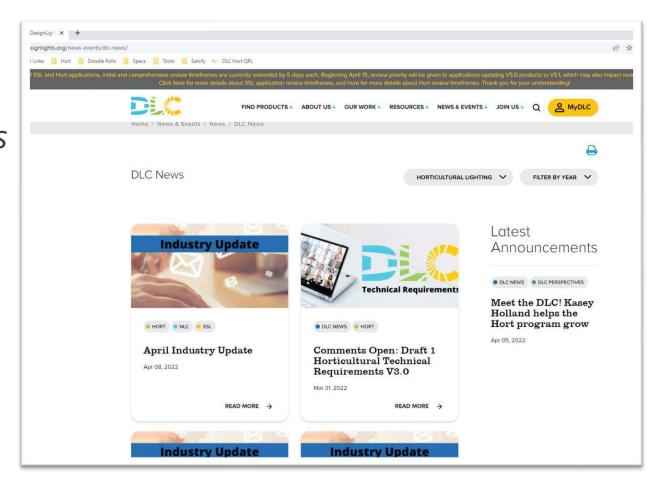


Welcome!

 Slides and recorded webinar will be posted on the DLC News & Events page at https://designlights.org shortly after today's presentation

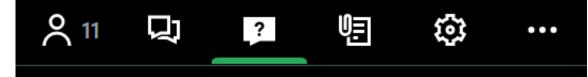
All attendees are automatically muted



Webinar Orientation

 Questions will be answered at the end during a live Q&A

 Type questions into the Question pane (not Chat) to submit for Q&A



The DesignLights Consortium is an independent, nonprofit organization providing decision makers with data and resources on quality lighting, controls, and integrated building systems to reduce energy, carbon, and light pollution.









SSL V6.0 & LUNA V2.0 Goals



Advance energy efficiency and support decarbonization



Strengthen the SSL QPL by expanding eligibility



Drive greater adoption of controls



Mitigate light pollution









DLC Stakeholder Input Process

1

3

4

5

6

RESEARCH & DEVELOPMENT

- Data analysis to identify problems to solve
- Market research and interviews industry
- Craft initiatives that serve DLC mission

EE MEMBER INPUT

- Gather input from Energy Efficiency programs
- Determine market impacts

POLICY DRAFTS

 Create policy drafts based on our research and efficiency program member input

COMMENT PERIOD(S)

- Release the draft policy to all stakeholders
- Collect comments
- Depending on the complexity, several may be released for additional comment periods

FINAL POLICY RELEASE

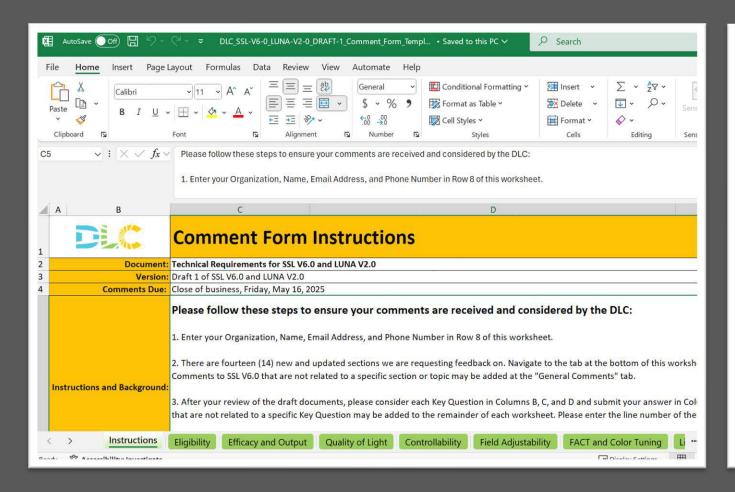
- Revisions made based on all feedback from the comment periods
- Finalize the draft to become official policy
- · Release final publicly

POLICY EFFECTIVE

- Final Release will include the date when the policy goes into effect
- All stakeholders have time to understand new requirements
- Awareness of impacts of new policies



All feedback is received and considered!



#	Key Questions						
1	The DLC is requiring all qualified products listed to be continuously dimmable down to at least 20%. What feedback, if any, do you have about this proposal?						
2	Are there any Driver Types missing in Table 19 or Table 20?						
3	Are there any Integral Sensor Types missing in Table 19 or Table 20?						
4	Are there any Driver and Integral Controller Types missing in Table 22?						
5	Are there any Integral Sensor Functions and Technologies missing in Table 22?						
6	Are there any Controls Ready receptacle types missing in Tabl 18?						



Draft 1: Controllability





Controllability Rationale:



Why

Better support incentive programs for integral controls and controls-ready luminaires

What

Required reporting of controls product variations within individual Product IDs

How

Collect specific driver and controls information through Controls Options Tables

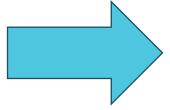


Controllability

Existing Control Features Fields

- Integral Controls
- Dimming Capability and Range
- Integral Control Capability
- Sensor Type
- SSL V5 Wired Communication Protocol
- SSL V5 Wireless Communication Protocol
- Wired Communication for a Single Control Point
- Wired Communication Between Multiple Control Points
- Wireless Communication Between Multiple Control Points
- Minimum Dimming Level
- Integral Control Receptacle Standard
- Field Adjustable Light Output
- White-Tunable
- Warm-Dimming
- Field Adjustable Light Distribution





Controls Options Tables



Controls Categories

11

Controls Categories - Indoor

Category	Indoor	Notes		
1	Luminaire Only			
2	Controls Ready Luminaire Only	Integral Receptacle		
3	Luminaire with Occupancy Sensor	Non-Networked		
4	Luminaire with Occupancy Sensor + Daylight Sensor	Non-Networked		
5	Luminaire with Networked Controller			
6	Luminaire Level Lighting Control (LLLC)	Integral networked controller and sensor		



Controls Options Tables

- Collected at Application Level
 - 1 Controls Options Table -> Multiple Product IDs

	INDOOR										
1	2	3	4	5	6	7	8	9	10	11	
Application ID	Controls Option Code	Driver Type	Min. Dim Level	Integral Controller Type	Controls Ready Receptacle Type	Integral Sensor Function	Integral Sensor Technolo gy	Mountina	NLC Product ID (indoor Scope)	Controls Ready Accessory Model Numbers (optional)	

Adding for Draft 2: Minimum Dim Level

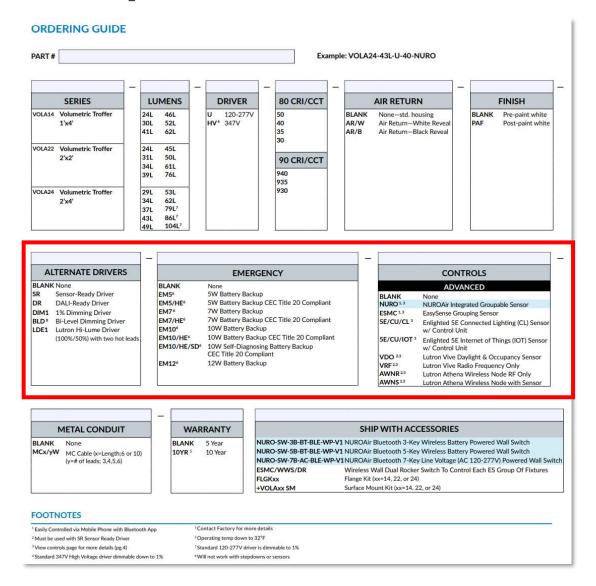
VOLA by ILP

V5.1: 309 Listings



VOLA by ILP

Ordering Guide



VOLA by ILP

ALTERNATE DRIVERS BLANK None SR Sensor-Ready Driver DR DALI-Ready Driver DIM1 1% Dimming Driver BLD⁸ Bi-Level Dimming Driver LDE1 Lutron Hi-Lume Driver (100%/50%) with two hot leads

	EMERGENCY
BLANK	None
EM56	5W Battery Backup
EM5/HE6	5W Battery Backup CEC Title 20 Compliant
EM76	7W Battery Backup
EM7/HE6	7W Battery Backup CEC Title 20 Compliant
EM10°	10W Battery Backup
EM10/HE6	10W Battery Backup CEC Title 20 Compliant
EM10/HE/SD ⁶	10W Self-Diagnosing Battery Backup CEC Title 20 Compliant
EM126	12W Battery Backup

	CONTROLS
	ADVANCED
BLANK	None
NURO 1,3	NUROAir Integrated Groupable Sensor
ESMC 1, 3	EasySense Grouping Sensor
5E/CU/CL ³	Enlighted 5E Connected Lighting (CL) Sensor w/ Control Unit
5E/CU/IOT 3	Enlighted 5E Internet of Things (IOT) Sensor w/ Control Unit
VDO 2,3	Lutron Vive Daylight & Occupancy Sensor
VRF ^{2,3}	Lutron Vive Radio Frequency Only
AWNR ^{2,3}	Lutron Athena Wireless Node RF Only
AWNS ^{2,3}	Lutron Athena Wireless Node with Sensor



Controls Categories - Outdoor

Category	Outdoor	Notes		
1	Luminaire Only			
1A	Luminaire with Photocell Only	Non-Networked		
1B	Luminaire with Photocell and Part Night Dim	Non-Networked		
2	Controls Ready Luminaire Only	Integral Receptacle		
3	Luminaire with Occupancy Sensor	Non-Networked		
4	Luminaire with Occupancy Sensor + Daylight Sensor	Non-Networked		
4A	Luminaire with Occupancy Sensor + Photocell	Non-Networked		
5	Luminaire with Networked Controller			
6	Luminaire Level Lighting Control (LLLC)	Integral networked controller and sensor		



Controls Options Tables

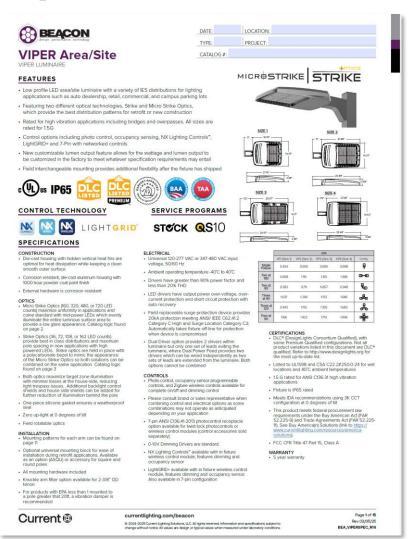
- Collected at Application Level
 - 1 Controls Options Table -> Multiple Product IDs

	OUTDOOR										
1	2	3	4	5	6	7	8	9	10	11	12
Application ID	Controls Option Code	Driver Type	Min. Dim Level	Integral Controller Type	Controls Ready Top Receptacle Type	Controls Ready Bottom Receptacle Type	Integral Sensor Function	Integral Sensor Technol ogy	Max Mounting	NLC Product ID (indoor Scope)	Controls Ready Accessory Model Numbers (optional)

Adding for Draft 2: Minimum Dim Level

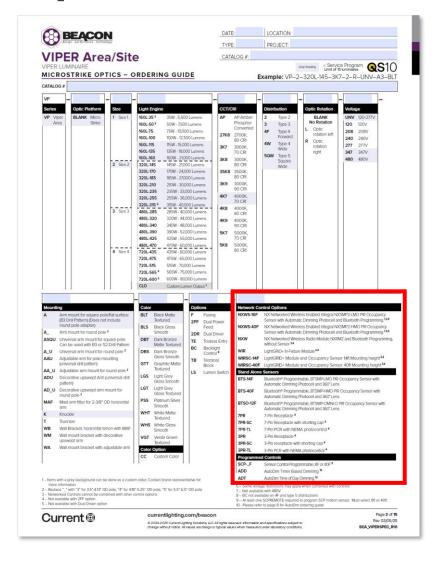
VIPER by Current

V5.1: 1,807 Listings



VIPER by Current

Ordering Guide



VIPER by Current

V5.1: 1,807 Listings

Network Control Options

NXWS-16F NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy

Sensor with Automatic Dimming Photocell and Bluetooth Programming 1,3,4

NXWS-40F NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy

Sensor with Automatic Dimming Photocell and Bluetooth Programming 1,3,4

NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming,

without Sensor 3,4

WIR LightGRID+ In-Fixture Module 3,4

WIRSC-14F LightGRID+ Module and Occupancy Sensor 14ft Mounting height 3.4
WIRSC-40F LightGRID+ Module and Occupancy Sensor 40ft Mounting height 3.4

Stand Alone Sensors

BTS-14F Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with

Automatic Dimming Photocell and 360° Lens

BTS-40F Bluetooth® Programmable, BTSMP-HMO PIR Occupancy Sensor with

Automatic Dimming Photocell and 360° Lens

BTSO-12F Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with

Automatic Dimming Photocell and 360° Lens

7PR 7-Pin Receptacle 4

7PR-SC
 7-Pin Receptacle with shorting cap ⁴
 7PR-TL
 7-Pin PCR with NEMA photocontrol ⁴

3PR 3-Pin Receptacle 4

3PR-SC
 3-Pin receptacle with shorting cap ⁴
 3PR-TL
 3-Pin PCR with NEMA photocontrol ⁴

Programmed Controls

SCP-_F Sensor Control Programmable, 8F or 40F 9

ADD AutoDim Timer Based Dimming 10

ADT AutoDim Time of Day Dimming 10



VIPER by Current

V5.1: 1,807 Listings

_								
	Network Cor	ntrol Options						
	NXWS-16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming 13.4						
	NXWS-40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming 1,3,4						
	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor $^{3.4}$						
	WIR	LightGRID+ In-Fixture Module 3.4						
	WIRSC-14F	LightGRID+ Module and Occupancy Sensor 14ft Mounting height 3.4						
	WIRSC-40F	LightGRID+ Module and Occupancy Sensor 40ft Mounting height 3,4						
	Stand Alone	Sensors						
	BTS-14F	Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens						
	BTS-40F	Bluetooth® Programmable, BTSMP-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens						
	BTSO-12F	Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens						
	7PR	7-Pin Receptacle ⁴						
	7PR-SC	7-Pin Receptacle with shorting cap 4						
	7PR-TL	7-Pin PCR with NEMA photocontrol 4						
Г	3PR	3-Pin Receptacle ⁴						
	3PR-SC	3-Pin receptacle with shorting cap ⁴						
1	3PR-TL	3-Pin PCR with NEMA photocontrol 4						
	Programmed	d Controls						
	SCPF	Sensor Control Programmable, 8F or 40F 9						
	ADD	AutoDim Timer Based Dimming 10						
	ADT	AutoDim Time of Day Dimming 10						



Key Questions - Controllability

Draft 1: Page 73

Key Questions Regarding Controls Categories and Other Controllability Proposals

- The DLC is requiring all qualified products listed to be continuously dimmable down to at least 20%.
 What feedback, if any, do you have about this proposal?
- 2. Are there any Driver Types missing in Table 19 or Table 20?
- 3. Are there any Integral Sensor Types missing in Table 19 or Table 20?
- Are there any Driver and Integral Controller Types missing in Table 22?
- 5. Are there any Integral Sensor Functions and Technologies missing in Table 22?
- 6. Are there any Controls Ready receptacle types missing in Table 18?
- 7. Draft 1 proposes that luminaires with only 3-pin Twistlock receptacles as an option are not eligible for V6.0 listing because they do not support dimming through the receptacle. What feedback, if any, do you have about this proposal?

Draft 1: Field Adjustable





Field Adjustable Rationale:



Why

Better align with industry practice and encourage use of lower output and CCTs.

What

Define 'Field Adjustable' as changes made at time of installation, local to the luminaire.

How

Three FA Types: FALO (output), FACT (color temp), FALD (distribution)



Field Adjustable vs Dimming/Tuning

Changes made physically at the luminaire

During installation

Field Adjustable

Changes made remote from the luminaire

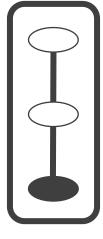
Normal Operation

Dimming/Tuning



Field Adjustable Light Output (FALO)

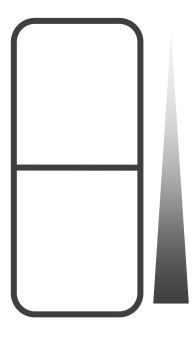
Splitting Field Adjustable Light Output from dimming



Lumen Output

Propose that products ship at lowest wattage setting

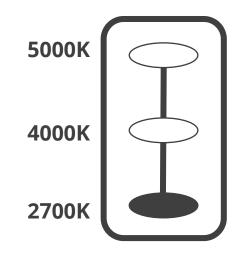
Field Adjustable Light Output



Dimming

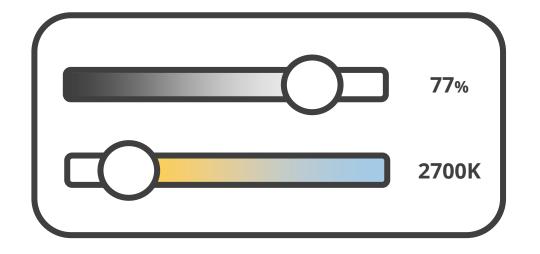
Field Adjustable Correlated Color Temperature (FACT)

Splitting FACT from color-tuning



Color Temperature

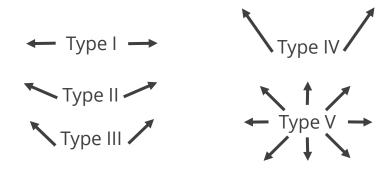
Propose that products ship at lowest CCT setting



Field Adjustable Light Distribution (FALD)

Field Adjustable Light Distribution

- Display
 - Type
 - Range
 - Indoor: degrees
 - Outdoor: IES + NEMA Distribution Types



IES Distribution Types

Beam Spread (deg)	NEMA Type	Description
10-18	1	Very Narrow
18-29	2	Narrow
29-46	3	Medium Narrow
46-70	4	Medium
70-100	5	Medium Wide
100-130	6	Wide
130+	7	Very Wide



Key Questions – Field Adjustable

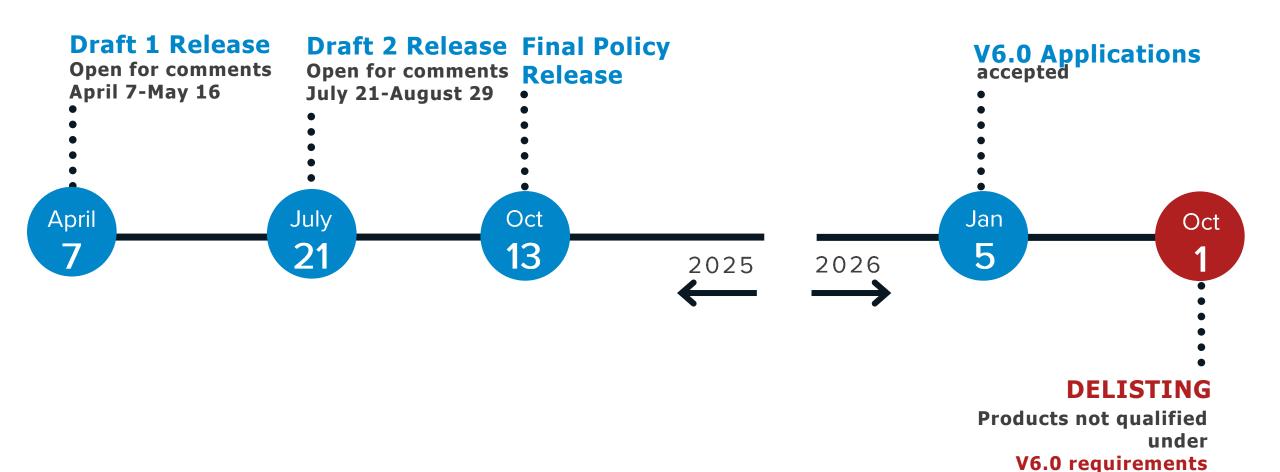
Draft 1: Page 79

Key Questions regarding field adjustability proposals

- 1. One implication of the proposed requirements for Field Adjustable Light Output products is that products seeking a FALO listing will need to be dimmable (changes made remote from the luminaire during normal operation) as well as field adjustable (changes made while physically located at the individual luminaire, typically during installation). Does this change have any implications for your current product line?
- Do you have any feedback about the changes proposed for reported data about field adjustable luminaires?



SSL V6.0 & LUNA V2.0 - Release Timeline





delisted