

RL Retrofit - LED Downlight Series

Dimming Guide and Step-down Transformer Application Note



The 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

RL4 Series - 90CRI

RL460WH927PK
RL460WH930PK
RL460WH935PK
RL460WH940PK
RL460WH927
RL460WH930
RL460WH935
RL460WH940

RL56 600 Series - 80CRI

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

RL56 600 Series - 90CRI

RL560WH6927
RL560WH6930
RL560WH6935
RL560WH6940
RL560WH6927R
RL560WH6930R
RL560WH6935R
RL560WH6940R

RL56 900 Series - 80CRI

RL560WH9827
RL560WH9830
RL560WH9835
RL560WH9840

RL56 900 Series - 90CRI

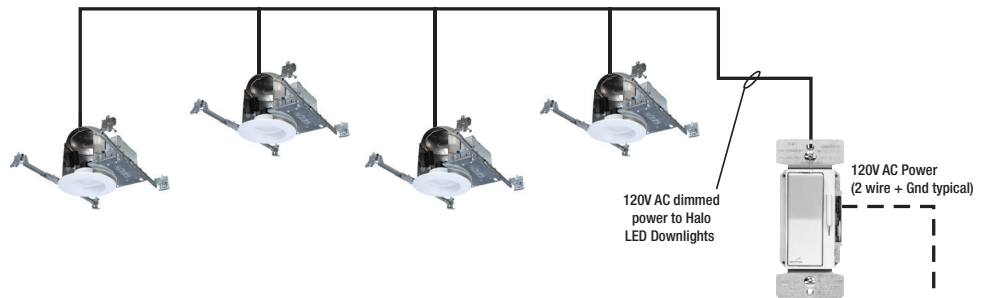
RL560WH9927
RL560WH9930
RL560WH9935
RL560WH9940

RL56 1200 Series - 90CRI

RL560WH12927
RL560WH12930
RL560WH12935
RL560WH12940
RL560WH12950

Phase Control Dimming

RL56 recessed housing installation.



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

Compatible Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Decorator	DAL06P	Triac (INC/HAL/MLV/ELV/CFL/LED)	300 W	1	29	5%	97%	<1s
EATON	Toggle	TAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	29	7%	97%	<1s
EATON	Slide	SAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	29	7%	98%	<1s
EATON	Slide	SLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	29	5%	98%	<1s
EATON	Toggle	DLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	29	5%	98%	<1s
Cooper Lighting Solutions	iLumin	SC277-06-UN	Control Panel(Leading Edge)	16 A	1	46	2%	100%	<1s

For Reference Only

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Toggle	T1061	Triac (INC/HAL)	600 W	1	58	1%	89%	<1s
EATON	Aspire	9530AW	Triac(INC)	600 W	1	58	2%	100%	>1s ¹
EATON	Rotary	R1061	Triac(INC/HAL)	600 W	1	58	5%	98%	>1s ²
EATON	Slide	SF8AP			1	93	20%	99%	<1s
EATON	Decorator	DE06P	ELV	600 W	1	58	2%	94%	>1s ¹
Lutron	Toggler	TG-600P	Triac (INC)	600 W	1	58	2%	97%	>1s ²
Lutron	Diva	DV-600P	Triac (INC)	600 W	1	58	5%	97%	>1s ²
Lutron	Lumea	LG600P	Triac (INC/HAL)	600 W	1	58	5%	96%	>1s ¹
Lutron	Skylark	S-600P	Triac (INC/HAL)	600 W	1	58	5%	96%	>1s ²
Lutron	Skylark Contour	CT103P	Triac (INC/HAL/MLV)	1000 W	1	97	5%	96%	<1s
Lutron	Diva	DV603P	Triac (INC/HAL)	600 W	1	58	5%	96%	<1s
Lutron	Nova T	NTFTU-5A	Triac (Fluorescent)	5 A	1	57	17%	98%	<1s
Lutron	Maestro	MAELV600	ELV	600 W	1	58	5%	95%	<1s
Lutron	Faetra	FAELV500	ELV	500 W	1	48	4%	95%	<1s
Lutron	Diva	DVELV303P	ELV	300 W	1	29	1%	96%	>1s ¹
Lutron	Skylark	SELV300P	ELV	300 W	1	29	1%	95%	>1s ¹
Leviton	SureSlide	6674	Triac (INC/LED/CFL)	150 W	1	14	4%	99%	<1s
Leviton	Illumatech	IPL06	Triac (INC/LED/CFL)	150 W	1	14	4%	96%	<1s
Leviton	Decora	6673	Triac (CFL/INC)	600 W	1	58	19%	96%	<1s
Leviton	SureSlide	6631-2	Triac (INC)	600 W	1	58	5%	98%	<1s
Leviton		IP106			1	58	10%	99%	<1s
Leviton	Vizia	VP106	Triac (INC)	600 W	1	58	4%	98%	<1s
Leviton	Decora	6161	Triac (INC)	500 W	1	48	4%	99%	<1s
Leviton	Sure Slide	6633-P			1	58	5%	97%	<1s
Leviton	Plug In Lamp Dimmer	TBI03	Triac	300 W	1	29	5%	100%	>1s ²
Leviton	Vizia	VPE06	ELV	600 W	1	58	4%	96%	<1s
Leviton	Vizia	VZE04	ELV	400 W	1	39	5%	95%	<1s
Legrand	Pass&Seymour Harmony	H703PTUW			1	44	6%	98%	<1s
Lutron	Ariadni	AY-600P		600 W	1	58	2%	97%	>1s ¹
Lutron	Contour	CT-103P		1000 W	1	97	5%	98%	<1s
Lutron	Contour	CT-600P		600 W	1	58	5%	99%	>1s ²
Lutron	Rotary	D-600P		600 W	1	58	5%	99%	<1s
Lutron	Diva	DV-600P			1	58	7%	100%	<1s
Lutron	Glyder	GL-600P			1	58	5%	99%	>1s ²
Lutron	Lumia	LG-600PH			1	58	7%	99%	<1s
Lutron	Maestro	MA600			1	58	7%	98%	<1s
Lutron	Nova	N-600		600 W	1	58	5%	100%	<1s
Lutron	Skylark	S-600P			1	58	7%	100%	>1s ²
Lutron	Centurion	C-600P		600 W	1	58	0%	97%	>1s ³
Lutron	Ariadni	AYLV-600P		450 W	1	44	0%	97%	>1s ³
Lutron	Glyder	GLV-600		450 W	1	44	6%	97%	<1s
Lutron	Diva	DVLV-600P			1	44	0%	97%	>1s ³
Lutron	Lumina	LG-103P		1000 W	1	44	0%	97%	>1s ³
Lutron	Skylark	SLV-600P		450 W	1	44	5%	96%	<1s
Lutron	Nova	NTLV-600		450 W	1	44	2%	97%	<1s
Lutron	Nova	NT-600		600 W	1	58	0%	97%	>1s ³

1. Up to 5 second start time for low end dimming.
2. Does not turn on at low end dimming.
3. Dim to off. Does not turn on at low end dimming.

Compatible Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Decorator	DAL06P	Triac (INC/HAL/MLV/ELV/CFL/LED)	300 W	1	27	4%	97%	<1s
EATON	Toggle	TAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	27	6%	97%	<1s
EATON	Slide	SAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	27	5%	96%	<1s
EATON	Slide	SLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	27	4%	98%	<1s
EATON	Toggle	DLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	27	4%	97%	<1s
Cooper Lighting Solutions	iLumin	SC277-06-UN	Control Panel(Leading Edge)	16 A	1	27	1%	99%	<1s
Lutron	Diva	C-L wall-mount dimmers (T1, T4, T5, T8)			1	15	11%	97%	<1s
Lutron	Skylark	C-L wall-mount dimmers (T1, T4, T5, T8)			1	15	11%	97%	<1s
Lutron	Skylark Contour	C-L wall-mount dimmers (T1, T4, T5, T8)			1	15	11%	97%	<1s
Lutron	Ariadni / Toggler	C-L wall-mount dimmers (T1, T4, T5, T8)			1	15	11%	97%	<1s
Lutron	Lumea	C-L wall-mount dimmers (T1, T4, T5, T8)			1	15	11%	97%	<1s
Lutron	Maestro	MACL-153M			1	15	7%	96%	<1s
Lutron	RadioRA 2	RRD-6NA			1	15	7%	96%	<1s
Lutron	Maestro Wireless	MRF2-6ELV			1	15	7%	96%	<1s
Lutron	HomeWorks QS	HQRD-6NA			1	15	7%	96%	<1s
Lutron	HomeWorks	HxD-6ND			1	10	5%	97%	<1s
Lutron	Stanza	SZ-6ND			1	10	5%	97%	<1s
Lutron	Panel module	PHPM-PA with Grafik Eye QS Main Unit			1	166	5%	99%	<1s
Lutron	Panel Module	PHPM-WBX with 3-wire fluorescent control			1	166	5%	99%	<1s
Lutron	Panel Module	HW/LP-RPM-4A-120			1	108	16%	96%	<1s
Lutron	Panel Module	HW/LP-RPM-4U-120			1	49	7%	99%	<1s
Lutron	Grafik QS/Wallbox Power Module	Grafik Eye QS Main Unit Family/LQRJ-WPM-6P			1	49	5%	99%	<1s
Lutron	Panel Module	GP (Harrier) Card			1	49	6%	98%	<1s
Lutron	150W C.L Wall Mount 3.0	DVCL-153P(T9)			1	15	9%	97%	<1s
Lutron	Maestro Sensor	MSCL-OP153M(T2)			1	15	5%	96%	<1s
Lutron	Maestro Sensor	MSCL-VP153M(T2)			1	15	5%	96%	<1s
Lutron	Grafik Eye 3000/ HomeWorks	Grafik Eye 3000 Family/ HWI-WPM-6D-120			1	49	5%	99%	<1s
Lutron	Caseta Wireless	PD-6WCL (SD11)			1	15	5%	96%	<1s
Lutron	RadioRA 2	RRD-6CL (R3)			1	15	5%	96%	<1s
Lutron	Maestro Wireless	MRF2-6CL (M6)			1	15	5%	96%	<1s
Lutron	HomeWorks QS	HQRD-6CL (H2)			1	15	5%	96%	<1s
Lutron	HomeWorks QS	HQRA-6CL (H2)			1	15	5%	96%	<1s
Lutron	RadioRA 2	RRD-6D			1	15	5%	96%	<1s
Lutron	RadioRA 2	RRD-H6BRL (with neutral)			1	10	7%	97%	<1s
Lutron	HomeWorks QS	HQRD-H6BRL (with neutral)			1	10	7%	97%	<1s
Lutron	Diva	250W C-L dimmers (T5, T8)			1	25	11%	97%	<1s
Lutron	Ariadni	250W C-L dimmers (T5, T8)			1	25	11%	97%	<1s
Lutron	Nova T	NTCL-250 (T8)			1	25	11%	97%	<1s
Lutron	Grafik T	GT-150 (T6) (without neutral)			1	15	10%	98%	<1s
Lutron	Grafik T	GTJ-150 (M6) (without neutral)			1	15	10%	98%	<1s
Lutron	HomeWorks QS/ myRoom	LQSE-4A1-D			1	10	6%	98%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-4A1-D			1	10	6%	98%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-3A1			1	10	6%	98%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-2A1-D			1	10	6%	98%	<1s
Lutron	Grafik T	GT-5NEM			1	25	7%	97%	<1s
Lutron	Grafik T	GTJ-5NEM			1	25	7%	97%	<1s

RL56 - 600 Series

For Reference Only

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Toggle	T1061	Triac (INC/HAL)	600 W	1	54	5%	90%	<1s
EATON	Aspire	9530AW	Triac(INC)	600 W	1	54	4%	99%	<1s
EATON	Rotary	RI061	Triac(INC/HAL)	600 W	1	54	4%	98%	>1s ¹
EATON	Slide	SF8AP			1	86	21%	99%	<1s
EATON	Decorator	DE06P	ELV	600 W	1	54	3%	92%	>1s ²
Lutron	Toggler	TG-600P	Triac (INC)	600 W	1	54	6%	99%	<1s
Lutron	Diva	DV-600P	Triac (INC)	600 W	1	54	7%	97%	<1s
Lutron	Lumea	LG600P	Triac (INC/HAL)	600 W	1	54	6%	97%	<1s
Lutron	Skylark	S-600P	Triac (INC/HAL)	600 W	1	54	7%	97%	>1s ²
Lutron	Skylark Contour	CT103P	Triac (INC/HAL/MLV)	1000 W	1	90	7%	97%	<1s
Lutron	Diva	DV603P	Triac (INC/HAL)	600 W	1	54	1%	96%	>1s ²
Lutron	Nova T	NTFTU-5A	Triac (Fluorescent)	5 A	1	53	17%	99%	<1s
Lutron	Maestro	MAELV600	ELV	600 W	1	54	4%	97%	<1s
Lutron	Faedra	FAELV500	ELV	500 W	1	45	3%	97%	<1s
Lutron	Diva	DVELV303P	ELV	300 W	1	27	1%	92%	>1s ²
Lutron	Skylark	SELV300P	ELV	300 W	1	27	1%	94%	>1s ²
Leviton	SureSlide	6674	Triac (INC/LED/CFL)	150 W	1	13	4%	98%	<1s
Leviton	Illumatech	IPL06	Triac (INC/LED/CFL)	150 W	1	13	4%	99%	<1s
Leviton	Decora	6673	Triac (CFL/INC)	600 W	1	54	19%	99%	<1s
Leviton	SureSlide	6631-2	Triac (INC)	600 W	1	54	1%	98%	>1s ²
Leviton		IPI06			1	54	4%	99%	<1s
Leviton	Vizia	VP106	Triac (INC)	600 W	1	54	4%	99%	>1s ¹
Leviton	Decora	6161	Triac (INC)	500 W	1	45	4%	99%	<1s
Leviton	Sure Slide	6633-P			1	54	5%	100%	<1s
Leviton	Plug In Lamp Dimmer	TBI03	Triac	300 W	1	27	8%	99%	>1s ¹
Leviton	Vizia	VPE06	ELV	600 W	1	54	3%	98%	<1s
Leviton	Vizia	VZE04	ELV	400 W	1	36	4%	98%	<1s
Legrand	Pass&Seymour Harmony	H703PTUW			1	40	5%	100%	<1s
Lutron	Ariadni	AY-600P		600 W	1	54	7%	97%	<1s
Lutron	Contour	CT-103P		1000 W	1	90	6%	99%	<1s
Lutron	Contour	CT-600P		600 W	1	54	3%	99%	<1s
Lutron	Rotary	D-600P		600 W	1	54	4%	99%	<1s
Lutron	Diva	DV-600P			1	54	3%	100%	<1s
Lutron	Glyder	GL-600P			1	54	7%	99%	>1s
Lutron	Lumia	LG-600PH			1	54	3%	100%	<1s
Lutron	Maestro	MA600			1	54	4%	97%	<1s ³
Lutron	Nova	N-600		600 W	1	54	1%	99%	>1s ²
Lutron	Skylark	S-600P			1	54	3%	99%	>1s ²
Lutron	Centurion	C-600P		600 W	1	54	1%	97%	>1s ¹
Lutron	Ariadni	AYLV-600P		450 W	1	40	3%	97%	<1s
Lutron	Glyder	GLV-600		450 W	1	40	3%	98%	<1s
Lutron	Diva	DVLV-600P			1	40	1%	97%	>1s ²
Lutron	Lumina	LG-103P		1000 W	1	90	1%	97%	>1s ²
Lutron	Skylark	SLV-600P		450 W	1	40	3%	97%	<1s
Lutron	Nova	NTLV-600		450 W	1	40	4%	98%	<1s
Lutron	Nova	NT-600		600 W	1	54	1%	98%	<1s

1. Up to 5 second start time for low end dimming.
2. Does not turn on at low end dimming.
3. Blinks when powering off.

Compatible Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Decorator	DAL06P	Triac (INC/HAL/MLV/ELV/CFL/LED)	300 W	1	18	5%	98%	<1s
EATON	Toggle	TAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	18	7%	99%	<1s
EATON	Slide	SAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	18	5%	99%	<1s
EATON	Slide	SLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	18	4%	99%	<1s
EATON	Toggle	DLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	18	4%	99%	<1s
Cooper Lighting Solutions	iLumin	SC277-06-UN	Control Panel(Leading Edge)	16 A	1	29	1%	100%	>1s
Lutron	Diva	C-L wall-mount dimmers (T1, T4, T5, T8)			1	11	97%	11%	<1s
Lutron	Skylark	C-L wall-mount dimmers (T1, T4, T5, T8)			1	11	97%	11%	<1s
Lutron	Skylark Contour	C-L wall-mount dimmers (T1, T4, T5, T8)			1	11	97%	11%	<1s
Lutron	Ariadni / Toggler	C-L wall-mount dimmers (T1, T4, T5, T8)			1	11	97%	11%	<1s
Lutron	Lumea	C-L wall-mount dimmers (T1, T4, T5, T8)			1	11	97%	11%	<1s
Lutron	Maestro	MACL-153M			1	11	90%	11%	<1s
Lutron	RadioRA 2	RRD-6NA			1	11	97%	8%	<1s
Lutron	Maestro Wireless	MRF-6ELV			1	11	97%	8%	<1s
Lutron	HomeWorks QS	HQRD-6NA			1	11	97%	8%	<1s
Lutron	HomeWorks	HxD-6ND			1	6	98%	8%	<1s
Lutron	Stanza	SZ-6ND			1	6	98%	8%	<1s
Lutron	Panel module	PHPM-PA with Grafik Eye QS Main Unit			1	97	98%	8%	<1s
Lutron	Panel Module	PHPM-WBX with 3-wire fluorescent control			1	97	98%	8%	<1s
Lutron	Panel Module	HW/LP-RPM-4A-120			1	66	96%	8%	<1s
Lutron	Panel Module	HW/LP-RPM-4U-120			1	30	99%	8%	<1s
Lutron	Grafik QS/Wallbox Power Module	Grafik Eye QS Main Unit Family/LQRJ-WPM-6P			1	30	98%	11%	<1s
Lutron	150W C.L Wall Mount 3.0	DVCL-153P(T9)			1	11	98%	5%	<1s
Lutron	Maestro Sensor	MSCL-OP153M(T2)			1	11	92%	8%	<1s
Lutron	Maestro Sensor	MSCL-VP153M(T2)			1	11	92%	8%	<1s
Lutron	Grafik Eye 3000/ HomeWorks	Grafik Eye 3000 Family/ HWI-WPM-6D-120			1	30	98%	11%	<1s
Lutron	Caseta Wireless	PD-6WCL (SD11)			1	11	94%	13%	<1s
Lutron	RadioRA 2	RRD-6CL (R3)			1	11	96%	9%	<1s
Lutron	Maestro Wireless	MRF2-6CL (M6)			1	11	95%	9%	<1s
Lutron	HomeWorks QS	HQRD-6CL (H2)			1	11	95%	9%	<1s
Lutron	HomeWorks QS	HQRA-6CL (H2)			1	11	95%	9%	<1s
Lutron	RadioRA 2	RRD-H6BRL (with neutral)			1	7	97%	7%	<1s
Lutron	HomeWorks QS	HQRD-H6BRL (with neutral)			1	7	97%	7%	<1s
Lutron	Diva	250W C-L dimmers (T5, T8)			1	18	97%	11%	<1s
Lutron	Ariadni	250W C-L dimmers (T5, T8)			1	18	97%	11%	<1s
Lutron	Nova T	NTCL-250 (T8)			1	18	97%	11%	<1s
Lutron	Grafik T	GT-150 (T6) (without neutral)			1	11	98%	8%	<1s
Lutron	Grafik T	GTJ-150 (M6) (without neutral)			1	11	98%	8%	<1s
Lutron	HomeWorks QS/ myRoom	LQSE-4A1-D			1	6	99%	11%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-4A1-D			1	6	99%	11%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-3A1			1	6	99%	11%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-2A1-D			1	6	99%	11%	<1s
Lutron	Grafik T	GT-5NEM			1	18	97	11	<1s
Lutron	Grafik T	GTJ-5NEM			1	18	97	11	<1s

For Reference Only

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Toggle	TI061	Triac (INC/HAL)	600 W	1	36	3%	85%	<1s
EATON	Aspire	9530AW	Triac(INC)	600 W	1	36	2%	99%	<1s
EATON	Rotary	RI061	Triac(INC/HAL)	600 W	1	36	5%	98%	>1s ²
EATON	Slide	SF8AP			1	58	21%	98%	<1s
EATON	Decorator	DE06P	ELV	600 W	1	36	3%	90%	>1s ¹
Lutron	Toggler	TG-600P	Triac (INC)	600 W	1	36	5%	96%	>1s ¹
Lutron	Diva	DV-600P	Triac (INC)	600 W	1	36	5%	97%	>1s ²
Lutron	Lumea	LG600P	Triac (INC/HAL)	600 W	1	36	4%	99%	>1s ¹
Lutron	Skylark	S-600P	Triac (INC/HAL)	600 W	1	36	5%	99%	>1s ²
Lutron	Skylark Contour	CT103P	Triac (INC/HAL/MLV)	1000 W	1	60	5%	97%	<1s
Lutron	Diva	DV603P	Triac (INC/HAL)	600 W	1	36	5%	98%	>1s ¹
Lutron	Nova T	NTFTU-5A	Triac (Fluorescent)	5 A	1	35	18%	97%	<1s
Lutron	Maestro	MAELV600	ELV	600 W	1	36	4%	97%	<1s
Lutron	Faetra	FAELV500	ELV	500 W	1	30	4%	97%	<1s
Lutron	Diva	DVELV303P	ELV	300 W	1	18	1%	91%	>1s ¹
Lutron	Skylark	SELV300P	ELV	300 W	1	18	1%	94%	>1s ¹
Leviton	SureSlide	6674	Triac (INC/LED/CFL)	150 W	1	9	4%	98%	<1s
Leviton	Illumatech	IPL06	Triac (INC/LED/CFL)	150 W	1	9	4%	99%	<1s
Leviton	Decora	6673	Triac (CFL/INC)	600 W	1	36	19%	97%	<1s
Leviton	SureSlide	6631-2	Triac (INC)	600 W	1	36	1%	99%	>1s ¹
Leviton		IPI06			1	36	2%	99%	>1s ¹
Leviton	Vizia	VP106	Triac (INC)	600 W	1	36	4%	97%	<1s
Leviton	Decora	6161	Triac (INC)	500 W	1	30	4%	97%	<1s
Leviton	Sure Slide	6633-P			1	36	5%	98%	<1s
Leviton	Plug In Lamp Dimmer	TBI03	Triac	300 W	1	18	2%	100%	>1s ²
Leviton	Vizia	VPE06	ELV	600 W	1	36	4%	99%	<1s
Leviton	Vizia	VZE04	ELV	400 W	1	24	4%	96%	<1s
Legrand	Pass&Seymour Harmony	H703PTUW			1	27	6%	97%	<1s
Lutron	Ariadni	AY-600P		600 W	1	36	5%	97%	<1s ²
Lutron	Contour	CT-103P		1000 W	1	60	5%	98%	<1s
Lutron	Contour	CT-600P		600 W	1	36	5%	96%	<1s
Lutron	Rotary	D-600P		600 W	1	36	5%	96%	<1s
Lutron	Diva	DV-600P			1	36	4%	98%	<1s
Lutron	Glyder	GL-600P			1	36	5%	97%	<1s
Lutron	Lumia	LG-600PH			1	36	5%	97%	>1s ¹
Lutron	Maestro	MA600			1	36	5%	98%	<1s
Lutron	Nova	N-600		600 W	1	36	0%	98%	>1s ³
Lutron	Skylark	S-600P			1	36	4%	98%	<1s
Lutron	Centurion	C-600P		600 W	1	36	0%	98%	>1s ³
Lutron	Ariadni	AYLV-600P		450 W	1	27	2%	98%	>1s
Lutron	Glyder	GLV-600		450 W	1	27	5%	97%	<1s
Lutron	Diva	DVLV-600P			1	27	0%	97%	>1s ³
Lutron	Lumina	LG-103P		1000 W	1	60	0%	97%	>1s ³
Lutron	Skylark	SLV-600P		450 W	1	27	6%	99%	<1s
Lutron	Nova	NTLV-600		450 W	1	27	4%	99%	<1s
Lutron	Nova	NT-600		600 W	1	36	1%	98%	>1s ¹

1. Up to 5 second start time for low end dimming.
2. Does not turn on at low end dimming.
3. Dim to off. Does not turn on at low end dimming.

Compatible Dimmers

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Decorator	DAL06P	Triac (INC/HAL/MLV/ELV/CFL/LED)	300 W	1	13	4%	100%	<1s
EATON	Toggle	TAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	13	7%	97%	<1s
EATON	Slide	SAL06P	Triac(INC/HAL/MLV/ELV/CFL/LED)	300 W	1	13	5%	99%	<1s
EATON	Slide	SLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	13	5%	94%	>1s
EATON	Toggle	DLC03P	Triac (INC/HAL/CFL/LED)	300 W	1	13	4%	98%	<1s
Cooper Lighting Solutions	iLumin	SC277-06-UN	Control Panel (Leading Edge)	16 A	1	21	2%	100%	<1s
Lutron	Diva	C-L wall-mount dimmers (T1, T4, T5, T8)			1	8	91%	13%	<1s
Lutron	Skylark	C-L wall-mount dimmers (T1, T4, T5, T8)			1	8	91%	13%	<1s
Lutron	Skylark Contour	C-L wall-mount dimmers (T1, T4, T5, T8)			1	8	91%	13%	<1s
Lutron	Ariadni / Toggler	C-L wall-mount dimmers (T1, T4, T5, T8)			1	8	91%	13%	<1s
Lutron	Lumea	C-L wall-mount dimmers (T1, T4, T5, T8)			1	8	91%	13%	<1s
Lutron	Maestro	MACL-153M			1	8	85%	6%	<1s
Lutron	RadioRA 2	RRD-6NA			1	8	92%	11%	<1s
Lutron	Maestro Wireless	MRF2-6ELV			1	8	92%	11%	<1s
Lutron	HomeWorks QS	HQRD-6NA			1	8	92%	11%	<1s
Lutron	Panel module	PHPM-PA with Grafik Eye QS Main Unit			1	90	95%	12%	<1s
Lutron	Panel Module	PHPM-WBX with 3-wire fluorescent control			1	90	95%	12%	<1s
Lutron	Panel Module	HW/LP-RPM-4A-120			1	56	95%	8%	<1s
Lutron	Panel Module	HW/LP-RPM-4U-120			1	24	94%	10%	<1s
Lutron	Grafik QS/Wallbox Power Module	Grafik Eye QS Main Unit Family/LQRJ-WPM-6P			1	24	95%	11%	<1s
Lutron	Panel Module	GP (Harrier) Card			1	24	95%	9%	<1s
Lutron	Maestro Sensor	MSCL-OP153M(T2)			1	8	87%	8%	<1s
Lutron	Maestro Sensor	MSCL-VP153M(T2)			1	8	87%	8%	<1s
Lutron	Grafik Eye 3000/ HomeWorks	Grafik Eye 3000 Family/ HWI-WPM-6D-120			1	24	95%	11%	<1s
Lutron	Caseta Wireless	PD-6WCL (SD11)			1	8	87%	6%	<1s
Lutron	RadioRA 2	RRD-6CL (R3)			1	8	86%	11%	<1s
Lutron	Maestro Wireless	MRF2-6CL (M6)			1	8	86%	11%	<1s
Lutron	HomeWorks QS	HQRD-6CL (H2)			1	8	86%	11%	<1s
Lutron	HomeWorks QS	HQRA-6CL (H2)			1	8	86%	11%	<1s
Lutron	RadioRA 2	RRD-H6BRL (with neutral)			1	5	92%	5%	<1s
Lutron	HomeWorks QS	HQRD-H6BRL (with neutral)			1	5	92%	5%	<1s
Lutron	Diva	250W C-L dimmers (T5, T8)			1	13	91%	13%	<1s
Lutron	Ariadni	250W C-L dimmers (T5, T8)			1	13	91%	13%	<1s
Lutron	Nova T	NTCL-250 (T8)			1	13	91%	13%	<1s
Lutron	Grafik T	GT-150 (T6) (without neutral)			1	8	92%	5%	<1s
Lutron	Grafik T	GTJ-150 (M6) (without neutral)			1	8	92%	5%	<1s
Lutron	HomeWorks QS/ myRoom	LQSE-4A1-D			1	4	95%	9%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-4A1-D			1	4	95%	9%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-3A1			1	4	95%	9%	<1s
Lutron	HomeWorks QS/ myRoom	MQSE-2A1-D			1	4	95%	9%	<1s
Lutron	Grafik T	GT-5NEM			1	13	93	12	<1s
Lutron	Grafik T	GTJ-5NEM			1	13	93	12	<1s

RL56 -1200 Series

For Reference Only

Dimmer Make	Dimmer Series	Dimmer Model #	Dimmer Rating	Dimmer Max Wattage or Input Rating	Minimum Luminaires (per circuit)	Maximum Recommended Luminaires (per circuit)	Min Dimming percentage (%)	Max Dimming percentage (%)	Low End Start Time
EATON	Toggle	TI061	Triac (INC/HAL)	600 W	1	26	4%	81%	<1s
EATON	Aspire	9530AW	Triac(INC)	600 W	1	26	4%	99%	>1s ¹
EATON	Rotary	RI061	Triac(INC/HAL)	600 W	1	26	7%	97%	>1s ²
EATON	Slide	SF8AP			1	42	22%	99%	<1s
EATON	Decorator	DE06P	ELV	600 W	1	26	3%	84%	<1s ²
Lutron	Toggle	TG-600P	Triac (INC)	600 W	1	26	7%	93%	<1s
Lutron	Diva	DV-600P	Triac (INC)	600 W	1	26	13%	96%	>1s ²
Lutron	Lumea	LG600P	Triac (INC/HAL)	600 W	1	26	10%	93%	<1s
Lutron	Skylark	S-600P	Triac (INC/HAL)	600 W	1	26	6%	94%	>1s ²
Lutron	Skylark Contour	CT103P	Triac (INC/HAL/MLV)	1000 W	1	44	6%	94%	<1s
Lutron	Diva	DV603P	Triac (INC/HAL)	600 W	1	26	14%	94%	<1s
Lutron	Nova T	NTFTU-5A	Triac (Fluorescent)	5 A	1	26	19%	98%	<1s
Lutron	Maestro	MAELV600	ELV	600 W	1	26	4%	93%	<1s
Lutron	Faetra	FAELV500	ELV	500 W	1	22	4%	93%	<1s
Lutron	Diva	DVELV303P	ELV	300 W	1	13	1%	90%	>1s ¹
Lutron	Skylark	SELV300P	ELV	300 W	1	13	1%	93%	>1s ¹
Leviton	SureSlide	6674	Triac (INC/LED/CFL)	150 W	1	6	5%	95%	<1s
Leviton	Illuminatech	IPL06	Triac (INC/LED/CFL)	150 W	1	6	6%	92%	<1s
Leviton	Decora	6673	Triac (CFL/INC)	600 W	1	26	22%	91%	<1s
Leviton	SureSlide	6631-2	Triac (INC)	600 W	1	26	6%	97%	<1s
Leviton		IPI06			1	26	2%	98%	<1s
Leviton	Vizia	VP106	Triac (INC)	600 W	1	26	6%	96%	>1s ¹
Leviton	Decora	6161	Triac (INC)	500 W	1	22	6%	96%	>1s ¹
Leviton	Sure Slide	6633-P			1	26	5%	99%	<1s
Leviton	Plug In Lamp Dimmer	TBI03	Triac	300 W	1	13	2%	100%	>1s ²
Leviton	Vizia	VPE06	ELV	600 W	1	26	4%	99%	<1s
Leviton	Vizia	VZE04	ELV	400 W	1	17	4%	98%	<1s
Legrand	Pass&Seymour Harmony	H703PTUW			1	20	5%	100%	<1s
Lutron	Ariadni	AY-600P		600 W	1	26	7%	95%	>1s ¹
Lutron	Contour	CT-103P		1000 W	1	44	5%	93%	<1s
Lutron	Contour	CT-600P		600 W	1	26	6%	93%	<1s
Lutron	Rotary	D-600P		600 W	1	26	8%	97%	<1s
Lutron	Diva	DV-600P			1	26	8%	96%	<1s
Lutron	Glyder	GL-600P			1	26	7%	97%	>1s ²
Lutron	Lumia	LG-600PH			1	26	4%	98%	<1s
Lutron	Nova	N-600		600 W	1	26	5%	97%	<1s
Lutron	Skylark	S-600P			1	26	6%	93%	>1s ²
Lutron	Centurion	C-600P		600 W	1	26	5%	97%	<1s
Lutron	Ariadni	AYLV-600P		450 W	1	20	2%	97%	>1s ²
Lutron	Glyder	GLV-600		450 W	1	20	5%	99%	<1s
Lutron	Diva	DVLV-600P			1	20	6%	95%	<1s
Lutron	Lumina	LG-103P		1000 W	1	44	4%	97%	<1s
Lutron	Skylark	SLV-600P		450 W	1	20	4%	99%	<1s
Lutron	Nova	NTLV-600		450 W	1	20	4%	97%	<1s
Lutron	Nova	NT-600		600 W	1	26	5%	97%	<1s

1. Up to 5 second start time for low end dimming.
2. Does not turn on at low end dimming.

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.

Dimming Guide Disclaimer:

- 1) 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®; Eaton® is a registered trademark of Eaton Corporation. These companies and their tradenames, trademarks or brands, where noted, are associated with their respective company and are not associated with Cooper Lighting Solutions.
- 2) Testing conducted by Cooper 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 Cooper Lighting Solutions 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 Cooper Lighting Solutions' control. The specifications of these dimming controls and their conditions of use may change without notice to Cooper Lighting Solutions or any other user. Cooper 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)

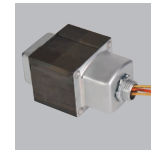
Transformer Load - H347200 (200VA)

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)

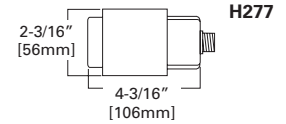
RL56 Retrofit LED Downlight Series

(RL56 Maximum Units on Step Down Transformer Powered Circuits)

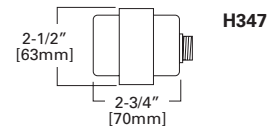
Transformer	VA Rating	Max # of Fixtures	
		600 Series	900 Series
H277	300	24	16
H347	75	6	4
H347200	200	16	10



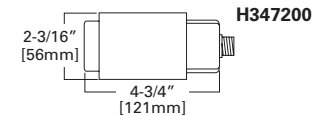
H277
277V Step Down Transformer, 300VA



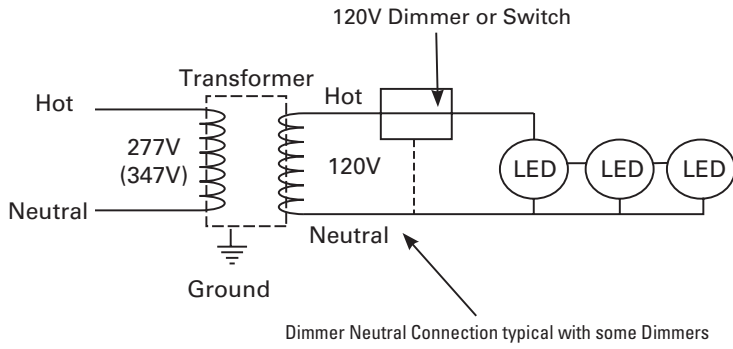
H347
347V Step Down Transformer, 75VA



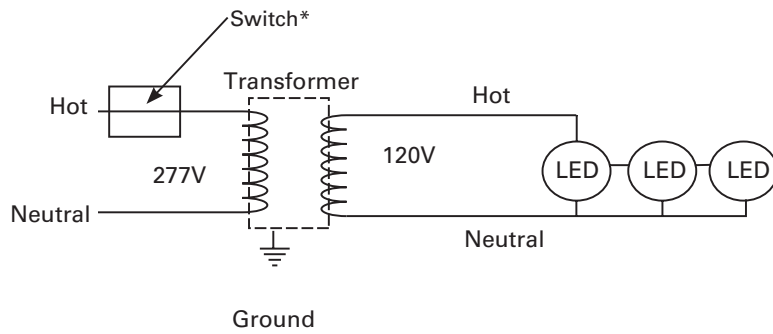
H347200
347V Step Down Transformer, 200VA



Transformer with Dimmer/Switch on 120V Secondary

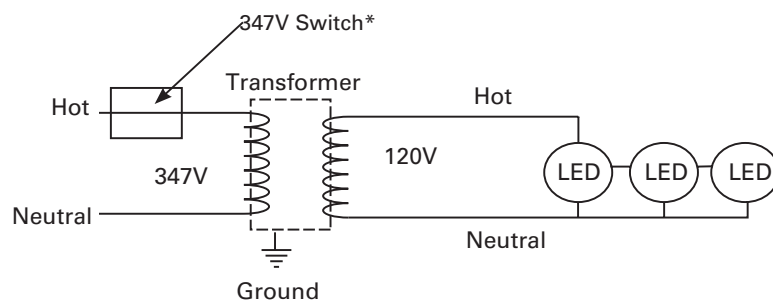


Transformer with Switch on 277V Primary



*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