

APPENDICES

Cathedral Place

Milwaukee, WI
Steven Puchek – Senior Thesis Project

Appendix C – Lighting

Luminaire	Description	Detail Asmt	Lamp	# Lamps	Lamp Wattage	Ballast	Luminaire Wattage	Light Output	Total LLF
A	Lithonia 1'x4' Louvered Troffer F28T5/835		F28T5 / 835	1	28	ICN-2S28@277	31.5	2600	0.810
A2	Lithonia 1'x4' Louvered Troffer F54T5/835		F54T5 / 835	1	54	ICN4S5490C2LS@277	58.5	4450	0.770
B	Lithonia 2'x4' Louvered Troffer F28T5/835		F28T5 / 835	2	28	ICN-2S28@277	63	2600	0.810
B2	Lithonia 2'x4' Louvered Troffer F54T5/835		F54T5 / 835	2	54	ICN4S5490C2LS@277	117	4450	0.770
C	Ledelite Achieva Pendant Dir/Ind. Louvered F28T5/835		F28T5 / 835	1	28	ICN-2S28@277	31.5	2600	0.820
C2	Ledelite Achieva Pendant Dir/Ind. Louvered F54T5/835		F54T5 / 835	1	54	ICN4S5490C2LS@277	58.5	4450	0.780
D1	Decorative/Artwork Luminaire "Tuby" - Sandblasted glass	A	FT36DL / 830	1	36	ICN-2S39@277V	34.5	2900	0.640
D2	Decorative/Artwork Luminaire "Bulby" - Sandblasted glass	B	FT36DL / 830	1	36	ICN-2S39@277V	34.5	2900	0.640
D3	Decorative/Artwork Luminaire "Ghosty" - Sandblasted glass	C	FT36DL / 830	1	36	ICN-2S39@277V	34.5	2900	0.640
E1	Full Barrel Fluorescent Reflector - 50"x48" area, Alanod Miro 3	D	F28T5 / 841	1	28	ICN-2S28@277	31.5	2600	0.730
E2	"Half" Barrel Fluorescent Reflector - 50"x48" area, Alanod Miro 3	E	F28T5 / 841	1	28	ICN-2S28@277	31.5	2600	0.730
F	Lithonia Narrow 4' Narrow Strip		F32T8 / 835	1	32	VOP-2P32-SC	35	3000	0.800
G	Lithonia 2' Twin Task Light		F14T5 / 841	1	14	ICN-2S28@277	17	1200	0.710
H	Luxeon K2 LED 1' Luminaire White		LED	1	0	**NONE**	1	60	0.730
H1	Luxeon K2 LED 1' Luminaire Purple		LED	1	0	**NONE**	1	60	0.730
H2	Luxeon K2 LED 1' Luminaire Green		LED	1	0	**NONE**	1	60	0.730
H3	Luxeon K2 LED 1' Luminaire Teal		LED	1	0	**NONE**	1	60	0.730
H4	Luxeon K2 LED 1' Luminaire Blue		LED	1	0	**NONE**	1	60	0.730
J	ERCO Lightcast Downlight 10in 2x26W CFL		CF26DD / 835	2	26	VH-2Q26-TP-W	58	1710	0.680
K	ERCO Lightcast Downlight 8in 1x18W CFL 13W		CF13DT / 835	1	13	VH-2B13-TP-W	13.5	900	0.670
K1	ERCO Lightcast Downlight 8in 1x18W CFL 18W		CF18DT / 827	1	18	RCF-2S18-M1-LS-QS	19.5	1200	0.760
K2	ERCO Lightcast Downlight 8in 1x18W CFL 26W		CF26DT / 827	1	26	RMB-1P26-S2	26	1800	0.700
K3	ERCO Lightcast Downlight 8in 1x18W CFL 32W		CF32DT / 827	1	32	RCF-2S26-H1-LD-QS	36	2400	0.710
L	ERCO Lightcast Downlight QPAR30 75W 10d		75W PAR30	1	75	**NONE**	75	1130	0.740
L1	ERCO Lightcast Downlight QPAR30 50W 10d		50W PAR30	1	50	**NONE**	50	900	0.750
L2	ERCO Lightcast Downlight QPAR30 75W 30d		75W PAR30	1	75	**NONE**	75	1130	0.740
L3	ERCO Lightcast Downlight QPAR30 50W 30d		50W PAR30	1	50	**NONE**	50	900	0.750

Cathedral Place

Milwaukee, WI

Steven Puchek – Senior Thesis Project

M	ERCO Beamer IV Spotlight 150W MH 10d Exterior Fixture	M150 / SS	1	150	71A5437BP	173	13000	0.410
M1	ERCO Beamer IV Spotlight 175W MH 10d Exterior Fixture	M175	1	175	IMH-175-C	191	14400	0.480
M2	ERCO Beamer IV Spotlight 250W MH 10d Exterior Fixture	M250	1	250	71A5731	294	22000	0.500
N	ERCO TFL Wallwasher F28T5	F28T5 / 835	1	28	ICN-2S28@277	31.5	2600	0.810
N2	ERCO TFL Wallwasher F54T5	F54T5 / 835	1	54	ICN4S5490C2LS@277	58.5	4450	0.770
P	ERCO Pollux Track Spotlight 35W MR16 10d	37MR16 / IR	1	37	**NONE**	37	700	0.750
P2	ERCO Pollux Track Spotlight 35W MR16 60d	37MR16 / IR	1	37	**NONE**	37	700	#N/A
Q	ERCO Cylinder Surface Mounted Downlight 35W MH	MC39T6	1	39	IMH-50-A	44	3300	0.610
R	Cooper/MCGraw Edison PSL 150W MH Parking Structure Fixture	M150 / SS	1	150	71A5437BP	173	13000	0.420
R2	Cooper/MCGraw Edison PSL 175W MH Parking Structure Fixture	M175	1	175	IMH-175-C	191	14400	0.500
S	Translucent Framed Luminaire / Desk System Full	F54T5 / 841	1	54	ICN4S5490C2LS@277	58.5	4450	0.830
S2	Translucent Framed Luminaire / Desk System Half	F28T5 / 841	1	28	ICN-2S28@277	31.5	2600	0.860

Cathedral Place

Milwaukee, WI

Steven Puchek – Senior Thesis Project

Luminaire	Description	Lamp	Lamp Lumen Depr.	Category	Clean	Dirt Condition	Luminaire Dirt Depr	Room Surface Dirt Depreciation	Ballast Factor	Total LLF
A	Lithonia 1'x4' Louvered Troffer F28T5/835	F28T5 / 835	0.930	IV	12	C	0.88	0.95	1.03	0.801
A2	Lithonia 1'x4' Louvered Troffer F54T5/835	F54T5 / 835	0.930	IV	12	C	0.88	0.95	0.99	0.770
B	Lithonia 2'x4' Louvered Troffer F28T5/835	F28T5 / 835	0.930	IV	12	C	0.88	0.95	1.03	0.801
B2	Lithonia 2'x4' Louvered Troffer F54T5/835	F54T5 / 835	0.930	IV	12	C	0.88	0.95	0.99	0.770
C	Ledalite Achieva Pendant Dir/Ind. Louvered F28T5/835	F28T5 / 835	0.930	II	12	C	0.94	0.9	1.03	0.810
C2	Ledalite Achieva Pendant Dir/Ind. Louvered F54T5/835	F54T5 / 835	0.930	II	12	C	0.94	0.9	0.99	0.779
D1	Decorative/Artwork Luminaire "Tuby" - Sandblasted glass	FT36DL / 830	0.860	IV	12	C	0.88	0.89	0.94	0.633
D2	Decorative/Artwork Luminaire "Bulby" - Sandblasted glass	FT36DL / 830	0.860	IV	12	C	0.88	0.89	0.94	0.633
D3	Decorative/Artwork Luminaire "Ghosty" - Sandblasted glass	FT36DL / 830	0.860	IV	12	C	0.88	0.89	0.94	0.633
E1	Full Barrel Fluorescent Reflector - 50"x48" area, Alanod Miro 3	F28T5 / 841	0.930	IV	24	C	0.8	0.95	1.03	0.728
E2	"Half" Barrel Fluorescent Reflector - 50"x48" area, Alanod Miro 3	F28T5 / 841	0.930	IV	24	C	0.8	0.95	1.03	0.728
F	Lithonia Narrow 4' Narrow Strip	F32T8 / 835	0.950	II	36	VC	0.92	0.9	1.01	0.794
G	Lithonia 2' Twin Task Light	F14T5 / 841	0.930	IV	24	C	0.8	0.9	1.06	0.710
H	Luxeon K2 LED 1' Luminaire White	LED	0.900	-	-	-	0.85	0.95	1	0.727
H1	Luxeon K2 LED 1' Luminaire Purple	LED	0.900	-	-	-	0.85	0.95	1	0.727
H2	Luxeon K2 LED 1' Luminaire Green	LED	0.900	-	-	-	0.85	0.95	1	0.727
H3	Luxeon K2 LED 1' Luminaire Teal	LED	0.900	-	-	-	0.85	0.95	1	0.727
H4	Luxeon K2 LED 1' Luminaire Blue	LED	0.900	-	-	-	0.85	0.95	1	0.727
J	ERCO Lightcast Downlight 10in 2x26W CFL	CF26DD / 835	0.860	IV	12	C	0.88	0.95	0.94	0.676
K	ERCO Lightcast Downlight 8in 1x18W CFL 13W	CF13DT / 835	0.860	IV	12	C	0.88	0.95	0.92	0.661
K1	ERCO Lightcast Downlight 8in 1x18W CFL 18W	CF18DT / 827	0.860	IV	12	C	0.88	0.95	1.05	0.755
K2	ERCO Lightcast Downlight 8in 1x18W CFL 26W	CF26DT / 827	0.860	IV	12	C	0.88	0.95	0.96	0.690
K3	ERCO Lightcast Downlight 8in 1x18W CFL 32W	CF32DT / 827	0.860	IV	12	C	0.88	0.95	0.98	0.705
L	ERCO Lightcast Downlight QPAR30 75W 10d	75W PAR30	0.885	IV	12	C	0.88	0.95	1	0.740
L1	ERCO Lightcast Downlight QPAR30 50W 10d	50W PAR30	0.889	IV	12	C	0.88	0.95	1	0.743
L2	ERCO Lightcast Downlight QPAR30 75W 30d	75W PAR30	0.885	IV	12	C	0.88	0.95	1	0.740
L3	ERCO Lightcast Downlight QPAR30 50W 30d	50W PAR30	0.889	IV	12	C	0.88	0.95	1	0.743

Cathedral Place

Milwaukee, WI

Steven Puchek – Senior Thesis Project

M	ERCO Beamer IV Spotlight 150W MH 10d Exterior Fixture	M150 / SS	0.577	IV	24	C	0.8	0.92	0.95	0.403
M1	ERCO Beamer IV Spotlight 175W MH 10d Exterior Fixture	M175	0.646	IV	24	C	0.8	0.92	1	0.475
M2	ERCO Beamer IV Spotlight 250W MH 10d Exterior Fixture	M250	0.773	IV	24	C	0.8	0.85	0.95	0.499
N	ERCO TFL Wallwasher F28T5	F28T5 / 835	0.930	IV	12	C	0.88	0.95	1.03	0.801
N2	ERCO TFL Wallwasher F54T5	F54T5 / 835	0.930	IV	12	C	0.88	0.95	0.99	0.770
P	ERCO Pollux Track Spotlight 35W MR16 10d	37MR16 / IR	0.886	IV	12	C	0.88	0.95	1	0.740
P2	ERCO Pollux Track Spotlight 35W MR16 10d	37MR16 / IR	0.886	IV	12	C	0.88	0.95	1	0.740
Q	ERCO Cylinder Surface Mounted Downlight 35W MH	MC39T6	0.788	V	24	C	0.83	0.92	1	0.602
R	Cooper/MCGraw Edison PSL 150W MH Parking Structure Fixture	M150 / SS	0.577	V	24	C	0.83	0.92	0.95	0.419
R2	Cooper/MCGraw Edison PSL 175W MH Parking Structure Fixture	M175	0.646	V	24	C	0.83	0.92	1	0.493
S	Translucent Framed Luminaire / Desk System Full	F54T5 / 841	0.930	II	12	C	0.94	0.95	0.99	0.822
S2	Translucent Framed Luminaire / Desk System Half	F28T5 / 841	0.930	II	12	C	0.94	0.95	1.03	0.855

Cathedral Place

Milwaukee, WI

Steven Puchek – Senior Thesis Project

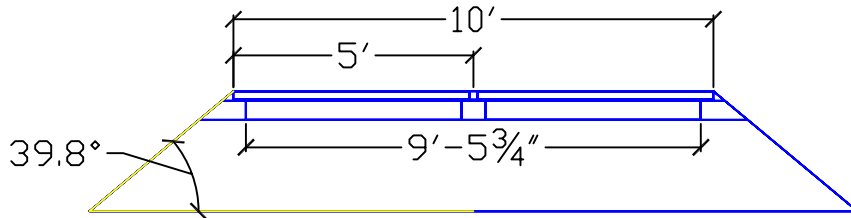
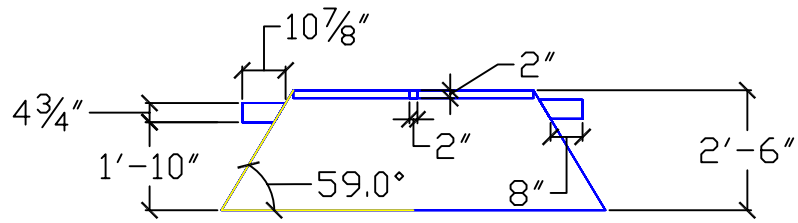
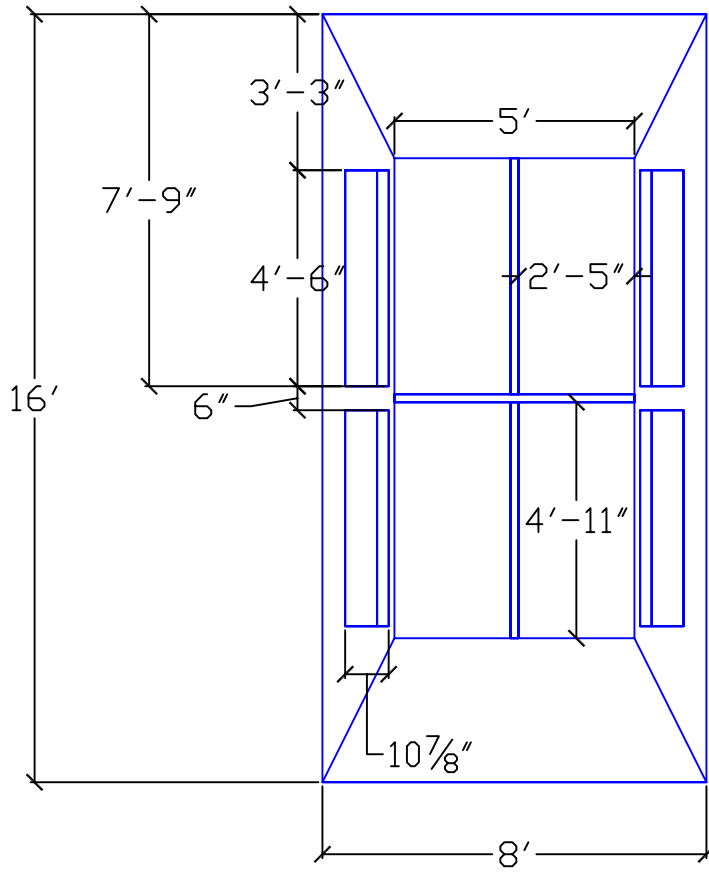
Lamp	Ballast?	Wattage	Voltage	Ballast Name	# Lamps	Input Power	Ballast Factor	Power per Lamp
F30T8 / 835	Y	30	277	VOP-2P32-SC	1	33	1.01	33
F30T8 / 841	Y	30	277	VOP-2P32-SC	1	33	1.01	33
F32T8 / 835	Y	32	277	VOP-2P32-SC	1	35	1.01	35
F32T8 / 841	Y	32	277	VOP-2P32-SC	1	35	1.01	35
F32T8 / 835	Y	32	277	VOP-2P32-SC	1	35	1.01	35
F32T8 / 841	Y	32	277	VOP-2P32-SC	1	35	1.01	35
F14T5 / 841	Y	14	277	ICN-2S28@277	2	34	1.06	17
F28T5 / 835	Y	28	277	ICN-2S28@277	2	63	1.03	31.5
F28T5 / 841	Y	28	277	ICN-2S28@277	2	63	1.03	31.5
F54T5 / 835	Y	54	277	ICN4S5490C2LS@277	2	117	0.99	58.5
F54T5 / 841	Y	54	277	ICN4S5490C2LS@277	2	117	0.99	58.5
M150 / SS	Y	150	277	71A5437BP	1	173	0.95	173
M175 / C	Y	175	277	IMH-175-C	1	191	1	191
M175 / C / MED	Y	175	277	IMH-175-C	1	191	1	191
M175	Y	175	277	IMH-175-C	1	191	1	191
M175 / MED	Y	175	277	IMH-175-C	1	191	1	191
M250 / C	Y	250	277	71A5731	1	294	0.95	294
M250	Y	250	277	71A5731	1	294	0.95	294
M250 / MED	Y	250	277	71A5731	1	294	0.95	294
CF13DT / 835	Y	13	277	VH-2B13-TP-W	2	27	0.92	13.5
CF13DT / 841	Y	13	277	VH-2B13-TP-W	2	27	0.92	13.5
CF18DT / 827	Y	18	120	RCF-2S18-M1-LS-QS	2	39	1.05	19.5
CF26DD / 835	Y	26	277	VH-2Q26-TP-W	2	58	0.94	29
CF26DD / 841	Y	26	277	VH-2Q26-TP-W	2	58	0.94	29
CF26DT / 827	Y	26	277	RMB-1P26-S2	1	26	0.96	26
CF32DT / 827	Y	32	120	RCF-2S26-H1-LD-QS	1	36	0.98	36
FT36DL / 835	Y	36	277	ICN-2S39@277V	2	69	0.94	34.5
FT36DL / 841	Y	36	277	ICN-2S39@277V	2	69	0.94	34.5
FT36DL / 830	Y	36	277	ICN-2S39@277V	2	69	0.94	34.5
37MR16 / IR	N	37	120	**NONE**	1	37	1	37
37MR16 / IR	N	37	120	**NONE**	1	37	1	37
MC39T6	Y	39	277	IMH-50-A	1	44	1	44
75W PAR30	N	75	120	**NONE**	1	75	1	75
50W PAR30	N	50	120	**NONE**	1	50	1	50
75W PAR30	N	75	120	**NONE**	1	75	1	75
50W PAR30	N	50	120	**NONE**	1	50	1	50
LED	PS	0	120	**NONE**	1	1	1	1

Cathedral Place

Milwaukee, WI

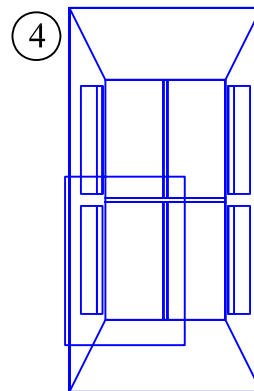
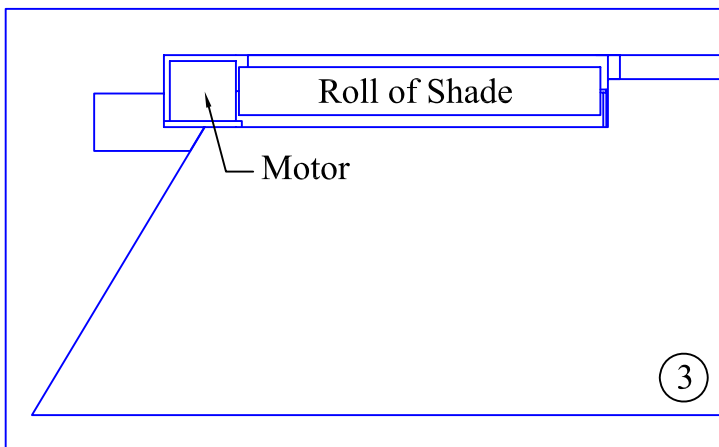
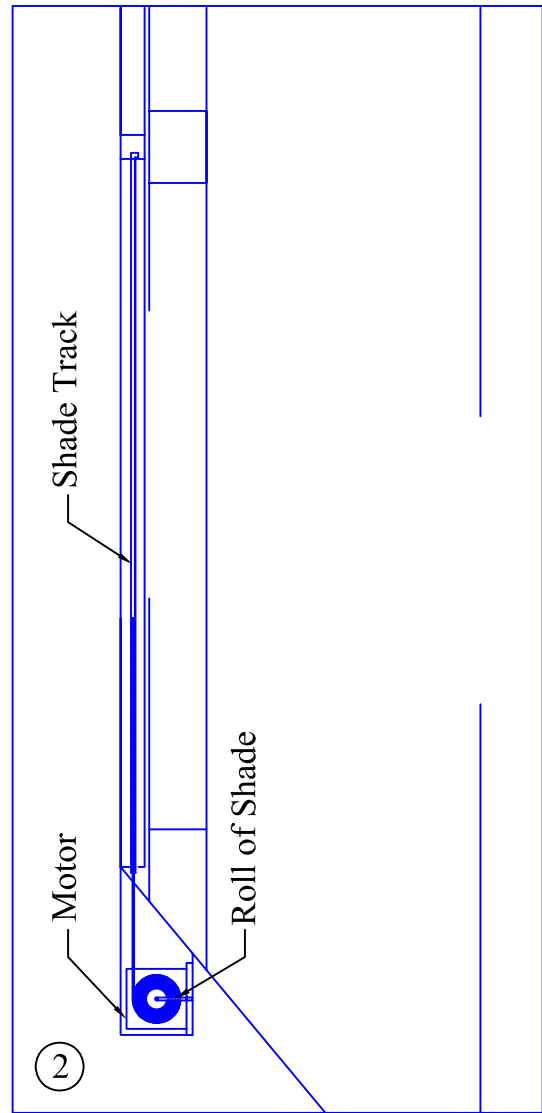
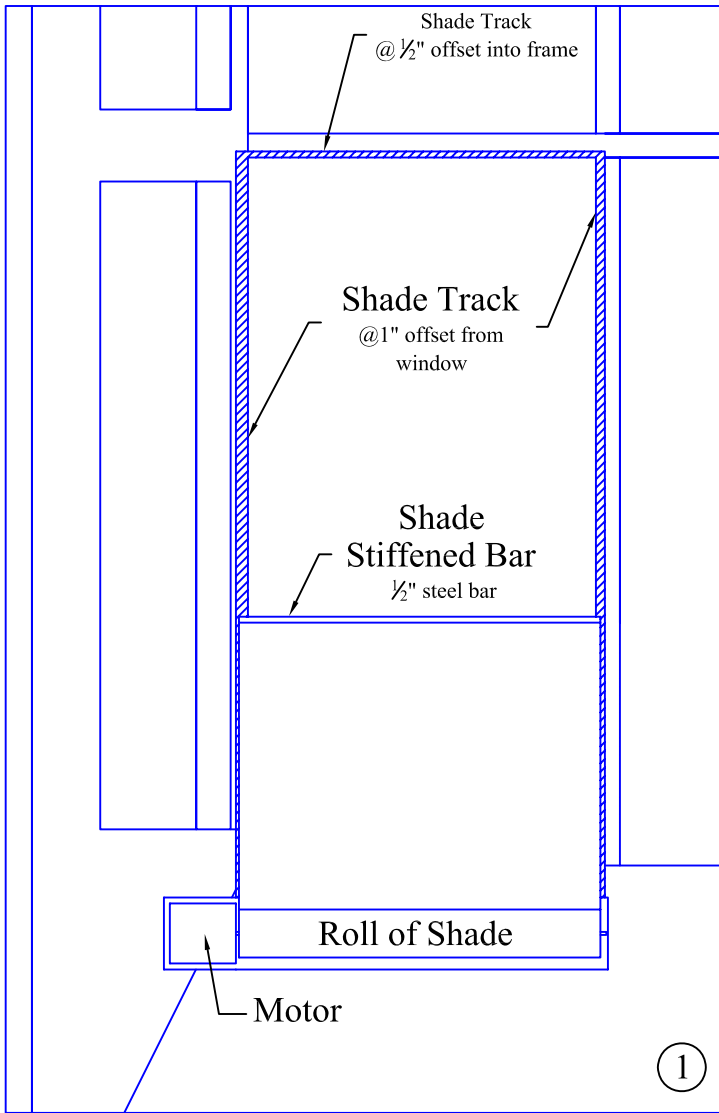
Steven Puchek – Senior Thesis Project

Lamp	Additional Lamp Data	Initial Lumens	Mean Lumens	CRI	CCT	Life	Angle	LLD	Full Name
F32T8 / 835	/ XP / ECO	3000	2850	85	3500	24000		0.950	F32T8 / 835/ XP / ECO
F32T8 / 835	/ XPS / ECO	3100	2945	85	3500	30000		0.950	F32T8 / 835/ XPS / ECO
F14T5 / 841	/ ECO	1200	1116	82	4100	20000		0.930	F14T5 / 841/ ECO
F28T5 / 835	/ ECO	2600	2418	82	3500	20000		0.930	F28T5 / 835/ ECO
F28T5 / 841	/ ECO	2600	2418	82	4100	20000		0.930	F28T5 / 841/ ECO
F54T5 / 835	/ HO / ECO	4450	4138	85	3500	25000		0.930	F54T5 / 835/ HO / ECO
F54T5 / 841	/ HO / ECO	4450	4138	85	4100	25000		0.930	F54T5 / 841/ HO / ECO
M150 / SS		13000	7500	65	4000	10000		0.577	M150 / SS
M175		14400	9300	65	4200	10000		0.646	M175
M250		22000	17000	65	4200	10000		0.773	M250
CF13DT / 835		900	774	82	3500	12000		0.860	CF13DT / 835
CF18DT / 827		1200	1032	82	2700	12000		0.860	CF18DT / 827
CF26DD / 835		1710	1470	82	3500	12000		0.860	CF26DD / 835
CF26DT / 827		1800	1548	82	2700	12000		0.860	CF26DT / 827
CF32DT / 827		2400	2064	82	2700	12000		0.860	CF32DT / 827
FT36DL / 830	/ RS	2900	2494	82	3000	12000		0.860	FT36DL / 830/ RS
37MR16 / IR	/ NSP10	700	620	100	2700	4000	10	0.886	37MR16 / IR/ NSP10
37MR16 / IR	/ WFL60	700	620	100	2700	4000	60	0.886	37MR16 / IR/ WFL60
MC39T6		3300	2600	81	3000	12000		0.788	MC39T6
75W PAR30	/ NSP10	1130	1000	100	2950	2500	10	0.885	75W PAR30/ NSP10
50W PAR30	/ NSP10	900	800	100	2810	3000	10	0.889	50W PAR30/ NSP10
75W PAR30	/ NFL25	1130	1000	100	2950	2500	25	0.885	75W PAR30/ NFL25
50W PAR30	/ NFL25	900	900	100	2810	3000	25	1.000	50W PAR30/ NFL25
LED		60	54	85	4100	50000		0.900	LED



Stairwell Skylight Dimensions

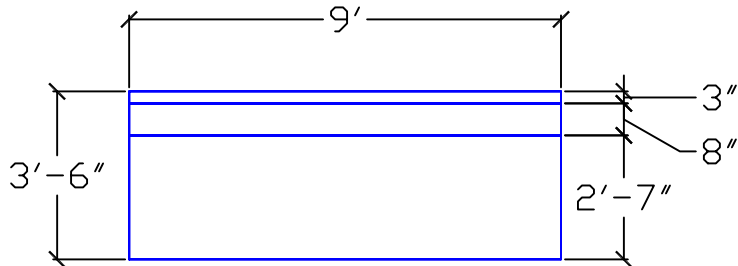
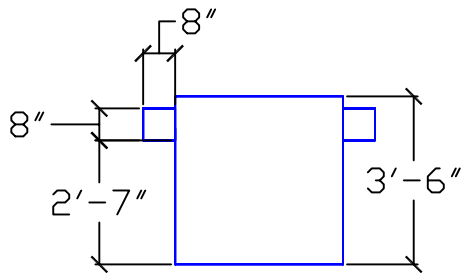
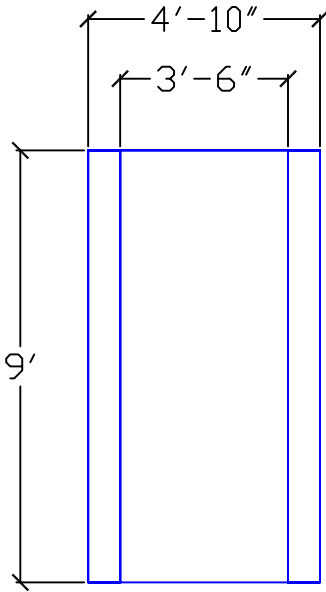
Scale: 1/4" = 1'



- ① Top
- ② Side
- ③ Front
- ④ Key

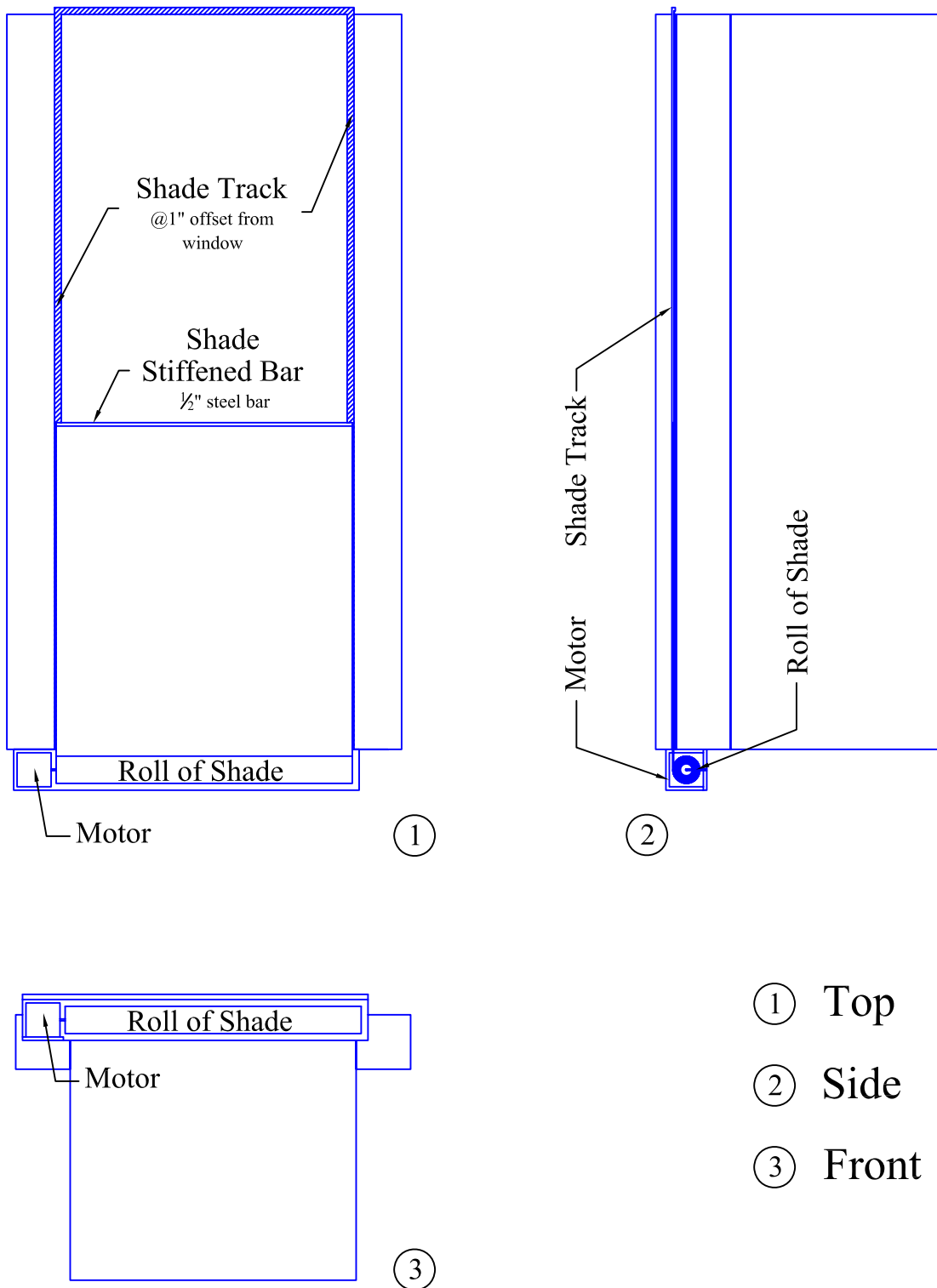
Stairwell Skylight Detail and Shades Detail

Scale: 3/4" = 1'



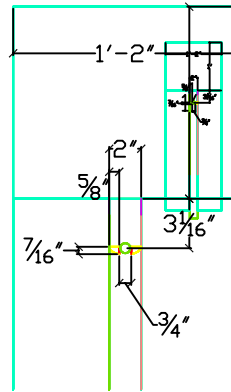
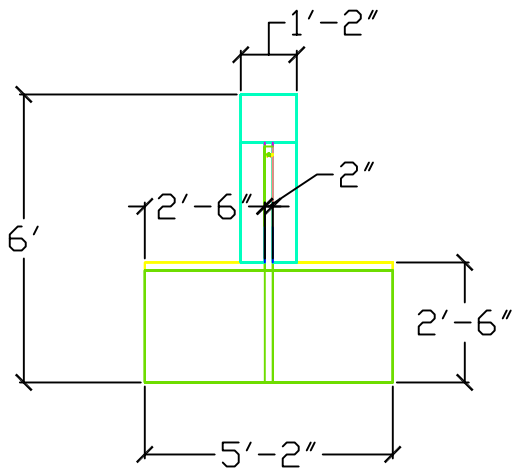
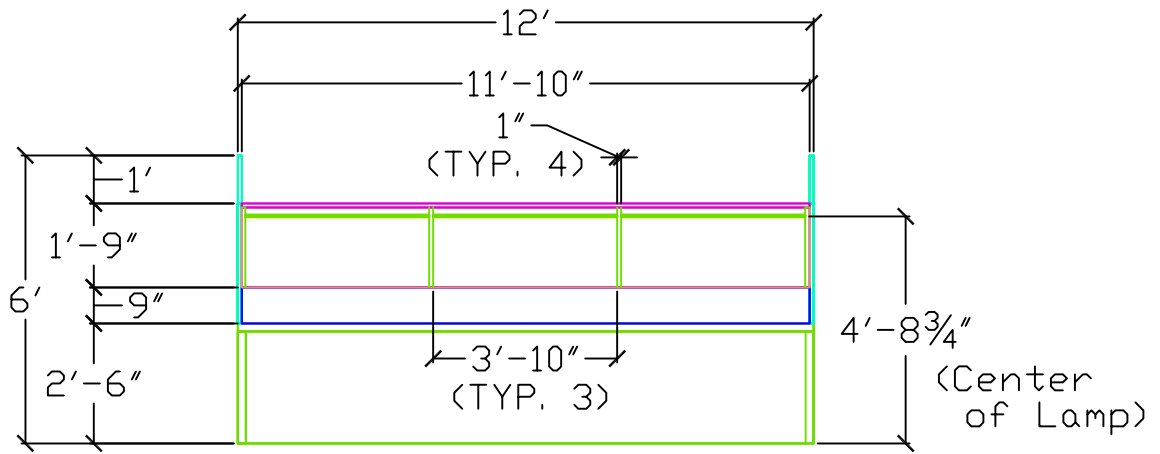
Reception Desk Skylight Dimensions

Scale: 1/4" = 1'

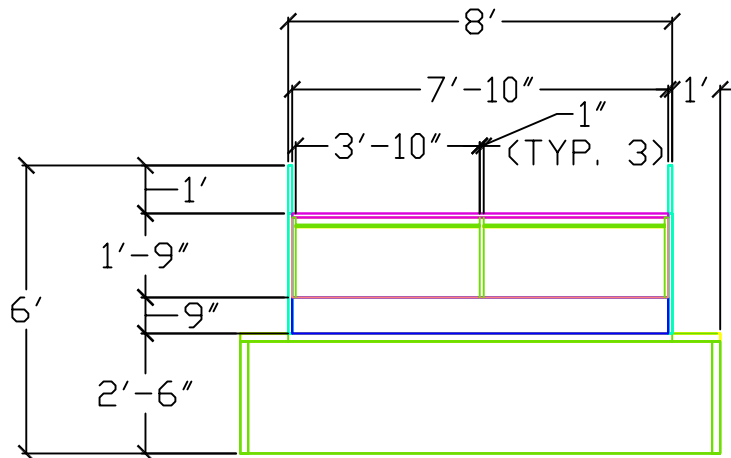


Reception Desk Skylight Details and Shades Detail

Scale: 1/2" = 1'

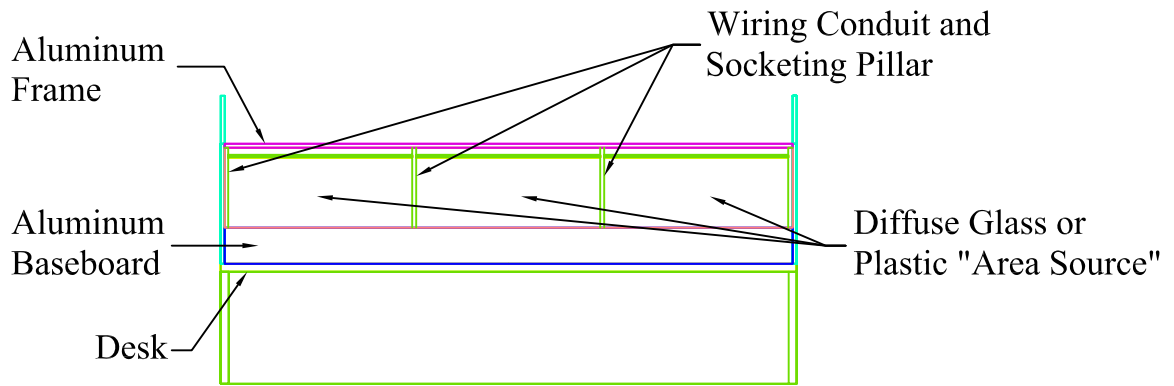


Scale: 1" = 1'

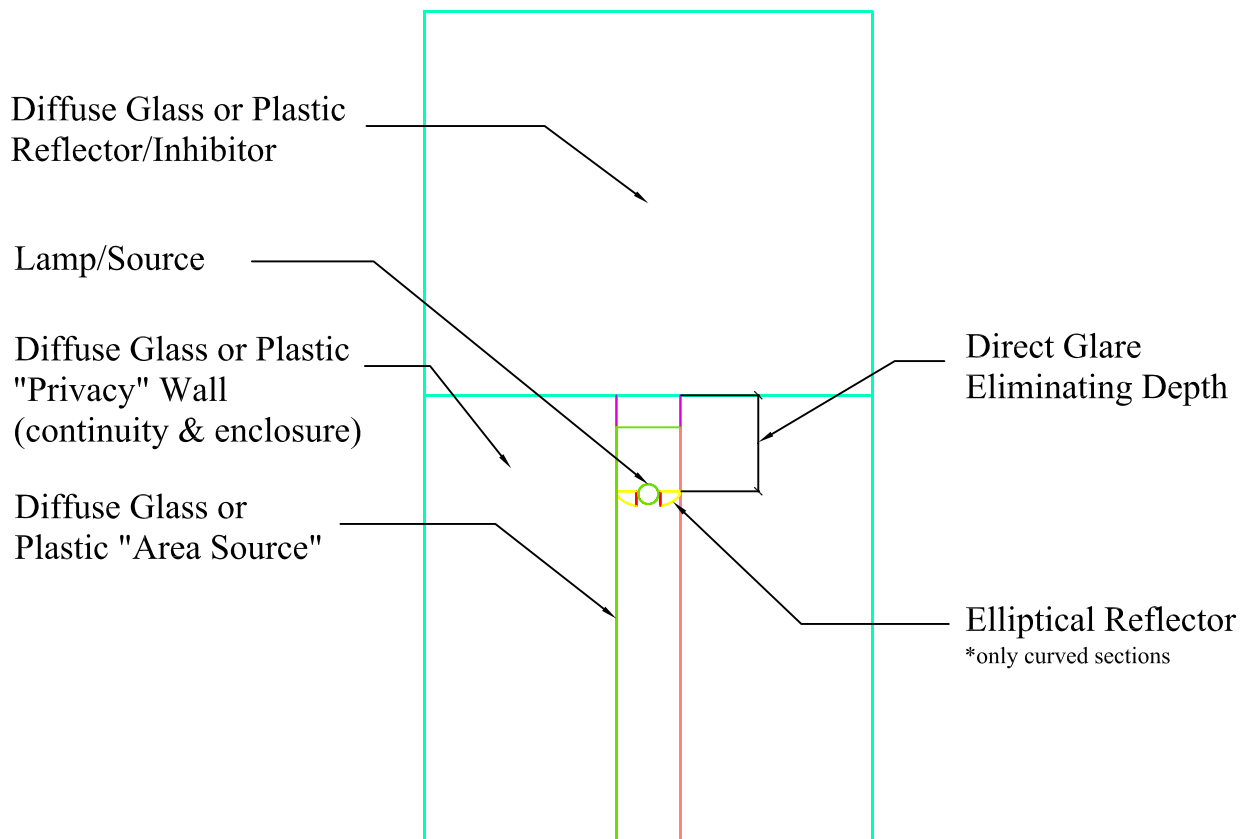


Open Office Desk Dimensions

Scale: 1/4" = 1'

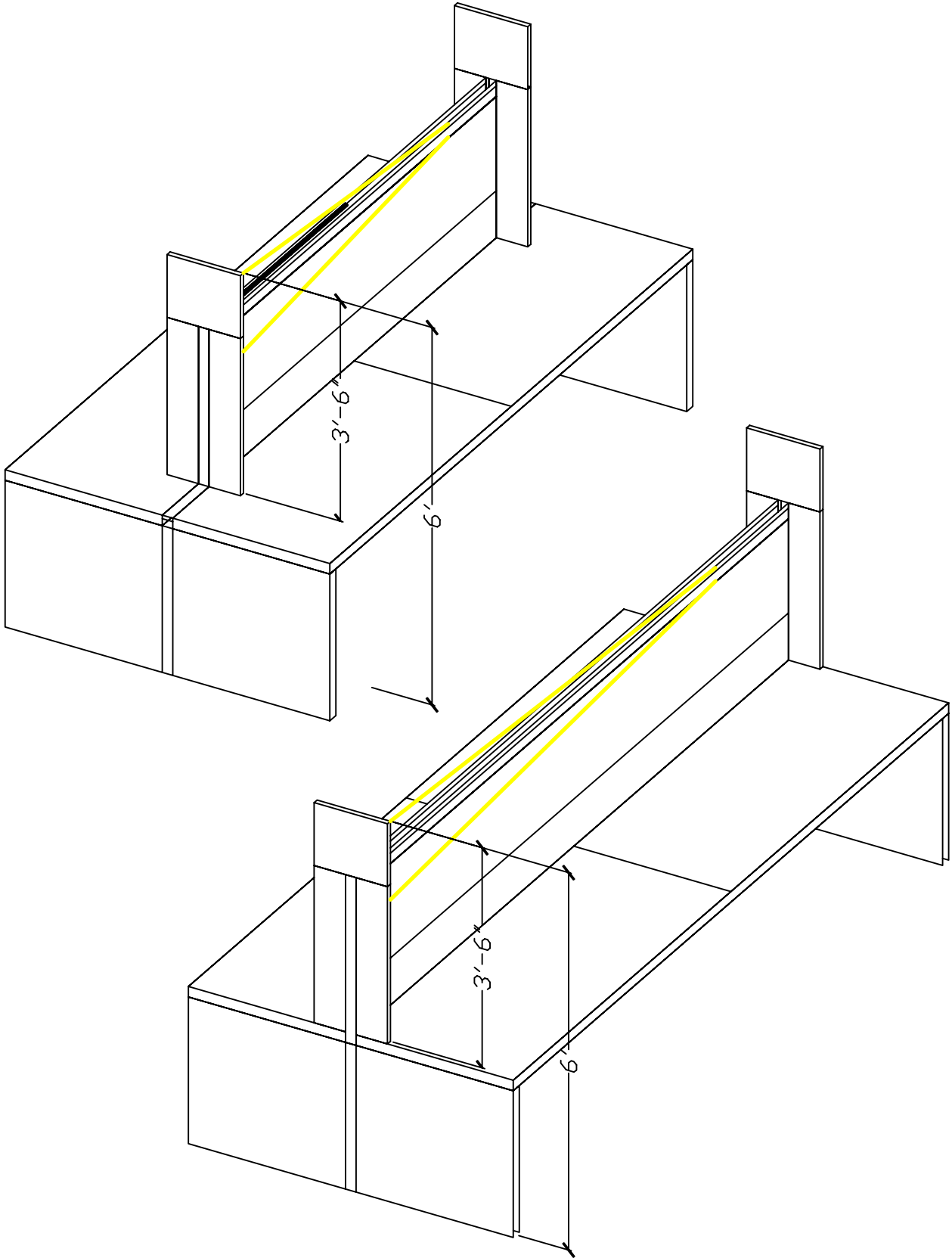


Scale: 1/4" = 1'



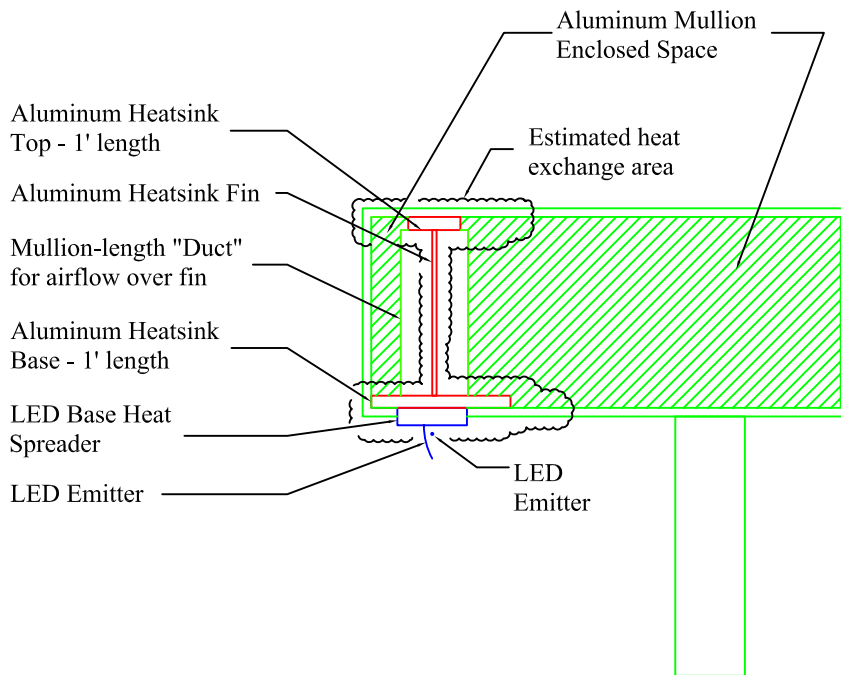
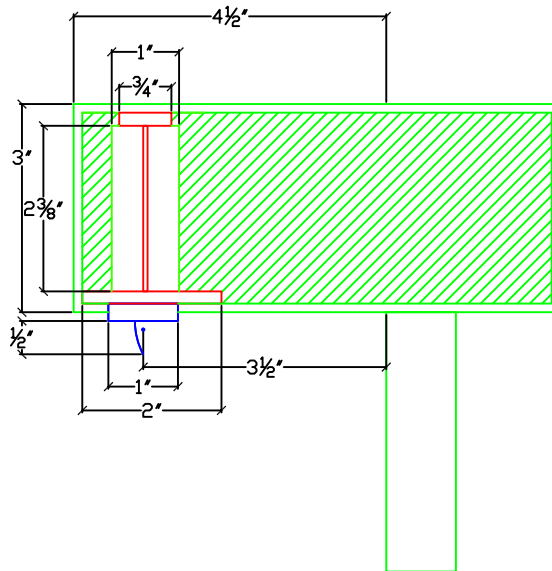
Open Office Desk Detail and Profile

Scale: 1" = 1'



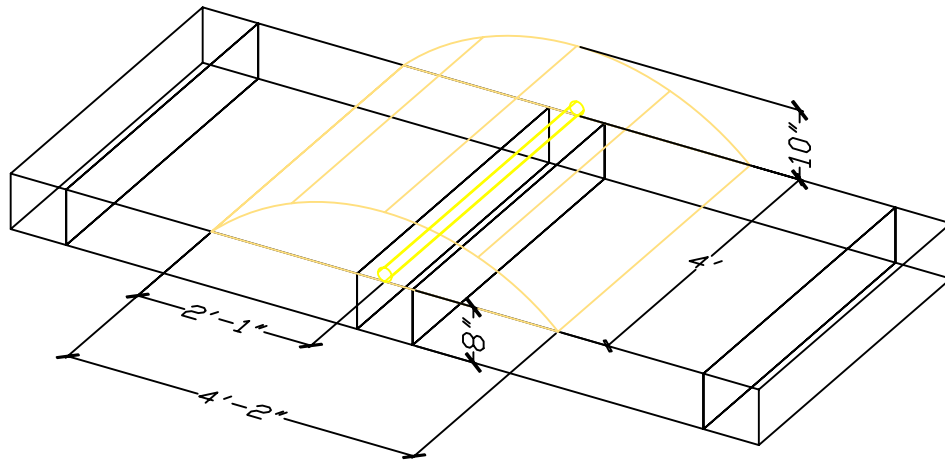
Open Office Desk Glare Angle Detail

Scale: $\frac{1}{2}'' = 1'$



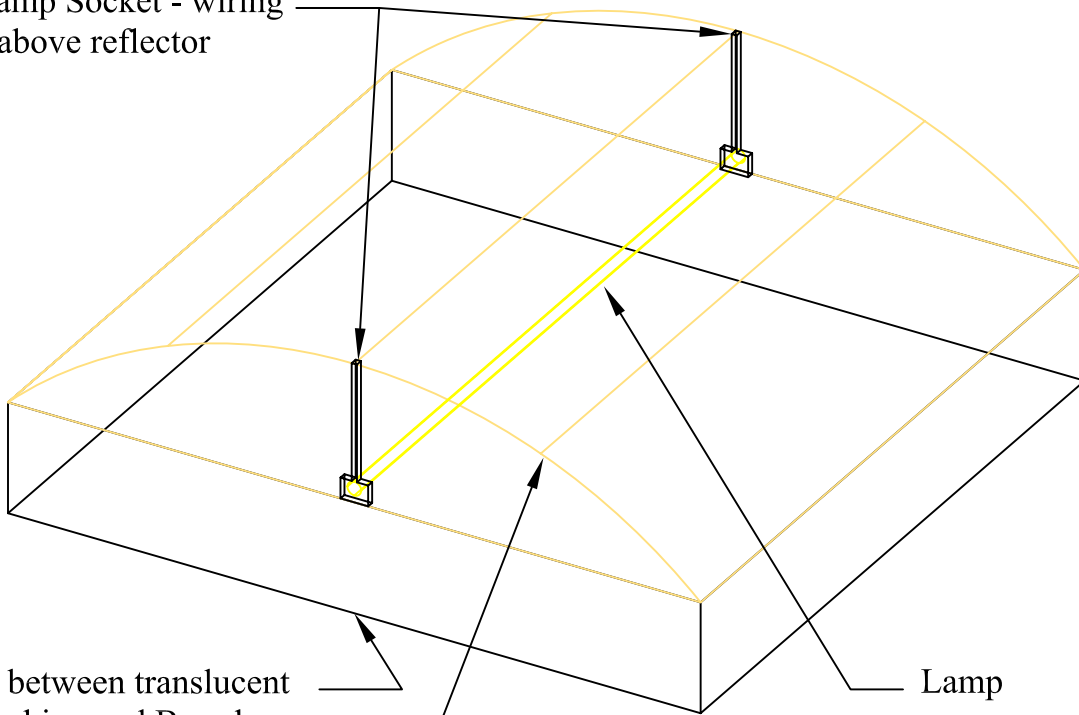
LED Installation on Mullion Dimension and Detail

Scale: 4" = 1'



Scale: 1/2" = 1'

Hung Lamp Socket - wiring located above reflector



Spacing between translucent white backing and Barrel

Specular (ALANOD Miro) Reflector

Lamp

Lobby "Barrel" Luminaire Dimension and Detail

Scale: 1" = 1'

FEATURES

OPTICAL SYSTEM

- Matte white polyester powder paint finished reflectors provide uniform light distribution. Optional diffuse aluminum stepped reflectors available
- Diffuser controls direct light distribution and glare by shielding lamps from direct view.
- Shielding snaps into place.
- Light traps prevent light leaks between shielding and endplates.

SHIELDING

- Straight Blade Louver (SBL) sides of perforated metal with staggered round holes and solid blade louvered center. Sides and louver backed with white acrylic diffuser.

ELECTRICAL SYSTEM

- Class P, thermally-protected, resetting, HPF, Non-PCB, UL Listed, CSA-certified electromagnetic ballast is standard. Energy saving and electronic ballast are sound rated A. Standard combinations are CBM approved and conform to UL 935.

HOUSING

- Housing is powder painted cold rolled steel. All edges hemmed or rounded.
- Trims available for standard 1" tee bar, mini-tee bar, screw slot grids.
- Drywall ceiling adapters available.
- Fixtures can be row mounted end to end.

LISTING

- UL listed and labeled. Listed and labeled to comply with Canadian and Mexican Standards (see options).

Specifications subject to change without notice.

Type

Catalog number

.....

.....

Direct/Indirect General Lighting System

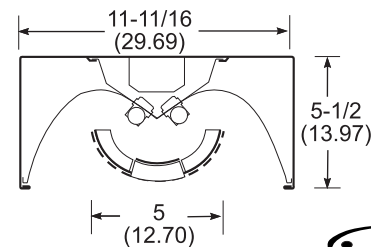
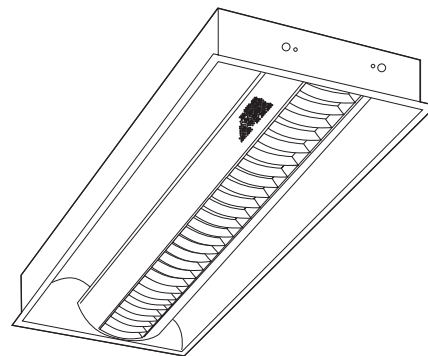
AV 1'x4' SBL

T8, T5 or T5HO

1 or 2 lamp

Compact Fluorescent

1 lamp in cross section



Avante
Recessed Direct/Indirect Lighting

ORDERING INFORMATION

Example: AV G 2 32 SBL 120 GEB

AV		SBL		Options	
Series	Lamps in Cross Section	Lamp Type	Diffuser	Voltage	Light Distribution
AV 1' wide For lamps in tandem add prefix T. Example: TAV.	1, 2	32 32W T8 (48") 28T5 28W T5 (46") 54HOT5 54W T5 HO (46") CF40 40W TT5 (24") ² CF50 50W TT5 (24") ² CF55 55W TT5 (24") ²	SBL Straight blade louver, round holes.	120, 277, 347 Others available	(blank) Symmetric Distribution
	Trim Type				
	G Grid trim ST Screw slot				

Accessories

Order as separate catalog number.

DGA14¹ Flanged grid to drywall adapter, unit installation.

Notes:

1 Use G trim plus DGA accessory for fixture trim flange and fixture support in plaster or plasterboard ceilings.

2 1 lamp in cross section, 2 lamps end to end in fixture.

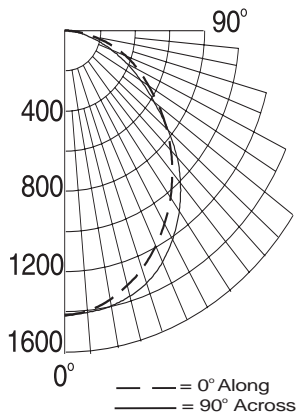
Options	
GEB	Electronic ballast, <20% THD.
GEB10IS	Electronic ballast, ≤10% THD, Instant Start.
GEB10RS	Electronic ballast, ≤10% THD, Rapid Start.
ADEZ	Advance Mark X two-wire dimming ballast. (T8 only)
EL	Emergency battery pack (nominal 300 lumens, see Life Safety section).
GLR	Internal fast-blow fuse.
GMF	Internal slow-blow fuse.
LP	Lamped. Specify lamp type and color.
PWS1836	6' prewire, 3/8" dia., 18-gauge, 3 wires.
RIF	Radio interference filter.
HTC	T-bar safety clips (snap-on).
LATC	T-bar safety clips (screw-on).
CSA	Listed and labeled to comply with Canadian Standards.
NOM	Listed and labeled to comply with Mexican Standards.

Reflector Option

ASR Aluminum stepped reflector.

AV 1x4 SBL Direct/Indirect General Lighting

AV G 2 32 SBL 120, (2) F32 T8 lamps, 2900 lumens per lamp, s/m (along) = 1.2, s/m (across) = 1.3, test no. LTL7107



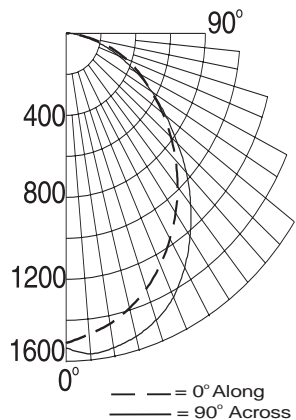
CANDLEPOWER SUMMARY			
Angle	0	45	90
0	1422	1422	1422
5	1408	1419	1419
15	1332	1363	1388
25	1213	1263	1305
35	1058	1108	1147
45	874	896	929
55	672	649	637
65	475	368	400
75	277	178	189
85	64	47	40
90	0	0	0

COEFFICIENT OF UTILIZATION %				
Floor	20			
Ceiling	80	70	50	0
Wall	70 50 30	70 50 30	50 30 10	0
0	76 76 76	75 75 75	71 71 71	64
1	70 67 65	68 66 63	63 61 59	54
2	64 59 55	62 58 54	55 52 49	46
3	59 52 47	57 51 46	49 45 42	39
4	54 46 41	52 45 40	44 39 36	33
5	49 41 36	48 41 35	39 35 31	29
6	46 37 32	45 37 31	36 31 27	26
7	42 34 28	41 33 28	32 28 24	23
8	40 31 26	39 31 25	30 25 22	20
9	37 28 23	36 28 23	27 23 20	18
10	35 26 21	34 26 21	25 21 18	17

ZONAL LUMEN SUMMARY			
Zone	Lumens	% Lamp	% Fixture
0-30°	1097	18.9	29.4
0-40°	1785	30.8	47.9
0-60°	3058	52.7	82.1
60-90°	666	11.5	17.9
0-90°	3724	64.2	100.0
90°-180°	0	0.0	0.0
0-180°	3724	64.2	100.0

Efficiency = 64.2%

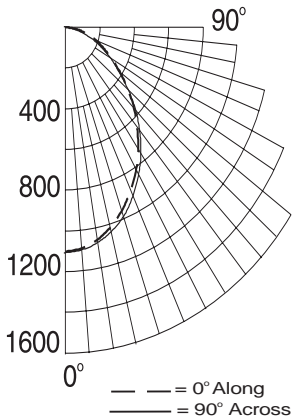
TAV G 1 CF40 SBL 120, (2) 40W TT5RS lamp, 3150 lumens per lamp, s/m (along) = 1.2, s/m (across) = 1.3, test no. LTL7119



RCR

Efficiency = 61.0%

AV G 2 32 SBL 120 ASR*, (2) F32 T8 lamps, 2850 lumens per lamp, s/m (along) = 1.1, s/m (across) = 1.2, test no. LTL7077



CANDLEPOWER SUMMARY			
Angle	0	45	90
0	1101	1101	1101
5	1090	1096	1093
15	1015	1029	1037
25	891	909	926
35	736	743	772
45	563	559	588
55	389	375	391
65	244	208	238
75	134	94	105
85	30	23	14
90	0	0	0

COEFFICIENT OF UTILIZATION %				
Floor	20			
Ceiling	80	70	50	0
Wall	70 50 30	70 50 30	50 30 10	0
0	50 50 50	49 49 49	47 47 47	42
1	46 45 43	45 44 42	42 41 40	36
2	43 39 37	42 39 36	37 35 33	31
3	39 35 32	38 34 31	33 31 29	27
4	36 31 28	35 31 28	30 27 25	23
5	33 28 25	32 28 24	27 24 22	20
6	31 26 22	30 25 22	24 21 19	18
7	29 23 20	28 23 20	22 19 17	16
8	27 21 18	26 21 18	21 18 16	15
9	25 20 16	25 19 16	19 16 14	13
10	24 18 15	23 18 15	18 15 13	12

ZONAL LUMEN SUMMARY			
Zone	Lumens	% Lamp	% Fixture
0-30°	808	14.2	33.6
0-40°	1274	22.4	53.0
0-60°	2049	35.9	35.2
60-90°	357	6.3	14.5
0-90°	2406	42.2	100.0
90°-180°	0	0.0	0.0
0-180°	2406	42.2	100.0

Efficiency = 42.2%

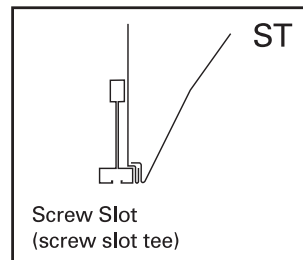
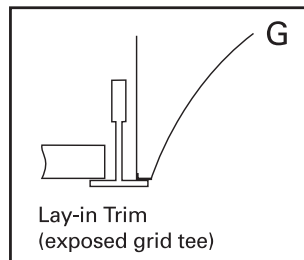
*ASR - Aluminum stepped reflector

For additional photometric information, visit our website at 'lithonia.com'.

MOUNTING DATA

Mounting Data Ceiling Type	Appropriate Trim Type
Exposed grid tee	G
Concealed grid tee	G
Screw slot	ST
Plaster or plasterboard	G*

*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 12-3/4" x 24-3/4" (Tolerance is +1/8", -0").



AV 1x4 SBL

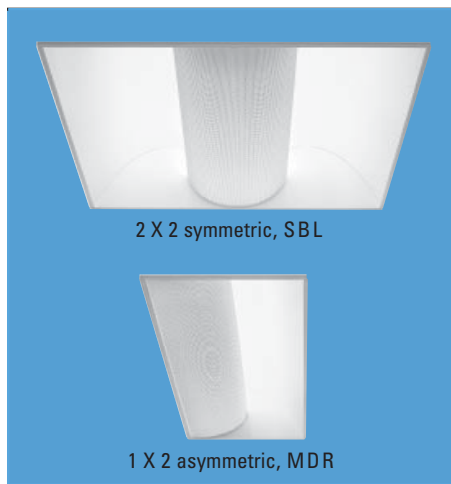
© 1999 Lithonia Lighting, Rev. 5/00
AV1x4SBL.p65

LITHONIA LIGHTING
ARCHITECTURAL INDOOR LIGHTING

ONE LITHONIA WAY, CONYERS, GEORGIA 30012, TELEPHONE 770-922-9000, FAX 770-860-3129
www.lithonia.com • IN CANADA: 1100 50TH AVE., LACHINE, QUEBEC H8T 2V3

Avante®

1' X 2' and 2' X 2'



Recessed Direct/Indirect Lighting

Intended Use

An exceptional general lighting product that performs well in large spaces with high ceilings. Asymmetric products deliver uniform vertical illumination. They produce excellent corridor lighting or accent lighting for retail applications in continuous rows.

Features

Optimum mix of directional and diffuse reflected light for balanced illumination between task and proximate walls, enhanced visual comfort and minimized shadows.

Available in 1'x2' and 2'x2' symmetric distributions for general area lighting applications. Unique 1'x2' design suitable for corridor applications.

1'x2' asymmetric distribution available for

dedicated wall washing or in combination with symmetric luminaires to maintain perimeter illumination.

Choice of shielding options.

Matte-white polyester powder paint finished reflectors provide uniform light distribution. Optional diffuse aluminum stepped reflectors available.

Shieldings pivot and swing down for easy lamp access.

Injection-molded plastic light traps prevent light leaks between shielding and end plates.

Compatible with screw slot and most 2-foot ceiling grids.

Covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

Listings – UL Listed (standard). CSA Certified or NOM Certified (see Options).

Ordering Information

Example: AV G 1 CF40 MDR 120 GEB

Series AV 1' wide, symmetric and asymmetric distribution 2AV 2' wide, symmetric distribution	Number of lamps 1, 2, 3 ³ Not included.	Lamp type 14T5 14W T5 (22") 17 17W T8(24") 24T5HO 24W T5 HO (22") CF40 40W TT5 (24") CF50 50W TT5 (24") CF55 55W TT5 (24")	Light distribution (blank) Symmetric distribution ASY Asymmetric distribution (AV only)	Options GEB T8 electronic ballast, <20% THD GEB10IS T8 electronic ballast, <10% THD, instant start GEB10PS T5 electronic ballast, ≤10% THD, program start GEB10RS T8 electronic ballast, <10% THD, rapid start ALG Acrylic litter guard GLR Internal fast-blow fuse EL Emergency battery pack for T8 (nominal 300 lumens) EL55 Emergency battery pack for T5/T5HO (nominal 390-700 lumens) ⁴ PWS1836 6' prewired, 3/8" dia., 18-ga., 3 wires LP_ Lamped. Specify lamp type and color APB Air pattern control blades (Not available with ASY distribution) NYC New York City approved CP Chicago Plenum approved ⁵ CSA CSA Certified NOM NOM Certified
Trim type G Grid trim ST Screw slot	Air function (blank) Standard A Air supply/return ¹	Diffuser MDR Metal diffuser, round holes SBL Straight blade louver, round holes ¹ MDM Metal diffuser, mini slots. ADP Acrylic diffuser, linear prismatic lens ^{1,3}	Voltage 120, 277, 347, MVOLT* Others available. * 120-277V. Must specify GEB10IS or GEB10PS.	

Others available; consult factory.

Ballast/Lamp Compatibility

	17	14T5	24T5HO	CF40	CF50	CF55
GEB	■			■	■ ⁶	■ ⁶
GEB10IS	■					
GEB10PS		■	■			
GEB10RS	■					

Availability and Dimensions

Size	Series	Number of Lamps	Lamp Type	Height in.(cm)
1x2 (blank)	AV	1, 2 1	14T5, 17, 24T5HO CF40, CF50, CF55	5½ (14.0)
1x2 ASY	AV	1, 2 1	14T5, 17, 24T5HO CF40, CF50, CF55	5½ (14.0) 5½ (14.0)
2x2	2AV	1, 2, 3	14T5, 17, 24T5HO, CF40, CF50, CF55	5½ (14.0)

Reflector Options

ASR Aluminum stepped reflector

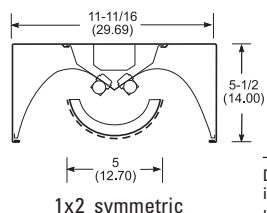
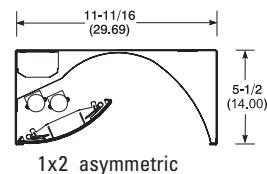
See page 29 for others.

NOTES:

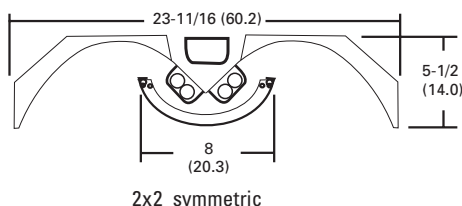
- 1 Not available in AV 1x2 asymmetric.
- 2 2-lamp available only in AV 1x2 with 14T5, 17, or 24T5HO.
- 3 Available with 2x2 only.
- 4 Not available in Canada.
- 5 Not available with air supply return.
- 6 Specify ballast manufacturer.

Accessories (Order separately)

DGA_ Drywall ceiling adapter, unit installation. Use G trim plus DGA for support in plaster ceilings. (Add 12 for 1x2, 22 for 2x2)



Dimensions are shown in inches (centimeters) unless otherwise noted.



Avante®

1' X 4' and 2' X 4'

Intended Use

An exceptional general lighting product that performs well in large spaces with high ceilings. Asymmetric products deliver uniform vertical illumination. They produce excellent corridor lighting or accent lighting for retail applications in continuous rows.

Features

The optimum mix of directional and diffuse reflected light combine for balanced illumination between task and proximate walls, enhanced visual comfort and minimized shadows.

Available in 1'x4' and 2'x4' symmetric distributions for general area lighting applications. End-to-end row mounting capability.

1'x4' asymmetric distribution available for dedicated wall washing or in combination with symmetric luminaires to maintain perimeter illumination.

Available with a variety of shielding options.

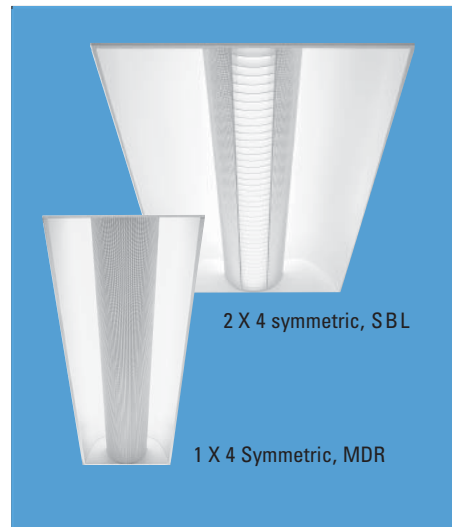
Matte-white polyester powder paint finished reflectors provide uniform light distribution. Optional diffuse aluminum stepped reflectors available.

Shieldings pivot on light trap and swing down for easy lamp access.

Injection-molded plastic light traps prevent light leaks between shielding and end plates.

Covered by one or more of the following patents: 5,988,829; 399,586; 411,641; 413,402; 2,212,513; 87,513.

Listings – UL Listed (standard). CSA Certified or NOM Certified (see Options).

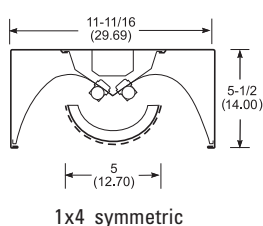
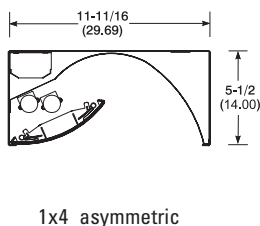
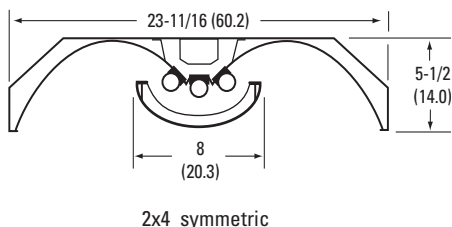


Ordering Information

Example: **2AV G 3 32 MDR 120 GEB**

Series AV 1' wide, symmetric and asymmetric distribution 2AV 2' wide, symmetric distribution	Number of lamps 1, 2, 3² Not included.	Lamp type 28T5 28W T5 (46") 32 32W T8 (48") 54T5HO 54W T5 HO (46")	Light distribution (blank) Symmetric distribution ASY Asymmetric distribution (AV only)	Options GEB T8 electronic ballast, <20% THD GEB10IS T8 electronic ballast, <10% THD, instant start GEB10PS T5 electronic ballast, ≤10% THD, program start GEB10RS T8 electronic ballast, <10% THD, rapid start ALG Acrylic litter guard GLR Internal fast-blow fuse EL Emergency battery pack for T8 (nominal 300 lumens) EL55 Emergency battery pack for T5/T5HO (nominal 390-700 lumens) ³ PWS1836 6' prewired, 3/8" dia., 18-ga., 3 wires APB Air pattern control blades (Not available with ASY distribution) LP Lamped. Specify lamp type and color NYC New York City approved CP Chicago Plenum approved ⁴ CSA CSA Certified NOM NOM Certified
Trim type G Grid trim ST Screw slot	Air function (blank) Standard A Air supply/return ¹	Diffuser MDR Metal diffuser, round holes SBL Straight blade louver, round holes ¹ MDM Metal diffuser, mini slots. ADP Acrylic diffuser, linear prismatic lens ²	Voltage 120, 277, 347, MVOLT* Others available. *120-277V. Must specify GEB10IS or GEB10PS.	

Dimensions are shown in **inches (centimeters)** unless otherwise noted.



Accessories (Order separately)

DGA Drywall ceiling adapter, unit installation. Use G trim plus DGA for support in plaster ceilings. (Add **14** for 1x4, **24** for 2x4)

Ballast/Lamp Compatibility	32	28T5	54T5HO
GEB	■		
GEB10IS	■		
GEB10RS	■		
GEB10PS		■	■

NOTES:
 1 Not available in AV 1x4 asymmetric.
 2 Available only with 2AV.
 3 Not available in Canada.
 4 Not available with air supply return.

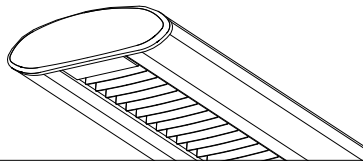
Reflector Options

ASR	Aluminum stepped reflector
------------	----------------------------

See page 29 for others.

Availability and Dimensions

Size	Series	Number of Lamps	Lamp Type	Height in.(cm)
1x4	AV	1, 2	28T5, 32, 54T5HO	5½ (14.0)
2x4	2AV	1, 2, 3	28T5, 32, 54T5HO	5½ (14.0)



Suspended
1T5HO
Direct/Indirect High Performance
8817H01

- Designed to accommodate up to 3T8 or 3T5HO lamps
- Optional Variable Optics™ provide additional up or downlight where needed
- Variable position mounting allows for flexibility in mount locations
- Optional high-performance version offers enhanced ceiling uniformity
- Standard orders can ship in 9 working days
- Factory pre-wired with quick-wire connectors

Order Number Guide

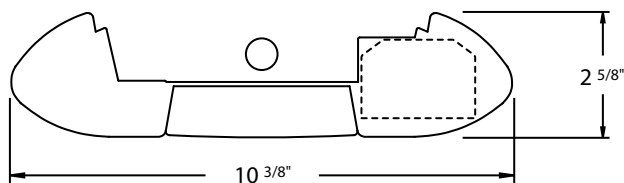
Example: 8817 H01PN 12 12EW

881	7	H01	—	—	—	—	—	E	—
Series Achieva	Type 7 - Direct/ Indirect High Performance	Lamping 1T5HO	Lower Optics (Lower Type) W - White P - Semi-Specular S - Specular M - Semi-Specular VDT R - Specular VDT	Upper Optics N - None (30% Dn) D - 60% Down Kit G - 80% Down Kit J - 100% Down Kit U - 80% Up Kit	Length 04 - 4ft 08 - 8ft 12 - 12ft	Wiring 1 - 1cct 3 - 1cct w/ Emergency cct 5 - 1cct w/ Battery Pack 7 - 1cct w/ Dimming 8 - 1cct w/ Thru Wire	Voltage 1 - 120V 2 - 277V 3 - 347V*	Ballast Electronic	Finish W - Standard White C - Factory Color X - Custom Color

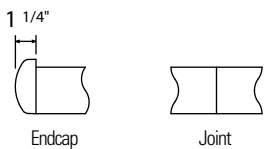
*Consult factory for availability

Not all product and/or wiring options shown. Some combinations of product options may not be available or recommended (see below for optics details). Consult factory for more information.

Cross Section



Ends / Joints



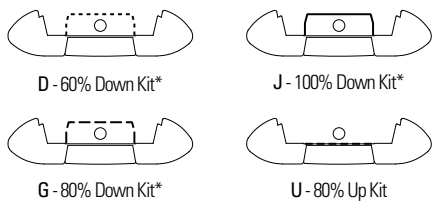
Louvers

Number of louver cells per 4ft:

W - White	34 cells
P - Semi-Specular	15 cells
S - Specular	15 cells
M - Semi-Specular VDT	30 cells
R - Specular VDT	30 cells

Optics

Variable Optics



* Downlight kits are not recommended with white louvers (lower optics option W), due to potential for excessive louver brightness.

Modules

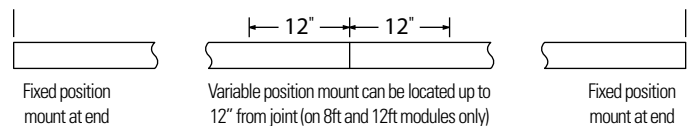
Module*	Mount Spacing*
4ft	4' 0"
8ft	8' 0"
12ft	12' 0"

* Module length excludes endcaps.
Nominal mount spacing for individually mounted modules with fixed position mounts.

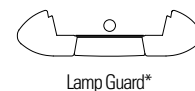
Individual modules can be joined together to form longer runs (see below).

Mounting in Runs

Fixed position mounts supplied standard at ends. Variable position mounts supplied standard at joints. Variable position mounts cannot be located on 4ft modules. Optional variable position mounts at ends available upon request (8ft and 12ft modules only).



Accessories



* Lamp guard is not available with an uplight kit (upper optics option U).

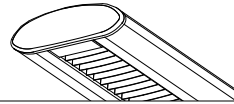


Suspended

1T5H0

Direct/Indirect High Performance

8817H01



Specifications

Housing: 6063 T5 extruded aluminum.

Optical System: Constructed of 96% reflective white steel to produce a direct/indirect distribution. High performance version utilizes additional highly specular aluminum reflectors. Louvers are available in white blades and aluminum specular or semi-specular blades. White louver blades are spaced 1.3" apart and are 1.1" deep (34 cells per 4ft section). Standard specular and semi-specular louver blades are spaced 3" apart and are 1" deep (15 cells per 4ft section). Specular VDT and semi-specular VDT louver blades are spaced 1.5" apart and are 1" deep (30 cells per 4ft section). Optional Variable Optics™ kits provide additional up or downlight where needed.

Ends: Aluminum die-cast endcaps, baked powder coat finish for color.

Joints: Self-aligning joining system.

Mounting: Fixed position mounts supplied standard at ends. Variable position mounts supplied standard at joints. Variable position mounts can be located on 8ft or 12ft modules within 12" of joint or end. Aircraft cable gripper is tamper-resistant and provides infinite vertical adjustment capability. Aircraft cable, crimp and cable gripper independently tested to meet stringent safety requirements.

Electrical: Factory pre-wired to section ends with quick-wire connectors.

Ballast: Electronic.

Weight: 2.7 lb per ft.

Approvals: Certified to UL and CSA standards.

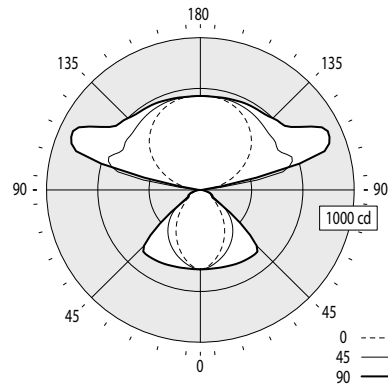
Finish: High quality powder coat. Available in Ledalite standard white (textured matte finish), and a selection of other factory and custom colors. Consult factory for details.

Due to continuing product improvements, Ledalite reserves the right to change specifications without notice.

Photometry

IES files for these and other photometric options, including downlight kits, can be downloaded online at www.ledalite.com

White Louvers - WN (Lower/Upper Optics Code)



Report Summary

Report # 2101359
 Efficiency 88.0%
 Peak Candela Value 914 @ 115°
 Peak to Zenith Ratio 1.5 : 1
 RP-1-04 Compliance VDT Intensive

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0	45	90
55	913	1424	1265
65	784	921	989
75	687	761	1002
85	661	716	772

Candela Distribution

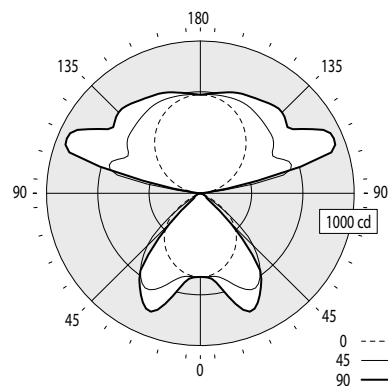
Vertical Angle	Horizontal Angle					Zonal Lumens
	0	22.5	45	67.5	90	
0	522	522	522	522	522	
5	508	508	513	519	522	49
15	444	451	475	509	527	136
25	362	375	426	493	538	202
35	269	288	365	469	548	238
45	173	193	285	417	517	232
55	109	110	170	157	151	132
65	69	69	81	81	87	76
75	37	36	41	42	54	44
85	12	11	13	11	14	14
90	3	4	5	5	5	
95	36	60	22	15	17	67
105	154	295	599	598	667	469
115	272	359	583	848	914	586
125	382	439	581	689	721	511
135	469	504	586	660	667	448
145	534	553	604	642	645	375
155	582	589	615	634	636	283
165	609	610	618	625	625	176
175	618	617	618	618	617	60
180	617	617	617	617	617	

Coefficients of Utilization (%)

Ceiling	80				70			50			0
	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	89	89	89	89	80	80	80	62	62	62	24
1	82	78	75	72	73	70	67	55	53	51	21
2	75	68	63	59	66	61	57	48	45	43	18
3	68	60	54	50	61	54	49	43	39	36	15
4	62	53	47	42	56	48	43	38	34	31	13
5	57	48	41	36	51	43	37	34	30	27	12
6	53	43	36	31	47	38	33	31	26	23	10
7	49	38	32	27	43	35	29	28	23	20	9
8	45	35	28	24	40	31	26	25	21	18	8
9	42	32	25	21	37	29	23	23	19	16	7
10	39	29	23	19	35	26	21	21	17	14	7

Floor reflectance: 20

Semi-Specular Louvers - PN (Lower/Upper Optics Code)



Report Summary

Report # 9900358
 Efficiency 95.4%
 Peak Candela Value 940 @ 112.5°
 Peak to Zenith Ratio 1.5 : 1
 RP-1-04 Compliance VDT Intensive

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0	45	90
55	2700	2274	668
65	1003	463	521
75	157	94	31
85	94	0	0

Candela Distribution

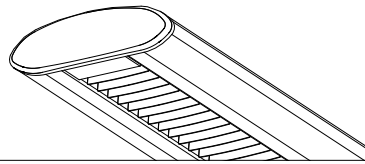
Vertical Angle	Horizontal Angle					Zonal Lumens
	0	22.5	45	67.5	90	
0	549	549	549	549	549	
5	546	546	550	553	555	55
15	518	529	581	660	701	171
25	470	515	696	818	836	307
35	404	509	675	692	692	376
45	317	453	488	360	283	305
55	190	272	160	45	47	138
65	52	76	24	30	27	44
75	5	4	3	2	1	5
85	1	1	0	0	0	0
90	0	0	0	0	0	
95	24	92	30	17	19	78
105	115	269	608	711	676	485
115	219	343	548	850	934	571
125	321	413	581	673	734	499
135	418	488	611	725	751	464
145	502	552	636	709	733	395
155	570	599	657	700	710	300
165	618	631	656	681	687	185
175	643	646	651	655	656	64
180	647	647	647	647	647	

Coefficients of Utilization (%)

Ceiling	80				70			50			0
	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	98	98	98	98	88	88	88	69	69	69	30
1	90	86	83	80	81	78	75	62	60	58	27
2	82	76	71	67	74	69	64	55	52	50	24
3	76	67	61	56	68	61	56	49	45	42	21
4	69	60	53	48	62	54	49	44	40	37	18
5	64	54	46	41	57	49	43	39	35	32	16
6	59	48	41	36	53	44	38	36	31	28	14
7	54	43	36	31	49	39	33	32	28	24	13
8	50	39	32	28	45	36	30	29	25	22	11
9	47	36	29	24	42	33	27	27	22	19	10
10	43	33	26	22	39	30	24	25	20	17	9

Floor reflectance: 20





Suspended
2T5HO
Direct/Indirect High Performance
8817H02

- Designed to accommodate up to 3T8 or 3T5HO lamps
- Optional Variable Optics™ provide additional up or downlight where needed
- Variable position mounting allows for flexibility in mount locations
- Optional high-performance version offers enhanced ceiling uniformity
- Standard orders can ship in 9 working days
- Factory pre-wired with quick-wire connectors

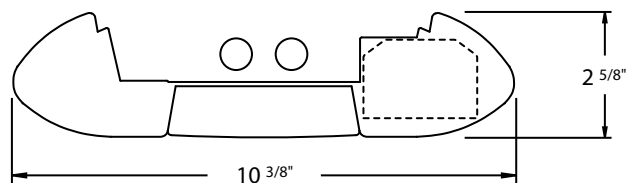
Order Number Guide

Example: 8817 H02PN 12 12EW

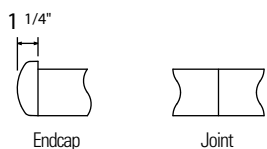
881	7	H02	—	—	—	—	—	E	—
Series Achieva	Type 7 - Direct/ Indirect High Performance	Lamping 2T5HO	Lower Optics (Lower Type) W - White P - Semi-Specular S - Specular M - Semi-Specular VDT R - Specular VDT	Upper Optics N - None (30% Dn) D - 60% Down Kit G - 80% Down Kit J - 100% Down Kit U - 80% Up Kit	Length 04 - 4ft 08 - 8ft 12 - 12ft	Wiring 1 - 1cct 2 - 2cct 3 - 1cct w/ Emergency cct 4 - 2cct w/ Emergency cct 5 - 1cct w/ Battery Pack 6 - 2cct w/ Battery Pack 7 - 1cct w/ Dimming 8 - 1cct w/ Thru Wire 9 - 2cct w/ Thru Wire	Voltage 1 - 120V 2 - 277V 3 - 347V*	Ballast Electronic	Finish W - Standard White C - Factory Color X - Custom Color

Not all product and/or wiring options shown. Some combinations of product options may not be available or recommended (see below for optics details). Consult factory for more information.

Cross Section



Ends / Joints



Louvers

Number of louver cells per 4ft:
 W - White.....34 cells
 P - Semi-Specular15 cells
 S - Specular15 cells
 M - Semi-Specular VDT30 cells
 R - Specular VDT30 cells

Modules

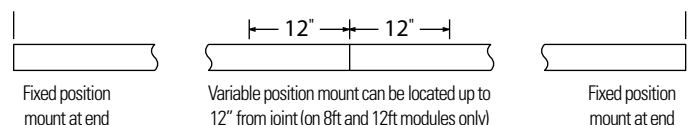
Module*	Mount Spacing*
4ft	4' 0"
8ft	8' 0"
12ft	12' 0"

* Module length excludes endcaps.
 Nominal mount spacing for individually
 mounted modules with fixed position mounts.

Individual modules can be joined together to form longer runs (see below).

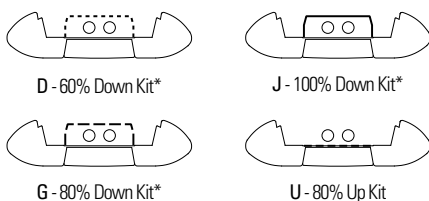
Mounting in Runs

Fixed position mounts supplied standard at ends. Variable position mounts supplied standard at joints. Variable position mounts cannot be located on 4ft modules. Optional variable position mounts at ends available upon request (8ft and 12ft modules only).



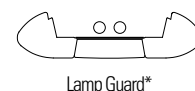
Optics

Variable Optics



* Downlight kits are not recommended with white louvers (lower optics option W), due to potential for excessive louver brightness.

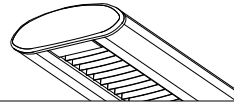
Accessories



* Lamp guard is not available with an upright kit (upper optics option U).



Suspended



2T5H0

Direct/Indirect High Performance

8817H02

Photometry

IES files for these and other photometric options, including downlight kits, can be downloaded online at www.ledalite.com

White Louvers - WN (Lower/Upper Optics Code)

Specifications

Housing: 6063 T5 extruded aluminum.

Optical System: Constructed of 96% reflective white steel to produce a direct/indirect distribution. High performance version utilizes additional highly specular aluminum reflectors. Louvers are available in white blades and aluminum specular or semi-specular blades. White louver blades are spaced 1.3" apart and are 1.1" deep (34 cells per 4ft section). Standard specular and semi-specular louver blades are spaced 3" apart and are 1" deep (15 cells per 4ft section). Specular VDT and semi-specular VDT louver blades are spaced 1.5" apart and are 1" deep (30 cells per 4ft section). Optional Variable Optics™ kits provide additional up or downlight where needed.

Ends: Aluminum die-cast endcaps, baked powder coat finish for color.

Joints: Self-aligning joining system.

Mounting: Fixed position mounts supplied standard at ends. Variable position mounts supplied standard at joints. Variable position mounts can be located on 8ft or 12ft modules within 12" of joint or end. Aircraft cable gripper is tamper-resistant and provides infinite vertical adjustment capability. Aircraft cable, crimp and cable gripper independently tested to meet stringent safety requirements.

Electrical: Factory pre-wired to section ends with quick-wire connectors.

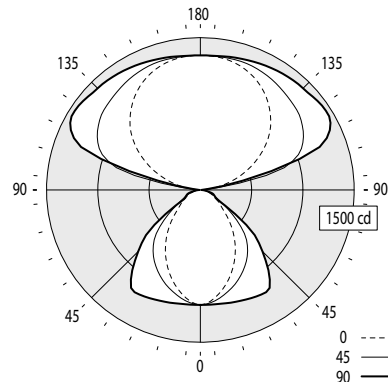
Ballast: Electronic.

Weight: 2.7 lb per ft.

Approvals: Certified to UL and CSA standards.

Finish: High quality powder coat. Available in Ledalite standard white (textured matte finish), and a selection of other factory and custom colors. Consult factory for details.

Due to continuing product improvements, Ledalite reserves the right to change specifications without notice.



Report Summary

Report # 2101360
 Efficiency 86.6%
 Peak Candela Value 1452 @ 122.5°
 Peak to Zenith Ratio 1.1 : 1
 RP-1-04 Compliance VDT Normal

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0	45	90
55	1893	2739	3484
65	1625	1910	1819
75	1429	1652	2116
85	1323	1653	1819

Candela Distribution

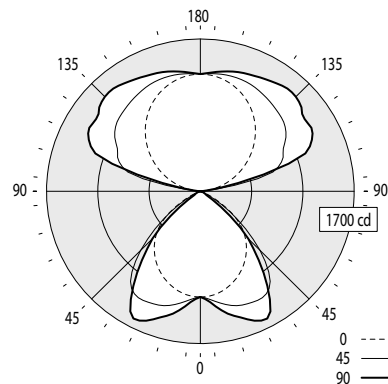
Vertical Angle	Horizontal Angle					Zonal Lumens
	0	22.5	45	67.5	90	
0	1132	1132	1132	1132	1132	
5	1102	1104	1117	1128	1134	107
15	963	977	1037	1109	1150	294
25	782	812	931	1076	1176	438
35	578	621	798	1017	1178	512
45	368	411	608	725	857	453
55	226	234	327	387	416	285
65	143	144	168	160	160	156
75	77	78	89	88	114	92
85	24	22	30	25	33	30
90	5	8	10	10	9	
95	64	122	42	20	21	105
105	295	567	848	709	717	675
115	545	754	1103	1322	1393	1021
125	779	911	1199	1395	1449	1033
135	971	1055	1244	1395	1416	945
145	1119	1170	1284	1382	1399	799
155	1229	1253	1315	1365	1373	606
165	1296	1304	1327	1346	1348	376
175	1324	1325	1326	1327	1327	129
180	1325	1325	1325	1325	1325	

Coefficients of Utilization (%)

Ceiling	80				70			50			0
	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	88	88	88	88	79	79	79	62	62	62	25
1	81	77	74	71	72	69	67	55	53	51	22
2	74	68	63	59	66	61	57	48	45	43	19
3	67	60	54	49	60	54	49	43	39	36	16
4	62	53	47	42	55	48	42	38	34	31	14
5	57	47	41	36	51	43	37	34	30	27	12
6	52	42	36	31	47	38	33	31	27	23	11
7	48	38	32	27	43	35	29	28	24	21	10
8	45	34	28	24	40	31	26	25	21	18	9
9	41	31	25	21	37	29	23	23	19	16	8
10	39	29	23	19	35	26	21	21	17	15	7

Floor reflectance: 20

Semi-Specular Louvers - PN (Lower/Upper Optics Code)



Report Summary

Report # 9900360
 Efficiency 90.9%
 Peak Candela Value 1498 @ 137.5°
 Peak to Zenith Ratio 1.1 : 1
 RP-1-04 Compliance VDT Normal

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0	45	90
55	5969	5727	2288
65	2141	1080	907
75	315	220	126
85	187	0	94

Candela Distribution

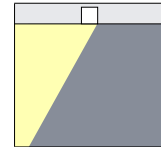
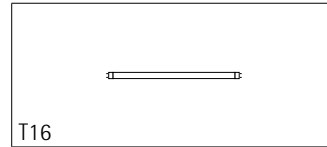
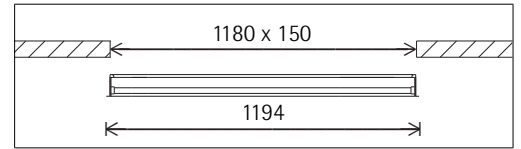
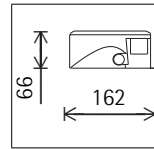
Vertical Angle	Horizontal Angle					Zonal Lumens
	0	22.5	45	67.5	90	
0	1180	1180	1180	1180	1180	
5	1174	1183	1212	1237	1242	119
15	1119	1191	1319	1412	1439	368
25	1018	1163	1366	1538	1593	619
35	878	1086	1325	1335	1291	748
45	693	918	933	779	749	637
55	420	579	403	223	161	338
65	111	150	56	49	47	91
75	10	9	7	4	4	11
85	2	1	0	0	1	1
90	0	0	0	0	0	
95	50	109	34	22	22	99
105	241	507	830	760	723	655
115	456	691	1009	1281	1360	960
125	663	837	1155	1328	1407	979
135	856	985	1228	1434	1493	931
145	1025	1116	1274	1421	1470	794
155	1158	1216	1316	1395	1420	603
165	1252	1280	1330	1371	1384	376
175	1302	1308	1319	1327	1330	128
180	1309	1309	1309	1309	1309	

Coefficients of Utilization (%)

Ceiling	80				70			50			0
	70	50	30	10	70	50	30	50	30	10	0
RCR											
0	94	94	94	94	84	84	84	68	68	68	31
1	86	83	80	77	78	75	72	60	59	57	28
2	79	73	68	64	71	66	62	54	51	48	25
3	72	65	59	54	65	59	54	48	44	41	22
4	67	58	51	46	60	53	47	43	39	36	19
5	61	51	45	40	55	47	41	39	34	31	17
6	56	46	39	34	51	42	36	35	30	27	15
7	52	42	35	30	47	38	32	32	27	24	13
8	48	38	31	27	44	35	29	29	24	21	12
9	45	34	28	24	41	32	26	26	22	19	11
10	42	31	25	21	38	29	23	24	20	17	10

Floor reflectance: 20





65040.000 Reflector silver
T16 28W G5 2600lm
ECG

Product description

Housing: sheet metal, white (RAL9002) powder-coated.
2 cable entries. Through-wiring possible. 5-pole terminal block.
Electronic control gear.
Wallwasher reflector: aluminium, anodised, satin matt. Hinged baffle to simplify lamp replacement.
Weight 4.00kg

Planning data

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

Hours of operation (h)	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000
LLMF	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.88
LSF	1	1	1	1	1	1	1	1	1	1

- MF LMFxRSMFxLLMFxLSF
- MF Maintainance 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

Illuminance E_n (lx)

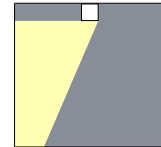
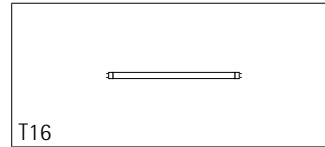
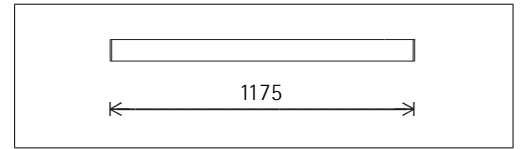
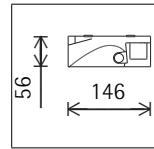
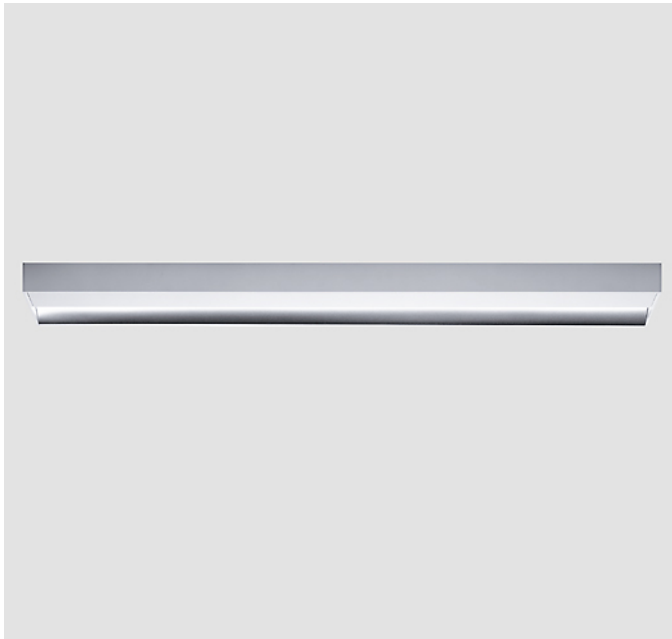
Specifications:

Number of luminaires $n > 5$

Wall height (m) 3

T16 28W G5 2600lm

Offset from wall (m)	1.00		1.00		1.25		1.25	
	below the luminaire	between the luminaires	below the luminaire	between the luminaires	below the luminaire	between the luminaires	below the luminaire	between the luminaires
0.250	285	228	258	176	123	117	93	79
0.500	624	559	559	430	396	382	313	252
0.750	619	579	540	463	506	488	390	331
1.000	510	490	439	401	460	450	348	315
1.250	412	403	352	335	394	389	297	278
1.500	333	327	284	275	333	329	250	240
1.750	269	265	230	225	280	277	211	205
2.000	217	213	185	182	235	233	178	174
2.250	176	172	151	149	197	194	150	147
2.500	144	140	125	122	164	162	126	124
2.750	118	116	104	101	137	135	107	105



65043.000 White (RAL9002)
T16 28W G5 2600lm
ECG

Product description

Housing: aluminium profile, powder-coated.

1 cable entries. Through-wiring possible. 3-pole terminal block.

Electronic control gear.

Wallwasher reflector: aluminium, silver, satin matt anodised. Hinged cover for lamp replacement.

Weight 4.00kg

Planning data

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

Hours of operation (h)	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000
LLMF	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.88
LSF	1	1	1	1	1	1	1	1	1	1

- MF LMFxRSMFxLLMFxLSF
- MF Maintainance 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

Illuminance E_n (lx)

Specifications:
 Number of luminaires $n > 5$
 Wall height (m) 3
 T16 28W G5 2600lm

Offset from wall (m)	1.00		1.00		1.25		1.25	
	below the luminaire	between the luminaires	below the luminaire	between the luminaires	below the luminaire	between the luminaires	below the luminaire	between the luminaires
0.250	285	228	258	176	123	117	93	79
0.500	624	559	559	430	396	382	313	252
0.750	619	579	540	463	506	488	390	331
1.000	510	490	439	401	460	450	348	315
1.250	412	403	352	335	394	389	297	278
1.500	333	327	284	275	333	329	250	240
1.750	269	265	230	225	280	277	211	205
2.000	217	213	185	182	235	233	178	174
2.250	176	172	151	149	197	194	150	147
2.500	144	140	125	122	164	162	126	124
2.750	118	116	104	101	137	135	107	105

FEATURES

- Available in tandem-wired lengths.
- Heavy-duty channel, die-formed from code-gauge steel.
- Sturdy channel cover secured by captive quarter-turn latch for easy access to wireway.
- High-gloss, baked white enamel finish.
- Endplate and channel connector furnished with each fixture.
- For unit or row installations, surface or suspended mounting.
- Guaranteed for one year against mechanical defects in manufacture.

SPECIFICATIONS

BALLAST — Thermally protected, resetting, Class P, HPF, non-PCB, UL listed, CSA-certified ballast is standard. Rapid start ballasts are sound rated A. Standard combinations are CBM approved and conform to UL 935.

WIRING & ELECTRICAL — Fixture conforms to UL 1570 and is suitable for damp locations. AWM, TFN or THHN wire used throughout, rated for required temperatures.

MATERIALS — Housing formed from cold-rolled steel. No asbestos is used in this product.

FINISH — Five-stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with high-gloss, baked white enamel.

LISTING — UL listed and labeled. CSA certified (see options). NOM labeled (see options).

Specifications subject to change without notice.

ENERGY

- Luminaire Efficiency Rating (LER)

One lamp minimum LER.FS = 52.

Based on 34W T12, 2650 lumen lamp and energy-saving magnetic ballast factor = .87 and input watts = 42.

Calculated in accordance with NEMA standard LE-5. See LER sheet for details.

Type

Catalog number

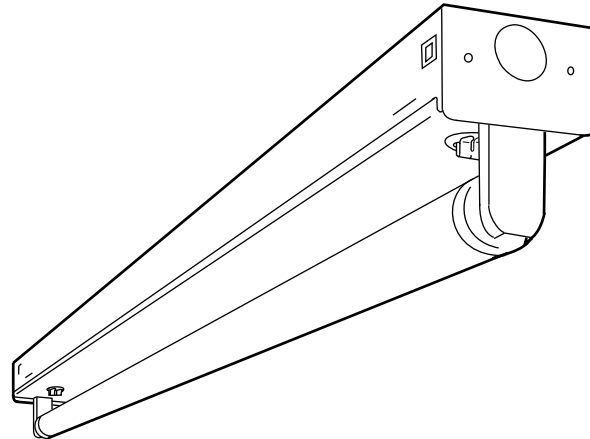
.....
.....
.....

Standard Strip

S

Rapid Start

1-1/2', 2', 3' or 4' length
1 lamp



PHOTOMETRICS

Calculated using the zonal cavity method in accordance with IESNA LM41 procedure. Floor reflectances are 20%. Lamp configurations shown are typical. Full photometric data on these and other configurations available upon request.

S 1 40

Report ITL 18240

S/MH (along) 1.2 (across) 1.6

Coefficient of Utilization

Ceiling Wall	80%			70%			50%		
	70%	50%	30%	70%	50%	30%	50%	30%	10%
1	94	89	84	89	84	80	76	72	69
2	84	75	68	80	72	65	64	59	54
3	76	65	57	72	62	54	56	49	44
4	70	57	48	65	54	46	49	42	37
5	63	50	41	59	48	39	43	36	30
10	42	29	21	39	28	20	25	19	14

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixture
0-30	388	12.1	12.8
0-40	663	20.7	21.9
0-60	1332	41.6	44.0
0-90	2245	70.2	74.2
90-180	782	24.4	25.8
0-180	3027	94.6	100.0

S 1 32

Report LTL 5725

S/MH (along) 1.2 (across) 1.6

Coefficient of Utilization

Ceiling Wall	80%			70%			50%		
	70%	50%	30%	70%	50%	30%	50%	30%	10%
1	97	91	86	92	87	82	79	75	72
2	87	77	70	82	74	67	67	61	56
3	78	67	58	74	64	56	58	52	46
4	71	59	50	67	56	48	51	44	38
5	65	51	42	61	49	41	45	37	32
10	43	30	22	41	28	21	26	20	15

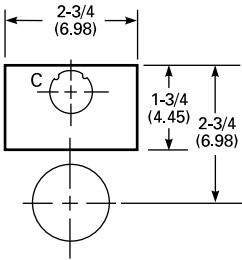
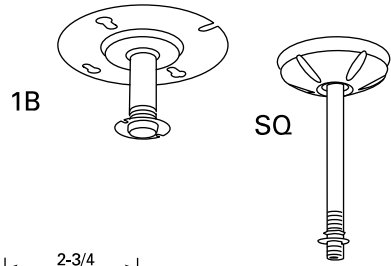
Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixture
0-30	388	13.4	13.9
0-40	660	22.8	23.7
0-60	1307	45.1	46.9
0-90	2176	75.0	78.1
90-180	609	21.0	21.9
0-180	2786	96.1	100.0

S Rapid Start

MOUNTING DATA

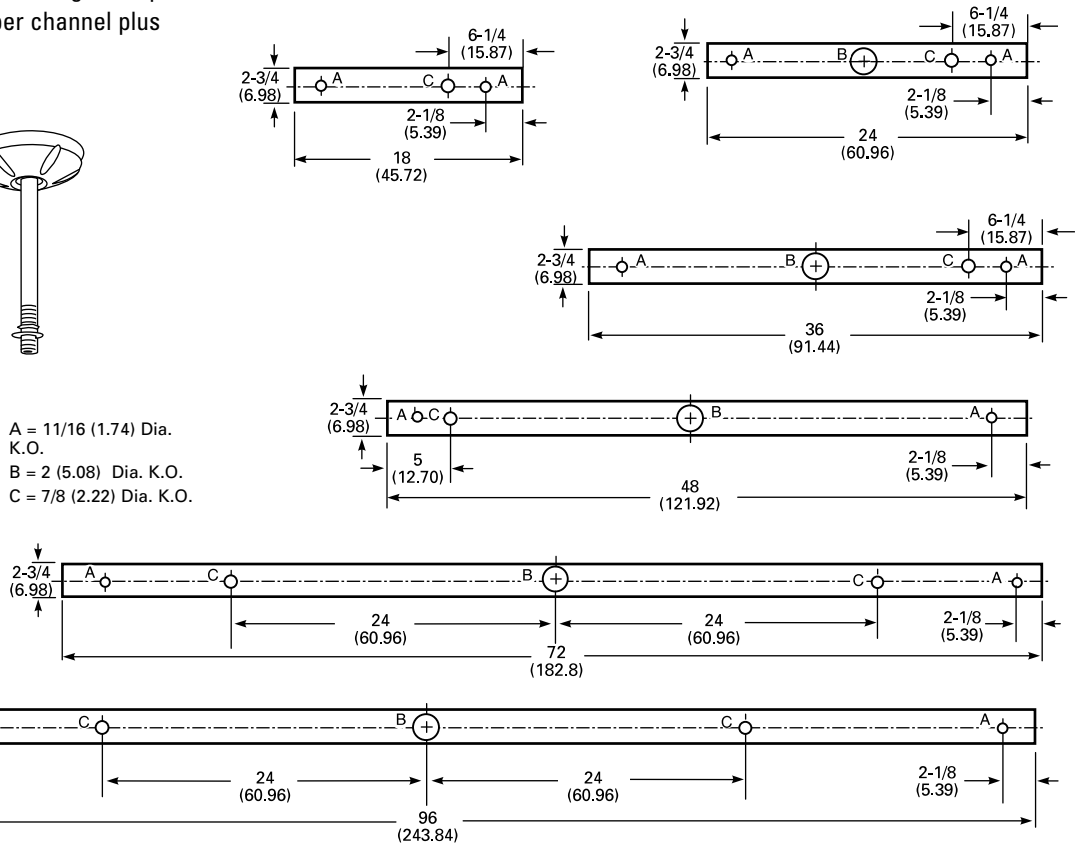
For unit or row installation, surface or stem mounting.
 Unit installation — Minimum of two hangers required.
 Row installation — One hanger per channel plus one per row required.



A = 11/16 (1.74) Dia. K.O.
 B = 2 (5.08) Dia. K.O.
 C = 7/8 (2.22) Dia. K.O.

DIMENSIONS

Inches (centimeters). Subject to change without notice.



ORDERING INFORMATION

Example: **S 1 30 120 HPF GLR**

S	1			
Series	Number of lamps	Lamp type	Voltage	Options
S Standard strip ¹	1 Not included	15 15W TS T12 (18") ³ 15PH 15W PH T12 (18") ² 17 17W T8 (24") 20PH 20W PH T12 (24") ² 20 20W TS T12 (24") ³ 25 25W T8 (36") 30PH 30W PH T12 (36") ² 30 30W RS T12 (36") 32 32W T8 (48") 40 40W T12 (48") ⁵	120, 277, 347 Others available	ES Energy-saving ballasts (30W or 40W lamps only). GEB Electronic ballasts, ≤20% THD. GEB10 Electronic ballasts, ≤10% THD. HPF High power factor ballast (15W, 20W and 30W only). LPF Low power factor ballast (15W, 20W and 30W only). EL Emergency battery pack (nominal 300 lumens; See Life Safety Section). Not CSA. GLR Internal fast-blow fuse (add X for external). GMF Internal slow-blow fuse (add X for external). CS1 6' cordset, NEMA 5-15P SJT, U-ground plug, 120V. CS3 6' cordset, NEMA L5-15P SJT, twist-lock plug, 120V. PLF Plug in wiring, specify number of branch circuits and hot wires (A -black, B -Red, C -Blue, AB or AC). CSA CSA-labeled for US shipment to Canada. NOM NOM-labeled for shipment to Mexico. SW Palletized and stretch-wrapped.

Accessories

Order as separate catalog numbers.

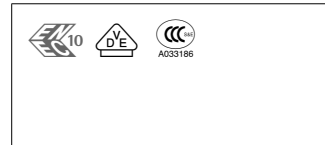
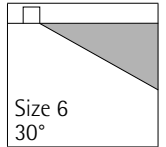
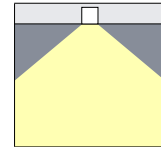
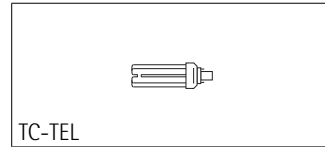
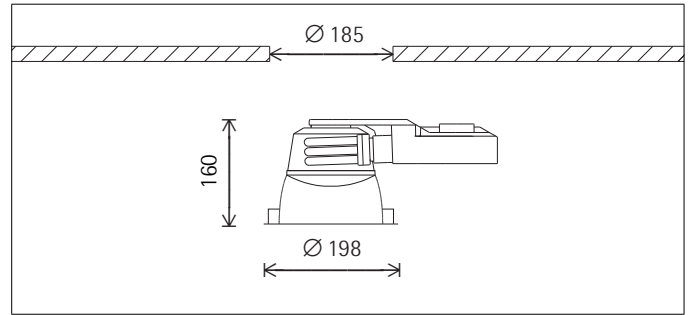
- SQ** Swivel-stem hanger (specify length in 2" increments).
- 1B** Ceiling spacer (adjusts from 1-1/2" to 2-1/2" from ceiling).
- WGS** Wireguard, 4' white, for unshielded S strip.⁴
- WGSSMR** Wireguard, 4' white, for S strip with SSMR reflector.⁴
- WGSASR** Wireguard, 4' white, for S strip with SASR reflector.⁴
- SSMR48WH** Symmetric reflector, 4' white.⁴
- SASR48WH** Asymmetric reflector, 4' white.⁴
- S48WG** Wireguard, 4' white, Canada only.⁴

Notes:

- 1 For tandem double-length unit, add prefix T. Example: **TS**
- 2 PH ballasts available in low power factor 120V only.
- 3 Specify **HPF** or **LPF** in options section for 120V, **HPF** standard on 277V.
- 4 Order two for 8' fixtures.
- 5 LPF is available for residential buildings only.

S RS

© 1996 Lithonia Lighting 5/96
 SRS.PM5



22221.000 Reflector silver
TC-TEL 18W GX24q-2 1150lm
ECG

Product description

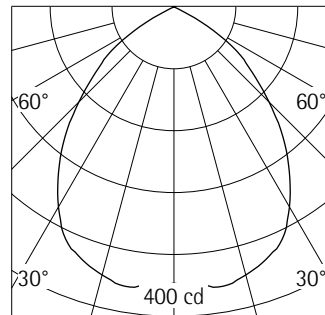
Housing: cast aluminium, designed as heat sink.

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, integrated cable clamp. Electronic control gear.

Darklight reflector: aluminium, bright anodised. Cut-off angle 30°.

Diffuser as lamp cover: plastic, translucent, can be removed for lamp replacement without tools. Weight 1.70kg



TC-TEL 18W GX24q-2 1150lm

LOR 0.59
UGR 19.1
65° < 200 cd/m²

Planning data

22221.000 TC-TEL 18W GX24q-2 1150lm
 Connected load P: 20 W
 Connected load per 100lx P*: 2.9 W/m²
 Number of luminaires per 100lx n*: 14.7 1/100m²

22221.000 TC-TEL 18W GX24q-2 1150lm
 Number of luminaires per 100m² for
 100lx 200lx 300lx 500lx
 15 30 44 74

22221.000 TC-TEL 18W GX24q-2 1150lm
 Module (m) 1.2x1.8 1.8x1.8 1.8x2.4 2.4x2.4
 Illuminance E_n (lx) 315 210 158 118

Cleaning (a)	1				2				3			
	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.94	0.89	0.81	0.72	0.88	0.80	0.69	0.59	0.84	0.74	0.61	0.52
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

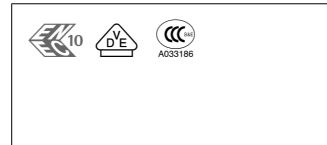
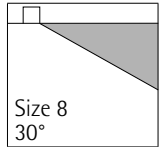
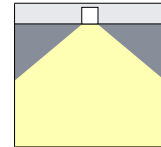
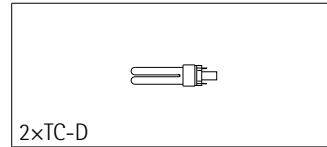
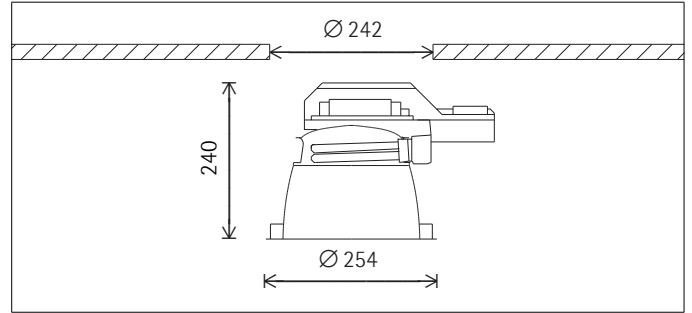
Hours of operation (h)	1000	2000	4000	6000	8000	10000
LLMF	0.97	0.92	0.88	0.85	0.83	0.83
LSF	1	1	1	1	1	1

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

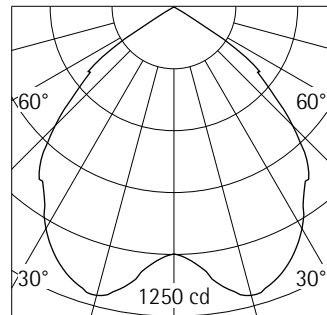
k	0.6	76	57	48	47	43
k	1.0	99	76	67	65	61
k	1.5	116	90	82	79	75
k	2.5	130	100	94	89	85
k	3.0	134	103	99	93	89



22214.000 Reflector silver
2xTC-D 26W G24d-3 1800lm

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, integrated cable clamp.
2 sets of low-loss control gear.
Darklight reflector: aluminium, bright anodised. Cut-off angle 30°. Weight 3.70kg



2xTC-D 26W G24d-3 1800lm

LOR 0.64
UGR 21.4
65° < 200 cd/m²

Planning data

22214.000 TC-D 26W G24d-3 1800lm
 Connected load P: 62 W
 Connected load per 100lx P*: 2.7 W/m²
 Number of luminaires per 100lx n*: 4.3 1/100m²

22214.000 TC-D 26W G24d-3 1800lm
 Number of luminaires per 100m² for
 100lx 200lx 300lx 500lx
 5 9 13 22

22214.000 TC-D 26W G24d-3 1800lm
 Module (m) 1.2x1.8 1.8x1.8 1.8x2.4 2.4x2.4
 Illuminance E_n (lx) 1077 718 538 404

Cleaning (a)	1				2				3			
	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.94	0.89	0.81	0.72	0.88	0.80	0.69	0.59	0.84	0.74	0.61	0.52
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

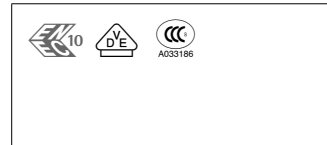
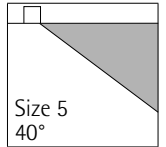
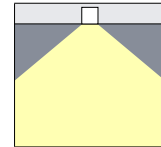
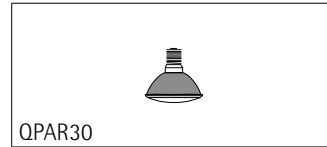
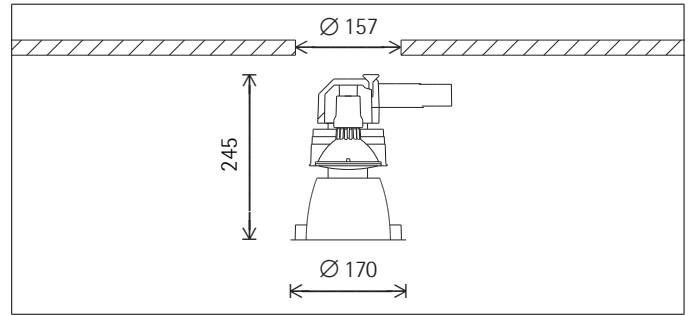
Hours of operation (h)	1000	2000	4000	6000	8000	10000
LLMF	0.97	0.92	0.88	0.85	0.83	0.83
LSF	1	1	1	1	1	1

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	76	57	47	47	43
k	1.0	100	76	68	66	62
k	1.5	116	90	83	80	76
k	2.5	130	100	95	90	85
k	3.0	134	103	99	93	89



22617.000 Reflector silver
 QPAR30 100W 230V E27 10°
 QPAR30 100W 230V E27 30°

Product description

Housing: cast aluminium, designed as heat sink.

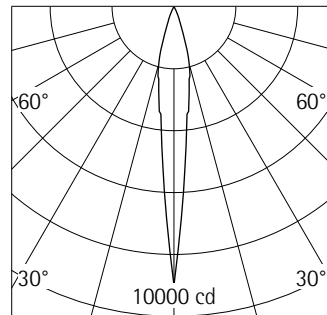
Mounting ring: cast aluminium, white (RAL9002) powder-coated.

Tools not required for mounting with 4-point support and screw fixing.

Junction box for through-wiring, 5-pole terminal block, integrated cable clamp.

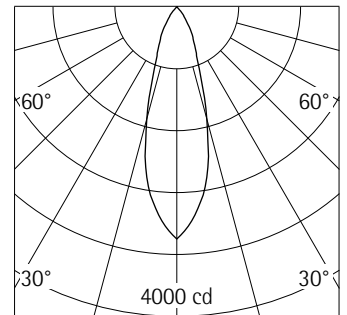
Darklight reflector: aluminium, bright anodised. Cut-off angle 40°.

Weight 1.00kg



QPAR30 100W 230V E27 10°

h(m)	E(lx)	D(m)
		10°
1	9000	0.17
2	2250	0.35
3	1000	0.52
4	562	0.70
5	360	0.87



QPAR30 100W 230V E27 30°

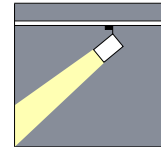
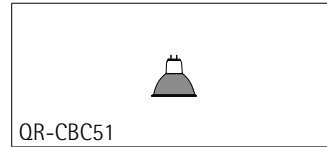
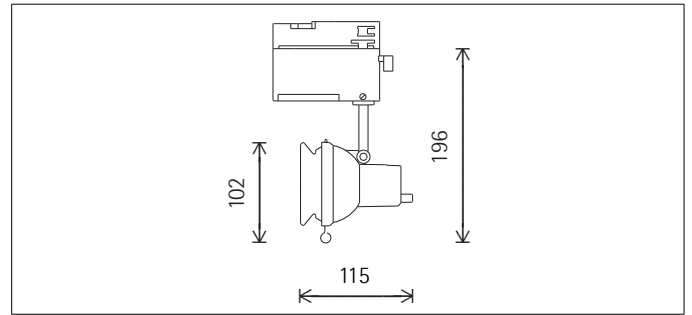
h(m)	E(lx)	D(m)
		30°
1	3000	0.54
2	750	1.07
3	333	1.61
4	188	2.14
5	120	2.68

Planning data

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

Hours of operation (h)	1000	2000
LLMF	0.98	0.95
LSF	1	1

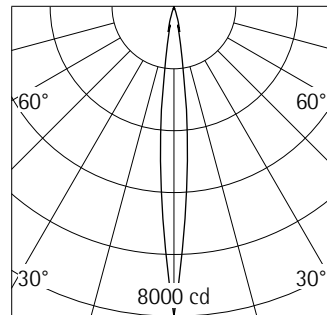
- MF LMFxRSMFxLLMFxLSF
- MF Maintainance Factor
- LMF Luminaire Maintenance Factor
- RSMF Room Surface Maintenance Factor
- LLMF Lamp Lumens Maintenance Factor
- LSF Lamp Survival Factor
- P Room pure
- C Room clean
- N Room normal
- D Room dirty



73750.000 Silver
 QR-CBC51 35W 12V GU5.3 10°
 QR-CBC51 35W 12V GU5.3 60°

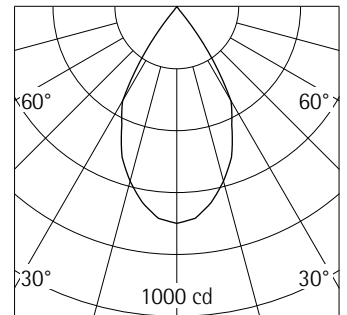
Product description

Housing and bracket: cast aluminium, powder-coated. 0°-90° tilt. Bracket on transadapter rotatable through 360°. ERCO Transadapter for 3-circuit track: plastic. Electronic transformer 230/12V, 20-50W. Potentiometer for brightness control 10%-100%. LED function indicator. Circuit pre-selection. Anti-dazzle ring: metal, black powder-coated, attached to the spotlight by means of a circular spring; to be removed for lamp replacement. Use dimmers for electronic transformers (trailing edge). Weight 0.32kg



QR-CBC51 35W 12V GU5.3 10°

h(m)	E(lx)	D(m)
		10°
1	8000	0.17
2	2000	0.35
3	889	0.52
4	500	0.70
5	320	0.87



QR-CBC51 35W 12V GU5.3 60°

h(m)	E(lx)	D(m)
		60°
1	700	1.15
2	175	2.31
3	78	3.46
4	44	4.62
5	28	5.77



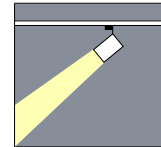
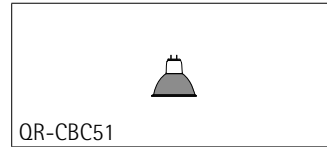
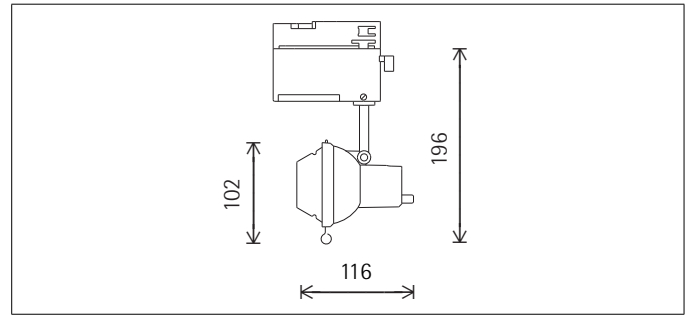
Mounting
 ERCO 3-circuit track
 Hi-trac track
 Monopoll track

Planning data

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

Hours of operation (h)	1000	2000
LLMF	0.98	0.95
LSF	1	1

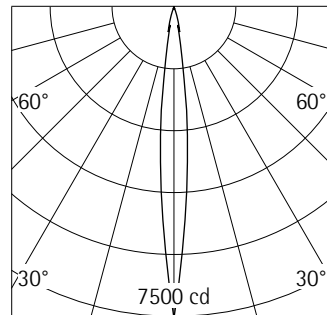
- MF LMFxRSMFxLLMFxLSF
- MF Maintainance Factor
- LMF Lumiaire Maintenance Factor
- RSMF Room Surface Maintenance Factor
- LLMF Lamp Lumens Maintenance Factor
- LSF Lamp Survival Factor
- P Room pure
- C Room clean
- N Room normal
- D Room dirty



73756.000 Silver
 QR-CBC51 35W 12V GU5.3 10°
 QR-CBC51 35W 12V GU5.3 60°

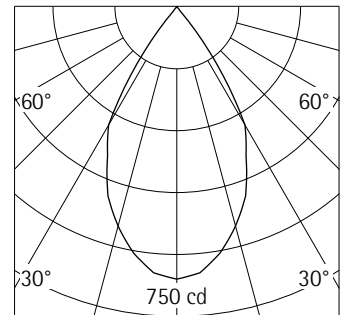
Product description

Housing and bracket: cast aluminium, powder-coated. 0°-90° tilt. Bracket on transadapter rotatable through 360°. ERCO Transadapter for 3-circuit track: plastic. Electronic transformer 230/12V, 20-50W. Potentiometer for brightness control 10%-100%. LED function indicator. Circuit pre-selection. Anti-dazzle cone: metal, black powder-coated, attached to the spotlight by means of a circular spring; to be removed for lamp replacement. Use dimmers for electronic transformers (trailing edge). Weight 0.32kg



QR-CBC51 35W 12V GU5.3 10°

h(m)	E(lx)	D(m)
		10°
1	7547	0.17
2	1887	0.35
3	839	0.52
4	472	0.70
5	302	0.87



QR-CBC51 35W 12V GU5.3 60°

h(m)	E(lx)	D(m)
		60°
1	660	1.15
2	165	2.31
3	73	3.46
4	41	4.62
5	26	5.77



Mounting
 ERCO 3-circuit track
 Hi-trac track
 Monopoll track

Planning data

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

Hours of operation (h)	1000	2000
LLMF	0.98	0.95
LSF	1	1

- MF LMFxRSMFxLLMFxLSF
- MF Maintainance 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

DESCRIPTION

The McGraw-Edison PSL Parking Structure Luminaire is a multi-purpose parking luminaire. The refractor provides proper 3D illumination for parking garages while the glare guard and light trespass shield add extra measure of visual comfort and control. The PSL improves drivers vision and pedestrian safety in parking garage facilities.

SPECIFICATION FEATURES

A...Housing

Die-cast, low copper, marine-grade alloy (A360) aluminum is precision formed. Extra heavy wall thickness (min. 0.123") housing provides exceptional heat sinking to keep components cool. Screw bosses are cast into back of housing for structural integrity.

B...Wiring

Plug Ease™ wiring system; lead wires are encased in a liquid injection-molded silicone gasket, which provides water-and dust-tight seal between housing and junction box.

SPECIFICATION FEATURES

C...Hardware

Stainless steel Philips head fasteners. Recessed screw heads on casting. Fasteners are captive in the die-cast during relamping and sealed via silicone gasket. Gaskets compress for proper sealing.

D...Socket

HID—4KV pulse rated medium-base with nickel-plated screw shell.

E...Ballast

HID—HPF, -20° starting Dual-Tap standard. For use with up to 175W Metal Halide lamp, 150W High Pressure Sodium or 85W QL Induction.

F...Optics

Molded tempered borosilicate glass refractor. Glass shock-absorbing system consists of 16 gauge steel ring to support the full round lens; the lens floats on the injection-molded silicone gasket for additional protection. Main specular aluminum reflectors are one-piece spun. Uplight windows provide a wide distribution high above the 90° plane for elimination of the cave effect. Optional polycarbonate lens available.

G...Lens Gaskets

Liquid injection-molded silicone gasket provides continuous seal between housing and refractor assembly.

H...Labels

U.L. listed and CSA certified for wet locations in all mounting positions; IP65 rated.

I...Finish

Fixture is painted white to minimize contrast borders between the fixture and the ceiling plane, allowing the units visual luminance to blend in. Premium TGIC textured thermoset polyester powder coat finish protects and provides a durable, rugged finish.



PSL PARKING STRUCTURE LUMINAIRE

70 - 200 W

Metal Halide

Pulse Start Metal Halide

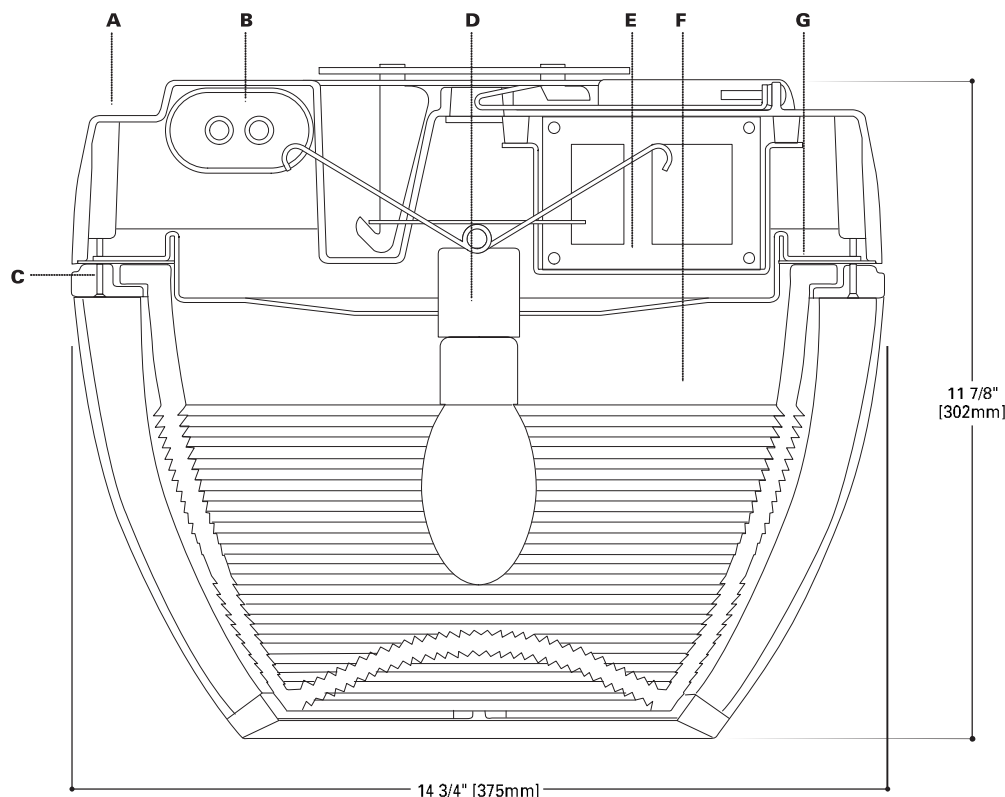
High Pressure Sodium

Electrodeless Fluorescent

BOROSILICATE GLASS

PARKING STRUCTURE

LUMINAIRE

**ENERGY DATA****High Reactance Ballast Input Watts**

70W HPS HPF (95 Watts)
70W MH HPF (94 Watts)
100W HPS HPF (130 Watts)
100W MH HPF (129 Watts)
150W HPS HPF (190 Watts)

CWA Ballast Input Watts

175W MH HPF (210 Watts)
200W MH HPF (232 Watts)

SHIPPING DATA

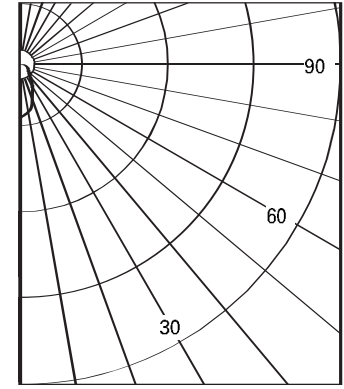
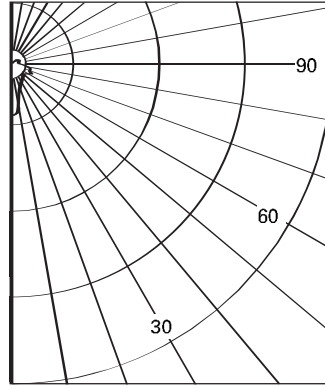
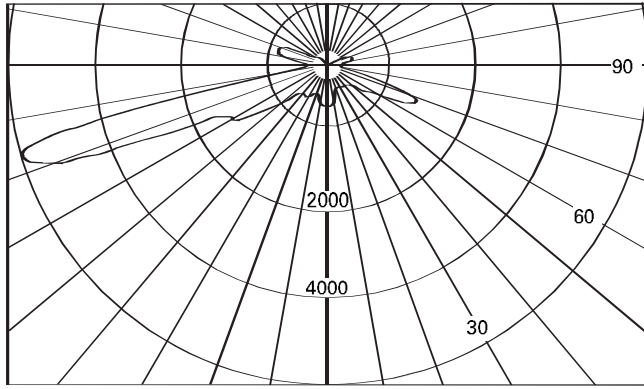
Approximate Net Weight:
34 lbs. (15 kgs.)

PHOTOMETRICS

IES File# H39164

IES File# H39165

IES File# H39166



Maximum CD Throw

Driving Aisle

Driver Aisle with GG60

Side Throw with LTS

PSL-175-MH-MT
175-Watt MH
14,400-Lumen Clear Lamp

APPLICATION DATA

60' Wide Bays, 8'-10' Mounting Height	Layout	Spacing	Lamp Wattage	Ave. fc	Horizontal Min. fc	Vertical Max./Min.	Vertical Min. fc @ 5'
	Single Row	20' Spacing	175W Metal Halide 14,400 Lumens	5.1	2.0	9.8	2.8
	Single Row with GG60	20' Spacing	175W Metal Halide 14,400 Lumens	5.2	2.1	9.8	3.0
	Double Row	40' Spacing/ 30' Separation	100W Metal Halide 8,500 Lumens	2.8	1.1	7.2	1.0
	Alternating Double Row	20' Spacing/ 30' Separation	100W Metal Halide 8,500 Lumens	2.8	1.1	6.9	0.9
	Combination 2/1 Row	30' Spacing/ 30' Separation	100W Metal Halide 8,500 Lumens	2.8	1.2	7.2	0.6
	Double Row With GG60	40' Spacing/ 30' Separation	85W QL 6,000 Lumens	2.2	1.0	4.1	1.1

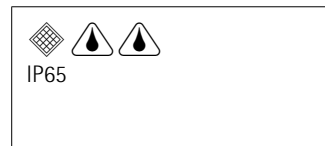
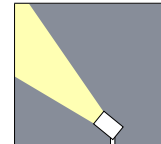
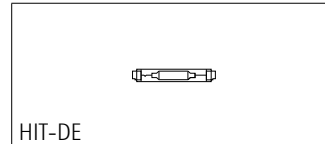
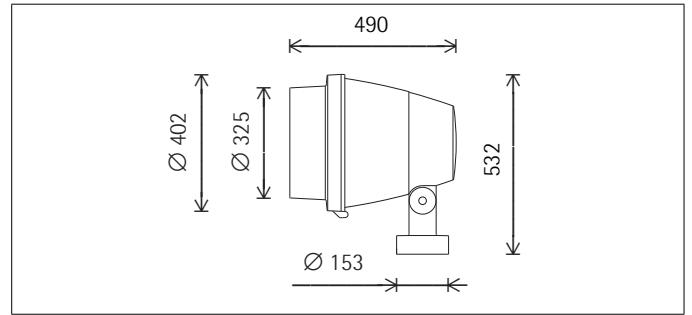
Reflectance: 20% Floor, 0% Walls, 20% Ceiling

ORDERING INFORMATION

SAMPLE NUMBER: PSL-175-MH-MT-WH

Product Family PSL=Parking Structure Luminaire	Lamp Wattage 70=70W 85=85W ¹ 100=100W 150=150W 175=175W 200=200W ²	Lamp Type MH=Metal Halide MP= Pulse Start Metal Halide ² HPS=High Pressure Sodium QL=Electrodeless Fluorescent ¹	Voltage 120 208 240 277 480 MT=Multi-Tap wired 277V ³ TT=Triple-Tap wired 347V ⁴ DT=Dual-Tap wired 277V ⁵	Color⁶ WH=White AP=Grey BZ=Bronze BK=Black	Options (add as suffix) F=Single Fuse (120, 277, 347V) ⁷ FF=Double Fuse (208, 240, 480V) ⁷ Q=Quartz Restrike (Hot Restrike Only) EM=Quartz Restrike with Time Delay (Strikes at cold start) EM/SC=Emergency Separate Circuit CT=Conduit Taps LAG=Less Antenna Guard ⁸ PL=Polycarbonate Lens (AccUView Inhibitor Applied) ⁹ TR=Tamper Proof	Accessories (order separately) PSL/BGL-XX=Bird Guard ¹⁰ PSL/GG60=Glare Guard PSL/TM=Trunnion Mount Kit PSL/LTS-XX=Light Trespass Shield ¹⁰ L=Lamp Included ¹¹

NOTES: 1 85W QL Electrodeless Fluorescent only. 120 or 240V only. 2 200W MP only. 3 Multi-Tap 120/208/240/277V wired 277V. 4 Triple-Tap 120/277/347V wired 347V. 5 Dual-Tap 120/277V wired 277V. 6 Other finish colors available. Consult McGraw-Edison Architectural Colors brochure. 7 Must specify single voltage. 8 Removes standard cast aluminum protective cage assembly. 9 Maximum use of (2) GG60's or (2) LTS accessories when used with wattages in excess of 100W. 10 Must specify color on BGL and LTS accessories (Example: PSL/LTSWH). 11 Lamp is shipped separate from luminaire. Lamp is Cooper designated product based on luminaire requirements. Specified lamps must be ordered as a separate line item. 12 For complete product data, reference the McGraw-Edison Specification binder. 13 Specifications and dimensions subject to change without notice. 14 Products also available in non-US voltages and frequencies for international markets. 15 Consult your Cooper Lighting Representative for availability and ordering information.



34009.000 Graphit m
HIT-DE 250W Fc2 20000lm

Product description

Housing, hinge and mounting plate: corrosion-resistant cast aluminium, No-Rinse surface treatment. Double powder-coated. Optimised surface for reduced accumulation of dirt. Hinge with internal wiring, 130° tilt. Graduated disc: corrosion-resistant aluminium. Mounting plate rotatable through 240°.

2 cable entries. Through-wiring possible. 3-pole terminal block. Control gear with temperature controller, timer-ignitor. Capacitor.

Spot reflector: aluminium, silver anodised, mirror-finish.

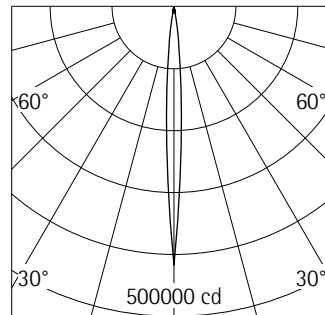
Screw-fastened snoot with safety glass: corrosion-resistant cast aluminium, double powder-coated.

Cross-baffle: metal, black lacquered. Cut-off angle 50°. Without spill light.

Protection mode IP65: dust-proof and water jet-proof.

Weight 19.50kg

Maximum wind load area 0.18m²



HIT-DE 250W Fc2 20000lm

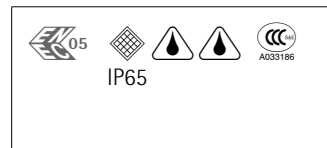
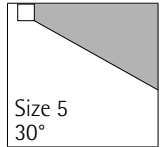
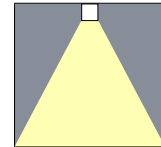
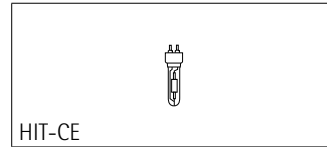
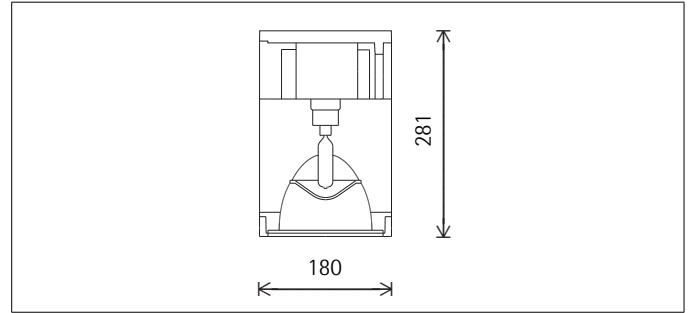
h(m)	E(lx)	D(m)
		7°
2	104390	0.24
4	26098	0.49
6	11599	0.73
8	6524	0.98
10	4176	1.22

Planning data

Cleaning (a)	1				2				3			
	P	C	N	D	P	C	N	D	P	C	N	D
Ambient conditions												
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

Hours of operation (h)	1000	2000	4000	6000	8000	10000	12000
LLMF	0.87	0.79	0.71	0.67	0.63	0.61	0.60
LSF	1	1	1	1	1	1	1

- MF LMFxRSMFxLLMFxLSF
- MF Maintainance Factor
- LMF Lumiaire 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



85045.000 Graphit m
HIT-CE 35W G12 3300lm

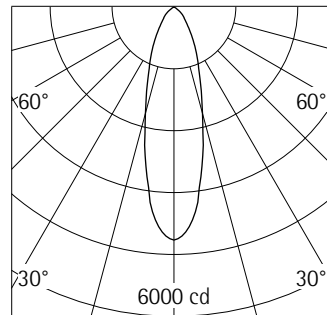
Product description

Cylinder and mounting plate: corrosion-resistant cast aluminium, No-rinse surface treatment. Double powder-coated.

Control gear with temperature controller, timer-ignitor, capacitor. 1 cable entry. Through-wiring possible. 3-pole terminal block. Darklight reflector: aluminium, silver, bright anodised. Cut-off angle 30°. Diffuser as lamp cover: glass, frosted.

Fixing ring with safety glass: corrosion-resistant cast aluminium, double powder-coated. To be removed together with Darklight reflector for lamp replacement.

Tamper-proof screw.
Protection mode IP65: dust-proof and water jet-proof.
Weight 4.65kg



HIT-CE 35W G12 3300lm

h(m)	E(lx)	D(m)
		29°
1	4521	0.52
2	1130	1.03
3	502	1.55
4	283	2.07
5	181	2.59

Planning data

Cleaning (a)	1				2				3			
	P	C	N	D	P	C	N	D	P	C	N	D
Ambient conditions												
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

Hours of operation (h)	1000	2000	4000	6000	8000	10000	12000
LLMF	0.89	0.84	0.81	0.79	0.77	0.76	0.75
LSF	1	1	1	1	1	1	1

- MF LMFxRSMFxLLMFxLSF
- MF Maintainance 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

[Return to: TRU-AIM IR® MR16](#)[Print Page](#)

Product Number: 58641
Order Abbreviation: 37MR16/IR/SP10/C 12V
General Description: Tungsten Halogen Tru-Aim MR16 IR UV-Stop Capsule With Axial Filament, Hard Dichroic Reflector GU5.3 Bi-Pin Base 37Watt 12Volt Narrow Spot Beam

Product Information

Abbrev. With Packaging Info.	37MR16IRSP10C 12V 20/CS 1/SKU
Average Rated Life (hr)	4000
Base	GU5.3 Bipin
Beam Angle (deg)	10
Beam Type	NSP
Bulb	MR16
Centerbeam Candlepower (cp)	12500
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® IR
Filament	AXIAL
Horizontal Beam Angle (deg)	10
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	37.00
Vertical Beam Angle (deg)	10

Additional Product Information

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

[Packaging Information](#)



Footnotes

- UV Filter capsule with axial filament in constant color, hard coated Dichroic reflector and infrared reflective coating on the lamp capsule.
- Infrared lamp technology

[Return to: TRU-AIM IR® MR16](#)[Print Page](#)

photo
not
available

Product Number: 58837
Order Abbreviation: 37MR16/IR/WFL60/C 12V
General Description: ENERGY SAVING, LOW VOLTAGE, WIDE FLOOD MR16. 12 VOLTS. DICHROIC REFLECTOR PASSES HEAT OUT OF THE BACK OF THE BULB.

Product Information

Abbrev. With Packaging Info.	37MR16IRWFL60C 12V 20/CS 1/SKU
Average Rated Life (hr)	4000
Base	GU5.3 Bipin
Beam Angle (deg)	60
Beam Type	WFL
Bulb	MR16
Centerbeam Candlepower (cp)	1100
Class	C (gas)
Diameter (in)	2
Diameter (mm)	50.8
Ecologic	YES
Filament	AXIAL
Horizontal Beam Angle (deg)	60
Lamp Finish	Reflector
Maximum Overall Length - MOL (in)	1.75
Maximum Overall Length - MOL (mm)	44.45
Nominal Voltage (V)	12.00
Nominal Wattage (W)	37.00
Vertical Beam Angle (deg)	60

Additional Product Information

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

[Packaging Information](#)



Footnotes

- Infrared lamp technology
- Max. seal temperature 350 C (662F)
- UV Filter capsule with axial filament in covered constant color, hard coated dichroic reflector and

[Return to: CAPSYLITE IR® PAR30](#)[Print Page](#)

photo
not
available

Product Number: 14132**Order** 50PAR30/CAP/IR/NFL25 130V**Abbreviation:****General Description:** 50 WATT PAR 30 FLOOD LAMP. 130 VOLTS. ENERGY EFFICIENT INFRARED CONSERVING TECHNOLOGY.

Product Information

Abbrev. With Packaging Info.	50PAR30CAPIRNFL25 130V 15/CS 1/SKU
Approx. Lumens	900
Average Rated Life (hr)	3000
Base	E26 Medium
Beam Angle (deg)	25
Beam Type	NFL
Bulb	PAR30
Centerbeam Candlepower (cp)	2900
Class	C (gas)
Color Temperature/CCT (K)	2810
Diameter (in)	3.75
Diameter (mm)	95.25
Ecologic	YES
Family Brand Name	CAPSYLITE® IR® PAR30
Filament	CC-8
Horizontal Beam Angle (deg)	25
Lamp Finish	Reflector
Maximum Overall Length - MOL (in)	3.625
Maximum Overall Length - MOL (mm)	92.075
Nominal Voltage (V)	130.00
Nominal Wattage (W)	50.00
Vertical Beam Angle (deg)	25

Additional Product Information

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

[Packaging Information](#)



[Return to: Enclosed Fixtures](#)[Print Page](#)

Product Number: 64325
Order Abbreviation: MC39T6/U/G12/940 PB 90V
General Description: 39W, 4000K, high CRI, reduced color shift, high performance, T6/G12 metal halide lamp, clear, universal burn

Product Information

Abbrev. With Packaging Info.	MC39T6UG12940PB 90V 12/CS 1/SKU
ANSI Code	M130/E
Approx. Lumens (initial - horizontal)	3200
Approx. Lumens (initial - vertical)	3200
Approx. Lumens (mean - horizontal)	2560
Approx. Lumens (mean - vertical)	2560
Arc Length (in)	0.19
Arc Length (mm)	4.8
Average Rated Life - Horizontal (hr)	12000
Average Rated Life - Vertical (hr)	12000
Base	G12
Bulb	T6
Color Rendering Index (CRI)	87
Color Temperature/CCT (K)	4200
Diameter (in)	0.75
Diameter (mm)	19
Family Brand Name	Metalarc® Powerball
Fixture Requirement	E
Hot Restrike Time (min)	2-15
Lamp Finish	Clear
Light Center Length - LCL (in)	2.2
Light Center Length - LCL (mm)	56
Maximum Base Temperature - Fahrenheit	536
Maximum Base Temperature - Celsius	282
Maximum Bulb Temperature - Fahrenheit	842
Maximum Bulb Temperature - Celsius	450
Maximum Overall Length - MOL (in)	3.94

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

photo
not
available

Product Number: 20760
Order Abbreviation: CF18DT/E/827
General Description: DULUX 18W triple compact fluorescent lamp with 4-pin base, 2700K color temperature, 82 CRI, for use with electronic and dimming ballasts

Product Information

Abbrev. With Packaging Info.	CF18DTE827 50/CS 1/SKU
Average Rated Life (hr)	12000
Base	GX24Q-2
Bulb	T4
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	2700
Family Brand Name	Dulux® T/E
Initial Lumens at 25C	1200
Mean Lumens at 25C	1032
Maximum Overall Length - MOL (in)	4.6
Maximum Overall Length - MOL (mm)	116
NEMA Generic Designation (current)	CFTR18W/GX24Q/827
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

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

Product Number: 20673
Order Abbreviation: CF26DD/E/835
General Description: DULUX 26W double compact fluorescent lamp with 4-pin base, integral EOL, 3500K color temperature, 82 CRI, for use with electronic and dimming ballasts, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	CF26DDE835 50/CS 1/SKU
Average Rated Life (hr)	12000
Base	G24Q-3
Bulb	T4
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	3500
Family Brand Name	Dulux® D/E
Industry Standards	IEC 60901- 2526
Initial Lumens at 25C	1710
Mean Lumens at 25C	1470
Maximum Overall Length - MOL (in)	6.5
Maximum Overall Length - MOL (mm)	166
NEMA Generic Designation (current)	CFQ26W/G24Q/835
Nominal Wattage (W)	26.00

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

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

[Print Page](#)



Product Number: 20767
Order Abbreviation: CF26DT/E/827
General Description: DULUX 26W triple compact fluorescent lamp with 4-pin base, integral EOL, 2700K color temperature, 82 CRI, for use with electronic and dimming ballasts

Product Information

Abbrev. With Packaging Info.	CF26DTE827 50/CS 1/SKU
Average Rated Life (hr)	12000
Base	GX24Q-3
Bulb	T4
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	2700
Family Brand Name	Dulux® T/E
Industry Standards	IEC 60901- 3426
Initial Lumens at 25C	1800
Mean Lumens at 25C	1548
Maximum Overall Length - MOL (in)	5.2
Maximum Overall Length - MOL (mm)	124
NEMA Generic Designation (current)	CFTR26W/GX24Q/827
NEMA Generic Designation (old)	CFM26W/GX24Q/827
Nominal Wattage (W)	26.00

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

[Return to: Dulux L High Lumen \(single, long, 4-Pin\)](#)

[Print Page](#)



Product Number: 20581
Order Abbreviation: FT36DL/830
General Description: DULUX 36W long compact fluorescent lamp with 4-pin base, 3000K color temperature, 82 CRI, for use on magnetic, electronic and dimming ballasts

Product Information

Abbrev. With Packaging Info.	FT36DL830 10/CS 1/SKU
Average Rated Life (hr)	12000
Base	2G11
Bulb	T5
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	3000
Family Brand Name	Dulux® L
Industry Standards	ANSI C78.901 - 2001
Initial Lumens at 25C	2900
Mean Lumens at 25C	2494
Maximum Overall Length - MOL (in)	16.6
Maximum Overall Length - MOL (mm)	422
NEMA Generic Designation (current)	FT36W/2G11/830
Nominal Wattage (W)	36.00

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.
- These lamps may also be operated on rapid start circuits. On rapid start circuits the 24 watt lamp operates at 27 watts and the 36 watt lamp operated at 39 watts. Rated lamp life is unchanged.
- Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to

[Return to: Octron 800 XP](#)

[Print Page](#)



Product Number: 21763
Order Abbreviation: FO32/835/XP/ECO
General Description: 32W, 48" MOL, T8 OCTRON XP Extended Performance fluorescent lamp, 3500K color temperature, rare earth phosphor, 85 CRI, suitable for IS or RS operation, ECOLOGIC

Product Information

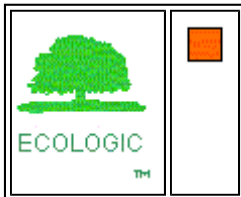
Abbrev. With Packaging Info.	FO32835XPECO 30/CS 1/SKU
Actual Length (in)	47.78
Actual Length (mm)	1213.6
Average Rated Life (hr)	24000
Base	Medium Bipin
Bulb	T8
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	3500
Diameter (in)	1.10
Diameter (mm)	27.9
Family Brand Name	OCTRON® 800 XP®, ECOLOGIC®
Industry Standards	ANSI C78.81 - 2001
Initial Lumens at 25C	3000
Mean Lumens at 25C	2850
Nominal Length (in)	48
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.
- Life rating of OCTRON XP lamps operated on instant start electronic ballasts is 18,000 hours

[Return to: Octron 800 XPS](#)[Print Page](#)

Product Number: 21697
Order Abbreviation: FO32/835/XPS/ECO
General Description: 32W, 48" MOL, T8 OCTRON XPS Extended Performance Super fluorescent lamp, 3500K color temperature, rare earth phosphor, 85 CRI, suitable for IS or RS operation, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FO32835XPSECO 30/CS 1/SKU
Actual Length (in)	47.78
Actual Length (mm)	1213.6
Average Rated Life (hr)	30000
Base	Medium Bipin
Bulb	T8
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	3500
Diameter (in)	1.10
Diameter (mm)	27.9
Family Brand Name	Octron® 800 XPS, Ecologic
Industry Standards	ANSI C78.81 - 2001
Initial Lumens at 25C	3100
Mean Lumens at 25C	2945
Nominal Length (in)	48
Nominal Wattage (W)	32.00

Additional Product Information

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

[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 rated on high frequency operation. 60 HZ operation would result in lower lumen output.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- OCTRON lamps should be operated only with magnetic rapid start ballasts designed to operate 265 mA, T-8 lamps or high frequency (electronic) ballasts that are either instant start, or rapid start, or programmed rapid start specifically designed to operate T8 lamps. OCTRON lamps may be operated on instant start ballasts with ballast factors ranging from a minimum of 0.71 to a

[Return to: Octron 800 XP](#)

[Print Page](#)



Product Number: 21767
Order Abbreviation: FO32/841/XP/ECO
General Description: 32W, 48" MOL, T8 OCTRON XP Extended Performance fluorescent lamp, 4100K color temperature, rare earth phosphor, 85 CRI, suitable for IS or RS operation, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FO32841XPECO 30/CS 1/SKU
Actual Length (in)	47.78
Actual Length (mm)	1213.6
Average Rated Life (hr)	24000
Base	Medium Bipin
Bulb	T8
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	4100
Diameter (in)	1.10
Diameter (mm)	27.9
Family Brand Name	OCTRON® 800 XP®, ECOLOGIC®
Industry Standards	ANSI C78.81 - 2001
Initial Lumens at 25C	3000
Mean Lumens at 25C	2850
Nominal Length (in)	48
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.
- Life rating of OCTRON XP lamps operated on instant start electronic ballasts is 18,000 hours

[Return to: Octron 800 XPS](#)[Print Page](#)

Product Number: 21681
Order Abbreviation: FO32/841/XPS/ECO
General Description: 48" MOL, T8 OCTRON XPS Extended Performance Super fluorescent lamp, 4100K color temperature, rare earth phosphor, 85 CRI, ECOLOGIC suitable for IS and RS operation, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FO32841XPSECO 30/CS 1/SKU
Actual Length (in)	47.78
Actual Length (mm)	1213.6
Average Rated Life (hr)	30000
Base	Medium Bipin
Bulb	T8
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	4100
Diameter (in)	1.10
Diameter (mm)	27.9
Family Brand Name	Octron® 800 XPS, Ecologic
Industry Standards	ANSI C78.81 - 2001
Initial Lumens at 25C	3150
Mean Lumens at 25C	2990
Nominal Length (in)	48
Nominal Wattage (W)	32.00

Additional Product Information

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

[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 rated on high frequency operation. 60 HZ operation would result in lower lumen output.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- OCTRON lamps should be operated only with magnetic rapid start ballasts designed to operate 265 mA, T-8 lamps or high frequency (electronic) ballasts that are either instant start, or rapid start, or programmed rapid start specifically designed to operate T8 lamps. OCTRON lamps may be operated on instant start ballasts with ballast factors ranging from a minimum of 0.71 to a

[Return to: Pentron Standard](#)

[Print Page](#)



Product Number: 20914
Order Abbreviation: FP14/841/ECO
General Description: 14W, T5 PENTRON fluorescent lamp, 4100K color temperature, rare earth phosphor, 82 CRI, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FP14841ECO 40/CS 1/SKU
Actual Length (in)	22.2
Actual Length (mm)	563.2
Average Rated Life (hr)	20000
Base	Miniature Bipin
Bulb	T5
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	4100
Diameter (in)	0.67
Diameter (mm)	17.0
Family Brand Name	PENTRON® ECO®
Initial Lumens at 25C	1200
Initial Lumens at 35C	1350
Mean Lumens at 25C	1116
Mean Lumens at 35C	1256
Nominal Length (in)	24
Nominal Wattage (W)	14.00

Additional Product Information

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

[Packaging Information](#)



Footnotes

- Approximate initial lumens after 100 hours operation.

[Return to: Pentron Standard](#)

[Print Page](#)



Product Number: 20901
Order Abbreviation: FP28/835/ECO
General Description: 28W, T5 PENTRON fluorescent lamp, 3500K color temperature, rare earth phosphor, 82 CRI, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FP28835ECO 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)	3500
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](#)



Footnotes

- Approximate initial lumens after 100 hours operation.

[Return to: Pentron Standard](#)

[Print Page](#)



Product Number: 20902
Order Abbreviation: FP28/841/ECO
General Description: 28W, T5 PENTRON fluorescent lamp, 4100K color temperature, rare earth phosphor, 82 CRI, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FP28841ECO 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)	4100
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](#)



Footnotes

- Approximate initial lumens after 100 hours operation.

[Return to: Pentron HO](#)

[Print Page](#)



Product Number: 20904
Order Abbreviation: FP54/835/HO/ECO
General Description: 54W, T5 PENTRON high output (HO) fluorescent lamp, 3500K color temperature, rare earth phosphor, 85 CRI, ECOLOGIC

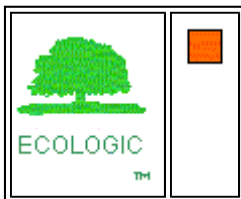
Product Information

Abbrev. With Packaging Info.	FP54835HOECO 40/CS 1/SKU
Actual Length (in)	45.8
Actual Length (mm)	1163.2
Average Rated Life (hr)	25000
Base	Miniature Bipin
Bulb	T5
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	3500
Diameter (in)	0.67
Diameter (mm)	17.0
Family Brand Name	PENTRON® ECO®
Initial Lumens at 25C	4450
Initial Lumens at 35C	5000
Mean Lumens at 25C	4138
Mean Lumens at 35C	4650
Nominal Length (in)	48
Nominal Wattage (W)	54.00

Additional Product Information

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

[Packaging Information](#)



Footnotes

- Approximate initial lumens after 100 hours operation.

[Return to: Pentron HO](#)[Print Page](#)

Product Number: 20906
Order Abbreviation: FP54/841/HO/ECO
General Description: 54W, T5 PENTRON high output (HO) fluorescent lamp, 4100K color temperature, rare earth phosphor, 85 CRI, ECOLOGIC

Product Information

Abbrev. With Packaging Info.	FP54841HOECO 40/CS 1/SKU
Actual Length (in)	45.8
Actual Length (mm)	1163.2
Average Rated Life (hr)	25000
Base	Miniature Bipin
Bulb	T5
Color Rendering Index (CRI)	85
Color Temperature/CCT (K)	4100
Diameter (in)	0.67
Diameter (mm)	17.0
Family Brand Name	PENTRON® ECO®
Initial Lumens at 25C	4450
Initial Lumens at 35C	5000
Mean Lumens at 25C	4138
Mean Lumens at 35C	4650
Nominal Length (in)	48
Nominal Wattage (W)	54.00

Additional Product Information

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

[Packaging Information](#)



Footnotes

- Approximate initial lumens after 100 hours operation.

[Return to: Standard & Pro-Tech \(>150W\)](#)
[Print Page](#)


Product Number: 64471
Order Abbreviation: M175/U
General Description: 175W general lighting metal halide lamp, universal burn, clear

Product Information

Abbrev. With Packaging Info.	M175U 6/CS 1/SKU
ANSI Code	M57/E
Approx. Lumens (initial - horizontal)	12800
Approx. Lumens (initial - vertical)	14400
Approx. Lumens (mean - horizontal)	9300
Approx. Lumens (mean - vertical)	9300
Arc Length (in)	1.02
Arc Length (mm)	26
Average Rated Life - Horizontal (hr)	7500
Average Rated Life - Vertical (hr)	10000
Base	E39 Mogul
Bulb	BT28
Color Rendering Index (CRI)	65
Color Temperature/CCT (K)	4200
Diameter (in)	3.5
Diameter (mm)	89
Family Brand Name	Metalarc®
Fixture Requirement	E
Hot Restrike Time (min)	7-12
Lamp Finish	Clear
Light Center Length - LCL (in)	5
Light Center Length - LCL (mm)	127
Maximum Base Temperature - Fahrenheit	482
Maximum Base Temperature - Celsius	250
Maximum Bulb Temperature - Fahrenheit	752
Maximum Bulb Temperature - Celsius	400
Maximum Overall Length - MOL (in)	8.31
Maximum Overall Length - MOL (mm)	211
Nominal Voltage (V)	132.00
Nominal Wattage (W)	175.00
Operating Position	Universal
Warm-up Time (min)	2-4

[Return to: Standard & Pro-Tech \(>150W\)](#)
[Print Page](#)


Product Number: 64479
Order Abbreviation: M175/U/MED
General Description: Compact 175W reduced outer jacket, universal burn metal halide lamp, clear

Product Information

Abbrev. With Packaging Info.	M175UMED 20/CS 1/SKU
ANSI Code	M57/E
Approx. Lumens (initial - horizontal)	12800
Approx. Lumens (initial - vertical)	14400
Approx. Lumens (mean - horizontal)	9300
Approx. Lumens (mean - vertical)	9300
Arc Length (in)	1.02
Arc Length (mm)	26
Average Rated Life - Horizontal (hr)	7500
Average Rated Life - Vertical (hr)	10000
Base	E26 Medium
Bulb	E17
Color Rendering Index (CRI)	65
Color Temperature/CCT (K)	4000
Diameter (in)	2.13
Diameter (mm)	54
Family Brand Name	Compact Metalarc®
Fixture Requirement	E
Hot Restrike Time (min)	7-12
Lamp Finish	Clear
Light Center Length - LCL (in)	3.39
Light Center Length - LCL (mm)	86
Maximum Base Temperature - Fahrenheit	410
Maximum Base Temperature - Celsius	210
Maximum Bulb Temperature - Fahrenheit	752
Maximum Bulb Temperature - Celsius	400
Maximum Overall Length - MOL (in)	5.43
Maximum Overall Length - MOL (mm)	138
Nominal Voltage (V)	132.00
Nominal Wattage (W)	175.00
Operating Position	Universal
Warm-up Time (min)	2-4



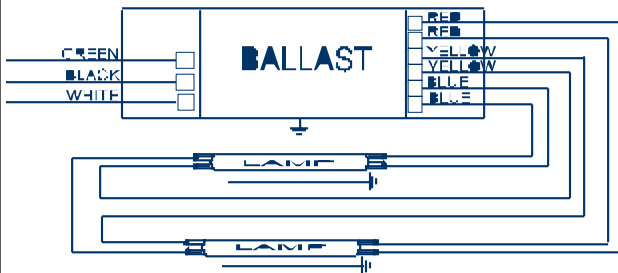
ICN-2S28@277

Brand Name	CENTIUM T5
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F14T5	1	14	0/-18	0.07	19	1.07	20	0.90	1.7	5.63
* F14T5	2	14	0/-18	0.13	34	1.06	10	0.98	1.7	3.12
F21T5	1	21	0/-18	0.10	26	1.03	15	0.95	1.7	3.96
F21T5	2	21	0/-18	0.17	48	1.02	10	0.98	1.7	2.13
F28T5	1	28	0/-18	0.12	33	1.04	10	0.98	1.7	3.15
F28T5	2	28	0/-18	0.23	63	1.03	10	0.99	1.7	1.63
F35T5	1	35	0/-18	0.15	41	1.01	10	0.98	1.7	2.46
F35T5	2	35	0/-18	0.28	77	1.00	10	0.99	1.7	1.30

Wiring Diagram

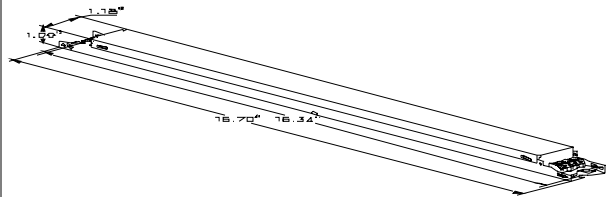


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0	0	Yellow/Blue	0	0
White	0	0	Blue/White	0	0
Blue	0	0	Brown	0	0
Red	0	0	Orange	0	0
Yellow	0	0	Orange/Black	0	0
Gray	0	0	Black/White	0	0
Violet	0	0	Red/White	0	0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
16.70 "	1.18 "	1.00 "	16.34 "
16 7/10	1 9/50	1	16 17/50
42.4 cm	3 cm	2.5 cm	41.5 cm

Revised 09/01/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



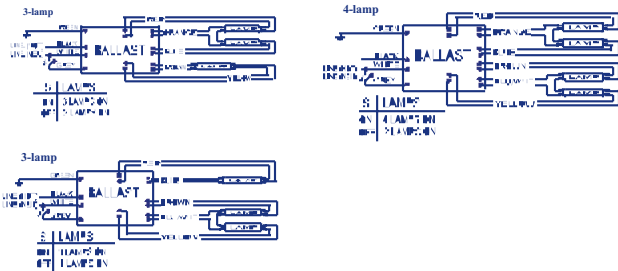
ICN4S5490C2LS@277

Brand Name	CENTIUM T5
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series/Parallel
Input Voltage	277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F54T5/HO	1	54	0/-18	0.24	62	0.99	30	0.90	1.7	1.60
* F54T5/HO	2	54	0/-18	0.43	117	0.99	10	0.98	1.7	0.85
F54T5/HO	3	54	0/-18	0.66	179	1.00	10	0.98	1.7	0.56
F54T5/HO	4	54	0/-18	0.86	234	1.00	10	0.98	1.7	0.43

Wiring Diagram

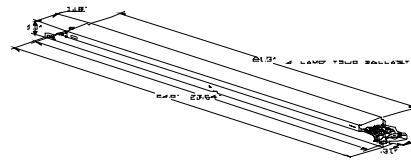


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0	0	Yellow/Blue	0	0
White	0	0	Blue/White	0	0
Blue	0	0	Brown	0	0
Red	0	0	Orange	0	0
Yellow	0	0	Orange/Black	0	0
Gray	0	0	Black/White	0	0
Violet	0	0	Red/White	0	0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
24 "	1.18 "	1 "	23.64 "
24	1 9/50	1	23 16/25
61 cm	3 cm	2.5 cm	60 cm

Revised 10/04/2005



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



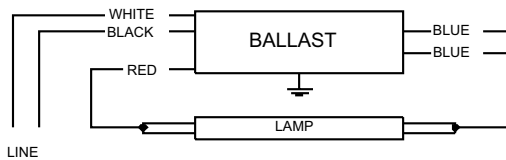
VOP-2P32-SC

Brand Name	OPTANIUM
Ballast Type	Electronic
Starting Method	Instant Start
Lamp Connection	Parallel
Input Voltage	277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F17T8	1	17	0/-18	0.08	19	1.02	15	0.95	1.7	5.37
F17T8	2	17	0/-18	0.11	31	0.90	15	0.97	1.7	2.90
F25T8	1	25	0/-18	0.10	27	1.02	15	0.97	1.7	3.78
F25T8	2	25	0/-18	0.16	43	0.88	10	0.99	1.7	2.05
F32T8	1	32	0/-18	0.13	35	1.01	15	0.98	1.7	2.89
F32T8	2	32	0/-18	0.20	55	0.88	10	0.99	1.7	1.60
* F32T8/ES (30W)	1	30	60/16	0.12	33	1.01	15	0.97	1.7	3.06
F32T8/ES (30W)	2	30	60/16	0.19	52	0.88	10	0.99	1.7	1.69
F40T8	1	40	32/00	0.15	41	1.01	15	0.99	1.7	2.46
F40T8	2	40	32/00	0.24	67	0.88	10	0.99	1.7	1.31

Wiring Diagram



Diag. 68

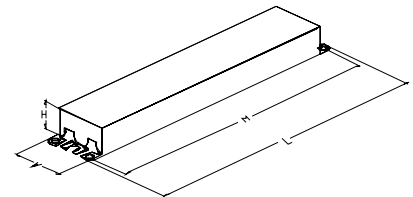
Insulate unused blue lead for 1000V

The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	25L	63.5	Yellow/Blue	0	0
White	25L	63.5	Blue/White	0	0
Blue	31R	78.7	Brown	0	0
Red	37L	94	Orange	0	0
Yellow	0	0	Orange/Black	0	0
Gray	0	0	Black/White	0	0
Violet	0	0	Red/White	0	0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
9.50 "	1.7 "	1.18 "	8.90 "
9 1/2	1 7/10	1 9/50	8 9/10
24.1 cm	4.3 cm	3 cm	22.6 cm

Revised 06/09/2003



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



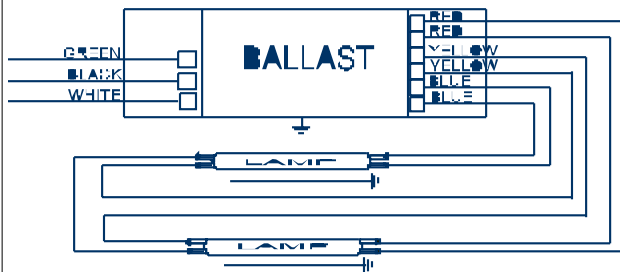
ICN-2S39@277V

Brand Name	CENTIUM T5
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
FT36W/2G11	1	36	0/-18	0.13	36	0.96	15	0.95	1.7	2.67
* FT36W/2G11	2	36	0/-18	0.25	69	0.94	10	0.98	1.7	1.36

Wiring Diagram

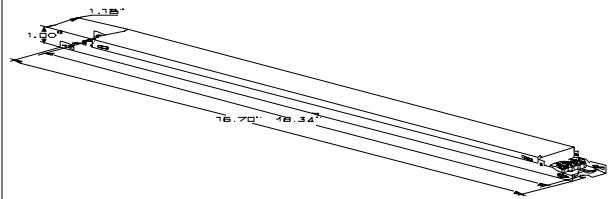


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0	0	Yellow/Blue	0	0
White	0	0	Blue/White	0	0
Blue	0	0	Brown	0	0
Red	0	0	Orange	0	0
Yellow	0	0	Orange/Black	0	0
Gray	0	0	Black/White	0	0
Violet	0	0	Red/White	0	0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
16.70 "	1.18 "	1.00 "	16.34 "
16 7/10	1 9/50	1	16 17/50
42.4 cm	3 cm	2.5 cm	41.5 cm

Revised 09/01/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



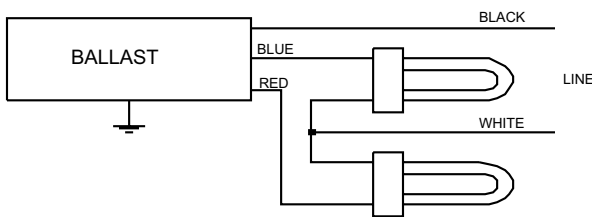
VH-2Q18-TP-W

Brand Name	COMPACT-HPF
Ballast Type	Magnetic
Starting Method	Pre-Heat
Lamp Connection	Series
Input Voltage	277
Input Frequency	60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Starting Current (Amps)	Open Circuit (Amps)	Input Power (Watts)	Ballast Factor	MAX THD %	Power Factor
* CFM18W/GX24D	2	18	50/10	0.15	0.28	0.00	40	0.96	25	0.97
CFQ18W/G24D	2	18	50/10	0.15	0.28	0.00	42	0.93	15	1.00

Wiring Diagram



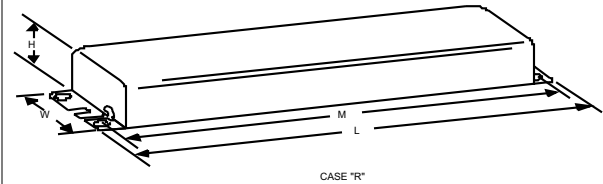
Diag. 51

The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	15	38.1	Yellow/Blue		0
White		0	Blue/White		0
Blue	15	38.1	Brown		0
Red	15	38.1	Orange		0
Yellow		0	Orange/Black		0
Gray		0	Black/White		0
Violet		0	Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (std)/(TP)	Height (H)	Mounting (M)
9.50 "	2.375 "	1.6875 "	8.90625 "
9 1/2	2 3/8	1 11/16	8 29/32
24.1 cm	6 cm / 0 cm	4.3 cm	22.6 cm

Revised 07/01/1999



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



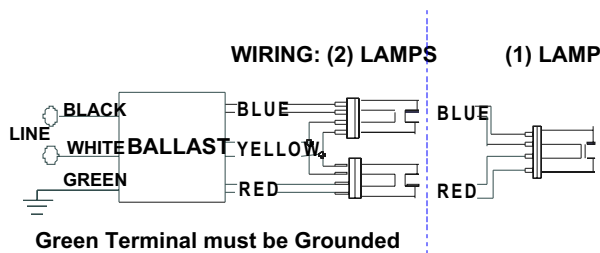
RCF-2S18-M1-LS-QS

Brand Name	SMARTMATE
Ballast Type	Electronic
Starting Method	Rapid Start
Lamp Connection	Series
Input Voltage	120
Input Frequency	60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
CFQ18W/G24Q	1	18	0/-18	0.16	19	1.00	10	0.97	1.5	5.26
CFQ18W/G24Q	2	18	0/-18	0.30	35	0.95	10	0.99	1.5	2.71
CFS16W/GR10Q	2	16	0/-18	0.31	37	1.00	10	0.99	1.5	2.70
CFS21W/GR10Q	1	21	0/-18	0.16	20	0.90	10	0.97	1.5	4.50
CFS21W/GR10Q	2	21	0/-18	0.16	40	0.91	10	0.97	1.5	2.28
CFTR18W/GX24Q	1	18	0/-18	0.17	20	1.05	10	0.97	1.5	5.25
* CFTR18W/GX24Q	2	18	0/-18	0.33	39	1.05	10	0.99	1.5	2.69

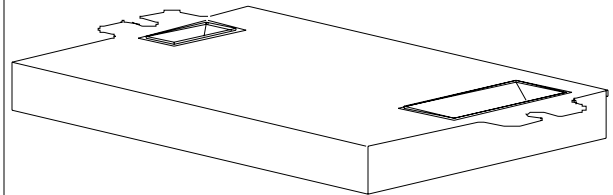
Wiring Diagram



The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
4.98 "	2.4 "	1.0 "	4.6 "
4 49/50	2 2/5	1	4 3/5
12.6 cm	6.1 cm	2.5 cm	11.7 cm

Revised 09/02/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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



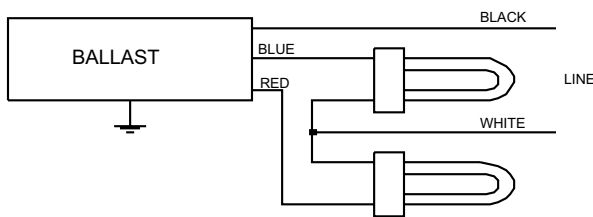
VH-2Q26-TP-W

Brand Name	COMPACT-HPF
Ballast Type	Magnetic
Starting Method	Pre-Heat
Lamp Connection	Series
Input Voltage	277
Input Frequency	60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Starting Current (Amps)	Open Circuit (Amps)	Input Power (Watts)	Ballast Factor	MAX THD %	Power Factor
* CFM26W/GX24D	2	26	50/10	0.21	0.32	0.00	58	0.94	25	1.00
CFQ26W/G24D	2	26	50/10	0.20	0.32	0.00	55	0.87	20	0.99

Wiring Diagram



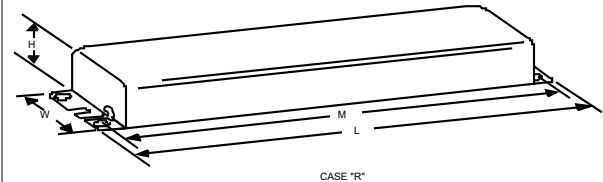
Diag. 51

The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	15	38.1	Yellow/Blue		0
White		0	Blue/White		0
Blue	15	38.1	Brown		0
Red	15	38.1	Orange		0
Yellow		0	Orange/Black		0
Gray		0	Black/White		0
Violet		0	Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (std)/(TP)	Height (H)	Mounting (M)
9.50 "	2.375 "	1.6875 "	8.90625 "
9 1/2	2 3/8	1 11/16	8 29/32
24.1 cm	6 cm / 0 cm	4.3 cm	22.6 cm

Revised 09/28/1999



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

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

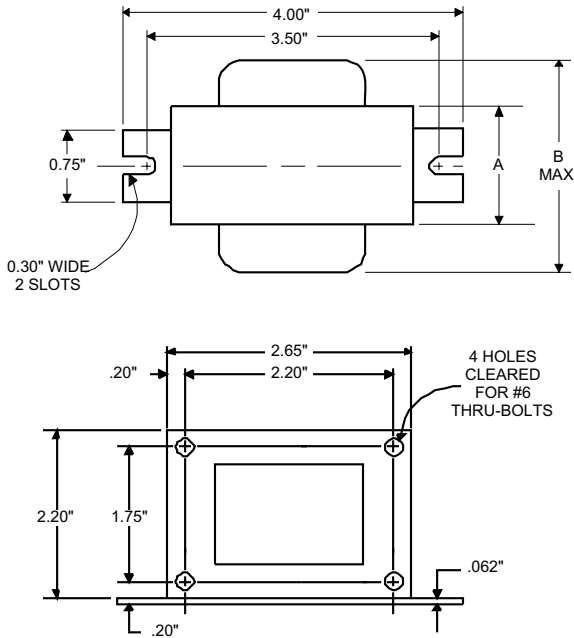


**Metal
Halide
Lamp Ballast**

**Catalog Number 71A5437BP
For 150W M102
60 Hz R-HPF
Status: Active**

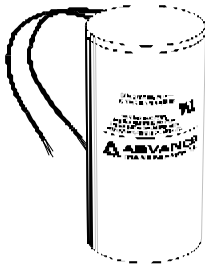
DIMENSIONS AND DATA

2 5/8 X 2 3/16 CORE



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	B			
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			

Capacitor: 7C140M33-R



Capacitance: 14
Dia/Oval Dim: 1.5
Height: 2.9

Temp Rating: 105°C

Ignitor: INTEGRAL

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

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

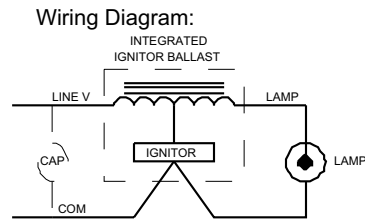


Fig. H

Ordering Information

Order Suffix	Description
500DB	Ballast With Integral Ignitor and Dry Film Capacitor
510DB	Ballast w/Welded Bracket, Integral Ignitor & Dry Film Cap.
600B	Ballast and Integral Ignitor, No Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment on a representative lot of ballasts. 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



e-Vision® Electronic Ballast for Metal Halide Lamps

Catalog Number IMH-50-A
 For (1) 39W ANSI M130 or
 (1) 50W ANSI M110 Metal Halide Lamp
 120-277V 50/60Hz Electronic
 Status: Active

DIMENSIONS AND DATA

Lamp Data		Input Volts	Catalog Number*	Line Current (Amps)	Input Power (W)	Ballast Factor	Max THD (%)	Min Power Factor	Wiring Dia	Figure	Weight (lb)	Max Distance to Lamp (ft)
Number	Watts											
39 Watt Lamp, ANSI Code M130 Minimum Starting Temp -30°C/-20°F												
1	39	120	IMH-50-A-xxx	0.38	45	1.0	15	0.9	1	A	1.4	5
		277		0.16	44							
50 Watt Lamp, ANSI Code M110 Minimum Starting Temp -30°C/-20°F												
1	50	120	IMH-50-A-xxx	0.47	56	1.0	15	0.9	2	A	1.4	5
		277		0.20	55							

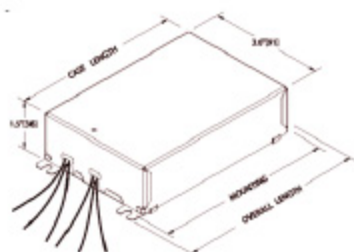
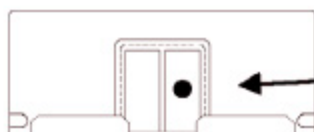
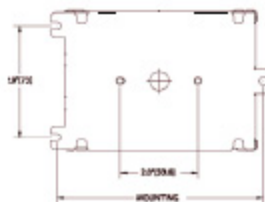


Figure A

CASE LENGTH = 4.72" [120mm]
 MOUNTING LENGTH = 5.20" [132mm]
 MOUNTING WIDTH = 2.87" [73mm]
 OVERALL LENGTH = 5.51" [140mm]
 CASE WIDTH = 3.62" [92mm]
 HEIGHT = 1.50" [38mm]



Case Temperature Measurement Location

MEASURE CASE TEMPERATURE ON RIGHT HEAT SINK CLIP AT BALLAST END



BALLAST CASE MUST BE GROUNDED

Wiring Diagram 1



BALLAST CASE MUST BE GROUNDED

Wiring Diagram 2



INSTALLATION & APPLICATION NOTES:

1. Maximum allowable case temperature is 85°C. See figure above for measurement location
2. Ignition pulse is 4 kV max
3. All leads are 12 inches long
4. Ballast output will shutdown after 20 minutes if lamp fails to ignite
5. Power must be cycled off – then on, after replacing lamp

*Ordering Information

Order Suffix	Description
-LF	Ballast with side exit leads and mounting feet
-BLS	Ballast with bottom exit leads and mounting studs

Data is based on tests performed by Advance transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.



e-Vision® Electronic Ballast for Metal Halide Lamps

Catalog Number IMH-175-C
 For (1) 150W ANSI M102, M142 or (1) 175W ANSI M137, M152 Metal Halide Lamp
 120-277V 50/60Hz Electronic
 Status: Released

DIMENSIONS AND DATA

Lamp Data		Input Volts	Catalog Number*	Line Current (Amps)	Input Power (W)	Ballast Factor	Max THD (%)	Min Power Factor	Wiring Dia	Figure	Weight (lb)	Max Distance to Lamp (ft)
Number	Watts											
150 Watt Lamp, ANSI Code M102 or M142 (or 150W HPS Lamp ANSI S58) Minimum Starting Temp -30°C/-20°F												
1	150	120	IMH-175-C-xxxx	1.4	169	1.0	15	0.9	1	C	2.5	5
		277		0.6	166							
175 Watt Lamp, ANSI Code M137 or M152 Minimum Starting Temp -30°C/-20°F												
1	175	120	IMH-175-C-xxxx	1.7	194	1.0	15	0.9	2	C	2.5	5
		277		0.7	191							

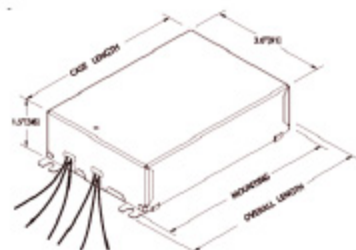
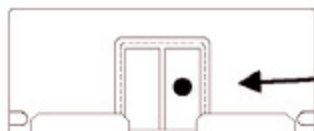
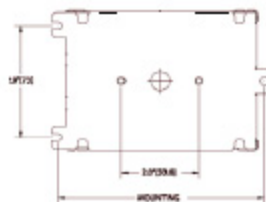


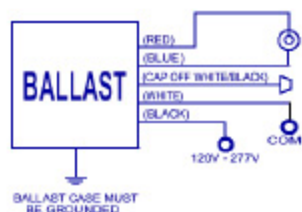
Figure C

CASE LENGTH = 7.3" [184]
 MOUNTING LENGTH = 7.7" [195]
 MOUNTING WIDTH = 2.9" [73]
 OVERALL LENGTH = 8.02" [204]
 CASE WIDTH = 3.8" [91]
 HEIGHT = 1.5" [38]

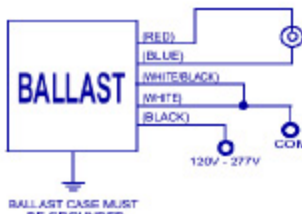


MEASURE CASE TEMPERATURE ON RIGHT HEAT SINK CLIP AT BALLAST END

Case Temperature Measurement Location



Wiring Diagram 1



Wiring Diagram 2



INSTALLATION & APPLICATION NOTES:

1. Maximum allowable case temperature is 85°C. See figure above for measurement location
2. Ignition pulse is 4 kV max
3. All leads are 12 inches long
4. Ballast output will shutdown after 20 minutes if lamp fails to ignite
5. Power must be cycled off – then on, after replacing lamp

*Ordering Information

Order Suffix	Description
-LF	Ballast with side exit leads and mounting feet
-BLS	Ballast with bottom exit leads and mounting studs

Data is based on tests performed by Advance transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.