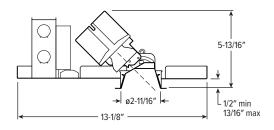
2AR PoE | tunable WHITE 2" Adjustable Downlight — Round







CATALOG #: _ PROJECT:





NEW CONSTRUCTION AND REMODEL

FEATURES

Deliver scalable, data-driven smart buildings with PoE-enabled fixtures and controls

SPECIFICATIONS

- HOUSING Die-cast aluminum spun and stamped articulating mechanism with forged aluminum heat sink. Mounting clips allow for ceiling thickness from 1/2" - 13/16"
- ${\sf OPEN}\;{\sf REFLECTOR}-{\sf Low-iridescent}$ 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 node. Reported L70>55,000 hours. Reported L90>55,000 hours. Estimated L70 = 200,000 hours. Lowvoltage DC fixture, to be fed by Class 2 power supply. 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 for new construction or IC-rated enclosure. N and R mounting types for use in non-fire rated installations only. Minimum 17" O.C. marked spacing required for P12 and P14 static white and P7 and P9 tunable white lumen packages when specified with R Mounting Type. Nodes cannot be mounted above hard ceilings
- LISTINGS
 - cCSAus conforms to UL STD 1598; Certified to CAN/CSA STD C22.2 No. 250.0 for dry and 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.
- WARRANTY 5-year limited warranty, see hew.com/warranty.

SYSTEM REQUIREMENTS

- PoE-ready luminaires are connected to building power systems through network integration and require other components for complete PoE lighting system.
- For additional PoE info, see hew.com/poe

ORDERING EXAMPLE: 2AR - P14/835 - OPTIONS - POE PR -OW - OF - CS - TRIM OPTIONS – HOUSING – — TRIM — MOUNT.

HOUSING

| SERIES | LUM | IENS [1] | CRI | CCT | | OPT | IONS | CONTR | OL ^[2] |
|--------|-----|----------|---------------------|-----|---|-----|---------------------------|--------|-------------------|
| 2AR | P5 | 500lm | 8 80 ^[3] | 27 | 2700K | | Airtight construction | POE PR | Power over |
| | P7 | 700lm | 9 90 | 30 | 3000K | CP | Chicago plenum (CCEA) [5] | | Ethernet-ready |
| | Р9 | 900lm | | 35 | 3500K | | | | |
| | P12 | 1,200lm | | 40 | 4000K | | | | |
| | P14 | 1,400lm | | 50 | 5000K | | | | |
| | | | | TW | Tunable white (90 CRI, 2700K-5000K) [4] | | | | |

TRIM [6]

| TRIM TYPE | DISTRIBUTION [7] | FLANGE TYPE | REFLECTOR FINISH | TRIM OPTIONS |
|---|---|---|--|--|
| O Open reflector L Flush lens R Regressed lens A Angled lens | W 35° Wide M 20° Medium N 15° Narrow ^[8] | OF 1/2" standard flange ZF Zero-flange mud-in ^[9] | CS Clear semi-specular anodize WH White texture powder coat BL Black texture powder coat | MWT Textured white trim flange [10] AD Diffuse acrylic lens [11] PD Diffuse 1/8" polycarbonate lens [12] WET/CC Wet location, covered ceiling listed [13] AM Anti-microbial [14] |

MOUNTING

MOUNTING TYPE [15]

N Open pan for new construction

- IC-rated enclosure for new construction [17]
- R Remodel kit [18]

MOUNTING HARDWARE [16]

- Integral 2-position fixed pan bracket, universal bar hanger included [19]
- BA1 Adjustable butterfly pan bracket, bar hanger not included [20]
- CA1 Adjustable caterpillar pan bracket, universal bar hanger included [21]

NOTES

- Lumen output based on O Trim Type, W Distribution, and CS Reflector Finish, 80 CRI/3500K CCT for single CCT and 90 CRI/4000K CCT for TW. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA
- For additional PoE connection details,
- consult factory. Not available with tunable white.
- P9 lumen package max with W and M Distributions. P7 lumen package max with N Distribution.
- I Mounting Type required.
- Trim ships separately. Beam angle based on static white, O Trim Type and CS Reflector Finish. Trim Type affects beam angle. See page 2 for FIXTURE PERFORMANCE DATA.
- P12 static white and P9 tunable white lumen package max when specified with N or R Mounting Type. P7 static white lumen package max when specified with I Mounting Type. Tunable White not available with I Mounting Type.
 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, ATH, or WET/CC options.

 Not available with L Trim Type, ZF Flange
- Type or WH Reflector Finish
- W distribution only. Not available with O Trim Type.
- W distribution only. Not available with O Trim Type.

 Not available with O Trim Type or ZF Flange

- Type. Not available with PD trim option.
- WH and BL Reflector Finishes only.
 Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 4 for MOUNTING TYPE DETAILS.
- Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
- P9 static white and P5 tunable white lumen packages max.

 Also used in new construction sheetrock
- ceilings. Pan-less installation.
- N and I Mounting Types only. I Mounting requires external brackets.
- N Mounting Type only. N Mounting Type only.



FIXTURE PERFORMANCE DATA

STATIC WHITE

| | | | OPEN REFLECTOR TRIM TYPE | | FLUSH LENS TRIM TYPE | | REGRESSED LENS TRIM TYPE | | ANGLED LENS TRIM TYPE | |
|----|--------------|---------|--------------------------|--------------------|----------------------|--------------------|--------------------------|--------------------|-----------------------|--------------------|
| | DISTRIBUTION | WATTAGE | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) |
| | W | 5.4 | 543 | 101 | 454 | 84 | 441 | 82 | 360 | 67 |
| 윤 | М | 5.4 | 391 | 72 | 303 | 56 | 292 | 54 | 195 | 36 |
| | N | 5.4 | 466 | 86 | 407 | 75 | 379 | 70 | 298 | 55 |
| | W | 7.6 | 713 | 94 | 596 | 78 | 580 | 76 | 473 | 62 |
| P | М | 7.6 | 513 | 67 | 398 | 52 | 384 | 51 | 256 | 34 |
| | N | 7.6 | 612 | 81 | 535 | 70 | 498 | 65 | 392 | 52 |
| | W | 11.1 | 955 | 86 | 798 | 72 | 776 | 70 | 634 | 57 |
| 8 | М | 11.1 | 687 | 62 | 533 | 48 | 514 | 46 | 342 | 31 |
| | N | 11.1 | 820 | 74 | 716 | 65 | 666 | 60 | 525 | 47 |
| | W | 15.3 | 1166 | 76 | 974 | 64 | 948 | 62 | 774 | 51 |
| 72 | M | 15.3 | 839 | 55 | 651 | 43 | 628 | 41 | 418 | 27 |
| | N | 15.3 | 1001 | 65 | 875 | 57 | 814 | 53 | 641 | 42 |
| | W | 22.7 | 1407 | 62 | 1176 | 52 | 1144 | 50 | 934 | 41 |
| 74 | М | 22.7 | 1012 | 45 | 785 | 35 | 758 | 33 | 504 | 22 |
| | N | _ | _ | _ | _ | _ | _ | _ | _ | - |

TUNABLE WHITE

| | | | OPEN REFLECTOR TRIM TYPE | | FLUSH LENS TRIM TYPE | | REGRESSED LENS TRIM TYPE | | ANGLED LENS TRIM TYPE | |
|----------|--------------|---------|--------------------------|--------------------|----------------------|--------------------|--------------------------|--------------------|-----------------------|--------------------|
| | DISTRIBUTION | WATTAGE | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) | DELIVERED LUMENS | EFFICACY (Im/W) |
| | W | 10.4 | 543 | 52 | 454 | 44 | 442 | 42 | 360 | 35 |
| 윤 | М | 10.4 | 445 | 43 | 345 | 33 | 333 | 32 | 222 | 21 |
| | N | 10.4 | 451 | 43 | 394 | 38 | 387 | 37 | 289 | 28 |
| | W | 15.9 | 748 | 47 | 625 | 39 | 608 | 38 | 496 | 31 |
| P. | М | 15.9 | 612 | 39 | 475 | 30 | 458 | 29 | 305 | 19 |
| | N | 15.9 | 621 | 39 | 543 | 34 | 533 | 34 | 398 | 25 |
| | W | 21.2 | 872 | 41 | 729 | 34 | 709 | 33 | 579 | 27 |
| 2 | М | 21.2 | 714 | 34 | 554 | 26 | 535 | 25 | 356 | 17 |
| | N | - | - | _ | _ | _ | _ | _ | _ | _ |
| | W | - | - | _ | _ | _ | _ | - | _ | _ |
| P12 | М | - | - | _ | _ | _ | _ | _ | _ | _ |
| | N | - | - | _ | _ | _ | _ | _ | _ | _ |
| | W | - | _ | _ | _ | _ | _ | _ | _ | _ |
| <u>4</u> | М | - | _ | _ | _ | _ | _ | - | _ | _ |
| | N | - | - | _ | _ | _ | _ | _ | _ | _ |

MULTIPLIER TABLES

| | COLOR TEMPERATURE | | | | | | | |
|--------|-------------------|----------|---------------|--|--|--|--|--|
| | ССТ | L | LUMENS | | | | | |
| | CCI | STANDARD | TUNABLE WHITE | | | | | |
| | 2700K | 0.92 | - | | | | | |
| ~ | 3000K | 0.98 | _ | | | | | |
| 80 CRI | 3500K | 1.00 | _ | | | | | |
| œ | 4000K | 1.01 | - | | | | | |
| | 5000K | 1.02 | _ | | | | | |
| | 2700K | 0.76 | 0.87 | | | | | |
| | 3000K | 0.70 | 0.96 | | | | | |
| 90 CRI | 3500K | 0.73 | 1.02 | | | | | |
| 90 | 4000K | 0.82 | 1.00 | | | | | |
| | | | | | | | | |
| | 5000K | 0.88 | 1.02 | | | | | |

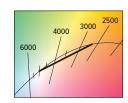
| REFLECTOR FINISH | | | | | | |
|----------------------------------|------|--|--|--|--|--|
| CATALOG CONVERSION NUMBER FACTOR | | | | | | |
| CS | 1.00 | | | | | |
| WH | 0.89 | | | | | |
| BL | 0.47 | | | | | |

| TRIM OPTIONS | | | | | | |
|-------------------|-------------------|--|--|--|--|--|
| CATALOG NUMBER | CONVERSION FACTOR | | | | | |
| AD | 0.85 | | | | | |
| DΠ | 0.85 | | | | | |

BEAM ANGLE

| | | TRIM TYPE | | | | | | | | |
|---|------|-----------|------------|--------|---------------|-------|-----------|--------|--|--|
| | | ST | ATIC WHITE | | TUNABLE WHITE | | | | | |
| | OPEN | FLUSH | REGRESSED | ANGLED | OPEN | FLUSH | REGRESSED | ANGLED | | |
| W | 35° | 35° | 35° | 30° | 35° | 40° | 40° | 35° | | |
| М | 20° | 20° | 20° | 20° | 30° | 30° | 30° | 35° | | |
| N | 15° | 15° | 15° | 20° | 20° | 20° | 20° | 25° | | |

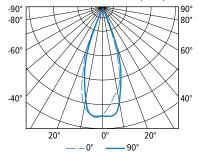
- Photometrics tested in accordance with IESNA LM-79. Results based on O trim type, W distribution, CS finish, and 25°C ambient temperature. Static white results based on 80 CRI/3500K CCT. Tunable white results based on 90 CRI/4000K CCT. Actual performance may vary +/-5%
- Wattage and efficacy data shown do not account for node losses.
- Beam angle based on static white, O Trim Type and CS Reflector Finish.
- Use multiplier tables to calculate additional options.





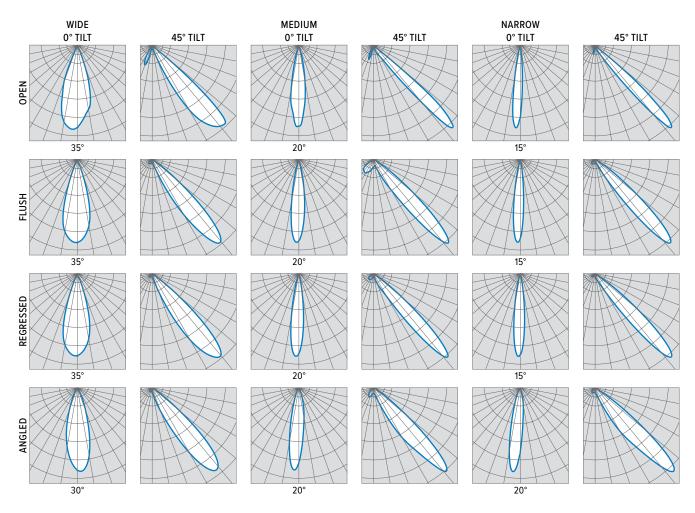
PHOTOMETRY

2AR-P12/835-POE PR-OW-OF-CS (0° tilt) Total Luminaire Output: 1166 lumens; 15.3 Watts | Efficacy: 76 lm/W | 80 CRI; 3500K CCT



| | VERTICAL | | HOR | IZONTAL AI | NGLE | | ZONAL |
|--------------------------|----------|------|------|------------|------|------|--------|
| | ANGLE | 0° | 45° | 90° | 135° | 180° | LUMENS |
| CANDLEPOWER DISTRIBUTION | 0 | 3932 | 3932 | 3932 | 3932 | 3932 | |
| ڃٰا | 5 | 3460 | 3622 | 3955 | 4086 | 3975 | 354 |
| 불 | 15 | 2175 | 2256 | 2473 | 2722 | 2812 | 662 |
| S | 25 | 59 | 72 | 133 | 238 | 255 | 138 |
| ~ | 35 | 7 | 8 | 11 | 12 | 12 | 7 |
| ⋈ | 45 | 2 | 2 | 5 | 4 | 4 | 3 |
| 픮 | 55 | 1 | 1 | 2 | 2 | 2 | 1 |
| ļ₫ | 65 | 1 | 1 | 0 | 0 | 0 | 1 |
| ∣ਲ | 75 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 85 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 90 | 0 | 0 | 0 | 0 | 0 | |

| LUMEN SUMMARY | ZONE | LUMENS | % FIXTURE |
|---------------|---------|--------|-----------|
| Ξ | 0 - 30 | 1154 | 99 |
| S | 0 - 40 | 1161 | 99 |
| 딟 | 0 - 60 | 1165 | 100 |
|] | 0 - 90 | 1166 | 100 |
| - | 0 - 180 | 1166 | 100 |

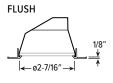


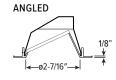


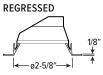
TRIM TYPE DETAILS

1/2" STANDARD FLANGE TYPE



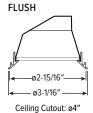


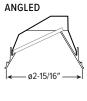




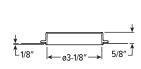
Ceiling Cutout: ø3"

ZERO-FLANGE MUD-IN

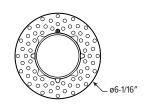




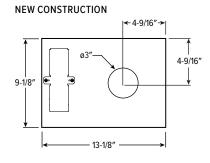


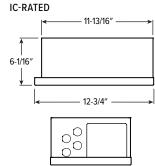


MUD FLANGE MOUNTING KIT

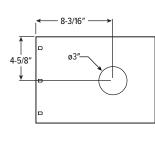


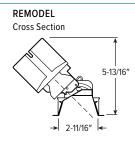
MOUNTING TYPE DETAILS





9-1/4"





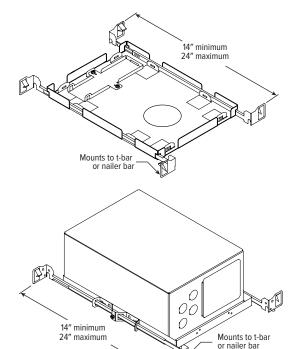
REFLECTOR FINISH DETAILS

| CS | WH | BL |
|---------------------|-----------|-----------|
| Clear semi-specular | White | Black |
| | | |

2AR PoE | tunable WHITE 2" Adjustable Downlight - Round

MOUNTING HARDWARE DETAILS

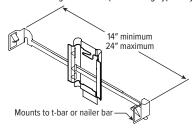
Integral 2-position fixed pan bracket, universal bar hanger included



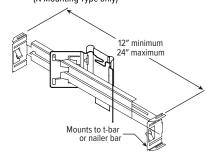
BA1 Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



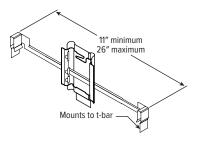
Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



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



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



F1 with I Mounting Type