

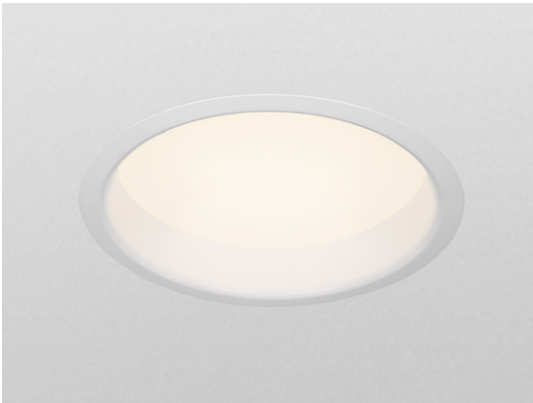
POP RECESSED REGRESSED



ROUND
STATIC WHITE, BIOS



Project: _____
Type: _____



DESCRIPTION

Pop Recessed Regressed Round is a flexible, elegant, low-glare luminaire available in four different sizes. Its innovative, precision-crafted Uniform Lambertian Optic (ULO) allows all models to have a Uniform Glare Rating (UGR) of <19, beneficial for creating well-balanced, low glare architectural spaces. The fixture can be integrated in various grid ceiling and gypsum board setups. Pop Regressed Round comes in static white and BIOS. Consult web pages for Chromawerx SOLA, DUO, and QUADRO solutions for Pop Regressed Round.

Performance

Based on 3500K, 80 CRI, medium output

SIZE	TOTAL LUMENS	EFFICACY lm/W
Ø 12"	690 lm	81 lm/W
Ø 24"	2800 lm	88 lm/W
Ø 36"	6200 lm	91 lm/W
Ø 48"	11000 lm	91 lm/W

Order Guide

LUMINAIRE ID	SIZE	OPTIC	LIGHT SOURCE ¹	CRI	LUMEN PACKAGE				COLOR TEMP.
PORRGRO		ULO							
PORRGRO - Pop Recessed Regressed Round	12IN - Ø 12" 24IN - Ø 24" 36IN - Ø 36" 48IN - Ø 48"	ULO - Uniform Lambertian Optic	SW - Static white BIOSST ² - BIOS Biological Static BIOSDY ² - BIOS Biological Dynamic BIOSTU ² - BIOS Biological Tunable	80CRI - 80 CRI 90CRI ³ - 90 CRI	Ø 12" Ø 24" Ø 36" Ø 48"	Low / BIOS 500LM 2000LM 4500LM 8000LM	Medium ⁴ 690LM 2800LM 6200LM 11000LM	High ⁴ 900LM 3600LM 8000LM 14200LM	27K ⁵ - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K ⁵ - 5000K
			¹ Chromawerx SOLA, DUO, and QUADRO also available. Consult other spec sheets. ² See page 4 for details.	³ Not available with BIOS.	⁴ Not available with BIOS.				⁵ Not available with BIOS.

VOLTAGE	DRIVER ⁸	ELECTRICAL	MOUNTING	FINISH	OPTIONS ¹⁶	
120V - 120V 277V - 277V UNV - 120V-277V 347V ^{6,7} - 347V	Integral D1 - 1% 0-10V DA ⁹ - DALI LDE1 ⁹ - Lutron Hi-lume 1% Eco	Remote ¹⁰ RDI - 1% 0-10V RDA ⁹ - DALI RLDE1 ⁹ - Lutron Hi-lume 1% Eco	1C - 1 circuit GTD ^{11,12} - Generator transfer device fixture +EMB ^{11,12,13,14} - Emergency battery	GRD ¹⁵ - Grid ceiling DTR - Drywall trim DMF - Drywall mud flange	W - Matte white CF# - Custom finish, specify RAL#	FU120 - Fuse 120V FU277 - Fuse 277V FWC - Flexible whip cable (6' std) CP - Chicago Plenum NA - None
⁶ For Ø 12", available with a remote driver box only. ⁷ Available with D1 only.	⁸ PoE (Power-over-Ethernet) compatible. Consult factory for details. ⁹ On-site commissioning is required. ¹⁰ A remote driver box is provided.	¹¹ Not available with 347V. ¹² For Ø 12", available with a remote driver box only. ¹³ Not available with GTD. ¹⁴ The code will be like the following example: 1C+EMB.	¹⁵ Not available with Ø 48".		¹⁶ Separate codes with a "+" if more than one is specified.	

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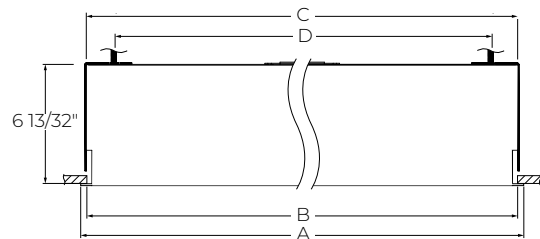
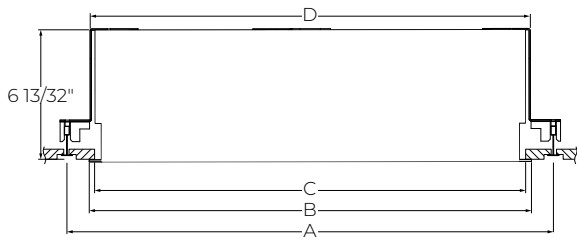
Dimensions

GRD - Grid ceiling

SIZE	BETWEEN T-BAR A	WITH FLANGES B	CEILING CUT-OUT C	FIXTURE SIZE D
Ø 12"	24"	11 1/2"	11"	11 1/4"
Ø 24"	24"	21 27/32"	21 1/4"	21 3/4"
Ø 36"	48"	35 3/32"	34 1/2"	35 1/4"
Ø 48"	N/A	N/A	N/A	N/A

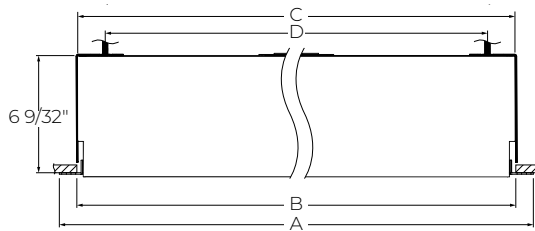
DTR - Drywall trim

SIZE	WITH FLANGES A	CEILING CUT-OUT B	FIXTURE SIZE C	BETWEEN RODS D
Ø 12"	11 17/32"	11 5/32"	10 15/16"	8 1/2"
Ø 24"	21 27/32"	21 1/2"	21 1/4"	14"
Ø 36"	35 3/32"	34 25/32"	34 15/32"	32"
Ø 48"	47 9/16"	47"	46 15/16"	44"

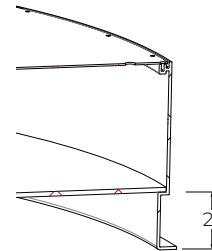


DMF - Drywall mud flange

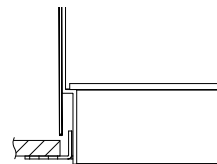
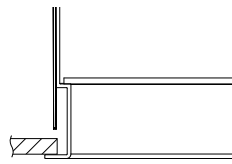
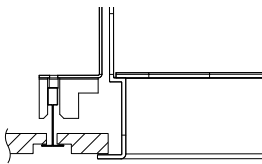
SIZE	WITH FLANGES A	CEILING CUT-OUT B	FIXTURE SIZE C	BETWEEN RODS D
Ø 12"	12 13/16"	11 5/32"	10 15/16"	8 1/2"
Ø 24"	23 3/16"	21 1/2"	21 1/4"	14"
Ø 36"	36 3/8"	34 25/32"	34 15/32"	32"
Ø 48"	48 29/32"	47"	46 15/16"	44"



LENS POSITION



Mounting



GRD - Grid ceiling

DTR - Drywall trim

DMF - Drywall mud flange

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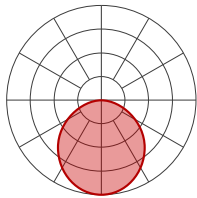


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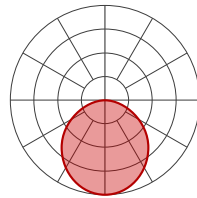
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Photometrics

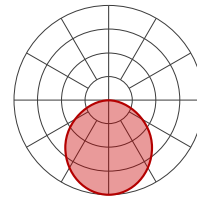
Values calculated based at 3500K and 80 CRI.



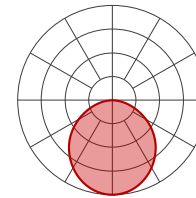
Ø 12"



Ø 24"



Ø 36"



Ø 48"

LM	W	LM/W
500	5.9	85
690	8.5	81
900	11.6	78

LM	W	LM/W
2000	21.7	92
2800	31.8	88
3600	42.8	84

LM	W	LM/W
4500	47.3	95
6200	68.1	91
8000	92.0	87

LM	W	LM/W
8000	84.1	95
11000	120.9	91
14200	163.4	87

MULTIPLIERS

Please follow the multiplier tables to ensure correct lumen value. CCT will change the lumen value.

Multiplier - CCT/CRI

CCT	WATTS		LPW	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	1.05	1.27	0.95	0.79
3000K	1.02	1.23	0.98	0.81
3500K	1.00	1.19	1.00	0.84
4000K	1.00	1.19	1.00	0.84
5000K	0.96	1.12	1.04	0.89

Multiplier for BIOS - CCT/CRI

CCT	EML ratio
	80 CRI R9>50
3000K	0.8
3500K	0.85
4000K	0.9

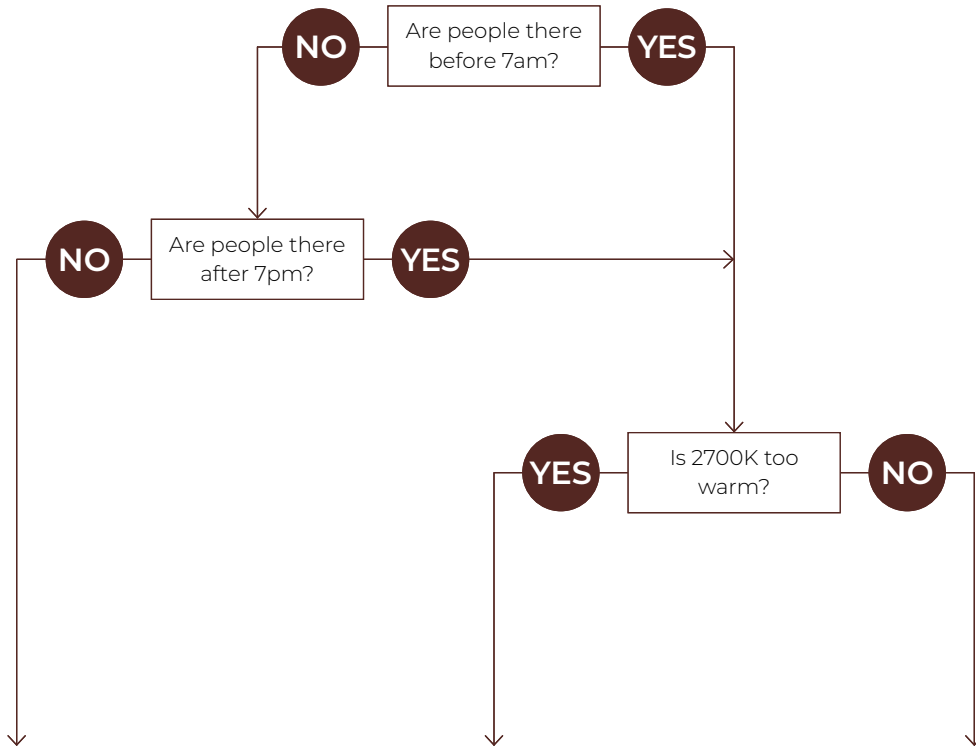
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BIOS

Three BIOS Circadian LED solutions are offered – Biological Static, Biological Dynamic, and Biological Tunable. Use the decision tree below to identify when and where to use BIOS Wellness LED Lighting Solutions.



Biological Static BIOSST	Biological Dynamic BIOSDY	Biological Tunable BIOSTU
No CCT change when dimmed	500K shift when dimmed	Dims to 2700K
Daytime solution	Daytime + evening solution	Daytime + evening solution
Spaces in operation during daytime hours, between 7am and 7pm	Spaces in operation overnight, after 7pm and before 7am, and when CCT color shift in the evening is not preferred	Suitable for spaces in operation overnight, after 7pm and before 7am, and where people do not sleep (CCT color shift in the evening is preferred)
E.g. offices, medical/dental offices	E.g. hospitals	E.g. offices, shiftwork

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Technical Specifications

OPTIC

Uniform Lambertian Optic (ULO): This optic provides a smooth homogenous glow with even illumination and consistent distribution. With Pop Regressed, ULO offers excellent visual comfort in all aperture sizes, from smallest to largest.

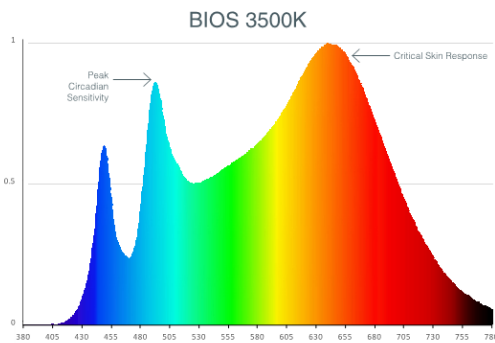
LIGHT SOURCE

Static white

Custom array of mid-flux LEDs are mounted directly to the housing for optimal thermal performance. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operated at reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L90 lumen maintenance greater than 60,000 hours reported, 150,000 hours projected. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

BIOS

BIOS SkyBlue™ Technology is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night, and overall feelings of well-being. The non-visual light signals that stimulate our circadian system have peak intensity in the "sky blue" region. As the diagram below illustrates, BIOS SkyBlue technology shifts the peak LED spectral intensity (490 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.



Three BIOS solutions are offered: BIOS Biological Static (BIOSST), BIOS Biological Dynamic (BIOSDY), and BIOS Biological Tunable (BIOSTU). See page 4 for details.

WELL BUILDING STANDARD



WELL for Light: The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 54 or L03 when BIOS LED is selected
- Feature 55 or L04 meets WELL glare category (b-c-d)
- Feature 58 or L07 when 90CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5% or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Mind: This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, and smooth optics. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information, please contact well@lumenwerx.com.

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277 VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume 1% Ecosystem and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, DUO (tunable white), QUADRO (RGBW), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.



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Battery

Factory installed long life, high temperature, maintenance-free Lithium-Ion battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 10 W (25°C) emergency lighting output and recharge time of 24 hours.

MOUNTING

Recessed fixtures can be mounted into exposed or concealed T-bar or tegular ceiling, as well as in drywall ceilings with trim or mud flange options.

FINISH

Interior: 95% reflective, matte white powder coating

Exterior: Matte white powder coating. Custom finishes are also available.

CONSTRUCTION

Housing: Curved aluminum extrusion

Lens: Acrylic

WEIGHT

Ø 12": 6.4 lbs - 2.9 kg

Ø 24": 13.2 lbs - 6 kg

Ø 36": 26.9 lbs - 12.2 kg

Ø 48": 59.1 lbs - 26.8 kg

CERTIFICATIONS

ETL: Rated for indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

Chicago Plenum: City of Chicago Approved (CCEA) when specified with CP option.

IC rated: Suitable for direct contact with insulation

WARRANTY

Lumenwerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.