

Appendix A :

Lighting Equipment

Appendix A: Lighting Equipment

Fixture Label	Description	Fixture Cat No.	#	Lamp Type	Lamp Cat. No.	CRI	CCT	Ballast Type	Ballast Cat. No.	Lamps per ballast
F1	Wall mounted metal halide uplight	P2-LS-M150-LS1-SGW	1	ED 17	MCG150/U/M3K ALTO	85	3000	Electronic	Advanced Transformer 71A5437BP	1
F2	Compact fluorescent decorative pendant	American Glass Light 6118-U	2	Quad	CFQ18W/G24Q/830	82	3000	DALI dimming	Sylvania QTP2x18CF/ UNV DALI	2
F3	CFL recessed mounted circular downlight	Erco 22151	2	Triple Tube	Sylvania CFTR32W/GX24Q/830	82	3000	DALI dimming	Sylvania QTP2x32CF/ UNV DALI	2
F4	Surface mounted decorative downlight	Magic-1/32W/CF GX24Q3 277 GLASS	2	Triple Tube	CFTR32W/G24Q/830	82	3000	DALI dimming	Sylvania QTP2x32CF/ UNV DALI	2
F5	Incandescent table lamp	Louis Poulsen PH4 1/2-T-1/100W/A19/IF MED/120 GLASS	1	A19	100A/CL/DL/RP	100	n/a	n/a	n/a	n/a
F5a	Incandescent floor lamp	Louis Poulsen PH4 1/2-F-1/100W/A19/IF MED/120 GLASS	1	A19	100A/CL/DL/RP	100	n/a	n/a	n/a	n/a
F6	Recessed wall mounted LED steplight	Erco 33730.000	1	LED	n/a	n/a	n/a	n/a	n/a	n/a
F7	Cove mounted fluorescent covelight	Prudentail SC-1T5-04	1	T5	Sylvania FP28/830/ECO	82	3000	DALI dimming	Sylvania QTP1x28T5/ UNV DALI	1
F8	Wall mounted compact fluorescent decorative sconce	OSW-1/18W/CF GX24Q-3/4-277-WHT	1	Quad	CFQ18W/G24Q/830	82	3000	DALI dimming	Sylvania QTP2x18CF/ UNV DALI	2
F9	CFL surface mounted downlight	Lightolier 3040PB218U	2	Quad	Sylvania CFQ18W/G24Q/830	82	3000	Dali Dimming	Sylvania QTP2x18CF/ UNV DALI	1
F10	Cove mounted fluorescent striplight	Prudentail PT8W-SS-STD-1T8-04-BWE-SC	1	T5	Sylvania FP28/830/ECO	82	3000	Dali Dimming	Sylvania QTP2x28T5/ UNV DALI	2
F11	Recessed halogen downlight	Lucifer DL1G	1	MR16	Sylvania 20MR16/T/FL40	100	3000	n/a	n/a	1
F12	Recessed halogen spotlight	Lucifer DL2G	1	MR16	Sylvania 20MR16/T/NSP10	100	n/a	n/a	n/a	1
F12a	Recessed halogen spotlight	Lucifer DL2G	1	MR16	Sylvania 50MR16/T/NSP10	100	n/a	n/a	n/a	1
F13	Semi direct CFL bollard	Louis Poulsen SAB/1/32/CF/ GX24q-3	1	Triple Tube	Sylvania CFTR32W/GX24Q/830	82	3000	DALI dimming	Sylvania QTP2x32CF/ UNV DALI	1
F14	Semi direct CFL sconce	Louis Poulsen ORW-MAX 1/32/CF GX24-q-3/4	1	Triple Tube	Sylvania CFTR32W/GX24Q/830	82	3000	DALI dimming	Sylvania QTP2x32CF/ UNV DALI	1
F15	Recessed fluorescent linear downlight	Focal Point FAVB-PL-1T5	1	T5	Sylvania FP28/830/ECO	82	3000	DALI dimming	Sylvania QTP1x28T5/ UNV DALI	1
F16	Wall mounted compact fluorescent sconce	Manning PS44-12-PLC-W	1	Quad	Sylvania CFQ13W/G24Q/830	82	3000	Dali Dimming	Sylvania QTP1x13CF/ UNV DALI	1
F17	Suspended indirect fluorescent pendant	Lightolier 48228ALU	2	T5	FP28/830/ECO	82	3000	DALI dimming	Sylvania QTP2x28T5/ UNV DALI	2
F18	Desk task light	Erco 33170.000	1	Capsul	50T4Q/CL/AX	100	n/a	n/a	n/a	n/a
F19	Semi direct CFL pole mounted fixture	Louis Poulsen SATT-MAX/1/32W/CF/G X24q-3/4	1	Triple Tube	Sylvania CFTR32W/GX24Q/830	82	3000	DALI dimming	Sylvania QTP2x32CF/ UNV DALI	1
F20	In grade LED orientation luminaire	Erco 38782.000	1	Dynamic Color changing LED	n/a	n/a	n/a	n/a	n/a	n/a

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

Luminaire
 Schedule

HID Large Wall Mount

WINDIRECT™

LAMP	SIZE	APPLICATION	TYPE
	INDOOR OUTDOOR		

- SURFACE WALL
- SURFACE CEILING
- SEMI-RECESSED
- SURFACE LINEAR
- COVE
- PENDANT
- CANTILEVER
- BASE MOUNT
- TRUSS
- MODIFIED STANDARD
- FINISHES
- OPTIONS
- TECHNICAL



P1 - LS - M175 - 120V - LS1 - SGW - X - STD

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.

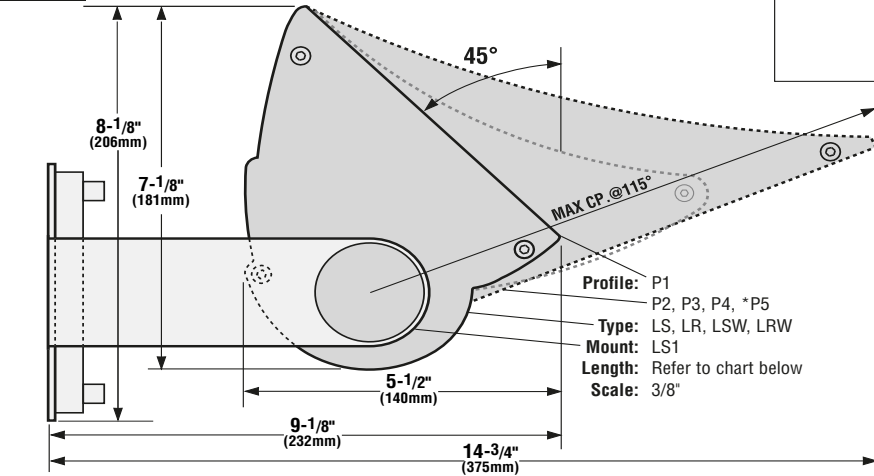
Type - Large profile with smooth or ribbed detail.

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 100W and 150W lamps. CWA ballast for 175W 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.



SPECIFICATIONS

PROFILE	TYPE	LAMPING	VOLTAGE	MOUNTING	FINISH	OPTIONS	CLASS
P2	LS	M400	120V or 277V	LS1	SGW	X	STD
	Indoor Location (damp label)	Code Description	Length Weight	Remote Ballast	SGW: Semi-Gloss White SGB: Semi-Gloss Black	X: No Options SB: Straight Blade Baffle (external mount)	STD: Indicate only when specifying a standard.
		M100 (1) 100W ED-17 MH	12" 8 lbs.	LS1: Simple Yoke	ALP: Aluminum Paint (matte finish)	PG: Patterned Glass Lens (wide distribution)	MOD: Indicate when specifying any modification.
		M150 (1) 150W ED-17 MH	12" 8 lbs.	LD1: Deco Yoke	LGP: Light Gold Iridescent (gloss finish)	QR: Quartz Restrike	
		M175 (1) 175W ED-17 MH	12" 8 lbs.	LD1: Deco Yoke	LGP: Light Gold Iridescent (gloss finish)	NT: Natatorium Construction	
		M250 (1) 250W T-15 or ET-18 MH16"	10 lbs.	LD1: Deco Yoke	LGP: Light Gold Iridescent (gloss finish)	SO: (MOD) Special Option	
		M400 (1) 400W T-15 or ET-18 MH16"	10 lbs.	LD1: Deco Yoke	LGP: Light Gold Iridescent (gloss finish)	Options - For complete list and detailed descriptions, refer to Options Section.	
		M800 (2) 400W T-15 or ET-18 MH25"	16 lbs.	LD1: Deco Yoke	LGP: Light Gold Iridescent (gloss finish)		
		Integral Ballast		Integral Ballast	PBP: Pale Bronze Paint (gloss finish)		
		M100 (1) 100W ED-17 MH	16" 27 lbs.	LS4: Simple Yoke	SPF: (STD) Standard Painted Finish to be determined		
		M150 (1) 150W ED-17 MH	16" 29 lbs.	LS4: Simple Yoke	CPF: (MOD) Custom Painted Finish		
		M175 (1) 175W ED-17 MH	16" 30 lbs.	LS6: Simple Yoke			
		M250 (1) 250W T-15 or ET-18 MH20"	37 lbs.	LD4: Deco Yoke			
		M400 (1) 400W T-15 or ET-18 MH20"	43 lbs.				
		M800 (2) 800W T-15 or ET-18 MH25"	60 lbs.				

Note: *P5 (short visor) does not provide the same sightline shielding as the P2, P3 or P4 visors (see options section for details). Ballast ANSI codes: M90, M102, M57, M58, M59



This catalog page is available online.

- 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

PHOTOMETRY

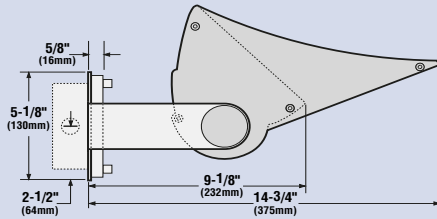
M400 Refer to Technical Section for detailed Photometry Reports. Report #11232

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

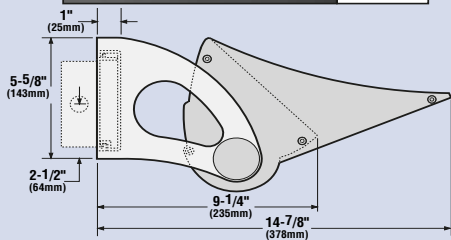
Fixture Type
F1

MOUNTING STYLES*

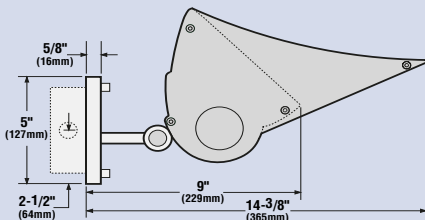
Remote Ballast



P2
(solid)
Ribbed
Simple
Yoke
LS1

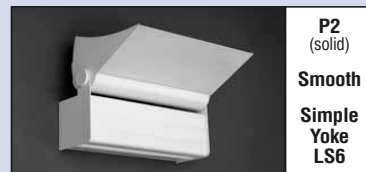
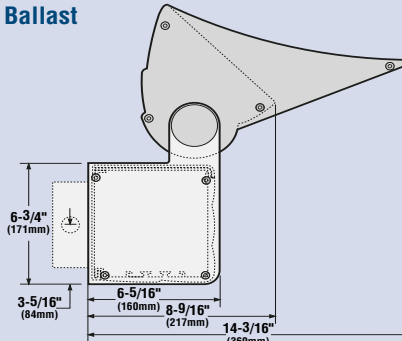


P3
(perforated)
Smooth
Deco
Yoke
LD1

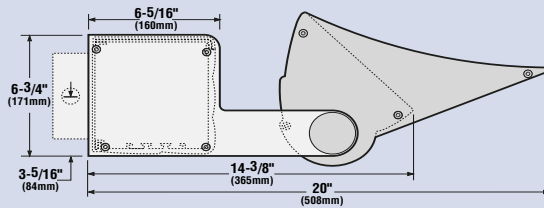


P3
(perforated)
Ribbed
Knuckle
Mount
LK1

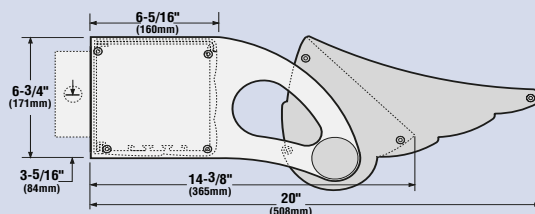
Integral Ballast



P2
(solid)
Smooth
Simple
Yoke
LS6



P3
(perforated)
Ribbed
Simple
Yoke
LS4



P4
(scalloped)
Ribbed
Deco
Yoke
LD4

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

- 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

This catalog page is available online.

winona
l i g h t i n g

PAGE: 23

- SURFACE WALL
- SURFACE CEILING
- SEMI-RECESSED
- SURFACE LINEAR
- COVE
- PENDANT
- CANTILEVER
- BASE MOUNT
- TRUSS
- MODIFIED STANDARD
- FINISHES
- OPTIONS
- TECHNICAL

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

Fixture Type
F1

Appendix A: Lighting Equipment

Product Spec Sheet for Jimmy B. Uplight

<http://www.americanglasslight.com/SpecSheet.asp>

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 lamping 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:

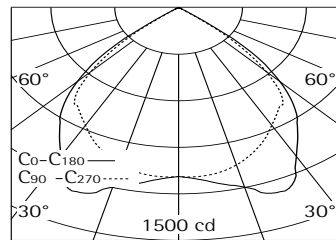
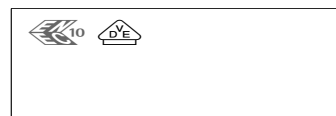
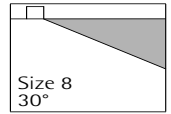
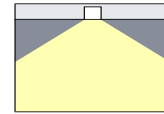
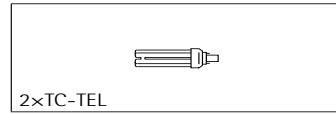
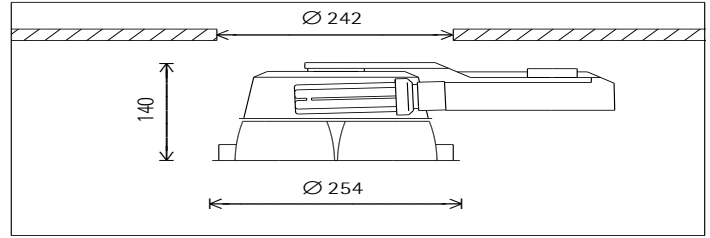
When specifying this product, please indicate all selected options so we have complete information when an order is placed.

Appendix A: Lighting Equipment

ERCO

CL downlight

for TC-T lamps



2xTC-TEL 32W GX24q-3 2400lm

LOR	0.45
UGR C0	20.9
UGR C90	19.8
65° <	200 cd/m ²

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

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/22151.000

Appendix A: Lighting Equipment

ERCO

CL downlight

Planning data

22151.000 TC-TEL 32W GX24q-3 2400lm
 Connected load P: 66 W
 Connected load per 100lx P*: 3.0 W/m²
 Number of luminaires per 100lx n*: 4.6 1/100m²

22151.000 TC-TEL 32W GX24q-3 2400lm
 Number of luminaires per 100m² for
 100lx 200lx 300lx 500lx
 5 10 14 23

22151.000 TC-TEL 32W GX24q-3 2400lm
 Module (m) 1.2x1.8 1.8x1.8 1.8x2.4 2.4x2.4
 Illuminance E_n (lx) 1013 676 507 380

Cleaning (a)	1				2				3			
	P	C	N	D	P	C	N	D	P	C	N	D
Ambient conditions	0.94	0.89	0.81	0.72	0.88	0.80	0.69	0.59	0.84	0.74	0.61	0.52
LMF	0.99	0.98	0.96	0.95	0.97	0.96	0.95	0.94	0.97	0.96	0.95	0.94
RSMF												

Hours of operation (h)	1000	2000	4000	6000	8000	10000
LLMF	0.97	0.92	0.88	0.85	0.83	0.83
LSF	1	1	1	1	1	1

- 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

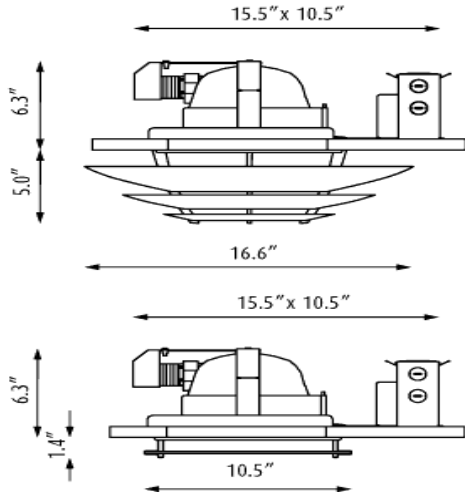
Correction table

Ceiling	0.70	0.70	0.70	0.50	0
Wall	0.70	0.50	0.20	0.20	0
Floor	0.50	0.20	0.20	0.10	0

k	0.6	77	58	49	48	45
k	1.0	100	77	69	67	63
k	1.5	116	91	84	80	77
k	2.5	129	100	95	90	86
k	3.0	134	103	99	93	89

Magic Glass/ Oslo

Design : Kurt Nørregaard and Louis Poulsen



Specification

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 ambience as a result of light being emitted between the shades.

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

Material
Shades: Spun aluminum. Glass: Partly silk-screened, soda lime glass. Reflector: Spun aluminum, matte anodized or spun dad aluminum, polished. Trim ring: Die cast satin matte aluminum.

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

Weight
Max. 9 lbs.

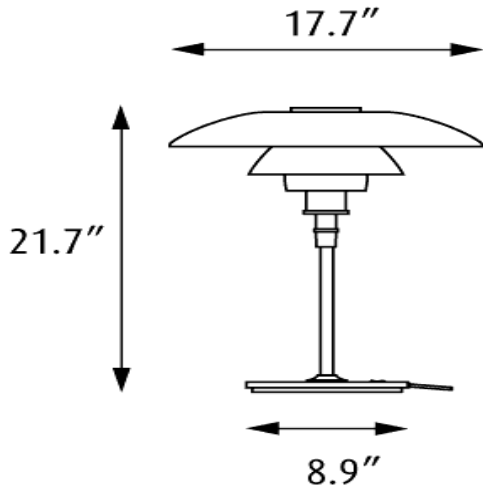
Label
cJL, Dry location. IBEW.

- | | |
|---|--|
| 1 | Product code
MAGIC |
| 2 | Light source
1/ 18W/ CF G24q-2
1/ 200W/A-23/ IF medium
1/ 26W/ CF GX24q-3
1/ 26W/ CF GX24q-3
1/ 32W/ CF GX24q-3
2/ 18W/ CF G24q-2
2/ 26W/ 32W/ CF GX24q-3
2/ 26W/ CF GX24q-3
2/ 32W/ CF GX24q-3 |
| 3 | Voltage
120-277V
120/ 277V
120V
277V |
| 4 | Finish
GLASS
WHT |
| 5 | Distribution/ Trim
GLASS
OSLO |
| 6 | Reflector
MATTE
POLISHED |
| 7 | Options
NOT APPLICABLE
EMPK
LUTRON HI-LUME |

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

PH 4½-3½ Glass Table

Design: Poul Henningsen



Specification

- 1 | Product code
PH4½-3½-T
- 2 | Light source
1/100W/A-19/IF medium
- 3 | Voltage
120V
- 4 | Finish
GLASS

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.

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

Shades: Handblown white opal glass. Base: High lustre chrome plated, spun brass. Top plate: High lustre chrome plated, spun brass. Stem: High lustre chrome plated, steel.

Mounting

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

Weight

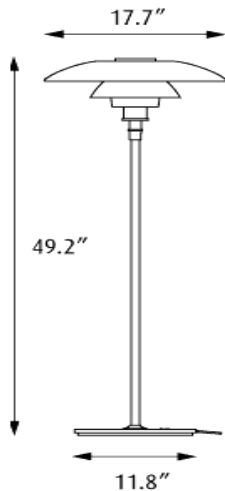
Max. 22 lbs.

Label

dJL, Dry location. IBEW.

PH 4½-3½ Glass Floor

Design: Poul Henningsen



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 undersides for uniform light distribution. III. The comparable EU version has the following classification: Ingress Protection Code: IP20.

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

Shades: Handblown white opal glass. Base: High lustre chrome plated, spun brass. Top plate: High lustre chrome plated, spun brass. Stem: High lustre chrome plated, steel.

Mounting

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

Weight

Max. 34 lbs.

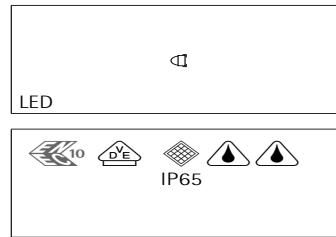
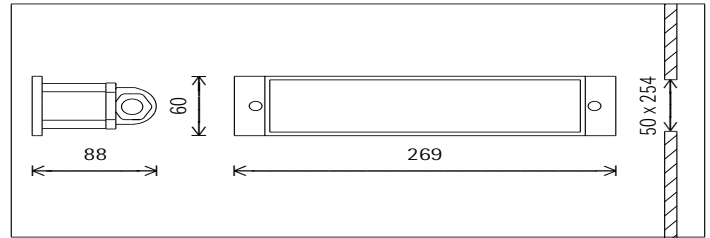
Label

dJL, Dry location. IBEW.

Appendix A: Lighting Equipment

ERCO

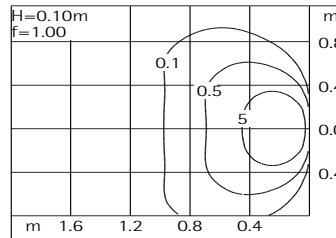
Axis Walklight with LED



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

Product description

Housing: corrosion-resistant cast aluminium, No-rinse surface treatment. Graphit m double powder-coated. Mounting bracket: metal. 2 cable entries. Through-wiring possible. 3-pole terminal block. Asymmetric reflector lens system: aluminium, silver anodised. Optimised screening for the LEDs ensures no direct light emission. Replaceable LED module. 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)	1				2				3			
Ambient conditions	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.98	0.94	0.90	0.86	0.95	0.91	0.86	0.81	0.94	0.90	0.84	0.79
RSMF	0.99	0.98	0.96	0.95	0.97	0.96	0.95	0.94	0.97	0.96	0.95	0.94

- 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

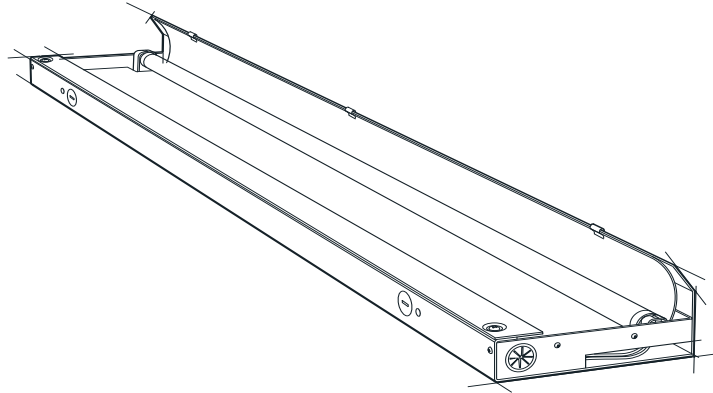
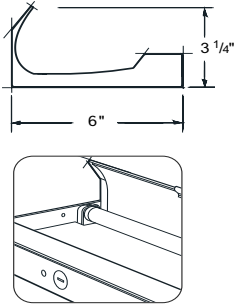
ERCO Leuchten GmbH
Postfach 24 60
58505 Lüdenscheid
Germany
Tel.: +49 2351 551-0
Fax.: +49 2351 551-300
info@erco.com

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

Appendix A: Lighting Equipment

Type
Job Name
Catalog Number

Cove & Perimeter **■ SUPER COVE**



ordering

series	lamp rows	nominal length	voltage	options
SC				
	1T8	02'	120	PAF
	1T5	03'	277	EML*
	1T5HO	04'	347*	EMH*
		06'	*T8 & T5HO only	DM
		08'		RSE**
		R__*		10THD†
		*row length		B__
				FH
				QC
				*consult factory for fixture lengths < 4'
				†T8 only

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=600 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; (T8 only); **B_:** specific ballast, specify manufacturer and catalog number (consult factory); **FH:** fixture fusing (slow blow); **QC:** quick-connect circuit assemblies.

Prudential Lighting phone 213.746.0360 fax 213.741.8590 www.prulite.com

0301

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

Fixture Type
F7

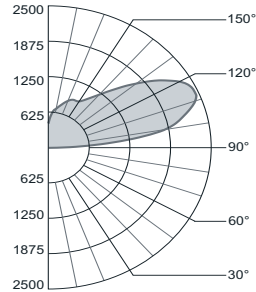
Appendix A: Lighting Equipment

SUPER COVE Cove & Perimeter

photometric data

SC-1T5HO-04

Report # LSI16391 D=0.0% I=100.0%
Lamp Lumens: 4500 Input Watts: 58



Candlepower Summary

Vertical Angle	Horizontal Angle					Output Lumens
	0°	22.5°	45°	67.5°	90°	
90	0	48	35	79	39	385
95	10	584	840	1069	911	385
100	37	821	1350	1858	1802	723
105	74	753	1615	2064	2149	723
110	111	633	1686	2253	2400	694
115	147	567	1557	2225	2455	694
120	183	543	1356	2027	2335	694
125	222	564	1154	1759	2076	519
130	256	616	1001	1492	1764	519
135	290	646	892	1257	1473	359
140	323	660	835	1082	1230	359
145	349	652	838	938	1056	249
150	374	652	848	916	946	249
155	395	644	810	905	933	174
160	413	646	761	838	881	174
165	427	616	707	756	788	96
170	439	564	671	690	701	96
175	446	499	564	575	603	28
180	429	429	429	429	429	28

Zonal Lumen Summary

Zone	% Lamp	% Luminaire
0-90	0.00	0.00
0-180	75.74	100.00

Efficiency = 75.7%

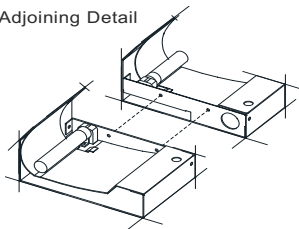
Peak Candela = 2458 @ 112.5°
Peak : Zenith Ratio = 5.7 : 1

Coefficients of Utilization (%)

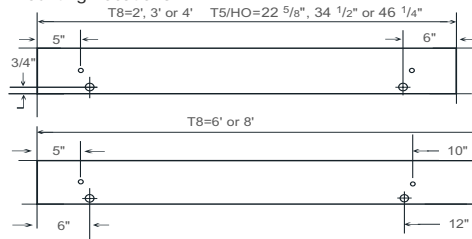
Floor	effective floor cavity reflectance = .20								
	Ceiling	80	70	50	50				
Wall	70	50	30	10	50				
RCR 0	72	72	72	62	62	62	42	42	42
1	66	63	60	57	56	53	51	49	37
2	60	54	50	47	51	47	43	40	32
3	54	48	43	39	46	41	37	34	28
4	50	42	37	33	42	36	32	28	25
5	45	37	32	28	39	32	27	24	22
6	42	33	28	24	35	28	24	21	20
7	38	30	24	20	32	25	21	18	15
8	35	27	21	18	30	23	18	15	13
9	32	24	19	15	28	21	16	13	12

installation

Adjoining Detail



Mounting Locations



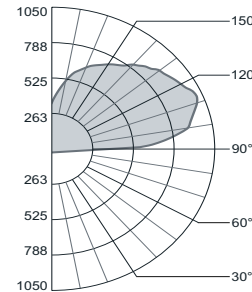
In an effort to continually provide the highest quality products, Prudential reserves the right to change design specifications and/or materials, without notice.

⁰³01 Prudential Lighting 1737 E. 22nd St. Los Angeles, CA 90058 phone 213.746.0360 fax 213.741.8590 www.prulite.com

photometric data

SC-1T8-04

Report # LSI16088 D=0.0% I=100.0%
Lamp Lumens: 2950 Input Watts: 31



Candlepower Summary

Vertical Angle	Horizontal Angle					Output Lumens
	0°	22.5°	45°	67.5°	90°	
90	2	138	316	518	556	248
95	17	258	493	704	757	248
100	44	360	605	855	917	328
105	81	373	695	903	974	328
110	118	382	717	959	1042	325
115	156	399	699	934	1044	325
120	192	422	685	887	986	287
125	227	451	672	852	937	287
130	260	481	669	820	897	245
135	292	509	653	798	857	245
140	319	530	660	756	827	197
145	349	547	663	739	778	197
150	373	545	664	725	759	142
155	393	536	652	709	734	142
160	410	520	637	679	703	90
165	424	502	592	635	660	90
170	434	483	538	560	584	24
175	440	460	485	486	500	24
180	430	430	430	430	430	24

Zonal Lumen Summary

Zone	% Lamp	% Luminaire
0-90	0.00	0.00
0-180	71.58	100.00

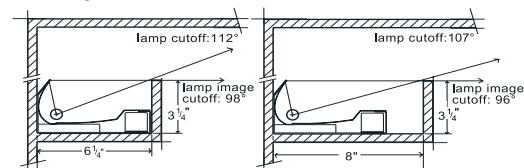
Efficiency = 71.6%

Peak Candela = 1053 @ 112.5°
Peak : Zenith Ratio = 2.4 : 1

Coefficients of Utilization (%)

Floor	effective floor cavity reflectance = .20									
	Ceiling	80	70	50	50					
Wall	70	50	30	10	50					
RCR 0	68	68	68	68	58	58	58	40	40	40
1	62	59	57	54	53	51	49	46	35	33
2	56	51	47	44	48	44	41	38	30	28
3	51	45	41	37	44	39	35	32	27	24
4	47	40	35	31	41	34	30	27	23	21
5	43	35	30	26	36	30	26	23	21	18
6	39	31	26	22	33	27	23	19	19	16
7	36	28	23	19	31	24	20	17	17	14
8	33	25	20	17	28	22	17	14	15	12
9	31	23	18	14	26	20	15	13	14	11

Mounting Details



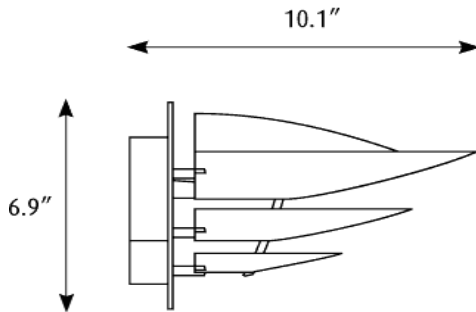
Distance from wall along ceiling

cove to ceiling	Peak Candela @ 112.5°	6 1/4" cove		8" cove	
		lamp	lamp image	lamp	lamp image
12"	27"	27"	70"	37"	91"
18"	42"	42"	112"	57"	148"
24"	57"	57"	155"	77"	205"

Appendix A: Lighting Equipment

Oslo Wall

Design : Kurt Nørregaard



Specification

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
Shades: Brushed aluminum or spun aluminum. Diffuser: . Back plate: Die cut steel.

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

Weight
Max. 7 lbs.

Label

1 | **Product code**
OSW

2 | **Light source**
1/ 26W/ 32W/ 42W/ CF GX24q-3/ 4

3 | **Voltage**
120-277V

4 | **Finish**
ALU
WHT

Specification notes:
a. Provided with one 120-277V electronic ballast

Info notes:
I. The comparable EU version has the following classification: Ingress Protection Code: IP20

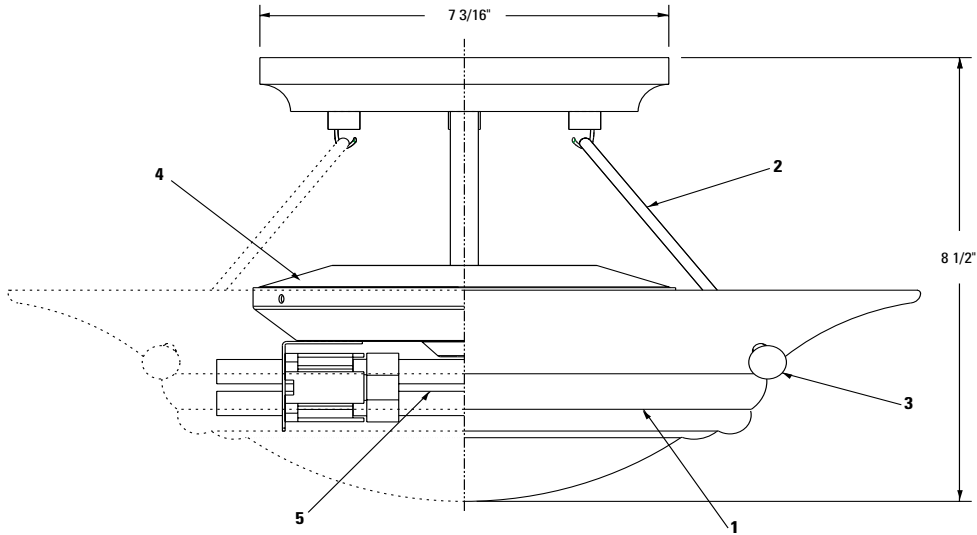
Appendix A: Lighting Equipment



Decorative Provence® 3040

Page 1 of 1

Suspended Indirect Close-To-Ceiling



Information

Catalog Number	Finish	Diffuser Dia. x Ht.	Mounting Rod Length	Ballast	Lamp
3040PB	Polished Brass	15 3/4" x 4"	5 1/2"	N/A	(2) A19 60W max.
3040PB218U		15 3/4" x 4"	5 1/2"	Univ. Electronic 120/277V	(2) 18W Quad 4-Pin

Features

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

Labels

UL listed suitable for damp locations.

Lamping

Incandescent: (2) A19 60W Max.

Compact fluorescent: (2) 18W Quad tube

	General Electric	Osram/Sylvania	Philips
4-Pin	F18DBX/SPX*/4P	CF 18DD/E/*	PL-C18W*/4P

* 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
Total Input Watts	42
Max. Line Current (Amps)	.35 / .15
Power Factor	> .98
Ballast Factor	1.05
THD	< 10%
Min. Starting Temps.	-20°C (-4°F)

Job Information

Type:

Job Name:

Cat. No.:

Lamp(s):

Notes:

Lightolier a Genlyte Thomas Company www.lightolier.com
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.
© 2002 Genlyte Thomas Group LLC (Lightolier Division) • A0902

LIGHTOLIER®

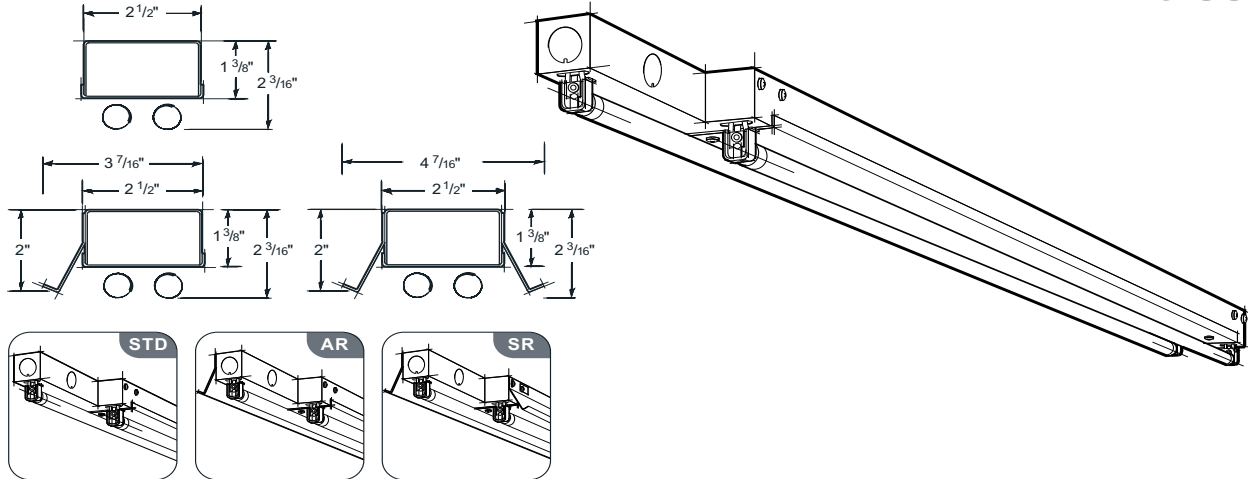
Project: The Franklin Care Center
Jennifer Curley
April 5, 2006

Fixture Type
F9

Appendix A: Lighting Equipment

Type
Job Name
Catalog Number

Strips & Industrials **P-T5-SS**



ordering

series	body style	lamp rows	nominal length	color/finish	circuiting	voltage	options	
P-T5-								
SS	staggered	STD standard	1T5	02'	BWE* white enamel	SC single circuit	120	AL
SS-TEL	staggered telescoping	AR asymmetric reflector	2T5	03'	YGW gloss white	DC* dual circuit (in-line)	277	EML*
		ARP asymmetric reflector perforated	1T5HO	04'	Y__ premium color	*2 lamp only	347*	EMH*
		SR symmetric reflector	2T5HO	06'	CC custom color		*T ₅ /HO only	DM
		SRP symmetric reflector perforated		08'	GLV galvanized			B__
			R__*		*standard			FH
			*row length When specifying row length, telescoping end modules are used.					*consult factory for fixture lengths < 4'

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 5/8" 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).

Prudential Lighting phone 213.746.0360 fax 213.741.8590 www.prulite.com

0815

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

Fixture Type
F10

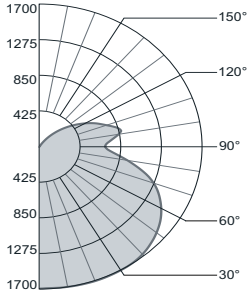
Appendix A: Lighting Equipment

P-T5-SS Strips & Industrials

photometric data

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

Report # LSI19352 D=81.7% I=18.3%
Lamp Lumens: 4500 Input Watts: 122



Candlepower Summary

Vertical Angle	Horizontal Angle					Output Lumens
	0°	22.5°	45°	67.5°	90°	
0	1693	1693	1693	1693	1693	164
5	1688	1683	1703	1695	1691	164
15	1624	1635	1680	1693	1701	471
25	1502	1538	1625	1679	1703	743
35	1326	1397	1539	1648	1692	953
45	1105	1219	1431	1581	1637	1080
55	849	1018	1289	1470	1537	1110
65	566	812	1115	1304	1374	1038
75	282	599	874	1045	1103	840
85	53	281	524	695	757	536
90	0	193	441	617	682	
95	0	256	509	676	736	488
105	0	152	489	748	844	474
115	0	63	339	564	650	320
125	0	1	191	373	446	179
135	0	0	59	191	245	74
145	0	0	0	35	68	13
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

Zonal Lumen Summary

Zone	% Lamp	% Luminaire
0-90	77.06	81.74
90-180	17.22	18.26

Efficiency = 94.3%

Luminance Summary (cd/m²)

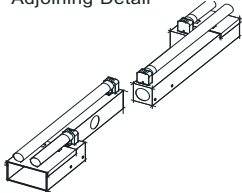
Angle	0°	45°	90°
45	26332	26142	27235
55	24932	26354	27893
65	22563	26817	28369
75	18383	26438	27370
85	10303	22386	24492

Coefficients of Utilization (%)

Floor Ceiling Wall	effective floor cavity reflectance = .20										
	80	70	50	30	10						
RCR 0	100	100	100	100	100	95	95	95			
1	97	92	87	83	92	88	83	79	80	77	74
2	87	78	71	65	83	75	69	63	69	64	59
3	79	68	60	54	75	65	58	52	60	54	49
4	72	60	51	45	68	58	50	43	53	46	41
5	65	52	44	37	62	50	42	36	46	39	34
6	60	47	38	32	57	45	37	31	41	34	29
7	55	42	33	27	52	40	32	26	37	30	25
8	51	37	29	23	48	36	28	23	33	26	22
9	47	34	25	20	44	32	25	19	30	23	18
10	43	30	23	18	41	29	22	17	27	21	16

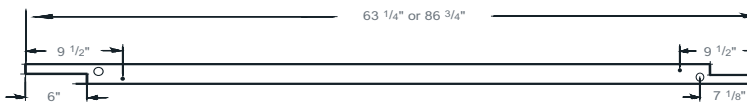
installation

Adjoining Detail

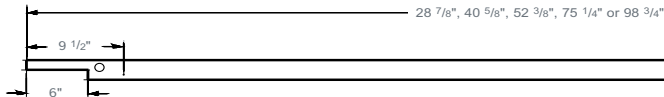


Mounting Locations

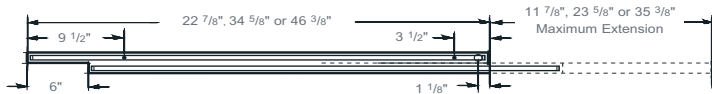
1 Lamp Fixtures



2 Lamp Fixtures



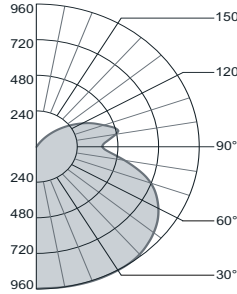
Telescoping Modules



photometric data

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

Report # LSI19353 D=81.8% I=18.2%
Lamp Lumens: 2610 Input Watts: 62



Candlepower Summary

Vertical Angle	Horizontal Angle					Output Lumens
	0°	22.5°	45°	67.5°	90°	
0	947	947	947	947	947	92
5	947	943	952	947	947	92
15	912	918	942	949	955	264
25	844	865	912	943	959	418
35	746	786	869	937	965	539
45	624	687	817	907	938	615
55	481	579	738	835	870	631
65	322	464	630	734	771	587
75	163	338	490	590	624	474
85	31	160	291	388	421	300
90	0	104	245	345	381	
95	0	142	286	379	414	273
105	0	85	267	409	461	261
115	0	39	190	313	358	179
125	0	5	113	214	252	103
135	0	0	43	116	146	46
145	0	0	1	32	50	10
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

Zonal Lumen Summary

Zone	% Lamp	% Luminaire
0-90	75.11	81.79
90-180	16.72	18.21

Efficiency = 91.8%

Luminance Summary (cd/m²)

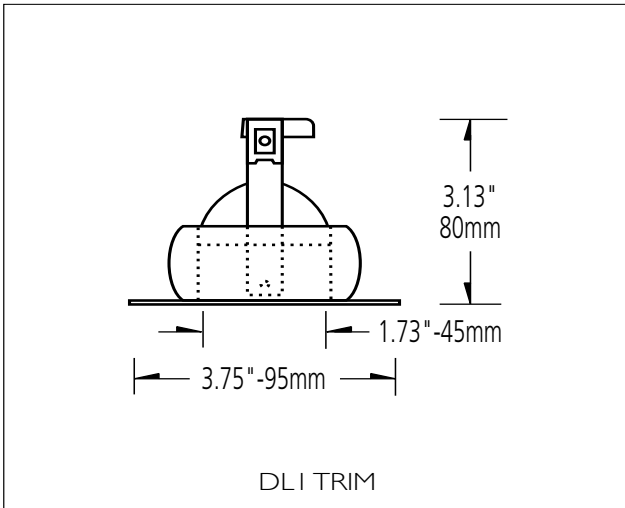
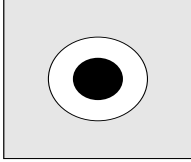
Angle	0°	45°	90°
45	14858	14916	15598
55	14122	15096	15782
65	12852	15158	15908
75	10584	14817	15477
85	5915	12417	13627

Coefficients of Utilization (%)

Floor Ceiling Wall	effective floor cavity reflectance = .20										
	80	70	50	30	10						
RCR 0	100	100	100	100	100	93	93	93			
1	94	89	85	81	90	86	81	77	78	75	72
2	85	76	70	64	81	73	67	62	67	62	58
3	77	66	59	52	73	64	57	51	59	53	48
4	70	58	50	44	67	56	48	42	52	45	40
5	64	51	42	36	60	49	41	35	45	38	33
6	58	45	37	31	55	44	36	30	40	33	28
7	53	41	32	27	51	39	31	26	36	29	24
8	49	36	28	23	47	35	27	22	32	26	21
9	45	33	25	19	43	31	24	19	29	23	18
10	42	30	22	17	40	28	21	17	26	20	16

Appendix A: Lighting Equipment

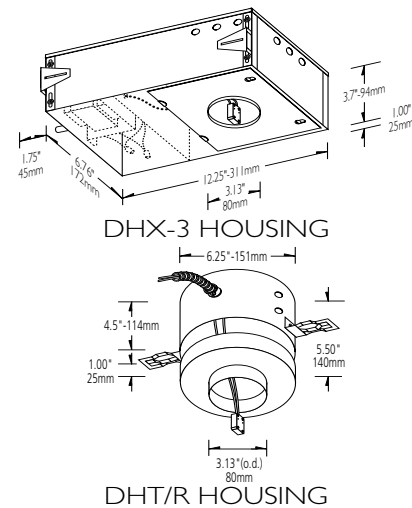
DLI - Fixed Compact RECESSED DOWNLIGHT



PRODUCT SPECIFICATION

Cat. No. Finish

DLIW	Matte White
DLIB	Matte Black
DLIC	Polished Chrome
DLIG	Polished Brass



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

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

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 logic.

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.

LUCIFER
LIGHTING COMPANY
414 Live Oak Street
San Antonio, Texas 78202
Phone 210 227-7329
FAX 210 227-4967
www.luciferlighting.com

©2004 Lucifer Lighting Company

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

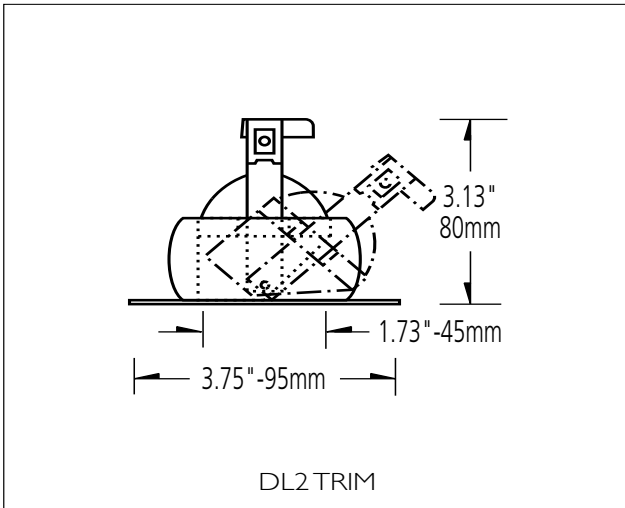
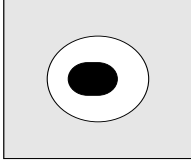
0925-1004

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

Fixture Type
F11

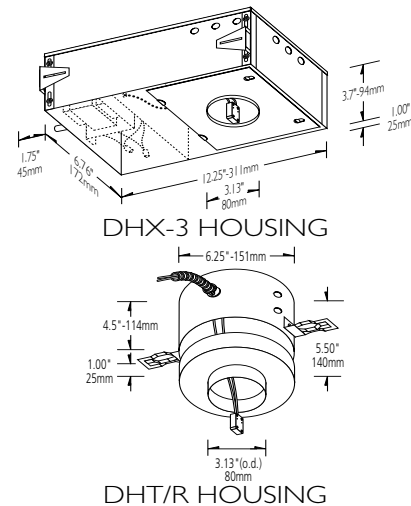
Appendix A: Lighting Equipment

DL2 - Adjustable Oval Compact RECESSED DOWNLIGHT



PRODUCT SPECIFICATION

Cat. No.	Finish
DL2W	Matte White
DL2B	Matte Black
DL2C	Polished Chrome
DL2G	Polished Brass



GENERAL DESCRIPTION

Lucifer recessed downlight is an adjustable low voltage fixture with **flush trim plate**. Oval opening offers 45° aiming from vertical and is lockable 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

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

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 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.

LUCIFER
LIGHTING COMPANY
414 Live Oak Street
San Antonio, Texas 78202
Phone 210 227-7329
FAX 210 227-4967
www.luciferlighting.com

©2004 Lucifer Lighting Company

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

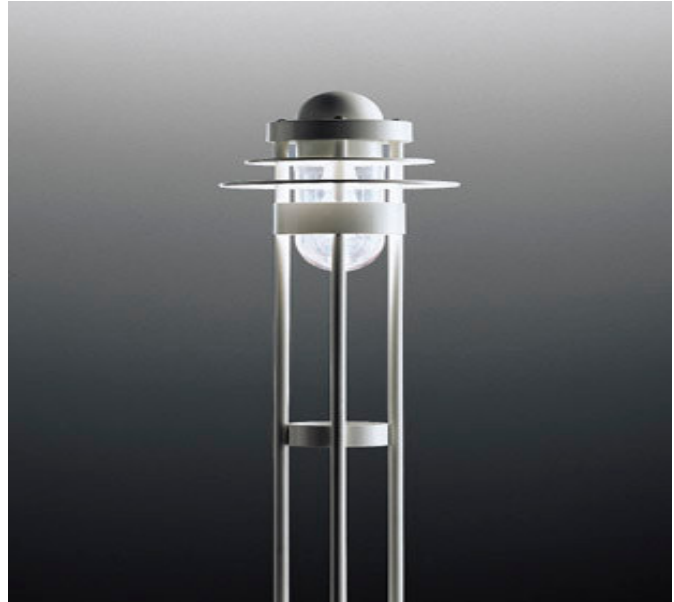
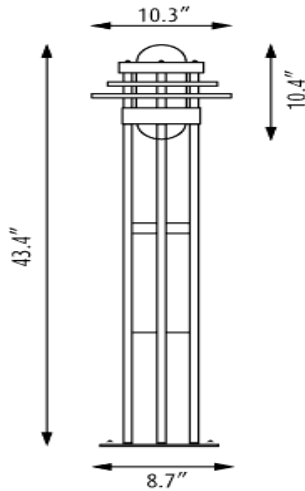
0927-1004

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

Fixture Type
F12

Saturn Bollard

Design: Jens Møller-Jensen



Specification

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

Shades: Spun steel. Endosure: Clear glass or white opal painted glass. Anti-glare ring: Extruded steel. Post: Extruded steel. Base plate: Spun steel.

Mounting

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

Weight

Max. 40 lbs.

Label

cJL, Wet location. IBEW.

- | | |
|---|---|
| 1 | Product code
SAB |
| 2 | Light source
1/ 100W/ A-19/ CL medium
1/ 32W/ CF GX24q-3
1/ 50W/ HPS/ ED-17 medium
1/ 50W/ MH/ ED-17 medium |
| 3 | Voltage
120-277V
120/ 277V
120V |
| 4 | Finish
GALV |

Specification notes:

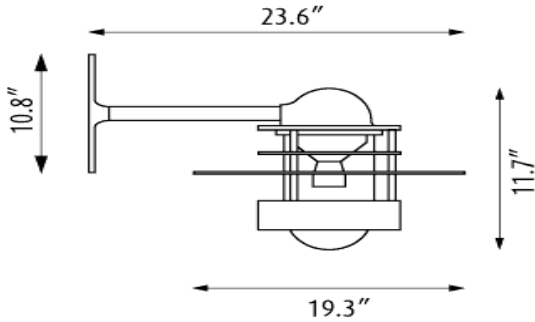
a. CF variant is provided with white opal glass lamp enclosure. b. HID and incandescent variants are provided with clear glass lamp enclosures. c. CF variant is provided with one 120-277V electronic ballast. d. HID variants are provided with one 120/ 277V F-can style ballast. e. Incandescent variant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

Info notes:

l. The comparable EU version has the following classification: Ingress Protection Code: IP44.

Orbiter Maxi Wall

Design: Jens Møller-Jensen



Specification

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

Enclosure: Injection molded clear polycarbonate, injection molded partly frosted polycarbonate or injection molded white opal polycarbonate. Saturn ring: Die cut aluminum. Anti-glare ring: Spun aluminum. Top: Die cast aluminum. Mounting plate: Die cast aluminum. Arm: Extruded aluminum.

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.

- | | |
|---|---|
| 1 | Product code
ORW-MAX |
| 2 | Light source
1/100W/HPS/ED-17 medium
1/100W/MH/ED-17 medium
1/150W/A-21/CL medium
1/26W/32W/42W/CF GX24q-3/4
1/70W/CMH/T-6 G12 |
| 3 | Voltage
120/ 208/ 240/ 277V
120-277V
120V
277V |
| 4 | Finish
NAT. PAINT. ALU.
NAT. RAW ALU.
WHT |

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 variant is 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

new in '05

avenue® b



FEATURES

Narrow 3" slot T5 fluorescent with opaque satin lens.

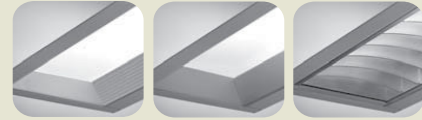
Shielding options include corrugated, solid regressed trim, concave louver as well as flush lens.

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.

shielding options



corrugated regress trim

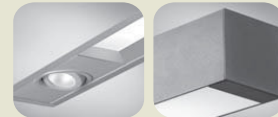
solid regress trim

concave louver



flush lens

companion luminaire

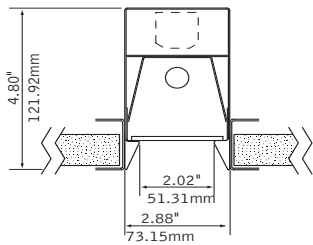


mr16

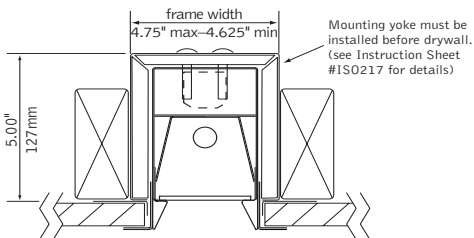
linear

DIMENSIONAL DATA

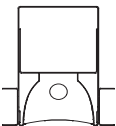
Grid Mount (Regress Trim Shown)



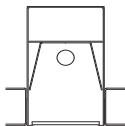
Drywall Flange (Regress Trim Shown)



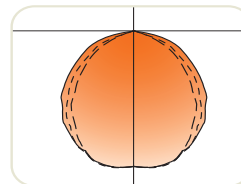
Louver



Flush Lens



PERFORMANCE



1-Lamp T5
60% Efficiency
709 cd @ 5°

See **Photometric** section for additional performance data.

november 2005

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

Fixture Type
F15

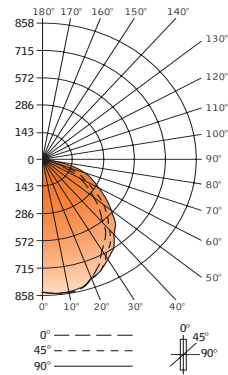
Appendix A: Lighting Equipment

regress with lens avenue® b



Filename: FAVBSR1T5.IES
 Catalog #: FAVB-SR-1T5-1C-120-S-G1-WH-4'
 Efficiency: 60%
 Test #: 12373.0

CANDLEPOWER DISTRIBUTION



Spacing 1.3
 Criterion: 1.2

Vertical Angle	0°	22.5°	45°	67.5°	90°	Zonal Lumens
0°	703	703	703	703	703	703
5°	706	707	707	707	709	68
15°	705	705	703	702	702	199
25°	646	646	640	623	614	294
35°	573	572	541	511	503	340
45°	482	470	420	385	372	330
55°	365	340	285	250	238	264
65°	253	216	163	128	112	171
75°	136	97	43	39	37	70
85°	32	11	11	11	11	15
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt
0°-30°	561	19.3	32.0
0°-40°	900	31.0	51.4
0°-60°	1494	51.5	85.4
0°-90°	1750	60.3	100.0
Total Luminaire	0°-180° 1750	60.3	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	8112	7068	6261
55°	7573	5913	4938
65°	7124	4590	3154
75°	6253	1977	1701
85°	4369	1502	1502

CO-EFFICIENTS OF UTILIZATION

Floor	80				70				20				50				30				10				00				
	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30
RCR 0	72	72	72	72	72	70	70	70	70	70	67	67	67	67	67	64	64	64	64	64	62	62	62	62	60	60	60	60	
1	67	64	62	60	60	65	63	59	61	57	58	56	56	54	53	52	51	51	51	51	47	46	46	46	44	43	43	43	
2	62	57	54	51	51	60	56	50	54	49	52	48	48	46	45	44	43	43	43	43	41	40	40	40	38	37	37	37	
3	57	51	47	44	44	56	51	43	49	43	47	42	42	40	39	38	38	38	38	37	36	36	36	34	33	33	33		
4	53	46	41	38	38	51	45	37	44	37	42	36	36	34	33	32	32	32	32	31	30	30	30	28	27	27	27		
5	48	41	36	32	32	47	40	32	39	32	38	32	32	30	29	28	28	28	28	27	26	26	26	24	23	23	23		
6	44	37	32	28	28	43	36	28	35	28	34	28	28	26	25	24	24	24	24	23	22	22	22	20	19	19	19		
7	41	33	28	25	25	40	33	25	32	25	31	24	24	22	21	20	20	20	20	19	18	18	18	16	15	15	15		
8	38	30	25	22	22	37	30	22	29	21	28	21	21	19	18	17	17	17	17	16	15	15	15	13	12	12	12		
9	35	27	22	19	19	34	27	19	26	19	25	19	19	17	16	15	15	15	15	14	13	13	13	11	10	10	10		
10	32	24	20	17	17	32	24	17	24	19	23	16	16	14	13	12	12	12	12	11	10	10	10	8	7	7	7		

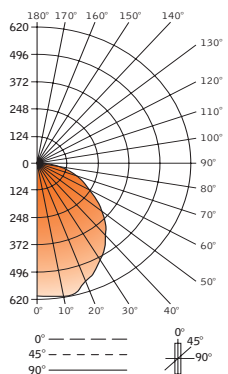
Numbers indicate percentage values of reflectivity.

flush lens avenue® b



Filename: FAVBFL1T5.IES
 Catalog #: FAVB-FL-1T5-1C-120-S-G1-WH-4'
 Efficiency: 59%
 Test #: 12397.0

CANDLEPOWER DISTRIBUTION



Spacing 1.3
 Criterion: 1.3

Vertical Angle	0°	22.5°	45°	67.5°	90°	Zonal Lumens
0°	610	610	610	610	610	610
5°	613	613	613	613	611	59
15°	616	616	616	615	615	175
25°	559	558	556	553	553	257
35°	490	489	487	484	483	306
45°	405	403	402	399	399	311
55°	304	302	299	299	298	269
65°	206	204	201	200	198	200
75°	110	108	108	107	108	114
85°	29	29	25	22	21	28
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt
0°-30°	490	16.9	28.5
0°-40°	796	27.4	46.3
0°-60°	1376	47.5	80.1
0°-90°	1718	59.3	100.0
Total Luminaire	0°-180° 1718	59.3	100.0

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	7474	7418	7363
55°	6916	6802	6779
65°	6360	6206	6113
75°	5546	5445	5445
85°	4342	3743	3144

CO-EFFICIENTS OF UTILIZATION

Floor	80				70				20				50				30				10				00				
	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30	10	Wall	70	50	30
RCR 0	71	71	71	71	71	69	69	69	66	66	63	63	60	60	59	59	59	59	59	56	54	54	52	51	51	51	51	51	
1	65	62	60	58	58	63	61	57	59	55	56	54	54	52	51	50	49	49	49	47	46	46	46	44	43	43	43	43	
2	60	55	51	48	48	58	54	48	52	46	50	45	45	43	42	41	41	41	41	39	38	38	37	35	34	34	34	34	
3	55	49	44	41	41	53	48	40	46	40	45	39	39	37	36	35	35	35	35	33	32	32	31	29	28	28	28	28	
4	50	44	39	35	35	49	43	35	41	34	40	34	34	32	31	30	30	30	30	28	27	27	26	24	23	23	23	23	
5	46	39	33	30	30	45	38	29	37	29	35	29	29	27	26	25	25	25	25	23	22	22	21	19	18	18	18	18	
6	42	35	29	26	26	41	34	26	33	25	32	25	25	23	22	21	21	21	21	19	18	18	16	15	15	15	15	15	
7	39	31	26	22	22	38	31	22	30	22	29	22	22	20	19	18	18	18	18	16	15	15	14	12	11	11	11	11	
8	36	28	23	19	19	35	27	19	27	19	26	19	19	17	16	15	15	15	15	13	12	12	11	9	8	8	8	8	
9	33	25	20	17	17	32	25	17	24	17	23	17	17	15	14	13	13	13	13	11	10	10	9	7	6	6	6	6	
10	31	23	18	15	15	30	22	15	22	15	21	15	15	13	12	11	11	11	11	9	8	8	7	5	4	4	4	4	

Numbers indicate percentage values of reflectivity.

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

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

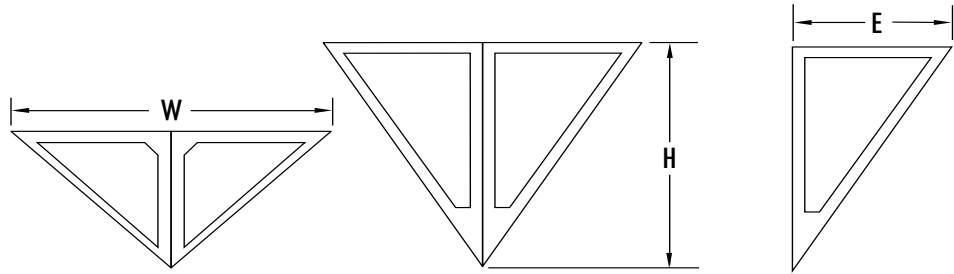
Fixture Type F15

Appendix A: Lighting Equipment



DS-44

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



Fixture No.	W	H	E	Material	Lamping		Acrylic
DS-44-12	12 ³ / ₄ "	10 ¹ / ₂ "	6 ³ / ₈ "	A, B or C	IN(1-100W)	PLC(1-13W)	W, X, V
DS-44-14	14"	11 ¹ / ₂ "	7"	A, B or C	IN(1-200W)	PLC(1-13W)	W, X, V

Sample Specification

DS - 44 - 12 B - PLC - W - 120
 Fixture Number Material Lamping Acrylic Voltage

SPECIFICATIONS

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

Manning Lighting, P.O. Box 1063, 1810 North Ave., Sheboygan, WI 53082 USA Phone: (920) 458-2184 Fax (920) 458-2491 Email: Info@ManningLtg.com

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

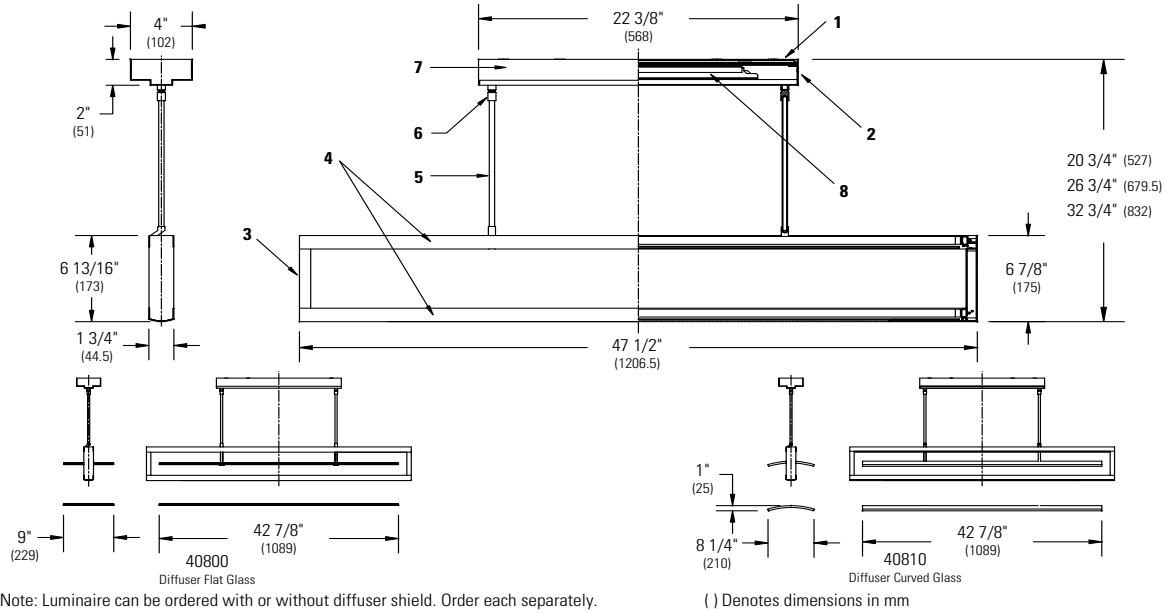
Fixture Type
F16



Architectural Decorative Soli Zontio **48228ALU**

Page 1 of 3

2 Light, T-5 Pendant



Fixture Ordering Information

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

Diffuser Ordering Information (Order diffuser separately)

Catalog No.	Description	Dimensions	Finish
40800	Flat Glass Diffuser (3/8" Thick)	9" W x 42 7/8" L	White ceramic coated top, etched bottom. Clear polished edges.
40810	Curved Glass Diffuser (3/8" Thick)	8 1/4" W x 42 7/8" L	Etched top and bottom. Clear polished edges.

Features

- Mounting Plate:** 18 GA. (.048) Galvanized steel for direct mounting to most junction boxes. Secondary mounting holes provided to mount directly to ceiling.
- End Cap:** (2) Die cast aluminum. See above for finish.
- End Cover:** (2) Die cast aluminum. See above for finish.
- Lamp Enclosure:** (2) Extruded aluminum. See above for finish.
- 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.
- Swivel:** (2) Meets California Earthquake codes.
- Housing:** Extruded aluminum. See above for finish.
- Ballast:** See below for details.

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.

	28 Watt		54 Watt	
	120V	277V	120V	277V
Total Input Watts	64	63	120	117
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: 0°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

Job Information	Type:
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.
© 2004 Genlyte Group LLC • A0904

LIGHTOLIER®

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

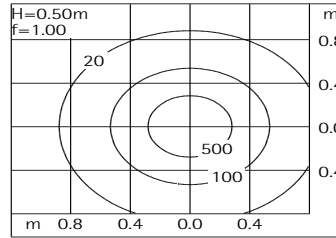
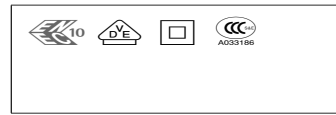
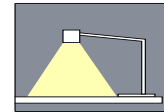
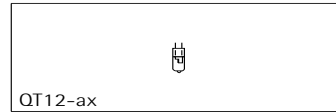
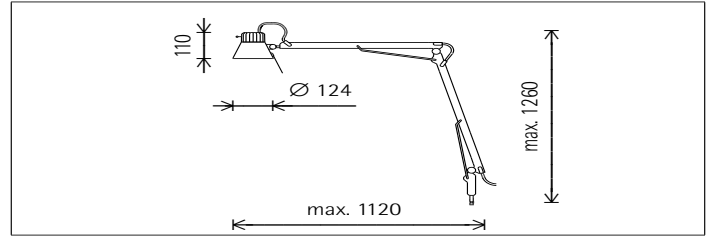
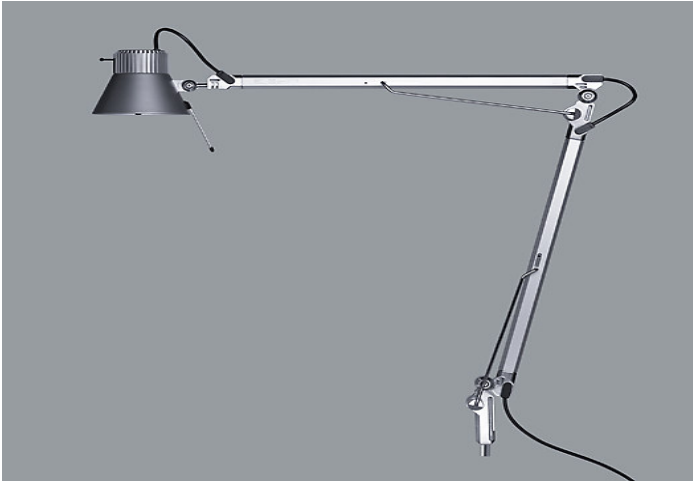
Fixture Type
F17

Appendix A: Lighting Equipment

ERCO

Lucy Task light

for low-voltage halogen lamps



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

Product description

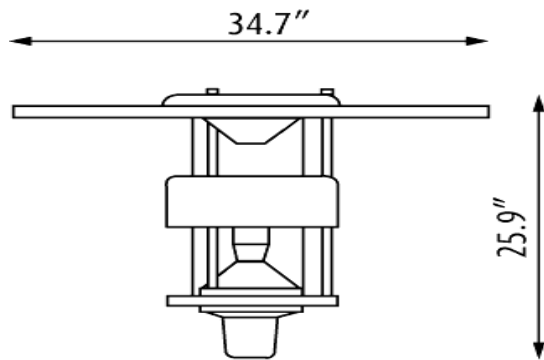
Light head: aluminium, anodised.
Switch. Cast aluminium lampholder carrier, designed as heat sink.
Articulated arm: aluminium profile, anodised. Stabilising of forces by means of visible steel connecting struts with internal springs.
Hinges: cast aluminium. Plastics elements for optimum conductor routing visible within range of joints, however otherwise concealed.
Mounting stud with mounting and safety ring for mounting to base, to be ordered separately.
Cable with 3-pin plug and transformer, L 2,500mm.
Reflector: aluminium, silver anodised, mirror-finish. Frosted spread lens.
Weight 1.90kg

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/33170.000

Satellit Maxi

Design: Jens Møller-Jensen



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
dJL, Wet location. IBEW.

Specification

- | | | |
|---|--|--|
| 1 | Product code
SATT-MAX | Specification notes:
a. CF variant is provided with a universal wattage socket and a 120-277V integral electronic ballast.
b. HID 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 grey 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.

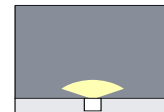
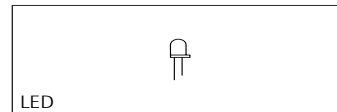
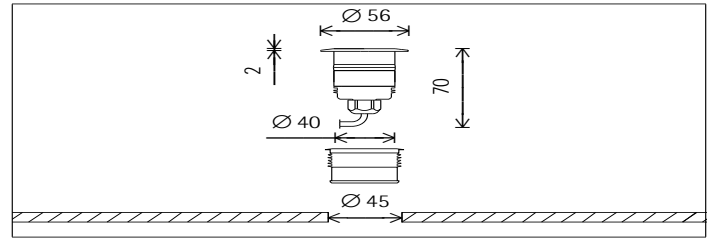
Info notes:
I. Enclosure is U.V. stabilized polycarbonate. II. For pole selection, refer to Pole Guide.
III. The comparable EU version has the following classification: Ingress Protection Code: IP44. |
| 2 | Light source
1/ 150W/ HPS/ ED-23 ½ mogul
1/ 175W/ MH/ ED-28 mogul
1/ 250W/ MH/ ED-28 mogul
1/ 26W/ 32W/ 42W/ CF GX24q-3/ 4 | |
| 3 | Voltage
120-277V
120/ 277V | |
| 4 | Finish
GRAPHITE
GREY
WHT | |
| 5 | Transition to pole
T-DRA-5"-3"
T-RSA-4.5" | |

Appendix A: Lighting Equipment

ERCO

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

1/3

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

Fixture Type
F20

Appendix A: Lighting Equipment

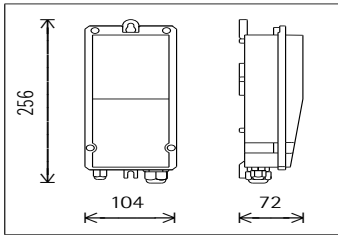
ERCO

LED orientation luminaire

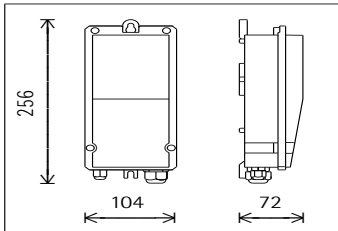
Accessories



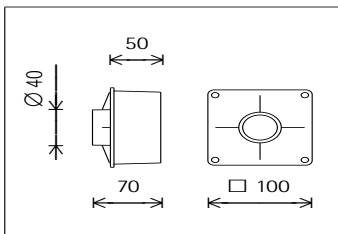
33858.000
Control gear
For max. 10 orientation luminaires.
Input voltage 100V-240V AC,
120V-250V DC.
Output voltage 30V DC.
Adjustable functions: switching
and dimming. Gradual flashing and
flashing at three speeds.
Protection mode IP65: dust-proof
and water-jet proof.
Weight 0.60kg
☞ ☞ ☞ ☞ ☞ SELV
IP65



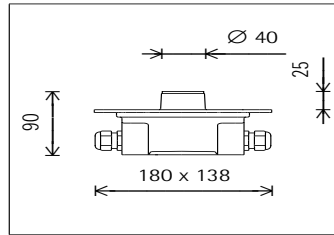
33859.000
Control gear
For max. 10 orientation luminaires.
Input voltage 100V-240V AC,
120V-250V DC.
Output voltage 30V DC.
Additional 24V DC input.
Adjustable functions: switching
and dimming. Gradual flashing and
flashing at three speeds.
Protection mode IP65: dust-proof
and water-jet proof.
Weight 0.60kg
☞ ☞ ☞ ☞ ☞ SELV
IP65



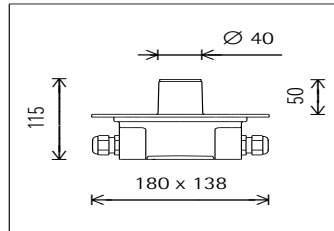
33873.000
Recessed housing
For mounting in plaster.



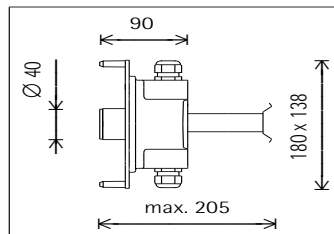
33893.000
Recessed housing IP67
For installation in concrete floors
or compressed natural ground with
25mm floor covering.
Cast aluminium, black double-
powder-coated.
2 cable entries with IP67 threads.
Through-wiring possible. 4-pole
terminal block. Cable, L 300mm.
Protection mode IP67: dust-proof
and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



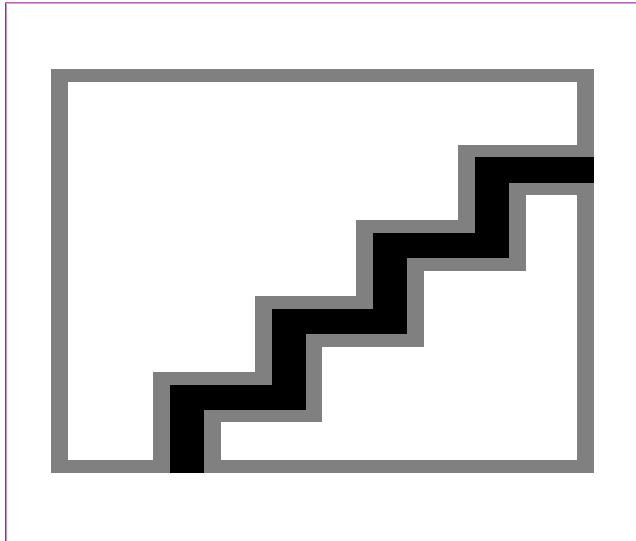
33894.000
Recessed housing IP67
For installation in concrete floors
or compressed natural ground with
50mm floor covering.
Cast aluminium, black double-
powder-coated.
2 cable entries with IP67 threads.
Through-wiring possible. 4-pole
terminal block. Cable, L 300mm.
Protection mode IP67: dust-proof
and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



LED orientation luminaire
33782.000



MasterColor CDM 150W/830 Med ED17 CL ALTO

Product family description
Range of high-efficiency long life ceramic metal halide lamps with a stable color over life time and a crisp, sparkling light.

Features/Benefits

- Excellent color rendering.
- Superior color stability over life within \pm 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 \pm 5% of rated ballast line volts for reactor type and \pm 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

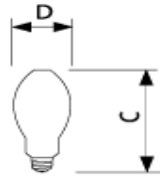
Product Number	130229
Full product name	MasterColor CDM 150W/830 Med ED17 CL ALTO
Ordering Code	MHC150/U/M/3K ALTO
Pack type	1 Sleeve Open End
Pieces per pack	1
Packs per case	12
Pack UPC	046677130220
EAN2US	
Case Bar Code	50046677130225

PHILIPS

Appendix A: Lighting Equipment

31/3

Product data	
Successor Product number	
Wattage[W]	1 50W
Color Code	830 [CCT of 3000K]
Base	Med [Medium]
Bulb	ED17 [Diameter: 2.125 inch]
Bulb Finish	CL [Clear]
Feature	ALTO [ALTO®]
Base Information	Brass[Brass Base]
Bulb Material	Hard Glass
Operating Position	Universal[Any or Universal (U)]
Packing Type	1SL[1 Sleeve Open End]
Packing Configuration	12
Rated Avg. Life[hr]	16000
ANSI Code HID	M142/M102/E
Lamp Voltage[V]	95
Mercury (Hg) Content[mg]	15
Color Rendering Index[Ra8]	85
Color Designation	White
Color Temperature[K]	3000
Initial Lumens[Lm]	14000
Design Mean Lumens[Lm]	10500
Light Center Length L[in]	3.348
Max Overall Length (MOL) – C[in]	5.438
Diameter D[in]	2.125


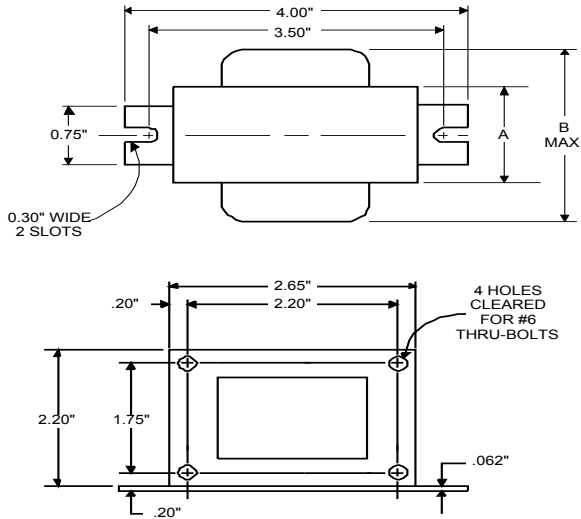

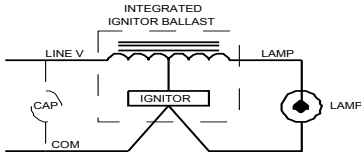


Data not (yet) available

CDM ED17



Appendix A: Lighting Equipment

	Metal Halide Lamp Ballast	Catalog Number 71A5437BP For 150W M102 60 Hz R-HPF Status: Active																																																																																																																																																																																																																								
DIMENSIONS AND DATA																																																																																																																																																																																																																										
<p style="text-align: center;">2 5/8 X 2 3/16 CORE</p> 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>INPUT VOLTS</td> <td style="text-align: right;">277</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CIRCUIT TYPE</td> <td style="text-align: right;">R-HPF</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>POWER FACTOR (min)</td> <td style="text-align: right;">90%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>REGULATION</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Line Volts</td> <td style="text-align: right;">±5%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Lamp Watts</td> <td style="text-align: right;">±10%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LINE CURRENT (Amps)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Operating.....</td> <td style="text-align: right;">0.63</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Open Circuit.....</td> <td style="text-align: right;">1.50</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Starting.....</td> <td style="text-align: right;">0.70</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>UL TEMPERATURE RATINGS</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Insulation Class</td> <td style="text-align: right;">H(180°C)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Coil Temperature Code</td> <td style="text-align: right;">1029</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MIN. AMBIENT STARTING TEMP.</td> <td style="text-align: right;">-20°F or -30°C</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NOM. OPEN CIRCUIT VOLTAGE</td> <td style="text-align: right;">277</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>INPUT VOLTAGE AT LAMP DROPOUT.....</td> <td style="text-align: right;">170</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>INPUT WATTS</td> <td style="text-align: right;">173</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RECOMMENDED FUSE (Amps).....</td> <td style="text-align: right;">5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CORE and COIL</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Dimension (A)</td> <td style="text-align: right;">2.50</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Dimension (B)</td> <td style="text-align: right;">4.00</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Weight (lbs.)</td> <td style="text-align: right;">4.2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Lead Lengths</td> <td style="text-align: right;">12"</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CAPACITOR REQUIREMENT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Microfarads</td> <td style="text-align: right;">14.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Volts (min.)</td> <td style="text-align: right;">280</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Fault Current Withstand (amps)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>High Potential Test (Volts)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 1 minute</td> <td style="text-align: right;">2000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 2 seconds</td> <td style="text-align: right;">2500</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Open Circuit Voltage Test (Volts)</td> <td style="text-align: right;">250-305</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Short-Circuit Current Test (Amps)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Secondary Current</td> <td style="text-align: right;">2.00-2.50</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Input Current.....</td> <td style="text-align: right;">0.50</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">0.75</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		INPUT VOLTS	277					CIRCUIT TYPE	R-HPF					POWER FACTOR (min)	90%					REGULATION						Line Volts	±5%					Lamp Watts	±10%					LINE CURRENT (Amps)						Operating.....	0.63					Open Circuit.....	1.50					Starting.....	0.70					UL TEMPERATURE RATINGS						Insulation Class	H(180°C)					Coil Temperature Code	1029					MIN. AMBIENT STARTING TEMP.	-20°F or -30°C					NOM. OPEN CIRCUIT VOLTAGE	277					INPUT VOLTAGE AT LAMP DROPOUT.....	170					INPUT WATTS	173					RECOMMENDED FUSE (Amps).....	5					CORE and COIL						Dimension (A)	2.50					Dimension (B)	4.00					Weight (lbs.)	4.2					Lead Lengths	12"					CAPACITOR REQUIREMENT						Microfarads	14.0					Volts (min.)	280					Fault Current Withstand (amps)						60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)						High Potential Test (Volts)						1 minute	2000					2 seconds	2500					Open Circuit Voltage Test (Volts)	250-305					Short-Circuit Current Test (Amps)						Secondary Current	2.00-2.50					Input Current.....	0.50						0.75				
INPUT VOLTS	277																																																																																																																																																																																																																									
CIRCUIT TYPE	R-HPF																																																																																																																																																																																																																									
POWER FACTOR (min)	90%																																																																																																																																																																																																																									
REGULATION																																																																																																																																																																																																																										
Line Volts	±5%																																																																																																																																																																																																																									
Lamp Watts	±10%																																																																																																																																																																																																																									
LINE CURRENT (Amps)																																																																																																																																																																																																																										
Operating.....	0.63																																																																																																																																																																																																																									
Open Circuit.....	1.50																																																																																																																																																																																																																									
Starting.....	0.70																																																																																																																																																																																																																									
UL TEMPERATURE RATINGS																																																																																																																																																																																																																										
Insulation Class	H(180°C)																																																																																																																																																																																																																									
Coil Temperature Code	1029																																																																																																																																																																																																																									
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C																																																																																																																																																																																																																									
NOM. OPEN CIRCUIT VOLTAGE	277																																																																																																																																																																																																																									
INPUT VOLTAGE AT LAMP DROPOUT.....	170																																																																																																																																																																																																																									
INPUT WATTS	173																																																																																																																																																																																																																									
RECOMMENDED FUSE (Amps).....	5																																																																																																																																																																																																																									
CORE and COIL																																																																																																																																																																																																																										
Dimension (A)	2.50																																																																																																																																																																																																																									
Dimension (B)	4.00																																																																																																																																																																																																																									
Weight (lbs.)	4.2																																																																																																																																																																																																																									
Lead Lengths	12"																																																																																																																																																																																																																									
CAPACITOR REQUIREMENT																																																																																																																																																																																																																										
Microfarads	14.0																																																																																																																																																																																																																									
Volts (min.)	280																																																																																																																																																																																																																									
Fault Current Withstand (amps)																																																																																																																																																																																																																										
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)																																																																																																																																																																																																																										
High Potential Test (Volts)																																																																																																																																																																																																																										
1 minute	2000																																																																																																																																																																																																																									
2 seconds	2500																																																																																																																																																																																																																									
Open Circuit Voltage Test (Volts)	250-305																																																																																																																																																																																																																									
Short-Circuit Current Test (Amps)																																																																																																																																																																																																																										
Secondary Current	2.00-2.50																																																																																																																																																																																																																									
Input Current.....	0.50																																																																																																																																																																																																																									
	0.75																																																																																																																																																																																																																									
<p>Capacitor: 7C140M33-R</p>  <p>Capacitance: 14 Dia/Oval Dim: 1.5 Height: 2.9 Temp Rating: 105°C</p>	<p style="text-align: center;">Wiring Diagram:</p>  <p style="text-align: center;">Fig. H</p>																																																																																																																																																																																																																									
<p>Ignitor: INTEGRAL</p> <p>An ignitor integral to the core and coil assembly is used to start the lamp.</p> <p>Ballast to Lamp Distance (BTL) = 2 feet Temp Rating: 125°C</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Order Suffix</th> <th style="text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">500DB</td> <td>Ballast With Integral Igniter and Dry Film Capacitor</td> </tr> <tr> <td style="text-align: center;">510DB</td> <td>Ballast w/Welded Bracket, Integral Igniter & Dry Film Cap.</td> </tr> <tr> <td style="text-align: center;">600B</td> <td>Ballast and Integral Igniter, No Capacitor</td> </tr> <tr> <td style="text-align: center;">610B</td> <td>Ballast w/Welded Bracket, Integral Igniter, No Capacitor</td> </tr> </tbody> </table>		Order Suffix	Description	500DB	Ballast With Integral Igniter and Dry Film Capacitor	510DB	Ballast w/Welded Bracket, Integral Igniter & Dry Film Cap.	600B	Ballast and Integral Igniter, No Capacitor	610B	Ballast w/Welded Bracket, Integral Igniter, No Capacitor																																																																																																																																																																																																														
Order Suffix	Description																																																																																																																																																																																																																									
500DB	Ballast With Integral Igniter and Dry Film Capacitor																																																																																																																																																																																																																									
510DB	Ballast w/Welded Bracket, Integral Igniter & Dry Film Cap.																																																																																																																																																																																																																									
600B	Ballast and Integral Igniter, No Capacitor																																																																																																																																																																																																																									
610B	Ballast w/Welded Bracket, Integral Igniter, No Capacitor																																																																																																																																																																																																																									
Data is based upon tests performed by Advance Transformer in a controlled environment. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.																																																																																																																																																																																																																										

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

05/15/03

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

Lamps and Ballasts

Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.do>

[Return to: DULUX D/E \(double, 4-Pin\)](#)

[Print Page](#)



Product Number: 20721
Order Abbreviation: CF13DD/E/830
General Description: DULUX 13W double compact fluorescent lamp with 4-pin base, integral EOL, 3000K color temperature, 82 CRI, for use with electronic and dimming ballasts, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	CF13DDE830 91V 50/CS 1/SKU
Average Rated Life (hr)	12000
Base	G24Q-1
Bulb	T4
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	3000
Family Brand Name	Dulux® D/E
Industry Standards	IEC 60901- 2513
Initial Lumens at 25C	900
Mean Lumens at 25C	774
Maximum Overall Length - MOL (in)	5.2
Maximum Overall Length - MOL (mm)	131
NEMA Generic Designation (current)	CFQ26W/G24Q/830
Nominal Wattage (W)	13.00

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.
- 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

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.do>

[Return to: DULUX D/E \(double, 4-Pin\)](#)

[Print Page](#)



Product Number: 20724
Order Abbreviation: CF18DD/E/830
General Description: 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

Product Information

Abbrev. With Packaging Info.	CF18DDE830 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	989
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

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.
- 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

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.do>

[Return to: DULUX T/E/IN \(amalgam, triple, 4-Pin\)](#)

[Print Page](#)



Product Number: 20884
Order Abbreviation: CF32DT/E/IN/830
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

Product Information

Abbrev. With Packaging Info.	CF32DTEIN830 50/CS 1/SKU
Average Rated Life (hr)	12000
Base	GX24Q-3
Bulb	T4
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	3000
Family Brand Name	Dulux® T/E
Industry Standards	IEC 60901- 7432
Initial Lumens at 25C	2400
Mean Lumens at 25C	2064
Maximum Overall Length - MOL (in)	5.6
Maximum Overall Length - MOL (mm)	142
NEMA Generic Designation (current)	CFR32W/GX24Q/830
NEMA Generic Designation (old)	CFM32W/GX24Q/830
Nominal Wattage (W)	32.00

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

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

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.

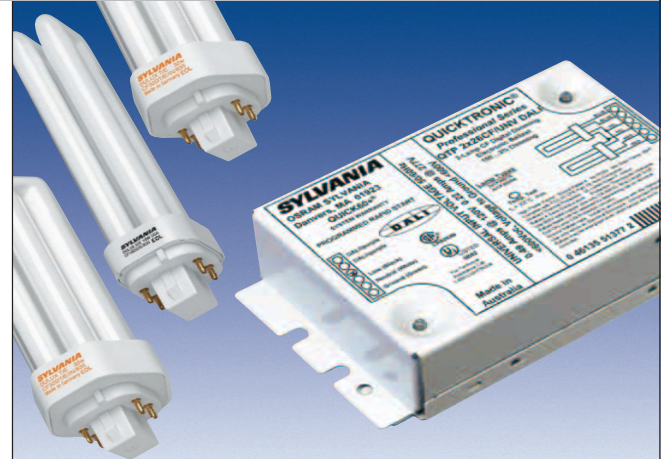
SYLVANIA QUICKTRONIC DALI Dimming combines digital control technology with full-range continuous dimming to provide a new level of lighting system performance. This allows for greater flexibility and control of the lighting environment than can be achieved with traditional 0-10VDC dimming systems. The 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 Information

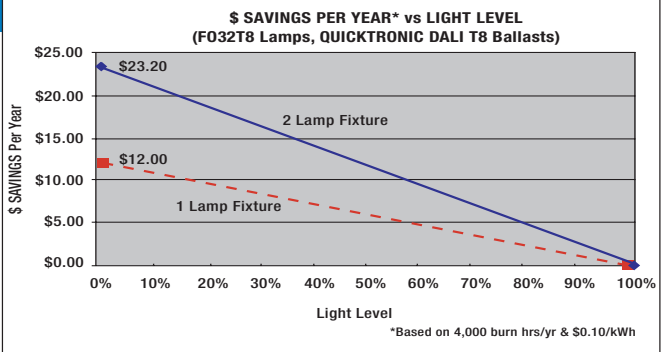
Programmed rapid start ballasts provide optimum starting conditions to provide up to 100,000 switching cycles for use on occupancy sensor and building control system applications. Individual addressability allows the user to dim any particular fixture or groups of fixtures at one time. Simple controller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



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.

Setting the standard for quality, SYSTEM CF-DALI is also covered by our QUICK 60+, warranty, the first and most comprehensive system warranty in the industry.



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.

Appendix A: Lighting Equipment

Electronic DALI CF/DL40 (40TT5) Fluorescent Controllable Lighting Systems

CF/DL40 DALI UNV VOLTAGE

Item Number	Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (Watts)	System Efficacy (lm/W)
51370	QTP 1x18CF/UNV DALI	120-277	0.18/0.08	18W DD/E, T/E	1200	1	1.00 0.03	1200 35	20	60
51372	QTP 2x18CF/UNV DALI	120-277	0.33/0.14	18W DD/E, T/E	1200	2	1.00 0.03	2400 70	39/38	61/63
51375	QTP 1x26CF/UNV DALI	120-277	0.24/0.10	26W DD/E, T/E	1800	1	1.00 0.03	1800 55	28	64
51377	QTP 2x26CF/UNV DALI	120-277	0.49/0.22	26W DD/E, T/E	1800	2	1.00 0.03	3600 110	55/54	65/67
51380	QTP 1x32CF/UNV DALI	120-277	0.34/0.15	32W DT/E	2400	1	1.00 0.03	2400 70	38	63
51382	QTP 2x32CF/UNV DALI	120-277	0.60/0.26	32W DT/E	2400	2	1.00 0.03	4800 140	71/70	68/69
51384	QTP 1x42CF/UNV DALI	120-277	0.43/0.19	42W DT/E	3200	1	1.00 0.03	3200 95	49	65
51386	QTP 2x42CF/UNV DALI	120-277	0.82/0.36	42W DT/E	3200	2	1.00 0.03	6400 190	92/91	69/70
51390	QTP 1x40TT5/UNV DALI	120-277	0.41/0.17	40W DL	3150	1	1.00 0.03	3150 95	45/44	70/72
51392	QTP 2x40TT5/UNV DALI	120-277	0.83/0.37	40W DL	3150	2	1.00 0.03	6300 190	97/94	65/67

Performance Guide

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.

Specifications

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

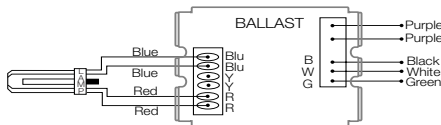
CF Dimensions, Packaging & Wiring:

Units	L	ML	W	H
inches	4.95	4.57	2.93	1.35
mm	125.7	116.1	74.4	34.3

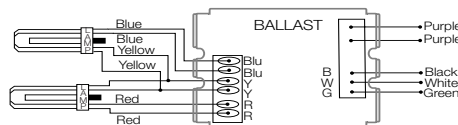
Packaging:

Quantity: 10 pieces/case
 Weight: 1.1 lbs each (approx.)

Metal Case 1 Lamp



Metal Case 2 Lamp

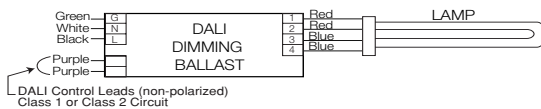


DL Dimensions, Packaging & Wiring:

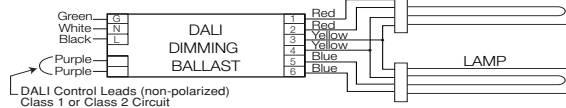
Units	L	ML	W	H
inches	18.05	17.70	1.18	1.18
mm	458.5	449.6	30.0	30.0

Packaging:

Quantity: 25 pieces/case
 Weight: 1.2 lbs each (approx.)



DL40 1-Lamp DALI



DL40 2-Lamp DALI

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.

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

Ordering Guide

Item Number: 51377 QTP 2 x 26CF / UNV DALI
 QUICKTRONIC PROFESSIONAL
 Number of Lamps: _____
 System Type - DALI
 Line Voltage (120-277V)
 Primary Lamp Wattage

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
 1-800-LIGHTBULB (1-800-544-4828)
 www.sylvania.com

the system solution®

Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: Pentron Standard](#)

[Print Page](#)



Product Number: 20868
Order Abbreviation: FP28/830/ECO
General Description: 28W, T5 PENTRON fluorescent lamp, 3000K color temperature, rare earth phosphor, 82 CRI, ECOLOGIC

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](#)



Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[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

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: TRU-AIM® MR16](#)

[Print Page](#)



Product Number: 54200
Order Abbreviation: 20MR16/FL40(BAB) 12V
General Description: Tungsten Halogen Tru-Aim MR16 STANDARD UV-Stop Capsule With Axial Filament, Dichroic Reflector GU5.3 Bi-Pin Base 20Watt 12Volt Flood Beam (BAB)

Product Information

Abbrev. With Packaging Info.	20MR16FL40BAB 12V 20/CS 1/SKU
ANSI Code	BAB
Average Rated Life (hr)	4000
Base	GU5.3 Bipin
Beam Angle (deg)	40
Beam Type	FL
Bulb	MR16
Centerbeam Candlepower (cp)	700
Class	C (gas)
Color Rendering Index (CRI)	100
Color Temperature/CCT (K)	3000
Diameter (in)	2
Diameter (mm)	50.8
Ecologic	YES
Family Brand Name	TRU-AIM Standard
Filament	AXIAL
Horizontal Beam Angle (deg)	40
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	20.00
Vertical Beam Angle (deg)	40

Additional Product Information

[Product Documents, Graphs, and Images](#)

[Packaging Information](#)



Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: TRU-AIM® MR16](#)

[Print Page](#)



Product Number: 58576
Order Abbreviation: 20MR16/NSP/RP(ESX) 12V
General Description: Tungsten Halogen Tru-Aim MR16 STANDARD UV-Stop Capsule With Axial Filament, Dichroic Reflector GU5.3 Bi-Pin Base 20Watt 12Volt Narrow Spot Beam (ESX) Retail Pack

Product Information

Abbrev. With Packaging Info.	20MR16NSRPESX 12V 6/CS 1/SKU
ANSI Code	ESX
Average Rated Life (hr)	4000
Base	GU5.3 Bipin
Beam Angle (deg)	8
Beam Type	NSP
Bulb	MR16
Centerbeam Candlepower (cp)	6000
Class	C (gas)
Color Rendering Index (CRI)	100
Color Temperature/CCT (K)	3000
Diameter (in)	2
Diameter (mm)	50.8
Ecologic	YES
Family Brand Name	TRU-AIM Standard
Filament	AXIAL
Horizontal Beam Angle (deg)	8
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	20.00
Vertical Beam Angle (deg)	8

Additional Product Information

[Product Documents, Graphs, and Images](#)

[Packaging Information](#)



Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: TRU-AIM® MR16](#)

[Print Page](#)



Product Number: 54208
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)

Product Information

Abbrev. With Packaging Info.	50MR16NSP12EXT 12V 20/CS 1/SKU
ANSI Code	EXT
Average Rated Life (hr)	4000
Base	GU5.3 Bipin
Beam Angle (deg)	12
Beam Type	NSP
Bulb	MR16
Centerbeam Candlepower (cp)	11000
Class	C (gas)
Color Rendering Index (CRI)	100
Color Temperature/CCT (K)	3000
Diameter (in)	2
Diameter (mm)	50.8
Ecologic	YES
Family Brand Name	TRU-AIM Standard
Filament	AXIAL
Horizontal Beam Angle (deg)	12
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	50.00
Vertical Beam Angle (deg)	12

Additional Product Information

[Product Documents, Graphs, and Images](#)

[Packaging Information](#)



Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: STARLITE® Bi-Pin](#)

[Print Page](#)



Product Number: 58676
Order Abbreviation: 50T4Q/CL/AX 12V
General Description: Tungsten Halogen Quartz Bi-Pin STARLITE Low Pressure Clear Finish UV-Stop With Axial Filament GY6.35 Bi-Pin Base 50Watt 12Volt 4000Hr Lamp Life

Product Information

Abbrev. With Packaging Info.	50T4QCLAX 12V 40/CS 1/SKU
Approx. Lumens	910
Average Rated Life (hr)	4000
Base	GY6.35 Bipin
Bulb	T4
Class	C (gas)
Color Rendering Index (CRI)	100
Color Temperature/CCT (K)	3000
Diameter (in)	0.5
Diameter (mm)	12.7
Ecologic	YES
Family Brand Name	STARLITE® Bi-Pin
Filament	AXIAL
Lamp Finish	Clear
Light Center Length - LCL (in)	1.125
Light Center Length - LCL (mm)	28.575
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	50.00

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.

[Print Page](#)

Appendix A: Lighting Equipment

Product Details

<http://ecom.mysylvania.com/sylvaniab2c/catalog/updateItems.c>

[Return to: Double Life Soft White](#)

[Print Page](#)



Product Number: 11176
Order Abbreviation: 100A/CL/DL/RP 120V
General Description:

Product Information

Abbrev. With Packaging Info.	100ACLDLRP 120V 24/CS 2/SKU
Approx. Lumens	1550
Average Rated Life (hr)	1500
Base	Medium
Bulb	A19
Class	C (gas)
Color Temperature/CCT (K)	2850
Diameter (in)	2 3/8
Diameter (mm)	60.325
Family Brand Name	Double Life Clear
Filament	CC-8
Lamp Finish	Clear
Light Center Length - LCL (in)	3 1/8
Light Center Length - LCL (mm)	79
Maximum Overall Length - MOL (in)	4 7/16
Maximum Overall Length - MOL (mm)	112.7125
Nominal Voltage (V)	120.00
Nominal Wattage (W)	100.00

Additional Product Information

[Product Documents, Graphs, and Images](#)

[Packaging Information](#)



[Print Page](#)

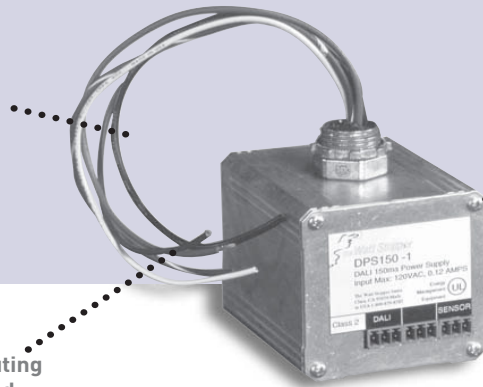


ezDALI Power Supply

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

PROJECT
LOCATION/TYPE

Product Overview

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.

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.

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



www.wattstopper.com
800.879.8585

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

DALI equipment Power Supply



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

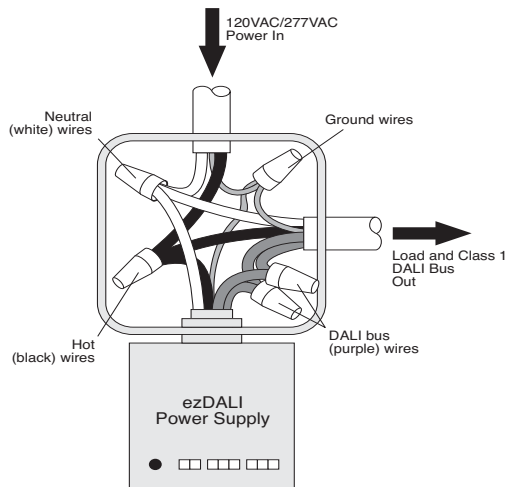
ezDALI Class 2 bus (power for ezDALI controllers and occupancy sensors)

- 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*

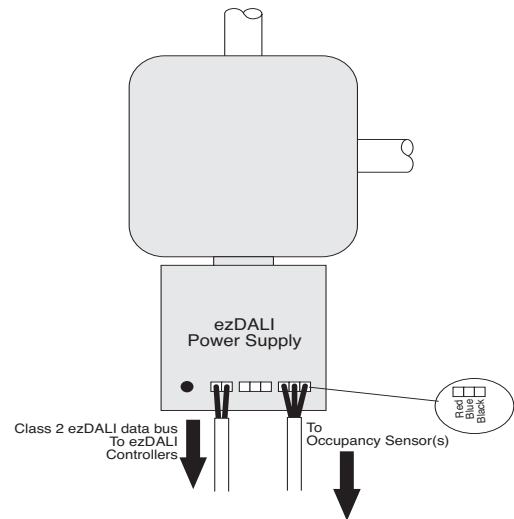
*Power requirements for occupancy sensors vary depending on sensor model and individual requirements. Refer to individual product specifications for complete details.

Wiring & Installation

Class 1 Wiring Diagram



Class 2 Wiring Diagram



Ordering Information

Catalog No.	Voltage
□ DPS150-1	120 VAC
□ DPS150-2	277 VAC

Watt Stopper/Legrand®
Pub. No. 16302

Appendix A: Lighting Equipment

D A L I D i m m i n g C o n t r o l s

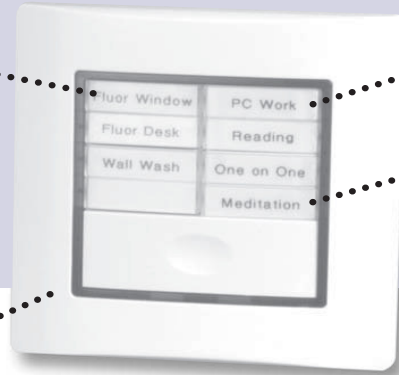


ezDALI Group and Scene Controller

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

PROJECT

LOCATION/TYPE

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.

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.

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
- 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



legrand

www.wattstopper.com
800.879.8585

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

DALI equipment Control



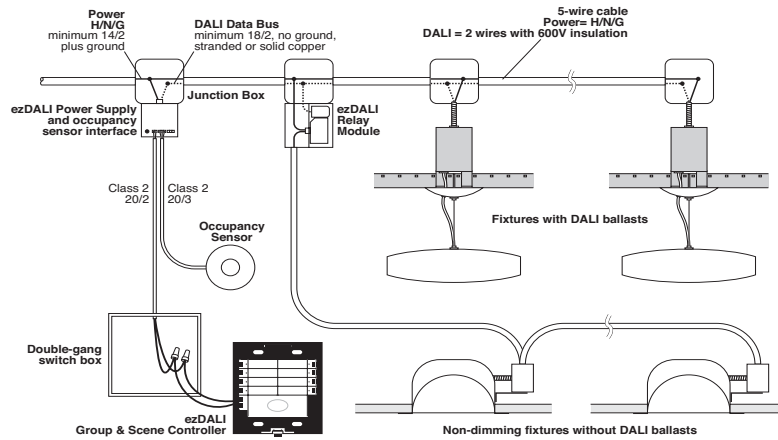
Controller Technical Information

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: 4.5" 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

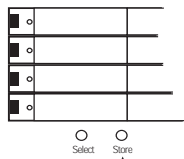
Wiring & Installation

Group and Scene Controller Wiring

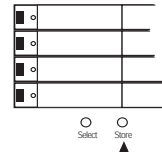


Programming the Controller

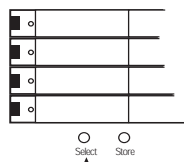
Programming Groups & Scenes



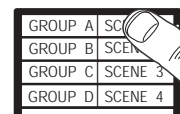
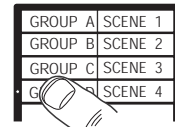
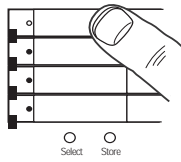
Step 1. Initialize
Press and hold Store button for 5 seconds. Release. LEDs will flash in sequence while ballasts are addressed. Each ballast will turn on as it receives its address.



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



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 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.

Ordering Information

Catalog No.	Color	Description	Voltage/ Input Power	Max. Ball.	Max. Groups	Max. Scenes
<input type="checkbox"/> DLCSS4-2	Ivory	ezDALI Group and Scene Controller	16 VDC/40 mA	64	4	4
<input type="checkbox"/> DLCSS4-4	Almond					
<input type="checkbox"/> DLCSS4-7	White					
<input type="checkbox"/> DLCSS4-9	Gray					

Watt Stopper/Legrand®
Pub. No. 16102

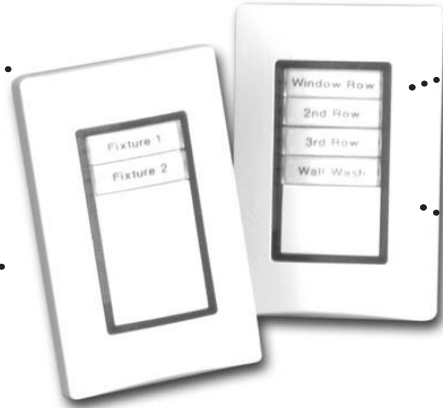


ezDALI Group Controller

Multi-group dimming controller compatible with DALI dimming ballasts

Modify lighting groups without rewiring or special tools

Integrates with occupancy sensor for automatic shut-off via ezDALI Power Supply



Push-button programming without a computer

Controls up to 64 DALI ballasts individually

Contractor-friendly installation and commissioning

Product Overview

Description

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.

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.

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)
- 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



www.wattstopper.com
800.879.8585



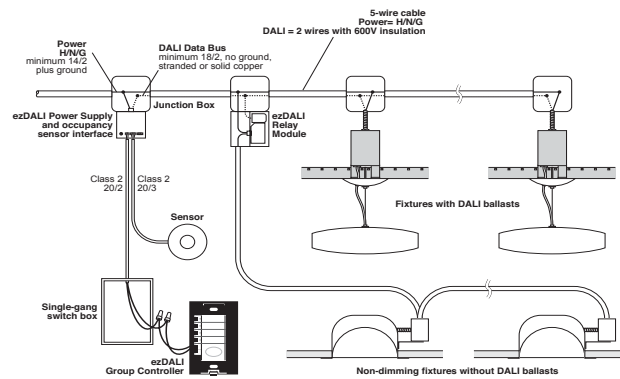
Group Controller Technical Information

Specifications

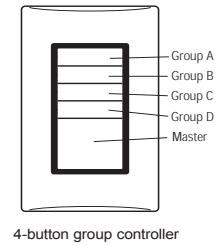
- Input Power: DLC-2 28 mA max @16VDC; DLC-4 40 mA max @16VDC
- ezDALI Class 2, low voltage communications
- 255 dimming steps for each group. 1% dimming for linear fluorescent, 3% for compact fluorescent
- Operating environment: to 140° F; 10 to 95% RH, non-condensing; non-explosive, non-corrosive; 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

Group Controller Wiring Diagram

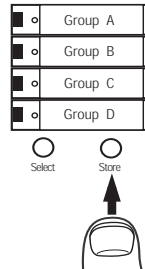


Product Controls

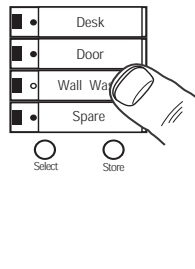


Programming the Controller

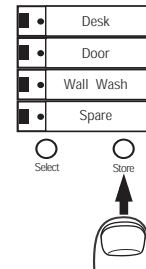
Programming Groups



Step 1. Initialize
Press and hold Store button for 5 seconds. Release. LEDs will sequence while ballasts are addressing.



Step 2. Create Groups
Press Select button. First ballast will turn on at maximum level and all others will turn off. Press desired group button (i.e., Group C, wall wash) to add that ballast to desired group. Group LED will begin flashing. Press Select button to select next ballast, which will turn on at maximum level (all others off). Repeat for all ballasts.



Step 3. Store settings
Press and release Store button to save all ballast group assignments. All group LEDs will turn on. Lighting will be at 100%.

Ordering Information

Catalog No.	Description	Voltage/Input Power	Max. Ballast	Max. Groups	Max. Scenes
DLC4-x	DALI 4-button Group Controller	16 VDC/40 ma	64	4	0
DLC2-x	DALI 2-button Group Controller	16 VDC/28 ma	64	2	0

"x" indicates color: -2 = ivory, -4 = almond, -7 = white, -9 = gray

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



ezDALI Relay Module



DALI ON/OFF control for non-dimming loads

Up to 20 amp ballast or incandescent loads

Acceptable for use in plenum spaces

Compatible with DALI ballast commands

Dual 120/277 VAC operation

Contractor-friendly installation and commissioning

PROJECT

LOCATION/TYPE

Product Overview

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.

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.

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



legrand

www.wattstopper.com
800.879.8585



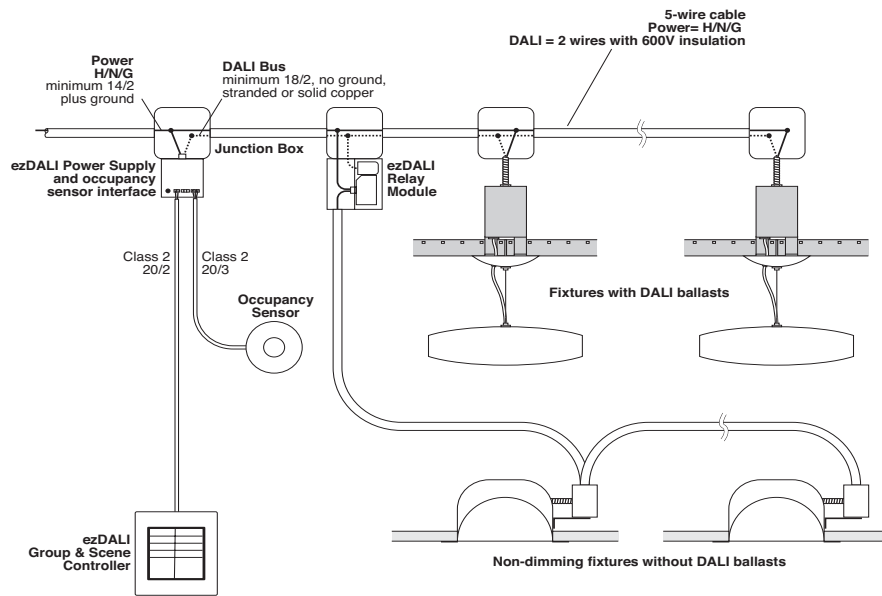
Relay Module Technical Information

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

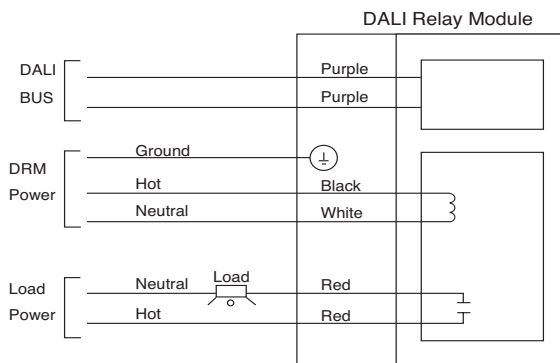
ezDALI System Wiring

ezDALI System Wiring with Relay Module

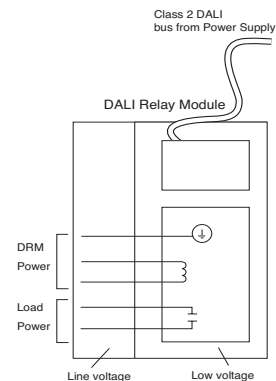


Relay Module Wiring

Class 1 Relay Module Wiring



Class 2 Relay Module Wiring



Ordering Information

Catalog No.	Voltage/DALI Power	Max. Current
□ DRM	120/277 VAC/16 VDC/7 mA	20 Amps

Watt Stopper/Legrand®
Pub. No. 16202

The Power of Illumination

www.bplust.com

DALI Star Digitally Addressable Low Voltage Isolation Transformer



DALI (Digitally Addressable Lighting Interface) is a protocol dedicated for lighting control use. The DALI protocol transforms a standard lighting system into a dynamic network able to control and manage individual lighting devices, via a common DALI bus. Individual devices can be addressed and programmed in the network as part of groups and scenes. DALI devices can communicate with the controller to provide real time status of the control of devices.

The DALI Star Series electronic transformer is designed specifically to operate 12 Volt halogen lamps in a DALI network with DALI controllers.

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

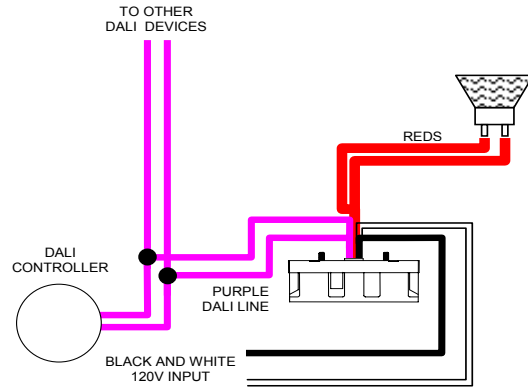


Appendix A: Lighting Equipment

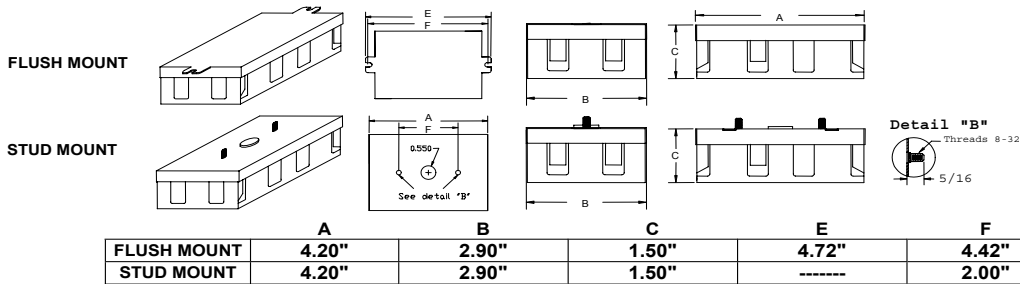
Ordering Information

MODEL NO.	INPUT VOLTAGE	SHORT CIRCUIT PROTECTION	OVERLOAD PROTECTION	DALI INPUT PROTECTION	MAXIMUM LOAD	OUTPUT TO LAMPS	MOUNTING
DS98100-S	120 VAC	YES	YES	YES	75 W	12 VAC	FLUSH MOUNT
DS98100-C	120 VAC	YES	YES	YES	75 W	12 VAC	STUD MOUNT

Cabling Diagrams



Dimensions



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



LS-301 Dimming Photosensor

Automatic dimming based on ambient light levels

Controls standard 0-10 VDC electronic dimming ballasts

All setup performed remotely with handheld

Optional occupant adjustment via handheld remote

Single zone control

Closed loop daylighting control



PROJECT
LOCATION/TYPE

Product Overview

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



legrand

www.wattstopper.com
800.879.8585



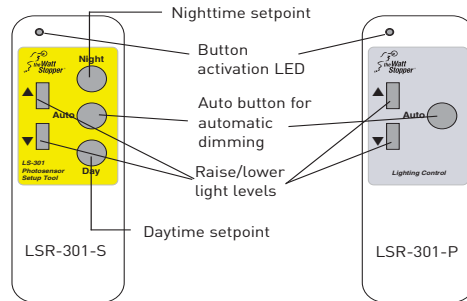
LS-301 Technical Information

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

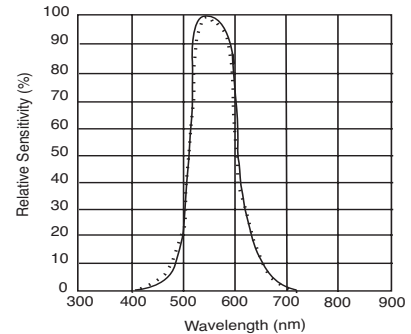
Product Controls

Remote Controls



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

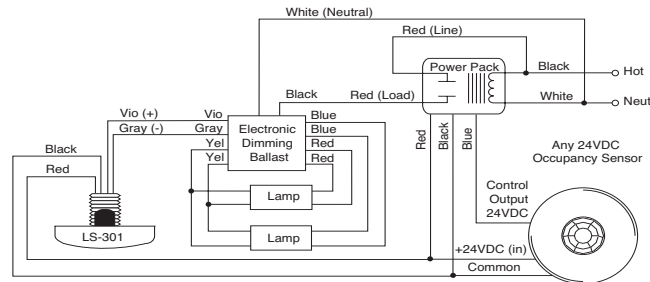
Spectral Response Curve



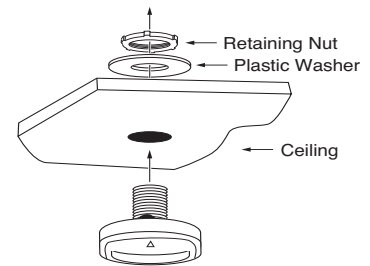
The spectral response of the LS-301 photocell closely matches the sensitivity of the human eye.

Wiring & Installation

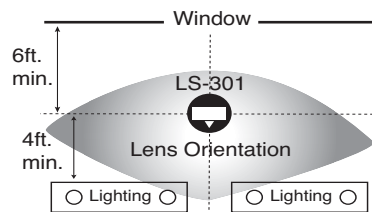
Wiring



Mounting and Installation



Coverage



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.

Ordering Information

Catalog No.	Description	Input Voltage
<input type="checkbox"/> LS-301	Dimming Photosensor	24 VDC
<input type="checkbox"/> LSR-301-S	Setup Remote Control (2 AAA batteries included)	
<input type="checkbox"/> LSR-301-P	Occupant Remote Control (2 AAA batteries included)	

LS-301 works with Watt Stopper power packs

Watt Stopper/Legrand®
Pub. No. 17504



UT-300 Low Voltage Ultrasonic Occupancy Sensor

Architecturally appealing
low profile appearance

SmartSet™ automatically
selects optimal time delay
and sensitivity

Ultrasonic diffusers give
more comprehensive
coverage



Accepts low voltage
switch input for
manual-ON operation

Depluggable terminal
wiring for quick and
easy installation

Walk-through mode
increases savings potential

PROJECT
LOCATION/TYPE

Product Overview

Description

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.

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.

Features

- Advanced control logic based on RISC micro-controller 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



www.wattstopper.com
800.879.8585

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

DALI equipment Occupancy Sensor



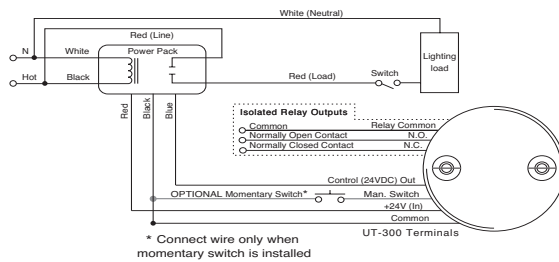
UT-300 Technical Information

Specifications

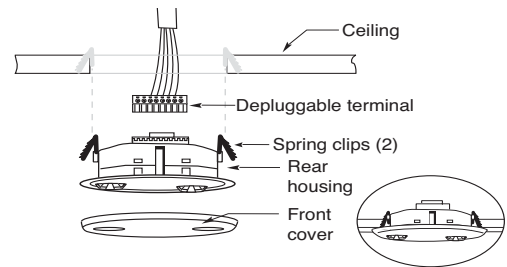
- 24 VDC/VAC
- Time delays: SmartSet (automatic), fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode
- Ultrasonic frequency of 40 kHz
- UT-300 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 30 VDC/VAC
- Mounting options: ceiling tile; 4 square junction box with double gang mudring
- Units per power pack: UT-300 up to 2(B), up to 3 (BZ); UT-305 up to 3 (B), up to 4 (BZ)
- Dimensions: 4.5" diameter x 1.02" deep (114.3mm x 25.9mm)
- UL and CUL listed; five year warranty

Wiring & Mounting

Wiring & Controls

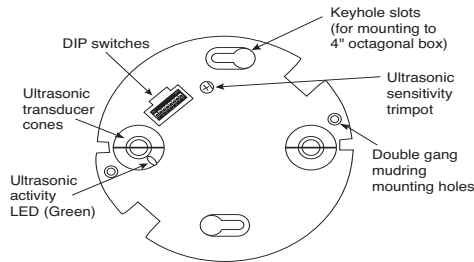


Ceiling Mounting



Controls & Settings

Product Controls



DIP Switch Settings

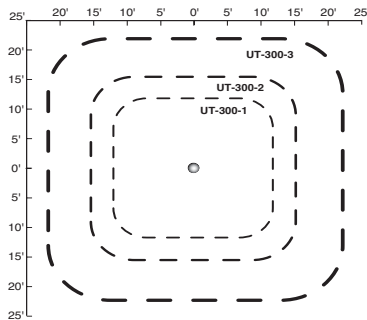
On Mode	1	LED 6
Auto On	-	Disabled -
Manual On	•	Enabled •
Override	2	
Normal	-	
Override	•	
Time Delay	3 4 5	
5 sec/SmartSet	▲	
5 minutes	-	
10 min.	▲	
10 minutes	-	
15 min.	▲	
15 minutes	-	
20 minutes	-	
30 min.	▲	

▲ = Factory Setting
• = ON
- = OFF

▲ = walk-through mode

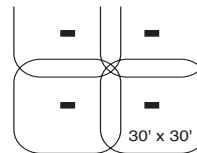
Coverage & Placement

Coverage



Coverages shown represent half-step walking motion. Actual coverages can vary for each application depending on the shape and use of space and the obstacles present. Coverage may be reduced if product is mounted greater than 12 feet high.

Placement



A typical layout for an open office space would be to place UT sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverages that senses motion up to 30' x 30'.

Ordering Information

Catalog No.	Voltage	Current	Coverage	Feature
UT-300-1	24 VDC	40 mA	500 ft ² (46.5 m ²)	Isolated relay
UT-300-2	24 VDC	40 mA	1000 ft ² (92.9 m ²)	Isolated relay
UT-300-3	24 VDC	45 mA	2000 ft ² (185.8 m ²)	Isolated relay
UT-305-1	24 VDC	30 mA	500 ft ² (46.5 m ²)	
UT-305-2	24 VDC	30 mA	1000 ft ² (92.9 m ²)	
UT-305-3	24 VDC	35 mA	2000 ft ² (185.8 m ²)	

Watt Stopper/Legrand®
Pub. No. 16902

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.