

# Top to bottom advantage





## Achieve balance Stand out and still save money

In a highly competitive environment, retailers look to strike a balance between encouraging customer spending and protecting profit margins.

LED lighting technology aids bottom line savings by reducing energy consumption and maintenance costs compared to traditional lighting technologies. And now, new lighting technologies can be leveraged to create an environment that engages consumers and stimulates sales.

The Day-Brite / CFI LED linear suspended LBX luminaires with LightBalance optics **deliver up to a 2:1 max/avg vertical gradient of light** to ensure evenly lit merchandise from the top shelf to the bottom shelf. Together with appropriate task and accent lighting, LBX luminaires deliver bottom line results retailers expect from an LED lighting upgrade while enhancing the store atmosphere and merchandise presentation to support the top line. Ambient lighting is typically a functional retail workhorse, and by incorporating LBX luminaires, it can also be leveraged for branding or revenue efforts. The IES Lighting Handbook, 10th ed. Retail Illuminance Recommendations lists vertical illuminance uniformity targets of 3:1 max./avg. and 3:1 avg./min. for general retail areas within Supermarkets or Mass Merchant stores.

# When to consider maximum to average versus average to minimum?

#### Maximum-to-average

This is the recommended ratio of maximum illuminance to the average illuminance found on the area of coverage of interest. This ratio is typically ascribed to situations sensitive to even a relatively small degree of overlighting<sup>1</sup>.

LBX luminaires can provide enhanced vertical illumination uniformity, which puts light exactly where it's needed, and at the right light levels without increasing energy expenses. By doing so, merchandise is properly promoted for all brands, and visual comfort is improved for shoppers.

#### Average-to-minimum

This is the recommended ratio of average illuminance to the minimum illuminance found on the area of coverage of interest. This ratio is typically ascribed to situations where illuminance too far below average conditions is noticeable and detrimental to task performance or inconsistent with normal expectations<sup>1</sup>.



With improper vertical illumination (far left), bottom shelves are underlit. LBX luminaires (near left) evenly light shelves from top to bottom.

1. DiLaura, D. L., Houser, K., Mistrick, R., & Steffy, G. R. (2011). The lighting handbook: reference and application (10th ed.). New York: Illuminating Engineering Society of North America.



# Promote merchandise through on-the-shelf uniformity

LBX luminaires provide the right light for any retail space where uniformity targets are important. The exclusive LightBalance optics offer narrow, medium, aisle, and wide light distributions to further extend design flexibility as well as a double asymmetric option that delivers 2:1 max:avg uniformity directly on the shelf, exceeding IES recommendations, while minimizing wasted energy.

## LightBalance optics

Highly specialized LightBalance optics within LBX luminaires use a unique one-optic-per-diode array that precisely delivers light to a specific area, compared to the broad angle delivered in a typical linear LED luminaire. This results in an ideal combination of light distribution and efficiency, and also provides the flexibility to choose the right option for a specific retail area. In many cases, this can improve horizontal and vertical uniformity while using significantly less lighting energy compared to other technologies.

The double asymmetric LightBalance optic is specifically designed for applications where vertical illuminance is critical; aiming two cones of light directly towards the vertical plane of the shelves, resulting in a 2:1 max/avg uniformity.





### Narrow

The narrow optic delivers an approximately 25° beam which allows focused light for higher ceiling areas.



### Medium

The medium optic delivers an approximately 40° beam which is tailored for mid mounting heights.



### Wide

The wide optic delivers an approximately 60° beam which is ideal for low bay areas or locations where wider luminaire spacing is desired.



### Aisle

The aisle optic has a distribution of approximately 20° by 50° for aisle areas or open areas requiring a rectangular distribution.

## **Compete in an omnichannel environment with Interact Retail Indoor Navigation**

## Enhance the shopping experience:

- Deliver personalized promotions to shoppers
- Dynamically guide shoppers to find products
- Drive effectiveness of digital tools, enabling precise help requests

#### Enrich business results:

- Drive conversion rates and basket size
- Enhance customer loyalty
- Test and evaluate marketing campaigns and store layout
- Collect and analyze non-personal shopper traffic pattern data
- Avoid loss of sales

Support an omnichannel consumer journey to captivate, inform and entertain using location-based services. Interact Retail indoor navigation leverages the lighting infrastructure, which is needed in every corner of your store space, and the unique capability of Visible Light Communication (VLC) and Bluetooth low energy to provide the best positioning analytics with precise, centimeter level accuracy and metrics.

Interact Retail Indoor Navigation technology is embedded directly in the LBX luminaires, so no additional installation, maintenance or power is required. Therefore, the luminaires provide all the benefits of LED-based illumination, while also providing the infrastructure for delivering indoor locationbased services.

For additional information on indoor location services and availability with the LBX luminaires, contact your local sales representative.

interact ready.



French retail giant Carrefour uses an **innovative indoor positioning system** to transform the shopping experience in its Lille hypermarket

Customer satisfaction is a priority for European retail giant, Carrefour, so when replacing the old fluorescent luminaires in their Lille, France hypermarket, Carrefour turned to Signify for an LED lighting system that is as innovative as it is energy-saving. The 800 linear LED luminaires across the 7800 square meter retail space helped to significantly reduce energy use by up to 50%, and also opened a new opportunity for Carrefour to engage with their customers.

"We are always on the lookout for innovations to facilitate customers' navigation in our stores and meet consumers' expectations," comments Céline Martin, Director of Commercial Models and Innovation for Carrefour hypermarkets in France. "Thanks to this new application, which uses Interact technology, we are now able to provide our customers at the EuraLille Carrefour with a new service, enabling them to quickly search and locate their preferred promotions or detect all the promotions around them when in-store."

## **GG** A real time-saver for an urban customer base!"

 Céline Martin, Director of Commercial Models and Innovation for Carrefour, France



## Protect profit margins

A key advantage to LBX is its advanced, dimmable LED technology that helps to significantly lower energy costs compared to traditional lighting technologies, without compromising light quality. The LBX delivers up to 150 lumens per watt, 50% better than leading fluorescent technology. Long-lasting LED technology also helps to reduce maintenance time and costs resulting from relamping and repairs. All this adds up to shorter payback periods.

#### Saving beyond LEDs

With an Interact Retail control system, lighting can be set at the correct level from installation, avoiding the need to over design lumen output. Our system also allows for the opportunity to schedule lighting to match the daily routine in the store. Lighting can adjust automatically to its highest level during core business hours and be set to dim during cleaning or restocking. Another important factor in saving energy is lighting only areas that are in use — areas for staff can be lit only when and where needed, ensuring that no energy is wasted.

#### Flexibility throughout the store

With our completely autonomous, but flexible, lighting system, you can reduce operational costs and save energy. Our lighting system can also be easily adjusted by staff, either based on schedule or to meet the needs of a special event, making it the ideal system for dynamic retail environments.

For more information on compatible controls systems, contact your local Signify sales representative.

#### Daylight Harvesting

# up to 15% savings

Harvest the power of daylight with sensors that adjust lighting accordingly



up to **10 -15%** savings

Ensure lighting is set at the correct level from installation, avoiding the need to over-design lumen output

> Light Scheduling

up to **10-15%** savings

Schedule lighting to match the daily routine in the store

> Presence Control

> up to **3-5%** savings

Detect presence in staff-only areas to light only where and when it's needed



## 

T

#### Foundation:

base unit with no optics, no lens. Ideal for "back of house" areas such as storage or utility spaces.

Distribution



base unit with LightBalance optics, no lens, and a choice of narrow, medium, wide, aisle, or double asymmetric optics.

Distribution



#### Brightness control:

base unit with louver. Field installed louver compatible with foundation or performance versions.

Distribution



## Choose from a wide selection

No matter what retail requirement or area, there's an LBX luminaire to light the way. Each configuration is available in 4-foot and 8-foot units that are easy to install, and can be continuously mounted together in long runs:

#### Flat diffuse:

base unit with flat lens. Ideal for retailers who want good performance, brightness control, and a minimal profile.

Distribution



#### Uplight diffuse:

base unit with oval lens and uplight. Ideal for retailers who want good performance and some uplight.

Distribution





### **Product details**

#### Ordering guide

Example: LBX55L840-UNV-FD

Family	Lumens (nominal)	CRI/CCT	Voltage	Optics	Options	
LBX		_	-	-		
LBX	4' Length           40L         4,000lm           55L         5,500lm           70L         7,000lm           90L         9,000lm           8' Length         80L           80L         8,000lm           110L         11,000lm           140L         14,000lm	830 <sup>3</sup> 80CRI/3000K 835 80CRI/3500K 840 80CRI/4000K 850 80CRI/5000K	UNV Universal 120-277V 120 120V 208 208V 240 240V 277 277V 347 <sup>4</sup> 347V	Blank     General       Distribution     N       N <sup>1</sup> Narrow       M <sup>1</sup> Medium       W <sup>1</sup> Wide       A <sup>1,2</sup> Aisle	FD UD VLC WP6 <sup>5,7</sup> WC6 <sup>7</sup> WC6/4 <sup>7</sup> WC6/5 <sup>7</sup> WP6D <sup>5,7</sup>	Flat diffuse lens Oval uplight diffuse lens Visible Light Communication (consult factory) Wired 6' 16/3 cord & NEMA twist lock plug Wired 6' 16/4 cord for line voltage plus unswitched hot for EMLED Wired 6' 18/5 cord for line voltage plus 0-10V dimming Wired 6' 16/3 cord & NEMA twist lock plug for line voltage and wired 6' purple and gray leads with disconnect plug for dimming control
	180L 18,000lm Note: Other lumen packages may be ordered in increments of 500lm from 4000 to 9000 lumens for 4' unit and				WC6D <sup>7</sup> SWZCS <sup>8,9</sup>	Wired 6' 16/3 cord for line voltage and wired 6' cord for dimming control Interact Pro scalable sensor with integral daylight & occupancy sensing, advanced grouping
		00lm from 8000 to			SWZCSH <sup>10</sup>	with dwell time Interact Pro scalable high bay sensor with integral daylight & occupancy sensing, advanced grouping with dwell time
					RADIO	Integral Interact Pro RF sensor, enables wireless connected lighting control
					IAOSB <sup>8,9</sup>	Interact Office advanced wireless sensor bundle, integral SC1500 w/IoT capabilities for enterprise scale projects
					EMLED <sup>6</sup> ER100 <sup>11,12</sup>	Emergency battery (0°C - 40°C) UL924 listed sensor bypass relay, factory installed between driver & sensor (Interact Pro compatible)
					ER100/HVPS <sup>11,12</sup>	UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Sense (Interact Pro compatible)
					ER100/HVPI <sup>11,12</sup>	
					GTD/E <sup>11</sup>	UL924 listed Bodine GTD factory installed on driver input
					BAC <sup>13</sup>	Meets the requirements of the Buy American Act of 1933 (BAA)

#### 1 Not for use with FD or UD diffuse lenses.

- 2 Not available in 3000K.
- 3 Not available in 9000lm or 18000lm.
- 4 Not available in 4000lm or 5500lm with EMLED.
- 5 Must specify voltage.
- 6 When row mounting, non-switched HOT for EMLED should be fed separately and directly to the emergency luminaire.
- 7 6' is standard cord length. For optional 10', 15', or 20' cord length, replace the "6" in the option code with the desired length.
- 8 Low mount motion detector. Use at 10' mounting height or below.
- 9 Must order IRT9015 Interact commissioning remote with each system order
- 10 High bay motion detector. Motion sensing zone is extremely limited if used below 15' mounting height.
- 11 Must be installed in conjunction with a UL1008 device.
- 12 Must be ordered with an integral sensing option.
- 13 Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- 14 Consult Signify to confirm whether specific accessories are BAA-compliant.

#### **Wiring Notes**

Standard cords have 3 wires. Consult factory for other cord options.

#### **General Notes**

- All options factory installed.
- All accessories are field installed.
- Many luminaire components, such as reflectors, refractors, lenses, sockets, lamp-holders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

#### Predicted L70 Lifetime

- 40°C Ambient > 100,000 hours
- (based upon LED manufacturer's supplied LM-80 data and in-situ laboratory testing)

### Accessories and options (order separately)



Contact your local sales representative for a personalized rendering of your space to see how an **LBX** upgrade can improve light level uniformity on your shelves, to ultimately encourage customer spending without compromising profits.

## (s)ignify

© 2024 Signify Holding. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Signify North America Corporation 400 Crossing Blvd, Suite 600 Bridgewater, NJ 08807 Telephone: 800-555-0050 Signify Canada Ltd. 281 Hillmount Road, Markham, ON, Canada L6C 2S3 Telephone: 800-668-9008

All trademarks are owned by Signify Holding or their respective owner