

Test Report

Report Number: L23035

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: F2U46A2Exxxxxx

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 17, 2023 through December 11, 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

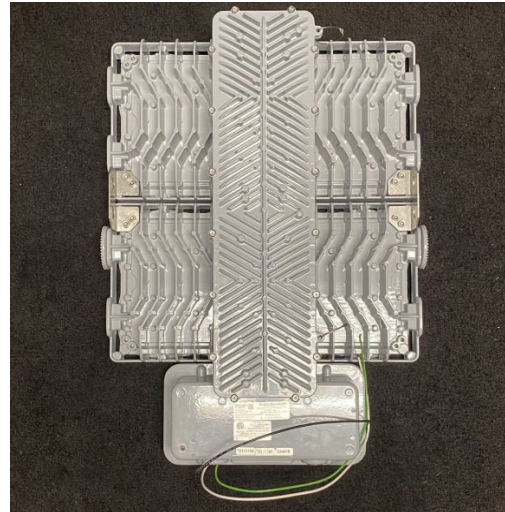
Description of sample:

Sample Number: L23035
Manufacturer: Dialight Corporation
Product Name: ProSite F2 Flood 24K
Description: Floodlight
Model Number: F2U46A2Exxxxxx

Report Summary

Sample number L23035
Dialight unit model number F2U46A2Exxxxxx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	19148 (lumens)	19500 (lumens)
Electrical Power:	453.2 (W)	458.0 (W)
Luminous Efficacy:	42.25 (lumens/W)	42.58 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	453.2 (W)
	Power Factor (120VAC):	0.9952
	Current ATHD % (120VAC):	5.03
Secondary Voltage:	Input Power (277VAC):	438.6 (W)
	Power Factor (277VAC):	0.9605
	Current ATHD % (277VAC):	9.62

Color Measurements:

Correlated Color Temperature (CCT):	1775 (K)
Color Rendering Index (CRI):	58.43
Chromaticity Coordinate (x):	0.567
Chromaticity Coordinate (y):	0.426
Chromaticity Coordinate (u')	0.325
Chromaticity Coordinate (v')	0.549
DUV:	0.0059

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L23035.

Dialight unit model number F2U46A2Exxxxxx

Test Conditions:

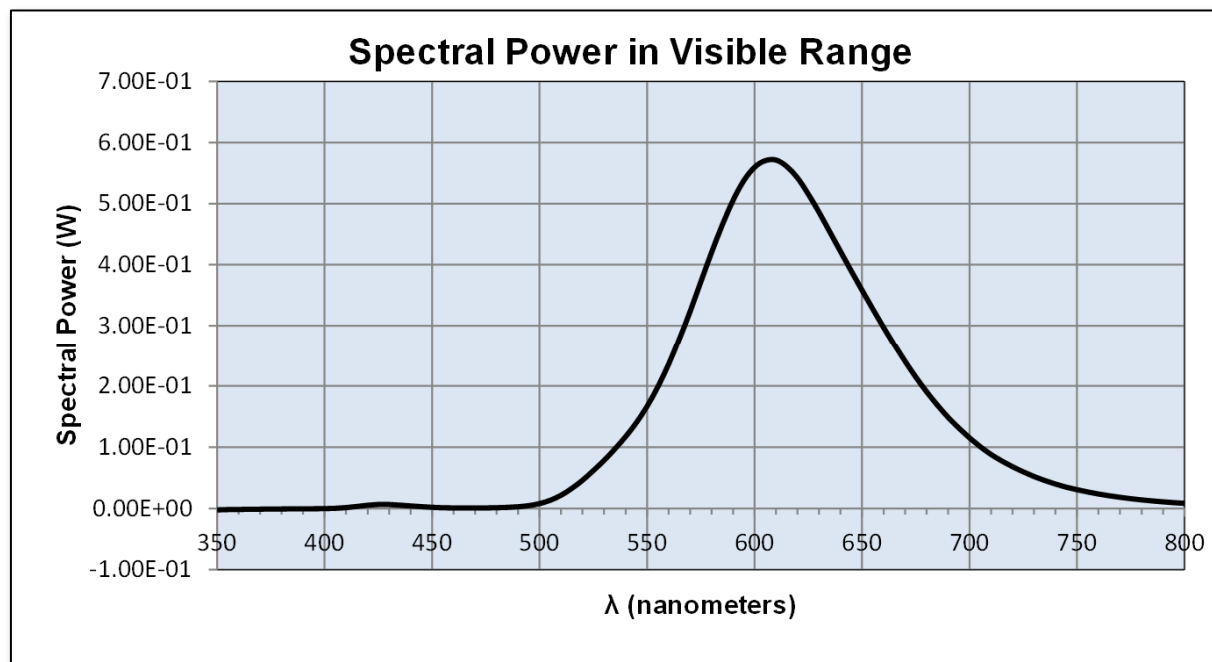
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.7 (VAC)
Input Current: 3.774 (A)
Input Power: 453.2 (W)
Input Power Factor: 0.9952
Current ATHD: 5.03 (%)

Photometric measurements:

Luminous Flux: 19148.3 (lumens)
Luminous Efficacy: 42.2 (lumens/W)
Correlated Color Temperature (CCT): 1775 (K)
CRI -Ra: 58.43
CRI -R9: -53.77
DUV: 0.0059
CIE Coordinate (x): 0.567
CIE Coordinate (y): 0.426
CIE Coordinate (u'): 0.325
CIE Coordinate (v'): 0.549
TM30_Rf: 54.2
TM30_Rg: 47.5
TM30_Rcs_hue1: -21.32 %



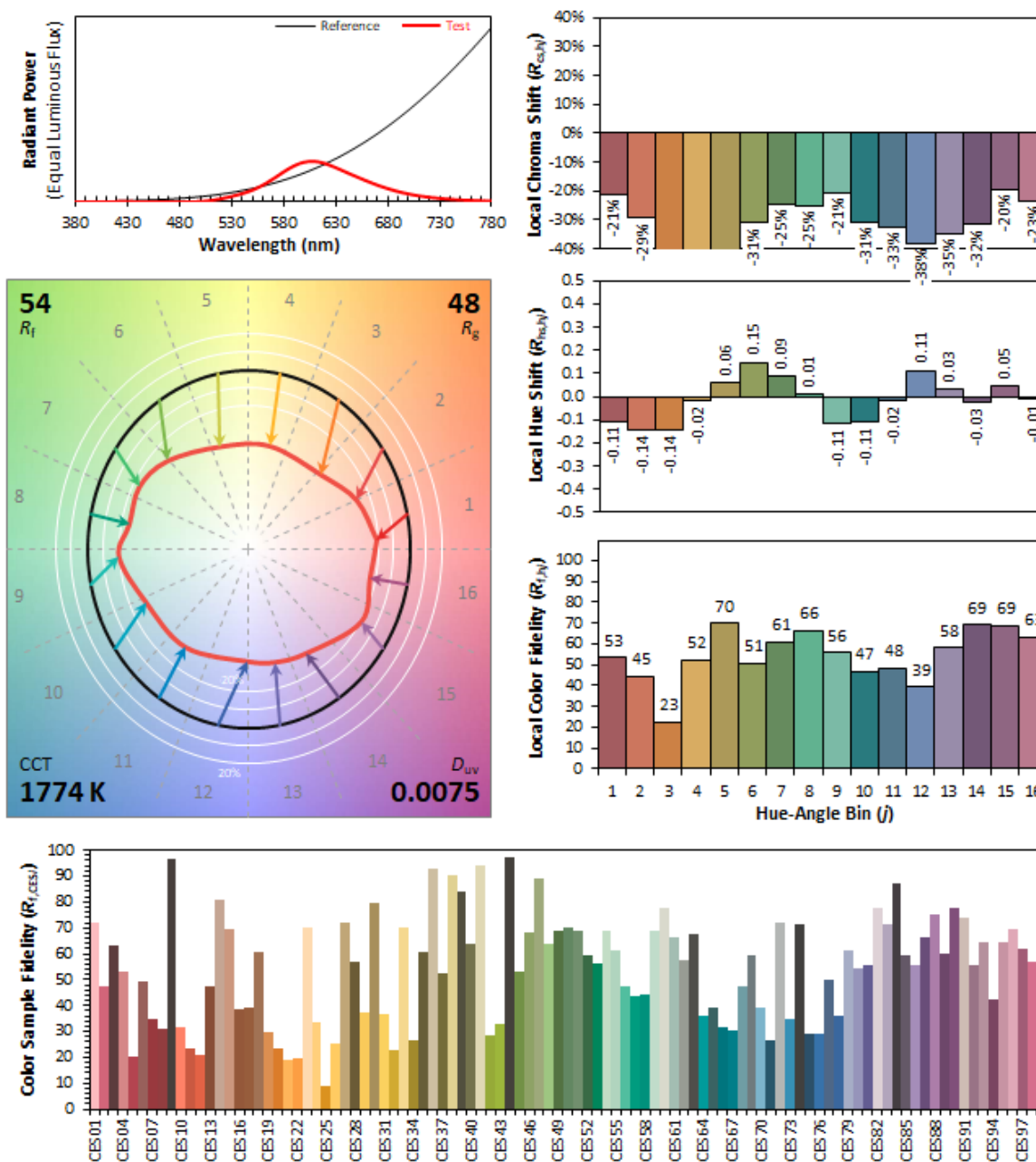
Test Results: Integrating Sphere

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	-0.00234	490	0.00279	630	0.48565	770	0.01818
355	-0.00179	495	0.00467	635	0.45355	775	0.01596
360	-0.00159	500	0.00801	640	0.42140	780	0.01402
365	-0.00125	505	0.01350	645	0.38938	785	0.01231
370	-0.00118	510	0.02164	650	0.35797	790	0.01086
375	-0.00089	515	0.03285	655	0.32724	795	0.00953
380	-0.00078	520	0.04621	660	0.29702	800	0.00841
385	-0.00059	525	0.06190	665	0.26795		
390	-0.00050	530	0.07857	670	0.24050		
395	-0.00041	535	0.09715	675	0.21450		
400	-0.00024	540	0.11733	680	0.19070		
405	0.00029	545	0.14018	685	0.16888		
410	0.00143	550	0.16689	690	0.14879		
415	0.00330	555	0.19876	695	0.13130		
420	0.00531	560	0.23577	700	0.11516		
425	0.00650	565	0.27811	705	0.10074		
430	0.00643	570	0.32354	710	0.08811		
435	0.00534	575	0.37230	715	0.07748		
440	0.00411	580	0.42045	720	0.06807		
445	0.00296	585	0.46550	725	0.05979		
450	0.00192	590	0.50563	730	0.05213		
455	0.00119	595	0.53785	735	0.04558		
460	0.00085	600	0.55970	740	0.03981		
465	0.00074	605	0.57047	745	0.03472		
470	0.00076	610	0.57143	750	0.03056		
475	0.00091	615	0.56075	755	0.02689		
480	0.00123	620	0.54203	760	0.02361		
485	0.00178	625	0.51549	765	0.02072		

IES TM-30-18 Color Rendition Report



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

x 0.5672
 y 0.4255
 u' 0.3255
 v' 0.5493

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 L23035.

Dialight unit model number F2U46A2Exxxxxx

Electrical Measurements:

Input Voltage:	119.9	(VAC)
Input current:	3.84	(A)
Input Power:	457.98	(W)
Power Factor:	0.9956	

Photometric measurements:

Absolute Luminous Flux:	19499.6	(lumens)
Luminous Efficacy:	42.6	(lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	12677	12677	12677	12677	12677	
5.00	12187	12190	12161	12237	12197	1240
15.00	9568	9409	9280	9303	9453	2677
25.00	8189	8163	8019	8068	8083	3757
35.00	7276	7219	7109	7107	7152	4516
45.00	5448	5447	5399	5413	5465	4215
55.00	2652	2822	2967	2896	2873	2523
65.00	503	541	627	559	508	528
75.00	130	138	196	144	140	152
85.00	7	11	14	13	11	6
90.00	1	1	1	1	1	

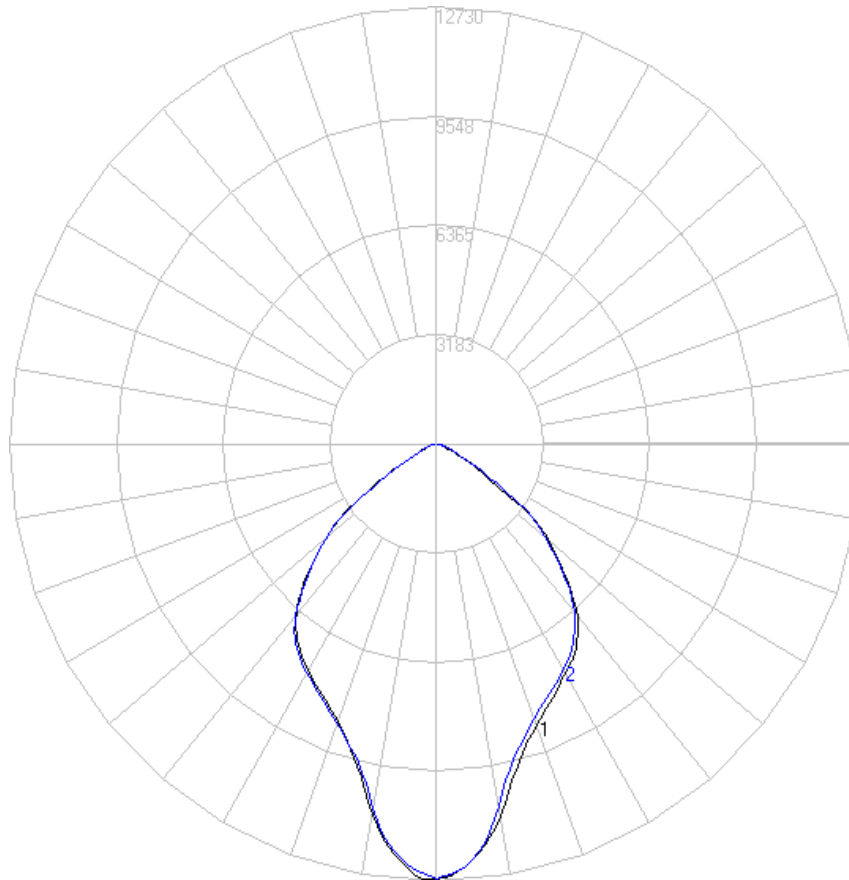
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	7555.15	38.75	38.75
0 to 40	12048.21	61.79	61.79
0 to 60	18707.78	95.94	95.94
0 to 90	19499.50	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	19499.50	100.00	100.00

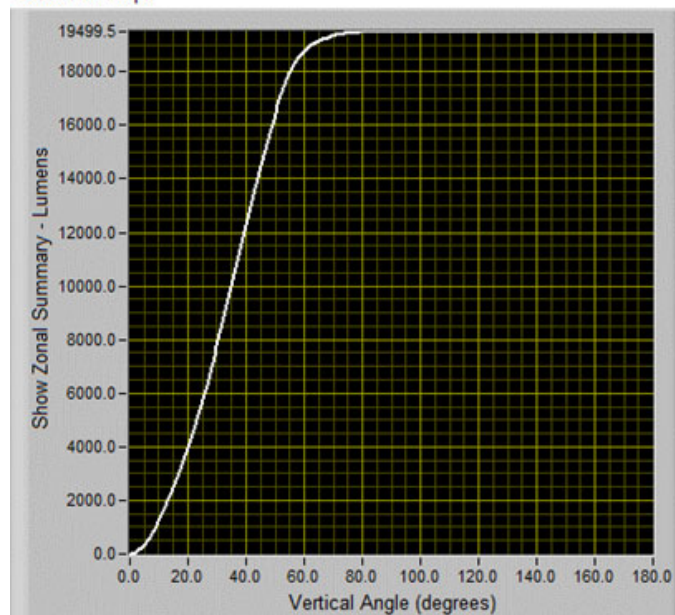
Test Results: Goniometer

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Polar Plot:



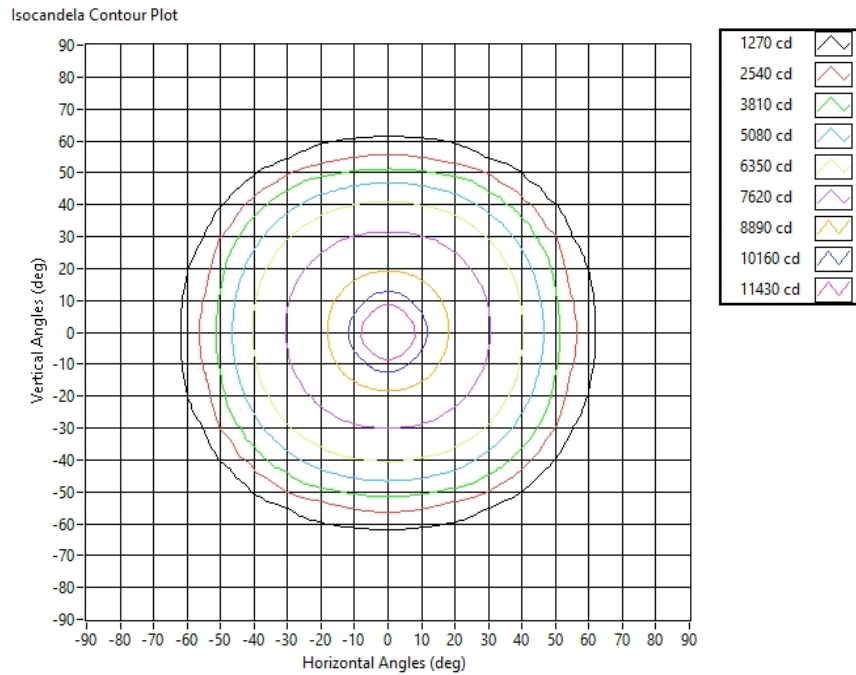
Zonal Flux Graph



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	3.47	3.40	3169.3
4	6.95	6.80	792.3
6	10.42	10.20	352.1
8	13.90	13.59	198.1
10	17.37	16.99	126.8
12	20.85	20.39	88.0
14	24.32	23.79	64.7
16	27.80	27.19	49.5
18	31.27	30.59	39.1
20	34.74	33.99	31.7

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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