

Toggled iQ®

Integrated LED Flat Panel



Toggled iQ® Integrated LED Flat Panel luminaires feature back-lit technology with a robust construction that still offers a slim, low-profile design with beautiful full panel diffusion and superior uniformity. These energy-efficient flat panels offer a cost-effective solution to maximize energy savings and take advantage of potential utility rebates where applicable.

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)
- Provides energy savings over fluorescent alternatives and potential rebate eligibility
- Long 50,000 hour rated life significantly reduces maintenance labor and material costs
- Excellent color consistency and CRI enhance color of focal point while maintaining uniformity throughout lighting installation
- Mercury free construction is great for all environments
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes back-lit technology for full diffusion with excellent uniformity
- Slim, low-profile design and lightweight for easy handling
- Battery Backup is Title 20 Compliant
- Listings: UL/cUL Listed, IC Rated, RoHS Compliant
- Luman maintenance: L70 > 54,000 hours
- Five year limited warranty against defects in manufacturing

Applications

Cost-effective, high-efficiency alternatives to traditional T5, T8 and T12 linear fluorescent troffers. Featuring a slim, low-profile design, Toggled iQ LED Flat Panel with Selectable CCT luminaires use back-lit technology to deliver full panel diffusion and superior uniformity that meets or exceeds the output from edge-lit panels. Applications include offices, schools, retail locations, healthcare, hospitality and other T-grid and commercial ceilings.

Construction

- Rectangular white frame
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- LED driver with integrated junction box
- System rated for long 50,000 hour life

Optics

- Back-lit technology provides even, uniform lighting
- 120° beam angle
- Frosted diffuser for reduced glare and aesthetic appeal
- Meets or exceeds the look and performance of edge-lit panels

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 Integrated LED Flat Panel (continued)

Ordering Information

Fixture	Type	Length	Style	Lens	Wire Termination	Line Voltage	Wattage	Color Temperature	Battery	Option
F	T		0	0	P	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

2 ft Accessories

Item Number	Description
YHANGER6PK	Y Fit Cable Hanger 6-Pack (Hangs 3 Units)
DTSK2	Surface Mount Kit for 2 x 2 Panels
DTFLK2	Recess Mount Flange Kit for 2 x 2 Panels
DRVEXTCABLE	3-Foot Driver Extension Cable

4 ft Accessories

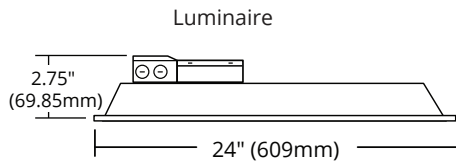
Item Number	Description
YHANGER6PK	Y Fit Cable Hanger 6-Pack (Hangs 3 Units)
DTSK4	Surface Mount Kit for 2 x 4 Panels
DTFLK4	Recess Mount Flange Kit for 2 x 4 Panels
DRVEXTCABLE	3-Foot Driver Extension Cable

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50-60 Hz
Wattage (W)	
2 x 2	(Selectable) 23W/29W/38W
2 x 4	(Selectable) 29W/39W/46W
Lumens (L)	
2 x 2	(Selectable) 2,600L/3,200L/4,200L
2 x 4	(Selectable) 3,300L/4,400L/5,100L
Lumens Per Watt (LPW)	>110 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
Controls	0-10V dimming (standard)

Toggled iQ Integrated LED Flat Panel (continued)

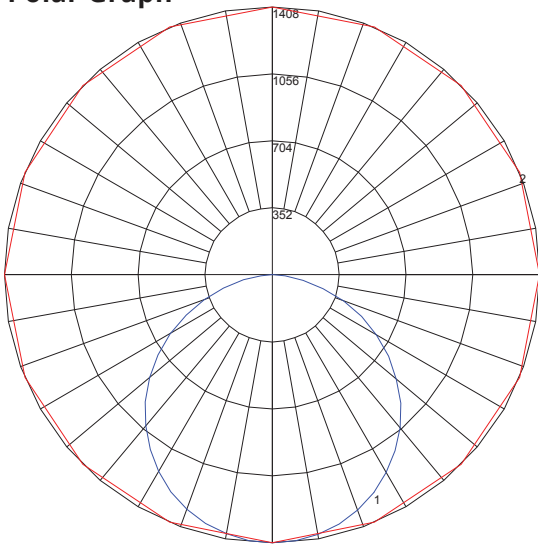
Dimensions & Mounting Data (2 x 2)



Photometrics (2 x 2)

Based on photometric data for
Model # FT200P0-U38C3-FC

Polar Graph



Maximum Candela = 1407.6 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3631	3602	3585
55	3506	3474	3437
65	3292	3239	3179
75	2892	2795	2680
85	2165	1983	1746

Spacing Criterion (0-180): 1.28

Spacing Criterion (90-270): 1.28

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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	26	24

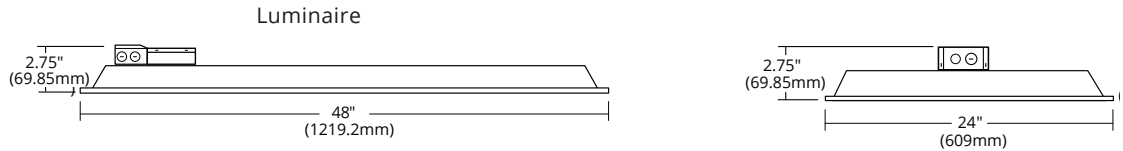
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	515.20	N.A.	12.70
0-30	1095.31	N.A.	27.10
0-40	1796.69	N.A.	44.40
0-60	3184.62	N.A.	78.70
0-80	3967.55	N.A.	98.10
0-90	4044.17	N.A.	100.00
10-90	3910.96	N.A.	96.70
20-40	1281.49	N.A.	31.70
20-50	2010.58	N.A.	49.70
40-70	1887.56	N.A.	46.70
60-80	782.93	N.A.	19.40
70-80	283.30	N.A.	7.00
80-90	76.63	N.A.	1.90
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	0.01	N.A.	0.00
90-180	0.76	N.A.	0.00
110-180	0.76	N.A.	0.00
0-180	4044.93	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Toggled iQ Integrated LED Flat Panel (continued)

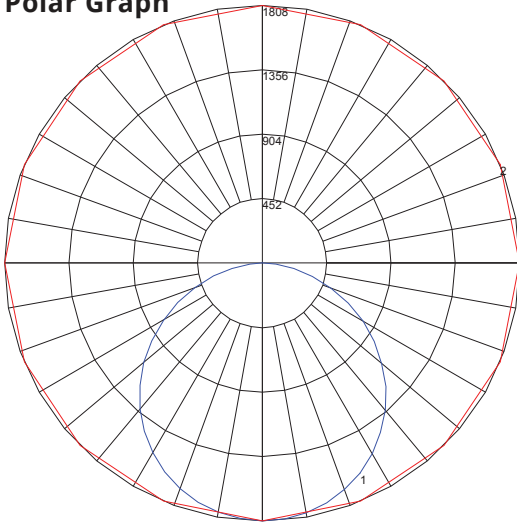
Dimensions & Mounting Data (2 x 4)



Photometrics (2 x 4)

Based on photometric data for Model # FT400P0-U46C3-FC

Polar Graph



Maximum Candela = 1808.2 Located At Horizontal Angle = 0, Vertical Angle = 0
 # 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
 # 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2333	2317	2318
55	2254	2237	2229
65	2125	2092	2083
75	1904	1866	1822
85	1499	1470	1394

Spacing Criterion (0-180): 1.28

Spacing Criterion (90-270): 1.28

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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	85	83	83	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69	64	60	58
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	55	52	50
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50	47	44	43
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	40	37	37
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	34	31	31
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	30	27	29
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29	26	23	26
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26	23	20	24
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	21	18	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	661.93	N.A.	12.70
0-30	1407.56	N.A.	26.90
0-40	2309.2	N.A.	44.20
0-60	4094.49	N.A.	78.40
0-80	5115.44	N.A.	97.90
0-90	5222.48	N.A.	100.00
10-90	5051.35	N.A.	96.70
20-40	1647.27	N.A.	31.50
20-50	2584.72	N.A.	49.50
40-70	2431.84	N.A.	46.60
60-80	1020.95	N.A.	19.50
70-80	374.40	N.A.	7.20
80-90	107.04	N.A.	2.00
90-110	0.62	N.A.	0.00
90-120	0.62	N.A.	0.00
90-130	0.62	N.A.	0.00
90-150	0.67	N.A.	0.00
90-180	1.55	N.A.	0.00
110-180	0.94	N.A.	0.00
0-180	5224.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%



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.

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