



**PRODUCT DESCRIPTION**

Recessed adjustable MR16 luminaire with 1 3/4" regressed pinhole featuring stippled uniformity lens on the aperture. Fixture utilizes precision geared hot-aiming and has 50° visual cutoff to lamp and lamp image. Low profile non-IC housing is for use in non-insulated areas, or where insulation is spaced at least 3" from housing. Supplied with vertically adjustable mounting brackets that accept 1/2" conduit, "C" channel bar hangers, linear bar hangers or telescoping Real Nail bar hangers.

**PRODUCT SPECIFICATIONS**

**Reflector** .040" aluminum angle-cut reflector in black Alzak finish shields housing interior.

**Trims Style** Flush Mount trims utilize torsion spring retention for tight, secure fit to ceiling • Flush Mount trim creates a truly trimless aperture • For flush mount installations in drywall ceilings use the FMA4 flush mount adapter • For flush mount installations in wood, stone, or tile ceilings the FMA4-SC\*\*\* must be used (specify ceiling thickness and adapter finish).

**Lens** Lampholder accommodates up to three (3) 2" captive accessory lenses • Supplied with stippled uniformity lens.

**Socket** Ceramic bi-pin socket with double blade nickel alloy contacts • Quick disconnect for simplified maintenance.

**Lamp** One 75W MR16 lamp.

**Adjustability** Acu-Aim™ precision geared hot-aiming achieves 370° rotation, 45° tilt • Optimized center lamp beam optics translates lamp forward as it is aimed off nadir, insuring maximum light and low brightness • Black aiming mechanism with shield prevents visibility into fixture and preserves dark aperture • Shield hinges out of way to facilitate maintenance.

**Transformer** High efficiency (>90%) dual tap magnetic, toroidal transformer has a boost tap to compensate for dimmer losses, improving color temperature and lumen output • Potted to eliminate noise and vibration • High efficiency (>94%), high power factor electronic transformer also available • 120V or 277V available.

**Dimming** May be dimmed using dimmers specifically designed for low voltage magnetic or electronic transformers; consult factory or dimmer manufacturer for additional information.

**Codes/Labels** UL and cUL listed for through branch wiring, wet locations • Product thermally protected • Union made.

**Mounting Bracket** Rough-in section equipped with vertically adjustable mounting brackets that accept 1/2" conduit, "C" channels (HB-26 or HB-50), linear flat bars (LB-27) or 26" telescoping Real Nail bar hangers (HB-1).

**Junction Box** Rated for 8 No. 12 AWG 90° C through branch circuit conductors and includes (5) 1/2", (1) 3/4", and (4) Non-metallic sheathed cable knock-outs • Push-in electrical connectors for field connections.

**Housing/Mounting Frame** Black steel plaster frame and housing painted for visually dark interior • V-Notch in plaster frame aids fixture alignment during installation • Patent pending Tru-Line™ Adjustment Mechanism featuring +/- 1/2" translation aids fixture alignment after installation, prior to drywall.

**Ceiling Thickness** 1/2" – 7/8" ceiling standard • For thicker ceilings, order CTA4N-125 (7/8"-1 1/4"), CTA4N-163 (1 1/4"-1 5/8") or CTA4N-200 (1 5/8"- 2") • CTA4N not required for wood, stone, or tile flush mount applications.

**RECESSED ADJUSTABLE**  
1-3/4" LENSED REGRESSED  
PINHOLE APERTURE

Non-IC Rated, 75W MR16



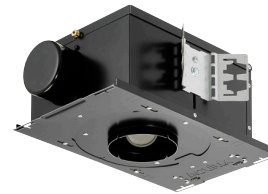
**TC943N, 4301N TRIM**

Project: \_\_\_\_\_

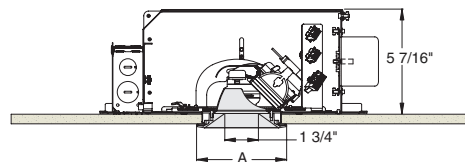
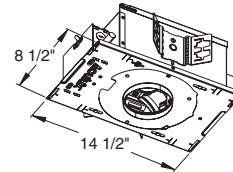
Fixture Type: \_\_\_\_\_

Location: \_\_\_\_\_

Contact/Phone: \_\_\_\_\_



**DIMENSIONS**



4 1/4" CEILING CUTOUT  
(REFER TO INSTRUCTION SHEET FOR  
FLUSH MOUNT CEILING CUTOUT)

|             | A      |
|-------------|--------|
| Trim Ring   | 4 5/8" |
| Flush Mount | 3 7/8" |


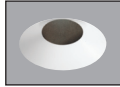
# RECESSED ADJUSTABLE

## 1-3/4" LENSED REGRESSED PINHOLE APERTURE

Non-IC Rated, 75W MR16

### TC943N, 4301N TRIM

**Ordering Information** Housing, trim and accessories each ordered separately

| Example: <b>TC943N-V</b> |  |                          | Example: <b>4301N-WH</b>  |  |             |
|--------------------------|--|--------------------------|---|--|-------------|
| Housing                  | Transformer  | Options                  | Trim/Description  |  |             |
| <b>TC943N</b>            | <b>Blank</b> 120V Magnetic<br><b>V</b> 277V Magnetic<br><b>E1</b> 120V Electronic<br><b>E2</b> 277V Electronic | <b>CP</b> Chicago Plenum |  |  |             |
|                          |  |                          | Trim Ring   | Flush Mount <sup>1</sup>   | Description |
|                          |  |                          | <b>4301N-WH</b>   | <b>4301N-WH-FM</b>   | White Trim  |
|                          |  |                          | <b>4301N-BL</b>   | <b>4301N-BL-FM</b>   | Black Trim  |

<sup>1</sup>Flush Mount trims must be used with Flush Mount Adapter, ordered separately.  
Product specifications subject to change without notice.

**Flush Mount Adapters**

|                      |  |
|----------------------|--|
| <b>FMA4</b>          | Drywall Ceiling Adapter  |
| <b>FMA4-SC087-WH</b> | Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, White     |
| <b>FMA4-SC087-BL</b> | Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, Black     |
| <b>FMA4-SC125-WH</b> | Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, White   |
| <b>FMA4-SC125-BL</b> | Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, Black   |
| <b>FMA4-SC163-WH</b> | Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, White |
| <b>FMA4-SC163-BL</b> | Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, Black |

**Optical Accessories**

| Cat. #       | Description                | Cat. #         | Description                   |
|--------------|----------------------------|----------------|-------------------------------|
| <b>T741</b>  | Med. Pink Color Filter     | <b>T7405</b>   | Yellow Dichroic Lens          |
| <b>T742</b>  | Warm Red Color Filter      | <b>T7406</b>   | Magenta Dichroic Lens         |
| <b>T743</b>  | Daylight Blue Color Filter | <b>T7411</b>   | Blue Green Dichroic Lens      |
| <b>T744</b>  | Med. Blue Color Filter     | <b>T7416</b>   | Daylight Blue Correction Lens |
| <b>T745</b>  | Med. Amber Color Filter    | <b>T7420</b>   | Diffuse Spread Lens           |
| <b>T746</b>  | Med. Green Color Filter    | <b>T7422</b>   | UV Filter Lens                |
| <b>T7401</b> | Red Dichroic Lens          | <b>T7477</b>   | Prismatic Lens                |
| <b>T7403</b> | Med. Green Dichroic Lens   | <b>T7478</b>   | Linear Spread Lens            |
| <b>T7404</b> | Med. Blue Dichroic Lens    | <b>T7459BL</b> | Hexcell Louver                |

**Misc. Accessories**

|                  |                               |
|------------------|-------------------------------|
| <b>CTA4N-125</b> | 1 1/4" Thick Ceiling Adapter  |
| <b>CTA4N-163</b> | 1 5/8" Thick Ceiling Adapter  |
| <b>CTA4N-200</b> | 2" Thick Ceiling Adapter      |
| <b>HB-1</b>      | (2) Real Nail 3 Bar Hangers   |
| <b>HB-26</b>     | (2) 26" C-Channel Bar Hangers |
| <b>HB-50</b>     | (2) 50" C-Channel Bar Hangers |
| <b>LB-27</b>     | (2) 27" Linear Bar Hangers    |

To order, specify catalog number.



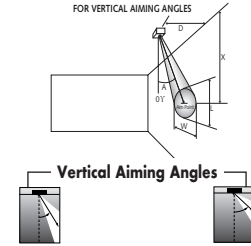
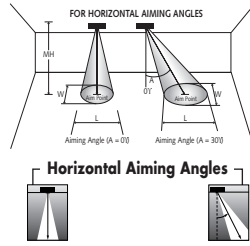
# RECESSED ADJUSTABLE

## 1-3/4" LENSED REGRESSED PINHOLE APERTURE

Non-IC Rated, 75W MR16  
**TC943N, 4301N TRIM**

**CBCP** • Centerbeam candlepower  
**FC** • Footcandles at beam center (aim point)

In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°, 1.0 for 45°).



| Lamp                              | Beam Type | Beam Spread° | Rated Life | CBCP  | 0° |     |     | 30° |     |     | 30° |   |     | 45°  |      |     |     |     |     |     |
|-----------------------------------|-----------|--------------|------------|-------|----|-----|-----|-----|-----|-----|-----|---|-----|------|------|-----|-----|-----|-----|-----|
|                                   |           |              |            |       | MH | FC  | L W | FC  | L W | D   | FC  | X | L W | FC   | X    | L W |     |     |     |     |
| <b>37W MR16 Halogen IR</b>        | NSP       | 10°          | 5000       | 12500 | 6  | 347 | 1.0 | 1.0 | 226 | 1.4 | 1.2 | 3 | 174 | 5.2  | 2.1  | 1.0 | 491 | 3.0 | 1.1 | 0.7 |
|                                   |           |              |            |       | 8  | 195 | 1.4 | 1.4 | 127 | 1.9 | 1.6 | 4 | 98  | 6.9  | 2.9  | 1.4 | 276 | 4.0 | 1.4 | 1.0 |
|                                   |           |              |            |       | 10 | 125 | 1.7 | 1.7 | 81  | 2.3 | 2.0 | 5 | 63  | 8.7  | 3.6  | 1.7 | 177 | 5.0 | 1.8 | 1.2 |
|                                   |           |              |            |       | 12 | 87  | 2.1 | 2.1 | 56  | 2.8 | 2.4 | 6 | 43  | 10.4 | 4.3  | 2.0 | 123 | 6.0 | 2.1 | 1.5 |
|                                   | NFL       | 25°          | 5000       | 4400  | 4  | 275 | 1.8 | 1.8 | 179 | 2.4 | 2.0 | 2 | 138 | 3.5  | 4.2  | 1.8 | 389 | 2.0 | 1.9 | 1.3 |
|                                   |           |              |            |       | 6  | 122 | 2.7 | 2.7 | 79  | 3.6 | 3.1 | 3 | 61  | 5.2  | 6.2  | 2.7 | 173 | 3.0 | 2.8 | 1.9 |
|                                   |           |              |            |       | 8  | 69  | 3.5 | 3.5 | 45  | 4.8 | 4.1 | 4 | 34  | 6.9  | 8.3  | 3.5 | 97  | 4.0 | 3.7 | 2.5 |
|                                   |           |              |            |       | 10 | 44  | 4.4 | 4.4 | 29  | 6.0 | 5.1 | 5 | 22  | 8.7  | 10.4 | 4.4 | 62  | 5.0 | 4.7 | 3.1 |
|                                   | FL        | 35°          | 5000       | 2200  | 3  | 244 | 1.9 | 1.9 | 159 | 2.6 | 2.2 | 2 | 69  | 3.5  | 7.2  | 2.5 | 194 | 2.0 | 2.8 | 1.8 |
|                                   |           |              |            |       | 4  | 138 | 2.5 | 2.5 | 89  | 3.5 | 2.9 | 3 | 31  | 5.2  | 10.8 | 3.8 | 86  | 3.0 | 4.2 | 2.7 |
|                                   |           |              |            |       | 6  | 61  | 3.8 | 3.8 | 40  | 5.2 | 4.4 | 4 | 17  | 6.9  | 14.4 | 5.0 | 49  | 4.0 | 5.6 | 3.6 |
|                                   |           |              |            |       | 8  | 34  | 5.0 | 5.0 | 22  | 7.0 | 5.8 | 5 | 11  | 8.7  | 18.0 | 6.3 | 31  | 5.0 | 7.0 | 4.5 |
| <b>42W MR16 Halogen</b>           | VNSP      | 9°           | 3500       | 12300 | 8  | 192 | 1.3 | 1.3 | 125 | 1.7 | 1.5 | 4 | 96  | 6.9  | 2.6  | 1.3 | 272 | 4.0 | 1.3 | 0.9 |
|                                   |           |              |            |       | 10 | 123 | 1.6 | 1.6 | 80  | 2.1 | 1.8 | 5 | 62  | 8.7  | 3.2  | 1.6 | 174 | 5.0 | 1.6 | 1.1 |
|                                   |           |              |            |       | 12 | 85  | 1.9 | 1.9 | 55  | 2.5 | 2.2 | 6 | 43  | 10.4 | 3.8  | 1.9 | 121 | 6.0 | 1.9 | 1.3 |
|                                   |           |              |            |       | 14 | 63  | 2.2 | 2.2 | 41  | 2.9 | 2.5 | 7 | 31  | 12.1 | 4.5  | 2.2 | 89  | 7.0 | 2.2 | 1.6 |
| <b>50W MR16 Halogen</b>           | NSP       | 15°          | 6000       | 9100  | 6  | 253 | 1.6 | 1.6 | 164 | 2.1 | 1.8 | 3 | 126 | 5.2  | 3.3  | 1.6 | 357 | 3.0 | 1.6 | 1.1 |
|                                   |           |              |            |       | 8  | 142 | 2.1 | 2.1 | 92  | 2.8 | 2.4 | 4 | 71  | 6.9  | 4.4  | 2.1 | 201 | 4.0 | 2.1 | 1.5 |
|                                   |           |              |            |       | 10 | 91  | 2.6 | 2.6 | 59  | 3.5 | 3.0 | 5 | 46  | 8.7  | 5.6  | 2.6 | 129 | 5.0 | 2.7 | 1.9 |
|                                   |           |              |            |       | 12 | 63  | 3.2 | 3.2 | 41  | 4.2 | 3.6 | 6 | 32  | 10.4 | 6.7  | 3.2 | 89  | 6.0 | 3.2 | 2.2 |
|                                   | NFL       | 25°          | 6000       | 3200  | 4  | 200 | 1.8 | 1.8 | 130 | 2.4 | 2.0 | 2 | 100 | 3.5  | 4.2  | 1.8 | 283 | 2.0 | 1.9 | 1.3 |
|                                   |           |              |            |       | 6  | 89  | 2.7 | 2.7 | 58  | 3.6 | 3.1 | 3 | 44  | 5.2  | 6.2  | 2.7 | 126 | 3.0 | 2.8 | 1.9 |
|                                   |           |              |            |       | 8  | 50  | 3.5 | 3.5 | 32  | 4.8 | 4.1 | 4 | 25  | 6.9  | 8.3  | 3.5 | 71  | 4.0 | 3.7 | 2.5 |
|                                   |           |              |            |       | 10 | 32  | 4.4 | 4.4 | 21  | 6.0 | 5.1 | 5 | 16  | 8.7  | 10.4 | 4.4 | 45  | 5.0 | 4.7 | 3.1 |
|                                   | FL        | 40°          | 6000       | 1700  | 3  | 189 | 2.2 | 2.2 | 123 | 3.0 | 2.5 | 2 | 53  | 3.5  | 9.7  | 2.9 | 150 | 2.0 | 3.4 | 2.1 |
|                                   |           |              |            |       | 4  | 106 | 2.9 | 2.9 | 69  | 4.1 | 3.4 | 3 | 24  | 5.2  | 14.5 | 4.4 | 67  | 3.0 | 5.0 | 3.1 |
|                                   |           |              |            |       | 6  | 47  | 4.4 | 4.4 | 31  | 6.1 | 5.0 | 4 | 13  | 6.9  | 19.3 | 5.8 | 38  | 4.0 | 6.7 | 4.1 |
|                                   |           |              |            |       | 8  | 27  | 5.8 | 5.8 | 17  | 8.1 | 6.7 | 5 | 9   | 8.7  | 24.2 | 7.3 | 24  | 5.0 | 8.4 | 5.1 |
| <b>50W MR16 Halogen IR Lensed</b> | SP        | 10°          | 5000       | 15000 | 6  | 417 | 1.0 | 1.0 | 217 | 1.4 | 1.2 | 3 | 208 | 5.2  | 2.1  | 1.0 | 589 | 3.0 | 1.1 | 0.7 |
|                                   |           |              |            |       | 8  | 234 | 1.4 | 1.4 | 152 | 1.9 | 1.6 | 4 | 117 | 6.9  | 2.9  | 1.4 | 331 | 4.0 | 1.4 | 1.0 |
|                                   |           |              |            |       | 10 | 150 | 1.7 | 1.7 | 97  | 2.3 | 2.0 | 5 | 75  | 8.7  | 3.6  | 1.7 | 212 | 5.0 | 1.8 | 1.2 |
|                                   |           |              |            |       | 12 | 104 | 2.1 | 2.1 | 68  | 2.8 | 2.4 | 6 | 52  | 10.4 | 4.3  | 2.1 | 147 | 6.0 | 2.1 | 1.5 |
|                                   | NFL       | 25°          | 5000       | 5700  | 4  | 356 | 1.8 | 1.8 | 231 | 2.1 | 2.0 | 2 | 178 | 3.5  | 4.2  | 1.8 | 504 | 2.0 | 1.9 | 1.3 |
|                                   |           |              |            |       | 6  | 158 | 2.7 | 2.7 | 103 | 3.6 | 3.1 | 3 | 79  | 5.2  | 6.2  | 2.7 | 224 | 3.0 | 2.8 | 1.9 |
|                                   |           |              |            |       | 8  | 89  | 3.5 | 3.5 | 58  | 4.8 | 4.1 | 4 | 45  | 6.9  | 8.3  | 3.5 | 126 | 4.0 | 3.7 | 2.5 |
|                                   |           |              |            |       | 10 | 57  | 4.4 | 4.4 | 37  | 6.0 | 5.1 | 5 | 29  | 8.7  | 10.4 | 4.4 | 81  | 5.0 | 4.7 | 3.1 |
|                                   | FL        | 35°          | 5000       | 2850  | 3  | 317 | 1.9 | 1.9 | 206 | 2.6 | 2.2 | 2 | 89  | 3.5  | 7.2  | 2.5 | 252 | 2.0 | 2.8 | 1.8 |
|                                   |           |              |            |       | 4  | 178 | 2.5 | 2.5 | 116 | 3.5 | 2.9 | 3 | 40  | 5.2  | 10.8 | 3.8 | 112 | 3.0 | 4.2 | 2.7 |
|                                   |           |              |            |       | 6  | 79  | 3.8 | 3.8 | 51  | 5.2 | 4.4 | 4 | 22  | 6.9  | 14.4 | 5.0 | 63  | 4.0 | 5.6 | 3.6 |
|                                   |           |              |            |       | 8  | 45  | 5.0 | 5.0 | 29  | 7.0 | 5.8 | 5 | 14  | 8.7  | 18.0 | 6.3 | 40  | 5.0 | 7.0 | 4.5 |
| <b>71W MR16 Halogen</b>           | SP        | 15°          | 4000       | 11500 | 6  | 319 | 1.6 | 1.6 | 207 | 2.1 | 1.8 | 3 | 160 | 5.2  | 3.3  | 1.6 | 452 | 3.0 | 1.6 | 1.1 |
|                                   |           |              |            |       | 8  | 180 | 2.1 | 2.1 | 117 | 2.8 | 2.4 | 4 | 90  | 6.9  | 4.4  | 2.1 | 254 | 4.0 | 2.1 | 1.5 |
|                                   |           |              |            |       | 10 | 115 | 2.6 | 2.6 | 75  | 3.5 | 3.0 | 5 | 58  | 8.7  | 5.6  | 2.6 | 163 | 5.0 | 2.7 | 1.9 |
|                                   |           |              |            |       | 12 | 80  | 3.2 | 3.2 | 52  | 4.2 | 3.6 | 6 | 40  | 10.4 | 6.7  | 3.2 | 113 | 6.0 | 3.2 | 2.2 |
|                                   | NFL       | 25°          | 4000       | 5500  | 4  | 344 | 1.8 | 1.8 | 223 | 2.4 | 2.0 | 2 | 172 | 3.5  | 4.2  | 1.8 | 486 | 2.0 | 1.9 | 1.3 |
|                                   |           |              |            |       | 6  | 153 | 2.7 | 2.7 | 99  | 3.6 | 3.1 | 3 | 76  | 5.2  | 6.2  | 2.7 | 216 | 3.0 | 2.8 | 1.9 |
|                                   |           |              |            |       | 8  | 86  | 3.5 | 3.5 | 56  | 4.8 | 4.1 | 4 | 43  | 6.9  | 8.3  | 3.5 | 122 | 4.0 | 3.7 | 2.5 |
|                                   |           |              |            |       | 10 | 55  | 4.4 | 4.4 | 36  | 6.0 | 5.1 | 5 | 28  | 8.7  | 10.4 | 4.4 | 78  | 5.0 | 4.7 | 3.1 |
|                                   | FL        | 40°          | 4000       | 2200  | 3  | 244 | 2.2 | 2.2 | 159 | 3.0 | 2.5 | 2 | 69  | 3.5  | 9.7  | 2.9 | 194 | 2.0 | 3.4 | 2.1 |
|                                   |           |              |            |       | 4  | 138 | 2.9 | 2.9 | 89  | 4.1 | 3.4 | 3 | 31  | 5.2  | 14.5 | 4.4 | 86  | 3.0 | 5.0 | 3.1 |
|                                   |           |              |            |       | 6  | 61  | 4.4 | 4.4 | 40  | 6.1 | 5.0 | 4 | 17  | 6.9  | 19.3 | 5.8 | 49  | 4.0 | 6.7 | 4.1 |
|                                   |           |              |            |       | 8  | 34  | 5.8 | 5.8 | 22  | 8.1 | 6.7 | 5 | 11  | 8.7  | 24.2 | 7.3 | 31  | 5.0 | 8.4 | 5.1 |

The beam spread in degrees and the beam "L" and "W" in the following tables are computed at 50% of centerbeam candlepower and represent areas of "effective illumination."



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