

Test Report

Report Number: L24017

Date: Aug 1, 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: S1xNQL2FxxxxxN

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 1, 2024 through August 1, 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

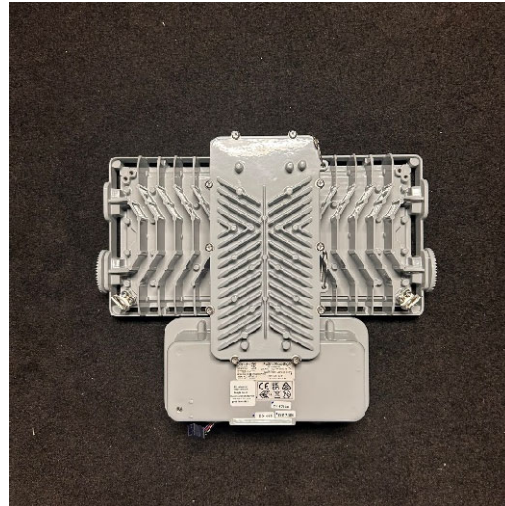
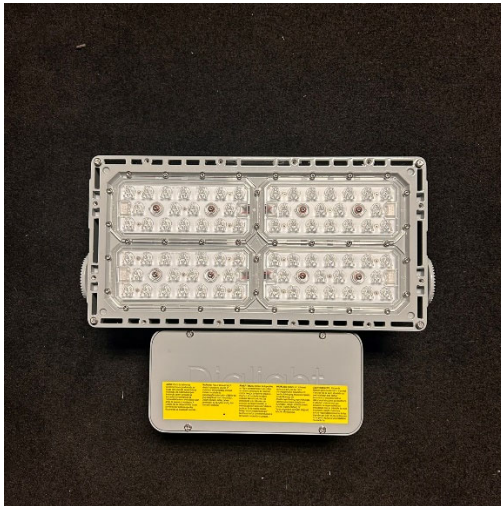
Description of sample:

Sample Number: L24017
Manufacturer: Dialight Corporation
Product Name: ProSite Street Light
Description: Street Light
Model Number: S1xNQL2FxxxxxN

Report Summary

Sample number L24017
Dialight unit model number S1xNQL2FxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	28670 (lumens)	29074 (lumens)
Electrical Power:	236.5 (W)	236.3 (W)
Luminous Efficacy:	121.2 (lumens/W)	123 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	236.5 (W)
	Power Factor (120VAC):	0.9954
	Current ATHD % (120VAC):	4.59
Secondary Voltage:	Input Power (277VAC):	228.2 (W)
	Power Factor (277VAC):	0.9590
	Current ATHD % (277VAC):	8.94

Color Measurements:

Correlated Color Temperature (CCT):	4119 (K)
Color Rendering Index (CRI):	74.24
Chromaticity Coordinate (x):	0.376
Chromaticity Coordinate (y):	0.375
Chromaticity Coordinate (u')	0.223
Chromaticity Coordinate (v')	0.500
DUV:	0.0006

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24017.

Dialight unit model number S1xNQL2FxxxxN

Test Conditions:

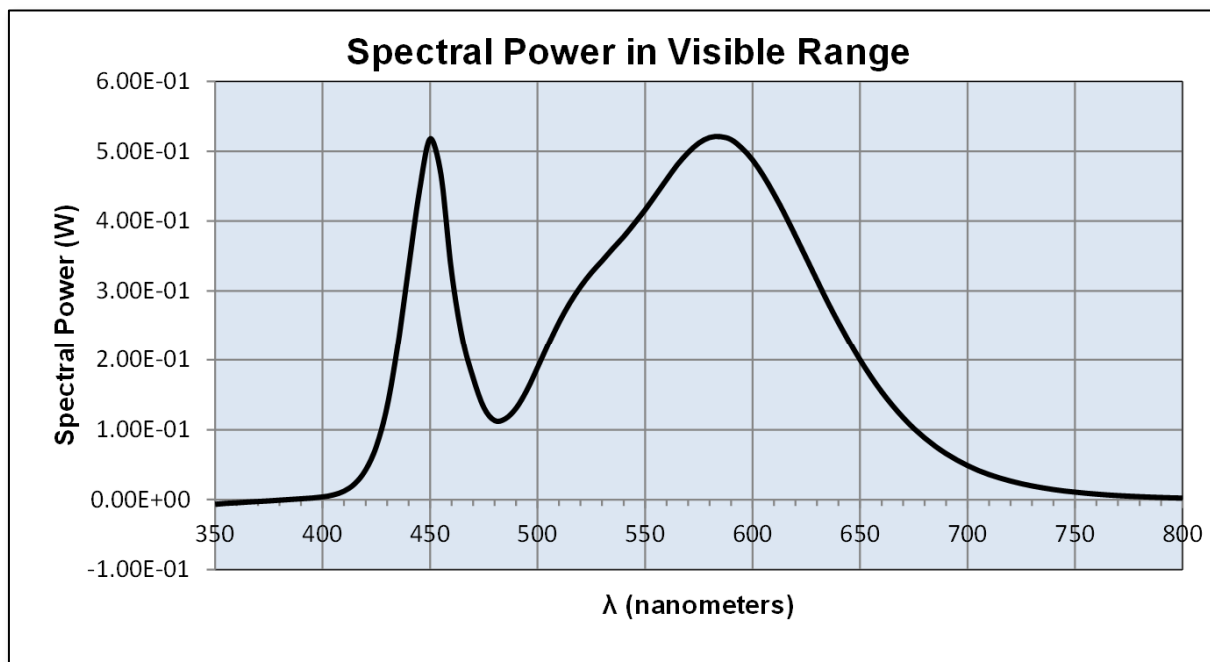
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 119.9 (VAC)
Input Current: 1.982 (A)
Input Power: 236.5 (W)
Input Power Factor: 0.9954
Current ATHD: 4.59 (%)

Photometric measurements:

Luminous Flux: 28669.5 (lumens)
Luminous Efficacy: 121.2 (lumens/W)
Correlated Color Temperature (CCT): 4119 (K)
CRI -Ra: 74.24
CRI -R9: -29.57
DUV: 0.0006
CIE Coordinate (x): 0.376
CIE Coordinate (y): 0.375
CIE Coordinate (u'): 0.223
CIE Coordinate (v'): 0.500
TM30_Rf: 76.9
TM30_Rg: 93.0
TM30_Rcs_hue1: -17.09 %



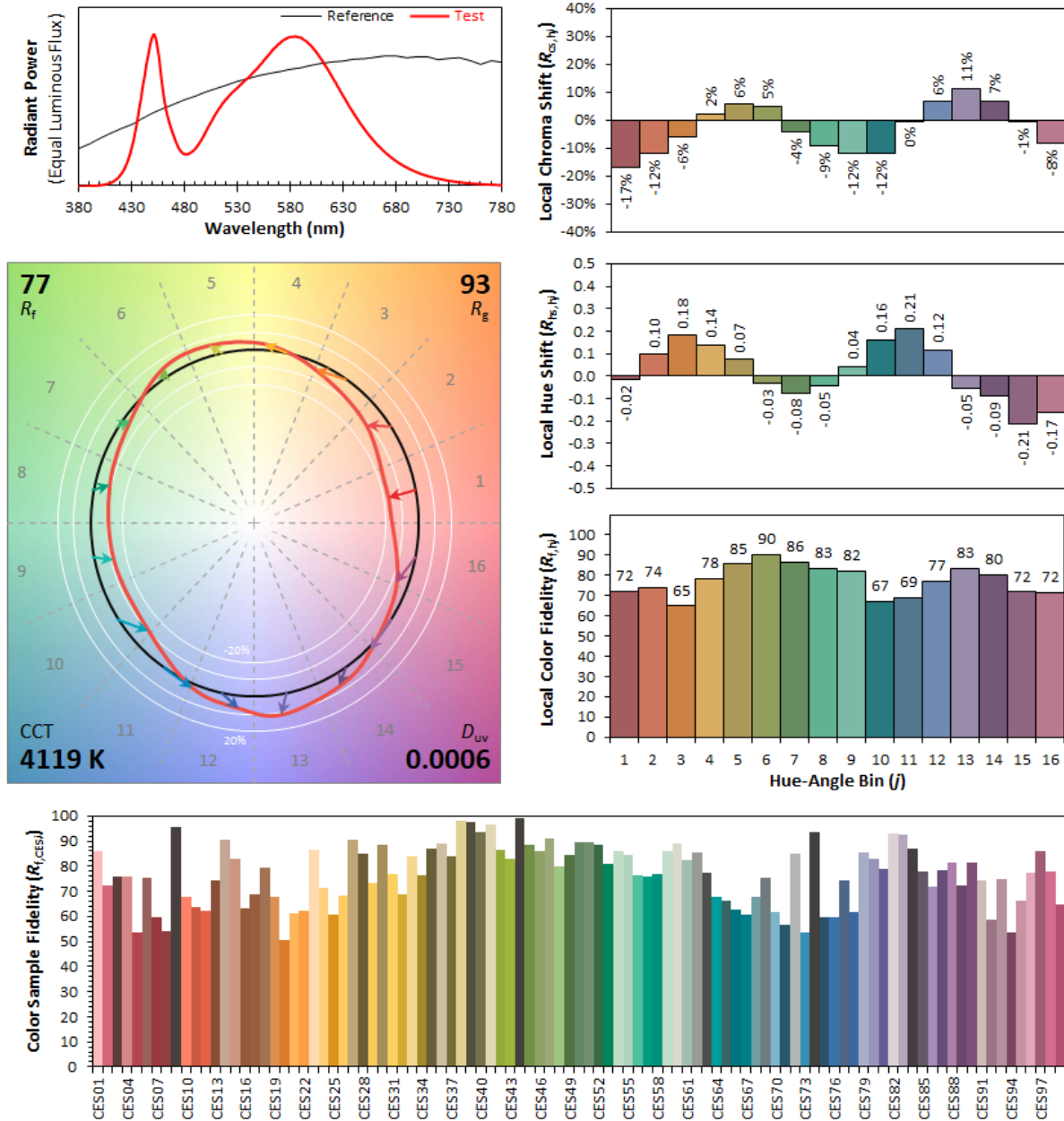
Test Results: Integrating Sphere

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	-0.00652	490	0.13082	630	0.31479	770	0.00587
355	-0.00520	495	0.15645	635	0.28336	775	0.00507
360	-0.00445	500	0.18918	640	0.25397	780	0.00436
365	-0.00343	505	0.22300	645	0.22602	785	0.00372
370	-0.00256	510	0.25511	650	0.19989	790	0.00317
375	-0.00164	515	0.28277	655	0.17609	795	0.00272
380	-0.00062	520	0.30620	660	0.15431	800	0.00233
385	0.00038	525	0.32607	665	0.13495		
390	0.00139	530	0.34314	670	0.11742		
395	0.00238	535	0.36075	675	0.10185		
400	0.00398	540	0.37758	680	0.08830		
405	0.00685	545	0.39658	685	0.07629		
410	0.01231	550	0.41616	690	0.06588		
415	0.02301	555	0.43773	695	0.05673		
420	0.04256	560	0.45953	700	0.04876		
425	0.07641	565	0.48072	705	0.04178		
430	0.13335	570	0.49825	710	0.03593		
435	0.22218	575	0.51180	715	0.03097		
440	0.33327	580	0.51974	720	0.02668		
445	0.44251	585	0.52103	725	0.02288		
450	0.51792	590	0.51672	730	0.01971		
455	0.46723	595	0.50459	735	0.01691		
460	0.32655	600	0.48758	740	0.01450		
465	0.23153	605	0.46498	745	0.01246		
470	0.17427	610	0.43853	750	0.01079		
475	0.13162	615	0.40964	755	0.00924		
480	0.11310	620	0.37847	760	0.00797		
485	0.11569	625	0.34675	765	0.00681		

IES TM-30-18 Color Rendition Report



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

x 0.3757
 y 0.3750
 u' 0.2227
 v' 0.5001

CIE 13.3-1995
(CRI)

R_a 74
 R_g -30

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 L24017.

Dialight unit model number S1xNQL2FxxxxN

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input current: 1.98 (A)
Input Power: 236.33 (W)
Power Factor: 0.9953

Photometric measurements:

Absolute Luminous Flux: 29074.5 (lumens)
Luminous Efficacy: 123.0 (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	9679	9679	9679	9679	9679	
5.00	9823	9556	9219	9602	9759	981
15.00	7866	6118	6416	6120	6206	1907
25.00	6683	3861	5859	3848	3195	2214
35.00	6690	3770	6475	3656	4328	3255
45.00	7749	5734	7210	3486	3786	4382
55.00	5480	7825	8315	2403	1505	4038
65.00	1397	6078	12835	1626	1121	3330
75.00	734	3954	9840	1149	1012	2553
85.00	386	1828	1772	581	538	491
90.00	175	12	22	386	212	

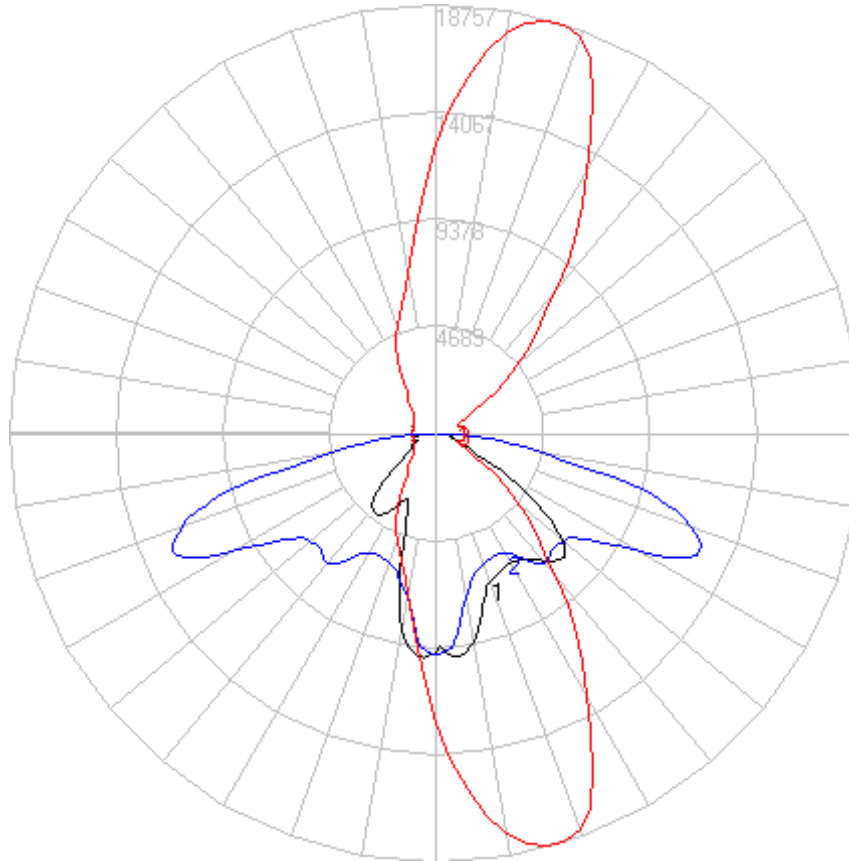
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	4769.18	16.46	16.46
0 to 40	7975.94	27.52	27.52
0 to 60	17757.94	61.28	61.28
0 to 90	28978.54	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	28978.54	100.00	100.00

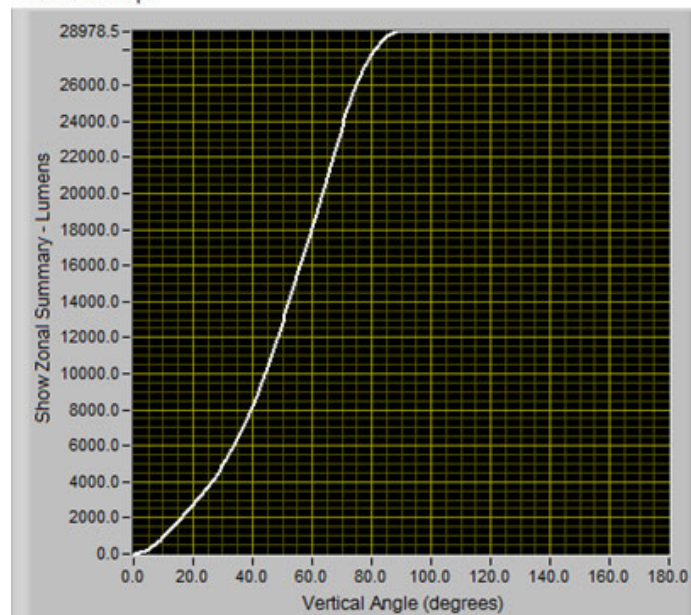
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



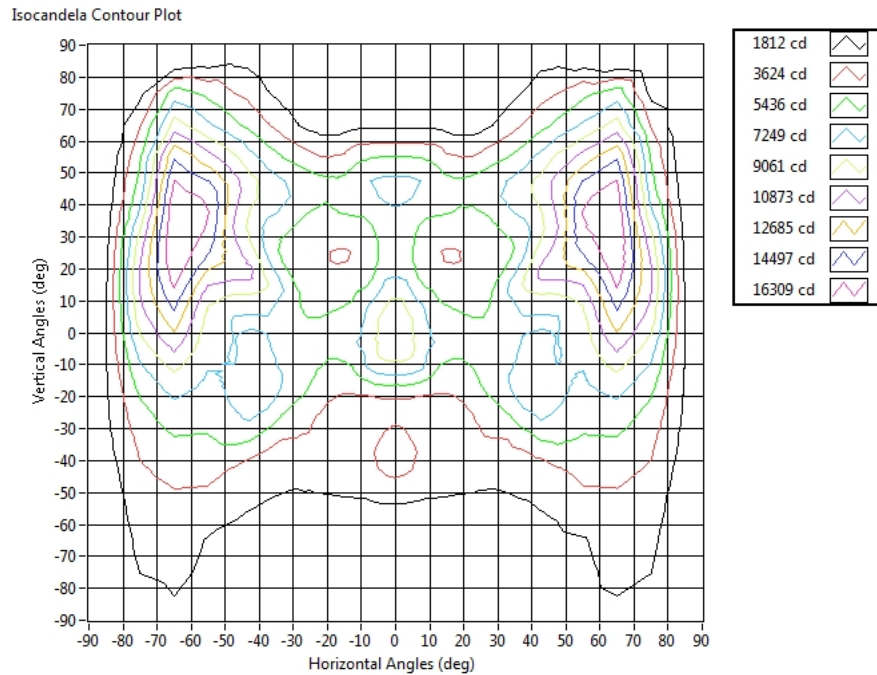
Zonal Flux Graph



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	3.66	22.10	2419.7
4	7.32	44.19	604.9
6	10.98	66.29	268.9
8	14.63	88.39	151.2
10	18.29	110.49	96.8
12	21.95	132.58	67.2
14	25.61	154.68	49.4
16	29.27	176.78	37.8
18	32.93	198.88	29.9
20	36.58	220.97	24.2

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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