



RECESSED DOWNLIGHT

3-1/4" OPEN APERTURE

IC Rated, 50W MR16

IC43SQ, 437SQ TRIM

PRODUCT DESCRIPTION

Recessed MR16 downlight luminaire with 3 1/4" square aperture die cast reflector. 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 Die cast, parabolic reflector maintains low glare, tight corners, and 50° lamp and lamp image cut-off • Available in haze, black haze, wheat haze, or white finishes.

Trims Style Self Flanged and Flush Mount reflectors utilize precision wound double torsion springs for tight, secure fit to ceiling • Flange is same finish as reflector unless optional painted white flange is specified • For flush mount installations in drywall ceilings use the FMASQ4 flush mount adapter • For flush mount installations in wood, stone, or tile ceilings the FMASQ4-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 and +/- 45° aperture rotation aids fixture alignment after installation, prior to drywall.

Ceiling Thickness 1/2" – 7/8" ceiling standard • For thicker ceilings, order CTA4SQ-125 (7/8"-1 1/4"), CTA4SQ-163 (1 1/4"-1 5/8") or CTA4SQ-200 (1 5/8" – 2") • CTA4SQ not required for wood, stone, or tile flush mount applications.

Project: _____

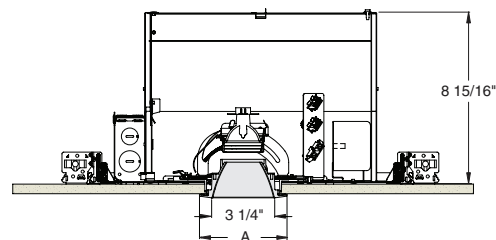
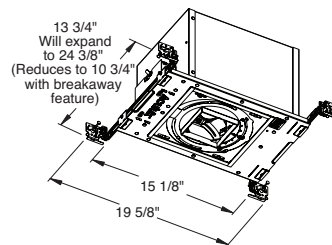
Fixture Type: _____

Location: _____

Contact/Phone: _____



DIMENSIONS



4 1/8" CEILING CUTOUT
(REFER TO INSTRUCTION SHEET FOR
FLUSH MOUNT CEILING CUTOUT)

	A
Self Flanged	4 1/2"
Flush Mount	3 5/8"

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IC43SQ, 437SQ TRIM

Housings

Catalog #	Description
IC43SQ	Low Voltage Recessed Magnetic Transformer, 120V
IC43SQ-E1	Low Voltage Recessed Electronic Transformer, 120V

Deep Downlight Reflector



Self Flanged ¹	Flush Mount ²	Description
437SQBHZ-SF	437SQBHZ-FM	Black Haze Reflector
437SQHZ-SF	437SQHZ-FM	Haze Reflector
437SQW-SF	437SQW-FM	White Reflector
437SQWHZ-SF	437SQWHZ-FM	Wheat Haze Reflector

¹For self flanged reflector with optional white painted flange, replace "SF" suffix with "SFWH".

²Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

Flush Mount Adapters

Cat. #	Description
FMASQ4	Drywall Ceiling Adapter
FMASQ4-SC100-WH	Wood, Stone, Tile, 1/2"-1" Thick Ceiling, Adapter, White
FMASQ4-SC100-BL	Wood, Stone, Tile, 1/2"-1" Thick Ceiling, Adapter, Black
FMASQ4-SC138-WH	Wood, Stone, Tile, 1"-1 3/8" Thick Ceiling, Adapter, White
FMASQ4-SC138-BL	Wood, Stone, Tile, 1"-1 3/8" Thick Ceiling, Adapter, Black
FMASQ4-SC175-WH	Wood, Stone, Tile, 1 3/8"-1 3/4" Thick Ceiling, Adapter, White
FMASQ4-SC175-BL	Wood, Stone, Tile, 1 3/8"-1 3/4" 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

CTA45Q-125	1 1/4" Thick Ceiling Adapter
CTA45Q-163	1 5/8" Thick Ceiling Adapter
CTA45Q-200	2" Thick Ceiling Adapter

To order, specify catalog number.



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PHOTOMETRIC REPORT

Catalog Number: IC43SQ (437SQHZ-SF)

Test Number: PT01102001

Total Luminaire Efficiency: 68.8%

Luminaire Spacing Criteria: 0.52

Luminaire: Haze finish, square downlight trim. Open aperture.

Lamps: One 37MR16/1R/FL35, rated at 800 total lumens.

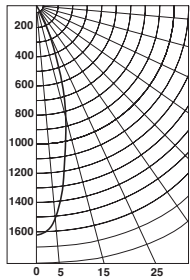
Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	44.7	19.8	3.5'
7'	32.8	14.6	4.0'
8'	25.1	11.1	4.6'
9'	19.9	8.8	5.2'
10'	16.1	7.1	5.8'
11'	13.3	5.9	6.4'
12'	11.2	5.0	6.9'
13'	9.5	4.2	7.5'
14'	8.2	3.6	8.1'
15'	7.2	3.2	8.7'

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	39	35	32
5' x 5'	25	22	20
6' x 6'	17	16	14
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°	1609	
5°	1512	144
15°	866	246
25°	278	129
35°	41	26
45°	6	5
55°	1	1
65°	0	0
75°	0	0
85°	0	0

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	388	1330
55	75	256
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	519	64.8	94.2
0-40°	545	68.1	98.9
0-60°	551	68.8	100.0
0-90°	551	68.8	100.0
90-180°	0	0.0	0.0
0-180°	551	68.8	100.0

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80		70		50		30		10		0							
	PW	70	50	30	10	50	30	10	50	30	10	0						
0	82	82	82	82	80	80	80	80	76	76	76	73	73	73	70	70	70	69
1	79	77	76	75	77	76	75	74	73	72	71	71	70	69	68	68	67	66
2	76	73	71	69	75	72	70	69	70	69	67	68	67	66	66	65	64	63
3	73	70	67	65	72	69	67	65	67	65	64	66	64	63	64	63	62	61
4	71	67	64	62	70	66	63	61	65	63	61	64	62	60	62	61	59	59
5	68	64	61	59	68	64	61	59	62	60	58	61	59	58	60	59	57	56
6	66	62	58	56	65	61	58	56	60	58	56	59	57	55	58	56	55	54
7	64	59	56	54	63	59	56	54	58	55	54	57	55	53	57	55	53	52
8	62	57	54	52	61	57	54	52	56	53	52	55	53	51	55	53	51	50
9	60	55	52	50	59	55	52	50	54	52	50	54	51	50	53	51	49	49
10	58	53	50	48	58	53	50	48	52	50	48	52	50	48	52	49	48	47

PHOTOMETRIC REPORT

Catalog Number: IC43SQ (437SQHZ-SF)

Test Number: PT01102106

Total Luminaire Efficiency: 72.0%

Luminaire Spacing Criteria: 0.63

Luminaire: Haze finish, square downlight trim. Open aperture.

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

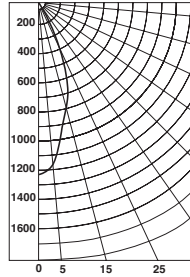
Initial Footcandles

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	34.2	14.0	4.5'
7'	25.1	10.3	5.3'
8'	19.2	7.9	6.1'
9'	15.2	6.2	6.8'
10'	12.3	5.0	7.6'
11'	10.2	4.2	8.3'
12'	8.6	3.5	9.1'
13'	7.3	3.0	9.9'
14'	6.3	2.6	10.6'
15'	5.5	2.2	11.4'

AVERAGE INITIAL FOOTCANDLES

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

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR3	RCR5
4' x 4'	41	36	33
5' x 5'	26	23	21
6' x 6'	18	16	14
7' x 7'	15	13	12
8' x 8'	12	10	9
9' x 9'	9	8	7
10' x 10'	6	6	5
12' x 12'	5	4	4



Candlepower Distribution (Candelas)

Angle	Candela	Lumens
0°	1231	
5°	1168	111
15°	796	226
25°	405	187
35°	67	42
45°	10	8
55°	2	2
65°	0	0
75°	0	0
85°	0	0

Luminance Data

Ang in Deg	Footlamberts	Candela/M ²
45	598	2048
55	151	519
65	0	0
75	0	0
85	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30°	524	65.5	91.0
0-40°	566	70.8	98.4
0-60°	576	72.0	100.0
0-90°	576	72.0	100.0
90-180°	0	0.0	0.0
0-180°	576	72.0	100.0

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method) Effective Floor Reflectance 20%

0	86	86	86	86	84	84	84	84	80	80	80	77	77	77	73	73	73	72
1	82	81	79	78	81	79	78	76	76	75	74	74	73	72	71	70	70	69
2	79	76	74	72	78	75	73	71	73	71	69	71	69	68	69	67	66	65
3	76	72	69	67	75	71	68	66	69	67	65	68	66	64	66	64	63	62
4	73	68	65	63	72	68	65	62	66	64	61	65	63	61	64	62	60	59
5	70	65	62	59	69	64	61	59	63	60	58	62	60	58	61	59	57	56
6	67	62	59	56	66	62	58	56	61	58	55	60	57	55	59	56	55	54
7	65	59	56	53	64	59	55	53	58	55	53	57	55	53	56	54	52	51
8	62	57	53	51	62	56	53	51	56	53	50	55	52	50	54	52	50	49
9	60	54	51	48	59	54	51	48	53	50	48	53	50	48	52	50	48	47
10	58	52	49	46	57	52	49	46	51	48	46	51	48	46	50	48	46	45

