

Test Report

Report Number: L24021

Date: Aug 28, 2024

Issued by:

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

Test of one Streetlight

Unit manufacturer: Dialight Corporation
Unit model number: S1xNPL2FxxxxxN

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: August 28, 2024 through August 28, 2024

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

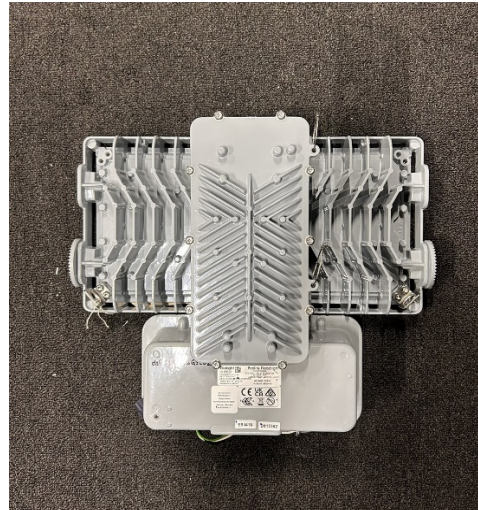
Description of sample:

Sample Number: L24021
Manufacturer: Dialight Corporation
Product Name: ProSite Streetlight
Description: Streetlight
Model Number: S1xNPL2FxxxxxN

Report Summary

Sample number L24021
Dialight unit model number S1xNPL2FxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	28180 (lumens)	27621 (lumens)
Electrical Power:	235.9 (W)	236.7 (W)
Luminous Efficacy:	119.5 (lumens/W)	116.7 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	235.9 (W)
	Power Factor (120VAC):	0.9965
	Current ATHD % (120VAC):	5.34
Secondary Voltage:	Input Power (277VAC):	227.2 (W)
	Power Factor (277VAC):	0.9812
	Current ATHD % (277VAC):	9.59

Color Measurements:

Correlated Color Temperature (CCT):	4118 (K)
Color Rendering Index (CRI):	74.77
Chromaticity Coordinate (x):	0.376
Chromaticity Coordinate (y):	0.374
Chromaticity Coordinate (u')	0.223
Chromaticity Coordinate (v')	0.500
DUV:	0.0003

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24021.

Dialight unit model number S1xNPL2FxxxxN

Test Conditions:

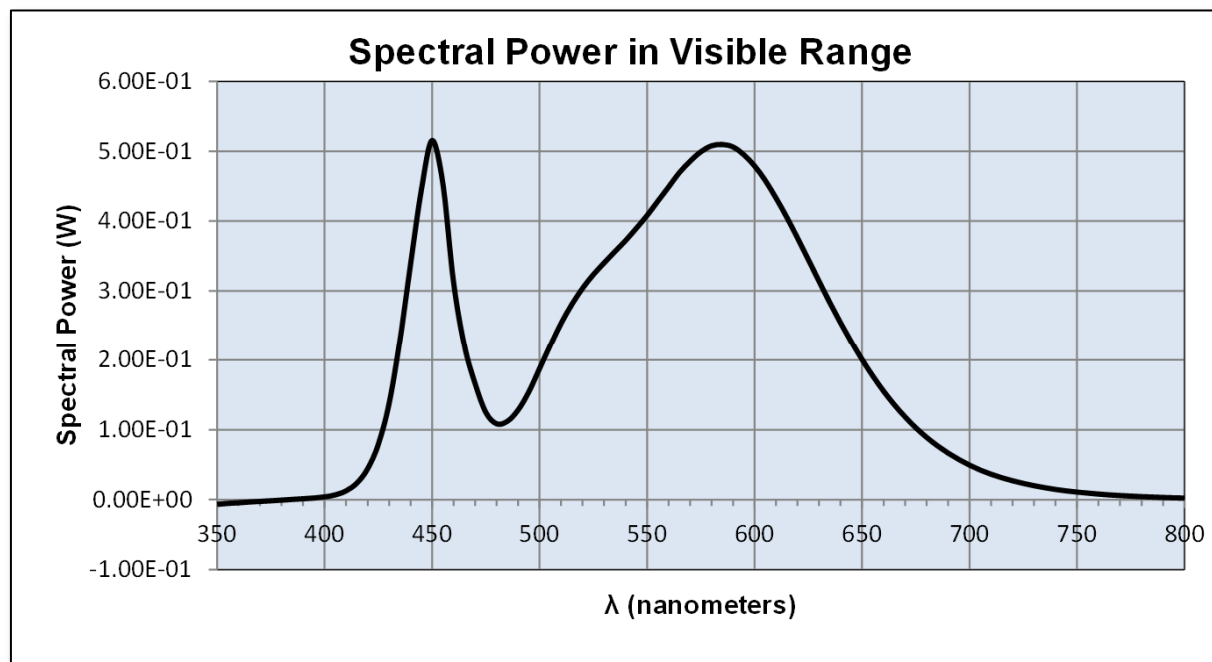
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input Current: 1.972 (A)
Input Power: 235.9 (W)
Input Power Factor: 0.9965
Current ATHD: 5.34 (%)

Photometric measurements:

Luminous Flux: 28179.6 (lumens)
Luminous Efficacy: 119.5 (lumens/W)
Correlated Color Temperature (CCT): 4118 (K)
CRI -Ra: 74.77
CRI -R9: -26.51
DUV: 0.0003
CIE Coordinate (x): 0.376
CIE Coordinate (y): 0.374
CIE Coordinate (u'): 0.223
CIE Coordinate (v'): 0.500
TM30_Rf: 77.2
TM30_Rg: 93.5
TM30_Rcs_hue1: -16.65 %



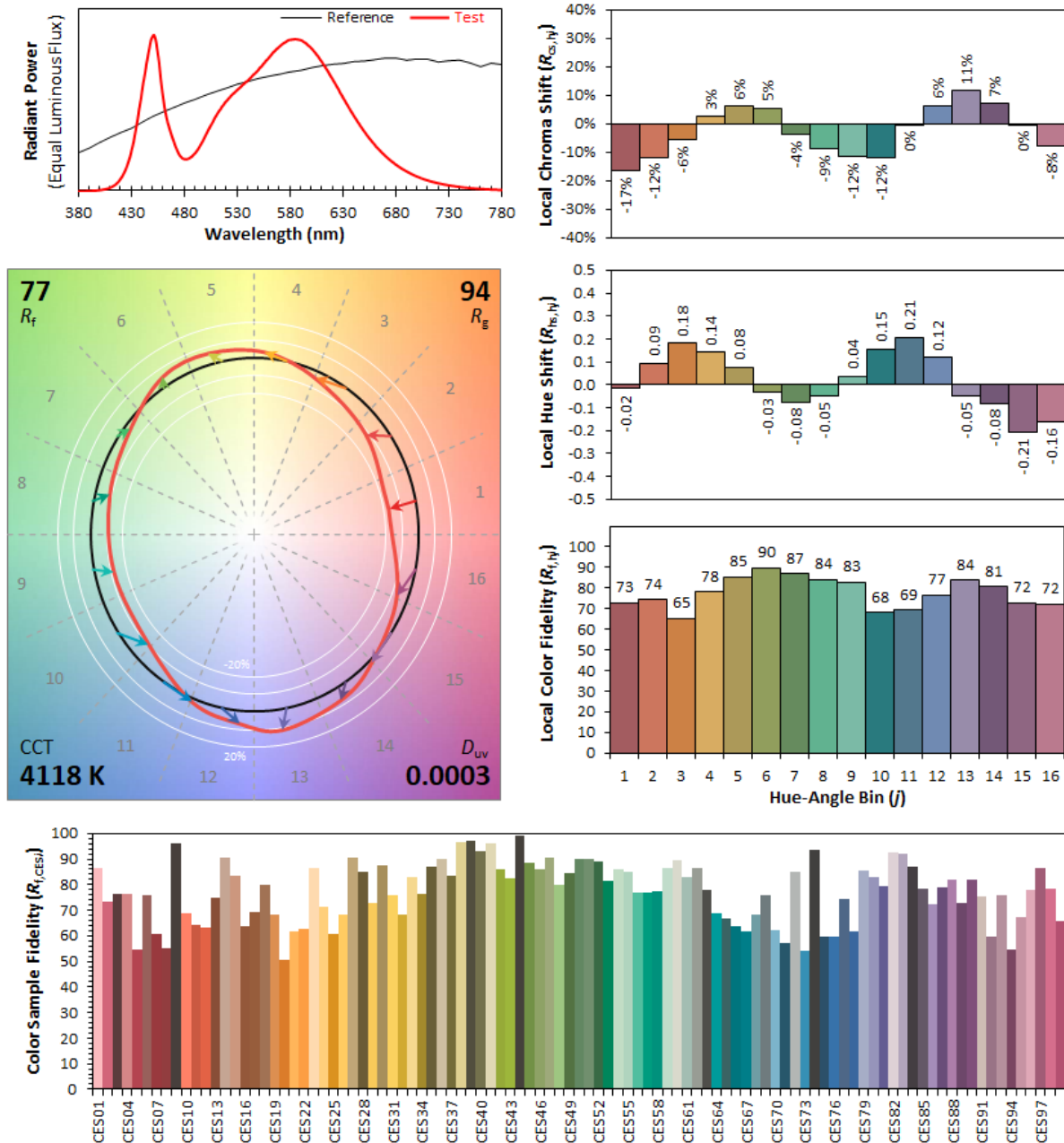
Test Results: Integrating Sphere

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	-0.00655	490	0.12826	630	0.31353	770	0.00595
355	-0.00520	495	0.15423	635	0.28298	775	0.00512
360	-0.00433	500	0.18777	640	0.25384	780	0.00441
365	-0.00328	505	0.22136	645	0.22629	785	0.00379
370	-0.00240	510	0.25353	650	0.20041	790	0.00322
375	-0.00154	515	0.28071	655	0.17683	795	0.00273
380	-0.00057	520	0.30393	660	0.15512	800	0.00234
385	0.00047	525	0.32337	665	0.13576		
390	0.00137	530	0.34015	670	0.11836		
395	0.00240	535	0.35631	675	0.10277		
400	0.00409	540	0.37218	680	0.08919		
405	0.00699	545	0.38975	685	0.07713		
410	0.01270	550	0.40813	690	0.06664		
415	0.02376	555	0.42860	695	0.05742		
420	0.04419	560	0.44886	700	0.04936		
425	0.07941	565	0.46941	705	0.04233		
430	0.13776	570	0.48583	710	0.03640		
435	0.22817	575	0.49939	715	0.03136		
440	0.33868	580	0.50791	720	0.02705		
445	0.44469	585	0.50980	725	0.02330		
450	0.51551	590	0.50614	730	0.01996		
455	0.45345	595	0.49507	735	0.01716		
460	0.31163	600	0.47898	740	0.01469		
465	0.22108	605	0.45807	745	0.01262		
470	0.16580	610	0.43273	750	0.01090		
475	0.12470	615	0.40531	755	0.00937		
480	0.10852	620	0.37562	760	0.00807		
485	0.11214	625	0.34480	765	0.00687		

IES TM-30-18 Color Rendition Report



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

x 0.3756
 y 0.3743
 u' 0.2229
 v' 0.4998

CIE 13.3-1995
(CRI)

R_a 75
 R_g -27

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 L24021.

Dialight unit model number S1xNPL2FxxxxN

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input current: 1.98 (A)
Input Power: 236.67 (W)
Power Factor: 0.9964

Photometric measurements:

Absolute Luminous Flux: 27620.9 (lumens)
Luminous Efficacy: 116.7 (lumens/W)

BUG Rating: B4 - U0 - G5

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	10575	10575	10575	10575	10575	
5.00	10854	10979	8741	10080	9882	1037
15.00	8058	8340	7736	6207	4457	1898
25.00	8207	5511	8176	3505	2938	2607
35.00	7696	6024	7399	3689	3735	3588
45.00	3776	4062	6795	4060	3056	3097
55.00	1315	2974	11813	2606	1431	2720
65.00	866	4628	16960	1381	1199	3491
75.00	519	3208	9777	1074	759	2282
85.00	178	1691	441	571	304	267
90.00	0	0	0	0	0	

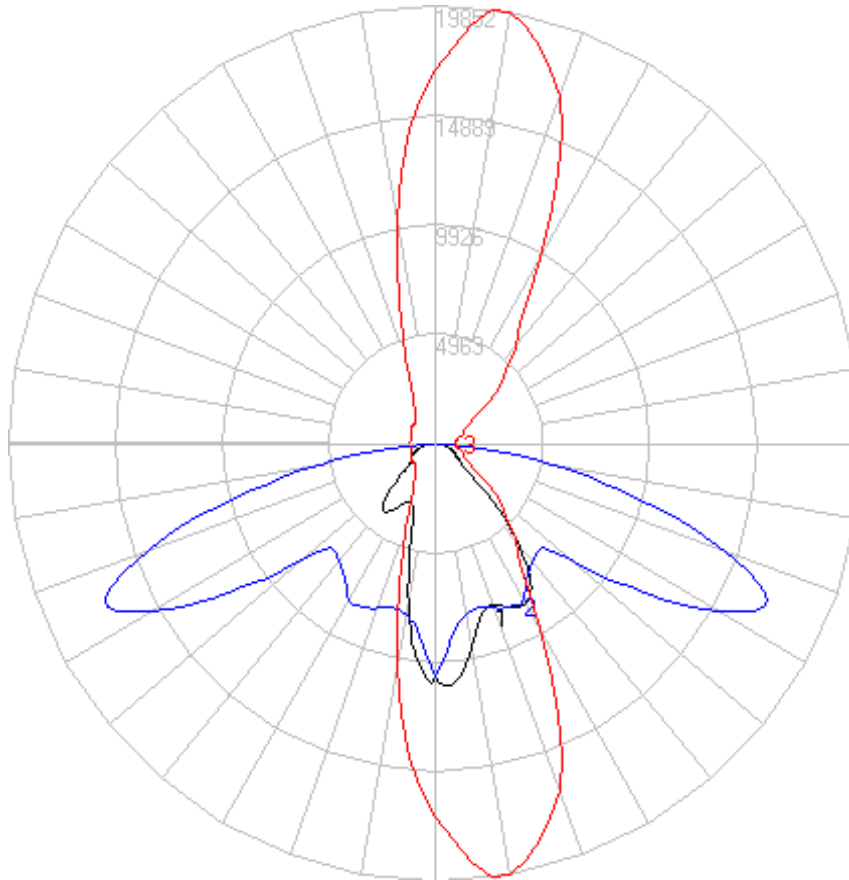
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	5565.34	20.22	20.22
0 to 40	9163.19	33.30	33.30
0 to 60	16839.09	61.19	61.19
0 to 90	27517.61	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	27517.61	100.00	100.00

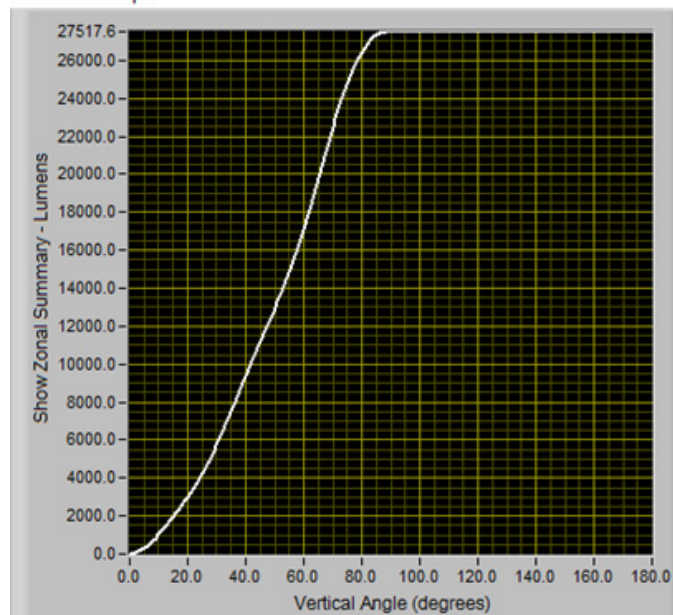
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



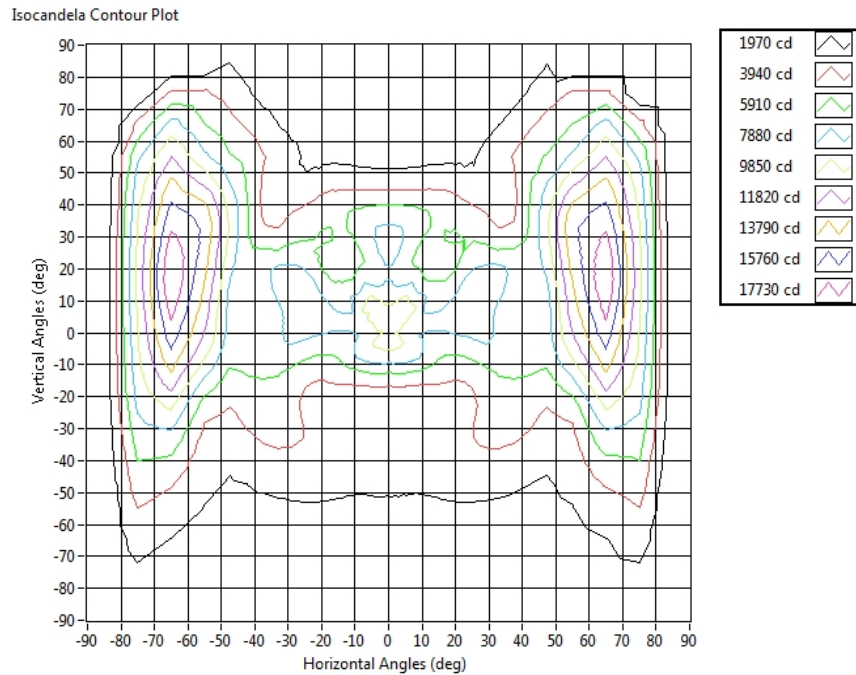
Zonal Flux Graph



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	2.24	24.60	2643.6
4	4.48	49.19	660.9
6	6.71	73.79	293.7
8	8.95	98.38	165.2
10	11.19	122.98	105.7
12	13.43	147.58	73.4
14	15.67	172.17	54.0
16	17.91	196.77	41.3
18	20.14	221.36	32.6
20	22.38	245.96	26.4

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 TC Meter	Dpi8-C24
Xitron Power Analyzer	XT2640
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
Labshere Spectrometer- CDS 2600 Spectrometer	CDS-2600
Xitron Power Analyzer	XT2640
LPS-525 DC Power Supply	LPS-525
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

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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