

Test Report

Report Number: L23040

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: F2UN4A2Exxxxxx

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 21, 2023 through December 21, 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

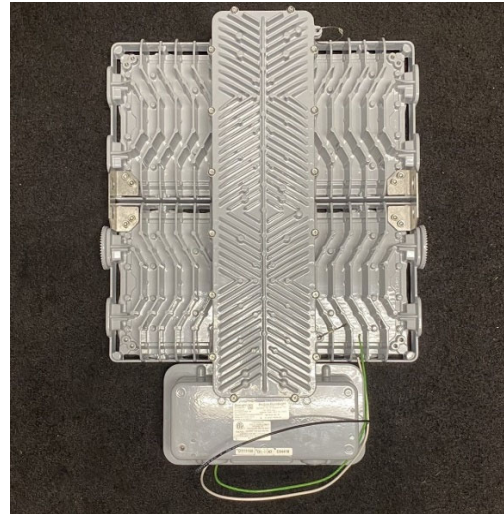
Description of sample:

Sample Number: L23040
Manufacturer: Dialight Corporation
Product Name: ProSite F2 Flood 24K
Description: Floodlight
Model Number: F2UN4A2Exxxxxx

Report Summary

Sample number L23040
Dialight unit model number F2UN4A2Exxxxxx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	23237 (lumens)	23749 (lumens)
Electrical Power:	453.7 (W)	453.7 (W)
Luminous Efficacy:	51.21 (lumens/W)	52.34 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	453.7 (W)
	Power Factor (120VAC):	0.9952
	Current ATHD % (120VAC):	5.05
Secondary Voltage:	Input Power (277VAC):	437.4 (W)
	Power Factor (277VAC):	0.9602
	Current ATHD % (277VAC):	9.68

Color Measurements:

Correlated Color Temperature (CCT):	1766 (K)
Color Rendering Index (CRI):	57.67
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 L23040.

Dialight unit model number F2UN4A2Exxxxxx

Test Conditions:

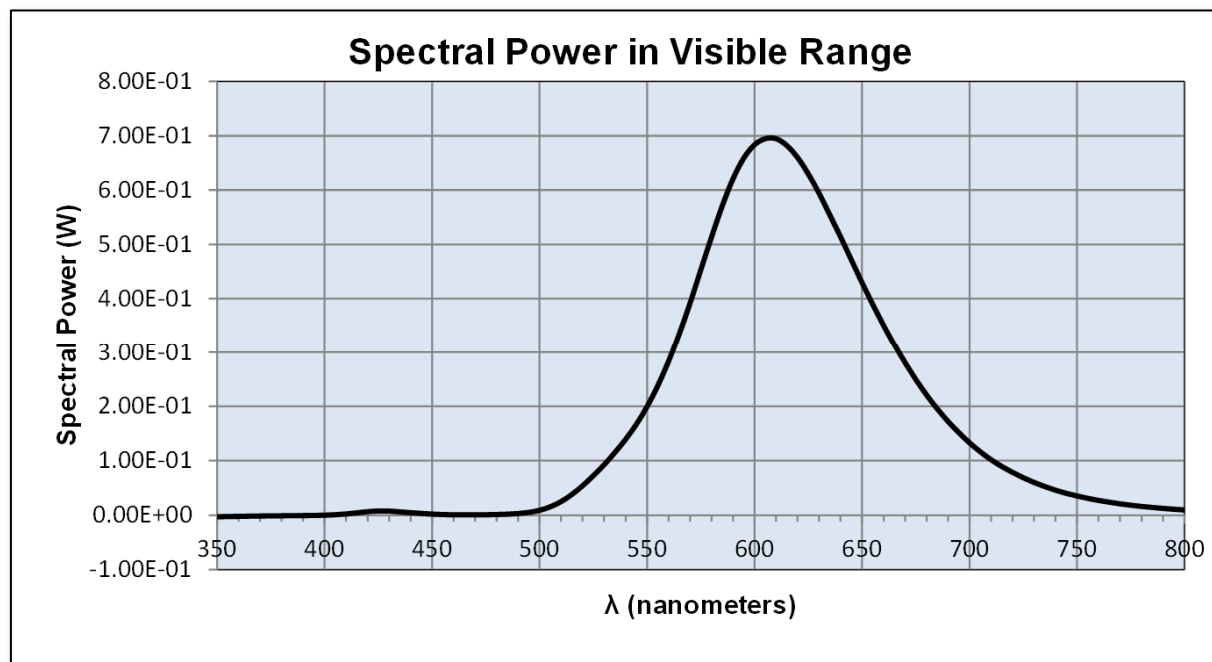
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.3 (VAC)
Input Current: 3.789 (A)
Input Power: 453.7 (W)
Input Power Factor: 0.9952
Current ATHD: 5.05 (%)

Photometric measurements:

Luminous Flux: 23236.6 (lumens)
Luminous Efficacy: 51.2 (lumens/W)
Correlated Color Temperature (CCT): 1766 (K)
CRI -Ra: 57.67
CRI -R9: -56.10
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: 53.5
TM30_Rg: 46.7
TM30_Rcs_hue1: -21.75 %



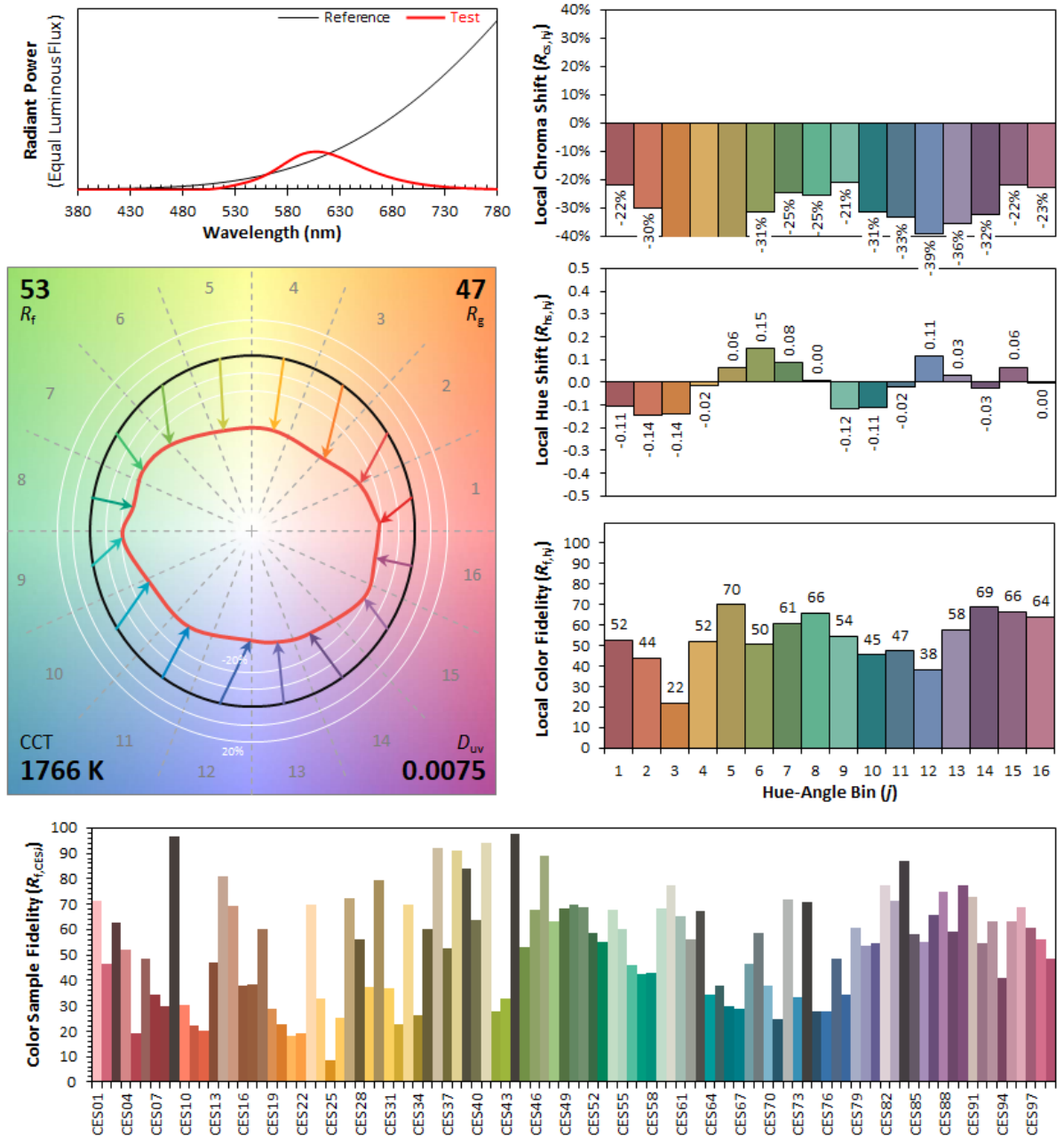
Test Results: Integrating Sphere

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	-0.00282	490	0.00314	630	0.59390	770	0.02101
355	-0.00222	495	0.00533	635	0.55392	775	0.01848
360	-0.00205	500	0.00918	640	0.51366	780	0.01620
365	-0.00161	505	0.01560	645	0.47141	785	0.01427
370	-0.00137	510	0.02518	650	0.42912	790	0.01259
375	-0.00113	515	0.03820	655	0.38877	795	0.01109
380	-0.00090	520	0.05424	660	0.35033	800	0.00980
385	-0.00066	525	0.07281	665	0.31425		
390	-0.00054	530	0.09281	670	0.28055		
395	-0.00030	535	0.11532	675	0.24936		
400	0.00015	540	0.13950	680	0.22102		
405	0.00100	545	0.16712	685	0.19538		
410	0.00243	550	0.19972	690	0.17223		
415	0.00455	555	0.23836	695	0.15176		
420	0.00662	560	0.28316	700	0.13300		
425	0.00790	565	0.33526	705	0.11661		
430	0.00774	570	0.39207	710	0.10199		
435	0.00628	575	0.45357	715	0.08953		
440	0.00475	580	0.51405	720	0.07872		
445	0.00338	585	0.57142	725	0.06890		
450	0.00212	590	0.62128	730	0.06021		
455	0.00131	595	0.65916	735	0.05278		
460	0.00093	600	0.68357	740	0.04601		
465	0.00081	605	0.69466	745	0.04025		
470	0.00083	610	0.69458	750	0.03538		
475	0.00099	615	0.68205	755	0.03107		
480	0.00134	620	0.65990	760	0.02727		
485	0.00198	625	0.62963	765	0.02396		

IES TM-30-18 Color Rendition Report



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

x 0.5681
 y 0.4249
 u' 0.3264
 v' 0.5492

CIE 13.3-1995
(CRI)
 R_a 58
 R_g -56

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 L23040.

Dialight unit model number F2UN4A2Exxxxxx

Electrical Measurements:

Input Voltage: 119.9 (VAC)
Input current: 3.80 (A)
Input Power: 453.73 (W)
Power Factor: 0.9952

Photometric measurements:

Absolute Luminous Flux: 23749.3 (lumens)
Luminous Efficacy: 52.3 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	22.50	45.00	67.50	90.00	Lumens
0.00	82431	82431	82431	82427	82431	
5.00	73770	73761	73830	73875	73896	7541
15.00	40896	40668	40442	40407	40371	11511
25.00	6333	6496	6660	6073	5610	2802
35.00	911	920	912	914	919	575
45.00	536	537	535	536	537	415
55.00	376	398	389	403	421	357
65.00	322	322	322	323	323	320
75.00	215	214	215	215	215	227
85.00	69	60	57	62	60	35
90.00	0	0	0	0	0	

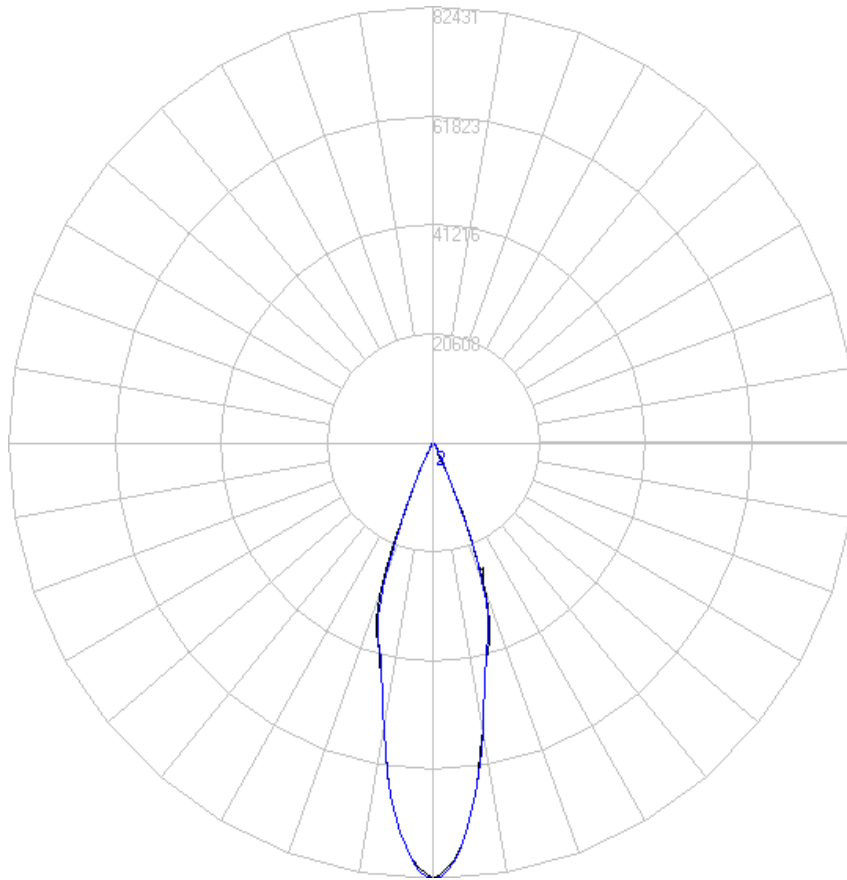
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	21808.20	91.83	91.83
0 to 40	22399.23	94.32	94.32
0 to 60	23158.72	97.51	97.51
0 to 90	23749.34	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	23749.34	100.00	100.00

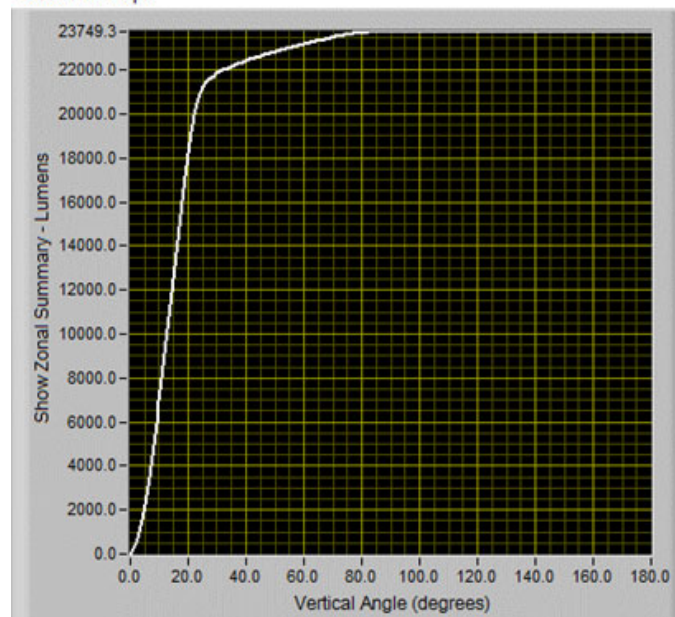
Test Results: Goniometer

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Polar Plot:



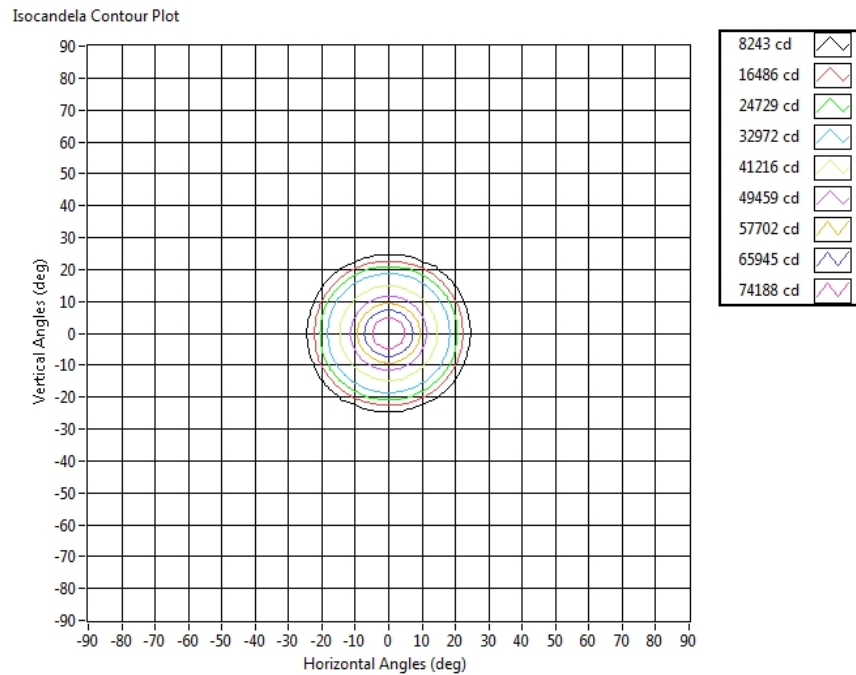
Zonal Flux Graph



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	1.01	1.03	20607.8
4	2.02	2.06	5151.9
6	3.03	3.09	2289.8
8	4.04	4.12	1288.0
10	5.05	5.15	824.3
12	6.06	6.18	572.4
14	7.07	7.21	420.6
16	8.08	8.24	322.0
18	9.09	9.27	254.4
20	10.10	10.30	206.1

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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Test Report Issued By:

Abriam Rodriguez
Dialight Optics Laboratory
Optics Lab Technician

Test Report Reviewed and Approved By:

Callan McCormick
Dialight Optics Laboratory
Optics Lab Engineer
Approved Signatory