America's Premier LED Lighting Company

"Changing How We Live and Work"

WRAP AROUND WARRANTY 10 YEARS WARRANTY

LIGHTING PRODUCTS CATALOG

2018-2019

Industry's BEST and ONLY 10-Year Wrap Around Warranty

135 to 185 Lumens per Watt

<10% THD

99% Power Factor

85+ CRI

MCB Lighting & Electrical

MEP Product Solutions

Inc. 500 AMERICA'S FASTEST-GROWING PRIVATE COMPANIES

Industry's BEST and ONLY 10-year Wrap Around Warranty

85+ CRI
99% power factor
< 10% THD
Extensive enhanced control capability

Leader in Lumen Efficiency

Top models at 135 to 185 lumens per watt
Upcoming designs exceeding 200 lumens per watt

MCB is one of the true pioneers in commercial LED lighting. Since the beginning, we have focused our efforts on award-winning LED lighting products as well as a customer experience that not only improves the way we light our world, but also improves the world we live in.

We bring a company and a dedicated team with a level of commitment and integrity not found elsewhere in our industry. At MCB's very foundation is a company completely focused on two core principles; our customers' needs and the environment as a whole.

Are you in need of the next generation of lighting fixtures that deliver the industry's lowest ROI or a custom LED solution designed for a challenging lighting project?

Can you benefit from free photometric studies, project financing, or complete project management from beginning to end?

MCB brings so much more to the table than just great lighting products and is the right partner to choose to get your project done right.

MCB Lighting & Electrical
MEP Product Solutions

AMERICA'S FASTEST-GROWING PRIVATE COMPANIES
Inc. 500

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Over the last several years, MCB has joined forces with diverse business partners to transition itself from a simple lighting manufacturer to become a complete TurnKey Solution provider.

We not only provide award-winning products to a range of different projects, but financial and on-the-ground support that other lighting manufacturers are simply not equipped to provide. MCB not only has the ability to manufacture the perfect LED lighting product customized to your specific project, we now have the ability to easily finance large municipal, industrial, and commercial sector projects.

Amazing products, unbeatable wrap-around warranties, and great customer service. At MCB, each of us are committed to bring a truly amazing customer experience to the world of commercial lighting and set the new standard of what you will expect from a complete TurnKey Solution provider.

From the beginning of the project to well past completion, we at MCB are your partners for the lifetime of our product warranty. After all, it isn't just lighting, it's the way we live our lives.

MCB Lighting & Electrical
MEP Product Solutions

America's Fastest-Growing Private Companies Inc. 500

The Real McCoy

Charles M. Baker

Energy Efficient Lighting Pioneer

MCB Lighting & Electrical was realized from CEO, President and Owner Charles M. Baker's unprecedented innovation of improvements in electrical power distribution systems, safety, and telecommunications in conjunction with his **unbelievable 73 energy management approved ideas** for the Department of Defense (DoD) — all bonded together and inspired by his desire to help the homeless and disenfranchised.

During his service for the United States Air Force (USAF), his ideas spearheaded cost-effective energy efficient lighting systems. Even more impressive was the better buying procedures and processes he implemented which were subsequently adopted government-wide. Years later, the commercial sector significantly benefited from these leverage buying practices helping to reduce costs in the commercial space by as much as 75%. Baker was also the driving force behind the development of the modern day energy efficient T-8 electronic ballast and compact fluorescent systems utilization that has revolutionized the entire energy industry. A true pioneer in LED energy efficiency, Baker has quite literally written the first lighting specifications (UFC) that is the basis of the LED market in which the federal government requires all companies to adhere for compliance. His knowledge of energy efficient lighting is unmatched and has developed most systems that has made energy efficiency all possible.

In 1999, Charles M. Baker, United States Air Force (USAF) SMsgt (sel) (ret.), started MCB Lighting & Electrical during his final two years while still on active duty. Within 18 months, he had employed more than 58 military veterans who needed to make extra money after duty hours, and was already grossing over $800K net profit. There were 75 original energy management ideas presented, 73 of those were approved. One of the two not approved at that time was the **ESPC Vision** (Energy Savings Performance Contracts). Sgt. Baker was determined to spearhead this program and integrate it into the USAF although it already existed in the statute but had never been utilized. That vision is used throughout the lighting industry today. The other idea

was demand side management commonly called **UESC** (Utility Energy Service Contract), **where his base was one of the first military bases to receive rebates**. In 1992, his competence in acquisition as a lighting program manager was so highly regarded that the Defense Logistics Agency commander sought him out to change how Strategic Sourcing was performed for lighting. Sgt. Baker upgraded the requirements for lighting and reduced the cost on over 700 items. These upgrades and savings reduced the costs for the entire agency by 25-75%. Consequently, he received **$1.2M for the first Energy Conservation Investment Program (ECIP)** project funded for lighting at McGuire Air Force Base. The **Return On Investment (ROI)** was less than two years while the ROI for the balance of the Department of Defense (DoD) as well as the rest of the federal government were **all over 10 years and not eligible**.

The dream began back in 1988 when Baker, an enlisted non-commissioned officer, was going about his daily weekend routine driving limousines part-time in Philadelphia. As he drove through the city, he was moved by the overwhelming number of homeless people he passed by in the streets that were sleeping on top of heated vents. Charles helped as many of the disenfranchised as he could, but as time passed, he realized that his efforts were futile without the ability to help make systemic changes within the community. Those monumental changes would require enormous funding. One evening, he prayed for a means to help those who needed assistance the most. The very next day, he saw a flyer on base offering money for progressive ideas (USAF Suggestion Program) that would improve operational aspects of the Air Force. Baker took on the challenge and his accomplishments were so impactful that he was **paid $265K in extra bonuses** and **promoted on the spot**. Receiving both rewards together is an extremely rare feat and had previously never been achieved. As a unique asset to the Air Force, Baker worked multiple jobs over the course of four years as an electrician, energy manager and high-tech communications specialist. Juggling each career field simultaneously was an extraordinary undertaking at the time and would be equally as challenging for individuals today. During an inspection, he recognized an excess of inefficiencies after back-checking the work of registered engineers. As a result, he was **awarded medals for two different lifesaving electrical discoveries** in base hospitals.

Inspired by the opportunity to develop solutions that could help the Air Force, DoD and the commercial sector, Baker began to engineer and develop unprecedented lighting systems, technologies and processes. Baker's innovations and buying strategies **saved the Department of Defense over $1.2B** and rewarded him with **more than $265K in bonuses** (each modern day DoD records) for changing how energy efficient lighting was developed, specified, purchased and warrantied by the federal government.

As a direct result of his impact, Baker was the first USAF member to win the Federal Energy Efficiency Renewables and Water Conservation award for the USAF; the **1994 Individual Federal Energy and Water Management award** for FEMP; a visit to the White House; and a Congressional ceremony as well as additionally receiving $5,000 in cash. He also won one of thirteen Secretary of Defense Quality and Excellence awards, two Chief of Staff high-dollar awards as well as the Society of America's Military Engineers Goddard award.

Baker's successes has afforded him the opportunity to do more than just help the homeless and disenfranchised whom where the original catalyst for his innovations. He has also been able to foster the initiation and growth of over 2,000 veterans beginning their own businesses and entrepreneurial journeys — two of which are now billion dollar companies. As a direct result, he won the **2009 SBA National Veteran Business Champion award**; multiple White House Rose Garden visits; plus honored as the only business owner invited to the 2010 Job Act's bill signing.

Due to his successful endeavors both in the military and then as a small business entrpreneur, Baker's prayers that night came to fruition as he was able to donate over $100K to shelters in Philadelphia to help those that had inspired his path.

Charles M. Baker is one of the most revered and influential individuals in the federal sector as it pertains to government procurement especially as a small business procurement expert. On three occasions, he has both testified before Congress and met with the Administrator of the U.S. Small Business Administration (SBA); retains the cell phone numbers for heads of procurement in his rolodex; prominent member of the SBA Presidential Veteran committees, Presidential SBA Banking panel, and Maryland's BRAC Governor's committee. He has also drafted more than four procurement laws and, under his advocacy, the veteran's dollars went from receiving less than .3% of government contracting funds to more than 3.2%. His impact was widely felt with the Supreme Court decision as one of the original authors for Vets First in VA. Baker also initiated Fast Pay for both prime and subcontracts, no more than 15 days for payment. The rule of two was strengthened, parity, and the mandatory reservation for all contracts under $500K for small business. With too many to list, Charles M. Baker's countless accomplishments continue to shape the lighting industry as well as how we live and work every day.

A new emphasis on subcontracting is coming with **"The Real McCoy"** and **MCB Lighting & Electrical** leading the way!

MCB Lighting & Electrical was recently honored at the Inc. 5000 Conference and Gala held in Palm Springs, CA as one of America's Fastest-Growing Private Companies for 2017.

MCB ranked **#144** overall, **#1** Lighting Distributor and **#12** on the list of Top Energy Companies.

Charles M. Baker Jr., CEO & President of MCB Lighting & Electrical since 2000, is a multi-state licensed electrician/manufacturers' representative and an award-winning Individual Federal Energy & Water Manager.

Service-Disabled Veteran-Owned Small Business Brand

1994 Individual Federal Energy & Water Manager of the Year Awardee

DoD record $1.2B savings from energy and infastructure ideas

National Diversity Supplier

Former DoD Lighting Expert

2008 DoD Hero to Hometown Awardee

Secretary of Defense Quality & Excellence Awardee

2009 National SBA Veteran's Business Champion

37 YEARS MANUFACTURING EXPERIENCE

Many companies are making the switch to LED lighting.

MCB has provided many customers with turnkey energy efficient LED lighting solutions... changing how we live and work.

TOYOTA

CHEVROLET

BEST BUY

McDonald's

TACO BELL

BURGER KING

Denny's

FLETCHER JONES
FAMILY OF FINE DEALERSHIPS SINCE 1946

BERKSHIRE HATHAWAY AUTOMOTIVE

PENSKE

AT&T

COWBOYS

Vestar

TEMPE MARKETPLACE

UFC Exterior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 4 Exterior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Life Cycle Cost	"Design exterior lighting systems to minimize energy consumption, reduce maintenance costs, improve lighting quality on DoD Installations, at the lowest life cycle cost." (page 95, section 4-1)	**Total system ownership possible if desired beyond 10 years**
	"Reduce maintenance by technology selection, reducing equipment quantities, and implementing controls strategies. Select light sources, power supplies, and controls that are rated and warranted for long useful lives to increase the amount of time between maintenance cycles. Match light sources in adjacent areas when appropriate." (page 95, section 4-1.2)	**Total system ownership possible if desired beyond 10 years**
	"Refer to APPENDIX E for an example of a life cycle cost analysis (LCCA). Select lighting systems on the total ownership cost accounting for the following variables: Initial Cost, Energy Cost, Demand Cost, Utility Inflation Rate, Maintenance (Equipment) Cost, Maintenance (Labor) Cost (including cleaning of luminaire), Maintenance Inflation Rate, Replacement Cost, Disposal/Recycling Cost, Annual Hours of Operation, Lifetime (all systems must be capitalized twice in the analysis period but not to exceed 40 years.)." (page 97, section 4-1.4)	**Total system ownership possible if desired beyond 10 years**
	Note: For AF projects, For LED applications that do not have built-in failure detection in the luminaire, include labor costs to measure light levels (baseline and 70% output – before the end of the warranty) in the LCCA." (page97, section 4-1.4)	**Detection installed**
Warranty	"LED luminaires require a 10-year warranty." (page 101, section 4-4.2.1)	**Best 10 year complete wrap around warranty**
Efficiencies	"Minimize energy consumption by providing energy efficient technologies, effective luminance and illuminance levels, and implementing control strategies. Solid State Lighting (SSL)/Light Emitting Diode (LED) and induction lighting systems are established technologies for exterior lighting applications that have been proven to save energy over traditional High Intensity Discharge (HID) light sources. Therefore, SSL/LED and induction lighting must be the first consideration for all exterior lighting applications such as building, area, roadway, parking lot, pathway, sidewalk, signage, landscape, and security lighting." (page 95, section 4-1.1)	**135 LPW - 185 LPW**
Efficacy	UFC does not specify a minimum efficacy for Exterior Lighting and Controls. (pages 95 - 105)	**210 LPW coming in 2018**
Total Current Harmonic Distortion (THD)	"Total current harmonic distortion (THD) less than or equal to 20%." (page 102, section 4-4.3.1)	**"Total current harmonic distortion (THD) less than or equal to -10% at full and 50% output." (page 10, section 2-4.2.1)**
Power Factor (PF)	"Power factor (PF) greater than or equal to 0.9." (page 102, section 4-4.3.1)	**"Power factor (PF) greater than or equal to 0.9 at full and 99% output." (page 10, section 2-4.2.1)**
Dimming	"Provide in accordance with NFPA 101. Emergency lighting units must be LED for new construction. It is not life cycle cost effective to replace existing units." (page 11, section 2-7.1)	**Dimmable or bi-level drivers compatible with standard dimming control circuit of 0-10V. Other dimming protocols must comply with Network requirement.**
Lumen Depreciation	"Note: For AF projects, For LED applications that do not have built-in failure detection in the luminaire, include labor costs to measure light levels (baseline and 70% output – before the end of the warranty) in the LCCA." (page 97, section 4-1.1)	**Built in failure detection**
	UFC does not specify a minimum lumen depreciation for **Exterior Lighting And Controls with the exception for AF projects**. (pages 95 - 105)	**Complies with**

UFC Exterior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 2 Interior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Correlated Color Temperature (CCT)	"Use a CCT of no greater than 4100K as stated on the manufacturer's cutsheet to reduce skyglow in exterior applications. Note, per ANSI C78.377-2011 standard, nominal CCT of 4000K is 3985K +/-275K for SSL products" (page 101, section 4-4.2	**4000K**
Color Rendering Index (CRI)	"Use a color rendering index (CRI) of no less than 70 for exterior applications." (page 101, section 4-4.2)	**Greater than .85**
Photometrics (IES)	"IES LM-79, LM-80 testing reports must be supplied from manufacturer and include all relevant information." (page 8, section 2-4.1.1)	**Perform inhouse**
Light Pollution/Trespass	"Use fully shielded or IES U0 luminaires to eliminate direct light above the horizontal plane. Refer to maximum allowable uplight (U) and backlight (B) ratings in specific lighting zones." (page 95, section 4-1.3.2)	**Complies with**
Light Color	"Use monochromatic amber LEDs in place of Low Pressure Sodium (LPS) for sensitive environments such as wildlife habitat, observations, wildlife nesting, or to meet dark sky requirements (observatories). Incorporate Fish and Wildlife, State, and local governing authority recommendations for lighting systems design and installation." (page 101, section 4-4.2.1)	**Complies with**
Lighting Zones	"Lighting zones reflect the base (or ambient) light levels desired for an area. Adopt the lowest possible lighting zone. Lighting zones are best implemented as an overlay to the established zoning especially on installations where a variety of zone districts exist within a defined area or along an arterial street. Where zone districts are cohesive, it may be possible to assign lighting zones to established land use zoning. It is recommended that the lighting zone includes churches, schools, parks, and other uses embedded within residential communities or to any land assigned to a lower zone." (page 97, section 4-2)	**Complies with**
	"For DoD installations, it is important to consider all activities of an area's land use. Lighting zones must consider the surrounding areas as well. For example, adjacent lighting zones must not hinder nighttime operations. Additionally, in Outside Continental of United States (OCONUS) areas, it is important that the installation does not stand out as an exceptionally bright area compared to the adjacent development. Table 4-1 and Figure 4-1 show examples of how lighting zones may be applied to DoD installations." (page 97, section 4-2)	**Complies with**
Lighting Controls	"Lighting control requirements must meet ASHRAE 90.1, ASHRAE 189.1, and this UFC. Refer to UFC 1-200-02 for publication year of ASHRAE. Refer to CHAPTER 5 (Exterior Applications) for control requirements. Provide commissioning per ASHRAE requirements. Refer to IES DG-29 for commission guidance." (page 99, section 4-3)	**Complies with**
Network Certification	"Network control systems (including systems separate from an energy management control system) must be planned, designed, acquired, executed, and maintained in accordance with DoD Instruction 8500.01 and DoD Instruction 8510.01, and as required by individual Service Implementation Policy. Coordinate wireless networks with base spectrum manager prior to specification in case of restrictions for wireless usage within the installation." (page 100, section 4-3.2	**Complies with**
Multi-Pin Receptacle	"Streetlights must be capable of being upgraded to a wireless control system. Streetlights must be installed with an ANSI C136.41 multi-pin receptacle. This five to seven pin receptacle will accept a standard three-pin photocell until the system is upgraded." (page 100, section 4-3.2)	**Complies with**

UFC Exterior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 4 Exterior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Surge Protection Device (SPD)	"LED luminaires require integral metal oxide varistors (MOV) type surge protection device (SPD)." (page 101, section 4-4.2.1)	**Complies with**
	"Provide MOV type SPDs at panelboards for all circuits feeding exterior lighting systems." (page 103, 4-4.4)	**Complies with**
Over Current Protection Device	"Provide in-line fuse in pole base or splice box for street and area lights. Monitoring Equipment." (page 103, section 4-4.5)	**Complies with**
Electrical Energy Monitoring	"For new construction buildings greater than 25,000 SF (2,322 m2), terminate exterior lighting branch circuits in dedicated lighting panelboards. Provide measurement devices to separately monitor the electrical energy use for exterior lighting." (page 103, section 4-5)	**Complies with**
Redesign	"Redesign includes new luminaires, circuits, and controls designed to meet current lighting criteria. A new design must ensure reduced energy consumption, reduced maintenance, and lighting quality is improved at the lowest life cycle cost. When existing pole locations are to be used as part of the redesign, the designer must evaluate the need for pole modification to account for possible resonance issues due to wind when reducing the weight and EPA of the luminaire replacement. Lighting redesign is required when a renovation involves changing lighting technologies such as fluorescent to LED and when renovation involves changing lighting with more efficient lighting within the same technology." (page 104, section 4-7.1)	**Complies with**
One for One Luminaire Replacemen	"A luminaire replacement consists of the entire luminaire being replaced, including the housing. A luminaire replacement may be considered when the lighting design is sufficient, but more efficient luminaires are available. In instances where the existing luminaire was operating under dimming control, the control must be upgraded to be compatible with the operating characteristics of the replacement luminaire. Luminaire replacement is only acceptable when the resulting illuminance levels, glare, and distribution meet the current criteria. The designer must evaluate the need for pole modification to account for possible resonance issues due to wind when reducing the weight and EPA of the luminaire replacement." (page 104, section 4-7.2)	**Complies with**
Calculations Of Lighting For Exterior Areas	"Computer-generated photometric plans for each area are required to verify proposed luminaires and locations meet the required performance criteria of the design using \1\ the applicable light loss factor (LLF)./1/ Photometric plan submittals must include: Horizontal illuminance (or luminance for roadways) measurements at pavement, taken at a maximum of every 10 feet (3 m), Minimum and maximum illuminance (or luminance for roadways) levels, Average maintained illuminance (or luminance for roadways) level, Average to minimum and maximum to minimum ratios for horizontal illuminance (or luminance for roadways), Lighting power density (Watts per square foot or per square meter), LLF." (page 107, section 5-2)	**In-house Photomectic**

MCB 10-Year Wrap Around Warranty

- Full coverage of the entire fixture including all hardware components *(accessories not included)*, the finish, performance issues such as lumen drop offs and color temperature variation
- Immediate response, analysis, root cause determination, final resolution within the quickest timeframe in the industry
- Full resolution of parts and labor through one service provider with no additional charges
- No warranty registration required
- No limitation on hours of operation
- Temperature rating matching spec sheet (some MCB fixtures up to 150 degrees fahrenheit)
- No minimum quantity ordered/failures to be eligible for warranty
- No minimum number of chips not emitting light to be considered a failure
- Provides a replacement solution for every problem, including fixtures we no longer manufacture

Other Manufacturers' 10-Year Warranty Limitations

ATG 10-Year Warranty

- 50,000 hours (average 13.6 hours of operation per day)
- Considered defective in material or workmanship only if a total of 15% or more of the individual light emitting diodes in the Product(s) fail to illuminate
- Inspection of returned product required
- Cannot operate in temperatures over 95 degrees fahrenheit
- No labor reimbursement

Cree 10-Year Warranty

- 50,000 hours of operation
- Components (dimmers and sensors) have a 5-year warranty
- Finish (cracking, peeling, fading, and defects) have a 10-year warranty, but customer color only has a 1-year warranty
- Considered defective if more than 10% of the LED components in the product fails
- No labor credit
- Must notify within 60 days of discovering defect

Revolution 10-Year Warranty

- Limited to 18 hours a day
- Only applies to tube lamps and flat panels

Deco Lighting 10-Year Warranty

- Warranty registration within 30 days after installation of 90 days after shipment is required
- Inspection of failed product may be required

Maxlite 10-Year Warranty

- Only applies to project sales of 50 fixtures or more
- Only applies to products used in Commercial or Industrial applications
- Warranty registration within 30 days after installation of 90 days after shipment is required
- Products registered after this time will be subject to a 5-year warranty
- Maximum temperature for indoor products: 77 degrees fahrenheit; Maximum temperature for outdoor products: 104 degrees fahrenheit
- Limited to 12 hours of operation a day; anything over this limits warranty to 48,000 hours
- May be subject to evaluation of failed product
- Only considered a failure of at least 20% of the LED chips stops illuminating
- Does not cover product finish or coating, lumen drop-off, and color temperature variations

UFC Interior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 2 Interior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Life Cycle Cost	"Refer to APPENDIX E for an example of a life cycle cost analysis (LCCA). The LCCA must provide a comparison to LED technology for applications where LED is a viable option. Exclude maintenance costs in all retrofit life cycle cost analyses that cannot be verified." (page 4, section 2-1.4)	**Complies with**
	"Refer to APPENDIX E for an example of a life cycle cost analysis (LCCA). Select lighting systems on the total ownership cost accounting for the following variables: Initial Cost, Energy Cost, Demand Cost, Utility Inflation Rate, Maintenance (Equipment) Cost, Maintenance (Labor) Cost (including cleaning of luminaire), Maintenance Inflation Rate, Replacement Cost, Disposal/Recycling Cost, Annual Hours of Operation, Lifetime (all systems must be capitalized twice in the analysis period but not to exceed 40 years.)." (page 5, section 2-1.4)	**Complies with**
Warranty	"Consistent with industry standard, all LED luminaires require a 10-year warranty." (page 9, section 2-4.1.1)	**10-year wrap around warranty includes fixture replacement and associated labor**
Efficiencies	"Increases in Solid State Lighting (SSL)/Light Emitting Diode (LED) lighting system efficiencies are surpassing the efficiencies of linear fluorescent systems. Analyze the use of LED for interior applications." (page 5, section 2-1.5)	**135 LPW - 185 LPW**
Efficacy	UFC does not specify a minimum efficacy for interior **Luminaire Replacement and Conversion**. (pages 13 - 14) Minimum efficacy for **Luminaire Conversion Kit** is 120 lumens per watt. (page 14, section 2-8.3.1) Minimum efficacy for **Light Source Retrofit** is 100 lumens per watt. (page 14, section 2-8.3.1	**210 LPW coming in 2018**
Total Current Harmonic Distortion (THD)	"Total current harmonic distortion (THD) less than or equal to 20% at full and 50% output." (page 10, section 2-4.2.1)	**"Total current harmonic distortion (THD) less than or equal to -10% at full and 50% output." (page 10, section 2-4.2.1)**
Power Factor (PF)	"Power factor (PF) greater than or equal to 0.9 at full and 50% output." (page 10, section 2-4.2.1)	**"Power factor (PF) greater than or equal to 0.9 at full and 99% output." (page 10, section 2-4.2.1)**
Emergency Lighting	"Provide in accordance with NFPA 101. Emergency lighting units must be LED for new construction. It is not life cycle cost effective to replace existing units." (page 11, section 2-7.1)	**Emergency lighting available**
Dimming	"LED luminaires must be dimmable or capable of multi-level control according to the control strategy. SSL dimmers must be NEMA SSL 7A compliant to ensure that the electrical infrastructure is adequate to dim the lamps without flicker or drop outs in dimming range." (page 8, section 2-4.1.1)	**Complies with**
	"For current and future dimming requirements (i.e. smart grid, curfew, adaptive), use dimmable or bi-level drivers compatible with standard dimming control circuit of 0-10V. Other dimming protocols must comply with Network Certification requirements." (page 10, section 2-4.2.1)	**Dimmable or bi-level drivers compatible with standard dimming control circuit of 0-10V. Other dimming protocols must comply with Network requirement.**
	"Compatible with NEMA SSL 7A dimmers and dimming systems. If existing luminaires are on a dimmer or dimming system, provide a compatible dimmer or dimmer system. Dimmer or dimming systems must be NEMA SSL 7A compliant to ensure that the electrical infrastructure is adequate to dim the light source without flicker or drop outs within the dimming range." (page 13, section 2-8.3)	**Complies with**

UFC Interior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 2 Interior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Lumen Depreciation	"IES LM-79, LM-80, and TM-21 testing reports must be supplied from manufacturer and include all relevant information. Note: For AF projects, For LED applications that do not have built-in failure detection in the luminaire, include labor costs to measure light levels (baseline and 70% output – before the end of the warranty) in the LCCA." (page 9, section 2-4.1.1)	**Built in failure detection**
	"UFC does not specify a minimum lumen depreciation for interior **Luminaire Replacement and Conversion**. (pages 13 - 14)	**Complies with**
Correlated Color Temperature (CCT)	"Use a correlated color temperature (CCT) of no greater than 4100K as stated on the manufacturer's cutsheet for all interior spaces. Note, per ANSI C78.377-2011 standard, nominal CCT of 4000K is 3985K +/-275K for SSL (Solid State Lighting) products." (page 8, section 2-4.1)	**4000K**
Color Rendering Index (CRI)	"Use a color rendering index (CRI) of no less than 80 for interior applications." (page 8, section 2-4.1)	**Greater than .85**
Exit Signs	"Provide in accordance with NFPA 101. Internally illuminated signs must be LED type and comply with UFC 3-600-01." (page 11, section 2-7.2)	**Complies with**
Photometrics (IES)	"IES LM-79, LM-80, and TM-21 testing reports must be supplied from manufacturer and include all relevant information." (page 8, section 2-4.1.1)	**Perform inhouse**
NEMA 410	"Inrush current meets NEMA 410." (page 13, section 2-8.3)	**Complies with**
Maintenance Reduction	"Reduce maintenance by technology selection, reducing equipment quantities, and implementing controls strategies. Select light sources, power supplies, and controls that are rated and warranted for long useful lives to increase the amount of time between maintenance cycles. Minimize light source types on an individual project. Locate luminaires in locations to improve access for regular servicing such as light source replacement." (page 3, section 2-1.2)	**Wrap around warranty mitigates maintenance concerns**
Energy Reduction	"Reduce energy consumption by using energy efficient technologies, effective illuminance levels, and implementing control strategies." (page 3, section 2-1.1)	**Complies with**
Lighting Controls	"Lighting control requirements must meet ASHRAE 90.1, ASHRAE 189.1 and this UFC. Refer to UFC 1-200-02 for publication year of ASHRAE. Refer to Chapter 3 (Interior Applications) for control requirements. Provide commissioning per ASHRAE requirements. Refer to IES DG-29 for commission guidance for specific applications." (page 5, section 2-2)	**Incorporated into fixture if desired**
Daylighting Control Requirements	"Control the electric lighting in response to daylight. Continuously dim electric light in task oriented areas such as offices, conference rooms, classrooms, or turning it off in non-task areas such as circulation and lounge areas. Control primary and secondary daylight zones separately. Refer to APPENDIX C Daylighting Best Practices for additional information." (page 5, section 2-2.1)	**Incorporated into fixture if desired**
	"Refer to UFC 1-200-02 for Daylighting requirements. Coordinate architectural daylight design and lighting contribution into electrical lighting design and control. Refer to APPENDIX C in this UFC for daylighting best practices." (page 8, section 2-3)	**Complies with**

UFC Interior Spec Comparison

Requirement or Technical Spec	Unified Facilities Criteria Chapter 2 Interior Lighting and Controls	MCB Lighting and Electrical LED Lighting Fixtures
Control Strategies	"Indicate in the contract documents the control strategy for each space in accordance with narrative descriptions in Table 2-1. Refer to Chapter 3 (Interior Applications) for additional information. In normally occupied spaces, control strategies must include a means for the occupant to manually turn the lights on and off. Do not use occupancy sensors, vacancy sensors, or timers to control luminaires that provide illumination of the work space around electrical service equipment such as switchboards, panelboards, or motor control centers. To reduce energy consumption, luminaires in the adjacent space that do not provide illumination of the work space must be dimmable and controlled by an integrated or separate vacancy sensor. For this application, the luminaires can be dimmed a maximum of 50 percent of full light output and the dimming cannot be stepped.* Regardless of control strategy, the controls and illumination for the means of egress components must comply with the requirements of NFPA 101." (page 6, section 2-2.3)	**For the first 3 years system operated at 70% due to design parameters of the initial design**
Network Certification	"Network control systems (including systems separate from an energy management control system) must be planned, designed, acquired, executed, and maintained in accordance with DoD Instruction 8500.01 and DoD Instruction 8510.01, and as required by individual Service Implementation Policy. Coordinate wireless networks with base spectrum manager prior to specification in case of restrictions for wireless usage within the installation. Note: For AF projects, refer to ETL 11-1 for additional requirements." (page 7, section 2-2.4)	**Complies with**
Surge Protection Device (SPD)	"Provide metal oxide varistor (MOV) type SPDs at panel boards for all circuits feeding interior lighting systems." (page 10, section 2-4.3)	**Complies with**
Electrical Energy Monitoring	"For new construction of buildings greater than 25,000 SF (2,322 m2), terminate lighting branch circuits in dedicated lighting panelboards." (page 11, section 2-5	**Complies with**
Elevators	"Provide lighting for elevators in accordance with ASME A17.1 or ASME A17.3 as applicable." (page 11, section 2-6)	**Complies with**
Measurement & Verification (M&V)		**Experience in developing, reviewing, conducting and supporting M&V plans and all associated activities. Understanding of the measurement, montoring and performance tests to be performed based on the M&V plan. Cognizant of the Army and FEMP M&V guidelines and procedures**
Name Plates		**Each major component shall have the manufacturers name, address, equipment type or style and catalog or serial number etched on the name plate. In addition, each piece of ESPC equipment shall be identified with proper nomenclature as being provided by the ESPC ESCO.**

COTS
Commercial Off The Shelf

BUY AMERICAN ACT COMPLIANT BAA
BAA 25.101 (a)(1)+(2)
LED LIGHTING
Manufactured in U.S.A. with Over 50% Domestic Components

SBA
U.S. Small Business Administration

"Domestic end product" means —

(1) An unmanufactured end product mined or produced in the United States;

(2) An end product manufactured in the United States, if —

(i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as those that the agency determines are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities of a satisfactory quality are treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic; or

(ii) The end product is a COTS item.

An item that meets the FAR 2.101 definition of COTS can be treated as domestic construction material without consideration of the costs of its components. See FAR 52.225-9(a), definition of domestic construction material, paragraph (2)(ii) [the "(2)(ii) rule"].

Upcoming Models:

Linear High Bays
Mini Wall Washers with Swivels
Bullet Flood Lights
Low Profile Shoebox
Flood Lights up to 600W

Exterior Lighting

Coming in 2018
210 Lumens per Watt

AREA LIGHT

ARCHITECTURAL SERIES

With exquisite, modern lines and sophisticated construction, MCB's Architectural Series Area Lights are a work of pure perfection. Blending a look worthy of museum applications and a toughness that can handle even the most rugged outdoor environments, MCB's Area Lights are more versatile than any other area light on the market.

Although most commonly found in area and site lighting, including downtown pedestrian walkways, hospital grounds, college campuses, business complexes and residential neighborhoods, the MCB Area Light is now being utilized as a pole top parking and municipal light fixture as well.

Advanced options include remote controlled motion, step-down and daylight sensing capabilities and built-in surge protection. By providing up to 180 lumens per watt with multiple optic choices and mounting options, coupled with the only 10-year wrap-around warranty in the industry, it is crystal clear why MCB's Architectural Series Area Light is one of the most popular LED products in 2018.

MCB Lighting & Electrical
MEP Product Solutions
America's Fastest-Growing Private Companies Inc 500

DLC QPL LISTED

10 YEARS WARRANTY

IP65

UL

Dimmable

ALAS	35W	50W
MCB Model Number	**MCB-ALAS-35**	**MCB-ALAS-50**
DLC Model Number	**U-ARALS-35**	**U-ARALS-50**
Performance		
Input Wattage	35W	50W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 6,428 lm**	**Up to 8,907 lm**
Efficiency	**165 - 180 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3000K - 5700K	
Equivalent Wattage	175W MH	250W MH
Distribution	T3, T4, T5	
Power Factor	**0.99**	
MAX THD (%)	**10**	
IP Rating	IP65	
EPA Rating	0.75	
Weight	9 lb / 4.1 kg	
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	3 in 1 (Resistance, PWM, 1-10V)	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

ALAS 80W

MCB Model Number	MCB-ALAS-80
DLC Model Number	**U-ARALS-80**
Performance	
Input Wattage	80W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 14,180 lm**
Efficiency	**165 - 180 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3000K - 5700K
Equivalent Wattage	375W MH
Distribution	T3, T4, T5
Power Factor	**0.99**
MAX THD (%)	**10**
IP Rating	IP65
EPA Rating	0.75
Weight	9 lb / 4.1 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

ALAS 100W

MCB Model Number	MCB-ALAS-100
DLC Model Number	U-ARALS-100
Performance	
Input Wattage	100W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 17,750 lm**
Efficiency	**165 - 180 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3000K - 5700K
Equivalent Wattage	400W MH
Distribution	T3, T4, T5
Power Factor	**0.99**
MAX THD (%)	**10**
IP Rating	IP65
EPA Rating	0.75
Weight	9 lb / 4.1 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

ALAS 120W

MCB Model Number	MCB-ALAS-120
DLC Model Number	U-ARALS-120
Performance	
Input Wattage	120W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 21,339 lm**
Efficiency	**165 - 180 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3000K - 5700K
Equivalent Wattage	600W MH
Distribution	T3, T4, T5
Power Factor	**0.99**
MAX THD (%)	**10**
IP Rating	IP65
EPA Rating	0.75
Weight	9 lb / 4.1 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

ALAS 150W

MCB Model Number	MCB-ALAS-150
DLC Model Number	U-ARALS-150
Performance	
Input Wattage	150W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 26,814 lm**
Efficiency	**165 - 180 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3000K - 5700K
Equivalent Wattage	750W MH
Distribution	T3, T4, T5
Power Factor	**0.99**
MAX THD (%)	**10**
IP Rating	IP65
EPA Rating	0.75
Weight	9 lb / 4.1 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

LUMINAIRE SCHEDULE – 100W SHOEBOX PHOTOMETRICS

Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Lumens
	68	MCB-SB-ALAS-100-180-T4-6A	SINGLE	0.900	100W ALAS, 180 LPW, T4, 6 in. ARM, Single	17940
	68	MCB-SB-ALAS-100-180-T4-6A(2 b2b)	BACK-BACK	0.900	100W ALAS, 180 LPW, T4, 6 in. ARM, 2 Back to Back	17940
	68	MCB-SB-ALAS-100-180-T4-6A	4 @ 90 DEGREES	0.900	100W ALAS, 180 LPW, T4, 6 in. ARM, 4 @ 90 degrees	17940
	68	MCB-SB-ALAS-100-180-T4-6A	2 @ 90	0.900	100W ALAS, 180 LPW, T4, 6 in. ARM, 2 @ 90 degrees	17940

CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Total # of Fixtures
Calc3	Illuminance	Fc	7.18	26.2	0.3	23.93	87.33	134

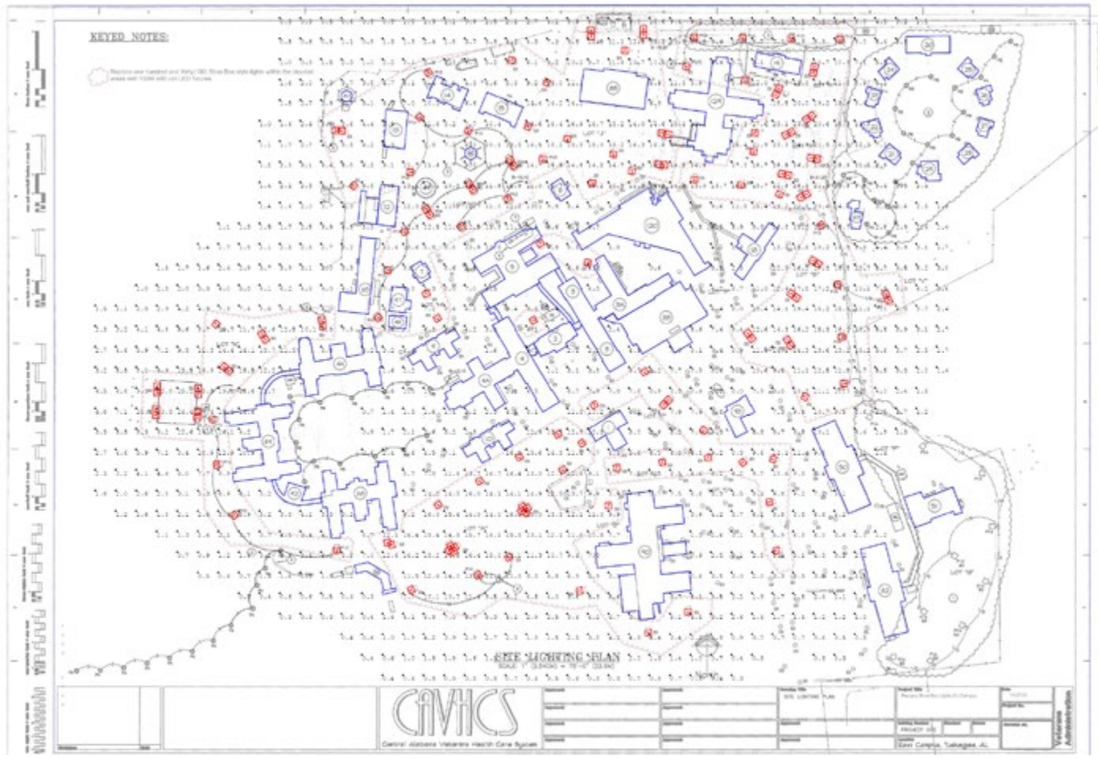
LUMINAIRE LOCATION SUMMARY

Label	MH (ft.)	Orient	Tilt
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	300.961	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	278.246	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	268.831	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	270	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	269.508	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	268.222	0
MCB-SB-ALAS-100-180-T4-6A (2@90)	34	15.106	0
MCB-SB-ALAS-100-180-T4-6A (4@90)	34	297.992	0
MCB-SB-ALAS-100-180-T4-6A (4@90)	34	299.605	0
MCB-SB-ALAS-100-180-T4-6A	34	121.921	0
MCB-SB-ALAS-100-180-T4-6A	34	120.004	0
MCB-SB-ALAS-100-180-T4-6A	34	116.57	0
MCB-SB-ALAS-100-180-T4-6A	34	117.02	0
MCB-SB-ALAS-100-180-T4-6A	34	211.605	0
MCB-SB-ALAS-100-180-T4-6A	34	120.962	0
MCB-SB-ALAS-100-180-T4-6A	34	270.924	0
MCB-SB-ALAS-100-180-T4-6A	34	121.605	0
MCB-SB-ALAS-100-180-T4-6A	34	120.654	0
MCB-SB-ALAS-100-180-T4-6A	34	5.881	0
MCB-SB-ALAS-100-180-T4-6A	34	29.319	0
MCB-SB-ALAS-100-180-T4-6A	34	94.399	0
MCB-SB-ALAS-100-180-T4-6A	34	93.363	0
MCB-SB-ALAS-100-180-T4-6A	34	358.689	0
MCB-SB-ALAS-100-180-T4-6A	34	7.509	0
MCB-SB-ALAS-100-180-T4-6A	34	37.405	0
MCB-SB-ALAS-100-180-T4-6A	34	88.561	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	319.129	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	45.913	0
MCB-SB-ALAS-100-180-T4-6A	34	53.27	0
MCB-SB-ALAS-100-180-T4-6A	34	283.28	0
MCB-SB-ALAS-100-180-T4-6A	34	38.937	0
MCB-SB-ALAS-100-180-T4-6A	34	337.989	0
MCB-SB-ALAS-100-180-T4-6A	34	8.86	0
MCB-SB-ALAS-100-180-T4-6A	34	6.117	0
MCB-SB-ALAS-100-180-T4-6A	34	277.598	0
MCB-SB-ALAS-100-180-T4-6A	34	275.427	0
MCB-SB-ALAS-100-180-T4-6A	34	118.611	0
MCB-SB-ALAS-100-180-T4-6A	34	302.661	0
MCB-SB-ALAS-100-180-T4-6A	34	335.772	0
MCB-SB-ALAS-100-180-T4-6A	34	183.633	0
MCB-SB-ALAS-100-180-T4-6A	34	180.51	0
MCB-SB-ALAS-100-180-T4-6A	34	184.001	0
MCB-SB-ALAS-100-180-T4-6A	34	209.789	0
MCB-SB-ALAS-100-180-T4-6A	34	66.801	0
MCB-SB-ALAS-100-180-T4-6A	34	84.284	0
MCB-SB-ALAS-100-180-T4-6A	34	83.777	0
MCB-SB-ALAS-100-180-T4-6A	34	262.519	0
MCB-SB-ALAS-100-180-T4-6A	34	83.855	0
MCB-SB-ALAS-100-180-T4-6A	34	82.918	0

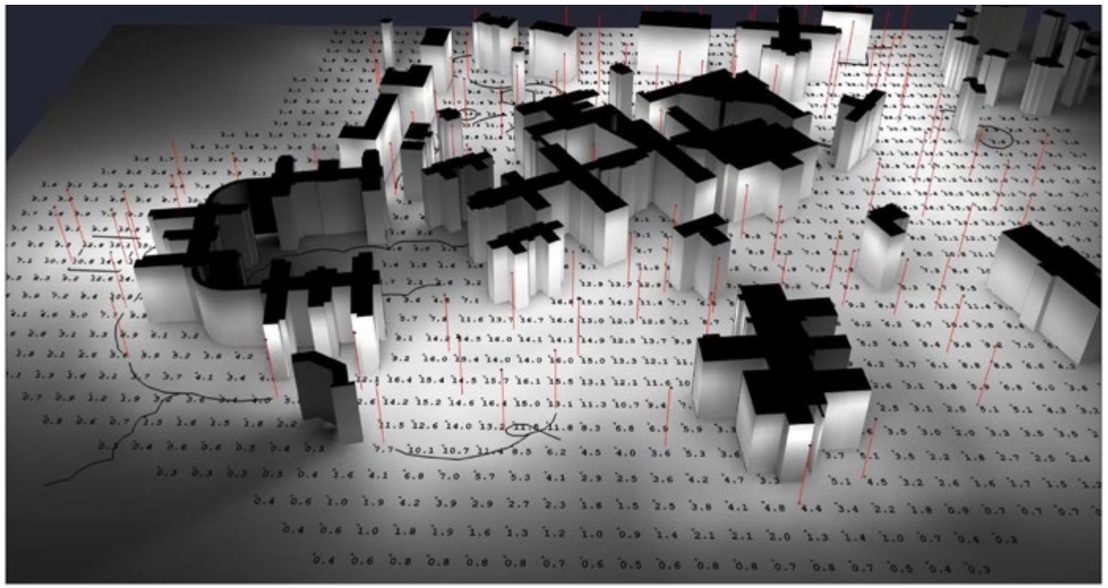
Label	MH (ft.)	Orient	Tilt
MCB-SB-ALAS-100-180-T4-6A	34	93.815	0
MCB-SB-ALAS-100-180-T4-6A	34	92.12	0
MCB-SB-ALAS-100-180-T4-6A	34	91.02	0
MCB-SB-ALAS-100-180-T4-6A	34	88.128	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	78.254	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	64.846	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	25.589	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	36.025	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	352.288	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	347.977	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	29.268	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	329.358	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	323.909	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	302.653	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	307.265	0
MCB-SB-ALAS-100-180-T4-6A	34	83.884	0
MCB-SB-ALAS-100-180-T4-6A	34	266.49	0
MCB-SB-ALAS-100-180-T4-6A	34	335.398	0
MCB-SB-ALAS-100-180-T4-6A	34	252.443	0
MCB-SB-ALAS-100-180-T4-6A	34	337.727	0
MCB-SB-ALAS-100-180-T4-6A	34	80.753	0
MCB-SB-ALAS-100-180-T4-6A	34	84.506	0
MCB-SB-ALAS-100-180-T4-6A	34	83.787	0
MCB-SB-ALAS-100-180-T4-6A	34	82.925	0
MCB-SB-ALAS-100-180-T4-6A	34	82.527	0
MCB-SB-ALAS-100-180-T4-6A	34	303.528	0
MCB-SB-ALAS-100-180-T4-6A	34	301.387	0
MCB-SB-ALAS-100-180-T4-6A	34	111.966	0
MCB-SB-ALAS-100-180-T4-6A	34	172.646	0
MCB-SB-ALAS-100-180-T4-6A	34	132.052	0
MCB-SB-ALAS-100-180-T4-6A	34	293.342	0
MCB-SB-ALAS-100-180-T4-6A	34	119.052	0
MCB-SB-ALAS-100-180-T4-6A	34	177.371	0
MCB-SB-ALAS-100-180-T4-6A	34	317.441	0
MCB-SB-ALAS-100-180-T4-6A	34	132.592	0
MCB-SB-ALAS-100-180-T4-6A	34	300.02	0
MCB-SB-ALAS-100-180-T4-6A	34	66.801	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	271.654	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	352.94	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	352.647	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	298.108	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	302.825	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	302.77	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	357.373	0
MCB-SB-ALAS-100-180-T4-6A	34	301.799	0
MCB-SB-ALAS-100-180-T4-6A	34	169.696	0
MCB-SB-ALAS-100-180-T4-6A	34	211.218	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	294.051	0
MCB-SB-ALAS-100-180-T4-6A	34	318.367	0
MCB-SB-ALAS-100-180-T4-6A(2 b2b)	34	272.645	0

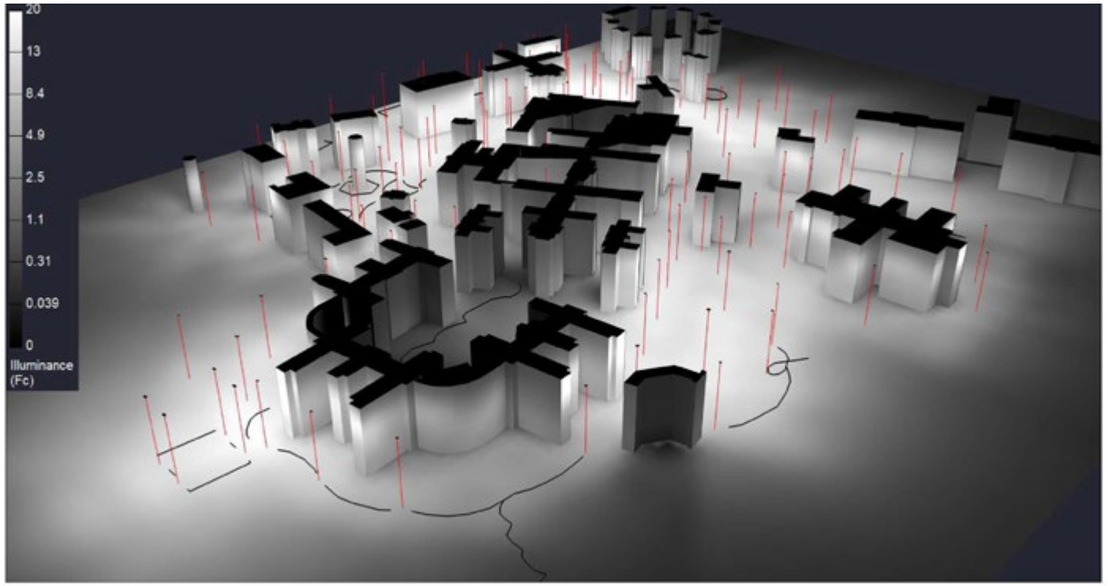
Building Heights = 34'

AREA LIGHTS 100W SHOEBOX PHOTOMETRICS

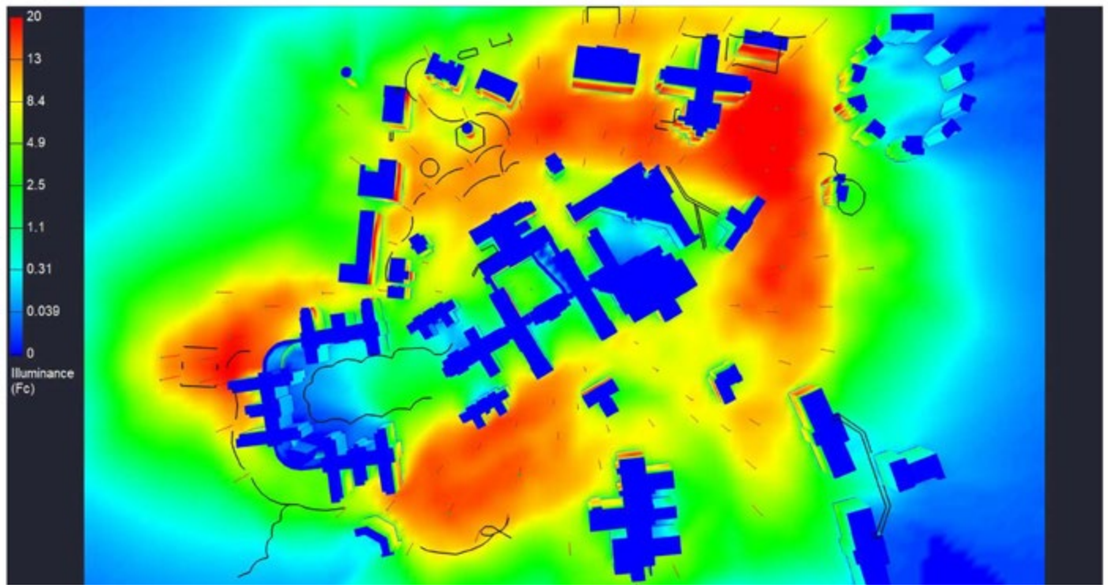


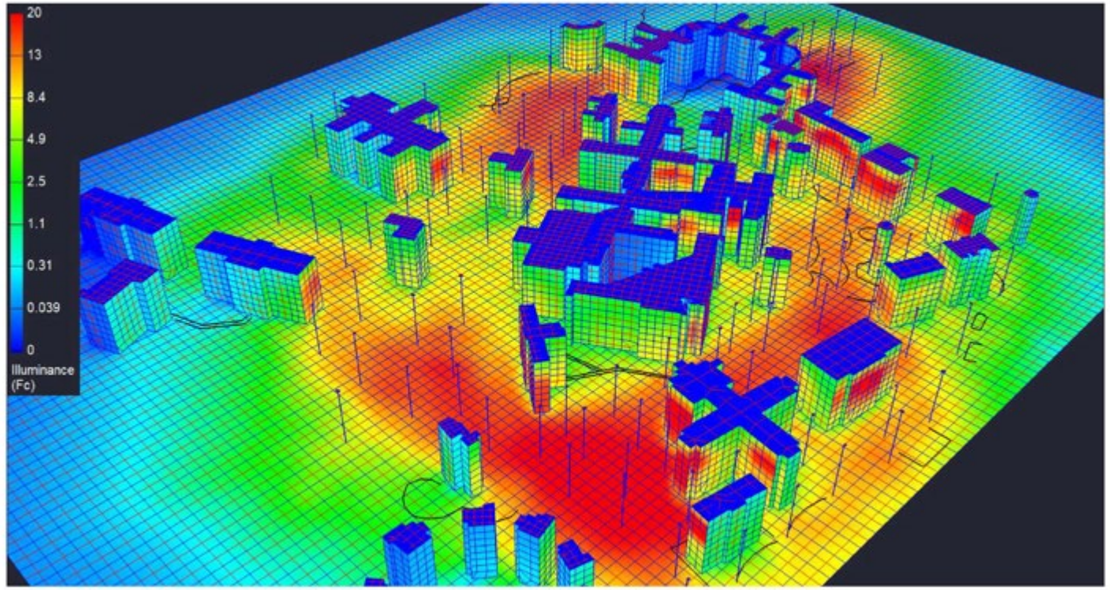
AREA LIGHTS 100W SHOEBOX PHOTOMETRICS





AREA LIGHTS 100W SHOEBOX PHOTOMETRICS





SHOEBOX

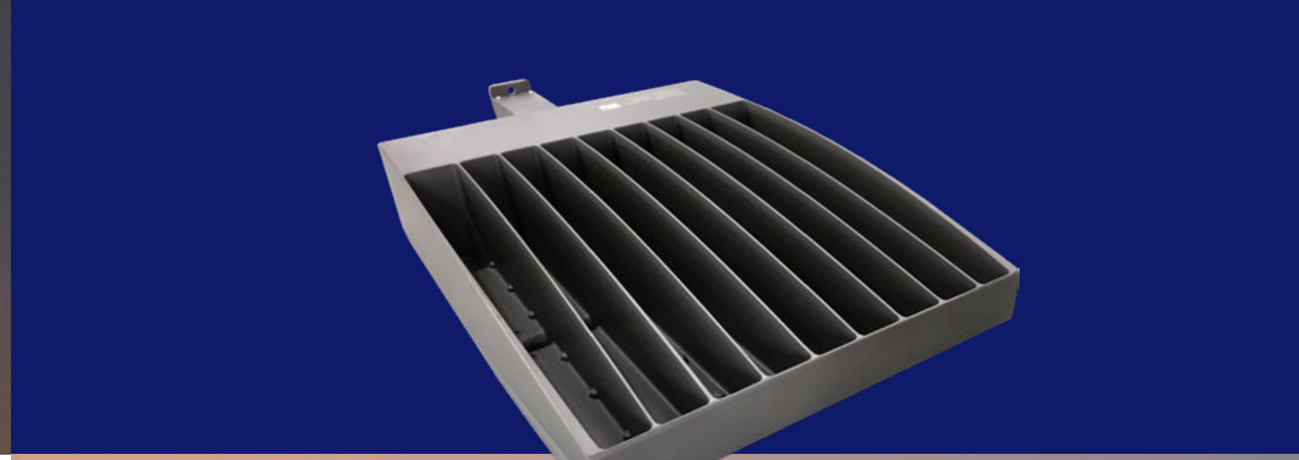
ARCHITECTURAL SERIES

The amazing versatility, outstanding performance and modern, sleek profile of MCB's Architectural Series Shoebox makes it the singular choice for parking lots, car dealerships, shopping malls, downtown areas, health care facilities, college campuses and business complexes. Engineered with a variety of wattages, lumen outputs, mounting options and lens type distributions, the limitless combinations provide for onsite flexibility unmatched by any other shoebox in the LED marketplace.

A work of pure aesthetic beauty to both see and touch, the low-profile, formed aluminum housing provides the Architectural Series Shoebox a distinctive, breathtaking look as well as boasting the highest ROI of any premium series shoebox manufactured today. Matched with the only 10-year wrap-around warranty on the market, quite simply, the MCB Architectural Series Shoeboxes are the optimum choice for almost any medium or large area lighting project.

SBAS 150W

MCB Model Number	MCB-SBAS-150
DLC Model Number	**U-ARAL-150**
Performance	
Input Wattage	150W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 27,050 lm**
Efficiency	**165 - 180 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	750W MH
Distribution	T3, T4, T5
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	150°F / 65°C
IP Rating	IP65
EPA Rating	0.8
Weight	24.3 lb / 11 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	



SBAS 200W 300W

MCB Model Number	MCB-SBAS-200	MCB-SBAS-300
DLC Model Number	U-ARAL-200	U-ARAL-300
Performance		
Input Wattage	200W	300W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 36,520 lm**	**Up to 54,300 lm**
Efficiency	**165 - 180 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	1,000W MH	1,500W MH
Distribution	T3, T4, T5	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	150°F / 65°C	
IP Rating	IP65	
EPA Rating	0.8	
Weight	26.5 lb / 12 kg	28.7 kg / 13 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	3 in 1 (Resistance, PWM, 1-10V)	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

STREET LIGHT

ARCHITECTURAL SERIES

MCB's streetlights are becoming the primary selection for governments around the world looking to brighten their roads. Topped with an unmatched 10-year wrap-around warranty and 150 lumens per watt, the exquisite design of the model is only matched by its illuminance on the asphalt.

MCB Lighting & Electrical
MEP Product Solutions

America's Fastest-Growing Private Companies Inc. 500

10 YEARS WARRANTY

IP65

UL

Dimmable

SLNG	20W	25W
MCB Model Number	**MCB-SLNG-20**	**MCB-SLNG-25**
DLC Model Number	**NOT CURRENTLY DLC**	**NOT CURRENTLY DLC**
Performance		
Input Wattage	20W	25W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 3,000 lm**	**Up to 3,750 lm**
Efficiency	**150 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	70W MH	100W MH
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-31°F / -35°C	
Max. Ambient Temp.	115°F / 45°C	
IP Rating	IP65	
EPA Rating	0.32	
Weight	8.6 lb / 3.9 kg	
Certifications	UL, FCC, CE, RoHS	
Dimming Compatible	Optional	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

SLNG 40W

MCB Model Number	MCB-SLNG-40
DLC Model Number	NOT CURRENTLY DLC
Performance	
Input Wattage	40W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 6,000 lm**
Efficiency	**150 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	150W MH
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-31°F / -35°C
Max. Ambient Temp.	115°F / 45°C
IP Rating	IP65
EPA Rating	0.32
Weight	16.9 lb / 7.6 kg
Certifications	UL, FCC, CE, RoHS
Dimming Compatible	Optional
Longetivity	
L70 Life (Hours)	100,000+ Hours
Wrap-Around Warranty	
10 Years	

SLNG 70W 100W

MCB Model Number	MCB-SLNG-70	MCB-SLNG-100
DLC Model Number	NOT CURRENTLY DLC	NOT CURRENTLY DLC
Performance		
Input Wattage	70W	100W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 10,500 lm**	**Up to 15,000**
Efficiency	**150 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	250W MH	400M WH
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-31°F / -35°C	
Max. Ambient Temp.	115°F / 45°C	
IP Rating	IP65	
EPA Rating	0.32	
Weight	19.2 lb / 8.7 kg	
Certifications	UL, FCC, CE, RoHS	
Dimming Compatible	Optional	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

FLOOD LIGHT

INDUSTRIAL SERIES

Although a commercial standard for nearly a decade, MCB's Industrial Series Flood Lights represent the future of energy efficiency in facility illumination. MCB Flood Lights are perfect for commercial applications where a low profile, high performance fixture is needed, including general site lighting, landscaping, loading docks, doorways, pathways and parking areas.

Engineered with cutting edge LED technology and proprietary optics for increased efficiency, durability and subtle aesthetics, our Industrial Series Flood Lights have been installed in environments as diverse as luxury hotels to commercial airports.

MCB Lighting & Electrical MEP Product Solutions

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FLIS 40W

MCB Model Number	MCB-FLIS-40
DLC Model Number	U-IFL-40
Performance	
Input Wattage	40W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 5,400 lm**
Efficiency	**135 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	150W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP65
Weight	6.6 lb / 3.0 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	Optional
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

FLIS 60W 90W

MCB Model Number	MCB-FLIS-60	MCB-FLIS-90
DLC Model Number	U-IFL-60	U-IFL-90
Performance		
Input Wattage	60W	90W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 8,100 lm**	**Up to 12,150 lm**
Efficiency	**135 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	200W MH	320W MH
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP65	
Weight	7.7 lb / 3.5 kg	11.0 lb / 5.0 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	Optional	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

FLIS 120W 150W

MCB Model Number	MCB-FLIS-120	MCB-FLIS-150
DLC Model Number	U-IFL-120	U-IFL-150
Performance		
Input Wattage	120W	150W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 16,200 lm**	**Up to 20,250 lm**
Efficiency	**135 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	400W MH	500W MH
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP65	
Weight	15.4 lb / 6.9 kg	16.5 lb / 7.5 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	Optional 1-10V	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

WALL PACK

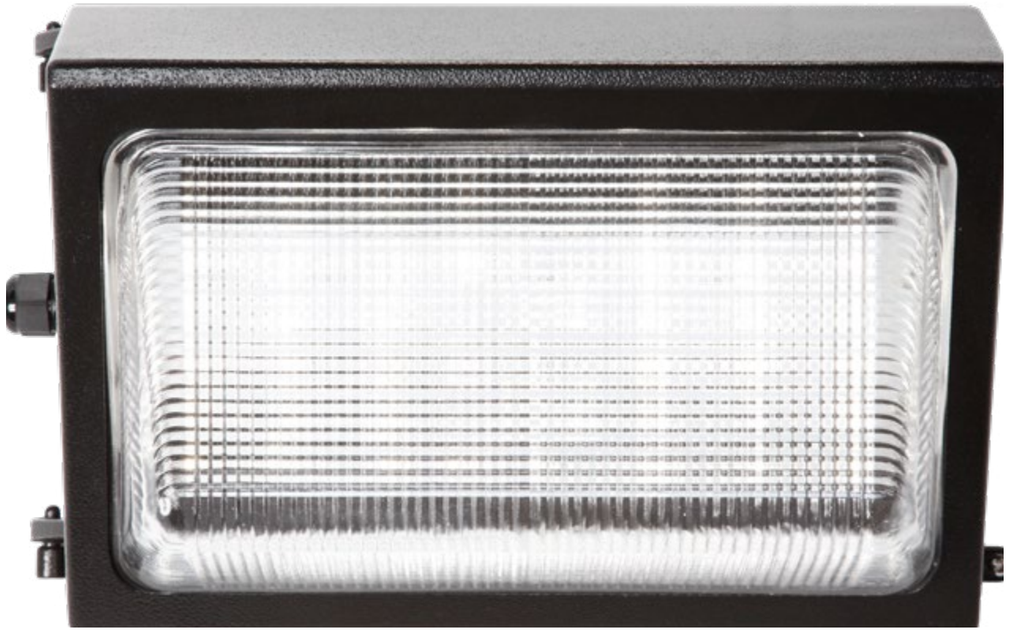
DECADE SERIES

Quite simply "the best wall pack ever built!" This is what was said when MCB's Wall Packs were being tested and installed at U.S. military facilities and foreign embassies around the globe. Ideal for building perimeters and entrances, overnight security, parking lots, alley ways and overhead door lighting applications.

With a contractor friendly rapid install plate, state of the art heat sink for unparalleled cooling, a built-in photocell and the only 10-year wrap-around warranty on the market, it is no wonder that MCB Wall Packs are the choice when reliability is what counts the most.

WPDS 28W

MCB Model Number	MCB-WPDS-28
DLC Model Number	**U-IWP-28**
Performance	
Input Wattage	28W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 3,080 lm**
Efficiency	**110 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	125W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP65
Weight	10.7 lb / 4.8 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	Optional 1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	



WPDS 40W

MCB Model Number	MCB-WPDS-40
DLC Model Number	**U-IWP-40**
Performance	
Input Wattage	40W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 4,400 lm**
Efficiency	**110 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	200W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP65
Weight	10.7 lb / 4.8 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	Optional 1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

WPDS 60W 90W

MCB Model Number	MCB-WPDS-60	MCB-WPDS-90
DLC Model Number	**U-IWP-60**	**U-IWP-90**
Performance		
Input Wattage	60W	90W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 6,300 lm**	**Up to 9,900 lm**
Efficiency	**110 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	250W MH	400W MH
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP65	
Weight	10.7 lb / 4.8 kg	
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	Optional 1-10V	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

WALL PACK

SECURITY SERIES

MCB's Security Series Wall Pack is the ideal solution for low profile applications requiring high light output. This consists of perimeters and entrances, overnight security, parking lots, alley ways, and parking garages.

With a contractor friendly rapid install plate, state-of-the-art heat sink for unparalleled cooling, a built-in photocell and the only 10-year wrap-around warranty on the market, our wall packs are setting the standard for safety and security in commercial applications by eliminating dark spots and preventing unwanted activities.

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WPSS 15W

MCB Model Number	MCB-WPSS-15
DLC Model Number	U-MNWP-15
Performance	
Input Wattage	15W
Input Voltage Range	100-277V
Delivered Lumens	**Up to 3,080 lm**
Efficiency	**130 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	70 - 100W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP65
Weight	2.6 lb / 1.2 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	Optional 1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

Interior Lighting

Coming in 2018
210 Lumens per Watt

HIGH BAY

WATERPROOF UFO

Superbly engineered with its modern, sleek design and amazing performance, "pure perfection" are the words most often used to describe MCB's LED Waterproof Series UFO fixtures. Our most versatile and best-selling fixture to date, our LED UFO High Bay is a fully waterproof, midsize, multifunctional, energy-efficient lighting solution featuring a tough, die cast powder coated aluminum housing and manufactured with industrial grade components for a maintenance-free, long life.

MCB's LED Waterproof High Bay UFO fixture is at home in high-end retail, manufacturing, sterile environments, offices, warehouses, sports complexes, storage facilities, and a variety of other outdoor and indoor lighting applications. MCB's UFO Series LED fixture is the only UFO on the market with a 10-year wrap-around warranty and is quite simply, the perfect dimmable LED lighting solution.

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MEP Product Solutions
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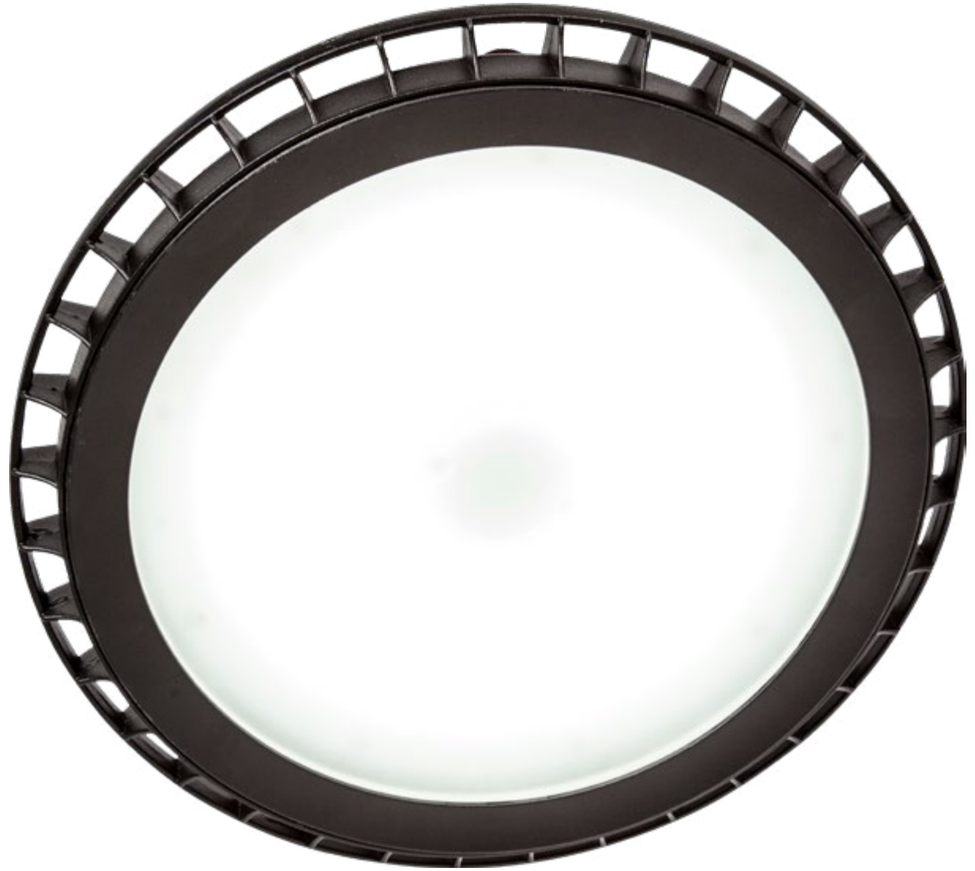
HBUFO 60W

MCB Model Number	MCB-HBUFO-60
DLC Model Number	NOT CURRENTLY DLC
Performance	
Input Wattage	60W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 11,100 lm**
Efficiency	**165 - 185 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	250W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	150°F / 65°C
IP Rating	IP67
Weight	11.7 lb / 5.7 kg
Certifications	UL, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	



HBUFO 100W

MCB Model Number	MCB-HBUFO-100
DLC Model Number	U-UHB-100
Performance	
Input Wattage	100W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 18,000 lm**
Efficiency	**165 - 185 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	400W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	150°F / 65°C
IP Rating	IP67
Weight	11.7 lb / 5.7 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

HBUFO 150W 240W

MCB Model Number	MCB-HBUFO-150	MCB-HBUFO-240
DLC Model Number	**U-UHB-150**	**U-UHB-240**
Performance		
Input Wattage	150W	240W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 27,000 lm**	**Up to 43,200 lm**
Efficiency	**165 - 185 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	1,000W MH	1500W MH
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	150°F / 65°C	
IP Rating	IP67	
Weight	12.5 lb / 5.7 kg	19.6 lb / 8.9 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	3 in 1 (Resistance, PWM, 1-10V)	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

HBUFO 320W

MCB Model Number	MCB-HBUFO-320
DLC Model Number	NOT CURRENTLY DLC
Performance	
Input Wattage	320W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 57,600 lm**
Efficiency	**165 - 185 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	2000W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	150°F / 65°C
IP Rating	IP67
Weight	21.6 lb / 9.8 kg
Certifications	UL, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

HIGH BAY

INDUSTRIAL SERIES

Rugged, durable and highly efficient, MCB's LED Industrial Series High Bay delivers the perfect combination of low-energy consumption, high lumen output and the ability to withstand almost any environment.

Designed specifically for industrial, retail and commercial interiors, MCB offers you a fixture that provides an unmatched combination of high performance and affordability. MCB's LED Industrial Series High Bay provides the perfect replacement for every existing energy-wasting fluorescent and HID high-bay in any facility.

The ideal replacement for warehouse, industrial, education and other commercial high-bay applications, find out why the MCB Industrial Series High Bay provides the highest ROI of any commercial lighting fixture ever built.

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HBIS	100W	150W
MCB Model Number	**MCB-HBIS-100**	**MCB-HBIS-150**
DLC Model Number	**U-IHB-100**	**U-IHB-150**
Performance		
Input Wattage	100W	150W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 13,500 lm**	**Up to 20,250 lm**
Efficiency	**135 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	400W MH	600W MH
Distribution	60°, 100°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	150°F / 65°C	
IP Rating	IP44	
Weight	6.5 lb / 2.6 kg	9.5 lb / 4.3 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	3 in 1 (Resistance, PWM, 1-10V)	
Longetivity		
L70 Life (Hours)	54,000 + Hours	
Wrap-Around Warranty		
10 Years		

DLC QPL Listed

Warranty 10 Years Warranty

IP44

UL

Dimmable

HBIS 240W

MCB Model Number	MCB-HBIS-240
DLC Model Number	**U-IHB-240**
Performance	
Input Wattage	240W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 32,400 lm**
Efficiency	**135 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	1,000W MH
Distribution	60°, 100°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	150°F / 65°C
IP Rating	IP44
Weight	10.5 lb / 4.76 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	54,000 + Hours
Wrap-Around Warranty	
10 Years	

HIGH BAY

RETAIL SERIES

The MCB LED Retail Series High Bay creates an unmatched combination of high performance lumen output and a premium aesthetic that is perfectly suited to many retail and commercial applications. It has become the fixture of choice for every major big box retailer worldwide for 2018.

Our new Retail Series High Bay features cutting-edge optics and a durable acrylic reflector that delivers a cleaner, brighter dimmable light. High vertical foot-candles, horizontal uniformity, glare control, and visual comfort create the perfect ambient retail or commercial environment compared to traditional high bay lighting.

The MCB LED Retail Series High Bay has a nearly 75% reduction in energy use and available options including multiple color temperatures, mounting choices, motion sensors, and lens variety. This makes it the perfect fixture for all retail stores, auto showrooms, gymnasiums, warehouses and manufacturing facilities and any commercial application.

HBRS 100W 150W

MCB Model Number	MCB-HBRS-100	MCB-HBRS-150
DLC Model Number	U-IHB-100	U-IHB-150
Performance		
Input Wattage	100W	150W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 13,500 lm**	**Up to 20,250 lm**
Efficiency	**135 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	400W MH	600W MH
Distribution	60°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP44	
Weight	6.4 lb / 2.6 kg	9.5 lb / 4.3 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	3 in 1 (Resistance, PWM, 1-10V)	
Longetivity		
L70 Life (Hours)	54,000 + Hours	
Wrap-Around Warranty		
10 Years		

HBRS 240W

MCB Model Number	MCB-HBRS-240
DLC Model Number	**U-IHB-240**
Performance	
Input Wattage	100W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 32,400 lm**
Efficiency	**135 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	1,000W MH
Distribution	60°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP44
Weight	10.5 lb / 4.8 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	3 in 1 (Res., PWM, 1-10V)
Longetivity	
L70 Life (Hours)	54,000 + Hours
Wrap-Around Warranty	
10 Years	

LOW BAY CANOPY

SLIM SERIES

MCB LED Slim Series Canopy luminaires provide outstanding light coverage for every commercial and industrial environment possible. With thousands already installed around the globe in applications as diverse as educational, medical, hospitality, industrial, storage, airport and military, the MCB Slim Series Canopy, provides more light per dollar than any canopy fixture ever built.

The LED Slim Series Canopy is manufactured with low-profile, vandal-proof, heavy-gauge aluminum housing with built-in heat sink cooling fins. In addition, it also features a heat and impact resistant tempered PC lens with antiglare diffuser and a corrosion-resistant electrocoat dark gray finish. Along with various mounting options available, it is perfectly suitable for every exterior and interior environment. "Tough and durable" are the words used most when describing the MCB LED Slim Series Canopy.

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LBSS 28W

MCB Model Number	MCB-LBSS-28
DLC Model Number	U-LCPN-28
Performance	
Input Wattage	28W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 4,060 lm**
Efficiency	**145 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	100W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP67
Weight	6.0 lb / 2.7 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

LBSS 40W 60W

MCB Model Number	MCB-LBSS-40	MCB-LBSS-60
DLC Model Number	U-LCPN-40	U-LCPN-60
Performance		
Input Wattage	40W	60W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 5,800 lm**	**Up to 8,700 lm**
Efficiency	**145 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	175W MH	200W MH
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP67	
Weight	6.0 lb / 2.7 kg	
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	1-10V	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

LBSS 90W

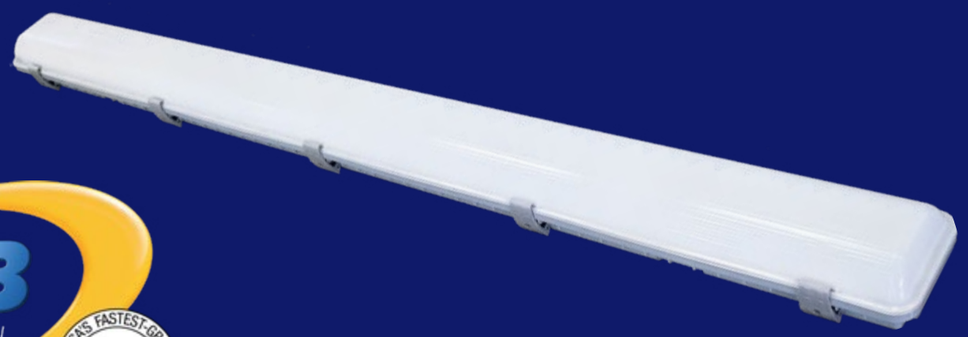
MCB Model Number	MCB-LBSS-90
DLC Model Number	U-LCPN-90
Performance	
Input Wattage	90W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 13,050 lm**
Efficiency	**145 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	250W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP67
Weight	6.0 lb / 2.7 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

VAPOR TIGHT

INDUSTRIAL SERIES

Engineered for powerful lighting in a watertight enclosure, MCB's LED Vapor Tight Industrial Series fixtures are manufactured with a high impact diffuser. Our award winning Vapor Tight fixtures are IP67 rated and specifically designed to withstand moisture, dust, harsh environments and applications where any exposure is detrimental to the life of the luminaire.

With an industry leading 10-year wrap-around warranty, MCB's LED Vapor Tight fixtures feature rugged and durable construction which can be surface or chain mounted and are ideally suitable for simple interior to harsh exterior and cold storage applications.



MCB Lighting & Electrical MEP Product Solutions

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VT4S	40W	60W
MCB Model Number	**MCB-VT4S-40**	**MCB-VT4S-60**
DLC Model Number	**U-IVT-40**	**U-IVT-60**
Performance		
Input Wattage	40W	60W
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 4,920 lm**	**Up to 6,780 lm**
Efficiency	**120 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	144W MH	216W MH
Distribution	220°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP67	
Weight	5.3 lb / 2.4 kg	6.2 lb / 2.8 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS	
Dimming Compatible	1-10V	
Longetivity		
L70 Life (Hours)	70,000 + Hours	
Wrap-Around Warranty		
10 Years		

TROFFERS

SUPER LUMEN SERIES

City by city, building by building, ceilings will never be the same as the award winning MCB LumiSmart troffers are changing the way people work, learn, heal and live their daily lives.

An affordable digital lighting platform designed to deliver general ambient lighting for recessed ceiling applications, MCB LumiSmart troffers transform ambient lighting into an exquisite balance of refined appearance and superior efficiency. MCB troffers produce a perfectly even glow that delivers exceptionally uniform light to enliven every interior space.

With up to 150 lumens per watt and a lighter weight, the MCB LumiSmart troffers deliver a broad portfolio of class leading efficiency and better light performance in an inspired ultra slim package, all at a remarkably affordable price.

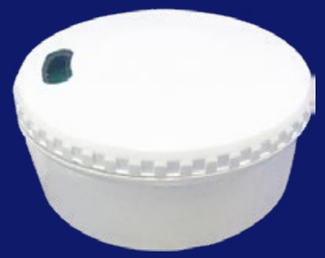
TR	35W (1X4)	35W (2X2)
MCB Model Number	**MCB-TR14-35**	**MCB-TR22-35**
DLC Model Number	**NOT CURRENTLY DLC**	**U-22TF-35**
Performance		
Input Wattage	35W	
Input Voltage Range	100-277V, 480V	
Delivered Lumens	**Up to 4,200 lm**	
Efficiency	**125 lm/W**	
Color Rendering Index (CRI)	85+	
Color Temperature (CCT)	3,000K - 5,700K	
Equivalent Wattage	120W MH	
Distribution	120°	
Power Factor	**0.99**	
MAX THD (%)	**10**	
Min. Ambient Temp.	-30°F / -34°C	
Max. Ambient Temp.	130°F / 54°C	
IP Rating	IP20	
Weight	8.0 lb / 3.6 kg	
Certifications	UL, FCC, CE, RoHS	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	1-10V	
Longetivity		
L70 Life (Hours)	100,000 + Hours	
Wrap-Around Warranty		
10 Years		

TR 55W (2X4)

MCB Model Number	MCB-TR24-55
DLC Model Number	U-24TF-55
Performance	
Input Wattage	55W
Input Voltage Range	100-277V, 480V
Delivered Lumens	**Up to 7,040 lm**
Efficiency	**150 lm/W**
Color Rendering Index (CRI)	85+
Color Temperature (CCT)	3,000K - 5,700K
Equivalent Wattage	200W MH
Distribution	120°
Power Factor	**0.99**
MAX THD (%)	**10**
Min. Ambient Temp.	-30°F / -34°C
Max. Ambient Temp.	130°F / 54°C
IP Rating	IP20
Weight	16.0 lb / 7.2 kg
Certifications	UL, DLC 4.2, FCC, CE, RoHS
Dimming Compatible	1-10V
Longetivity	
L70 Life (Hours)	100,000 + Hours
Wrap-Around Warranty	
10 Years	

MOTION SENSORS AND REMOTES

MCB's fixtures are compatible with state of the art energy-saving motion sensors with stepdown capability and dusk to dawn photocell. Engineered to significantly improve ROI, these remote control programming units are the future to sustainability and light performance.



MCB Lighting & Electrical MEP Product Solutions

AMERICA'S FASTEST-GROWING Inc. 500 PRIVATE COMPANIES

BRI810
Photoelectric and
Microwave Sensor

RC-101-C
Sensor Remote

PSDMS-RC-INT

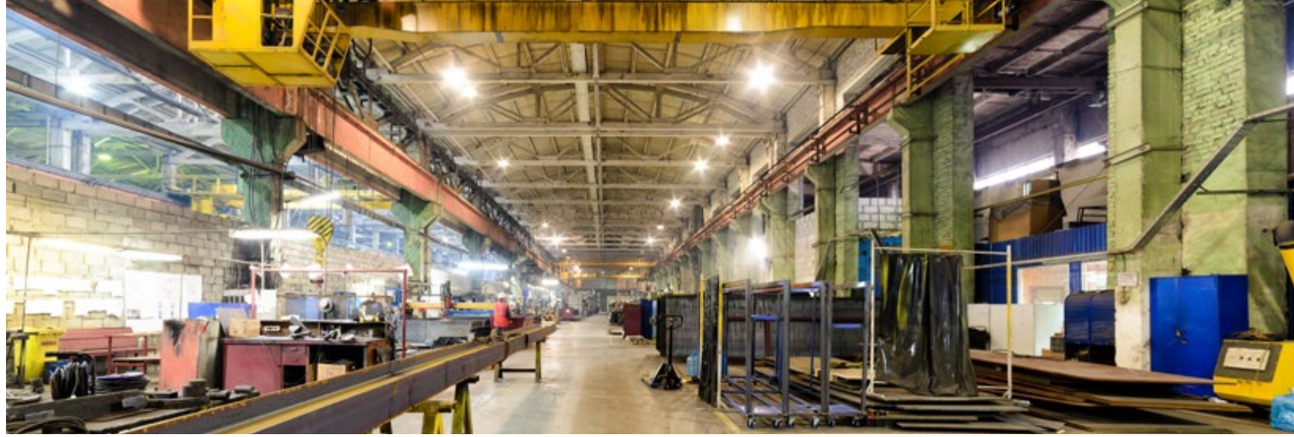
MCB Model Number	MCB-PSDMS-RC-INT
Applicable Models	MCB-WPSS
	MCB-WPDS
	MCB-LBSS
	MCB-VT4S
	MCB-TR12
	MCB-TR22
	MCB-TR24
Specifications	
Power Supply	120-277 VAC
Maximum Load @ -40°F ~ 158°F (-40°C ~ 70°C)	Resistive/Tungsten 600W @ 120V Electronic Ballast (LED) 800/1200VA @ 120/277V
HF System	5.8 GHz CW
Dim Control Output	0-10V, Max 25mA sinking current
Detection Radius / Angle	Max 25 ft (7.6 m) / 360°
Mounting Height	Max 50 ft (15.2 m)
Remote Range	33 ft. (10m) indoor, no backlight
Humidity	Max 95% RH
Min. Ambient Temp.	-104°F / -40°C
Max. Ambient Temp.	158°F / 70°C

PSDMS-RC

BRI812A
Photoelectric and
Microwave Sensor

MCB Model Number	MCB-PSDMS-RC-EXT
Applicable Models	MCB-ALAS
	MCB-FLIS
	MCB-SBAS
Specifications	
Power Supply	120-277 VAC 50 / 60 Hz
Maximum Load @ -40°F ~ 158°F (-40°C ~ 70°C)	Resistive/Halogen 600W @ 120V Fluorescent Ballast / CFL 600W/1200W @ 120/277V Ballast Electronic (LED) 800/1200VA @ 120/277V
HF System	5.8 GHz CW
Dim Control Output	0-10V, Max 25mA sinking current
Detection Radius / Angle	Max 26.2 ft (8 m) / 360°
Mounting Height	Max 50 ft (15.2 m)
Remote Range	33 ft. (10m) indoor, no backlight
Time-Setting	10 sec - 30 min (adjustable)
Light-Control	10 - 2000 Lux (adjustable)
Humidity	Max. 95% RH
Min. Ambient Temp.	-104°F / -40°C
Max. Ambient Temp.	158°F / 70°C

RC-100
Sensor Remote



HBDMS-RC

BRI81B
Photoelectric and
Microwave Sensor

MCB Model Number	MCB-HBDMS-RC
Applicable Models	MCB-HBIS
	MCB-HBRS
	MCB-HBUFO
Specifications	
Power Supply	120-277 VAC 50 / 60 Hz
Maximum Load @ -40°F ~ 158°F (-40°C ~ 70°C)	Resistive/Halogen 600W @ 120V Fluorescent Ballast / CFL 600W/1200W @ 120/277V Ballast Electronic (LED) 800/1200VA @ 120/277V
HF System	5.8 GHz CW
Dim Control Output	0-10V, Max 25mA sinking current
Detection Radius / Angle	Max 26.2 ft (8 m) / 360°
Mounting Height	Max 50 ft (15.2 m)
Remote Range	33 ft. (10m) indoor, no backlight
Time-Setting	10 sec - 30 min (adjustable)
Light-Control	10 - 2000 Lux (adjustable)
Humidity	Max 95% RH
Min. Ambient Temp.	-104°F / -40°C
Max. Ambient Temp.	158°F / 70°C

RC-100
Sensor Remote

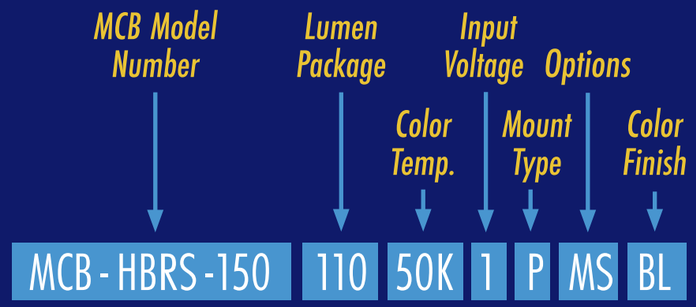
Ordering Information

Our SKU has multiple parts and start with the MCB MODEL NUMBER followed by a dash and then the following items, with a dash in between, like so:

MCB - HBRS - 150 - 110 - 50K - 1 - P - MS - BL

Some items are standard and will be on every SKU, but some fixtures will have items specific to that fixture (e.g. distribution, lens, and housing types).

Interpreting the SKU: Standard SKU Items



MCB Model Number - Determines the product; luminaire (along with its wattage), remote and sensor, etc.

LED Fixture Name	Model	Wattages Available (W)
Area Light - Architectural Series	**MCB-ALAS**	35, 50, 80, 100, 120, 150
Shoebox - Architectural Series	**MCB-SBAS**	150, 200, 300
High Bay - Waterproof UFO	**MCB-HBUFO**	60, 100, 150, 240, 320
High Bay - Industrial Series	**MCB-HBIS**	100, 150, 240
High Bay - Retail Series	**MCB-HBRS**	100, 150, 240
Wall Pack - Decade Series	**MCB-WPDS**	28, 40, 60, 90
Wall Pack - Security Series	**MCB-WPSS**	15
Flood Light - Industrial Series	**MCB-FLIS**	40, 60, 90, 120, 150
Low Bay Canopy - Slim Series	**MCB-LBSS**	28, 40, 60, 90
Vapor Tight - Industrial Series	**MCB-VT4S**	40, 60
Troffers - Super Lumen Series	**MCB-TR##**	35, 55
Street Light - Architectural Series	**MCB-SLNG**	20, 25, 40, 70, 100

Lumen Packages - Lumens per Watt. Each luminaire has their own set of lumen package options. Refer to the table below.

Fixture / Model	SKU Code	Lumen Package
Area Light Architectural Series **MCB-ALAS**	**135**	135 L/W
	165	165 L/W
	180	180 L/W
Shoebox Architectural Series **MCB-SBAS**	**140**	140 L/W
	165	165 L/W
	180	180 L/W
High Bay Waterproof UFO **MCB-HBUFO**	**135**	135 L/W
	165	165 L/W
	185	185 L/W
High Bay Industrial Series **MCB-HBIS**	**110**	110 L/W
	135	135 L/W
High Bay Retail Series **MCB-HBRS**	**110**	110 L/W
	135	135 L/W
Wall Pack Decade Series **MCB-WPDS**	**N/A**	110 L/W
Wall Pack Security Series **MCB-WPSS**	**N/A**	130 L/W
Flood Light Industrial Series **MCB-FLIS**	**115**	115 L/W
	135	135 L/W
Low Bay Canopy Slim Series **MCB-HBRS**	**130**	130 L/W
	145	145 L/W
Vapor Tight Industrial Series **MCB-VT4S**	**115**	115 L/W
Troffers Super Lumen Series **MCB-TR##**	**N/A (TR14,TR22)**	120 L/W
	N/A (TR24)	120 L/W
Street Light Architectural Series **MCB-SLNG**	**N/A**	130 L/W

Color Temperature - MCB luminaires range from 3000K to 5700K.

SKU Code	Color Temperature	Appearance
30K	**3000K**	Halogen Light
40K	**4000K**	Clear Metal Halide
50K	**5000K**	Direct Daylight at Noon
57K	**5700K**	Daylight (Sun and Sky)

Input Voltage - MCB has two options available. 100-277V and 480V.
Opting for 480V will reduce the warranty to 5 years.

SKU Code	Input Voltage
1	100-277V
2	480V

Mount Type - Different fixtures have different types of mounting.

SKU Code	Mount	Applicable Fixtures
A	6" Arm	ALAS, SBAS,
F	Flush	LBSS, VT4S
H	Hook	HBUFO, HBIS, HBRS,
P	Pendant	HBUFO, HBIS, HBRS, VT4S
R	Recessed	LBSS, TR
SF	Slip Fitter	ALAS, SBAS,
W	Wall	ALAS, SBAS, WPDS, WPSS
Y	Yoke	SBAS, HBUFO, FLIS

Options - Each LED fixture has different optional additions.

SKU Code	Option	Applicable Fixtures
DIM	Dimming	WPDS, WPSS
EI	Emergency Inverter	ALL
MS	Motion Sensor	ALL
S	Shield	WPDS, WPSS
P	Photocell	ALAS, SBAS, WPDS, FLIS
TL	Twist Lock Cap	HBUFO, HBIS, HBRS
3P	3-Pin Twist Lock Base	SBAS
5P	5-Pin Twist Lock Base	SBAS
7P	7-Pin Twist Lock Base	SBAS
WP	Additional 4' Whip	ALL EXCEPT HBUFO
WP(X)	Additional (X)' Whip	HBUFO, HBIS, HBRS

Color Finish - Each MCB LED fixture has one standard color finish, but other colors can also be custom ordered.

SKU Code	Color	Standard on these Fixtures
BZ	Bronze	WPDS, ALAS, SBAS, LBSS
BL	Black	HBUFO, FLIS ,WPSS
SV	Silver	HBIS, HBRS
GR	Gray	VT4S
W	White	TR
SP	Other	None

LBSS, VT4S, and TR are not available in other colors. FLIS only available in black and white.

Interpreting the SKU: Fixture Specific SKU Items

Lens Type - Material of the lens, tempered glass is standard. Only use the SKU code to change lens.

SKU Code	Lens Type	Applicable Fixtures
PC	Polycarbonate	HBUFO, WPDS

Insert SKU code between fixture model and wattage.

Distribution - How the light is distributed. Can be a specific distribution type or the angle of the light.

SKU Code	Distribution	Applicable Fixtures
T2	Type 2	ALAS
T3	Type 3	ALAS, SBAS
T4	Type 4	ALAS, SBAS
T5	Type 5	ALAS, SBAS
1	120°	WPDS, WPSS, FLIS, LBSS
1	220°	VT4S

Insert SKU code between color temperature and input voltage. WPDS, WPSS, FLIS, LBSS, VT4S only have one option, but is there so the Distribution is known.

Lens / Housing - The angle of the reflector and the opacity of the lens.

SKU Code	Lens / Housing	Applicable Fixtures
1	100°	HBIS
2	60°	HBIS
C	Clear	HBIS
F	Frosted	HBIS

Insert SKU code between input voltage and housing. Selection of one angle and one opacity required.

Resources

Certifications and Logos

DesignLights Consortium (DLC)

A non-profit organization dedicated to the adoption of high-performing commercial lighting solutions. Promoting high-quality, energy-efficient lighting products in collaboration with utilities and energy efficiency program members, manufacturers, lighting designers, and federal, state, and local entities, the DLC establishes quality specifications for fixtures, lamps, and integrated controls.

Underwriters Laboratories (UL)

UL is a non-profit organization dedicated to public safety. UL sets the standards for different product categories and tests products to ensure they meet the standards for responsible design. UL has been evaluating products for safety risks for over a century.

Wrap Around Warranties

MCB takes pride in customer service, supporting this by providing wrap around warranties on all LED fixtures. The term "wrap around" means that it is all-inclusive - any defect that occurs, MCB will provide a replacement.

Years	Supported Fixtures
10	ALAS, SBAS, HBUFO, WPDS, WPSS, FLIS, SLNG
7	LBSS
5	HBIS, HBRS, VT4S, TR

Opting for 480V on ANY fixture will reduce warranty to 5 years.

Dimmable

MCB LED fixtures usually come equipped with 3-in-1 Dimming capabilities, unless specified otherwise. That means dimming is compatible with three different signal types: 1-10V, PWM (Pulse Width Modulation) Signal, and Resistance.

Ingress Protection (IP) Rating

Developed by the European Committee for Electro Technical Standardization, Ingress Protection ratings specify the environmental protection the enclosure provides. IP Ratings consist of two to three numbers (the third is usually omitted). Each number represents protection against different circumstances. The first number represents protection against solid objects, the second for liquids, and the third against mechanical impacts (omitted).

Number	Solid Protection
0	No special protection
1	Protected against solid objects over 50 mm
2	Protected against solid objects over 12 mm
3	Protected against solid objects over 2.5 mm
4	Protected against solid objects over 1 mm
5	Protected against dust*
6	Totally protected against dust

*Limited ingress permitted

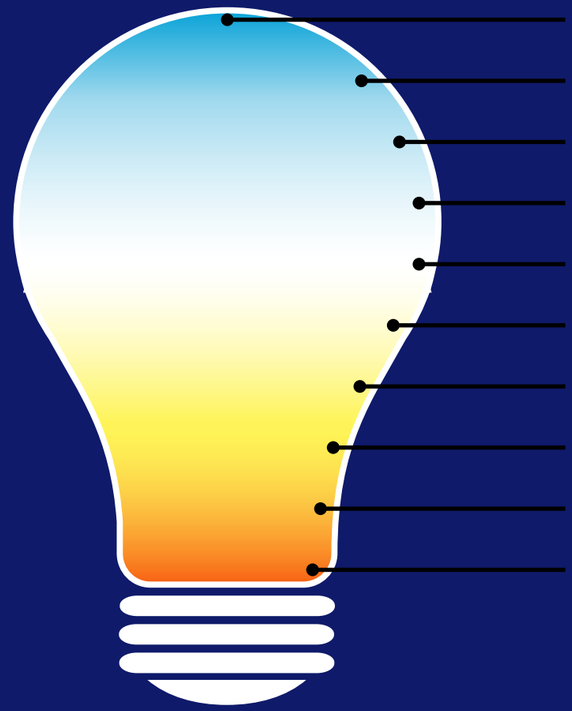
Number	Liquid Protection
0	No protection
1	Protected against vertically falling drops of water
2	Protected against direct sprays of water up to 15° from normal position
3	Protected against direct sprays of water up to 60° from normal position
4	Protected against direct sprays of water from all directions*
5	Protected against low pressure jets of water from all directions*
6	Protected against temporary flooding of water from all directions*
7	Protected against the effect of immersion between 15 cm and 1 m
8	Protects against long periods of immersion under pressure

*Limited ingress permitted

Number	Impact Protection (omitted)
0	No protection
1	**Protection against impact of 0.225 joule** (e.g. 150 g falling from 15 cm)
2	**Protection against impact of 0.375 joule** (e.g. 250 g falling from 15 cm)
3	**Protection against impact of 0.5 joule** (e.g. 250 g falling from 20 cm)
4	**Protection against impact of 2.0 joule** (e.g. 500 g falling from 40 cm)
5	**Protection against impact of 6.0 joule** (e.g. 1.5 kg falling from 40 cm)
6	**Protection against impact of 20.0 joule** (e.g. 5 kg falling from 40 cm)

Color Temperature

Color temperature is the way light appearance, provided by a light source, is described. It is measured in degrees of Kelvin (K) on a scale of 1,000 to 10,000. MCB LEDs range from 3,000K to 5,700K.



- **Less than 2000K:** Dim glow of light, similar to a candle and best for low light areas when ambient illumination is preferrable.
- **2000K to 3000K:** Soft white glow, often yellow in appearance and best for living rooms, dining rooms, bedrooms and outdoor spaces.
- **3100K to 4500K:** Bright amount of white light and best for kitchens, offices, work spaces and vanities where task lighting is necessary.
- **4600K to 6500K:** Bright blue-white light, like daylight and best for display areas and work environments where bright illumination is a must.
- **6500K and Over:** Bright bluish hue of light, often found in commercial locations and best for task lighting.

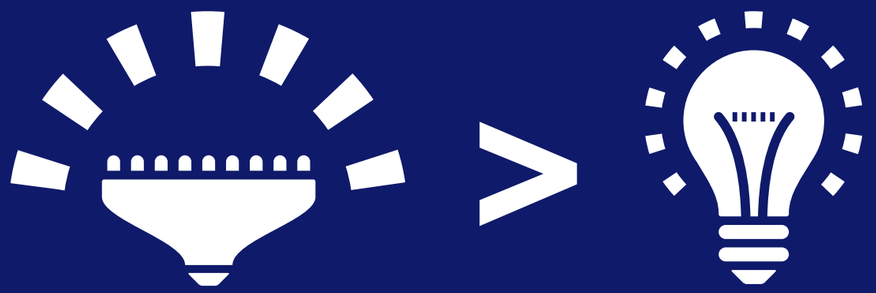
LED to HID Equivalency

The energy savings offered by LED, as compared to HID and other traditional lighting systems, can as substantial as 80%. Combining higher system efficiency and slower lumen depreciation means the difference in higher overall efficiency with LED.

Interior LED to HID Equivalency Chart	
LED	**HID**
15W	60W MH
28W	110W MH
40W	160W MH
60W	240W MH
100W	400W MH
200W	800W MH
300W	1,200W MH

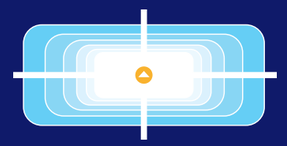
Exterior LED to HID Equivalency Chart	
LED	**HID**
15W	75W MH
28W	140W MH
40W	200W MH
60W	300W MH
100W	500W MH
200W	1,000W MH
300W	1,500W MH

(These numbers are an approximation of the range of MCB LED fixtures.)

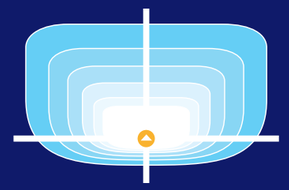


Light Distribution Types

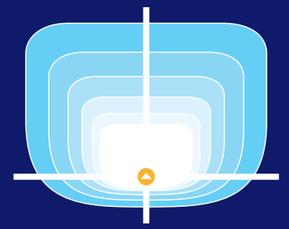
Light distribution types are the projected patterns light fixtures will emit onto a surface. The orange dot in each diagram represent the placement of the light fixture.



Type 1: Two-way lateral suitable for 2 lane roads and walkways. Meant to be placed in the center.



Type 2: Lateral but a little larger are than Type 1. Good for 4-lanes, on-ramps, and usually located roadside.

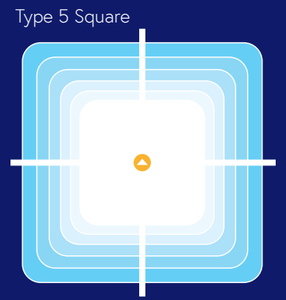


Type 3: Commonly known as "bat-wing" it is suitable for perimeters where other interior pole placements fill the site.

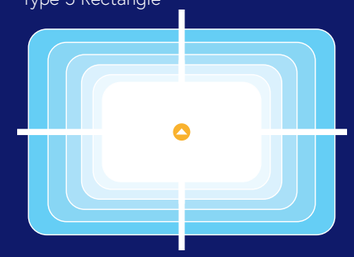
Type 4: Known as a "forward throw", or asymmetric, is best along perimeters where spill light is a concern and/or there are no places to add poles within the site.

Type 5: Available as a square/rectangular or as a circle pattern. Best for large interior areas within a site.

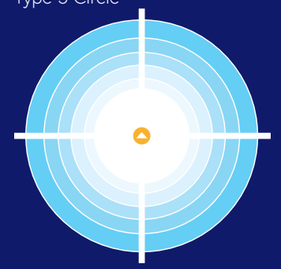
Type 5 Square



Type 5 Rectangle



Type 5 Circle



MCB

Lighting & Electrical

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