

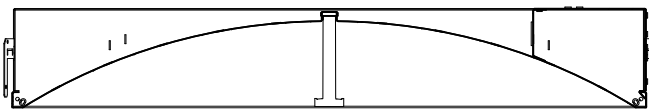


TRANSOM 2 x 2 TR1-22

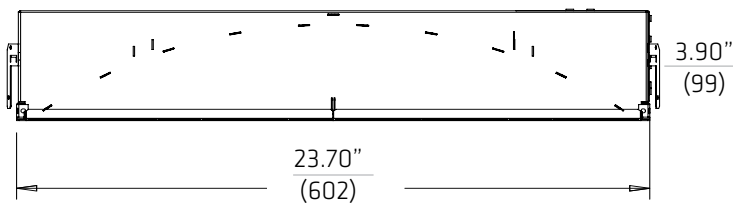
Specification Data



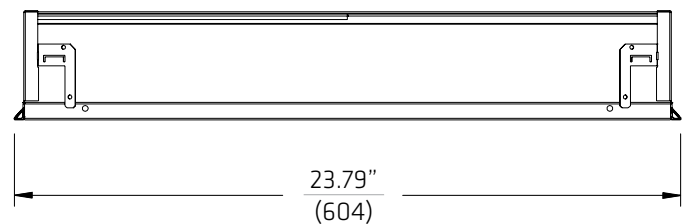
CROSS SECTION



DIMENSIONS inches (mm)



FRONT VIEW



SIDE VIEW

SPECIFICATION

TR1	22						
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 <small>⁵ Available for 120-277V</small>	
	<small>¹ Optional filler panels available for 20 x 60</small>	<small>² Add 4W to above for 347 V with E1-4/L1</small>	<small>³ 1 x 4 2 x 4 20 x 48 only</small>		<small>⁴ 347 V Driver for F1/F2 347 V Transformer & Driver E1-4/L1</small>		

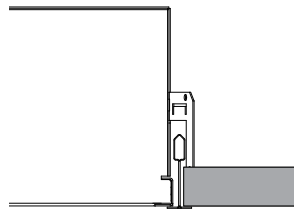
Luminaire	TRANSOM - 2 X 2 (TR1-22)	Type
Project		
Product		
Notes		



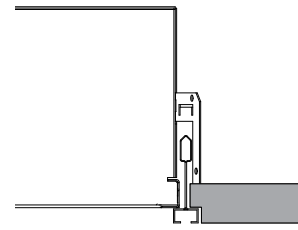
Performance Summary	Transom 2 x 2		
	A	B	C
Light (lm)	2650	3200	4050
Energy (W)	23	29	38
Efficacy (lm/W)	113	110	104
Color Rendering (CRI)	80+	80+	80+
Color Accuracy (SDCM)	< 2	< 2	< 2
L70 Estimate (h)	200,000	200,000	200,000
Lumen Maintenance per TM21 (@ 60,000 h)	L90	L90	L90

DLC qualified for each lumen output (A,B,C) in 3000K, 3500K & 4000K. Summary values are nominal and based on 4000K CCT

CEILING INTEGRATION GRID

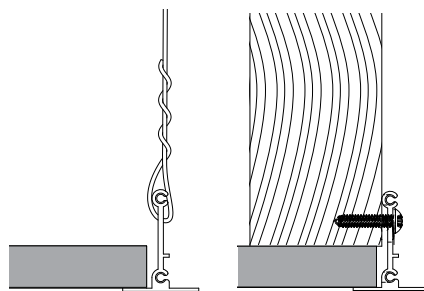


FLAT GRID

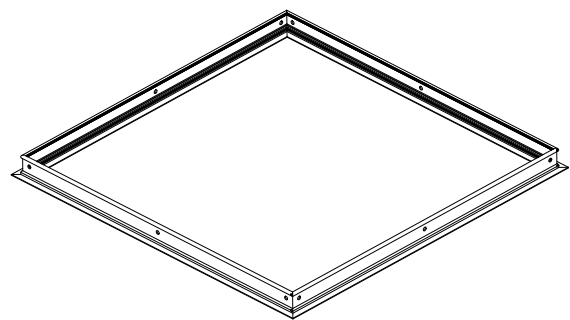


SLOT GRID

CEILING INTEGRATION DRYWALL



DRYWALL FLANGE KIT



Required Aperture: 24.63 x 24.63 (625 x 625)

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 ≥ L90 @ 60,000 h
- Available in CCTs 3000 K, 3500 K or 4000 K with CRI ≥ 80 and R9 ≥ 0, all with color accurate binning ≤ 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 16 lb. (7.3 kg)
- Maximum 20 lb. (9.1 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 2x2	Description 2x2 LED A Lumens CCT 4000 K	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy (CRI) (R9) (SDCM)		
Version	TR1-22A40		CCT Color Temperature	4000 K	2660	23.49	113.2	83.6	11.4	< 2
Report	Based on 11555052.09			3500 K	2599	23.49	110.6	83.6	11.4	< 2
		3000K		2514	23.57	106.7	81.9	3.4	< 2	

100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	622	622	622	622	622
5°	620	619	621	622	623
15°	599	614	697	762	789
25°	561	636	783	843	862
35°	504	639	765	816	826
45°	432	598	701	705	714
55°	347	511	569	582	575
65°	250	399	432	383	378
75°	146	262	228	180	145
85°	44	68	37	21	16
90°	2	1	1	1	1
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture	
0-30°	600	N.A.	23	
0-60°	2021	N.A.	76	
0-90°	2660	N.A.	100	
90-180°	0	N.A.	0	
Total Luminaire	0-180°	2660	N.A.	100

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	1678	2720	2773
55°	1662	2722	2754
65°	1624	2804	2485
75°	1548	2419	1538
85°	1399	1153	498

CO-EFFICIENTS OF UTILIZATION

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	102	100
1	108	103	99	95	105	101	93	97	90	93	87	89	85	83
2	98	89	82	76	95	87	75	83	73	80	71	77	70	68
3	89	77	69	62	86	76	61	73	60	70	59	67	58	56
4	81	68	59	52	78	67	51	64	51	62	50	59	49	47
5	74	60	51	44	72	59	44	57	43	55	43	53	42	40
6	68	54	44	38	66	53	38	51	37	49	37	48	37	34
7	63	48	39	33	61	48	33	46	33	45	32	43	32	30
8	58	44	35	29	56	43	29	42	29	41	29	39	28	26
9	54	40	32	26	53	40	26	38	26	37	25	36	25	23
10	51	37	29	23	49	36	23	35	23	34	23	33	23	21

Integrating Sphere and Photometric results at 4000K by an independent accredited testing laboratory per IES LM-79-2008 and ANSI C78.377-2011. Results for 3000K & 3500K scaled based on integrating sphere results at 38W (C). Candlepower Distribution scaled per total lumens of Integrating Sphere results.

Product	Transom 2x2	Description 2x2 LED B Lumens CCT 4000 K	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy (CRI) (R9) (SDCM)		
Version	TR1-22B40		CCT Color Temperature	4000 K	3220	29.16	110.4	83.6	11.2	< 2
Report	Based on 11555052.10			3500 K	3146	29.16	107.9	83.6	11.2	< 2
		3000K		3071	29.16	105.3	81.5	2.1	< 2	

100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	753	753	753	753	753
5°	750	749	751	753	755
15°	725	743	844	923	955
25°	679	770	948	1021	1044
35°	611	773	926	988	1000
45°	523	724	848	854	864
55°	420	619	688	705	696
65°	303	482	522	463	463
75°	177	317	276	218	176
85°	54	83	44	26	19
90°	3	2	2	1	1
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture	
0-30°	727	N.A.	23	
0-60°	2447	N.A.	76	
0-90°	3220	N.A.	100	
90-180°	0	N.A.	0	
Total Luminaire	0-180°	3220	N.A.	100

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	2032	3293	3357
55°	2011	3295	3333
65°	1966	3394	3009
75°	1874	2927	1862
85°	1695	1396	602

CO-EFFICIENTS OF UTILIZATION

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	102	100
1	108	103	99	95	105	101	93	97	90	93	87	89	85	83
2	98	89	82	76	95	87	75	83	73	80	71	77	70	68
3	89	77	69	62	86	76	61	73	60	70	59	67	58	56
4	81	68	59	52	78	67	51	64	51	62	50	59	49	47
5	74	60	51	44	72	59	44	57	43	55	43	53	42	40
6	68	54	44	38	66	53	38	51	37	49	37	48	37	34
7	63	48	39	33	61	48	33	46	33	45	32	43	32	30
8	58	44	35	29	56	43	29	42	29	41	29	39	28	26
9	54	40	32	26	53	40	26	38	26	37	25	36	25	23
10	51	37	29	23	49	36	23	35	23	34	23	33	23	21

Product	Transom 2x2	Description	Performance Summary					Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	TR1-22C40	2x2 LED C Lumens CCT 4000 K	CCT Color Temperature	4000 K	4074	39.24	103.8	83.6	10.9	< 2			
Report	Based on 11555052.13			3500 K	3980	39.24	101.4	83.6	10.9	< 2			
				3000K	3886	39.43	98.6	81.5	2.1	< 2			

100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	953	953	953	953	953	953
5°	949	948	950	952	955	92
15°	918	940	1068	1168	1208	302
25°	859	974	1199	1291	1321	525
35°	772	978	1172	1250	1265	691
45°	662	916	1073	1080	1094	762
55°	532	783	871	892	881	724
65°	383	610	661	586	586	579
75°	223	401	349	275	222	329
85°	68	105	56	32	24	71
90°	3	2	2	1	1	
95°						
105°						
115°						
125°						
135°						
145°						
155°						
165°						
175°						
180°						

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30°	919	N.A.	23
0-60°	3096	N.A.	76
0-90°	4074	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	4075	N.A.	100

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
	45°	2570	4166
55°	2544	4169	4218
65°	2487	4294	3807
75°	2370	3704	2356
85°	2145	1767	759

Lighting Facts
Light Output (Lumens) **4074**
Watts **39.24**
Lumens per Watt (Efficacy) **103.82**
Color Accuracy (Color Rendering Index (CRI)) **83**
Light Color (Color Temperature (CCT)) **4000 (Bright White)**

CO-EFFICIENTS OF UTILIZATION

Floor Ceiling Wall	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	102	100
1	108	103	99	95	105	101	93	97	90	93	87	89	85	83
2	98	89	82	76	95	87	75	83	73	80	71	77	70	68
3	89	77	69	62	86	76	61	73	60	70	59	67	58	56
4	81	68	59	52	78	67	51	64	51	62	50	59	49	47
5	74	60	51	44	72	59	44	57	43	55	43	53	42	40
6	68	54	44	38	66	53	38	51	37	49	37	48	37	34
7	63	48	39	33	61	48	33	46	33	45	32	43	32	30
8	58	44	35	29	56	43	29	42	29	41	29	39	28	26
9	54	40	32	26	53	40	26	38	26	37	25	36	25	23
10	51	37	29	23	49	36	23	35	23	34	23	33	23	21

Integrating Sphere and Photometric results at 3000 & 4000K by an independent accredited testing laboratory per IES LM-79-2008 and ANSI C78.377-2011. Results for 3500K scaled based on integrating sphere results at 38W (C). Candlepower Distribution scaled per total lumens of Integrating Sphere results.