



PRODUCT DESCRIPTION

Recessed MR16 downlight luminaire with 3 1/4" Alzak deep cone aperture. Fixture 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 parabolic reflector in clear, gold, black, haze, or wheat haze Alzak finish provides 50° 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, damp 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 DOWNLIGHT

3-1/4" OPEN APERTURE

Non-IC Rated, 75W MR16

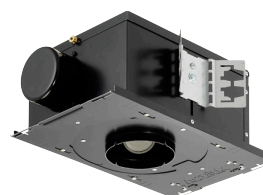
TC943N, 437N TRIM

Project: _____

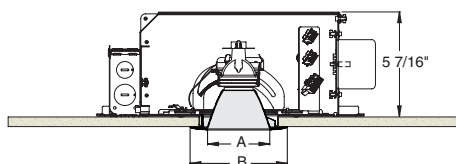
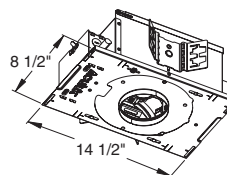
Fixture Type: _____

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

Non-IC Rated, 75W MR16

TC943N, 437N TRIM

Ordering Information

Housing, trim and accessories each ordered separately

Example: **TC943N-V**

Housing	Transformer	Options
TC943N	Blank 120V Magnetic V 277V Magnetic E1 120V Electronic E2 277V Electronic	CP Chicago Plenum

Example: **437NC-WH**

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

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

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

³Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

Flush Mount Adapters

FMA#	Description
FMA4-SC087-WH	Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, White
FMA4-SC087-BL	Wood, Stone, Tile, 1/2"-7/8" Thick Ceiling, Adapter, Black
FMA4-SC125-WH	Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, White
FMA4-SC125-BL	Wood, Stone, Tile, 7/8"-1 1/4" Thick Ceiling, Adapter, Black
FMA4-SC163-WH	Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, White
FMA4-SC163-BL	Wood, Stone, Tile, 1 1/4"-1 5/8" Thick Ceiling, Adapter, Black

Optical Accessories

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

Misc. Accessories

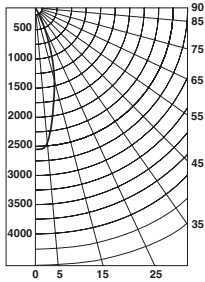
CTA4N-125	1 1/4" Thick Ceiling Adapter
CTA4N-163	1 5/8" Thick Ceiling Adapter
CTA4N-200	2" Thick Ceiling Adapter
HB-1	(2) Real Nail 3 Bar Hangers
HB-26	(2) 26" C-Channel Bar Hangers
HB-50	(2) 50" C-Channel Bar Hangers
LB-27	(2) 27" Linear Bar Hangers

To order, specify catalog number.



PHOTOMETRIC REPORT

Catalog Number: TC943N (437NC-WH)
Test Number: PT12091503
Total Luminaire Efficiency: 70.0%
Luminaire Spacing Criteria: 0.53
Luminaire: Clear specular Alzak® downlight trim. Open aperture
Lamps: One 50MR16/1R/FL35/C, rated at 1200 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	2541	
5°	2466	235
15°	1392	395
25°	390	181
35°	44	27
45°	3	2
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	70.6	31.2	3.5'
7'	51.9	23.0	4.1'
8'	39.7	17.6	4.7'
9'	31.4	13.9	5.3'
10'	25.4	11.2	5.8'
11'	21.0	9.3	6.4'
12'	17.6	7.8	7.0'
13'	15.0	6.7	7.6'
14'	13.0	5.7	8.2'
15'	11.3	5.0	8.8'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	173	594
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	811	67.5	96.5
0-40°	838	69.8	99.8
0-60°	840	70.0	100.0
0-90°	840	70.0	100.0
90-180°	0	0.0	0.0
0-180°	840	70.0	100.0

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	59	54	50
5' x 5'	38	35	32
6' x 6'	26	24	22
7' x 7'	21	19	18
8' x 8'	17	15	14
9' x 9'	13	12	11
10' x 10'	9	9	8
12' x 12'	7	6	6

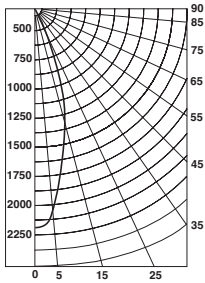
COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80		70		50		30		10		0							
PW	70	50	30	10	70	50	30	10	50	30	10	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	79	78	76	79	77	76	75	75	74	73	72	71	71	70	69	69	67
2	78	75	73	71	76	74	72	70	72	70	69	70	68	67	68	67	66	65
3	75	72	69	67	74	71	68	66	69	67	65	67	66	64	66	65	63	63
4	73	69	66	64	71	68	65	63	67	64	63	65	63	62	64	62	61	60
5	70	66	63	61	69	65	63	60	64	62	60	63	61	59	62	60	59	58
6	68	63	60	58	67	63	60	58	62	60	58	61	59	57	60	58	57	56
7	66	61	58	56	65	61	58	56	60	57	56	59	57	55	59	57	55	54
8	64	59	56	54	63	59	56	54	58	56	54	57	55	53	57	55	53	53
9	62	57	54	52	61	57	54	52	56	54	52	56	53	52	55	53	52	51
10	60	55	52	50	60	55	52	50	55	52	50	54	52	50	54	52	50	49

PHOTOMETRIC REPORT

Catalog Number: TC943N (437NC-WH)
Test Number: PT12091601
Total Luminaire Efficiency: 70.7%
Luminaire Spacing Criteria: 0.57
Luminaire: Clear specular Alzak® downlight trim. Open aperture
Lamps: One Q71MR16C/FL40, rated at 1200 total lumens.



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	2214	
5°	2110	201
15°	1311	372
25°	496	230
35°	66	41
45°	6	5
55°	0	0
65°	0	0
75°	0	0
85°	0	0

Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	61.5	26.4	3.9'
7'	45.2	19.4	4.6'
8'	34.6	14.9	5.2'
9'	27.3	11.7	5.9'
10'	22.1	9.5	6.5'
11'	18.3	7.9	7.2'
12'	15.4	6.6	7.8'
13'	13.1	5.6	8.5'
14'	11.3	4.9	9.2'
15'	9.8	4.2	9.8'

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	395	1355
55	0	0
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	803	66.9	94.6
0-40°	844	70.3	99.5
0-60°	849	70.7	100.0
0-90°	849	70.7	100.0
90-180°	0	0.0	0.0
0-180°	849	70.7	100.0

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	59	54	49
5' x 5'	38	35	31
6' x 6'	26	24	22
7' x 7'	21	19	18
8' x 8'	17	15	14
9' x 9'	13	12	11
10' x 10'	9	9	8
12' x 12'	7	6	5

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	50	30	10	0			
0	84	84	84	84	82	82	82	82	79	79	79	75	75	75	72	72	72	71
1	81	79	78	77	79	78	77	76	75	74	73	73	72	71	70	70	69	68
2	78	75	73	71	77	74	72	70	72	70	69	70	69	67	68	67	66	65
3	75	72	69	67	74	71	68	66	69	67	65	67	66	64	66	64	63	62
4	73	68	65	63	71	68	65	63	66	64	62	65	63	61	64	62	61	60
5	70	65	62	60	69	65	62	60	64	61	59	63	60	59	62	60	58	57
6	68	63	59	57	67	62	59	57	61	59	57	60	58	56	60	57	56	55
7	65	60	57	55	65	60	57	55	59	56	54	58	56	54	58	55	54	53
8	63	58	55	52	62	58	55	52	57	54	52	56	54	52	56	53	52	51
9	61	56	53	50	60	56	52	50	55	52	50	54	52	50	54	52	50	49
10	59	54	51	49	59	54	51	48	53	50	48	53	50	48	52	50	48	47

