

Project:	Catalog#:	Type:
Notes:		

**Product Description**

The CRUo-DFX series provides a UVA source from an overlapping door luminaire to provide a simple and effective way of adding surface disinfection to clean rooms. It also has advanced clean room features to provide uncompromising illumination for a wide variety of applications. It is certified dust-tight and water resistant to IP65 for frequent rigorous cleaning practices. The mousing is universal for 15/16", 1.0" and 1.5" T-bar grid and flanged installations. The CRUo-DFX featuring Leviton's WavePort™ technology harnesses the power of 365DisInFx to kill bacteria while delivering superior white light.

**Feature Options**

- 2x2 Standard Size for Grid Ceilings
- Red and Amber LEDs
- BIOS® SkyBlue®
- High CRI (80+ and 90+)



**Housing**

Precision formed, seam welded, one-piece, hole-free construction. 20 gauge cold rolled steel standard. Rigid 18 gauge flange with welded and rounded corners for safety. Stainless Steel and Aluminum are available options. 5 Stage pretreatment and gloss white polyester powder coated after fabrication. ASTM B117 1000hr Salt Spray tested.

**Door Frame**

Overlapping one-piece 18 gauge cold rolled steel standard, optional types 304 or 316 stainless steel or aluminum. welded corners blended smooth. Countersunk flat head, stainless steel, captive fasteners with integral silicone o-rings. Door frame is removable, reversible, and hinged by stainless steel aircraft cables. Highly resilient and chemical resistant CertaSeal microcellular closed-cell gasket seals door frame to the housing and/or ceiling.

**Lens & Lens Retention**

Standard lens; Impact resistant 0.125" thick diffuse symmetric acrylic lens (DSA). Smooth external surface for easy cleaning. Sealed to doorframe with RTV silicone sealant and retained by continuous perimeter brackets. UVA transmissive and resistant materials used in DFX aperture. See order code for other options.

**Gasket Systems**

Triple gasketed: Lens: RTV 100% pure silicone seals lens to door. Door: Highly resilient and chemical resistant CertaSeal microcellular closed-cell gasket seals door frame to the housing. Housing: Closed cell neoprene gasket provided to seal flange to ceiling. Door screws: Silicone o-rings with special sealing flat-head screws.

**LED**

LED board modules are high efficiency and closely regulated to maintain CRI, color consistency, lumen performance, and efficacy. Select from 3000K, 3500K, 4000K, and 5000K color temperatures with a color consistency of 3 SDCM, standard 80 CRI, optional 90 CRI. Tunable White CCT range is 2700-6500K. Lifetime L90 is greater than 60,000 hrs. Modules are field replaceable and commercially available. Optional amber and red LEDs arrays available alone or in combination with white LEDs. Tunable White and Bios SkyBlue® options are also available. See specific CRUo-Red & Amber spec sheet [here](#).

**Electrical**

The standard electronic driver is constant current, programmable and dimmable to 1% using a 0-10V protocol. High efficiency (>85%) and low THD (<10%). Certified to FCC Part 15, Class A. 120-277Vac or 347Vac, 50/60hz. See "Options" for Lutron™ or DALI driver choices. Internal Emergency Drivers are serviceable from the room side unless otherwise noted. Each LED color is separately circuited.

**Finish**

5 Stage pretreatment and gloss white polyester powder coated after fabrication. ASTM B117 1000hr Salt Spray tested. Stainless Steel is available with a choice of brushed #4 polished finish or gloss white polyester powder coated.

**Installation**

Flange installation is supported by swing style mounting brackets. Bracket vertical range is 1.3-2.9 inches. Grid installation suitable for 1" and 1.5" T-Bar NEMA LE4 Type G ceilings. See ordering key for use with 2" T-Bar Grid systems. (option C57) Consult factory for compatibility with non-standard grid systems). Ambient operating temperature: -4°F (-20°C) to 104°F (40°C).

**Safety**

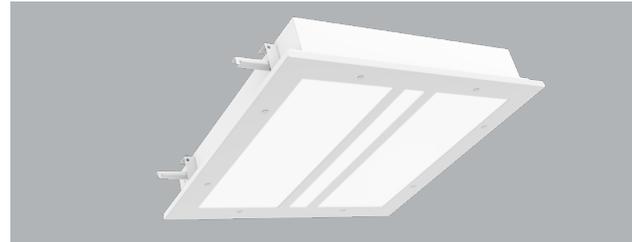
Safety: 24-hour dosage is designed to operate below human health exposure limits per IEC 62471 Photobiological Safety for Lamps and Lamp Systems standard and American Conference of Governmental Industrial Hygienists (ACGIH®) TLVs® guidelines. This fixture has assigned to Risk Group 0 (Zero) per this standard. \*Risk Group 0 (Zero) is the lowest test group and requires no special warnings or cautions. See the Application Guide for proper installation and use. UVA emitted from this product. Install in compliance with manufacturer instructions to prevent risk of personal injury from UV radiation.

**Listings, Certifications and Ratings**

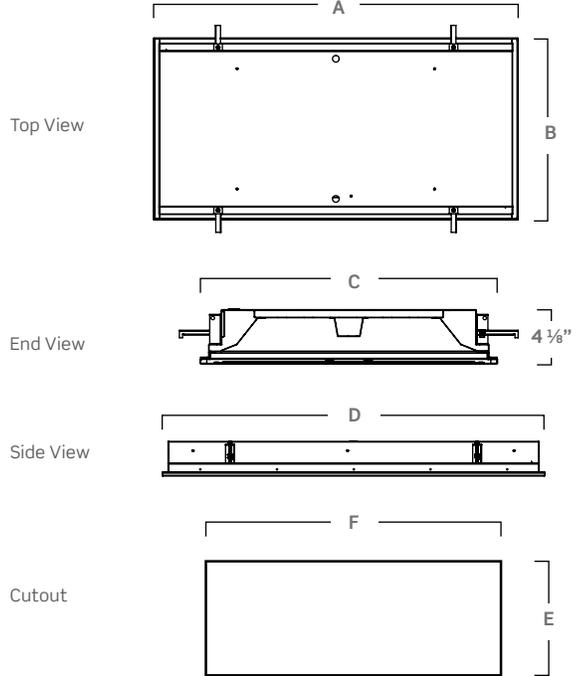
ETL listed for wet locations under covered ceiling (CAN & USA, ANSI/UL1598 & UL8750). Recessed Type IC for insulated ceilings. NSF2 for Splash zone and non-food zones (See option X5 for Food Zone certification). IEC60529 IP65 (Certified dust-tight and resistant to jets of water). Cleanroom classified ISO3-8. EU GMP Grade A, Suitable for Biosafety BSL1-2. (See overlapping door for BSL1-3) Compliant with CCEA requirements. Rated for 2500psi washdown conditions. ETL Listed to UL8802 Germicidal Systems, IEC60598 IP65 Certified. EPA #xxxx

**Approvals**

- Certified for safety by ETL and is suitable for continuous, 24-hour use.



**Dimensions**



	Dimensions (inch) & Weights						Weight
	A	B	C	D	E	F	
2x2	23.75	23.75	22.69	22.88	22.69	22.88	29 lbs.
2x4	47.75	23.75	22.69	46.75	22.69	46.75	50 lbs.

Consult installation guide for exact dimensions.

\* 365DisInFx™ is a trademark of Current Lighting Solutions, LLC.

**Warranty**

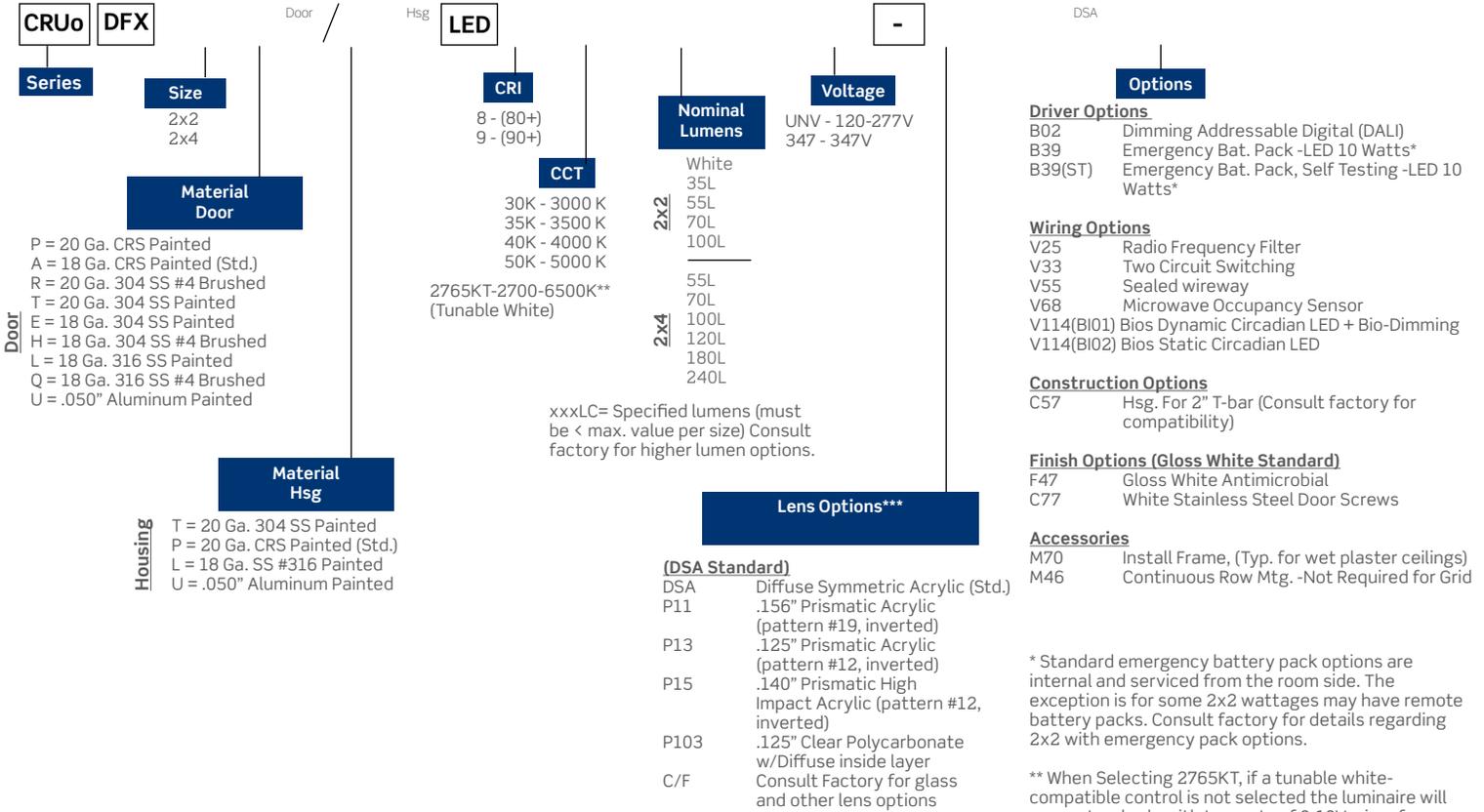
5 year limited warranty. For complete warranty,



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**Order Key**

**EXAMPLE: CRUo-DFX2x4A/PLED840K100LUNV-DSA**



Performance Data					
White LED Performance*					
Size	Nominal Lumens Order Code	Lumens (4000K)	Watts	Efficacy	UVA Watts
2x2	35L	3527	27.5	128	14
	55L	5544	45	123	14
	70L	7083	59.2	120	14
	100L	10056	84.3	119	14
2x4	55L	5589	43.1	130	29
	70L	7055	55	128	29
	100L	10056	80.6	125	29
	120L	12012	98.3	122	29
	180L	18076	149.4	121	29

\* Lumen values are based on 4000K, 80 CRI performance. See Lumen Multipliers below for other CCT or CRI performance data.

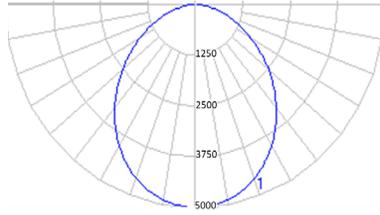
Standard White										
CCT	Lumen Factor	80 CRI				90 CRI				
		CRI	R9	Rf	Rg	Lumen Factor	CRI	R9	Rf	Rg
3000	0.95	80	-	-	-	0.77	90	-	-	-
3500	0.97		12	85	97	0.80		62	91	100
4000	1.00		10	84	97	0.82		68	91	101
5000	1.01		10	84	97	0.84		65	91	98

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**Photometric Performance**

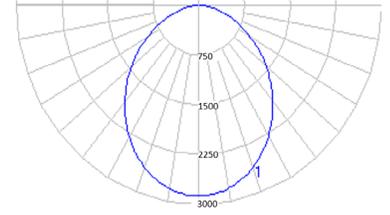
**CRUo-DFX-2X4-LED840K120LUNV-DSA**

Characteristics	
Luminaire Lumens	12012
Efficacy Rating	121
Total Luminaire Watts	99
Spacing Criterion (0-180)	1.2
Spacing Criterion (90-270)	1.2
Spacing Criterion (Diagonal)	1.3



**CRUo-DFX-2X2-LED840K070LUNV-DSA**

Characteristics	
Luminaire Lumens	7083
Efficacy Rating	120
Total Luminaire Watts	59
Spacing Criterion (0-180)	1.2
Spacing Criterion (90-270)	1.2
Spacing Criterion (Diagonal)	1.3



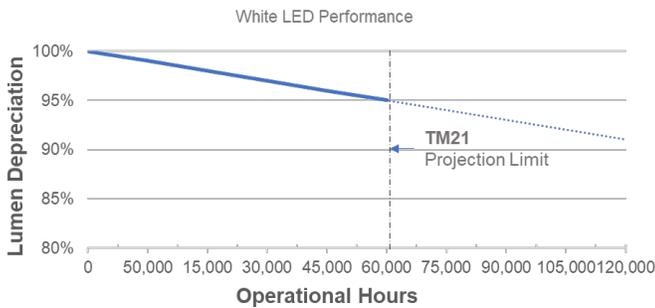
Luminance Data (cd/sq.m)				
Degrees	0-Deg	45-Deg	90-Deg	
xx	xxxx	xxxx	xxxx	
xx	5169	5077	5146	
65	xx51	4444	4486	
75	3623	3414	3212	
85	2875	2093	725	

Zonal Lumens	
Zone	Lumens
0-30	xxxx
x-xx	xxxx
x-xx	9893
0-90	12011
90-180	0

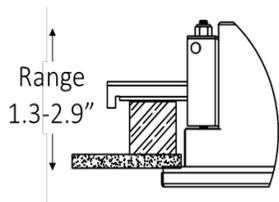
Luminance Data (cd/sq.m)				
Degrees	0-Deg	45-Deg	90-Deg	
xx	xxxx	xxxx	xxxx	
xx	6208	6102	6158	
65	5482	5365	5379	
75	4379	4156	3869	
85	3498	2588	869	

Zonal Lumens	
Zone	Lumens
0-30	2131.89
0-40	3432.31
0-60	5838.59
0-90	7083.29
90-180	0

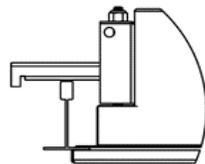
**Lumen Maintenance**



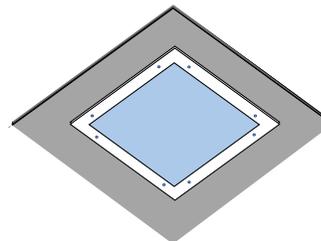
**Installation Details**



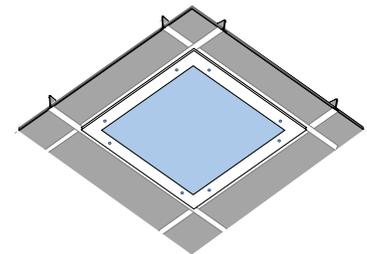
Overlapping Door Flanged (Framing by others)



Overlapping Door in Grid Ceiling



Overlapping Door Flanged



Overlapping Door in Grid Ceiling