

Product Information

Project Name	Type
Catalog Number	Date

SPECIFICATIONS

Features

- Retrofits prismatic & parabolic troffers with fixture depth greater than 3-1/8".
- Fully integrated reversible hinged optical assembly allows for rapid troffer conversion.
- Upgrade to modern full distribution architectural aesthetics providing controlled soft, uniform light distribution without pixilation.
- Choice of four lumen packages and three dimming options available.
- Long-life, 60,000 hour LEDs at L80 (80% lumen maintenance) reduces life cycle maintenance costs.
- Up to 101 lumens per watt.
- Low W/ft2 to meet the most restrictive lighting power density codes.
- Reduces job site waste by reusing existing fixture housing.
- Color Rendering Index (CRI) > 80.
- Available in both 2x4 and 2x2 configurations.
- Made In USA. Meets ARRA & Buy American requirements.

Construction

- Conversion kit includes pre-wired LED door frame assembly, mounting rails and screws.
- Luminaire retrofit is die formed, pre-painted white aluminum.
- Acrylic lens features linear prisms sculpted into the surface for a distinct ribbed texture.
- Hinges from either side for easy access to LED module and electrical components
- Weight: 2x4 - 10 lbs. & 2x2 - 7 lbs.

Electrical

- Input Voltage Range: 100-277 VAC Nom. (90-305 V Min/Max)
- Frequency: 50/60 Hz Nom. (47-63 Hz Min/Max)
- Active Power Factor Correction
- Power Factor: >0.90 @ full load, 100V through 277V
- Inrush Current: 70 Amps max @ 220 VAC, cold start 25°C
- Harmonic Distortion: THD < 20% @ full load
- Protection: Over-Voltage, Over-Temperature (110°) & Short Circuit with self-recovery
- Compliant to FCC Part 15 requirements for EM/RFI emissions
- NEC/CEC compliant ballast disconnect is standard
- Standard surge protection: ANSI Std. C62.41-2002 Category A (2.5 kV)
- Optional surge protection: ANSI Std. C62.41-2002 Category C High (10kA and 10kV)
- Optional emergency battery pack



Certifications

- UL listed 1598, 1598C and cUL for Canada.
- Luminaires bear appropriate listing labels.
- Emergency-equipped fixtures labeled UL 924.
- Adheres to LM79, LM80 and TM21 industry standards.
- Maintains insulation contact (IC) rating of existing fixture.
- DesignLights Consortium® (DLC) qualified.
- Please refer to the DLC website for specific product qualifications at www.designlights.org.

Application

- Ideal for Commercial Offices, Educational Facilities, Retail, and Health Care Facilities.
- Suitable for use with most wired or wireless lighting control systems.
- Suitable for Dry or Damp Locations.

Warranty

- Five-year warranty. (Terms and Conditions Apply)

CERTIFICATION



ORDERING INFORMATION

EXAMPLE TKD-2X4-LW-F-UL-40K-FRL

TKD		SIZE		LUMEN OUTPUT		DRIVER OUTPUT		DRIVER VOLTAGE		COLOR TEMP		LENS		OTHER	
TKD	Full Distribution LED Conversion Kit	2x2	2x2 Nominal	XL	Extra Low	F	Fixed	UL	Universal 120-277 Volt	35K	3500	FRL	Frosted Ribbed Lens	EB	Emergency Battery Backup
		2x4	2x4 Nominal	LW	Low	DM	0-10v Dimming ¹			40K	4000			JP	Job Pack
				ML	Medium	BL	Bi-Level ¹			50K	5000			LSP	Lighting Surge Protector
				HL	High										

¹Must be used in conjunction with lighting controls. Contact factory for assistance.

*U.S. & Canada Patents Pending.

PHOTOMETRIC DATA

Test: L0813316R01
Test Date: 08/14/13

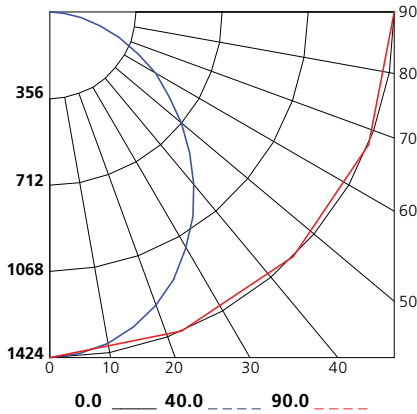
PHOTOMETRIC DATA: TKD-2X4-LW-F-UL-40K-FRL

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified lab.

LUMINAIRE DATA

Luminaire	TKD-2X4-LW-F-UL-40K-FRL, LED Troffer Conversion Kit
Ballast	D255CQ42UNV-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4019
Watts	41
Mounting	Recessed
Shielding Angle	N/A
Spacing Criterion	0° = 1.20 90° = 1.20
Luminous Opening in feet	Length: 3.71 Width: 0.88 Height: 0.00

INDOOR CANDELA PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	510	N.A.	12
0-30	1067	N.A.	26
0-40	1724	N.A.	42
0-60	3021	N.A.	75
0-80	3887	N.A.	96
0-90	4019	N.A.	100

COEFFICIENTS OF UTILIZATION (%)

RC	80					70					50					0						
	RW	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	
0	119	119	119	119	119	116	116	116	116	116	111	111	111	111	111	111	111	111	111	111	111	100
1	108	103	98	94	94	105	100	96	92	92	96	93	89	82	82	82	82	82	82	82	82	82
2	98	89	82	76	76	95	87	80	75	75	83	78	73	67	67	67	67	67	67	67	67	67
3	89	78	69	62	62	86	76	68	62	62	73	66	61	56	56	56	56	56	56	56	56	56
4	81	69	60	53	53	79	67	59	52	52	65	58	52	48	48	48	48	48	48	48	48	48
5	75	61	52	45	45	73	60	52	45	45	58	50	45	41	41	41	41	41	41	41	41	41
6	69	55	46	40	40	67	54	46	39	39	53	45	39	36	36	36	36	36	36	36	36	36
7	64	50	41	35	35	62	49	41	35	35	48	40	35	32	32	32	32	32	32	32	32	32
8	60	46	37	31	31	58	45	37	31	31	44	36	31	29	29	29	29	29	29	29	29	29
9	56	42	34	28	28	54	41	33	28	28	40	33	28	26	26	26	26	26	26	26	26	26

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

AVG. LUMINANCE (Candela/Sq. M.)

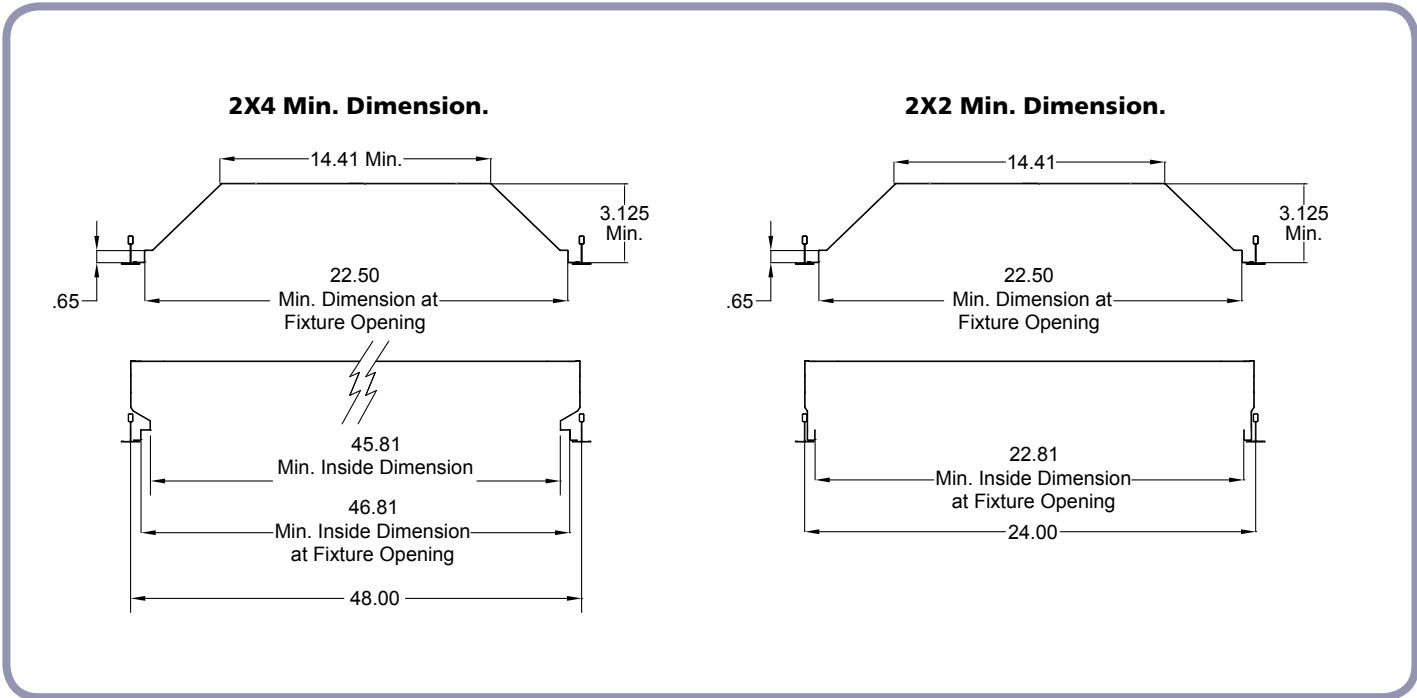
Average Lumina nce Angle	0.0					22.5					45.0					67.5					90.0				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100				
0	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424	1424				
5	1412	1413	1415	1413	1411	1412	1413	1415	1413	1411	1412	1413	1415	1413	1411	1412	1413	1415	1413	1411	1412				
10	1386	1385	1385	1380	1377	1386	1385	1385	1380	1377	1386	1385	1385	1380	1377	1386	1385	1385	1380	1377	1386				
15	1343	1342	1339	1332	1328	1343	1342	1339	1332	1328	1343	1342	1339	1332	1328	1343	1342	1339	1332	1328	1343				
20	1285	1282	1279	1271	1269	1285	1282	1279	1271	1269	1285	1282	1279	1271	1269	1285	1282	1279	1271	1269	1285				
25	1212	1210	1209	1205	1203	1212	1210	1209	1205	1203	1212	1210	1209	1205	1203	1212	1210	1209	1205	1203	1212				
30	1126	1128	1132	1134	1134	1126	1128	1132	1134	1134	1126	1128	1132	1134	1134	1126	1128	1132	1134	1134	1126				
35	1031	1037	1051	1061	1064	1031	1037	1051	1061	1064	1031	1037	1051	1061	1064	1031	1037	1051	1061	1064	1031				
40	927	940	966	986	992	927	940	966	986	992	927	940	966	986	992	927	940	966	986	992	927				
45	820	839	878	909	920	820	839	878	909	920	820	839	878	909	920	820	839	878	909	920	820				
50	711	736	788	831	847	711	736	788	831	847	711	736	788	831	847	711	736	788	831	847	711				
55	603	633	699	755	775	603	633	699	755	775	603	633	699	755	775	603	633	699	755	775	603				
60	506	538	615	682	707	506	538	615	682	707	506	538	615	682	707	506	538	615	682	707	506				
65	406	436	528	604	630	406	436	528	604	630	406	436	528	604	630	406	436	528	604	630	406				
70	307	342	437	508	535	307	342	437	508	535	307	342	437	508	535	307	342	437	508	535	307				
75	217	252	338	408	439	217	252	338	408	439	217	252	338	408	439	217	252	338	408	439	217				
80	133	166	235	304	332	133	166	235	304	332	133	166	235	304	332	133	166	235	304	332	133				
85	63	85	123	170	192	63	85	123	170	192	63	85	123	170	192	63	85	123	170	192	63				

LUMEN PACKAGE OPTIONS

Proposed System	Light Source Quantity & Type	CRI	3500K DETAILS					4000K DETAILS				
			CCT	Lumens Per Fixture	Input Watts	Lumens Per Watt	CCT	Lumens Per Fixture	Input Watts	Lumens Per Watt		
TKD-2X2-XL	1 TKD XL Engine	>80	3500K	2,091	21	99	4000K	2,082	21	98		
TKD-2X2-LW	1 TKD LW Engine	>80	3500K	2,544	27	94	4000K	2,589	28	91		
TKD-2X2-ML	1 TKD ML Engine	>80	3500K	3,237	36	90	4000K	3,421	36	95		
TKD-2X2-HL	1 TKD HL Engine	>80	3500K	4,632	52	89	4000K	4,851	52	93		
TKD-2X4-XL	1 TKD XL Engine	>80	3500K	3,076	30	101	4000K	3,137	32	99		
TKD-2X4-LW	1 TKD LW Engine	>80	3500K	3,989	41	98	4000K	4,020	41	97		
TKD-2X4-ML	1 TKD ML Engine	>80	3500K	4,702	51	93	4000K	4,747	51	94		
TKD-2X4-HL	1 TKD HL Engine	>80	3500K	6,573	72	91	4000K	6,863	72	95		

*Lumen values shown are initial delivered lumens tested at 25°C per IES LM-79 standards.

MINIMUM DIMENSIONS OF EXISTING FIXTURE OPENING



FIT AND FUNCTION

Minimum dimensional requirements are above but Precision-Paragon[P2] recommends a trial installation prior to ordering project quantities. TKD Conversion Kits are designed to fit into most parabolic and lensed-recessed troffers mounted in T-grid installation.