

When Less is More



Lighting Upgrades for Energy Conservation



Lighting Services Inc

Lighting Upgrades for Energy Conservation

Over the past several years, low wattage ceramic metal halide and **LED** technology have begun to challenge or even surpass halogen as the lamp of choice in a wide variety of upscale commercial and retail applications. Rising fuel prices, environmental concerns and a wavering economy have forced companies to search for ways to reduce their **energy costs** and overall carbon footprint. Companies have also become more aware of the need and benefits of doing what's right for the **environment**. Lighting upgrade are an ideal way for an organization to reduce utility costs immediately, as they are cost effective and quick to implement. Measurable benefits including **reduced energy consumption** as well as better control and maintenance of lighting and HVAC systems.

The advantages are clear:

Less energy

On average, ceramic metal halide yields three times the number of lumens per watt—which means that a 20 watt ceramic metal halide lamp is as powerful as a 75 watt halogen lamp.

LED MR16 lamps provides up to 80% energy savings. 80% less power consumption results in 80% less heat production; heat that normally raises the ambient temperature in commercial environments from halogen lamps, which is neutralized by costly air conditioners.

Less maintenance

In addition to the energy savings of these efficient light sources, the long life of these lamps means that lamp replacement and disposal take place less often.

Reduced HVAC Load

Lighting typically accounts for 30% - 50% of a building's electric bill. For every 3 watts of lighting load reduction, there is a corresponding reduction of 1 watt on the HVAC system.

Longer life

Ceramic metal halide lamps have an average life of up to 12,000 hours or more—three times longer than halogen. LED lamps have a life of up to 40,000 hours- ten times longer than halogen.

Lighting power density

As new and evolving codes limit total wattage in commercial spaces, ceramic metal halide and LED fixtures are the best way to attain the light levels your projects require, while complying with local or national codes.

Stable, customizable color

Ceramic metal halide lamps are available at 3000° Kelvin.

LED lamps are available at 3200° and 4300° Kelvin which is ideal for the cooler, crisper light of retail displays.

In addition, ceramic metal halide and LED lamps produce stable light quality throughout their usable life.

LUMENS PER WATT

HALOGEN		14
LED		35
METAL HALIDE		42



Existing LN16 Series



Upgrade to MHLN1620 Series

SAVINGS

Annual Operating Cost by Region*

New York 15¢/KWH
Chicago 9¢/KWH
Los Angeles 13¢/KWH
Based on 3650 Hours

\$34.16 per unit
\$20.50 per unit
\$29.61 per unit

Annual Savings
including lamp
replacement

Average Installation
(per 100 fixtures)

\$15.77 per unit
\$9.46 per unit
\$13.76 per unit

Savings Per Year
\$18.39 per unit/ year
\$11.04 per unit/ year
\$15.94 per unit/ year

** \$6.10
** \$6.10
** \$6.10

Savings Per Year
\$24.49 per unit/ year
\$17.14 per unit/ year
\$22.04 per unit/ year

\$1,714 - \$2,449 Annually

Additional savings to HVAC will also be realized

SPECIFICATIONS

Lamp Type

MR16 Halogen

MR16 Ceramic Metal Halide

System Watts

52 Watt

24 Watt

Beam Spreads

15°, 25°, 40°

12°, 25°, 40°

Average Lamp Life

6,000 Hours

12,000 Hours

Dimensions

6" (152mm) x 5 3/4" (146mm)

6 7/8" (174mm) x 5 3/4" (146mm)

Lumens

730 Lumens (Est.)

1000 Lumens

Center Beam Candlepower

9100 (15°), 3200 (25°), 1700 (40°)

9000 (12°), 2900 (25°), 1500 (40°)

Lumens per Watt

14

42

* Total input watts x 12Hrs/day x 365 days/yr x (Regional KWH)/1000
** Lamp+labor cost pro-rated for 1 year

Halogen Photometric Data

Q50MR16/C/NSP15

50 Watt, 6000 hrs
 Beam Spread to 50% of CBCP **15°**
 Center Beam Candlepower **9100**
 Color Temperature (Kelvin) **3050**

Q50MR16/C/NFL25

50 Watt, 6000 hrs
 Beam Spread to 50% of CBCP **25°**
 Center Beam Candlepower **3200**
 Color Temperature (Kelvin) **3050**

Q50MR16/C/FL40

50 Watt, 6000 hrs
 Beam Spread to 50% of CBCP **40°**
 Center Beam Candlepower **1700**
 Color Temperature (Kelvin) **3050**

Ceramic Metal Halide Photometric Data

CMH MR16 20W 12

20 Watt, 9000 hrs
 Beam Spread to 50% of CBCP **7°**
 Center Beam Candlepower **9000**
 Color Temperature (Kelvin) **3000**
 CRI **80+**

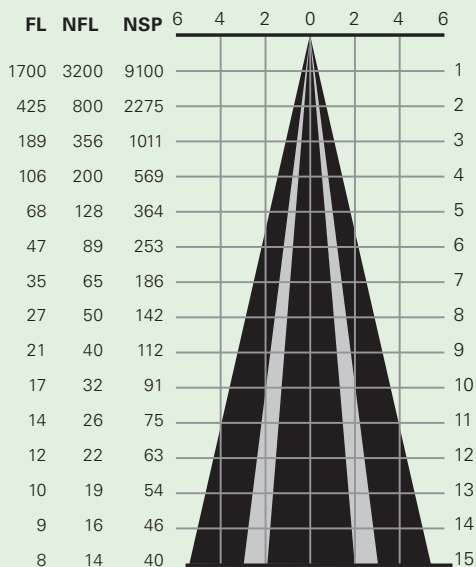
CMH MR16 20W 25

20 Watt, 9000 hrs
 Beam Spread to 50% of CBCP **25°**
 Center Beam Candlepower **2900**
 Color Temperature (Kelvin) **3000**
 CRI **80+**

CMH MR16 20W 40

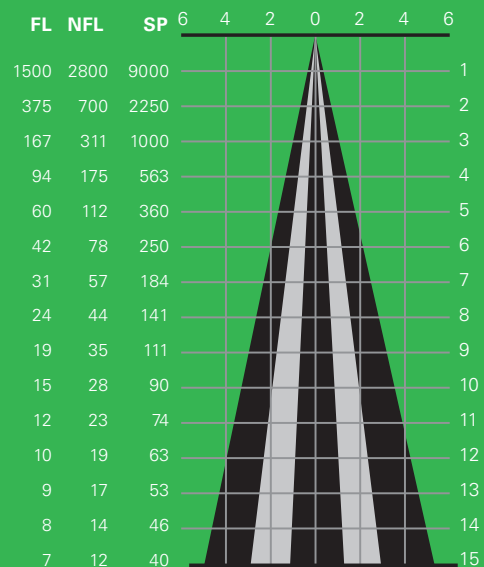
20 Watt, 9000 hrs
 Beam Spread to 50% of CBCP **40°**
 Center Beam Candlepower **1500**
 Color Temperature (Kelvin) **3000**
 CRI **80+**

All Distances in Feet



Q50MR16/C/NSP7 15°
Q50MR16/C/NFL25 25°
Q50MR16/C/FL40 40°

All Distances in Feet



CMH MR16 20W 12 12°
CMH MR16 20W 25 25°
CMH MR16 20W 40 40°



Existing LN16 Series



Upgrade to SSLN16 Series

SAVINGS

Annual Operating Cost by Region*

New York 15¢/KWH
Chicago 9¢/KWH
Los Angeles 13¢/KWH
Based on 3650 Hours

\$14.45 per unit
\$8.67 per unit
\$12.53 per unit

Annual Savings
including lamp
replacement

Average Installation
(per 100 fixtures)

\$3.29 per unit
\$1.97 per unit
\$2.85 per unit

Savings Per Year

\$11.16 per unit/ year
\$6.70 per unit/ year
\$9.68 per unit/ year

** \$7.30
** \$7.30
** \$7.30

Savings Per Year

\$18.46 per unit/ year
\$14.88 per unit/ year
\$16.98 per unit/ year

\$1,480 - \$1,846 Annually

Additional savings to HVAC will also be realized

SPECIFICATIONS

Lamp Type

MR16 Halogen

LED

System Watts

20 Watt

4 Watt

Beam Spreads

15°, 40°

12°, 24°, 34°

Average Lamp Life

5,000 Hours

40,000 Hours

Dimensions

6" (152mm) x 5 3/4" (146mm)

7 7/16" (189mm) x 5 13/16" (148mm)

Lumens

300 Lumens (Est.)

250 Lumens

Center Beam Candlepower

3750 (25°), 525 (40°)

3264 (12°), 942 (25°), 375 (40°)- Warm White
3488 (12°), 984 (25°), 396 (40°)- Natural White

Lumens per Watt

14

35

* Total input watts x 12Hrs/day x 365 days/yr x (Regional KWH)/1000
** Lamp+labor cost pro-rated for 1 year

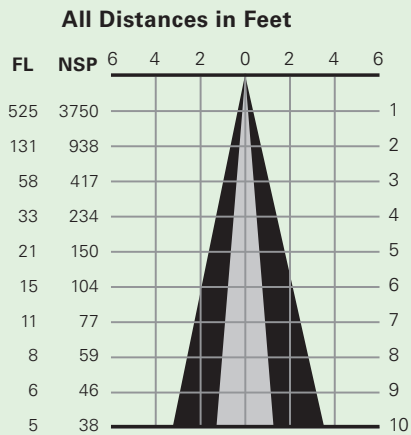
Halogen Photometric Data

Q20MR16/C/NSP15

20 Watt, 5000 hrs
 Beam Spread to 50% of CBCP **15°**
 Center Beam Candlepower **3750**
 Color Temperature (Kelvin) **2900**

Q20MR16/C/FL40

20 Watt, 5000 hrs
 Beam Spread to 50% of CBCP **40°**
 Center Beam Candlepower **525**
 Color Temperature (Kelvin) **2900**



Q20MR16/C/NSP15 15°
Q20MR16/C/FL40 40°

LED Photometric Data

MR16-12-N-S

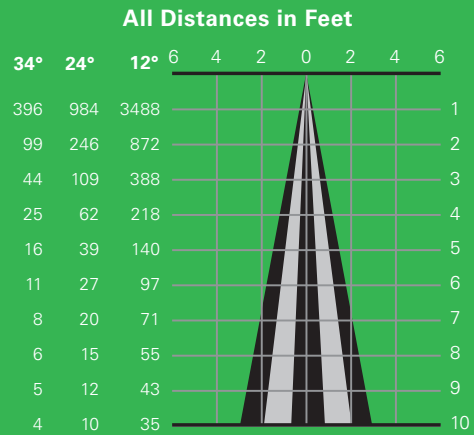
4 Watt, 40,000 hrs
 Beam Spread to 50% of CBCP **12°**
 Center Beam Candlepower **3488**
 Color Temperature (Kelvin) **4300**
 CRI **80**

MR16-24-N-S

4 Watt, 40,000 hrs
 Beam Spread to 50% of CBCP **24°**
 Center Beam Candlepower **984**
 Color Temperature (Kelvin) **4300**
 CRI **80**

MR16-34-N-S

4 Watt, 40,000 hrs
 Beam Spread to 50% of CBCP **34°**
 Center Beam Candlepower **396**
 Color Temperature (Kelvin) **4300**
 CRI **80**



MR16-12-N-S 12°
MR16-24-N-S 25°
MR16-34-N-S 40°

Lighting Services Inc has been producing the finest quality Track, Accent and Display Lighting Systems for over fifty years.

During the last fifty years, we have been part of an extraordinary revolution in architectural lighting - not just in the technical aspects of the industry, but also in the expectations of people all over the globe to experience the positive effects that exceptional lighting can bring.

As the premier independent manufacturer of track, accent and display lighting systems, it is our reputation for creativity and innovation that is unrivalled in our industry. It is our continued commitment to these principals, which makes LSI the manufacturer of choice among the most discriminating specifiers of lighting. Our specification grade products are backed by the industry's first 5-year warranty, and by a 10-year warranty on all of our Track & Busway systems.

Our challenge for the future is to continue our commitment to the lighting community, and to the global community that we touch. With the development of new technologies and sustainable manufacturing processes we will reduce our impact on the environment, while at the same time, increasing the availability of high quality lighting solutions. We will also continue our support of industry groups such as the IALD, LIRC, IES, LEED, US Green Building Council, and the AIA/CES program, to foster awareness of excellence in lighting.





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