



# RECESSED DOWNLIGHT

## 3-1/4" SHOWER LIGHT

### Non-IC Rated, 75W MR16

### TC943N, 432N TRIM

#### PRODUCT DESCRIPTION

Recessed MR16 downlight luminaire with 3 1/4" Alzak deep cone aperture with tempered glass to protect lamp against water. Fixture has 55° 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 parabolic reflector in clear, gold, black, haze, or wheat haze Alzak finish provides 55° lamp and lamp image cut-off.

**Trims Style** Trim Ring, 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 75W MR16 lamp.

**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.

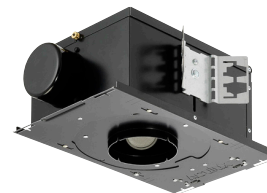
**Ceiling Thickness** 1/2" – 7/8" ceiling standard • For thicker ceilings, order CTA4N-125 (7/8"-1 1/4"), CTA4N-163 (1 1/4"-1 5/8") or CTA4N-200 (1 5/8"- 2") • CTA4N not required for wood, stone, or tile flush mount applications.

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

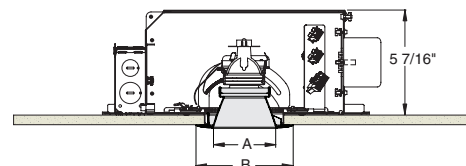
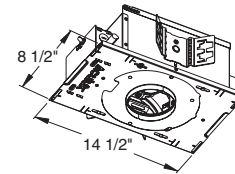
Fixture Type: \_\_\_\_\_

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"

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**TC943N, 432N TRIM**

## Ordering Information

Housing, trim and accessories each ordered separately

Example: **TC943N-V**

Housing	Transformer	Options
<b>TC943N</b>	<b>Blank</b> 120V Magnetic <b>V</b> 277V Magnetic <b>E1</b> 120V Electronic <b>E2</b> 277V Electronic	<b>CP</b> Chicago Plenum

Example: **432NC-WH**

Trim/Description			
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Trim Ring <sup>1</sup>	Self Flanged <sup>2</sup>	Flush Mount <sup>3</sup>	Description
<b>432NB-WH</b>	<b>432NB-SF</b>	<b>432NB-FM</b>	Black Cone
<b>432NC-WH</b>	<b>432NC-SF</b>	<b>432NC-FM</b>	Clear Cone
<b>432NG-WH</b>	<b>432NG-SF</b>	<b>432NG-FM</b>	Gold Cone
<b>432NHZ-SC</b>	-	-	Haze Cone
<b>432NHZ-WH</b>	<b>432NHZ-SF</b>	<b>432NHZ-FM</b>	Haze Cone, White Ring
<b>432NWHZ-ABZ</b>	-	-	Wheat Haze Cone
<b>432NWHZ-WH</b>	<b>432NWHZ-SF</b>	<b>432NWHZ-FM</b>	Wheat Haze Cone, White Ring

<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
<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.



**PHOTOMETRIC REPORT**

Catalog Number: TC943N (432NC-WH)

Test Number: PT12091504

Total Luminaire Efficiency: 69.4%

Luminaire Spacing Criteria: 0.53

Luminaire: Clear specular Alzak® lensed shower trim.

Lamps: One 50MR16/1R/FL35/C, rated at 1200 total lumens.

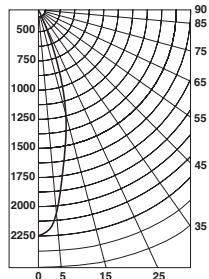
**Initial Footcandles**

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	62.5	27.6	3.5'
7'	45.9	20.3	4.1'
8'	35.1	15.5	4.7'
9'	27.8	12.3	5.3'
10'	22.5	9.9	5.9'
11'	18.6	8.2	6.5'
12'	15.6	6.9	7.1'
13'	13.3	5.9	7.7'
14'	11.5	5.1	8.2'
15'	10.0	4.4	8.8'

**AVERAGE INITIAL FOOTCANDLES**

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	59	53	47
5' x 5'	37	34	30
6' x 6'	26	23	21
7' x 7'	21	19	17
8' x 8'	17	15	13
9' x 9'	13	11	10
10' x 10'	9	8	8
12' x 12'	7	6	5



**Candlepower Distribution (Candelas)**

Angle	Candela	Lumens
0°	2249	
5°	2095	200
15°	1221	346
25°	422	196
35°	89	56
45°	30	23
55°	13	11
65°	0	0
75°	0	0
85°	0	0

**Luminance Data**

Ang in Deg	Footlamberts	Candela/M <sup>2</sup>
45	2010	6888
55	1028	3522
65	0	0
75	0	0
85	0	0

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fixture
0-30°	742	61.8	89.1
0-40°	798	66.5	95.8
0-60°	832	69.4	100.0
0-90°	832	69.4	100.0
90-180°	0	0.0	0.0
0-180°	832	69.4	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	83	83	83	83	81	81	81	81	77	77	77	74	74	74	71	71	71	69
1	79	78	76	75	78	76	75	74	74	72	72	71	70	69	69	68	67	66
2	76	74	70	69	75	72	70	68	70	68	67	68	67	66	66	65	64	63
3	73	70	67	65	72	69	66	64	67	65	63	65	64	62	64	62	61	60
4	71	66	63	61	69	66	63	60	64	62	60	63	61	59	62	60	58	58
5	68	63	60	58	67	63	60	57	62	59	57	60	58	56	59	57	56	55
6	66	61	57	55	65	60	57	55	59	56	54	58	56	54	57	55	54	53
7	63	58	55	52	62	58	54	52	57	54	52	56	54	52	55	53	51	51
8	61	56	52	50	60	55	52	50	55	52	50	54	51	50	53	51	49	49
9	59	54	50	48	58	53	50	48	53	50	48	52	50	48	52	49	48	47
10	57	52	48	46	56	51	48	46	51	48	46	50	48	46	50	48	46	45

**PHOTOMETRIC REPORT**

Catalog Number: TC943N (432NC-WH)

Test Number: PT12091602

Total Luminaire Efficiency: 69.8%

Luminaire Spacing Criteria: 0.56

Luminaire: Clear specular Alzak® lensed shower trim.

Lamps: One Q71MR16C/FL40, rated at 1200 total lumens.

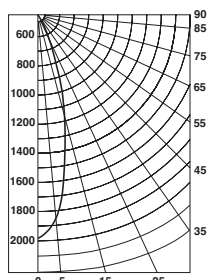
**Initial Footcandles**

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	55.0	23.7	3.9'
7'	40.4	17.4	4.5'
8'	30.9	13.3	5.2'
9'	24.4	10.5	5.8'
10'	19.8	8.5	6.5'
11'	16.3	7.0	7.1'
12'	13.7	5.9	7.8'
13'	11.7	5.0	8.4'
14'	10.1	4.3	9.1'
15'	8.8	3.8	9.7'

**AVERAGE INITIAL FOOTCANDLES**

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	59	53	47
5' x 5'	37	34	30
6' x 6'	26	23	21
7' x 7'	21	19	17
8' x 8'	17	15	13
9' x 9'	13	11	10
10' x 10'	9	8	8
12' x 12'	7	6	5



**Candlepower Distribution (Candelas)**

Angle	Candela	Lumens
0°	1978	
5°	1846	176
15°	1142	324
25°	497	230
35°	110	69
45°	36	28
55°	12	10
65°	0	0
75°	0	0
85°	0	0

**Luminance Data**

Ang in Deg	Footlamberts	Candela/M <sup>2</sup>
45	2382	8160
55	959	3285
65	0	0
75	0	0
85	0	0

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fixture
0-30°	730	60.8	87.2
0-40°	799	66.6	95.4
0-60°	838	69.8	100.0
0-90°	838	69.8	100.0
90-180°	0	0.0	0.0
0-180°	838	69.8	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	83	83	83	83	81	81	81	81	78	78	78	74	74	74	71	71	71	70
1	80	78	77	75	78	77	75	74	74	73	72	71	70	70	69	68	68	66
2	77	74	71	69	75	72	70	68	70	68	67	68	67	65	66	65	64	63
3	73	70	67	64	72	69	66	64	67	65	63	65	63	62	64	62	61	60
4	71	66	63	60	69	65	62	60	64	61	59	63	60	59	61	59	58	57
5	68	63	59	57	67	62	59	57	61	58	56	60	57	56	59	57	55	54
6	65	60	56	54	64	59	56	54	58	55	53	57	55	53	57	54	53	52
7	63	57	54	51	62	57	53	51	56	53	51	55	53	51	54	52	50	49
8	60	55	51	49	60	54	51	49	54	51	49	53	50	48	52	50	48	47
9	58	52	49	47	57	52	49	47	52	49	46	51	48	46	50	48	46	45
10	56	50	47	45	55	50	47	45	50	47	45	49	46	44	49	46	44	44

