

### **Opportunities for Collaboration**

Department of Energy Lighting R&D Workshop, January 28, 2020 San Diego, California

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Established in 2016:

- Refine knowledge about lighting and visual processes
- Understand the impact of light exposure on human health
- Foster the integration of lighting into the holistic built environment
- Demonstrate the value of quality lighting



#### Identifying and Funding Projects

- Identifying funding partners to support important research
- Partner with organizations to sponsor summits and research-driven events
- Biannual Research Symposia
  - 2020 IES Research Symposium Light + Quality, Orlando, Florida, April 27<sup>th</sup> to 29<sup>th</sup>
  - 2018, Light + Health, Atlanta
  - 2016, Light + Color, Gaithersburg
  - 2014, Light + Behavior, Cleveland
  - 2012, Light + Seniors, Washington DC

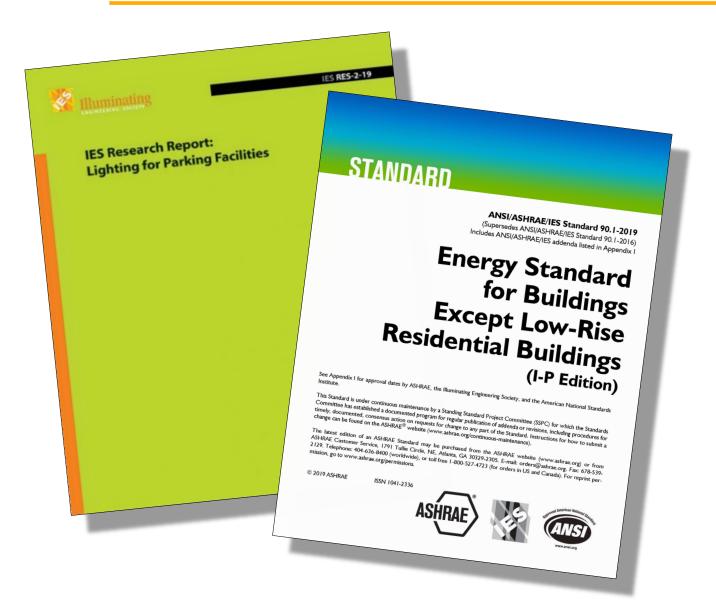




IES Technical Committees & Standards-Specific Research



#### **IES Standards-Specific Research Published**



IES Research Report: Lighting for Parking Facilities (IES RES-2-19)

ASHRAE / IES Standard 90.1: Lighting Computer Modeling Project



## Outreach

AASHTO	CEE	IALD	IWBI	NRC
AATCC	CIBSE SLL	ICC	LCA	NRCan
AIA	CIE	IDA	LDL	NRDC
ALA	CIE-USNC	IEC	LESA	NBI
ALMR	CLIC	IECI	LRC	NXT
AMA	CLTC	IEEE	NAED	OSA
ANCR	CORM	IEIJ	NAESCO	OSHA
ANSI	CPTED	IESANZ	NAHB	PLDC
AOLP	CTBUH	IESSA	NAILD	RBC
ASABE	DLC	A LET AN A	NALMCO	SOLA
ASAP	DOE	IFMA	NAS	SID
ASE	DOT	IIC	NCQLP	SLTBR
ASHRAE	EFC	IIDA	NECA	SPIE
ASID	EPA	ILA	NEMA	TIA
ASLA	FDA	ILLI , ,	NEMRA	UL
ASME	FGI	1LP	NFPA	USGBC
ASTM	FHWA	IMSA	NIBS	VZN
AVIXA	FTC	ISA	NIH	Zhaga
BOMA	GSA	ISCC	NIST	0
CABA	HCLS	<b>UTE</b>	NLB	St and
CEA	HFES	ITU	NLCAA	
CEC	HPBCCC	IUVA	NPS	2



- Lighting metrics: vision, health, environmental, quality, and economics
- Requires nothing less than the same effort established 100 years ago when lighting metrics were first established
- Our goal is to formulate strong collaborations to identify pathways for funding targeted projects to resolve big picture issues:
  - Vision metrics
  - Glare metrics
  - Flicker criteria
  - Lights and human health criteria (day, night, shift work)
  - Environmentally responsible outdoor lighting criteria



Responsible Outdoor Lighting Criteria:

- The IES is resolved to form a new set of environmentally responsible outdoor lighting standards
- Formation of an Outdoor Lighting Task Group (12 IES committees)
- IES Science Advisory Panel reviewing existing metrics
- New IES Agreement with the National Park Service
- New Memorandum of Understanding with the International Dark Skies Association
- Research needs: New lighting metrics for environmentally sensitive applications, standards to minimize sky glow, etc



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# Illuminating ENGINEERING SOCIETY