



NALMCO[®]

THE STANDARD FOR LIGHTING MANAGEMENT QUALITY SINCE 1953

SPRING SEMINAR

WWW.NALMCO.ORG

NALMCO SPRING SEMINAR

David Brown

Lighting Trends in the RetroFit Market

March 4, 2020



The Standard for Lighting Management Quality since 1953 www.nalmco.org

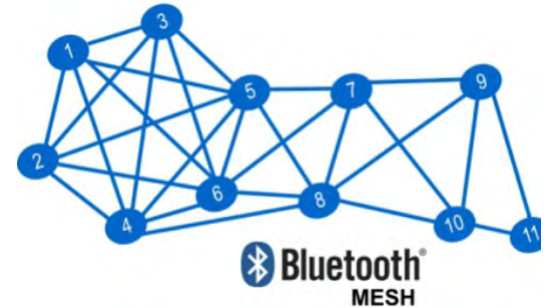
Why are we here?

- Trends in the following areas:
 - Wireless Controls
 - USA Assembled Products
 - Zoning changes for Outdoor Lighting
- How to leverage each trend to become a valued advisor to your client
 - What's New
 - What's the Opportunity
 - How to Sell



Controls – What's New?

- Bluetooth Mesh
 - From One-to-One to One-to-Many
- Easier Fixture Integration
- Completely Wireless
- Easy-to-program
- Network not limited to 200 nodes
- NO GATEWAYS



Controls – What's the opportunity?

- Better Value
 - Optimum controllability at a more economical rate
- Rebate Fulfillment
 - Acquire control rebates once not feasible
 - Energy control management system
- Future Proof Space
 - Every fixture is addressable



Controls – How to Sell

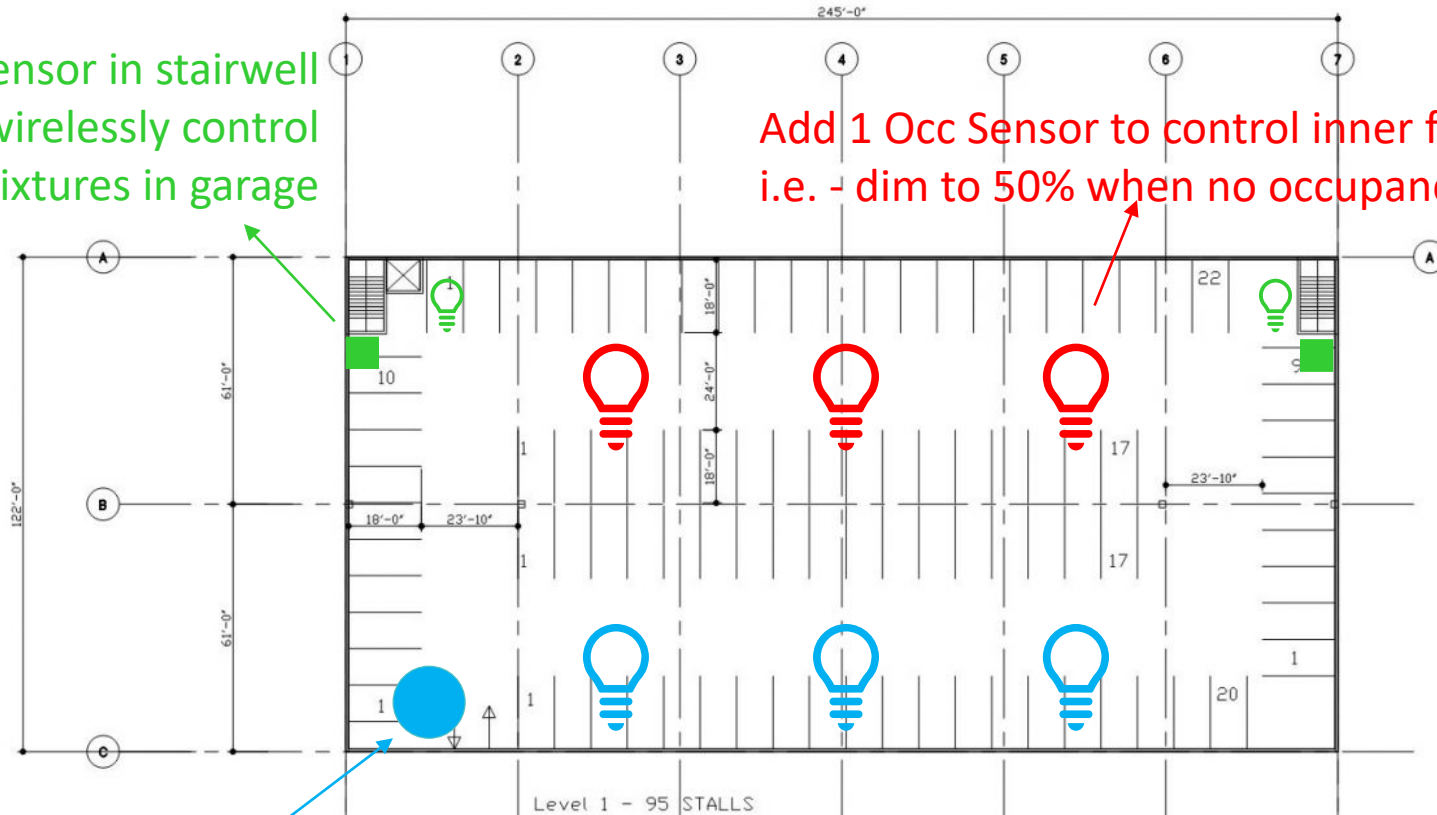
- What's the trend?
 - Customers and end users are asking for more control over the lighting. Open workspaces, flexible work hours and multi-functioned teams are generating flexible lighting needs.
- To satisfy this trend we . . .
 - Have incorporated lighting controls into each of our projects. We realize the up-front costs are going to be higher than many proposals that you might see. But we feel like we'd be doing a disservice if we didn't at least discuss this option. After understanding the value, most of our incorporate at least some of the control options we propose.



Parking Garage Application

Place Sensor in stairwell to wirelessly control fixtures in garage

Add 1 Occ Sensor to control inner fixtures – i.e. - dim to 50% when no occupancy



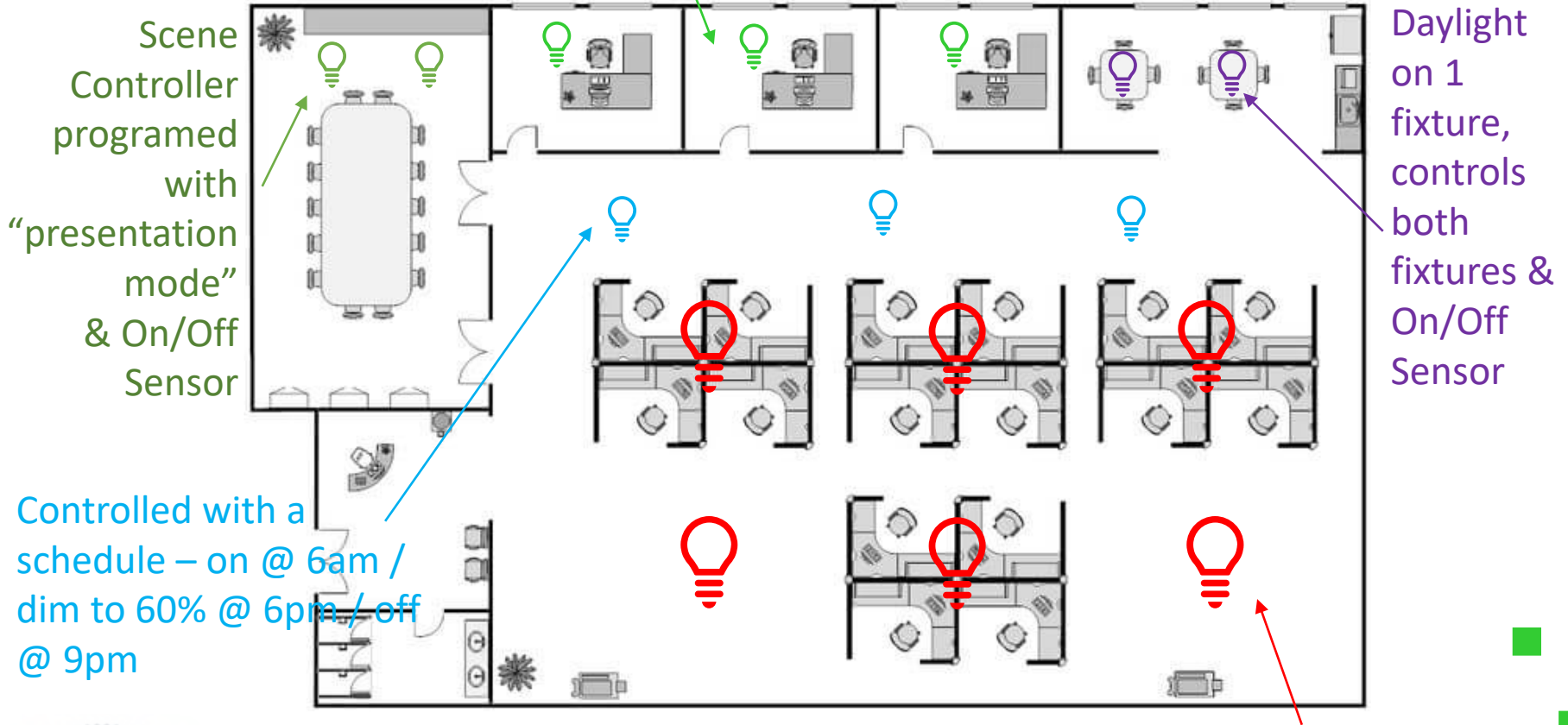
Add 1 Daylight Sensor to control perimeter fixtures



The Standard for Lighting Management Quality since 1953 www.nalmco.org

Office Application

Scene Controller/Dimmer & On/Off Sensor



Scene Controller programmed with "presentation mode" & On/Off Sensor

Controlled with a schedule - on @ 6am / dim to 60% @ 6pm / off @ 9pm

Daylight on 1 fixture, controls both fixtures & On/Off Sensor

Wall On/Off - Future proofed with Simple Sync in anticipation of future cubical moves/changes



Parking Lot Application

Controls –
dimmed @ 9pm

RESIDENTIAL



Design Control Document Only - Not for Construction
Recommended location and positioning is based on
information provided. Installation shall be completed
by laboratory data in accordance with IES approved methods.
Performance may vary due to site-specific variables.
Calculations do not account for the influence of obstructions
unless otherwise noted. An engineer and/or architect must
approve the applicability of the layout for final construction documents.

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	App/Min	Max/Min
Residential Parking	Footcandle	Fc	1.86	19.2	0.0	NA	NA

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	LF	Description	Total Watts	Lum Lumens
L	3	0	TWIN		25001 TR-SPT10W27V80K12	698.88W	11640

Drawn By: KENN GRANT
Date: 1/20/2020
Scale: 1" = 16'

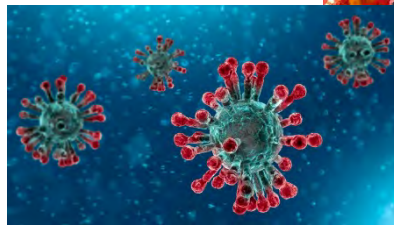
HYDE PARK GOLF & COUNTRY CLUB
PARKING LOT



US Assembled – What's New?



- How Trend Started
 - Tariff
 - Demand for faster customer fulfillment
 - Perfect Storm
 - CNY & Corona

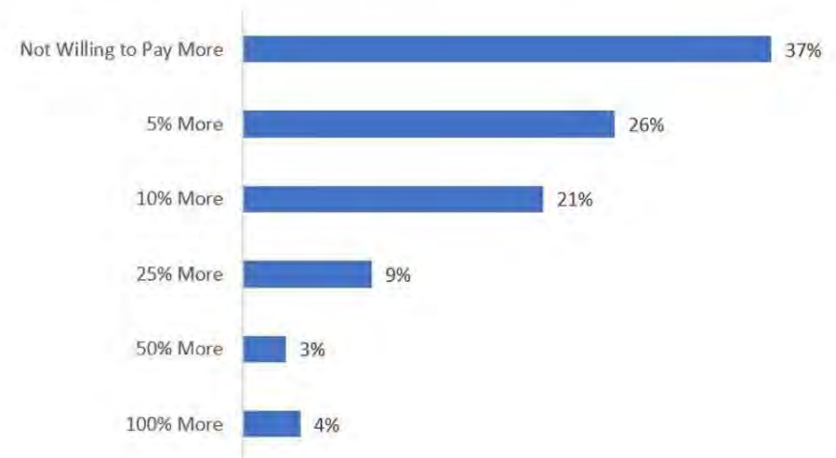


US Assembled – What's the opportunity?



- Shorter Lead Times
- Warranty concerns eased
- Opens Military Base Markets
- Customization
- Up Charge

U.S. Consumer Survey: How Much More Respondents Would be Willing to Pay for U.S.-Made Products, 2017



Credit: Reuters/Ipsos



US Assembled – How to Sell

- What's the trend?
 - Customers are demanding faster access to products – labor is scarce, and we simply can't wait for weeks to schedule labor.
- To satisfy this trend we . . .
 - Have partnered with local, US based manufacturers to allow us to have the greatest speed and flexibility to complete your project. If there are issues, and there always are, it's easy to solve them with the manufacturer as they are in the US.
 - There might be a small premium for this, but we believe it's very much worth staying on track with this project.



Light Pollution - Background

- Light Pollution

- Lighting that emits too much light or shines when and where it's not needed.
- 30% of all outdoor lighting in the US is wasted
- Unnecessary indoor lighting – particularly in empty office buildings at night

- Effects of Light Pollution

- Increased Energy Consumption
- Disrupting the ecosystem & wildlife
- Harming Health (circadian rhythm)

New Mexico N.M. Stat. Ann. 837a-12-1 et seq. The Night Sky Protection Act regulates outdoor lighting fixtures to preserve the state's dark sky while promoting safety, conserving energy and protecting the environment for astronomy. Requires all outdoor lighting fixtures to be shielded, except incandescent fixtures of 50 watts or less or other sources of 70 watts or less. Prohibits outdoor recreational facilities from using lighting after 11:00 p.m. Provides for a fine of up to \$25 for any person, firm or corporation in violation of the law. Exceptions may apply.



Light Pollution – What's New

- New Legislation
- 18 States have light pollution laws
- Laws generally about shielded
- Now laws getting more specific
- Sea Turtles
 - Fairfax Co, Virginia
 - The proposed amendment seeks to set the maximum color temperature for outdoor lighting to 3,000 kelvins, which is consistent with a recently adopted amendment to the [Public Facilities Manual](#) for street lights. It's also in line with recommendations from the [International Dark-Sky Association](#) and the [American Medical Association](#).
 - County staff also recommends that the hours of operation for lighted outdoor playing fields or courts on single family residential properties be revised from the current time of 11 p.m. to 10 p.m.



Light Pollution – What’s the Opportunity?

- Confusion in the marketplace
 - Opportunity to become trusted advisor
- Increased flexibility / futureproof
 - Schedules (off at 10pm) – avoid fines
 - CCT tuning
 - Validate energy usage



Light Pollution – How to Sell

- What's the trend?
 - Communities are becoming more aware of Light Pollution and this can impact outdoor lighting projects by creating greater restrictions on CCT, F/C levels, hours of operation, etc.
- To satisfy this trend we . . .
 - We suggest future proofing your outdoor project. We can add controls to this project to allow you to change scenes, schedules, etc that ensures your project will comply should the local ordinances change. While this might add additional up-front costs, it's more economical to do this now, than in the future. Additionally, by better controlling the outdoor light fixtures, many of our customers have seen a significant payback on the controls.



Conclusion

- Controls are easy & pricing is making once “luxury” solutions mainstream.
- Assembled in the US is gaining traction.
- Light Pollution awareness is increasing and may impact state/local rules.
- Become a trusted advisor to your customer:
 - Explain the Trend
 - Provide a Solution
 - Sell More!



Thank You!

- David Brown
 - david.brown@techbrite.com



The Standard for Lighting Management Quality since 1953 www.nalmco.org

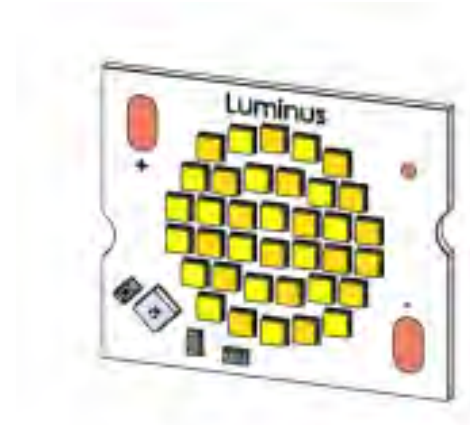
Appendix



The Standard for Lighting Management Quality since 1953 www.nalmco.org

Trends – Rapid Fire

- Human Centric Lighting
- Warm Dimming
 - Replicate the behavior of traditional bulb technology by dynamically changing CCT from 3000K to 1800K or from 4000K to 2700K as they are being dimmed. This “dim-to-warm” effect provides a relaxing, human-centric environment which is ideal in restaurants, bars, hotels, retail, and residential environments.
- UV Lighting – to fight bacteria

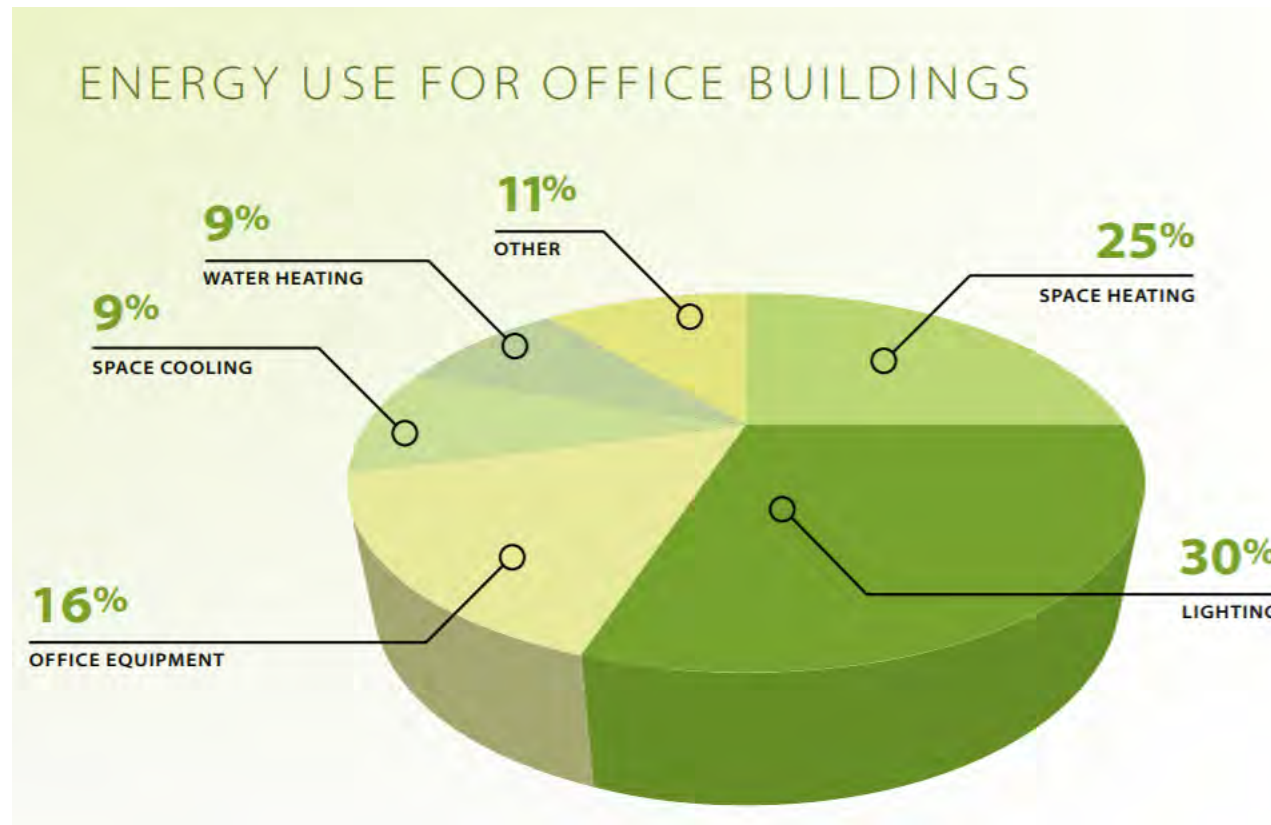


Human Centric Lighting – Background

- Human Centric Lighting
 - The natural circadian rhythm of a person can be supported by using warmer (relaxing) light with lower intensity in the morning and evenings, and cooler (energising) light during a typical working day. In essence, if we can control the lighting in our buildings better, then we can create a human centric lighting solution.
 - Helvar Lighting White Paper



Energy Use For Office Buildings



Made/Assembled in US Standard

- <https://www.ftc.gov/tips-advice/business-center/guidance/complying-made-usa-standard>



The Standard for Lighting Management Quality since 1953 [**www.nalmco.org**](http://www.nalmco.org)