

The Merritt Series

BLRT-M - Architectural Recessed Metric Troffer

Project

Date

Part

Type

About The Merritt Series

This family of BLRT products is designed as a recessed lay-in fixture for use in T-bar ceilings. It is well suited for office spaces, schools, and hospitals, and is available with an RGBW/RGBWW full-spectrum color and tunable-white engine for dynamic architectural and medical lighting. This luminaire is also available in all common imperial size formats (1x4', 2x2', 2x4') and has a wide variety of options including passive and active air handling.

Specifications

| | |
|--------------------------|--|
| Supported Voltage | 120-277V, 347V, 120-347V |
| Available Sizes | 600x600mm, 750x750mm, 500x1500mm, 300x1200mm, 600x1200mm |
| Lifetime | L70 of 150,000+ hours, L90 of 45,000+ hours |
| Operating Temperature | -20°C/+25°C (-40°/+40°C upgrade) |
| Lumens | 2L (2000lm) to 10L (10000lm) |
| CCT | 2700K, 3000K, 3500K, 4000K, 5000K, 6500K |
| CRI | 80+ standard, 90+ and 95+ available |
| Dimming | 0-10V Standard |
| Mounting | Holes provided for chain or hanger, and wire mounting support for T-Bar ceilings |
| Room-Side Serviceability | Standard on all models |
| RGBW / RGBWW | Full-spectrum color and tunable white |

Approvals

- DLC Listed
- ETL Listed
- Made with UL Listed components
- Designed and Manufactured in Canada

Warranty

- | 5 Year Comprehensive, 10 Year LED

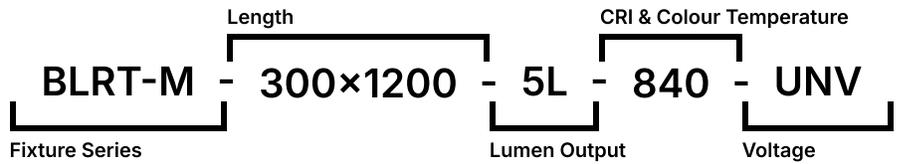
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Architectural Lighting by **BJTAKE** LIGHTING

Ordering Information

Fill in the fields below with your product selections. If you need help with this section, [contact your local sales professional](#).



| 1 | 2 | 3 | 4 | 5 |
|--------|----------|--------------------|-----------------------------------|--------------|
| Series | Size | Lumen Output | LED Configuration | Voltage |
| BLRT-M | 300x1200 | 300x1200 | 827 or 927 80 90 CRI 2700K | UNV 120-277V |
| | 750x750 | 2L 2.5L | 830 or 930 80 90 CRI 3000K | 347 347V |
| | 600x600 | 3L 3.5L | 835 or 935 80 90 CRI 3500K | UN3 120-347V |
| | 500x1500 | 4L 4.5L | 840 or 940 80 90 CRI 4000K | |
| | 600x1200 | 5L | 850 or 950 80 90 CRI 5000K | |
| | | 600x600, 750x750 | 865 or 965 80 90 CRI 6500K | |
| | | 2L 2.5L | RGB-27 RGBW 2700K | |
| | | 3L 3.5L | RGB-30 RGBW 3000K | |
| | | 4L 4.5L | RGB-35 RGBW 3500K | |
| | | 5L | RGB-40 RGBW 4000K | |
| | | 500x1500, 600x1200 | RGB-50 RGBW 5000K | |
| | | 3L 3.5L | RGB-65 RGBW 6500K | |
| | | 4L 4.5L | RGB2040 RGBWW 2000K-4000K | |
| | | 5L 5.5L | RGB3050 RGBWW 3000K-5000K | |
| | | 6L 6.5L | | |
| | | 7L 7.5L | | |
| | | 8L 8.5L | | |
| | | 9L 9.5L | | |
| | | 10L | | |

95+ CRI available on request*
CRI selection unavailable with RGB*

Options

| | | |
|--|--|---|
| Lenses BLANK Frosted Acrylic | Motion Sensors WX15 Internal Dimming Low Voltage Microwave Sensor WC20 Leviton Low-Voltage Sensor W** Other Options Available* | Packaging BLANK Individually Boxed on Pallets P0 Bulk Packaging |
| Dimming B11 0-10V Dimming Leads B12 Line Voltage Dimming B22 0-10V 1% Dimming B27 Dim-to-off Driver B** Other Options Available* | Emergency Driver B17 UL924 10W Battery Back-up F8 UL924 Emergency Relay | T-Bar Kits BLANK 15/16" T-Bar TB39 9/16" T-Bar TB39S 9/16" T-Bar (Slotted) H40 Drywall Kit (packaged separately) |
| Controls WC10* Encelium Wireless Controls WC18* NX Wireless Controls WC19* Avi-on Wireless Controls WC22* JDRF Wireless Controls | Air Handling H20 Housing with Passive Air Handling H24 Housing with Active Air Handling | Warranty CL7 10-Year Comprehensive Warranty Upgrade |
| | Finish BLANK Standard Matte White C5 Matte Black CUSTOM* Custom Colour Choice | |

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Documentation and Resources

All files and resources are available on our website for download. Files and resources are also embedded as links in this document, listed below. Additional files may be available upon request.

Please contact your local sales agent [here](#) or contact sales@bjtake.com for more information.

 [BLRT-M - Installation Instructions](#)

 [BLRT-M - Photometry.zip](#)

Certifications and Listings

Certifications that apply to this fixture and its possible configurations are listed here. More information available upon request.

| Icon | Description |
|--|----------------------------------|
|  | ETL Listed |
|  | DLC Listed |
|  | Wireless Controls Available |
|  | 90 and 95+ CRI Options Available |
|  | 120-347V(UN3) Available |

Usage Applications

This fixture can be used in a variety of applications, and is ideal for the following:

| Usage Application |
|-------------------|
| Hospitals |
| Offices |
| Schools |

Warranty Statement

BJ Take products are tested and/or inspected prior to being packaged for shipment and are guaranteed from the day the product is shipped for a period of ten-year LED chip warranty and a five-year comprehensive component warranty. This can be upgraded to a ten-year comprehensive warranty on request.

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Wattage Information

Below are the wattage tables for all metric size formats of the BLRT-M.

BLRT-M 500x1500 Wattage

| Size | Lumen Output | Actual Lumen Output | Wattage |
|------|--------------|---------------------|---------|
| 2x4 | 3.0 | 3254 | 21.7 |
| 2x4 | 3.5 | 3780 | 25.3 |
| 2x4 | 4.0 | 4300 | 29.0 |
| 2x4 | 4.5 | 4812 | 32.7 |
| 2x4 | 5.0 | 5316 | 36.3 |
| 2x4 | 6.0 | 6304 | 43.7 |
| 2x4 | 7.0 | 7263 | 51.0 |
| 2x4 | 8.0 | 8192 | 58.4 |
| 2x4 | 9.0 | 9093 | 65.7 |
| 2x4 | 10.0 | 9966 | 73.0 |

BLRT-M 600x1200 Wattage

| Size | Lumen Output | Actual Lumen Output | Wattage |
|------|--------------|---------------------|---------|
| 2x4 | 3.0 | 3254 | 21.7 |
| 2x4 | 3.5 | 3780 | 25.3 |
| 2x4 | 4.0 | 4300 | 29.0 |
| 2x4 | 4.5 | 4812 | 32.7 |
| 2x4 | 5.0 | 5316 | 36.3 |
| 2x4 | 6.0 | 6304 | 43.7 |
| 2x4 | 7.0 | 7263 | 51.0 |
| 2x4 | 8.0 | 8192 | 58.4 |
| 2x4 | 9.0 | 9093 | 65.7 |
| 2x4 | 10.0 | 9966 | 73.0 |

BLRT-M 300x1200 Wattage

| Size | Lumen Output | Actual Lumen Output | Wattage |
|------|--------------|---------------------|---------|
| 1x4 | 2.0 | 2009 | 14.8 |
| 1x4 | 2.5 | 2508 | 18.4 |
| 1x4 | 3.0 | 3005 | 22.1 |
| 1x4 | 3.5 | 3500 | 25.8 |
| 1x4 | 4.0 | 3994 | 29.5 |
| 1x4 | 4.5 | 4486 | 33.2 |
| 1x4 | 5.0 | 4977 | 36.8 |

BLRT-M 500x500 / 600x600 Wattage

| Size | Lumen Output | Actual Lumen Output | Wattage |
|------|--------------|---------------------|---------|
| 2x2 | 2.0 | 1989 | 14.8 |
| 2x2 | 2.5 | 2483 | 18.4 |
| 2x2 | 3.0 | 2975 | 22.1 |
| 2x2 | 3.5 | 3465 | 25.8 |
| 2x2 | 4.0 | 3954 | 29.5 |
| 2x2 | 4.5 | 4441 | 33.2 |
| 2x2 | 5.0 | 4927 | 36.8 |

BLRT-M 750x750 Wattage

| Size | Lumen Output | Actual Lumen Output | Wattage |
|------|--------------|---------------------|---------|
| 2x2 | 2.0 | 1989 | 14.8 |
| 2x2 | 2.5 | 2483 | 18.4 |
| 2x2 | 3.0 | 2975 | 22.1 |
| 2x2 | 3.5 | 3465 | 25.8 |
| 2x2 | 4.0 | 3954 | 29.5 |
| 2x2 | 4.5 | 4441 | 33.2 |
| 2x2 | 5.0 | 4927 | 36.8 |

BLRT-M Light Loss Factor (LLF)

| CCT | Output% |
|-------|---------|
| 2700K | 92.95 |
| 3000K | 95.51 |
| 3500K | 96.80 |
| 4000K | 100.00 |
| 5000K | 101.28 |
| 90CRI | 84.72 |

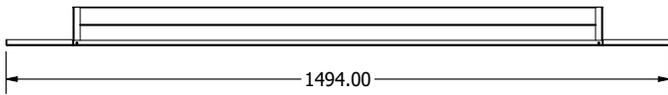
* Actual lumen output may vary

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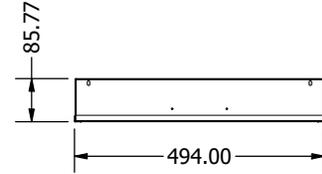
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Architectural Lighting by **BJTAKE**
LIGHTING

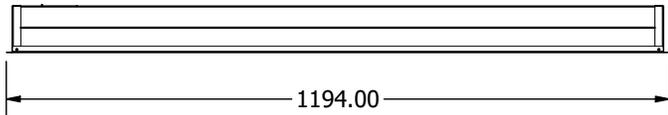
BLRT-M 500x1500mm



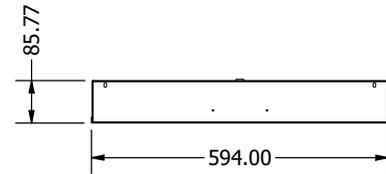
End Dimensions



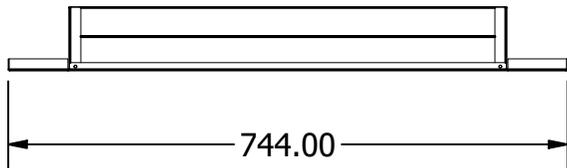
BLRT-M 600x1200mm



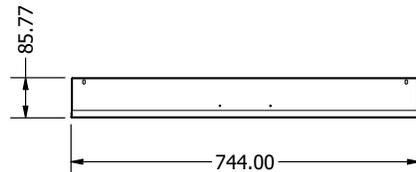
End Dimensions



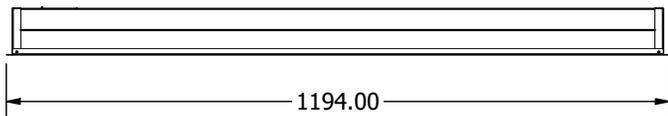
BLRT-M 750x750mm



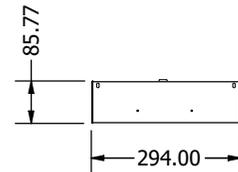
End Dimensions



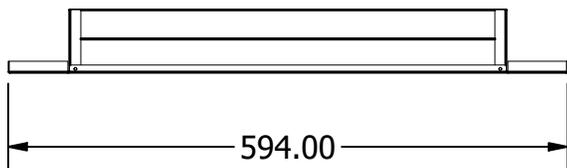
BLRT-M 300x1200mm



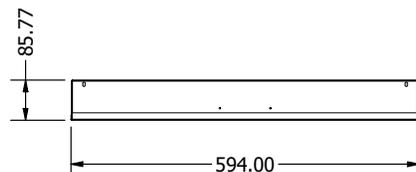
End Dimensions



BLRT-M 600x600mm



End Dimensions



* Drawings not to scale

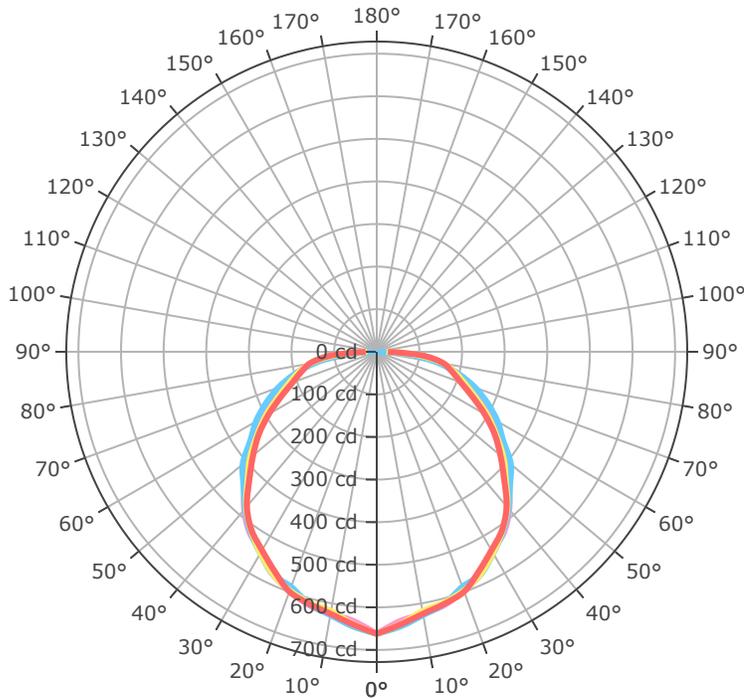
* Standard tolerances apply

* Specifications may change without notice

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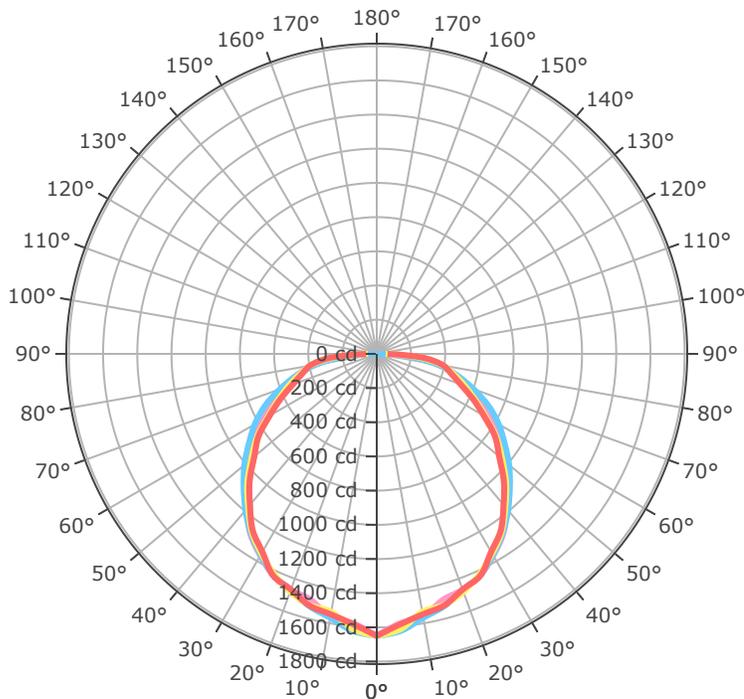
BLRT-M-300X1200-2L-840



- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 18.4 fc | 17.6 ft |
| 8.0 ft | 10.3 fc | 23.5 ft |
| 10.0 ft | 6.6 fc | 29.4 ft |
| 12.0 ft | 4.6 fc | 35.2 ft |
| 14.0 ft | 3.4 fc | 41.1 ft |
| 16.0 ft | 2.6 fc | 47.0 ft |
| 24.0 ft | 1.1 fc | 70.5 ft |
| 32.0 ft | 0.6 fc | 94.0 ft |
| 40.0 ft | 0.4 fc | 117.5 ft |
| 48.0 ft | 0.3 fc | 141.0 ft |
| 56.0 ft | 0.2 fc | 164.5 ft |
| 64.0 ft | 0.2 fc | 188.0 ft |

BLRT-M-300X1200-5L-840



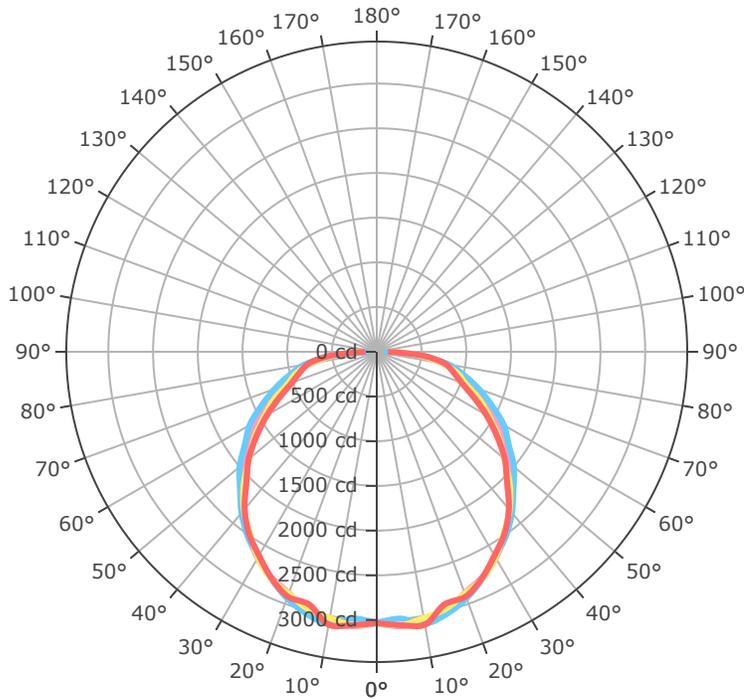
- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 45.8 fc | 17.7 ft |
| 8.0 ft | 25.8 fc | 23.6 ft |
| 10.0 ft | 16.5 fc | 29.4 ft |
| 12.0 ft | 11.5 fc | 35.3 ft |
| 14.0 ft | 8.4 fc | 41.2 ft |
| 16.0 ft | 6.4 fc | 47.1 ft |
| 24.0 ft | 2.9 fc | 70.7 ft |
| 32.0 ft | 1.6 fc | 94.2 ft |
| 40.0 ft | 1.0 fc | 117.8 ft |
| 48.0 ft | 0.7 fc | 141.3 ft |
| 56.0 ft | 0.5 fc | 164.9 ft |
| 64.0 ft | 0.4 fc | 188.4 ft |

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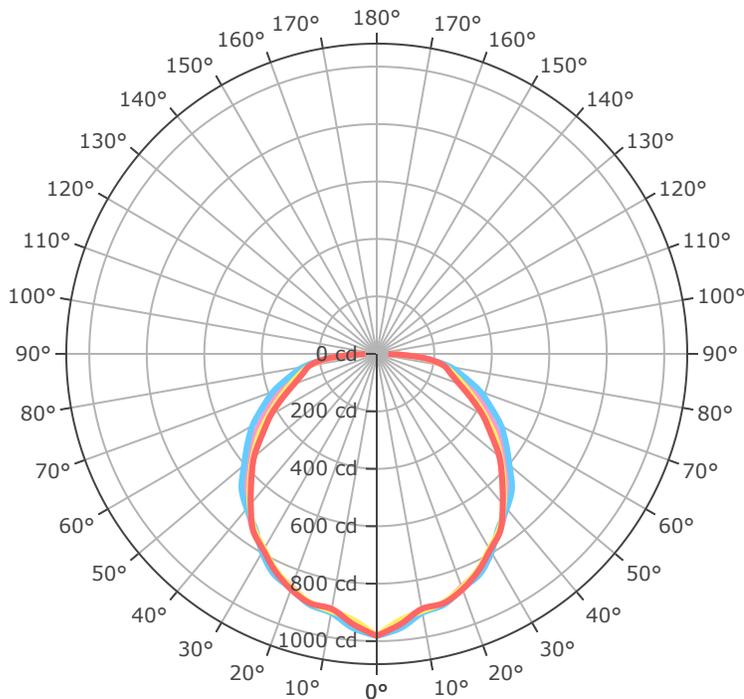
BLRT-M-600X1200-500X1500-10L-840



- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 84.3 fc | 19.0 ft |
| 8.0 ft | 47.4 fc | 25.4 ft |
| 10.0 ft | 30.3 fc | 31.7 ft |
| 12.0 ft | 21.1 fc | 38.0 ft |
| 14.0 ft | 15.5 fc | 44.4 ft |
| 16.0 ft | 11.9 fc | 50.7 ft |
| 24.0 ft | 5.3 fc | 76.1 ft |
| 32.0 ft | 3.0 fc | 101.4 ft |
| 40.0 ft | 1.9 fc | 126.8 ft |
| 48.0 ft | 1.3 fc | 152.1 ft |
| 56.0 ft | 1.0 fc | 177.5 ft |
| 64.0 ft | 0.7 fc | 202.8 ft |

BLRT-M-600X1200-500X1500-3L-840



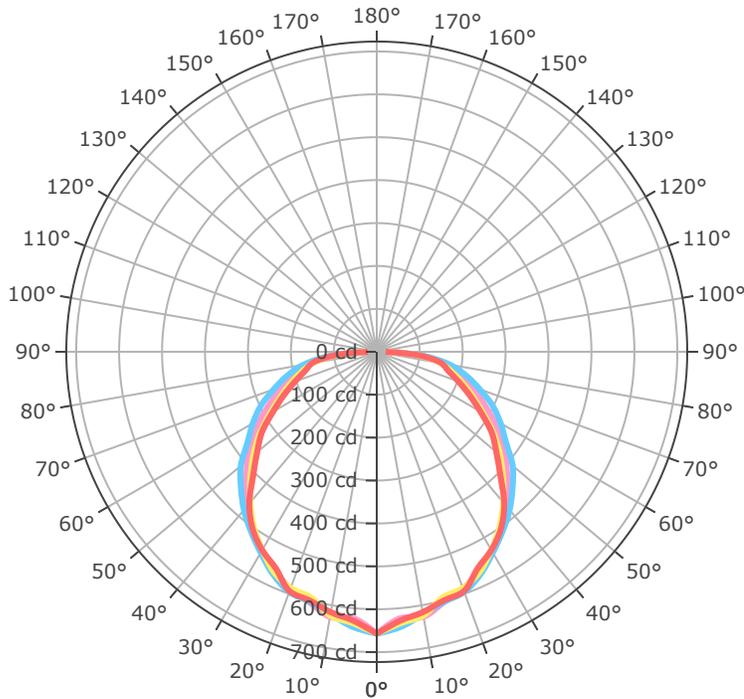
- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 27.3 fc | 16.9 ft |
| 8.0 ft | 15.3 fc | 22.5 ft |
| 10.0 ft | 9.8 fc | 28.2 ft |
| 12.0 ft | 6.8 fc | 33.8 ft |
| 14.0 ft | 5.0 fc | 39.4 ft |
| 16.0 ft | 3.8 fc | 45.0 ft |
| 24.0 ft | 1.7 fc | 67.6 ft |
| 32.0 ft | 1.0 fc | 90.1 ft |
| 40.0 ft | 0.6 fc | 112.6 ft |
| 48.0 ft | 0.4 fc | 135.1 ft |
| 56.0 ft | 0.3 fc | 157.6 ft |
| 64.0 ft | 0.2 fc | 180.2 ft |

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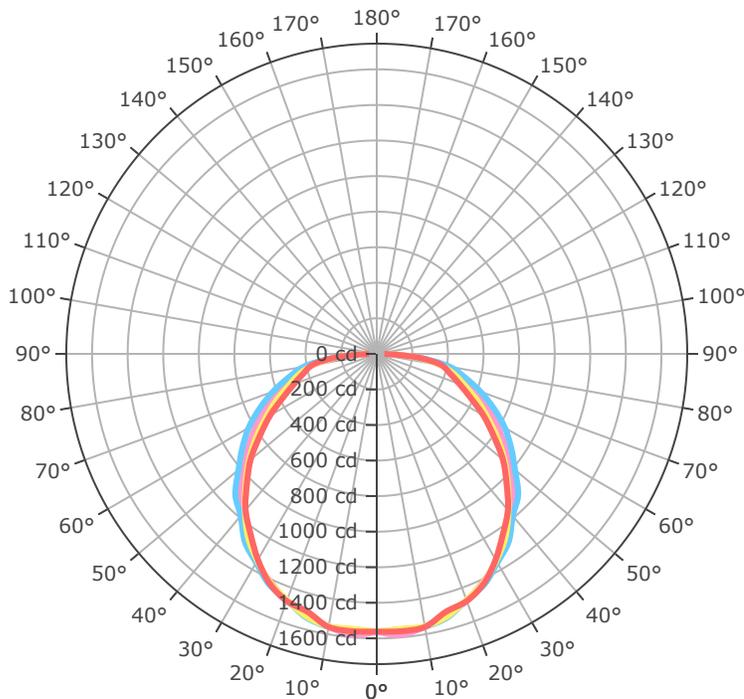
BLRT-M-750X750-600X600-2L-840



- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 18.3 fc | 17.0 ft |
| 8.0 ft | 10.3 fc | 22.6 ft |
| 10.0 ft | 6.6 fc | 28.3 ft |
| 12.0 ft | 4.6 fc | 33.9 ft |
| 14.0 ft | 3.4 fc | 39.6 ft |
| 16.0 ft | 2.6 fc | 45.2 ft |
| 24.0 ft | 1.1 fc | 67.8 ft |
| 32.0 ft | 0.6 fc | 90.4 ft |
| 40.0 ft | 0.4 fc | 113.1 ft |
| 48.0 ft | 0.3 fc | 135.7 ft |
| 56.0 ft | 0.2 fc | 158.3 ft |
| 64.0 ft | 0.2 fc | 180.9 ft |

BLRT-M-750X750-600X600-5L-840



- 0.0°
- 45.0°
- 90.0°
- 135.0°
- 180.0°

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 6.0 ft | 43.4 fc | 17.8 ft |
| 8.0 ft | 24.4 fc | 23.7 ft |
| 10.0 ft | 15.6 fc | 29.6 ft |
| 12.0 ft | 10.8 fc | 35.5 ft |
| 14.0 ft | 8.0 fc | 41.4 ft |
| 16.0 ft | 6.1 fc | 47.3 ft |
| 24.0 ft | 2.7 fc | 71.0 ft |
| 32.0 ft | 1.5 fc | 94.7 ft |
| 40.0 ft | 1.0 fc | 118.4 ft |
| 48.0 ft | 0.7 fc | 142.0 ft |
| 56.0 ft | 0.5 fc | 165.7 ft |
| 64.0 ft | 0.4 fc | 189.4 ft |

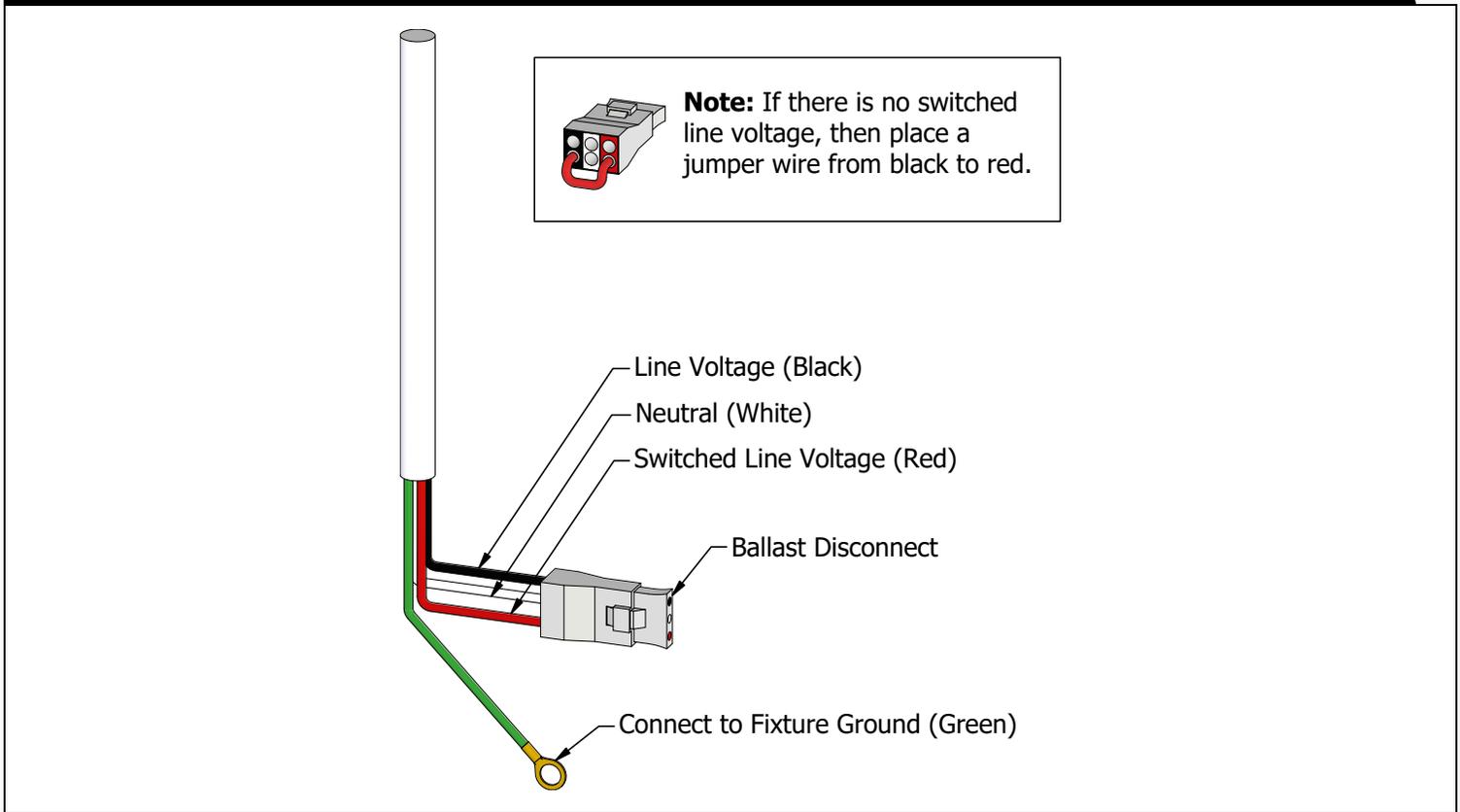
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Emergency Battery Plan - 10W

| Emergency Lighting | Solution System Components | System Operation |
|--|---|--|
| Option Code 'B17' - UL 924 listed components that are factory installed in the luminaire | UL 924 listed 10-watt battery integral to the luminaire | Loss of normal power is detected by the B17 emergency light solution and the power supply is switched automatically to the 10-watt integral battery pack which powers the emergency LED lighting driver. |
| | UL 924 listed LED emergency lighting driver integral to the luminaire | The battery pack and emergency LED driver are UL 924 certified to provide a minimum of 90-minutes of emergency lighting. |
| | Wiring options for both switched and unswitched emergency lighting | |

Emergency Lighting Wiring



Important Information

More information on emergency lighting options and configurations available on request.



THRIVE™ is an **optional** natural daylight technology replacing typical CRI order codes.

| Order Code | Option | Use-case |
|------------|---------|---|
| 8 | 80 CRI | Energy-efficient, lower cost, acceptable colour rendering for general lighting applications. |
| 9 | 90 CRI | More accurate, natural and vibrant colour appearance. Suitable for retail, offices, and applications where colour accuracy is of higher importance. |
| 1 | 95+ CRI | Near-perfect colour fidelity, excellent for architectural, medical, retail, and other premium applications. |
| 0 | THRIVE | Human-centric lighting engineered to provide the most accurate recreation of natural daylight. Highly beneficial for healthcare, office environments, schools and other applications where all-day comfort and general well-being are top priorities. |

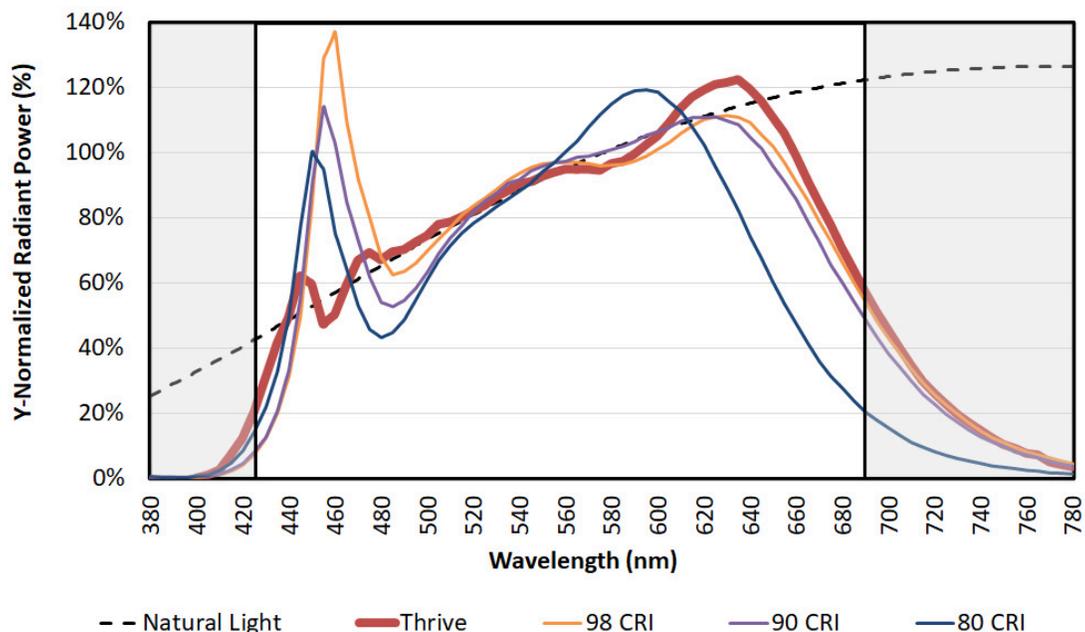
Engineered to provide the closest match to natural light available using proprietary chip, phosphor, and packaging technology, Thrive can be used in constant colour point luminaires to bring full spectrum natural light indoors, or in tunable white luminaires to incorporate circadian elements that may impact human well-being.

The high-fidelity spectral output of Thrive creates stunning environments with excellent colour rendering and outstanding TM-30 metrics. Target applications include office, education, healthcare, retail, hospitality, architectural, museums, and residential lighting.

[Bridgelux White Paper - Average Spectral Difference.pdf](#)

The effect of the THRIVE™ spectral power distributions at a CCT of 4000K (typical for interior lighting in commercial, office, and education settings) is shown in the figure below. The reference light source at this colour temperature is firelight, represented diagrammatically as the blackbody curve (BBC) and referenced in the below figure as natural light. LEDs offering a CRI of 90 or 98 have a closer match to the blackbody curve than the 80 CRI light source. Nevertheless, across the entire visual spectrum, both light sources show a substantial deviation from the natural light BBC. This is shown in the spectral spikes (deviations above the blackbody curve) and valleys (deviations below the blackbody curve).

Spectral power distributions of LED light sources at 4000K against the blackbody curve.



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Gallery Information

Below you will find images of relevant products and configurations for the BLRT-M.

