

Test Report

Report Number: L23034

Date: Jan 8, 2024

Issued by:

Dialight Optics Laboratory
1501 Route 34 South, Farmingdale, NJ 07727

Test of one Floodlight

Unit manufacturer: Dialight Corporation
Unit model number: F2U44A2Exxxxxx

Issued to:

Dialight Corporation
1501 Route 34 South, Farmingdale, NJ 07727

Tests performed: Photometric characterization and temperature measurement per the described standards.

Dates of test: December 22, 2023 through December 22, 2023

Standards used: All tests are performed in accordance with procedures and guidelines prescribed by the American National Standards Institute (ANSI) or Illuminating Engineering Society of North America (IES):

- IES LM-79:2019: Optical and Electrical Measurements of Solid-State Lighting Products
- ANSI/UL 1598:2008: Underwriters Laboratories Inc. Standard for Safety: Luminaires
- ENERGY STAR Manufacturer's Guide for Qualifying Solid State Lighting Luminaires Version 2.1

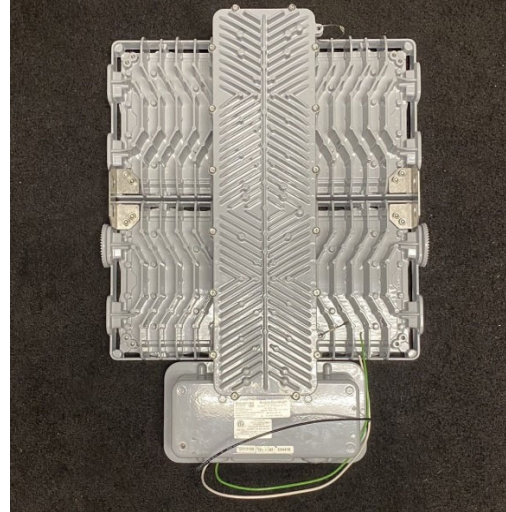
Description of sample:

Sample Number: L23034
Manufacturer: Dialight Corporation
Product Name: ProSite F2 Flood 24K
Description: Floodlight
Model Number: F2U44A2Exxxxxx

Report Summary

Sample number L23034
Dialight unit model number F2U44A2Exxxxxx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	19684 (lumens)	20440 (lumens)
Electrical Power:	452.6 (W)	453.2 (W)
Luminous Efficacy:	43.49 (lumens/W)	45.11 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	452.6 (W)
	Power Factor (120VAC):	0.9953
	Current ATHD % (120VAC):	4.99
Secondary Voltage:	Input Power (277VAC):	432.5 (W)
	Power Factor (277VAC):	0.9600
	Current ATHD % (277VAC):	9.58

Color Measurements:

Correlated Color Temperature (CCT):	1765 (K)
Color Rendering Index (CRI):	58.23
Chromaticity Coordinate (x):	0.568
Chromaticity Coordinate (y):	0.425
Chromaticity Coordinate (u')	0.326
Chromaticity Coordinate (v')	0.549
DUV:	0.0059

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L23034.

Dialight unit model number F2U44A2Exxxxxx

Test Conditions:

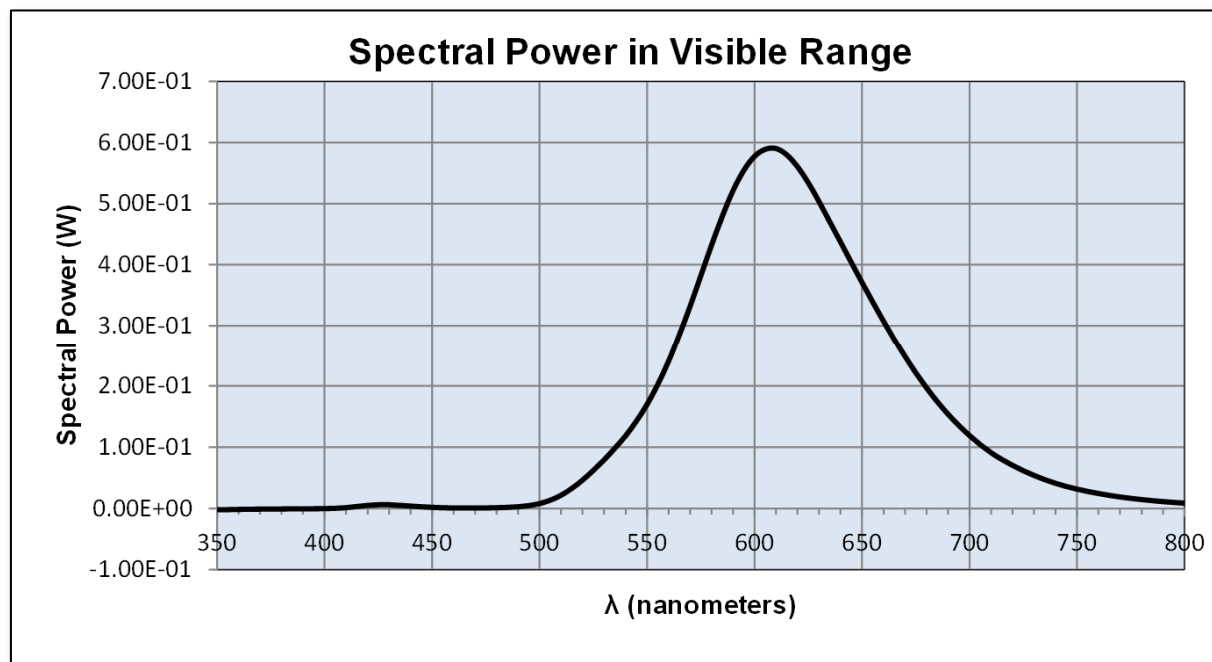
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input Current: 3.789 (A)
Input Power: 452.6 (W)
Input Power Factor: 0.9953
Current ATHD: 4.99 (%)

Photometric measurements:

Luminous Flux: 19683.8 (lumens)
Luminous Efficacy: 43.5 (lumens/W)
Correlated Color Temperature (CCT): 1765 (K)
CRI -Ra: 58.23
CRI -R9: -53.99
DUV: 0.0059
CIE Coordinate (x): 0.568
CIE Coordinate (y): 0.425
CIE Coordinate (u'): 0.326
CIE Coordinate (v'): 0.549
TM30_Rf: 53.0
TM30_Rg: 45.9
TM30_Rcs_hue1: -21.43 %



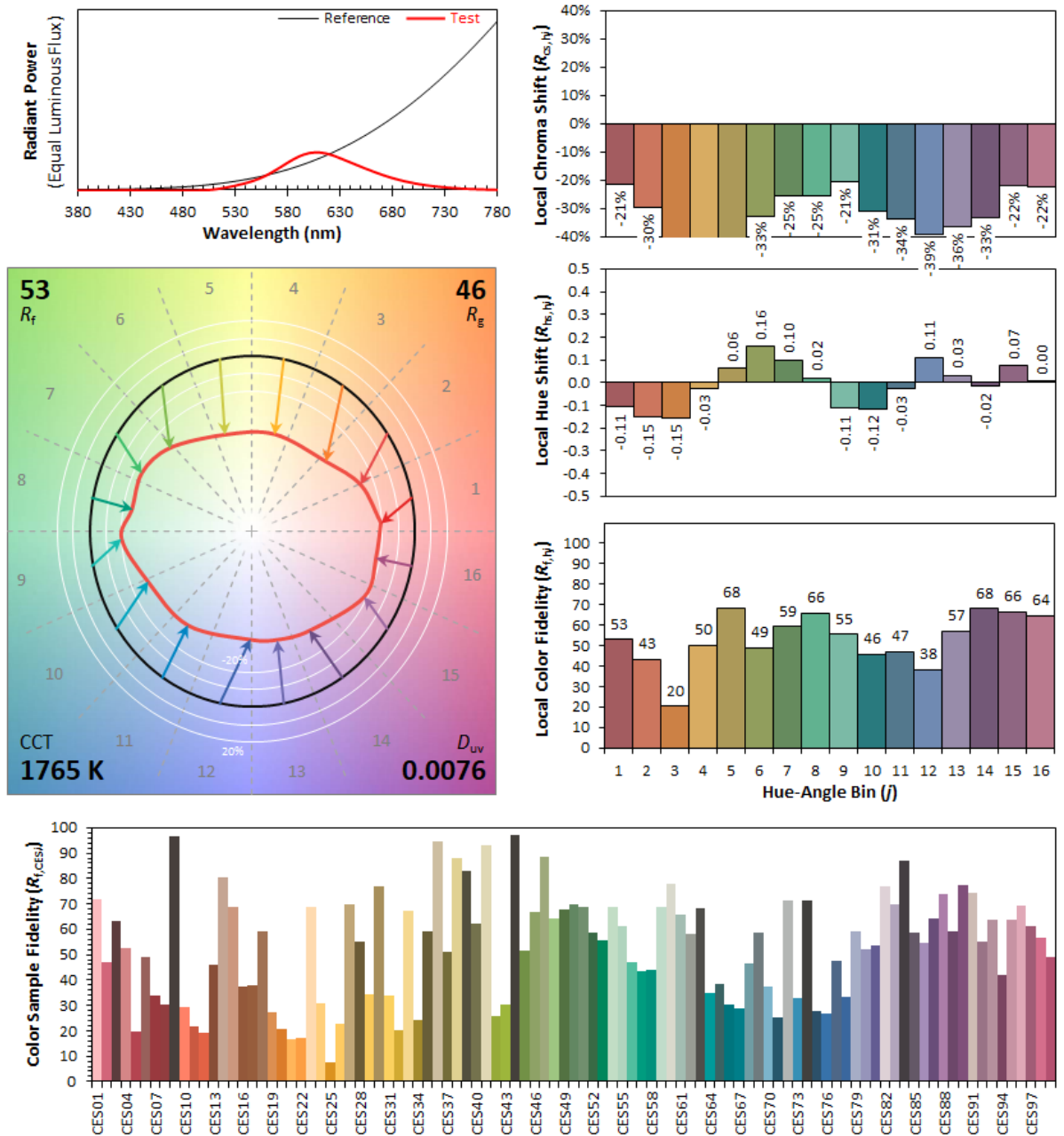
Test Results: Integrating Sphere

Results continued from previous page.

Tabulated Spectral Power in Visible Range:

$\lambda(\text{nm})$	(W/nm)	$\lambda(\text{nm})$	(W/nm)	$\lambda(\text{nm})$	(W/nm)	$\lambda(\text{nm})$	(W/nm)
350	-0.00216	490	0.00280	630	0.50299	770	0.01879
355	-0.00190	495	0.00468	635	0.46988	775	0.01650
360	-0.00154	500	0.00800	640	0.43692	780	0.01450
365	-0.00130	505	0.01351	645	0.40355	785	0.01276
370	-0.00112	510	0.02162	650	0.37064	790	0.01122
375	-0.00096	515	0.03282	655	0.33850	795	0.00990
380	-0.00079	520	0.04638	660	0.30725	800	0.00871
385	-0.00063	525	0.06227	665	0.27687		
390	-0.00055	530	0.07939	670	0.24845		
395	-0.00045	535	0.09842	675	0.22149		
400	-0.00026	540	0.11865	680	0.19692		
405	0.00022	545	0.14258	685	0.17439		
410	0.00136	550	0.17000	690	0.15380		
415	0.00316	555	0.20279	695	0.13549		
420	0.00498	560	0.24062	700	0.11901		
425	0.00605	565	0.28481	705	0.10412		
430	0.00607	570	0.33197	710	0.09105		
435	0.00502	575	0.38224	715	0.07999		
440	0.00384	580	0.43253	720	0.07038		
445	0.00278	585	0.47965	725	0.06167		
450	0.00185	590	0.52165	730	0.05390		
455	0.00116	595	0.55466	735	0.04701		
460	0.00083	600	0.57766	740	0.04110		
465	0.00075	605	0.58903	745	0.03588		
470	0.00076	610	0.59026	750	0.03156		
475	0.00091	615	0.57984	755	0.02775		
480	0.00123	620	0.56037	760	0.02438		
485	0.00177	625	0.53410	765	0.02140		

IES TM-30-18 Color Rendition Report



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

x 0.5682
 y 0.4249
 u' 0.3265
 v' 0.5492

CIE 13.3-1995
(CRI)

R_a 58
 R_g -54

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

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L23034.
Dialight unit model number F2U44A2Exxxxxx

Electrical Measurements:

Input Voltage: 119.7 (VAC)
Input current: 3.80 (A)
Input Power: 453.16 (W)
Power Factor: 0.9952

Photometric measurements:

Absolute Luminous Flux: 20440.5 (lumens)
Luminous Efficacy: 45.1 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	22.50	45.00	67.50	90.00	Lumens
0.00	69920	69920	69920	69920	69920	
5.00	62616	62679	62609	62634	62673	6398
15.00	35766	34336	33171	32105	31441	9504
25.00	4919	5768	6414	6462	6494	2686
35.00	944	961	966	967	967	601
45.00	537	537	537	539	547	419
55.00	350	363	387	419	427	348
65.00	250	232	270	309	313	277
75.00	107	107	107	120	126	122
85.00	1	1	1	3	4	1
90.00	0	0	0	0	0	

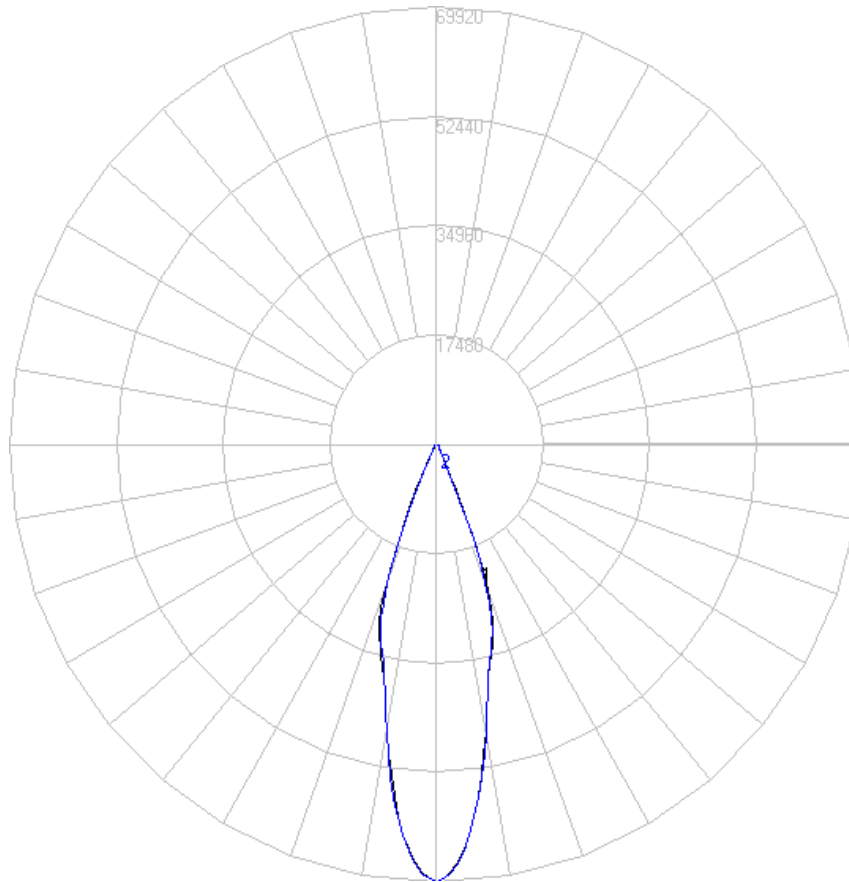
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	18631.82	91.15	91.15
0 to 40	19242.41	94.14	94.14
0 to 60	20014.79	97.92	97.92
0 to 90	20440.45	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	20440.45	100.00	100.00

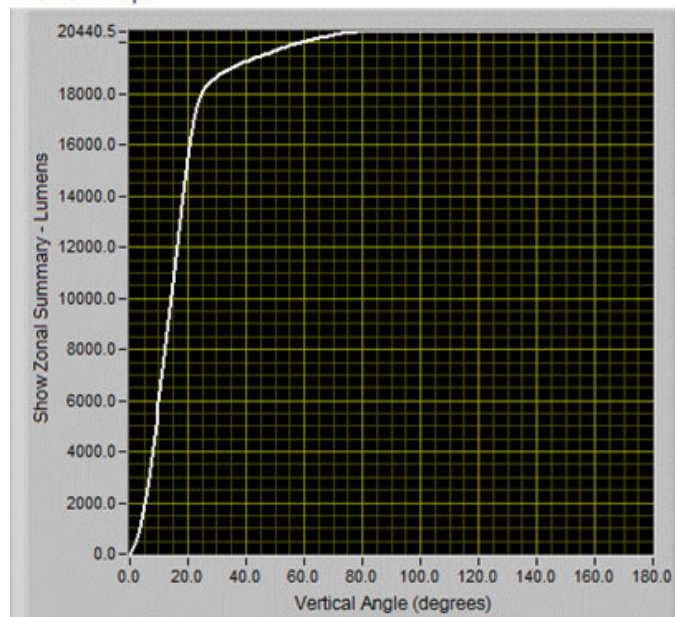
Test Results: Goniometer

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Polar Plot:



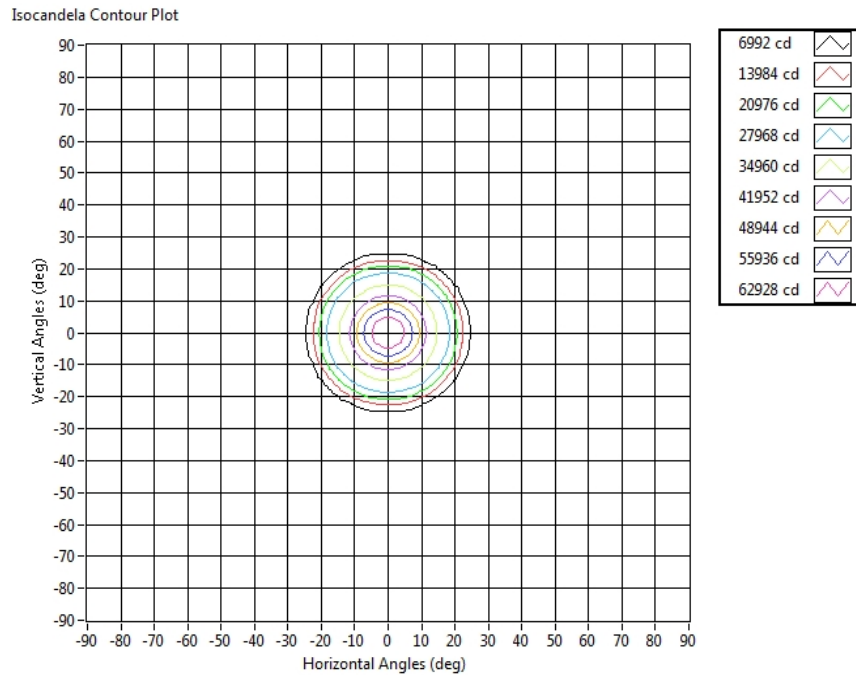
Zonal Flux Graph



Test Results: Goniometer

Results continued from previous page.

Illuminance Plot:



Illuminance-Cone of Light:

Mounting Height (ft)	Beam Cone Width (ft)	Orthogonal Beam Cone Width (ft)	Projected Illuminance (fc)
2	1.00	1.03	17480.1
4	2.01	2.05	4370.0
6	3.01	3.08	1942.2
8	4.02	4.11	1092.5
10	5.02	5.13	699.2
12	6.03	6.16	485.6
14	7.03	7.19	356.7
16	8.03	8.21	273.1
18	9.04	9.24	215.8
20	10.04	10.27	174.8

Equipment Used:

Equipment Name	Model Number
Omega TC	DPI8
Type-C Moving Mirror Goniometer	6240T
Elgar AC Power Supply	CW1251P
Sorensen DC Power Supply	XHR150-7
Dialight Confirmation Sample	RRE2MN2CxxxxxN
Fluke 8808A Digit Multimeter	8808A
Step-Up Transformer	
Omega Thermocouple	5TC-TT-K
Fluke 971 Humidity Meter	971
GwINSTEK DC Power Supply	GEP172679
Omega TC	TC-08
Labshere 2M sphere	Illumia Plus 2600-195
Labshere Controller	PM-150-140
Xitron Power Analyzer	XT2640
Xitron Power Analyzer	XT2640
LPS-525 DC Power Supply	LPS-525
Omega Temperature Controller	DP41-RTD-A
YOKOGAWA Digital Power Meter	WT310E
STS Luminous Intensity Standard Lamp for Type-C Cal	STD-EHD
STS Luminous Intensity Standard Lamp for Type-C Cal	STD-EHD
STS Luminous Intensity Standard Lamp for Type-C Cal	STD-EHD
Dialight Confirmation Sample	VEx7RB2Exxxxxx
Labsphere calibration lamp for 2M sphere	SCL-1400
Labsphere calibration lamp for 2M sphere	SCL-1400
Labsphere calibration lamp for 2M sphere	SCL-1400
Labshere Spectrometer- CDS 2600 Spectrometer	CDS-2600

Additional Notes:

Samples are received and tested in new and undamaged condition, unless otherwise noted.

The results shown in this report are representative only of the test samples submitted. This data has been issued to the assignee for further evaluation.

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