Appendix A: Lighting Equipment
## Appendix A: Lighting Equipment

<table>
<thead>
<tr>
<th>Fixture Label</th>
<th>Description</th>
<th>Fixture Cat No.</th>
<th>#</th>
<th>Lamp Type</th>
<th>Lamp Cat. No.</th>
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<th>CCT</th>
<th>Ballast Type</th>
<th>Ballast Cat. No.</th>
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<td>F3</td>
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**Appendix A: Lighting Equipment**

**HID Large Wall Mount**

**Profile** - P1 (basic): Anodized, extruded aluminum specular reflector with solid aluminum endcaps and stainless steel hardware. Extruded aluminum visors are combined with P1 basic profile to create P2, P3, P4 & *P5 profiles.

**Type** - Large profile with smooth or ribbed detail. 
- Indoor: captive, extruded alum. hinge with non-gasketed regressed lens. 
- Outdoor: captive, extruded alum. door with window cut-out for regressed lens and silicone gasket. 

**Lens** - micro prismatic tempered glass lens standard. 

**Mounting** - Three standard mounts are fully adjustable and lockable. Designed for remote or integral ballast.

**Performance** - Asymmetric distribution provides a concentration of light on target surface for smooth illumination. Maximum candle-power aimed 115° above nadir has less than 15% spill light within the 0-115° zone and less than 3% spill light within the 180-270° zone.

**Electrical** - HX-HPF ballast for medium base 175W and 200W lamps. CWA ballast for 275W medium base lamp. 250W and 400W mogul base lamps. Ballasts are thermally protected, dual-voltage for 120/277V operation, and offered as remote or integral. Provide 90° C supply wire. See Technical section for ballast data.

**Finishes** - An electrostatically applied wet paint system utilizes a multi-stage process to provide a durable acrylic enamel finish. Suitable for indoor and outdoor applications.

**Options** - For complete list and detailed descriptions, refer to Options Section.

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** Technical section for ballast data.**
### Appendix A: Lighting Equipment

**Large Wall Mount HID**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>APPLICATION</th>
<th>LAMP</th>
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<tr>
<td></td>
<td>OUTDOOR</td>
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#### MOUNTING STYLES*

**Remote Ballast**

- 5/8" (16mm)
- 9 3/8" (232mm)
- 14 3/8" (360mm)

**Integral Ballast**

- 6 3/4" (171mm)
- 6 5/16" (160mm)
- 14 3/8" (360mm)

---

*All profiles can be combined with the mounting styles shown.*

---

- **Reduced Ballast**
- **Remote Ballast**
- **Integral Ballast**

---

- **P2** (solid)
- **Ribbed**
- **Simple Yoke LS1**

- **P3** (perforated)
- **Smooth**
- **Deco Yoke LD1**

- **P3** (perforated)
- **Ribbed**
- **Simple Yoke LS4**

- **P4** (scalloped)
- **Ribbed**
- **Deco Yoke LD4**

---

- **5-1/8" (130mm)**
- **9-1/8" (232mm)**
- **14-3/4" (375mm)**

- **5/8" (16mm)**
- **2-1/2" (64mm)**

---

*All fixtures U.L. listed, (USA & Canada). © Copyright 2004 Winona Lighting • 3760 West Fourth Street • P.O. Box 1205 • Winona, MN 55987-7205 1-800-328-5291 • 507-454-5113 (MN) • FAX 507-452-8528 • www.winonalighting.com

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This catalog page is available online.

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Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

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**Fixture Type**

F1
Appendix A: Lighting Equipment

American Glass Light Product Spec Sheet:

Fixture Name: Jimmy B. Uplight

Catalog #: 6118-U
Selected Width: 19"
Selected Height: 14"
Selected Lamping: (2) 18W Quad Tube Compact Fluorescent
Selected Glass/Panel: White Sandblasted Glass
Selected Finish: Polished brass

Additional Details: Weight for standard lamping 19" width: 10 Lbs. Weight for standard lamping 23" width: 12 Lbs. Weight for standard lamping for 35" width: 33 Lbs. 54" diameter available by special order. 6123-U also available with 16" overall height using (3) 60W A lamps. Metal Halide lamp uses Phillips P100 CDM/C/U/M (or equal). Metal Halide lamp suitable for use in an unshielded fixture. Each lamp is provided with one autotransformer, dual voltage (120/277V), magnetic, encased and potted, 100W M-90 ballast for remoting a maximum of 15 feet from lamp. A wiring compartment is provided on one end for splicing lamp and ballast leads. For 32" diameter (or larger) fixtures, (3) lamps are standard unless (4) lamps are ordered. Dimensions, finishes, and lamping ship standard as listed unless special order options are requested.

120 volts is standard unless other voltage is ordered.

Your Notes:

When specifying this product, please indicate all selected options so we have complete information when an order is placed.
Appendix A: Lighting Equipment

22151.000 Reflector silver
2xTC-TEL 32W GX24q-3 2400lm
ECG DALI

Product description
Housing: Cast aluminium, designed as heat sink.
Mounting ring: cast aluminium, white (RAL9002) powder-coated.
Tools not required for mounting with 4-point support and screw fixing.
Junction box for through-wiring, 5-pole terminal block, integral cable clamp. Electronic control gear.
Upper reflector: Aluminium, silver anodised.
4-cell Darklight reflector: Plastic, mirror-finish aluminium vaporised.
Scratch-resistant special coating.
Cut-off angle 30°.
Weight 2.40kg
### Appendix A: Lighting Equipment

#### ERCO CL downlight

**Planning data**

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<tr>
<td><strong>Connected load per 100lx</strong></td>
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<td><strong>Number of luminaires per 100lx</strong></td>
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| Floor | 0.50 | 0.20 | 0.20 | 0.10 | 0 |

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**Magic Glass/ Oslo**

**Design:** Kurt Nørregaard and Louis Poulsen

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**Magic series** consist of two different lighting characteristics, depending on the chosen trim. The Glass trim provides a mainly direct downward illumination, adding a soft green tone of light to the ceiling. The Oslo trim provides indirect and distinct general illumination and produces a visually comfortable ambiance as a result of light being emitted between the shades.

**Finish**
Partly silk-screened, soda lime glass. White, wet painted.

**Material**

**Mounting**
Semi-recessed: Mounting frame with two vertically adjustable brackets spaced equally at 180° to be installed prior to closing the ceiling. Ceiling types: Accessible and non-accessible ceilings. Ceiling cutout: 8.3" dia.

**Weight**
Max. 9 lbs.

**Label**
dUL, Dry location. IBEW.

---

### Specification

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</table>

**Specification notes:**
- Provided with one 120-277V integral electronic ballast.
- Incandescent variant is only available in 120V.
- EMPK (emergency power pack) is available in dual tap 120/277V.
- DIM-ES 120-277V is digital dimming.
- LUTRON HI-LUME 120V or 277V is digital dimming.

---

[www.louispoulsen.com](http://www.louispoulsen.com) 7-2005
PH 4½-3½ Glass Table

Design: Poul Henningsen

---

PH 4½-3½ Glass Table (1927) provides soft illumination. The PH 4½ family is based on the principle of a reflecting multi-shade system, producing a harmonious and glare-free illumination. The shades are drawn over a logarithmic spiral, with the center of the light source placed in the spiral’s focal point.

Finish
White opal glass. High lustre chrome plated.

Material

Mounting
Cord type: Black. Cord length: 9’. Plug: 120V.

Weight
Max.: 22 lbs.

Label
cUL, Dry location. IBEW.

---

Specification

<table>
<thead>
<tr>
<th></th>
<th>Product code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PH 4½-3½-T</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Light source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1/100W/A-19/1F medium</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>120V</td>
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<table>
<thead>
<tr>
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<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>GLASS</td>
</tr>
</tbody>
</table>

Info notes:
I. On/off switch located in the base. II. All handblown opal glass shades are sandblasted on the undersides for uniform light distribution. III. The comparable EU version has the following classification: Ingress Protection Code: IP20.

---

www.louispoulsen.com 7-2005
PH 4½-3½ Glass Floor

Design: Poul Henningsen

PH 4½-3½ Glass Floor (1927) provides soft illumination. The PH 4½ family is based on the principle of a reflecting multi-shade system, producing a harmonious and glare free illumination. The shades are drawn over a logarithmic spiral, with the center of the light source placed in the spiral’s focal point.

Finish
White opal glass. High lustre chrome plated.

Material

Mounting
Cord type: Black. Cord length: 9'. Plug: 120V.

Weight
Max. 34 lbs.

Label
cUL, Dry location. IBEW.

Specification

1. Product code
PH4½-3½-F

2. Light source
1/100W/A-19/IF medium

3. Voltage
120V

4. Finish
GLASS

Info notes:
I. In-line on/off foot switch provided. II. All handblown opal glass shades are sandblasted on the underside for uniform light distribution. III. The comparable EU version has the following classification: Ingress Protection Code: IP20.
Appendix A: Lighting Equipment

ERCO

Axis Walklight
with LED

33730.000 Graphit m LED White
LED 1.7W 230V AC 20lm

Product description
Cover frame with Softec lens: corrosion-resistant cast aluminium, graphit m double powder-coated. Protection mode IP65: dust-proof and water jet-proof. On site protection must be provided using a residual current circuit breaker, FI<30mA. Weight 0.85kg

Cleaning (a)

<table>
<thead>
<tr>
<th>Ambient conditions</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMF</td>
<td>0.98</td>
<td>0.94</td>
<td>0.90</td>
</tr>
<tr>
<td>RSMF</td>
<td>0.99</td>
<td>0.98</td>
<td>0.96</td>
</tr>
</tbody>
</table>

MF  LMFxRSMFxLLMFxLSF
MF  Maintenance Factor
LMF  Luminaire Maintenance Factor
RSMF  Room Surface Maintenance Factor
LLMF  Lamp Lumens Maintenance Factor
LSF  Lamp Survival Factor
P  Room pure
C  Room clean
N  Room normal
D  Room dirty

Technical Region: 230V/50Hz
Edition: December 16, 2005
Please download the current version from
www.erco.com/33730.000

ERCO Leuchten GmbH
Postfach 24 60
58505 Lüdenscheid
Germany
Tel.: +49 2351 551-0
Fax.: +49 2351 551-300
info@erco.com

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Appendix A: Lighting Equipment

Applications  Coves, retail, lobbies, small offices, conference rooms.

Features  A low-profile cove lighting system designed for T5/HO or T8 lamps with a unique 3-piece optical system. Formed 95 percent reflective specular aluminum reflector throws light at low angles. Galvanized steel bottom reflector directs and diffuses light on ceiling to eliminate striations while limiting uplight. White backlight reflector fills the cove cavity with light, limiting socket shadow.

Construction  The housing, available in 2-, 3-, 4-, 6- or 8-foot standard lengths, and end plates are made of die-formed, 20-gauge steel. The three part reflector system is die-formed from 95 percent reflective specular aluminum, 20-gauge steel and galvanized steel.

Finish  The standard exterior body color is white enamel.

Electrical  T8 fixtures have instant-start electronic ballasts with less than 20% THD. T5/HO fixtures have programmed-start electronic ballasts with less than 10% THD. Fixtures are U.L. Damp labeled (non-emergency) and I.B.E.W. manufactured. Maximum ballasts size available: 1 5/8" width x 1 1/4" height.

Mounting  Fixture is to be surface-mounted within concealed coves.

Options  PAF: painted after fabrication; EML: emergency battery (T5/HO=700 lumens; T8=500 lumens); EMH: emergency battery (T5/HO=1200 lumens; T8=1200 lumens); DM: dimming (consult factory); RSE: rapid-start electronic (T8 only); 10THD: ballast with < 10% total harmonic distortion; B_: specific ballast, specify manufacturer and catalog number (consult factory); FH: fixture fusing (slow blow); QC: quick-connect circuit assemblies.

<table>
<thead>
<tr>
<th>Type</th>
<th>Job Name</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixtures</td>
<td>supernovalia-lighting</td>
<td><a href="http://www.supernovalia-lighting.com">www.supernovalia-lighting.com</a></td>
</tr>
</tbody>
</table>

03 01
# Oslo Wall

*Design: Kurt Norregaard*

Oslo Wall creates indirect illumination and produces a visually comfortable ambience as a result of light being emitted between the shades. The lighting characteristics make it ideal for accent illumination.

## Finish
Aluminum, brushed & lacquered. White, wet painted.

## Material

## Mounting
Surface: Mounted directly to finished surface over a recessed 4" octagonal junction box.

## Weight
Max. 7 lbs.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>OSW</td>
</tr>
<tr>
<td>Light source</td>
<td>1/26W/32W/42W/CF GX24q-3/4</td>
</tr>
<tr>
<td>Voltage</td>
<td>120-277V</td>
</tr>
<tr>
<td>Finish</td>
<td>ALU WHT</td>
</tr>
</tbody>
</table>

**Specification notes:**
- Provided with one 120-277V electronic ballast
- The comparable EU version has the following classification: Ingress Protection Code: IP20
### Information

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Finish</th>
<th>Diffuser Dia. x Ht.</th>
<th>Mounting Rod Length</th>
<th>Ballast</th>
<th>Lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>3040PB</td>
<td>Polished Brass</td>
<td>15 3/4&quot; x 4&quot;</td>
<td>5 1/2&quot;</td>
<td>N/A</td>
<td>(2) A19 60W max.</td>
</tr>
<tr>
<td>3040PB218U</td>
<td></td>
<td>15 3/4&quot; x 4&quot;</td>
<td>5 1/2&quot;</td>
<td>Univ. Electronic 120/277V</td>
<td>(2) 18W Quad 4-Pin</td>
</tr>
</tbody>
</table>

### Features

1. **Diffuser:** Satin etched opal glass.
2. **Mounting Rod:** Cast steel.
3. **Mounting Knob:** Drilled and tapped steel ball.
4. **Electrical Chassis:** Die-formed 20 ga. steel, gloss white finish.
5. **Lamps:** Compact Fluorescent or Incandescent (by others).

### Lamping

- **Incandescent:** (2) A19 60W Max.
- **Compact fluorescent:** (2) 18W Quad tube

<table>
<thead>
<tr>
<th>4-Pin</th>
<th>General Electric</th>
<th>Osram/Sylvania</th>
<th>Philips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F18DBX/SPX*/4P</td>
<td>CF 18DD/E*</td>
<td>PL-C18W/*/4P</td>
</tr>
</tbody>
</table>
* Manufacturers’ color temperature designation.

### Electrical

- **Lampholders:** Incandescent: Medium base, porcelain, nickel-plate screw shell
  Compact Fluorescent: 4-pin, G24q-2 base
- **Ballast:** Electronic 120/277V

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Input Watts</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Max. Line Current (Amps)</td>
<td>35 / .15</td>
<td></td>
</tr>
<tr>
<td>Power Factor</td>
<td>&gt; .98</td>
<td></td>
</tr>
<tr>
<td>Ballast Factor</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>THD</td>
<td>&lt; 10%</td>
<td></td>
</tr>
<tr>
<td>Min. Starting Temps.</td>
<td>-20°C (-4°F)</td>
<td></td>
</tr>
</tbody>
</table>

### Labels

UL listed suitable for damp locations.

---

**Job Information**

- **Type:**
  - **Job Name:**
  - **Cat. No.:**
  - **Lamp(s):**
  - **Notes:**

---

**Project:** The Franklin Care Center

**Jennifer Curley**

**April 5, 2006**

**Fixure Type:** F9

---

**Lightolier** a Genlyte Thomas Company

631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710

We reserve the right to change details of design, materials and finish.

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Appendix A: Lighting Equipment

<table>
<thead>
<tr>
<th>Type</th>
<th>Job Name</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Strips & Industrials**

**P-T5-SS**

**Applications**  Concealed coves, perimeter systems, retail, schools.

**Features**  A low-profile staggered T5 strip light with a 6" overlapping system. It also includes an innovative telescoping end module for greater dimensional flexibility. Choice of either perforated or solid, asymmetric or symmetric reflectors. Dimming ballasts and emergency batteries are also available.

**Construction**  The housing, available in 2-, 3-, 4-, 6- or 8-foot standard lengths, is made of die-formed, 20-gauge steel.

**Finish**  The standard exterior body color is white enamel (BWE) or optional gloss white (YGW) using polyester powder paint. Refer to ordering matrix for optional metal finishes or refer to **Defining Section** for optional paint colors. Optional reflectors are painted gloss white (YGW) unless other finish specified.

**Electrical**  T5/HO fixtures have programmed-start electronic ballasts with less than 10% THD. Fixtures are U.L. Damp labeled and I.B.E.W. manufactured. Maximum ballast size available 1 1/8" width x 1 1/4" height.

**Mounting**  Fixture is to be surface-mounted.

**Options**
- AL: aluminum body; EML: emergency battery (T5/HO=600-700 lumens); EMH: emergency battery (T5/HO=1100-1400 lumens);
- DM: dimming (consult factory); B_: specific ballast, specify manufacturer and catalog number (consult factory); FH: fixture fusing (slow blow).

### Ordering

<table>
<thead>
<tr>
<th>series</th>
<th>body style</th>
<th>lamp rows</th>
<th>nominal length</th>
<th>color/finish</th>
<th>circuiting</th>
<th>voltage</th>
<th>options</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-T5-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>staggered</td>
<td>1T5</td>
<td>02'</td>
<td>BWE* white enamel</td>
<td>SC single circuit</td>
<td>120</td>
<td>AL</td>
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<tr>
<td>SS-TEL</td>
<td>staggered</td>
<td>2T5</td>
<td>03'</td>
<td>YGW gloss white</td>
<td>DC* dual circuit</td>
<td>277</td>
<td>EML*</td>
</tr>
<tr>
<td></td>
<td>telescoping</td>
<td>1TSHO</td>
<td>04'</td>
<td>Y_ premium color</td>
<td>*lamp only only</td>
<td>347*</td>
<td>EMH*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2TSHO</td>
<td>06'</td>
<td>CC custom color</td>
<td></td>
<td></td>
<td>DM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>08'</td>
<td>GLV galvanized</td>
<td></td>
<td></td>
<td>B_</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15/8&quot;</td>
<td>*standard</td>
<td></td>
<td></td>
<td>FH</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>*row length</td>
<td>When specifying row length, telescoping end modules are used.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Prudential Lighting  phone 213.746.0360  fax 213.741.8590  www.prulite.com

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Appendix A: Lighting Equipment

### photometric data

#### P-T5-SS-STD-2T5HO-04-BWE

<table>
<thead>
<tr>
<th>Lamp</th>
<th>Vertical</th>
<th>Horizontal</th>
<th>Output</th>
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</thead>
<tbody>
<tr>
<td>Lamp</td>
<td>Angle 0°</td>
<td>22.5°</td>
<td>45°</td>
</tr>
<tr>
<td>635</td>
<td>1693</td>
<td>1693</td>
<td>1693</td>
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<td>634</td>
<td>1688</td>
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<td>1688</td>
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<tr>
<td>865</td>
<td>1105</td>
<td>1210</td>
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<tr>
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<td>849</td>
<td>1018</td>
<td>1289</td>
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<tr>
<td>55</td>
<td>566</td>
<td>612</td>
<td>1115</td>
</tr>
<tr>
<td>75</td>
<td>282</td>
<td>599</td>
<td>874</td>
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<tr>
<td>55</td>
<td>83</td>
<td>211</td>
<td>524</td>
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<td>50</td>
<td>90</td>
<td>193</td>
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<td>256</td>
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</tr>
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<td>50</td>
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<tr>
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### Zonal Lumen Summary

<table>
<thead>
<tr>
<th>Zone</th>
<th>% Lamp</th>
<th>Luminaires</th>
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<tbody>
<tr>
<td>0-90</td>
<td>77.06</td>
<td>1018</td>
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<tr>
<td>90-180</td>
<td>17.22</td>
<td>1115</td>
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<tr>
<td>180+</td>
<td>18.26</td>
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</table>

### Coefficients of Utilization (%)

<table>
<thead>
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<th>Angles</th>
<th>0°</th>
<th>45°</th>
<th>90°</th>
</tr>
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<tbody>
<tr>
<td>45°</td>
<td>2632</td>
<td>2614</td>
<td>2723</td>
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<tr>
<td>55°</td>
<td>2493</td>
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<tr>
<td>85°</td>
<td>10303</td>
<td>23686</td>
<td>24962</td>
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</table>

### Installation

**Adjoining Detail**

**Mounting Locations**

1 Lamp Fixtures

- 63° or 86°
- 28°, 40°, 52°, 75° or 98°

2 Lamp Fixtures

- 63° or 86°
- 28°, 40°, 52°, 75° or 98°

### Photometric Data

#### P-T5-SS-STD-2T5HO-04-BWE

<table>
<thead>
<tr>
<th>Lamp</th>
<th>Vertical</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>635</td>
<td>1693</td>
<td>1693</td>
</tr>
<tr>
<td>634</td>
<td>1688</td>
<td>1688</td>
</tr>
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<tr>
<td>5</td>
<td>180</td>
<td>0</td>
</tr>
</tbody>
</table>

### Zonal Lumen Summary

<table>
<thead>
<tr>
<th>Zone</th>
<th>% Lamp</th>
<th>Luminaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-90</td>
<td>77.11</td>
<td>81.79</td>
</tr>
<tr>
<td>90-180</td>
<td>16.72</td>
<td>18.21</td>
</tr>
</tbody>
</table>

### Coefficients of Utilization (%)

<table>
<thead>
<tr>
<th>Angles</th>
<th>0°</th>
<th>45°</th>
<th>90°</th>
</tr>
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<td>14858</td>
<td>14916</td>
<td>15598</td>
</tr>
<tr>
<td>55°</td>
<td>14122</td>
<td>15096</td>
<td>15762</td>
</tr>
<tr>
<td>65°</td>
<td>12852</td>
<td>15158</td>
<td>15908</td>
</tr>
<tr>
<td>75°</td>
<td>10584</td>
<td>14817</td>
<td>15477</td>
</tr>
<tr>
<td>85°</td>
<td>5915</td>
<td>12417</td>
<td>13627</td>
</tr>
</tbody>
</table>

### Telescoping Modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 1/4&quot; x 24 3/4&quot; or 36 1/4&quot;</td>
<td>Maximum Extension</td>
</tr>
<tr>
<td>9 3/4&quot; x 6&quot;</td>
<td>1/8&quot; Mounting Hole</td>
</tr>
<tr>
<td>5 1/2&quot; x 6&quot;</td>
<td>1/8&quot; Wiring K.O.</td>
</tr>
</tbody>
</table>

Prudential reserves the right to change design specifications and/or materials, without notice.

Project: The Franklin Care Center

Jennifer Curley

April 5, 2006
Appendix A: Lighting Equipment

**DLI - Fixed Compact**
**RECESSED DOWNLIGHT**

**PRODUCT SPECIFICATION**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLIW</td>
<td>Matte White</td>
</tr>
<tr>
<td>DLIB</td>
<td>Matte Black</td>
</tr>
<tr>
<td>DLIC</td>
<td>Polished Chrome</td>
</tr>
<tr>
<td>DLIG</td>
<td>Polished Brass</td>
</tr>
</tbody>
</table>

**GENERAL DESCRIPTION**
Lucifer recessed downlight is a fixed low voltage fixture with flush trim plate. Round opening. Uses a quartz halogen lamp for superior color rendition and beam control. Clear glass lens is supplied with fixture.

**MOUNTING**
Use with DHX-3 housing with integral magnetic or electronic transformer for non-IC, accessible ceilings only. Use with DHT/R housing and remote transformer for non-IC, accessible ceilings only. DHT/R housing includes 5 foot conduit with leads and pre-wired mating connectors for quick trim connection. Hanging bars and brackets are included.

**MATERIAL**
Trim is constructed of steel. Fixture housing is riveted aluminum.

**ACCESSORIES**
Trim may be accessorized with Frosted Glass Lens (FGL-2), Linear Spread Lens (LSL-2), MR-11 Lamp Adapter (LA), Honeycomb Louvre (HCL-2), Spread Glass Lens (SGL-2) and Ultra Violet Glass Lens (UVL-2).

**LABEL**
UL listed trim and housings for dry and damp, non-IC locations. Accessible ceilings only. File No. EI15025.

**ELECTRICAL**
Trim is pre-wired for use in housing assembly.

**TRANSFORMER**
DHX-3 housing is supplied with an integral 120v or 277v primary, 12v secondary magnetic transformer or 120v primary, 12v secondary electronic transformer. DHT/R housing is powered by remote transformer sized to load (order separately). Standard 120v primary, 12v secondary. All transformers are fully dimmable.

**LAMP**
12v MR-16 halogen lamp, 50w maximum (order separately). Specify lamp beam spread. Manufacturer recommends use of Osram Sylvania’s energy saving 37w Tru-Aim® IR halogen lamps which convert more energy into light than conventional 50w MR-16 lamps. Tru-Aim® IR halogen lamps can be ordered from Lucifer Lighting for use in fixture. See luciferlighting.com for lamp specification guide.

**ENERGY CONSERVATION**
Manufacturer recommends use of Osram Sylvania’s energy saving 37w Tru-Aim® IR halogen lamps which convert more energy into light than conventional 50w MR-16 lamps. Tru-Aim® IR halogen lamps can be ordered from Lucifer Lighting for use in fixture. See luciferlighting.com for lamp specification guide.

**WARRANTY**
Manufacturer’s one year warranty of product is conditioned on use of manufacturer supplied transformers.

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As part of its policy of continuous research and product development, the Company reserves the right to change or withdraw specifications without prior notice.

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Appendix A: Lighting Equipment

**DL2 - Adjustable Oval Compact**

**RECESSED DOWNLIGHT**

GENERAL DESCRIPTION
Lucifer recessed downlight is an adjustable low voltage fixture with flush trim plate. Oval opening offers 45° aiming from vertical and is locatable from below. Lamp holder features registered yoke to allow secure placement of up to three lenses/louvers and includes internal collar to prevent light leaks. Uses a halogen lamp for superior color rendition and beam control. Clear glass lens is supplied with fixture.

MOUNTING
Use with DHX-3 housing with integral magnetic or electronic transformer for non-IC, accessible ceilings only. Use with DHT/R housing and remote transformer for non-IC, accessible ceilings only. DHT/R housing includes 5 foot conduit with leads and pre-wired mating connectors for quick trim connection. Hanging bars and brackets are included.

MATERIAL
Trim is constructed of steel. Fixture housing is riveted aluminum.

ACCESSORIES
Trim may be accessorized with Frosted Glass Lens (FGL-2), Linear Spread Lens (LSL-2), MR-11 Lamp Adapter (LA), Honeycomb Louvre (HCL-2), Spread Glass Lens (SGL-2) and Ultra Violet Glass Lens (UVL-2).

LABEL
UL listed trim and housings for dry and damp, non-IC locations. Accessible ceilings only. File No. E115025.

**PRODUCT SPECIFICATION**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL2W</td>
<td>Matte White</td>
</tr>
<tr>
<td>DL2B</td>
<td>Matte Black</td>
</tr>
<tr>
<td>DL2C</td>
<td>Polished Chrome</td>
</tr>
<tr>
<td>DL2G</td>
<td>Polished Brass</td>
</tr>
</tbody>
</table>

**ELECTRICAL**
Trim is pre-wired for use in housing assembly.

**TRANSFORMER**
DHX-3 housing is supplied with an integral 120v or 277v primary, 12v secondary magnetic transformer or 120v primary, 12v secondary electronic transformer. DHT/R housing is powered by remote transformer sized to load (order separately). Standard 120v primary, 12v secondary. All transformers are fully dimmable.

**LAMP**
12v MR-16 halogen lamp, 50w maximum (order separately). Specify lamp beam spread.

**ENERGY CONSERVATION**
Manufacturer recommends use of Oram Sylvania’s energy saving 37w Tru-Aim® IR halogen lamps which convert more energy into light than conventional 50w MR-16 lamps. Tru-Aim® IR halogen lamps can be ordered from Lucifer Lighting for use in fixture. See luciferlighting.com for lamp specification guide.

**WARRANTY**
Manufacturer’s one year warranty of product is conditioned on use of manufacturer supplied transformers.

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Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Saturn Bollard

Design: Jens Møller-Jensen

Saturn Bollard provides symmetrical downward illumination. The design of the reflector rings ensures the majority of the light is directed downward. An anti-glare ring and the reflector rings shield the light source from direct view.

Finish
Galvanized, hot dipped. White or natural painted aluminum, powder coated.

Material

Mounting
Base plate: Mounted to a concrete base with 4 anchor bolts. Base plate dimension: 8.7" dia.

Weight
Max. 40 lbs.

Label
dUL, Wet location, IBEW.

Specification

1. Product code
SAB

2. Light source
1/10B/A-19/GL medium
1/32W/CD GX24q-3
1/50W/HPS/ED-17 medium
1/50W/MH/ED-17 medium

3. Voltage
120-277V
120V

4. Finish
GALV

Specification notes:
a. CF variant is provided with white opal glass lamp enclosure. b. HID and incandescent variants are provided with clear glass lamp enclosures. c. Of variant is provided with one 120-277V electronic ballast. d. HID variants are provided with one 120/277V F-can style ballast. e. Incandescent variant is only available in 120V.

Info note:
1. The comparable EU version has the following classification: Ingress Protection Code: IP44.

www.louispoulsen.com 7-2005
Orbiter Maxi Wall provides general illumination. The design of the two reflector rings ensures the majority of the light is being directed downwards. The anti-glare ring shields the lamp from direct view.

**Finish**
White or natural painted aluminum, powder coated. Natural aluminum, shot-peened.

**Material**

**Mounting**
Surface: Mounted directly to a recessed ballast box (10.7" dia. x 3.6" D) provided or mounted directly to finished surface over a recessed 4" octagonal junction box.

**Weight**
Max. 24 lbs.

**Label**
cUL, Wet location. IBEW.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>ORW-MAX</td>
</tr>
<tr>
<td>Light source</td>
<td>1/100W/HPS/ED-17 medium</td>
</tr>
<tr>
<td>Voltage</td>
<td>120/208/240/277V</td>
</tr>
<tr>
<td>Finish</td>
<td>NAT. PAINT. ALU.</td>
</tr>
</tbody>
</table>

**Specification notes:**
- a. CMH variant is provided with a partly frosted enclosure. b. CF variant is provided with an opal enclosure. c. HID and incandescent variants are provided with clear enclosures. d. CMH variant is provided with a recessed ballast box containing one 120V or 277V electronic ballast. e. CF variant is provided with a universal wattage socket and 120-277V integral electronic ballast. f. HID variants are provided with a recessed ballast box containing one 120/208/240/277V open core and coil ballast. g. Incandescent variants are only available in 120V.

**Info notes:**
- I. Natural shot peened aluminum is untreated and is designed to change color over time depending on environmental conditions.
- II. All enclosures are U.V. stabilized polycarbonate. III. The comparable EU version has the following classification: Ingress Protection Code: IP44.
Appendix A: Lighting Equipment

**FEATURES**

Narrow 3” slot T5 fluorescent with opaque satin lens.

Shielding options include corrugated, solid regressed trim, concave louver as well as flush lens.

Universal mounting allows compatibility for multiple grid types.

Drywall installation is available, which allows for both individual or continuous row mount capability.

Avenue® B is a great solution for general illumination in a narrow aperture.

**DIMENSIONAL DATA**

Grid Mount (Regress Trim Shown)

Drywall Flange (Regress Trim Shown)

Mounting yoke must be installed before drywall. (see Instruction Sheet #150217 for details)

**PERFORMANCE**

1–Lamp T5
60% Efficiency
709 cd @ 5°

See Photometric section for additional performance data.

**PERFORMANCE**

1–Lamp T5
60% Efficiency
709 cd @ 5°

See Photometric section for additional performance data.
Appendix A: Lighting Equipment

CANDLEPOWER DISTRIBUTION

- Avenue® b
- Flush lens

LUMEN SUMMARY

- Zone
- Lamp %
- Flat %

- Vertical Angle
- Horizontal Angle
- Total Lumen

- Zone
- Lamp %
- Flat %

- Vertical Angle
- Horizontal Angle
- Total Lumen

CO-EFFICIENTS OF UTILIZATION

- Floor Ceiling
- Wall
- RDR

- Vertical Angle
- Total Lumen

- Vertical Angle
- Total Lumen

- Catalog #:
- Efficiency:
- Test #:

Go to www.focalpointlights.com for additional photometric data.

LUMINANCE DATA (CD/M²)

- Floor Ceiling
- Wall
- RDR

- Vertical Angle
- Total Lumen

- Vertical Angle
- Total Lumen

- Filename:
- Test #:

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

Fixture Type
F15
Appendix A: Lighting Equipment

DS-44

A triangular metal frame and acrylic panels provide an even glow from incandescent or fluorescent sources.

<table>
<thead>
<tr>
<th>Fixture No.</th>
<th>W</th>
<th>H</th>
<th>E</th>
<th>Material</th>
<th>Lamping</th>
<th>Acrylic</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-44-12</td>
<td>12½&quot;</td>
<td>10½&quot;</td>
<td>6½&quot;</td>
<td>A, B or C</td>
<td>IN(1-100W)</td>
<td>W, X, V</td>
</tr>
<tr>
<td>DS-44-14</td>
<td>14&quot;</td>
<td>11½&quot;</td>
<td>7&quot;</td>
<td>A, B or C</td>
<td>IN(1-200W)</td>
<td>W, X, V</td>
</tr>
</tbody>
</table>

Sample Specification

<table>
<thead>
<tr>
<th>Fixture Number</th>
<th>Material</th>
<th>Lamping</th>
<th>Acrylic</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-44-12</td>
<td>A-C</td>
<td>PLC(1-13W)</td>
<td>W, X, V</td>
</tr>
<tr>
<td>DS-44-14</td>
<td>A-C</td>
<td>PLC(1-13W)</td>
<td>W, X, V</td>
</tr>
</tbody>
</table>

SPECSIFICATIONS

Material/Finishes
- A Convection oven baked painted finish on aluminum and steel material.
- B Polished solid brass
- C Polished chrome plated over solid brass

Acrylic
- W Virgin white acrylic
- X Faux alabaster acrylic
- V White swirl acrylic

All acrylics have .125" minimum starting thickness.

Ballasts and Housings
- Fluorescent fixtures supplied with magnetic integral high power factor (HPF) ballasts that are “A” sound rated and “P” type thermally protected. Low THD. All fluorescent ballasts are contained in the fixture.
- Lamps not included.

Mounting
Designed for permanent mounting to recessed four-inch octagon outlet box.

Warranty
Manning Lighting guarantees its products against defects in materials and workmanship for three years from the date of shipment. See catalog for details.

UL
Underwriters Laboratories listed. All fixtures are wired complete and short tested before packing.

IBEW union made in the USA

Lamp information:
13W dbl. twin tube 2-pin base

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Architectural Decorative Soli Zontio 48228ALU

2 Light, T-5 Pendant

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

Appendix A: Lighting Equipment

Features
1. Mounting Plate: 18 GA. (.048) Galvanized steel for direct mounting to most junction boxes. Secondary mounting holes provided to mount directly to ceiling.
2. End Cap: (2) Die cast aluminum. See above for finish.
3. End Cover: (2) Die cast aluminum. See above for finish.
4. Lamp Enclosure: (2) Extruded aluminum. See above for finish.
5. Support Stem: (2) 3/8" diameter steel tubing. Luminaire provided with three lengths (10", 16" and 22"). See above for overall heights. Stems can not be added together.

Lamping (by others)
Linear Fluorescent: 28W T5 or 54W T5 HO, Mini Bipin

Electrical
Lampholders: G5 (Mini-Bipin) base with rotor for securing lamp. cULus Listed.
Ballast: Electronic, HPF, Universal voltage 120V-277V.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>28 Watt</th>
<th>54 Watt</th>
</tr>
</thead>
<tbody>
<tr>
<td>120V</td>
<td>64</td>
<td>100</td>
</tr>
<tr>
<td>277V</td>
<td>63</td>
<td>117</td>
</tr>
</tbody>
</table>

| Max. Line Current (Amps) | 0.55 | 0.23 | 1.0 | 0.43 |
| Ballast Factor | 1.03 | 1.03 | 1.0 | 1.0 |
| Min. Starting Temp: 8°F/18°C | THD<10% |

Options
Dimming: (Voltage Specific/54W HO lamps)
Add MX1 suffix code (for 120V) to Cat. No.
Add MX2 suffix code (for 277V) to Cat. No.
example: 48254ALMX1

Emergency: Integral Bodine LP550 emergency battery pack, test switch and light, add E suffix code to Cat. No.
DALI: Digital Dimming System ballast 120/277V. Add DA suffix code to Cat. No.

Labels
cULus Listed. Suitable for Damp Locations

Fixture Ordering Information

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Finish</th>
<th>Wattage</th>
<th>Voltage</th>
<th>Lamping</th>
</tr>
</thead>
<tbody>
<tr>
<td>48228ALU</td>
<td>Metallic Aluminum Powder Coated 2 x 28W 120/277V T-5, Mini-Bipin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48254ALU</td>
<td>Metallic Aluminum Powder Coated 2 x 54W 120/277V T-5 HO, Mini-Bipin High Output</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diffuser Ordering Information (Order diffuser separately)

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Description</th>
<th>Dimensions</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>40810</td>
<td>Curved Glass Diffuser (3/8&quot; Thick) 8 1/4&quot; W x 42 7/8&quot; L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Job Information

| Job Name: |
| Cat. No.: |
| Lamp(s): |
| Notes: |

Lightolier a Genlyte company
631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710
We reserve the right to change details of design, materials and finish.
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Appendix A: Lighting Equipment

Lucy Task light
for low-voltage halogen lamps

33170.000 Silver
QT12-ax 50W 12V GY6.35 950lm

Product description
## Satellit Maxi

**Design:** Jens Møller-Jensen

34.7”

25.9”

Satellit Maxi provides glare free and symmetrical illumination. The design of the top shade ensures the majority of the light is directed downward. The anti-glare ring shields the lamp from direct view.

**Finish**
- White, grey or graphite grey, powder coated

**Material**
- Top shade: High pressure molded fiber glass
- Enclosure: Injection molded clear polycarbonate
- Anti-glare ring: Injection molded polycarbonate
- Base: Die cast aluminum

**Mounting**
- Post Top: Mounted on dual round aluminum (DRA) or round straight aluminum (RSA) pole.

**Weight**
Max. 32 lbs.

**Label**
- cUL, Wet location. IBEW.

### Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Product code</strong></td>
</tr>
<tr>
<td></td>
<td>SAT-MAX</td>
</tr>
<tr>
<td>2</td>
<td><strong>Light source</strong></td>
</tr>
<tr>
<td></td>
<td>1/150W/HPS/ED-23 ½ mogul</td>
</tr>
<tr>
<td></td>
<td>1/175W/MH/ED-28 mogul</td>
</tr>
<tr>
<td></td>
<td>1/250W/MH/ED-28 mogul</td>
</tr>
<tr>
<td></td>
<td>1/26W/32W/42W/CF GX24q-3/4</td>
</tr>
<tr>
<td>3</td>
<td><strong>Voltage</strong></td>
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<tr>
<td></td>
<td>120/277V</td>
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<tr>
<td></td>
<td>120-277V</td>
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<tr>
<td>4</td>
<td><strong>Finish</strong></td>
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<tr>
<td></td>
<td>GRAPHITE</td>
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<tr>
<td></td>
<td>GREY</td>
</tr>
<tr>
<td></td>
<td>WHT</td>
</tr>
<tr>
<td>5</td>
<td><strong>Transition to pole</strong></td>
</tr>
<tr>
<td></td>
<td>T-DRA-5”-3”</td>
</tr>
<tr>
<td></td>
<td>T-RSA-4.5”</td>
</tr>
</tbody>
</table>

**Specification notes:**
- a. CF variant is provided with a universal wattage socket and a 120-277V integral electronic ballast.
- b. H.Ø. variants are provided with one 120/277V F-can style ballast to be mounted in RSA-4.5” or DRA-5”-3” poles.
- c. Grey top shade is provided with grey and graphite finishes. d. Opaque anti-glare rings for grey variants are painted to match grey finishes. e. White top shade is provided with white finish. f. White opal anti-glare ring is provided with white finish.

**Info notes:**
- 1. Enclosure is U.V. stabilized polycarbonate. II. For pole selection, refer to Pole Guide.
- III. The comparable EU version has the following classification: Ingress Protection Code: IP44.

www.louispoulsen.com 9-2005
Appendix A: Lighting Equipment

**LED orientation luminaire**

with dynamic colour change

33782.000 Silver LED Blue/Green
LED 0.9W 30V DC

**Product description**

- Housing with gasket: stainless steel.
- Installation bush with ribs: plastic.
- Cable 4x0.75mm², L 500mm.
- Clear prismatic diffuser with circular light aperture.
- Cover ring: corrosion resistant stainless steel, with 6mm safety glass. Load 5kN.
- Control gear to be ordered separately.
- Protection mode IP68 3m: protection against dust ingress, and continuous immersion up to 3m deep.
- Weight 0.16kg

ERCO Leuchten GmbH
Postfach 24 60
58505 Lüdenscheid
Germany
Tel.: +49 2351 551-0
Fax.: +49 2351 551-300
info@erco.com

Technical Region: 230V/50Hz
Edition: December 16, 2005
Please download the current version from
www.erco.com/33782.000

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

Fixture Type
F20
Appendix A: Lighting Equipment

LED orientation luminaire

Accessories

33858.000
Control gear
Weight 0.60kg
SELV

33859.000
Control gear
Weight 0.60kg
SELV

33873.000
Recessed housing
For mounting in plaster.

33893.000
Recessed housing IP67
For installation in concrete floors or compressed natural ground with 25mm floor covering. Cast aluminium, black double-powder-coated. 2 cable entries with IP67 threads. Through-wiring possible. 4-pole terminal block. Cable, L 300mm. Protection mode IP67: dust-proof and protected against immersion damage.
Weight 0.70kg

33894.000
Recessed housing IP67
For installation in concrete floors or compressed natural ground with 50mm floor covering. Cast aluminium, black double-powder-coated. 2 cable entries with IP67 threads. Through-wiring possible. 4-pole terminal block. Cable, L 300mm. Protection mode IP67: dust-proof and protected against immersion damage.
Weight 0.70kg

33896.000
Recessed housing IP67
For installation in concrete wall. Cast aluminium, black double-powder-coated. 2 cable entries with IP67 threads. Through-wiring possible. 4-pole terminal block. Cable, L 300mm. Protection mode IP67: dust-proof and protected against immersion damage.
Weight 0.75kg
Appendix A: Lighting Equipment

**Features/Benefits**
- Excellent color rendering.
- Superior color stability over life within +/- 200K.
- Lamp to lamp color consistency over life.
- Higher lumen maintenance than standard metal halide.
- Warm (3K) or fresh white (4K) color impression.
- High lamp efficacy (up to 93 lumens per watt) for energy saving and low heat.
- Universal operating position.
- No shut off required in 24-hour-a-day/7-day-a-week operations (relamp fixtures at or before the end of rated life).
- Retrofit in existing ED-17 sockets.
- Long lamp life compared to quartz metal halide lamps.

**Applications**
- Ideal for general lighting, downlighting and flood lighting.

**Notes**
- Requires a ballast specified or approved for Philips Metal Halide lamp or one designed to the indicated ANSI Standard. A pulse ignitor is required. Sockets and wiring must withstand starting pulse. (391)
- Supply volts must be +/- 5% of rated ballast line volts for reactor type and +/- 10% for CWA or electronic ballasts. (392)
- This product utilizes ALTO® Lamp Technology. ALTO products pass the US EPA's Toxicity Characteristic Leaching Procedure (TCLP) for non–hazardous waste status. (399)
- MasterColor® Metal Halide Lamps are not recommended for use on dimmers and are not warranted if used on dimmer systems. (401)
- Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average. For lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps. (351)
- Approximate lumen values listed are for vertical operation of the lamp. (352)
- Means Lumens is the approximate lumen output at 40% of lamp rated average life. (353)
- Heat resisting glass bulb.

**Product data**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
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<tr>
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<td>130229</td>
</tr>
<tr>
<td>Full product name</td>
<td>MasterColor CDM 150W/830 Med ED17 CL ALTO</td>
</tr>
<tr>
<td>Ordering Code</td>
<td>MHC150/U/M/3K ALTO</td>
</tr>
<tr>
<td>Pack type</td>
<td>1 Sleeve Open End</td>
</tr>
<tr>
<td>Pieces per pack</td>
<td>12</td>
</tr>
<tr>
<td>Pack UPC</td>
<td>046677130220</td>
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<tr>
<td>EAN2US</td>
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<td>Case Bar Code</td>
<td>50046677130225</td>
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</table>

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Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

PHILIPS
Lamps and Ballasts
### Product data

<table>
<thead>
<tr>
<th>Successor Product number</th>
<th>Wattage [W]</th>
<th>150W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Code</td>
<td>830 [CCT of 3000K]</td>
<td></td>
</tr>
<tr>
<td>Base</td>
<td>Med [Medium]</td>
<td></td>
</tr>
<tr>
<td>Bulb</td>
<td>ED17 [Diameter: 2.125 inch]</td>
<td></td>
</tr>
<tr>
<td>Bulb Finish</td>
<td>CL [Clear]</td>
<td></td>
</tr>
<tr>
<td>Feature</td>
<td>ALTO [ALTO®]</td>
<td></td>
</tr>
<tr>
<td>Base Information</td>
<td>Brass [Brass Base]</td>
<td></td>
</tr>
<tr>
<td>Bulb Material</td>
<td>Hard Glass</td>
<td></td>
</tr>
<tr>
<td>Operating Position</td>
<td>Universal [Any or Universal (U)]</td>
<td></td>
</tr>
<tr>
<td>Packing Type</td>
<td>1SL [1 Sleeve Open End]</td>
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<tr>
<td>Packing Configuration</td>
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<td></td>
</tr>
<tr>
<td>Rated Avg. Life [hr]</td>
<td>16000</td>
<td></td>
</tr>
<tr>
<td>ANSI Code HID</td>
<td>M142/M102/E</td>
<td></td>
</tr>
<tr>
<td>Lamp Voltage [V]</td>
<td>95</td>
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<tr>
<td>Mercury (Hg) Content [mg]</td>
<td>15</td>
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<tr>
<td>Color Rendering Index [Ra8]</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Color Designation</td>
<td>White</td>
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<tr>
<td>Color Temperature [K]</td>
<td>3000</td>
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<tr>
<td>Initial Lumens [Lm]</td>
<td>14000</td>
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<tr>
<td>Design Mean Lumens [Lm]</td>
<td>10500</td>
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<tr>
<td>Light Center Length [in]</td>
<td>3.348</td>
<td></td>
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<tr>
<td>Max Overall Length (MOL) [in]</td>
<td>5.438</td>
<td></td>
</tr>
<tr>
<td>Diameter [in]</td>
<td>2.125</td>
<td></td>
</tr>
</tbody>
</table>

Data not (yet) available
## Appendix A: Lighting Equipment

### Metal Halide Lamp Ballast

**Catalog Number**: 71A5437BP  
**For**: 150W M102  
**Status**: Active

### Dimensions and Data

<table>
<thead>
<tr>
<th>Input Volts</th>
<th>277</th>
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<tbody>
<tr>
<td>Circuit Type</td>
<td>R-HPF</td>
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<tr>
<td>Power Factor (min)</td>
<td>90%</td>
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<tr>
<td>Regulation</td>
<td></td>
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<tr>
<td>Line Volts</td>
<td>±5%</td>
</tr>
<tr>
<td>Lamp Watts</td>
<td>±10%</td>
</tr>
</tbody>
</table>

### Line Current (Amps)

- Operating: 0.63 A
- Open Circuit: 1.50 A
- Starting: 0.70 A

### UL Temperature Ratings

- Insulation Class: H
- Ul Temperature Code: 1029
- Min. Ambient Starting Temp.: -20°F or -30°C
- Nom. Open Circuit Voltage: 277 V
- Input Voltage at Lamp Dropout: 173 V
- Input Watts: 173 W
- Recommended Fuse (Amps): 5 A

### Core and Coil

- Dimension (A): 2.50 in.
- Dimension (B): 4.00 in.
- Weight (lbs.): 4.2
- Lead Lengths: 12"

### Capacitor Requirement

- Microfarads: 14.0 μF
- Volts (min.): 280 V

### 60 Hz Test Procedures (Refer to Advance Test Procedure for HID Ballasts - Form 1270)

- High Potential Test (Volts)
  - 1 minute: 2000 V
  - 2 seconds: 2500 V
- Open Circuit Voltage Test (Volts): 250-305 V
- Short-Circuit Current Test (Amps)
  - Secondary Current: 2.00-2.50 A
  - Input Current: 0.50-2.50 A

### Wiring Diagram

- Fig. H

### Ordering Information

<table>
<thead>
<tr>
<th>Order Suffix</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>500DB</td>
<td>Ballast With Integral Igniter and Dry Film Capacitor</td>
</tr>
<tr>
<td>510DB</td>
<td>Ballast w/Welded Bracket, Integral Igniter &amp; Dry Film Cap.</td>
</tr>
<tr>
<td>600B</td>
<td>Ballast and Integral Igniter, No Capacitor</td>
</tr>
<tr>
<td>600B</td>
<td>Ballast and Integral Igniter, No Capacitor</td>
</tr>
</tbody>
</table>

---

**Capacitor**: 7C140M33-R  
**Capacitance**: 14 μF  
**Dia/Oval Dim**: 1.5 in.  
**Height**: 2.9 in.  
**Temp Rating**: 125°C

An ignitor integral to the core and coil assembly is used to start the lamp.

Ballast to Lamp Distance (BTL) = 2 feet  
Temp Rating: 125°C

---

**ADVANCE TRANSFORMER CO.**  
O’HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018  
Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071  
Corporate Offices: Phone: 800-322-2086

---

**Project:** The Franklin Care Center  
**Jennifer Curley**  
**April 5, 2006**
Appendix A: Lighting Equipment

Product Details

Product Information

<table>
<thead>
<tr>
<th>Information</th>
<th>Value</th>
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</thead>
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<tr>
<td>Abbrev. With Packaging Info.</td>
<td>CF13DEB30 91V 50/CS 1/SKU</td>
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<tr>
<td>Average Rated Life (hr)</td>
<td>12000</td>
</tr>
<tr>
<td>Base</td>
<td>G24Q-1</td>
</tr>
<tr>
<td>Bulb</td>
<td>T4</td>
</tr>
<tr>
<td>Color Rendering Index (CRI)</td>
<td>82</td>
</tr>
<tr>
<td>Color Temperature/CCT (K)</td>
<td>3000</td>
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<tr>
<td>Family Brand Name</td>
<td>Dulux® D/E</td>
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<tr>
<td>Industry Standards</td>
<td>IEC 60901-2 2513</td>
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<tr>
<td>Initial Lumens at 25C</td>
<td>900</td>
</tr>
<tr>
<td>Mean Lumens at 25C</td>
<td>774</td>
</tr>
<tr>
<td>Maximum Overall Length - MOL (in)</td>
<td>5.2</td>
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<tr>
<td>Maximum Overall Length - MOL (mm)</td>
<td>131</td>
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<tr>
<td>NEMA Generic Designation (current)</td>
<td>CFQ26W/G24Q/830</td>
</tr>
<tr>
<td>Nominal Wattage (W)</td>
<td>13.00</td>
</tr>
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Additional Product Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compatible Ballast</td>
<td></td>
</tr>
<tr>
<td>Packaging Information</td>
<td></td>
</tr>
</tbody>
</table>

Footnotes

- Approximate initial lumens after 100 hours operation.
- The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
- Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light output.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- There is a NEMA supported, industry issue where T2, T4, and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can resultin one or both of the following: 1. Bulb wall cracking near the lamp base. 2. The lamp can overheat in the base area and possibly melt the
Appendix A: Lighting Equipment

Return to: DULUX D/E (double, 4-Pin)  Print Page

Product Information

<table>
<thead>
<tr>
<th>Product Number:</th>
<th>20724</th>
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<tbody>
<tr>
<td>Order Abbreviation:</td>
<td>CF18DD/E/830</td>
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<tr>
<td>General Description:</td>
<td>DULUX 18W double compact fluorescent lamp with 4-pin base, integral EOL, 3000K color temperature, 82 CRI, for use with electronic and dimming ballasts, ECOLOGIC</td>
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</tbody>
</table>

Abbrev. With Packaging Info. CF18DD/E830 100V 50/CS 1/SKU
Average Rated Life (hr) 12000
Base G24Q-2
Bulb T4
Color Rendering Index (CRI) 82
Color Temperature/CCT (K) 3000
Family Brand Name Dulux® D/E
Industry Standards IEC 60901- 2518
Initial Lumens at 25C 1150
Mean Lumens at 25C 999
Maximum Overall Length - MOL (in) 5.8
Maximum Overall Length - MOL (mm) 147
NEMA Generic Designation (current) CFQ18W/G24Q/830
Nominal Wattage (W) 18.00

Additional Product Information

Compatible Ballast

Packaging Information

Footnotes
- Approximate initial lumens after 100 hours operation.
- The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
- Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light output.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- There is a NEMA supported, industry issue where T2, T4, and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can result in one or both of the following: 1. Bulb wall cracking near the lamp base. 2. The lamp can overheat in the base area and possibly melt the
Appendix A: Lighting Equipment

Product Details

Return to: DULUX T/E/IN (amalgam, triple, 4-Pin)  Print Page

| General Description: | DULUX 32W triple compact fluorescent amalgam lamp with 4-pin base, integral EOL, 3000K color temperature, 82 CRI, for use with electronic and dimming ballasts |

<table>
<thead>
<tr>
<th>Product Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbrev. With Packaging Info.</td>
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<td>Average Rated Life (hr)</td>
</tr>
<tr>
<td>Base</td>
</tr>
<tr>
<td>Bulb</td>
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<td>Color Temperature/CCT (K)</td>
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<td>Industry Standards</td>
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<td>Mean Lumens at 25C</td>
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<td>Maximum Overall Length - MOL (in)</td>
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<tr>
<td>Maximum Overall Length - MOL (mm)</td>
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<tr>
<td>NEMA Generic Designation (current)</td>
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<tr>
<td>NEMA Generic Designation (old)</td>
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<tr>
<td>Nominal Wattage (W)</td>
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</tbody>
</table>

Additional Product Information

Product Documents, Graphs, and Images

Compatible Ballast

Packaging Information

Footnotes

- Approximate initial lumens after 100 hours operation.
- The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
- Lumen output and life rated on high frequency operation.
- Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light.
Appendix A: Lighting Equipment

Electronic Compact Fluorescent Digital Dimming Systems
QUICKTRONIC® CF DALI
Professional Series

Lamp/Ballast Guide

| 18W T4 – DULUX D/E, T/E | 1-lamp QTP1x18CF/UNV DALI |
| 2-lamp QTP2x18CF/UNV DALI |
| 26W T4 – DULUX D/E, T/E | 1-lamp QTP1x26CF/UNV DALI |
| 2-lamp QTP2x26CF/UNV DALI |
| 32W T4 – DULUX D/E, T/E | 1-lamp QTP1x32CF/UNV DALI |
| 2-lamp QTP2x32CF/UNV DALI |
| 42W T4 – DULUX T/E | 1-lamp QTP1x42CF/UNV DALI |
| 2-lamp QTP2x42CF/UNV DALI |
| 40W TT5 – DULUX L | 1-lamp QTP1x40TT5/UNV DALI |
| 2-lamp QTP2x40TT5/UNV DALI |

SYLVANIA QUICKTRONIC DALI Dimming combines digital control technology with full-range continuous dimming to provide a new level of lighting system performance. This allows for greater flexibility and control of the lighting environment than can be achieved with traditional 0-10VDC dimming systems. The communications protocol is “DALI”, an acronym for “Digital Addressable Lighting Interface”. This is a worldwide standard for digital lighting control that has been accepted by all the leading lighting suppliers.

SYSTEM CF-DALI controls DULUX® L, D/E and T/E 4-pin Compact Lamps over a wide range of light level settings, from 100 – 3% (ballast factor 1.0 – .03). Control wiring is simplified by two polarity-free connections that can be routed in the same raceway as power wires.

SYSTEM CF-DALI is available in one and two lamp models that operate from 120V through 277V, eliminating “wrong voltage” wiring errors and reducing the number of models in inventory by half.

System Information

Programmed rapid start ballasts provide optimum starting conditions to provide up to 100,000 switching cycles for use on occupancy sensor and building control system applications. Individual addressability allows the user to dim any particular fixture or groups of fixtures at one time. Simple controller programming steps allow for:

1. Fade rates, dim levels, time of day, groups and scenes to be customized.

2. Flexibility in grouping fixtures; no need to re-wire fixtures when groups need to be changed.

3. Systems are scalable and can be expanded anytime user needs change, without the need for costly re-wiring. Additional fixtures are added to groupings simply by means of software.

QUICKTRONIC DALI systems can be integrated with Building Management Systems (BMS) by installing gateways that translate between the DALI and BMS systems.

When used in conjunction with appropriate controls, feedback can be obtained on operating conditions, such as operating hours, light-level or failed lamps.

This lamp fault-reporting feature can save significant cost by quickly identifying the location, especially in large facilities or in applications where lamps are concealed by lenses.

Specification of DALI compatible gateways, controls and ballasts ensure flawless operation of the lighting system.

Key System Features

- Digital Addressable Control
- Individual control of fixtures
- Up to 16 groups and scenes
- 100 – 3% Dimming Range
- Programmable fade rates
- Universal voltage (120-277)
- Programmed rapid start
- Anti-flash circuitry
- End-Of-Lamp-Life Sensing
- Wiretrap connectors
- Control may be wired for Class 1 or Class 2 applications
- UL, cUL, FCC
- QUICK 60+® ballast and lamp warranty

Application Information

SYLVANIA QUICKTRONIC DALI is ideally suited for:
- Energy Management
- Load Shedding
- Daylight Harvesting
- Occupancy sensors
- Conference rooms
- All size offices
- Creative lighting designs

For optimal dimming performance, fluorescent lamps may require seasoning up to 100 hours prior to dimming to the lowest light levels.

Savings / Year vs Light Level

$ SAVINGS PER YEAR® vs LIGHT LEVEL
(F032T8 Lamps, QUICKTRONIC DALI T8 Ballasts)

$25.00
$23.20
$20.00
$18.00
$15.00
$12.00
$10.00
$8.00
$5.00
$0.00

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

$ SAVINGS PER Year* vs LIGHT LEVEL

*Based on 4,000 burn hrs/yr & $0.10/kWh
## Electronic DALI CF/DL40 (40TT5) Fluorescent Controllable Lighting Systems

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Input Voltage (VAC)</th>
<th>Input Current (AMPS)</th>
<th>Lamp Type</th>
<th>Rated Lumens (lm)</th>
<th>No. of Lamps</th>
<th>Ballast Factor (BF)</th>
<th>System Lumens</th>
<th>Input Power (Watts)</th>
<th>System Efficacy (lm/W)</th>
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</thead>
<tbody>
<tr>
<td>51370</td>
<td>QTP 1x18CF/UNV DALI</td>
<td>120-277</td>
<td>0.18/0.08</td>
<td>18W</td>
<td>1200</td>
<td>1</td>
<td>1.00</td>
<td>1200</td>
<td>20</td>
<td>60</td>
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<td>51372</td>
<td>QTP 2x18CF/UNV DALI</td>
<td>120-277</td>
<td>0.33/0.14</td>
<td>18W</td>
<td>1200</td>
<td>2</td>
<td>1.00</td>
<td>2400</td>
<td>38/38</td>
<td>61/63</td>
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<td>51375</td>
<td>QTP 1x26CF/UNV DALI</td>
<td>120-277</td>
<td>0.24/0.10</td>
<td>26W</td>
<td>1800</td>
<td>1</td>
<td>1.00</td>
<td>1800</td>
<td>28</td>
<td>64</td>
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<td>51377</td>
<td>QTP 2x26CF/UNV DALI</td>
<td>120-277</td>
<td>0.49/0.22</td>
<td>26W</td>
<td>1800</td>
<td>2</td>
<td>1.00</td>
<td>3600</td>
<td>55/54</td>
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<td>0.34/0.15</td>
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<td>1</td>
<td>1.00</td>
<td>2400</td>
<td>38</td>
<td>63</td>
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<td>120-277</td>
<td>0.60/0.26</td>
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<td>2400</td>
<td>2</td>
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<td>4800</td>
<td>71/70</td>
<td>68/69</td>
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<td>120-277</td>
<td>0.43/0.19</td>
<td>42W</td>
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<td>51386</td>
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<td>120-277</td>
<td>0.82/0.36</td>
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<td>1.00</td>
<td>6400</td>
<td>92/91</td>
<td>69/70</td>
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<td>51390</td>
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<td>120-277</td>
<td>0.41/0.17</td>
<td>40W</td>
<td>3150</td>
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<td>3150</td>
<td>45/44</td>
<td>70/72</td>
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<td>51392</td>
<td>QTP 2x40TT5/UNV DALI</td>
<td>120-277</td>
<td>0.83/0.37</td>
<td>40W</td>
<td>3150</td>
<td>2</td>
<td>1.00</td>
<td>6300</td>
<td>97/94</td>
<td>65/67</td>
</tr>
</tbody>
</table>

### Performance Guide

- **Starting Method:** Programmed Rapid-Start
- **Circuit Type:** Series
- **Lamp Frequency:** >40kHz
- **Lamp CCF:** <1.7
- **Starting Temp:** 50°F min.
- **Voltage Range:** 108-305V
- **Input Frequency:** 50/60 Hz
- **THD:** <10% @ full output
- **Power Factor:** >95% @ full output
- **UL Listed Class P, Indoor**
- **cUL or CSA Certified**
- **Temp. Test Point (Tc) on ballast label:**
  - All CF models: 75°C max
  - 1 lamp DL model: 70°C max
  - 2 lamp DL model: 75°C max
- **FCC 47CFR Part 18 Non-Consumer Class A Sound Rating**
- **ANSI C62.41 Cat. A Transient Protection**

**Specifications**

- Data shown based upon SYLVANIA DULUX lamp(s). QUICKTRONIC DALI ballasts are also compatible with other lamp manufacturers equivalent lamp types that meet ANSI specifications.

**Ordering Guide**

- **QUICKTRONIC PROFESSIONAL**
- **System Type - DALI**
- **Line Voltage (120-277V)**
- **Primary Lamp Wattage**

### Control Information

- QUICKTRONIC DALI ballasts are compatible with DALI digital controllers available from various manufacturers. For a list of DALI control manufacturers, please contact OSRAM SYLVANIA.

- **Refer to pages 74 & 75 for controls information.**

### Packaging:

- **Metal Case 1 Lamp**
- **Metal Case 2 Lamp**

### DL Dimensions, Packaging & Wiring:

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<tr>
<th>Units</th>
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<th>ML</th>
<th>W</th>
<th>H</th>
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<td>18.06</td>
<td>17.70</td>
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<td>1.18</td>
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<td>mm</td>
<td>458.5</td>
<td>446.6</td>
<td>30.0</td>
<td>30.0</td>
</tr>
</tbody>
</table>

### Control Specifications:

- Two wire non-polarized control. May be wired as a Class 1 or Class 2 circuit, consult Local and National Electrical Codes.

### Specifications subject to change without notice.

---

**Appendix A: Lighting Equipment**

Project: The Franklin Care Center  
Jennifer Curley  
April 5,2006
Appendix A: Lighting Equipment

Product Details

Return to: Pentron Standard

Product Information

Abbrev. With Packaging Info. | FP28830ECO 40/CS 1/SKU
---|---
Actual Length (in) | 45.8
Actual Length (mm) | 1163.2
Average Rated Life (hr) | 20000
Base | Miniature Bipin
Bulb | T5
Color Rendering Index (CRI) | 82
Color Temperature/CCT (K) | 3000
Diameter (in) | 0.67
Diameter (mm) | 17.0
Family Brand Name | PENTRON® ECO®
Initial Lumens at 25C | 2600
Initial Lumens at 35C | 2900
Mean Lumens at 25C | 2418
Mean Lumens at 35C | 2697
Nominal Length (in) | 48
Nominal Wattage (W) | 28.00

Additional Product Information

Product Documents, Graphs, and Images

Packaging Information

http://ecom.mysylvania.com/sylvania2c/catalog/updateItems.c
Appendix A: Lighting Equipment

Product Details

Return to: T5 Linear Fluorescent

Print Page

Product Number: 51356
Order Abbreviation: QTP1X28T5/UNV DALI
General Description: 1-lamp Universal Voltage <10%THD 100-1% electronic DALI digital dimming ballast for 28W T5 lamp

Product Information

Abbrev. With Packaging Info. QTP1X28T5UNVDALI
Ballast Factor 1.00
Ballast Height H (in) 1.1800
Ballast Length L (in) 1.1800
Ballast Width W (in) 18.0500
Circuit Type SERIES
Family Brand Name QUICKTRONIC Professional
Input Wattage (W) 32.00
Input Current (Amps) 0.27/0.11
Nominal Voltage (V) UNIVERSAL 120-277
Number of Lamps 1
Open Circuit Voltage (V) <600
Power Factor >0.98
Primary Lamp Type FP28T5
Sound Rating A
Starting Method PROGRAMMED RAPID-START
Starting Temperature - Fahrenheit 50
Starting Temperature - Celsius 10
Total Harmonic Distortion (THD) <10%
Wiring Method WIRETRAP CONNECTORS

Additional Product Information

Product Documents, Graphs, and Images

Packaging Information

Footnotes

- Data based on primary lamp types. See OSRAM SYLVANIA System Performance Guide for data on other lamp combinations.
- 75C Max Case Temperature
- Install in accordance with National Electric Codes
- Complies with FCC 47 CFR Part 18, Non-Consumer
## Appendix A: Lighting Equipment

Product Details

<table>
<thead>
<tr>
<th>Product Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abbrev. With Packaging Info.</strong></td>
</tr>
<tr>
<td><strong>ANSI Code</strong></td>
</tr>
<tr>
<td><strong>Average Rated Life (hr)</strong></td>
</tr>
<tr>
<td><strong>Base</strong></td>
</tr>
<tr>
<td><strong>Beam Angle (deg)</strong></td>
</tr>
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### Additional Product Information

**Product Documents, Graphs, and Images**

**Packaging Information**

Lamps and Ballasts

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

http://ecom.mysylvania.com/sylvania2c/catalog/updateItems.c
## Appendix A: Lighting Equipment

### Product Details

**Return to: TRU-AIM® MR16**

![Lamps and Ballasts](http://ecom.mysylvania.com/sylvania2c/catalog/updateItems.c)

**Product Information**

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### Additional Product Information

**Product Documents, Graphs, and Images**

**Packaging Information**

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Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

Lamps and Ballasts
## Appendix A: Lighting Equipment

### Product Details

**Product Number:** S4208  
**Order Abbreviation:** 50MR16/NSP12(EXT) 12V  
**General Description:** Tungsten Halogen Tru-Aim MR16 STANDARD UV-Stop Capsule With Axial Filament, Dichroic Reflector GU5.3 Bi-Pin Base 50Watt 12Volt Narrow Spot Beam (EXT)

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### Additional Product Information

**Packaging Information**
## Appendix A: Lighting Equipment

**Product Information**

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### Additional Product Information

**Product Documents, Graphs, and Images**

**Packaging Information**

### Footnotes

- Starlite Low Pressure - UV Filter Quartz
- Suitable for use in unshielded fixtures. Consult most recent luminaire standards for your area to determine luminaire requirements.
## Appendix A: Lighting Equipment

### Product Details

**Project:** The Franklin Care Center  
**Jennifer Curley**  
**April 5, 2006**

### Lamps and Ballasts

#### Appendix A: Lighting Equipment

**Product Information**

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### Additional Product Information

**Product Documents, Graphs, and Images**

**Packaging Information**

![Image](http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c)
## Appendix A: Lighting Equipment

### DALI Dimming Controls

#### ezDALI Power Supply

- **Power Supply for DALI ballast communications**
- **Supports DALI bus and fixture power wiring in same conduit**
- **Automatic message routing among DALI ballasts and controls**
- **Powers and isolates both Class 1 and Class 2 DALI buses**
- **No programming or adjustments required**
- **Compatible with all Watt Stopper 24 VDC ceiling occupancy sensors**

### Description

The ezDALI Power Supply (DPS150) supplies power and communications for the ezDALI system.

### Operation

The ezDALI Power Supply contains two transformers with associated power conditioning. The first provides 150 mA at 16 VDC to the Class 1 bus. The second provides 150 mA to the Class 2 ezDALI bus (16 VDC) and to any other control devices (i.e., occupancy sensors) at 24 VDC. For instance, when an occupancy sensor detects motion, it signals the power supply, which initiates a command to an ezDALI controller over the Class 2 data bus. In addition, the power supply provides mechanical and electrical isolation between the two buses to prevent accidental contact of line and low voltage wiring. Furthermore, the power supply routes signals between the Class 1 and Class 2 buses automatically.

### Features

- 150 mA power supply for Class 1 DALI bus, allowing control of DALI ballasts and relay modules
- 150 mA power supply for Class 2 peripherals, providing power for ezDALI controllers and occupancy sensors
- Two electrically isolated buses, one for Class 1 ballasts, the other for Class 2 devices for communication with ezDALI controllers
- **Bus LED status indication:** Green steady = OK, flashing Red = Class 1 bus shorted, flashing Green = Class 2 bus shorted
- **No set-up or commissioning required**
- **Plug-in connectors for low voltage control devices for simplified wiring**
- **Supports DALI bus and fixture power wiring in same conduit**

### Easy Installation

The ezDALI Power Supply enables ezDALI bus and fixture power wiring to be run in the same conduit, simplifying installation. It also features plug-in connectors for easy installation of low voltage control devices, such as occupancy sensors, or for the DALI Class 2 bus. It connects to any standard junction box and is normally mounted in an accessible ceiling space.

### Applications

The Power Supply is an integral component of any ezDALI application. One is required for each room or controlled space. The primary applications for ezDALI controls are spaces that have changing lighting needs, such as classrooms, conference rooms, lecture rooms, and executive offices. The energy savings potential from ezDALI use also makes open offices ideal candidates as well.
Appendix A: Lighting Equipment

Power Supply Technical Information

Specifications
- Input voltage: DPS150-1 = 120 VAC, 60 Hz; DPS150-2 = 277 VAC, 60 Hz, 1.5 watts max. consumption
- Output current/voltage: DALI Class 1 bus = 150 mA, 16VDC; ezDALI Class 2 bus total = 150 mA (16 VDC for ezDALI bus, 24VDC for occupancy sensors)
- Temperature: 0 to 140°F, Rel. Humidity 10 to 95% RH, non-condensing; Atmosphere non-explosive, non-corrosive; Stationary applications, NEMA Level A
- Dimensions: 2.5” x 2.5” x 3.12” (W x H x D) with .5” nipple (63.5 mm x 63.5 mm x 79.25 mm with 12.7 mm nipple)
- UL and CUL listed 916 Energy Management equipment
- FCC approved for use in commercial and industrial applications
- Five year warranty

Power Ratings
- DALI Class 1 bus (power for DALI ballasts, relay modules, and remote scene switches)
  - Available power: 150 mA @ 16 VDC
  - Power requirements: ballast = 2 mA; relay module = 7 mA, remote scene switch = 5 mA
- ezDALI Class 2 bus (power for ezDALI controllers and occupancy sensors)
  - Available power: 150 mA @ 16 & 24 VDC
  - Power requirements: 4-group controller = 40 mA; Group & Scene controller = 40 mA; relay module = 7 mA, occupancy sensors*

*Power requirements for occupancy sensors vary depending on sensor model and individual requirements. Refer to individual product specifications for complete details.

Class 1 Wiring Diagram

Class 2 Wiring Diagram

Ordering Information

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Watt Stopper/Legrand®
Pub. No. 16302

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

DALI equipment
Power Supply
Appendix A: Lighting Equipment

**ezDALI Group and Scene Controller**

Compatible with DALI ballasts for stand-alone dimming, ON/OFF, and scene control of up to four lighting groups

Controls up to 64 DALI ballasts individually

Integrates with occupancy sensor for automatic shut off via Power Supply

Four preset lighting scenes

Pushbutton programming without a computer

Contractor-friendly installation and commissioning

**Product Overview**

**Description**

The ezDALI Group and Scene Controller (DLCSS4) is a component of a Watt Stopper ezDALI dimming system, which provides stand-alone fluorescent dimming with DALI ballasts. It allows DALI ballasts to be assigned to up to four different lighting groups, and enables the user to dim these lighting groups to create up to four preset lighting scenes (presets).

**Operation**

DALI ballasts are assigned to a desired lighting group using the controller’s four labeled group buttons. The user then raises or lowers the group’s light level by pressing and holding the respective group button. This creates a preferred lighting scene; to memorize it, the occupant simply presses and holds the desired scene button. The Master button toggles between the last setting and OFF for normal daily operation. An occupancy sensor option provides occupant-sensitive automatic shut-off via the ezDALI Power Supply.

**Features**

- Four lighting groups with independent dimming capability and LED status indication
- Four scene control buttons with LED status indication and recall of user-defined scenes
- Locator light bar for finding controller in darkened room
- Architecturally attractive wall switch also used to configure ezDALI network

**Scene Control**

Scenes are created and memorized using the controller. When a user presses a scene button, the switch signals the controlled ballasts to recall that scene. The ballasts fade to the level programmed in ballast memory for that scene, and the scene LED lights on the controller. Additional Remote Scene Switches may be used to provide scene control from multiple locations within a room.

**Applications**

The Group and Scene Controller is well-suited for executive offices, conference rooms, classrooms, and lecture halls. It is particularly effective in multi-use spaces that require different lighting configurations. In each of these applications, the Group and Scene Controller allows lighting to be adjusted to accommodate occupants’ needs while also providing enhanced energy savings. Since the controller requires no special tools or commissioning software, it can be easily installed and commissioned by an electrical contractor in any building.

- Master OFF/Restore button provides simple recall of last lighting scene
- Designer appearance with screwless wallplate and removable lens cap for labeling
- Impact-resistant Lexan protects against damage
- Max level setting limits light level for increased energy savings

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**Project:** The Franklin Care Center

Jennifer Curley

April 5, 2006
Appendix A: Lighting Equipment

Controller Technical Information

**Specifications**
- **Input Power:** 40 mA max @16 VDC
- **ezDALI Class 2, low voltage communications**
- **1% dimming for linear fluorescent, 3% for compact fluorescent**
- **Operating environment:** to 140° F; 10 to 95% RH, non-condensing; non-explosive, non-corrosive; stationary applications, NEMA level A
- **Dimensions:** 6.5” W x 4.5” H x 1.8” D (114.3 mm x 114.3 mm x 46 mm)
- **FCC approved for use in commercial and industrial applications**
- **UL and CUL listed, 916 Energy Management, Class 2**
- **Five year warranty**

**Wiring & Installation**

**Group and Scene Controller Wiring**

**Programming the Controller**

**Programming Groups & Scenes**

**Step 1. Initialize**
Press and hold Store button for 5 seconds. Release. LEDs will flash in sequence while ballasts are addressed. Each ballast will turn on as it receives its address.

**Step 2. Create Groups**
Press Select button. First ballast will turn on at maximum level and all others will turn off. Press Group button to add ballast to group. Group button LED will start flashing. Press Select button to select next ballast. Repeat for each ballast.

**Step 3. Store Setting**
Press Store button to save all groups. All group LEDs will light and all ballasts are on at 100%.

**Step 4. Create Scenes**
Adjust lighting levels of each group by pressing and holding Group button to ramp lights up or down. (Releasing stops ramping. Pressing Group button again reverses ramping.) Press and release Group button to turn lights OFF or ON. When desired light level for all groups have been set for a scene, press and hold Scene button until Scene LED lights, indicating that scene is memorized. Repeat for remaining scenes.

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Watt Stopper/Legrand®
Pub. No. 16102

DALI equipment Control
Appendix A: Lighting Equipment

**ezDALI Group Controller**

**Product Overview**

The ezDALI Group Controller (DLC) is a component in an ezDALI system. It is the source of all commands to the ballasts. In addition, it provides a simple tool for creating ballast groups (a set of ballasts that act in unison, also referred to as a “zone”), and manual dimming of each group to create a preferred “scene” or “preset.” Automatic shut-off, in compliance with energy codes, is achieved by connecting an occupancy sensor via the ezDALI Power Supply.

**Operation**

The ezDALI Group Controller operates with an ezDALI Power Supply and one or more DALI ballasts. Once each ballast has been assigned to a group button on the ezDALI wallbox controller, a user can raise or lower group light levels by pressing and holding the group button. This allows the occupant to set each group to a preferred lighting level. The Master button will toggle between the last setting and off for normal daily operation.

**Features**

- Push-button set-up for easier installation and future changes
- Master OFF/Restore button provides quick access to last lighting scene
- Compatible with standard 24 VDC occupancy sensor (input to Power Supply)

**Button Options**

The ezDALI Group Controller is available in 2- or 4-group models, both of which fit within a standard single-gang wallbox. With the 2-group model, users can create two different lighting groups, while the 4-group model enables control of up to four groups. Both the 2- and 4-group controllers allow the occupant to create a preferred lighting level. Using the Master button provides OFF/Restore capability.

**Applications**

The ezDALI Group Controller is ideal for use in private offices, open offices and hallways. In each of these applications, ezDALI allows the lighting to be tuned to the needs of the occupant while also providing enhanced energy savings. Since it requires no special tools or commissioning software, it can be easily installed by an electrical contractor in any building.

- Designer appearance with screwless wallplate and removable lens caps for labeling
- Impact-resistant Lexan protects against damage
- Locator light bar for finding controller in darkened room
- Max Level Set limits light level for increased energy savings
Appendix A: Lighting Equipment

Group Controller Technical Information

- **Specifications**
  - Input Power: DLC-2: 28 mA max @16VDC; DLC-4: 40 mA max @16VDC
  - ezDALI Class 2, low voltage communications
  - 255 dimming steps for each group. 1% dimming for linear fluorescent, 3% for compact fluorescent
  - Operating environment: to 140° F; 10 to 95% RH, non-condensing; non-explosive, non-corrosive; stationary applications, NEMA level A
  - 2 or 4-button configuration in single gang box
  - Dimensions: 2.75" W x 4.5" H x 1.81" D (69.8 mm x 114.3 mm x 46 mm)
  - FCC approved for use in commercial and industrial applications
  - UL and CUL listed, 916 Energy Management, Class 2
  - Five year warranty

- **Wiring & Installation**

- **Programming the Controller**

- **Ordering Information**

The Watt Stopper®, Inc.
Pub. No. 16001

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DALI equipment Control
**ezDALI Relay Module**

**Description**
The ezDALI Relay Module (DRM) is an optional component in an ezDALI system. Mimicking the function of a DALI ballast, the DRM provides ON/OFF control for non-DALI loads such as standard electronic ballasts, incandescent or motor loads.

**Operation**
The ezDALI Relay Module provides isolated high-power (20 amps, 120 or 277 VAC) switching capability for non-dimming ON/OFF loads. The operator addresses and controls the DRM as if it were a DALI ballast. To assign a Relay Module to a group, the operator uses the Select function on an ezDALI controller. When the lighting controlled by the Relay Module turns on, the operator presses the desired group button on the controller to add that lighting to the group. Thereafter, the Relay Module will switch lighting on or off in response to the signal from the ezDALI controller.

**Features**
- Networked digital control of non-dimming loads
- Addressable and controllable as if a DALI ballast
- Zero crossing protects relay from inrush current and increases relay life
- Compatible with DALI ballast commands
- Can be installed with either Class 1 or Class 2 DALI bus wiring

**Control of non-DALI loads**
The ezDALI Relay Module coordinates ON/OFF control of non-DALI loads (i.e., incandescent lighting, fans) with the operation of DALI ballasts. When a command issues from a control device, the DRM responds along with other Relay Modules or DALI ballasts in the group or scene. While DALI ballasts may raise or lower light levels, the DRM will switch its load either ON or OFF.

**Applications**
The ezDALI Relay Module can be used for controlling non-dimming loads with ezDALI controls. The DRM can coordinate operation of non-dimming lighting and electrical loads in conference rooms or lecture halls. In small offices, the DRM allows coordinated control of DALI ballasted lighting and non-DALI incandescent lighting.

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**Appendix A: Lighting Equipment**

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**ezDALI Relay Module**

- DALI ON/OFF control for non-dimming loads
- Acceptable for use in plenum spaces
- Dual 120/277 VAC operation
- Networked digital control of non-dimming loads
- Addressable and controllable as if a DALI ballast
- Zero crossing protects relay from inrush current and increases relay life
- Contractor-friendly installation and commissioning
- Compatible with DALI ballast commands
- Can be installed with either Class 1 or Class 2 DALI bus wiring

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**DALI equipment**

**Relay**

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**Project:** The Franklin Care Center

**Jennifer Curley**

**April 5, 2006**

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Appendix A: Lighting Equipment

**DALI Dimming Controls**

**Relay Module Technical Information**

**Specifications**
- Input Power: 120 or 277 VAC, 60 Hz, 0.1 Amps
- Load rating: 20 Amps ballast, 20 Amps incandescent, 1 HP motor @ 120/250 VAC
- DALI bus input power: 16 VDC, 7 mA
- Acceptable for use in plenum spaces
- Dimensions: 4.8” x 4.8” x 2.3” (W x H x D) (122 mm x 122 mm x 58.4 mm)
- FCC approved for use in commercial and industrial applications
- UL & CUL listed, Energy management equipment 86WA
- Five year warranty

**ezDALI System Wiring**

**ezDALI System Wiring with Relay Module**

**Relay Module Wiring**

Class 1 Relay Module Wiring

Class 2 Relay Module Wiring

**Ordering Information**

Watt Stopper/Legrand®
Pub. No. 16202

**DALI equipment—Relay**

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Project: The Franklin Care Center
Jennifer Curley
April 5, 2006
Appendix A: Lighting Equipment

The Power of Illumination

DALI Star
Digitally Addressable Low Voltage Isolation Transformer

The advanced microprocessor-based circuitry of the DS Series transformer is fully compatible with DALI controllers and is digitally addressable to provide precise dimming control and full a range of operation for 12 Volt halogen lamps, as individually addressed devices or part of groups and scenes.

The many features of the DS Series include auto reset short and overload protection, protection against misconnection of line voltage into DALI input, open lamp detection and automatic programmable preset light level on DALI control interrupt.

B+L Technologies’ DALI Star transformer offers multiple possibilities to meet digital lighting systems requirements and to please your customers. Contact our customer service representatives to find out more about this and many of our lighting products.

General Specifications

- Fully DALI protocol compatible
- Precise 0 – 100% Dimming Control
- Open lamp detection
- Auto reset short circuit protection
- Auto reset over load protection
- Protection against line voltage to DALI input
- Programmable preset light output on DALI line interruption
- Fully Digitally addressable
- Programmable multiple groups
- Programmable 16 scenes, 16 groups
- Minimum load: 20W
- Nominal output: 12VAC

- For 12V halogen lamps
- Power factor >0.98
- THD<13%
- Operating frequency > 20kHz
- Ambient temperature range: -15 °C to 50 °C
- Input 120V 60Hz
- Input current: 0.60 A
- Input wire gauge: 18 AWG
- Output wire gauge: 18 AWG
- DALI line wire gauge: 18 AWG
- Standby power consumption: 1 W
- Compact metal casing, available in choice of stud mount or flush mount

1-800-361-1400

B+L Technologies
Appendix A: Lighting Equipment

Ordering Information

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>INPUT VOLTAGE</th>
<th>SHORT CIRCUIT PROTECTION</th>
<th>OVERLOAD PROTECTION</th>
<th>DALI INPUT PROTECTION</th>
<th>MAXIMUM LOAD</th>
<th>OUTPUT TO LAMPS</th>
<th>MOUNTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS98100-S</td>
<td>120 V AC</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>75 W</td>
<td>12 V AC</td>
<td>FLUSH MOUNT</td>
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<tr>
<td>DS98100-C</td>
<td>120 V AC</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>75 W</td>
<td>12 V AC</td>
<td>STUD MOUNT</td>
</tr>
</tbody>
</table>

Cabling Diagrams

Dimensions

<table>
<thead>
<tr>
<th>FLUSH MOUNT</th>
<th>STUD MOUNT</th>
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</thead>
<tbody>
<tr>
<td>A: 4.20&quot;</td>
<td>4.20&quot;</td>
</tr>
<tr>
<td>B: 2.90&quot;</td>
<td>2.90&quot;</td>
</tr>
<tr>
<td>C: 1.50&quot;</td>
<td>1.50&quot;</td>
</tr>
<tr>
<td>E: 4.72&quot;</td>
<td>4.42&quot;</td>
</tr>
<tr>
<td>F: 4.42&quot;</td>
<td>4.42&quot;</td>
</tr>
</tbody>
</table>

Warranty

3 years from delivery date for:
DALI Star 75 Transformer

1131 Autoroute Laval W.
Laval (Quebec)
Canada, H7L 3W3
Tel.: (450) 663-7884
1-800-361-1400
Fax.: (450) 663-7638
www.bplusl.com
info@bplusl.com
Appendix A: Lighting Equipment

LS-301 Dimming Photosensor

Description
The LightSaver LS-301 is a ceiling mount, low voltage indoor photosensor that works with standard, 0-10 VDC electronic dimming ballasts to dim lighting as daylight increases.

Operation
The LS-301 mounts on a ceiling and utilizes a spectral filtering system to measure daylight and electric light levels. A closed loop daylighting system, the LS-301 measures the total light level from daylight and electric light in the controlled area to adjust electric lighting levels. As the daylight contribution increases, the lights dim down. The photosensor utilizes sliding setpoint control, which responds to the different spatial distribution qualities of electric light and daylight. The LS-301 calculates the required light level for current daylight contribution based on two setpoints. One represents the target level when no daylight is present [night setpoint] and the other when significant daylight is present [day setpoint].

Adjustment via Handheld Remote Control
All LS-301 adjustments are made with one of two handheld remotes. The LSR-301-S provides five buttons for initial set-up, which is easily completed by first raising or lowering electric light levels to desired levels, then programming this target level into the photosensor. The LSR-301-P provides three buttons for occupants to adjust light levels. With this optional tool, users can increase target light levels by up to 25% or reduce them to the lamp/ballast minimum level. Pressing the "Auto" button returns the control to programmed levels.

Applications
The LS-301 is designed to blend into its surroundings when installed in any environment. It provides one zone of daylighting control in a private office or classroom. In these applications, the LS-301 can be combined with an occupancy sensor. Often, it is possible for the LS-301 to share a single power pack with occupancy sensor[s].

Features
- Provides precise control of lighting to maintain desired light level
- Extremely linear photocell response with greater than 1% accuracy
- Designed to measure light as the human eye perceives it, eliminating "overreporting" illumination levels provided by daylight
- Separate handheld remote controls for setup and occupant adjustment to prevent tampering
- Boosts energy savings by reducing maximum lamp output, often resulting in a 20% reduction or more compared with lights at full output
- Achieves lumen maintenance by holding target light level as lamp output decreases over time

Product Overview
The LightSaver LS-301 is a ceiling mount, low voltage indoor photosensor that works with standard, 0-10 VDC electronic dimming ballasts to dim lighting as daylight increases.

www.wattstopper.com
800.879.8585
Appendix A: Lighting Equipment

**LS-301 Technical Information**

### Specifications
- **Full range dimming**: 2 VDC (minimum) to 10 VDC (100% lighting) output voltage
- **Current consumption**: 30 mA @ 24 VDC
- **In typical applications**, setpoints are adjustable from 20-60 footcandles (210-640 lux)
- **Controls up to 50 standard dimming ballasts in one zone**
- **Sensor leads**: gray and violet to ballast, red and black to 24 VDC
- **Dimensions**: 2.35” diam. x 0.875” depth (60mm x 22mm), threaded piece extends 1.25” (31.8mm) from back, fits .5” knockout
- **5 year warranty**

### Remote Controls
- **Nighttime setpoint**
- **Button activation LED**
- **Auto button for automatic dimming**
- **Raise/lower light levels**
- **Daytime setpoint**

Remote handheld (above left) enables easy set-up while optional occupant remote provides adjustability for individual lighting preferences.

### Wiring & Installation

#### Coverage
- **Window**
- **Lens Orientation**
- **6ft. min.**
- **4ft. min.**

#### Ordering Information

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Description</th>
<th>Input Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS-301</td>
<td>Dimming Photosensor</td>
<td>24 VDC</td>
</tr>
<tr>
<td>LS-301-5</td>
<td>Setup Remote Control (2 AAA batteries included)</td>
<td>24 VDC</td>
</tr>
<tr>
<td>LS-301-P</td>
<td>Occupant Remote Control (2 AAA batteries included)</td>
<td>24 VDC</td>
</tr>
</tbody>
</table>

LS-301 works with Watt Stopper power packs

### Spectral Response Curve

The spectral response of the LS-301 photocell closely matches the sensitivity of the human eye.

**Daylighting Controls**

- **LSR-301-S**
- **LSR-301-P**

**Remote Controls**

- **Button activation LED**
- **Auto button for automatic dimming**
- **Raise/lower light levels**

**Wiring**

- **Retaining Nut**
- **Plastic Washer**
- **White (Neutral)**
- **Black**
- **Blue**
- **Red**
- **24VDC (in)**
- **Red (Load)**
- **Red (Line)**
- **White**
- **Black**
- **Neut.**
- **Hot**

**Mounting and Installation**

- **Placement Guidelines**
  - Mount photocell between 6 and 12 feet [1.8m - 3.7m] from window.
  - Do not mount directly above direct/indirect pendant fixtures. Mount at least 4 feet [1.2m] from pendant fixtures.
# Appendix A: Lighting Equipment

## UT-300 Low Voltage Ultrasonic Occupancy Sensor

**Product Overview**

Watt Stopper/Legrand’s low profile UT-300 ultrasonic occupancy sensor automatically turns lighting on and off based on occupancy. The sensor mounts on the ceiling with a flat, unobtrusive appearance and provides 360° coverage.

**Operation**

The UT-300 operates on 24 VDC, VAC or halfwave rectified. It uses the Doppler Principle and high frequency (40 KHz) ultrasound to sense occupancy and automatically turn lighting on. When no occupancy is detected for the length of the time delay, lighting automatically turns off. For manual-ON operation, the UT works with a low voltage momentary switch.

**Features**

- Advanced control logic based on RISC microcontroller provides:
  - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
  - SmartSet automatically adjusts sensitivity and time delay settings to fit occupant patterns
  - Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Advanced Signal Processing Circuitry helps to eliminate false ONs

- Patented ultrasonic diffusion technology spreads coverage to a wider area
- LED indicates occupancy detection
- UT-300 works with low voltage momentary switches for manual control
- DIP switch simplifies sensor adjustments
- Clip mounting system makes ceiling tile installation simple
- Uses depluggable terminal wiring system for quick and easy installation
- Available with isolated relay for integration with BAS or HVAC

**SmartSet**

Using SmartSet™ technology, UT sensors require no adjustment at installation. SmartSet continuously monitors the controlled space to identify usage patterns. With this information, it automatically adjusts time delay and sensitivity settings for optimal performance and energy efficiency. The sensor assigns short delays (as low as 5 minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times.

**Application**

UT sensors offer excellent control of lighting for many spaces including restrooms, large offices, and open office areas. Also, they can control large partitioned office spaces when configured in zone patterns. The UT sensors’ performance combined and ease of installation will provide fast paybacks and many years of energy savings.
Appendix A: Lighting Equipment

UT-300 Technical Information

Specifications
- 24 VDC/VAC
- Time delays: SmartSet (automatic), fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode
- Ultrasonic frequency of 40 kHz
- UT-300 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 30 VDC/VAC
- Mounting options: ceiling tile; 4 square junction box with double gang mudring

Wiring & Controls

Controls & Settings

Coverage & Placement

Ordering Information

Catalog No. Voltage Current Coverage Feature

| UT-300-1 | 24 VDC | 40 mA | 500 ft² (46.5 m²) | Isolated relay |
| UT-300-2 | 24 VDC | 40 mA | 1000 ft² (92.9 m²) | Isolated relay |
| UT-305-1 | 24 VDC | 30 mA | 500 ft² (46.5 m²) | Isolated relay |
| UT-305-2 | 24 VDC | 30 mA | 1000 ft² (92.9 m²) | Isolated relay |
| UT-305-3 | 24 VDC | 35 mA | 2000 ft² (185.8 m²) | Isolated relay |

All units are white and use Watt Stopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.

DALI equipment
Occupancy Sensor

Project: The Franklin Care Center
Jennifer Curley
April 5, 2006