

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

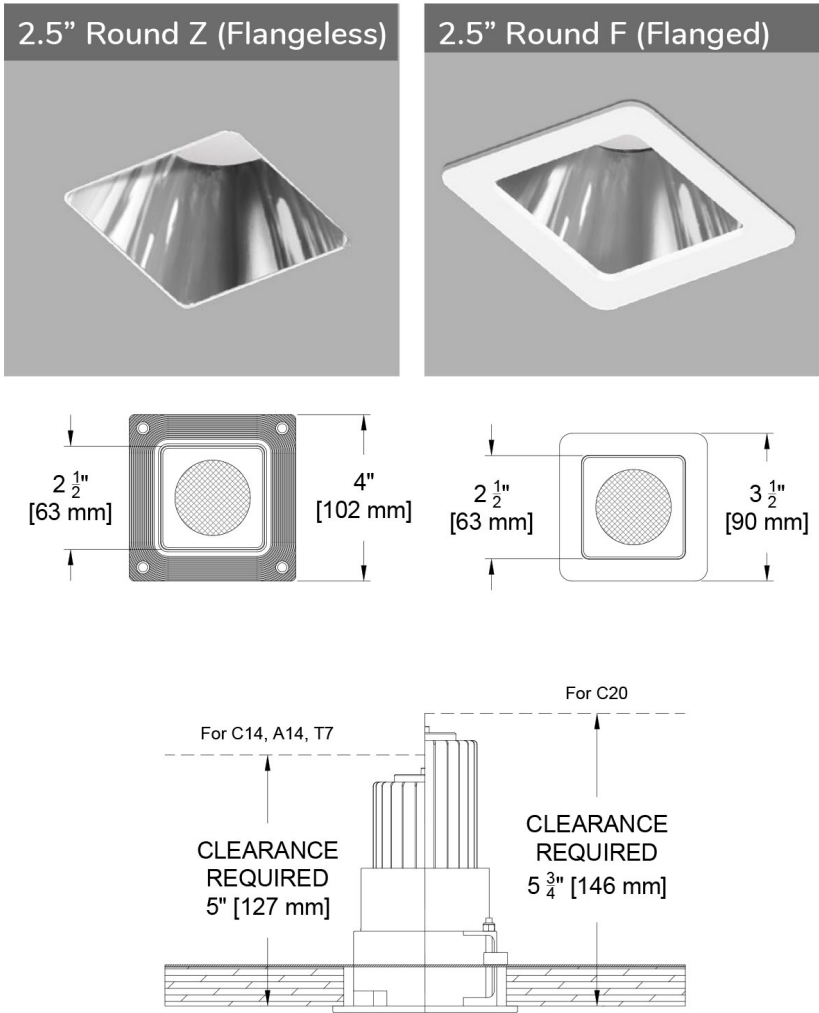
- 3 beam spreads - 15°, 22° and 36°
- Up to 1304 delivered lumens
- <2 MacAdams Ellipses (<2 SDCM)
- 90+ CRI, 60+ R9 Standard, 95+ CRI, 90+ R9 available with Ambient Dim option
- 2400K, 2700K, 3000K, 3500K, 4000K Ambient Dim and Tunable White Options Available
- **TITLE 24** Source supports California 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)
- **SP** 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
- Phase, 0-10, DALI-2, DMX, Ecosystem or Wireless Control
- Flicker free to IEEE 1789-2015 available
- 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  |
|--|---|---|--|---|---|--|--|---|--|--|
| SCOD-S                                 |   |   |  |   |   |  |  |   |  |  |
| Scope Original 2.5" Downlight - Square | F<br>Flanged Trim<br><br>Z<br>Flangeless Trim<br><br>FS<br>Flanged Shower Trim*<br><br>ZS<br>Flangeless Shower Trim*<br><br>*Requires aperture lens selection for wet listing | NP<br>New Pan (IC/Airtight) for Mounting to bottom of wood studs^<br><br>BP<br>Bracket Pan (IC/Airtight) for mounting with hanger bars to studs or T-bar^<br><br>AT<br>Airtight / IC Housing*<br><br>PM<br>Panel Mount \$<br><br>RM<br>Remodel mounts direct to ceiling - Wing Springs for flanged and drywall anchors for flangeless<br><br>● Supports CA Title 24 compliance to JA8 requirements<br><br>* Chicago Plenum available with AT<br><br>^Not for use with spray foam insulation<br><br>\$ Must be used with flangeless trims. | Citizen<br><br>C14<br>14W<br>985Lm*<br>90+CRI, 60+R9<br><br>C20<br>21W<br>1340Lm*<br>90+CRI, 60+R9<br><br>Tunable<br><br>T7<br>10W<br>90+CRI, 60+R9<br>Tunable White<br><br>T20<br>21W<br>90+CRI,<br>Tunable White<br><br>Ambient Dim™<br><br>A14<br>15W<br>95+CRI,<br><br>A20<br>21W<br>858Lm<br>95+CRI, 90+R9<br><br>● CA Title 24 Compliant<br><br>* Based on 22" Beam<br><br>**1840 CCT does not meet Title 24<br><br>^Based on 2765 CCT<br><br>+LTT or EdoLED driver selection required and will be supplied with 2 Channel version | 24<br>2400K<br><br>27<br>2700K<br><br>30<br>3000K<br><br>35<br>3500K<br><br>40<br>4000K<br><br>Tunable<br><br>TW1840<br>1800-4000K<br>Tunable White w/ E1, E2, E3, E4<br><br>TW2765<br>2700-6500K<br>Tunable White w/ E1, E2, E3, E4<br><br>Ambient Dim™<br><br>2722*<br>2700-2200K<br>*A14 Only<br><br>3019<br>3000-1900K<br><br>3022 *<br>3000-2200K<br>*A14 Only<br><br>* Not compliant with California Title 24 | 15<br>Spot<br><br>22<br>Narrow Flood<br><br>36<br>Flood | C1<br>0-10<br>1.0%, UNV (120-277V) linear<br><br>C2<br>ELV/Triac<br>1.0%, (120V) linear<br><br>E1<br>0-10*<br>0.1%, UNV (120-277V) log<br><br>E2<br>DALI-2*<br>0.1%, UNV (120-277V) log<br><br>E3<br>0-10*<br>0.1%, UNV (120-277V) linear<br><br>E4 ^<br>DMX<br>0.1%, UNV (120-277V) Universal DMX Driver/Controller RGBW-DMX<br>^ INCLUDES DMX/RDM COMPATIBLE DRIVER WITH BUILT-IN DECODER - CONTROLLER BY OTHERS<br><br>Lutron<br><br>LD<br>Digital Ecosystem*<br>1.0%, UNV (120-277V) ECO Hi-Lume SoftOn/Fade-to-Black LDE1<br><br>* Requires remote mounting | A01<br>Black Anodize<br><br><br>A32<br>Clear Aluminum Anodize<br><br><br>AXX<br>Other Anodize colors*<br>A1-A36<br><br>D<br>Wood**<br><br><br>PXX<br>Specialty Paint Color*<br>P01-P15<br><br>C<br>Custom/RAL Color*<br><br>*See Finish Guide<br>**See Wood Guide<br><br>WOOD TRIM GUIDE | A01<br>Black Anodize<br><br><br>A32<br>Clear Aluminum Anodize<br><br><br>AXX<br>Specialty anodize color*<br>A1-A36<br><br>W<br>White Paint<br><br><br>PXX<br>Specialty Paint Color*<br>P01-P15<br><br>C<br>Custom/RAL Color*<br><br>K<br>Blank for use with Flangeless or Panel Mount<br><br>*See Finish Guide<br>**See Wood Guide<br><br>FINISH GUIDE LINK | Reflector (lamp) Media<br><br>91L<br>Solite<br><br>92L<br>Supertex (spreader lens)<br><br>97L<br>Black Hexcel Louver<br><br>XXL<br>Other reflector (lamp) media*<br>* See Lens Accessory Guide<br><br>LENS ACCESSORY VISUAL GUIDE LINK | CP<br>Chicago Plenum<br><br>EM<br>Emergency Pack<br><br>Controls<br><br>LR<br>Lutron Wireless RF PowPak<br><br>ATH<br>Lutron Athena Wireless Node<br>Must be used with E2 driver (DALI-2)<br><br>CA<br>Casambi Wireless BLE to be paired with driver |

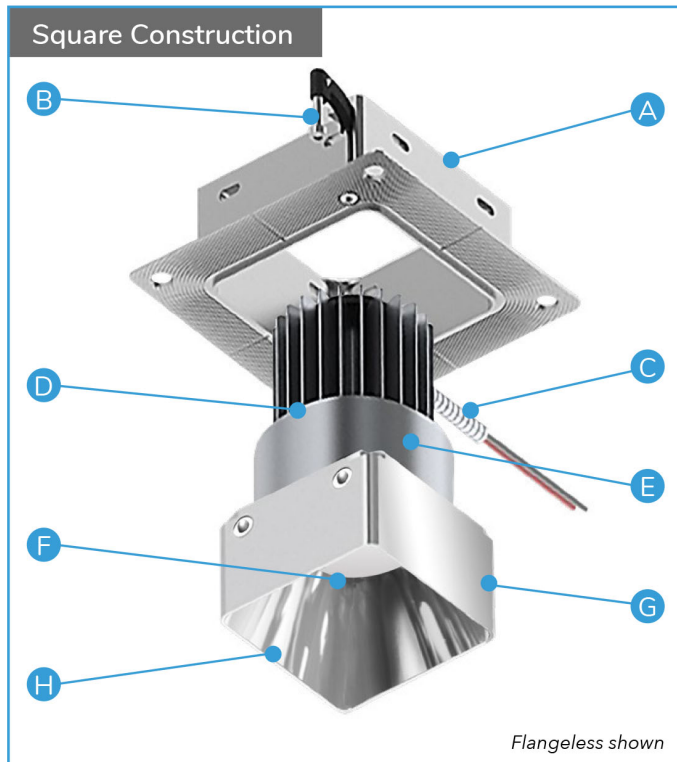
# Scope O 2.5" Square Downlight (64mm)

Formerly known as 4509

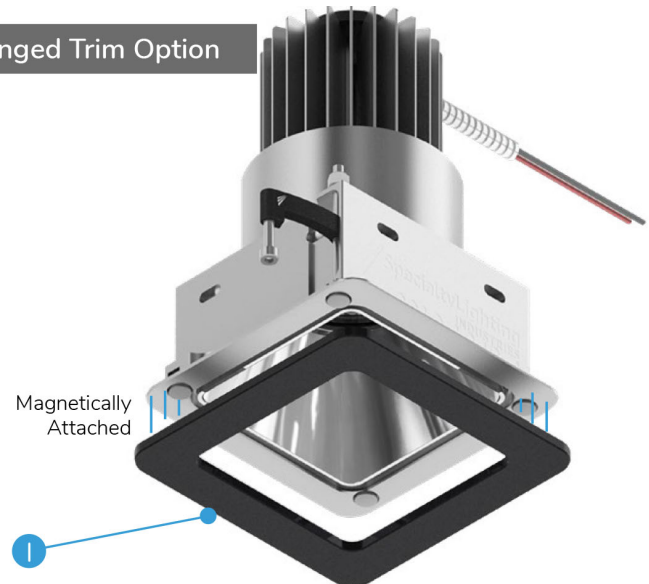
Fixed Recessed Accent Light

## Fixture Details

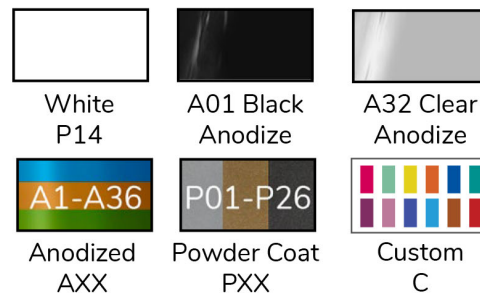
Machined receiver with integral trim holder / plaster flange attaches to pan or housing with ceiling clamps. Light engine and trim bezel attaches to receiver with ball plungers



### Flanged Trim Option



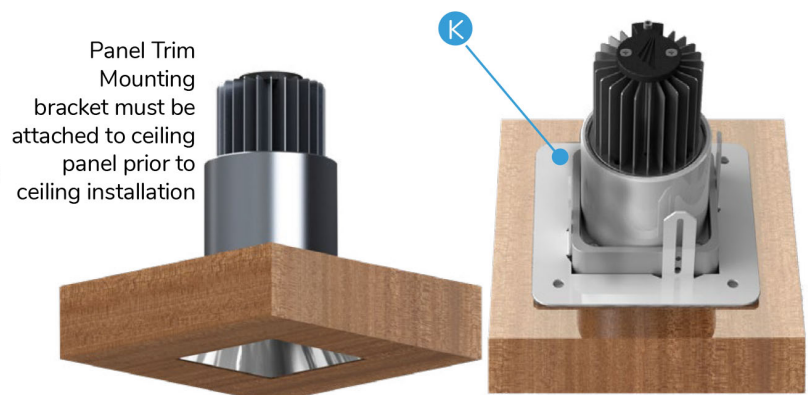
### Flanged Finish Options



### Trim Bezel Finish Options

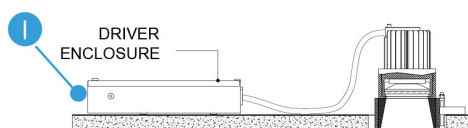


### Panel Trim Option



## 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

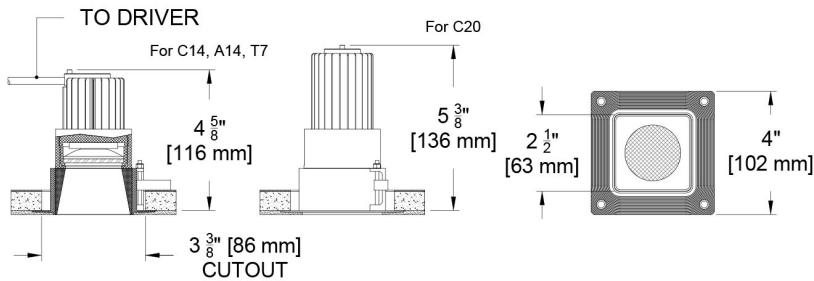


## Ceiling Cutouts and Dimensions

### Square New or Bracket Pan

### Flangeless Trim (Z)

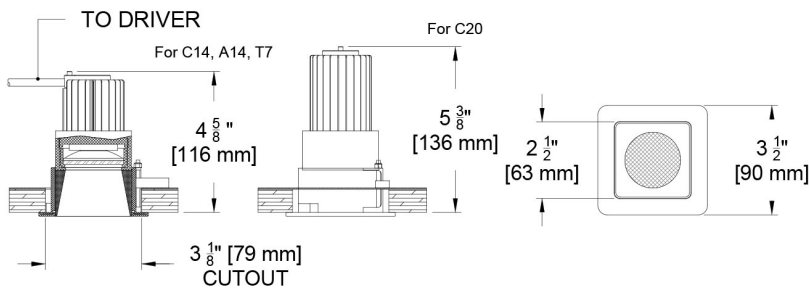
(SCOD-S-DR-Z-BP / NP-)



### Square New or Bracket Pan

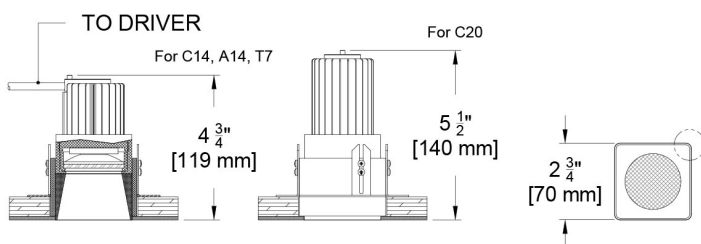
### Flanged Trim (F)

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



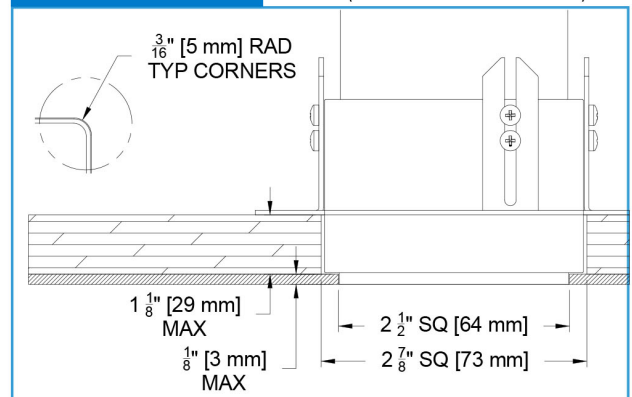
### Square Panel Mount

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



### Panel Mount Detail

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

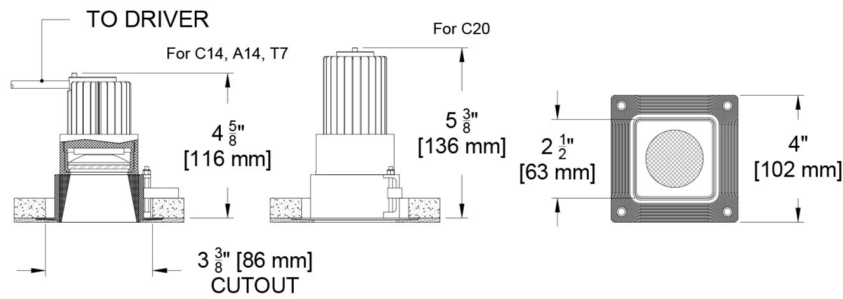


## Ceiling Cutouts and Dimensions

### Square Remodel

### Flangeless Trim (Z)

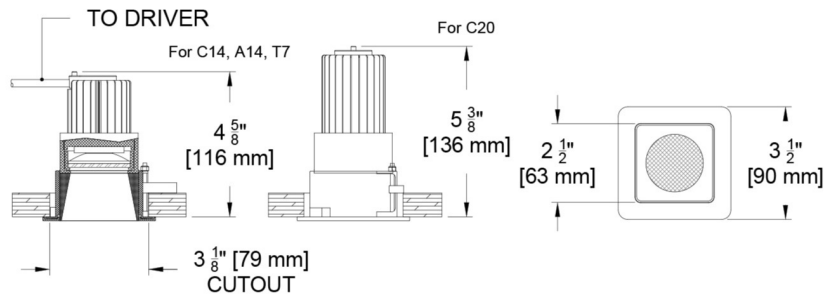
(SCOD-S-DR-Z-RM-)



### Square Remodel

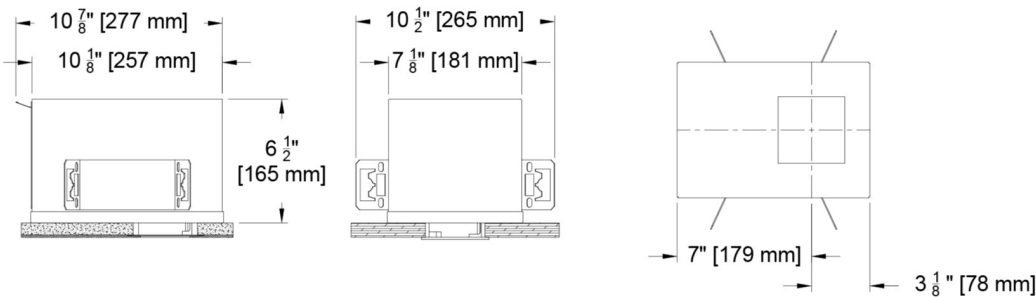
### Flanged Trim (F)

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

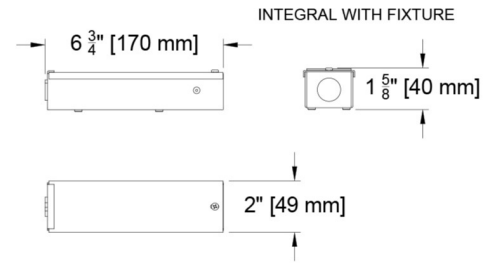


### Square Airtight (AT)

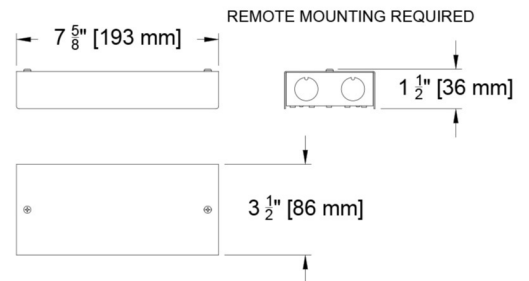
(SCOD-S-DR-\_-AT-)



### Driver Enclosure for C1, LTP



### Driver Enclosure for E1, E2, E3, E4, L3, LD

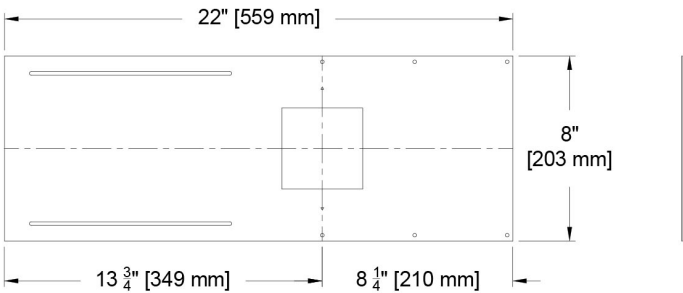
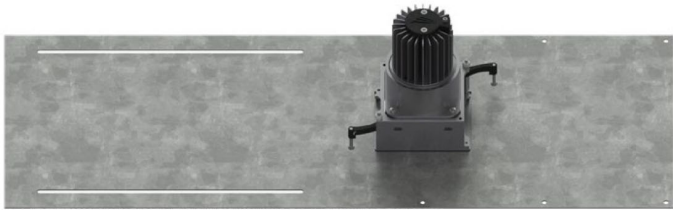




# Mounting Options

## New Pan (SCOD-S-X-X-NP)

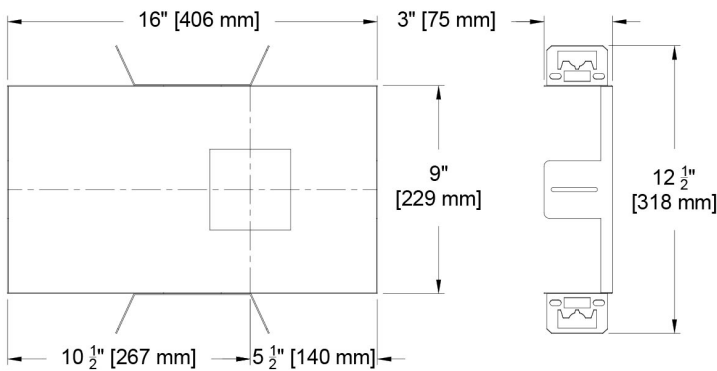
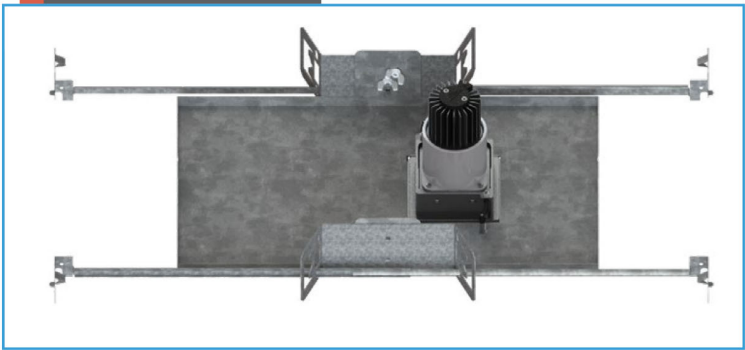
For new construction and attachment to bottom of studs



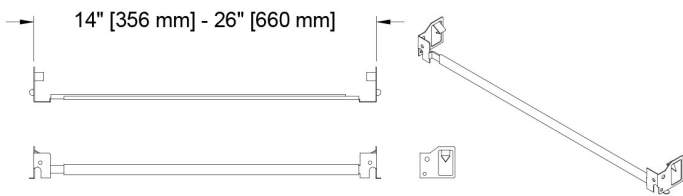
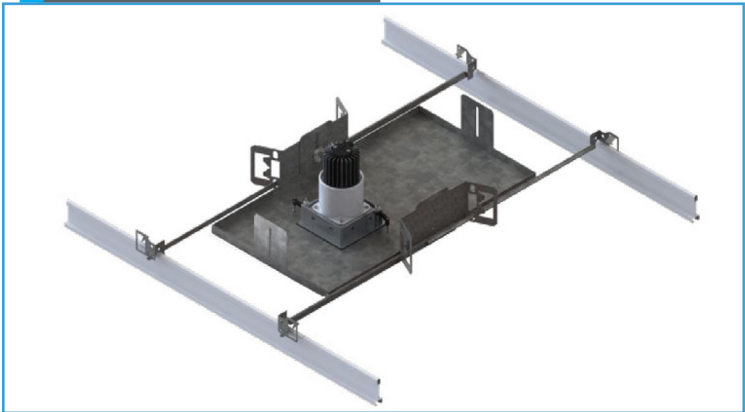
## Bracket Pan (SCOD-S-X-X-BP)

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

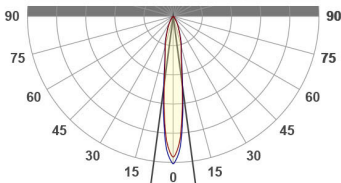
Scope O 2.5" Square Downlight (64mm)

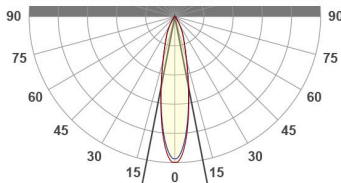
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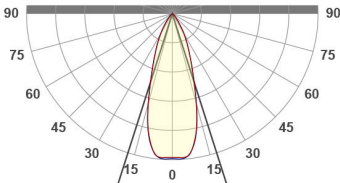


Photometric Table All data below are delivered lumens based on goniometer measurements of production representative product. All lumen values can vary +/- 10% from LED manufacturer rated flux range.

| SQUARE Beamspreads   |                    |                  | 10°                    |              |     |         |           | 20°                    |              |     |         |           | 30°                    |              |     |         |           |
|--|--------------------|------------------|------------------------|--------------|-----|---------|-----------|------------------------|--------------|-----|---------|-----------|------------------------|--------------|-----|---------|-----------|
| Source   |                    | System watts (W) | Deliv-ered Lumens (lm) | Lumens/ Watt | UGR | Peak cd | 10% Field | Deliv-ered Lumens (lm) | Lumens/ Watt | UGR | Peak cd | 10% Field | Deliv-ered 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               |                  |                        |              |     |         |           |                        |              |     |         |           |                        |              |     |         |           |
| 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 |                    |                  |                        |              |     |         |           |                        |              |     |         |           |                        |              |     |         |           |

| Beam angle  |       |
|---|-------|
|  | 15.2° |

| Beam angle   |       |
|--|-------|
|  | 22.1° |

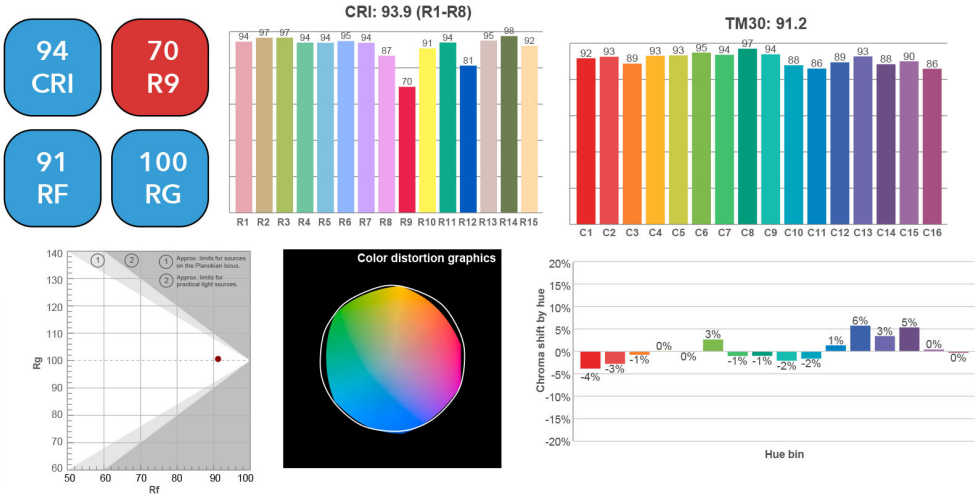
| Beam angle  |       |
|---|-------|
|  | 35.5° |

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.

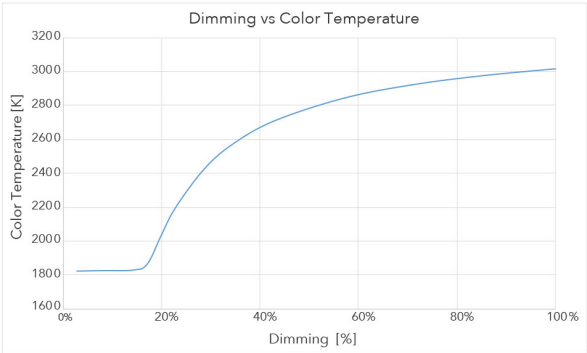
Citizen C20 and C14

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

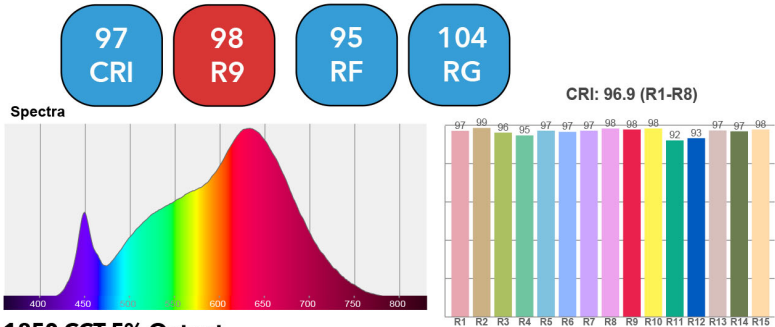


Ambient Dim - 3000k to 1900k

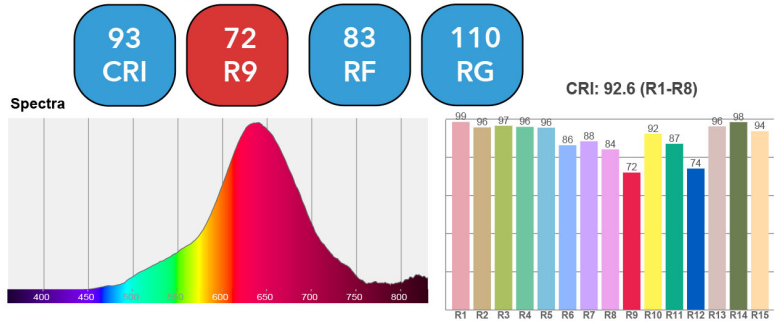
- <3 MacAdam Ellipse (<3 SDCM)
- 95+ CRI and RF
- 90+R9, Hue Bin 1
- Follows Black Body Locus through dimming range



3000 CCT Full Output




1850 CCT 5% Output



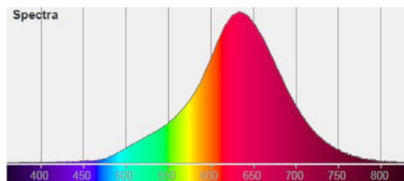


## Tunable White 1800k to 4000k

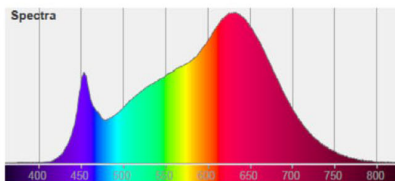
- <3 MacAdam Ellipse (<3 SDCM)
- 94 CRI average across all CCTs
- 76 R9 average across all CCTs
- Available with wired or wireless control

|   |                            |      |      |      |      |      |      |      |
|---|----------------------------|------|------|------|------|------|------|------|
|    | TUNABLE WHITE - 1800-4000K |      |      |      |      |      |      |      |
|   | Color Temp                 | 1800 | 2200 | 2500 | 2700 | 3000 | 3500 | 4000 |
|   | System Watts               | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
|   | Delivered Lumens           | 379  | 433  | 468  | 491  | 539  | 571  | 571  |
|   | Luminaire Efficiency       | 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 |                            |      |      |      |      |      |      |      |

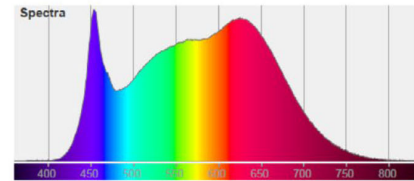
Spectral Power Distributions at all listed CCTs available upon request



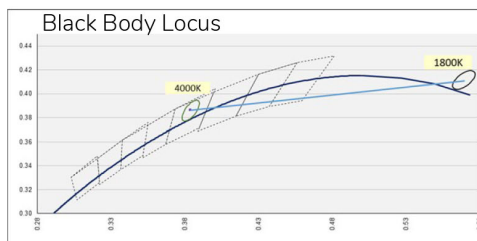
1800K



3000K




4000K

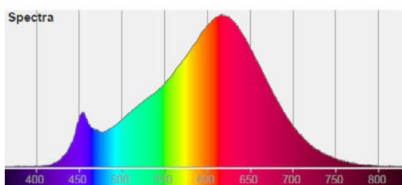


## Tunable White 2700k to 6500k

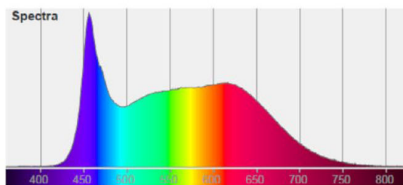
- <3 MacAdam Ellipse (<3 SDCM)
- 94 CRI average across all CCTs
- 96 R9 average across all CCTs
- Available with wired or wireless control

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

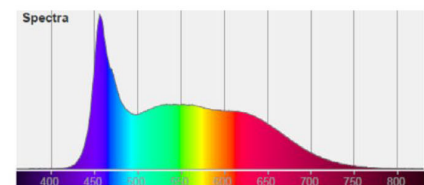
Spectral Power Distributions at all listed CCTs available upon request



2700K



5000K



6500K

