

# RA & RL Retrofit - Adjustable and LED Downlight Series

## Dimming Guide and Step-down Transformer Application Note



The RA & RL LED Series provides continuous dimming with reverse or forward phase cut dimmers.

### RL4 Series - 80CRI

RL460WH827PK  
RL460WH830PK  
RL460WH835PK  
RL460WH840PK  
RL460WH827  
RL460WH830  
RL460WH830-C  
RL460WH835  
RL460WH840

### RL56 600 Series - 80CRI

RL560WH6827  
RL560WH6830  
RL560WH6835  
RL560WH6840  
RL560WH-R  
RL560WH-C  
RL560WH6827R  
RL560WH6835R  
RL560WH6840R

### RL56 900 Series - 80CRI

RL560WH9827  
RL560WH9830  
RL560WH9835  
RL560WH9840

### RA4 Series

RA406927WH  
RA406930WH  
RA406927NFLWH  
RA406930NFLWH  
RA406930WHR

### RA56 Series

RA5606927WH  
RA5606930WH  
RA5606927NFLWH  
RA5606930NFLWH  
RA5606930WHR

### RL4 Series - 90CRI

RL460WH927PK  
RL460WH930PK  
RL460WH935PK  
RL460WH940PK  
RL460WH927  
RL460WH930  
RL460WH935  
RL460WH940

### RL56 600 Series - 90CRI

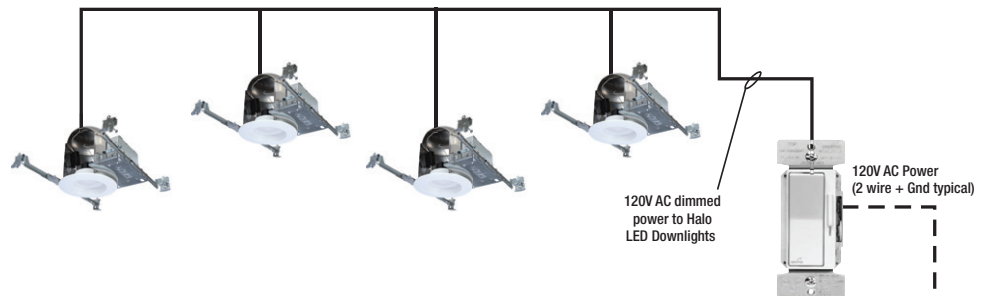
RL560WH6927  
RL560WH6930  
RL560WH6935  
RL560WH6940  
RL560WH6927R  
RL560WH6930R  
RL560WH6935R  
RL560WH6940R

### RL56 900 Series - 90CRI

RL560WH9927  
RL560WH9930  
RL560WH9935  
RL560WH9940

## Phase Control Dimming

RL56 recessed housing installation.



Eaton's AL Series dimmers offer versatile options to set the mood and reduce energy consumption.

Visit [www.cooperwiringdevices.com/ALSeries](http://www.cooperwiringdevices.com/ALSeries) for more information.



**\*Note:** The Rapid Start feature is used to ensure the right amount of power boost during start-up. When a dimmer with Rapid Start is turned on from a low dimmer setting, the LED lighting may exhibit a momentary flash. Designated dimmer models offer an adjustment of the Rapid Start feature. The user may wish to adjust this setting to reduce the boost and resulting momentary flash. If this capability is desired, the user should select dimmer models noted as "fully adjustable" or "selectable ON or OFF?"

Dimmer Features	ACCELL (AAL06)	DEVINE (DAL06P)	SKYE (SAL06P)	TRACE (TAL06P)
Rapid Start feature*	Selectable ON or OFF	Fully adjustable	Fixed ON	Fully adjustable
Adjustable high-end trim	•	•	•	•
Adjustable low-end trim	•	•	•	•
Wiring configurations	Single-pole or multi-location	Single-pole or 3-way	Single-pole or 3-way	Single-pole or 3-way
Color change kits	•	•	•	•

## RL4 & RL56 - 600 Series - 80CRI - 2700K, 3000K, 3500K, 4000K

### RL4 Series - 80CRI

RL460WH827PK	RL460WH827
RL460WH830PK	RL460WH830
RL460WH835PK	RL460WH835
RL460WH840PK	RL460WH840
	RL460WH-R
	RL460WH-C
	RL460WH830-C

### RL56 600 Series - 80CRI

RL560WH6827	RL560WH6827R
RL560WH6830	RL560WH-R
RL560WH6835	RL560WH-C
RL560WH6840	RL560WH6835R
	RL560WH6840R

## LED Rated Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Lutron	Diva	DVCL-153P	INC/HAL/CFL/LED	600(INC/HAL), 150 (LED/CFL)	1	15	90%	1%	≥1 sec
Lutron	Maestro	MACL-153M	INC/CFL/LED	600(INC), 150(LED/CFL)	1	15	83%	1%	≥1 sec
Leviton	IllumaTech	IPL06-10Z	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	95%	1%	≥1 sec <sup>1</sup>
Leviton	IllumaTech	6674	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	96%	1%	≤1 sec <sup>1</sup>
EWD	DEVINE	DAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec <sup>2</sup>
EWD	ACCELL	AAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	TRACE	TAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	SKYE	SAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	99%	1%	≤1 sec <sup>2</sup>
EWD	SKYE	SLC03PC-PTA	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	99%	1%	≥1 sec
EWD	DEVINE	DLC03P	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	99%	1%	≤1 sec
Legrand	P&S	H703PTUW	LED/CFL/ELV	450(LED/CFL), 700(ELV)	1	36	100%	2%	≤1 sec
ELC	iLumen	SC277-06-UN	Control Platform	20A	1	120	100%	3%	≤1 sec
Lutron	LCP128	LP-RPM-4U-120	Control Platform	16A	1	55	100%	5%	≤1 sec
Lutron	LCP128	LP-RPM-4A-120	Control Platform	16A	1	122	99%	1%	≤1 sec

1. Flash at startup
2. Slight shimmer

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

## RA4 & RA56 and RL4 & RL56 - 600 Series - 90CRI - 3000K, 3500K, 4000K

### RA4 Series

RA406930WH  
RA406930WHR

### RA56 600 Series

RA5606930WH  
RA5606930WHR

### RL4 Series - 90CRI

RL460WH930PK  
RL460WH935PK  
RL460WH940PK  
RL460WH930  
RL460WH935  
RL460WH940

### RL56 600 Series - 90CRI

RL560WH6930  
RL560WH6935  
RL560WH6940  
RL560WH6930R  
RL560WH6935R  
RL560WH6940R

## LED Rated Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Lutron	Diva	DVCL-153P	INC/HAL/CFL/LED	600(INC/HAL), 150 (LED/CFL)	1	15	91%	2%	≤1 sec
Lutron	Maestro	MACL-153M	INC/CFL/LED	600(INC), 150(LED/CFL)	1	15	83%	2%	≤1 sec
Leviton	IllumaTech	IPL06-10Z	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	97%	1%	≤1 sec
Leviton	IllumaTech	6674	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	98%	1%	≤1 sec
EWD	DEVINE	DAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	ACCELL	AAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	TRACE	TAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	SKYE	SAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	SKYE	SLC03PC-PTA	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	99%	1%	≤1 sec
EWD	DEVINE	DLC03P	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	97%	1%	≤1 sec
Legrand	P&S	H703PTUW	LED/CFL/ELV	450(LED/CFL), 700(ELV)	1	36	100%	2%	≤1 sec
ELC	iLumen	SC277-06-UN	Control Platform	20A	1	120	100%	3%	≤1 sec
Lutron	LCP128	LP-RPM-4U-120	Control Platform	16A	1	55	99%	1%	≤1 sec
Lutron	LCP128	LP-RPM-4A-120	Control Platform	16A	1	122	98%	1%	≤1 sec

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

## RA4 & RA56 - 600 Series - 90CRI - 2700K and RL4 & RL56 - 600 Series - 90CRI - 2700K

### RL4 Series - 90CRI

RL460WH927PK  
RL460WH927

### RL56 600 Series - 90CRI

RL560WH6927  
RL560WH927R

### RA4 Series

RA406927WH  
RA406927NFLWH

### RA56 600 Series

RA5606927WH  
RA5606927NFLWH

## LED Rated Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Lutron	Diva	DVCL-153P	INC/HAL/CFL/LED	600(INC/HAL), 150 (LED/CFL)	1	15	89%	1%	≥1 sec
Lutron	Maestro	MACL-153M	INC/CFL/LED	600(INC), 150(LED/CFL)	1	15	81%	1%	≥1 sec
Leviton	IllumaTech	IPL06-10Z	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	92%	1%	≥1 sec
Leviton	IllumaTech	6674	INC/LED/CFL	600(INC), 150(CFL/LED)	1	15	95%	1%	≤1 sec
EWD	DEVINE	DAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec <sup>2</sup>
EWD	ACCELL	AAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec <sup>1</sup>
EWD	TRACE	TAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	SKYE	SAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	30	97%	1%	≤1 sec
EWD	SKYE	SLC03PC-PTA	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	98%	1%	≤1 sec
EWD	DEVINE	DLC03P	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	30	100%	1%	≤1 sec
Legrand	P&S	H703PTUW	LED/CFL/ELV	450(LED/CFL), 700(ELV)	1	36	100%	2%	≤1 sec
ELC	iLumen	SC277-06-UN	Control Platform	20A	1	120	98%	2%	≤1 sec
Lutron	LCP128	LP-RPM-4U-120	Control Platform	16A	1	55	99%	1%	≤1 sec
Lutron	LCP128	LP-RPM-4A-120	Control Platform	16A	1	122	99%	1%	≤1 sec

1. Flash at startup
2. Slight shimmer

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

## RL56 - 900 Series - 80CRI and 90CRI - 2700K, 3000K, 3500K, 4000K

### RL56 900 Series - 80CRI

RL560WH9827	RL560WH9827R
RL560WH9830	RL560WH9830R
RL560WH9835	RL560WH9835R
RL560WH9840	RL560WH9840R

### RL56 900 Series - 90CRI

RL560WH9927	RL560WH9927R
RL560WH9930	RL560WH9930R
RL560WH9935	RL560WH9935R
RL560WH9940	RL560WH9940R

## LED Rated Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Lutron	Diva	DVCL-153P	INC/HAL/CFL/LED	600(INC/HAL), 150 (LED/CFL)	1	12	96%	1%	≥1 sec
Lutron	Maestro	MACL-153M	INC/CFL/LED	600(INC), 150(LED/CFL)	1	12	93%	1%	≥1 sec
Leviton	IllumaTech	IPL06-10Z	INC/LED/CFL	600(INC), 150(CFL/LED)	1	12	98%	1%	≤1 sec
Leviton	IllumaTech	6674	INC/LED/CFL	600(INC), 150(CFL/LED)	1	12	98%	1%	≤1 sec
EWD	DEVINE	DAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	24	99%	1%	≤1 sec <sup>1</sup>
EWD	ACCELL	AAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	24	97%	1%	≤1 sec <sup>2</sup>
EWD	TRACE	TAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	24	97%	1%	≤1 sec
EWD	SKYE	SAL06P	INC/HAL/FLR/MLV/ELV/CFL/LED	600(INC/HAL/FLR/MLV/ELV), 300(CFL/LED)	1	24	99%	2%	≤1 sec <sup>1</sup>
EWD	SKYE	SLC03PC-PTA	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	24	99%	1%	≤1 sec
EWD	DEVINE	DLC03P	INC/HAL/CFL/LED	600(INC/HAL), 300(CFL/LED)	1	24	99%	1%	≤1 sec
Legrand	P&S	H703PTUW	LED/CFL/ELV	450(LED/CFL), 700(ELV)	1	29	100%	3%	≤1 sec
ELC	iLumen	SC277-06-UN	Control Platform	20A	1	97	99%	2%	≤1 sec
Lutron	LCP128	LP-RPM-4U-120	Control Platform	16A	1	45	99%	1%	≤1 sec
Lutron	LCP128	LP-RPM-4A-120	Control Platform	16A	1	28	96%	1%	≤1 sec

1. Flash at startup, bright flash after several seconds off
2. Flash at startup, Flicker

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

# Incandescent & Electronic Low Voltage Rated Dimmers - For Reference Only

## RL4 and RL56 - 600 Series - 80CRI - 2700K, 3000K, 3500K, 4000K

Testing conducted by Cooper Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Refer to this dimming guide notes section. Consult the dimmer manufacturer prior to installation to ensure compatibility.

### RL56 600 Series - 80CRI

RL560WH6827	RL560WH-C
RL560WH6830	RL560WH-R
RL560WH6835	RL560WH6835R
RL560WH6840	RL560WH6840R

### RL4 Series - 80CRI

RL460WH827PK	RL460WH827	RL460WH-R
RL460WH830PK	RL460WH830	RL460WH-C
RL460WH835PK	RL460WH835	
RL460WH840PK	RL460WH840	

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Leviton	Decora	6673	INC	600(INC), 300(CFL)	1	48	93%	11%	≤1 sec
Leviton	SureSlide	6631-2	INC, CFL	600	1	24	99%	1%	≤1 sec
Leviton	Illumatech	RP106	INC	600	1	48	99%	0%	≤1 sec
Leviton	Illumatech	IP106	INC	600	1	48	100%	1%	≥1 sec
Leviton	Vizia	VP106	INC	600	1	48	90%	1%	≤1 sec
Leviton	Decora	6161	INC	600	1	48	95%	5%	≤1 sec
Leviton	SureSlide	6633-P	INC	500	1	40	99%	0%	>1 sec
Lutron	Toggler	TG-600P	INC	600	1	48	100%	8%	≤1 sec
Lutron	Diva	DV600P	INC/HAL	600	1	48	93%	2%	≤1 sec
Lutron	Lumea	LG600P	INC	600	1	48	95%	4%	≤1 sec
Lutron	Skylark	S600P	INC/HAL	600	1	48	95%	4%	≤1 sec
Lutron	Skylark Contour	CT103P	INC/HAL/MLV	1000	1	80	96%	3%	≤1 sec
Lutron	Diva	DV603P	INC/HAL	600	1	48	94%	5%	≤1 sec
Leviton	Plug In Lamp Dimmer	TBI04	INC	300	1	24	99%	3%	>1 sec
Leviton	Vizia	VPE06	ELV	400	1	32	100%	4%	≤1 sec
Leviton	Illumatech	IPE04	ELV	300	1	24	99%	2%	≤1 sec
Leviton	Vizia	VZE04	ELV	400	1	32	98%	7%	≤1 sec
Lutron	Maestro	MAELV600	ELV	600	1	48	91%	5%	≤1 sec
Lutron	Faedra	FAELV500	ELV	500	1	40	91%	5%	≤1 sec
Lutron	Diva	DVELV303P	ELV	300	1	24	84%	2%	≤1 sec
Lutron	Skylark	SELV300P	ELV	300	1	24	85%	3%	≤1 sec
EWD	Devine	DEL06P	ELV	300	1	24	95%	1%	≤1 sec
Lightolier	Sunrise	ZP260QEW	ELV	260	1	21	87%	3%	≤1 sec
Hubbell	Tradeselect	RD600PDK	INC	600	1	48	90%	1%	≥1 sec
Legrand	P&S	HLV703PTC	MLV	700	1	56	94%	1%	≥1 sec <sup>1</sup>
Legrand	P&S	H703PW	INC	700	1	56	98%	1%	≤1 sec

1. Shimmer may be present

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

# Incandescent & Electronic Low Voltage Rated Dimmers - For Reference Only

## RL4, RL56, RA4, RA56 - 600 Series - 90CRI - 3000K, 3500K, 4000K

Testing conducted by Cooper Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Refer to this dimming guide notes section. Consult the dimmer manufacturer prior to installation to ensure compatibility.

### RL56 600 Series - 90CRI

RL560WH6930  
RL560WH6935  
RL560WH6940  
RL560WH6930R  
RL560WH6935R  
RL560WH6940R

### RA56 Series - 90CRI

RA560WH6930WH  
RA560WH6930NFLWH  
RA560WH6935WH  
RA560WH6935NFLWH  
RA560WH6940WH  
RA560WH6940NFLWH

### RL4 Series - 90CRI

RL460WH930PK  
RL460WH935PK  
RL460WH940PK  
RL460WH930  
RL460WH935  
RL460WH940

### RA4 Series - 90CRI

RA406930WH  
RA406930NFLWH  
RA406935WH  
RA406935NFLWH  
RA406940WH  
RA406940NFLWH

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Leviton	Decora	6673	INC	600(INC), 300(CFL)	1	48	95%	10%	≤1 sec
Leviton	SureSlide	6631-2	CFL, INC	600	1	48	100%	1%	≤1 sec
Leviton	Illumatech	RP106	INC	600	1	48	100%	0%	>1 sec
Leviton	Illumatech	IPI06	INC	600	1	48	100%	1%	≥1 sec
Leviton	Vizia	VP106	INC	600	1	48	91%	1%	≤1 sec <sup>1</sup>
Leviton	Decora	6161	INC	600	1	48	96%	5%	≤1 sec
Leviton	SureSlide	6633-P	INC	500	1	40	100%	0%	≥1 sec
Lutron	Toggler	TG-600P	INC	600	1	48	100%	7%	≤1 sec
Lutron	Diva	DV600P	INC/HAL	600	1	48	93%	2%	≤1 sec
Lutron	Lumea	LG600P	INC	600	1	48	97%	3%	≤1 sec
Lutron	Skylark	S600P	INC/HAL	600	1	48	96%	3%	≤1 sec
Lutron	Skylark Contour	CT103P	INC/HAL	1000	1	80	96%	3%	≤1 sec
Lutron	Diva	DV603P	INC/HAL	600	1	48	95%	4%	≤1 sec
Leviton	Plug In Lamp Dimmer	TBI04	INC	300	1	24	100%	3%	>1 sec
Leviton	Vizia	VPE06	ELV	400	1	32	100%	3%	≤1 sec
Leviton	Illumatech	IPE04	ELV	300	1	24	100%	2%	≤1 sec <sup>1</sup>
Leviton	Vizia	VZE04	ELV	400	1	32	99%	6%	≤1 sec
Lutron	Maestro	MAELV600	ELV	600	1	48	91%	5%	≤1 sec
Lutron	Faedra	FAELV500	ELV	500	1	40	91%	5%	≤1 sec
Lutron	Diva	DVELV303P	ELV	300	1	24	84%	2%	≤1 sec
Lutron	Skylark	SELV300P	ELV	300	1	24	85%	2%	≤1 sec
EWD	Devine	DEL06P	ELV	300	1	24	96%	1%	≤1 sec
Lightolier	Sunrise	ZP260QEW	ELV	260	1	21	86%	2%	≤1 sec
Hubbell	Tradeselect	RD600PDK	INC	600	1	48	95%	1%	≥1 sec <sup>2</sup>
Legrand	P&S	HLV703PTC	MLV	700	1	56	96%	1%	≤1 sec
Legrand	P&S	H703PW	INC	700	1	56	98%	1%	≤1 sec

1. Uneven dimming response
2. Shimmer may be present

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Lighting Controls  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

# Incandescent & Electronic Low Voltage Rated Dimmers - For Reference Only

## RA4 & RA56 and RL4 & RL56 - 600 Series - 90CRI - 2700K

Testing conducted by Cooper Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Refer to this dimming guide notes section. Consult the dimmer manufacturer prior to installation to ensure compatibility.

### RL4 Series - 90CRI

RL460WH927PK  
RL460WH927

### RL56 600 Series - 90CRI

RL560WH6927  
RL560WH6927R

### RA4 Series

RA406927WH  
RA406927NFLWH

### RA56 600 Series

RA560WH6927WH  
RA560WH6927NFLWH

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Leviton	Decora	6673	INC	600(INC), 300(CFL)	1	48	94%	9%	≤1 sec
Leviton	SureSlide	6631-2	CFL, INC	600	1	48	97%	0%	≥1 sec
Leviton	Illumatech	RP106	INC	600	1	48	99%	0%	>1 sec
Leviton	Illumatech	IP106	INC	600	1	48	99%	0%	≥1 sec
Leviton	Vizia	VP106	INC	600	1	48	88%	1%	≤1 sec <sup>1</sup>
Leviton	Decora	6161	INC	600	1	48	93%	3%	≤1 sec
Leviton	SureSlide	6633-P	INC	500	1	40	99%	0%	>1 sec
Lutron	Toggler	TG-600P	INC	600	1	48	99%	5%	≤1 sec
Lutron	Diva	DV600P	INC/HAL	600	1	48	91%	1%	≤1 sec
Lutron	Lumea	LG600P	INC	600	1	48	94%	2%	≤1 sec
Lutron	Skylark	S600P	INC/HAL	600	1	48	94%	2%	≤1 sec
Lutron	Skylark Contour	CT103P	INC/HAL	1000	1	80	93%	2%	≤1 sec
Lutron	Diva	DV603P	INC/HAL	600	1	48	93%	4%	≤1 sec
Leviton	Plug In Lamp Dimmer	TBI04	INC	300	1	24	100%	3%	≤1 sec
Leviton	Vizia	VPE06	ELV	400	1	32	100%	2%	≤1 sec
Leviton	Illumatech	IPE04	ELV	300	1	24	100%	1%	≤1 sec <sup>1</sup>
Leviton	Vizia	VZE04	ELV	400	1	32	96%	5%	≤1 sec
Lutron	Maestro	MAELV600	ELV	600	1	48	89%	4%	≤1 sec
Lutron	Faetra	FAELV500	ELV	500	1	40	89%	4%	≤1 sec
Lutron	Diva	DVELV303P	ELV	300	1	24	79%	2%	≤1 sec
Lutron	Skylark	SELV300P	ELV	300	1	24	81%	2%	≤1 sec
EWD	Devine	DEL06P	ELV	300	1	24	94%	1%	≤1 sec
Lightolier	Sunrise	ZP260QEW	ELV	260	1	21	83%	2%	≤1 sec
Hubbell	Tradeselect	RD600PDK	INC	600	1	48	95%	1%	≥1 sec <sup>2</sup>
Legrand	P&S	HLV703PTC	MLV	700	1	56	96%	1%	≤1 sec
Legrand	P&S	H703PW	INC	700	1	56	98%	1%	≤1 sec

1. Uneven dimming response
2. Shimmer may be present

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Cooper Controls Business  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent



# Incandescent & Electronic Low Voltage Rated Dimmers - For Reference Only

## RL56 - 900 Series - 80CRI & 90CRI - 2700K, 3000K, 3500K, 4000K

Testing conducted by Cooper Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Refer to this dimming guide notes section. Consult the dimmer manufacturer prior to installation to ensure compatibility.

### RL56 900 Series - 80CRI

RL560WH9827  
RL560WH9830  
RL560WH9835  
RL560WH9840

### RL56 900 Series - 90CRI

RL560WH9927  
RL560WH9930  
RL560WH9935  
RL560WH9940

Dimmer Make	Dimmer Series	Dimmer Model #	Types of Dimmer	Dimmer Max Wattage	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Max Dimming percentage (%)	Min Dimming percentage (%)	Start Time
Leviton	Decora	6673	CFL, INC	600(INC), 300(CFL)	1	39	97%	8%	≤1 sec
Leviton	SureSlide	6631-2	INC	600	1	39	99%	2%	≤1 sec
Leviton	Illumatech	RP106	INC	600	1	39	100%	0%	>1 sec
Leviton	Illumatech	IPI06	INC	600	1	39	100%	2%	≥1 sec
Leviton	Vizia	VP106	INC	600	1	39	97%	1%	≤1 sec
Leviton	Decora	6161	INC	500	1	32	98%	6%	≤1 sec
Leviton	SureSlide	6633-P	INC	600	1	39	100%	0%	>1 sec
Lutron	Toggler	TG-600P	INC	600	1	39	97%	10%	≤1 sec
Lutron	Diva	DV600P	INC/HAL	600	1	39	98%	3%	≤1 sec
Lutron	Lumea	LG600P	INC	600	1	39	98%	4%	≤1 sec
Lutron	Skylark	S600P	INC/HAL	600	1	39	98%	4%	≤1 sec
Lutron	Skylark Contour	CT103P	INC/HAL/MLV	1000	1	65	98%	3%	≤1 sec
Lutron	Diva	DV603P	INC/HAL	600	1	39	98%	6%	≤1 sec
Leviton	Plug In Lamp Dimmer	TBI04	INC	300	1	19	100%	5%	>1 sec
Leviton	Vizia	VPE06	ELV	400	1	26	100%	3%	≤1 sec
Leviton	Illumatech	IPE04	ELV	300	1	19	100%	2%	≤1 sec <sup>1</sup>
Leviton	Vizia	VZE04	ELV	400	1	26	99%	7%	≤1 sec
Lutron	Maestro	MAELV600	ELV	600	1	39	96%	5%	≤1 sec
Lutron	Faetra	FAELV500	ELV	500	1	32	96%	5%	≤1 sec
Lutron	Diva	DVELV303P	ELV	300	1	19	92%	2%	≤1 sec
Lutron	Skylark	SELV300P	ELV	300	1	19	92%	2%	≤1 sec
EWD	Devine	DEL06P	ELV	300	1	19	98%	1%	≤1 sec
Lightolier	Sunrise	ZP260QEW	ELV	260	1	17	93%	2%	≤1 sec
Hubbell	Tradeselect	RD600PDK	INC	600	1	38	96%	1%	≥1 sec <sup>2</sup>
Legrand	P&S	HLV703PTC	MLV	700	1	45	98%	1%	≤1 sec
Legrand	P&S	H703PW	INC	700	1	45	98%	1%	≤1 sec

1. Uneven dimming response
2. Shimmer may be present

### Dimmer Make or Series

**EWD** = Eaton's Wiring Devices  
**ELC** = Eaton's Cooper Controls Business  
**P&S** = Pass & Seymour Harmony

### Dimmer Rating - Load Type

**INC** = Incandescent  
**HAL** = Halogen  
**MLV** = Magnetic Low Voltage  
**ELV** = Electric Low Voltage  
**CFL** = Compact Fluorescent  
**FLR** = Fluorescent

#### Dimmer Notes:

- 1) Start time is measured at the lowest dimmer setting.
- 2) Some LED dimmers have a "rapid start" design used to provide a momentary power boost to LED and CFL lamps during start-up. When a LED luminaire is on a dimmer with "rapid start" the boost may cause a momentary flash of the LED lighting. This "flash" is generated by the dimmer, and may be more noticeable when the dimmer is at a low setting. A solution is available with EATON wiring devices business AL series dimmers which provide adjustment capability of the "rapid start": Devine (DAL06P), Accell (AAL06P), and Trace (TAL06P). Refer to product specifications online at [www.eaton.com/lighting](http://www.eaton.com/lighting) for more details.

#### Dimming Guide Disclaimer:

- 1) EATON lighting controls is a unit of EATON lighting solutions, and with EATON wiring devices, these are businesses of EATON; in which their product names, where identified, are tradenames or trademarks of EATON or its Affiliates. Leviton® is a registered trademark of Leviton Manufacturing Co. Inc.; Lutron® is a registered trademark of Lutron Electronics Co. Inc.; Lightolier® is a registered trademark of Philips Lighting; Hubbell® is a registered trademark of Hubbell Incorporated; Legrand® and Pass & Seymour® are registered trademarks of Legrand®. These companies and their tradenames, trademarks or brands, where noted, are associated with their respective company and are not associated with EATON.
- 2) Testing conducted by EATON lighting solutions is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to the manufacturer specifications for more detailed information on product certifications and standards.
- 3) This is a representative list of typical dimmers as tested by EATON lighting solutions business for performance with the designated LED luminaires only. Test data contained in this literature is based upon dimmers obtained in the marketplace. Information about these other manufacturers products is obtained from packaging and published information made available by the manufacturer and is deemed to be reliable, but has not been verified. Dimmer performance and perceived limitations of the dimmers are based on factors outside of EATON's control. The specifications of these dimming controls and their conditions of use may change without notice to EATON lighting solutions or any other user. EATON lighting solutions makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied. Installer must ensure proper local and national electrical codes are followed; and that the dimmer application and condition of use is per dimmer manufacturer instructions and guidelines.

**Application Note** - H277, H347 and H347200 step-down transformers are qualified to drive multiple Halo LED on a single circuit in Non-IC construction. Installation of these transformers with individual LED fixtures on circuits with multiple LED loads is not recommended. This is not recommended due to resulting multiple inductive currents pulled by each transformer; in this situation the majority of the power would then be reactive (VARs) and not real (WATTS). If H277, H347 or H347200 transformers should be used individually on each LED fixture in a single circuit, then that circuit should be sized for lowered power factor as well as increased apparent power on the circuit. H277, H347 and H347200 are UL/cUL listed for use with Halo recessed housings: H750T, H750TCP, H7T, H7TNB, H7RT.

**Step Down Transformers**

**H277** = Steps 277 line voltage down to 120 volts. Attaches to knockout on first fixture’s junction box in a circuit and is 300VA rated. H277 is a UL recognized Component listed under the luminaire UL/cUL listing for Halo Non-IC housings.

**H347 and H347200** = Steps 347 line voltage down to 120 volts. Attaches to knockout on first fixture’s junction box in a circuit. H347 is 75VA and H347200 is 200VA rated. H347 is a CSA/UL Listed Component for use under the luminaire UL/cUL listing with Halo Non-IC housings.

**Transformer Load - H277 (300VA)**

1. H277 Transformer at full loading consumes a maximum of 16W of power.
2. When a dimmer or switch is on the secondary (120V) side of the transformer, power is consumed by the transformer when the dimmer or switch is in “OFF” mode at 6.5W and in “ON” mode at 16W maximum under full loading.
3. When a dimmer or switch is on the primary (277V) side ahead of the transformer, power is consumed only in “ON” mode to a maximum of 16W under full loading. (Use of a dimmer ahead of the transformer is not recommended)

**Transformer Load - H347 (75VA)**

1. H347 Transformer at full loading consumes a maximum of 15W of power.
2. When a dimmer or switch is on the secondary (120V) side of the transformer, power is consumed by the transformer when the dimmer or switch is in “OFF” mode at 2.5W and in “ON” mode at 15W maximum under full loading.
3. When a switch is on the primary (347V) side ahead of the transformer, power is consumed only in “ON” mode to a maximum of 15W under full loading. (Use of a dimmer ahead of the transformer is not recommended)

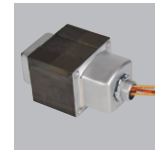
**Transformer Load - H347200 (200VA)**

1. H347200 Transformer at full loading on 120V side consumes a maximum of 28W of power.
2. When a dimmer or switch is on the secondary (120V) side of the transformer, power is consumed by the transformer when the dimmer or switch is in “OFF” mode at 9.2W and in “ON” mode at 28W maximum under full loading.
3. When a switch is on the primary (347V) side ahead of the transformer, power is consumed only in “ON” mode to a maximum of 28W under full loading. When a switch is on the primary (277V) side ahead of the transformer, power is consumed only in “ON” mode to a maximum of 12W under full loading. (Use of a dimmer ahead of the transformer is not recommended)

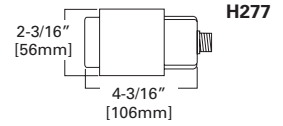
**RL56 Retrofit LED Downlight Series**

(RL56 Maximum Units on Step Down Transformer Powered Circuits)

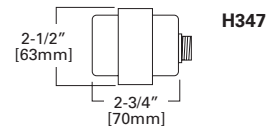
Transformer	VA Rating	Max # of Fixtures	
		600 Series	900 Series
H277	300	24	16
H347	75	6	4
H347200	200	16	10



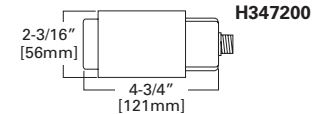
**H277**  
277V Step Down Transformer,  
300VA



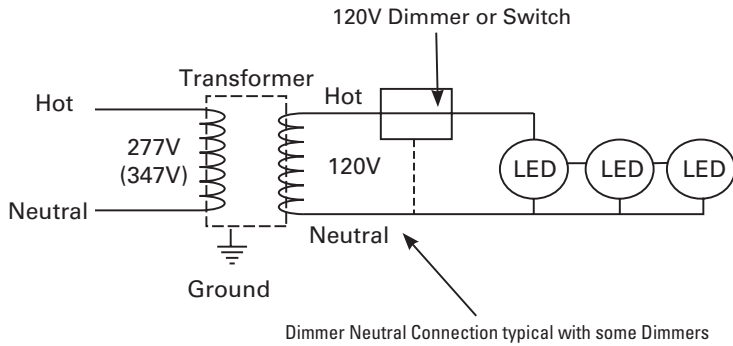
**H347**  
347V Step Down Transformer,  
75VA



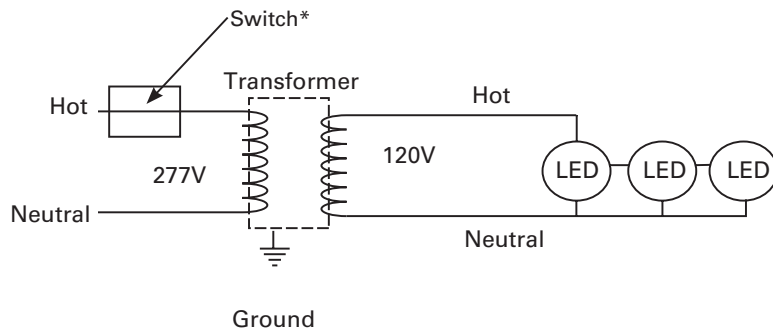
**H347200**  
347V Step Down Transformer,  
200VA



## Transformer with Dimmer/Switch on 120V Secondary

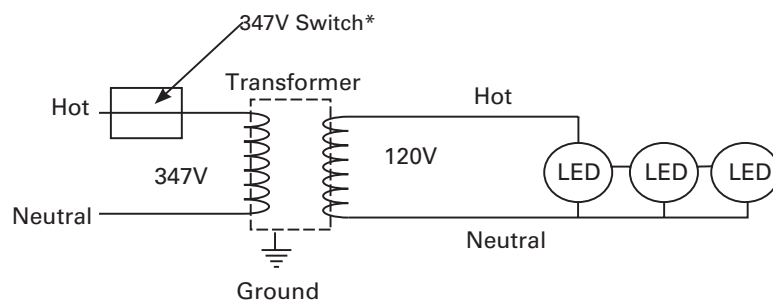


## Transformer with Switch on 277V Primary



\*Use of a dimmer ahead of the transformer is not recommended

## Transformer with Switch on 347V Primary



\*Use of a dimmer ahead of the transformer is not recommended