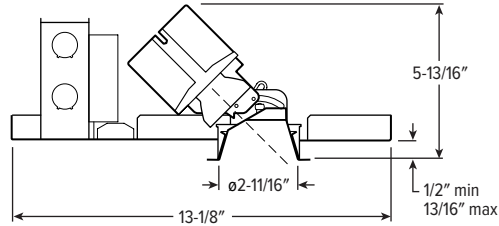
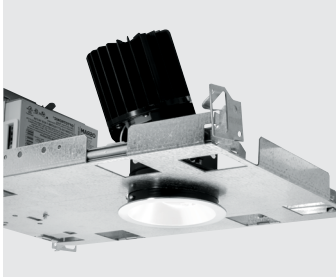


# 2AR tunable WHITE 2" Adjustable Downlight – Round



CATALOG #: \_\_\_\_\_

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_



ORDERING EXAMPLE: **2AR - L9/9TW - OPTIONS - DIM - UNV - OW - OF - CS - TRIM OPTIONS - N - F1**

HOUSING TRIM MOUNT

## HOUSING

SERIES	LUMENS <sup>[1]</sup>	COLOR	OPTIONS	CONTROL	VOLTAGE
2AR	L5 500lm L7 700lm L9 900lm	9TW Tunable white (90 CRI, 2700K-5000K)	See page 4 for EMERGENCY BATTERY OPTIONS. ATH Airtight construction <sup>[2]</sup> F Fuse CP Chicago plenum (CCEA) <sup>[3]</sup>	See page 3 for CONTROL DETAILS. DALI Driver prewired for DALI applications DIM Dimming driver with (1) 0-10V signal to control dimming and (1) 0-10V signal to control CCT DMX Driver prewired for DMX applications PSQ Lutron T-Series 2-channel tunable white 1%. <sup>[4]</sup>	UNV 120-277V

## TRIM <sup>[5]</sup>

TRIM TYPE	DISTRIBUTION <sup>[6]</sup>	FLANGE TYPE	REFLECTOR FINISH	TRIM OPTIONS
O Open reflector L Flush lens R Regressed lens A Angled lens	W 35° Wide M 30° Medium N 20° Narrow <sup>[7]</sup>	OF 1/2" standard flange ZF Zero-flange mud-in <sup>[8]</sup>	CS Clear semi-specular anodize WH White texture powder coat BL Black texture powder coat	MWT Textured white trim flange <sup>[9]</sup> AD Diffuse acrylic lens <sup>[10]</sup> PD Diffuse 1/8" polycarbonate lens <sup>[11]</sup> WET/CC Wet location, covered ceiling listed <sup>[12]</sup> AM Anti-microbial <sup>[13]</sup>

## MOUNTING

MOUNTING TYPE <sup>[14]</sup>	MOUNTING HARDWARE <sup>[15]</sup>
N Open pan for new construction <sup>[16]</sup> I IC-rated enclosure for new construction <sup>[17]</sup>	F1 Integral 2-position fixed pan bracket, universal bar hanger included <sup>[18]</sup> BA1 Adjustable butterfly pan bracket, bar hanger not included <sup>[19]</sup> CA1 Adjustable caterpillar pan bracket, universal bar hanger included <sup>[20]</sup>

## NOTES

- <sup>1</sup> Lumen output based on O Trim Type, W Distribution, and CS Reflector Finish, 90 CRI/4000K CCT. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
- <sup>2</sup> I Mounting Type required.
- <sup>3</sup> I Mounting Type required.
- <sup>4</sup> N Mounting Type only, top access required.
- <sup>5</sup> Trim ships separately.
- <sup>6</sup> Beam angle based on O Trim Type and CS Reflector Finish. Trim Type affects beam angle. See page 2 for FIXTURE PERFORMANCE DATA.
- <sup>7</sup> Not available with L9 lumen package or I Mounting Type.
- <sup>8</sup> For use with mud-in plaster construction only, supplied with mud flange installation kit. See page 4 for TRIM TYPE DETAILS. Not available with O Trim Type or ATH option.
- <sup>9</sup> Not available with L Trim Type, ZF Flange Type or WH Reflector Finish.
- <sup>10</sup> W distribution only. Not available with O Trim Type.

- <sup>11</sup> W distribution only. Not available with O Trim Type.
- <sup>12</sup> L Trim Type only. Not available with PD trim option.
- <sup>13</sup> WH and BL Reflector Finishes only.
- <sup>14</sup> Mounting hardware required, ordered separately, see MOUNTING HARDWARE ordering info. See page 5 for MOUNTING TYPE DETAILS.
- <sup>15</sup> Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
- <sup>16</sup> Top access required.
- <sup>17</sup> Top access required. Not available with EM batteries.
- <sup>18</sup> I Mounting requires external brackets.
- <sup>19</sup> N Mounting Type only.
- <sup>20</sup> N Mounting Type only.



# 2AR tunable WHITE

## 2" Adjustable Downlight – Round

### FEATURES

- Support human-centric design with adaptive, individualized lighting using tunable white light
- Adjustable aim with 0° - 45° tilt and 360° rotation
- 2" aperture is unobtrusive in small scale spaces
- Zero-flange trim options for modern ceiling
- New construction mounting pan or IC-rated enclosure available
- Contemporary design provides glare-free illumination for a soft ceiling appearance
- Choice of open reflector or die-cast flush, regressed or angled lensed trims to complement interior styles
- Etched degree markers and directional indicator make it simple to fine-tune the illumination angle
- Beam angles ranging from 20° narrow to 35° wide for tailored performance

### SPECIFICATIONS

- HOUSING** – Die-cast aluminum spun and stamped articulating mechanism with forged aluminum heat sink. Galvanized steel splice compartment with driver mounting plate/enclosure. Mounting clips allow for ceiling thickness from 1/2" – 13/16".
- OPEN REFLECTOR** – Low-iridescent anodized aluminum. Clear semi-specular finish standard.
- LENSED TRIM** – Die-cast aluminum frame with micro-prismatic, acrylic lens. Diffuse acrylic lens standard with A Trim Type.
- ELECTRICAL** – High-performance Class 2 C.O.B. LED array. Modular quick-connect plug for easy field-connection of LED light assembly to driver. Reported L70>55,000 hours. Reported L90>55,000 hours. Estimated L70 = 200,000 hours. Tunable White products use LEDs of multiple CCTs and may produce a perceptibly different shade of white from single-CCT products at the same CCT. All CCTs are within 3 MacAdam ellipses.
- MOUNTING** – Recessed. 20 ga. galvanized steel mounting pan. N mounting type for use in non-fire rated installations only. Top access required for driver maintenance.

- LISTINGS** –
  - cCSAus conforms to UL STD 1598; Certified to CAN/CSA STD C22.2 No. 250.0 for damp locations. LED light assembly conforms to UL 2108 for remote installation.
  - Suitable for wet location under covered ceiling when specified with WET/CC option.
  - IC-rated for direct contact with insulation when specified with I Mounting Type.
  - City of Chicago Environmental Air approved when specified with CP option.
  - Complies with ASTM-E283 when specified with ATH option.
  - RoHS compliant.
  - Complies with the Buy American Act and other federal regulations. Request certification at [hew.com/baa](http://hew.com/baa).
- WARRANTY** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).

### FIXTURE PERFORMANCE DATA

	DISTRIBUTION	WATTAGE	OPEN REFLECTOR TRIM TYPE		FLUSH LENS TRIM TYPE		REGRESSED LENS TRIM TYPE		ANGLED LENS TRIM TYPE	
			DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
15	W	15.1	543	36	454	30	442	29	360	24
	M	15.1	445	29	345	23	333	22	222	15
	N	15.1	451	30	394	26	387	26	289	19
17	W	19.5	748	38	625	32	608	31	496	25
	M	19.5	612	31	475	24	458	24	305	16
	N	19.5	621	32	543	28	533	27	398	20
19	W	24.1	872	36	729	30	709	29	579	24
	M	24.1	714	30	554	23	535	22	356	15
	N	–	–	–	–	–	–	–	–	–

### MULTIPLIER TABLES

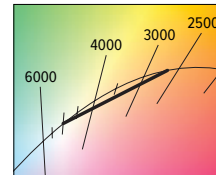
COLOR TEMPERATURE		
CCT	LUMENS	WATTS
2700K	0.87	1.05
3000K	0.96	1.11
3500K	1.02	1.06
4000K	1.00	1.00
5000K	1.02	1.06

REFLECTOR FINISH	
CATALOG NUMBER	CONVERSION FACTOR
CS	1.00
WH	0.89
BL	0.47

TRIM OPTIONS	
CATALOG NUMBER	CONVERSION FACTOR
AD	0.85
PD	0.85

### BEAM ANGLE

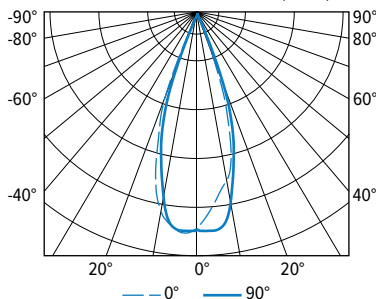
	TRIM TYPE			
	OPEN	FLUSH	REGRESSED	ANGLED
W	35°	40°	40°	35°
M	30°	30°	30°	35°
N	20°	20°	20°	25°



- Photometrics tested in accordance with IESNA LM-79. Results based on O trim type, W distribution, CS finish, 90 CRI/4000K CCT, average wattage for 120V input, and 25°C ambient temperature. Actual performance may vary +/-5%.
- Beam angle based on O Trim Type and CS Reflector Finish.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier tables to calculate additional options.

### PHOTOMETRY

2AR-L9/9TW-DIM-UNV-OW-OF-CS (0° tilt) Total Luminaire Output: 872 lumens; 24.1 Watts | Efficacy: 36 lm/W | 90 CRI; 4000K CCT



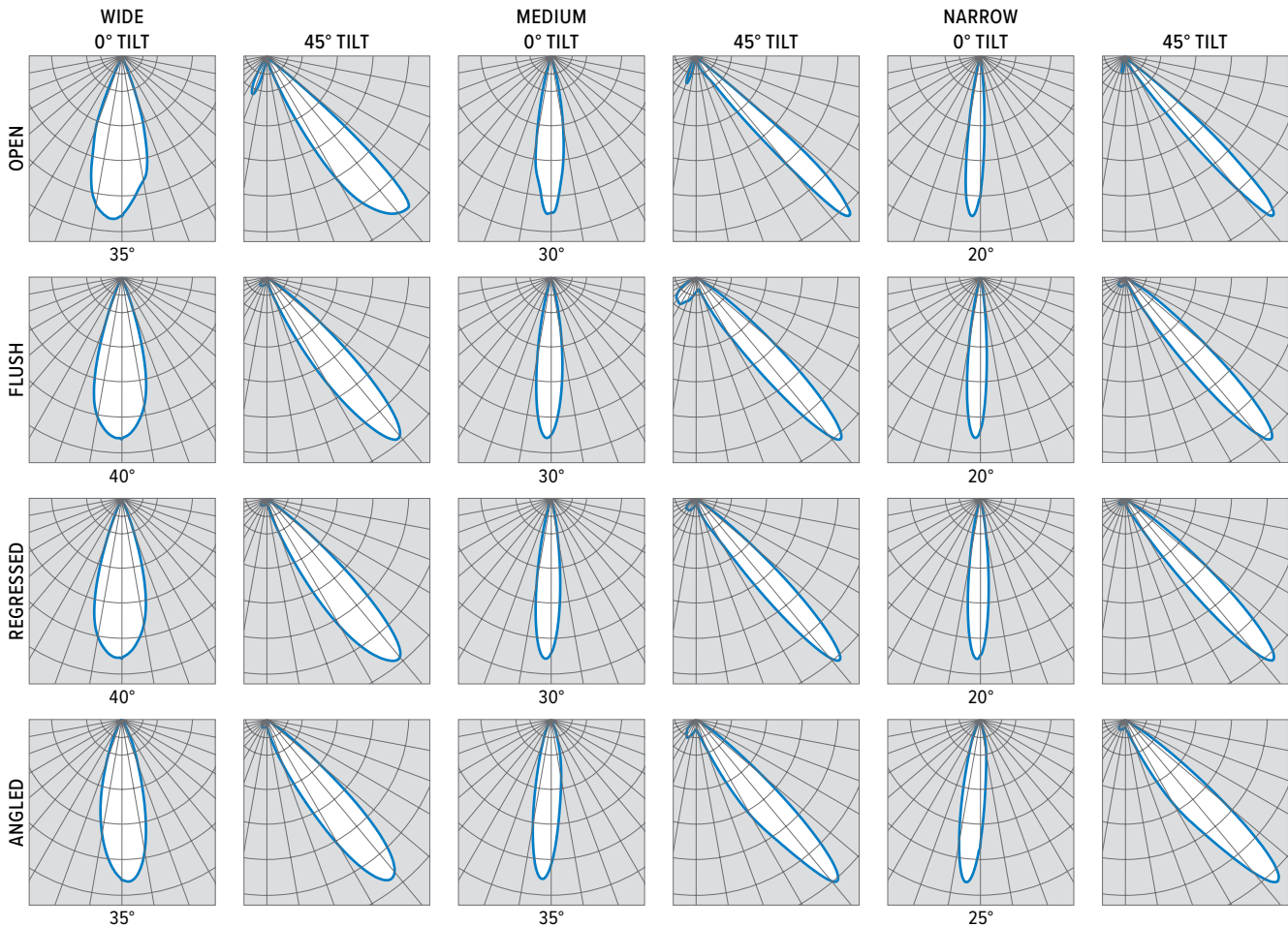
VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
	0°	45°	90°	135°	180°	
0	2253	2253	2253	2253	2253	
5	2610	2514	2471	2441	2473	225
15	1435	1386	1426	1454	1480	409
25	491	431	467	459	459	217
35	18	18	21	20	20	14
45	3	3	7	5	5	4
55	1	1	2	2	2	2
65	1	0	0	1	1	1
75	0	0	0	0	0	0
85	0	0	0	0	0	0
90	0	0	0	0	0	0

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	851	98
	0 - 40	865	99
	0 - 60	871	100
	0 - 90	872	100
	0 - 180	872	100

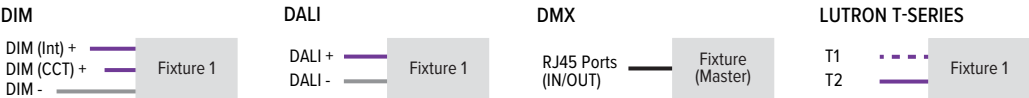


2AR

tunable **WHITE**  
2" Adjustable Downlight – Round



CONTROL DETAILS



REFLECTOR FINISH DETAILS



2AR

tunable WHITE

2" Adjustable Downlight – Round

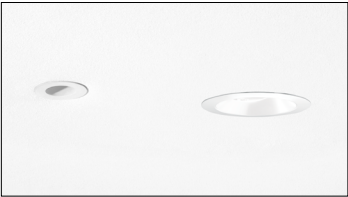
EMERGENCY BATTERY OPTIONS

Additional limitations apply, see page 1. Specify CEC in the option code when California Energy Commission regulations are required.

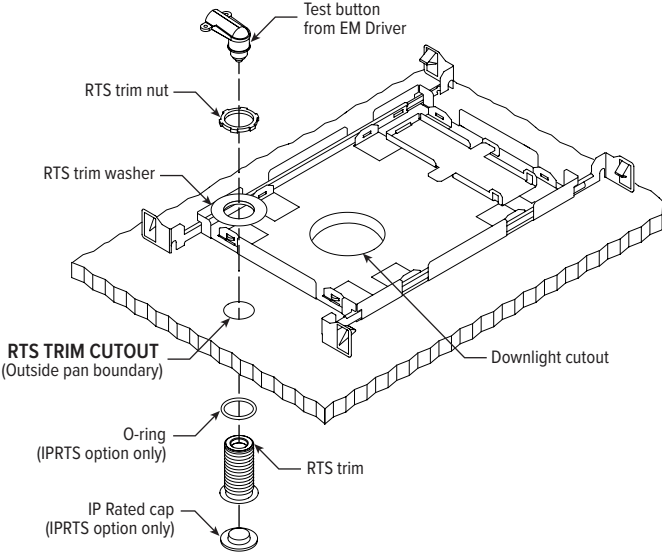
CATALOG NUMBER	DESCRIPTION
EM/5W	5-watt emergency battery
EM/7W	7-watt emergency battery
EM/7W/RTS	7-watt emergency battery with regressed test switch <sup>1</sup>
EM/7W/IPRTS	7-watt emergency battery with IP65 rated regressed test switch <sup>2</sup>
EM/10W	10-watt emergency battery
EM/10W/RTS	10-watt emergency battery with regressed test switch <sup>1</sup>
EM/10W/IPRTS	10-watt emergency battery with IP65 rated regressed test switch <sup>2</sup>

- <sup>1</sup> Not available with WET/CC Option. N Mounting Type only. Top access required.
- <sup>2</sup> N Mounting Type only. Top access required.

REGRESSED TEST SWITCH DETAILS

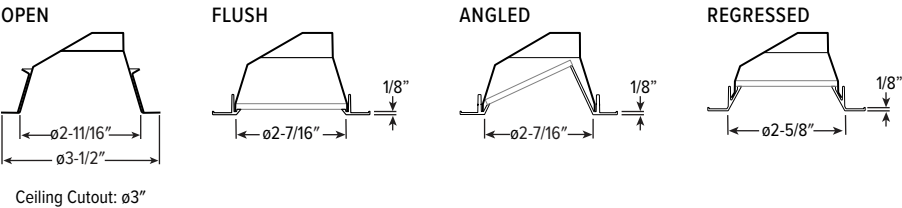


Shown Installed

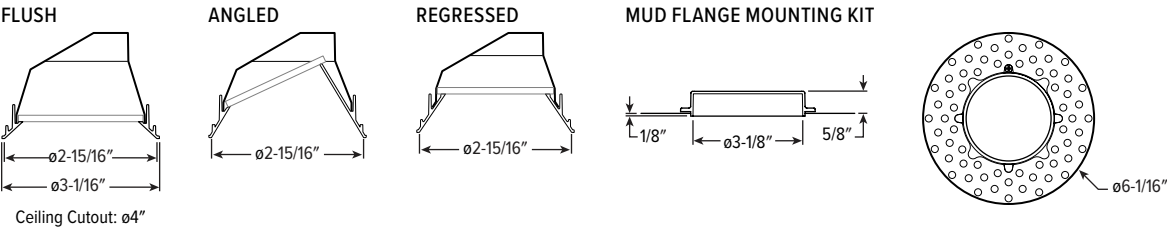


TRIM TYPE DETAILS

1/2" STANDARD FLANGE TYPE



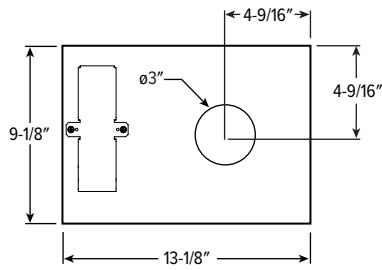
ZERO-FLANGE MUD-IN



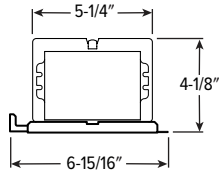
# 2AR tunable **WHITE** 2" Adjustable Downlight – Round

## MOUNTING TYPE DETAILS

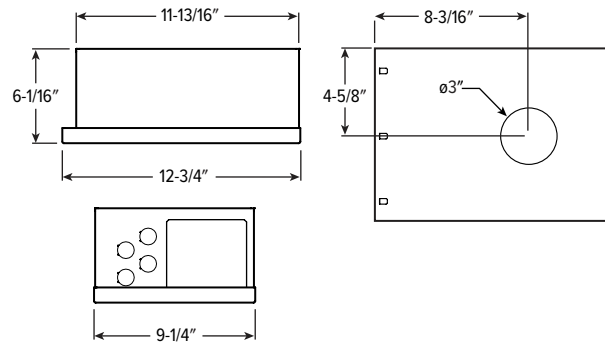
### NEW CONSTRUCTION



#### Driver and Junction Box

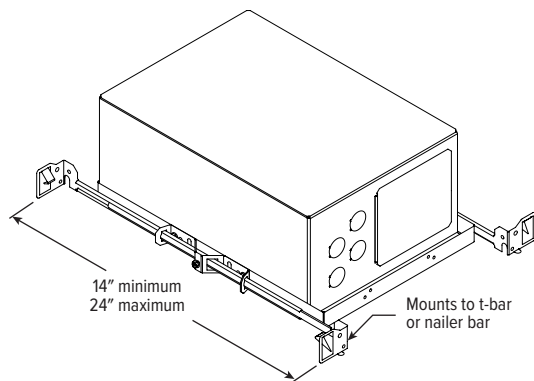
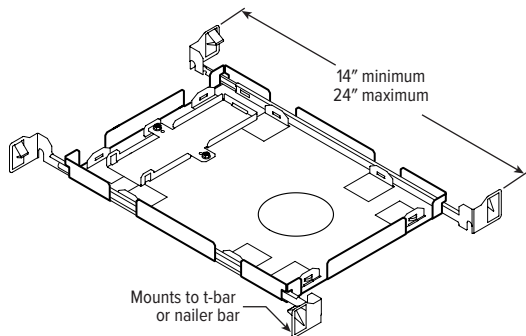


### IC-RATED



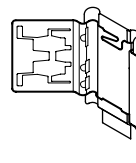
## MOUNTING HARDWARE DETAILS

### F1 Integral 2-position fixed pan bracket, universal bar hanger included

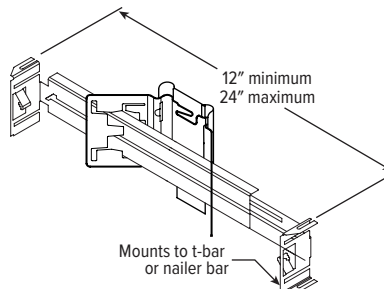


### F1 with I Mounting Type

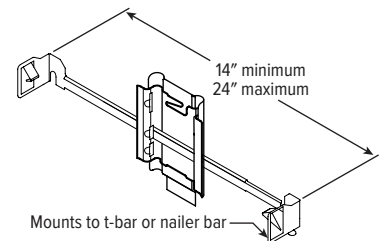
### BA1 Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



### BA2 Adjustable butterfly pan bracket, heavy-duty universal bar hanger included (N Mounting Type only)



### CA1 Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



### CA2 Adjustable caterpillar pan bracket, t-bar hanger included (N Mounting Type only)

