

Toggled iQ®

LED Volumetric CCT Troffer



Toggled iQ® LED Volumetric CCT Troffers offer a high-efficiency alternative to T5, T8 and T12 linear fluorescent systems. They provide long life with consistent color and superior lumen maintenance. Designed to mount in a variety of grid ceilings, the rugged, cold-rolled steel housing is post-painted with a highly diffused white finish. The low-glare acrylic diffuser provides wide distribution and the sloped reflector softens the contrast between the luminaire and the ceiling. The LED Volumetric CCT Troffers offer a cost-effective solution to maximize savings and take advantage of potential utility rebates without sacrificing performance.

System Compatibility

- Completely compatible with the Toggled iQ wireless networked lighting controls platform.
- Toggled iQ is a wireless networked lighting controls system that leverages the power of IoT to create simple and customizable lighting controls solutions designed for any size building/room space and configuration. This fixture seamlessly connects and communicates with other Toggled iQ products to ensure a quick and efficient installation and commissioning process.

Features

- Wireless Dimming / Color Control (CCT) Uses up to 61% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency and CRI
- Mercury-free
- Fits standard 1" and 9/16" T-bar grid ceilings
- Acrylic diffuser with sloped housing design
- Slim, low-profile design
- 7 year limited warranty
- Listings: UL/cUL Listed, IC Rated, RoHS Compliant, DLC 5.1 Listed
- Lumen maintenance: L90> 36,000 hours

Applications

High efficiency alternatives to T5, T8 and T12 linear fluorescent troffers. Intelligent high performance LED light engines and drivers deliver long life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail locations, hospitals, and other T-grid ceilings.

Construction

Constructed of rugged cold-rolled steel, post-painted with a highly diffused white finish, and an acrylic diffuser. The housing is designed to mount in a variety of grid ceiling types.

Electrical

All electrical components are cULus listed. High efficiency drivers provide consistent power to ensure even lighting from the long life LEDs. Each driver is wattage selectable and paired with a high quality LED light engine to deliver long life and high quality light. Full range 0-10V dimming is optional.

Optics

The acrylic diffuser conceals the LEDs while providing a highly diffused, low-glare light. The smooth white reflector integrates into the diffuser, creating soft illumination and distributing the light evenly in a wide pattern. The sloped design also softens the contrast between the luminaire and the ceiling.

System Capabilities

(Pairing with Toggled iQ Sensor(s) expands capabilities)

- **Occupancy/Vacancy**
Enables connected devices the ability to turn on/off when motion is detected.
- **Daylight Harvesting**
Connected, dimmable devices become capable of adjusting their brightness to compensate for natural light level changes throughout the day.

(Pairing with Toggled iQ Switch(es) expands capabilities)

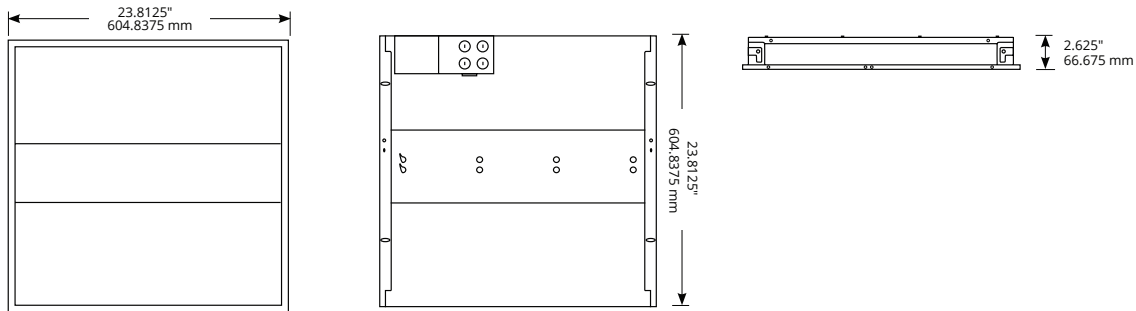
- **Scheduling**
Enables customized automation of 7-day schedules.

(Pairing with the free Toggled iQ App expands capabilities)

- **Scenes**
Create customized lighting scenes with brightness and color settings changed for individual or groups of fixture controllers.

Toggled iQ LED Volumetric CCT Troffer (continued)

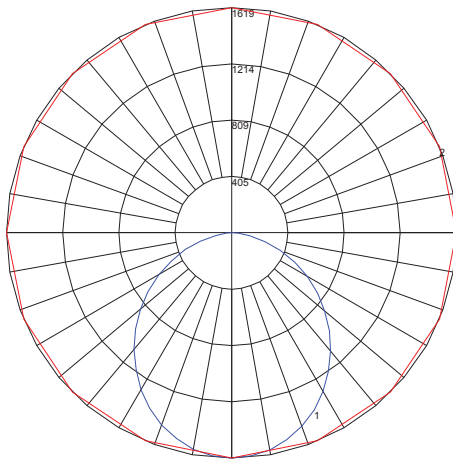
Dimensions & Mounting Data (2 x 2)



Photometrics (2 x 2)

Based on photometric data for Model # FT200V0-U38C3-FC

Polar Graph



Maximum Candela = 1671.01 Located At Horizontal Angle = 10, Vertical Angle = 5
 # 1 - Vertical Plane Through Horizontal Angles (0 - 190) (Through Max. Cd.)
 # 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3788	4043	4385
55	3530	3930	4460
65	3190	3840	4691
75	2600	3900	5273
85	1462	3433	3393

Specifications and dimensions subject to change without notice.

Spacing Criterion (2 x 2)

(0-180): 1.24, (90-270): 1.32

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50				30				10				0	
	RW	70	50	30	10	70	50	30	10	111	111	111	50	30	10	106	106	106	102	102	102	100
0	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	108	103	99	94	94	105	101	97	93	96	93	90	92	90	87	89	87	85	82	82	82	82
2	98	89	82	76	76	95	87	81	75	84	78	73	80	76	72	77	74	70	68	68	68	68
3	89	78	70	63	63	86	76	69	62	73	67	61	71	65	60	68	63	59	57	57	57	57
4	81	69	60	53	53	79	68	59	53	65	58	52	63	56	51	61	55	50	48	48	48	48
5	75	62	52	46	46	73	60	52	45	58	51	45	56	49	44	54	48	44	42	42	42	42
6	69	55	46	40	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36	36	36	36
7	64	50	41	35	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32	32	32	32
8	59	46	37	31	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28	28	28	28
9	56	42	34	28	28	54	41	33	28	40	33	28	39	32	28	38	32	27	26	26	26	26
10	52	39	31	25	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23	23	23	23

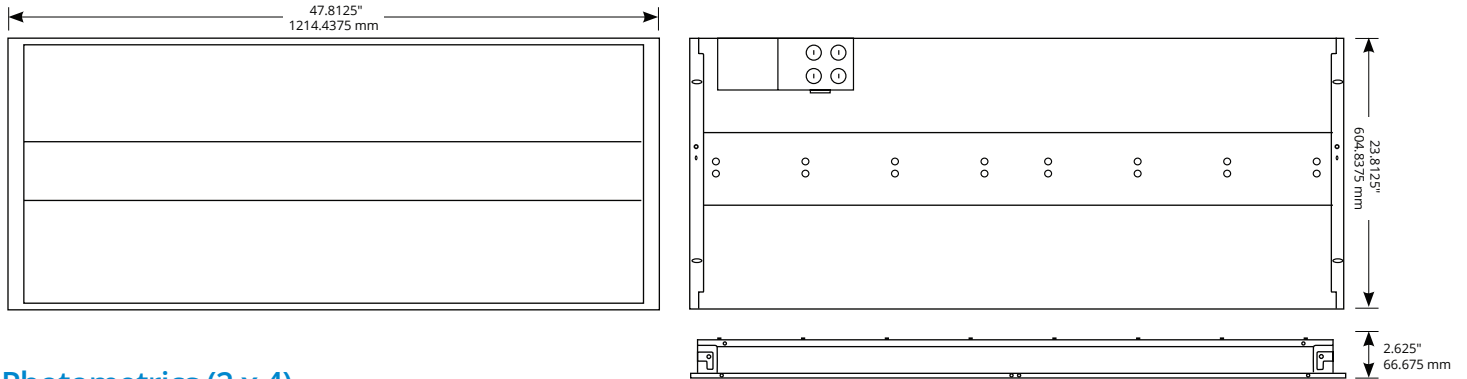
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	590.75	N.A.	12.30
0-30	1252.75	N.A.	26.10
0-40	2050.35	N.A.	42.80
0-60	3647.2	N.A.	76.00
0-80	4670.78	N.A.	97.40
0-90	4793.14	N.A.	99.90
10-90	4640.08	N.A.	96.70
20-40	1459.6	N.A.	30.40
20-50	2290.86	N.A.	47.80
40-70	2214.67	N.A.	46.20
60-80	1023.58	N.A.	21.30
70-80	405.76	N.A.	8.50
80-90	122.36	N.A.	2.60
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.73	N.A.	0.00
90-180	2.82	N.A.	0.10
110-180	2.82	N.A.	0.10
0-180	4795.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Toggled iQ LED Volumetric CCT Troffer (continued)

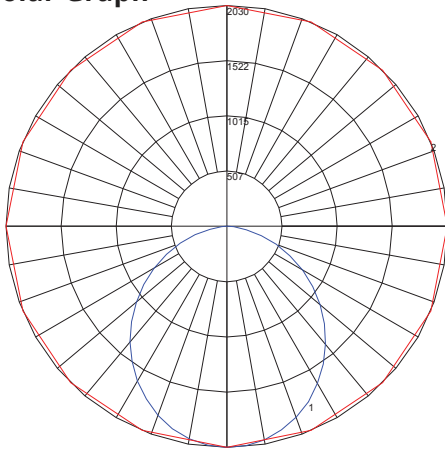
Dimensions & Mounting Data (2 x 4)



Photometrics (2 x 4)

Based on photometric data for Model # FT400V0-U46C3-FC

Polar Graph



Maximum Candela = 1671.01 Located At Horizontal Angle = 10, Vertical Angle = 5
 # 1 - Vertical Plane Through Horizontal Angles (0 - 190) (Through Max. Cd.)
 # 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2411	2600	2825
55	2261	2257	2917
65	2048	2582	3137
75	1703	2774	3595
85	987	2767	2730

Specifications and dimensions subject to change without notice.

Spacing Criterion (2 x 4)

(0-180): 1.24, (90-270): 1.32

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	67	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	741.86	N.A.	12.10
0-30	1575.01	N.A.	25.80
0-40	2581.26	N.A.	42.20
0-60	4607.58	N.A.	75.40
0-80	5937.37	N.A.	97.10
0-90	6112.53	N.A.	100.00
10-90	5920.5	N.A.	96.80
20-40	1839.41	N.A.	30.10
20-50	2891.24	N.A.	47.30
40-70	2821.12	N.A.	46.10
60-80	1329.79	N.A.	21.70
70-80	534.99	N.A.	8.70
80-90	175.16	N.A.	2.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	1.65	N.A.	0.00
110-180	1.65	N.A.	0.00
0-180	6114.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Toggled iQ LED Volumetric CCT Troffer (continued)

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50-60 Hz
Wattage (W)	
2 x 2	38W
2 x 4	46W
Lumens (L)	
2 x 2	5000L
2 x 4	6000L
Lumens Per Watt (LPW)	>130 LPW
Rated Life	50,000 hours
Minimum Starting Temperature	-20°C
Maximum Operating Temperature	40°C
CRI	>80
Power Factor	>90%
THD	<20%
Ratings	UL/cUL damp location rated, IC rated, IP20, DLC 5.1 Listed
Controls	0-10V dimming (standard)



The Toggled iQ system is listed on the DesignLights Consortium-register mark- (DLC) Qualified Products List (QPLs) and qualifies for most applicable utility rebates requiring Title 24 and ASHRAE compliance.

Disclaimer: Toggled reserves the right to make changes to specific items and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

Ordering Information

Fixture	Type	Length	Style	Lens	Wire Termination	Line Voltage	Wattage	Color Temperature	Battery	Option	
F	T		0	0	V	0	U		C3		FC
F = Fixture	T = Troffer	2 = 2 feet 4 = 4 feet		P = Panel V = Volumetric	0 = None	U = Universal (120-277VAC)	38 = 38W 46 = 46W	C3 = Selectable (3500/4100/5000K)	B = Battery Blank = No Battery	FC = Fixture Controller	