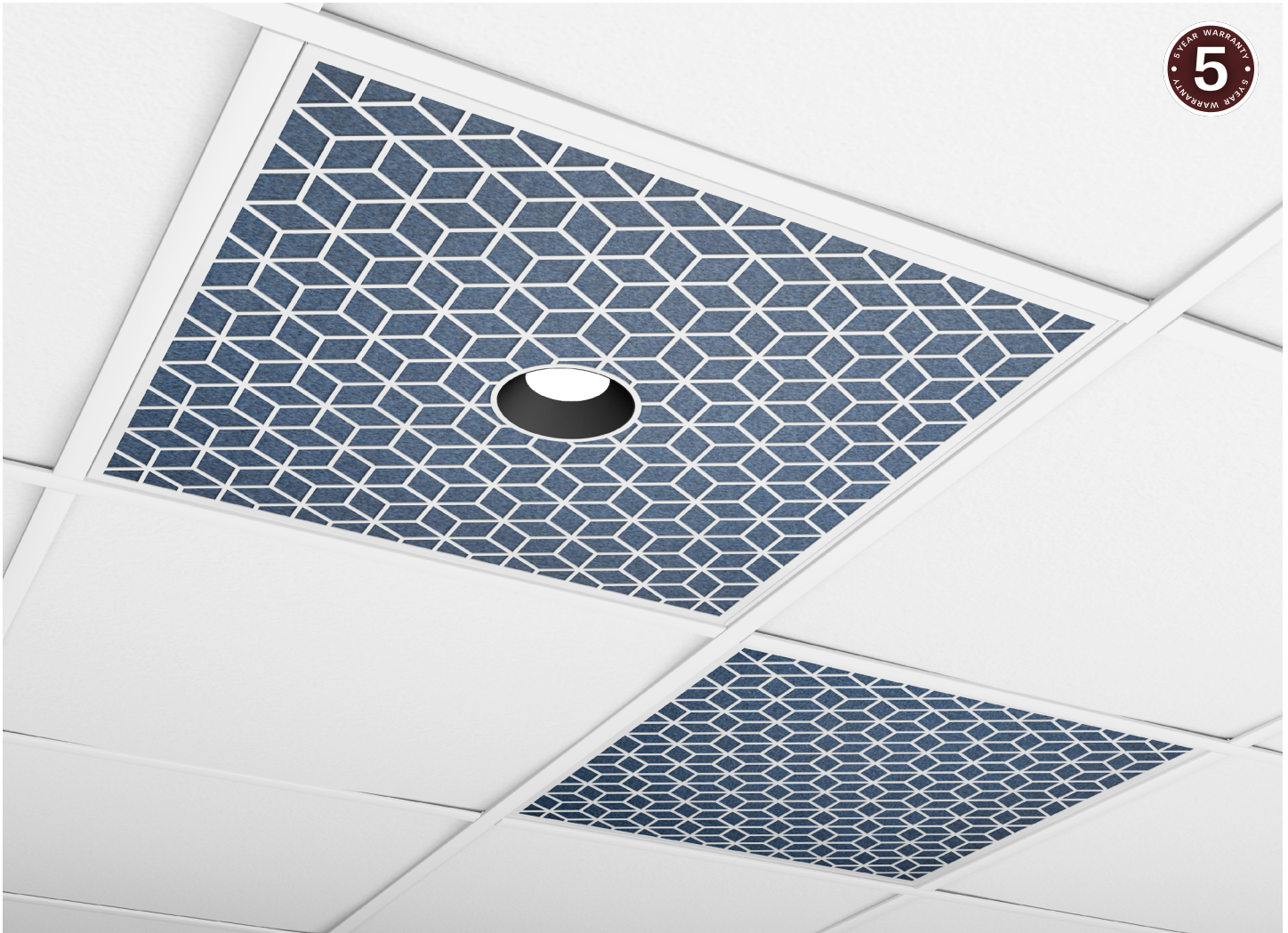


AERA 4" ECHOCORE

RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

LUMENWERX

Project: _____
Type: _____



DESCRIPTION

Aera EchoCore™ acoustic luminaires not only offer outstanding optical performance and maximal eye comfort, but they also reduce echo and reverberation in their immediate environment. When sound waves meet the lighting fixture, they pass through its aluminum lattice only to be trapped by its core of layered sound-absorbing material. Available in round and square models with recessed mounting.

Patterns



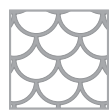
Round



Square



Linear



Scallop



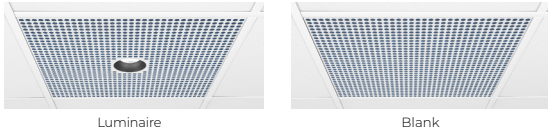
Cubic

AERA 4" ECHOCORE

LUMENWERX

RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Project: _____
Type: _____



Luminaire code

LUMINAIRE ID	SIZE	LIGHT SOURCE	BEAM	COLOR QUALITY	CRI	COLOR TEMP.	OPTICAL OPTIONS
	22						
AE4RECHR - Aera 4" Round EchoCore 2'x2' Recessed AE4SECHR - Aera 4" Square EchoCore 2'x2' Recessed	22 - 2ft x 2ft	SW - Static white FS - Full spectrum SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K	15 - 15° Narrow spot 25 - 25° Spot 35 - 35° Narrow flood 50 - 50° Wide flood SOLA 50 - 50° Wide flood DUO 25 - 25° Spot 35 - 35° Narrow flood 50 - 50° Wide flood	2 ¹ - 2 Step MacAdam Ellipse 3 - 3 Step MacAdam Ellipse ¹ Not available with full spectrum. SOLA_DUO 3 - 3 Step MacAdam Ellips	80 ² - 80 CRI 90 ² - 90 CRI 95 ³ - 95 CRI ² Not available with full spectrum. ³ Not available with static white. SOLA_DUO 90 - 90 CRI 95 - 95 CRI	27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K SOLA_DUO SOLA - Dim-to-Warm single channel 35K-22K DUO - Tunable white 2-channel control 65K to 27K	LS ⁴ - Linear spread HEX ⁴ - Hex louver NA - None ⁴ Hex louver and linear spread cannot be used together.

BEZEL	LENS	BEZEL FINISH	VOLTAGE	WATTAGE	DRIVER ⁹
BEV - Bevel PIN ⁵ - Pinhole ⁵ Not available with square recessed.	SDL ⁶ - Soft diffused lens FDL ⁶ - Frosted diffused lens CL ⁶ - Clear lens NOL - No lens ⁶ Not available with pinhole bezel.	TMW - Textured matte white TMB - Textured matte black SPC - Specular SSPC - Semi-specular CHP - Champagne finish, specify RAL# CF# - Custom	120 - 120V 277 - 277V UNV - 120V-277V 347 ^{7,8} - 347V ⁷ Available with D1 only. ⁸ Driver is remote.	14W - Low output 1451-1538 lm 20W - Medium output 2026-2146 lm 28W - High output 2719-2882 lm SOLA 25W - 25 W output 1300-1400lm (50° only) DUO 19W - 19 W output 900-1100lm (25° and up)	D1 - 1% 0-10V ELV ¹⁰ - ELV 120V TRI ¹⁰ - TRIAC 120V LTEA2W - Lutron 1% - 2 wire FP 120V ⁹ PoE (Power-over-Ethernet) compatible. Consult factory for details. ¹⁰ Available with 120V only. ¹¹ On-site commissioning is required. SOLA SDI - 1% 0-10V SELV ¹⁰ - ELV 120V STRI ¹⁰ - TRIAC 120V LDE1 - Lutron Hi-lume 1% Eco DA ¹¹ - DALI ELD1 - eldoLED 1% ECOdrive 0-10V ELDO - eldoLED 0.1% SOLOdrive 0-10V DUO DMX ¹¹ - DMX DDA ¹¹ - DALI DD1 - Dual 0-10V input for CCT/intensity PSQO ¹¹ - Lutron T-Series 1% tunable white.

ELECTRICAL	MOUNTING	FIXTURE FINISH	PATTERN	PATTERN FINISH	FELT COLOR
1C					
1C - 1 circuit	TC9 - Tegular 9/16" TC15 - Tegular 15/16" TB9 - T-bar 9/16" TB15 - T-bar 15/16" ST - Screw slot t-bar	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL# See page 3 for more finish options.	<u>Standard</u> ROU - Round SQU - Square LIN - Linear <u>Premium</u> SCP - Scallop CBC - Cubic	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL# See page 3 for more finish options.	STANDARD COLORS FWN LVN FON LEN ION CYN TBN PMN MDN FGN PREMIUM COLORS¹² PKN CDN IVN BHN OGN LCN SLN CFN LNN SYN CNN GRN LMN BLN GHN MON EGN NVN CLN ESN

Blank code

LUMINAIRE ID	SIZE	MOUNTING	FIXTURE FINISH	PATTERN	PATTERN FINISH	FELT COLOR
ECHBR	22					
ECHBR - EchoCore Blank 2'x2' Recessed	22 - 2ft x 2ft	TC9 - Tegular 9/16" TC15 - Tegular 15/16" TB9 - T-bar 9/16" TB15 - T-bar 15/16" ST - Screw slot t-bar	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL# See page 3 for more finish options.	<u>Standard</u> ROU - Round SQU - Square LIN - Linear <u>Premium</u> SCP - Scallop CBC - Cubic	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL# See page 3 for more finish options.	STANDARD COLORS FWN LVN FON LEN ION CYN TBN PMN MDN FGN PREMIUM COLORS¹³ PKN CDN IVN BHN OGN LCN SLN CFN LNN SYN CNN GRN LMN BLN GHN MON EGN NVN CLN ESN

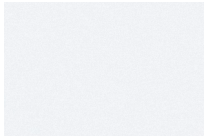
AERA 4" ECHOCORE

LUMENWERX

RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Fixture/Pattern Finishes

Standard



W - Matte White



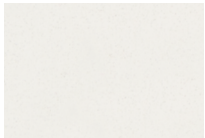
AL - Aluminum



B - Matte Black

Custom

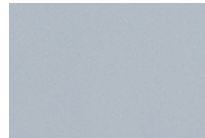
Neutrals



CRM - Cream



GRY - Gray



STG - Steel Gray



SAG - Sage Gray

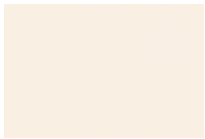


MOG - Moss Gray



BLB - Black Blue

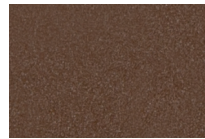
Designer



ALM - Almond



QRZ - Quartzite Texture



RST - Rust Fine Texture



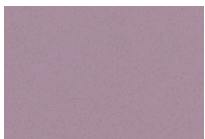
GRB - Green Beige



YLW - Yellow



SLM - Salmon Pink



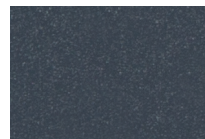
VIO - Pastel Violet



RED - Red



PRR - Purple Red



SMB - Storm Blue



DPB - Deep Blue



OCB - Ocean Blue



BLG - Blue Green



GNS - Green Smoke



MNG - Mint Green

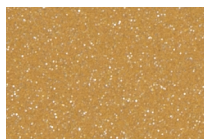


LMG - Lime Green

Metallics



SND - Sand



GLD - Gold



DGD - Dark Gold



IRN - Iron Ore



CNY - Canyon



SBP - Sandblast Copper



SWD - Sandalwood

AERA 4" ECHOCORE

LUMENWERX

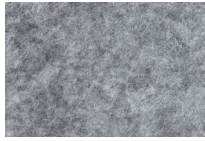
RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Felt Finishes

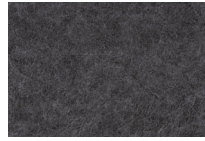
Standard Color Options



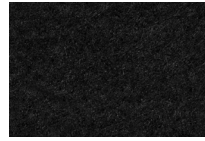
FWN - FROST WHITE



FON - FOG



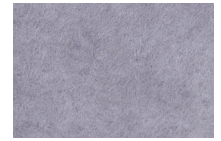
ION - IRON



TBN - TRUE BLACK



MDN - MIDNIGHT BLUE



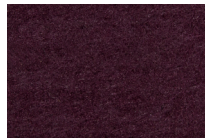
LVN - LAVENDER



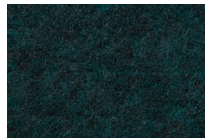
LEN - LATTE



CYN - CHERRY



PMN - PLUM



FGN - FOREST GREEN

Premium Color Options*



PKN - PAPIKA



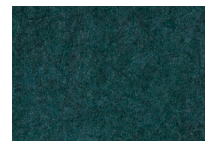
OGN - ORANGE



LNN - LEMON



LMN - LIME



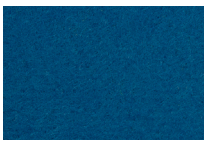
EGN - EVERGREEN



CDN - CLOUDY



LCN - LICHEN



SYN - SKY



BLN - BLUEBERRY



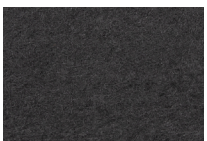
NVN - NAVY



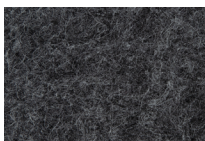
IVN - IVORY



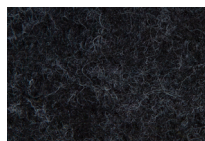
SLN - STEEL



CNN - CARBON



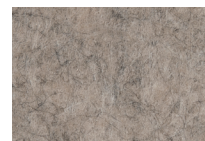
GHN - GRAPHITE



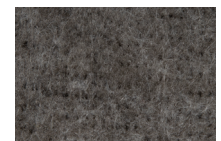
CLN - CHARCOAL



BHN - BLUSH



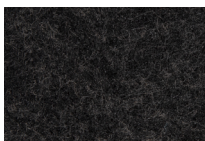
CFN - CAFÉ



GRN - GREIGE



MON - MOCHA



ESN - ESPRESSO

*Please consult factory for more color options.

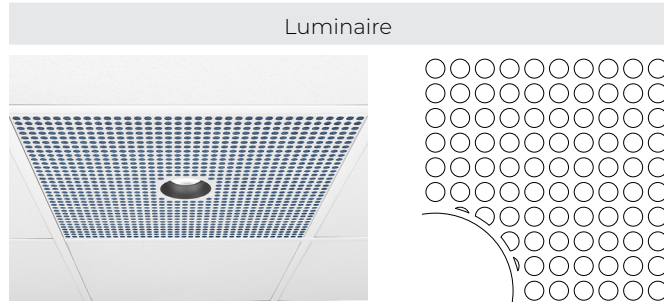
*Lead time may vary.

AERA 4" ECHOCORE

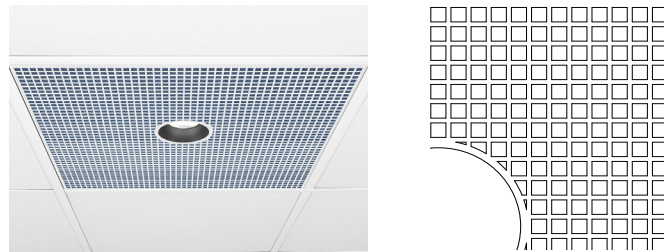
LUMENWERX

RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Fixture Patterns



ROU - ROUND



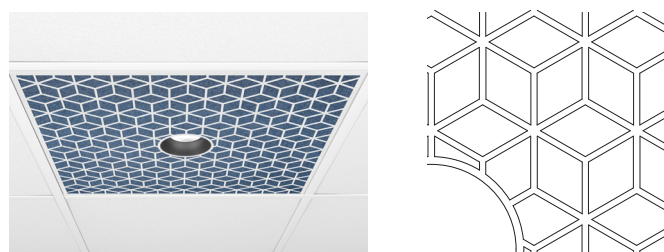
SQU - SQUARE



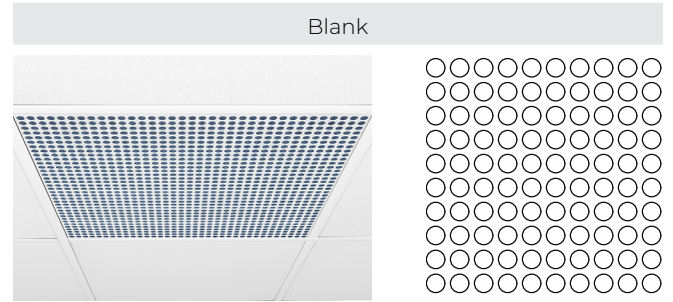
LIN - LINEAR



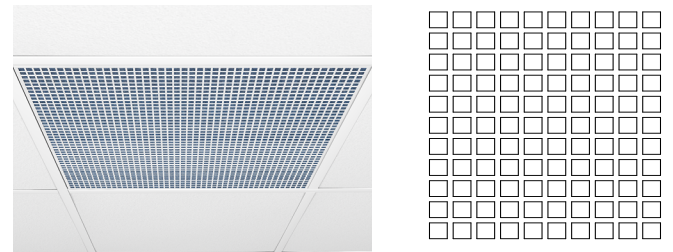
SCP - SCALLOP



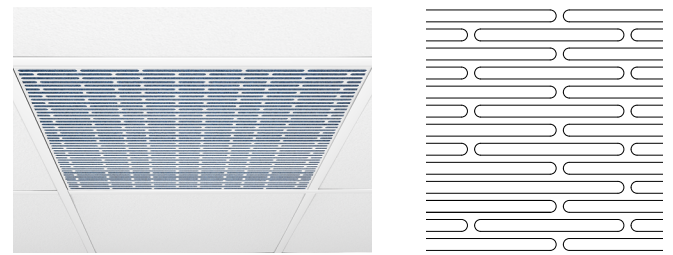
CBC - CUBIC



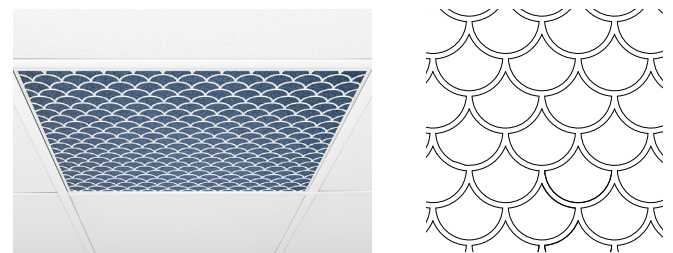
ROU - ROUND



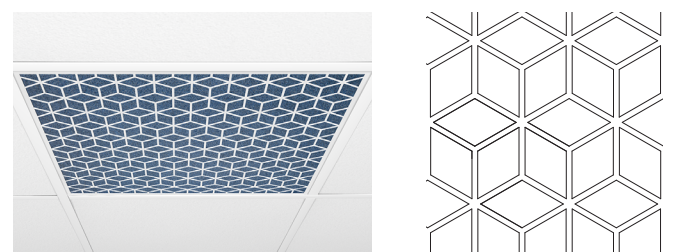
SQU - SQUARE



LIN - LINEAR



SCP - SCALLOP



CBC - CUBIC

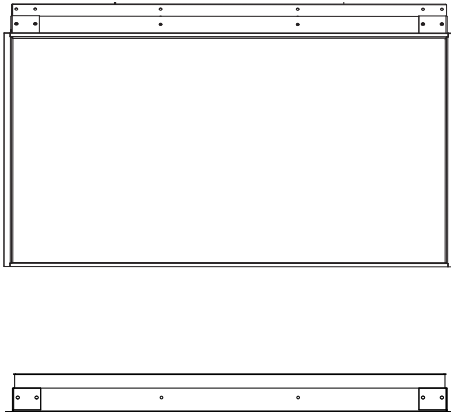
AERA 4" ECHOCORE

LUMENWERX

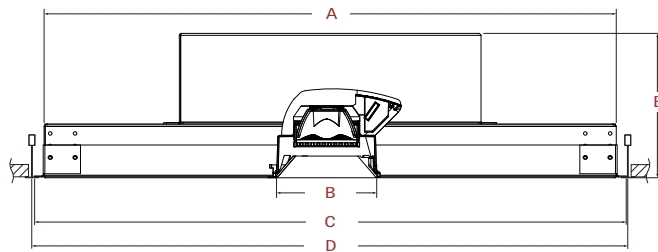
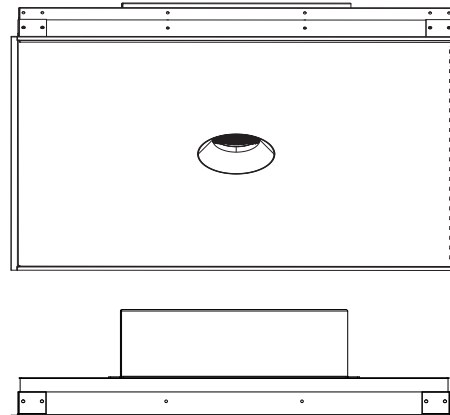
RECESSED
 STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Dimensions

BLANK



LUMINAIRE



	FIXTURE LENGTH	LENS HOLE	WITH FLANGES	BETWEEN T-BARS	FIXTURE HEIGHT
	A	B	C	D	E
ROUND	23"	Ø 4 1/16"	23 13/16"	23 31/32"	5 13/16"
SQUARE		4 3/32"			2 5/32"
BLANK		X			

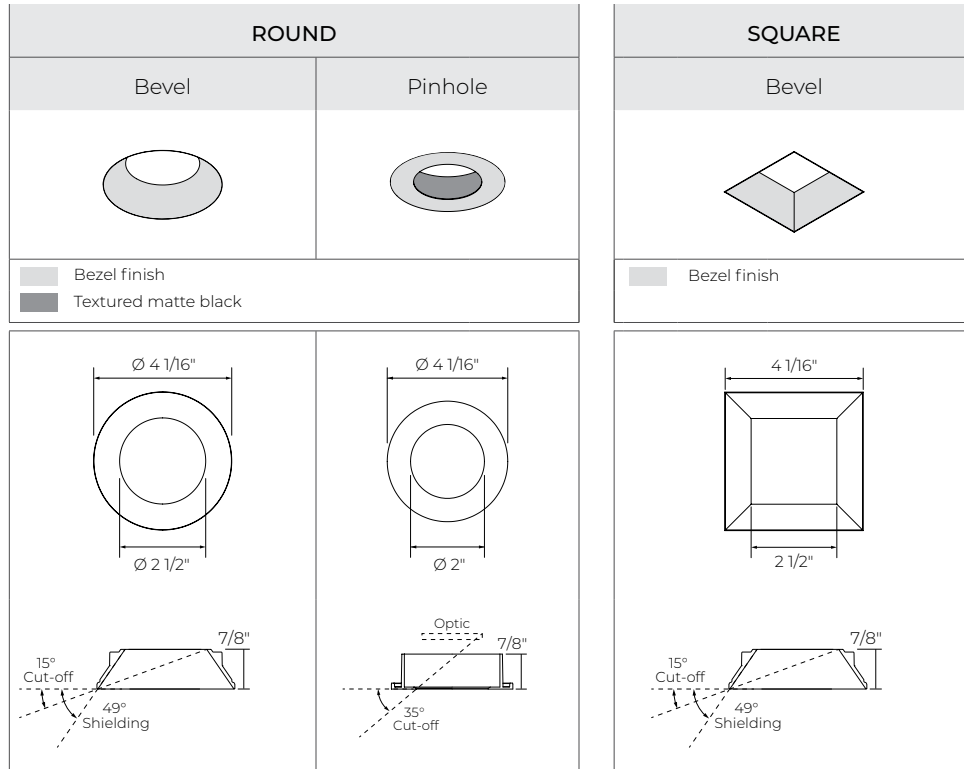
AERA 4" ECHOCORE

LUMENWERX

RECESSED

STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Bezel



AERA 4" ECHOCORE

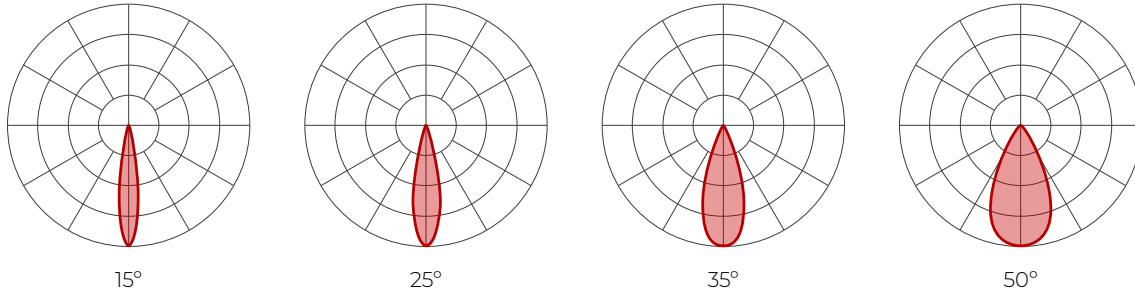
LUMENWERX

RECESSED

STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Photometrics

Please follow the multiplier tables to ensure correct lumen value. Beams, CCT, baffle styles, baffle colors, lensing and accessories will change the lumen value.



Delivered Lumens for Bevel Baffles - At 35K, with SDL lens option

BEAM	80 CRI				90 CRI				97 CRI			
	15	25	35	50	15	25	35	50	15	25	35	50
Low - 14 W	1497	1538	1481	1451	1399	1437	1384	1356	1077	1106	1066	1044
Medium - 20 W	2089	2146	2066	2026	1952	2006	1931	1893	1503	1545	1487	1458
High - 28 W	2804	2882	2775	2719	2621	2693	2593	2541	2018	2074	1997	1957

Efficacy Based on Delivered Lumens

BEAM	80 CRI				90 CRI				97 CRI			
	15	25	35	50	15	25	35	50	15	25	35	50
Low - 14 W	107	110	106	104	100	103	99	97	77	79	76	75
Medium - 20 W	104	107	103	101	98	100	97	95	75	77	74	73
High - 28 W	100	103	99	97	94	96	93	91	72	74	71	70

MULTIPLIERS

CCT

CCT	Multiplier
2700K	0.9
3000K	0.95
3500K	1
4000K	1.05

For SOLA and DUO, please consult factory.

Bazel

BAZEL VARIABLES	Multiplier
White	1
Black	1
Round	1
Square	1
Bevel	1
Pinhole	0.92

Optical Options

LENS AND LOUVERS	Multiplier
No lens	1.1
Soft diffused lens	1
Frosted lens	0.8
Clear lens	1.1
Linear spread	0.84
Hex louvers	0.86

AERA 4" ECHOCORE

LUMENWERX

RECESSED

STATIC WHITE, FULL SPECTRUM, SOLA/DUO

ACOUSTIC CALCULATOR

Using the Lumenwerx Acoustix Value Calculator table, you can determine the number of acoustic luminaires required in a space by fixture type. We have three levels of recommended sound reduction: good, better, and best. Choosing one of these options will reduce the sound accordingly. The best option indicates the best acoustic improvement. Calculations are based on a standard ceiling height of 9 feet.



- 1 Calculate the square feet of your room (L x W).
- 2 Choose the level of acoustical improvement you are looking for, and find the corresponding value based on your room dimension and luminaire configuration.

% in reduction in reverberation time		
😊	GOOD	25%
😊😊	BETTER	40%
😊😊😊	BEST	50%

	Room dimensions under 300 sq ft			Room dimensions over 300 sq ft		
	GOOD 😊	BETTER 😊😊	BEST 😊😊😊	GOOD 😊	BETTER 😊😊	BEST 😊😊😊
LUMINAIRE						
Round EchoCore	33	18	14	50	28	22
Square EchoCore	33	18	14	50	28	22
BLANK						
EchoCore Blank	33	18	14	50	28	22

- 3 Use the Lumenwerx Acoustix Value Formula to determine the number of luminaires needed in the room.

$$\text{Square feet} \div \text{Value} = \text{Number of luminaires}$$

Example:

Luminaires: Aera 4" Round EchoCore 2 ft x 2 ft Recessed
Room square feet: L: 20 ft x W: 18 ft = 360 sq ft
Desired acoustical improvement: Better = 28
Number of luminaires needed in the room: 360 ÷ 28 = 13 luminaires

NOTES:

- You can mix lit and blank fixtures.
- Lumenwerx acoustic calculators were developed to act as a guide. For precise acoustic performance in a space, please consult an acoustician.

AERA 4" ECHOCORE

LUMENWERX

RECESSED

STATIC WHITE, FULL SPECTRUM, SOLA/DUO

Technical Specifications

OPTIC

XPoint™ Refraction Technology optics provide precise optical control in a remarkably compact form. The core of this four-tier system is compound reflector with a central TIR element, just 1.06" deep. Beam angles are easily interchanged in the field.

LIGHT SOURCE

In static white, custom arrays of mid-flux LED are available in 2700K, 3000K, 3500K, and 4000K 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 L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated. Optional BIOS or full spectrum LEDs can be incorporated in the fixture to increase Cyanosis Observation Index (COI) and assist in regulating circadian rhythms.



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 full spectrum or Duo is selected
- Feature 55 or L04 meets WELL glare category (b-c-d)
- Feature 58 or L07 when 90 CRI or above 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 Sound - This luminaire is recommended for use as an acoustical absorption surface to limit reverberation times (RT) in a given space. This luminaire contributes to noise reduction and vibration dampening to promote focus and concentration. Reverberation needs to be calculated in each space based on the materials used.



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

CHROMAWERX - TUNABLE WHITE

Chromawerx SOLA

Chromawerx SOLA is single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control adjusts a specially populated LED array to emulate the effect of dimming a filament source.

Chromawerx DUO

Chromawerx DUO offers a two-channel control system which uses analog or digital protocols for synchronous control of both cool (6500K) to warm (2700K) LED arrays - maintaining a CRI above 90. The range of color DUO offers is useful for entraining circadian rhythms, stimulating alertness, and compensating for jet lag among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures.

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) 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% (specify 2-wire, or Ecosystem Dim-to-Off), 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), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

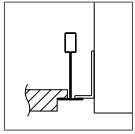
AERA 4" ECHOCORE

LUMENWERX

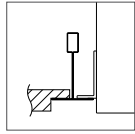
RECESSED
STATIC WHITE, FULL SPECTRUM, SOLA/DUO

MOUNTING OPTIONS

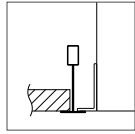
Recess mount into exposed or concealed T-Bar or Tegular grid ceiling.



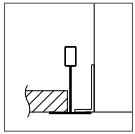
TG9
Tegular 9/16"



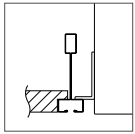
TG15
Tegular 15/16"



TB9
T-bar 9/16"



TB15
T-bar 15/16"



ST
Screw slot T-bar

FINISH

Standard powder-coat paint available in textured matte white, aluminum and black. Custom colors are also available in over 30 colors.

ACOUSTIC FINISH

Material is 100% polyester containing up to 50% of recycled plastic bottles (PET) with an ASTM E-84 Class A fire rating and is moisture resistant.

CARE

Remove dust and debris by wiping down with a clean, dry or damp, soft, lint-free cloth, or vacuum.

CONSTRUCTION

Housing - 20 gauge cold rolled steel housing with perforated cover and felt box with a white painted 18 gauge enclosure
Interior brackets - Die formed cold rolled sheet steel 18 gauge thick

Reflectors - Cold rolled steel 0.0246" thick precisely die formed, 95% reflective matte white painted

XPoint™ Refraction Technology optic - Micro optical paths from the chip on board converge and then disperse in precise beam angles, resulting in a crisp and exacting light quality.

LED Module - Integral COB module. 80, 90, and 95 CRI options.
L80 > 60,000 hours

Perforated panel - Die cut aluminum panel (18 gauge aluminum sheet)

WEIGHT

Aera 4" Round & Square - 18.3 lbs - 8.3 kg

Aera 4" Blank - 12 lbs - 5.4 kg

OPTICAL OPTIONS



Linear Spread



Hex Louvers

ENVIRONMENT

Ambient temperature at fixture location shall be within 0°C/32°F - 25°C/77°F, indoor dry or damp as well as outdoor damp use (canopies or marquees).

CERTIFICATIONS

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

WARRANTY

Lumenwerx provides a five-year limited warranty on 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