



Showcase

2016

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Competition Partners

Partnerships link energy efficiency & lighting quality

INTERNATIONAL ASSOCIATION OF LIGHTING DESIGNERS

IALD



Illuminating
ENGINEERING SOCIETY

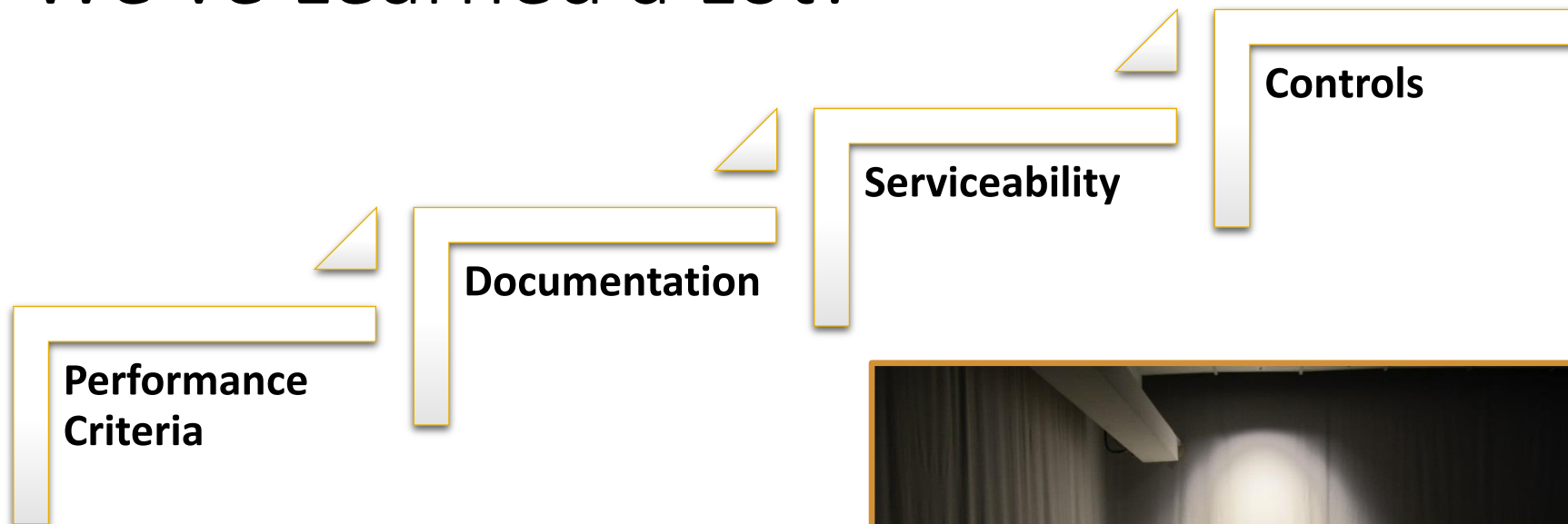
U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

BUILDING TECHNOLOGIES OFFICE

NGL 2008-2016

We've Learned a Lot!



And Seen Lots of Products

	2016	All
Intents	159	1975
Judged	93	1054
% of intents judged	58%	53%
Awards	25	371
% of judged awarded	24%	35%

2016 Judging Panels



Indoor

Outdoor



New in 2016 - Indoor

- Luminaire focused categories with application targets
 - High output recessed downlights
 - Linear pendants
 - Industrial high bays
 - 2x2 troffers
- Control areas
 - Single - digital (all applications)
 - Single - dim to warm & white tunable
 - Connected lighting systems



2016 Outdoor Focus

- Pedestrian Scale
 - 12' decorative post top
 - Bollards
- Parking Garage
 - Detailed controls evaluation
- Other Applications
 - Roadway
 - Sports lighting (new)



Judging Approach

- Organized by application
- Product Evaluation
 - Installed and lighted
 - Dimming Sequence
 - Table top – serviceability
 - Documentation
- Process
 - Independent judgment
 - *Preliminary* scoring
 - Discussion and decision
 - Post judging analysis & verification



Scoring

Deliberation

3:06 PM

100%

6

Cava Curve (*Pendant Linear Luminaires*)

Light Output 3628	Input Power 31.44	Efficacy 115.39	CCT 3049	CRI 83	Power Factor 0.988
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Price
450

Product Warranty
5 years

Chip Manufacturer
Samsung

Driver Brand
EldoLED

Additional Applications
N/A

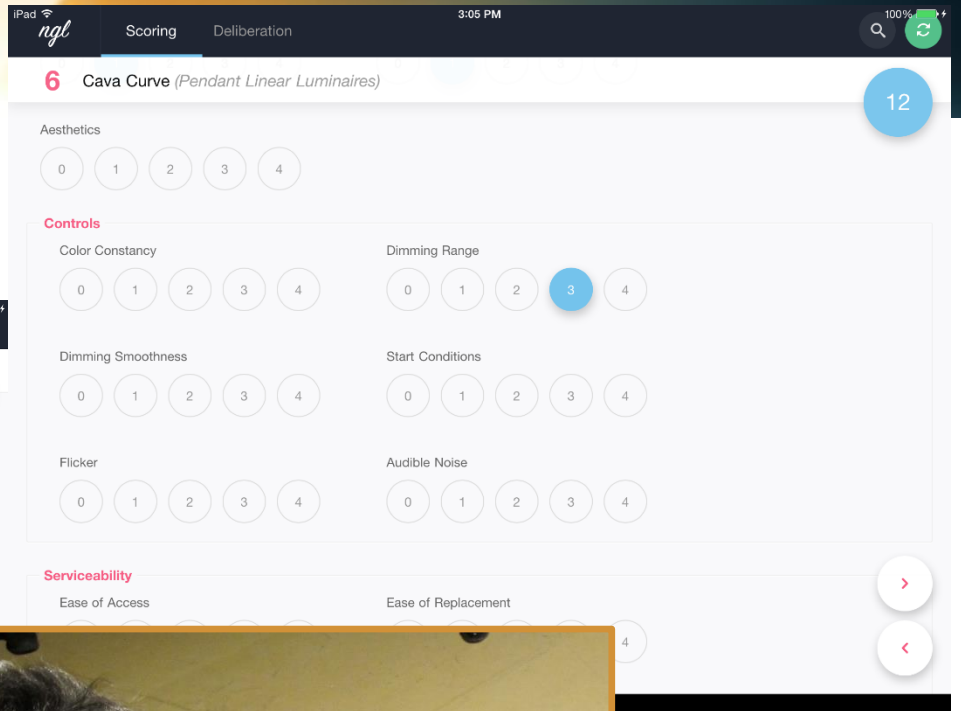
Notes To Judges

Cava is a linear LED pendant luminaire with a remarkably comfortable and surprising appearance. Using completely concealed a Cava provides superior brightness control, while maintaining high efficacy by distributing light over the vaulted interior cavity of t totally direct or segmented direct/indirect distributions.

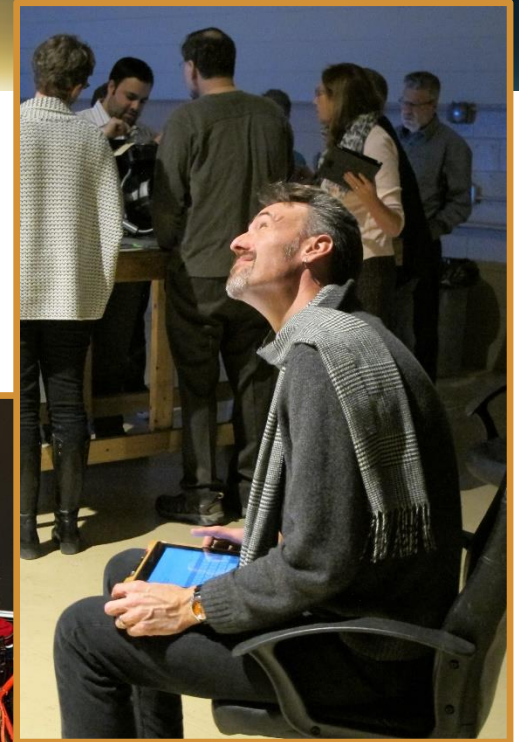
Combined Judges Scores						
Color Quality 0.00	Illuminance 2.00	Light Distribution 1.00	Glare Control 1.00	Aesthetics 0.00	Controls 1.00	Serviceability 0.00
Bonus Points 0.00	Efficacy 2.00	Lumen Main. 3.00				

Your Scores						
Color Quality 0.00	Illuminance 2.00	Light Distribution 1.00	Glare Control 1.00	Aesthetics 0.00	Controls 1.00	Serviceability 0.00
Bonus Points	Efficacy	Lumen Main				

10.00



Seeing is Believing



Color Evaluation

Review based on visual evaluation of the color appearance, consistency, and rendering of the installed luminaire.

We collected TM-30 data for the first time in 2016.

48% of entrants submitted data.



Digital Dimming Evaluation

		All	Winners
2015	DALI	39.6%	63.2%
	DMX	20.8%	10.5%
	Proprietary	39.6%	26.3%
2016	DALI	52.8%	57.9%
	DMX	30.2%	21.1%
	Proprietary	30.2%	5.3%

Dimming Sequence

Same
sequence
for each
entry

	Dimming Level	Fade Time
1	100%	
2	off - 100%, 100% - off	0
3	off - 100%, 100% - off	5 sec
4	off - 100%, 100% - off	15 sec
5	off - 100%, 100% - off	30 sec
6	100%, 50%, 20%, 10%, 5%, 1%, off	0
7	off, 1%, 5%, 10%, 20%, 50%, 100%	0

Indoor Control Evaluation Criteria

- Color constancy
- Dimming range
- Dimming smoothness
- Start conditions
- Flicker
- Other criteria deemed appropriate by the judges

Sports Lighting Evaluation

- First year for this category
- Focus on recreational fields
- Only 'Notable' winners this year



Connected Lighting Evaluation

- First year for this category
- Focus on systems
- Only 'Notable' winners this year



- DLC CALC connection
- Key parameters
 - Code compliant
 - Daylight
 - Presence detection
 - Individual control
 - Overlapping groups
- Entrant options
 - Wired or wireless, hybrid OK
 - Integrated or separate

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Evaluation Set Up

- All entries in the same room
- 3-6 luminaires provided
- Daylight simulated
- Presence timed



Evaluation Protocol

- Entrant guide
- Pre-qualification
 - Check list of capabilities
 - Review of documentation
- Visual evaluation
 - Lighting performance
 - Dimming performance
 - Sensor performance
- Installation/configuration

2016 Next Generation Luminaires
Connected Lighting Systems

Minimum Qualification Review

Luminaire ID	333
Company	Best Lighting
Luminaire Name	Omnisight
Description	Our luminaires provide beautiful illumination of the space and our controls are so seamless and unobtrusive they predict your needs and adjust the lighting automatically!

Required Control Features	Yes	No	Comment: indicate source document that supports review
Occupancy/vacancy detection	x		Installation manual provides guidance on adjusting time delay, 10 sec - 15 min.
Occupancy/vacancy variable time delay	x		
Local on/off	x		
Local intermediate control	x		
Daylight compensation	x		
Dimming to 10 percent relative light output, or 200:1 Contrast Ratio			
Individually addressable			
Capable of being grouped by lot (a minimum of 1000 luminaire type and output/zone; grouping configuration must allow for diversity)			
Function and implement lighting control strategies independently or any remote or centralized controller.			

Prohibited Control Features	Yes	No	Comment: indicate source document that supports review
Analog communication (e.g. 0-10V) between luminaire and control system			

Additional Control Features (for information only)	Yes	No	Comment: indicate source document that supports review
Analog communication within the luminaire			
Wireless			
Hybrid (wired and wireless)			
Intelligence and control functionality resident in luminaire modules or Gateway (if applicable)			
Use of a Gateway and/or an API interface for control			

Subjective Review	Ranking	Comments
Basic Operation/Luminaire Performance		
Color		
Illuminance		
Light Distribution		
Glare Control		
Serviceability		
Value		
Appearance		
Bonus Points		
Daylighting/Control		
Smoothness		
Response Time		
Sensitivity		
Dimming		
Color Constancy		
Range		
Smoothness		
Start/Conditions		
Flicker		
Driver physical dimensions/mounting		
Occupancy/Vacancy Control		
Response Time		
Sensitivity		
Variable Time Delay		
Optional Features		
Individual/Personal Control		
Ease of Use		
Flexibility		
Energy Reporting		
Ease of Use		
Flexibility		
Reconfiguring/System		
Ease of Reconfiguring		
Flexibility		
Installation/Configuration: Reformed by Client/End User		
Ease of Installation		
Ease of Configuration		
Documentation Quality		
Commissioning: Reformed by Client/End User		
Ease of Commissioning		
Documentation Quality		

What We Saw

2 Basic System Types

- External controller with networked luminaires
- Self-contained network (all logic on board)



External Controller

Manufacturer supplies control system, luminaire by others

- Benefits:
 - Robust control functionality, typically can interface with BMS
 - Many options for luminaire styles
 - Well suited for new construction and complex projects
- Limitations:
 - Dual points of responsibility
 - More complicated installation
 - More complicated start up and commissioning
 - Cost for smaller projects

Self-Contained Network

Integrated fixture/control “out of the box”

- Benefits:
 - Integrated solution, single point of responsibility
 - Simple installation, start up, and commissioning
 - Well suited for retrofits and smaller projects
- Limitations:
 - Limited control functionality
 - Limited options for luminaire styles

Challenges

- How do you know how system capability matches to project needs (mostly by experience today)?
- How do you know that you have correctly configured a system – is professional commissioning necessary?
- In practice, if a system fails to meet expectations, is it capability, configuration, or defect?

2017 Thoughts

- Continued emphasis on digital controls and connected systems? Perhaps a separate competition?
- Continued refinement of application focused evaluations?
- More realistic installations (expanded number of sites?)

Tell us what you would like to see!

The background is a dark blue gradient with abstract geometric shapes. On the left, there are several overlapping translucent blue polygons. From the bottom center, a bright yellow and orange light source emits several rays of light that fan out towards the top right. There are also some circular bokeh-like light effects in the upper center.

OUTSTANDING WINNERS

Kenall Lighting

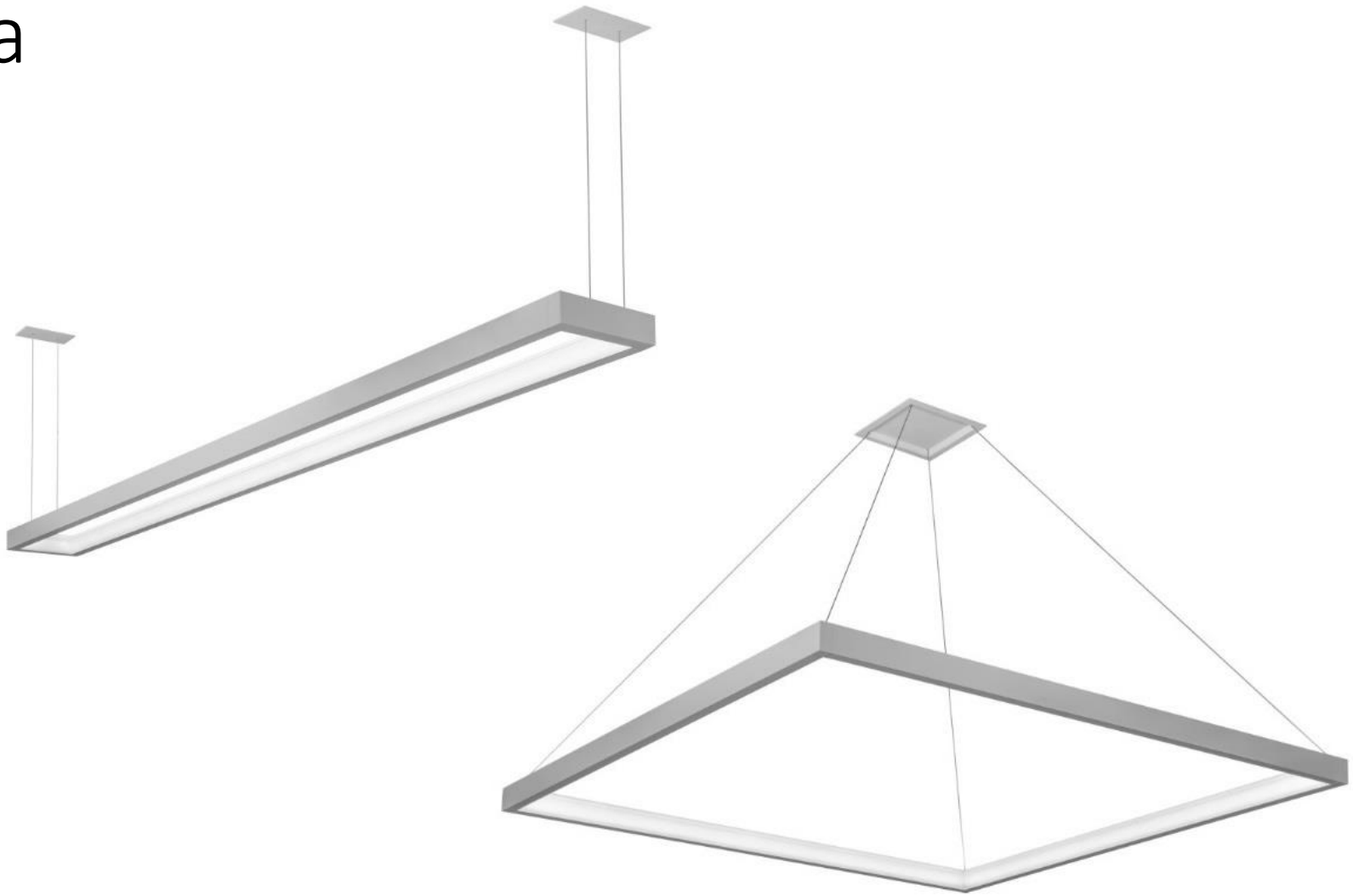
MedMaster Balance

OUTSTANDING



White Tunable

Focal Point Nera



OUTSTANDING

Eaton

Portfolio dim to warm

OUTSTANDING



Cree

RSW Series LED Street Luminaire

OUTSTANDING



Landscape Forms, Inc.

FGP Path Light

OUTSTANDING



The background is a dynamic abstract composition. It features a dark blue field on the right, transitioning into a lighter blue area on the left. Overlaid on this are several translucent, angular shapes in shades of blue and yellow, creating a sense of depth and movement. Bright, golden-yellow light rays emanate from the bottom center, fanning out upwards and to the right, adding a dramatic and celebratory feel to the overall design.

RECOGNIZED WINNERS

Landscape Forms, Inc.

FGP Pedestrian Light

RECOGNIZED



Eaton

Arbor Decorative LED Post Top



RECOGNIZED

Kenall Lighting

TekDek High Output

RECOGNIZED

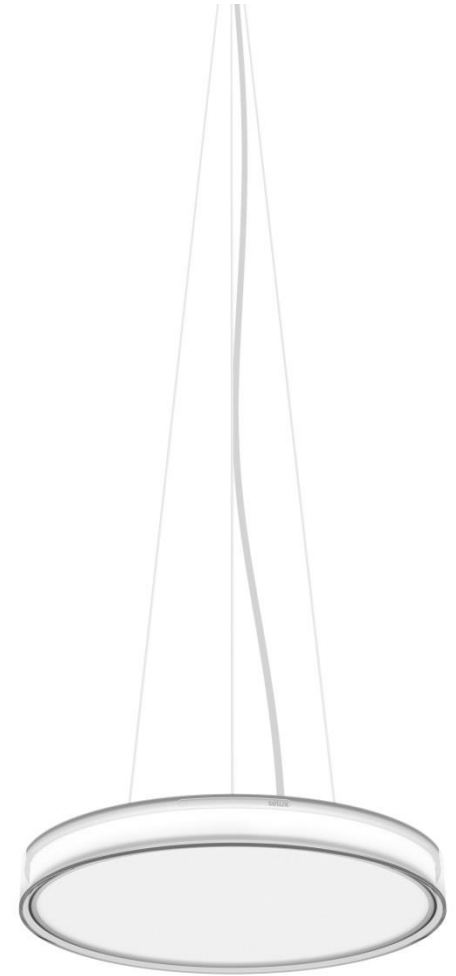


Parking Garage

Selux Corporation

Kju Circle

RECOGNIZED



Selux Corporation

M60 MyWhite

RECOGNIZED

Cool

Warm

Selux Corporation

Inula Bollard LED

RECOGNIZED



Juno Lighting Group, an Acuity Brands company

Juno 4" I.A. Downlight

RECOGNIZED



Recessed Accent

Juno Lighting Group, an Acuity Brands company

Aculux 3 ¼" BBD/TW, Gen2

RECOGNIZED



Philips Ledalite

TruGroove Suspended LED

RECOGNIZED



Philips Ledalite

FloatPlane Suspended LED

RECOGNIZED



Philips Gardco

Softview LED parking garage luminaire



RECOGNIZED

LumenWerx

ALCOVE Ramp

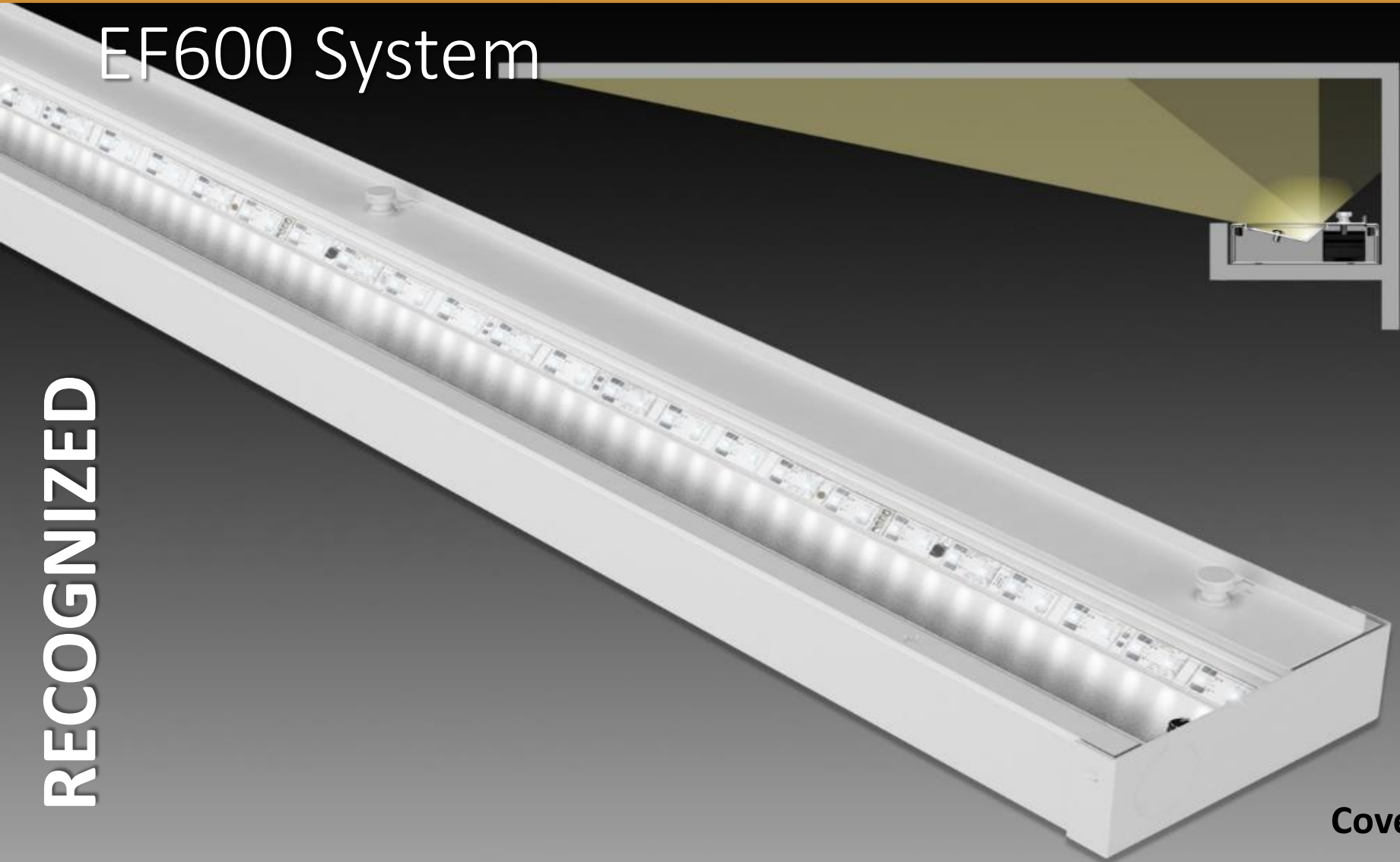
RECOGNIZED



Cove

LF Illumination EF600 System

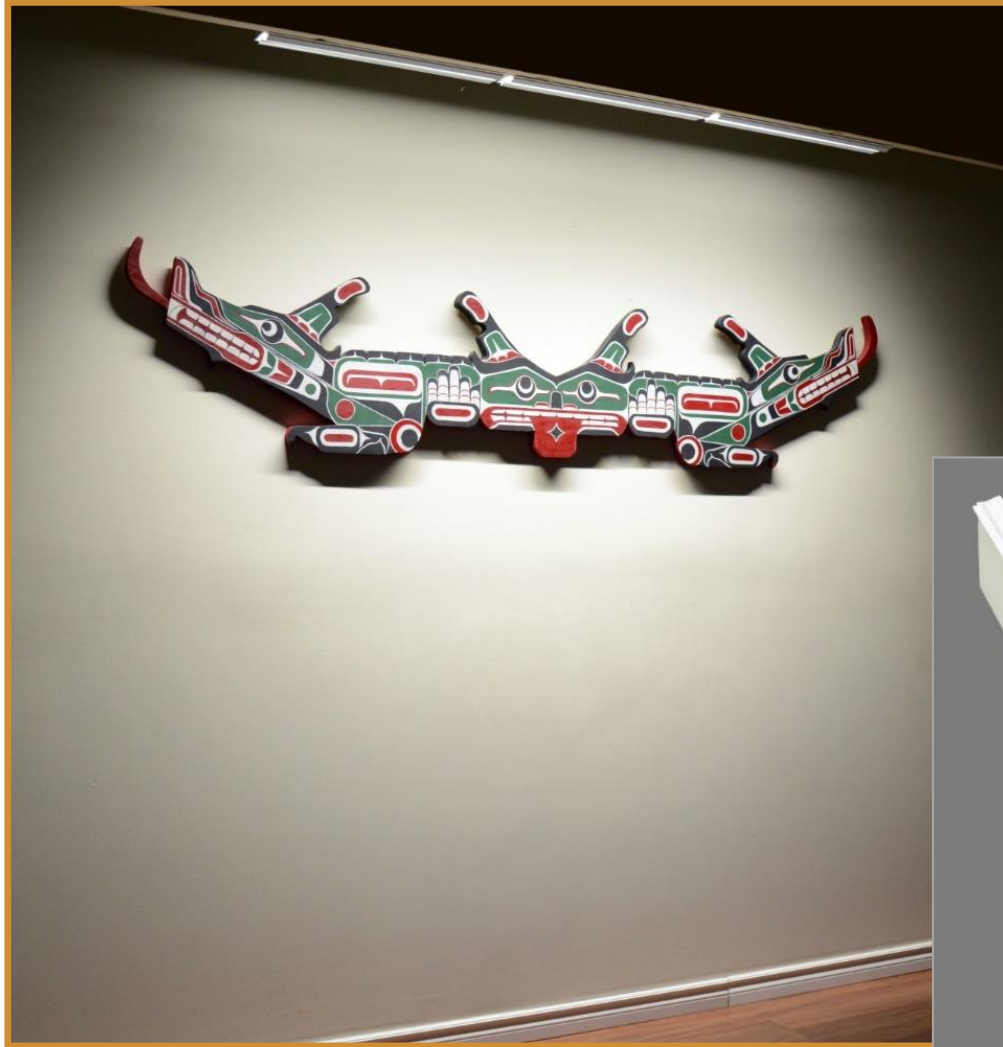
RECOGNIZED



Cove

QuarkStar in collaboration with Everlight Q-Wall

RECOGNIZED



Wall Wash



Visa Lighting

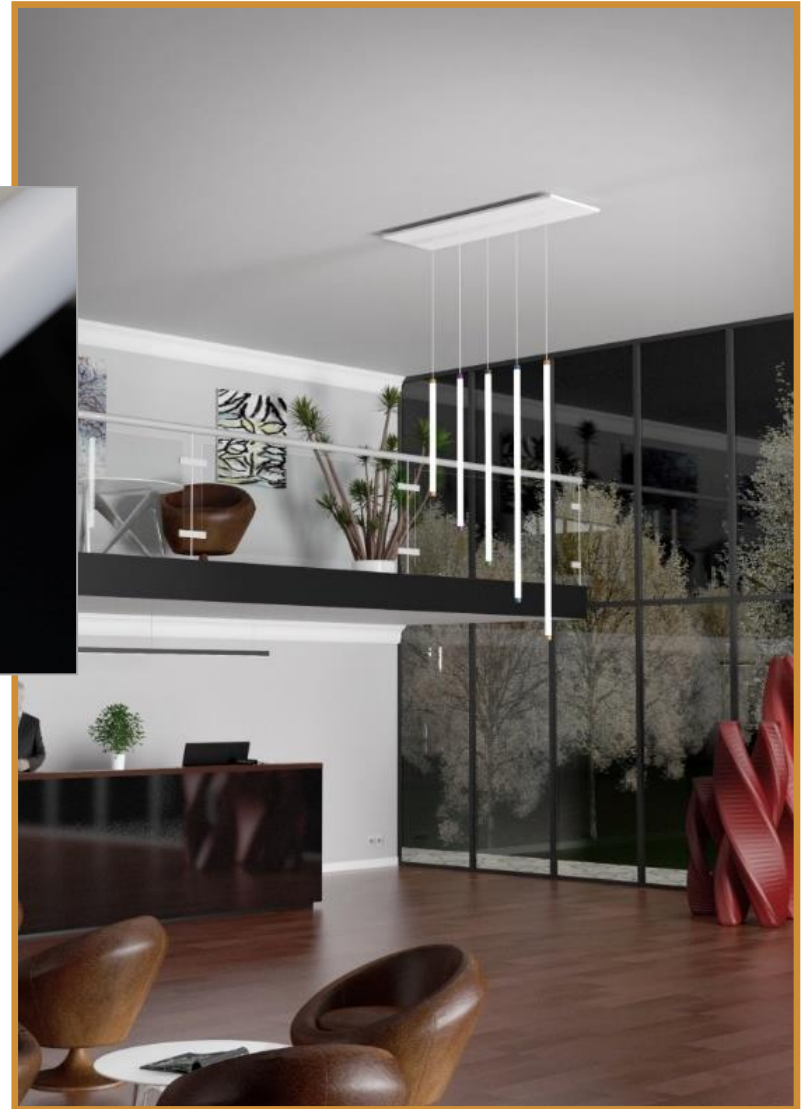
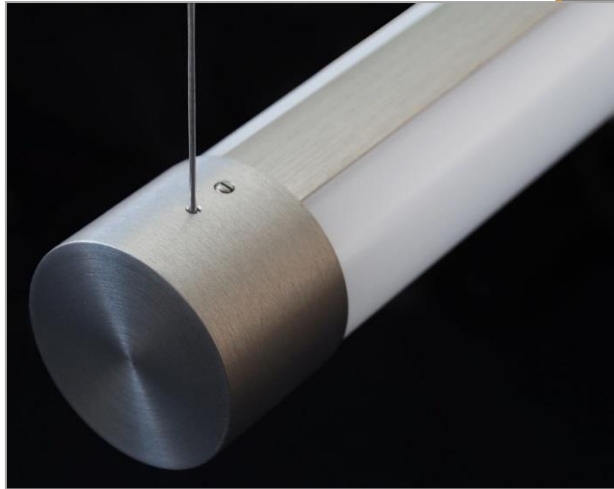
Meridian

RECOGNIZED



LED Linear GmbH

XOOTUBE 38 HD15



RECOGNIZED

METEOR LIGHTING

6" High Lumen Recessed Downlight

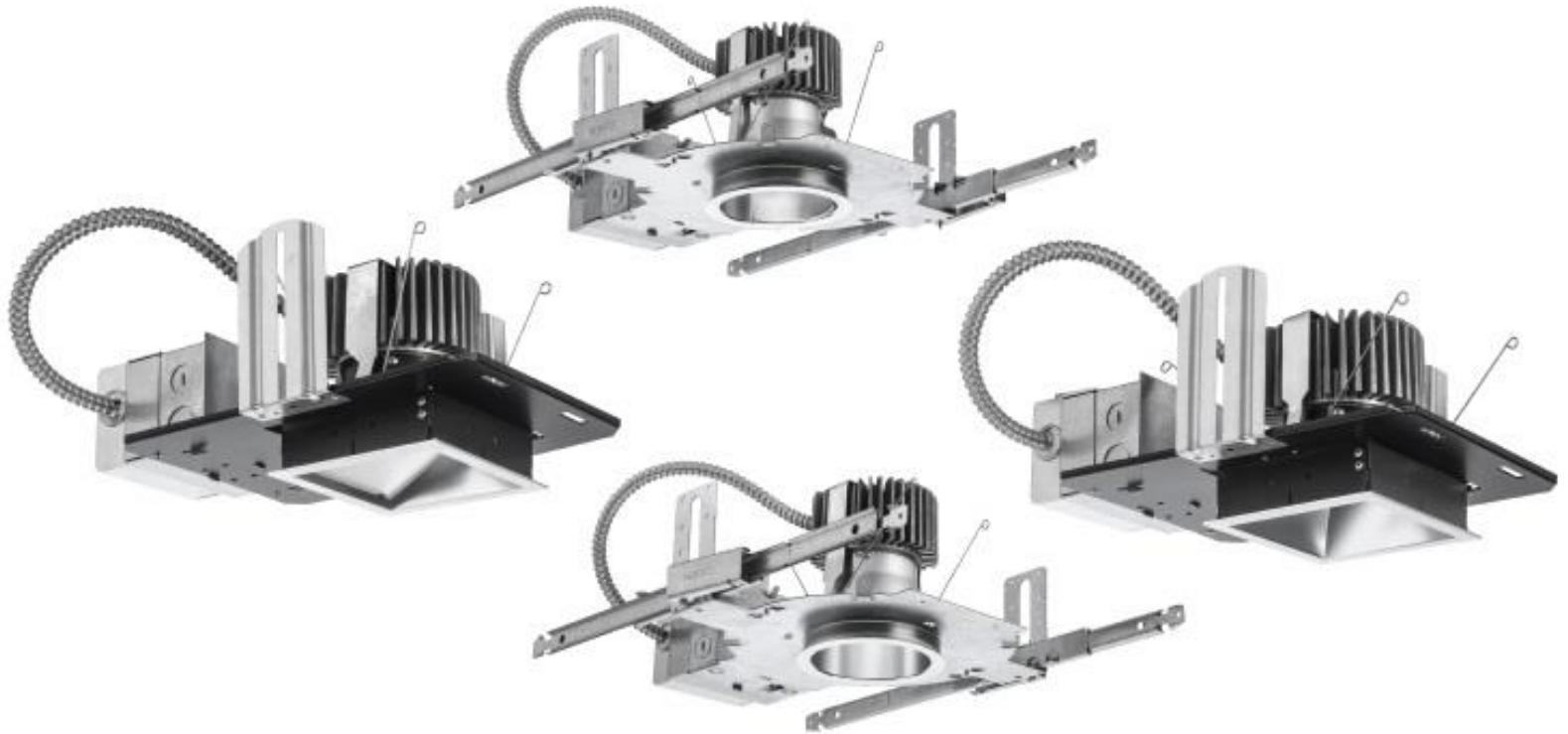
RECOGNIZED



Acuity Brands Lighting, Inc.

EVO 4" Tunable White

RECOGNIZED



First Light Technologies

PLB-AC Series LED Bollard

RECOGNIZED



RAB Lighting Inc.

PORTO™

RECOGNIZED



Parking Garage

The background is a dark blue gradient with abstract, translucent geometric shapes in shades of blue and yellow. These shapes overlap and create a sense of depth. Bright, white light rays emanate from the bottom center, spreading outwards and upwards, creating a lens flare effect. The overall composition is modern and tech-oriented.

CONNECTED LIGHTING SYSTEMS

Cree SmartCast® Technology



NOTABLE

Enlighted Inc.

Advanced Lighting Control Solution



NOTABLE

Philips Lighting SpaceWise



NOTABLE

The background is a dynamic composition of abstract elements. On the left, there are sharp, angular shapes in various shades of blue, resembling facets of a crystal or architectural structures. From the bottom center, a bright, warm yellow light source emits several distinct rays of light that fan out towards the right side of the frame. Overlaid on these light rays are several semi-transparent, concentric circles in a light blue or cyan color, creating a bokeh or lens flare effect. The overall color palette is dominated by deep blues and vibrant yellows, with the white text providing a high-contrast focal point.

SPORTS LIGHTING

Eaton's Ephesus Lighting Stadium Pro



NOTABLE

KMW, Inc.

SUFA-A Sports Luminaire



NOTABLE

The background is a dark blue gradient with abstract, translucent geometric shapes in shades of blue and yellow. A large, bright yellow triangular shape points upwards from the bottom center. Several concentric circles and lens flare effects are visible, particularly in the upper right and center. The word "CONGRATULATIONS!" is written in a large, white, sans-serif font across the middle.

CONGRATULATIONS!

See you all next year!