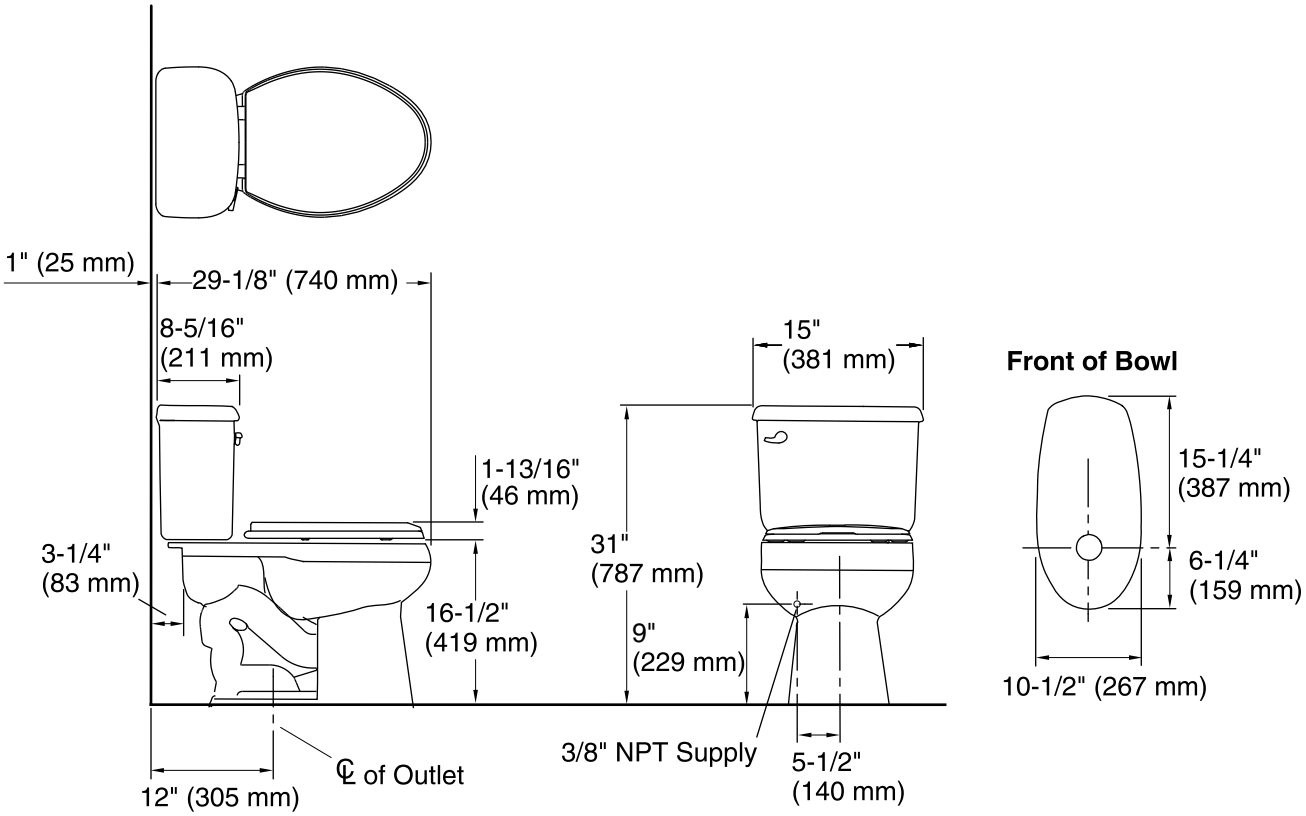
Color	Code	Description
	0	White

STERLING
A KOHLER COMPANY

Windham™

All-in-one HET-High Efficiency Toilet

404705



Technical Information

All product dimensions are nominal.

Toilet type:	Two-piece
Bowl shape:	Elongated front
Trap passageway:	2" (51 mm)
Water surface size:	8" x 10" (203 mm x 254 mm)
Rough-in:	12
Seat-mounting holes:	5-1/2" (140 mm)

Notes

Install this product according to the installation instructions.

One flush cleansing of the bowl per ASME A112.19.2/CSA B45.1 and Dual Flush toilets per ASME A112.19.14-2006 performance requirements, when installed and operated per instructions packed with the product.

This model is acceptable for left-hand Accessible compartment installations only.

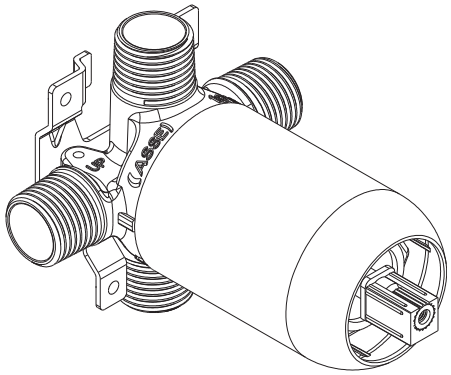
ADA, OBC, CSA B651 compliant when installed to the specific requirements of these regulations.

Plumbing codes may require elongated toilets and elongated, open-front seats in public bathrooms.

Accessibility standards may require controls to be located on the open side of the toilet.

S P E C I F I C A T I O N S H E E T

Model: 45312



Pressure Balancing Cycling In-Wall Valve

DESCRIPTION
- Brass construction
- 1/2" connections: IPS - exterior
  CC - interior
- Pressure balancing 4 port cycling valve
- Twelve (12) individual boxes per master carton

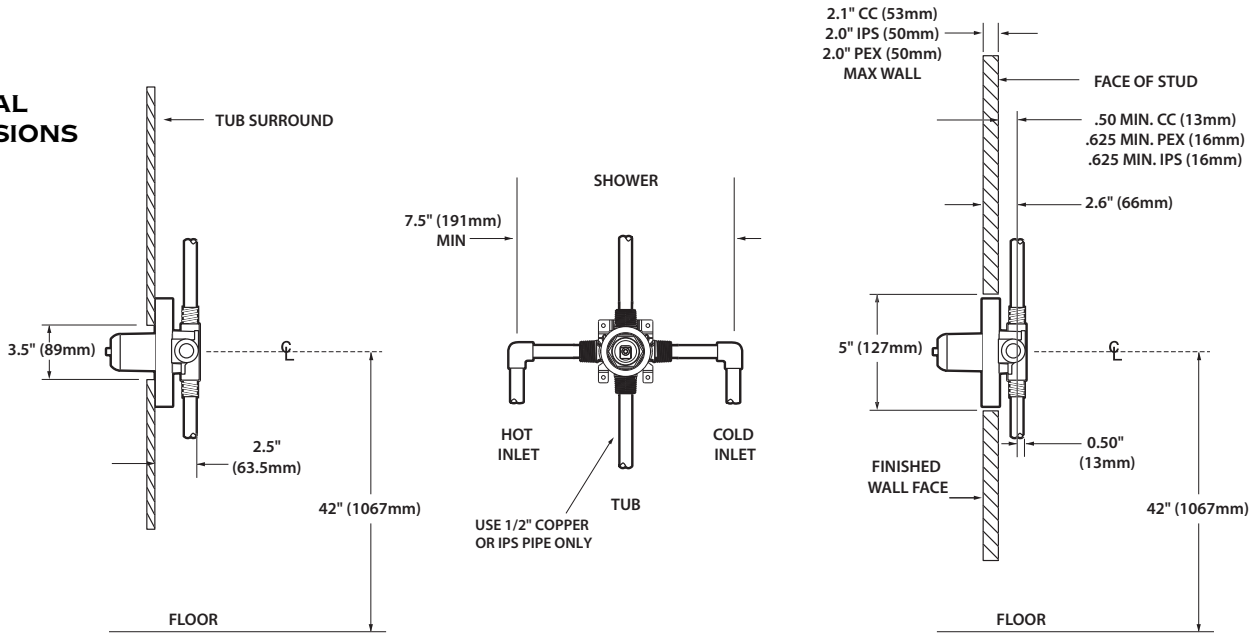
OPERATION
- Pressure balancing mechanism maintains selected discharge temperature to +- 2°F
- Adjustable temperature limit stop to control maximum hot water
- For use with stud thicknesses 2-1/2" or greater

CARTRIDGE
- European ceramic disc technology
- Non-metallic, non-ferrous, and plastic material

STANDARDS
- Third party certified to ASME A112.18.1/CSA B125.1, ASSE, and all applicable requirements referenced therein, California Proposition 65, Illinois, Massachusetts, and Texas

WARRANTY
- Ten (10) year limited warranty against defects in materials and manufacturing workmanship
- Refer to the installation instructions enclosed with each CFG product or call 1-888-450-4910 for complete warranty information.

CRITICAL DIMENSIONS



THIN WALL THICK WALL

CLEVELAND CFG FAUCET GROUP™

A Moen Incorporated Brand

SPECIFICATION SHEET

There is more than 1 version of this model.
Page down to identify the version you have.



CORNERSTONE™

Two Handle Lavatory With Metal Waste

Models:
CA40210 2H Lav with metal waste
CA40211 2H Lav with 50/50 waste
CA40213 2H Lav less waste

DESCRIPTION
- Metal construction with various finishes identified by suffix
- Includes 17ga brass or 50/50 waste pop-up type assembly where noted
- 1/2" IPS connections
- Six (6) individual boxes per master carton
- Features red/blue hot/cold temperature indicators

OPERATION
- Lever style handles
- Hot side: Turn counterclockwise to open (clockwise to close)
- Cold side: Turn clockwise to open (counterclockwise to close)
- Will operate with less than 5 lbs. of torque
- No grasping motion required to operate the faucet handles

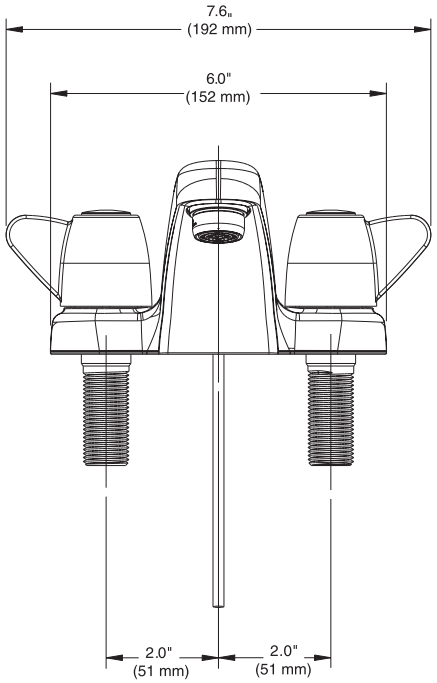
FLOW
- Water usage is limited to these maximum flow rates as indicated by the corresponding product markings
  - 1.2 gpm max (4.5L/min) at 60 psi
  - 1.5 gpm max (5.7L/min) at 60 psi

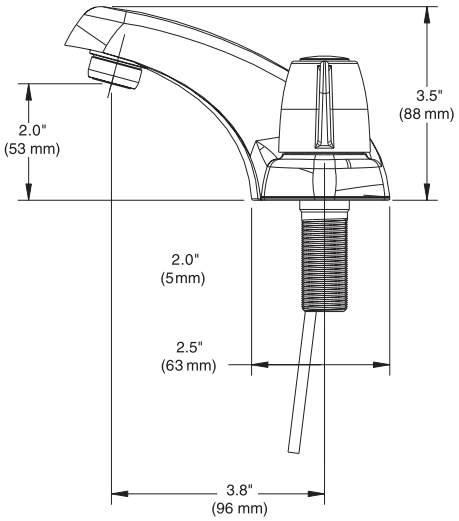
CRITICAL DIMENSIONS
- Note: This faucet is designed to be installed through 3 holes, 1" minimum diameter outer holes, 4" centers,
- Maximum deck thickness 0.875" (22 mm)
- 6 individual boxes per master carton

CARTRIDGE
- Ceramic disc technology
- Non-metallic, non-ferrous, and brass material
- Single body construction for easy replacement
- 1/4 turn movement

STANDARDS
- Third party certified to WaterSense®, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Certified to NSF 61/9 & 372
- Products marked with 1.2 gpm are compliant with California water efficiency regulations
- Complies with California Proposition 65 and the Federal Safe Water Drinking Act
- **ADA** for lever handle

WARRANTY – RESIDENTIAL, COMMERCIAL
- Ten year limited warranty against defects in materials and manufacturing workmanship
- Refer to the installation instructions enclosed with each CFG product or call 1-888-450-4910 for complete warranty information





CRITICAL DIMENSIONS

(DO NOT SCALE)

CLEVELAND CFG FAUCET GROUP™

A Moen Incorporated Brand

SPECIFICATION SHEET



DESCRIPTION
- Metal construction with various finishes identified by suffix
- Includes 17ga brass or 50/50 waste pop-up type assembly where noted
- 1/2" IPS connections
- Six (6) individual boxes per master carton
- Features red/blue hot/cold temperature indicators

OPERATION
- Lever style handles
- Hot side: Turn counterclockwise to open (clockwise to close)
- Cold side: Turn clockwise to open (counterclockwise to close)
- Will operate with less than 5 lbs. of torque
- No grasping motion required to operate the faucet handles

FLOW
- Flow is limited to 1.5 gpm max. (5.7L/min) at 60 psi, for products made before October 2008 flow is limited to 2.2 gpm max. (8.3L/min)

CRITICAL DIMENSIONS
- Note: This faucet is designed to be installed through 3 holes, 1" minimum diameter outer holes, 4" centers,
- Maximum deck thickness 0.875" (22 mm)
- 6 individual boxes per master carton

CARTRIDGE
- Ceramic disc technology
- Non-metallic, non-ferrous, and brass material
- Single body construction for easy replacement
- 1/4 turn movement

STANDARDS
- Third party certified to WaterSense®, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
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CORNERSTONE™

Two Handle Lavatory With Metal Waste

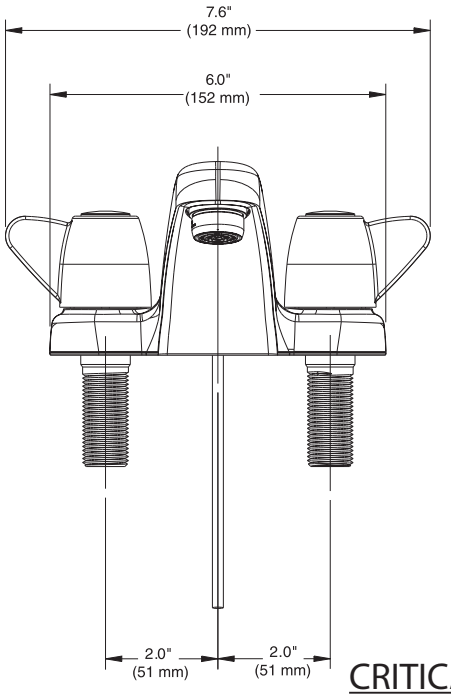
Models:

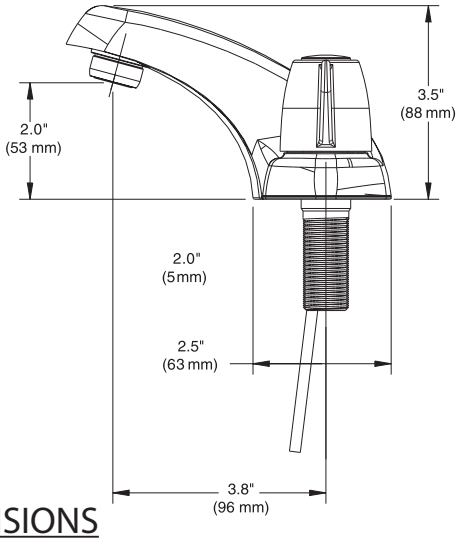
CA40210 2H Lav with metal waste

CA40211 2H Lav with 50/50 waste

CA40213 2H Lav less waste

10 YEAR NSF UPC® WaterSense Maeis EPA Criteria Certified by IAPMO R&T





CRITICAL DIMENSIONS

(DO NOT SCALE)

11/17/2016 SPC11656 5000025855 Released

S P E C I F I C A T I O N S H E E T

Model:
CA47511 series

CLEVELAND CFG FAUCET GROUP™
A Moen Incorporated Brand

Flagstone®



UPC® NSF 61/9

One Handle Kitchen

DESCRIPTION
- Metal construction with chrome plated finish
- 1/2" IPS connections
- Will accept standard cone/bevelled connection for 3/8" tubing
- Six (6) individual boxes per master carton

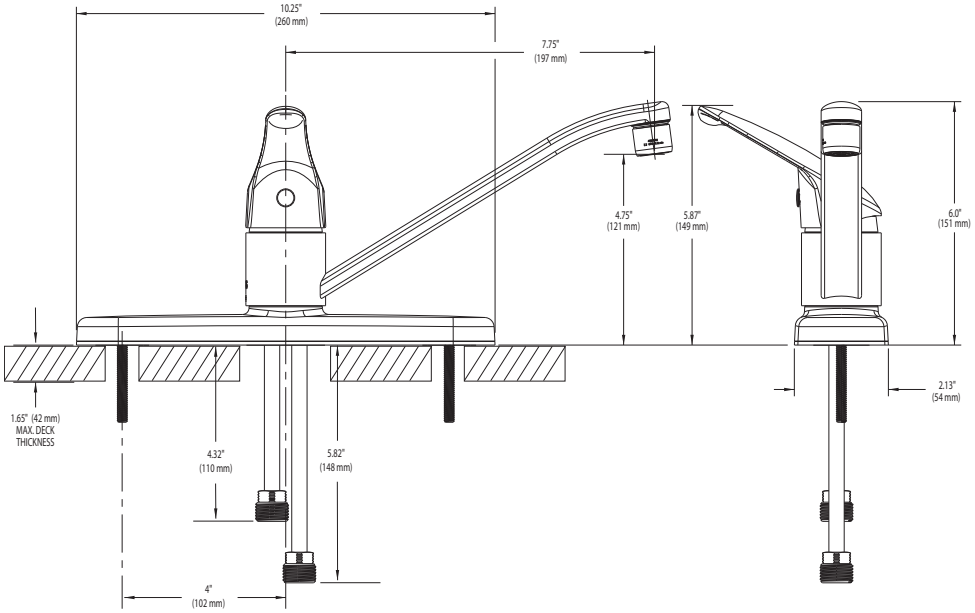
OPERATION
- Pivot action, lever style handle
- Temperature control by 90° arc
- Features international red/blue markings

FLOW
- Aerator limited to 1.5 gpm (5.7 L/min)

CARTRIDGE
- Ceramic disc technology
- Non-metallic, non-ferrous, and plastic material
- Single body construction for easy replacement

STANDARDS
- Third party certified to IAPMO Green ASME A112.18.1/CSA B-125.1, ICC A117.1, ANSI/NSF 61/9 and all applicable requirements referenced therein, the Federal Safe Drinking Water Act, California Proposition 65, Illinois,Massachusetts, and Texas
- Meets CalGreen and Georgia SB370 requirements
- Contains no more than 0.25% weighted average lead content
- All CFG products are compliant to all plumbing codes that require 3rd party certification to the applicable plumbing/fitting standards
- Feature red/blue hot/cold temperature indicators
- ADA for lever handle

WARRANTY – RESIDENTIAL, COMMERCIAL
- One year limited warranty against defects in materials and manufacturing workmanship
- Refer to the installation instructions enclosed with each CFG product or call 1-888-450-4910 for complete warranty information



CRITICAL DIMENSIONS

01/29/2015 SPC13864 3000013811
Redacted

Exhibit C

28-inch Wide Top Freezer Refrigerator - 14 cu. ft.

Model #: WRT134TFDW



A fridge for every family, a place for everything.

Additional Features

Optional Icemaker

Don't worry about refilling ice trays when you have this optional icemaker installed.

Freezer Temperature Controls

Keep frozen items ice cold with controls that allow you to adjust the temperature level in the freezer compartment.

Quiet Cooling

Keep noise down in the kitchen with a design that provides quiet cooling.

ENERGY STAR® Certified

ENERGY STAR® certified models exceed government standards to help save money on your utility bills.

View More

Specifications

Dimensions

- **Cabinet Width**

  28.0 in

- **Depth**

  32-1/8 in

- **Depth Closed Excluding Handles**

  29-7/8 in

- **Depth Closed Including Handles**

  32-1/8 in

- **Depth Excluding Doors**

  25-1/4 in

- **Depth With Door Open 90 Degree**

  55-3/4 in

- **Freezer Volume**

  3.87 cu. ft.

- **Height**

  62-7/8 in

- **Height To Top Of Cabinet**

  62-3/8 in

- **Height To Top Of Door Hinge**

  62-7/8 in

- **Refrigerator Volume**

  10.46 cu. ft.

- **Width**

  28.0 in

Configuration and Overview

- **ADA Compliant**

  Yes

- **CEE Tier**

  Tier I

- **Counter Depth**

  No

- **Prop 65**

  CALIFORNIA RESIDENTS ONLY - WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

- **UL**

UL

Appearance

- **Cabinet Finish**

  Textured

- **Door Finish**

  Textured

- **Door Style**

  Flat

- **Handle Color**

  White

- **Handle Material**

  Plastic

- **Handle Type**

  Reach-Through Handle

- **Hidden Hinge**

  No

- **Reversible Door**

  Yes

Controls

- **Automatic Defrost**

  Yes

Refrigerator Details

- **Deli Drawer**

  No

- **Lighting**

Incandescent

- **Non Climate Control Drawers**

  2 Half Width

- **Number of Interior Shelves**

  3

Freezer Details

- **Door Type**

  Swing

- **Freezer Number of Shelves**

  1

Dispenser Details

- **Dispenser Options**

  NA

- **Dispenser Type**

  No Dispenser

Icemaker Details

- **Icemaker**

  Optional

Icemaker

- **Icemaker Kit Part Number**

  ECKMF95

Certifications

- **Energy Star® Qualified**

  ENERGY STAR® Certified

- **Prop 65**

  CALIFORNIA RESIDENTS ONLY - WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Filter Details

- **Fresh Flow Air Filter**

  No

- **Produce Preserver**

  No

- **Water Filter Location**

  No

Electrical

- **Hz**

  60

Description

- **Type of Refrigerator**

  Top Freezer

Configuration

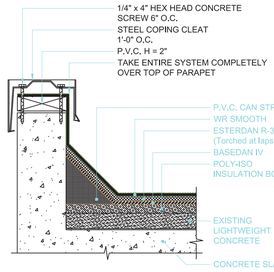
- **Installation Configuration**

  Freestanding

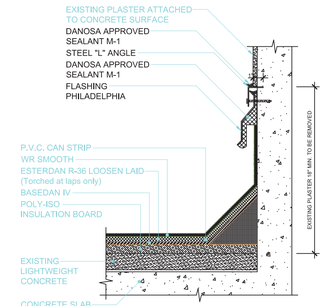
Exhibit D

EXISTING ROOF CONDITION ASSESSMENT & RECOMMENDATIONS

BUILDING	EXISTING SYSTEM		COMMENTS	RECOMMENDATIONS
4, 6, 7, 8, 17, 18		THERMOPLASTIC MEMBRANE	THERMOPLASTIC MEMBRANE BROKEN AND DETACHED AT BUILDINGS 17 AND 18. THERMOPLASTIC MEMBRANE WITH HOLES AT BUILDINGS 4 & 6; ASSOCIATED TO OBJECT IMPACTS.	REMOVE THE THERMOPLASTIC MEMBRANE, ALL GRAVEL, FLASHING AND VERTICAL SURFACE TREATMENT. THEN APPLY ONE OF THE RECOMMENDED SYSTEMS.
		ASPHALT PLY (DANOSA)		
		ASPHALT BUILT UP ROOF		
1, 2, 3, 5, 9, 10, 11, 12, 13, 14, 15,16, 19, 20, 21		THERMOPLASTIC MEMBRANE	THERMOPLASTIC MEMBRANE WITH HOLES AT BUILDINGS 1, 2, 3, 5, 9, 11 & 12; ASSOCIATED TO OBJECT IMPACTS.	REMOVE THE EXISTING SYSTEMS;. THEN APPLY ONE OF THE RECOMMENDED SYSTEMS.
		ASPHALT BUILT UP ROOF		



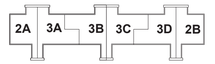
DETALLE MK'D. "A"
SCALE: 1"=1'-0"



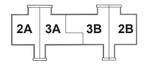
DETALLE MK'D. "B"
SCALE: 1"=1'-0"

HOUSING BUILDINGS LEGEND

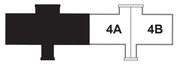
NOTES: 2A = 2B BUT MIRROR
3A = 3D BUT MIRROR
3B = 3C BUT MIRROR



TYPE I
HOUSING BUILDING TYPE I
(BUILDINGS # 02, 04, 06, 10, 20)



TYPE II
HOUSING BUILDING TYPE II
(BUILDINGS # 19, 13,09, 07, 14)



TYPE III
HOUSING BUILDING TYPE III
(BUILDINGS # 01, 03, 11, 12)



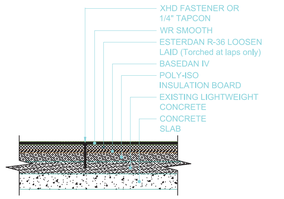
TYPE IV
HOUSING BUILDING TYPE IV
(BUILDING # 21)



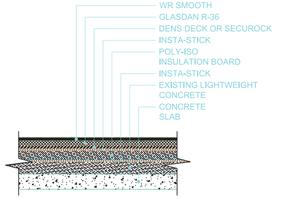
HOUSING BUILDING NUMBER

3B APARTMENT DESIGNATION BY BEDROOM COUNTING
TYPE OF CONFIGURATION
NUMBER OF ROOMS

RECOMMENDED WATERPROOFING SYSTEMS



DANOSA ROOFING (FM 1-225)
SCALE 1" = 1'-0"



DANOSA ROOFING (FM 1-240)
SCALE 1" = 1'-0"

INSTALLATION PROCEDURE

A. Place Poly-Iso rigid insulation boards loose laid or presecured.
B. Over Poly-Iso place Basedan IV and install Esterdan R-36 with XHD Fastener or 1/4" Tapcon torched laps down to the deck. Plates to be primed with Danosa Primer (ASTM D-41). Torch laps only.
C. Determine direction of roof drainage and the corresponding low points of the roof. In the installation of bituminous membranes, the direction of both ends and side laps shall be such that the direction of drainage will be over the laps.
D. Proceed with the installation of the top membrane WR Smooth (fully torched), heat fusing the entire surface to the lower membrane, Esterdan R-36.
E. Revise the upper surface of the lapping joints with a heated rounded-nosed trowel. Precaution must be taken so that the seam of the base ply of Esterdan R-36, already adhered will lay in the middle of the width of the top layer, WR Smooth.
F. Retouch seams in the WR Smooth to protect exposed asphalt during the seaming process.

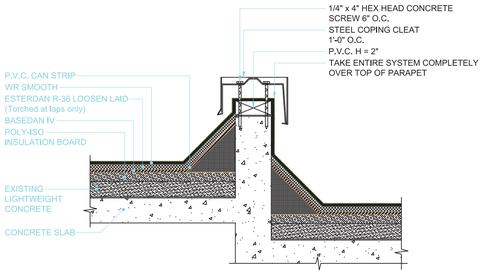
NOTES:
1. Vents are required at a minimum of one (1) vent for every 1,000 square feet, Prior to the installation of the pressure release vent, core a hole through the roofing system down to where the vent will be placed in order to vent any moisture that may be trapped in the insulated deck.

INSTALLATION PROCEDURE

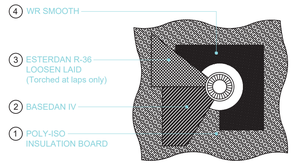
A. Over a properly clean and dry concrete deck proceed with the installation of 4'x4' Poly-Iso Insulation Boards adhered with Insta-Stick foam adhesive with 0.75" to 1.00" wide bead 12" o.c. followed by the installation of Densdeck Prime or Securock.
B. Determine direction of roof drainage and the corresponding low points of the roof. In the installation of bituminous membranes, the direction of both ends and side laps shall be such that the direction of drainage will be over the laps.
C. Proceed with the installation of the base membrane Glasdan R-36 fully torched over Densdeck previously installed.
D. Proceed with the installation of the top membrane WR Smooth (fully torched), heat fusing the entire surface to the lower membrane, Glasdan R-36 .
E. Revise the upper surface of the lapping joints with a heated rounded-nosed trowel. Precaution must be taken so that the seam of the base ply of Glasdan R-36, already adhere will lay in the middle of the width of the top layer, WR Smooth.

GENERAL NOTES:

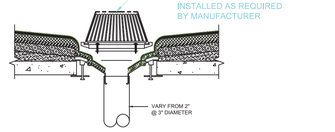
1. ALL DETAILS ARE SHOWN BY DANOSA ROOFING PRODUCTS.
2. DANOSA ROOFING PRODUCTS TO BE SELECTED BY OWNER OR CONTRACTOR.
3. ON SYSTEMS WITH GRAVEL OR MINERAL GRANULES FINISHED MEMBRANES (RM), IT IS REQUIRED TO INSTALL GLASDAN AL-80-4 AS A TOP MEMBRANE ON ALL VERTICALS (I.E. PARAPETS, INVERTED BEAMS, PENETRATIONS, ETC.) IF IT OCCURS FOR GRAPHICAL INFORMATION SEE ARCHITECTURAL DETAILS SECTION.
4. GLASDAN R-36, ALREADY ADHERED WILL LAY IN THE MIDDLE OF THE WIDTH OF THE TOP LAYER, WR SMOOTH.
5. AS MANUFACTURED BY DANOSA CARIBBEAN, INC. ACCORDING TO ASTM D-41 OR FEDERAL SPECIFICATIONS SS-A-701 OR ANY OTHER AS APPROVED BY DANOSA CARIBBEAN, INC.



DETALLE MK'D. "C"
SCALE: 1"=1'-0"



TOP PLAN VIEW



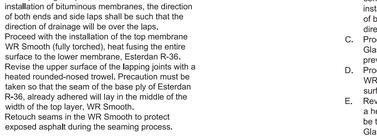
TYPICAL ROOF DRAINAGE DETAIL "F"
SCALE: 1"=1'-0"
NOTE: APPLY TO ALL EXISTING ROOF DRAINS WHERE OCCURS.

SPACE NUMBER LIST

100	KITCHEN
101	LIVING ROOM
102	BEDROOM
103	BATHROOM
104	CLOSET
105	BALCONY
106	STAIRS

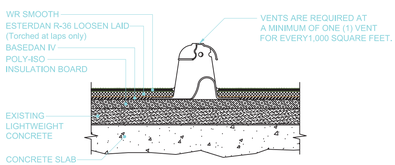
SYMBOLS KEY

- EXISTING STRUCTURE
- SELECTED TO BE DEMOLISHED
- PROPOSED C.M.U. WALLS
- PROPOSED REINFORCED CONCRETE WALL/SLABS
- GYPSUM BOARD WALLS
- BUILDING SECTION
- WALL SECTION
- BLOW UP
- SPACE NUMBER
- FLOOR STEP
- CHANGE OF MATERIAL
- DOOR MARK
- WINDOW MARK
- R.D. TYPICAL ROOF DRAIN

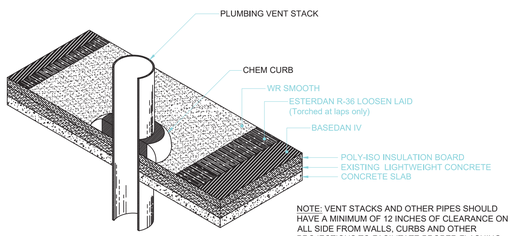


OVERFLOW DETAIL "D"
NOT TO SCALE

BULDING TYPE I TO TYPE IV TYPICAL ROOF DETAILS

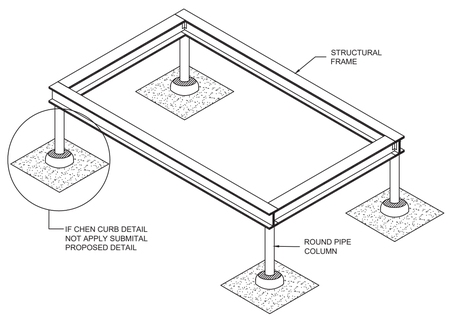


DETALLE INTERIOR DE VENTOSA
SCALE: 1"=1'-0"

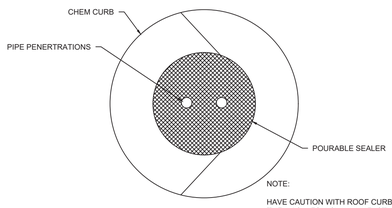


NOTE: VENT STACKS AND OTHER PIPES SHOULD HAVE A MINIMUM OF 12 INCHES OF CLEARANCE ON ALL SIDE FROM WALLS, CURBS AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.

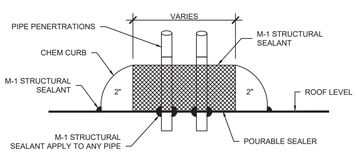
DETALLE DE VENTILADOR
NOT TO SCALE



EQUIPMENT SUPPORT STAND DETAIL
NOT TO SCALE



NOTE:
HAVE CAUTION WITH ROOF CURBS AT THE GASKET BETWEEN THE A / C A FOLLOW MANUFACTURER SPECIFICATION



CHEM CURB DETAIL
ESCALA: N.T.S.

CAMANO
architecture
CALLE COSTA 391
OFFICE 201
SAN JUAN PR 00918
T/ 787 220 8633
E/ luiscamanos@gmail.com

CLIENT
WEST CORP.
DESIGN
CARLOS M PEREZ RIVERA, PE
DRWN BY
CMPR
CHK'D BY
CMPR
DATE
JAN.16.2019

REVISIONS

1	JAN.22.2019

CERTIFIED CORRECT

Carlos Manuel Pérez Rivera
Ingeniero Licenciado
Lic. 19137 P.E.
Puerto Rico
Fecha de Expiración: 2023-09-19

CARLOS M. PÉREZ RIVERA
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PO Box 314
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cpingenieros@outlook.com

CPR Ingenieros

NOTE

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PROJECT
MIRADOR LAS CASAS APARTMENTS
FULL REHABILITATION
SANTURCE, PR

TITLE
BUILDING TYPE I TO IV
TYPICAL ROOF DETAILS

PAGE
A-1.23
1 OF 1

Certificación: Yo, Carlos M. Pérez Rivera, Ingeniero Licenciado Num. 19137, certifico que soy el profesional que diseñó estos planos y las especificaciones complementarias. También certifico que en Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido sin conocimiento o por negligencia, ya sea por mi, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OIGPe y otras autoridades competentes, incluyendo, pero sin limitarse, a la terminación de la participación en los procedimientos de certificación profesional en la OIGPe.

Multi-Max® FA-3

Insulation for Above the Deck

ROOF
WALL
SPECIALTY

PRODUCT DESCRIPTION

Rmax Multi-Max® FA-3 is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam core bonded to glass fiber/organic mat facers on both sides.

COMPLIANCES

- ASTM C1289 Type II, Class 1
- International Building Code (ICC) Chapter 26 Section 2603, Foam Plastic
- ASHRAE 90.1
- Miami-Dade County Product Control Approved
- Florida Product Approval (FL11207)
- RR 25378, City of Los Angeles Research Report
- CA Insulation Directory
- Factory Mutual – Class 1 roofing insulation per FM Standard 4450/4470 (1.5" minimum thickness). Multi-Max® FA-3 is subject to the conditions of approval as a roof insulation when installed as described in the current edition of the FMRC "Approval Guide". Refer to FM Approvals RoofNav for specific system details.
- Underwriters Laboratories – UL listed and labeled as shown in UL Certifications Directory:
  - Class A for External Flame – UL Standard 790
  - Class A for Internal Flame – UL Standard 1256
  - Fire Rated Roof/Ceiling Assemblies – UL Standard 263

APPLICATIONS

Built-up roof; modified bitumen; fully adhered single ply; mechanically attached single ply; loose laid ballasted single ply; metal panel roofing

THERMAL PROPERTIES / PRODUCT DATA

"R" means resistance to heat flow. The higher the R-value, the greater the insulating power.

Nominal Thickness[1]	Long Term Thermal Resistance (LTTR)[2]	Bundle Data[3] (48" x 96")		Truckload Data (48" x 96")	
Inches		Pieces	Sq. Ft.	Pieces	Sq. Ft.
1.50	8.6	32	1,024	768	24,576
1.75	10.0	27	864	648	20,736
2.00	11.4	24	768	576	18,432
2.50	14.4	19	608	456	14,592
2.60	15.0	18	576	432	13,824
3.00	17.4	16	512	384	12,288
3.10	18.0	15	480	360	11,520
3.50	20.5	13	416	312	9,984
4.00	23.6	12	384	288	9,216
4.25	25.2	11	352	264	8,448
4.50	26.8	10	320	240	7,680

[1]The 1.50" and thicker products are approved for FM Class 1-90 wind uplift.
[2]LTTR values are determined in accordance with CAN/ULC-S770. LTTR predicts a 15-year, time-weighted average.
[3]Multi-Max® FA-3 is shipped in bundles that are approximately 48" high and wrapped in plastic for easy handling.
NOTE: Metal deck flute span shall be a maximum of 4 3/8".

Visit www.rmax.com for a complete list of thicknesses and packaging information.

TYPICAL PHYSICAL PROPERTIES

Physical properties shown are based on data obtained under controlled conditions and are subject to normal manufacturing tolerances.

Property	Test Method	Results
Density, Overall, Nominal	ASTM D1622	2.0 pcf
Compressive Strength	ASTM D1621	20 psi[1]
Flame Spread, Core[2]	ASTM E84	25 - 60
Smoke Developed, Core[2]	ASTM E84	75 - 160
Water Vapor Transmission	ASTM E96	< 1.5 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability Length and Width	ASTM D2126	< 2% Linear Change
Service Temperatures		250°F max

[1]Also available in Grade 2 or Grade 3 upon request.
[2]Flame Spread and Smoke Developed Indexes are used to measure and describe the properties of this material in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of this material and other related roofing components under actual fire conditions.

APPLICATION / INSTALLATION

General - Multi-Max® FA-3 is applied to the roof deck in order to provide a continuous layer of thermal insulation and a suitable substrate for the application of many different kinds of roofing membranes available in the market today.

Refer to *Rmax Polyiso Roof Insulation Fastening Guide* for details on fastening patterns, thickness requirements and approved washers. Multi-Max® FA-3 must be secured to steel or wood roof decks with FM listed mechanical screw and plate fasteners. It may be secured to other types of "nailable" decks with suitable mechanical fasteners for that type of "nailable" deck. Multi-Max® FA-3 shall be adhered to properly prepared concrete roof decks with hot bitumens or air-cured polyurethane foam adhesives. For applications utilizing hot bitumens, the asphalt should be applied at its recommended equiviscous temperature (EVT) plus or minus 25°F. Adhesives shall be used in strict accordance with recommended installation procedures as supplied by the manufacturer. NOTE: Panel size shall be limited to 4'x 4' when hot bitumens are used or when the insulation is being installed over concrete decks. No more insulation shall be laid than can be covered with the completed membrane system by the end of the day's work. Refer to PIMA Technical Bulletin 109 for storage and handling recommendations.

Rmax strongly recommends that the decision to use or not use a vapor retarder in any insulated roofing assembly be guided by the recommendations of the National Roofing Contractors Association (NRCA) in the latest edition of the "NRCA Roofing and Waterproofing Manual".

Designers and installers are referred to Rmax publication "General Notes for Use of Rmax Roofing Insulations in Low Slope Applications," for specifics regarding construction applications utilizing Rmax roof insulation products.

Multi-Layer Insulation Systems - Rmax recommends two layers of insulation whenever the total insulation requirement exceeds 3.0" to reduce thermal bridging, moisture migration and system movement. Joints should be offset between the insulation layers as well as between the insulation and cover board.

LIMITATIONS

Multi-Max® FA-3 is not recommended nor warranted for use in inverted or protected roofing membrane systems (IRMA). Multi-Max® FA-3 is not a structural panel.

WARNING

DO NOT leave Multi-Max® FA-3 exposed. Polyiso foam is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity and may contribute to flames spreading.

WARRANTY

See Rmax "Sales Policy" for warranty conditions. Rmax does not assume any responsibility or liability for the performance of any products other than those manufactured by Rmax. **NOTE: All Rmax products must be tarped, placed on skids and kept dry before and throughout construction. Requests for Certification Letters and/or special warranty considerations must be submitted to Rmax Sales prior to delivery of the products.**

Rmax Sales Offices and Plant Locations

Central:
13524 Welch Road
Dallas, Texas 75244

Phone: 972-387-4500
Fax: 972-387-4673
Toll Free: 1-800-527-0890

East:
1649 South Batesville Road
Greer, South Carolina 29650

Phone: 864-297-1382
Fax: 864-234-7548
Toll Free: 1-800-845-4455

West:
210 Lyon Drive
Fernley, Nevada 89408

Phone: 775-575-4849
Fax: 775-575-5035
Toll Free: 1-800-762-9462

E-mail us at rmax@rmax.com or visit our website www.rmax.com

2017-12

Proudly Made and Engineered in the U.S.A.

PIMA POLYISOCYANURATE INSULATION MANUFACTURERS ASSOCIATION

Exhibit E

Specifications



Product Type
Flush Mount Lighting
See Similar Items

Compatible Bulb Type
Integrated LED
See Similar Items

Damp/Wet Rating
Wet Rated
See Similar Items

Shape
Dome
See Similar Items

Style
Traditional
See Similar Items

Shade Material
Acrylic
See Similar Items

Dimensions

Fixture Height (In.)	1
Fixture Width (In.)	5.75
Product Height (in.)	1
Product Width (in.)	5.75 in
Shade Diameter (in.)	5.75

Details

Actual Color Temperature (K)	2700
Actual Color Temperature (K) - Color Temperature	2700K - Soft White
Color Rendering Index (CRI)	90
Color Temperature	Soft White
Commercial/Residential	Commercial,Residential
Compatible Bulb Type	Integrated LED
Damp/Wet Rating	Wet Rated
Features	No Additional Features
Fixture Color/Finish	Satin Nickel
Fixture Color/Finish Family	Nickel
Fixture Material	Aluminum
Glass Type	Frosted Glass
Included	Installation Instructions,Mounting Brackets
Indoor/Outdoor	Indoor
Integrated LED Type	Standard
Light Bulb Type Included	Integrated LED
Lumens	800
Maximum Bulb Wattage	12
Package Quantity	1
Product Type	Flush Mount Lighting
Product Weight (lb.)	0.4
Returnable	90-Day
Shade Color Family	White
Shade Material	Acrylic
Shade Product Type	With Shade
Shape	Dome
Style	Traditional
Voltage	Line Voltage
Watt Equivalence	60

Warranty / Certifications

Certifications and Listings	CSA Listed,ETL Listed
Manufacturer Warranty	1 Year Limited Manufacturer

Specifications

Dimensions

Product Height (in.)	5.9	Shade Diameter (in.)	8.6
Product Width (in.)	11.4		

Details

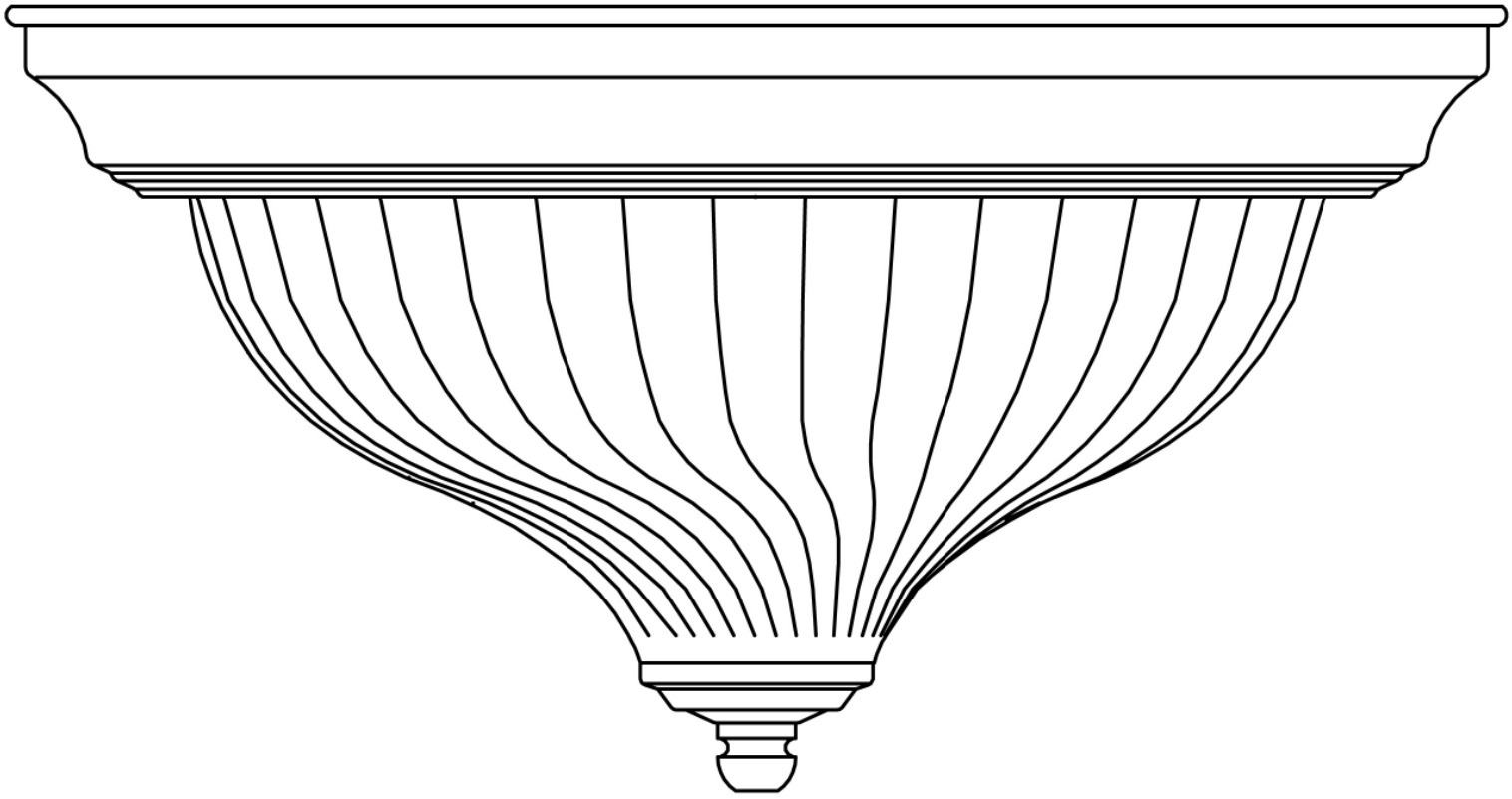
Commercial/Residential	Residential	Number of Bulbs Required	2
Compatible Bulb Type	CFL,Incandescent,LED	Package Quantity	1

Features	Dimmable	Product Weight (lb.)	2.35lb
Fixture Color/Finish	Oil Rubbed Bronze Finish	Recommended Light Bulb Shape Code	A19
Fixture Color/Finish Family	Bronze	Returnable	90-Day
Fixture Material	Steel	Shade Color Family	Bronze
Glass Type	Frosted Glass	Shade Material	Glass
Included	Installation Instructions,Mounting Brackets	Shade Product Type	With Shade
Indoor/Outdoor	Indoor	Shape	Globe
Light Bulb Base Code	E26	Style	Cottage
Maximum Bulb Wattage	60	Voltage	Line Voltage

INSTRUCTION MANUAL

2LT Interior Flushmount

The Home Depot SKU 370-830 (UPC 6940500310527) (brushed nickel)
The Home Depot SKU 385-740 (UPC 6940500310312) (white)
The Home Depot SKU 596-148 (UPC 6940500313641) (oil rubbed bronze)



Thank you for purchasing this Hampton Bay interior flushmount. This product has been manufactured with the highest standards of safety and quality.

FEATURES:

1. Two-light interior flushmount in brushed nickel finish (SKU 370-830), white finish (SKU 385-740) or oil rubbed bronze finish (SKU 596-148) with frosted swirl glass.

2. This fixture has been engineered to safely use two 60 watt medium base incandescent light bulbs (do not exceed 60 watts each) (not included).

3. For energy savings, this fixture has been engineered to safely use up to two standard base compact fluorescent light bulbs (for equivalent light output, do not exceed 15 watts each) (not included).

QUESTIONS, PROBLEMS, MISSING PARTS:

Before returning to your local The Home Depot, please call our Customer Service Team at 1-877-527-0313 or visit www.homedepot.com. Please reference your SKU (370-830 brushed nickel fixture, 385-740 white fixture or 596-148 oil rubbed bronze fixture) or UPC (6940500310527 brushed nickel fixture, 6940500310312 white fixture or 6940500313641 oil rubbed bronze fixture).

CAUTION:

1. Before starting installation of this fixture or removal of a previous fixture, disconnect the power by turning off the circuit breaker or by removing the fuse at the fuse box.

2. CONSULT A QUALIFIED ELECTRICIAN IF YOU HAVE ANY ELECTRICAL QUESTIONS.

3. If you have any non-electrical questions about this fixture, please contact our Customer Service Team at 1-877-527-0313 or visit www.homedepot.com. Please reference your SKU (370-830 brushed nickel fixture, 385-740 white fixture or 596-148 oil rubbed bronze fixture) or UPC (6940500310527 brushed nickel fixture, 6940500310312 white fixture or 6940500313641 oil rubbed bronze fixture).

4. Keep your receipt and these Instructions for Proof of Purchase.

TOOLS REQUIRED FOR ASSEMBLY & INSTALLATION (not included):



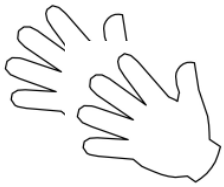
2 Light Bulbs
(60 watt maximum)
(or CFL equivalent)



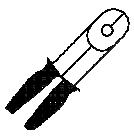
Safety Goggles



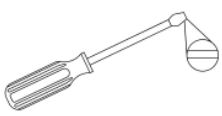
Ladder



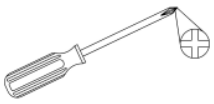
Gloves



Wire Strippers



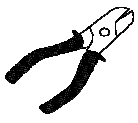
Flathead Screwdriver



Phillips Screwdriver



Electrical Tape



Wire Cutters

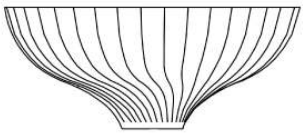
PARTS INCLUDED FOR ASSEMBLY (parts are not to scale):



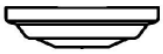
1ea Hex Nut (#5)



1ea Nipple (#6)



1ea Shade (#7)



1ea Bottom Cover (#8)



1ea Finial (#9)

ASSEMBLY INSTRUCTIONS:

1. Carefully unpack the fixture. Lay out all parts on a clean surface.

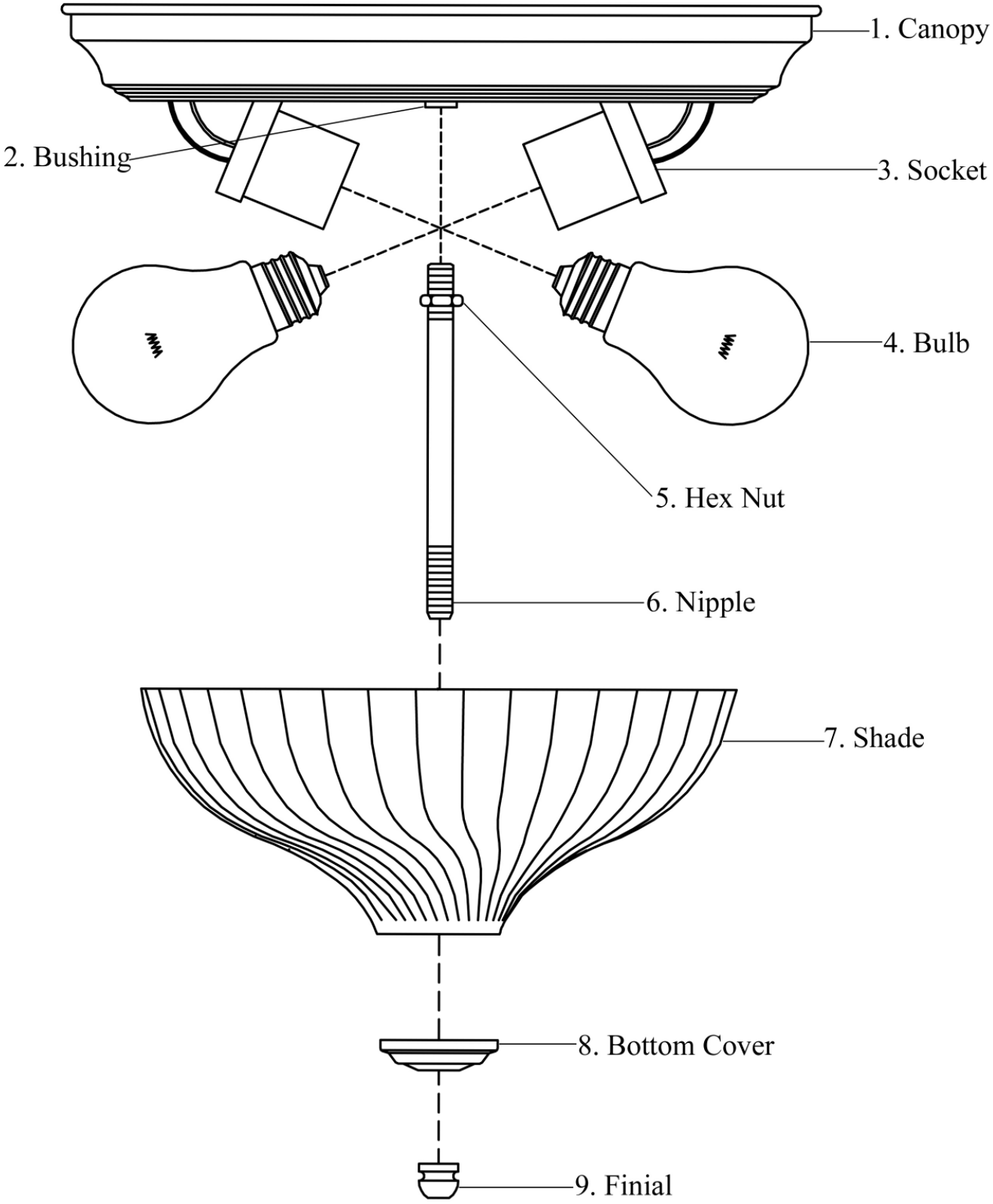
2. Unscrew the Finial (#9) from the Nipple (#6). Screw the Nipple (#6) into the Bushing (#2). Secure the Nipple (#6) into position using the Hex Nut (#5) as a guide.

3. Before continuing Assembly, please proceed to the Installation Instructions.

4. Install two 60 watt medium base incandescent light Bulbs (#4) (not included) or two equivalent standard base compact fluorescent light bulbs (not included) in the Sockets (#3) in the fixture.

5. Place the Shade (#7) and the Bottom Cover (#8) over the Nipple (#6). Screw the Finial (#9) onto the Nipple (#6) to secure the Shade (#7).

ASSEMBLY:


1. Canopy
2. Bushing
3. Socket
4. Bulb
5. Hex Nut
6. Nipple
7. Shade
8. Bottom Cover
9. Finial

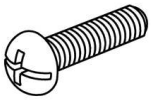
PARTS INCLUDED FOR INSTALLATION (parts are not to scale):



3ea Wire Connectors (#11)



2ea Outlet Box Screws (#12)



2ea Mounting Screws (#13)



1ea Mounting Strap (#14)



1ea Ground Screw (#15)

INSTALLATION INSTRUCTIONS:

1. Screw the two Mounting Screws (#13) into the Mounting Strap (#14). Mount the Mounting Strap (#14) to the Outlet Box (#10) using the two Outlet Box Screws (#12). [Make sure the heads of the Mounting Screws (#13) are facing outside when the Mounting Strap (#14) is attached to the Outlet Box (#10).]

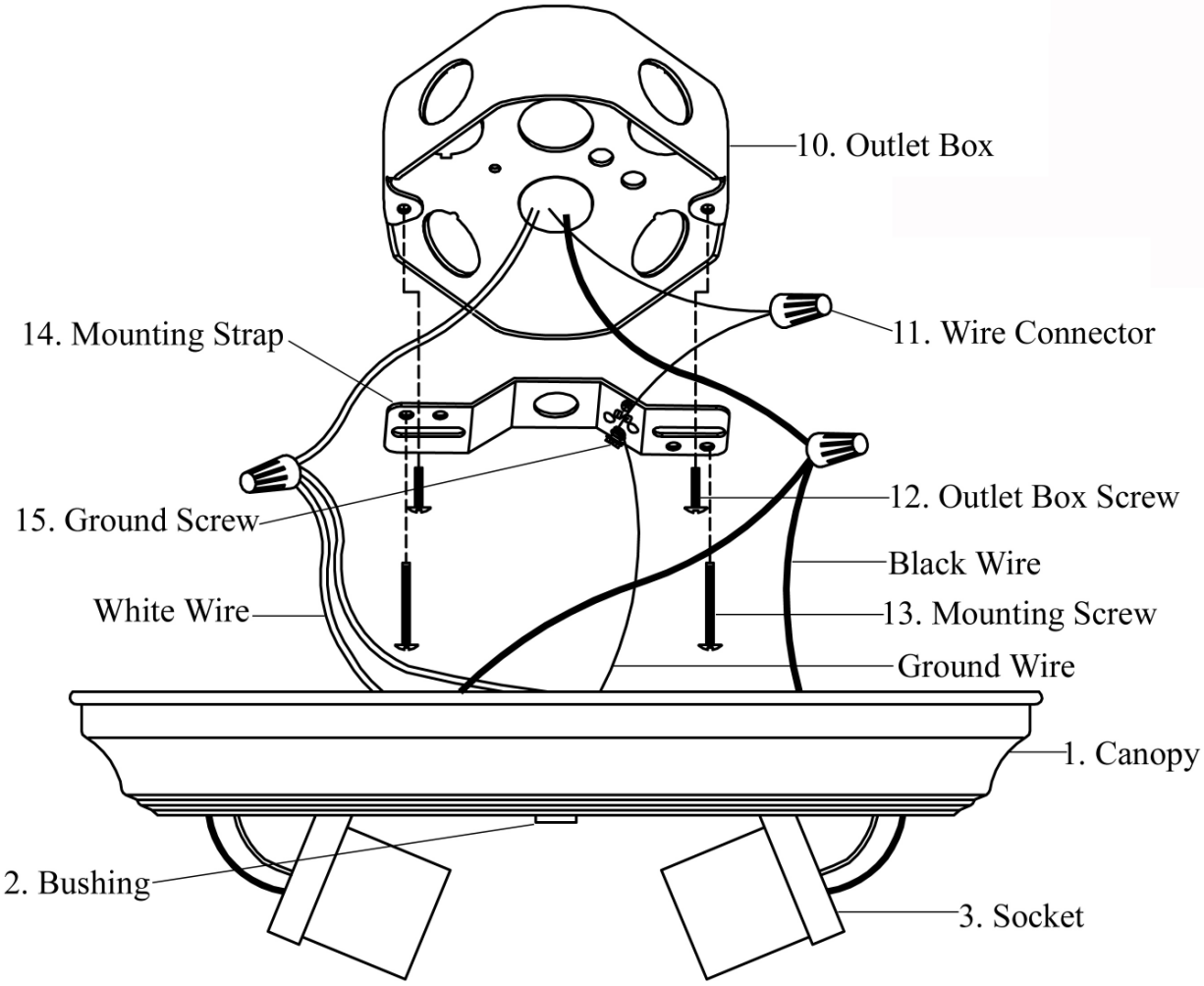
2. Wrap the ground wire from the fixture around the Ground Screw (#15) on the Mounting Strap (#14), and then connect the ground wire from the fixture to the ground wire from the Outlet Box (#10). Connect the white wire from the fixture to the white wire (neutral wire) from the Outlet Box (#10). Connect the black wire from the fixture to the black wire (live wire) from the Outlet Box (#10). Cover the three connections using the three Wire Connectors (#11). Wrap the three wire connections with electrical tape for a more secure connection. Position the wires back inside the Outlet Box (#10). *Note: If you have electrical questions, consult your local electrical code for approved grounding methods.*

3. Place the Canopy (#1) over the Outlet Box (#10). Allow the heads of the Mounting Screws (#13) to come out through the large ends of the keyholes on the Canopy (#1). Twist the Canopy (#1) until the heads of the Mounting Screws (#13) slide into the narrow ends of the keyholes. Tighten the Mounting Screws (#13) to secure the Canopy (#1).

4. Before completing Installation, please return to Assembly Instruction #4.

5. Installation is complete. Turn on the power at the circuit breaker or fuse box. Turn the light switch on to activate the fixture.

INSTALLATION:



TROUBLESHOOTING:

Problem	Possible Cause	Corrective Action
Light bulb will not illuminate.	1. Light bulb is burned out.	1. Replace light bulb.
	2. Power is off.	2. Make sure power supply is on.
	3. Faulty wire connection.	3. Check wiring.
	4. Faulty switch.	4. Test or replace switch.
Fuse blows or circuit breaker trips when light bulb is illuminated.	Crossed wires or power wire is grounding out.	Check wire connections.

PRODUCT MAINTENANCE:

1. To clean the outside of the fixture, use a dry or slightly dampened clean cloth (use clean water, never a solvent) to wipe the glass and surface of the fixture.

2. To clean the inside of the fixture, first disconnect power to the fixture by turning off the circuit breaker or by removing the fuse at the fuse box. Next, use a dry or slightly dampened clean cloth (use clean water, never a solvent) to wipe the inside glass and interior surface of the fixture.

3. Do not use any cleaners with chemicals, solvents or harsh abrasives. Use only a dry soft cloth to dust or wipe carefully.

LIMITED WARRANTY

The manufacturer warrants this lighting fixture to be free from defects in materials and workmanship for a period of five (5) years from date of purchase. This warranty applies only to the original consumer purchaser and only to products used in normal use and service. If this product is found to be defective, the manufacturer's only obligation, and your exclusive remedy, is the repair or replacement of the product at the manufacturer's discretion, provided that the product has not been damaged through misuse, abuse, accident, modifications, alterations, neglect or mishandling. This warranty shall not apply to any product that is found to have been improperly installed, set-up, or used in any way not in accordance with the instructions supplied with the product. This warranty shall not apply to a failure of the product as a result of an accident, misuse, abuse, negligence, alteration, or faulty installation, or any other failure not relating to faulty material or workmanship. This warranty shall not apply to the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear. **The manufacturer does not warrant and specially disclaims any warranty, whether express or implied, of fitness for a particular purpose, other than the warranty contained herein. The manufacturer specifically disclaims any liability and shall not be liable for any consequential or incidental loss or damage, including but not limited to any labor / expense costs involved in the replacement or repair of said product.**

Model # 7791-30B Internet #203355666 Store SKU #



Save to Favorites

Newport Coastal

Black Coastal Jelly Jar

★★★★½ (18) Write a Review

Sku #: 926207

Internet #: 203355666

Newport Coastal is synonymous with long-lasting decorative outdoor light fixtures that hold up against the harshest weather. The Coastal Jelly Jar in Black is no exception. Whether it's salty sea air, blistering desert sun, or rainy and humid climates, this fixture with contemporary styling will not fade, corrode or disintegrate.

- UV resistant
- Corrosion resistant
- Fade resistant
- Clear, beveled glass "jar"
- Click here for more information on Electronic Recycling Programs

Live Chat

Specifications ›

Dimensions

Product Depth (in.)	5
Product Height (in.)	6
Product Length (in.)	4.75
Product Width (in.)	6.38

Details

Exterior Lighting Product Type	Outdoor Lanterns
Fixture Color/Finish	Black
Fixture Material	Plastic
Glass/Lens Type	Clear
Included	
Hardware Included	
Light Bulb Base Code	E26
Light Bulb Type Included	No Bulbs Included
Maximum Bulb Wattage	60
Maximum Wattage (watts)	60
Number of Bulbs Required	1
Outdoor Lighting Features	Weather Resistant
Power Type	Hardwired
Product Weight (lb.)	1.3lb
Recommended Light Bulb Shape Code	A19
Returnable	90-Day
Size	Small
Style	Modern
Style	Modern,Transitional
UL Listing	1-UL Listed

Warranty / Certifications

Exhibit F

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

Decorative Indoor

LED Low Profile Round

Flush Mount



HIGH-PERFORMANCE LED

FEATURES & SPECIFICATIONS

INTENDED USE

Provides general illumination in commercial and residential applications. Ideal for use in closets, foyers, hallways, corridors, bedrooms, offices, utility work areas, stairways and more.

CONSTRUCTION

Features a white acrylic diffuser and is available in 11″ and 14″ sizes. Hidden cam-latches provide easy diffuser removal for installation and maintenance.

OPTICS

11″ units produce 1100 lumens and 14″ units produce 1600 lumens, both at 50,000 hours life.

ELECTRICAL

Fixture operates at 120 volts, 60 Hz. 11″ Standard input = 16 watts, 69 lumens per watt.

14″ Standard input = 24 watts, 67 lumens per watt.

Works with most standard incandescent dimmers (see list of approved dimmers).

INSTALLATION

All mounting hardware included.

LISTINGS

cUL Certified to US and Canadian standards and listed suitable for damp locations.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Specifications subject to change without notice.

Specifications

Height: FMLRL 11 – 2-7/8 (7.3)
FMLRL 14 – 3-1/8 (7.9)

Width: FMLRL 11 – 11 (27.9)
FMLRL 14 – 13-11/16 (34.7)

All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION For shortest lead times, configure product using **bolded options.**

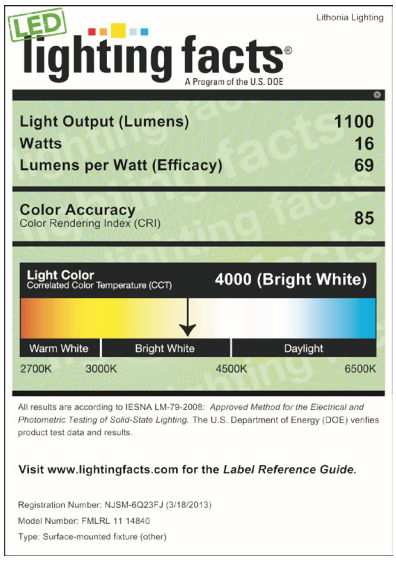
Example: FMLRL 11 14840

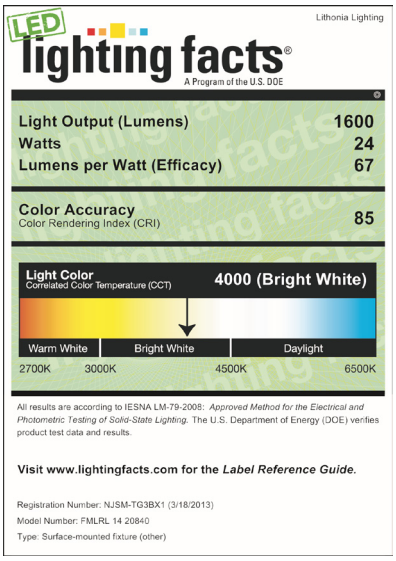
Series		Module/CRI		Color temperature	
FMLRL 11	11″ LED low profile round flush mount	**148**	>80	**40**	4000 K
FMLRL 14	14″ LED low profile round flush mount	**208**	>80	35	3500 K[1]
				30	3000 K
				27	2700 K[1]

Notes
1 Minimum 90-day lead time for non-standard color temperatures; minimum 50 order quantity.

LED Low Profile Round Flush Mount

LIGHTING FACTS





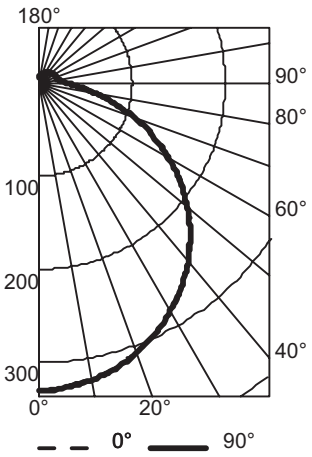
SUGGESTED DIMMERS

The FMLRL is designed to operate with most standard Triac Based (Forward Phase-Control or Leading Edge) dimmers and is not compatible with 0-10v dimming systems. The following is a list of dimmers tested and does not imply any guarantee or warranty of compatibility with a particular application. Unlisted dimmers do not imply non-compatibility.

Manufacturer	Part number(s)
Leviton	6633P
	IPL06
	6674P
	IPE04
	Trimatron 600W
Lutron	DVELV 300P
	Skylark 300P
	NTELV 300
	NLV 600
Synergy	ISD 600 I 120

PHOTOMETRICS

FMLRL 11 14840, test no. LTL23006, tested in accordance to IESNA LM-79.



CP Summary

	0°	90
0°	330	330
5°	327	328
15°	317	318
25°	296	296
35°	266	267
45°	230	230
55°	187	186
65°	137	135
75°	86	84
85°	44	42
90	31	30

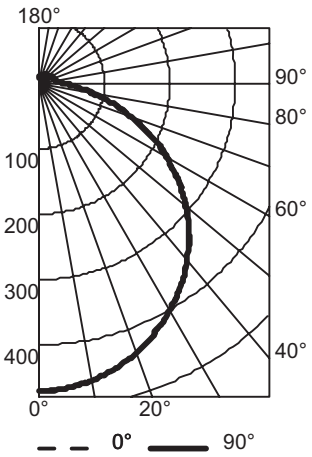
Coefficients of Utilization

pf		20%								
pc		80%			70%			50%		
pw		70%	50%	30%	50%	30%	10%	50%	30%	10%
RCR	0	117	117	117	113	113	113	106	106	106
	1	105	100	95	97	92	88	90	87	84
	2	95	86	79	83	77	71	78	73	68
	3	86	75	67	73	65	59	68	62	56
	4	79	66	57	64	56	49	61	53	48
	5	72	59	50	57	49	42	54	47	41
	6	67	53	44	52	43	37	49	41	36
	7	62	48	39	47	38	32	44	37	31
	8	57	44	35	43	34	29	40	33	28
	9	54	40	32	39	31	26	37	30	25
	10	50	37	29	36	28	23	34	27	23

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	258	22.1	22.1
0° - 40°	425	36.5	36.5
0° - 60°	771	66.1	66.1
0° - 90°	1051	90.1	90.1
90° - 120°	72	6.2	6.2
90° - 130°	87	7.5	7.5
90° - 150°	107	9.2	9.2
90° - 180°	115	9.9	9.9
0° - 180°	1166	100.0	100.0

FMLRL 14 20840, test no. LTL23005, tested in accordance to IESNA LM-79.



CP Summary

	0°	90
0°	470	470
5°	467	468
15°	451	452
25°	421	420
35°	380	378
45°	327	324
55°	265	260
65°	195	188
75°	120	114
85°	58	56
90	39	38

Coefficients of Utilization

pf		20%								
pc		80%			70%			50%		
pw		70%	50%	30%	50%	30%	10%	50%	30%	10%
RCR	0	117	117	117	113	113	113	106	106	106
	1	106	100	96	97	93	89	91	88	85
	2	96	87	79	84	77	72	79	74	69
	3	87	76	67	74	66	59	69	63	57
	4	79	67	58	65	57	50	61	54	48
	5	73	60	50	58	49	43	55	47	42
	6	67	53	44	52	43	37	49	42	36
	7	62	48	39	47	39	33	45	37	32
	8	58	44	35	43	35	29	41	34	28
	9	54	40	32	39	32	26	38	31	26
	10	50	37	29	36	29	24	35	28	23

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	366	22.8	22.8
0° - 40°	604	37.6	37.6
0° - 60°	1090	67.8	67.8
0° - 90°	1472	91.6	91.6
90° - 120°	86	5.3	5.3
90° - 130°	103	6.4	6.4
90° - 150°	125	7.8	7.8
90° - 180°	135	8.4	8.4
0° - 180°	1607	100.0	100.0

DECORATIVE INDOOR: One Lithonia Way, Conyers, GA 30012 Phone: 800-748-5070 Fax: 770-860-3903 www.lithonia.com

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LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

QUANTUM®

Contemporary Commercial LED Emergency Light



ELM2L
Aimable Optics



ELM2LF
Fixed Optics

LITHIUM IRON PHOSPHATE
Nickel Cadmium

FEATURES & SPECIFICATIONS

INTENDED USE — Provides a minimum of 90 minutes illumination for the rated wattage upon loss of AC power to meet and exceed code required emergency lighting. Ideal for applications requiring attractive LED unit equipment with quick installation and unparalleled performance for lower mounting heights. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.**

CONSTRUCTION — The housing is a standard white (black optional) thermoplastic with a compact and low-profile contemporary design. It is 5VA flame rated, impact-resistant, scratch-resistant and corrosion proof. The UV-stable resin resists discoloration from natural and man-made light sources. There is a low-profile, integrated and back-lit test switch with an easily visible multi-color LED status indicator. The back-plate contains a universal j-box mounting pattern to facilitate ease of installation on a wide variety of j-boxes and the front housing allows tool-less access for ease of maintenance.

ELM2LF: Fixed lamp head arrangement for ease of installation and maximum path of egress aiming coverage with no aiming required for wall mount applications.

ELM2L: Unique track and swivel arrangement permits full range of direction for lamp head adjustment.

OPTICS — Both the ELM2L and ELM2LF feature two, high performance LEDs with acrylic lens' rated at 1.2 watts each and delivering a total of 220 lumens in a linear pattern (LP220L). The typical life of an LED is 10 years. The LED light sources typically never need to be replaced under normal conditions for normal off applications.

CCT: 5000K.

ELECTRICAL — Orderable in multiple voltages (see ordering tree for specific voltages).

Current-limiting charger maximizes battery life and minimizes energy consumption and provides low operating costs. Small battery chargers Certified in the CA Title 20 Appliance Efficiency Database.

Short-circuit protection — current-limiting charger circuitry protects printed circuit board from shorts.

Regulated charge voltage maintains constant-charge voltage over a wide range of line voltages.

Prevents over/undercharging that shortens battery life and reduces capacity. Filtered charger input minimizes charge voltage ripple and extends battery life.

BATTERY: Sealed, maintenance-free nickel-cadmium or Lithium Iron Phosphate.

Lithium Iron Phosphate battery powers both on board LEDs and up to 2.4W additional LED remote lamp heads simultaneously or offers extended run-time up to 3 hours.

SELF-DIAGNOSTICS and REMOTE TEST (SDRT option):

Automatic 24-hour recharge after a 90-minute discharge.

Advanced electrical design provides constant light output throughout the entire discharge period.

Brownout protection is automatically switched to emergency mode when supply voltage drops below approximately 80 percent nominal of 120, 220, 277 or 347. Other input voltages may vary.

AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Self-Diagnostics: Continuously monitors AC functionality. Test switch and remote tester (RTKIT accessory) provide manual activation of 30-second diagnostic testing for on-demand visual inspection. Standard derangement monitoring will indicate disconnected battery, charger failure and displays green flashing indicator light while in emergency mode. Single multi-chromatic LED indicator to display two-state charging, test activation and three-state self-diagnostics.

Self-diagnostic testing: Five minutes every 30 days and 90 minutes annually. Diagnostic evaluation of lamps, AC to DC transfer, battery charging and condition of microprocessor. Automatic test is easily post-poned for eight hours by activating manual test switch or use of remote tester (RTKIT accessory).

CLSR option: Connected Life Safety radio transmits monthly and annual test results and diagnostics information for automated reporting requirements.

INSTALLATION — Wall mount and ceiling mount standard for ELM2L. Wall mount only for ELM2LF. Blind-mate connector ensures easy installation and safe maintenance. 7/8" entrance provision at top of unit for standard 1/2" conduit entry. Tool-less removal of front cover from back-plate for ease of installation and maintenance.

LISTINGS — UL damp location listed standard and wet location listed when used with the WPVS accessory, all at 50-104°F (10-40°C). Meets or exceeds all applicable requirements for UL 924, NFPA 101 (current Life Safety Code), NFPA 70 (NEC), NOM (Norma Oficial Mexicana), California Energy Commission Title 20 section 1605.3 (W)(4), FCC Title 47, Part 15, Subpart B and OSHA. List and labeled to comply with Canadian Standards C22.2 No. 141-10.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

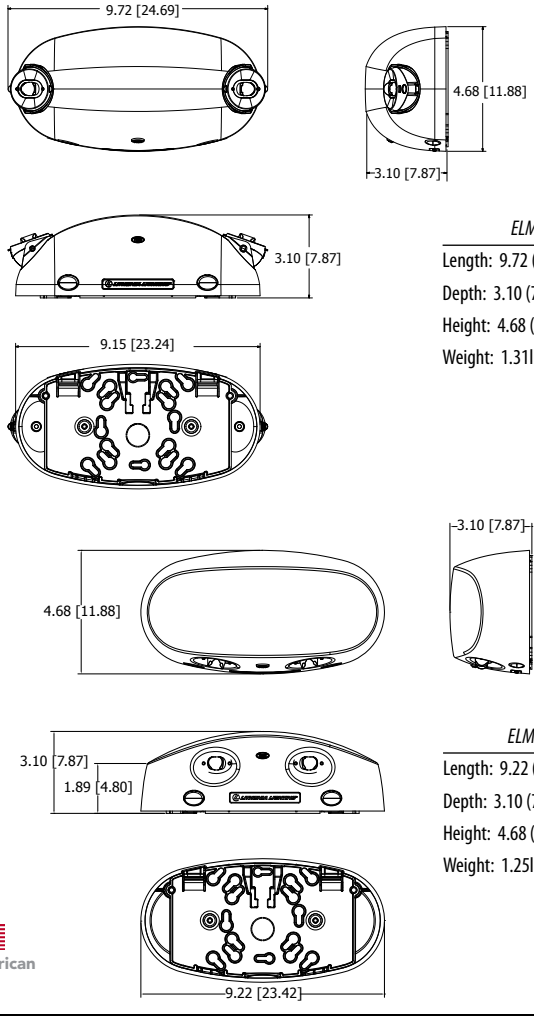
NOTE: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.

UL LISTED BC CERTIFIED IN TITLE 20 † FC NOM c UL us LISTED Buy American

MOUNTING AND SPECIFICATIONS

All dimensions are inches (centimeters) unless otherwise indicated.



ELM2L Specifications

Length: 9.72 (24.69)
Depth: 3.10 (7.87)
Height: 4.68 (11.88)
Weight: 1.31lbs (0.59kg)

ELM2LF Specifications

Length: 9.22 (23.42)
Depth: 3.10 (7.87)
Height: 4.68 (11.88)
Weight: 1.25lbs (0.57kg)

ELM2L_ELM2LF Quantum® Contemporary Commercial LED Emergency Light

Looking for Contractor Select readily available configurations? Click here to visit Contractor Select™ spec sheet or go to www.contractorselect.com

NICKEL CADMIUM BATTERY MODELS

ORDERING INFORMATION For shortest lead times, configure product using **bolded options.** **Example:** ELM2LF

Series[1]	Lamp type	Housing color	Voltage	Battery type	Automatic Testing	Options
ELM2L Aimable optics **ELM2LF** Fixed optics	**(blank)** LP220L 220 lumen, 2.4 watt, linear pattern, two lamps	**(blank)** White B Black	**(blank)** 120/277 VAC/60Hz 120/347 120/347 VAC/60Hz SVOLT 220-240/50-60 Hz UVOLT 120 - 347 VAC, 50/60hz	**(blank)** Nicad	**(blank)** None SDRT Self Diagnostics, Remote Test[2]	**(blank)** None WPVS Wet protective vandal shield[3] BAA BAA Buy America(n) Act Compliant

Notes
1 ELM2L and ELM2LF with Nicad battery type not available with remote capacity.
2 SDRT only available with UVOLT.
3 WPVS breaks out and ships separately and color will match (ex: WPVS SML B). Must be ordered when using for wet location applications. Decreases delivered lumens up to 20%. See spec sheet WPVS for more information.

LITHIUM IRON PHOSPHATE BATTERY MODELS

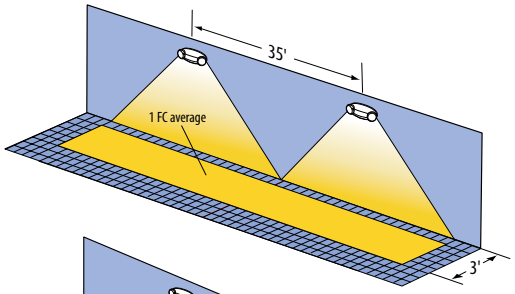
ORDERING INFORMATION For shortest lead times, configure product using **bolded options.** **Example:** ELM2LF UVOLT LTP

Series[1]	Lamp type	Housing color	Voltage	Battery type	Automatic Testing	Options
ELM2L Aimable Optics **ELM2LF** Fixed Optics	**(blank)** LP220L 220 lumen, 2.4 Watt, Linear Pattern, two lamps	**(blank)** White B Black	UVOLT 120 - 347 VAC, 50/60hz	**LTP** Lithium Iron Phosphate[1]	**(blank)** None SDRT Self-diagnostics, remote test[1] CLSR Connected Life Safety Radio[2]	**(blank)** None WPVS Wet protective vandal shield[3] BAA BAA Buy America(n) Act Compliant

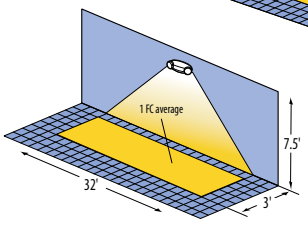
Notes
1 Extended run-time or remote capacity is standard. New ELMRE and ELMRW style remotes are compatible with both SDRT and non-SDRT versions (see page 3).
2 SDRT option required. Connected Life Safety radio transmits monthly and annual test results and diagnostics information for automated reporting requirements. Only available with LTP battery type.
3 WPVS breaks out and ships separately and color will match (ex: WPVS SML B). Must be ordered when using for wet location applications. Decreases delivered lumens up to 20%. See spec sheet WPVS for more information.

SPACING GUIDELINES

*Note: To see complete photometric report or download the .ies file for this product, visit Lithonia Lighting ELM2L or ELM2LF home page.



Example of multiple ELM2L luminaires illuminating a 3' path of egress.



Example of single ELM2L illuminating a 3' path of egress.
* Application image examples are using LP220L lamp.

Maximum Spacing Guidelines — ELM2LF

Mounting Height	Illumination Level	Single Luminaire Coverage		Multiple Luminaire Spacing		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg[1]	32'	20'	35'	28'	100' Corridor, 8' wide, and 12' high with 80/50/20 reflectances
10'	1FC Avg[1]	20'	NA	27'	24'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: .1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines — ELM2L

Mounting Height	Illumination Level	Single Luminaire Coverage		Multiple Luminaire Spacing		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg[1]	32'	24'	35'	28'	100' Corridor, 8' wide, and 12' high with 80/50/20 reflectances
10'	1FC Avg[1]	20'	14'	27'	23'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: .1FC minimum and max/min ratio of 40:1.

Other Accessories: *Order as separate catalog number.*

WPVS SML W	Wet protective vandal shield (must be used for wet location applications)
WPVS SML B	Wet protective vandal shield, black (must be used for wet location applications)
ELA WG1	Wireguard, 15" W x 13-1/2" H x 6" D (see spec sheet ELA-WG)
RTKIT	Remote test kit, up to 40' away (includes goggles, laser and battery)


ELM2L mounted inside the WPVS (white)


ELM2LF mounted inside WPVS (white)

EMERGENCY: One Lithonia Way, Conyers, GA 30012 Phone: 1-800-705-SERV (7378) techsupport-emergency@acuitybrands.com www.lithonia.com © 2017-2021 Acuity Brands Lighting, Inc. All rights reserved.

INDOOR/ DAMP LOCATION REMOTES

ELMRE Compatible Remotes [1,2,3]

LTP Compatible Remote Accessories: *Order as separate catalog number.*	
ELMRE LP220L SGL	Single LED Indoor remote head, white, 110 lumens
ELMRE LP220L T	Twin LED Indoor remote heads, white, 110 lumens
ELMRE LP220L FXO	Twin LED Indoor remote heads, fixed lamps, white, 220 lumens

Notes
1 Compatible with SDRT and non-SDRT versions.
2 Order the WPVS accessory for wet location listing and vandal protection.
3 See spec sheet ELMRE. Also available in black.

BATTERY CAPACITY AND LOADNG - ELMRE REMOTES		
Battery Option	**Total Capacity**	**Maximum # of Remote Lamp heads**
LTP	4.8W	2- ELMRE LP220L SGL M12
		1 - ELMRE LP220L T M12
		1 - ELMRE LP220L FXO

* In addition to the lamp heads on the product.


ELMRE LP220L SGL


ELMRE LP220L T


ELMRE LP220L FXO

OUTDOOR / WET LOCATION REMOTES

ELMRW Compatible Remotes

LTP Compatible Remote Accessories: *Order as separate catalog number.*	
ELMRW LP220L DDBTXD SGL	Single LED Wet Location remote head, dark bronze, 110 lumens
ELMRW LP220L DDBTXD T	Twin LED Wet Location remote heads, dark bronze, 220 lumens

BATTERY CAPACITY AND LOADING		
Battery Option	**Total Capacity**	**Maximum# Remote lamp heads***
LTP	4.8W	2- ELMRW LP220L SGL
		1 - ELMRW LP220L T

* These are in addition to the lamp heads on the product.


ELMRW LP220L DDBTXD SGL


ELMRW LP220L DDBTXD T

SPECIFICATIONS

ELECTRICAL			
Primary Circuit			
Type	**Volts**	**Input amps**	**Watts**
Nicad	120	0.018	1.09
	347	0.012	1.34
Lithium Iron Phosphate	120	0.022	1.35
	347	0.014	1.64

LTP EXTENDED RUN-TIMES	
Products	**Total Run-time with no remotes**
ELM2L LTP	3 hours
ELM2LF LTP	3 hours

BATTERY			
UVOLT Nicad (6V), All Other Nicad (3.6V)			
Typical Shelf life[1]	**Typical life**[1]	**Maintenance**[2]	**Temperature Range**[3,4]
3 years	7-9 years	none	50°-104°F (10-40°C)
Lithium Iron Phosphate (9.6V)			
Typical Shelf life[1]	**Typical life**[1]	**Maintenance**[2]	**Temperature Range**[3,4]
1 years	7-9 years	none	50°-104°F (10-40°C)

Notes
1 At 77°F (25°C) ambient temperature, charge/discharge cycles and prolonged full discharge may reduce useful life.
2 All life safety equipment, including emergency lighting for path of egress must be tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required testing could jeopardize the safety of occupants and will void all warranties.
3 Ambient temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.
4 Battery life is negatively impacted by many variables including temperature, charging rates, number of cycles and deep discharges due to long periods of time without AC power.

EMERGENCY: One Lithonia Way, Conyers, GA 30012 Phone: 1-800-705-SERV (7378) techsupport-emergency@acuitybrands.com www.lithonia.com © 2017-2021 Acuity Brands Lighting, Inc. All rights reserved.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

GRAD LINEAR

I/D, Direct



FEATURES & SPECIFICATIONS

INTENDED USE —The GRAD is a linear suspended product for commercial indoor, education and healthcare applications.

CONSTRUCTION — Nominal 8-1/4" x 1-3/4" rectangular housing is formed from cold-rolled steel.

End caps are mechanically attached with no exposed fasteners.

Color for housing and end caps is white or painted aluminum. Consult factory for custom colors.

OPTICS — Four LED lumen packages and three available color temperature options (3000K, 3500K and 4000K) — all within 2.5 MacAdam ellipses.

ELECTRICAL — LED light engine — consisting of modular LED boards and dimming driver — is rated for >60,000 hours (L80) at 25° C ambient temperature. Specify 120V or 277V. Pre-wired with 16AWG fixture wire. For special circuiting or wire gauge, consult factory. Plug-in electrical connectors included.

MIN1 option provides "natural dimming" with smooth, continuous and flicker-free dimming. Syncing for controls: 2mA max. THD: < 20%. Insignificant inrush current at 120 and 277VAC. FCC Class A and B tested for EMI and RFI. Controls and system networking options. For wired networking via Cat-5e, choose an integrated nLight® module. For daylight dimming and/or dual technology occupancy detection. See Integrated Sensor Layout Page for more details.

INSTALLATION — 4' and 8' lengths in a single section for exact suspension spacing of 4' and 8'. For total luminaire length, add 1/16" for each flat end cap. Using internal joiners, 4' and 8' sections can be joined to form longer rows.

Ambient operating temperature between 0° C and 25° C.

LISTINGS — CSA/CUS listed. LM-79 tested. Individual sections meet FCC Part 15 requirements. Lighting Facts partner. CSA tested to UL 1598 standards.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: GRD LLP 16FT MSL4 80CRI 30K ID1000LMF 80/20 MIN1 ZT 120 SCT F1/24A C110

Luminaire	Linear length plan	Total run length	Maximum section length	LED color rendering	LED color temperature	Indirect/direct LED output	Indirect/direct intensity ratio
GRD	LLP Linear longest possible LSL Linear same length	__FT Indicate luminaire row length in 4' increments. Ex: 12FT	MSL4 4' section(s) MSL8 8' section(s)	80CRI 80+ CRI	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	ID800LMF 800 nominal lumens per foot ID1000LMF 1000 nominal lumens per foot ID1300LMF 1300 nominal lumens per foot ID1500LMF 1500 nominal lumens per foot	80/20 Std. 80% up/ 20% down 20/80 20% up/ 80% down 0/100 0% up/ 100% down

Minimum dimming level	Control input	Voltage	Wiring option	Emergency options[8]
MIN1 Constant current, dimming to 1% MIN10[1] Constant current, dimming to 10%	ZT 0-10V[2] NLIGHT nLight enabled[3] ECO Lutron Ecosystem[4]	120 120V 277 277V	SCT Single circuit	(blank) None 1EC (1) Emergency circuit module 2EC (2) Emergency circuit modules __EC ___ Emergency circuit modules _E10WLCP _10 Watt battery pack, constant power with self diagnostics. CEC Certified

Primary Sensor[5]	Secondary Sensor[5]	Mounting type /	Overall suspension	
(blank) No factory-installed, integrated sensor PDT_ Dual technology occupancy sensor. PIR & microphonics sensor ADC_ Daylight Dimming Sensor APD_ Dual technology occupancy sensor and daylight dimming sensor	(blank) No factory-installed, integrated sensor SPDT_ Dual technology occupancy sensor. PIR & microphonics sensor SADC_ Daylight Dimming Sensor SAPD_ Dual technology occupancy sensor and daylight dimming sensor	F1/ T-bar ceiling (universal mounting bracket) F1A/ T-bar ceiling (UMB with integrated J-box) F2/ Hard ceiling (horizontal J-box)	12F 12" fixed 18F 18" fixed 24F 24" fixed 24A 24" adjustable 36A 36" adjustable 48A 48" adjustable	72A 72" adjustable 96A 96" adjustable 144A 144" adjustable 192A 192" adjustable 240A 240" adjustable

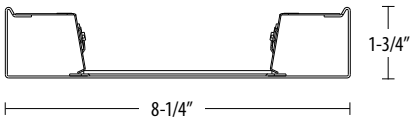
Option	Color	Fusing	Territory compliance	Cover	Canopy	Junction box	Slope
IND[10] Individual luminaire (factory installed end caps and power cord; hanging hardware in box)	C110 Painted aluminum (low gloss) C210 White white (fine textured) C202[6] Black (fine textured) C099 Custom color	(blank) None GLR Fast blow GMF Slow blow	(blank) None CSA[7] Manufactured to Canadian standards	(blank) None DU Dust cover	(blank) None MCS Matching canopy at support for aesthetics MCSJ Matching canopy for J-box mounting at non-power feed support locations BLK[6] Black cord, cord manager and canopy	(blank) None OJB Offset J-box at feed	(blank) None SLP Sloped ceiling

Notes

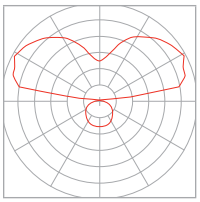
1 Not available with NLIGHT or Sensors.
2 0-10V will use linear dimming curve.
3 Will use logarithmic dimming curve.
4 Only available with MIN1
5 Only available with ZT or NLIGHT.
6 Will use white cord and canopy unless BLK canopy option is selected.
7 When chosen with EC entire section must be EC. EX: MSL8 section would need to be 2EC for entire section.
8 Separate feed required.
9 4FT MSL4 Individual fixture with EC Consult factory
10 Not available with F1A or SLP or fixed cables (12F, 18F & 24F)

DIMENSIONS

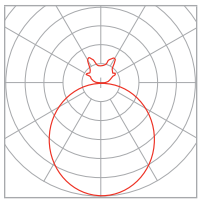
All dimensions are inches (centimeters) unless otherwise specified.



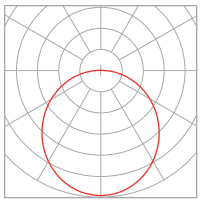
PHOTOMETRICS



ID800LMF 80/20 80CRI 35K
137 lm/W
3401 delivered lumens per 4' section



ID800LMF 20/80 80CRI 35K
105 lm/W
2621 delivered lumens per 4' section



ID800LMF 0/100 80CRI 35K
94 lm/W
2335 delivered lumens per 4' section

Fixture Performance

	3000K				3500K				4000K			
	800LMF	1000LMF	1300LMF	1500LMF	800LMF	1000LMF	1300LMF	1500LMF	800LMF	1000LMF	1300LMF	1500LMF
Lumen Output	3303	4033	4843	5841	3401	4153	4987	6015	3456	4220	5067	6111
Input Watts	25	32	40	51	25	32	40	51	25	32	40	51
Lumens/Watt	133	125	121	115	137	129	124	119	139	131	126	121

*AT 80/20 Indirect/Direct Intensity Ratio

How to Calculate Delivered Lumens in Emergency Mode

Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for E10WLCP option.

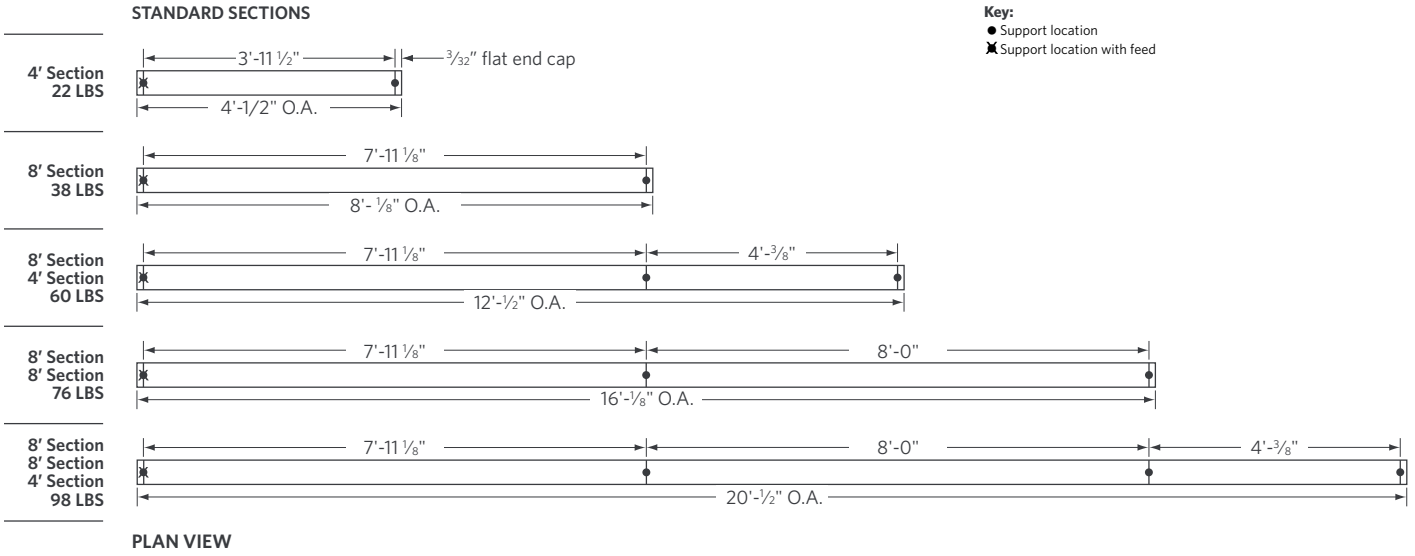
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

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Weights and Support Spacing

Suspension spacing equals section length. Default location shown. Consult factory for stem mounting suspension spacing and alternate locations.



Linear Plan:

Lithonia Lighting offers the ability to provide a continuous run plan to suit your requirements by optionally offering three different methods of configuration.

LSL- Linear Same Length:
In this configuration, each segment is the same length and is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length there are mathematical limitations on what overall row lengths can be achieved. Example: 20 FT row would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).

LCB- Linear Center Balanced:
This configuration incorporates the longest center segment(s) along with any additional lengths required to fill the run length, added to the run ends. Example: 20 FT run would have 2, 4 FT segments (one at each end) and 1, 8 FT segment in the center.

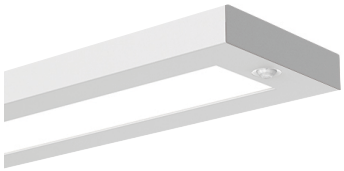
LLP- Linear Longest Possible
In this configuration, the longest length available is optimized, resulting in the fewest segments and mounting locations. Caution, should be used where balanced appearance is a concern. Example: 20 FT run would have 2, 8 FT segment and 1, 4 FT segment at the end of the run.

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INTEGRATED SENSOR OPTIONS

Dimming Driver	Integrated Sensor	Daylight Dimming	Daylight Dimming and/or Occupancy Detection	nLight Wired Networking	nLight Wireless Networking	Link to Spec Sheet
NLIGHT	ADC	X		X		https://www.acuitybrands.com/products/detail/147312/nLight/nES-ADCX/Dimming-Photocell-Embedded-Low-Volt/-/media/products/nLight/147312/document/nES_ADCX-Form_pdf.pdf
NLIGHT	PDT		X	X		https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf
NLIGHT	APD	X	X	X		https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf
ZT	ADC	X				https://www.acuitybrands.com/products/detail/147312/nLight/nES-ADCX/Dimming-Photocell-Embedded-Low-Volt/-/media/products/nLight/147312/document/nES_ADCX-Form_pdf.pdf
ZT	PDT		X			https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf
ZT	APD	X	X			https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf



Daylight harvesting deactivated by default and field programmed per sequence of operations for PDT sensor options.

Luminaires specified with nLight system networking ship with one RJ-45 connector integrated into the luminaire, 10' of Cat-5e cable and a splitter to control the entire luminaire row (depending on wattage/voltage limitations). For multiple zones, please contact TechSupport@PeerlessLighting.com.

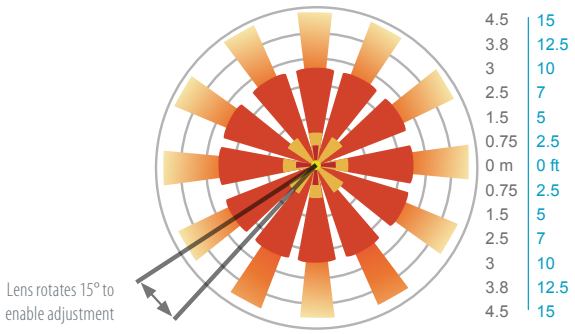
OCCUPANCY DETECTION COVERAGE

At the 7.5 ft (2.9 m) hanging height of a typical pendant mount fixture the sensor provides 10 ft (3.05 m) radial detection of small motion. At a 9 ft (2.74 m) hanging height the radius is 12 ft (3.66 m) for small motion.

Adequate for walking motion detection from mounting heights between 7.5 ft (2.29 m) and 20 ft (6.10 m).

Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor.

Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.

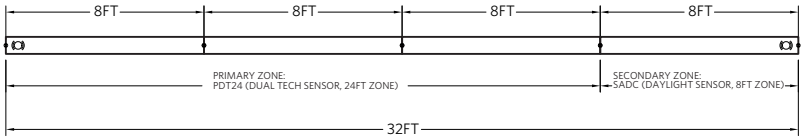


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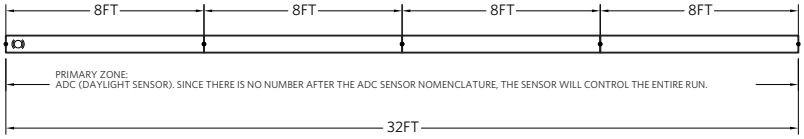
INTEGRATED SENSOR LAYOUT

CORRECT:

32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 24FT AND SECONDARY ZONE 8FT -- PDT24 SADC8

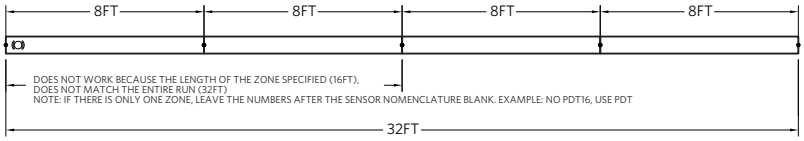


32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- ADC

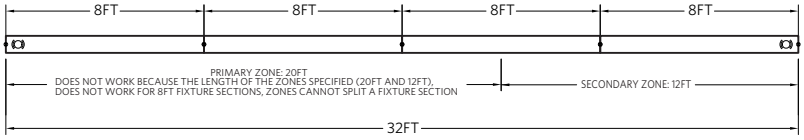


INCORRECT:

32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- PDT16



32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 20FT AND SECONDARY ZONE 12FT -- PDT20 SADC12



Notes:

- Only one sensor per zone
- At the most, the entire run can only have 2 sensors (thus 2 sensors zones at the most)
- Sensor zone can not split fixture sections
- No overlapping zones
- One nLight or NLTAIR2 device per zone or per sensor, for multiple zones without sensors contact factory

LED: One Lithonia Way, Conyers, GA 30012 Phone: 1- 800-705-SERV (7378) Fax: 770-929-8789 www.lithonia.com

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Most Common Mounting Types and Options

Options available for this specific luminaire are checked in the boxes below.

Mounting Type

F1/ For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications.

F2/ For use with recessed or surface mount horizontal J-box applications.

F1A/ For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications. Comes complete with vertical J-box with built-in wire way. See also CP.

Mounting Options

MCS Matching canopy at support for aesthetics.

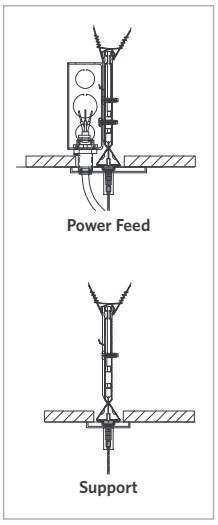
MCSJ Matching canopy for J-box mounting at non-power feed support locations.

OJB Offset J-box at feed.

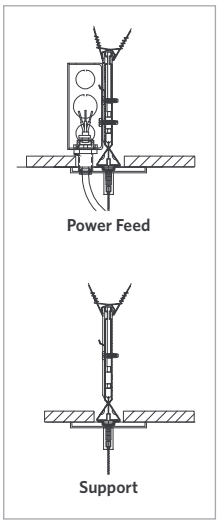
SLP OJB Sloped ceiling couplers and offset J-box option at feed.

For more detailed mounting drawings and information, see peerlesslighting.acuitybrands.com/resources

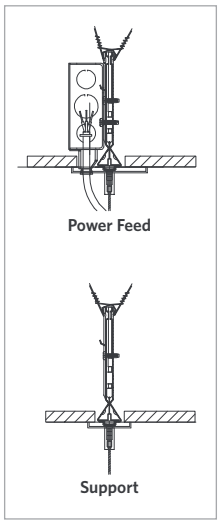
☑ F1/



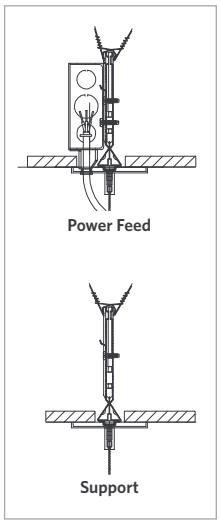
☑ F1/MCS



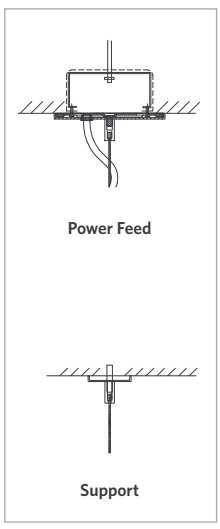
☑ F1A/



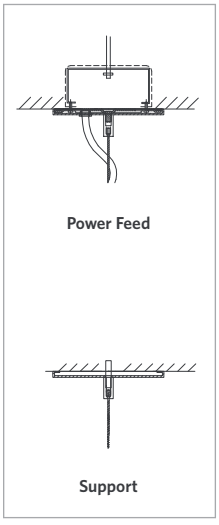
☑ F1A/MCS



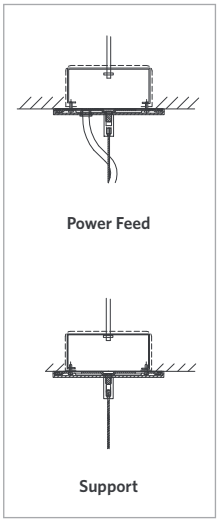
☑ F2/



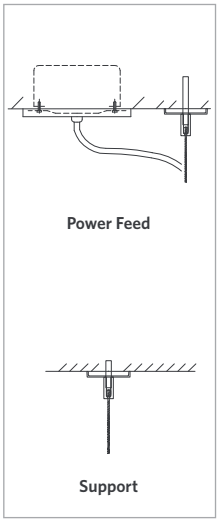
☑ F2/MCS



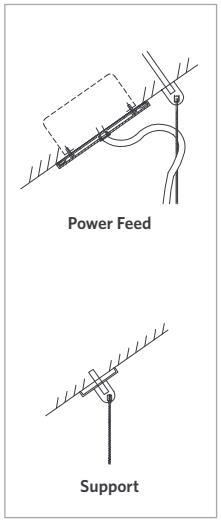
☑ F2/MCSJ



☑ F2/OJB



☑ F2/SLP OJB



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Exhibit G

LEDVANCE® FLOODLIGHT HIGH WATTAGE
100W / 150W / 200W 100-240V 3000K / 5000K

Luminario LED de alta potencia para iluminación de exteriores. Disponible en dos temperatura de color: Cálida (3000K) y Blanca Fría (5000 K)





Aplicaciones

- Uso industrial
- Fachadas
- Jardines
- Entradas principales
- Estacionamientos
- Áreas recreativas

Beneficios

- Hasta 90% de ahorro de energía
- Vida útil de 50 000 horas
- Garantía de 5 años
- LED SMD: más eficiente y exige menor disipación de calor
- Soporte rotativo 180°
- Difusor antireflejante con vidrio templado
- Alta eficiencia
- Fácil instalación
- No requiere el uso de lámparas complementarias
- Certificación NOM

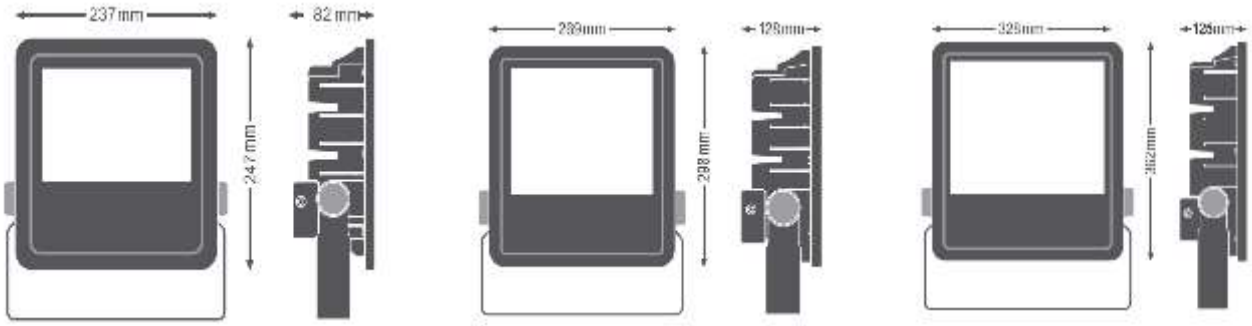
NOM
Cumple con: NOM-003-SCFI/VIGENTE



Características del producto

Potencia Nominal	100W / 150W / 200W
Equivalencia	1 X lámpara halógena 750W / 1000W / 1500W
Tensión Nominal	100 - 240 V~
Flujo Luminoso	(100W) 10 000 lm / (150W) 15 000 lm / (200W) 20 000 lm
Temperatura de Color	3000 K (solo para 100W) / 5000 K
IRC	>80
Ángulo de Apertura	100°
Vida Útil	50 000 h
Dimeable	NO
IP	IP65
Garantía	5 años
Protección contra Impactos Mecánicos	IK08
Mínima y Máxima Temperatura de Utilización	-20°~ 50°
Mínima y Máxima Temperatura de Almacenaje	-40°~70°

Dimensiones

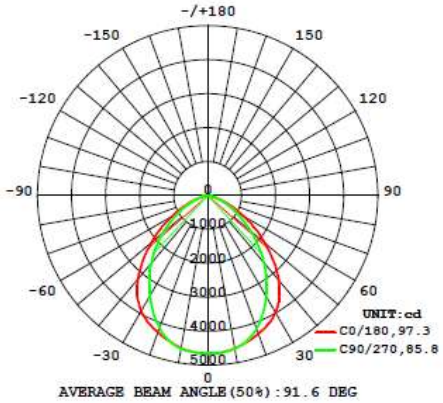


100W 150W 200W

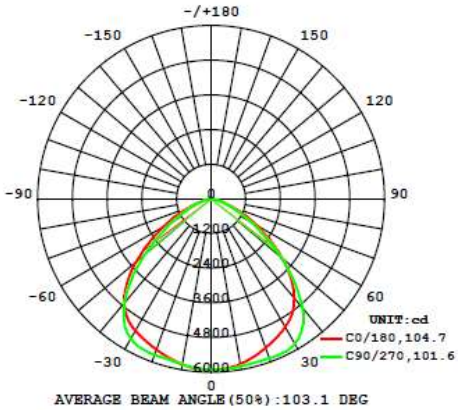
Datos del producto

Clave	Descripción	Pieza Caja	Peso (g)	EAN 10	Dimensiones EAN10 (mm)	Peso EAN 10 (g)	EAN 40	Dimensiones EAN40 (mm)	Peso EAN 40 (g)
86383	LEDVANCE FLOODLIGHT 100W/830	1	3600	NA	NA	NA	4058075807969	320x280x130	3850
86384	LEDVANCE FLOODLIGHT 100W/850	1	3600	NA	NA	NA	4058075807983	320x280x130	3850
86385	LEDVANCE FLOODLIGHT 150W/850	1	5100	NA	NA	NA	4058075808027	363x308x140	5350
86386	LEDVANCE FLOODLIGHT 200W/850	1	6450	NA	NA	NA	4058075808065	440x375x150	6750

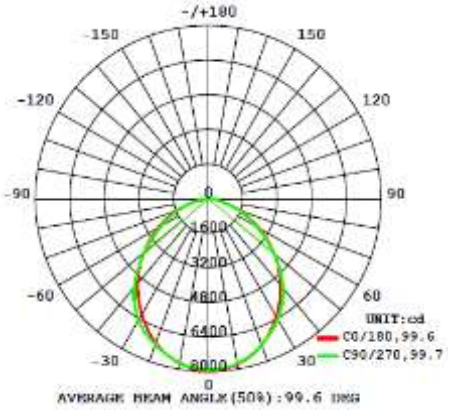
Curvas de Distribución Fotométrica



100W

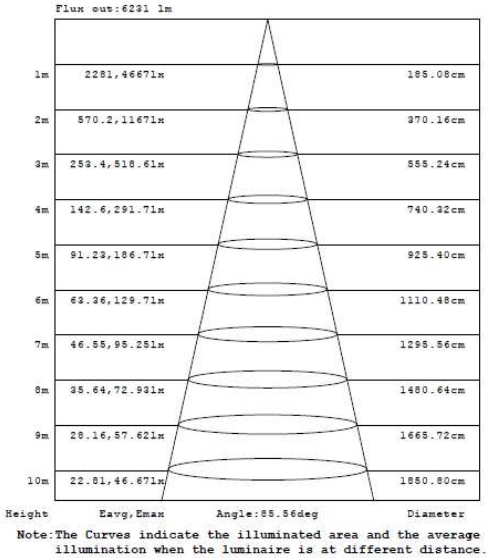


150W

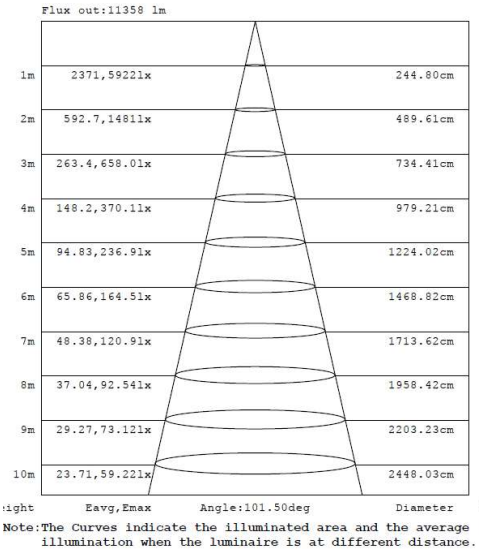


200W

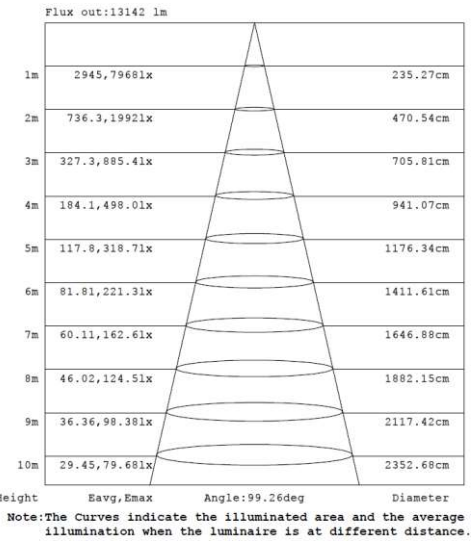
Curvas de Iluminación a Distancia



100W



150W

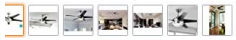


200W

Exhibit H



Pasa el mouse encima de la imagen para aplicar zoom



Windward IV., Nickel, 99963, 26.00watts, 115.00 volts

de Hampton Bay

4.2 de 5 estrellas 81 calificaciones

Disponible a través de estos vendedores.

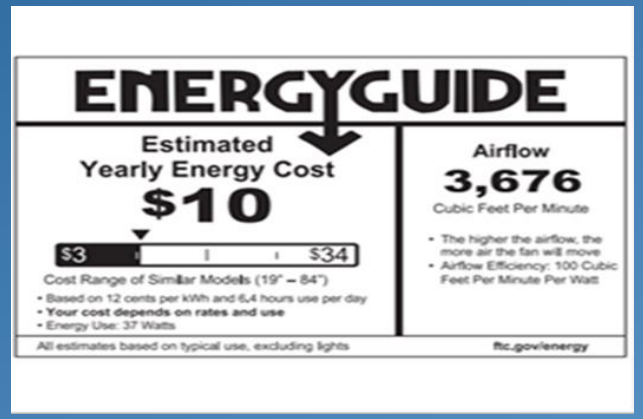
	Windward
	Home Decorators Collect'on
Finish	Brushed Nickel
Material	Metal
Perfil del enchufe	Protruding
Voltaje	115 voltios
Capacidadde flujo de aire	6112 CFM

Sobre este artículo

- Award winning contemporary design ceiling fan displays outstanding beauty w'th l'fetime of durability. This industry recognized name brand fan is built for looks and to last. This stunn ng and newly updated model has even more durable material, powerful quiet motor technology and includes brilliant energy efficient led lighting and quality controller
- 5 cuchillas en acabado negro con 29ã ° blade P'tch proporciona una mayor circulac'ón de aire de alta eficiencia y se mueve hasta un 40% más de flujo de aire acabado de níquel cepillado
- Kit de luz integrada con esmerilado vidrio opal crea un sofisticado presenc'a en cualquier habitación de su hogar incluye termostático control remoto perm te la temperatura y control de luz, programable.
- 153 x 18 mm ofrece la mejor movimiento de aire del motor; 6057 CFM. 6 'rosca downrod inclu'dos para mayor estabilidad
- tri-mount instalación (close-to-ceiling, estándar, o en ángulo soporte), uso en interiores, habitaciones grandes. ASSEMBLED Altura 16,5 en
- Dos GU24 de 13 vatios bombillas CFL garantía de motor de por v'da incluido Energy Star nom'nal para mejorar la eficiencia energética.

› Ver los detalles del producto

Comparar con artículos similares



ENERGYGUIDE

Estimated Yearly Energy Cost

$10

$3 — $34

Cost Range of Similar Models (19" – 84")

- Based on 12 cents per kWh and 6.4 hours use per day
- **Your cost depends on rates and use**
- Energy Use: 37 Watts

Airflow

3,676

Cubic Feet Per Minute

- The higher the airflow, the more air the fan will move
- Airflow Efficiency: 100 Cubic Feet Per Minute Per Watt

All estimates based on typical use, excluding lights

ftc.gov/energy

SPECIFICATIONS

Size	Speed	Volts	Airflow CFM	Fan Power Consumption (Without Lights) WATT	Airflow Efficiency (Higher Is Better) CFM/WATT	Net Weight	Gross Weight	Cube Feet
52 in.	Low	120	2333	12	194	20.29 lbs (9.2 kgs)	23.15 lbs (10.5 kgs)	1.7 ft.
	Medium		4283	30	143			
	High		6052	57	106			

Details

Airflow (CFM)	6052	Blade Color	Matte White
Blade Color Family	White	Bulb wattage (watts)	5
Ceiling Fan Size	Medium	Ceiling Fan Type	Basic
Color Family	White	Compatible Bulb Type	LED
Control Type Included	Remote Control Included	Damp/Wet Rating	Dry Rated
Fan Blade Material	Acrylonitrile Butadiene Styrene (ABS)	Features	Light Kit Compatible
Fixture Color Family	White	Fixture Color/Finish	Matte White
Glass Style	Frosted	Included	Angle Mount Hardware,Downrod Included,Hardware Included,Includes Light Kit
Indoor/Outdoor	Indoor	Light Bulb Base Code	E26
Light Bulb Type Included	LED	Light Type	Bowl
Motor Speed (RPM)	170	Mounting Type	Angled Mount,Downrod Mount,Flush Mount
Number of Blades	5 Blades	Number of Lights	1 Light
Number of Speeds	3	Product Weight (lb.)	23.1 lb
Recommended Light Bulb Shape Code	A19	Recommended Room Size	Large Room
Returnable	180-Day	Style	Modern

Warranty

The supplier warrants the fan motor to be free from defects in workmanship and material present at time of shipment from the factory for a lifetime after the date of purchase by the original purchaser. The supplier also warrants that all other fan parts, excluding any glass or acrylic blades, to be free from defects in workmanship and material at the time of shipment from the factory for a period of two years after the date of purchase by the original purchaser. We agree to correct such defects without charge or at our option replace with a comparable or superior model if the product is returned. To obtain warranty service, you must present a copy of the receipt as proof of purchase. All costs of removing and reinstalling the product are your responsibility. Damage to any part such as by accident, misuse, improper installation, or by affixing any accessories, is not covered by this warranty. Because of varying climatic conditions this warranty does not cover any changes in brass finish, including rusting, pitting, corroding, tarnishing, or peeling. Brass finishes of this type give their longest useful life when protected from varying weather conditions. A certain amount of "wobble" is normal and should not be considered a defect. Servicing performed by unauthorized persons shall render the warranty invalid. There is no other express warranty. Home Decorators Collection hereby disclaims any and all warranties, including but not limited to those of merchantability and fitness for a particular purpose to the extent permitted by law. The duration of any implied warranty which cannot be disclaimed is limited to the time period as specified in the express warranty. Some states do not allow a limitation on how long an implied warranty lasts, so the above limitation may not apply to you. The retailer shall not be liable for incidental, consequential, or special damages arising out of or in connection with product use or performance except as may otherwise be accorded by law. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives specific legal rights, and you may also have other rights which vary from state to state. This warranty supersedes all prior warranties. Shipping costs for any return of product as part of a claim on the warranty must be paid by the customer.

Contact the Customer Service Team at 1-800-986-3460 or visit www.HomeDepot.com/homedecorators.

BROAN®

SPECIFICATION SHEET

Broan SmartSense®
INTELLIGENT VENTILATION SYSTEM
SSQTXE080 & SSQTXE110

Improve air quality throughout the home automatically and efficiently - a smart solution to home ventilation.

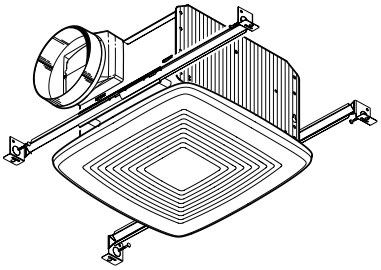
FEATURES

- Removes pollutants such as household cleaners, VOC's, carbon dioxide/monoxide, and off-gassing from building materials, carpets and other furnishings
- Helps remove gases and particles that are not trapped by any filtration unit
- Program a single control for a ventilation rate to match the size of the home
- Automatically adjusts total run-time based on square footage and number of bedrooms
- Optimizes energy usage by monitoring normal fan operation and adjusting automatic ventilation time as needed
- Continuously monitors and as necessary, activates other Broan SmartSense® systems located in different locations within the home – day and night
- No control wiring required – controls communicate over existing home power wires
- Uses less than 40 watts during ventilation cycles – in most installations
- Cost effective and energy efficient ventilation strategy
- Broan Ultra Silent™ fans operate at a barely audible 0.3 (80 CFM fans) or 0.7 Sones (110 CFM fans)
- Easy installation of fans in the ceiling, vented to the exterior using 6-inch duct
- Up to 10 systems can be combined into an air quality network
- Meets ASHRAE 62.2 – related ventilation requirements
- ENERGY STAR® qualified

INSTEON ENABLED

LinkLogic® uses INSTEON™, a powerful, wireless home control technology

ENERGY STAR



80 CFM FAN (Model QTXE080)
110 CFM FAN (Model QTXE110)
(see fan spec sheet)



CONTROL
(Recommend deep single-gang electrical box)

SSQTXE080

Contains:
1 - 80 CFM Fan (Model QTXE080)
1 - SmartSense® Control (SMSC080)

SSQTXE110

Contains:
1 - 110 CFM Fan (Model QTXE110)
1 - SmartSense® Control (SMSC110)

SMSCPLR Phase Coupler (optional)

Required for LinkLogic® on opposite electrical power phases

CONTROL SPECIFICATIONS

Paddle Type:	Rocker action
Color:	White Paddle & Trim Frame Almond Paddle & Trim Frame included
Conditions:	Indoor, 40^0 to 104^0 F, up to 85% relative humidity
Supply Voltage:	120 VAC +/- 10%, 60 Hz, single phase
Max. Load:	480 Watts incandescent, 13A resistive
Certification:	Safety tested for use in USA and Canada (ETL #3017581)

Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

Broan SmartSense®
INTELLIGENT VENTILATION SYSTEM
SSQTXE080 & SSQTXE110

Recommended rooms for fans include:

- One for each Bathroom, Watercloset, or Shower Stall
- Laundry Room
- Rec Room
- Workshop
- Exercise Room
- Home Office
- Playroom

RECOMMENDED CONTINUOUS VENTILATION RATE IN CFM (cubic feet per minute)

Home Square Footage	Number of Bedrooms				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
< 1500	30	45	60	75	90
1501 - 3000	45	60	75	90	105
3001 - 4500	60	75	90	105	120
4501 - 6000	75	90	105	120	135
6001 - 7500	90	105	120	135	150
> 7500	105	120	135	150	165

INSTEON™
POWERLINE PHYSICAL LAYER PROPERTIES

Frequency:	131.65 KHz
Modulation:	BPSK
Min. Transmit Level:	3.16 Vpp into 5 Ohms
Min. Receive Level:	10 mV
Phase Bridging:	SMSCPLR Hard Wired or INSTEON™ RF Phase Coupler

INSTEON ENABLED

ENERGY STAR

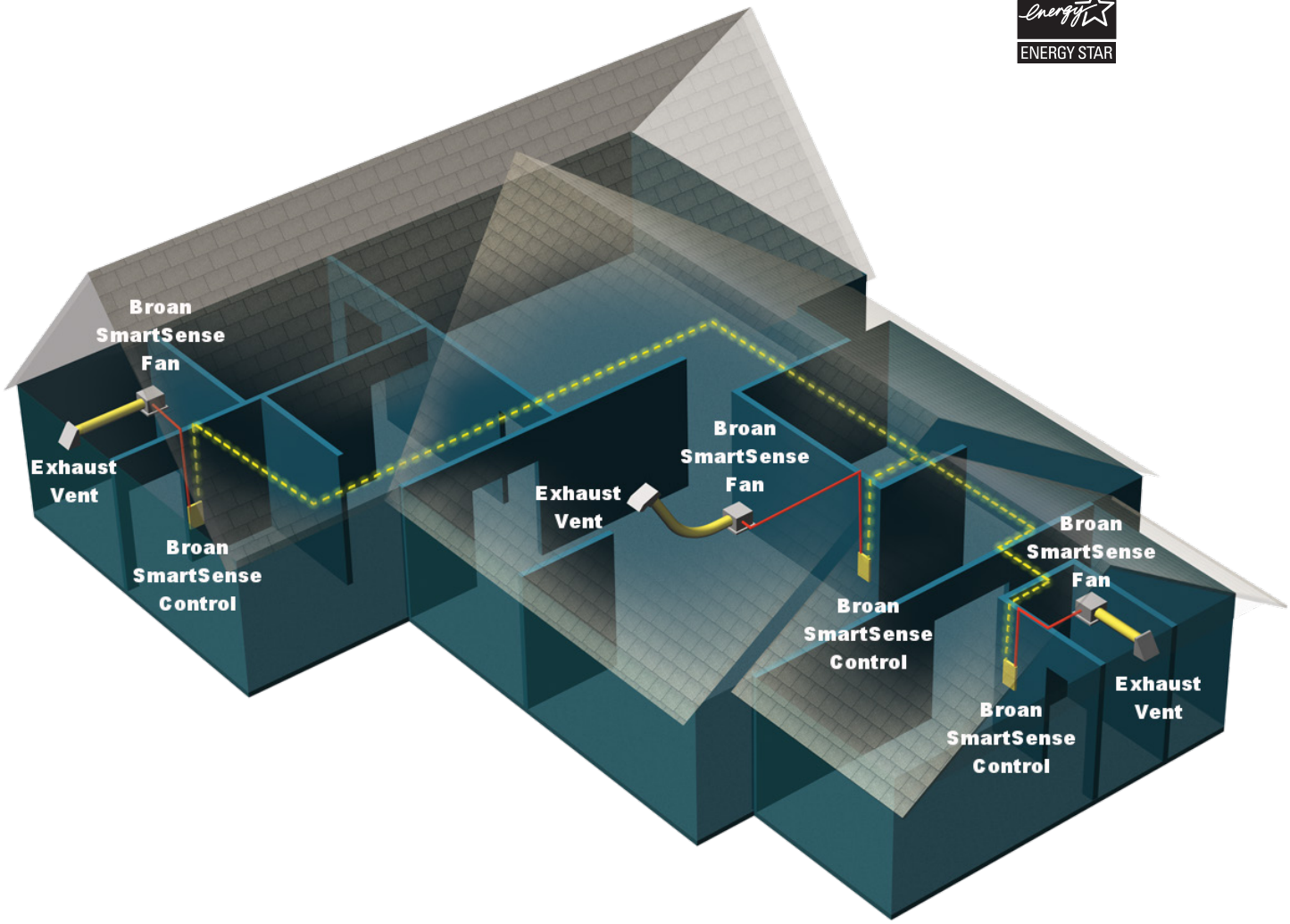


Exhibit I

Architectural Coatings

Speedhide Pro-EV Zero Interior Wall & Ceiling Latex Flat

GENERAL DESCRIPTION

Speedhide Pro-EV Zero Interior Wall & Ceiling Latex Flat is a durable, quality interior vinyl acrylic paint designed for new and repaint applications where speed of application is most important in both the commercial and multi-family markets. This zero-VOC**, low odor paint enables a space to be painted while occupied while delivering the durable product performance required. *Speedhide* Pro-EV Zero Interior Wall & Ceiling paint has good adhesion, touch-up and application properties on walls, ceilings and trim surfaces. *Speedhide* Pro-EV Zero is recommended on interior walls, ceilings and trim where a flat finish is desirable.

RECOMMENDED SUBSTRATES

Concrete	Gypsum Wallboard-Drywall
Concrete/Masonry Block	Plaster
Ferrous Metal	Wood

CONFORMANCE STANDARDS

- VOC compliant in all regulated areas
- Can help earn LEED® v4 EQ Low-Emitting Materials Credit

RECOMMENDED PRIMERS

Concrete	4-603, 17-921
Concrete/Masonry Block (block fillers)	6-7, 6-15
Concrete/Masonry Block (primers, sealers)	4-603, 17-921
Ferrous Metal	90-712, 90-912
Gypsum Wallboard-Drywall	6-2, 6-4, 9-900, 12-900XI
Plaster	4-603, 17-921
Wood	6-2, 9-900, 12-900XI, 17-921

LIMITATIONS OF USE

FOR INTERIOR USE ONLY. Apply when air, product and surface temperatures are between 50ºF (10ºC) and 90ºF (32ºC).

Not recommended for use on floors or in high humidity areas.

PROTECT FROM FREEZING.

PACKAGING

1-Gallon (3.78 L)
5-Gallon (18.9 L)

TINTING AND BASE INFORMATION

Refer to the appropriate color formula book, automatic tinting equipment, and or computer color matching system for color formulas and tinting instructions.

12-110XI	White and Pastel Base
12-120XI	Midtone Base*
12-140XI	Neutral Base*

*Must be tinted before use.

Some colors, or drastic color changes, or porous substrates may require more than one coat to achieve a uniform finish.

PRODUCT DATA

PRODUCT TYPE:	Vinyl Acrylic Latex
SHEEN:	Flat: 0 to 4 @ 60º & 85º
VOLUME SOLIDS*:	32% +/- 2%
WEIGHT SOLIDS*:	49% +/- 2%
VOC*:	0 g/L (0 lbs./gal.)**
WEIGHT/GALLON*:	11.1 lbs. (5.0 kg) +/- 0.2 lbs. (91 g)

*Product data calculated on product 12-110XI.

COVERAGE: Approximately 400 sq. ft./gal. (37 sq. m/3.78L) per U.S. Gallon (3.78L) on smooth, nonporous surfaces.

Wet Film Thickness:	4.0 mils
Wet Microns:	102
Dry Film Thickness:	1.3 mils
Dry Microns:	33

Coverage figures do not include loss due to surface irregularities and porosity or material loss due to application method or mixing.

DRYING TIME: Dry time @ 77ºF (25ºC); 50% relative humidity.

To Touch:	1 hour
To Recoat:	4 hours
To Full Cure:	30 days

Drying times listed may vary depending on temperature, humidity, film build, color, and air movement.

CLEANUP: Clean tools with warm soapy water.

WASHING INSTRUCTIONS: Wait at least 14 days after painting before cleaning the surface with a non-abrasive mild cleaner.

DISPOSAL: Contact your local environmental regulatory agency for guidance on disposal of unused product. Do not pour down a drain or storm sewer.

FLASH POINT: Over 200ºF (93ºC)

FEATURES / BENEFITS

Features	Benefits
Zero VOC**	Meets the most stringent VOC regulations nationwide
Good hiding power and coverage	Saves money; less material required
Excellent uniformity	Prevents sheen variation
Easy soap and water cleanup	Waterborne formula
Can help earn *LEED* v4 EQ Low-Emitting Materials Credit	Contributes to sustainable design

****Colorants added to this base paint may increase VOC level significantly depending on color choice. However, PPG Futurity and PPG HS colorants (96-xxxXI, 96-xxx, 96-xxxx, 96-xxxxx), even if used at maximum tint load in any color, contributes less than 8 g/L of VOC to the final tinted product.**

GENERAL SURFACE PREPARATION

Surfaces to be coated must be dry, clean, sound, and free from all contamination including loose and peeling paint, dirt, grease, oil, wax, concrete curing agents and bond breakers, chalk, efflorescence, mildew, rust, product fines, and dust. Remove loose paint, chalk, and efflorescence by wire brushing, scraping, sanding, and/or pressure washing. Putty all nail holes and caulk all cracks and open seams. Sand all glossy, rough, and patched surfaces. Feather back all rough edges to sound surface by sanding. Prime all bare and porous substrates with an appropriate primer.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

CONCRETE: New concrete should cure for at least 30 days and preferably 90 days prior to priming and painting. The pH of the substrate must be less than 10 before priming with an alkali resistant primer.
CONCRETE/MASONRY BLOCK: Mortar should cure for at least 30 days and preferably 90 days prior to priming. Fill block with an appropriate block filler. Surfaces previously coated with water thinned cement-based paint must be prepared with extra care. If the material appears to be adhering tightly, a masonry sealer may be applied to seal the surface. Check adhesion by applying a piece of masking tape. If the sealer peels off and has loose particles, remove all chalking or crumbling material, re-seal and re-check adhesion.
FERROUS METAL: The surface must be cleaned thoroughly to remove any dust, rust, and surface contaminants, and then primed.
GYPSUM WALLBOARD-DRYWALL: Nails or screws should be countersunk, and they along with any indentations should be mudded flush with the surface, sanded smooth and cleaned to remove any dust, then prime prior to painting the substrate.
PLASTER: Plaster, hardcoat, skim coat, or other alkaline surfaces should be allowed to cure for at least 30 days prior to priming with an alkali resistant primer.
WOOD: Unpainted wood or wood in poor condition should be sanded smooth, wiped clean, then primed. Any knots or resinous areas must be primed before painting. Countersink all nails, putty flush with surface, then prime.

APPLICATION INFORMATION

Stir thoroughly before using and occasionally when in use. When using more than one can of the same color, intermix to ensure color uniformity. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN. Read all label and Safety Data Sheet (SDS) information prior to use. SDS are available through our website or by calling 1-800-441-9695.

Application Equipment: Apply with a high quality brush, roller, paint pad, or by airless spray equipment. Where necessary, apply a second coat.
Airless Spray: Pressure 2000 psi, tip 0.015” - 0.021”
Spray equipment must be handled with due care and in accordance with manufacturer’s recommendation. High-pressure injection of coatings into the skin by airless equipment may cause serious injury.
Brush: Polyester/Nylon Brush
Roller: 3/8” - 3/4” nap roller cover
Thinning: Thinning is not usually required. If necessary, thin with up to 1/4 pint (118mL) of water per U.S. gallon (3.78 L) of paint.
Permissible temperatures during application:

Material:	50 to 90ºF	10 to 32ºC	Ambient:	50 to 90ºF	10 to 32ºC	Substrate:	50 to 90ºF	10 to 32ºC

PRECAUTIONS

WARNING! HARMFUL IF SWALLOWED. Sanding and grinding dusts may be harmful if inhaled. Do not swallow. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Provide fresh air ventilation during and after application and drying. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Use personal protective equipment as required. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific SDS and label information. FIRST AID:** If swallowed, rinse mouth with water (only if the person is conscious). Call physician immediately. Do not induce vomiting unless directed to do so by medical personnel. If in eyes, rinse with water for 15 minutes. Check for and remove any contact lenses. If on skin, rinse well with water. Wash with soap and water. Get medical attention if irritation develops. If inhaled, remove to fresh air. If experiencing respiratory symptoms call a POISON CENTER or doctor/physician. Keep out of the reach of children. For workplace use, an SDS is available from your retailer or by calling (412) 492-5555. EMERGENCY SPILL INFORMATION: (412) 434-4515 (U.S.).

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PPG Architectural Finishes, Inc. believes the technical data presented is currently accurate: however, no guarantee of accuracy, comprehensiveness, or performance is given or implied. Improvements in coatings technology may cause future technical data to vary from what is in this bulletin. For complete, up-to-date technical information, visit our web site or call 1-800-441-9695.

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Longueuil (Quebec) Canada J4G 1E5

SEAL GRIP®

17-921XI Series

Architectural Coatings

PPG Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer

GENERAL DESCRIPTION

Our premium interior/exterior acrylic primer is formulated to meet the performance requirements of the residential and commercial sgments. *Seal Grip* Universal Primer/Sealer is especially formulated to block most stains -water, smoke, ink, markers, and tannin. *Seal Grip* Universal Primer/Sealer has exceptional adhesion to glossy surfaces. Also recommended as a whole house primer for use on properly prepared interior or exterior wood, masonry, plaster, wallboard, cement, brick, stucco, cement composition board, aluminum and wall coverings.

RECOMMENDED SUBSTRATES

Aluminum Siding	Masonry
Brick	MDO Board
Concrete	Plaster
Fiber Cement	Stucco
Fiberglass	Vinyl Siding
Gypsum Wallboard-Drywall	Wood

CONFORMANCE STANDARDS

VOC compliant in all regulated areas
MPI approved in categories #3, #6,#17, #39, and #137

PRODUCT INFORMATION

17-921XI	White (Tintable)
17-922XI	Deep Base*

*Must be tinted before use

Refer to the appropriate color formula book, automatic tinting equipment, and or computer color matching system for color formulas and tinting instructions.

PACKAGING

Quart (946 mL)
1-Gallon (3.78 L)
5-Gallon (18.9 L)
Not all products available in all sizes.

PRODUCT DATA

PRODUCT TYPE:	100% Acrylic Latex
SHEEN:	Low Sheen
VOLUME SOLIDS*:	40% +/- 2%
WEIGHT SOLIDS*:	52% +/- 2%
WEIGHT/GALLON*:	10.5 lbs. (4.8 kg) +/- 0.2 lbs. (91 g)
VOC:	<50 g/L (0.4 lbs./gal.)

*Product data calculated on product 17-921XI.

COVERAGE: Approximately 400 sq. ft. (37 sq. meters) per U.S. Gallon (3.78L) on smooth, nonporous surfaces.

Wet Film Thickness:	4.0 mils
Wet Microns:	102
Dry Film Thickness:	1.6 mils
Dry Microns:	41

Coverage figures do not include loss due to surface irregularities and porosity or material loss due to application method or mixing. Some colors, drastic color changes, or porous substrates may require more than one coat to achieve a uniform finish.

DRYING TIME: Dry time @ 77ºF (25ºC); 50% relative humidity.

To Touch:	30 minutes
To Recoat:	1-2 hours
To Full Cure:	30 days

Drying times listed may vary depending on temperature, humidity, film build, color, and air movement. For example, product applied at 35ºF (2ºC) would require a minimum of 24 hours before recoat. Drying is important to stain-blocking properties. For maximum stain resistance, allow 24 hours before topcoating. If drying conditions are poor (low temperature, high humidity), longer drying times are required to achieve stain blocking.

CLEANUP: Clean tools with warm, soapy water.

DISPOSAL: Contact your local environmental regulatory agency for guidance on disposal of unused product. Do not pour down a drain or storm sewer.

FLASH POINT: Over 200ºF (93ºC)

FEATURES / BENEFITS

Features	**Benefits**
Great hide	Saves time and money; Better coverage in less coats
Outstanding stain and tannin blocking	Great at blocking out most stains - water, smoke, ink, markers, and more
Low VOC, <50 g/L	Nationally VOC compliant
Interior/Exterior Universal Formula	Use as a whole house primer on multiple substrates
Fast drying	Topcoat can be applied in as little as one hour
Excellent adhesion	Adheres to glossy surfaces
Mildew resistant coating	Mildew and fungal growth resistance on the paint film

GENERAL SURFACE PREPARATION

Surface must be clean and dry. Remove dirt, mildew, grease and other surface contamination. Remove loose paint, excessive amounts of chalk, and efflorescence by wire brushing, scraping, sanding, and/or pressure washing. Repair all moisture problems. Blistering and peeling issues are commonly caused by moisture behind the paint film. Putty all nail holes, and caulk all cracks and open seams. Sand all rough, and patched surfaces. Sanding is not required if the surface is properly and thoroughly cleaned.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

ALUMINUM SIDING and FIBERGLASS: Aluminum siding and fiberglass may present potential adhesion problems. Prime prior to topcoating. Primer should be spot applied, allowed to cure overnight, then evaluated for adhesion. Check adhesion by applying a piece of masking tape. If adhesion is good, the application may proceed. If the coating peels off when the masking tape is removed, the surface must be scuff sanded prior to proceeding to ensure mechanical adhesion.

BRICK, CONCRETE, MASONRY and STUCCO: New concrete and masonry should cure for at least 7 days and preferably 30 days prior to priming and painting. The pH of the substrate must be less than 13 before priming. Painting glazed brick is not recommended due to potential adhesion problems.

GYPSUM WALLBOARD-DRYWALL: Nails or screws should be countersunk, and they along with any indentations should be mudded flush with the surface, sanded smooth and cleaned to remove any dust, then prime prior to painting the substrate.

FIBER CEMENT: Fiber cement board may present potential adhesion, alkali burn, and efflorescence problems. New board should be aged for at least 7 days and preferably 30 days prior to priming and painting. The pH of the substrate must be less than 13 and the moisture content must be less than 12% prior to priming and topcoating. All cracks and opens seams should be caulked to prevent water penetration. Pre-primed board from the manufacturer may not be uniformly or completely sealed. It is recommended that a primer be applied to ensure complete and uniform sealing prior to topcoating.

MEDIUM DENSITY OVERLAY (MDO) BOARD: Countersink all nails or screws and putty flush with the surface. Surface should be sanded smooth and cleaned to remove any dust or contaminates, then primed prior to painting.

PLASTER: Plaster, hardcoat, skim coat, or other alkaline surfaces should be allowed to cure for at least 7 days and preferably 30 days prior to priming.

VINYL SIDING: Vinyl siding may present potential adhesion problems. Primer should be spot applied, allowed to cure overnight, then evaluated for adhesion. If adhesion is good, the application may proceed. Check adhesion by applying a piece of masking tape. When the masking tape is removed, if the coating peels off, the surface must be scuff sanded prior to proceeding to ensure mechanical adhesion. Color selection for vinyl siding is limited. Do not paint vinyl siding with a topcoat color darker that the original to prevent potential warping due to heat absorption.

WOOD: Unpainted wood or wood in poor condition should be sanded smooth and wiped clean. Any knots or resinous areas must be primed before painting. Countersink all nails, putty flush with surface, then prime. Staining or tannin bleeding woods (like cedar or redwood) may require two coats. The first coat must be completely dry before re-coating. For optimum tannin blocking performance, allow the first coat to dry a full 24 hours prior to the application of a second coat.

RECOMMENDED PRIMERS

Concrete Block (CMU)	6-15XI

LIMITATIONS OF USE

Apply when air and surface temperatures are 35ºF (2ºC) and surface temperature is at least 5ºF (3ºC) above the dew point. For optimum application properties, bring material to at least 50ºF (10ºC) prior to application. Air and surface temperature must remain above 35ºF (2ºC) for the next 24 hours. Avoid painting late in the day when dew and condensation are likely to form or if rain or snow is expected. Do not apply in direct sunlight.

LIMITATIONS OF USE (continued)

Vinyl siding and similar plastic composites should not be painted with a color darker than the original color. Painting vinyl siding or plastic composites with a darker color may cause them to warp. Color selection for use over vinyl siding is limited. For information, call 1-800-441-9695.

While this product provides a mildew resistant coating, growth may still occur if the substrate is not properly prepared prior to painting and/or if the substrate is consistently exposed to conditions conducive to mold, mildew, and algae.

PROTECT FROM FREEZING.

GENERAL DESCRIPTION

Glidden Spred is a multi-purpose interior latex paint + primer. This low odor/zero VOC* paint provides good hiding and is scrubbable and washable to withstand repeated cleanings. Ideal for use on properly prepared interior walls, ceilings, or trim composed of new or previously painted drywall, plaster, masonry, wood and metal.

***Colorants added to this base paint may increase VOC level significantly depending on color choices.**

RECOMMENDED SUBSTRATES

Concrete/Masonry	Gypsum Wallboard-Drywall
Concrete Block (CMU)	Plaster
Ferrous Metal	Wood

FEATURES / BENEFITS

Multi-Purpose Paint + Primer
Scrubbable & Washable
Good Hide & Coverage
Low Odor / Zero VOC*

***Colorants added to this base paint may increase VOC level significantly depending on color choices.**

CONFORMANCE STANDARDS

VOC compliant in all regulated areas

TINTING AND BASE INFORMATION

GLSIN30WB	White & Pastel Base
GLSIN30MB	Midtone Base*
GLSIN30DB	Ultra Deep Base*

*Must be tinted before use.

Refer to the appropriate color formula book, automatic tinting equipment, and or computer color matching system for color formulas and tinting instructions.

PACKAGING

Quart (946 mL)
1-Gallon (3.78 L)
5-Gallon (18.9 L)

Not all products available in all sizes.

PRODUCT DATA

PRODUCT TYPE:	Vinyl Acrylic Latex
SHEEN:	Semi-Gloss: 40-60 @60º
VOLUME SOLIDS*:	33% +/- 2%
WEIGHT SOLIDS*:	46% +/- 2%
WEIGHT/GALLON*:	10.3 lbs. (4.7 kg) +/- 0.2 lbs. (91 g)
VOC*:	0 g/L (0.0 lbs./gal.)**

*Product data calculated on product GLSIN30WB.
****Colorants added to this base paint may increase VOC level significantly depending on color choices.**

COVERAGE: Approximately 400 sq. ft. (37.2 sq. meters) per U.S. Gallon (3.78L) on smooth, nonporous surfaces.

Wet Film Thickness:	4.0 mils
Wet Microns:	102
Dry Film Thickness:	1.3 mils
Dry Microns:	33

Coverage figures do not include loss due to surface irregularities and porosity or material loss due to application method or mixing. Some colors, drastic color changes, or porous substrates may require more than one coat to achieve a uniform finish.

DRYING TIME: Dry time @ 77ºF (25ºC); 50% relative humidity.

To Touch:	1 hour
To Recoat:	4 hours
To Full Cure:	30 days

Drying times listed may vary depending on temperature, humidity, film build, color, and air movement.

CLEANUP: Clean tools with warm, soapy water.

WASHING INSTRUCTIONS: Wait at least 30 days after painting before cleaning the surface with a non-abrasive mild cleaner.

DISPOSAL: Contact your local environmental regulatory agency for guidance on disposal of unused product. Do not pour down a drain or storm sewer.

FLASH POINT: Over 200ºF (93ºC)

LIMITATIONS OF USE

FOR INTERIOR USE ONLY. Apply paint only when air, product and surface temperatures are between 50ºF (10ºC) and 90ºF (32ºC).

Not recommended for use on steps or floors.

PROTECT FROM FREEZING.

GENERAL SURFACE PREPARATION

Surface must be clean and dry. Remove all loose and peeling paint, dirt, mildew, grease, oil, chalk, rust, and any other surface contaminants. Putty all nail holes, and caulk all cracks and open seams. Sand all glossy, rough, and patched surfaces. When applied to an uncoated substrate, two coats are required, with the first coat acting as the primer. The appropriate specialty primer is recommended for special substrates such as tannin staining wood, chalky masonry, and bare metal.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

CONCRETE, MASONRY and PLASTER: New concrete, masonry and plaster should cure for at least 30 days and preferably 90 days prior to painting. The pH of the substrate must be less than 10.

CONCRETE BLOCK (CMU): Mortar should cure for at least 30 days and preferably 90 days prior to painting. Fill block with an appropriate block filler.

FERROUS METAL: The surface must be cleaned thoroughly to remove any dust, rust, and surface contaminants, and then primed.

GYPSUM WALLBOARD-DRYWALL: Nails or screws should be countersunk, and they along with any indentations should be mudded flush with the surface, sanded smooth and cleaned to remove any dust prior to painting the substrate.

WOOD: Unpainted wood or wood in poor condition should be sanded smooth and wiped clean. Any knots or resinous areas must be primed before painting. Countersink all nails, putty flush with surface, then paint.

APPLICATION INFORMATION

Stir thoroughly before using and occasionally when in use. When using more than one can of the same color, intermix to ensure color uniformity. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN. Read all label and Safety Data Sheet (SDS) information prior to use. SDS are available through our web site or by calling 1-800-441-9695.

Application Equipment: Apply with a high quality brush, roller, paint pad, or by spray equipment. Where necessary, apply a second coat and allow each coat to dry thoroughly before applying the next coat.
Airless Spray: Minimum pressure 2000 psi, tip 0.015" - 0.021". Spray equipment must be handled with due care and in accordance with manufacturer's recommendation. High-pressure injection of coatings into the skin by airless equipment may cause serious injury.
Brush: Polyester/Nylon Brush
Roller: 3/8" - 1/2" nap roller cover
Thinning: No thinning required.
Permissible temperatures during application:

Material:	50 to 90ºF	10 to 32ºC	Ambient:	50 to 100ºF	10 to 38ºC	Substrate:	50 to 100ºF	10 to 38ºC

PRECAUTIONS

WARNING! HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. Sanding and grinding dusts may be harmful if inhaled. Do not swallow. Avoid contact with eyes. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Provide fresh air ventilation during and after application and drying. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Use personal protective equipment as required. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific SDS and label information.**
FIRST AID: If swallowed, rinse mouth with water (only if the person is conscious). Call physician immediately. Do not induce vomiting unless directed to do so by medical personnel. If in eyes, rinse with water for 15 minutes. Check for and remove any contact lenses. If on skin, rinse well with water. Wash with soap and water. Get medical attention if irritation develops. If inhaled, remove to fresh air. If experiencing respiratory symptoms call a POISON CENTER or doctor/physician. Keep out of the reach of children. For workplace use, an SDS is available from your retailer or by calling (412) 492-5555. EMERGENCY SPILL INFORMATION: (412) 434-4515 (U.S.).

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Architect/Specifier
1-888-PPG-IDEA

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2505, rue de la Metropole
Longueuil (Quebec) Canada J4G 1E5

GLSIN30WB - 1/2018

Made in the USA

U.S. CONSUMER PRODUCT SAFETY COMMISSION (CPSC)
CERTIFICATE OF COMPLIANCE

Product

GLSIN30WB GLIDDEN SPRED INTERIOR LATEX FLAT SEMI-GLOSS WHITE/PASTEL BASE

Applicable CPSC Regulation(s)
PPG Architectural Coatings certifies that the above product(s) comply with the requirements of the CPSIA and the following regulations:

16 CFR 1302 – Ban on Extremely Flammable Contact Adhesives
16 CFR 1303 – Ban of Lead Containing Paint
16 CFR 1500 – Federal Hazardous Substances Act
16 CFR 1700 – Poison Prevention Packaging Act

Applicable Toxics in Packaging Legislation - PPG Architectural Coatings certifies that all packaging and packaging components sold by PPG Architectural Coatings or its subsidiaries in the States of California, Connecticut, Florida, Georgia, Illinois, Iowa, Maine, Maryland, Minnesota, Missouri, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, Washington and Wisconsin comply with the requirements of the toxics in packaging laws.

Manufacturer/Distributor
PPG Architectural Coatings
400 Bertha Lamme Drive
Cranberry Township, PA 16066

Individual Maintaining Records of Test Results
Director – Global Product Stewardship Architectural Coatings
PPG Architectural Coatings
400 Bertha Lamme Drive
Cranberry Township, PA 16066
(724) 742-5456
ppgacproductstewardship@ppg.com

Manufacturing Information
PPG Architectural Coatings are manufactured at the following locations:

US
Batavia, IL
Carrollton, TX
Dover, DE
East Point, GA
Houston, TX
Huron, OH
Louisville, KY
Oakwood, GA
Reno, NV
Temple, TX

Canada
Beauport, Quebec
Delta, British Columbia
Vaughan, Ontario

For specific manufacturing information contact our Technical Service Department at 1-800-441-9695.

Testing Information
PPG Architectural Coatings has a longstanding tradition of providing quality products that meet or exceed all applicable product safety federal, state, local regulations and industry standards. This includes those regulations administered by the Consumer Product Safety Commission (CPSC). In addition, PPG Architectural Coatings implemented, and has engaged in, an on-going testing program to document conformity with 16 CFR 1303 limits for lead in paint. Information on our testing efforts is available by calling PPG Technical Service at 1-800-441-9695.

Third-Party Laboratory Information
Not Applicable

Effective: May 2017

APPLICATION INFORMATION

Stir thoroughly before using and occasionally when in use. When using more than one can of the same color, intermix to ensure color uniformity. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN. Read all label and Safety Data Sheet (SDS) information prior to use. SDS are available through our web site or by calling 1-800-441-9695.

Application Equipment: Apply with a high quality brush, roller, paint pad, or by spray equipment. Severe stains may require two coats of primer. Brushing is the preferred method of application over chalky substrates. If painting will be interrupted for more than 15 minutes, keep brushes and rollers wet by wrapping them in tinfoil or plastic wrap.

Airless Spray: Pressure 2000 psi; tip 0.015" - 0.021". Spray equipment must be handled with due care and in accordance with manufacturer's recommendation. High-pressure injection of coatings into the skin by airless equipment may cause serious injury.

Brush: Polyester/Nylon Brush
Roller: 3/8" - 3/4" nap roller cover
Thinning: Do not thin.

Permissible temperatures during application:

Material:	35 to 90ºF	2 to 32ºC
Ambient:	35 to 90ºF	2 to 32ºC
Substrate:	35 to 90ºF	2 to 32ºC

PRECAUTIONS

WARNING! HARMFUL IF INHALED. HARMFUL IF SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. Do not breathe vapor or mist. Do not swallow. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Provide fresh air ventilation during and after application and drying. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Use personal protective equipment as required. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific SDS and label information. FIRST AID:** If swallowed, rinse mouth with water (only if the person is conscious). Call physician immediately. Do not induce vomiting unless directed to do so by medical personnel. If in eyes, rinse with water for 15 minutes. Check for and remove any contact lenses. If on skin, rinse well with water. Wash with soap and water. Get medical attention if irritation develops. If inhaled, remove to fresh air. Call physician immediately. Keep out of the reach of children. For workplace use, an SDS is available from your retailer or by calling (412) 492-5555. EMERGENCY SPILL INFORMATION: (412) 434-4515 (U.S.).

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PPG Architectural Finishes, Inc. believes the technical data presented is currently accurate: however, no guarantee of accuracy, comprehensiveness, or performance is given or implied. Improvements in coatings technology may cause future technical data to vary from what is in this bulletin. For complete, up-to-date technical information, call 1-800-441-9695.

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1-888-PPG-IDEA

PPG Architectural Coatings Canada Inc.
1550 rue Ampère, Suite 500
Boucherville (Quebec) J4B 7L4

GENERAL DESCRIPTION

Glidden Spred is a multi-purpose interior latex paint + primer. This low odor/zero VOC* paint provides good hiding and is scrubbable and washable to withstand repeated cleanings. Ideal for use on properly prepared interior walls, ceilings, or trim composed of new or previously painted drywall, plaster, masonry, wood and metal.

***Colorants added to this base paint may increase VOC level significantly depending on color choices.**

RECOMMENDED SUBSTRATES

Concrete/Masonry	Gypsum Wallboard-Drywall
Concrete Block (CMU)	Plaster
Ferrous Metal	Wood

FEATURES / BENEFITS

Multi-Purpose Paint + Primer
Scrubbable & Washable
Good Hide & Coverage
Low Odor / Zero VOC*

***Colorants added to this base paint may increase VOC level significantly depending on color choices.**

CONFORMANCE STANDARDS

VOC compliant in all regulated areas

TINTING AND BASE INFORMATION

GLSIN10WB	White & Pastel Base
GLSIN10MB	Midtone Base*
GLSIN10DB	Ultra Deep Base*

*Must be tinted before use.

Refer to the appropriate color formula book, automatic tinting equipment, and or computer color matching system for color formulas and tinting instructions.

PACKAGING

Quart (946 mL)
1-Gallon (3.78 L)
5-Gallon (18.9 L)

Not all products available in all sizes.

PRODUCT DATA

PRODUCT TYPE:	Vinyl Acrylic Latex
SHEEN:	Flat: 1-5 @60º & @85º
VOLUME SOLIDS*:	33% +/- 2%
WEIGHT SOLIDS*:	49% +/- 2%
WEIGHT/GALLON*:	11.0 lbs. (5.0 kg) +/- 0.2 lbs. (91 g)
VOC*:	0 g/L (0.0 lbs./gal.)**

*Product data calculated on product GLSIN10WB.
****Colorants added to this base paint may increase VOC level significantly depending on color choices.**

COVERAGE: Approximately 400 sq. ft. (37.2 sq. meters) per U.S. Gallon (3.78L) on smooth, nonporous surfaces.

Wet Film Thickness:	4.0 mils
Wet Microns:	102
Dry Film Thickness:	1.3 mils
Dry Microns:	33

Coverage figures do not include loss due to surface irregularities and porosity or material loss due to application method or mixing. Some colors, drastic color changes, or porous substrates may require more than one coat to achieve a uniform finish.

DRYING TIME: Dry time @ 77ºF (25ºC); 50% relative humidity.

To Touch:	1 hour
To Recoat:	4 hours
To Full Cure:	30 days

Drying times listed may vary depending on temperature, humidity, film build, color, and air movement.

CLEANUP: Clean tools with warm, soapy water.

WASHING INSTRUCTIONS: Wait at least 30 days after painting before cleaning the surface with a non-abrasive mild cleaner.

DISPOSAL: Contact your local environmental regulatory agency for guidance on disposal of unused product. Do not pour down a drain or storm sewer.

FLASH POINT: Over 200ºF (93ºC)

LIMITATIONS OF USE

FOR INTERIOR USE ONLY. Apply paint only when air, product and surface temperatures are between 50ºF (10ºC) and 90ºF (32ºC).

Not recommended for use on steps or floors.

PROTECT FROM FREEZING.

GENERAL SURFACE PREPARATION

Surface must be clean and dry. Remove all loose and peeling paint, dirt, mildew, grease, oil, chalk, rust, and any other surface contaminants. Putty all nail holes, and caulk all cracks and open seams. Sand all glossy, rough, and patched surfaces. When applied to an uncoated substrate, two coats are required, with the first coat acting as the primer. The appropriate specialty primer is recommended for special substrates such as tannin staining wood, chalky masonry, and bare metal.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

CONCRETE, MASONRY and PLASTER: New concrete, masonry and plaster should cure for at least 30 days and preferably 90 days prior to painting. The pH of the substrate must be less than 10.

CONCRETE BLOCK (CMU): Mortar should cure for at least 30 days and preferably 90 days prior to painting. Fill block with an appropriate block filler.

FERROUS METAL: The surface must be cleaned thoroughly to remove any dust, rust, and surface contaminants, and then primed.

GYPSUM WALLBOARD-DRYWALL: Nails or screws should be countersunk, and they along with any indentations should be mudded flush with the surface, sanded smooth and cleaned to remove any dust prior to painting the substrate.

WOOD: Unpainted wood or wood in poor condition should be sanded smooth and wiped clean. Any knots or resinous areas must be primed before painting. Countersink all nails, putty flush with surface, then paint.

APPLICATION INFORMATION

Stir thoroughly before using and occasionally when in use. When using more than one can of the same color, intermix to ensure color uniformity. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN. Read all label and Safety Data Sheet (SDS) information prior to use. SDS are available through our web site or by calling 1-800-441-9695.

Application Equipment: Apply with a high quality brush, roller, paint pad, or by spray equipment. Where necessary, apply a second coat and allow each coat to dry thoroughly before applying the next coat.
Airless Spray: Minimum pressure 2000 psi, tip 0.015" - 0.021". Spray equipment must be handled with due care and in accordance with manufacturer's recommendation. High-pressure injection of coatings into the skin by airless equipment may cause serious injury.
Brush: Polyester/Nylon Brush
Roller: 3/8" - 1/2" nap roller cover
Thinning: No thinning required.
Permissible temperatures during application:

Material:	50 to 90ºF	10 to 32ºC	Ambient:	50 to 100ºF	10 to 38ºC	Substrate:	50 to 100ºF	10 to 38ºC

PRECAUTIONS

WARNING! HARMFUL IF SWALLOWED. Sanding and grinding dusts may be harmful if inhaled. Do not swallow. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Provide fresh air ventilation during and after application and drying. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Use personal protective equipment as required. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific SDS and label information. FIRST AID:** If swallowed, rinse mouth with water (only if the person is conscious). Call physician immediately. Do not induce vomiting unless directed to do so by medical personnel. If in eyes, rinse with water for 15 minutes. Check for and remove any contact lenses. If on skin, rinse well with water. Wash with soap and water. Get medical attention if irritation develops. If inhaled, remove to fresh air. If experiencing respiratory symptoms call a POISON CENTER or doctor/physician. Keep out of the reach of children. For workplace use, an SDS is available from your retailer or by calling (412) 492-5555. EMERGENCY SPILL INFORMATION: (412) 434-4515 (U.S.).

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PPG Architectural Coatings Canada Inc.
2505, rue de la Metropole
Longueuil (Quebec) Canada J4G 1E5

GLSIN10WB - 1/2018

Made in the USA

Exhibit J

TOP GUN® 200XI 1414X

PPG Architectural Coatings

TOP GUN® 200XI Elastomeric Siliconized Acrylic Sealant

GENERAL DESCRIPTION

TOP GUN® 200XI Elastomeric Acrylic Sealant is a premium grade sealant that forms a durable, flexible, airtight, weather resistant seal that offers exceptional protection from environmental conditions. *TOP GUN 200XI* flows smoothly, is easy to apply, offers good paintability and resists rust bleed-through. *TOP GUN 200XI* is designed to be used on some of the most extreme applications, including molding, windows/doors, baseboards, pipes/vents, brick/masonry, siding/wood, drywall, counters/tile, glass, and metal.

RECOMMENDED USES

Molding
Windows/Doors
Baseboards
Pipes/Vents
Drywall
Tile
Glass

FEATURES / BENEFITS

50 year warranty
Excellent Adhesion & Durability
Easy Water Clean-up
Paintable
Interior/Exterior
Exceeds ASTM C-834

LIMITATIONS OF USE

Not designed for use in engineered "expansion joints." Do not apply when rain is expected on exterior applications within 8 hours. Not recommended for applications below grade or where water may stand, or for traffic bearing surfaces. For deep cracks, always use closed-cell backer-rod. Do not use in cracks larger than ½" x ½." Not for food contact surfaces. NOTE: Painting the sealant before the recommended dry time may result in cracking. PROTECT FROM FREEZING.

PRODUCTS

1414X	White

PRODUCT DATA

Product Type:	100% Acrylic (Siliconized)
Volume Per Tube:	10.1 oz.
VOC (actual):	<1.5%
Weight Per Gallon:	14.0 lbs.
Solids by Weight:	82% minimum
Freeze/Thaw:	5 Cycles
Adhesion:	Excellent

Dry Time to Paint @ 70ºF / 50% relative humidity:

Latex Paint:	4 to 6 hours
Oil Base Paint:	4 to 6 hours

(Expect longer dry times at lower temperatures and higher relative humidity.)

Estimated Coverage:	1/8” x 1/4” bead - 60 linear feet per tube 1/4” x 1/4” bead - 30 linear feet per tube.
Clean Up:	Clean spills immediately with clean water and a soft cloth. Clean tools immediately after use with clean water.
Flash Point:	>200ºF (>93ºC)
ASTM Specification:	Exceeds the requirements of ASTM C-834, Type OP, Grade - 18ºC.

Note: This product is not formulated with lead or mercury containing materials.

GENERAL SURFACE PREPARATION

Where applicable, remove old sealant or caulking. Thoroughly dry the joints or surfaces, where the *TOP GUN 200XI* will be applied. Remove all dirt, dust, oil, mildew, loose paint or other contaminants. Bare surfaces should be primed before caulking.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

APPLICATION INFORMATION

Permissible temperatures during application:

Temperature Range:	Air and surface 40ºF to 110ºF (43.3ºC) Optimum product temperature 60ºF to 80ºF (16ºC to 27ºC)
Dew Point:	Surface must be at least 5ºF (3ºC) above the dew point.

A**pplication Information:** Install backer-rod uniformly into deep cracks to control sealant depth. For cracks up to 1/2 inch wide, set the backer-rod from 1/4 to 1/2 inch deep. Bond breaker tape may be used for joints not deep enough for backer-rod. Cut nozzle at a 45º angle. Fill joints and cracks by holding the nozzle in the opening and filling completely from the bottom up. Cured bead should be between 1/8" and 1/2". Smooth immediately with a damp sponge or towel, or other tool as required. Remove excess material with a wet cloth. Dry excess sealant may be cut away.

SHIPPING

Freight Classification: PAINT OR PAINT RELATED MATERIAL
Packaging: 12-10.1 Ounce Tubes per carton

PRECAUTIONS

WARNING! HARMFUL IF SWALLOWED. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED. Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces. Do not breathe. Do not swallow. Do not get in eyes or on skin or clothing. Wash thoroughly after handling. Provide fresh air ventilation during and after application and drying. Use personal protective equipment as required. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information. FIRST AID**: If swallowed, do not induce vomiting. Call physician immediately. If in eyes, or on skin rinse with water for 15 minutes. Get medical attention immediately. If inhaled, remove to fresh air. Call a physician if respiratory symptoms occur. Keep out of the reach of children. For workplace use, an MSDS is available from your retailer or by calling (412) 492-5555. EMERGENCY SPILL INFORMATION: (412) 434-4515 (U.S.).

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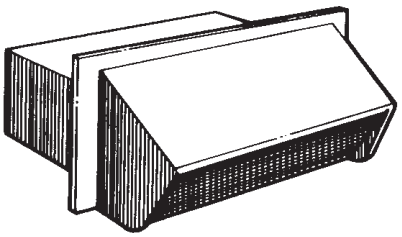
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Exhibit K

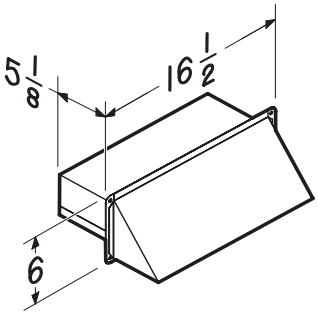
BROAN®

SPECIFICATION SHEET

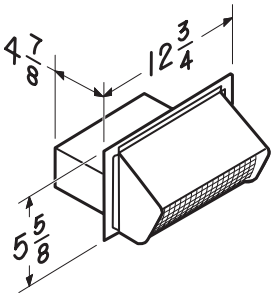
WALL CAPS



Model WC638
- For 3¼" x 14" duct
- Spring-loaded backdraft damper and bird screen
- 26 GA CRCQ Steel, black finish

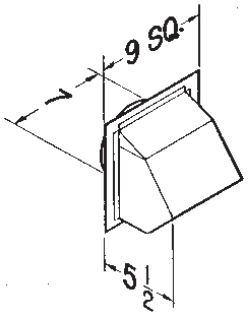


Model 639
- For 3¼" x 10" duct
- Spring-loaded backdraft damper and bird screen
- 24 GA CRCQ Steel, black powder coat paint finish
- Do not use for dryer venting

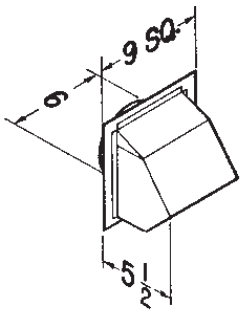


Model 649
- Same features as Model 639
- .025 Aluminum - natural finish

Model 647
- For 7" round duct
- Spring-loaded backdraft damper and bird screen
- .025 Aluminum - natural finish
- Do not use for dryer venting



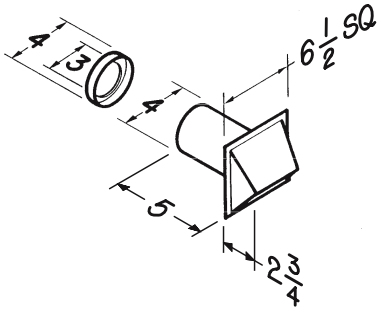
Model 843BL
- For 6" round duct
- Spring-loaded backdraft damper and bird screen
- 22 GA CRCQ Steel, black powder coat paint finish
- Attachment collar 1¼" long
- Do not use for dryer venting



Model 641
- Same features as Model 843BL
- .025 Aluminum - natural finish

Model 641FA
- Same features as Model 641
- Without backdraft damper
- Includes mesh screen
- Intended for make-up air inlet applications

Model 885BL
- For 3" or 4" round duct (4" to 3" transition included)
- Spring-loaded backdraft damper and bird screen
- 24 GA CRCQ Steel, black powder coat paint finish
- Do not use for dryer venting

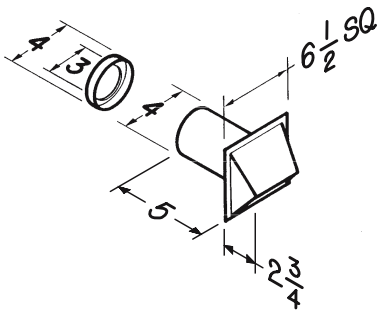


Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

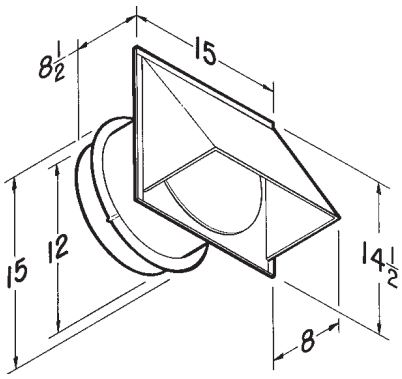
Model 885AL

- For 3" or 4" round duct (4" to 3" transition included)
- Spring-loaded backdraft damper and bird screen
- .025 Aluminum - natural finish
- Do not use for dryer venting



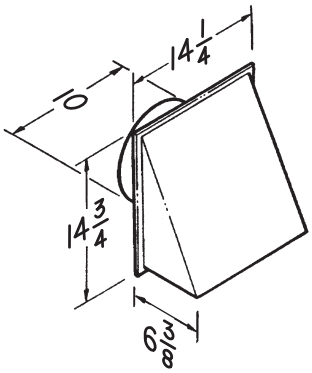
Model 613

- For 12" round duct
- High capacity
- Built-in backdraft damper and bird screen
- .025 Aluminum - natural finish



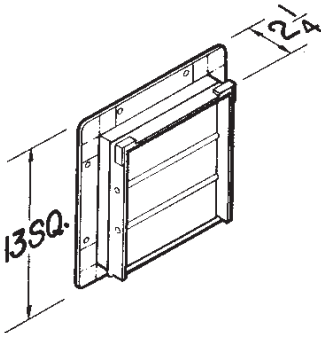
Model 610FA

- For 10" round duct
- .025 Aluminum - natural finish
- Attachment collar 3-3/8" long
- Without backdraft damper
- Includes mesh screen
- Intended for make-up air inlet applications



Model 441

- Gravity dampers
- Collar with bird screen for attaching 10" round duct
- 24 GA CRCQ steel construction with aluminum louvers

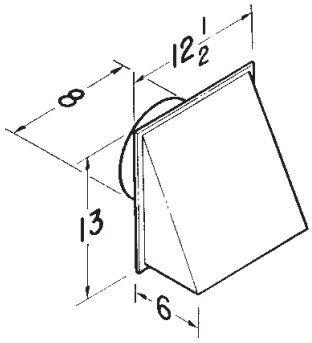


Model 643

- For 8" round duct
- Built-in backdraft damper
- .025 Aluminum - natural finish
- Attachment collar 3-3/8" long

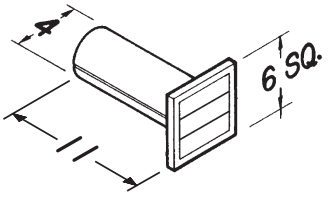
Model 643FA

- Same features as Model 643
- Without backdraft damper
- Includes mesh screen
- Intended for make-up air inlet applications



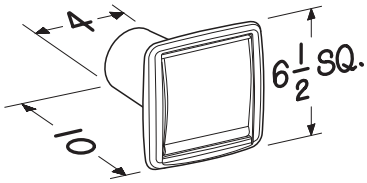
Model 450 Flexible Wall Ducting Kit

- Includes 5 ft. of 4", flexible, vinyl ducting, 4" diameter metal duct connector, 2 duct clamps, 4" to 3" reducer and a white polymeric louvered wall vent



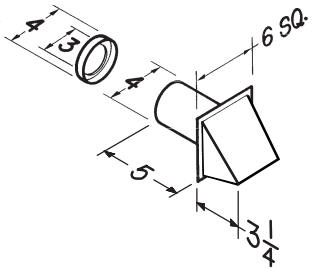
Model WC650

- White wall cap for 4" round duct - includes 4 mounting screws
- Engineered resin material for impact and UV resistance
- Weighted backdraft damper guards against wind, birds or lint build-up
- 4" diameter metal duct connector



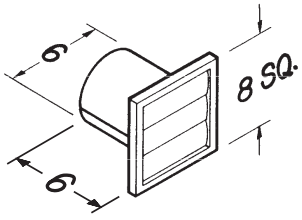
Model 642

- For 4" round duct (4" to 3" transition included)
- Built-in backdraft damper
- Aluminium - natural finish
- Do not use for dryer venting



Model 646

- For 6" round duct
- Polymeric construction - white finish



Model WVK2A Flexible Wall Ducting Kit

- Includes 5 ft. of 4", flexible, 2-ply metallic laminate ducting, 10" long 4" diameter metal duct, 2 duct clamps, 4" to 3" reducer, an engineered resin material wall cap with white finish, and mounting screws
- Duct conforms to UL181 Class 1 air connector requirements
- Do not use for dryer venting

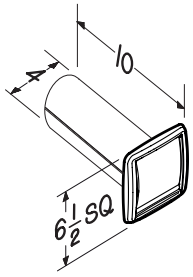
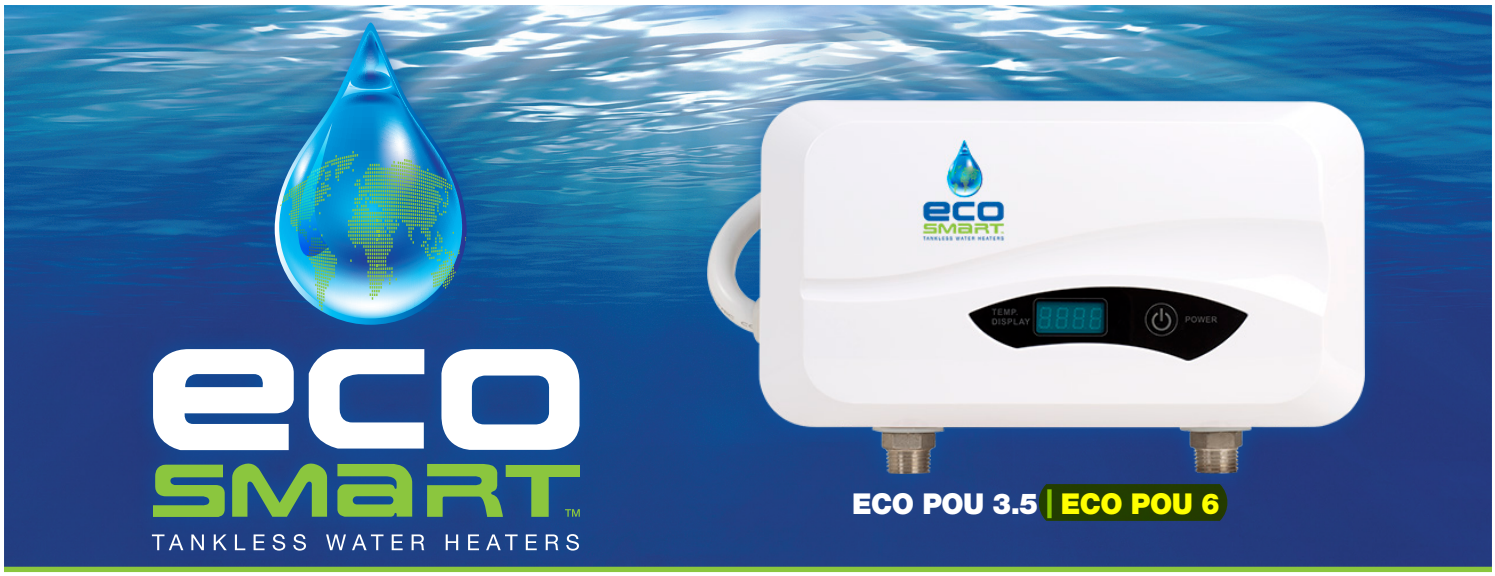


Exhibit L



Electric Tankless Water Heater

MODEL	KW	VOLTS	BREAKER	REQUIRED WIRE	WATER CONNECTIONS
POU 3.5	3.5	120	30 A	10 AWG	1/2” NPT
POU 6	5.5	220	25 A	10 AWG	1/2” NPT

Tested and certified by the Water Quality Association against NSF/ANSI 372 for lead free compliance.

Temperature Rise

The chart below shows the temperature rise each POU model can achieve based on the gallon-per-minute flow rate. POU models do not have self-modulating technology or temperature setting capability. They have a digital display showing the outlet temperature.

Temperature Rise Table. Reflects temperature rise for different models at various flow rates in gallons per minute.

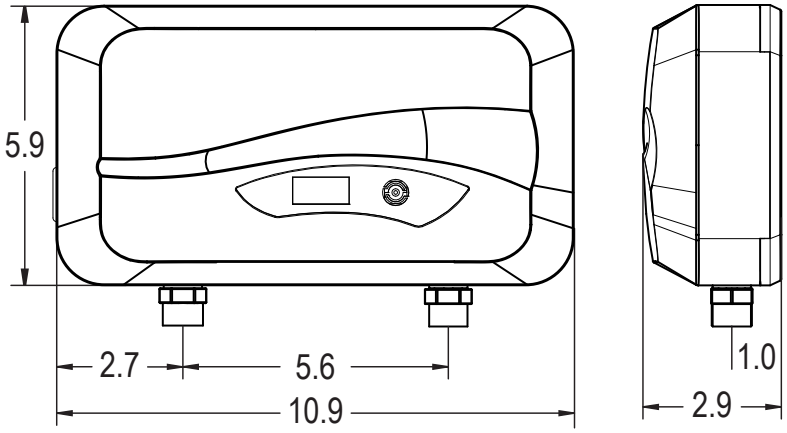
FLOW RATE	POU 3.5	POU 6
0.5 GPM	47.8°F	75.1°F
1.0 GPM	23.9°F	37.6°F
1.5 GPM	15.9°F	25.0°F

Applications

- Hand Sinks
- Wet Bars
- Strip Malls
- Doctor’s Offices
- Boats
- Recreational Vehicles
- Schools
- Restaurants
- Airports
- Commercial Facilities
- Hotels
- Daycare Centers

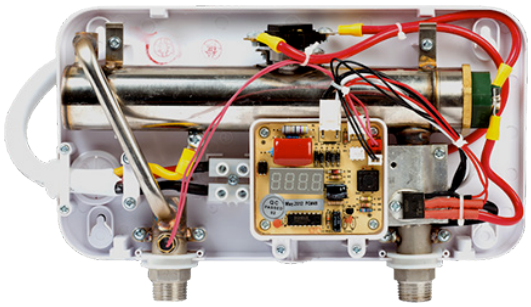
Product Attributes

- On-demand, consistent and endless hot water
- Compact, durable and stylish with digital display
- Dimensions: 6” x 11” x 3”
- 99.8% energy efficient
- Heating elements are durable and are threaded for easy replacement
- Simple Installation
- 3-ft. electric cable included and 1/2” NPT water connectors for easy flex hose installation
- One year warranty for residential use when registered properly and installed within 30 days of purchase by a licensed professional
- 0.5 GPM aerator included
- Solid, hand-welded stainless steel heat exchanger



Product dimensions shown in inches.

Specifications



ECO POU 3.5

Uses one (1) 3.5kW at 120V element.

ECO POU 6

Uses one (1) 5.5kW at 220V element.

Operating Pressure

Minimum	Maximum
25 PSI	150 PSI

Note: Flow Activated at 0.25 GPM

SPECIFICATION	POU 3.5	POU 6
kW	3.5	5.5
Voltage	120	220
Phase	Single	Single
Element	(1) 3.5kW @ 120V	(1) 5.5kW @ 220V
Amperage Draw	29 A	25 A
Required Breaker	30 A	25 A
Required Wire	10 AWG	10 AWG
Weight	4 lb	4 lb
Heat Exchanger	Stainless steel	Stainless steel
Protection	Thermal Auto-Reset	Thermal Auto-Reset
Energy Efficiency	99.8%	99.8%
Certification	ETL Listed to UL-499 and CAN/CSA-C22.2 No. 64	
Warranty	1 year limited	

EcoSmart Submittal

Engineer/Architect: _____

Job Name/Customer: _____

Location: _____

Contractor: _____

Representative: _____

HEATER SPECIFICATIONS	Quantity	kW	Voltage	AMPS
Model: ECO _____	_____	_____	_____	_____

400 Captain Neville Drive
Waterbury, CT 06705
Toll Free: (877) 474-6473
support@ecosmartus.com
EcoSmartUS.com

EX09001-62 REV 05/2017

Exhibit M

LEAD BASED PAINT INSPECTION REPORT

FOR

FERNANDO L. SUMAZA & COMPANY, INC.

SAMPLING CONDUCTED AT
MIRADOR LAS CASAS APARTMENTS
EDUARDO CONDE FINAL AVENUE,
SANTURCE WARD, SAN JUAN, PR

APRIL, 2016

ZEM-16064

PREPARED BY:
ZIMMETRY ENVIRONMENTAL MANAGEMENT CORP.
PO BOX 3545 BAYAMÓN, PR 00958
PHONE: 787.376.9010 FAX: 787.995.0005
WEB PAGE: WWW.ZIMMETRY.COM
EMAIL: INFO@ZIMMETRY.COM

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Appendix B: Performance Characteristics Sheet

Appendix C: Project Photographs

Appendix D: Site Location

Appendix E: XRF Sampling Data

SECTION 1: EXECUTIVE SUMMARY

1.1 INTRODUCTION

A Lead-Based Paint inspection was conducted between March 18, 2016 and April 7, 2016 at Mirador Las Casas Apartments Complex located at Eduardo Conde Final Avenue, Santurce Ward in San Juan, PR. All painted and/or finished components were evaluated according to the specifications described in the protocols for LBP inspection in the Housing and Urban Development (HUD) Guidelines Chapter 7 (Second Edition, July 2012) and all applicable Federal, State, and Local regulations.

The information in this report must be disclosed to all existing and new residents and to any new buyer in the future, under the Lead Disclosure Rule (24 CFR part 35, subpart A (HUD's rule) and 40 CFR part 745, subpart F (EPA's identical rule)).

1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of 28 dwelling units, randomly selected, from the 294 dwelling units, exteriors, administrative offices, playground, Neighborhood Network Center, Communal Center, common areas (i.e. hallways, staircases, etc.) and site. Exterior storage rooms were not part of the scope of work. The inspection was performed following the Department of Housing and Urban Development's (HUD) Guidelines for the Evaluation of Lead Based Paint in Housing multifamily inspection protocol. No samples of dust were collected.

Additionally, ceramic components (i.e. wall tiles, floor tiles, lavatories, toilets, etc.) were evaluated in order to disclose the findings if future replacement activities will be conducted in compliance with Environmental Quality Board Non-Hazardous Solid Waste Regulation and the Lead Based Paint Abatement Activities Regulation.

Lead-based paint (defined in section 2.3) and lead containing components were identified in various components and surfaces throughout the project on the date of the evaluation. Table 1-1 identifies the components positive for lead.

1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH LEAD-BASED PAINT

Table 1-1 below summarizes the building components coated with lead-based paint or building components containing lead. Details that identify positive lead-based paint findings within specific areas and on surfaces were provided in the Lead-based paint inspection report. Table 2-2 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Environmental Quality Board (EQB). For specific locations and additional detail on the location of lead-based paint reference Sections 2 and 3.

Table 1-1: Summary of Components with Lead Based Paint or Containing Lead						
Bldg.	**Apart.**	**Area**	**Component**	**Color**	**Substrate**	**Area / Amount (Approx.)**
1	1-B3	Bathroom	Bathtub	White	Ceramic	1 Unit
2	2-D2	Bathroom	Bathtub	White	Ceramic	1 Unit
3	3-B3	Bathroom	Bathtub	White	Ceramic	1 Unit
4	4-B3	Bathroom	Bathtub	White	Ceramic	1 Unit
	4-F3	Bathroom	Bathtub	White	Ceramic	1 Unit
5	5-B2	Bathroom	Bathtub	White	Ceramic	1 Unit
6	6-C1	Bathroom	Bathtub	White	Ceramic	1 Unit
		Hall Closet	Shelve & Cleat	White	Wood	Shelve System
7	7-D1	Bathroom	Bathtub	White	Ceramic	1 Unit
8	8-C1	Bathroom	Bathtub	White	Ceramic	1 Unit
9	9-B2	Bathroom	Bathtub	White	Ceramic	1 Unit
10	10-D1	Bathroom	Bathtub	White	Ceramic	1 Unit
	10-E2	Bathroom	Bathtub	White	Ceramic	1 Unit
11	11-D3	Bathroom	Bathtub	White	Ceramic	1 Unit
12	12-C3	Bathroom	Bathtub	White	Ceramic	1 Unit
13	13-D2	Bathroom	Bathtub	White	Ceramic	1 Unit
14	14-A2	Bathroom	Bathtub	White	Ceramic	1 Unit
		Rooms 1 & 2 Closet	Shelve & Cleat	White	Wood	Shelve Systems
	14-C3	Bathroom	Bathtub	White	Ceramic	1 Unit
		Bathroom, Hall 2 Closet & Rooms 1, 2 & 3	Door Casings	Cream	Wood	5 Units
		Room 2 Clo.	Shelve & Cleat	Cream	Wood	Shelve System
15	15-B3	Bathroom	Bathtub	White	Ceramic	1 Unit
		Room 1 Closet & Hall 2 Closet 2	Shelve & Cleat	Cream	Wood	Shelve Systems
		Hall 2 Closet 1	Door	Cream	Wood	1 Unit
16	16-A2	Living & Dining	Wall B	Cream	Concrete	104 Ft^2
		Room 1 Closets 1 & 2 & Room 2 Closet	Shelve & Cleat	Cream	Wood	Shelve Systems
		Bathroom & Hall 2 Closet	Doors	Cream	Wood	2 Units
		Bathroom	Bathtub	White	Ceramic	1 Unit

Table 1-1: Summary of Components with Lead Based Paint or Containing Lead						
Bldg.	**Apart.**	**Area**	**Component**	**Color**	**Substrate**	**Area / Amount (Approx.)**
17	17-B2	Bathroom	Bathtub	White	Ceramic	1 Unit
17	17-B2	Hall 2 Closet, Room 2 Closet 1, Room 3 Closet & Hall1 Closet	Shelve & Cleat	Cream	Wood	Shelve Systems
17	17-C3	Bathroom	Bathtub	White	Ceramic	1 Unit
		Bathroom & Hall 2 Closet	Doors	Cream	Wood	2 Units
		Room 1 Closet 2, Room 2 Closet & Hall 2 Closet	Shelve & Cleat	Cream	Wood	Shelve Systems
18	18-D2	Bathroom	Bathtub	White	Ceramic	1 Unit
		Room 1 Closet	Shelve & Cleat	Cream	Wood	Shelve System
19	19-C3	Bathroom	Bathtub	White	Ceramic	1 Unit
		Room 1 Closet 2, Room 2 Closet & Room 3 Closet	Shelve & Cleat	Cream	Wood	Shelve Systems
	19-D2	Bathroom	Bathtub	White	Ceramic	1 Unit
20	20-F3	Bathroom	Bathtub	White	Ceramic	1 Unit
21	21-A2	Bathroom	Bathtub	White	Ceramic	1 Unit
	21-B3	Bathroom	Bathtub	White	Ceramic	1 Unit
Site		Parking A	Curbs	Yellow	Concrete	855 Ln Ft

Note:

- The quantification of positives materials presented in this table is only an estimate. If an abatement of the materials will be conducted the Contractors shall estimate the amount of materials to be abated.
- Photographic documentation is for reference purposes and doesn't include all the surfaces with lead based paint and/or components containing lead.

Dwelling units inspected were found to be free of lead-based paint

Table 1-2: Dwelling Units Negative for Lead Based Paint or Components Containing Lead	
Floor	**Dwelling Unit**
9	9-C2

SECTION 2: LEAD-BASED PAINT INSPECTION REPORT

2.1 OVERVIEW OF THE EVALUATION

This lead-based paint inspection is an interior and exterior investigation to identify all lead-based paint on a surface-by-surface basis. A lead-based paint inspection following the HUD Guidelines Multifamily inspection protocol was performed at the project area. Mirador Las Casas Apartments Complex consists of two hundred ninety-four dwelling units distributed in twenty one buildings. This lead-based paint inspection consisted of the evaluation of 28 dwelling units randomly selected exteriors, administrative offices, playground, Neighborhood Network Center, Communal Center, common areas (i.e. hallways, staircases, etc.) and site. Storage rooms were not part of the scope of work. No samples of dust were collected. Additionally, ceramic components (i.e. wall tiles, floor tiles, lavatories, toilets, etc.) were evaluated in order to disclose the findings if future replacement activities will be conducted in compliance with Environmental Quality Board Non-Hazardous Solid Waste Regulation and the Lead Based Paint Abatement Activities Regulation.

Samples were taken using X-ray fluorescence (XRF) analyzers. Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm^2. Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread. The evaluation found that lead-based paint was present in selective components through the assessed areas of the referenced project on the date of the assessment (See Table 1-1).

Testing was performed by Keralind Vargas, state-certified inspector 2273-0915-LI-009 and Onell González state-certified inspector 3241-1215-LI-011, using the Niton XLp-300A XRFs, SN-25492. The credentials are provided in Section 3, Appendix A: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on a variety of building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, is capable of detecting lead concentrations that occur within numerous layers of various surface coatings.

The dwelling units concrete surfaces inspected resulted negative for the presence of lead based paint, with the exception of wall B of the living and dining area of the apartment 16-A2 were lead based paint was identified. Lead based paint was detected on a selective wood doors, door casings and shelve systems through of the dwelling units. In addition, lead-based paint was also detected at the Parking A yellow traffic paint on the curbs. The ceramic coating bathtub inspected at the bathroom resulted positive for lead. therefore, all these components of the entire building complex shall be considered as positive for lead. These results vary from unit to unit and were not 100% at all units. In order to properly identify the exact location of the positive materials an inspection of the un-inspected components must be performed. Refers to Tables 1-1: Summary of Components with Lead Based Paint.

Please refer to the XRF Testing Results Section 3, Appendix E: XRF Sampling Data for the detailed analytical testing results for each distinct area inspected. The reports provide a complete testing data.

Table 2-1: Random Sampling Results					
Functional Space	**Component**	**Substrate**	**Total of Components Tested**	**Total of Positive Results**	**Percentage of Positive**
Dwelling Units, Bathroom Area	Bathtubs	Ceramic	28	27	96 %
Dwelling Units, Closets	Shelves & Cleats	Wood	150	20	13%
Dwelling Units	Door Casings	Wood	251	5	2%
Dwelling Units	Doors	Wood	251	5	2%
Dwelling Units, Living & Dining	Wall B	Concrete	28	1	4%

2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION

The survey was performed following the methodology established in the HUD Guidelines for the Evaluation and Control of Lead Based Paint in Housing (2012 revision), multifamily inspection protocol, and the PREQB Lead Based Paint Abatement Control Regulation. The surfaces evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm^2 it is considered negative.

- If the lead concentration measured by the XRF Spectrum Analyzer is equal or greater than 1.0 mg/cm^2 it is considered positive.

To each functional space of the structures a name was assigned according to the use of that space. If no name could be assigned, then a code letter or number was assigned. The room numbers will be assigned clockwise as you enter the structure and go towards the left always. Each wall surface was named with letters beginning with wall A, the wall leave behind as you enter the room. The one at the left side is wall B, the one in front of you is wall C and the wall at your right wall D. See Fig 1. Each reading obtained was recorded in the data sheet with its respective information (functional space, component, and all related information).

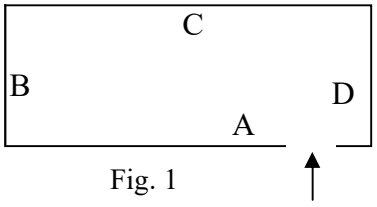


Fig. 1

2.3 LEAD REGULATORY LEVELS

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

TABLE 2-2: LEAD REGULATORY LEVELS	
	EPA/EQB Levels
Lead-Based Paint	**1.0 mg/cm^2 or 0.5% by weight (or 5,000 ppm)**

2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this property on the date of the evaluation. No samples of dust were collected.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner. The results and opinions in this report, based solely on the conditions found at the property on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential lead-based paint hazards at this residence beyond the date of the property evaluation.

2.5 DISCLOSURE RESPONSIBILITY

A copy of this report must be provided to new lessees (tenants) and purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that children and pregnant women are protected from LBP hazards.

The Occupational Safety and Health Administration (OSHA) Lead in Construction Standard states that "negative" readings (i.e. those below the HUD/EPA definition of what constitutes LBP [1.0 mg/cm^2]) **do not** relieve contractors from performing exposure assessments (personal air monitoring) on their employees per the OSHA Lead Standard, and should not be interpreted as lead free. Although a reading may indicate "negative", airborne lead concentrations still may exceed the OSHA Action Level or the OSHA Permissible Exposure Limit (PEL) depending on the work activity.

The information in this report must be disclosed to all existing and new residents and to any new buyer in the future, under the Lead Disclosure Rule (24 CFR part 35, subpart A - Disclosure of Known Lead-Based Paint and/or Lead-Based Paint Hazards Upon Sale or Lease of Residential Property (HUD's rule) and 40 CFR part 745, subpart F.

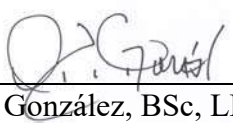
2.6 ABATEMENT CONDITIONS

Abatement, as defined by HUD and the Puerto Rico Environmental Quality Board (EQB), means any set of measures designed to eliminate lead-based paint and/or lead-based paint hazards permanently. Abatement activities may include, but are not necessarily limited to: the onsite or offsite removal of lead-based paint from substrates and components; the replacement of components or fixtures painted with lead-based paint; the permanent enclosure of lead-based paint with construction materials mechanically-fastened to the substrate; the encapsulation of lead-based paint with specially designed encapsulant products; or the removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards. If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

According to the EQB lead regulations, prior to the demolishing of a structure containing lead based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non hazardous waste. The firm providing the abatement services must be certified as an abatement firm by the EQB. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the EQB.

2.7 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection in a thorough and professional manner consistent with commonly accepted industry standards. The inspection was conducted between March 18, 2016 and April 7, 2016 by Keralind Vargas, state-certified inspector 2273-0915-LI-009 and Onell González state-certified inspector 3241-1215-LI-011 both qualified by experience, education and training in the recognition of lead based paint and approved sampling techniques using the Niton XLp-300A XRF, SN-25492.



Onell González, BSc, LEED AP O+M
Environmental Building Consultant

SECTION 3: APPENDICES

Appendix A: Certifications, Licenses, and Accreditations

Appendix B: Performance Characteristics Sheet

Appendix C: Project Photographs

Appendix D: Site Location

Appendix E: XRF Sampling Data

APPENDIX A: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



ESTADO LIBRE ASOCIADO DE PUERTO RICO
OFICINA DEL GOBERNADOR
JUNTA DE CALIDAD AMBIENTAL

JCA
JUNTA DE CALIDAD AMBIENTAL

Este certificado es otorgado a:

Zimmetry Environmental Management, Corp.
(# s.social: 66-0606404)

Por haber cumplido con los requisitos establecidos en el Capítulo V, Regla 1541, sección B(2) del Reglamento para el Control de Actividades de Mitigación de Pintura con Base de Plomo. Se le otorga una certificación en la disciplina de

Empresa

Para llevar a cabo actividades de mitigación de pintura con base de plomo en la jurisdicción de Puerto Rico

Número de Certificado
7561 – 0315 – LF - 001

Este certificado está sujeto a ser revocado, suspendido, modificado o enmendado debido a causas que incluyan evidencia de no cumplimiento, información falsa provista en la solicitud o por cualquier alteración que afecte la habilidad de llevar a cabo las tareas efectivamente.

Fecha de emisión: 03 de marzo de 2015
Fecha de expiración: 02 de marzo de 2016

Sr. Weldin F. Ortiz Franco
Director Ejecutivo

APPENDIX A: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



Proyecto de Certificación y Permisos de Pintura con Base de Plomo

Esta tarjeta autoriza a:

Keralind Vargas Mercado

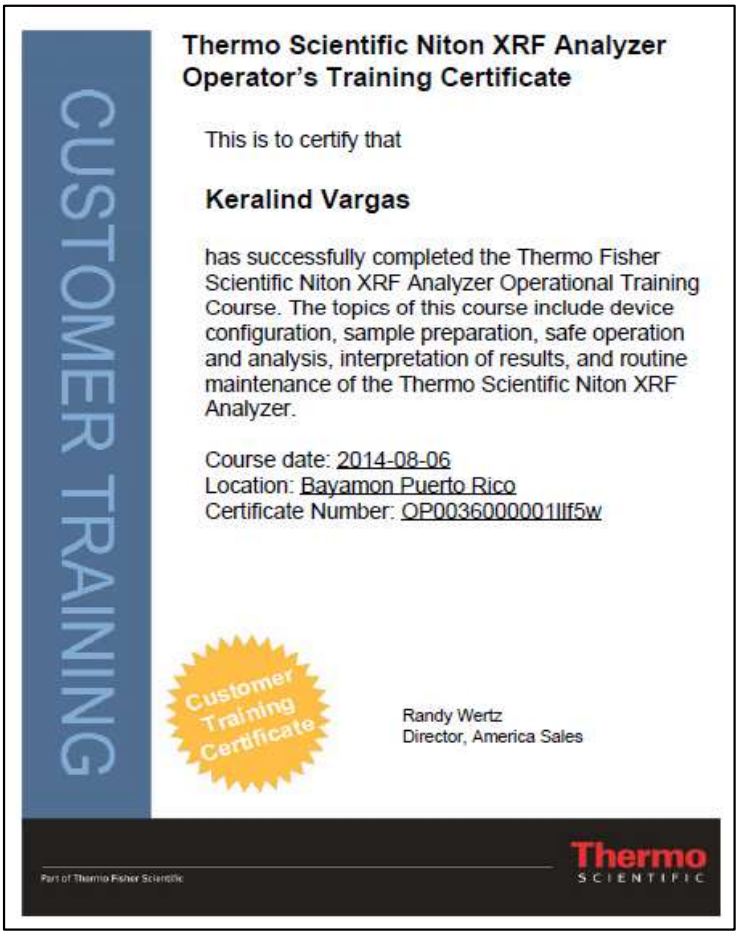
Inspector

a trabajar en la remoción de Pintura con Base de Plomo. Esta persona NO es empleado, ni representante de la Junta.

2273-0915-LI-009
Núm. Certificado

Jun-13-2016
Fecha de expiración

Firma Autorizada
Junta de Calidad Ambiental



CUSTOMER TRAINING

Thermo Scientific Niton XRF Analyzer Operator's Training Certificate

This is to certify that

Keralind Vargas

has successfully completed the Thermo Fisher Scientific Niton XRF Analyzer Operational Training Course. The topics of this course include device configuration, sample preparation, safe operation and analysis, interpretation of results, and routine maintenance of the Thermo Scientific Niton XRF Analyzer.

Course date: 2014-08-06
Location: Bayamon Puerto Rico
Certificate Number: OP0036000001llf5w

Customer Training Certificate

Randy Wertz
Director, America Sales

Part of Thermo Fisher Scientific

Thermo SCIENTIFIC

APPENDIX A: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS



Proyecto de Certificación y Permisos de Pintura con Base de Plomo

Esta tarjeta autoriza a:

Onell González Martínez

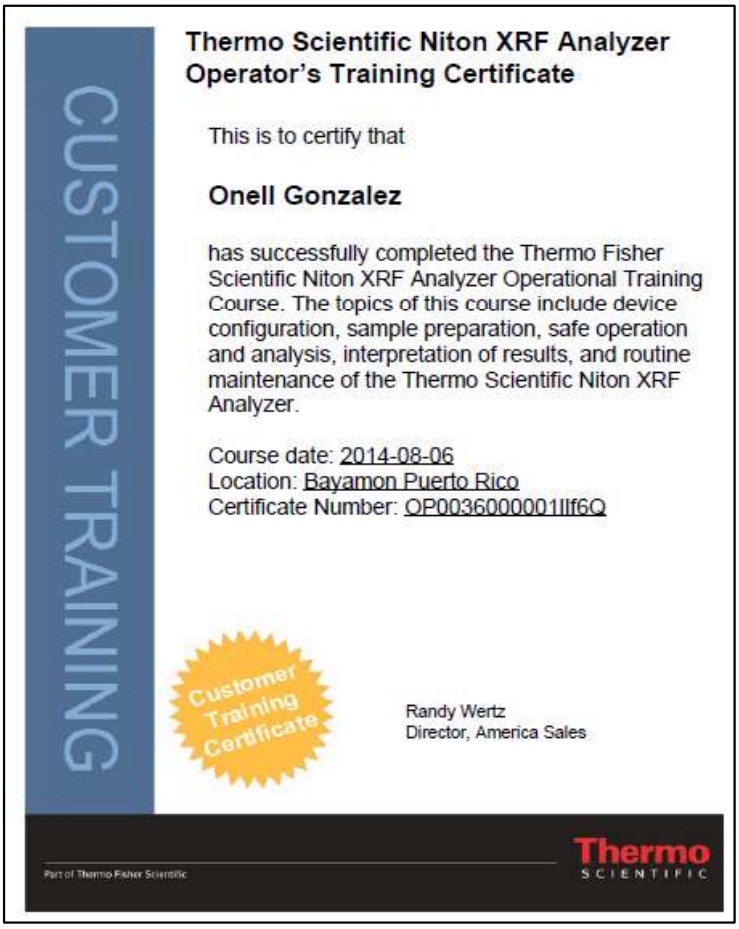
Inspector

a trabajar en la remoción de Pintura con Base de Plomo. Esta persona NO es empleado, ni representante de la Junta.

3241-1215-LI-011
Núm. Certificado

Oct-19-2016
Fecha de expiración

Firma Autorizada
Junta de Calidad Ambiental



CUSTOMER TRAINING

Thermo Scientific Niton XRF Analyzer Operator's Training Certificate

This is to certify that

Onell Gonzalez

has successfully completed the Thermo Fisher Scientific Niton XRF Analyzer Operational Training Course. The topics of this course include device configuration, sample preparation, safe operation and analysis, interpretation of results, and routine maintenance of the Thermo Scientific Niton XRF Analyzer.

Course date: 2014-08-06
Location: Bayamon Puerto Rico
Certificate Number: OP0036000001IIf6Q

Customer Training Certificate

Randy Wertz
Director, America Sales

Part of Thermo Fisher Scientific

Thermo SCIENTIFIC

PO Box 366457, San Juan, P.R. 00936-6457
Phones: (787) 420-0220 / (787) 240-2040
nortol@prmail.net / www.nortolpr.com

NAT-F121771-1

August 10, 2018

Fernando L. Sumaza & Company
PO Box 3685
Mayagüez, PR 00681-3685
c/o Alexandra Domenech

Re: Lead-based paint Survey report for bathtubs-El Mirador Las Casas, San Juan, P.R.

Dear sirs:

Nortol Environmental is submitting the report on the lead-based paint survey for bathtubs achieved at ten (10) representative dwelling units from El Mirador Las Casas, San Juan, PR. This activity was requested by your company, as part of your environmental and occupational safety/health due diligence. The field work was conducted on August 9, 2018 with Roraima Vega as company representative.

None of the randomly assessed bathtubs were painted. Ms. Vega indicated that the other bathtubs in the Mirador Las Casas was not either painted. See Attachment for representative pictures. Factory lead glazed porcelain bathtubs are not considered as "lead-based paint" as per current definition and are not regulated at this time. See Attachment 2 for extra research information.

The *2nd Edition, July 2012; Chapter 7-Lead-Based Paint Inspection, of HUD's Guidelines for the Evaluation and Control of Lead- Based Paint Hazards in Housing,* establish that ceramic tiles and fixtures are not considered lead-based paint and not need to be included under Lead Disclosure Rule. Otherwise, the current Performance Characteristic Sheets pertaining to XRF instruments (Niton & Heuresis models) does not contemplate porcelain or ceramic between its evaluated substrates, so the readings with this instrument on porcelain or ceramic are questionable.

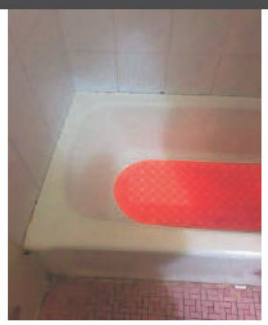
For all above expressed facts, the bathtubs installed in El Mirador Las Casas, San Juan, P.R. are negative to "lead-based paint" as per current definition.

Feel free to contact us if additional information is necessary.

Respectfully,

Norma I. Torres, Env. Sc. BS, MBA | *Executive Director*

El Mirador Las Casas - Bathtubs Survey for lead-based Paint
Thursday, August 9, 2018

Apartment Number	Picture
14 B2	
14 B1	
10 C1	
9 D1	
10 A2	

Apartment Number	Picture
9 C1	
8 E1	
8 F1	
6 B1	
11 C1	

NOTE: NONE OF THE BATHTUBS WERE PAINTED

Why testing with XRF instrument on Porcelain or Ceramic is NOT considered for Lead-Based Paint inspection and report

1) Performance Characteristic Sheet set for the instrument HEURESIS Pb200i alpha, used by NORTOL Environmental and Occupational as well others XRF instruments, validate only the following substrates:

   Concrete, Wood, Metal, Brick, Drywall and Plaster Instrument

2) Under the Department Housing and Urban Development (HUD); Guidelines for the Evaluation and Controls of Lead-Based Paint Hazards in Housing, 2nd Edition, July 2012; Chapter 7-21:

   a. *Establish that ceramic tiles and fixtures are not considered lead-based paint and not need to be included under Lead Disclosure Rule.* HUD

3) "the EPA in their *Renovation, Repair, and Painting (RRP) Rule, Frequent Questions, March 22, 2018* establish":

   Question (23002-15691)

   Does the RRP Rule apply to renovations that disturb ceramic tile where the glaze on the tile contains lead at regulated levels?

   Answer:

   No. Ceramic tile glaze is neither a surface coating nor a painted surface. *Therefore, renovations that disturb ceramic tile glaze are not subject to the RRP Rule.* EPA

4) Under "Reglamento para el control de actividades de mitigación y renovación de pintura con base de plomo", the PR Environmental Quality Board do not express regarding ceramic or porcelain. Define: "Paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter (1.0 mg/cm.^{2}) or more than 0.5% w/w (5,000) parts per million by dry weight or more." PREQB

5) Under no applicability by the XRF on porcelain or ceramic, might be consider the Flame Atomic Absorption (FAA) chemical analysis. Chemical

6) The U. S. Consumer Product Safety Commission – Office of Compliant

Ban of Lead-containing paint and certain consumer products bearing lead-containing paint 16 C.F.R 1303 clarify: *What is a paint or similar-surface coating material?*

These terms apply generally to liquid or semi-liquid products that change to a solid film when you apply a thin coating to wood, stone, metal, cloth, plastic or a similar surface. Printing inks, materials such as pigments for plastic that become part of an article itself, and materials such as ceramic glaze which become **bonded to the surface** of a product are not paints or similar surface coating materials. Physical