



LOOP 1x4 LR1-14

Specification Data



Luminaire	LOOP 1x4 (LR1-14)	Type
Project		
Product		
Notes		

Performance Summary	Loop 1x4			
	A	B	C	D
Light (lm)	2700	3150	3800	5050
Energy (W)	19	23	29	38
Efficacy (lm/W)	143	137	134	130
Color Rendering (CRI)	80+	80+	80+	80+
Color Accuracy (SDCM)	< 2	< 2	< 2	< 2
L70 Estimate (h)	200,000	200,000	200,000	150,000
Lumen Maintenance per TM21 (@ 54,000 h)	L90	L90	L90	L88

Summary values are nominal and based on 4000K CCT.



SPECIFICATION

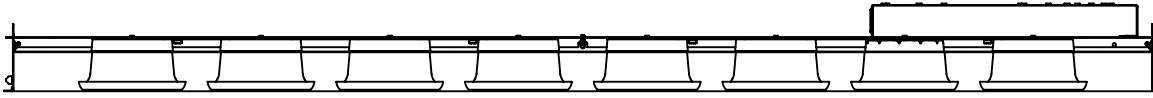
LR1	14										OPTIONS
1	2	3	4	5	6						

1. FAMILY	2. SIZE	3. ENERGY ¹	4. CCT	5. DRIVER
LR1 Loop Recessed	14 (1x4) 22 (2x2) 24 (2x4) 11 (1x1) 12 (1x2)	A 19 W B 23 W C 29 W D 38 W A 12 W B 15 W C 19 W	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

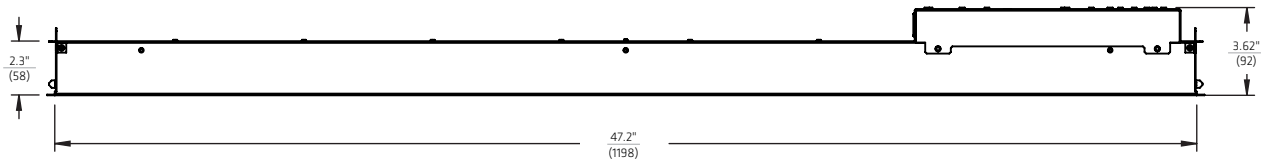
6. VOLTAGE	OPTIONS
M 120 - 277 V 3 347 V ²	B Battery Pack ³ C Chicago Plenum F 6' Flex Whip K Drywall Flange Kit

NOTES		
¹ Add 4W for 347V with E1-4/L1	² 347 V Driver for F1/F2, 347 V Transformer & Driver for E1-4/L1	³ Available for 120 - 277V

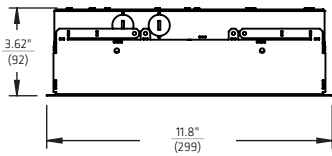
CROSS SECTION



DIMENSIONS inches (mm)

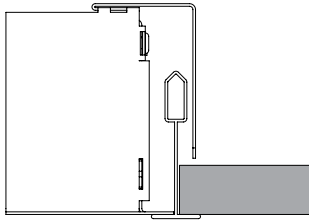


SIDE VIEW

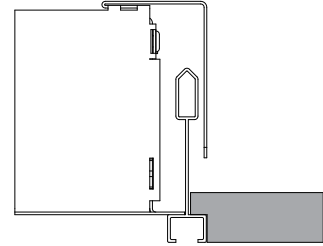


FRONT VIEW

CEILING INTEGRATION GRID

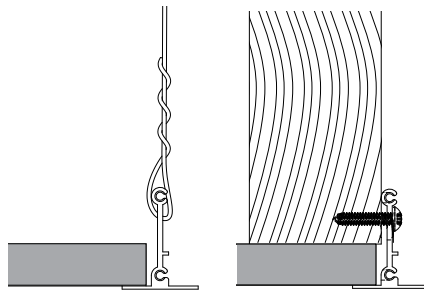


FLAT GRID

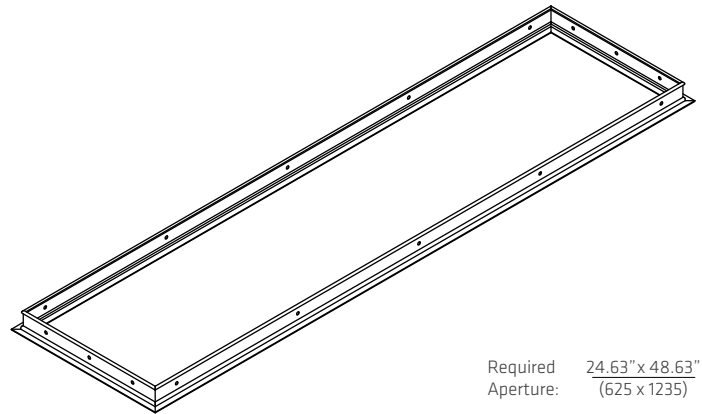


SLOT GRID

CEILING INTEGRATION DRYWALL



DRYWALL FLANGE KIT



Required 24.63" x 48.63"
Aperture: (625 x 1235)

CONSTRUCTION

- 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

- Radial Anidolic optical structures with detailed light extraction elements for 360° symmetric batwing distribution
- Precision molded high transmittance clear acrylic lenses
- Long life LED system designed for typical TM21 lumen maintenance \geq L90 @ 54,000 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 18 lb (8.2 kg)
- Maximum 22 lb (10 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)

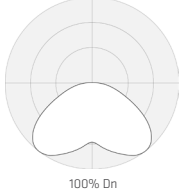
INDEPENDENT TESTING

- IESNA LM79
- IESNA LM80 (LED@ 9,000 h)

APPROVALS

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

Product	Loop 1x4	Description 1x4 LED A Lumens CCT 4000 K	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	LR1-14A40		CCT Color Temperature	4000 K	2710	18.95	143	(CRI)	(R9)	(SDCM)
Report	FLUXWERX			3500 K	2669	18.95	140.9	82.8	6.7	< 2
		3000 K		2629	18.95	138.7	82.8	5.7	< 2	



100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	506	506	506	506	506
5°	521	524	525	527	530
15°	591	595	598	601	606
25°	667	672	676	680	684
35°	719	723	727	733	736
45°	694	696	701	708	711
55°	551	558	563	564	567
65°	346	362	363	361	359
75°	195	219	209	204	202
85°	87	101	104	99	97
90°					100
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30°	536	N.A.	20
0-60°	2029	N.A.	75
0-90°	2710	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	0-180°	2710	N.A.

LUMINANCE DATA (CD/M²)

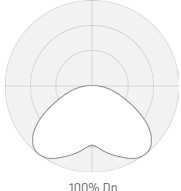
Vertical Angle	0°	45°	90°
	45°	2937	2968
55°	2874	2938	2960
65°	2454	2571	2545
75°	2259	2420	2334
85°	2982	3562	3325

CO-EFFICIENTS OF UTILIZATION

Floor Ceiling Wall	80				70			20		30		10		0
	70	50	30	10	70	50	10	50	10	50	10	50	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102	102	100
1	107	102	97	93	105	100	91	95	88	91	86	88	83	81
2	97	88	80	74	94	86	73	82	71	79	70	76	68	66
3	88	76	67	60	85	74	60	71	59	69	57	66	56	54
4	80	67	57	50	77	65	50	63	49	60	48	58	47	45
5	73	59	49	42	70	58	42	56	41	53	41	52	40	38
6	67	52	43	36	65	51	36	50	36	48	35	46	35	33
7	61	47	38	31	60	46	31	45	31	43	31	42	30	28
8	57	43	34	27	55	42	27	41	27	39	27	38	27	25
9	53	39	30	24	51	38	24	37	24	36	24	35	24	22
10	49	36	27	22	48	35	22	34	21	33	21	32	21	19

Integrating Sphere and Photometric results at 3000K, 3500K, 4000K scaled from LR1-14 38W (D) and LR1-22 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	Loop 1x4	Description 1x4 LED B Lumens CCT 4000 K	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
Version	LR1-14B40		CCT Color Temperature	4000 K	3170	23.16	136.9	(CRI)	(R9)	(SDCM)
Report	FLUXWERX			3500 K	3122	23.16	134.8	82.8	6.7	< 2
		3000 K		3075	23.16	132.8	82.5	4.5	< 2	



100% Dn

CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	592	592	592	592	592
5°	610	613	614	617	620
15°	691	696	699	703	709
25°	780	787	790	795	800
35°	841	846	850	857	861
45°	811	815	820	828	832
55°	644	653	658	660	663
65°	405	423	424	422	420
75°	229	257	245	239	236
85°	102	118	121	116	113
90°					117
95°					
105°					
115°					
125°					
135°					
145°					
155°					
165°					
175°					
180°					

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixture
0-30°	627	N.A.	20
0-60°	2373	N.A.	75
0-90°	3169	N.A.	100
90-180°	0	N.A.	0
Total Luminaire	0-180°	3169	N.A.

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
	45°	3436	3472
55°	3362	3436	3462
65°	2870	3007	2977
75°	2643	2831	2730
85°	3487	4167	3889

CO-EFFICIENTS OF UTILIZATION

Floor Ceiling Wall	80				70			20		30		10		0
	70	50	30	10	70	50	10	50	10	50	10	50	10	0
0	119	119	119	119	116	116	116	111	111	106	106	102	102	100
1	107	102	97	93	105	100	91	95	88	91	86	88	83	81
2	97	88	80	74	94	86	73	82	71	79	70	76	68	66
3	88	76	67	60	85	74	60	71	59	69	57	66	56	54
4	80	67	57	50	77	65	50	63	49	60	48	58	47	45
5	73	59	49	42	70	58	42	56	41	53	41	52	40	38
6	67	52	43	36	65	51	36	50	36	48	35	46	35	33
7	61	47	38	31	60	46	31	45	31	43	31	42	30	28
8	57	43	34	27	55	42	27	41	27	39	27	38	27	25
9	53	39	30	24	51	38	24	37	24	36	24	35	24	22
10	49	36	27	22	48	35	22	34	21	33	21	32	21	19

Product	Loop 1x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
			CCT Color Temperature	4000 K				(CRI)	(R9)	(SDCM)
Version	LR1-14C40	1x4 LED C Lumens CCT 4000 K	4000 K	3808	28.41	134	82.8	6.7	< 2	
Report	FLUXWERX		3500 K	3751	28.41	132	82.8	6.7	< 2	
			3000 K	3694	28.41	130	82.5	4.5	< 2	

CANDLEPOWER DISTRIBUTION							LUMEN SUMMARY				LUMINANCE DATA (CD/M ²)											
Vertical Angle	Horizontal Angle					Zonal Lumens	Zone	Lumens	% Lamp	% Fixture	Vertical Angle	0°			45°			90°				
	0°	22.5°	45°	67.5°	90°							0-30°	0-60°	0-90°	90-180°	0-180°	0°	5°	10°	15°	20°	25°
0°	711	711	711	711	711	711	0-30°	753	N.A.	20	45°	4127	4172	4232								
5°	733	737	738	741	745	72	0-60°	2851	N.A.	75	55°	4039	4128	4160								
15°	831	837	840	845	852	240	0-90°	3808	N.A.	100	65°	3448	3612	3577								
25°	937	945	949	955	961	440	90-180°	0	N.A.	0	75°	3175	3400	3279								
35°	1010	1016	1021	1030	1034	640	Total Luminaire	0-180°	3808	100	85°	4187	5008	4675								
45°	975	979	985	995	1000	757																
55°	774	784	791	793	797	701																
65°	487	509	510	507	505	503																
75°	275	308	294	287	284	313																
85°	122	142	146	139	136	141																
90°																						
95°																						
105°																						
115°																						
125°																						
135°																						
145°																						
155°																						
165°																						
175°																						
180°																						

Integrating Sphere and Photometric results at 3000K, 3500K, 4000K scaled from LR1-14 38W (D) and LR1-22 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	Loop 1x4	Description	Performance Summary		Light (lm)	Energy (W)	Efficacy (lm/W)	Color Accuracy		
			CCT Color Temperature	4000 K				(CRI)	(R9)	(SDCM)
Version	LR1-14D40	1x4 LED D Lumens CCT 4000 K	4000 K	5026	38.59	130.3	82.8	6.7	< 2	
Report	12156787.09A		3500 K	4951	38.59	128.3	82.8	6.7	< 2	
			3000 K	4876	38.23	127.5	82.5	4.5	< 2	

CANDLEPOWER DISTRIBUTION							LUMEN SUMMARY				LUMINANCE DATA (CD/M ²)											
Vertical Angle	Horizontal Angle					Zonal Lumens	Zone	Lumens	% Lamp	% Fixture	Vertical Angle	0°			45°			90°				
	0°	22.5°	45°	67.5°	90°							0-30°	0-60°	0-90°	90-180°	0-180°	0°	5°	10°	15°	20°	25°
0°	939	939	939	939	939	939	0-30°	994	N.A.	20	45°	5448	5506	5586								
5°	967	972	974	978	983	96	0-60°	3763	N.A.	75	55°	5330	5449	5490								
15°	1096	1104	1109	1115	1124	317	0-90°	5025	N.A.	100	65°	4551	4768	4721								
25°	1236	1247	1253	1261	1268	581	90-180°	0	N.A.	0	75°	4191	4488	4329								
35°	1333	1341	1348	1360	1365	844	Total Luminaire	0-180°	5025	100	85°	5527	6609	6170								
45°	1287	1292	1300	1313	1319	1000																
55°	1021	1035	1044	1047	1052	925																
65°	642	671	673	669	666	664																
75°	362	407	388	379	374	413																
85°	161	188	192	184	180	186																
90°																						
95°																						
105°																						
115°																						
125°																						
135°																						
145°																						
155°																						
165°																						
175°																						
180°																						

LED lighting facts

Light Output (Lumens) **5026**
 Watts **38.59**
 Lumens per Watt (Efficacy) **130.24**

Color Accuracy
 Color Rendering Index (CRI) **82**

Light Color
 Correlated Color Temperature (CCT) **4000 (Bright White)**

Warm White 3000K Bright White 4000K Daylight 5000K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: XAAK-CJ204 (2/28/2018)
 Model Number: LR1-14D40-12156787.09A
 Type: Luminaire - TuffGrid Ceiling