

LED Dimming Option

For use with Cree Edge™ Series, LEDway® Series, 228 Series™, 304 Series™, OL Series™, XSP Series, XSP-HO Series, CPY Series, OSQ Series, RSW™ Series and VG Series Luminaires

Description:

Our 0-10V dimming option provides access to multiple drive currents and provides the flexibility to utilize combinations of these currents to optimize lumen output and energy savings needs. As the product is dimmed all LEDs are operated at the same current for longevity and lumen maintenance.

Unlike traditional source technologies, LED performance improves when dimmed in terms of efficacy, longevity and lumen maintenance. This powerful combination allows for the selection luminaires capable of delivering high levels of sustainable illumination performance when desired, but with the ability to be dimmed to deliver lower levels of illumination when appropriate with even greater energy savings.

If dimming leads remain open (factory shipped), luminaire will run at full power.

The 0-10V dimming control interface is compliant with the IEC EN 60929 Annex E which establishes controls for fluorescent products.

Dimming Availability

LEDway® Luminaires – Requires DIM Option		
Drive Current	Voltage	All Mounts
350mA	120-277	20-120 LED
	347-480	20-120 LED
525mA	120-277	20-120 LED
	347-480	20-120 LED
700mA	120-277	20-120 LED
	347-480	20-120 LED

228 Series™ Luminaires – Requires DIM Option					
Drive Current	Voltage	Canopy		Soffit IC Rated	Soffit Non-IC Rated
		RM Mount	RT Mount	All Mounts	All Mounts
350mA	120-277	90 LED	N/A	N/A	30-60 LED
	347-480	90 LED	N/A	N/A	30-60 LED
525mA	120-277	30-90 LED	30-60 LED	N/A	30-60 LED
	347-480	30-90 LED	30-60 LED	N/A	30-60 LED
700mA	120-277	30-90 LED	30-60 LED	N/A	N/A
	347-480	30-90 LED	30-60 LED	N/A	N/A
900mA	120-277	60 LED	N/A	N/A	N/A
	347-480	60 LED	N/A	N/A	N/A
1000mA	120-277	30 LED	N/A	N/A	N/A
	347-480	30 LED	N/A	N/A	N/A

304 Series™ Luminaires – Requires DIM Option									
Drive Current	Voltage	Floodlight	Parking Structure	Recessed Canopy		Recessed Interior		Recessed Soffit	
		Yoke Mount	All Mounts	Single & Double Skin Mounts	Upgrade Mounts	Non-IC Mounts	IC Rated Mounts	Non-IC Mounts	IC Rated Mounts
350mA	120-277	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED
	347-480	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED
525mA	120-277	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	N/A	40-60 LED	N/A
	347-480	40-60 LED	40-60 LED	40-60 LED	40-60 LED	40-60 LED	N/A	40-60 LED	N/A
700mA	120-277	40-60 LED	40-60 LED	40-60 LED ¹	N/A	N/A	N/A	N/A	N/A
	347-480	40-60 LED	40-60 LED	40-60 LED ¹	N/A	N/A	N/A	N/A	N/A

¹Marked spacing required

Rev. Date: V4 04/13/2017



LED Dimming Option

Cree Edge™ Series Luminaires – Requires DIM Option										
Drive Current	Voltage	Area/Flood			High Output	Round Area/Flood	Canopy	Parking	Security	Transportation
		Direct & Adjustable Arm Mounts	Post Top Mounts	Side Arm Mount	All Mounts	All Mounts	All Mounts	All Mounts		All Mounts
350mA	120-277	40-240 LED	40-240 LED	20-60 LED	N/A	40-120 LED	40-240 LED	40-100 LED	20-120 LED ³	40-100; 120-160
	347-480	20-240 LED ^{1,2}	40-240 LED ^{1,2}	20-60 LED	N/A	40-120 LED ^{1,2}	40-240 LED ^{1,2}	40-100 LED ^{1,2}	20-120 LED ^{2,3}	40-100; 120-160
525mA	120-277	20-160 LED	40-160 LED	20-60 LED	N/A	40-120 LED	40-160 LED	40-100 LED	20-80 LED ³	40-100; 120-160
	347-480	20-160 LED ^{1,2}	40-160 LED ^{1,2}	20-60 LED	N/A	40-120 LED ^{1,2}	40-160 LED ^{1,2}	40-100 LED ^{1,2}	20-80 LED ^{2,3}	40-100; 120-160 LED ^{1,2}
700mA	120-277	20-60 LED	40-60 LEDs	20-60 LED	120-240 LED	40-60 LED	40-60 LED	40-60 LED ^{1,2}	20-60 LED ³	40-60
	347-480	20-60 LED ^{1,2}	40-60 LED ^{1,2}	20-60 LED	120-240 LED ^{1,2}	40-60 LED ^{1,2}	40-60 LED ^{1,2}	40-60 LED ^{1,2}	20-60 LED ^{2,3}	40-60 LED ^{1,2}
1000mA	120-277	N/A	N/A	N/A	120-240 LED	N/A	N/A	N/A	N/A	N/A
	347-480	N/A	N/A	N/A	120-240 LED ^{1,2}	N/A	N/A	N/A	N/A	N/A

¹P (Photocell) option not available on 480V

²Not available with F (Fuse) option

³P (Photocell) option not available

OL Series™ Linear Flood – Requires DIM Option		
Drive Current	Voltage	All Mounts
350mA	120-277	14-112 LED
	347-480	14-112 LED
525mA	120-277	14-112 LED
	347-480	14-112 LED
700mA	120-277	14-112 LED
	347-480	14-112 LED

0-10V Dimming Multipliers – 350mA Drive Current

Note: For use with products when 350mA drive current is specified. Specified drive current represents the maximum drive current that will be available with dimming option. Specifying the maximum allowed drive current for your product will provide the greatest range of dimming. Multipliers are for estimating purposes only. Check actual spec sheet data where available.

120-277V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.1	75	0.23	0.24
1.3	88	0.26	0.28
1.6	113	0.33	0.36
1.9	138	0.40	0.43
2.2	163	0.46	0.51
2.3	175	0.50	0.54
2.7	213	0.60	0.65
3	238	0.67	0.72
3.3	263	0.74	0.78
3.4	275	0.79	0.81
3.6	288	0.81	0.85
3.8	313	0.87	0.91
>= 4.2	350	1.00	1.00

347-480V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.0	75	0.25	0.24
1.1	88	0.28	0.28
1.6	113	0.35	0.36
1.9	138	0.41	0.43
2.2	163	0.48	0.51
2.3	175	0.50	0.54
2.7	213	0.63	0.65
2.9	238	0.69	0.72
3.2	263	0.76	0.78
3.3	275	0.79	0.81
3.4	288	0.83	0.85
3.6	313	0.90	0.91
>= 4.0	350	1.00	1.00



LED Dimming Options

0-10V Dimming Multipliers – 525mA Drive Current

Note: For use with products when 525mA drive current is specified. Specified drive current represents the maximum drive current that will be available with dimming option. Specifying the maximum allowed drive current for your product will provide the greatest range of dimming. Multipliers are for estimating purposes only. Check actual spec sheet data where available.

120-277V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.4	75	0.15	0.18
2.2	125	0.23	0.29
2.6	150	0.28	0.34
3.0	175	0.32	0.40
3.7	225	0.42	0.50
4.5	275	0.51	0.60
5.2	325	0.60	0.69
5.6	350	0.65	0.73
6.7	425	0.80	0.85
7.4	475	0.90	0.93
>= 8.2	525	1.00	1.00

347-480V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.7	75	0.15	0.18
2.4	125	0.24	0.29
2.7	150	0.29	0.34
3.1	175	0.33	0.40
3.7	225	0.42	0.50
4.3	275	0.51	0.60
4.9	325	0.60	0.69
5.3	350	0.65	0.73
6.2	425	0.80	0.85
6.9	475	0.89	0.93
>= 7.7	525	1.00	1.00

0-10V Dimming Multipliers – 700mA Drive Current

Note: For use with products when 700mA drive current is specified. Specified drive current represents the maximum drive current that will be available with dimming option. Specifying the maximum allowed drive current for your product will provide the greatest range of dimming. Multipliers are for estimating purposes only. Check actual spec sheet data where available.

120-277V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.1	75	0.11	0.14
1.7	125	0.18	0.23
1.9	150	0.21	0.28
2.3	175	0.24	0.32
2.8	225	0.31	0.40
3.4	275	0.38	0.48
3.9	325	0.45	0.56
4.2	350	0.48	0.59
5.1	425	0.59	0.69
5.6	475	0.66	0.76
6.1	525	0.74	0.82
6.4	550	0.78	0.85
6.7	575	0.81	0.87
7.3	625	0.89	0.93
>= 8.5	700	1.00	1.00

347-480V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.0	75	0.12	0.14
1.7	125	0.18	0.23
2.0	150	0.21	0.28
2.3	175	0.25	0.32
2.8	225	0.32	0.40
3.3	275	0.38	0.48
3.7	325	0.45	0.56
4.0	350	0.48	0.59
4.7	425	0.58	0.69
5.2	475	0.65	0.76
5.8	525	0.74	0.82
5.9	550	0.77	0.85
6.2	575	0.80	0.87
6.7	625	0.87	0.93
>= 7.7	700	1.00	1.00

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0-10V Dimming Multipliers – 1000mA Drive Current

Note: For use with products when 900mA or 1000mA drive current is specified. Specified drive current represents the maximum drive current that will be available with dimming option. Specifying the maximum allowed drive current for your product will provide the greatest range of dimming. Multipliers are for estimating purposes only. Check actual spec sheet data where available.

120-277V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.0	105	0.07	0.19
1.4	150	0.11	0.23
1.6	175	0.13	0.25
1.7	200	0.15	0.27
2.1	250	0.20	0.31
2.5	300	0.24	0.35
2.9	350	0.29	0.39
3.2	400	0.33	0.43
3.6	450	0.38	0.47
4.0	500	0.42	0.51
4.2	525	0.44	0.53
4.3	550	0.47	0.55
4.7	600	0.51	0.59
5.1	650	0.56	0.63
5.4	700	0.60	0.67
5.8	750	0.65	0.71
6.2	800	0.69	0.75
6.5	850	0.74	0.79
6.9	900	0.78	0.83
7.3	950	0.83	0.87
7.6	1000	0.87	0.91
>= 8.0	1050	1.00	1.00

347-480V			
0-10V	Drive Current (mA)	System Watts Multiplier	Lumen Multiplier
<= 1.0	105	0.07	0.19
1.4	150	0.11	0.23
1.6	175	0.13	0.25
1.7	200	0.15	0.27
2.1	250	0.20	0.31
2.5	300	0.24	0.35
2.9	350	0.29	0.39
3.2	400	0.33	0.43
3.6	450	0.38	0.47
4.0	500	0.42	0.51
4.2	525	0.44	0.53
4.3	550	0.47	0.55
4.7	600	0.51	0.59
5.1	650	0.56	0.63
5.4	700	0.60	0.67
5.8	750	0.65	0.71
6.2	800	0.69	0.75
6.5	850	0.74	0.79
6.9	900	0.78	0.83
7.3	950	0.83	0.87
7.6	1000	0.87	0.91
>= 8.0	1050	1.00	1.00

0-10V Dimming Multipliers

Multipliers are for estimating purposes only.

VG Series – Requires DIM Option		
Input Power Designator	Voltage	All Mounts
A	120-277	Available
	347-480	Available

VG Series		
0-10V	System Watts Multiplier	Lumen Multiplier
<= 0.8	0.15	0.12
1.3	0.19	0.17
1.7	0.23	0.23
2	0.27	0.27
2.4	0.31	0.33
2.7	0.35	0.39
3.2	0.41	0.45
3.7	0.46	0.52
4.4	0.55	0.60
5.1	0.64	0.68
5.7	0.72	0.76
6.5	0.82	0.86
7.1	0.90	0.91
10	1.00	1.00

LED Dimming Option

0-10V Dimming Multipliers

Multipliers are for estimating purposes only.

CPY Series – Requires DIM Option		
Input Power Designator	Voltage	Availability
A	120-277	N/A
	347-480	N/A
B	120-277	Available
	347-480	Available
C	120-277	N/A
	347-480	N/A
D	120-277	Available
	347-480	Available
E	120-277	Available
	347-480	Available

CPY Series – Input Power Designator B		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.14	0.15
1.6	0.22	0.25
1.9	0.26	0.30
2.2	0.30	0.35
2.8	0.39	0.44
3.4	0.48	0.54
3.9	0.55	0.61
4.2	0.60	0.65
5.1	0.73	0.78
5.7	0.83	0.86
6.3	0.91	0.93
6.6	0.96	0.97
6.9	1.00	1.00
>/= 7.5	1.09	1.13

CPY250 Series – Input Power Designators D & E		
0-10V	120-480V	
	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.12	0.13
1.6	0.18	0.17
1.9	0.21	0.21
2.2	0.25	0.25
2.8	0.33	0.34
3.4	0.41	0.43
3.9	0.47	0.49
4.2	0.51	0.54
5.1	0.64	0.66
5.7	0.71	0.73
6.3	0.79	0.81
6.6	0.83	0.85
6.9	0.86	0.87
7.5	0.95	0.96
>/= 8.0	1.00	1.00

OSQ Series – Requires DIM Option		
Input Power Designator	Voltage	Availability
A, B, J, K, S, T, U	120-277	Available
	347-480	Available

OSQ Series – A, J & S Input Power Designators		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.1	0.12	0.15
1.6	0.18	0.24
2.0	0.22	0.30
2.2	0.27	0.35
2.9	0.34	0.43
3.5	0.41	0.51
4.0	0.48	0.59
4.2	0.50	0.61
4.7	0.57	0.68
5.4	0.64	0.73
5.8	0.71	0.80
6.3	0.78	0.85
7.2	0.85	0.91
7.4	0.90	0.94
7.7	0.95	0.98
10.0	1.00	1.00

OSQ Series – B, K & T Input Power Designators		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 0.7	0.15	0.13
1.3	0.17	0.19
1.6	0.22	0.24
1.8	0.25	0.28
2.1	0.31	0.33
2.5	0.38	0.40
2.6	0.40	0.42
3.0	0.46	0.48
3.3	0.50	0.53
3.7	0.58	0.59
3.9	0.61	0.63
4.2	0.68	0.67
4.6	0.71	0.74
5.3	0.84	0.84
5.5	0.90	0.87
5.9	0.91	0.91
6.4	0.99	0.98
>/= 6.5	1.00	1.00

OSQ Series – U Input Power Designator		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.09	0.12
1.3	0.10	0.14
1.8	0.16	0.21
2.1	0.20	0.26
2.4	0.25	0.30
2.6	0.27	0.33
3.0	0.32	0.39
3.3	0.36	0.44
3.5	0.39	0.46
3.9	0.44	0.52
4.0	0.45	0.53
4.2	0.48	0.56
4.6	0.53	0.61
5.1	0.60	0.68
5.3	0.62	0.70
5.8	0.69	0.76
5.9	0.71	0.77
6.3	0.75	0.82
6.5	0.80	0.84
6.9	0.83	0.88
7.2	0.89	0.92
7.7	0.96	0.96
10.0	1.00	1.00



LED Dimming Option

0-10V Dimming Multipliers

Multipliers are for estimating purposes only.

LEDway® High Output Luminaires – Requires DIM Option		
Input Power Designator	Voltage	All Mounts
A	120-277	Available
	347-480	Available

LEDway® Series High Output Street Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.12	0.14
1.6	0.16	0.20
1.9	0.20	0.25
2.2	0.23	0.30
2.8	0.31	0.39
3.4	0.39	0.47
3.9	0.45	0.54
4.2	0.49	0.58

LEDway® Series High Output Street Luminaires Cont.		
0-10V	System Watts Multiplier	Lumen Multiplier
5.1	0.61	0.76
6.3	0.76	0.82
6.6	0.80	0.86
6.9	0.84	0.89
7.5	0.91	0.94
>/= 8.0	1.00	1.00

0-10V Dimming Multipliers

Multipliers are for estimating purposes only.

XSP Series				
Product	Version	Input Power Designator	Voltage	Availability
XSP1 & XSP2	B	A-I	120-277	Standard
			347-480	Standard
	C	E & F	120-277	Standard
			347-480	Standard
XSPR	A	C	120-277	Standard
		G	120-277	Standard
	B	A	120-277	Standard
XSPW	A	C	120-277	Standard
			347	Standard
		G	120-277	N/A
			347	N/A

Version A: XSPR™ & XSPW™ Luminaires Version B: XSP1™ & XSP2™ Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.16	0.12
1.6	0.22	0.21
1.9	0.25	0.25
2.2	0.29	0.30
2.8	0.36	0.38
3.4	0.43	0.46
3.9	0.49	0.53
4.2	0.50	0.57
5.1	0.52	0.68
5.7	0.71	0.75
6.3	0.78	0.82
6.6	0.82	0.85
6.9	0.86	0.89
7.5	0.94	0.95
>/= 8.0	1.00	1.00

Version B: XSPR™ Luminaires Version C: XSP1™ & XSP2™ Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.11	0.15
1.6	0.17	0.23
1.9	0.21	0.29
2.2	0.24	0.33
2.8	0.32	0.43
3.4	0.39	0.51
3.9	0.45	0.58
4.2	0.49	0.61
5.1	0.61	0.72
5.7	0.68	0.79
6.3	0.76	0.85
6.6	0.80	0.87
6.9	0.84	0.90
7.5	0.92	0.95
>/= 8.0	1.00	1.00

LED Dimming Option

0-10V Dimming Multipliers

Multipliers are for estimating purposes only.

XSP High Output Series			
Product	Input Power Designator	Voltage	Availability
BXSP1 - HO	100W	120-277	Standard
BXSP2 - HO	165W	120-277	Standard
		347-480	Standard
BXSPR - HO	60W	120-277	Standard
	80W	120-277	Standard

XSP1™ High Output Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.09	0.13
2.0	0.20	0.26
2.6	0.25	0.35
3.0	0.30	0.41
3.3	0.34	0.45
3.7	0.43	0.50
4.0	0.44	0.54
4.8	0.53	0.64
5.0	0.58	0.67
5.3	0.62	0.71
6.0	0.70	0.78
6.7	0.80	0.87
7.0	0.86	0.90
7.2	0.89	0.92
10.0	1.00	1.00

XSP2™ High Output Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.09	0.12
2.0	0.23	0.22
2.6	0.29	0.31
3.0	0.34	0.37
3.5	0.41	0.41
4.0	0.47	0.46
4.6	0.53	0.50
5.0	0.60	0.59
5.6	0.67	0.62
5.8	0.70	0.66
6.4	0.78	0.74
7.0	0.85	0.82
7.2	0.89	0.85
7.7	0.98	0.87
10.0	1.00	1.00

XSPR™ High Output Luminaires		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.09	0.13
2.0	0.19	0.26
2.6	0.26	0.35
3.0	0.31	0.41
3.3	0.35	0.46
3.7	0.43	0.51
4.0	0.44	0.56
4.8	0.53	0.66
5.0	0.57	0.69
5.3	0.62	0.73
6.0	0.69	0.81
6.7	0.80	0.89
7.0	0.86	0.92
7.2	0.89	0.94
10.0	1.00	1.00

Description:

Cree's 0-10V dimming is included standard with each RSW streetlight through the NEMA 7-Pin receptacle (ANSI C136.41 compatible controls by others).

Unlike traditional source technologies, LED performance improves when dimmed in terms of efficacy, longevity and lumen maintenance. This powerful combination allows for the selection of luminaires capable of delivering high levels of sustainable illumination performance when desired, but with the ability to be dimmed to deliver lower levels of illumination when appropriate with even greater energy savings.

Dimming Availability

RSW (S1) Series Luminaires	
Input Power	Availability
30W	Available
50W	Available

0-10V Dimming Multipliers

RSW (S1) Series Luminaires – 30 Watt		
0-10V	System Watts Multiplier	Lumen Multiplier
3.9	0.48	0.46
5.1	0.64	0.64
6.4	0.80	0.81
10	1.00	1.00

RSW (S1) Series Luminaires – 50 Watt		
0-10V	System Watts Multiplier	Lumen Multiplier
5.6	0.67	0.72
6.4	0.76	0.82
7.3	0.87	0.93
10	1.00	1.00



LED Dimming Option

Description:

Cree's 0-10V dimming is included standard with each RSW streetlight through the NEMA 7-Pin receptacle (ANSI C136.41 compatible controls by others).

Unlike traditional source technologies, LED performance improves when dimmed in terms of efficacy, longevity and lumen maintenance. This powerful combination allows for the selection of luminaires capable of delivering high levels of sustainable illumination performance when desired, but with the ability to be dimmed to deliver lower levels of illumination when appropriate with even greater energy savings.

Dimming Availability

RSW Small & Medium Series Luminaires	
Lumen Package	Availability
3L	Available
5L	Available
9L	Available

0-10V Dimming Multipliers

RSW™ Street Luminaires – 3L		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.17	0.13
3	0.36	0.37
3.9	0.48	0.50
5.1	0.63	0.66
6.5	0.81	0.84
7	0.87	0.89
>/= 8.5	1.00	1.00

RSW™ Street Luminaires – 5L		
0-10V	System Watts Multiplier	Lumen Multiplier
</= 1.0	0.14	0.13
3	0.34	0.37
4.5	0.54	0.57
5.6	0.68	0.72
6.4	0.80	0.82
7.3	0.92	0.93
>/= 8.5	1.00	1.00

RSW™ Street Luminaires – 9L		
0-10V	System Watts Multiplier	Lumen Multiplier
1.0	0.11	0.14
2.0	0.23	0.24
3.0	0.35	0.37
4.0	0.49	0.51
5.1	0.61	0.70
5.9	0.72	0.75
6.1	0.75	0.78
6.4	0.79	0.83
6.7	0.84	0.89
7.2	0.91	0.96
7.6	0.98	0.98
11.1	1.00	1.00