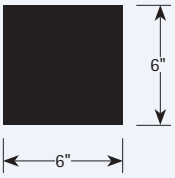
FORM 4

1, 2-Lamp T8, Direct/Indirect Distribution

FEATURES

- Internal extruded aluminum chassis and outer steel housing provides excellent strength and rigidity
- Direct/Indirect Luminaire
- Up to 2-lamp T8 in cross section
- Die-cast aluminum end caps provide stylish, subtle fixture ends
- Controls compatible
- Available with lenses or parabolic louvers
- Wide assortment of lighting distributions
- Excellent for schools, offices and retail applications

SHAPE AND DIMENSIONS



PROJECT INFORMATION

Project Name | Type

Catalog No. | Date

CONSTRUCTION

The outer housing of the Form 4 is constructed of 20 gauge steel. This steel housing is wrapped around multiple aluminum extrusions to give the housing the durability and rigidity of an aluminum extruded housing. The end caps are constructed of die cast aluminum ensuring that there are no light leaks. All fasteners are concealed and maintained with a minimum amount of tolerance to ensure that fixture integrity is maintained.

FINISH

Standard housing finish is powder coat matte white. Other powder coat finishes are available as an option. Pre-plated steel finishes are available in bright chrome, polished brass and satin medium bronze. End caps and connectors are finished the same as the housing on all painted parts. Cast end caps and connectors on pre-plated units are painted flat black.

SHIELDING

Form 4 is available with a parabolic louver or acrylic lens.

—Parabolic louvers are constructed of anodized aluminum with either a low iridescent specular or semi-specular finish.

—A variety of lenses are available.

MOUNTING

The F4 is designed to be installed with cables, stems, surface mounted. Corners and connectors are available and constructed of heavy-duty steel to assure rigid joints. Where patterns or rows are used it is recommended that the factory be provided with a layout diagram.

LABELS AND ELECTRICAL

—UL 1598 or CSA

—Prewired w/ T8 electronic ballasts

—Quick connect plugs standard

—Damp label on most models

ORDERING INFORMATION

EXAMPLE: F4-20-2UT8-CM48-A12-EU-MW

F4 - - T8 - - -

MODEL

F4	Form 4

LAMP TYPE

T8	T8

SUSPENSION LENGTH

48	48"
96	96"

Not applicable for surface or wall mount. Other lengths available on request.

BALLAST

E	Electronic, Instant Start (Standard for T8)
EP	Electronic, Programmed Start
ED	Electronic, Dimming (Must specify)
ESD	Electronic, Step Dimming

Unless specified, Alera will use fewest ballasts possible.

VOLTAGE

U	120V-277V
120	120V
277	277V
347	347V

FINISH

MW	Matte White (Std.)
ZT	ZET Metallic Silver

See MTX-1 for other color selections.

ROW LENGTH

4	4' Single
8	8' Single
—	Indicate row length over 8' in 4' increments

Note: Rows over 8' will be configured by Alera. Example: 16' will be (2) 8'. Alternate configurations: contact factory.

LAMP PROFILE AND DISTRIBUTION

1U	1-Lamp Uplight
1AU	1-Lamp Asymmetric Uplight
1UD	1-Lamp Uplight & Downlight
1D	1-Lamp Downlight
1AD	1-Lamp Asymmetric Downlight
2U	2-Lamp Uplight
2UD	2-Lamp Uplight & Downlight
2D	2-Lamp Downlight

MOUNTING METHOD

CM	Adjustable Aircraft Cable
PM	Pendant Mount
SM	Surface Mount (Direct only)
WM	Wall Mount, Symmetric Dist.
WMW	Wall Mount, Wall Wash[1]
WMR	Wall Mount, Room Wash[1]

See HGR-1 for other hanging methods.

SHIELDING

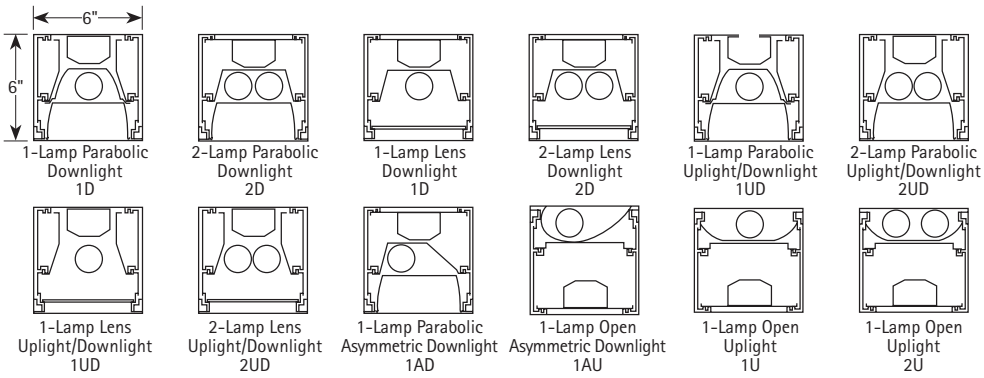
LD	Low Iridescent Semi-Specular Louver
LS	Low Iridescent Specular Louver
A12	Acrylic Pattern 12 Lens
A19	Acrylic Pattern 19 Lens
CA	Clear Acrylic Lens (No pattern)
OA	Opal Acrylic Lens (No pattern)
WCB	White Cross Baffle
NA	No Shielding

OPTIONS

DC	Dust Cover
LR	Left/Right Switching (2-Lamp only)
EL	Emergency Battery Pack[2, 3]
EMC	One Emergency Circuit[2, 3, 4]
NL	Night Light Circuit[2, 3, 4]
GLR	Fast Blow Fuse
GMF	Slow Blow Fuse
TBAR	T-Bar Mounting
CSA	UL listed or CSA certified for Canada
DL	Damp Label (Available on most models)

[1] For use with asymmetric distributions.
[2] Specify voltage. For additional, specify quantity before nomenclature (Example: 2EL120, EMC277).
[3] Not available with all configurations; some limitations apply. Contact factory for details.
[4] One extra feed drop per row with through wiring. (Standard is one 4ft lamp per circuit.)

CROSS SECTION



PHOTOMETRIC DATA

LUMINAIRE DATA Test 6478

Luminaire	F4-1UDT12-49-LE Form 4 Architectural Beam 6" x 6" x 48" 1-Lamp with Semi-specular Louver
Ballast	-
Ballast Factor	1.00
Lamp	-
Lumens per Lamp	3200
Watts	52
Mounting	Pendant
Shielding Angle	0° = 0 90° = 0
Spacing Criterion	0° = 0.15 90° = 1.65
Luminous Opening in Feet	Length: 4.00 Width: 0.50 Height: 0.00

AVG. LUMINANCE (Candela/Sq. M.)

Angle	0.0	22.5	45.0	67.5	90.0
0	3418	3418	3418	3418	3418
30	3039	3642	4207	4885	5071
40	2550	3316	4229	4616	4813
45	2215	3022	3806	4201	4460
50	1432	2269	3014	3508	3743
55	676	966	1886	2552	2505
60	517	581	861	1572	1345
65	420	471	484	751	624
70	330	393	393	393	425
75	291	333	333	333	354
80	310	341	341	341	372
85	432	494	494	494	494

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	576	18.0	27.8
0-40	969	30.3	46.7
0-60	1507	47.1	72.6
0-90	1583	49.5	76.3
90-120	74	2.3	3.6
90-130	133	4.2	6.4
90-150	319	10.0	15.4
90-180	493	15.4	23.7
0-180	2075	64.9	100.0

COEFFICIENTS OF UTILIZATION (%)

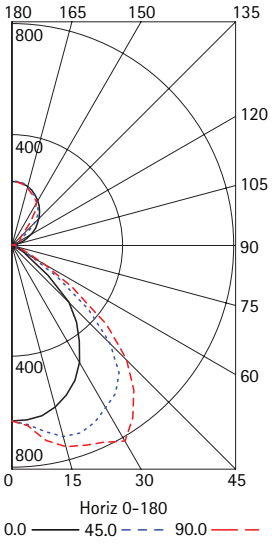
RC	80				70				50			0
RW	70	50	30	10	70	50	30	10	50	30	10	0
1	68	66	64	62	65	63	61	59	58	56	55	44
2	63	59	55	52	60	57	53	51	52	49	47	39
3	58	53	48	45	56	51	47	44	47	44	41	34
4	54	47	43	39	51	46	41	38	42	39	36	30
5	50	43	38	34	48	41	37	33	38	34	32	27
6	46	39	34	30	44	37	33	29	35	31	28	24
7	43	35	30	27	41	34	29	26	32	28	25	21
8	40	32	27	24	38	31	27	23	29	25	22	19
9	37	30	25	21	36	29	24	21	27	23	20	17
10	35	27	23	19	33	26	22	19	25	21	18	16

RCR = Room Cavity Ratio
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

ENERGY DATA

Total Luminaire Efficiency	64.9%
Luminaire Efficacy Rating (LER)	40
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Intensive Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	$6.00 based on 3000 hrs. and $0.08 per KWH

INDOOR CANDELA PLOT



Test Date 11/15/06

PHOTOMETRIC DATA

LUMINAIRE DATA Test 7044

Luminaire	F4-2DT12-LD-LE Form 4 Architectural Beam 6" x 6" x 48" Decorative 2-Lamp Luminaire with #43 Louver
Ballast	-
Ballast Factor	1.00
Lamp	-
Lumens per Lamp	3200
Watts	92
Shielding Angle	0° = 0 90° = 0
Spacing Criterion	0° = 1.17 90° = 1.19
Luminous Opening in Feet	Length: 4.00 Width: 0.42 Height: 0.00

AVG. LUMINANCE (Candela/Sq. M.)

Angle	0.0	22.5	45.0	67.5	90.0
0	9886	9886	9886	9886	9886
30	8967	8922	8804	8974	9100
40	8264	8038	8071	8339	8606
45	7512	7457	7602	7865	8246
50	5702	6280	6848	7037	7506
55	1944	3161	5451	5965	6613
60	961	1192	2883	4600	5433
65	713	849	1243	2941	3669
70	543	656	880	1461	1630
75	396	520	743	965	1139
80	332	443	627	775	959
85	294	809	1250	735	882

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1163	18.2	38.0
0-40	1851	28.9	60.5
0-60	2887	45.1	94.4
0-90	3057	47.8	100.0
0-180	3057	47.8	100.0

COEFFICIENTS OF UTILIZATION (%)

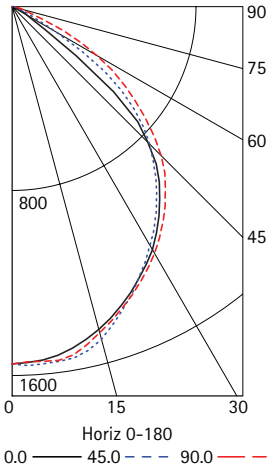
RC	80				70				50			0
RW	70	50	30	10	70	50	30	10	50	30	10	0
1	53	51	50	48	52	50	49	48	48	47	46	43
2	49	46	44	41	48	45	43	41	44	42	40	37
3	46	42	38	36	45	41	38	36	40	37	35	33
4	42	38	34	31	41	37	34	31	36	33	31	29
5	39	34	30	28	38	34	30	27	33	30	27	26
6	37	31	27	25	36	31	27	24	30	27	24	23
7	34	28	25	22	33	28	24	22	27	24	22	21
8	32	26	22	20	31	26	22	20	25	22	20	19
9	30	24	20	18	29	24	20	18	23	20	18	17
10	28	22	19	16	27	22	19	16	22	18	16	15

RCR = Room Cavity Ratio
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

ENERGY DATA

Total Luminaire Efficiency	47.8%
Luminaire Efficacy Rating (LER)	N/A
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	$N/A based on 3000 hrs. and $0.08 per KWH

INDOOR CANDELA PLOT



Test Date 11/15/06

PHOTOMETRIC DATA

LUMINAIRE DATA Test 7043

Luminaire	F4-2UDT12-LD-LE Form 4 Architectural Beam 6" x 6" x 48" Decorative 2-Lamp Fluorescent Direct/ Indirect Luminaire with #43 Baffle
Ballast	-
Ballast Factor	1.00
Lamp	-
Lumens per Lamp	3200
Watts	92
Shielding Angle	0° = 0 90° = 0
Spacing Criterion	0° = 1.15 90° = 1.22
Luminous Opening in Feet	Length: 4.00 Width: 0.42 Height: 0.00

AVG. LUMINANCE (Candela/Sq. M.)

Angle	0.0	22.5	45.0	67.5	90.0
0	7913	7913	7913	7913	7913
30	7043	7191	7154	7324	7480
40	6490	6557	6633	7009	7452
45	6098	6125	6379	6760	7185
50	4356	5084	5811	6020	6499
55	1620	2245	4401	5049	5697
60	807	935	1909	3742	4459
65	591	682	925	2153	2790
70	450	543	712	1049	1330
75	347	421	594	767	965
80	295	369	480	664	812
85	294	294	1176	662	882

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	941	14.7	21.4
0-40	1504	23.5	34.2
0-60	2367	37.0	53.8
0-90	2504	39.1	56.9
90-120	345	5.4	7.8
90-130	643	10.0	14.6
90-150	1338	20.9	30.4
90-180	1897	29.6	43.1
0-180	4401	68.8	100.0

COEFFICIENTS OF UTILIZATION (%)

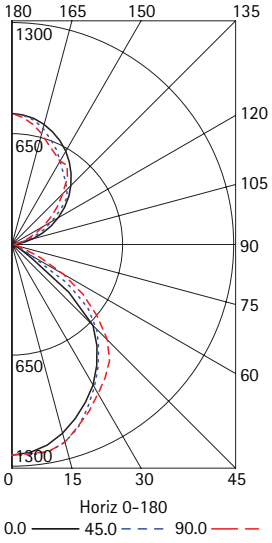
RCR	RC	80				70				50			0
	RW	70	50	30	10	70	50	30	10	50	30	10	0
1		69	67	64	62	64	62	60	58	54	53	51	35
2		64	59	55	52	59	55	52	49	48	46	44	31
3		59	53	48	45	55	50	45	42	43	40	38	27
4		54	47	42	38	50	44	40	36	39	36	33	24
5		50	42	37	33	46	40	35	32	35	32	29	21
6		46	38	33	29	43	36	31	28	32	28	25	19
7		43	35	30	26	40	33	28	25	29	25	23	17
8		40	32	27	23	37	30	25	22	27	23	20	15
9		37	29	24	21	35	27	23	20	25	21	18	14
10		35	27	22	19	33	25	21	18	23	19	17	13

RCR = Room Cavity Ratio
RC = Effective Ceiling Cavity Reflectance **RW** = Wall Reflectance

ENERGY DATA

Total Luminaire Efficiency	68.8%
Luminaire Efficacy Rating (LER)	N/A
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	$N/A based on 3000 hrs. and $0.08 per KWH

INDOOR CANDELA PLOT



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