

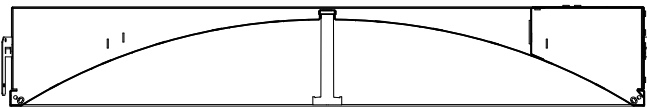


TRANSOM 2 x 4 TR1-24

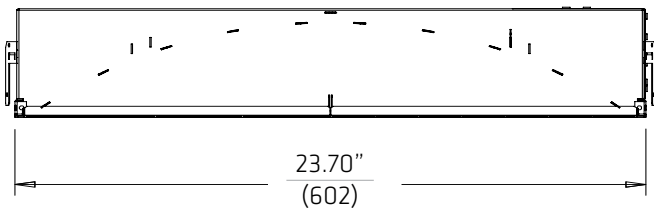
Specification Data



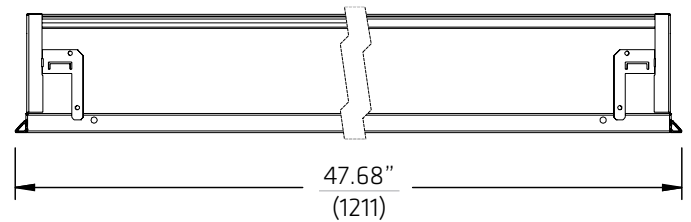
CROSS SECTION



DIMENSIONS inches (mm)



FRONT VIEW



SIDE VIEW

SPECIFICATION

TR1	24						
1	2	3	4	5	6	OPTIONS	
1. FAMILY	2. SIZE	3. ENERGY ²	4. CCT	5. DRIVER	6. VOLTAGE	OPTIONS	
TR1 Transom	14 1 x 4 22 2 x 2 24 2 x 4 52 20 x 24 54 20 x 48 ¹	A 23 W B 29 W C 38 W D 47 W ³	30 3000 K 35 3500 K 40 4000 K	E1 eldoLED ECO 0-10V Dim 1% E2 eldoLED SOLO 0-10V Dim 0.1% E3 eldoLED ECO DALI 1% E4 eldoLED SOLO DALI Dim 0.1% F1 Factory Non- Dim F2 Factory 0-10V Dim 3% L1 Lutron Hi-Lume 1%-H EcoSystem	M 120 - 277 V 3 347 V ⁴	B Battery Pack ⁵ C Chicago Plenum F 6' Flex Whip K Drywall Flange Kit	

NOTES					
¹ Optional filler panels available for 20 x 60	² Add 4W to above for 347 V with E1-4/L1	³ 1 x 4 2 x 4 20 x 48 only	⁴ 347 V Driver for F1/F2 347 V Transformer & Driver E1-4/L1	⁵ Available for 120-277V	

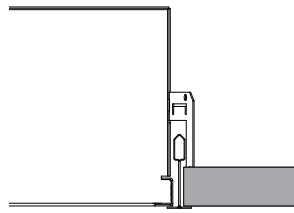
Luminaire	TRANSOM - 2 X 4 (TR1-24)	Type
Project		
Product		
Notes		



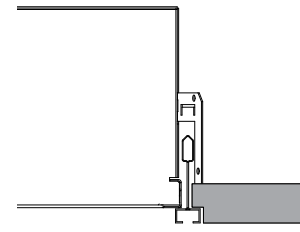
Performance Summary	Transom 2 x 4			
	A	B	C	D
Light (lm)	2750	3300	4300	5000
Energy (W)	23	29	38	47
Efficacy (lm/W)	119	117	112	109
Color Rendering (CRI)	80+	80+	80+	80+
Color Accuracy (SDCM)	< 2	< 2	< 2	< 2
L70 Estimate (h)	200,000	200,000	200,000	200,000
Lumen Maintenance per TM21 (@ 60,000 h)	L90	L90	L90	L90

DLC qualified for 29W (B), 38W (C) and 47W (D) in 3000K, 3500K & 4000K. Summary values are nominal and based on 4000K CCT

CEILING INTEGRATION GRID

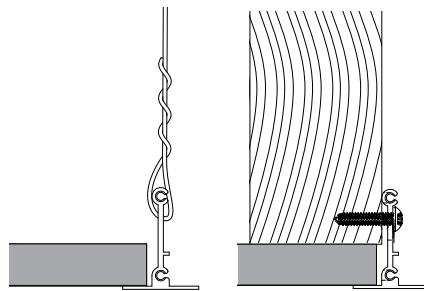


FLAT GRID

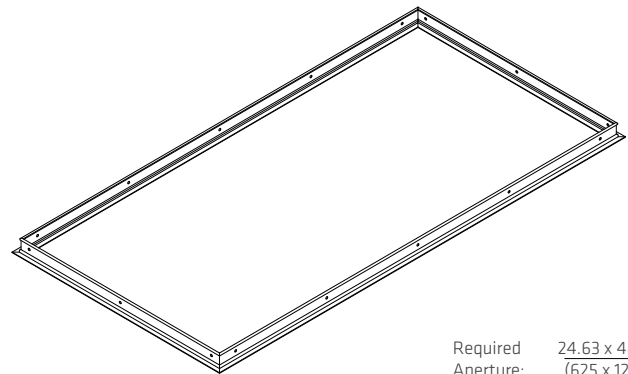


SLOT GRID

CEILING INTEGRATION DRYWALL



DRYWALL FLANGE KIT



Required 24.63 x 48.63
Aperture: (625 x 1235)

CONSTRUCTION

- Clear anodized aluminum lower rail
- Die formed 22 ga. steel housing
- Quick wire access plate and integral seismic restraint tabs/tie-offs
- Option for (K) drywall flange kit
- High reflectance diffuse white textured powdercoat

OPTICAL

- Anidolic optical structures with linear light extraction elements
- Precision extruded high transmittance clear acrylic lenses
- Long life LED system designed for typical TM21 lumen maintenance \geq L90 @ 60,000 h
- Available in CCTs 3000 K, 3500 K or 4000 K with CRI \geq 80 and R9 \geq 0, all with color accurate binning \leq 2 SDCM

ELECTRICAL

- Integral high efficiency drivers 120 – 277 V or 347 V; 50 - 60 Hz
- Power Factor $>$ 0.90
- Total Harmonic Distortion $<$ 20%
- F2:0 – 10 V Dim Range: 3 - 100%
- Optional Battery Pack
- Optional Lutron: Hi-lume H-Series EcoSystem LED drivers for 100 - 1% (PWM) dim range
- Optional flex whip: 6' prewired
- Surge Protection: Meets ANSI C82.11 spec and ANSI/IEEE C62.41
- Inrush Current: Meets NEMA 410

WEIGHT

- Maximum 27 lb. (12.3 kg)
- Maximum 31 lb. (14.1 kg) with battery pack

WARRANTY

- 5 year limited warranty on all components and workmanship

ENVIRONMENTAL

- Designed for use in damp or dry indoor environments with room side operating temperatures of 0 - 30° C (32 - 86° F)

INDEPENDENT TESTING

- IESNA LM79
- IESNA LM80 (LED@10,000 h)

APPROVALS

- UL Listed (USA + Canada)
- CCEA Chicago Plenum
- Lighting Facts[®]
- DesignLights Consortium[®]
- IC Rated

Product	Transom 2x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	TR1-24A40	2x4 LED A Lumens CCT 4000 K	CCT Color Temperature	4000 K	2744	23.16	118.5	83.2	8.9	< 2
Report	Fluxwerx			3500 K	2692	23.16	116.2	83.2	8.9	< 2
				3000 K	2640	23.16	114	82.5	6.4	< 2

100% Dn

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	644	644	644	644	644
5°	643	641	644	655	660
15°	624	644	724	781	803
25°	586	665	796	847	863
35°	530	662	784	821	823
45°	457	619	716	709	709
55°	370	537	586	582	566
65°	269	425	444	387	379
75°	157	294	240	179	163
85°	49	93	36	26	23
90°					
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

Zone	Lumens	% Lamp	% Fixture
0-30°	616	N.A.	23
0-60°	2067	N.A.	75
0-90°	2743	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	2743	N.A.	100

Vertical Angle	0°	45°	90°
	45°	945	1482
55°	945	1495	1444
65°	931	1538	1313
75°	890	1359	921
85°	828	606	388

Floor Ceiling	80				70				20			
	70	50	30	10	70	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102
1	108	103	98	94	105	101	93	96	90	92	87	89
2	98	89	81	75	95	87	74	83	73	80	71	77
3	88	77	68	62	86	76	61	72	60	70	59	67
4	80	68	58	51	78	66	51	64	50	61	50	59
5	74	60	51	44	71	59	43	57	43	55	42	53
6	68	54	44	38	66	53	37	51	37	49	37	47
7	62	48	39	33	61	47	33	46	32	44	32	43
8	58	44	35	29	56	43	29	42	29	40	28	39
9	54	40	31	26	53	39	26	38	25	37	25	36
10	50	37	29	23	49	36	23	35	23	34	23	33

Integrating Sphere and Photometric results at 4000K, 3500K and 3000K scaled from TR1-24 47W (D) and TR1-14 results from an independent accredited testing laboratory per IES LM-79-2008 and ANSI C78.377-2011. Candlepower Distribution scaled per total lumens of Integrating Sphere results

Product	Transom 2x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	TR1-24B40	2x4 LED B Lumens CCT 4000 K	CCT Color Temperature	4000 K	3323	28.52	116.5	83.1	10.7	< 2
Report	Fluxwerx			3500 K	3260	28.52	114.3	83.1	10.7	< 2
				3000 K	3172	28.48	111.4	82.5	6.1	< 2

100% Dn

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	780	780	780	780	780
5°	779	777	780	794	799
15°	755	780	877	946	972
25°	710	805	964	1026	1045
35°	642	802	949	994	997
45°	553	750	867	859	859
55°	448	650	709	705	685
65°	325	514	537	469	459
75°	191	356	291	217	197
85°	60	112	44	31	28
90°					
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

Zone	Lumens	% Lamp	% Fixture
0-30°	746	N.A.	23
0-60°	2503	N.A.	75
0-90°	3323	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	3323	N.A.	100

Vertical Angle	0°	45°	90°
	45°	1145	1795
55°	1144	1810	1748
65°	1127	1862	1590
75°	1078	1646	1115
85°	1005	734	470

Floor Ceiling	80				70				20			
	70	50	30	10	70	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102
1	108	103	98	94	105	101	93	96	90	92	87	89
2	97	89	81	75	95	87	74	83	73	80	71	77
3	88	77	68	62	86	76	61	72	60	70	59	67
4	80	68	58	51	78	66	51	64	50	61	49	59
5	74	60	51	44	71	59	43	57	43	55	42	53
6	68	54	44	38	66	53	37	51	37	49	37	47
7	62	48	39	33	61	47	33	46	32	44	32	43
8	58	44	35	29	56	43	29	42	29	40	28	39
9	54	40	31	26	52	39	26	38	25	37	25	36
10	50	37	29	23	49	36	23	35	23	34	23	33

Product	Transom 2x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	TR1-24C40	2x4 LED C Lumens CCT 4000 K	CCT Color Temperature	4000 K	4301	38.37	112.1	83.1	10.7	< 2
Report	11361637.25			3500 K	4220	38.37	110	83.1	10.7	< 2
				3000 K	4139	38.37	107.9	82.2	5.2	< 2

100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	90°
0°	1009	1009	1009	1009	1009
5°	1008	1006	1010	1027	1035
15°	978	1009	1136	1225	1258
25°	919	1043	1248	1328	1353
35°	831	1038	1229	1287	1291
45°	716	970	1122	1112	1112
55°	580	842	918	913	887
65°	421	666	696	607	594
75°	247	460	377	281	255
85°	77	145	57	40	36
90°					
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30°	966	N.A.	23
0-60°	3241	N.A.	75
0-90°	4301	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	4301	N.A.	100

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	1482	2324	2303
55°	1481	2343	2263
65°	1460	2410	2059
75°	1396	2131	1444
85°	1300	951	610

CO-EFFICIENTS OF UTILIZATION

	Floor Ceiling				Wall				20		30		10		0
	70	50	30	10	70	50	30	10	50	10	50	10	50	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102	102	100	
1	108	103	98	94	105	101	93	96	90	92	87	89	84	82	
2	98	89	81	75	95	87	74	83	73	80	71	77	69	67	
3	88	77	68	62	86	76	61	72	60	70	59	67	58	55	
4	80	68	58	51	78	66	51	64	50	61	50	59	49	47	
5	74	60	51	44	71	59	43	57	43	55	42	53	42	40	
6	68	54	44	38	66	53	37	51	37	49	37	47	36	34	
7	62	48	39	33	61	47	33	46	32	44	32	43	32	30	
8	58	44	35	29	56	43	29	42	29	40	28	39	28	26	
9	54	40	31	26	53	39	26	38	25	37	25	36	25	23	
10	50	37	29	23	49	36	23	35	23	34	23	33	23	21	

Integrating Sphere and Photometric results at 4000K, 3500K and 3000K scaled from TR1-24 47W (D) and TR1-14 results from an independent accredited testing laboratory per IES LM-79-2008 and ANSI C78.377-2011. Candlepower Distribution scaled per total lumens of Integrating Sphere results

Product	Transom 2x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	TR1-24D40	2x4 LED D Lumens CCT 4000 K	CCT Color Temperature	4000 K	5001	46.01	108.7	83.4	10.7	< 2
Report	11555052.16			3500 K	4907	46.01	106.6	83.4	10.7	< 2
				3000 K	4812	46.33	103.9	82.2	5.2	< 2

100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	90°
0°	1173	1173	1173	1173	1173
5°	1172	1169	1174	1194	1203
15°	1137	1173	1320	1424	1463
25°	1068	1212	1450	1544	1573
35°	966	1207	1428	1497	1501
45°	832	1128	1305	1293	1293
55°	674	979	1067	1061	1031
65°	490	774	809	706	691
75°	287	535	438	327	297
85°	90	169	66	47	42
90°					
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30°	1123	N.A.	23
0-60°	3768	N.A.	75
0-90°	5001	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	5001	N.A.	100

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	1724	2701	2677
55°	1722	2725	2631
65°	1697	2803	2394
75°	1623	2477	1679
85°	1510	1105	709

CO-EFFICIENTS OF UTILIZATION

	Floor Ceiling				Wall				20		30		10		0
	70	50	30	10	70	50	30	10	50	10	50	10	50	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102	102	100	
1	108	103	98	94	105	101	93	96	90	92	87	89	84	82	
2	97	89	81	75	95	87	74	83	73	80	71	77	69	67	
3	88	77	68	62	86	76	61	72	60	70	59	67	58	55	
4	80	68	58	51	78	66	51	64	50	61	49	59	49	47	
5	74	60	51	44	71	59	43	57	43	55	42	53	42	40	
6	68	54	44	38	66	53	37	51	37	49	37	47	36	34	
7	62	48	39	33	61	47	33	46	32	44	32	43	32	30	
8	58	44	35	29	56	43	29	42	29	40	28	39	28	26	
9	54	40	31	26	53	39	26	38	25	37	25	36	25	23	
10	50	37	29	23	49	36	23	35	23	34	23	33	23	21	

