

Citadel Series LED



PROJECT NAME	
CATALOG #	
NOTES	

FEATURES

- > Driver temperature up to 167°F (75°C)
- > UL Listed Drivers with less than 1% failure rate
- > Patent-pending remote driver minimizes fixture operating temperature without re-gridding required
- > Patent-pending design extends fixture life by helping prevent build-up of insulating dust and debris and eliminating illumination dead spots
- > Includes 10 Year Module Warranty - Full light engine or plug & play driver module replacement, rather than parts
- > Fail off 15KA transient voltage surge suppressor (TVSS) protects fixture against failure due to power supply surges
- > Optional motion sensor. Choose from standard by Wattstopper with L7 lens (fig 1.1 & 1.2 on pg 3), or Internet of Things (IOT) by Enlighted Sensors (fig 1.3).
- > Dimmable 0-10V
- > UL 1598 listed
- > IP65 rated
- > BAA & BABA compliant

SPECIFICATIONS

Power Factor.....>0.9
 Available Wattages.....100, 150, 200, 250, 300, 400, 500, 600, 700, 800, 900
 Kelvin Temperatures4000K, 5000K
 Input Voltage120/277V & 347/480V
 Performance..... Up to 160 lm/W
 Distribution.....120°, 60° & Aisle
 Mount Type..... Suspension
 Color Rendering Index (4000K)>70
 Color Rendering Index (5000K)>90

LUMINOUS OUTPUT, DIMENSIONS & WEIGHT

WATTAGE	OUTPUT	STANDARD TEMP		HIGH TEMP		EXTREME TEMP	
		LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
100 Watts	13,220 lumens	18 in	18.039 lbs	18 in	18.039 lbs	26 in	20.941 lbs
150 Watts	21,600 lumens	18 in	18.171 lbs	26 in	20.941 lbs	34 in	24.209 lbs
200 Watts	28,800 lumens	26 in	21.439 lbs	34 in	24.209 lbs	42 in	26.979 lbs
250 Watts	36,000 lumens	34 in	24.209 lbs	42 in	26.979 lbs	60 in	35.676 lbs
300 Watts	43,200 lumens	34 in	24.629 lbs	50 in	30.169 lbs	68 in	41.844 lbs
400 Watts	57,600 lumens	50 in	34.704 lbs	68 in	41.844 lbs	84 in	42.584 lbs
500 Watts	72,000 lumens	50 in	34.704 lbs	84 in	42.584 lbs	110 in	62.189 lbs
600 Watts	86,400 lumens	68 in	42.684 lbs	102 in	48.964 lbs	126 in	63.135 lbs
700 Watts	100,800 lumens	84 in	47.539 lbs	118 in	58.619 lbs	146 in	70.959 lbs
800 Watts	115,200 lumens	92 in	51.569 lbs	136 in	65.419 lbs	146 in	70.959 lbs
900 Watts	129,600 lumens	102 in	54.339 lbs	146 in	70.959 lbs	146 in	70.959 lbs

OPERATIONAL TEMPERATURE

STANDARD TEMP	HIGH TEMP	EXTREME TEMP
-40°F to 130°F (or -40°C to 55°C)	-40°F to 195°F (or -40°C to 90°C)	-40°F to 245°F (or -40°C to 118°C)

CITADEL ORDERING INFORMATION

SAMPLE ORDER NUMBER: CIT-1-100-40-1-2-1-1-1-X-X-X-1-1

SERIES	WATTAGE	KELVIN	OPTICS	LENS	FINISH	DRIVER VOLTAGE	REMOTE CABLE	MOTION SENSOR	BATTERY BACKUP	DLC	POWER CORD TYPE	CORD LENGTH
CIT-1 Std Temp	100	40- (4000K)	1- No Optics	2- Flat Poly Clear ²	1- Black	1- 120/277V	1- 6'	X- No	X- No	X- N/A	1- whip 120-277V	1- 6'
CIT-2 High Temp	150 ¹	50- (5000K)	2- 60°	6- Tempered glass clear		2- 24V DC	2- 10'	1- Standard ³	1- Yes	1- Standard	2- whip 347-480V	2- 12'
CIT-3 Extreme	200		4- Aisle			4- 347/480V	3- 25'	2- IOT ³		2- Premium	3- 125V 15amp Straight	
	250 ¹						4- 50'				4- 125V 20amp Twistlock	
	300						5- 100'				5- 250V 20amp Twistlock	
	400 ¹						6- 200'				6- 277V 15amp Twistlock	
	500 ¹						7- 500'				7- 277V 20amp Twistlock	
	600 ¹						8- 1,000'				8- 480V 20amp Twistlock	
	700 ¹						9- Custom				9- 600V 20amp Twistlock	
	800 ¹										M- M12 3 ft	
	900 ¹											

¹ Under review - DLC approval pending

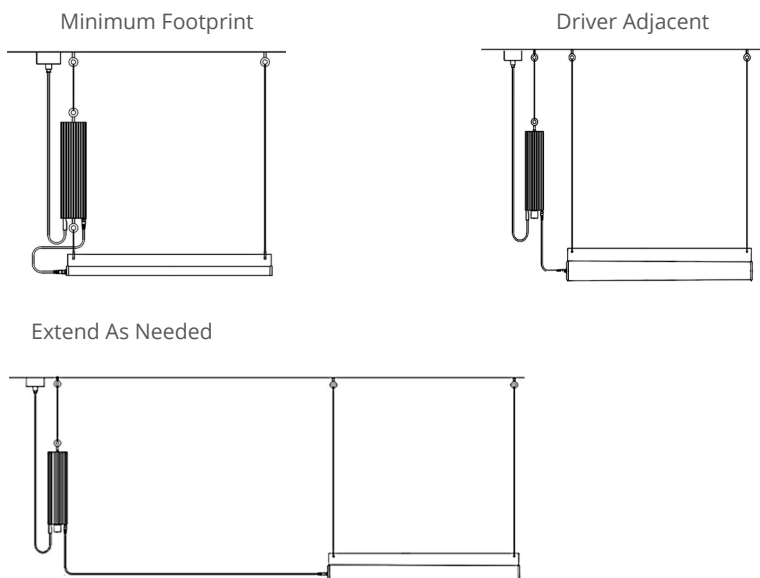
² Due to melting concerns, Flat Poly Clear Lenses are only available with CIT-1 Standard Temperature Fixtures

³ Motion Sensor information: Standard (1) features sensors by Wattstopper with L7 lens. Internet of Things or IOT, (2) features sensors by Enlighted Sensors

Citadel Series LED

REMOTE DRIVER SYSTEMS

Tactik Lighting uses drivers that operate in ambient temperatures up to 167°F, while the light engine can handle up to 245°F. If temperatures exceed 167°F, the driver must be relocated to a cooler area within 10' to 1000' without voltage drop-off. The driver box can be mounted at ground level, ceiling level, or on a wall or strut. Its universal plug-and-play design ensures complete accessibility.

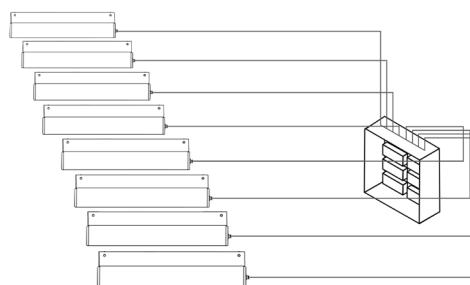


DAISY CHAIN & CONTROL PANEL OPTIONS

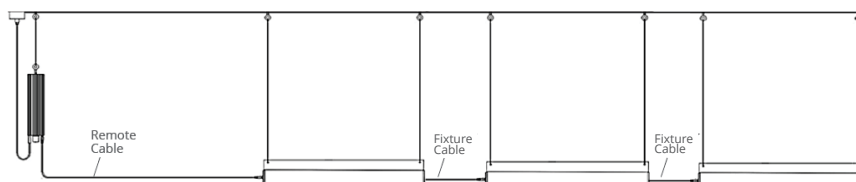
Our custom daisy chain configurations and custom control panel options allow you to power multiple fixtures with one driver, saving you money and space. And we can custom-mount your drivers at a height that best suits your environment.

Reach out to a manufacturing representative today for a custom quote for your facility.

Control Panel for Multiple Lights



Daisy Chain for Multiple Lights



CITADEL DAISY CHAIN ORDERING INFORMATION

ORDER NUMBER: CIT-1-100-40-1-2-1-1-1-X-X-X-1-1-2-1

SERIES	WATTAGE	KELVIN	OPTICS	LENS	FINISH	DRIVER VOLTAGE	REMOTE CABLE	MOTION SENSOR	BATTERY BACKUP	DLC	POWER CORD TYPE	CORD LENGTH	DAISY CHAIN	FIXTURE CABLE
CIT-1Std	50	40- (4000K)	1- No Optics	2- Flat Poly Clear ²	1- Black	1- 120/277V	1- 6'	X- No	X- No	X- N/A	1- whip 120-277V	1- 6'	2	1- 6'
CIT-2 High	100	50- (5000K)	2- 60°	6- Tempered glass clear		2- 24V DC	2- 10'	1- Standard ³	1- Yes	1- Standard	2- whip 347-480V	2- 12'	3	2- 10'
CIT-3 Extreme	150		4- Aisle			4- 347/480V	3- 25'	2- 10T ³		2- Premium	3- 125V 15amp Straight		4	3- 25'
							4- 50'				4- 125V 20amp Twistlock		5	4- 50'
							5- 100'				5- 250V 20amp Twistlock			5- 100'
							6- 200'				6- 277V 15amp Twistlock			6- 200'
							7- 500'				7- 277V 20amp Twistlock			7- 500'
							8- 1,000'				8- 480V 20amp Twistlock			8- 1,000'
							9- Custom				9- 600V 20amp Twistlock			9- Custom
											M- M12 3ft			

Note:
 100 Watt Max Daisy Chain = 3.
 150 Watt Max Daisy Chain = 2.

Citadel Series LED

OPTIONS & ACCESSORIES

> Emergency Battery Backup

OPERATION

When AC power fails, the EM series emergency LED driver immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.



EM-L2554-LBF
EM series
emergency LED Driver

EMERGENCY LUMEN OUTPUT EXAMPLE - 25 WATT BATTERY

Est Luminaire Efficacy	Est Lumens @ 1 Minute	Est Lumens @ 45 Minutes	Est Lumens @ 90 Minutes
140 LPW	3500	3500	3500
150 LPW	3750	3750	3750
160 LPW	4000	4000	4000

> Sensors

*All Motion sensor purchases come as a set, including a motion sensor and an L7 Wattstopper lens. Coverage includes up to 40' and the maximum temperature rating for the motion sensors is 165°F

fig 1.1



FSP-201
Wattstopper
with L7 lens

fig 1.2



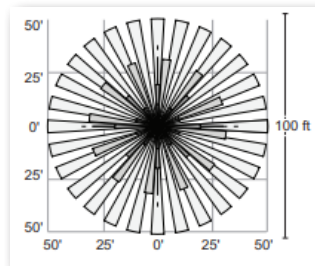
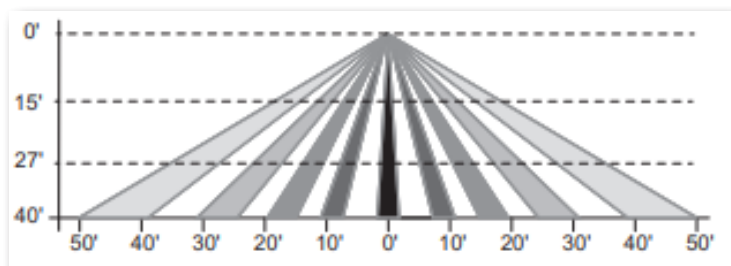
FSP-L7
Wattstopper
with L7 lens

fig 1.3



IoT
IoT sensor by
Siemens Enlighted

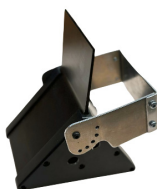
MOTION SENSOR COVERAGE



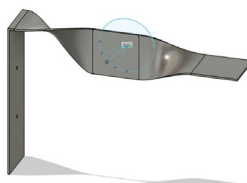
> Fixture Brackets & Mounting Options



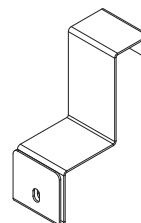
DB-Strut
Strut Mount
Driver Box



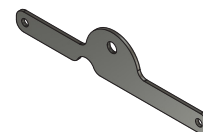
CIT-WM
Universal Swivel
Mount



CIT-WM2
Wall
Mount



CIT-PR1
Pallet Racking
Uplight



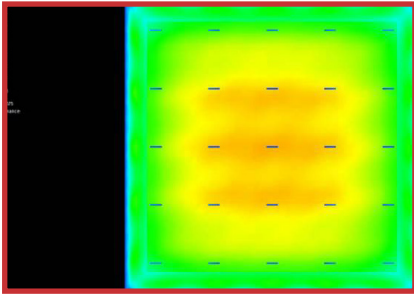
CIT-HU
Hanging
Uplight

Citadel Series LED

OPTICS INFORMATION

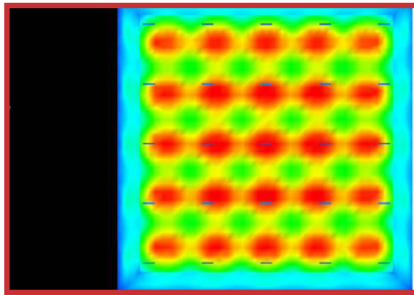
No Optics

- > Great for general illumination. No Optics are also great if you want to maximize horizontal light & to achieve uniform lighting overall. Ideal for 30 feet and below.



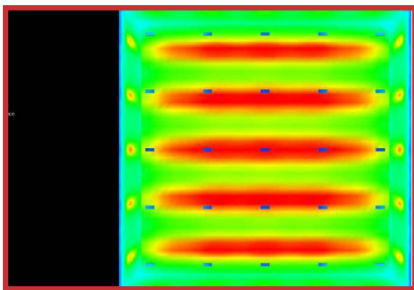
60 Degree Optics

- > Great for higher ceilings. Best used for fixtures mounted 30+ feet up. (This image captures a 25 foot mounting height).



Aisle Optics

- > Great for racking. With Aisle Optics, light is not wasted in adjoining aisles. This means you can reduce the number of fixtures in your facility, or can substantially reduce wattage when switching from HID or Fluorescents to LED.



Citadel Series LED

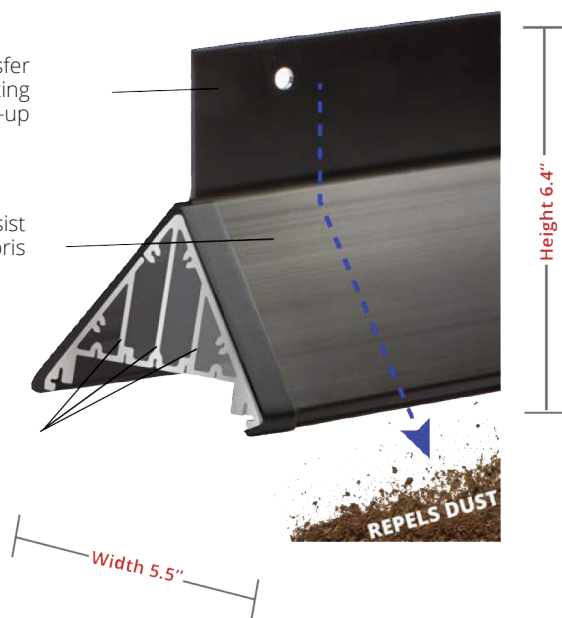
PREVENT PREMATURE FIXTURE FAILURE

As dust & debris accumulate, they act as insulators. This causes internal temperatures to soar and frequently leads to premature fixture failure. The Citadel Series' innovative design addresses this issue three different ways.

1. Patent-Pending Vertical exterior heat transfer cooling fin dissipates heat while preventing dust and debris build-up

2. Steeply sloped sidewalls resist build-up of dust and debris

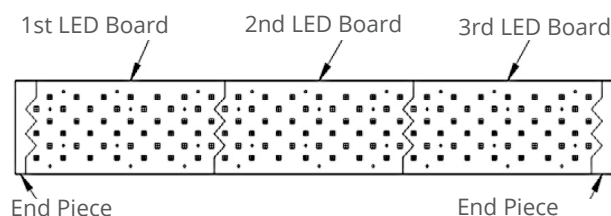
3. Patent-pending Internal heat transfer cooling fins prevent buildup of dust and debris that can hinder cooling



LED BOARD CONFIGURATIONS

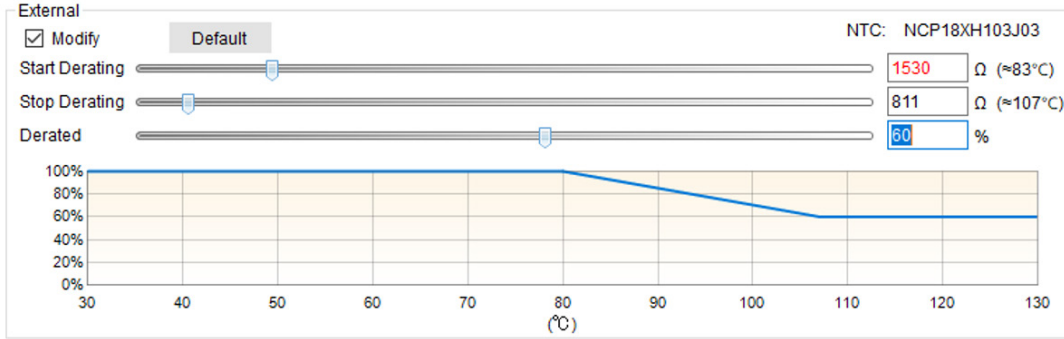
Patent-pending shark tooth design enables LED boards to be configured for any of 11 models, ranging from 100-900 Watts. The resulting array provides uniform light distribution with no dead spots.

Each 8" board has a maximum wattage of 75W. The higher the selected wattage of the fixture, the longer the fixture gets.



Citadel Series LED

EXTERNAL THERMISTOR DIMMING

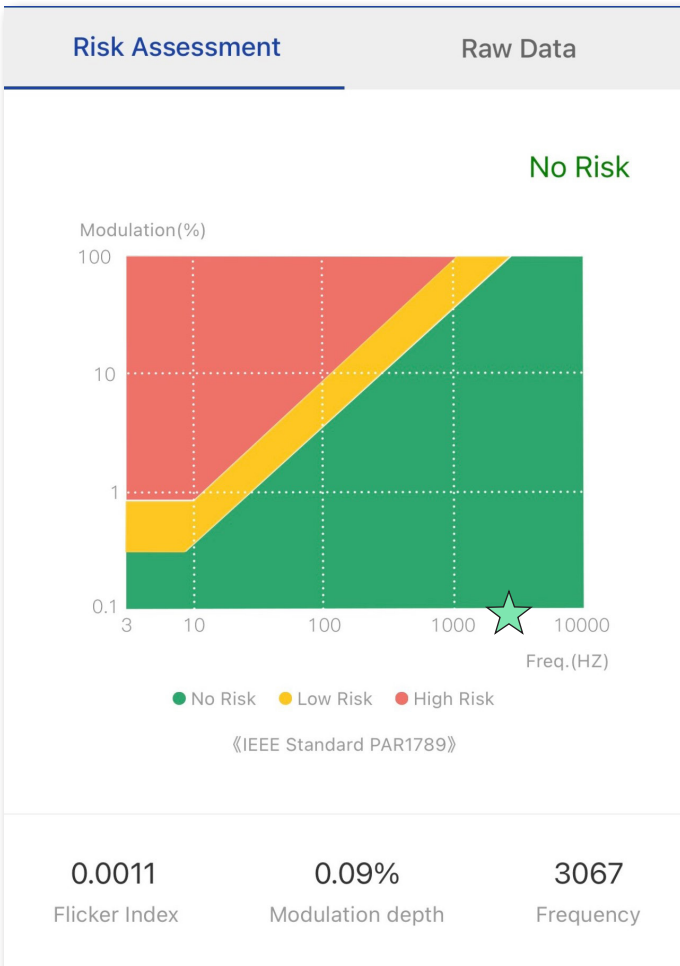


* LEDs set to dim to 60% once the boards reach 108°C

LM80 REPORT

DATA AVERAGES					
AMBIENT TEMPERATURE	OPERATING HOURS				
	0	6,000	9,000	12,000	13,000
55°C	100%	96.92%	95.99%	95.33%	95.08%
85°C	100%	96.33%	95.14%	94.21%	93.88%
105°C	100%	95.48%	93.97%	92.70%	92.31%

FLICKER TEST



REPORT

TEST CONDITIONS			
TEMPERATURE	VOLTAGE	POWER FACTOR	FREQUENCY
25.1°C	120.0 VAC	0.999	60Hz

OPERATIONAL DATA			
PACKAGE	INPUT WATTAGE	CCT	CIT-X LUMENS (LPW)
100W	89.24 W	4000K	13,220 (156)
		5000K	13,881 (139)
150W	153.3 W	4000K	21,600 (153)
		5000K	22,680 (151)
200W	203.6 W	4000K	32,900 (157)
		5000K	34,545 (165)
250W	258.0 W	4000K	36,000 (144)
		5000K	39,910 (151)
300W	299.0 W	4000K	42,820 (159)
		5000K	49,550 (159)
350W	348.7 W	4000K	57,793 (165)
		5000K	57,973 (165)
400W	398.4 W	4000K	66,050 (165)
		5000K	66,050 (165)

ADDITIONAL LITERATURE

Component Temperature Ratings

- > Cord(s): Up to 90°C (194°F)
- > Nylon Nut(s): Up to 121°C (250°F)
- > Polycarbonate Lens: Up to 138°C (280°F)
- > Motion Sensor: Up to 77°C (167°F)

Citadel Series LED

3.1 DATA SET 1, 55°C, 200mA (LUMEN MAINTENANCE)

No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)												
			0hr (Initial)	10000hrs	20000hrs	30000hrs	40000hrs	50000hrs	60000hrs	70000hrs	80000hrs	90000hrs	100000hrs	110000hrs	120000hrs
1	25.92	630.4	99.21	98.86	98.41	97.76	97.27	97.08	96.83	96.51	96.05	95.78	95.59	95.42	95.02
2	26.25	650.3	98.94	98.77	98.59	98.37	97.42	96.97	96.79	96.54	96.14	96.05	95.91	95.62	95.59
3	26.16	648.8	99.21	99.18	99.11	98.38	98.06	97.63	97.33	96.95	96.62	96.41	96.18	96.09	95.92
4	26.47	640.9	99.14	98.85	98.08	97.04	96.77	96.69	96.43	96.07	95.90	95.80	95.65	95.37	94.98
5	26.19	638.1	99.14	98.82	98.14	97.38	97.09	96.72	96.44	95.89	95.61	95.38	95.27	95.05	94.80
6	26.05	641.3	99.20	99.06	98.35	97.97	96.99	96.55	96.09	95.73	95.26	94.95	94.79	94.45	94.09
7	26.34	636.7	98.93	98.51	98.30	97.68	97.19	96.80	96.29	95.90	95.65	95.38	95.16	94.93	94.58
8	26.27	645.8	99.24	98.84	98.58	97.89	97.51	97.38	97.04	96.78	96.30	96.07	95.63	95.52	95.42
9	26.22	644.8	99.40	99.12	98.71	98.60	97.98	97.64	97.02	96.71	96.53	96.20	95.87	95.63	95.39
10	26.15	635.3	98.77	98.73	98.24	97.75	96.95	96.76	96.49	96.29	95.92	95.75	95.42	95.17	95.01
11	26.14	639.0	99.17	98.92	98.23	97.48	96.90	96.54	96.31	95.96	95.62	95.41	95.40	95.12	94.91
12	26.12	607.8	98.96	98.21	97.96	97.22	96.78	96.33	95.99	95.41	95.13	94.95	94.62	94.46	94.27
13	25.86	627.6	99.09	98.66	98.12	97.55	96.75	96.22	95.94	95.73	95.54	95.38	95.14	94.89	94.60
14	26.06	625.6	99.38	99.26	98.90	98.31	97.55	97.15	96.55	96.36	96.15	95.88	95.72	95.40	95.24
15	26.17	643.6	99.18	98.87	98.71	98.07	97.14	96.92	96.38	96.22	95.87	95.71	95.49	95.18	94.73
16	26.24	627.3	98.80	98.37	97.85	96.83	96.33	96.14	95.73	95.36	95.01	94.91	94.69	94.29	94.23
17	26.25	632.9	99.37	98.70	98.53	98.09	97.14	96.93	96.70	96.56	96.43	96.21	95.97	95.53	95.70
18	26.28	631.3	99.02	98.56	98.26	97.54	92.20	96.71	96.64	96.45	96.09	95.88	95.69	95.31	95.20
19	26.09	651.5	99.22	98.77	98.30	97.76	97.59	97.18	97.13	96.88	96.70	96.52	96.21	95.92	95.56
20	26.13	636.2	99.76	99.07	98.83	98.77	98.02	97.74	97.60	97.25	96.81	96.70	96.49	96.37	96.05
21	26.25	636.4	99.31	99.01	98.65	98.51	98.05	97.42	97.28	96.18	96.53	96.28	96.15	95.80	95.44
22	25.99	634.1	99.10	98.63	98.42	98.23	97.40	96.81	96.69	96.39	96.04	95.90	95.82	95.43	95.02
Ave.	26.16	636.6	99.16	98.81	98.42	97.87	97.28	96.92	96.62	96.31	95.99	95.79	95.59	95.33	95.08
Med.	26.17	636.6	99.17	98.83	98.38	97.81	97.19	96.87	96.59	96.37	96.05	95.84	95.64	95.38	95.02
st dev	0.1374	9.7938	0.2177	0.2599	0.3172	0.5154	0.4691	0.4494	0.4822	0.5046	0.5055	0.5035	0.4987	0.5278	0.5342
Min.	25.86	607.8	98.77	98.21	97.85	96.83	96.33	96.14	95.73	95.36	95.01	94.91	94.62	94.29	94.09
Max.	26.47	651.5	99.76	99.26	99.11	98.77	98.06	97.74	97.60	97.25	96.81	96.70	96.49	96.37	96.05

Citadel Series LED

3.3 DATA SET 2, 85°C, 200mA (LUMEN MAINTENANCE)

No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)												
			Ohr (Initial)	10000hrs	20000hrs	30000hrs	40000hrs	50000hrs	60000hrs	70000hrs	80000hrs	90000hrs	100000hrs	110000hrs	120000hrs
23	26.04	643.5	98.63	98.14	97.95	97.16	96.29	95.85	95.49	94.95	94.78	94.58	94.30	93.94	93.80
24	25.93	632.3	98.92	98.50	97.91	96.74	95.94	95.68	95.19	94.78	94.37	94.18	93.82	93.56	93.14
25	26.44	640.0	99.16	98.66	98.09	97.16	96.66	95.89	95.39	95.08	94.59	94.16	93.81	93.47	93.25
26	25.99	647.6	99.09	98.36	97.82	97.16	96.14	95.92	95.35	94.86	94.50	94.26	94.15	93.76	93.47
27	26.45	633.6	98.99	98.48	98.22	97.35	97.14	96.84	96.69	96.29	95.94	95.50	95.14	94.89	94.41
28	26.34	641.7	98.66	98.24	97.48	96.70	95.75	95.28	94.90	94.50	94.17	93.98	93.45	93.16	92.68
29	26.24	649.2	98.86	98.55	97.66	96.78	95.83	95.07	94.73	94.49	94.05	93.68	93.30	92.98	92.84
30	26.03	641.7	98.74	98.52	97.87	97.07	96.59	96.57	96.35	95.98	95.56	95.12	94.90	94.76	94.27
31	25.87	648.2	98.83	98.59	98.15	97.55	96.65	96.54	96.31	95.97	95.62	95.33	94.85	94.40	93.95
32	26.37	658.1	98.63	97.92	97.33	96.47	96.08	95.49	94.71	94.33	93.89	93.60	93.47	93.28	92.90
33	26.04	637.3	98.95	98.42	97.80	97.38	96.56	96.42	95.70	95.43	94.88	94.59	94.24	93.90	93.44
34	25.89	648.5	98.83	98.23	98.20	97.83	97.18	96.95	96.58	96.30	96.14	95.76	95.57	95.45	95.16
35	26.02	651.4	99.25	98.53	98.33	97.97	97.18	96.71	96.28	95.75	94.83	95.15	94.73	94.37	94.12
36	26.01	649.0	99.85	99.32	98.67	98.14	97.35	97.06	96.38	95.82	95.62	95.21	94.87	94.67	94.51
37	26.16	656.6	99.03	98.58	99.21	98.48	98.00	97.56	97.11	96.74	96.38	96.09	95.92	95.74	95.23
38	26.40	636.1	99.18	98.70	98.16	97.44	96.75	96.45	96.07	95.69	95.32	95.16	94.86	94.51	94.21
39	26.09	648.5	99.34	98.81	98.43	97.50	96.79	96.19	96.02	95.64	95.40	95.08	94.76	94.48	94.09
40	26.03	642.8	99.30	99.22	98.46	97.96	97.43	97.12	96.58	96.25	95.86	95.44	95.38	95.19	94.80
41	26.16	640.4	98.86	98.81	98.16	97.64	97.41	97.19	96.89	96.58	96.22	95.78	95.58	95.21	94.89
42	26.28	634.7	98.93	98.52	97.48	96.86	96.27	95.64	95.27	94.83	94.34	93.92	93.51	93.07	92.94
43	26.20	646.0	98.62	98.34	97.49	96.55	96.21	95.98	95.50	94.77	94.15	93.79	93.44	93.00	92.68
44	26.15	652.6	99.31	99.07	98.39	97.61	97.59	96.87	96.75	96.23	95.88	95.66	95.23	94.94	94.51
Ave.	26.14	644.5	99.00	98.57	98.06	97.34	96.72	96.33	95.92	95.51	95.14	94.82	94.51	94.21	93.88
Med.	26.12	644.8	98.94	98.52	98.12	97.36	96.65	96.43	96.05	95.66	95.36	95.10	94.75	94.38	94.02
st dev	0.1774	71951	0.2970	0.3350	0.4440	0.5369	0.6255	0.6785	0.7263	0.7411	0.7882	0.7680	0.8051	0.8488	0.8147
Min.	25.87	632.3	98.62	97.92	97.33	96.47	95.75	95.07	94.71	94.33	93.89	93.60	93.30	92.98	92.68
Max.	26.45	658.1	99.85	99.32	99.21	98.48	98.00	97.56	97.11	96.74	96.38	96.09	95.92	95.74	95.23

Citadel Series LED

3.5 DATA SET 3, 105°C, 200mA (LUMEN MAINTENANCE)

No.	V _F (V)	Φ(lm)	Lumen Maintenance (%)												
			Ohr (Initial)	10000hrs	20000hrs	30000hrs	40000hrs	50000hrs	60000hrs	70000hrs	80000hrs	90000hrs	100000hrs	110000hrs	120000hrs
45	26.31	639.0	99.01	98.48	97.79	96.73	95.92	95.31	94.87	94.26	93.80	93.40	92.94	92.47	92.16
46	26.17	645.4	98.99	98.22	97.57	97.07	96.16	95.32	95.18	94.67	94.17	93.76	93.11	92.84	92.28
47	26.05	648.0	99.15	98.37	98.02	97.13	96.67	96.11	95.57	95.02	94.34	93.83	93.46	93.16	92.75
48	26.20	639.6	98.95	98.55	97.72	96.89	95.95	95.29	94.89	94.15	93.62	93.14	92.60	92.03	91.74
49	26.24	648.5	99.03	98.57	97.67	96.75	96.31	95.81	95.20	94.71	94.40	94.12	93.69	93.28	92.74
50	26.08	648.2	99.35	98.72	98.21	97.42	97.16	96.84	96.48	95.87	95.22	94.88	94.32	93.88	93.58
51	26.41	635.7	98.87	98.54	97.84	97.06	96.07	95.33	94.56	93.79	93.24	92.76	92.45	92.01	91.57
52	26.29	633.8	98.97	98.37	98.01	97.18	96.45	95.55	94.87	94.29	93.83	93.48	92.88	92.54	92.19
53	26.07	641.5	99.08	98.07	97.68	95.88	94.86	94.50	94.01	93.42	93.11	92.67	92.11	91.69	91.32
54	26.35	637.9	99.03	98.21	97.52	97.02	95.85	95.69	95.20	94.73	94.37	93.84	93.35	92.84	92.33
55	25.99	639.0	98.89	98.47	97.398	96.85	96.48	96.06	95.32	94.90	94.30	93.96	93.57	93.10	92.52
56	26.18	639.4	99.12	98.20	97.79	96.67	95.93	95.87	95.20	94.64	93.98	93.73	93.53	92.99	92.71
57	26.32	632.3	99.04	97.96	97.31	96.28	95.40	95.14	94.65	94.35	93.71	93.20	92.88	92.33	92.12
58	26.26	643.2	98.63	97.89	97.25	96.10	95.60	95.18	94.50	93.92	93.27	92.79	92.40	91.95	91.51
59	26.26	632.8	99.05	98.44	97.49	96.78	95.97	95.73	94.99	94.47	94.11	93.63	93.14	92.86	92.57
60	26.30	638.0	99.17	98.43	97.38	96.45	95.47	95.25	94.81	94.12	93.50	93.21	92.57	92.26	91.93
61	26.20	636.0	99.09	98.52	97.91	96.70	96.35	96.05	95.68	95.24	94.81	94.48	94.06	93.73	93.33
62	26.24	636.8	98.90	98.65	97.71	96.69	95.74	94.60	94.38	94.13	93.50	93.07	92.57	92.09	91.79
63	25.97	641.9	98.91	98.33	97.55	96.73	96.15	95.45	95.12	94.73	94.20	93.68	93.29	92.88	92.43
64	25.91	632.0	99.22	98.28	97.31	96.11	95.71	94.97	94.54	94.13	93.48	93.07	92.82	92.50	92.20
65	26.48	636.3	98.54	97.64	96.83	96.20	96.18	95.29	94.92	94.59	94.17	93.84	93.37	92.85	92.39
66	26.18	644.5	98.63	98.03	97.15	97.01	96.25	95.25	94.97	94.66	94.29	93.98	93.55	93.17	92.68
Ave.	26.20	639.5	98.98	98.33	97.62	96.71	96.03	95.48	95.00	94.49	93.97	93.57	93.12	92.70	92.31
Med.	26.22	639.0	99.02	98.40	97.67	96.74	96.02	95.32	94.95	94.53	94.04	93.65	93.12	92.84	92.31
st dev	0.1442	5.1046	0.1938	0.2787	0.3303	0.3981	0.4818	0.5227	0.5109	0.5227	0.5261	0.5567	0.5583	0.5739	0.5549
Min.	25.91	632.0	98.54	97.64	96.83	95.88	94.83	94.50	94.01	93.42	93.11	92.67	92.11	91.69	91.32
Max.	26.48	648.5	99.35	98.72	98.21	97.42	97.16	96.84	96.48	95.87	95.22	94.88	94.32	93.88	93.58