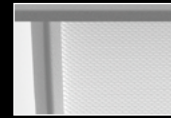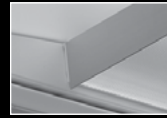# Equation™ 2 2x4

LED

R N PL PoE

opal acrylic lens

MicroGlow lens

suspended or surface mount

air return

DIMENSIONAL DATA

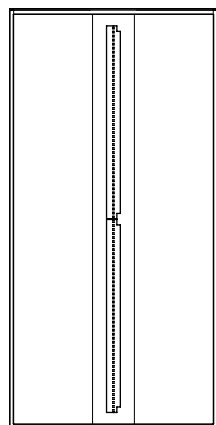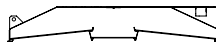G1, ST: 23.39" (594.1mm)
G2: 23.69" (601.7mm)

3.91" / 99.3mm

24.00"
609.6mm
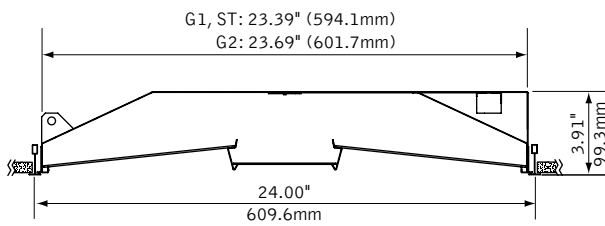
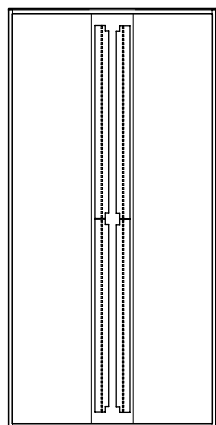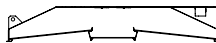Overall height of luminaire with air return is 4.62"–4.89"

led options

Standard

High Efficiency

2 LED boards

4 LED boards

FEATURES

Equation™ 2 blends sleek aesthetics with uniform diffuse illumination.

Center diffuser features MicroGlow prismatic lens for brightness control and visual comfort. Opal acrylic center lens may also be specified.

Premium LEDs operate efficiently to achieve excellent thermal management and reliable operation.

Connected Solutions: Integrates with wired and wireless building lighting control systems.

Preferred Light: Lighting for better color rendition and human preference.

PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

PERFORMANCE

PRODUCT OVERVIEW

Lumen Output:	4000-8500lm
Wattage:	37-85W
LPW:	86-112
SDCM:	3
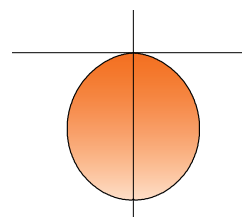
Opal Acrylic Lens

Delivered Lumens: 5000lm

Total System Watts: 47W

Photometric performance is measured in accordance with IESNA LM-79.
Visit focalpointlights.com for complete photometric data.

MOUNTING INFORMATION

grid

| G1 15/16" | G2 9/16" | "ST" slot tee 9/16" |

drywall frame kit

specify "F" Drywall Frame Kit for drywall ceiling conditions.

Use tie-wire or screws to secure frame kit.

Cut out dimensions:
2': Min: 24.25"
    Max: 24.563"

4': Min: 48.25"
    Max: 48.563"

SPECIFICATIONS

LED System
Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 2700K, 3000K, 3500K or 4000K with CRI>80 or CRI>90, 3SDCM. 3500K and 4000K with CRI>90 have a cyanosis observation index (COI) of 3.3 or less. Contact factory for additional color temperature and CRI options. 0-10V dimming driver standard. LED modules and drivers are replaceable from below.

Construction
One piece 24 Ga. steel reflector and housing. Bottom access 24 Ga. steel driver compartment. Positional brackets supplied as standard. Standard weight: 27.3 lbs. Surface-mount/suspended weight: 35.5 lbs.

Optic
24 Ga. steel reflectors finished in matte satin white powder coat. .080" thick frosted white acrylic diffusers. Center shielding options include .080" thick opal acrylic lens or MicroGlow prismatic lens with optical filter overlay.

Electrical
Standard 120-277V driver includes 0-10V analog dimming. Power factor > .9. Optional Lutron EcoSystem or Step-dimming drivers available. PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

Emergency
Emergency battery output—10 watts for 90 minutes. Emergency Circuit with Connected Solutions (NLT1, ENL1, CLM1, DLM1) requires a UL924 compliant device, consult factory.

Labels
UL and cUL listed. Suitable for Dry or Damp Locations, indoor use only.

Finish
Polyester powder coat applied over a multi-stage pre–treatment.

Lumen Maintenance
Reported: L70 at >61,000 hours   Calculated: L70 at 460,000 hours
           L80 at >61,000 hours   L80 at 280,000 hours
(Derived from EPA TM-21 calculator. Based on typical conditions, consult factory for additional data.)

Reliability
At Focal Point, our products are designed to stand the test of time. Each luminaire is engineered using superior components, manufactured with the utmost care and rigorously tested. Contact us for reliability data.

Warranty
LED system rated for operation in ambient environments up to 25°C. 5-year limited warranty.

PERFORMANCE CHART

Lumen Output		Tested System Watts	LPW	Lumen Output		Tested System Watts	LPW
4000	4000L	33	119	6000	6000LH	47	123
	4000LH	31	126	6500	6500LH	51	122
4500	4500L	39	112	7000	7000LH	55	121
	4500LH	34	129	7500	7500LH	59	120
5000	5000L	45	106	8000	8000LH	63	119
	5000LH	37	129	8500	8500LH	67	118
5500	5500L	51	106				
	5500LH	43	124				

Based on 3500K, 80 CRI, Opal Acrylic Lens. Lumen multipliers: Preferred Light = 0.65, 90+ CRI = 0.87, MicroGlow Prismatic Lens = 0.94. Lumen output may vary +/- 5%. Actual wattage may vary +/- 5%.

ORDERING

		FEQ2
Luminaire Series		
Equation 2	FEQ2	
Nominal Size		**24**
2' x 4'	24	
Shielding		_____
Opal Acrylic Lens	AC	
MicroGlow Prismatic Lens	MG	
Lumen Output		_____
Standard		
4000 Lumens	4000L	
4500 Lumens	4500L	
5000 Lumens	5000L	
5500 Lumens	5500L	
High Efficiency		
4000 Lumens	4000LH	
4500 Lumens	4500LH	
5000 Lumens	5000LH	
5500 Lumens	5500LH	
6000 Lumens	6000LH	
6500 Lumens	6500LH	
7000 Lumens	7000LH	
7500 Lumens	7500LH	
8000 Lumens	8000LH	
8500 Lumens	8500LH	

Color Temperature		_____
2700K, 80+ CRI **or** 90+ CRI	27K **or** 927K	
3000K, 80+ CRI **or** 90+ CRI	30K **or** 930K	
3500K, 80+ CRI **or** 90+ CRI	35K **or** 935K	
4000K, 80+ CRI **or** 90+ CRI	40K **or** 940K	
3500K, Preferred Light	P35K	

Circuit		**1C**
Single Circuit	1C	

Voltage		_____
UNV 120/277 Volt	UNV	
347 Volt	347	
(Not available with SD5 or DLM.)		
Low Voltage	LV	

Control System & Dimming Level		_____
0-10V - 10% Dimming	LD1	
0-10V - 1% Dimming	L11	
Low Voltage, PoE compatible	LVN	
(No driver. Not available with EM. LV Voltage only.)		
Lutron Hi-Lume EcoSystem (LDE1) - 1% Dimming	LH1	
Step Dimming	SD5	
(6000 lumens or less only. 120/277 only.)		
Enlighted Smart Sensor - 1% Dimming	ENL1	
(Cannot combine with 347V & EM.)		
Encelium CLM Connected Lighting Module - 1% Dimming	CLM1	
(5500 Lumens or less. Cannot combine with 347V & EM. Compatible with Encelium X Light Management System)		
Wattstopper DLM - 1% Dimming	DLM1	

Mounting		_____
24" Aircraft Cable	C24	
48" Aircraft Cable	C48	
96" Aircraft Cable	C96	
Drywall Frame Kit	F	
(ENL1, CLM1 & DLM1 not available)		
(Cut out dimensions: Min: 24.25"/Max: 24.563" Min: 48.25"/Max: 48.563")		
15/16" Grid	G1	
9/16" Grid	G2	
Slot Tee	ST	
Surface Mount	SM	
(Not available with DLM1)		

Factory Options		_____
Air Return	AR	
(Overall height with Air Return is 4.62"–4.89")		
Chicago Plenum	CP	
Emergency Battery with Integral Test Switch	EM	
(Cannot combine with 347V)		
6' New York City Flex Whip (120V)	FNY1	
6' New York City Flex Whip (277V)	FNY2	
6' Flex Whip	FW	

Finish		**WH**
Matte Satin White	WH	

QS **5/10 DAY** Options in orange qualify for the Quickship program. 5-day up to 100 pieces, 10-day up to 300 pieces. Refer to Quickship Guide for complete details.

CONNECTED SOLUTIONS

Focal Point provides flexibility in meeting the needs of each project by integrating with several building lighting control systems. A variety of sensors, drivers and other components can be specified that allow the luminaires to communicate with wired and wireless networks. All zoning can be digitally reconfigured through the application software. Daylight harvesting, occupancy sensing, integration with HVAC systems, and individual controls enable the monitoring and modulating of light levels and temperature in order to save energy, reduce costs and maximize occupants' comfort. All Connected Solutions luminaires require a compatible building control system.†

enlighted
A Siemens Company

Enlighted smart sensor allows for occupancy sensing, daylight harvesting, energy usage, temperature and light level control. Communicates wirelessly with the Enlighted network.

Enlighted Smart Sensor - 1% Dimming (ENL1)
Enlighted Model #SU-5E-IOT

ENCELIUM

Encelium's Connected Lighting Module (CLM) is fully compatible with the Encelium X Light Management System, as well as with 0-10V and DALI based LED drivers to allow for individual luminaire control, including on/off and dimming functionalities, occupancy sensing, and multi-zone daylight harvesting.

Encelium CLM - 1% Dimming (CLM1)
Encelium Model #ZBHA-CLM-DIM-ENC

Serial labels will be provided on outside of luminaires and control unit.

legrand®   WATTSTOPPER®
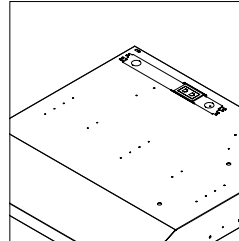
A Digital Lighting Management (DLM) system that provides two-way wired communication between networked luminaires and control system to allow for on/off and dimming functionality, occupancy sensing and multi-zone daylight harvesting.

Wattstopper DLM - 1% Dimming (DLM1)
Wattstopper Model #LMFC-011

CAT-5 Cable provided by others. Serial labels will be provided on outside of luminaires and control unit.
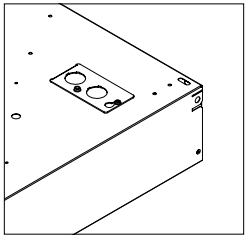
LUTRON®

A two-way digital network that enables on/off and dimming functionality, occupancy sensing, and multi-zone daylight harvesting working with Quantum®, Energi Savr Node™, and Energi TriPak® using EcoSystem® communication protocol.

Lutron Hi-Lume EcoSystem - 1% Dimming (LH1)
Lutron Model #LDE1
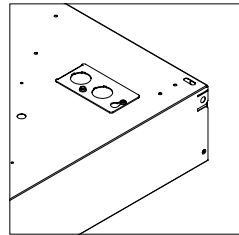
CRESTRON

A two-way digital network that enables on/off and dimming functionality, occupancy sensing, and multi-zone daylight harvesting. Communicates with Zūm wireless and SpaceBuilder working with Zūm hub scheduling or FUSION management.

0-10V - 1% Dimming (L11)
Note: 0-10V is not a digital network but is compatible with Creston Zūm™ system.

CONNECTED SOLUTIONS DETAILS

Connected Solution	Model #	Protocol	Compatible Networks*	Occupancy	Daylight	Temperature Reporting	Communication to Luminaire	Drivers
Crestron (L11)	Specified Driver	DALI 0-10V	Crestron Zūm Wireless & SpaceBuilder	Enabled	Enabled	No	Wired	**Advance by Signify (0-10V)**
Enlighted Smart Sensor (ENL1)	SU-5E-IOT**	Enlighted RF	Enlighted	Integrated	Integrated	Yes	Wireless	**Advance by Signify**
Legrand Wattstopper DLM (DLM1)	LMFC-011**	DLM	DLM	Enabled	Enabled	No	Wired	**Advance by Signify**, Optotronic by eldoLED
Lutron EcoSystem (LH1)	LDE1**	EcoSystem	Quantum, Energi Savr Node, Energi TriPak	Enabled	Enabled	No	Wired	**Lutron Hi-Lume**
Encelium CLM Connected Lighting Module (CLM1)	ZBHA-CLM-DIM-ENC*	ZigBee	Encelium X Light Management System	Enabled	Enabled	No	Wireless	**Optotronic by eldoLED** Advance by Signify

*Not all compatible networks may be listed. **For performance data and additional control system details please visit the connected solutions manufacturer websites. Primary drivers are listed in **bold.** To specify a particular driver please consult factory.
†Controls systems supplied by others.