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## Photometric Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014, UL 1598-2008  
CIE 13.3-1995, CIE 15-2004, ANSI C78.377-2017  
IES TM-30-2018

Prepared For  
**LDPI Inc**  
4404 Anderson Dr  
Eau Claire, WI 54703  
United States

### Catalog Number

**LE451-180-V1-D1-5**

Order Number  
**14480670**  
Test Number  
**14480670.05**

### Test Date

2022-11-15 - 2022-12-01

### Prepared By

Bhavik Shah, Laboratory Leader

### Approved By

Tiffany Hamm, Engineering Project Handler

The results contained in this report pertain only to the tested sample.  
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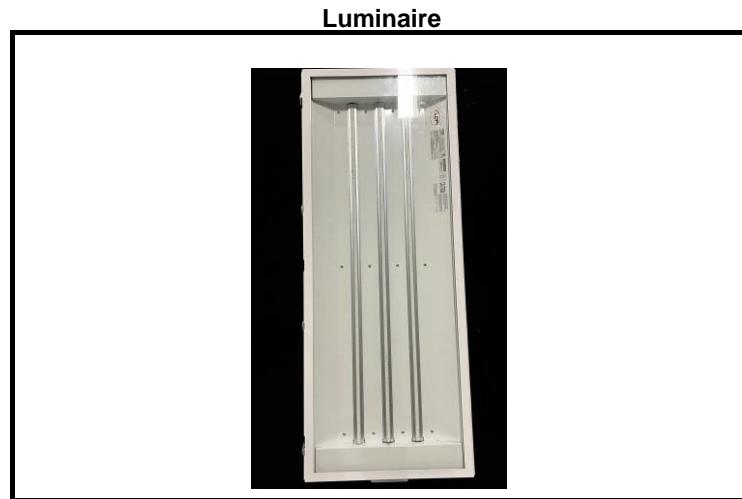
Laboratory results may not be representative of field performance  
Ballast factors have not been applied

Testing was performed in a 3-meter integrating sphere using the  $4\pi$  geometry method.

Absorption correction was employed for Sphere measurement



**Luminaire Description:** White aluminum housing, clear glass lens enclosure  
**Lamp:** 540 LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** 1 INVENTRONICS 150W 0-10V EUM-150S210DT and 1 INVENTRONICS 75W 0-10V EUM-075S210DT



## Summary of Results

### Integrating Sphere

Luminous Flux: 24230 Lumens  
Efficacy: 137.51 lm/w  
CCT: 5275 K  
CRI (Ra): 84.0

### Electrical Data at 277 VAC

Test Temperature: 24.6 °C  
Voltage: 277.0 VAC  
Current: 0.6703 A  
Power: 172.7 W  
Power Factor: 0.930  
Frequency: 60 Hz  
Current THD: 9.35 %

### In-Situ

LED Temperature: 70.1 °C  
Driver Temperature: 53.5 °C  
Measured LED Current: 0.01190 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.



**Solutions**

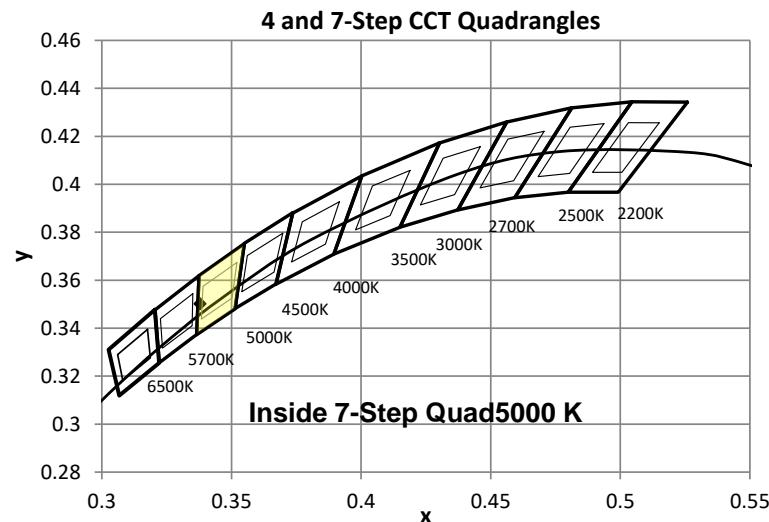
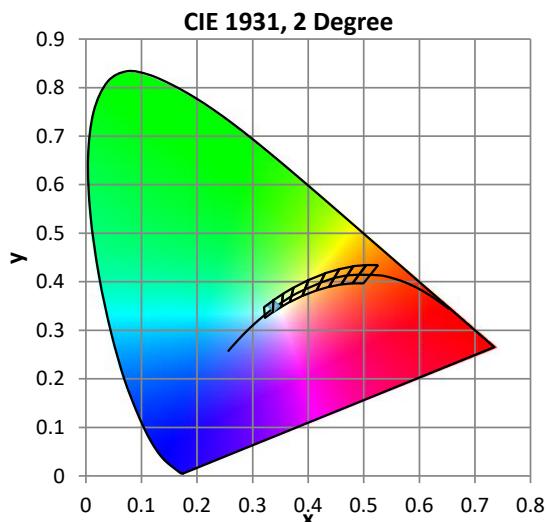
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	1.470 A	176.2 W	0.999	60 Hz	3.21 %

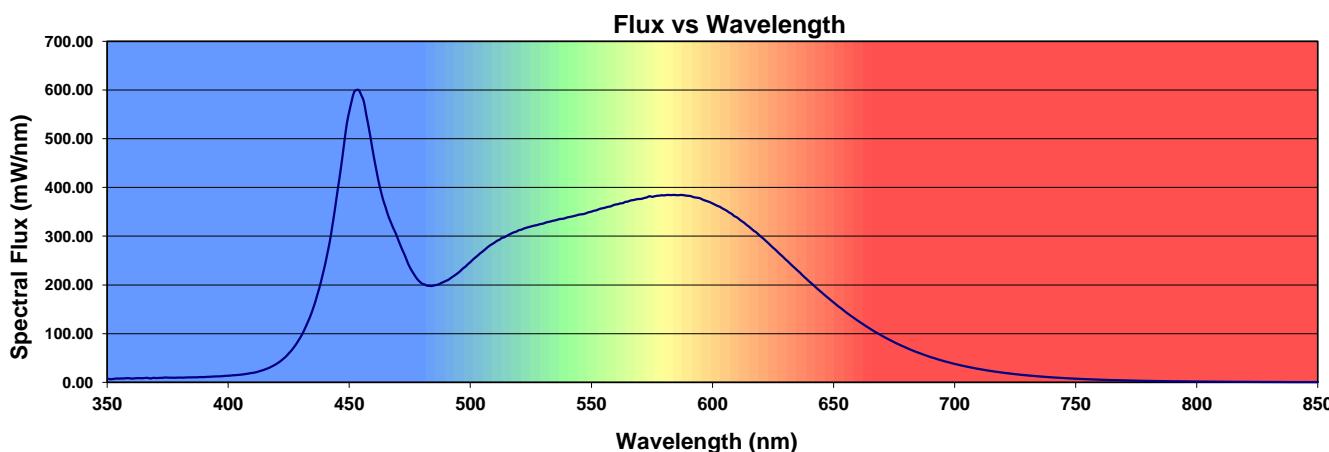
### Summary of Results

Total Output:	24230 Lumens	Chromaticity (x):	0.3379
Efficacy:	137.5 lm/w	Chromaticity (y):	0.3502
CCT:	5275 K	Chromaticity (u'): 0.2071	
CRI (Ra):	84.0	Chromaticity (v'): 0.4829	
CRI (R9):	6.3	TM-30 Rf: 84	
Peak Wavelength:	453 nm	TM-30 Rg: 94	
Dominant Wavelength:	555 nm	TM-30 Rcs,h1: -13%	
S/P Ratio:	2.06	Duv: 0.0023	
M/P Ratio:	0.88 WELL Building Standard v2		



### Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
84.0	82.3	90.9	94.8	82.2	83.0	86.4	86.2	66.2	6.3	77.7	81.5	65.3	85.0	97.6	76.3



## In-Situ Test

### In-Situ Test Conditions

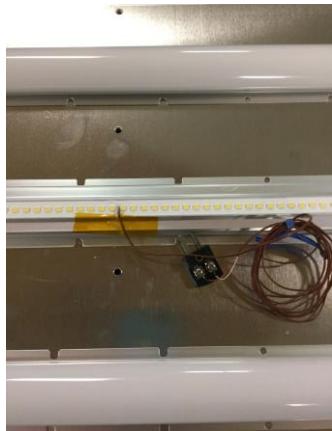
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
23.6 °C	120.0 VAC	N/A	N/A	N/A	60 Hz	N/A

### Summary of Results

LED Temperature: 70.1 °C  
Driver Temperature: 53.5 °C  
Measured LED Current: 0.01190 A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

**LED Temperature Location**



**Thermocouple Reference**



**Driver Temperature Location**



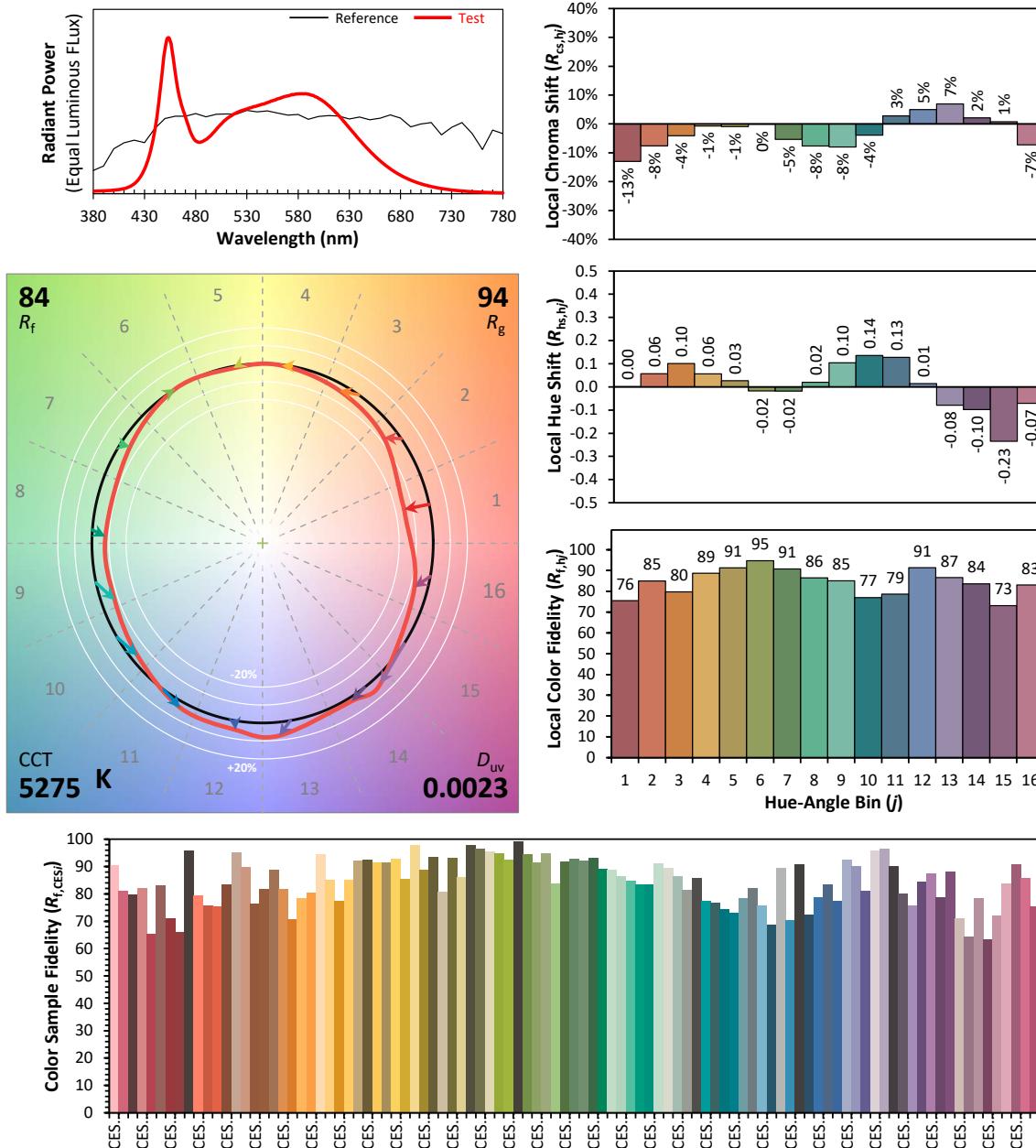
# ANSI/IES TM-30-18 Color Rendition Report

Date: 2022-11-15

Manufacturer: LDPI Inc

Model:

LE451-180-V1-D1-5



**Notes:** This is a recommended method for displaying ANSI/IES TM-30-18 information.

$x = 0.3379$

$y = 0.3502$

$u' = 0.2071$

$v' = 0.4829$

CIE 13.3-1995  
(CRI)

$R_a = 84$

$R_g = 6$

Colors are for visual orientation purposes only. Created with the IES TM-30-18 Calculator Version 2.00.