

Test Report

Report Number: L23032

Date: Dec 12, 2023

Issued by:

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

Test of one Floodlight

Unit manufacturer: Dialight Corporation
Unit model number: F2U4FA2Exxxxxx

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: November 15, 2023 through November 16, 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

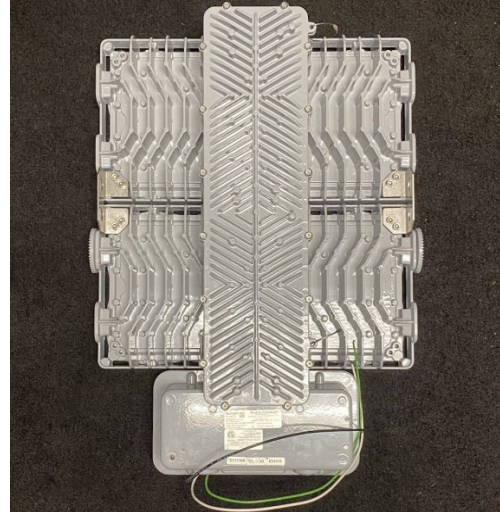
Description of sample:

Sample Number: L23032
Manufacturer: Dialight Corporation
Product Name: ProSite F2 Flood 24K
Description: Floodlight
Model Number: F2U4FA2Exxxxxx

Report Summary

Sample number L23032
Dialight unit model number F2U4FA2Exxxxxx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	18282 (lumens)	18287 (lumens)
Electrical Power:	458.0 (W)	457.9 (W)
Luminous Efficacy:	39.92 (lumens/W)	39.93 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	458.0 (W)
	Power Factor (120VAC):	0.9956
	Current ATHD % (120VAC):	4.64
Secondary Voltage:	Input Power (277VAC):	438.5 (W)
	Power Factor (277VAC):	0.9626
	Current ATHD % (277VAC):	8.96

Color Measurements:

Correlated Color Temperature (CCT):	1822 (K)
Color Rendering Index (CRI):	57.83
Chromaticity Coordinate (x):	0.564
Chromaticity Coordinate (y):	0.431
Chromaticity Coordinate (u')	0.321
Chromaticity Coordinate (v')	0.551
DUV:	0.0070

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L23032.

Dialight unit model number F2U4FA2Exxxxxx

Test Conditions:

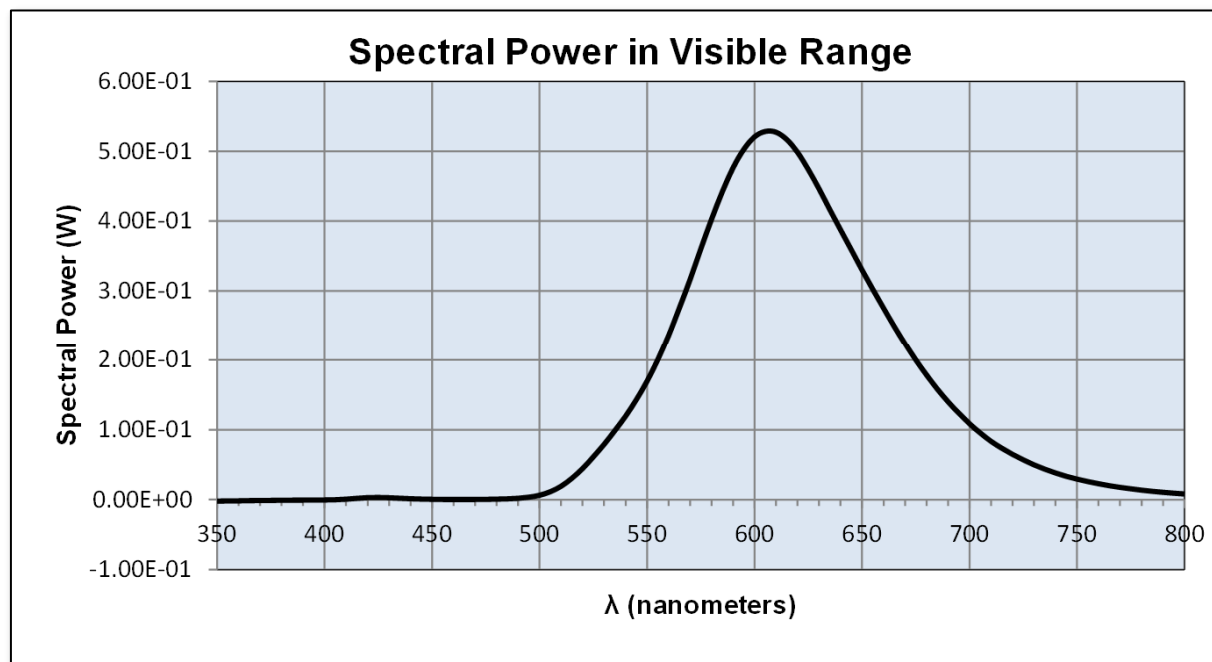
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input Current: 3.833 (A)
Input Power: 458.0 (W)
Input Power Factor: 0.9956
Current ATHD: 4.64 (%)

Photometric measurements:

Luminous Flux: 18282.4 (lumens)
Luminous Efficacy: 39.9 (lumens/W)
Correlated Color Temperature (CCT): 1822 (K)
CRI -Ra: 57.83
CRI -R9: -53.89
DUV: 0.0070
CIE Coordinate (x): 0.564
CIE Coordinate (y): 0.431
CIE Coordinate (u'): 0.321
CIE Coordinate (v'): 0.551
TM30_Rf: 40.6
TM30_Rg: 31.6
TM30_Rcs_hue1: -21.09 %



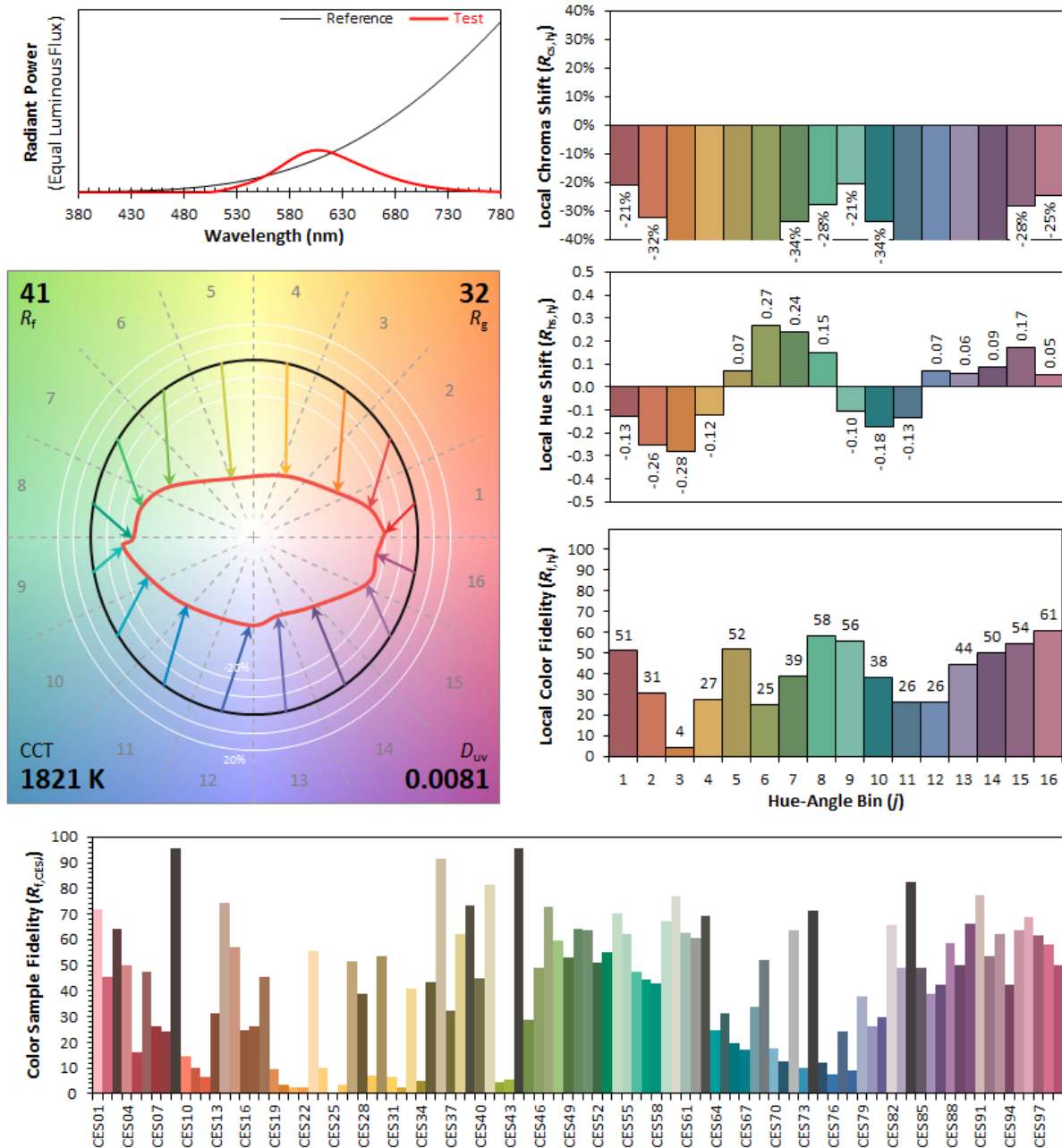
Test Results: Integrating Sphere

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	-0.00198	490	0.00205	630	0.44596	770	0.01764
355	-0.00173	495	0.00358	635	0.41622	775	0.01557
360	-0.00157	500	0.00639	640	0.38730	780	0.01367
365	-0.00127	505	0.01143	645	0.35874	785	0.01199
370	-0.00109	510	0.01926	650	0.32975	790	0.01060
375	-0.00098	515	0.03059	655	0.30206	795	0.00935
380	-0.00081	520	0.04458	660	0.27509	800	0.00822
385	-0.00068	525	0.06131	665	0.24853		
390	-0.00057	530	0.07914	670	0.22355		
395	-0.00046	535	0.09883	675	0.19990		
400	-0.00032	540	0.11942	680	0.17832		
405	0.00002	545	0.14306	685	0.15809		
410	0.00079	550	0.16954	690	0.13986		
415	0.00195	555	0.20052	695	0.12361		
420	0.00293	560	0.23565	700	0.10853		
425	0.00320	565	0.27539	705	0.09526		
430	0.00282	570	0.31651	710	0.08339		
435	0.00207	575	0.36052	715	0.07354		
440	0.00139	580	0.40297	720	0.06478		
445	0.00092	585	0.44225	725	0.05690		
450	0.00060	590	0.47651	730	0.04980		
455	0.00039	595	0.50286	735	0.04361		
460	0.00031	600	0.52076	740	0.03818		
465	0.00032	605	0.52850	745	0.03338		
470	0.00040	610	0.52731	750	0.02940		
475	0.00055	615	0.51679	755	0.02589		
480	0.00081	620	0.49849	760	0.02282		
485	0.00124	625	0.47382	765	0.02003		

IES TM-30-18 Color Rendition Report



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

x 0.5643

y 0.4307

u' 0.3207

v' 0.5506

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 L23032.

Dialight unit model number F2U4FA2Exxxxxx

Electrical Measurements:

Input Voltage:	119.5	(VAC)
Input current:	3.85	(A)
Input Power:	457.92	(W)
Power Factor:	0.9957	

Photometric measurements:

Absolute Luminous Flux:	18286.9	(lumens)
Luminous Efficacy:	39.9	(lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	2693	2693	2693	2693	2693	
5.00	3241	3434	2578	2578	2370	286
15.00	5281	4726	2792	2364	2136	1007
25.00	9454	5462	3404	2250	1594	2241
35.00	13120	5332	3979	1932	1706	3793
45.00	23996	5498	4067	1808	1362	7238
55.00	9171	9073	3544	2038	938	4478
65.00	2511	1097	3092	1224	644	1650
75.00	841	107	214	321	406	497
85.00	15	0	8	106	96	27
90.00	1	0	0	17	0	

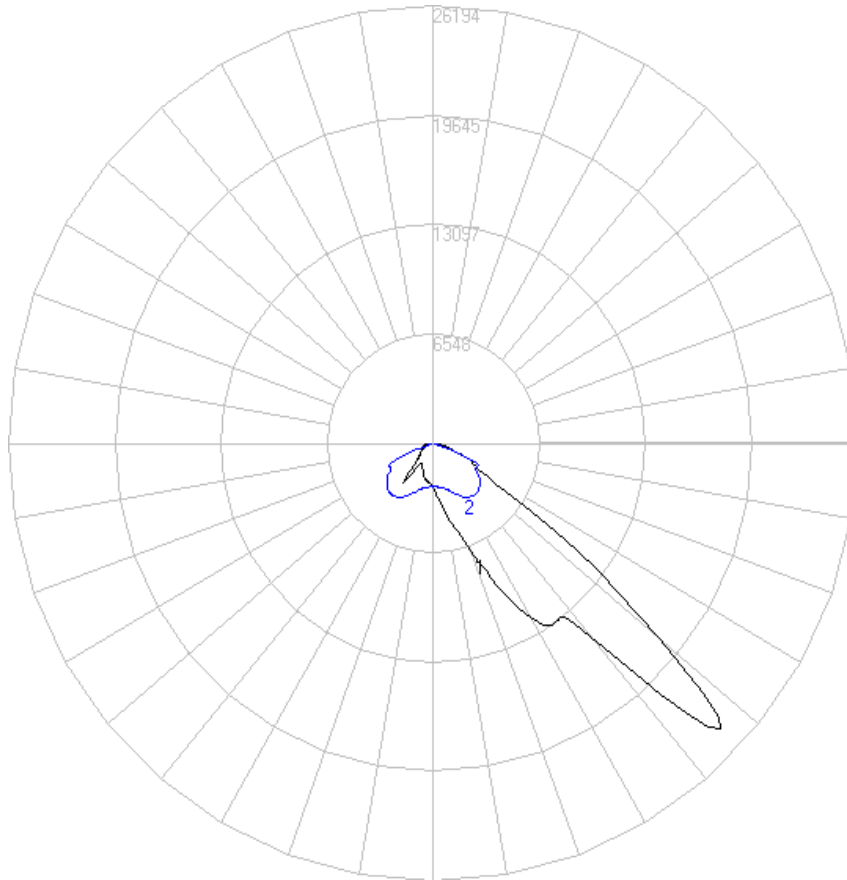
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	3214.92	17.58	17.58
0 to 40	6319.70	34.56	34.56
0 to 60	15920.47	87.06	87.06
0 to 90	18286.86	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	18286.86	100.00	100.00

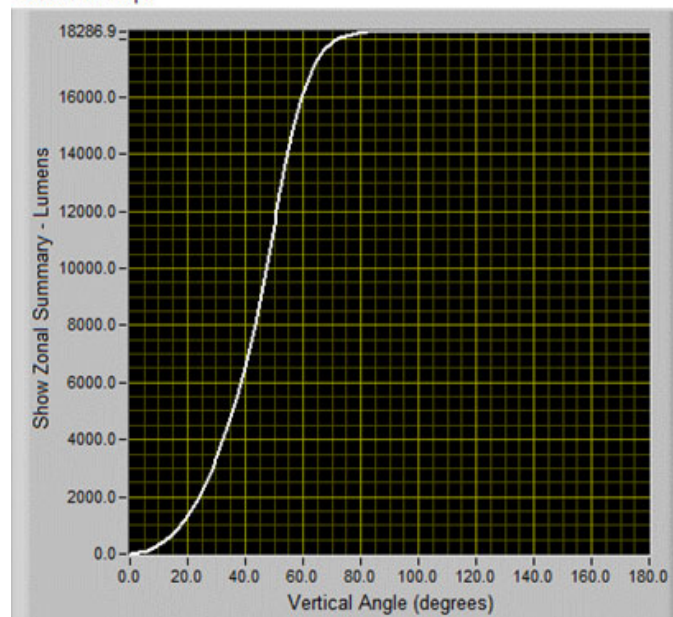
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



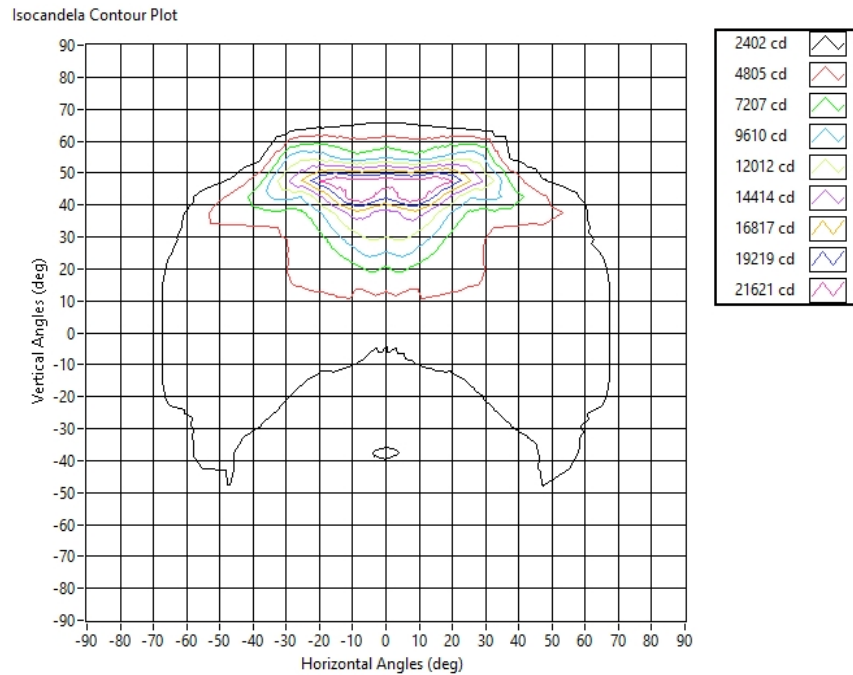
Zonal Flux Graph



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	7.65	9.91	673.2
4	15.30	19.83	168.3
6	22.95	29.74	74.8
8	30.60	39.65	42.1
10	38.25	49.56	26.9
12	45.90	59.48	18.7
14	53.55	69.39	13.7
16	61.20	79.30	10.5
18	68.86	89.21	8.3
20	76.51	99.13	6.7

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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