# Handrail Lighting System

## PRODUCT SUMMARY

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three beam spread options</td>
<td>-</td>
</tr>
<tr>
<td>Four Kelvin temperatures</td>
<td>-</td>
</tr>
<tr>
<td>Energy efficient</td>
<td>-</td>
</tr>
<tr>
<td>50,000 hour LED life</td>
<td>-</td>
</tr>
<tr>
<td>Stable &amp; consistent color temperature</td>
<td>-</td>
</tr>
<tr>
<td>Low voltage</td>
<td>-</td>
</tr>
<tr>
<td>Easy to assemble &amp; install</td>
<td>-</td>
</tr>
<tr>
<td>Cool to the touch</td>
<td>-</td>
</tr>
<tr>
<td>Compatible with C.R Laurence Cap Rail models:</td>
<td>-</td>
</tr>
<tr>
<td>GR16 (diameter: 1.66&quot;, 42.2mm), GR20 (2&quot;, 50.8mm), GR25 (2.5&quot;, 63.5mm), GR30 (3&quot;, 76.2mm), GR35 (3.5&quot;, 88.9mm), and GR40 (4&quot;, 101.6mm)</td>
<td>-</td>
</tr>
<tr>
<td>C.R Laurence can provide custom hardware solutions</td>
<td>-</td>
</tr>
<tr>
<td>Meets A.D.A requirements for handrail diameters</td>
<td>-</td>
</tr>
<tr>
<td>Suitable for wet locations</td>
<td>-</td>
</tr>
</tbody>
</table>

## PRODUCT FEATURES

### Color Temperatures & Light Output

- **3000K** (211 lumens/foot)
- **3500K** (211 lumens/foot)
- **4000K** (211 lumens/foot)
- **6500K** (211 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

- **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>W30 = White 3000K</td>
<td>C060A = Clear, 60° Asymmetrical</td>
<td>01</td>
</tr>
<tr>
<td></td>
<td>W35 = White 3500K</td>
<td>C065S = Clear, 65° Symmetrical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W40 = White 4000K</td>
<td>C110S = Clear, 110° Symmetrical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W65 = White 4500K</td>
<td>[ ]</td>
<td>01 = Version 1</td>
</tr>
</tbody>
</table>

Specification sheets are subject to change without notice. For the most recent version, please refer to 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 (&quot;CRL&quot;) 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>ILight Handrail Lighting System</th>
<th>Specification in the lighting section of the “Electrical” division.</th>
</tr>
</thead>
</table>
|                                | • 3000K (211 lumens*/foot)  
• 3500K (211 lumens*/foot)  
• 4000K (211 lumens*/foot)  
• 6500K (211 lumens*/foot) |

(*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 |

Please cross reference the handrail hardware specification.

<table>
<thead>
<tr>
<th>Bidding</th>
<th>Handrail Installer bids the hardware</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>Field Measurements</th>
<th>Handrail Installer</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Electrical Contractor bids the light source</th>
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</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)
**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”

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**Mechanical**

**65° Symmetric Lens**

Foot-candle Values

**110° Symmetric Lens**

Foot-candle Values

**60° Asymmetric Lens**

Foot-candle Values
# Handrail Lighting System

## Technical Information

<table>
<thead>
<tr>
<th><strong>Electrical</strong></th>
<th><strong>DC Cable</strong></th>
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<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>
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<tr>
<th><strong>Environmental</strong></th>
<th><strong>Certification</strong></th>
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<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>
<tr>
<td>DC Cable</td>
<td>14 AWG, PVC/Nylon Tape TC 600 Volt power and control able or equivalent</td>
</tr>
<tr>
<td></td>
<td>FT-4 fire rating</td>
</tr>
<tr>
<td></td>
<td>Class 2 wiring system</td>
</tr>
<tr>
<td></td>
<td>Silicone based wire nuts</td>
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<tr>
<td>Electrical Tips</td>
<td>Only use iLight approved power supply</td>
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<td></td>
<td>Complies with UL 1598 and CSA c22.2 No. 250-00 Luminaires</td>
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<td>Power Supplies are RU listed (Recognized Components by Underwriters Laboratory)</td>
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## Lighting System Profile

- **iLight Handrail Lighting System**
- **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
- **Operating Temperature Range**:
  - -25°C to 50°C (-13°F to 122°F)
- **Storage Temperature Range**:
  - -25°C to 75°C (-13°F to 167°F)
- **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)
## 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**
  T01-KIT02-01-00

- **JUMPER PINS**
  T01-JMP02-01-00

- **LED HOUSING SHIMS**
  T01-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)**

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