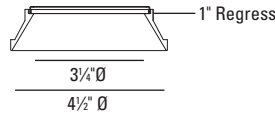


# BeveLED® LED Trimless Downlight



# 3320



## LUMINAIRE INFORMATION

### APPLICATION:

Accent luminaire for Residential, Commercial, Retail or Hospitality environments.

### MATERIALS:

**Trim:** Die cast aluminum retained by two mounting clips.

**Housing:** Fabricated of 20 ga. powder coated black galvanized steel thru wire J-box, 4 in 4 out at min. 75°C, #12 AGW thru branch circuit wiring.

Housing and trim supplied as one complete unit.

**Trim Lens:** Proprietary low glare blended optical lens system.

**Reflector:** Precision injection molded specular polycarbonate reflector for 30°, 50° or 80° beam distributions. 30° and 50° reflectors are field interchangeable..

### LIGHT ENGINE: Field Replaceable

Available in 10W or 20W ±100K. High power white LED's tightly binned for fixture to fixture color consistency.

### CRI OPTIONS:

**Standard:** 80+ CRI. **High:** 90+ CRI.

### RATED LIFE:

Based on IESNA LM80-2008  
20W - 50,000 hours at 70% lumen maintenance (L70).  
10W - 50,000 hours at 70% lumen maintenance (L70).

### HEATSINK:

Proprietary high performance aluminum die cast heatsink for maximum LED life.

### DRIVER: Field Replaceable

Solid state electronic. Constant current.  
High power factor. Specify 120V or 277V.

### DIMMING: (optional)

Multiple 3 wire dimming drivers available.  
See compatibility chart attached.

### MOUNTING:

Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

### CEILING CUT OUT:

5 1/2" Ø

### LISTINGS:

Dry/Damp.  
IBEW union made.



### NOTES:

- Housing included with trim.
- Maximum ceiling thickness 1 inch.
- Consult factory for other ceiling conditions.
- Fixture should be installed in applications where ambient temperatures do not exceed 40°C during normal operation.
- For drywall installation only.
- Not for use with acoustical ceilings.
- **5 year warranty**
- IC not currently Energy Star rated.

### PHOTOMETRICS:

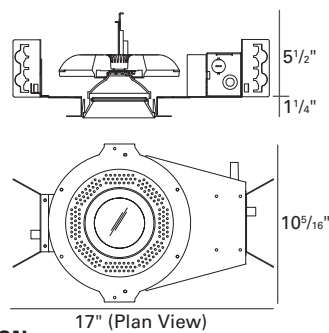
Consult factory or website for IES files.  
Tested in accordance with IESNA LM79-2008.

## HOUSING INFORMATION (50° Beam Distribution Shown)

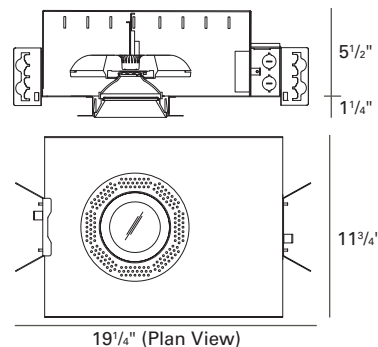
LRLD4-9010-C1 (10W)

LRLD4-9020-C1 (20W)

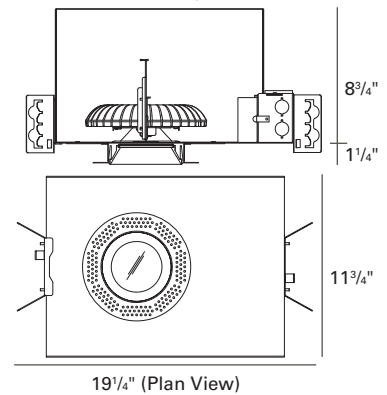
### New Construction - NC Non-Air Handling Plenum



### New Construction - NCAH Air Handling Plenum



### Insulated / Airtight - IC



## ORDERING INFORMATION

Trim	Trim Suffix for 80°	Finish	Housing	Color Temperature	Reflector	Housing Type	Voltage	Accessories
3320	8	10 - White 21 - Black 28 - Metalized Grey RAL - Special Color	LRLD4-9010-C1 (10W LED) LRLD4-9020-C1 (20W LED)	Standard CRI 80+ 27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K High CRI 90+ 27H - 2700K 30H - 3000K	30 - 30° 50 - 50° 80 - 80°	NC - New Construction IC - Insulated / Airtight NCAH - New Construction Air Handling Plenum	120V 277V	CB27 - 27" C-Channel Bars CB52 - 52" C-Channel Bars DIML2 - 0-10V Low Voltage 15% Dimming Driver DIML4 - Lutron Hi-Lume LED / ECO System Series A 3 Wire Control 1% Dimming Driver EML - Emergency lighting battery pack w/ remote test switch. Note: Housing size may differ. <b>Above ceiling access required for service</b> SLD30 - 30° Reflector SLD50 - 50° Reflector MLXX - Millwork Adapter XX=Specify Color (10, 21, 28, RAL)
<p>Use 8 suffix to order trim that uses 80° reflector only Do not include 8 suffix when ordering 30° or 50° reflector</p>								



www.usalighting.com  
info@usalighting.com

1126 River Road  
New Windsor, NY 12553

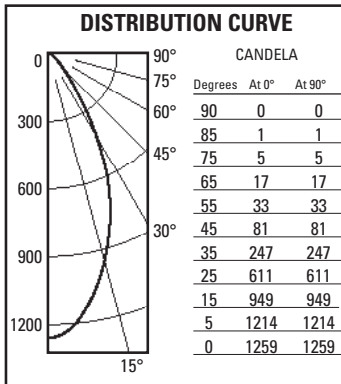
T 845-565-8500  
F 845-561-1130

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07/06/2011

**BeveLED Downlight, 50° Beam, 20W**  
**3020-10-LRTD4-9020-C1-30-50-NC-120V**  
**LTL Report No. : 20486**  
**Spacing Criteria: .75 CBCP: 1259**



LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	35.0	4.5
8.0	19.7	6.1
10.0	12.6	7.5
12.0	8.7	9.0
14.0	6.9	10.5



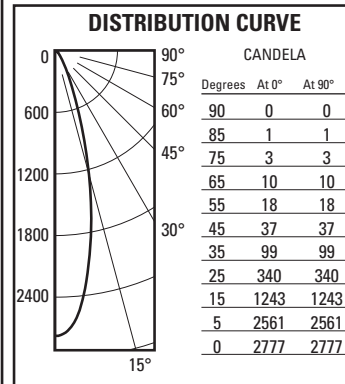
ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	651.1	N/A	70.0%
0-40	809.5	N/A	87.0%
0-60	905.7	N/A	97.4%
0-90	930.1	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	930.1	N/A	100.0%

**Total lumen Output:** 930.1 Lumens  
**Luminaire Efficacy:** 46.8 Lumens per Watt  
**CIE Type:** Direct  
**Spacing Criterion:** 0.75

**BeveLED Downlight, 30° Beam, 20W**  
**3020-10-LRTD4-9020-C1-30-30-NC-120V**  
**LTL Report No. : 20484**  
**Spacing Criteria: .47 CBCP: 2777**



LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	77.1	2.8
8.0	43.4	3.7
10.0	27.8	4.7
12.0	19.3	5.6
14.0	14.2	6.5



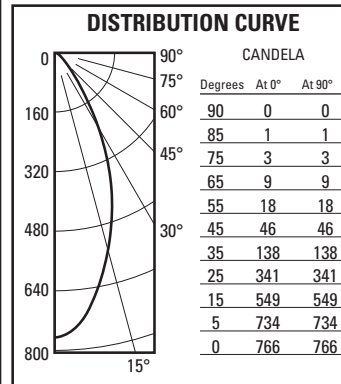
ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	723.2	N/A	85.4%
0-40	787.7	N/A	93.0%
0-60	833.2	N/A	98.4%
0-90	846.7	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	846.7	N/A	100.0%

**Total lumen Output:** 846.7 Lumens  
**Luminaire Efficacy:** 42.6 Lumens per Watt  
**CIE Type:** Direct  
**Spacing Criterion:** 0.47

**BeveLED Downlight, 50° Beam, 10W**  
**3020-10-LRTD4-9010-C1-30-50-NC-120V**  
**LTL Report No. : 20710**  
**Spacing Criteria: .71 CBCP: 766**



LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	21.3	4.3
8.0	12.0	5.7
10.0	7.7	7.1
12.0	5.3	8.5
14.0	3.9	9.9



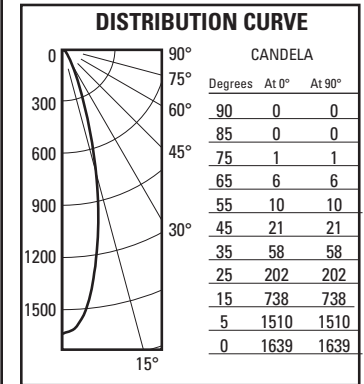
ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	374.2	N/A	70.6%
0-40	463.0	N/A	87.5%
0-60	517.3	N/A	97.5%
0-90	530.4	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	530.4	N/A	100.0%

**Total lumen Output:** 530.4 Lumens  
**Luminaire Efficacy:** 52.9 Lumens per Watt  
**CIE Type:** Direct  
**Spacing Criterion:** 0.71

**BeveLED Downlight, 30° Beam, 10W**  
**3020-10-LRTD4-9010-C1-30-30-NC-120V**  
**LTL Report No. : 20708**  
**Spacing Criteria: .47 CBCP: 1639**



LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	45.5	2.8
8.0	25.6	3.7
10.0	16.4	4.7
12.0	11.4	5.6
14.0	8.4	6.5



ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	428.5	N/A	85.5%
0-40	466.6	N/A	93.2%
0-60	493.3	N/A	98.5%
0-90	500.9	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	500.9	N/A	100.0%

**Total lumen Output:** 500.9 Lumens  
**Luminaire Efficacy:** 50.0 Lumens per Watt  
**CIE Type:** Direct  
**Spacing Criterion:** 0.47

Note: Above data shown using 80+ CRI. 90+ CRI, de-rate data by approximately 20%.

# BeveLED® LED Trimless Down-

Performance Summary (continued)

BeveLED Downlight, 80° Beam, 20W  
3020-10-LRTD4-9020-C1-30-80-NC-120V

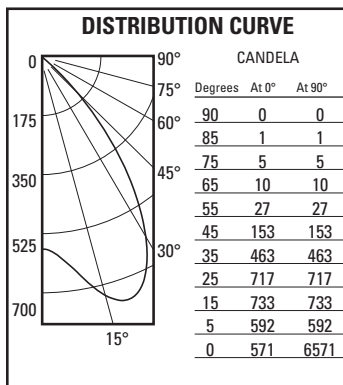
LTL Report No. : 23160

Spacing Criteria: 1.34 CBCP: 571



**NOTE**  
lighting facts label  
coming soon

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	15.9	8.05
8.0	8.92	10.7
10.0	5.71	13.4
12.0	3.97	16.1
14.0	2.91	18.8



### ZONAL LUMEN SUMMARY

Zone	Lumens	% of Lamp	% of Luminaire
0-30	591	N/A	56.5%
0-40	877	N/A	83.9%
0-60	1028	N/A	98.4%
0-90	1045	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	1045	N/A	100.0%

**Total lumen Output:** 1045 Lumens  
**Luminaire Efficacy:** 53.6 Lumens per Watt  
**CIE Type:** Direct  
**Spacing Criterion:** 1.34

Note: Above data shown using 80+ CRI. 90+ CRI, de-rate data by approximately 20%.

# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE

## DIMMING DRIVER WIRING SCHEMES:

### DIML2 LED: 0-10V 3-Wire FL Dimming Driver Wiring (Dims down to 15%)

**NOTE:** Consult dimmer manufacturer for detailed installation information.

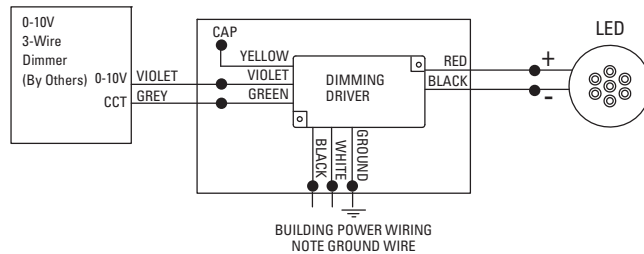
For use with 0-10V fluorescent type controls.

Use only with approved vendor models:

Lutron: DIVA DVTV-XX XX=Color

Leviton: IP710-DLX

Lightolier: V2000FAMU



### Compatible Crestron Dimming System

**NOTE:** Consult dimmer manufacturer for detailed installation information.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output (3)
CLS-EXP-DIMFLV	Y	1	0-100%	15-100%
DIN-4DIMFLV4	Y	1	0-100%	15-100%
DIN-A08	Y	1	0-100%	15-100%
GLX-DIMFLV8	Y	1	0-100%	15-100%
GLXP-DIMFLV8	Y	1	0-100%	15-100%

(1) Operating dimmers with less than the minimum required fixtures may cause flicker.

The Max number of fixtures is limited by dimmer rating unless otherwise noted.

(2) % Level refers to the Crestron Control System Intensity.

Operating the dimmer below the Min % level may cause flicker.

Operating the dimmer above the Max % may show no additional brightness.

(3) % Level of light output from fixture when connected directly to power source

(4) Dimmer requires a direct connection to neutral unless otherwise noted.

**NOTE: See next page for DIML4 LED Dimming Part Numbers**

### DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

#### Compatible Lutron Dimmers / Test Results

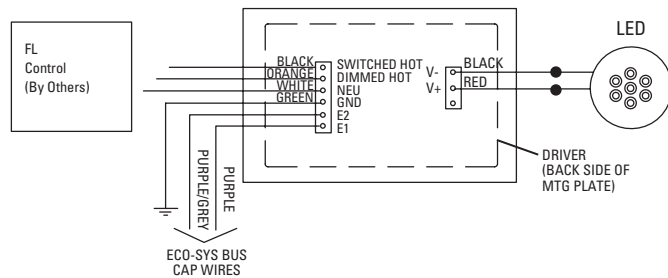
**NOTE:** Consult dimmer manufacturer for detailed installation information.

Product	Part Number	Fixtures Per Dimmer		Measured Light Output Range
		120V	277V	
NovaT	NTF-10	1-59	-	100% - 1%
NovaT	NTF-103P, NTF-10-277	1-29	1-61	100% - 1%
NovaT	NTF-103P-277	-	1-46	100% - 1%
Nova	NF-10	1-59	-	100% - 1%
Nova	NF-103P, NF-10-277	1-29	1-61	100% - 1%
Nova	NF-103P-277	-	1-46	100% - 1%
Vareo	VF-10	1-29	-	100% - 1%
Skylark	SF-10P, SF-103P	1-29	-	100% - 1%
Skylark	SF-12P-277, SF-12P-277-3	-	1-46	100% - 1%
Diva	DVF-103, DVSCF-103P	1-29	-	100% - 1%
Diva	DVF-103P-277, DVSCF-103P-277	-	1-46	100% - 1%
Ariadni	AYF-103P	1-29	-	100% - 1%
Ariadni	AYF-103P-277	-	1-46	100% - 1%
Vierti	VTF-6AM	1-22	-	100% - 1%
Maestro	MAF-6AM, MAF-6AM-277, MSCF-6AM, MSCF-6AM-277	1-22	1-46	100% - 1%
Maestro Wireless	MRF2-F6AN-DV	1-22	1-46	100% - 1%
Spacer System	SPSF-6A, SPSF-6A-277, SPSF-6AM, SPSF-6AM-277	1-22	1-46	100% - 1%
Lyneo	LXF-103PL	1-29	-	100% - 1%
Lyneo	LXF-103PL-277	-	1-46	100% - 1%
Radio RA 2	RRD-F6AN-DV	1-22	1-46	100% - 1%
HomeWorks QS	HQRD-F6AN-DV	1-22	1-46	100% - 1%
Interfaces (1)	PHPM-3F	1-59	1-123	100% - 1%
	GRX-FDBI-16A	1-59	-	100% - 1%
<b>EcoSystem</b>	CS-1L-WM, CS-2L-WM, CS-1L-CM, CS-2L-CM, EcoSystem ESN	64 per EcoSystem link		100% - 1%
	Grafik Eye QS with EcoSystem			100% - 1%
	Quantum			100% - 1%

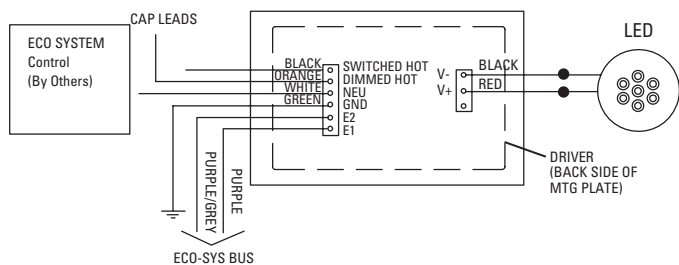
(1) For use with 3 Wire controls or Commercial Systems, RA Systems or Home Systems applications.

\*Contact Lutron tech support for degangng rules when using wallbox controls on the Hi-lume A-Series LED Driver.

#### Wire Diagram for 3-Wire FL Control (no Eco System Control)



#### Wire Diagram for ECO System Digital Control



#### Compatible Crestron Dimmers / Test Results

**NOTE:** Consult dimmer manufacturer for detailed installation information.

### 20W

**Date Tested:** 06/02/2011. [Report Revised 6/28/2011]

**Dimming Performance:** Smooth and Continuous.

**Operating Voltage / Power Rating:** 120V / 277V, 20W

**Control Type:** 3 Wire Control (HOT, Dimmed HOT, Neutral)

**Notes:** Recommend setting MIN Level to 25% to avoid dead travel at low dimming levels. Recommend setting MAX Level to level indicated below to avoid dead travel at high end.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output % (3)	Notes
CLS-EXP-DIMFDB	Y	1	25-87%	<1-100%	MIN Level must be set to 25%
GLX-DIM6	Y	1	25-77%	<1-100%	
GLXX-2DIM8	Y	1	25-70%	<1-100%	

(1) Operating dimmers with less than the minimum required fixtures may cause flicker. The Max number of fixtures is limited by dimmer rating unless otherwise noted.

(2) % Level refers to the Crestron Control System Intensity. 0 power source

(4) Dimmer requires a direct connection to neutral unless otherwise noted.

### 10W

**Date Tested:** 06/02/2011.

**Dimming Performance:** Smooth and Continuous at 120V only.

**Operating Voltage / Power Rating:** 120V / 277V, 10W

**Control Type:** 3 Wire Control (HOT, Dimmed HOT, Neutral)

**Notes:** Recommend setting MIN Level to 25% to avoid dead travel at low dimming levels. Recommend setting MAX Level to level indicated below to avoid dead travel at high end. Power supply tested is NOT suitable for use at 277V. Supply cuts out regardless of LED Load or Dimmer connected.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output % (3)	Notes
CLS-EXP-DIMFDB	Y	1	25-87%	<1-100%	MIN Level must be set to 25% 120V operation only
GLX-DIM6	Y	1	25-77%	<1-100%	
GLXX-2DIM8	Y	1	25-70%	<1-100%	