

# INSTRUCTIONS

## Module Downlight Installation



RAB Lighting is committed to creating high-quality, affordable, well-designed and energy-efficient LED lighting and controls that make it easy for electricians to install and end users to save energy. We'd love to hear your comments. Please call the Marketing Department at 888-RAB-1000 or email: [marketing@rablighting.com](mailto:marketing@rablighting.com)

ND22-12-3RW  
ND22-20-4HRW  
ND22-30-6HRW  
ND22-50-8RW



### IMPORTANT

#### **READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

RAB fixture must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

**To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards read all warnings and instructions included with and on the fixture box and all fixture labels.**

**Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions. Commercial installation, service and maintenance of luminaires should be performed by a qualified licensed electrician. For Residential installation: If you are unsure about the installation or maintenance of the luminaires, consult a qualified licensed electrician and check your local electrical code.**

#### **DO NOT INSTALL DAMAGED PRODUCT!**

This fixture is intended to be connected to a properly installed and grounded UL listed junction box.

The product should be installed, inspected and maintained by a qualified electrician in accordance with local national electrical safety regulations;

Please turn off the power before checking, installing or removing;

Ensure that the voltage used is the voltage within the product identification range;

Use wires that comply with UL (or other local standards) for wiring.

Do not install in a hazardous environment. The ambient temperature must not exceed the rated operating temperature of the product;

Do not install the product when it rains. Avoid the danger of lightning strikes and avoid accidents;

Please use with listed waterproof strain relief bushing when connecting the power supply cord to outlet box.

Do not use the electric generator to test the LED lamp.

External 0-10V only passive dimmers are supported.

Risk of fire - Supply conductors (power wires) connecting the fixture must be rated minimum 90°C. if uncertain consult an electrician.

Risk of fire or electric shock. Installation requires knowledge of luminaires electrical systems.

Risk of Fire/Electric Shock - If not qualified, do not attempt installation. Contact a qualified electrician.

Keep away from flammable and explosive environment.

Don't cover the fixture with insulation liner or similar material

Don't install where fixture is loose or only partially supported.

Don't impact or exert pressure on the fixture surface face or rear, as damage may occur..

For your safety read and understand instructions completely before starting installation.

To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

Before attempting installation, check your local electrical code, as it sets the wiring standards for your locality.

If luminaire (fixture) is to be switched from a wall switch, make sure black power supply wire is connected to the switch.

DO NOT connect the white supply wire to the switch.

Make certain no bare wires are exposed outside the wire nut connectors.

Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.

#### **MIN 90°C SUPPLY CONDUCTORS**

**THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED. ALL COMPONENTS IN THE LUMINAIRE SHALL NOT BE REPLACED OR SERVICED.**

# INSTRUCTIONS

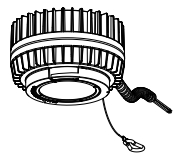
## Module Downlight Installation



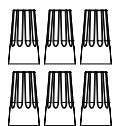
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### WHAT'S IN THE BOX

#### Module



Module (1)

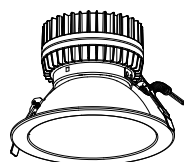


Nuts (6)

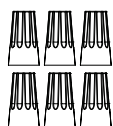


MC connector (1)

#### Module & Reflector Kit



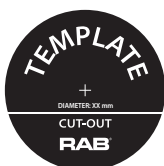
Module & Reflector (1)



Nuts (6)

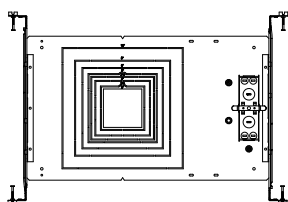
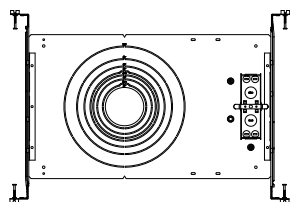


MC connector (1)



Template (1)

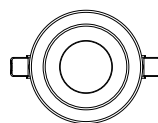
### OPTIONAL ACCESSORIES



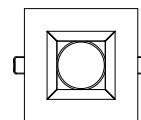
### REQUIRED ACCESSORIES

A trim must be purchased so that the fixture can be installed properly.

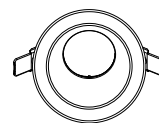
INTERCHANGEABLE TRIM FOR 12W module (ND22-12)



ND22T-3Rxx  
ND22T-4Rxx  
ND22T-6Rxx

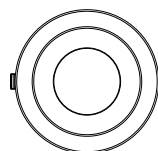


ND22T-3Sxx  
ND22T-4Sxx  
ND22T-6Sxx

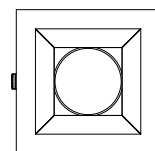


ND22T-3Rxx-WW  
ND22T-4Rxx-WW  
ND22T-6Rxx-WW

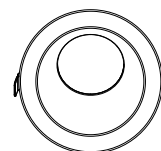
INTERCHANGEABLE TRIM FOR 20W/30W/50W module (ND22-20/ND22-30/ND22-50)



ND22T-4HRxx  
ND22T-6HRxx  
ND22T-8Rxx  
ND22T-10Rxx



ND22T-4HSxx  
ND22T-6HSxx  
ND22T-8Sxx



ND22T-6HRxx-WW  
ND22T-8Rxx-WW

Note: "xx" can be HW/W/HZ/B

"HW" refers to the haze cone white flange

"W" refers to the white cone white flange

"HZ" refers to the haze cone haze flange

"B" refers to the black cone black flange

# INSTRUCTIONS

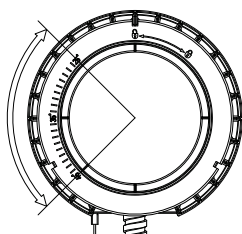
## Module Downlight Installation



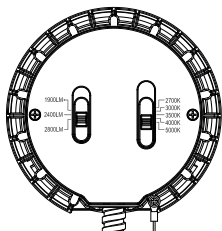
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### Module & Reflector Kit Assembly

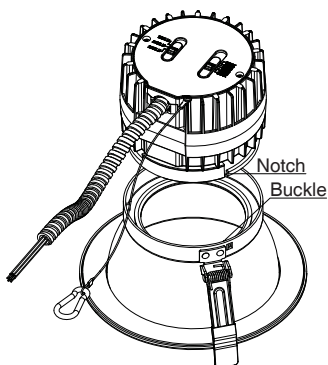
1. Select light engine appropriate for the application.
2. Rotate the lens adjustment ring to select desired beam angle.



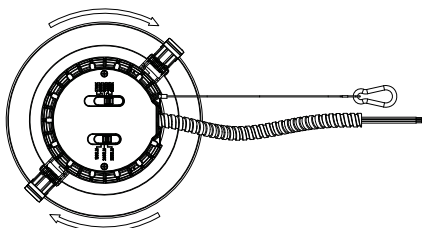
3. Select the desired CCT and lumen output switches.



4. Align the Buckle of the reflector kit with the notch on the heatsink.



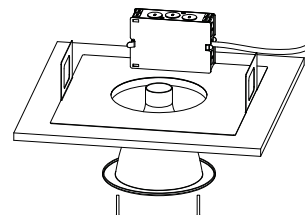
5. Rotate the module clockwise until it is properly tightened.



### Retrofit Installation

1. Turn power OFF from the fixture before installation.
2. Remove existing lamp and reflector. If existing trim or can are present, remove from the ceiling or move it out of the way. Make sure to retain existing rough-in kit components. (Fig. 1)

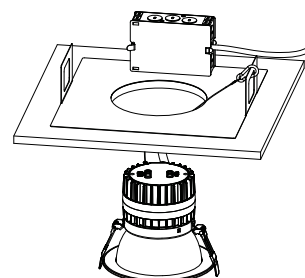
Fig: 1



3. Measure the ceiling opening and ensure the edge of the downlight retrofit will cover the entire hole and sit firmly in the ceiling.

4. Attach the carabiner safety lanyard to the existing fixture housing. (Fig. 2)

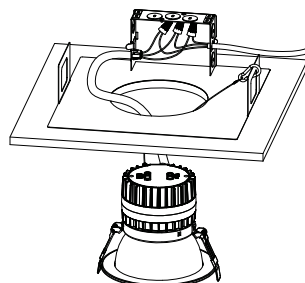
Fig: 2



5. Remove the junction box faceplate. Disconnect wiring to existing ballast. Remove appropriate knock out on junction box.

6. Connect incoming AC mains power to fixture input leads. Insert the downlight conduit into the J-box and wire to the power source (black to hot, white to neutral, purple to 0-10V dimming positive, pink to 0-10V dimming negative). Reattach the J-box cover when done. (The grounding of the overall system shall be done in accordance with NEC and local codes). (Fig.3)

Fig: 3



# INSTRUCTIONS

## Module Downlight Installation

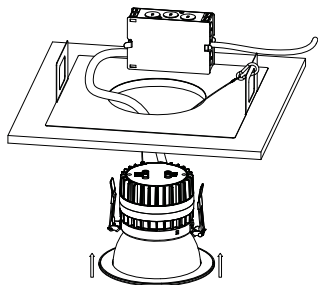


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### Retrofit Installation *(cont'd)*

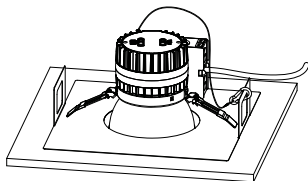
7. Bend the spring clips upward so they are in an upright and insert downlight into hole in the ceiling/housing. (Fig.4)

Fig: 4



8. Once downlight is inside the ceiling and housing, release the spring clips and push the fixture up into the ceiling until securely fixed and flush with the ceiling (rotating the downlight may be necessary to properly engage the spring clips and ensure a secure fit). (Fig.5)

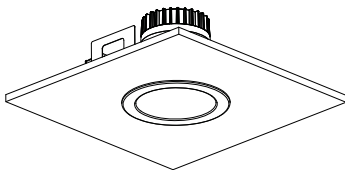
Fig: 5



9. For additional safety, connect safety cable onto the ceiling/housing where applicable.

10. Restore power at the source. The installation is complete. (Fig. 6)

Fig: 6

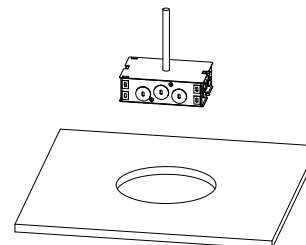


### New Construction Installation

1. Turn power OFF from the fixture before installation.

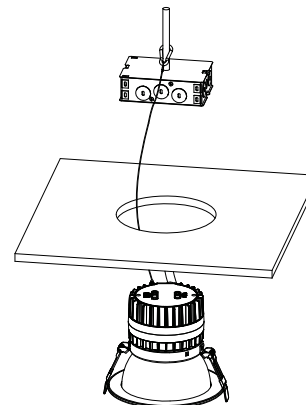
2. Use template inside box to cut hole in ceiling. (fig.7)

Fig: 7



3. Attach the carabiner safety lanyard to secure place inside the ceiling. (Fig. 8)

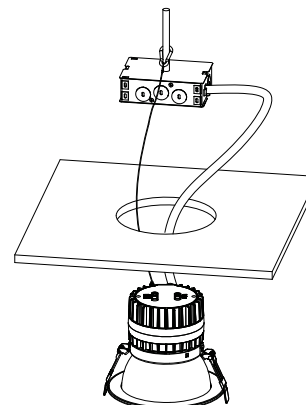
Fig: 8



4. Remove the junction box faceplate. Disconnect wiring to existing ballast. Remove appropriate knock out on junction box.

5. Connect incoming AC mains power to fixture input leads. Insert the downlight conduit into the J-box and wire to the power source (black to hot, white to neutral, purple to 0-10V dimming positive, pink to 0-10V dimming negative). Reattach the J-box cover when done. (The grounding of the overall system shall be done in accordance with NEC and local codes). (Fig. 9)

Fig: 9



# INSTRUCTIONS

## Module Downlight Installation

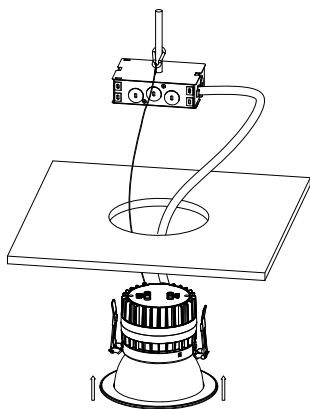


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### New Construction Installation (cont'd)

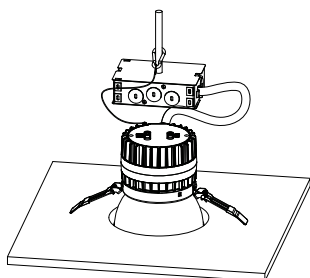
6. Bend the spring clips upward so they are in an upright and insert downlight into hole in the ceiling/ housing. (Fig.10)

Fig: 10



7. Once downlight is inside the ceiling and housing, release the spring clips and push the fixture up into the ceiling until securely fixed and flush with the ceiling (rotating the downlight may be necessary to properly engage the spring clips and ensure a secure fit). (Fig. 11)

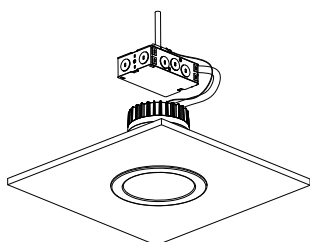
Fig: 11



8. For additional safety, connect safety cable onto the ceiling/housing where applicable.

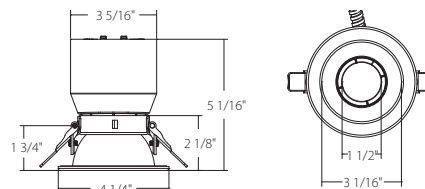
9. Restore power at the source. The installation is complete. (Fig.12)

Fig: 12

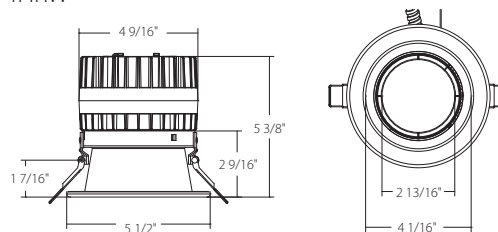


### DIMENSIONAL DRAWINGS

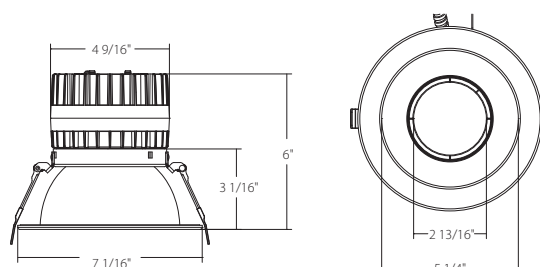
ND22-12-3RW



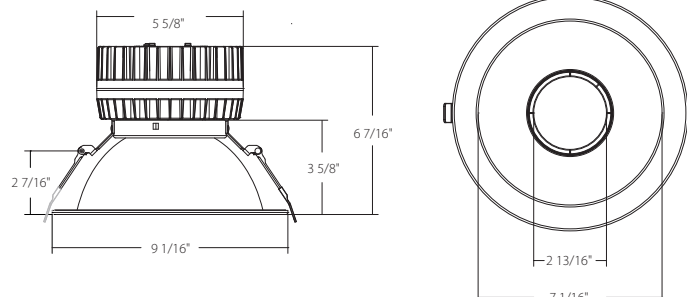
ND22-20-4HRW



ND22-30-6HRW



ND22-50-8RW



**Note:** These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation, operation or maintenance.

# INSTRUCTIONS

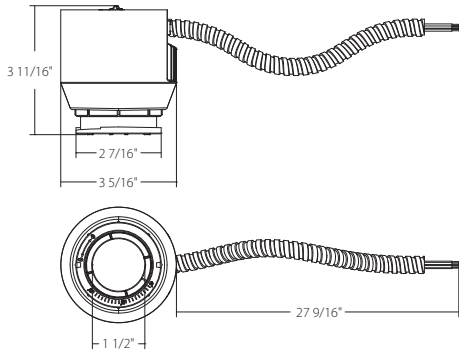
## Module Downlight Installation

# RAB®

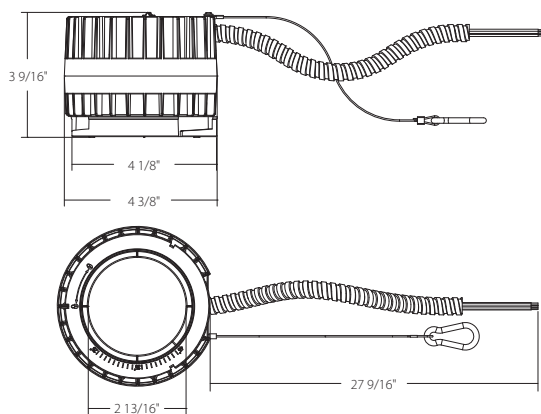
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### New Construction Installation (cont'd)

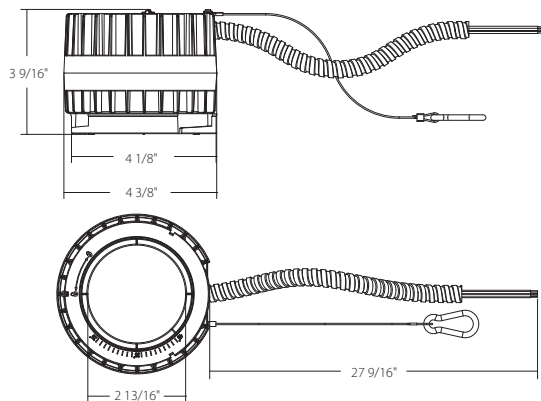
ND22-12



ND22-20

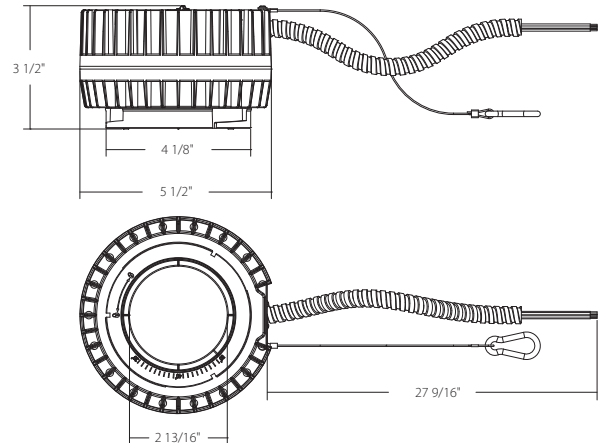


ND22-30



### INSTALLATION (cont'd)

ND22-50



#### MINIMUM DIMENSION OF LUMINAIRES:

- 3": MINIMUM DIMENSION OF LUMINAIRE INSIDE DIAMETER(mm): 90
- 4" MINIMUM DIMENSION OF LUMINAIRE INSIDE DIAMETER(mm): 126
- 6" MINIMUM DIMENSION OF LUMINAIRE INSIDE DIAMETER(mm): 160

### TROUBLESHOOTING

1. Check that the line voltage at the fixture is correct. Refer to wiring directions.
2. Is the fixture grounded properly?

### CLEANING & MAINTENANCE

CAUTION: Be sure fixture temperature is cool enough to touch. Do not clean or maintain while fixture is energized.

1. Do not open fixture to clean the LED. Do not touch the LED.
2. Do not touch reflector.
3. Do not clean any fixture surface with wood-base cleaning material such as paper towels or tissues.

#### Easy Answers

[rablighting.com](http://rablighting.com)  
Visit our website for product info

Tech Help Line  
Call our experts: 888 722-1000

e-mail  
Answered promptly - [sales@rablighting.com](mailto:sales@rablighting.com)

Free Lighting Layouts  
Answered online or by request

**RAB WARRANTY:** RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).