



## PRODUCT DESCRIPTION

Recessed downlight 20W LED luminaire with 3-1/4" square lensed reflector produces up to 850 fixture lumens and approximates the performance of a 75W MR16 lamp. Fixture has 50° visual cutoff and features precision geared hot-aiming. Sealed Air-Loc® housing ensures maximum energy savings and controls plenum sound transmission. Low profile Non-IC rated housing for use in non-insulated areas or where insulation is spaced at least 3" from housing.

## PRODUCT SPECIFICATIONS

**LED Light Engine** Consistent fixture to fixture color consistency within 3-step MacAdam ellipse • 2700K, 3000K, 3500K, or 4000K color temperatures are available with 85 CRI typical • 3000K also available with 93 CRI typical and R9 >80.

**Modular Optics** Available with 12° Spot, 24° Narrow Flood, or 35° Flood field interchangeable optics • 50° distribution is available when AF3-50DEG accessory lens is used with 12° Spot optic • Patent pending auto-adjusting optic holder maximizes luminaire efficiency by maintaining optimal LED optic position • Accommodates up to three (3) additional beam control lenses and/or filters.

**Reflector** Lensed, 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  
• Features clear glass lens.

**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 FMSQ4 flush mount adapter • For flush mount installations in wood, stone, or tile ceilings the FMSQ4-SC\*\*\* must be used (specify ceiling thickness and adapter finish).

**LED Driver** Choice of four drivers to accommodate voltages from 120-277 volts AC • Dedicated 120V (-I) driver is dimmable with most incandescent, magnetic low voltage, and electronic low voltage dimmers • Universal Voltage (-U) driver is dimmable with most 0-10V protocol dimmers • Lutron Hi-Lume® A Series 3-wire (-L) driver is dimmable with 3-wire fluorescent controls and compatible with EcoSystem® • Lutron Hi-Lume® A Series 2-wire (-D) driver is dimmable with 2-wire forward phase dimmers containing a neutral wire • For a list of compatible dimmers, refer to ACLXLED-DIM • Power Factor > 0.9 • Field replaceable from below or above ceiling.

**Life** Rated for 50,000 hrs at 70% lumen maintenance.

**Warranty** 5 years from date of purchase on LED components  
• Standard Juno Lighting Group product guarantee terms and conditions apply.

**Codes/Labels** UL and cUL listed for through branch wiring, wet locations • Meets energy code Air Leakage requirements per ASTM E283 • Union made.

**Mounting** TC49LSQ features Patented (US Patent 8,038,113) Pro-VI™ Bar Hanger System with locking set screws, permitting 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.

TC949LSQ is 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 (6) 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 and Patented (US Patent 8,277,090) Tru-Line™ Platform featuring +/- 1/2" translation and +/- 45° aperture rotation aids fixture alignment during installation.

**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.

# LED RECESSED DOWNLIGHT

3-1/4" SQUARE  
LENSED REFLECTOR

Non-IC Rated, 1000 LUMEN

**TC49LSQ-432SQ, TC949LSQ-432SQ**



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

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

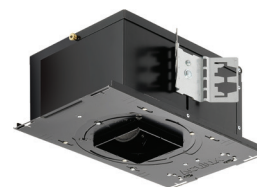
Location: \_\_\_\_\_

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

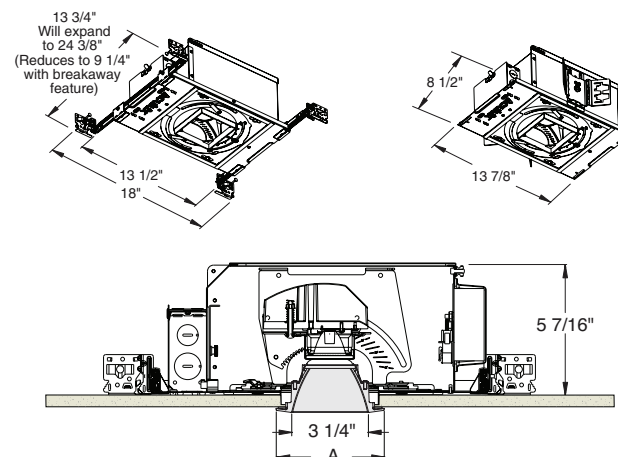
**TC49LSQ**



**TC949LSQ**



## 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"

## ELECTRICAL DATA

Driver Option	Dedicated 120V (-I)	Universal Voltage (-U)	Lutron 3-wire (-L)	Lutron 2-wire (-D)
Voltage	120	120 277	120 277	120
Input Power	18.7	20.6 22.1	19.7 21.1	20.0
Input Current	0.16	0.17 0.08	0.16 0.08	0.17
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Power Factor	0.98	0.99 0.90	0.99 0.94	0.98

# LED RECESSED DOWNLIGHT

## 3-1/4" SQUARE LENSED REFLECTOR

Non-IC Rated, 1000 LUMEN

### TC49LSQ-432SQ, TC949LSQ-432SQ

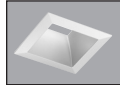

#### Ordering Information

Housing, trim and accessories each ordered separately

Example: **TC49LSQ-835-F-L**

Housings	CRI/Color Temperature	Beam Optics	Drivers	Options
<b>TC49LSQ</b>	<b>827</b> 2700K, 85CRI	<b>S</b> 12° Spot	<b>I</b> 120V, Forward & Reverse Phase Dimming	<b>CP</b> Chicago Plenum
<b>TC949LSQ</b>	<b>830</b> 3000K, 85CRI	<b>N</b> 24° Narrow Flood		
	<b>835</b> 3500K, 85CRI	<b>F</b> 35° Flood	<b>U</b> 120-277V, 0-10V Dimming	
	<b>840</b> 4000K, 85CRI		<b>L</b> 120-277V, Lutron Hi-Lume 3-wire Dimming, Ecosystem Compatible	
	<b>930</b> 3000K, 93CRI		<b>D</b> 120V, Lutron Hi-Lume 2-wire Dimming	

Example: **432SQW-SF**

Trim/Description		
		
Self Flanged <sup>1</sup>	Flush Mount <sup>2</sup>	Description
<b>432SQBHZ-SF</b>	<b>432SQBHZ-FM</b>	Black Haze Reflector
<b>432SQHZ-SF</b>	<b>432SQHZ-FM</b>	Haze Reflector
<b>432SQW-SF</b>	<b>432SQW-FM</b>	White Reflector
<b>432SQWHZ-SF</b>	<b>432SQWHZ-FM</b>	Wheat Haze Reflector

<sup>1</sup>For self flanged reflector with optional white painted flange, replace "-SF" suffix with "-SFWH".

<sup>2</sup>Flush Mount trims must be used with Flush Mount Adapter, ordered separately.

Product specifications subject to change without notice.

#### Flush Mount Adapters

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

#### Optical Accessories

Cat. #	Description	Cat. #	Description
<b>TIR-1-SP</b>	12° Spot Optic	<b>T7403</b>	Med. Green Dichroic Lens
<b>TIR-1-NFL</b>	24° Narrow Flood Optic	<b>T7404</b>	Med. Blue Dichroic Lens
<b>TIR-1-FL</b>	35° Flood Optic	<b>T7405</b>	Yellow Dichroic Lens
<b>AF3-50DEG</b>	50° Optic Film (Use with 12° Optic)	<b>T7406</b>	Magenta Dichroic Lens
<b>T741</b>	Med. Pink Color Filter	<b>T7411</b>	Blue Green Dichroic Lens
<b>T742</b>	Warm Red Color Filter	<b>T7416</b>	Daylight Blue Correction Lens
<b>T743</b>	Daylight Blue Color Filter	<b>T7420</b>	Diffuse Spread Lens
<b>T744</b>	Med. Blue Color Filter	<b>T7422</b>	UV Filter Lens
<b>T745</b>	Med. Amber Color Filter	<b>T7477</b>	Prismatic Lens
<b>T746</b>	Med. Green Color Filter	<b>T7478</b>	Linear Spread Lens
<b>T7401</b>	Red Dichroic Lens	<b>T7459BL</b>	Hexcell Louver

#### Misc. Accessories

Cat. #	Description
<b>CTA45Q-125</b>	1 1/4" Thick Ceiling Adapter
<b>CTA45Q-163</b>	1 5/8" Thick Ceiling Adapter
<b>CTA45Q-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
<b>EMI-20</b>	20W Emergency Lighting Inverter

To order, specify catalog number.

# LED RECESSED DOWNLIGHT

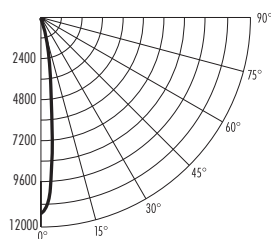
## 3-1/4" SQUARE LENSED REFLECTOR

Non-IC Rated, 1000 LUMEN

### TC49LSQ-432SQ, TC949LSQ-432SQ

#### PHOTOMETRIC REPORT

Test Report #: PT07102703  
Catalog No: TC49LSQ-830-S-U  
with 432SQHZ-SF Trim  
Luminaire Spacing Criterion: 0.23  
Luminaire LPW: 40.5



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	11012
5	6599
15	496
25	54
35	20
45	2
55	0
65	0
75	0
85	0
90	0
Multipliers:	827 - 0.92 930 - 0.92 835 - 1.01 840 - 1.02

#### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)  
Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	58	54	52
5.0'	37	35	33
6.0'	26	24	23
7.0'	21	19	19
8.0'	16	15	15
9.0'	13	12	11
10.0'	9	9	8

#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0 - 30°	796	98.3
0 - 40°	808	99.8
0 - 60°	809	100.0
0 - 90°	809	100.0

#### INITIAL FOOTCANDLES

(One Unit, 20.0W, 11.9° Beam)

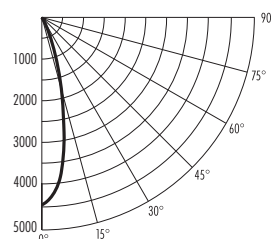
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	305.9	1.2'
8	172.1	1.7'
10	110.1	2.1'
12	76.5	2.5'

#### LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	438
55	0
65	0
75	0
85	0

#### PHOTOMETRIC REPORT

Test Report #: PT07102602  
Catalog No: TC49LSQ-830-N-U  
with 432SQHZ-SF Trim  
Luminaire Spacing Criterion: 0.39  
Luminaire LPW: 40.7



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	4298
5	3864
15	1247
25	152
35	30
45	2
55	0
65	0
75	0
85	0
90	0
Multipliers:	827 - 0.92 930 - 0.92 835 - 1.01 840 - 1.02

#### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)  
Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	57	53	49
5.0'	37	34	32
6.0'	26	23	22
7.0'	21	19	18
8.0'	16	15	14
9.0'	13	12	11
10.0'	9	8	8

#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0 - 30°	793	97.5
0 - 40°	812	99.8
0 - 60°	813	100.0
0 - 90°	813	100.0

#### INITIAL FOOTCANDLES

(One Unit, 20.0W, 24.0° Beam)

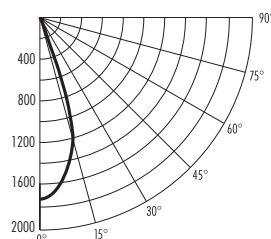
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	119.3	2.5'
8	67.1	3.4'
10	43.0	4.2'
12	29.9	5.1'

#### LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	409
55	0
65	0
75	0
85	0

#### PHOTOMETRIC REPORT

Test Report #: PT09101602  
Catalog No: TC49LSQ-830-F-U  
with 432SQHZ-SF Trim  
Luminaire Spacing Criterion: 0.26  
Luminaire LPW: 42.6



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1778
5	1696
15	1317
25	587
35	65
45	5
55	0
65	0
75	0
85	0
90	0
Multipliers:	827 - 0.92 930 - 0.92 835 - 1.01 840 - 1.02

#### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)  
Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	60	53	48
5.0'	38	34	31
6.0'	26	24	22
7.0'	21	19	17
8.0'	17	15	14
9.0'	13	12	11
10.0'	10	9	8

#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0 - 30°	806	94.8
0 - 40°	847	99.5
0 - 60°	851	100.0
0 - 90°	851	100.0

#### INITIAL FOOTCANDLES

(One Unit, 20.0W, 41.6° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	49.4	4.6'
8	27.8	6.1'
10	17.8	7.6'
12	12.3	9.1'

#### LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	1104
55	0
65	0
75	0
85	0

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925  
220 Chrysler Drive • Brampton, Ontario • Canada L6S 6B6 • Phone (905) 792-7335 • Fax (905) 792-0064  
Visit us at [www.junolightinggroup.com](http://www.junolightinggroup.com)

Printed in U.S.A. ©2014 Juno Lighting, LLC.