

# Scope O 2.5" Square Downlight (64mm)

Formerly known as 4509  
Fixed Recessed Accent Light

## Scope Original

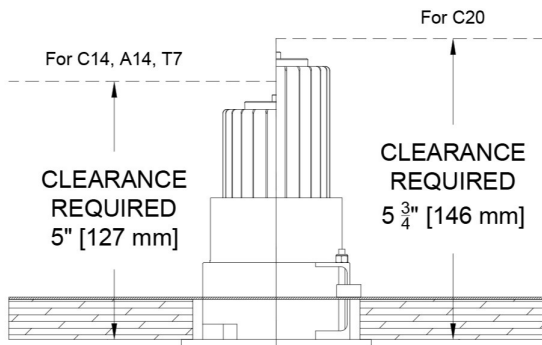
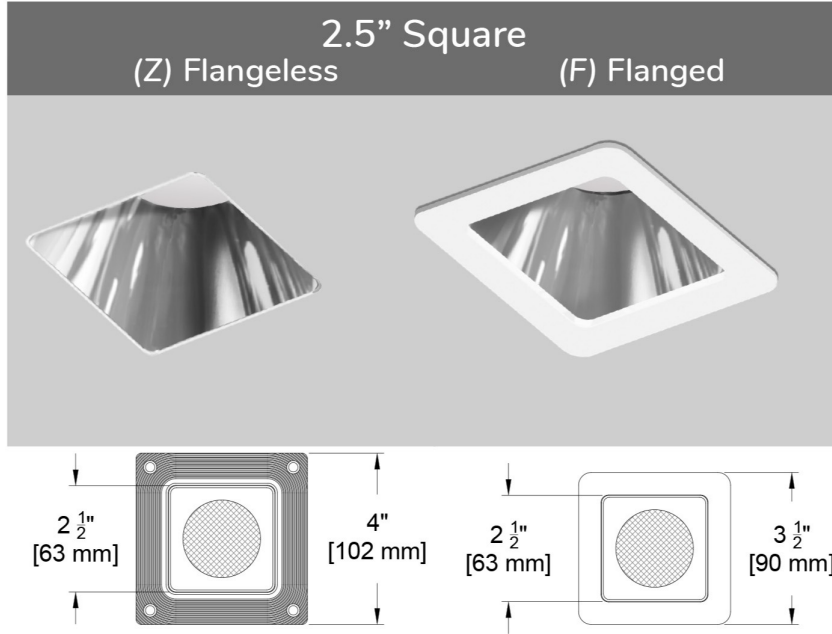
The Scope Original is a small aperture downlight family used to great acclaim in thousands of projects over the last 20 years. We have expanded this offering with new mounting options, a large selection of source technology and control options. This modifiable fixture has over 40 finish options including a wood trim selection. You have found the Square Downlight Datasheet and we hope you enjoy the details.

PROJECT:

TYPE:

SPECIFIER:

DATE:



### Key Points (SCOD-S)

#### Trim

- Machined aluminum body in USA
- Wood trim bezel available on Flangeless option
- 40 color options + custom RAL available for trim flange and bezel. Finishes can be mixed and matched
- Flange or flangeless

#### Source / Optics

- 3 beam spreads - 15°, 22° and 36°
- Up to 1304 delivered lumens
- <2 MacAdams Ellipses (<2 SDCM)
- 90+ CRI, 60+ R9 Standard, 95+ CRI, 90+ R9 available with Ambient Dim option
- 2400K, 2700K, 3000K, 3500K, 4000K Ambient Dim and Tunable White Options Available
- **TITLE 24** Source supports California Title 24 compliance to JA8 requirements except for T7-1840 tunable white source
- Lifetime: L87B3>55,000 hours at 40° C ambient for fixed white

#### Housing

- 2 pan options, IC / Airtight rated for use in direct contact with insulation (not for spray foam)
- **UL** listed for damp location - wet rating with Shower Trim selection
- **TITLE 24** IC Rated / airtight housing approved for use in direct contact with insulation Chicago Plenum Available and supports CA Title 24 compliance
- Remodel or millwork option available

#### Driver And Control

- Drivers are integral with fixtures unless noted as remote mount with \* in ordering code options. "K can" type drivers do not fit through the 2.5" hole
- TruPhase™, 0-10, DALI-2, DMX, Ecosystem or Wireless Control
- Flicker free to IEEE 1789-2015 available with EldoLED and TruPhase™
- Universal 120-277v

### 2.5" Aperture Options



Deep Regress (DR)



Wood Available (WD)

### PERFORMANCE SUMMARY CHART

	CITIZEN		TUNABLE WHITE®		AMBIENT DIM®
Source	CZ14	CZ20	T7	T7	AD14
CCT (color tune)			1840	2765	3019
Delivered Lumens	985	1340	418	513	680
Watts	14	20	10	10	15
Fixture Efficacy (LPW)	70	67	42	51	45

Data based on 22° beam at 3000k. Tunable white at mid-point CCT. Ambient Dim at full output  
Tunable White 1840 does not meet Title 24 JA8 efficacy requirements

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## Ordering Codes

PROJECT:

SPECIFIER:

DATE:

TYPE:

QUANTITY:

Ordering Code Example: SCOD-S-F-NP-C20-30-22-C1-A32-A32-91L

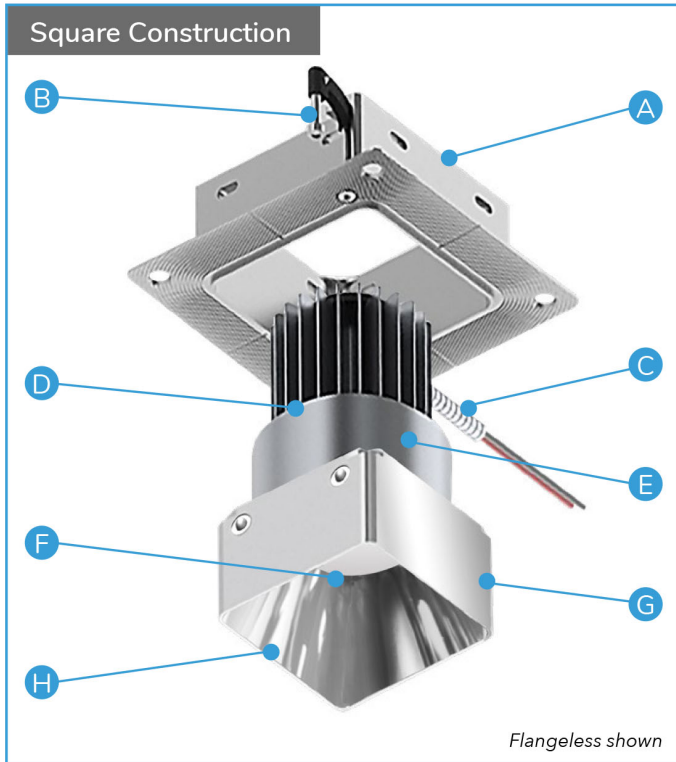
FIXTURE	TRIM	MOUNTING	SOURCE / WATTS	CCT	BEAM	DRIVER / CONTROL	BEZEL FINISH	TRIM FINISH	LENS ACCESSORIES	ACCESSORIES
<p>SCOD-S</p> <p>Scope Original 2.5" Downlight - Square</p>	<p>F Flanged Trim</p> <p>Z Flangeless Trim</p> <p>FS Flanged Shower Trim*</p> <p>ZS Flangeless Shower Trim*</p> <p>*Requires aperture lens selection for wet listing</p>	<p>NP New Pan (IC/Airtight) for Mounting to bottom of wood studs^</p> <p>BP Bracket Pan (IC/Airtight) for mounting with hanger bars to studs or T-bar^</p> <p>AT ●● Airtight / IC Housing*</p> <p>PM Panel Mount §</p> <p>RM Remodel mounts direct to ceiling - Wing Springs for flanged and drywall anchors for flangeless</p> <p>●● Supports CA Title 24 compliance to JA8 requirements</p> <p>* Chicago Plenum available with AT</p> <p>^Not for use with spray foam insulation</p> <p>§ Must be used with flangeless trims.</p>	<p>Citizen</p> <p>C14 ●● 14W 985Lm* 90+CRI, 60+R9</p> <p>C20 ●● 21W 1340Lm* 90+CRI, 60+R9</p> <p>Tunable</p> <p>T7 ●● 10W 90+CRI, 60+R9 Tunable White</p> <p>T20 ●● 21W 90+CRI, Tunable White</p> <p>Ambient Dim™</p> <p>A14 ●● 15W 95+CRI,</p> <p>A20 ●● 21W 858Lm 95+CRI, 90+R9</p> <p>●● CA Title 24 Compliant</p> <p>* Based on 22° Beam</p> <p>**1840 CCT does not meet Title 24</p> <p>^Based on 2765 CCT</p> <p>+LTT or EldoLED driver selection required and will be supplied with 2 Channel version</p> <p><a href="#">View Photometry</a></p>	<p>24 2400K</p> <p>27 2700K</p> <p>30 3000K</p> <p>35 3500K</p> <p>40 4000K</p> <p>Tunable</p> <p>TW1840 1800-4000K Tunable White w/ E1, E2, E3, E4</p> <p>TW2765 2700-6500K Tunable White w/ E1, E2, E3, E4</p> <p>Ambient Dim™</p> <p>2722* 2700-2200K *A14 Only</p> <p>3019 3000-1900K</p> <p>3022 * 3000-2200K *A14 Only</p> <p>* Not compliant with California Title 24</p>	<p>15 Spot</p> <p>22 Narrow Flood</p> <p>36 Flood</p>	<p>C1 0-10 1.0%, UNV (120-277V) linear</p> <p>C2 ELV/Triac 1.0%, (120V) linear</p> <p>E1 0-10* 0.1%, UNV (120-277V) log</p> <p>E2 DALI-2* 0.1%, UNV (120-277V) log</p> <p>E3 0-10* 0.1%, UNV (120-277V) linear</p> <p>E4 ^ DMX 0.1%, UNV (120-277V) Universal DMX Driver/Controller RGBW-DMX ^ INCLUDES DMX/RDM COMPATIBLE DRIVER WITH BUILT-IN DECODER - CONTROLLER BY OTHERS</p> <p>TR2 TruPhase™ 0.1%, (120-120V) log Up to 20W Forward and Reverse compatible Phase Dimming Static White &amp; Ambient Dim only</p> <p>LD Digital Ecosystem* 1.0%, UNV (120-277V) ECO Hi-Lume SoftOn/Fade-to-Black LDE1</p> <p>* Requires remote mounting</p>	<p>A01 Black Anodize</p> <p>A32 Clear Aluminum Anodize</p> <p>AXX Other Anodize colors*</p> <p>A1-A36</p> <p>D Wood**</p> <p>PXX Specialty Paint Color*</p> <p>P01-P15</p> <p>C Custom/RAL Color*</p> <p>*See Finish Guide **See Wood Guide</p> <p>WOOD TRIM GUIDE</p>	<p>A01 Black Anodize</p> <p>A32 Clear Aluminum Anodize</p> <p>AXX Specialty anodize color*</p> <p>A1-A36</p> <p>W White Paint</p> <p>PXX Specialty Paint Color*</p> <p>P01-P15</p> <p>C Custom/RAL Color*</p> <p>K Blank for use with Flangeless or Panel Mount</p> <p>*See Finish Guide **See Wood Guide</p> <p>FINISH GUIDE LINK</p>	<p>Reflector (lamp) Media</p> <p>91L Solite</p> <p>92L Supertex (spreader lens)</p> <p>97L Black Hexcel Louver</p> <p>XXL Other reflector (lamp) media* * See Lens Accessory Guide</p> <p>LENS ACCESSORY VISUAL GUIDE LINK</p>	<p>CP Chicago Plenum</p> <p>EM Emergency Pack</p> <p>Controls</p> <p>LR Lutron Wireless RF PowPak</p> <p>ATH Lutron Athena Wireless Node <i>Must be used with E2 driver (DALI-2)</i></p> <p>CA Casambi Wireless BLE to be paired with driver</p>

# Scope O 2.5" Square Downlight (64mm)

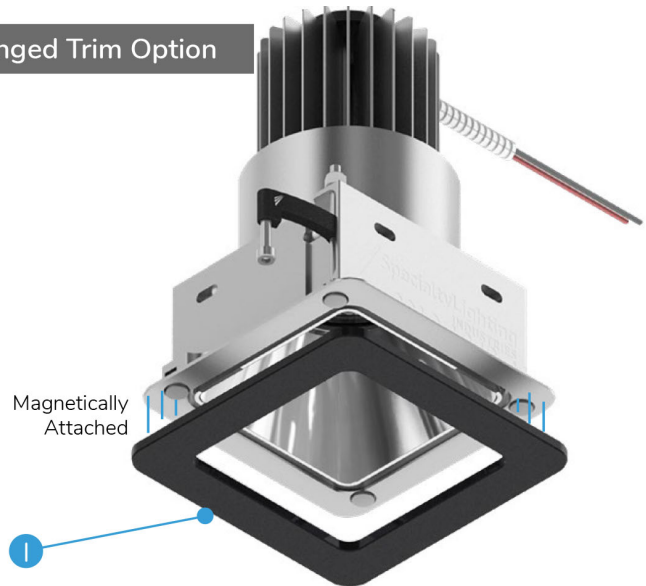
Formerly known as 4509  
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## Fixture Details

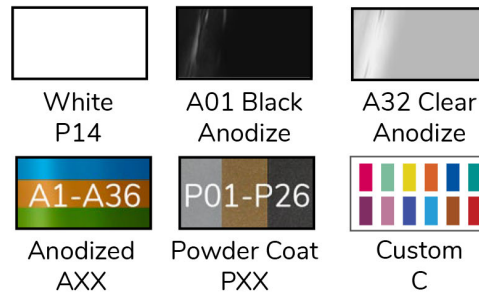
Machined receiver with integral trim holder / plaster flange attaches to pan or housing with ceiling clamps. Light engine and trim bezel attaches to receiver with ball plungers



### Flanged Trim Option



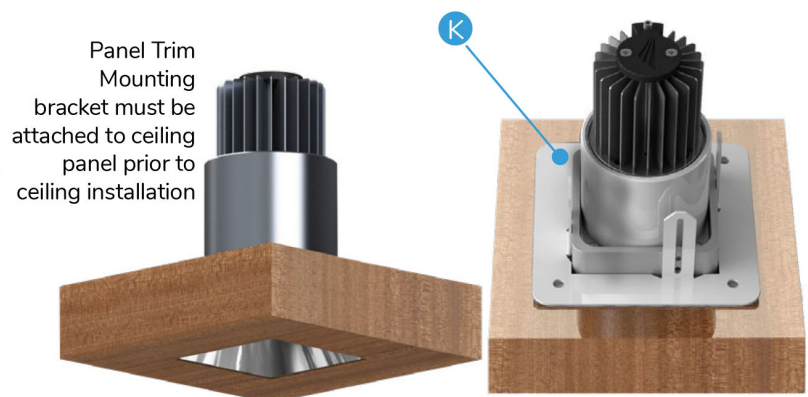
### Flanged Finish Options



### Trim Bezel Finish Options

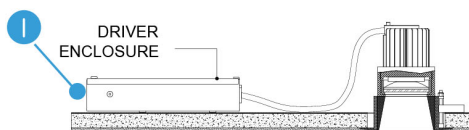


### Panel Trim Option



### Square Assembly Specs

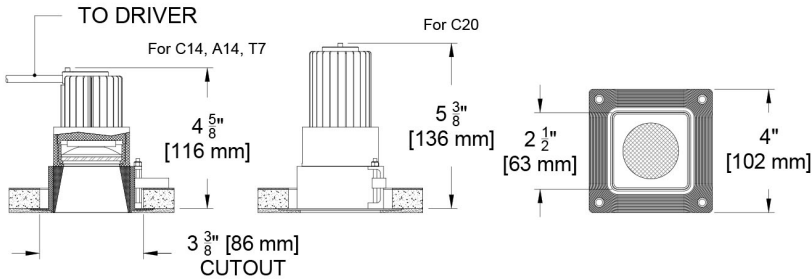
- A** Receiver – High Grade Aluminum precision machined in U.S.A. with integral flange
- B** Ceiling Clamp- Inserts into ceiling and automatically spreads during installation
- C** 22AWG wire to Driver. Enclosed in flexible conduit connected to driver enclosure.
- D** Thermal management system and body. High grade anodized aluminum, precision machined in the U.S.A.
- E** LED Assembly- Field serviceable as part of thermal management system (not shown)
- F** Reflector optic- Field changeable
- G** Bezel holder- Precision machined in the U.S.A. with ball stud attachment feature for solid locking and field service
- H** Trim Bezel, Molded Polycarbonate finished with 4 color options
- I** Integral driver and enclosure – UL approved for IC-serviceable from below the ceiling
- J** Finish Trim Flange magnetically attached (flange option)
- K** Receiver and mounting bracket for Panel Trim/ millwork wood ceiling



# Ceiling Cutouts and Dimensions

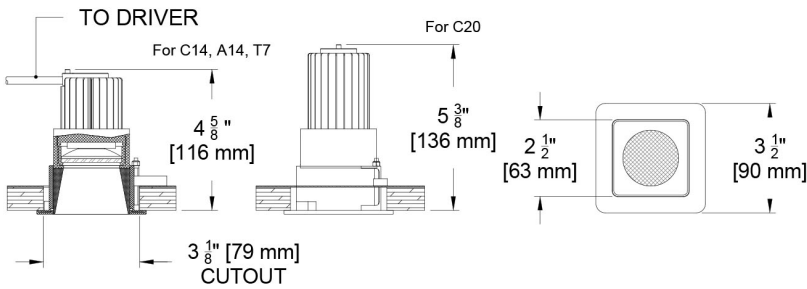
## Square New or Bracket Pan Flangeless Trim (Z)

(SCOD-S-DR-Z-BP / NP-)



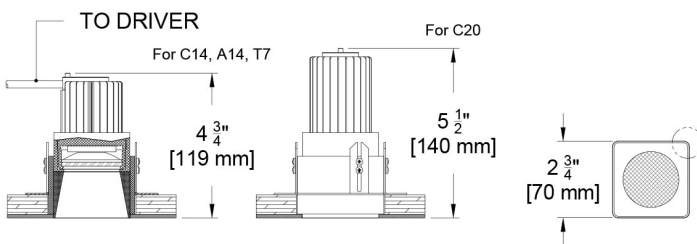
## Square New or Bracket Pan Flanged Trim (F)

(SCOD-S-DR-F-BP / NP-)

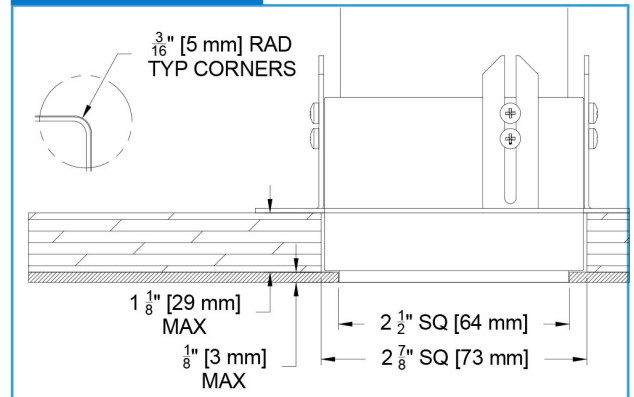


## Square Panel Mount

(SCOD-S-DR-Z-PM-)



### Panel Mount Detail (SCOD-S-DR-Z-PM-)

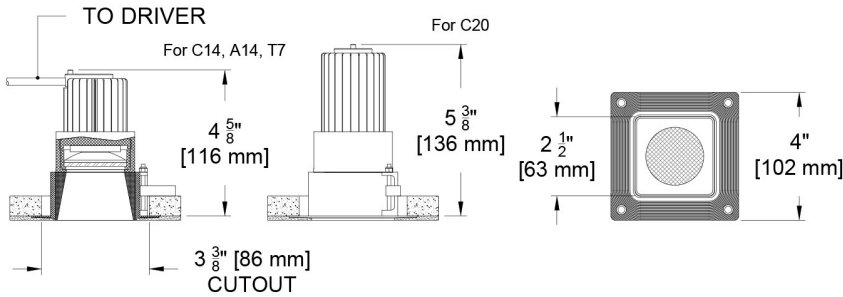


# Ceiling Cutouts and Dimensions

## Square Remodel

### Flangeless Trim (Z)

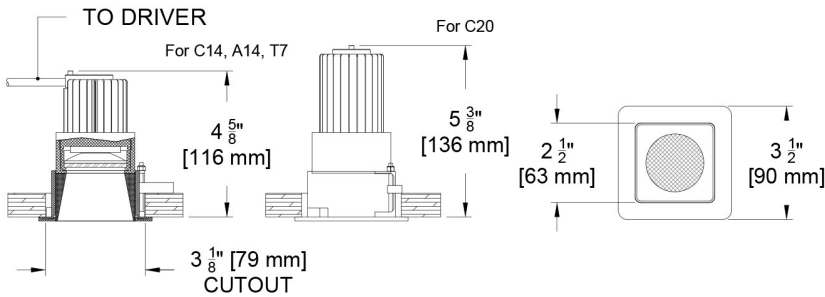
(SCOD-S-DR-Z-RM-)



## Square Remodel

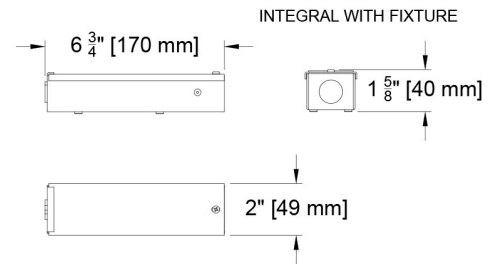
### Flanged Trim (F)

(SCOD-S-DR-F-RM-)



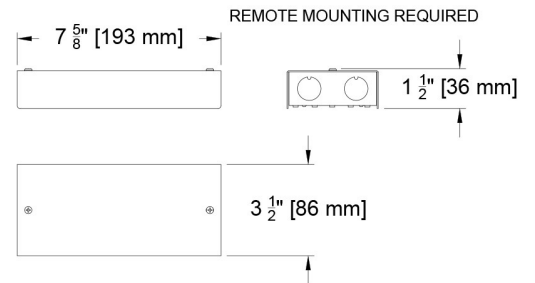
## Driver Enclosure

### for C1, C2, TR2



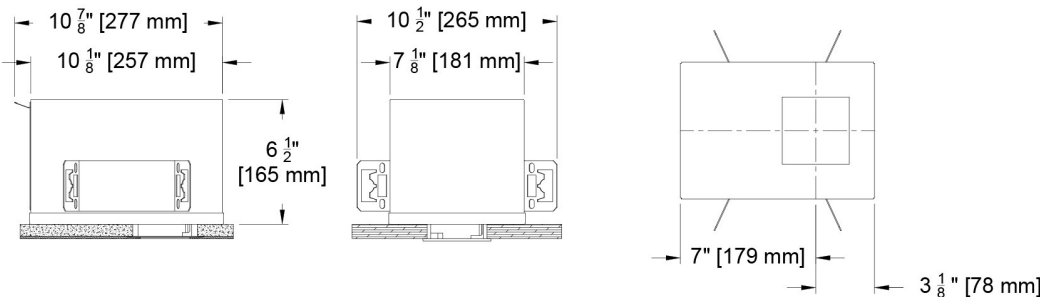
## Driver Enclosure

### for E1, E2, E3, E4, LD



## Square Airtight (AT)

(SCOD-S-DR--AT-)

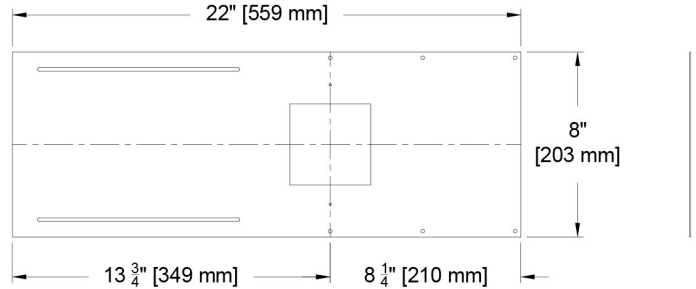
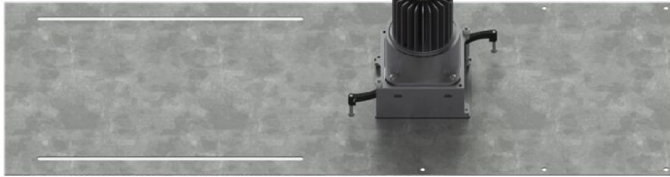


# Mounting Options

## New Pan

(SCOD-S-X-X-NP)

For new construction and attachment to bottom of studs

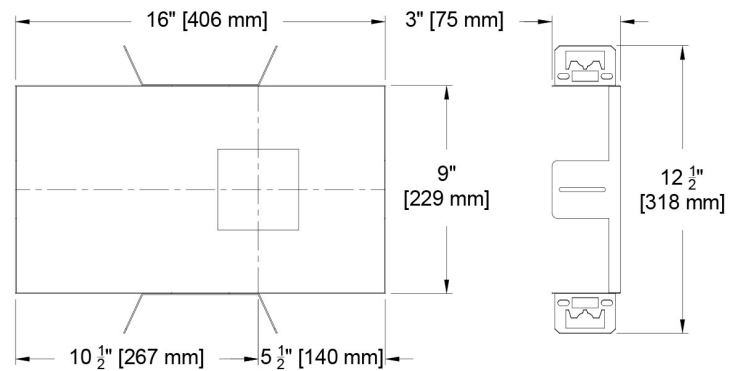


## Bracket Pan

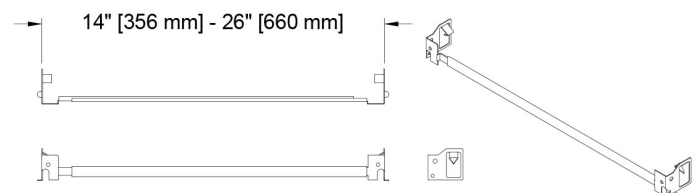
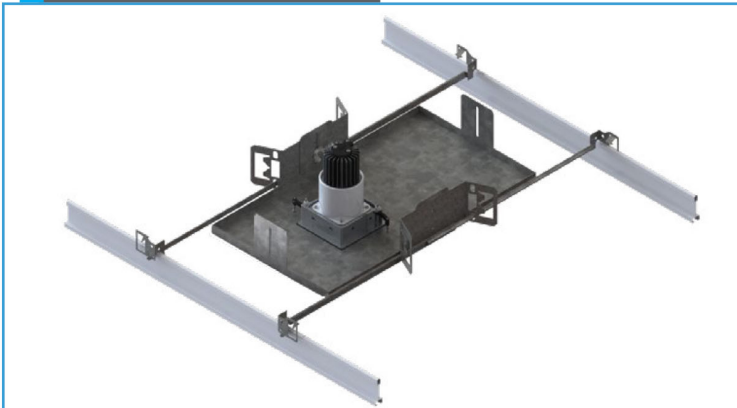
(SCOD-S-X-X-BP)

For new construction using hanger bars for attaching to studs or drop ceiling

### Option 1- Attaching to Studs



### Option 2- Attaching to Drop Ceiling



Note: For panel trim mounting see page 3 for picture of detail or refer to installation instructions

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## Photometric Table

All data below are delivered lumens based on goniometer measurements of production representative product. All lumen values can vary +/- 10% from LED manufacturer rated flux range.

SQUARE Beamspreads		10°						20°						30°					
Source		System watts (W)	Delivered Lumens (lm)	Lumens/Watt	UGR	Peak cd	10% Field	Delivered Lumens (lm)	Lumens/Watt	UGR	Peak cd	10% Field	Delivered Lumens (lm)	Lumens/Watt	UGR	Peak cd	10% Field		
Deep Regress	Citizen C14	14	947	68	29	5411	45°	985	70	29	3895	53°	870	62	31	1786	70°		
	Citizen C20	21	1304	62	31	7266	46°	1340	64	30	5371	53°	1294	62	32	2703	69°		
	Ambient Dim A14	15	660	45	28	4483	39°	680	46	28	2934	50°	657	45	29	1410	68°		
	Tunable White 1840	10	391	39	22	2264	41°	418	42	22	2007	45°	411	42	24	892	67°		
	Tunable White 2765	10	501	51	22	2885	41°	513	52	22	2539	45°	526	53	25	1182	67°		
CCT Multiplier																			
CCT	Citizen																		
2700	0.95																		
3000	1.00																		
3500	1.02																		
4000	1.03																		
<p>All Measurements are delivered lumens based on 3000K unless otherwise noted below. Ambient dim measured at full output. Tunable White measurements at mid-point CCT of range (2700k for 1840 and 4500k for 2765). UGR values based on 4H 3H table cell. Tunable White T7 - 1840 does not meet CA Title 24 JA8 efficacy requirements. 15° tunable white not recommended due to source imaging</p>		<p style="text-align: center;"><b>Beam angle</b> 15.2°</p>						<p style="text-align: center;"><b>Beam angle</b> 22.1°</p>						<p style="text-align: center;"><b>Beam angle</b> 35.5°</p>					

# Color Data

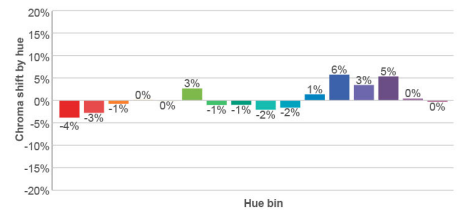
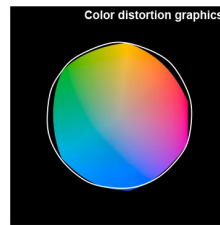
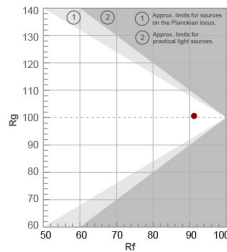
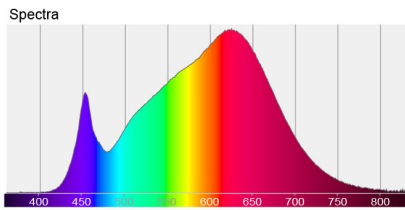
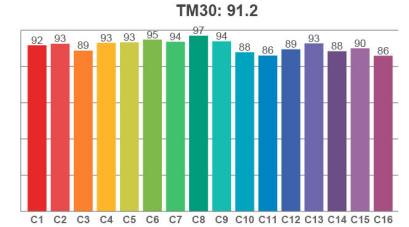
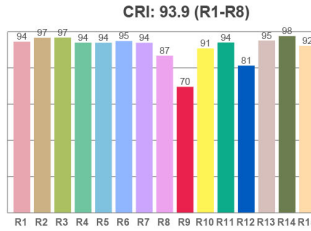
All data below are delivered lumens. Color and flux information based on goniometer measurements of production representative product. All values can vary +/- 10% from LED manufacturer rated nominal data as listed on their datasheet.

## Citizen C20 and C14

- <2 MacAdam Ellipse (<2 SDCM)
- 90+ CRI and RF
- 60+R9, Hue Bin 1

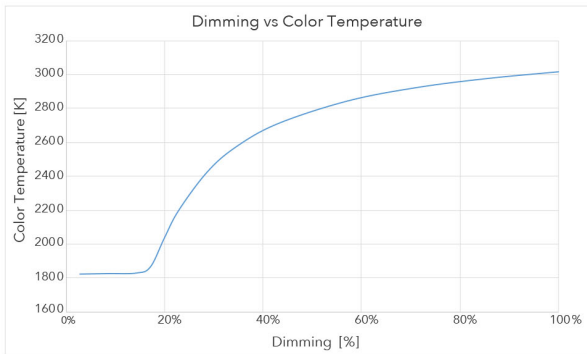
94 CRI    70 R9

91 RF    100 RG



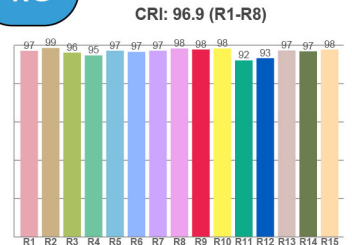
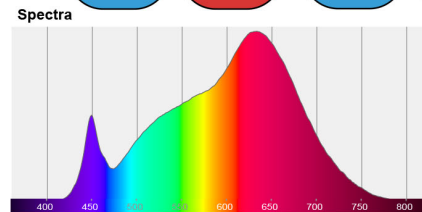
## Ambient Dim - 3000k to 1900k

- <3 MacAdam Ellipse (<3 SDCM)
- 95+ CRI and RF
- 90+R9, Hue Bin 1
- Follows Black Body Locus through dimming range



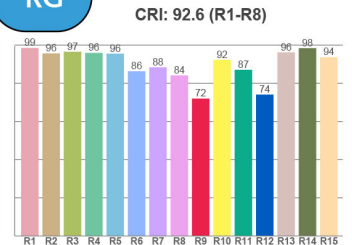
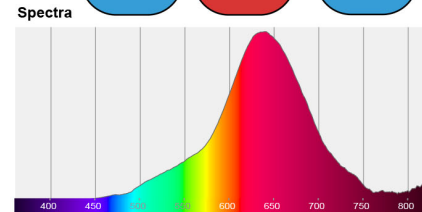
### 3000 CCT Full Output

97 CRI    98 R9    95 RF    104 RG



### 1850 CCT 5% Output

93 CRI    72 R9    83 RF    110 RG



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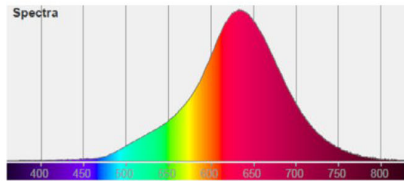
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## Tunable White 1800k to 4000k

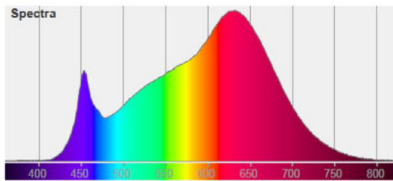
- <3 MacAdam Ellipse (<3 SDCM)
- 94 CRI average across all CCTs
- 76 R9 average across all CCTs
- Available with wired or wireless control

TUNABLE WHITE - 1800-4000K							
<b>Color Temp</b>	1800	2200	2500	2700	3000	3500	4000
<b>System Watts</b>	10	10	10	10	10	10	10
<b>Delivered Lumens</b>	379	433	468	491	539	571	571
<b>Luminaire Efficiency</b>	40	46	49	52	57	60	60
Flux and Color data based on 20° measurement at 2700k. All other values are extrapolated from actual and analytical tests							

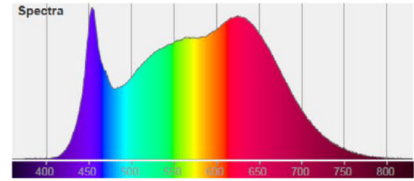
Spectral Power Distributions at all listed CCTs available upon request



1800K



3000K



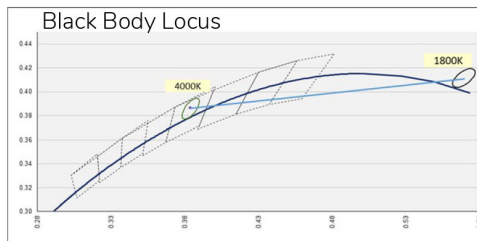
4000K

94 CRI

76 R9

89 RF

97 RG

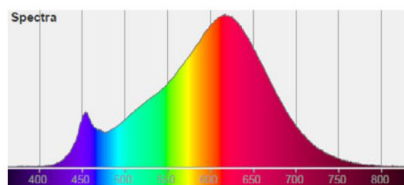


## Tunable White 2700k to 6500k

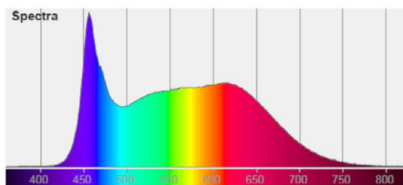
- <3 MacAdam Ellipse (<3 SDCM)
- 94 CRI average across all CCTs
- 96 R9 average across all CCTs
- Available with wired or wireless control

TUNABLE WHITE - 2700-6500K									
<b>Color Temp</b>	2700	3000	3500	4000	4500	5000	5500	6000	6500
<b>System Watts</b>	10	10	10	10	10	10	10	10	10
<b>Delivered Lumens</b>	602	620	640	640	640	639	638	636	644
<b>Luminaire Efficiency</b>	63	65	67	67	67	67	67	67	68
Flux and Color data based on 20° measurement at 4500k. All other values are extrapolated from actual and analytical tests									

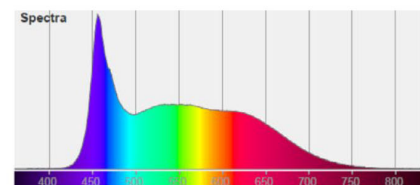
Spectral Power Distributions at all listed CCTs available upon request



2700K



5000K



6500K

96 CRI

96 R9

91 RF

99 RG

