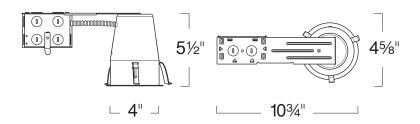
# 3.5" 19W Remodel LED Housing w/ 3.5" LED 19W Square Reflector Downlight

### 3.5" MINI-ARC LED LIGHTING





#### **SPECIFICATION**

Ceiling cut-out: 4 1/2"

**Application:** High-output architectural-grade miniature recessed LED downlight housing is perfect for remodel applications. Designed for low to medium height ceilings in commercial and architectural applications. A variety of trims, styles and finishes are available to achieve desired decor and illumination.

**Housing:** Pre-wired housing adjusts up to a  $1\ 1/4''$  ceiling thickness. Integral thermal protector to guard against improper lamping and installation. Trim is secured with torsion wing springs.

**Mounting:** Housing suitable for existing or new construction installations, supplied with high tension remodeling clips, designed to secure the housing to an existing sheetrock ceiling for fast and easy installation.

Driver: Electronic Direct Current LED driver integrally mounted in electric junction box.

**Power Connection:** LED lamp array is replaceable via on board quick disconnect terminal. Meets CA Title 24 Requirements and other standards restricting the use of Medium Base or Bi-Pin Sockets.

**Lumen Maintenance:** Minimum 50,000 hours L70 life based on ANSI TM-21 calculations from LM80 standardized test results.

**Junction Box** :16 gauge pre-wired galvanized steel Junction Box, 32 cubic-inch for a maximum of (8) #12 AWG wires. Furnished with (7) 3/4" and (4) Romex knock-outs. Strain clamps to install or remove covers for easy access and ground wire. Equipped with safety standard fitting for flex-conduit.

**Insulation Contact:** Non-IC rated housing must be kept 3" from insulation.

**Dimming:** 0-10V dimming option (-D10) works with most 0-10V dimmers. Factory qualified for use with Leviton IP710-DLX and Lutron NTFTV-WH. The Lutron Hi-Lume 1% dimming option (-DHL) works with compatible Lutron dimmers: NovaT NTF-10-277, Skylark SF-12P277 & Vierti VTF-6A. **Uni-Dim**<sup>™</sup> is a universal dimming system that works with most ELV, Incandescent and 0-10V fluorescent dimmers.

**Caution:** LITON recommends use of surge protectors on the power entering LED Housings. Surge damage is not covered by warranty.

Label: cETL Listed
Assembled in USA

#### **FEATURE:**





**Application:** High output miniature architectural-grade Square LED trim is designed for low to medium ceiling heights in retail, commercial and high-end residential applications that benefit from linearity and symmetry in design.

"Optics: Interchangeable optics allow polycarbonate lens to be changed in the field to modify beam spread. No tools required."

**Lumen Maintenance:** Minimum 50,000 hours L70 life based on ANSI TM-21 calculations from LM80 standardized test results.

**Thermal Management:** Effective thermal dissipation facilitated by integral cast-aluminum, heat sink design for maximum heat rejection to provide long LED life.

**Mounting:** Steel pressure springs mounted on trim to ensure positive retention inside housing.

Power Connection: LED lamp array is replaceable via on board quick disconnect terminal. Meets CA Title 24 Requirements and other standards restricting the use of Medium Base or Bi-Pin Sockets

**Safety Labels:** Suitable for dry and damp locations. NYC approved: Calendar #41937

**Warranty:** Covered by a 5 Year Warranty to be free of defects in materials and craftsmanship. Recommended for applications where ambient temperatures do not exceed 35°C, installations exceeding this temperature will result in reduced LED lamp life and a voided warranty.

Label: cETL Listed

Made in USA

## 3.5" 19W REMODEL LED HOUSING LHBLD4R 19W Max LED

WATTAGE		OPTION
LHBLD4R19C70 :19W*	Blank	:120V Non-Dimming
	UE	:120V/277V
	UE-D10	:120V/277V 0-10V
	<b>UE-DHL</b>	:Hi-Lume Dimming (120V/277V)
	UE-DUN	:120V-277V (ELV/0-10V Universal Dimming)

Tel: 323.904.0200

\* Not rated for Insulation Contact

## 3.5" LED 19W SQUARE REFLECTOR DOWNLIGHT LR4LHQ21 19W Max LED 0rdering example: LHBLD4R19C70/LR4LHQ21BC-L12-C90

FINISH	BEAM SPREAD	LED	OPTIONS
LR4LHQ21BC-L12 :Black Baffle/Chrome Ring	Blank :45° Flood	Blank :3000K	Blank : Damp Location
LR4LHQ21BB-L12 : All Black	-B25 :Spot*	-C90 :3000K, 90CRI	-WL :Wet Location
LR4LHQ21BW-L12:Black Reflector/White Ring	-B60 :60° Wide Flood	- <b>C97</b> :3000K, 97CRI	
LR4LHQ21W-L12 :White		- <b>T17</b> :1700K*	
		- <b>T25</b> :2500K*	
		- <b>T27</b> :2700K	
		-T27-C90 :2700K, 90 + CR	l
		-T27-C97 :2700K, 97CRI	
		- <b>T35</b> :3500K	
		- <b>T40</b> :4000K	

www.liton.com



 $<sup>^{</sup>st}$  Extended Lead Time may apply. Consult Factory.

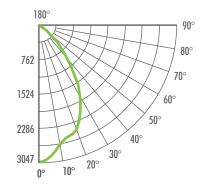
#### LR4LH: 4" 19W Mini-Arc LED

Lamp: (1) LED		Test Report File#
Total Rated Fixture Lumen	:1148 Lm	L08121604
Total Luminaire Efficacy	:60 Lm/W	Light Laboratory Inc.
Luminous Diameter	:2.04"	LHJLD4/LR4LH
Color Rendering Index (CRI)	:80+	
Color Temperature	:3050K	
Estimated Life	:50,000 hrs.	L70
Lamp Equivalents	:75W MR16,	50W PAR20/PAR30

Fixture Data			
	LED Module Lumen	Fixture Lumen	Input Wattage
@ 3000K	1400	1148.0	19W
@ 4000K	1484	1217.0	19W

## **ZONAL LUMENS SUMMARY**

Lumens	% Fixt
734.55	64.00
1010.43	88.00
1103.30	96.10
1145.59	99.80
1148.21	100.00
1148.43	100.00
888.78	77.40
368.74	32.10
398.26	34.70
44.30	3.90
2.62	0.20
0.62	0.10
0.22	0.00
	734.55 1010.43 1103.30 1145.59 1148.21 1148.43 888.78 368.74 398.26 44.30 2.62 0.62



## CANDELA TABULATION

## CD./SQ.M (FOOTLAMBERTS)

Angle	0
0.0	3047.350
2.0	3019.710
6.0	2805.178
12.0	2153.787
18.0	1339.944
24.0	661.342
30.0	287.984
36.0	121.291
42.0	49.885
52.0	19.660
62.0	2.771
72.0	0.744
80.0	0.353

### **COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

#### **EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20**

RC	80	70	50	30	10	0
RW	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 20	0
0	119 119 119 119	116 116 116 116	111 111 111	106 106 106	102 102 102	100
1	114 112 110 108	112 110 108 106	106 104 103	102 101 100	99 98 97	95
2	110 106 102 100	108 104 101 98	101 98 96	98 96 94	95 94 92	91
3	106 100 96 93	104 99 95 92	96 93 91	94 91 89	92 90 88	86
4	102 95 91 87	100 94 90 87	92 89 86	90 87 85	88 86 84	82
5	98 91 86 82	96 90 85 82	88 84 81	87 83 81	85 82 80	79
6	94 87 82 78	93 86 81 78	85 81 78	83 80 77	82 79 77	75
7	91 83 78 75	89 82 78 74	81 77 74	80 76 74	79 76 73	72
8	87 80 75 71	86 79 74 71	78 74 71	77 73 71	76 73 70	69
9	84 76 72 68	83 76 71 68	75 71 68	74 71 68	74 70 68	_ 67_
10	82 74 69 66	81 73 69 66	72 68 65	72 68 65	71 68 65	64
	i	i .	i			

### **LUMINANCE DATA**

## CD./SQ.M (FOOTLAMBERTS)

Angle	Avg. 0-Deg	Avg. 45-Deg	Avg. 90-Deg
45	24264	24264	24264
55	12022	12022	12022
65	1751	1751	1751
75	1039	1039	1039
85	1112	1112	1112

#### **MULTIPLIERS**

**Liton** 

_	_		_	_	 
	n		۱D	T	ЛD
	u	LU	ıĸ		vi P

1.00
1.13
0.90

## ZONAL LUMINANCE SUMMARY

#### CD./SQ.M (FOOTLAMBERTS)

Zone	Lumens
0-10	259.66
10-20	474.90
20-30	275.88
30-40	92.87
40-50	29.51
50-60	12.78
60-70	2.01
70-80	0.62
80-90	0.22
90-100	0.00