



## PRODUCT DESCRIPTION

Recessed MR16 downlight luminaire with 3 1/4" Alzak deep cone aperture. Fixture has 50° visual cutoff to lamp and lamp image. Sealed Air-Loc housing eliminates leak-paths to ensure maximum energy savings and controls plenum sound transmission. IC rated housing for use in direct contact with insulation.

## PRODUCT SPECIFICATIONS

**Reflector** .040" aluminum parabolic reflector in clear, gold, black, haze, or wheat haze Alzak finish provides 50° lamp and lamp image cut-off.

**Trims Style** Self Flanged and Flush Mount reflectors utilize torsion spring retention for tight, secure fit to ceiling • Trim ring features beveled knife edge for clean ceiling interface • Self Flanged reflectors with polished or optional white painted flange • 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 clear uniformity lens.

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

**Lamp** One 50W MR16 lamp.

**Transformer** 120V 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.

**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 direct contact with insulation, through-branch wiring, damp locations • Meets energy code Air Leakage requirements per ASTM E283 • Product thermally protected • Union made.

**Proprietary Bar Hanger System** Patent pending Pro-VI™, telescoping bar hanger system with locking set screws, permits quick placement of housing within 24" O.C. joists or suspended ceilings • Robust bar eliminates flexing regardless of fixture position • Integral T-bar notch with locking tabs secures housing to suspended ceiling grid • Captive bugle-headed ring shank nail for quick one-step installation • Bar Hanger foot aligns to bottom of construction joist and breaks away for use in suspended ceilings.

**Junction Box** Rated for 4 No. 12 AWG 90° C through branch circuit conductors and includes (6) 1/2", (1) 3/4", and (4) Non-metallic sheathed cable knock-outs • Push-in electrical connectors for field connections.

**Housing/Mounting Frame** Steel plaster frame and aluminum housing painted black 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 DOWNLIGHT

## 3-1/4" OPEN APERTURE

### IC Rated, 50W MR16

### IC43N, 437N TRIM

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

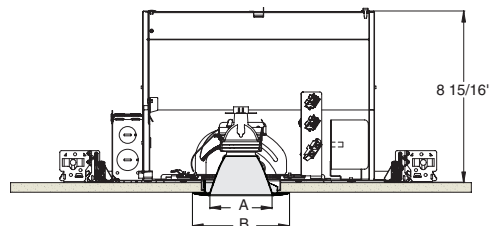
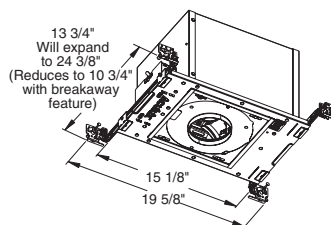
Fixture Type: \_\_\_\_\_

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

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



## DIMENSIONS



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

|              | A      | B      |
|--------------|--------|--------|
| Trim Ring    | 3 1/4" | 5"     |
| Self Flanged | 3 3/8" | 4 5/8" |
| Flush Mount  | 3 3/8" | 3 7/8" |

# RECESSED DOWNLIGHT

3-1/4" OPEN APERTURE

IC Rated, 50W MR16

**IC43N, 437N TRIM**

## Housings

| Catalog #       | Description                                       |
|-----------------|---|
| <b>IC43N</b>    | Low Voltage Recessed Magnetic Transformer, 120V   |
| <b>IC43N-E1</b> | Low Voltage Recessed Electronic Transformer, 120V |

## Deep Downlight Cone



| Trim Ring <sup>1</sup> | Self Flanged <sup>2</sup> | Flush Mount <sup>3</sup> | Description                 |
|------------------------|---------------------------|--------------------------|-----------------------------|
| <b>437NB-WH</b>        | <b>437NB-SF</b>           | <b>437NB-FM</b>          | Black Cone                  |
| <b>437NC-WH</b>        | <b>437NC-SF</b>           | <b>437NC-FM</b>          | Clear Cone                  |
| <b>437NG-WH</b>        | <b>437NG-SF</b>           | <b>437NG-FM</b>          | Gold Cone                   |
| <b>437NHZ-WH</b>       | -                         | -                        | Haze Cone, White Ring       |
| <b>437NHZ-SC</b>       | <b>437NHZ-SF</b>          | <b>437NHZ-FM</b>         | Haze Cone                   |
| <b>437NWHZ-WH</b>      | -                         | -                        | Wheat Haze Cone, White Ring |
| <b>437NWHZ-ABZ</b>     | <b>437NWHZ-SF</b>         | <b>437NWHZ-FM</b>        | Wheat Haze Cone             |

<sup>1</sup>Trim Ring Finish: ABZ - Classic Aged Bronze, SC - Satin Chrome, WH - White.

<sup>2</sup>For self flanged reflector with optional white painted flange, replace "SF" suffix with "SFWH".

<sup>3</sup>Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

## Flush Mount Adapters

| FMA4                 | Description  |
|----------------------|--|
| <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     |

To order, specify catalog number.



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**PHOTOMETRIC REPORT**

**Catalog Number:** IC43N (437NC-WH)

**Test Number:** PT12090905

**Total Luminaire Efficiency:** 73.0%

**Luminaire Spacing Criteria:** 0.58

**Luminaire:** Clear specular Alzak® downlight trim. Open aperture.

**Lamps:** One Q50MR16C/FL40, rated at 800 total lumens.

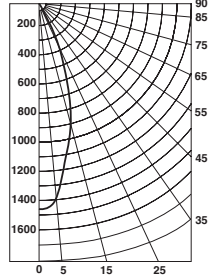
**Initial Footcandles**

| Distance to Illuminated Plane (feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|--------------------------------------|-------------------------|-----------------------|---------------|
| 6'                                   | 41.0                    | 17.6                  | 3.9'          |
| 7'                                   | 30.1                    | 12.9                  | 4.6'          |
| 8'                                   | 23.0                    | 9.9                   | 5.2'          |
| 9'                                   | 18.2                    | 7.8                   | 5.9'          |
| 10'                                  | 14.7                    | 6.3                   | 6.6'          |
| 11'                                  | 12.2                    | 5.2                   | 7.2'          |
| 12'                                  | 10.2                    | 4.4                   | 7.9'          |
| 13'                                  | 8.7                     | 3.8                   | 8.5'          |
| 14'                                  | 7.5                     | 3.2                   | 9.2'          |
| 15'                                  | 6.6                     | 2.8                   | 9.8'          |

**AVERAGE INITIAL FOOTCANDLES**

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

| Luminaire Spacing | Room Cavity Ratio |      |      |
|-------------------|-------------------|------|------|
|                   | RCR1              | RCR3 | RCR5 |
| 4' x 4'           | 41                | 37   | 34   |
| 5' x 5'           | 26                | 24   | 21   |
| 6' x 6'           | 18                | 16   | 15   |
| 7' x 7'           | 15                | 13   | 12   |
| 8' x 8'           | 12                | 11   | 10   |
| 9' x 9'           | 9                 | 8    | 7    |
| 10' x 10'         | 7                 | 6    | 5    |
| 12' x 12'         | 5                 | 4    | 4    |



**Candlepower Distribution (Candelas)**

| Angle | Candela | Lumens |
|-------|---------|--------|
| 0°    | 1475    |        |
| 5°    | 1410    | 135    |
| 15°   | 891     | 253    |
| 25°   | 346     | 160    |
| 35°   | 54      | 34     |
| 45°   | 4       | 3      |
| 55°   | 0       | 0      |
| 65°   | 0       | 0      |
| 75°   | 0       | 0      |
| 85°   | 0       | 0      |

**Luminance Data**

| Ang in Deg | Footlamberts | Candela/M <sup>2</sup> |
|------------|--------------|------------------------|
| 45         | 238          | 816                    |
| 55         | 0            | 0                      |
| 65         | 0            | 0                      |
| 75         | 0            | 0                      |
| 85         | 0            | 0                      |

**Zonal Lumen Summary**

| Zone    | Lumens | %Lamp | %Fixture |
|---------|--------|-------|----------|
| 0-30°   | 547    | 68.4  | 93.7     |
| 0-40°   | 581    | 72.6  | 99.5     |
| 0-60°   | 584    | 73.0  | 100.0    |
| 0-90°   | 584    | 73.0  | 100.0    |
| 90-180° | 0      | 0.0   | 0.0      |
| 0-180°  | 584    | 73.0  | 100.0    |

**COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)**

Effective Floor Reflectance 20%

| PCC | 80 |    | 70 |    | 50 |    | 30 |    | 10 |    | 0  |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|     | PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |    |    |    |    |    |
| 0   | 87 | 87 | 87 | 87 | 85 | 85 | 85 | 85 | 81 | 81 | 81 | 78 | 78 | 78 | 74 | 74 | 74 | 73 |
| 1   | 84 | 82 | 80 | 79 | 82 | 80 | 79 | 78 | 78 | 76 | 75 | 75 | 74 | 73 | 72 | 72 | 71 | 70 |
| 2   | 81 | 78 | 75 | 73 | 79 | 76 | 74 | 72 | 74 | 72 | 71 | 72 | 71 | 69 | 70 | 69 | 68 | 67 |
| 3   | 78 | 74 | 71 | 69 | 76 | 73 | 70 | 68 | 71 | 69 | 67 | 69 | 68 | 66 | 68 | 66 | 65 | 64 |
| 4   | 75 | 70 | 67 | 65 | 74 | 70 | 67 | 64 | 68 | 66 | 64 | 67 | 65 | 63 | 66 | 64 | 62 | 61 |
| 5   | 72 | 67 | 64 | 62 | 71 | 67 | 64 | 61 | 65 | 63 | 61 | 64 | 62 | 60 | 63 | 61 | 60 | 59 |
| 6   | 70 | 64 | 61 | 59 | 69 | 64 | 61 | 58 | 63 | 60 | 58 | 62 | 60 | 58 | 61 | 59 | 57 | 56 |
| 7   | 67 | 62 | 58 | 56 | 66 | 61 | 58 | 56 | 61 | 58 | 56 | 60 | 57 | 55 | 59 | 57 | 55 | 54 |
| 8   | 65 | 59 | 56 | 54 | 64 | 59 | 56 | 54 | 58 | 55 | 53 | 58 | 55 | 53 | 57 | 55 | 53 | 52 |
| 9   | 63 | 57 | 54 | 52 | 62 | 57 | 54 | 52 | 56 | 53 | 51 | 56 | 53 | 51 | 55 | 53 | 51 | 50 |
| 10  | 61 | 55 | 52 | 50 | 60 | 55 | 52 | 50 | 54 | 51 | 49 | 54 | 51 | 49 | 53 | 51 | 49 | 48 |

**PHOTOMETRIC REPORT**

**Catalog Number:** IC43N (437NC-WH)

**Test Number:** PT12090803

**Total Luminaire Efficiency:** 69.3%

**Luminaire Spacing Criteria:** 0.54

**Luminaire:** Clear specular Alzak® downlight trim. Open aperture.

**Lamps:** One 37MR16/IR/FL35/C, rated at 800 total lumens.

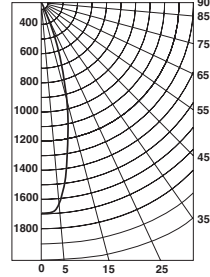
**Initial Footcandles**

| Distance to Illuminated Plane (feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|--------------------------------------|-------------------------|-----------------------|---------------|
| 6'                                   | 47.2                    | 20.8                  | 3.6'          |
| 7'                                   | 34.7                    | 15.3                  | 4.2'          |
| 8'                                   | 26.5                    | 11.7                  | 4.7'          |
| 9'                                   | 21.0                    | 9.3                   | 5.3'          |
| 10'                                  | 17.0                    | 7.5                   | 5.9'          |
| 11'                                  | 14.0                    | 6.2                   | 6.5'          |
| 12'                                  | 11.8                    | 5.2                   | 7.1'          |
| 13'                                  | 10.1                    | 4.4                   | 7.7'          |
| 14'                                  | 8.7                     | 3.8                   | 8.3'          |
| 15'                                  | 7.6                     | 3.3                   | 8.9'          |

**AVERAGE INITIAL FOOTCANDLES**

Reflectances: 80% Ceiling, 50% Walls, 20% Floors

| Luminaire Spacing | Room Cavity Ratio |      |      |
|-------------------|-------------------|------|------|
|                   | RCR1              | RCR3 | RCR5 |
| 4' x 4'           | 39                | 36   | 33   |
| 5' x 5'           | 25                | 23   | 21   |
| 6' x 6'           | 17                | 16   | 15   |
| 7' x 7'           | 14                | 13   | 12   |
| 8' x 8'           | 11                | 10   | 9    |
| 9' x 9'           | 8                 | 8    | 7    |
| 10' x 10'         | 6                 | 6    | 5    |
| 12' x 12'         | 4                 | 4    | 4    |



**Candlepower Distribution (Candelas)**

| Angle | Candela | Lumens |
|-------|---------|--------|
| 0°    | 1699    |        |
| 5°    | 1649    | 157    |
| 15°   | 957     | 271    |
| 25°   | 232     | 107    |
| 35°   | 28      | 18     |
| 45°   | 0       | 0      |
| 55°   | 0       | 0      |
| 65°   | 0       | 0      |
| 75°   | 0       | 0      |
| 85°   | 0       | 0      |

**Luminance Data**

| Ang in Deg | Footlamberts | Candela/M <sup>2</sup> |
|------------|--------------|------------------------|
| 45         | 0            | 0                      |
| 55         | 0            | 0                      |
| 65         | 0            | 0                      |
| 75         | 0            | 0                      |
| 85         | 0            | 0                      |

**Zonal Lumen Summary**

| Zone    | Lumens | %Lamp | %Fixture |
|---------|--------|-------|----------|
| 0-30°   | 536    | 67.0  | 96.8     |
| 0-40°   | 554    | 69.3  | 100.0    |
| 0-60°   | 554    | 69.3  | 100.0    |
| 0-90°   | 554    | 69.3  | 100.0    |
| 90-180° | 0      | 0.0   | 0.0      |
| 0-180°  | 554    | 69.3  | 100.0    |

**COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)**

Effective Floor Reflectance 20%

| PCC | 80 |    | 70 |    | 50 |    | 30 |    | 10 |    | 0  |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|     | PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |    |    |    |    |    |
| 0   | 82 | 82 | 82 | 82 | 81 | 81 | 81 | 81 | 77 | 77 | 77 | 74 | 74 | 74 | 71 | 71 | 71 | 69 |
| 1   | 80 | 78 | 77 | 76 | 78 | 77 | 75 | 74 | 74 | 73 | 72 | 71 | 71 | 70 | 69 | 68 | 68 | 67 |
| 2   | 77 | 74 | 72 | 70 | 75 | 73 | 71 | 70 | 71 | 70 | 68 | 69 | 68 | 67 | 67 | 66 | 65 | 64 |
| 3   | 74 | 71 | 69 | 66 | 73 | 70 | 68 | 66 | 68 | 67 | 65 | 67 | 65 | 64 | 65 | 64 | 63 | 62 |
| 4   | 72 | 68 | 65 | 63 | 71 | 67 | 65 | 63 | 66 | 64 | 62 | 65 | 63 | 61 | 64 | 62 | 61 | 60 |
| 5   | 70 | 66 | 63 | 60 | 69 | 65 | 62 | 60 | 64 | 61 | 60 | 63 | 61 | 59 | 62 | 60 | 59 | 58 |
| 6   | 68 | 63 | 60 | 58 | 67 | 63 | 60 | 58 | 62 | 59 | 57 | 61 | 59 | 57 | 60 | 58 | 57 | 56 |
| 7   | 66 | 61 | 58 | 56 | 65 | 60 | 58 | 56 | 60 | 57 | 55 | 59 | 57 | 55 | 58 | 56 | 55 | 54 |
| 8   | 64 | 59 | 56 | 54 | 63 | 59 | 56 | 54 | 58 | 55 | 54 | 57 | 55 | 53 | 57 | 55 | 53 | 52 |
| 9   | 62 | 57 | 54 | 52 | 61 | 57 | 54 | 52 | 56 | 54 | 52 | 56 | 53 | 52 | 55 | 53 | 52 | 51 |
| 10  | 60 | 55 | 52 | 50 | 59 | 55 | 52 | 50 | 54 | 52 | 50 | 54 | 52 | 50 | 54 | 51 | 50 | 49 |

