

Test Report

Report Number: L24013

Date: Aug 6, 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: S1xNQB2FxxxxxN

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 2, 2024 through August 5, 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

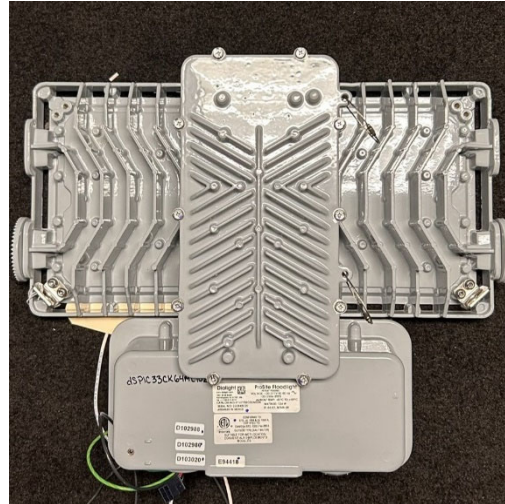
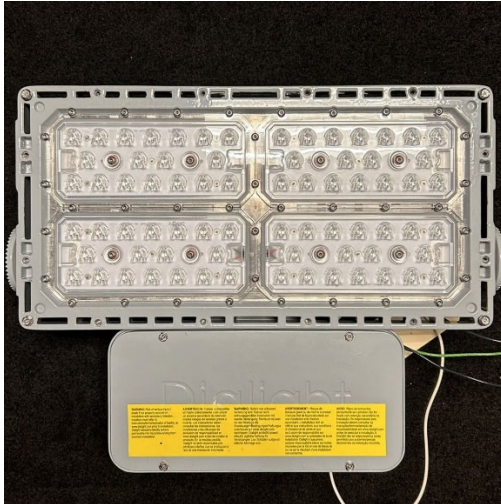
Description of sample:

Sample Number: L24013
Manufacturer: Dialight Corporation
Product Name: ProSite Street Light
Description: Street Light
Model Number: S1xNQB2FxxxxxN

Report Summary

Sample number L24013
Dialight unit model number S1xNQB2FxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	29246 (lumens)	29407 (lumens)
Electrical Power:	233.8 (W)	234.2 (W)
Luminous Efficacy:	125.1 (lumens/W)	125.6 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	233.8	(W)
	Power Factor (120VAC):	0.9970	
	Current ATHD % (120VAC):	4.69	
Secondary Voltage:	Input Power (277VAC):	225.6	(W)
	Power Factor (277VAC):	0.9835	
	Current ATHD % (277VAC):	8.74	

Color Measurements:

Correlated Color Temperature (CCT):	5121	(K)
Color Rendering Index (CRI):	71.78	
Chromaticity Coordinate (x):	0.342	
Chromaticity Coordinate (y):	0.351	
Chromaticity Coordinate (u')	0.210	
Chromaticity Coordinate (v')	0.484	
DUV:	0.0008	

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24013.

Dialight unit model number S1xNQB2FxxxxN

Test Conditions:

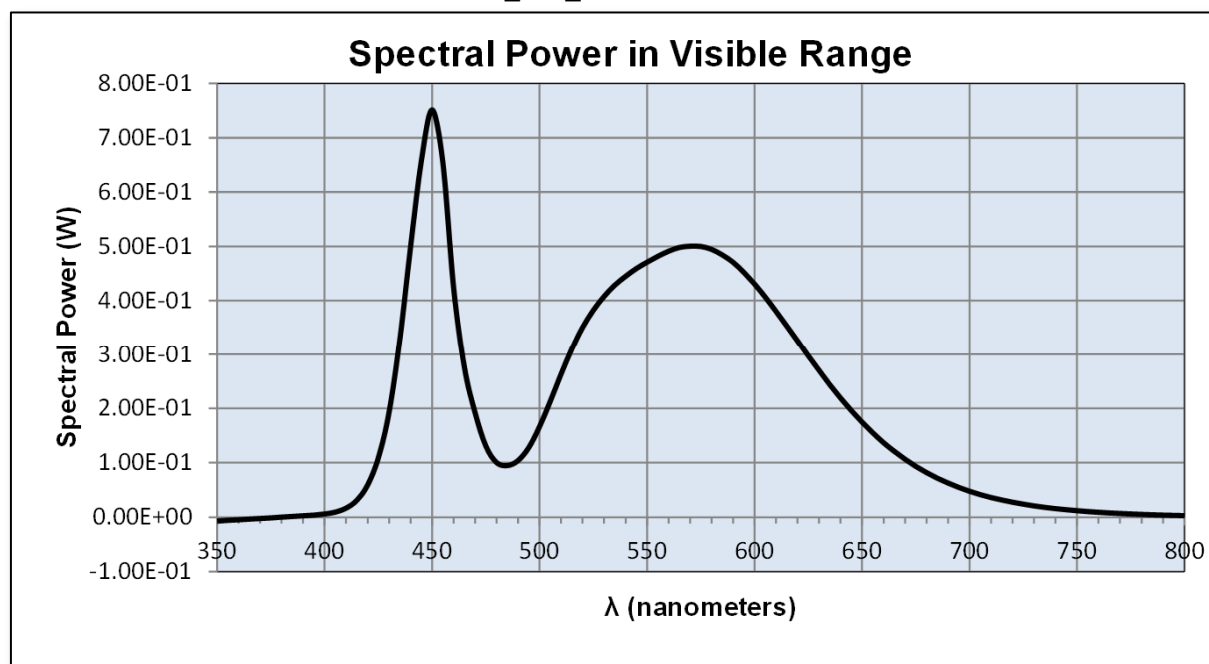
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input Current: 1.953 (A)
Input Power: 233.8 (W)
Input Power Factor: 0.9970
Current ATHD: 4.69 (%)

Photometric measurements:

Luminous Flux: 29246.3 (lumens)
Luminous Efficacy: 125.1 (lumens/W)
Correlated Color Temperature (CCT): 5121 (K)
CRI -Ra: 71.78
CRI -R9: -31.58
DUV: 0.0008
CIE Coordinate (x): 0.342
CIE Coordinate (y): 0.351
CIE Coordinate (u'): 0.210
CIE Coordinate (v'): 0.484
TM30_Rf: 72.6
TM30_Rg: 94.1
TM30_Rcs_hue1: -18.14 %



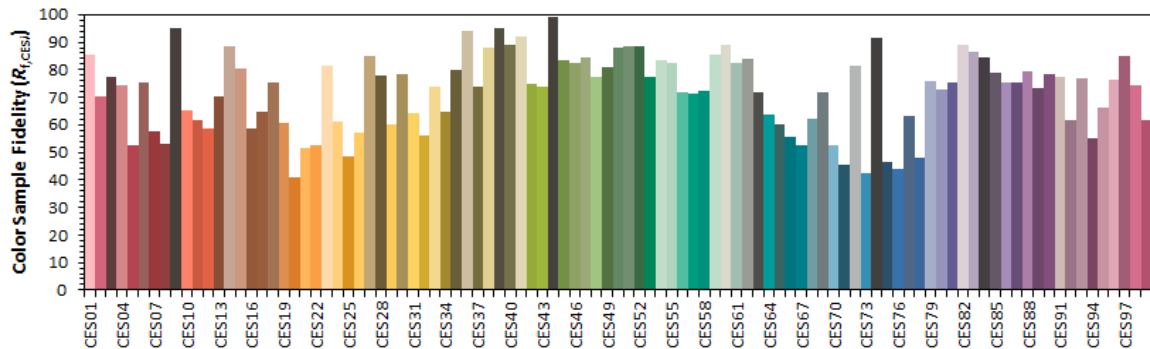
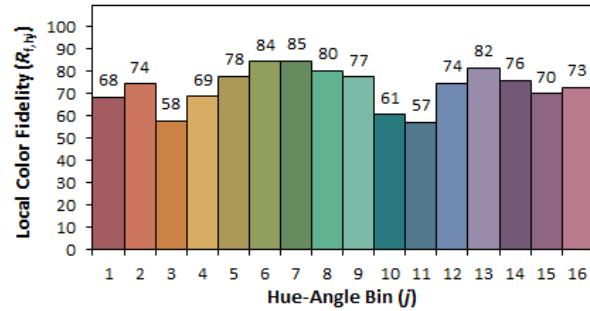
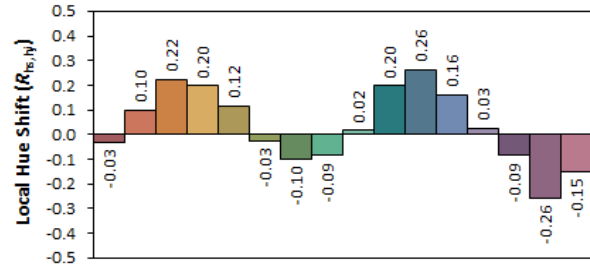
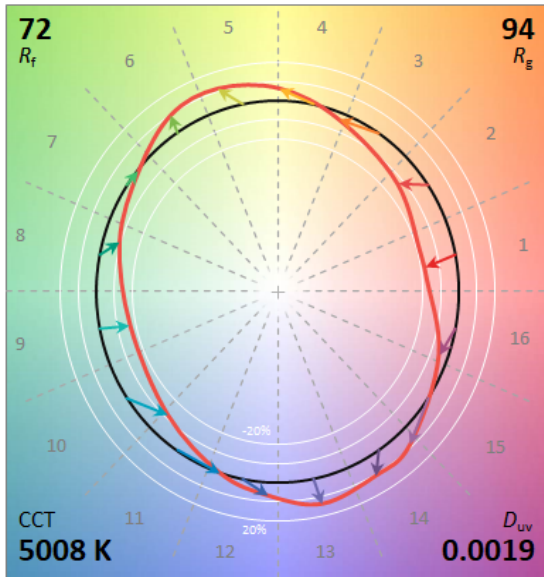
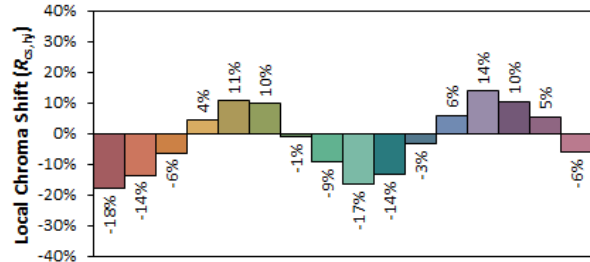
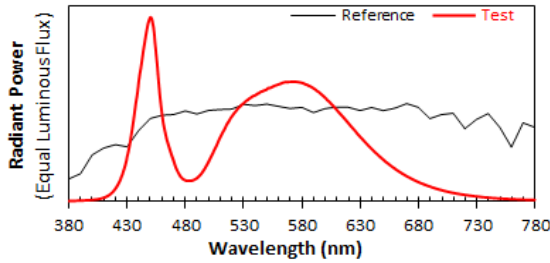
Test Results: Integrating Sphere

Results continued from previous page.

Tabulated Spectral Power in Visible Range:

λ (nm)	(W/nm)	λ (nm)	(W/nm)	λ (nm)	(W/nm)	λ (nm)	(W/nm)
350	-0.00702	490	0.10424	630	0.27000	770	0.00692
355	-0.00557	495	0.12828	635	0.24349	775	0.00603
360	-0.00456	500	0.16683	640	0.21893	780	0.00526
365	-0.00340	505	0.21345	645	0.19603	785	0.00456
370	-0.00228	510	0.26366	650	0.17473	790	0.00392
375	-0.00110	515	0.31029	655	0.15511	795	0.00342
380	0.00024	520	0.35043	660	0.13696	800	0.00294
385	0.00151	525	0.38223	665	0.12114		
390	0.00271	530	0.40786	670	0.10662		
395	0.00394	535	0.42864	675	0.09346		
400	0.00603	540	0.44478	680	0.08204		
405	0.00951	545	0.45910	685	0.07180		
410	0.01679	550	0.47084	690	0.06287		
415	0.03129	555	0.48163	695	0.05483		
420	0.05922	560	0.49102	700	0.04774		
425	0.10942	565	0.49799	705	0.04147		
430	0.19368	570	0.50026	710	0.03617		
435	0.32843	575	0.49981	715	0.03163		
440	0.49980	580	0.49444	720	0.02767		
445	0.65769	585	0.48414	725	0.02412		
450	0.75139	590	0.47064	730	0.02092		
455	0.65395	595	0.45201	735	0.01817		
460	0.42376	600	0.43048	740	0.01581		
465	0.27613	605	0.40617	745	0.01378		
470	0.19183	610	0.37982	750	0.01204		
475	0.13073	615	0.35265	755	0.01051		
480	0.10046	620	0.32504	760	0.00913		
485	0.09498	625	0.29699	765	0.00794		

IES TM-30-18 Color Rendition Report



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

x 0.3452
 y 0.3554
 u' 0.2100
 v' 0.4865

CIE 13.3-1995 (CRI)
 R_a 71
 R_g -36

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 L24013.
Dialight unit model number S1xNQB2FxxxxxN

Electrical Measurements:

Input Voltage:	120.0	(VAC)
Input current:	1.96	(A)
Input Power:	234.18	(W)
Power Factor:	0.9969	

Photometric measurements:

Absolute Luminous Flux:	29407.5	(lumens)
Luminous Efficacy:	125.6	(lumens/W)

BUG Rating: B4 - U0 - G4

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	10492	10492	10492	10492	10492	
5.00	10679	10539	9482	10350	10422	1055
15.00	8397	6815	7077	6879	6115	2022
25.00	6598	4154	6427	3994	3450	2297
35.00	6614	4036	7696	3854	4435	3393
45.00	7607	5862	7268	3547	3609	4329
55.00	4529	7398	8337	2475	1465	3723
65.00	1152	5303	13052	1700	1111	3190
75.00	712	3023	8820	1218	1144	2341
85.00	316	1235	1354	657	573	416
90.00	94	14	21	420	221	

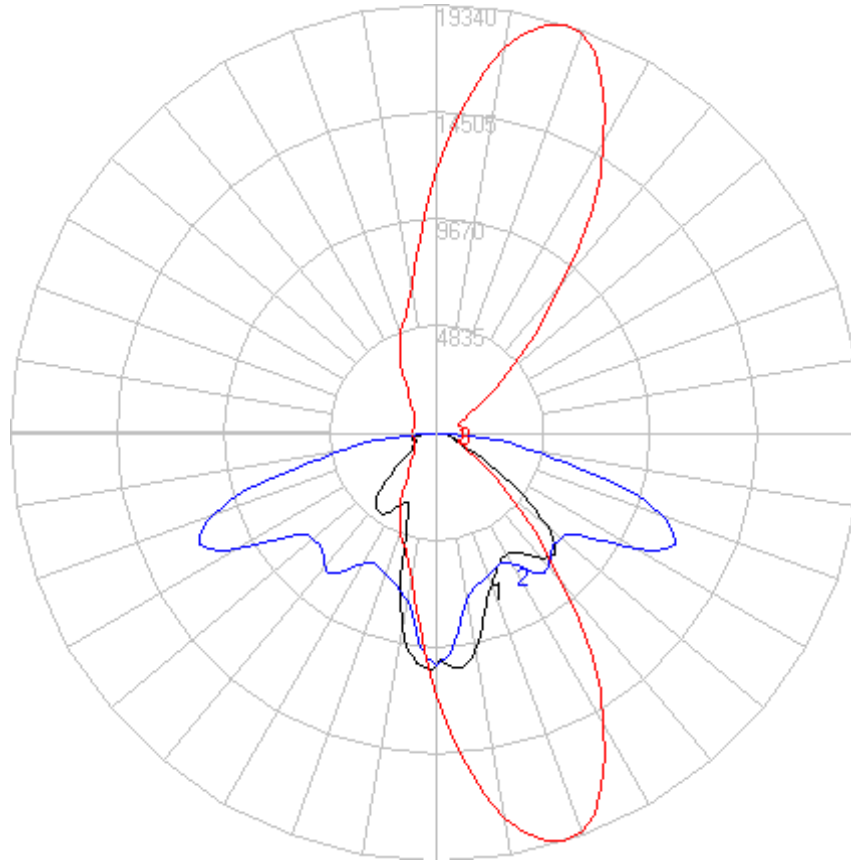
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	5100.41	17.41	17.41
0 to 40	8486.58	28.97	28.97
0 to 60	18455.88	62.99	62.99
0 to 90	29297.91	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	29297.91	100.00	100.00

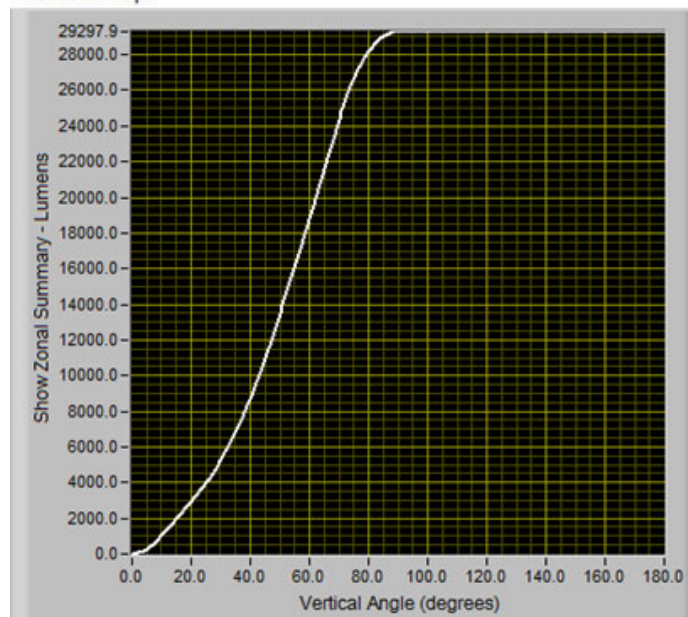
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



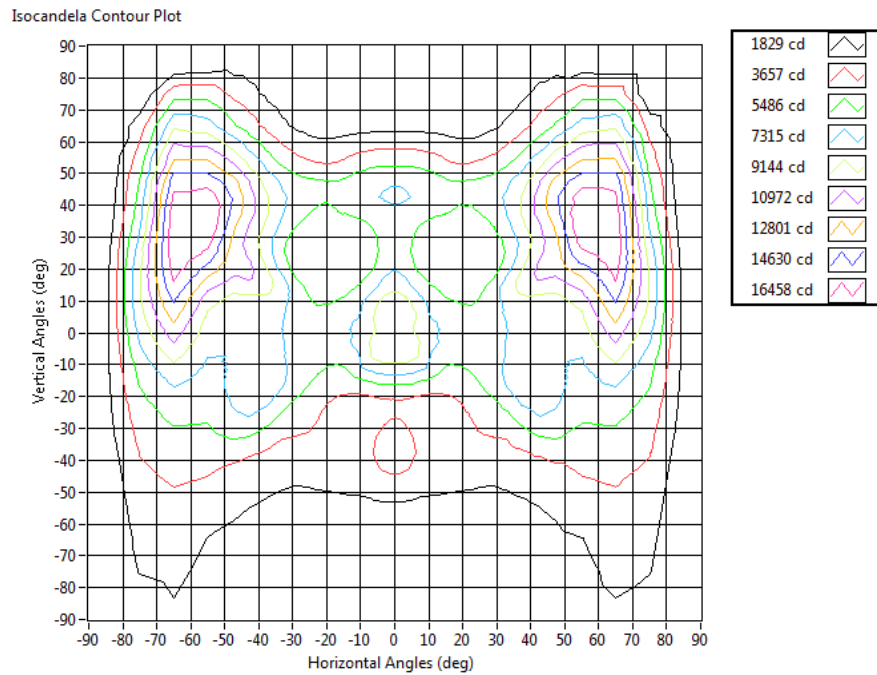
Zonal Flux Graph



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	3.32	20.52	2623.0
4	6.65	41.04	655.7
6	9.97	61.56	291.4
8	13.29	82.08	163.9
10	16.62	102.59	104.9
12	19.94	123.11	72.9
14	23.26	143.63	53.5
16	26.59	164.15	41.0
18	29.91	184.67	32.4
20	33.24	205.19	26.2

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
Labisphere calibration lamp for 2M sphere	SCL-1400
Labisphere calibration lamp for 2M sphere	SCL-1400
Labisphere 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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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