Handrail Lighting System

PRODUCT SUMMARY

PRODUCT FEATURES
- Three beam spread options
- Five Kelvin temperatures
- Energy efficient
- 50,000 hour LED life
- Stable & consistent color temperature
- Low voltage
- Easy to assemble & install
- Cool to the touch
- Compatible with C.R Laurence Cap Rail models: GR16 (1.66"), GR20 (2"), GR25 (2.5"), GR30 (3"), GR35 (3.5"), GR40 (4"
- C.R Laurence can provide custom hardware solutions
- Meets A.D.A requirements for handrail diameters
- Suitable for wet locations

Color Temperatures & Light Output
- 2700K (260 lumens/foot)
- 3000K (260 lumens/foot)
- 3500K (260 lumens/foot)
- 4000K (260 lumens/foot)
- 6500K (260 lumens/foot)
Other colors and lower lumen outputs are available
("Lumen data based on actual light output of luminaire, not the higher output of the "raw" LEDs. Measured with 60° asymmetrical lens.

Beam Spread Options
- 60° Asymmetrical
- 65° Symmetrical
- 110° Symmetrical

CRI Output
- 2700K (CRI 80+)
- 3000K (CRI 80+)
- 3500K (CRI 80+)
- 4000K (CRI 80+)
- 6500K (CRI 80+)

LED Light Engine
- Standard Length: 12" (304.8mm)
- Field cuttable in 4" (101.6mm) increments
- Run lengths of 10' (3.05m) possible
- Straight lengths only

Power Supply
- Primary voltage: 120 or 120-277 universal input
- Secondary voltage: 24VDC 4.1 A Max
- Maximum illumination length of a single 100W power supply 20' (6.10m) - two 10' (3.05m) runs

Power Supply Tips
- 20% maximum overage for breaker for primary current draw
- Do not plug multiple power supplies into one run
- All iLight power supplies should be on an independent circuit
- Recommend surge protection upstream from power supply
- Verify correct voltage prior to wiring to non-switching power supplies

Low Voltage Cable
Maximum distance of low voltage cable in any given run:
- 14 AWG: 40 feet (12.19m)
- 12 AWG: 60 feet (18.29m)
- 10 AWG: 100 feet (30.48m)

Housing & Lens
- Standard Length: 6' (1.829m)
- Field cuttable to desired length

ORDERING INFORMATION (includes light engine, lens, housing, power supplies & kit accessories)

<table>
<thead>
<tr>
<th>Class</th>
<th>Light Color</th>
<th>Lens Type</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS</td>
<td>W27 = White 2700K</td>
<td>C060A = Clear, 60° Asymmetrical</td>
<td>01 = Version I</td>
</tr>
<tr>
<td></td>
<td>W30 = White 3000K</td>
<td>C065S = Clear, 65° Symmetrical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W35 = White 3500K</td>
<td>C110S = Clear, 110° Symmetrical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W40 = White 4000K</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W65 = White 6500K</td>
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</tr>
</tbody>
</table>

Specification sheets are subject to change without notice. For the most recent version, please refer to www.ilight-tech.com

1 iLight Technologies • 118 South Clinton Street, Suite 370 • Chicago, IL 60661 • T 312.876.8630 • F 312.876.8631 • www.ilight-tech.com
### Handrail Lighting System

**Specification, Bidding, Field Measurements, & Installation**

For a smooth, predictable process and a high quality outcome, you need:

A) A high quality light source (iLight)
B) A high quality hardware system (C.R. Laurence)
C) An experienced electrical contractor, and
D) An experienced handrail installer (e.g. ornamental ironworker, metal shop, glazing company)

A bundled illuminated handrail system (lighting and hardware together) conflicts with how the trades like to do business. If an EC does not provide the lighting, they won’t warrant it. And if a handrail installer does not provide the hardware, they won’t warrant that. And neither trade wants to purchase material for the other trade.

That’s why many general contractors demand that the handrail installer provides the hardware and the electrical contractor provides the lighting. This makes iLight the ideal solution: electrical contractors and handrail installers have been working together for over 10 years to successfully install the iLight Handrail Lighting System on compatible C.R Laurence handrails.

<table>
<thead>
<tr>
<th>Specification</th>
<th>C.R Laurence (“CRL”) handrail hardware model compatible with iLight Handrail Lighting System, including CRL Cap Rail models:</th>
</tr>
</thead>
</table>
|               | • GR16 (diameter:1.66", 42.2mm)  
|               | • GR20 (diameter: 2.0", 50.8mm)  
|               | • GR25 (diameter: 2.5", 63.5mm)  
|               | • GR30 (diameter: 3.0", 76.2mm)  
|               | • GR35 (diameter: 3.5", 88.9mm)  
|               | • GR40 (diameter: 4.0", 101.6mm)  
|               | Or custom CRL hardware designed to meet the specifications of the iLight Handrail Lighting System.  
|               | Specification in the “Metals” division.  
|               | Please cross reference the iLight Handrail Lighting System specification. |

<table>
<thead>
<tr>
<th>Bidding</th>
<th>Handrail Installer bids the hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electrical Contractor bids the light source</td>
</tr>
</tbody>
</table>
|               | Not Required  
|               | Small variations from plan to actual would not significantly change costs for the iLight Handrail Lighting System.  
|               | • iLight light engine comes in 1-foot sections, cuttable every 4 inches  
|               | • Housing & lens come in 6-foot sections and are field cuttable  
|               | • Up to 20 feet per power supply; (two 10-foot runs)                      |

<table>
<thead>
<tr>
<th>Field Measurements</th>
<th>Handrail Installer</th>
<th>Electrical Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

(*Lumen data based on actual light output of luminaire, not the higher output of the “raw” LEDs. Measured with 60° asymmetrical lens.)

<table>
<thead>
<tr>
<th>Beam Spread Options</th>
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<tbody>
<tr>
<td>60° asymmetrical</td>
</tr>
<tr>
<td>65° symmetrical</td>
</tr>
<tr>
<td>110° symmetrical</td>
</tr>
</tbody>
</table>

Please cross reference the handrail hardware specification.
Handrail Lighting System

**TECHNICAL INFORMATION**

**Housing**
- 6’ (1.83m) standard length—field cuttable to allow for exact size of light engine boards
- 0.75” (19.05mm)w x 1.10” (27.94mm)h when used within handrail applications with frosted lens
- 0.75” (19.05mm)w x 0.90” (22.86mm)h when edge lighting glass panels

**Mounting**
- Light engine jumper pins to connect one light engine board to the next
- Shims help hold handrail housing in position during installation
- Mounting clips mount into handrail and screw into handrail housing

**Power Supply Dimensions**
- Electronic (Advance) = 9.50” x 1.18” x 1.70”

**65° Symmetric Lens Foot-candle Values**

<table>
<thead>
<tr>
<th>Foot-candle Values</th>
<th>5'</th>
<th>4'</th>
<th>3'</th>
<th>2'</th>
<th>1'</th>
<th>0'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.1</td>
<td>1.6</td>
<td>2.8</td>
<td>9.9</td>
<td>27.0</td>
<td>37.6</td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>9.9</td>
<td>27.0</td>
<td>37.6</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>9.9</td>
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<td>9.9</td>
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<td></td>
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<td></td>
<td>2.8</td>
<td>9.9</td>
<td>27.0</td>
<td>37.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**110° Symmetric Lens Foot-candle Values**

<table>
<thead>
<tr>
<th>Foot-candle Values</th>
<th>5'</th>
<th>4'</th>
<th>3'</th>
<th>2'</th>
<th>1'</th>
<th>0'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.2</td>
<td>1.8</td>
<td>3.7</td>
<td>12.4</td>
<td>25.0</td>
<td>32.1</td>
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<tr>
<td></td>
<td>1.8</td>
<td>3.7</td>
<td>12.4</td>
<td>25.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.7</td>
<td>12.4</td>
<td>25.0</td>
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<td></td>
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<td>12.4</td>
<td>25.0</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>3.7</td>
<td>12.4</td>
<td>25.0</td>
<td></td>
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</table>

**60° Asymmetric Lens Foot-candle Values**

<table>
<thead>
<tr>
<th>Foot-candle Values</th>
<th>5'</th>
<th>4'</th>
<th>3'</th>
<th>2'</th>
<th>1'</th>
<th>0'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.1</td>
<td>1.6</td>
<td>2.5</td>
<td>5.2</td>
<td>10.8</td>
<td>31.1</td>
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<tr>
<td></td>
<td>1.6</td>
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</table>
# Handrail Lighting System

## Technical Information

### Electrical

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Load Current</td>
<td>142.5 mA/foot at 24VDC (476.5mA/meter)</td>
</tr>
<tr>
<td></td>
<td>3.4 watts/foot (11.15 watts/meter)</td>
</tr>
<tr>
<td>Maximum Run Length</td>
<td>20’ (6.10m) - two 10’ (3.05m) runs with iLight approved power supply</td>
</tr>
</tbody>
</table>

### DC Cable
- 14 AWG, PVC/Nylon Tape TC 600 Volt power and control able or equivalent
- FT-4 fire rating
- Class 2 wiring system
- Silicone based wire nuts

### Electrical Tips
- Only use iLight approved power supply

### Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature Range</td>
<td>-25°C to 50°C (-13°F to 122°F)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-25°C to 75°C (-13°F to 167°F)</td>
</tr>
</tbody>
</table>

### Certification
- Suitable for Wet Locations
- Complies with UL 1598 and CSA c22.2 No. 250-00 Luminaires
- MetLabs listed. MetLabs is a Nationally Recognized Testing Laboratory (NRTL)
- Power Supplies are RU listed (Recognized Components by Underwriters Laboratory)

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## Lighting System Profile

### iLight Handrail Lighting System

- One of several positions for light engine when using lens.
- Position for light engine when using glass wall.
- Lens
- Housing
- LED light engine
Handrail Lighting System

**TECHNICAL INFORMATION**

Cross section of C.R. Laurence handrail hardware GR16 and iLight Handrail Lighting System

**HARDWARE & LIGHTING SYSTEM CROSS SECTION**

**ACCESSORIES**

CAP RAIL HOUSING MOUNTING CLIP HS-KIT02-01-00

JUMPER PINS HS-JMP02-01-00

LED HOUSING SHIMS HS-SPC01-01-00

**POWER SUPPLIES**

65-ADV100W24V
Input: 120-277VAC 50/60Hz
Output: 24VDC 4A max
RU listed for U.S. and Canada
Additional Enclosure Required
2lbs. (0.9kg)

**ELECTRONIC (ADVANCE) POWER SUPPLY**

Input: 120-277VAC 50/60Hz
Output: 24VDC 4A max
RU listed for U.S. and Canada
Additional Enclosure Required
2lbs. (0.9kg)