



# RECESSED REMODEL DOWNLIGHT

3-1/4" OPEN APERTURE

TC Rated, 50W MR16

**TC43NR, 437N TRIM**

## PRODUCT DESCRIPTION

Recessed MR16 remodel luminaire with 3/4" Alzak deep cone aperture. Fixture has 50° visual cutoff to lamp and lamp image. Low profile TC housing is for use in non-insulated areas, or where insulation is spaced at least 3" from housing. Installs quickly and securely with patented (US Patent 7,191,993) push-pull cable system through ceiling opening.

## 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** Trims utilize torsion spring retention for tight, secure fit to ceiling • Trim ring features beveled knife edge for clean ceiling interface • Not recommended with Self Flanged trims.

**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 and aluminum heat shield.

**Lamp** One 50W MR16 lamp.

**Transformer** 120 V thermally protected magnetic transformer is serviceable from below ceiling • High efficiency (>95%), 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 through branch wiring, damp locations • Product thermally protected • Union made.

**Patented (US Patent 7,191,993) "Push-Pull" Cable System** Allows rapid installation without tools or loose parts • Template included for accurate ceiling cutout • Housing accommodates ceiling thickness from 3/8" to 2" without altering photometrics • Fits 2 x 6 construction.

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

**Housing/Mounting Frame** Galvanized steel plaster frame. Housing painted black for visually dark interior • Packaged for ease of rapid installation.

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

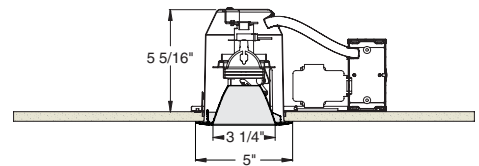
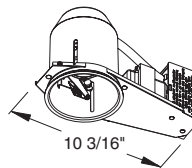
Fixture Type: \_\_\_\_\_

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

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



## DIMENSIONS



4 7/16" CEILING CUTOUT

## Housings

Catalog #	Description
TC43NR	Low Voltage Recessed Magnetic Transformer, 120V
TC43NR-E1	Low Voltage Recessed Electronic Transformer, 120V

## 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

To order, specify catalog number.

## Deep Downlight Cone



Trim Ring	Description
437NB-WH	Black Cone
437NC-WH	Clear Cone
437NG-WH	Gold Cone
437NHZ-SC	Haze Cone
437NHZ-WH	Haze Cone, White Ring
437NWHZ-ABZ	Wheat Haze Cone
437NWHZ-WH	Wheat Haze Cone, White Ring

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

**PHOTOMETRIC REPORT**

Catalog Number: TC43NR (437NC-WH)

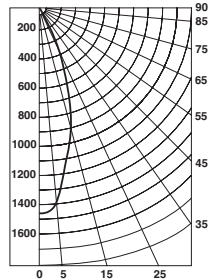
Test Number: PT12090905

Total Luminaire Efficiency: 73.0%

Luminaire Spacing Criteria: 0.58

Luminaire: Clear specular downlight trim. Open aperture.

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



**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

**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'

**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

**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

**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: TC43NR (437NC-WH)

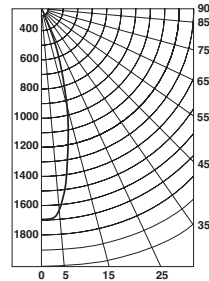
Test Number: PT12090803

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.



**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

**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'

**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

**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

**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

