

Test Report

Report Number: L24018

Date: Aug 21, 2024

Issued by:

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

Test of one Street Light

Unit manufacturer: Dialight Corporation
Unit model number: S1xNQL2ExxxxxN

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 20, 2024 through August 20, 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

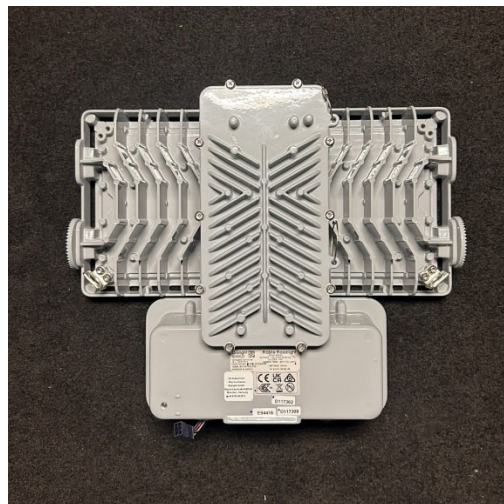
Description of sample:

Sample Number: L24018
Manufacturer: Dialight Corporation
Product Name: ProSite Street Light
Description: Street Light
Model Number: S1xNQL2ExxxxxN

Report Summary

Sample number L24018
Dialight unit model number S1xNQL2ExxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	23525 (lumens)	23884 (lumens)
Electrical Power:	177.5 (W)	177.0 (W)
Luminous Efficacy:	132.6 (lumens/W)	134.9 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	177.5 (W)
	Power Factor (120VAC):	0.9938
	Current ATHD % (120VAC):	4.91
Secondary Voltage:	Input Power (277VAC):	172.1 (W)
	Power Factor (277VAC):	0.9322
	Current ATHD % (277VAC):	9.45

Color Measurements:

Correlated Color Temperature (CCT):	4045 (K)
Color Rendering Index (CRI):	73.87
Chromaticity Coordinate (x):	0.380
Chromaticity Coordinate (y):	0.379
Chromaticity Coordinate (u')	0.223
Chromaticity Coordinate (v')	0.503
DUV:	0.0015

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24018.

Dialight unit model number S1xNQL2ExxxxN

Test Conditions:

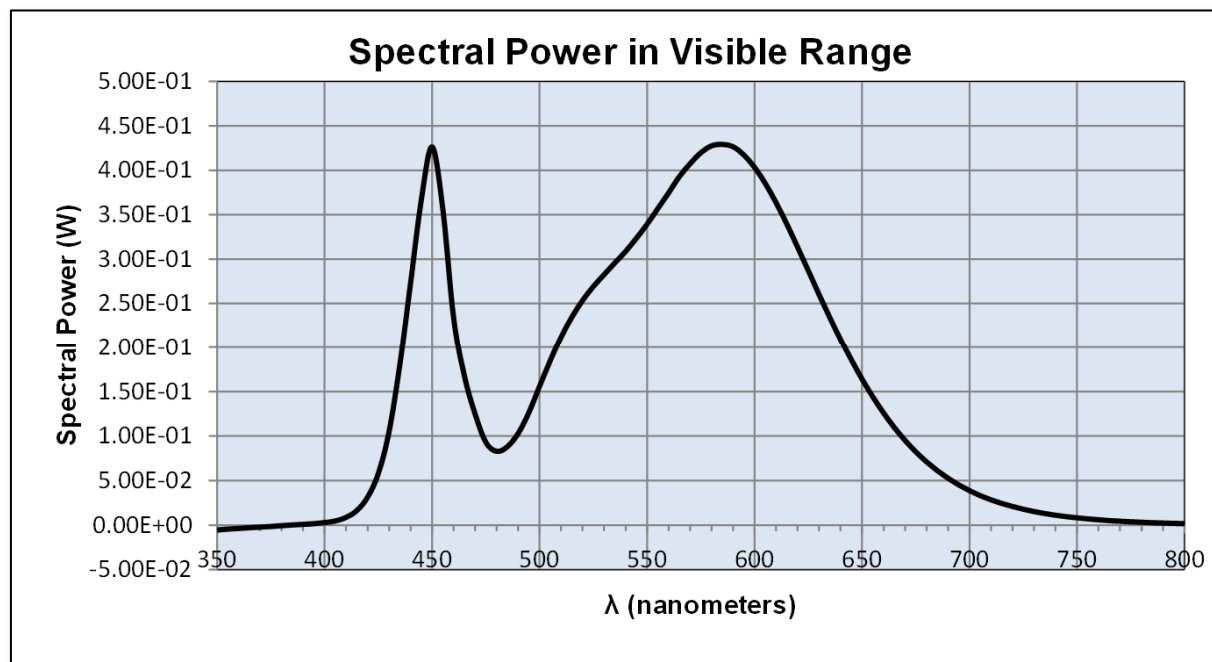
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.1 (VAC)
Input Current: 1.487 (A)
Input Power: 177.5 (W)
Input Power Factor: 0.9938
Current ATHD: 4.91 (%)

Photometric measurements:

Luminous Flux: 23524.8 (lumens)
Luminous Efficacy: 132.6 (lumens/W)
Correlated Color Temperature (CCT): 4045 (K)
CRI -Ra: 73.87
CRI -R9: -31.70
DUV: 0.0015
CIE Coordinate (x): 0.380
CIE Coordinate (y): 0.379
CIE Coordinate (u'): 0.223
CIE Coordinate (v'): 0.503
TM30_Rf: 76.9
TM30_Rg: 93.2
TM30_Rcs_hue1: -17.13 %



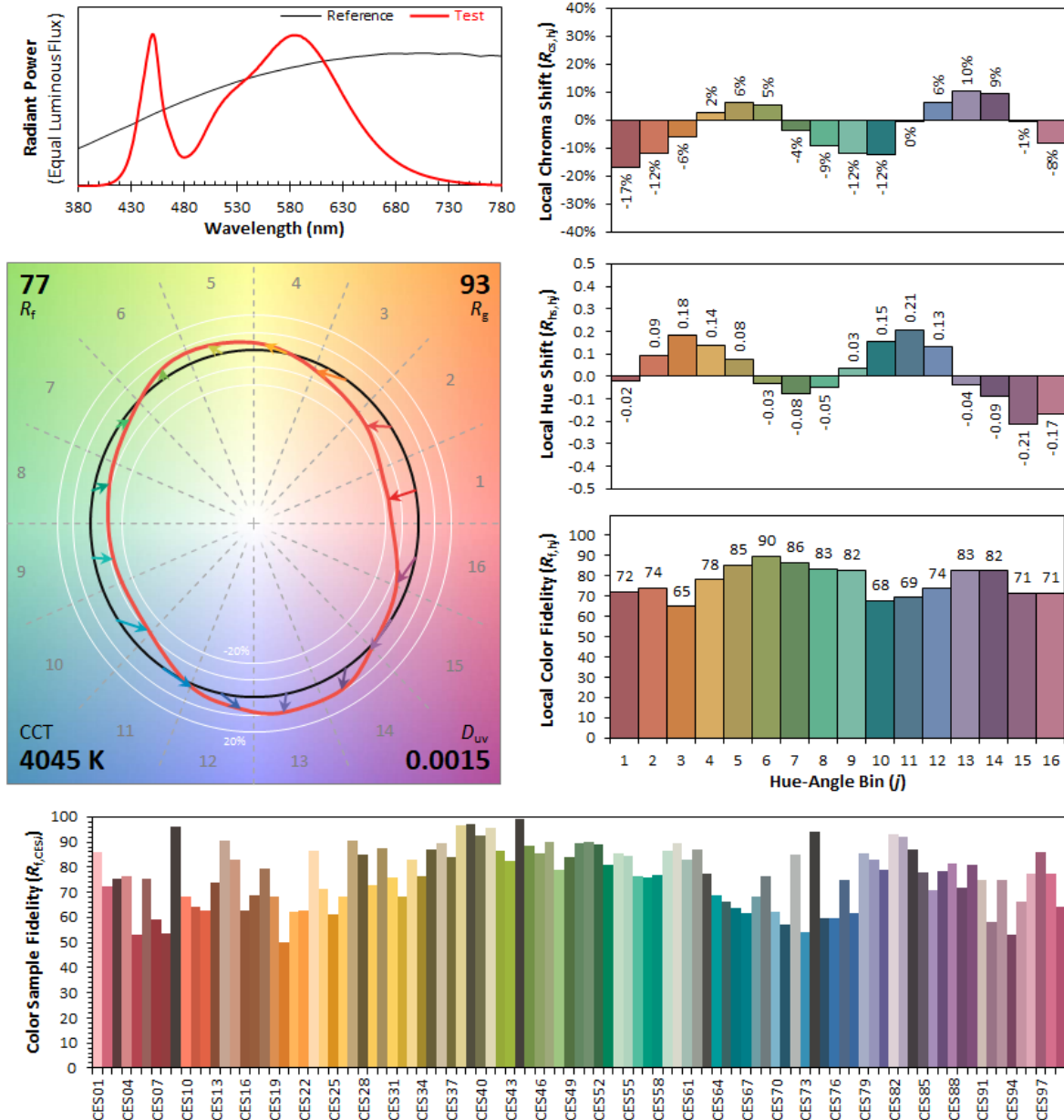
Test Results: Integrating Sphere

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	-0.00543	490	0.10290	630	0.26004	770	0.00444
355	-0.00439	495	0.12640	635	0.23409	775	0.00380
360	-0.00371	500	0.15609	640	0.20914	780	0.00327
365	-0.00287	505	0.18514	645	0.18575	785	0.00278
370	-0.00218	510	0.21229	650	0.16391	790	0.00237
375	-0.00146	515	0.23480	655	0.14406	795	0.00200
380	-0.00056	520	0.25365	660	0.12588	800	0.00171
385	0.00025	525	0.26930	665	0.10963		
390	0.00092	530	0.28269	670	0.09513		
395	0.00167	535	0.29589	675	0.08227		
400	0.00286	540	0.30870	680	0.07106		
405	0.00477	545	0.32349	685	0.06121		
410	0.00869	550	0.33936	690	0.05262		
415	0.01648	555	0.35692	695	0.04518		
420	0.03146	560	0.37459	700	0.03871		
425	0.05823	565	0.39294	705	0.03304		
430	0.10541	570	0.40751	710	0.02836		
435	0.18051	575	0.41987	715	0.02434		
440	0.27354	580	0.42758	720	0.02095		
445	0.36726	585	0.42925	725	0.01791		
450	0.42635	590	0.42655	730	0.01530		
455	0.35571	595	0.41732	735	0.01309		
460	0.23374	600	0.40333	740	0.01117		
465	0.16777	605	0.38511	745	0.00956		
470	0.12470	610	0.36357	750	0.00826		
475	0.09298	615	0.33949	755	0.00705		
480	0.08292	620	0.31355	760	0.00604		
485	0.08814	625	0.28701	765	0.00513		

IES TM-30-18 Color Rendition Report



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

x 0.3795
 y 0.3793
 u' 0.2235
 v' 0.5026

CIE 13.3-1995
(CRI)
 R_a 74
 R_g -32

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 L24018.
Dialight unit model number S1xNQL2ExxxxxN

Electrical Measurements:

Input Voltage: 120.1 (VAC)
Input current: 1.48 (A)
Input Power: 177.01 (W)
Power Factor: 0.9939

Photometric measurements:

Absolute Luminous Flux: 23884.1 (lumens)
Luminous Efficacy: 134.9 (lumens/W)

BUG Rating: B3 - U0 - G5

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	7904	7904	7904	7904	7904	
5.00	8013	7683	7633	7788	8011	801
15.00	6174	4939	5237	4965	5588	1578
25.00	5341	3078	4588	3452	2595	1791
35.00	5462	3060	5269	3281	3488	2669
45.00	6332	4529	5749	2929	3253	3598
55.00	4196	6018	7000	2093	1351	3250
65.00	1041	4303	11580	1473	958	2773
75.00	568	2808	9239	1002	807	2180
85.00	282	1306	1442	522	508	400
90.00	116	15	15	381	212	

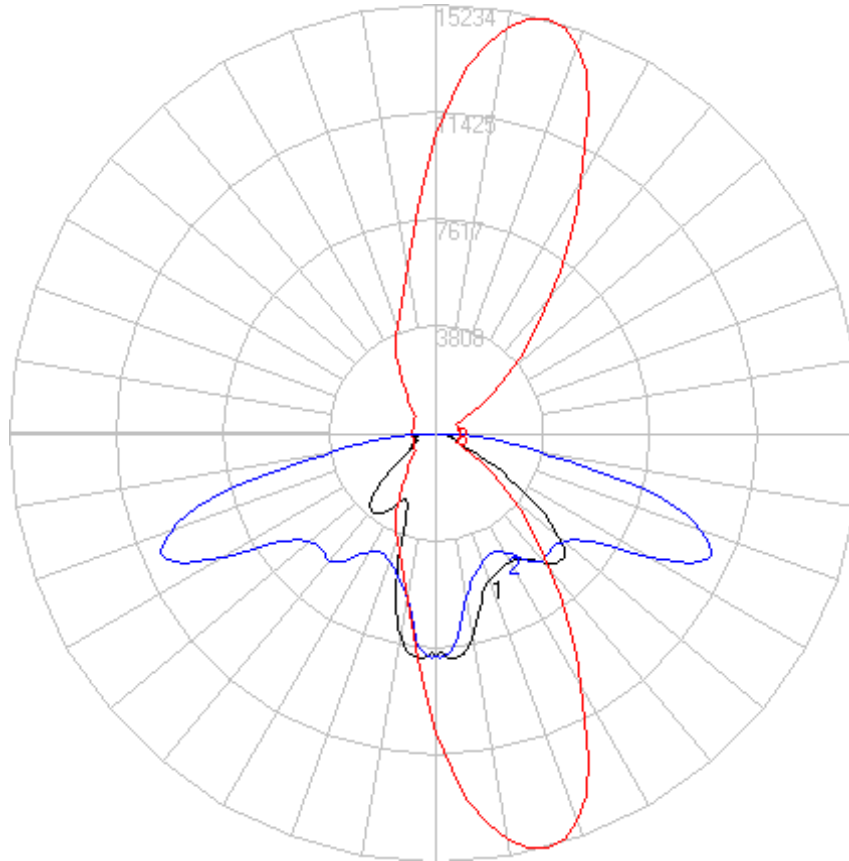
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	3919.28	16.46	16.46
0 to 40	6541.94	27.48	27.48
0 to 60	14518.91	60.98	60.98
0 to 90	23809.60	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	23809.60	100.00	100.00

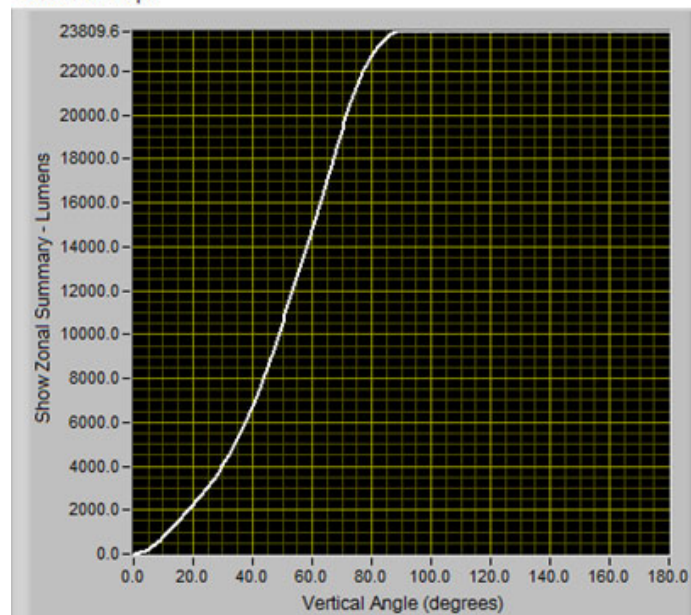
Test Results: Goniometer

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Polar Plot:



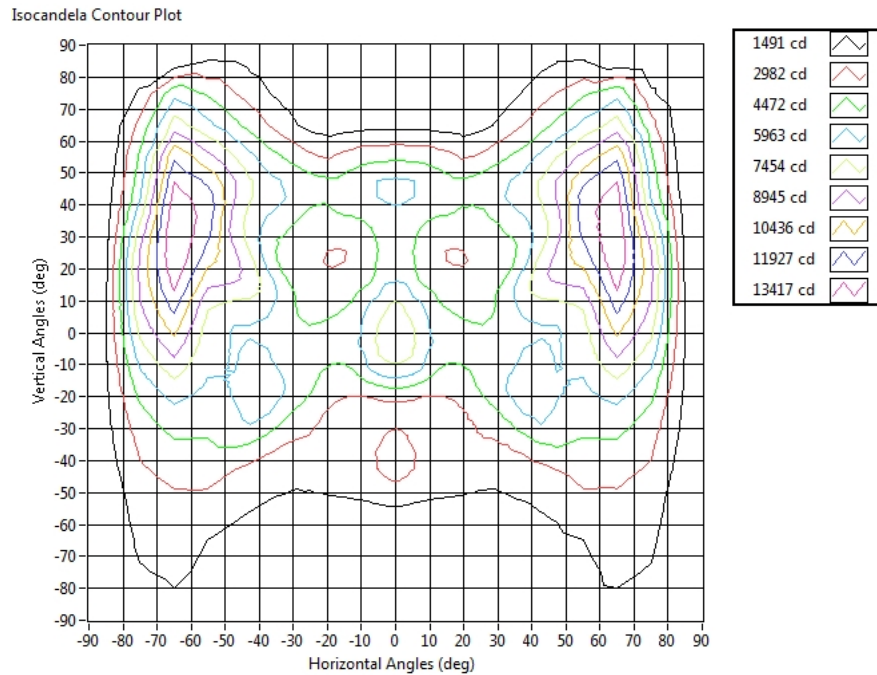
Zonal Flux Graph



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	3.56	21.81	1976.1
4	7.12	43.62	494.0
6	10.68	65.42	219.6
8	14.24	87.23	123.5
10	17.80	109.04	79.0
12	21.36	130.85	54.9
14	24.92	152.65	40.3
16	28.48	174.46	30.9
18	32.04	196.27	24.4
20	35.60	218.08	19.8

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 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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