



RECESSED DOWNLIGHT

3-1/4" SHOWER LIGHT

Non-IC Rated 20W, 39W CMH MR16

TC943M, 432N TRIM

PRODUCT DESCRIPTION

Recessed metal halide MR16 downlight luminaire with 3/4" Alzak deep cone aperture with tempered glass to protect lamp against water. 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.

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 two (2) 2" captive accessory lenses.

Socket GX10 twist lock socket with quick disconnect for simplified maintenance.

Lamp One 20W or 39W CMH MR16 lamp.

Ballast High Power Factor, electronic solid state ballast with less than 10% THD • Features transient and short circuit protection • Available in 120V or 277V.

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.

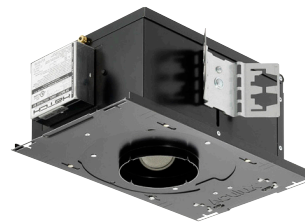
Ceiling Thickness 1/2" - 7/8" ceiling standard • For thicker ceilings, order CTA4N-125 (7/8"-1 1/4"), CTA4N-163 (1 1/4"-1 5/8") or CTA4N-200 (1 5/8"- 2") • CTA4N not required for wood, stone, or tile flush mount applications.

Project: _____

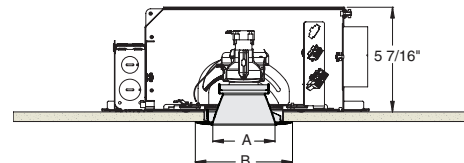
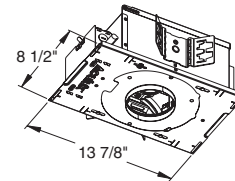
Fixture Type: _____

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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TC943M, 432N TRIM

Ordering Information

Housing, trim and accessories each ordered separately

Example: **TC943M-MR16-20E1**

Housing	Wattage	Voltage	Options
TC943M-MR16	20 20W 39 39W	E1 120V E2 277V	CP Chicago Plenum

Example: **432NC-WH**

Trim/Description



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

FMA4	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: TC943M (432NC-WH)

Test Number: PT12090204

Total Luminaire Efficiency: 82.4%

Luminaire Spacing Criteria: 0.44

Luminaire: Clear specular Alzak® lensed shower light trim.

Lamps: One CMH39/MR16/930/FL, rated at 2200 total lumens.

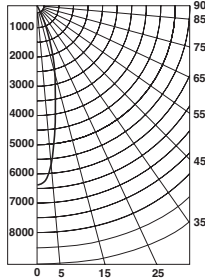
Initial Footcandles

Distance to Illuminated Plane (feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	179.3	83.6	2.6'
7'	131.7	61.4	3.1'
8'	100.8	47.0	3.5'
9'	79.7	37.2	3.9'
10'	64.5	30.1	4.4'
11'	53.3	24.9	4.8'
12'	44.8	20.9	5.2'
13'	38.2	17.8	5.7'
14'	32.9	15.4	6.1'
15'	28.7	13.4	6.5'

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	128	116	106
5' x 5'	82	74	68
6' x 6'	57	51	47
7' x 7'	46	42	38
8' x 8'	36	33	30
9' x 9'	28	25	23
10' x 10'	20	18	17
12' x 12'	14	13	12



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	6454	
5°	5771	551
15°	2597	736
25°	730	338
35°	192	121
45°	66	51
55°	19	17
65°	0	0
75°	0	0
85°	0	0

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	4420	15144
55	1545	5292
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	1625	73.8	89.6
0-40°	1745	79.3	96.2
0-60°	1814	82.4	100.0
0-90°	1814	82.4	100.0
90-180°	0	0.0	0.0
0-180°	1814	82.4	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	98	98	98	98	96	96	96	96	92	92	92	88	88	88	84	84	84	82
1	95	93	91	90	93	91	89	88	88	86	85	85	84	83	82	81	81	79
2	91	88	85	83	89	87	84	82	84	82	80	82	80	79	79	78	77	76
3	88	84	80	78	86	83	80	77	81	78	76	79	77	75	77	75	74	73
4	85	80	76	74	83	79	76	73	77	75	72	76	74	72	74	72	71	70
5	82	77	73	70	81	76	72	70	74	72	69	73	71	69	72	70	68	67
6	79	74	70	67	78	73	69	67	72	69	66	71	68	66	70	67	66	65
7	77	71	67	64	76	70	67	64	69	66	64	68	66	64	68	65	63	62
8	74	68	65	62	73	68	64	62	67	64	62	66	63	61	66	63	61	60
9	72	66	62	60	71	66	62	60	65	62	59	64	61	59	64	61	59	58
10	70	64	60	58	69	63	60	58	63	60	58	62	59	57	62	59	57	56

PHOTOMETRIC REPORT

Catalog Number: TC943M (432NC-WH)

Test Number: PT12090304

Total Luminaire Efficiency: 78.3%

Luminaire Spacing Criteria: 0.6

Luminaire: Clear specular Alzak® lensed shower light trim.

Lamps: One CMH39/MR16/930/WFL, rated at 2200 total lumens.

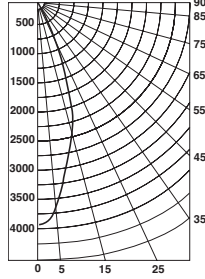
Initial Footcandles

Distance to Illuminated Plane (feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	109.3	46.2	4.1'
7'	80.3	33.9	4.8'
8'	61.5	26.0	5.5'
9'	48.6	20.5	6.2'
10'	39.4	16.6	6.9'
11'	32.5	13.7	7.6'
12'	27.3	11.5	8.3'
13'	23.3	9.8	9.0'
14'	20.1	8.5	9.7'
15'	17.5	7.4	10.4'

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	121	107	96
5' x 5'	77	69	62
6' x 6'	54	48	43
7' x 7'	44	39	35
8' x 8'	34	31	27
9' x 9'	26	23	21
10' x 10'	19	17	15
12' x 12'	13	12	11



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	3936	
5°	3679	351
15°	2457	696
25°	979	453
35°	230	145
45°	73	57
55°	23	20
65°	0	0
75°	0	0
85°	0	0

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	4876	16705
55	1849	6335
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	1501	68.2	87.1
0-40°	1645	74.8	95.5
0-60°	1722	78.3	100.0
0-90°	1722	78.3	100.0
90-180°	0	0.0	0.0
0-180°	1722	78.3	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	93	93	93	93	91	91	91	87	87	87	83	83	83	80	80	80	78	
1	90	88	86	84	88	86	84	83	83	82	81	80	79	78	77	77	76	75
2	86	83	80	78	84	81	79	77	79	77	75	77	75	73	74	73	72	71
3	82	78	75	72	81	77	74	72	75	73	70	73	71	69	72	70	68	67
4	79	74	70	68	78	73	70	67	72	69	66	70	68	66	69	67	65	64
5	76	70	67	64	75	70	66	63	68	65	63	67	65	62	66	64	62	61
6	73	67	63	60	72	67	63	60	65	62	60	64	62	59	64	61	59	58
7	70	64	60	57	69	64	60	57	63	59	57	62	59	57	61	58	56	56
8	68	61	57	55	67	61	57	55	60	57	54	59	56	54	59	56	54	53
9	65	59	55	52	64	59	55	52	58	54	52	57	54	52	57	54	52	51
10	63	57	53	50	62	56	53	50	56	52	50	55	52	50	55	52	50	49

