



TROFFERS

NORIBACHI PRODUCT FAMILY BROCHURE

Troffers at a Glance

Fixture	Features	Size	Depth	Benefits
Troffer.A	Center diffuser direct/indirect	2' X 4'	3.41"	Soft light mimics a skylight
Troffer.B	Center diffuser direct/indirect	1' X 4'	3.25"	Soft light mimics a skylight
Troffer.C	Center diffuser direct/indirect	2' X 2'	3.41"	Soft light mimics a skylight
Troffer.D	Flat lens	1' X 1'	3.33"	Multiple lens options
Troffer.E	Flat lens	2' X 4'	4"	Multiple lens options
Troffer.F	Flat lens	1' X 4'	4"	Multiple lens options
Troffer.G	Flat lens	2' X 2'	4"	Multiple lens options
Troffer.H	Dual basket direct/indirect	2' X 4'	2.56"	For shallow plenum spaces
Troffer.I	Dual basket direct/indirect	2' X 2'	2.56"	For shallow plenum spaces



Troffer.A, Troffer.B and Troffer.C Style



Troffer.D, Troffer.E, Troffer.F and Troffer.G Style



Troffer.H and Troffer.I Style



The Troffer family of fixtures feature best in the business efficacy to really light up interiors. Use this fixture to brighten office environments, lobbies, medical spaces, educational facilities and other indoor commercial areas. These luminaires easily outperform outdated fluorescent fixtures. Offered in 3 styles and in 1X1, 2x2, 4x1, and 4x2 configurations!

Troffer Highlights:

- L70 rated at +100,000 hours
- CRI 70 minimum
- Operating temp: -40°C to +60°C
- Non-toxic chemical/ROHS compliant
- ETL certified, meets UL and CSA safety standards
- Manufactured in the US
- Up to 110 LPW
- 12x12, 24x24, 48x12, and 48x24 configurations
- No UV or IR
- Mercury free, lead free

Electrical Characteristics:

- Standard AC input: 120/277V
- EMI: Compliance to EN61000-4-2,3,4,5,6,8,11
- FCC Title 47, Part 2, Part 15, Class A
- Power factor: >0.9
- Total harmonic distortion: <20%

Warranty:

- 5-year manufacturer's warranty
- First year includes labor
- Optional 10-year manufacturer's warranty
- U.S. manufacturing and quality control

Appearance:

- Die-formed and embossed code 22 or 20 gauge steel
- Baked white enamel, with matte white reflectors.
- 4000K (NW) LEDs standard.
- Grid or surface mount.
- Custom colors.
- Lenses designed to maximize efficiency and minimize glare.

Fixture Upgrades:

- Custom color
- Multiple lens options for flat panel models

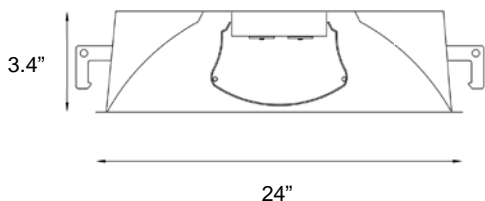
Light Engine Upgrades:

- Cool white or warm white LEDs
- RGBW options
- Tight bins

Electrical Upgrades:

- 0-10V, step, line voltage and bi-level dimming
- Wireless networking and controls
- Occupancy sensor
- Emergency battery backup
- Daylight harvesting sensor
- Enhanced surge protection

Troffer.A



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP20

Performance Summary

Lumens: 4,308 – 12,923 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 39 - 117 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel
 Color: High reflectance baked white enamel, with matte white reflectors.
 Lens: Linear ribbed acrylic lens
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 48"
 Width: 24"
 Depth: 3.4"

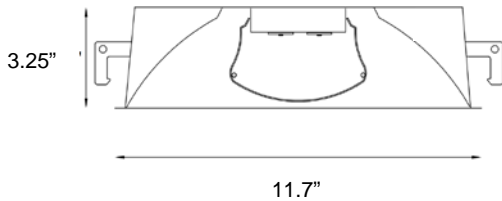
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.B



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP20

Performance Summary

Lumens: 4,308 – 12,923 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 39 - 117 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.

Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel
 Color: High reflectance baked white enamel, with matte white reflectors.
 Lens: Linear ribbed acrylic lens
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 47.8"
 Width: 11.7"
 Depth: 3.25"

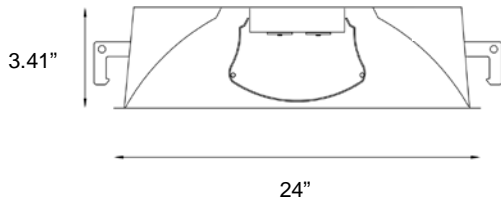
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.C



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP20

Performance Summary

Lumens: 2,154 – 6,462 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 20 - 59 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel
 Color: High reflectance baked white enamel, with matte white reflectors.
 Lens: Linear ribbed acrylic lens
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 24"
 Width: 24"
 Depth: 3.41"

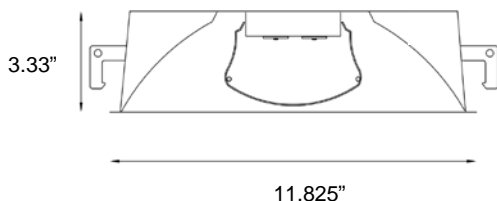
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.D



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP20

Performance Summary

Lumens: 1,077 – 3,231 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 10 -29 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.

Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel
 Color: High reflectance baked white enamel, with matte white reflectors.
 Lens: Linear ribbed acrylic lens
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 11.85"
 Width: 11.825"
 Depth: 3.33"

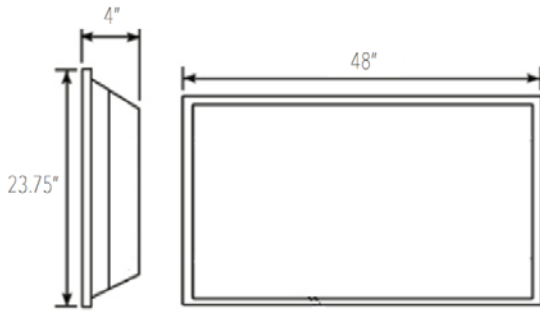
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 EM Immunity:
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.E



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP40

Performance Summary

Lumens: 4,308 – 12,923 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 39 - 117 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel.
 Color: High reflectance baked white enamel. Custom colors also available.
 Lens: High transmission prismatic pattern #12 acrylic (A12) for light diffusion which maximizes light output. Other lenses are available upon request. See fixture specifications page for details.
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 48"
 Width: 23.75"
 Depth: 4"

Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 EM Immunity:
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.F



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP40

Performance Summary

Lumens: 4,308 – 8,615 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 39 - 78 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel.
 Color: High reflectance baked white enamel. Custom colors also available.
 Lens: High transmission prismatic pattern #12 acrylic (A12) for light diffusion which maximizes light output. Other lenses are available upon request. See fixture specifications page for details.
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 48"
 Width: 12"
 Depth: 4"

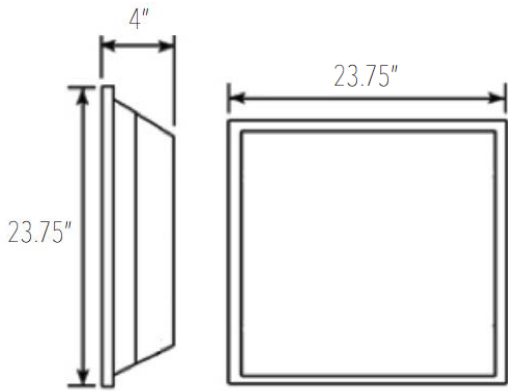
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.G



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13
 IP Rating: IP40

Performance Summary

Lumens: 2,154 – 6,462 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 20 - 59 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 22 gauge steel.
 Color: High reflectance baked white enamel. Custom colors also available.
 Lens: High transmission prismatic pattern #12 acrylic (A12) for light diffusion which maximizes light output. Other lenses are available upon request. See fixture specifications page for details.
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 23.75"
 Width: 23.75"
 Depth: 4"

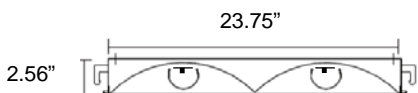
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.H



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13

Performance Summary

Lumens: 8,615 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 78 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.

Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 20 gauge steel.
 Color: High reflectance baked white enamel. Custom colors also available.
 Lens: Clear (ribbed) standard.
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 48"
 Width: 23.75"
 Depth: 2.56"

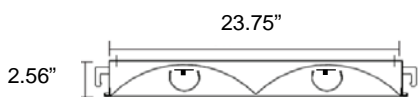
Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3
 EM Immunity: Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer.I



Performance Ratings and Certifications

UL 1598
 UL 8750
 CSA C22.2#250.0
 CSA C22.2#250.13

Performance Summary

Lumens: 4,308 lm
 Lumens Per Watt (typ.): 110 LPW
 Power Consumption: 39 W
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 80 CRI. Custom CRI also available.
 CCT (Typical): 3000K, 4000K, 5000K, tight bins also available.
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Die-formed and embossed code 20 gauge steel.
 Color: High reflectance baked white enamel. Custom colors also available.
 Lens: Clear (ribbed) standard.
 Mounting: Recessed inverted T-Bar ceilings. Grid mount or surface mount. Wiring knockouts are provided on the back of housing.
 Length: 23.75"
 Width: 23.75"
 Depth: 2.56"

Electrical System Characteristics / Data

AC Input: 120/277 VAC (standard), 480 VAC (upgrade)
 FCC: Title 47, Part 2, Part 15, Class A
 EM: Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (60% load); EN61000-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A
 Withstand Voltage: I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
 Isolation Resistance: I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
 Power Factor: PF > 0.98/115VAC, PF > 0.92/277VAC
 Total Harmonic Distortion: THD < 20%
 Standard Surge Protection: All-Around Protection: OVP, SCP, OLP.
 Enhanced Surge Protection: Protects against surges according to IEEE C62.41.2 C and ANSI C136.2
 Emergency Batt. Backup: Optional upgrades available.

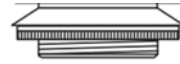
Optional Controls:

Wireless Controls: Optional via Pulse Wireless Mess
 Network Dimming: 0-10V, step, line and bi-level available.
 Daylight Harvesting Sensor: Optional
 Occupancy Sensor: Optional

Troffer Options

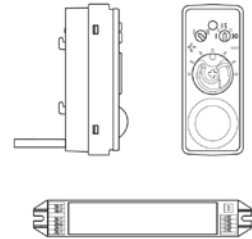
Occupancy Sensor

Sensor Mounting:	Remote
Sensor Lens Options:	360° lens
Functionality:	60' diameter coverage from 40' height 30 seconds to 30 minutes
Width:	4.34"
Height:	4.44"
Depth:	1.58"



Daylight Harvesting Sensor

Sensor Mounting:	Remote
Functionality:	Enables daylight regulations and dimming when no presence is detected
Delay:	1 to 30 minutes
Sensor Depth:	0.78"
Sensor Height:	0.74"
Sensor Width:	1.84"
Switchbox Length:	7.1"
Switchbox Width:	1.18"



Fixture Specifications

Construction

Housing is die-formed and embossed code 22 gauge steel (code 20 gauge for Troffer.H and Troffer. I). Finish is high reflectance baked white enamel. Wiring knockouts are provided on back and end of housing. Driver cover and/or reflector snaps into place; no tools required for ballast access. Lens is held with a hinged steel door frame; frame hinges downward on either side and is held closed by two positive cam latches. Linear ribbed acrylic lens is standard for Troffer.A, Troffer.B, Troffer.C and Troffer.D. Standard lens for Troffer.E, Troffer.F and Troffer.G is high transmission prismatic pattern #12 acrylic (A12) for light diffusion which maximizes light output. Clear, ribbed lens standard for Troffer.H and Troffer.I.

Optional Finishes

Custom colors available (specify RAL code).

Mounting Options

Recessed inverted T-bar ceilings. Grid mount or Surface Mount.

Lens Options for Troffer.E Troffer.F and Troffer.G:

- Prismatic Acrylic #12 Pattern 1/8"
- Matte White Acrylic
- Specular Parabolic Louver 1/2" x 1/2" x 3/8"
- Specular Parabolic Louver 3/4" x 3/4" x 1/2"
- Specular Parabolic Louver 1 1/2" x 1 1/2" x 1"
- White Cubed Acrylic Louver 1/2" x 1/2" x 3/8"
- Frosted Acrylic Smooth Lens .04", 100% Dura Frost

Optics Specifications

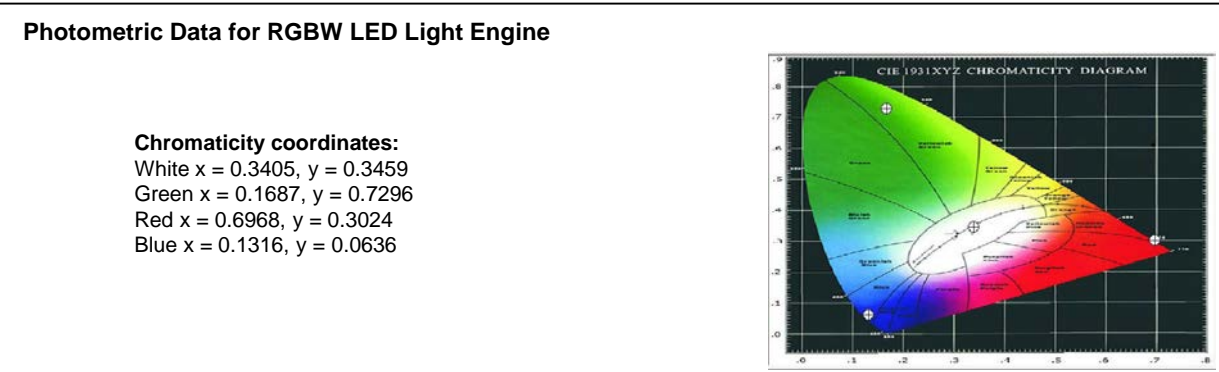
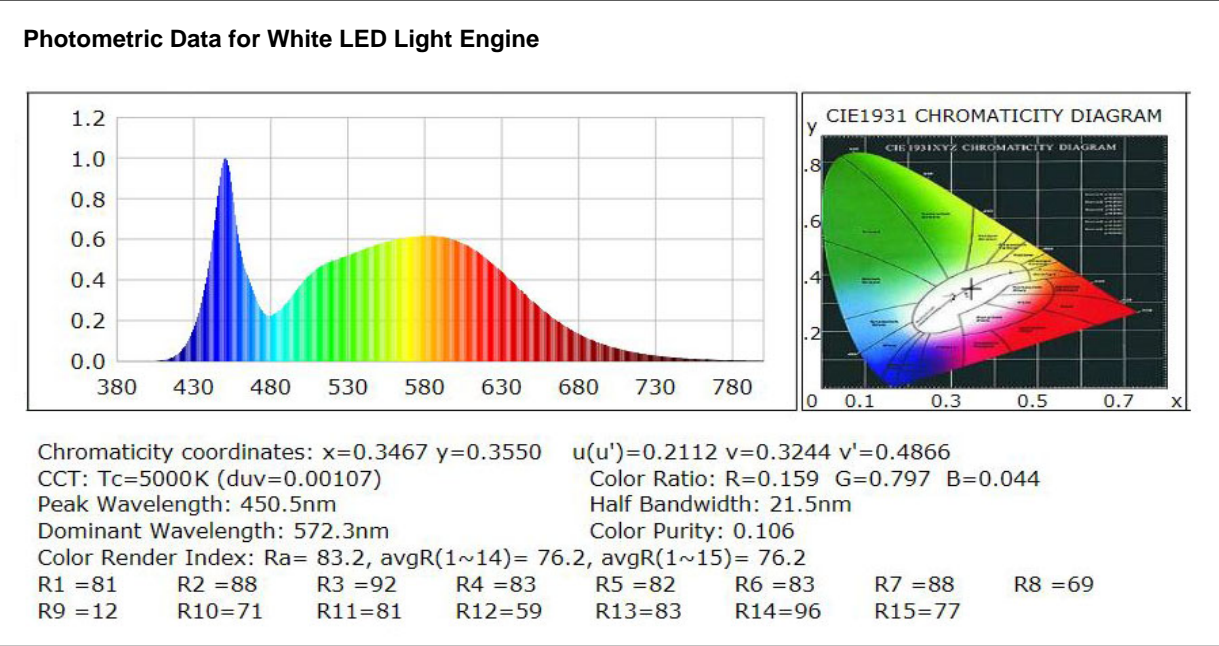
White LED Optics

High brightness, high efficiency LEDs. Standard color temperature is Cool White (5000K typical). Neutral White (4000K typical) and Warm White (3000K typical) also available. All with minimum 70 CRI. Tight bins (<+/- 50degK variability) also available – recommended for WW installations as the eye is sensitive to variations in this color range. 40deg and 80deg beam angle optional (n/a for RGBW).

RGBW Light Engine Optics

RGBW light engine also available, compatible with DMX controller. RGBW colors, to allow changing from pure white light to any hue available. Multiple channels of LEDs produce a full spectrum of light anywhere from deepest red to farthest violet. CRI great than 75 in the 2700K – 4000K range.

Single color light engines also available. Red=630 nanometers, Green=525 nanometers. Blue=475 nanometers.



Electrical System Specifications

Electrical System

Standard AC input of 120 – 277VAC. Optional upgrade to 480VAC. Driver meets maximum harmonic distortion (THD) of 20% and is ROHS compliant. Power Factor = > 0.9. Standard Surge protection according to IEC/EN 61000-4-5 EMC test standard and can protect against up to 4KV transient surge. Optional, enhanced Surge Protection protects Line-Ground, Line-Neutral, and Neutral-Ground. Protects against surges according to IEEE C62.41.2 C(10kA and 10kV) and ANSI C136.2.

Controls

Optional controls include: 0-10V (010V), Step, line voltage and Bi-Level Dimming functionality (not guaranteed to work with all dimming systems). Occupancy and Daylight Harvest Sensors available. Optional Emergency Battery Backup: Nickel-Cadmium Batteries, 5W, 600 Lumens for 90 minutes. Optional Cold Emergency Battery Backup: 23W, 2000 Lumens for 90 minutes. The battery has a 7-10 year lifespan.

Driver

All LED drivers provide constant current to give flicker free lighting. Two different drive currents are provided; A (325 mA) and B (575 mA). Highly reliable. Suitable for dry, damp and wet locations. Compliant to worldwide safety regulations for lighting.

Ambient Temperature

We provide fixtures that can sustain ambient temperature ranging from -40F to 140F (-40C to 60C).

Wireless Control Options

Optional wireless networking using the Noribachi Pulse Wireless controller. Pulse is an Arduino-based hardware platform that provides communication between fixtures and a base station using Digi's XBEE based mesh network. Pulse controls up to 16 independent LED lighting fixtures using an FCC approved 900 MHz frequency with up to 200 Kbps data transmission speed. Transmit power output 50 mW. Data transmission rate is 156.25 kbps. 128 bit AES Encryption.

Occupancy Sensor and Daylight Harvesting

Sensor provides 60' diameter coverage from a 40' height. Time can be set from 30 seconds to 30 minutes.

RGBW Controls

Optional RGBW controls with communication to fixture via DMX512 or DMX256 and four channel controls. Four channel control uses red, green, blue and white (to control intensity). DMX controller optional, either software DMX master (via CD and USB adapter) or a physical DMX master. 2.4 GHz wireless DMX networking optional. Other frequencies available upon request.

Testing Compliance

Noribachi complies with and exceeds standards set forth by UL and CSA. All luminaires comply with UL 1598 (CSA C22.2#250.13), and UL 8750 (CSA C22.2#250.0) standards for safety.

Performance testing is done in accordance with LM-79 color measurements and LM-79 distribution measurements, and LM-80 lumen maintenance testing.

Manufacturing

Manufactured in beautiful Harbor City, CA. ARRA Compliant. NAFTA Compliant. Test and burn-in of 100% of all luminaires before shipment. No less than 8-years experience in manufacturing LED-based products.

Warranty

Standard limited 5-year warranty, first year includes labor. Optional 10-year warranty available. See details at www.Noribachi.com.

Note

All safety tests and performance data is done in ambient (STP) conditions. Specifications subject to change without notice. Actual performance may differ as a result of end-user environment application. Actual wattage may differ by +/- 8%. Lumen values may vary within compliance with ANSI C78-377 (unless specifying tight color bins).

Performance Specifications

Electrical Load				
Light Engine	Drive Current (Amps @120VAC)	Drive Current (Amps @277VAC)	Drive Current (Amps @480VAC)	System Power (Watts)*
LINL-028-B-CW-MT	0.08	0.04	0.02	9.79
LINL-056-B-CW-MT	0.16	0.07	0.04	19.58
LINL-084-B-CW-MT	0.24	0.11	0.06	29.37
LINL-112-B-CW-MT	0.33	0.14	0.08	39.16
LINL-168-B-CW-MT	0.49	0.21	0.12	58.74
LINL-224-B-CW-MT	0.65	0.28	0.16	78.32
LINL-336-B-CW-MT	0.98	0.42	0.24	117.48

Operating Characteristics (Typical @5700K CCT)			
Light Engine	Lumens (Medium Dist)	Input Power (Watts)	Lumens per Watt
LINL-028-B-CW-MT	1,077	10	110.00
LINL-056-B-CW-MT	2,154	20	110.00
LINL-084-B-CW-MT	3,231	29	110.00
LINL-112-B-CW-MT	4,308	39	110.00
LINL-168-B-CW-MT	6,462	59	110.00
LINL-224-B-CW-MT	8,615	78	110.00
LINL-336-B-CW-MT	12,923	117	110.00

ELECTRICAL CHARACTERISTICS AND PERFORMANCE DATA VERIFIED BY NATIONALLY RECOGNIZED TESTING LABS (NRTL). FOR FULL REPORTS AND RESULTS, VISIT WWW.NORIBACHI.COM/REPORTS. ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. ALL VALUES TYPICAL UNLESS OTHERWISE NOTED. LUMEN VALUES MAY VARY BY +/- 10%. COLOR TEMPERATURE MAY VARY ACCORDING TO ANSI C78.377.

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Available Light Engines

Fixture	Standard Order Code	Length	Width	Depth	Lumens	Watts
Troffer.A	TRA-LINL-112-B-CW-MT	48"	24"	3.41"	4,308	39
	TRA-LINL-224-B-CW-MT	48"	24"	3.41"	8,615	78
	TRA-LINL-336-B-CW-MT	48"	24"	3.41"	12,923	117
Troffer.B	TRB-LINL-112-B-CW-MT	47.8"	11.7"	3.25"	4,308	39
	TRB-LINL-224-B-CW-MT	47.8"	11.7"	3.25"	8,615	78
	TRB-LINL-336-B-CW-MT	47.8"	11.7"	3.25"	12,923	117
Troffer.C	TRC-LINL-056-B-CW-MT	24"	24"	3.41"	2,154	20
	TRC-LINL-112-B-CW-MT	24"	24"	3.41"	4,308	39
	TRC-LINL-168-B-CW-MT	24"	24"	3.41"	6,462	59
Troffer.D	TRD-LINL-028-B-CW-MT	11.85"	11.825"	3.33"	1,077	10
	TRD-LINL-056-B-CW-MT	11.85"	11.825"	3.33"	2,154	20
	TRD-LINL-084-B-CW-MT	11.85"	11.825"	3.33"	3,231	29
Troffer.E	TRE-LINL-112-B-CW-MT	48"	23.75"	4"	4,308	39
	TRE-LINL-224-B-CW-MT	48"	23.75"	4"	8,615	78
	TRE-LINL-336-B-CW-MT	48"	23.75"	4"	12,923	117
Troffer.F	TRF-LINL-112-B-CW-MT	48"	12"	4"	4,308	39
	TRF-LINL-224-B-CW-MT	48"	12"	4"	8,615	78
Troffer.G	TRG-LINL-056-B-CW-MT	23.75"	23.75"	4"	2,154	20
	TRG-LINL-112-B-CW-MT	23.75"	23.75"	4"	4,308	39
	TRG-LINL-168-B-CW-MT	23.75"	23.75"	4"	6,462	59
Troffer.H	TRH-LINL-224-B-CW-MT	48"	23.75"	2.56"	8,615	78
Troffer.I	TRI-LINL-112-B-CW-MT	23.75"	23.75"	2.56"	4,308	39

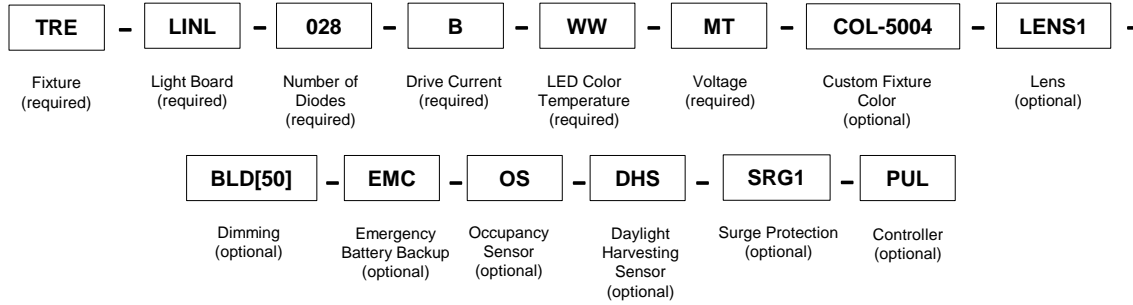
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How to Order

Sample Order Code: Only include the optional upgrades you need.



How to Order (continued)

Numbering Order	Specification	Required or Optional	Allowed Values	Description
1	Fixture	Required	TRA	For Troffer.A
			TRB	For Troffer.B
			TRC	For Troffer.C
			TRD	For Troffer.D
			TRE	For Troffer.E
			TRF	For Troffer.F
			TRG	For Troffer.G
			TRH	For Troffer.H
			TRI	For Troffer.I
2	Light Board	Required	LINL	For all
3	Number of Diodes	Required	028	For LINL-028 models
			056	For LINL-056 models
			084	For LINL-084 models
			112	For LINL-112 models
			168	For LINL-168 models
			224	For LINL-224 models
4	Drive Current	Required	B	B (525mA) drive current
5	LED Color Temperature	Required	CW	Standard Cool white LEDs (5700K)
			NW	Neutral White LEDs (4000K)
			WW	Warm White LEDs (3000K)
			[Specific degree Kelvin]	Specific color temp LEDs [Specific degree Kelvin]
			T1 [Specific degree Kelvin]	Tight Bin LED Color [Specific degree Kelvin] for <150W
			T2 [Specific degree Kelvin]	Tight Bin LED Color [Specific degree Kelvin] for all others
			RGBW	Red/Green/Blue/White light engine
6	Voltage	Required	COL [R, G, B]	Single color light engine
			MT	Standard AC input: 120VAC - 277VAC
			HV1	High Voltage (480VAC) option for <150W light engines
7	Custom Fixture Color	Optional	HV2	High Voltage (480VAC) option for > 150W light engines
			COL-[RAL]	Custom Fixture Color (RAL code)
8	Lens	Optional	LENS1	Prismatic Acrylic #12 Pattern 1/8" for TRE, F, G
			LENS2	Matte White Acrylic for TRE, F, G
			LENS3	Specular Parabolic Louver 1/2" x 1/2" x 3/8" for TRE, F, G
			LENS4	Specular Parabolic Louver 3/4" x 3/4" x 1/2" for TRE, F, G
			LENS5	Specular Parabolic Louver 1 1/2" x 1 1/2" x 1" for TRE, F, G
			LENS6	White Cubed Acrylic Louver 1/2" x 1/2" x 3/8" for TRE, F, G
			LENS7	Frosted Acrylic Smooth Lens .04", 100% Dura Frost for TRE, F, G
11	Dimming	Optional	010V	0 - 10V dimming
			STEP	Step dimming
			LVDIM	Line voltage dimming
			BLD[%]	Bi-level dimming
12	Emergency Battery Backup	Optional	EM	Emergency Battery Backup
			EMC	Emergency Battery Backup - Cold
13	Occupancy Sensor	Optional	OS	Occupancy Sensor
14	Daylight Harvesting Sensor	Optional	DHS	Daylight Harvesting Sensor
15	Surge Protection	Optional	SRG1	Enhanced surge protection for 120-277VAC
			SRG2	Enhanced surge protection for 480VAC
16	Controller	Optional	PUL	Pulse Wireless Controller

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