

Test Report

Report Number: L24010

Date: Jul 29, 2024

Issued by:

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

Test of one Streetlight

Unit manufacturer: Dialight Corporation
Unit model number: S1xNPB2CxxxxxN

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: July 29, 2024 through July 29, 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

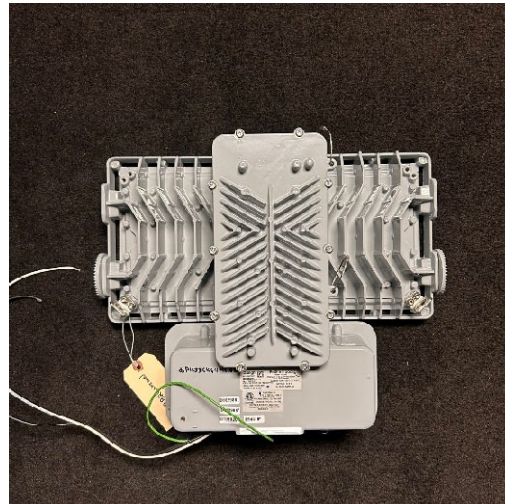
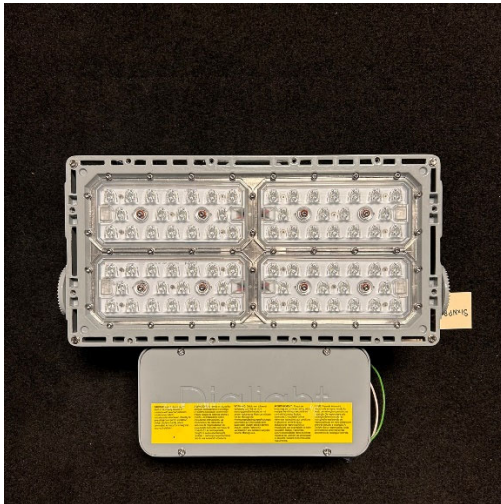
Description of sample:

Sample Number: L24010
Manufacturer: Dialight Corporation
Product Name: ProSite Streetlight
Description: Streetlight
Model Number: S1xNPB2CxxxxxN

Report Summary

Sample number L24010
Dialight unit model number S1xNPB2CxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	17415 (lumens)	17458 (lumens)
Electrical Power:	124.6 (W)	124.8 (W)
Luminous Efficacy:	139.8 (lumens/W)	139.9 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	124.6 (W)
	Power Factor (120VAC):	0.9949
	Current ATHD % (120VAC):	5.83
Secondary Voltage:	Input Power (277VAC):	120.4 (W)
	Power Factor (277VAC):	0.9579
	Current ATHD % (277VAC):	10.84

Color Measurements:

Correlated Color Temperature (CCT):	4945 (K)
Color Rendering Index (CRI):	70.59
Chromaticity Coordinate (x):	0.347
Chromaticity Coordinate (y):	0.358
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.488
DUV:	0.0023

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24010.

Dialight unit model number S1xNPB2CxxxxxN

Test Conditions:

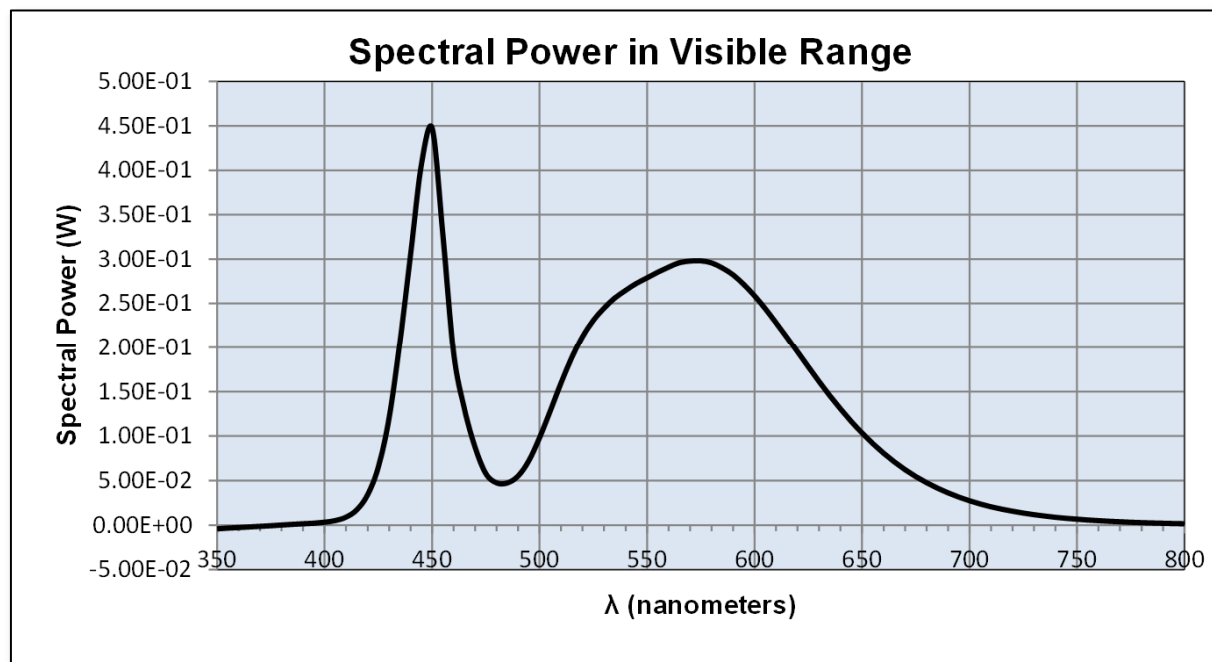
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.8 (VAC)
Input Current: 1.037 (A)
Input Power: 124.6 (W)
Input Power Factor: 0.9949
Current ATHD: 5.83 (%)

Photometric measurements:

Luminous Flux: 17415.4 (lumens)
Luminous Efficacy: 139.8 (lumens/W)
Correlated Color Temperature (CCT): 4945 (K)
CRI -Ra: 70.59
CRI -R9: -35.75
DUV: 0.0023
CIE Coordinate (x): 0.347
CIE Coordinate (y): 0.358
CIE Coordinate (u'): 0.210
CIE Coordinate (v'): 0.488
TM30_Rf: 71.7
TM30_Rg: 94.5
TM30_Rcs_hue1: -18.03 %



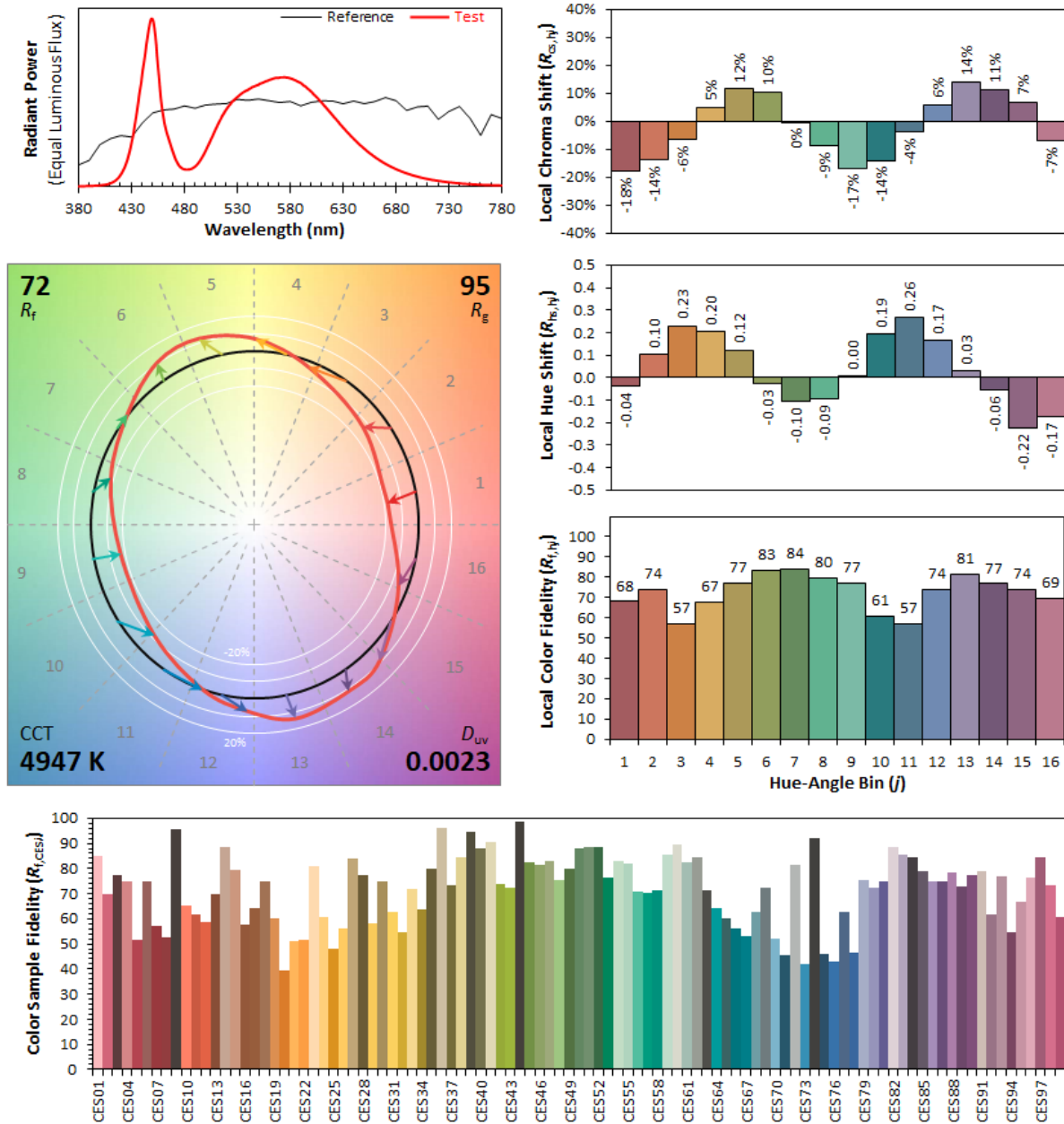
Test Results: Integrating Sphere

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	-0.00412	490	0.05519	630	0.16128	770	0.00379
355	-0.00328	495	0.07239	635	0.14528	775	0.00329
360	-0.00264	500	0.09836	640	0.13038	780	0.00285
365	-0.00198	505	0.12852	645	0.11627	785	0.00248
370	-0.00131	510	0.16002	650	0.10345	790	0.00213
375	-0.00064	515	0.18868	655	0.09154	795	0.00183
380	0.00018	520	0.21269	660	0.08076	800	0.00159
385	0.00094	525	0.23104	665	0.07103		
390	0.00157	530	0.24492	670	0.06230		
395	0.00223	535	0.25629	675	0.05454		
400	0.00332	540	0.26484	680	0.04771		
405	0.00519	545	0.27265	685	0.04163		
410	0.00908	550	0.27895	690	0.03628		
415	0.01735	555	0.28538	695	0.03155		
420	0.03417	560	0.29108	700	0.02740		
425	0.06548	565	0.29604	705	0.02373		
430	0.12058	570	0.29790	710	0.02060		
435	0.20577	575	0.29817	715	0.01795		
440	0.30554	580	0.29581	720	0.01564		
445	0.40621	585	0.29005	725	0.01358		
450	0.44750	590	0.28233	730	0.01179		
455	0.32729	595	0.27141	735	0.01022		
460	0.19356	600	0.25864	740	0.00882		
465	0.13085	605	0.24412	745	0.00766		
470	0.08728	610	0.22819	750	0.00669		
475	0.05784	615	0.21180	755	0.00581		
480	0.04750	620	0.19484	760	0.00503		
485	0.04743	625	0.17794	765	0.00435		

IES TM-30-18 Color Rendition Report



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

x 0.3471
y 0.3577
 u' 0.2104
 v' 0.4879

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 L24010.

Dialight unit model number S1xNPB2CxxxxxN

Electrical Measurements:

Input Voltage:	120.2	(VAC)
Input current:	1.04	(A)
Input Power:	124.83	(W)
Power Factor:	0.9945	

Photometric measurements:

Absolute Luminous Flux:	17458.2	(lumens)
Luminous Efficacy:	139.9	(lumens/W)

BUG Rating: B3 - U0 - G4

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	6264	6264	6264	6264	6264	
5.00	6464	6499	5412	5992	5935	621
15.00	4867	4908	4257	3884	2784	1140
25.00	4679	2991	4335	2110	1759	1477
35.00	4936	3363	4439	2162	2338	2210
45.00	2961	2737	4070	2510	2042	2113
55.00	919	2115	7250	1779	909	1762
65.00	584	3063	11328	902	763	2315
75.00	353	2105	7161	680	478	1590
85.00	133	1097	1117	371	192	256
90.00	2	249	16	221	80	

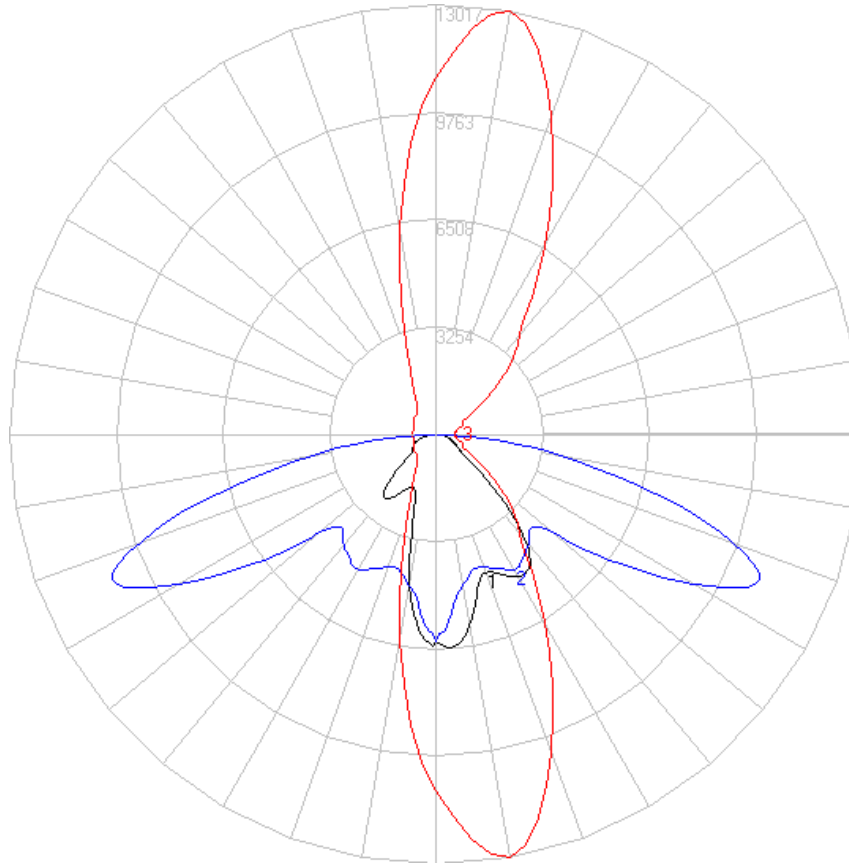
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	3264.29	18.76	18.76
0 to 40	5482.35	31.51	31.51
0 to 60	10420.51	59.89	59.89
0 to 90	17400.43	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	17400.43	100.00	100.00

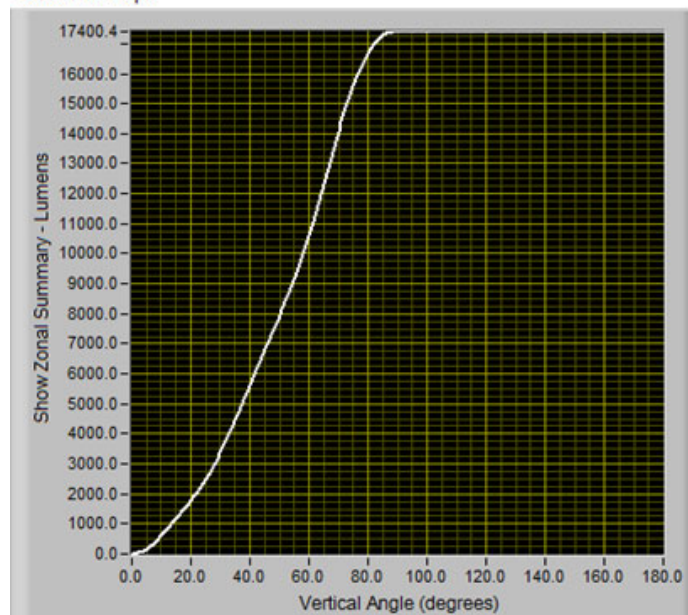
Test Results: Goniometer

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Polar Plot:



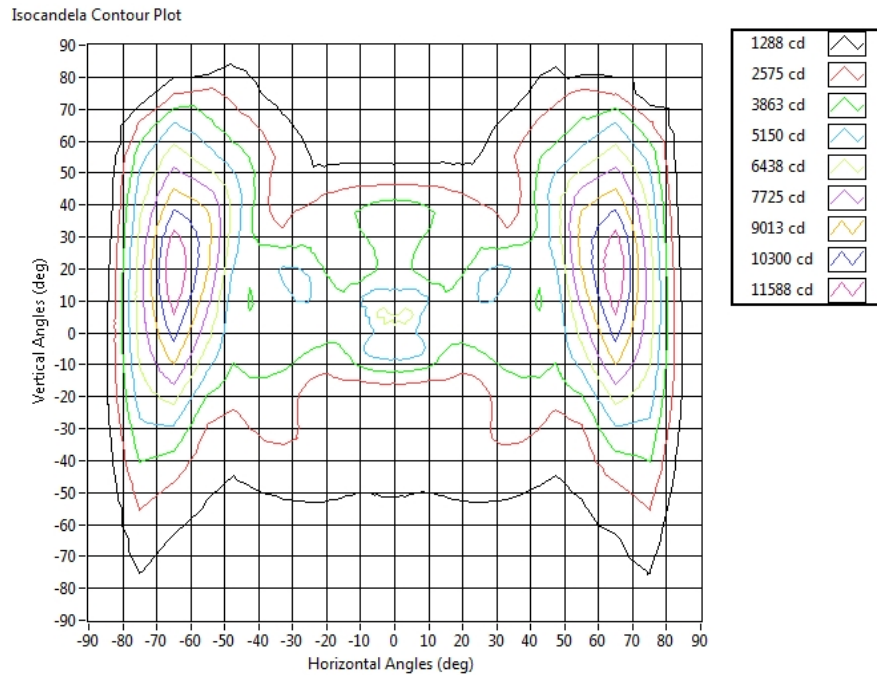
Zonal Flux Graph



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	2.43	25.72	1566.0
4	4.87	51.44	391.5
6	7.30	77.16	174.0
8	9.74	102.88	97.9
10	12.17	128.60	62.6
12	14.60	154.32	43.5
14	17.04	180.04	32.0
16	19.47	205.76	24.5
18	21.91	231.47	19.3
20	24.34	257.19	15.7

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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