

Volta

Tunable White - 2" Shallow Regressed Downlight

R2RD1T | R2SD1T

Fixture Type: _____

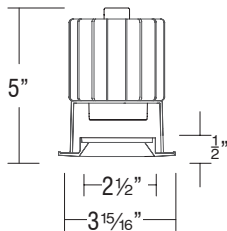
Project: _____

Catalog#: _____

Location: _____



LINE DRAWING



PRODUCT DESCRIPTION

Volta 2" Tunable White recessed series represents an innovation in design and technology for architectural lighting. This high lumen and adaptable family of fixtures with a comprehensive set of round and square fittings, affords a sustainable solution for commercial, corporate, and upscale residential applications.

SPECIFICATIONS

Construction:	Durable die-cast self flanged aluminum construction
Mounting:	Heavy gauge retention clips support trim firmly Ceiling cut out (Round): Trim $\varnothing$ 3 ⁹ / ₁₆ " Invisible $\varnothing$ 4 ¹ / ₄ " Ceiling cut out (Square): Trim 3 ⁹ / ₁₆ " x 3 ⁹ / ₁₆ " Invisible 4 ¹ / ₄ " x 4 ¹ / ₄ " Accommodates 1/2" - 1 1/2" ceiling thickness
Light Source:	High output 3-step Mac Adam Ellipse COB Rated life of 50,000 hours at L70
Input:	Universal 120-277V AC, 50/60 Hz
Dimming:	2 Channel 0-10V: 100-0.1% 2 Channel DMX512-A with RDM: 100-0.1% linear dimming. Channels for intensity and CCT tuning.
Maximum Delivered Intensity:	Up to 4,066 cd (Square Narrow Flood 25°, TWB 5000K, CRI 98)
Maximum Delivered Output:	Up to 1,288 lm (Square Flood 35°, TWA 4000K, CRI 98)
Standards:	ETL & cETL Wet location listed
Warranty:	5 year WAC Lighting guaranteed warranty

BEAM ANGLES



N - 25°



F - 35°



W - 45°

FINISHES



Black
BK



Copper Bronze
CB



Haze
HZ



White
WT



Black White
BKWT



Haze White
HZWT

Model	Beam	Lumens Ref Output*	CBCP	Color Temp	CRI
R2RD1T Round R2SD1T Square	N 25° Round	815	2345	TWA 1800K-4000K	98
	Square	950	2730		
	F 35° Round	800	1740		
	Square	1085	2365	TWB 2700K-6500K	98
	W 45° Round	630	1050		
	Square	745	1240		
R2RD1T Round R2SD1T Square	N 25° Round	755	3115	TWB 2700K-6500K	98
	Square	880	3630		
	F 35° Round	845	2280		
R2RD1T Round R2SD1T Square	Square	1150	3105		
	W 45° Round	680	1270		
	Square	805	1500		

Lumens and CBCP are reference values for 3000K Color Temperature and 85 CRI with 22 housing. Refer to Multiplier Table in Performance Data to determine other outputs.



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ORDERING INFORMATION

Model & Power	Beam	Color Temperature & CRI	Reflector Finish	Trim Finish
R2RD1T R2SD1T	N - 25° F - 35° W - 45°	TWA - 1800K-4000K TWB - 2700K-6500K	BK - BLACK CB - COPPER HZ - HAZE WT - WHITE	WT - WHITE

R2RD1T-____-____
Example: R2RD1T-NTWA-WT

HOUSINGS (Required)				
Model	Trim	Power	Driver	
New Construction Airtight - Round R2RN	T Trim	15 15W IC	T-X DMX512-A	
	L Invisible Trim	22 22W Non-IC	T-Z 2CH 0-10V	
New Construction Airtight - Square R2SN	T Trim	15 15W IC	T-X DMX512-A	
	L Invisible Trim	22 22W Non-IC	T-Z 2CH 0-10V	
Remodel Non-IC Round & Square R2BR	T Trim	15 15W IC	T-X DMX512-A	
		22 22W IC	T-Z 2CH 0-10V	
Remodel Non-IC Round R2RR	L Invisible Trim	15 15W IC	T-X DMX512-A	
		22 22W IC	T-Z 2CH 0-10V	
Remodel Non-IC Square R2SR	L Invisible Trim	15 15W Non-IC	T-X DMX512-A	
		22 22W Non-IC	T-Z 2CH 0-10V	

ACCESSORIES			
LENS-16-HLD	Accessory Holder	LENS-16RED	Red Lens
LENS-16HCM	Honeycomb Louver	LENS-16FR	Frosted Lens
LENS-16CRL	Cross Louver	LENS-16SPR	Spread Lens
LENS-16AMB	Amber Lens	LENS-16BEL	Beam Elongating Lens
LENS-16BLU	Blue Lens		
LENS-16GRN	Green Lens		

CEILING ADAPTERS	
R2R-ADP1	Round - ½" to 1" ceiling thickness
R2R-ADP2	Round - 1" to 1½" ceiling thickness
R2S-ADP1	Square - ½" to 1" ceiling thickness
R2S-ADP2	Square - 1" to 1½" ceiling thickness

INTERCHANGEABLE REFLECTORS	
REF-R2-N	Narrow Flood Beam
REF-R2-F	Flood Beam
REF-R2-W	Wide Beam

ORDERING NOTES
1. The "White" trim finish is only available with the reflector finishes "Black" and "Haze".
2. The "Narrow Flood - 25°", "Flood - 35°", and "Wide Flood - 45°" beam angles are available in 15W and 22W.

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FEATURES

Optics: • Even wall illumination both vertically and horizontally thanks to our innovative bidirectional spread lens	Construction: • Durable die-cast self flanged aluminum construction • Heavy gauge retention clips support trim firmly
LED: • High output COB LED with a 3-step Mac Adam ellipse • Rated operational life of 50,000 hours at L70 (LED maintains 70% of its initial delivered lumens when brand new for 50,000 hours of use.) • Natural and Vivid Precision LED CCT Tuning • Consistent 98 CRI across all settings	Trim and Reflector: • Integral patterned tempered trim lens included standard with every fixture • Dual finishes are made of a single piece with no physical seams
Electrical: • Volta is compatible with 120-277 VAC, 50/60 Hz • Housings are available in 15W and 22W with varying ratings and standards	Installation: • Requires housing for installation. • New Construction housings for this fixture are IC rated based on power level. The 22 power level is non-IC rated. • All Remodel housings are non-IC rated.
Dimming: • Linear dimming: 1st channel input is intensity changing, 2nd channel input is CCT changing • 2 Channel 0-10V: 100 - 0.1% • 2 Channel DMX512-A with RDM: 100 - 0.1%	Warranty: • WAC Architectural limited warranty up to 5 years • Full warranty found at: waclighting.com/warranty
Notes: • Trim and trimless fixtures of the same shape (Round/Square) have the same performance. Minor variations occur due to fixture shape. • The White and Black finishes are powder coated while the Haze is enamel coated and the Copper Bronze is plated and brushed. • The Volta product family is compatible with a wide range of accessories. • Use the DMX Byte Value vs CCT table to determine how to set each CCT value.	

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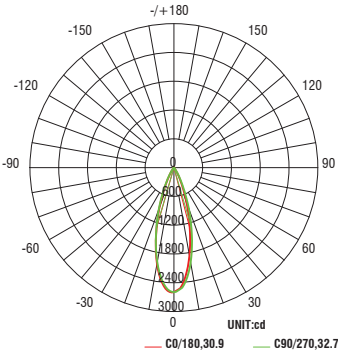
PERFORMANCE DATA

Polar Candela Distribution Charts

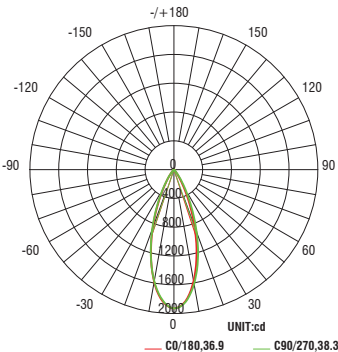
Samples shown with a 22W fixture set to 4000K and 98 CRI.

ROUND

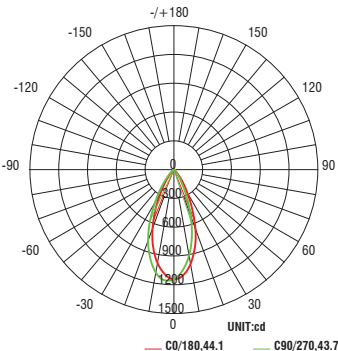
Narrow Flood Beam: 25° Beam



Flood Beam: 35° Beam

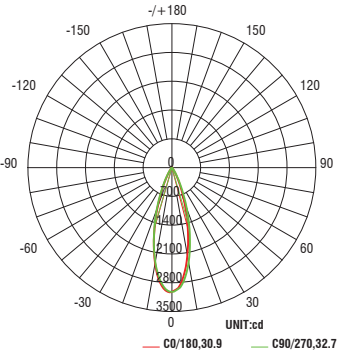


Wide Flood Beam: 45° Beam

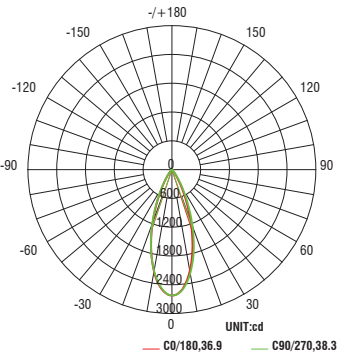


SQUARE

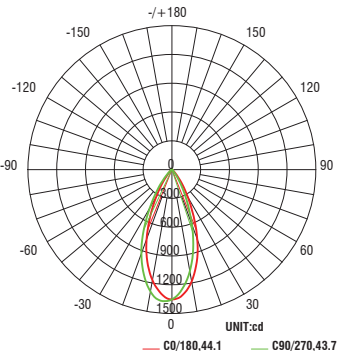
Narrow Flood Beam: 25° Beam



Flood Beam: 35° Beam



Wide Flood Beam: 45° Beam



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PERFORMANCE DATA

Unified Glare Rating (UGR) Table
UGR values shown are calculated at 3000K and 90 CRI.

Round Fixture	Angle	UGR Range	Square Fixture	Angle	UGR Range
Narrow Flood	25°	≤7	Narrow Flood	25°	≤7
Flood	35°	≤9	Flood	35°	≤10
Wide Flood	45°	≤13	Wide Flood	45°	≤14

Lumens and CBCP Multiplier Table
Use the below table to determine lumens and CBCP values for the combinations of power, color temperature, and CRI values.

Lumens & CBCP Multiplier		Color Temperature					
TWA (1800K - 4000K)	Housing Power Level	1800K	2200K	2700K	3000K	3500K	4000K
	22 (22W)	0.68	0.82	0.94	1.00	1.07	1.11
	15 (15W)	0.46	0.56	0.64	0.68	0.73	0.75
TWB (2700K - 6500K)	Housing Power Level	2700K	3000K	3500K	4000K	5000K	6500K
	22 (22W)	0.96	1.00	1.06	1.09	1.12	1.11
	15 (15W)	0.65	0.68	0.72	0.74	0.76	0.75

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NATURAL TUNABLE WHITE CCT TUNING:

The CCT of the Volta Tunable White fixture may be adjusted.

Using the DMX byte values in the adjacent table mapped to CH1 and CH2 of the desired output, the Volta Tunable White fixture may be tuned to increments of 100K (Kelvin) from 1800K to 4000K for TWA and 2700K to 6500K for TWB, at full intensity.

Note: Through compatible RDM tool, fixture channels can be reassigned to desired consecutive channels. Factory default is DMX channel 1 and 2.

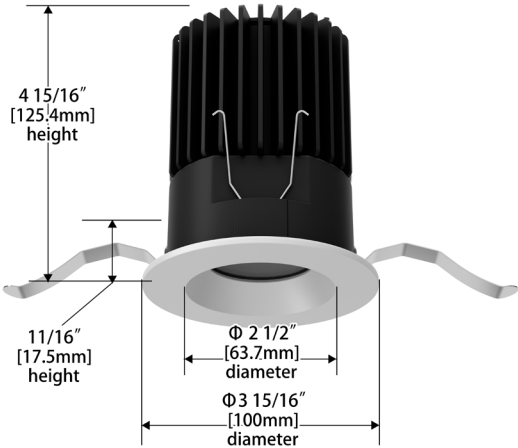
VOLTA 2" TUNABLE WHITE DMX BYTE VALUE VS CCT					
TWA DMX BYTE VALUES AT FULL INTENSITY			TWB DMX BYTE VALUES AT FULL INTENSITY		
CCT (K)	CH 1: INTENSITY	CH 2: CCT	CCT (K)	CH 1: INTENSITY	CH 2: CCT
4000	255	255	6500	255	252
3900	255	253	6400	255	249
3800	255	247	6300	255	245
3700	255	241	6200	255	241
3600	255	233	6100	255	238
3500	255	225	6000	255	232
3400	255	219	5900	255	229
3300	255	210	5800	255	228
3200	255	202	5700	255	222
3100	255	193	5600	255	217
3000	255	185	5500	255	212
2900	255	176	5400	255	208
2800	255	166	5300	255	204
2700	255	154	5200	255	199
2600	255	141	5100	255	194
2500	255	126	5000	255	190
2400	255	109	4900	255	185
2300	255	82	4800	255	179
2200	255	79	4700	255	173
2100	255	64	4600	255	168
2000	255	46	4500	255	160
1900	255	26	4400	255	152
1800	255	0	4300	255	144
			4200	255	138
			4100	255	131
			4000	255	123
			3900	255	115
			3800	255	107
			3700	255	98
			3600	255	89
			3500	255	80
			3400	255	71
			3300	255	62
			3200	255	51
			3100	255	41
			3000	255	30
			2900	255	16
			2800	255	4
			2700	255	0

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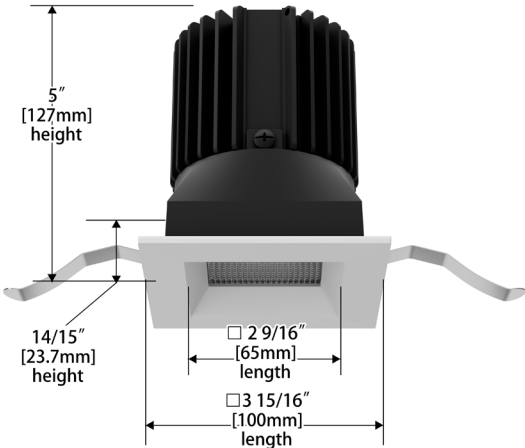
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DIMENSIONAL DIAGRAMS

Round Trim (R2RD1T)



Square Trim (R2SD1T)

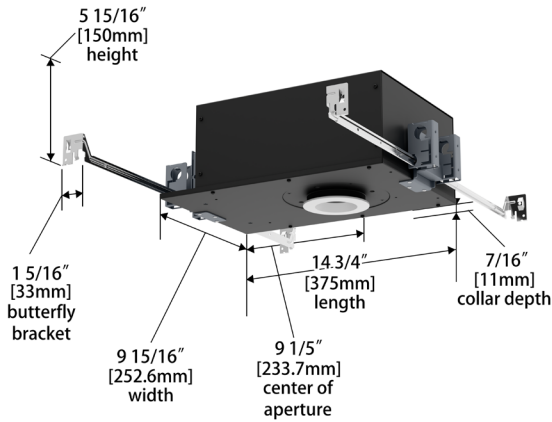


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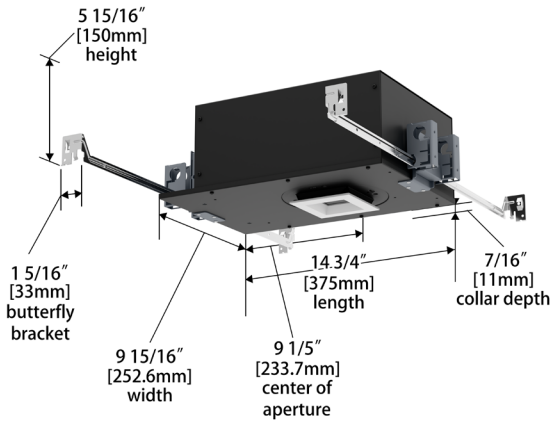
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DIMENSIONAL DIAGRAMS

New Construction - Round Trim



New Construction - Square Trim



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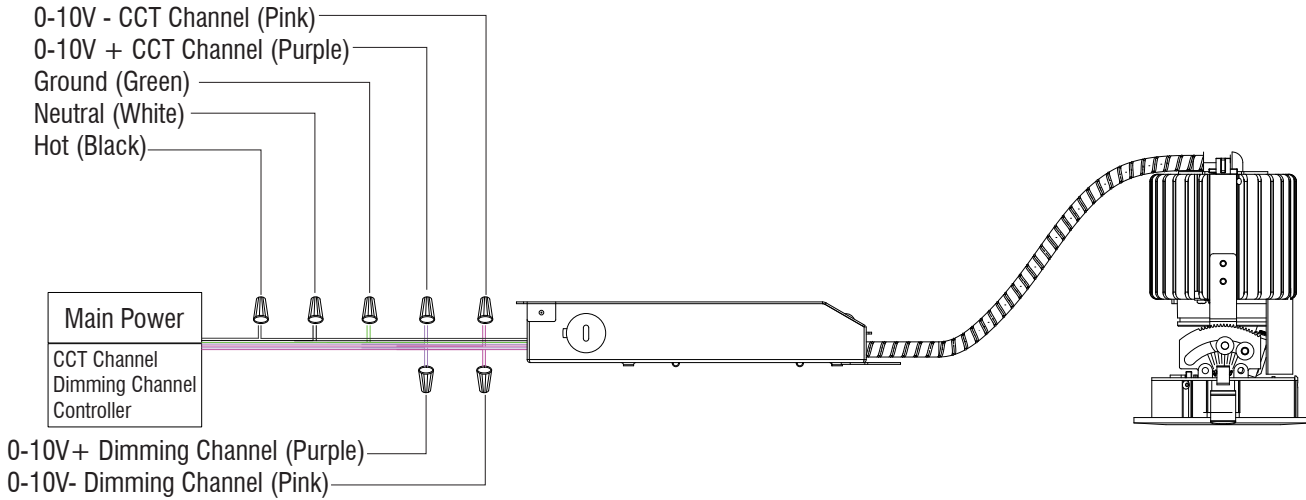
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WIRING DIAGRAMS

Remodel Installation



New Construction Installation

