

Test Report

Report Number: L24016

Date: Sep 10, 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: S1xNPB2FxxxxxN

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: September 5, 2024 through September 6, 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

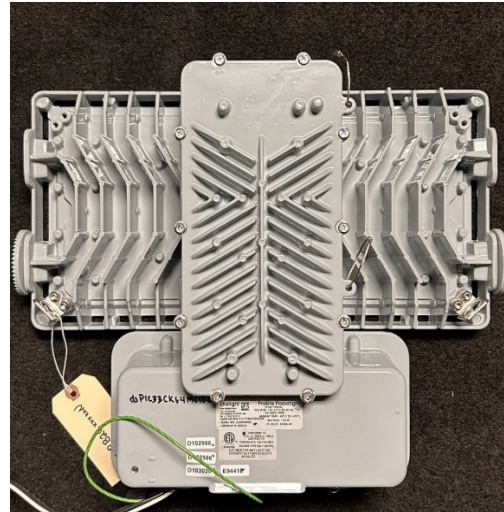
Description of sample:

Sample Number: L24016
Manufacturer: Dialight Corporation
Product Name: ProSite Street Light
Description: Street Light
Model Number: S1xNPB2FxxxxxN

Report Summary

Sample number L24016
Dialight unit model number S1xNPB2FxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	28378 (lumens)	28002 (lumens)
Electrical Power:	235.1 (W)	235.3 (W)
Luminous Efficacy:	120.7 (lumens/W)	119 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	235.1 (W)
	Power Factor (120VAC):	0.9953
	Current ATHD % (120VAC):	4.63
Secondary Voltage:	Input Power (277VAC):	226.5 (W)
	Power Factor (277VAC):	0.9584
	Current ATHD % (277VAC):	8.99

Color Measurements:

Correlated Color Temperature (CCT):	5187 (K)
Color Rendering Index (CRI):	71.86
Chromaticity Coordinate (x):	0.340
Chromaticity Coordinate (y):	0.347
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.482
DUV:	-0.0001

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24016.

Dialight unit model number S1xNPB2FxxxxN

Test Conditions:

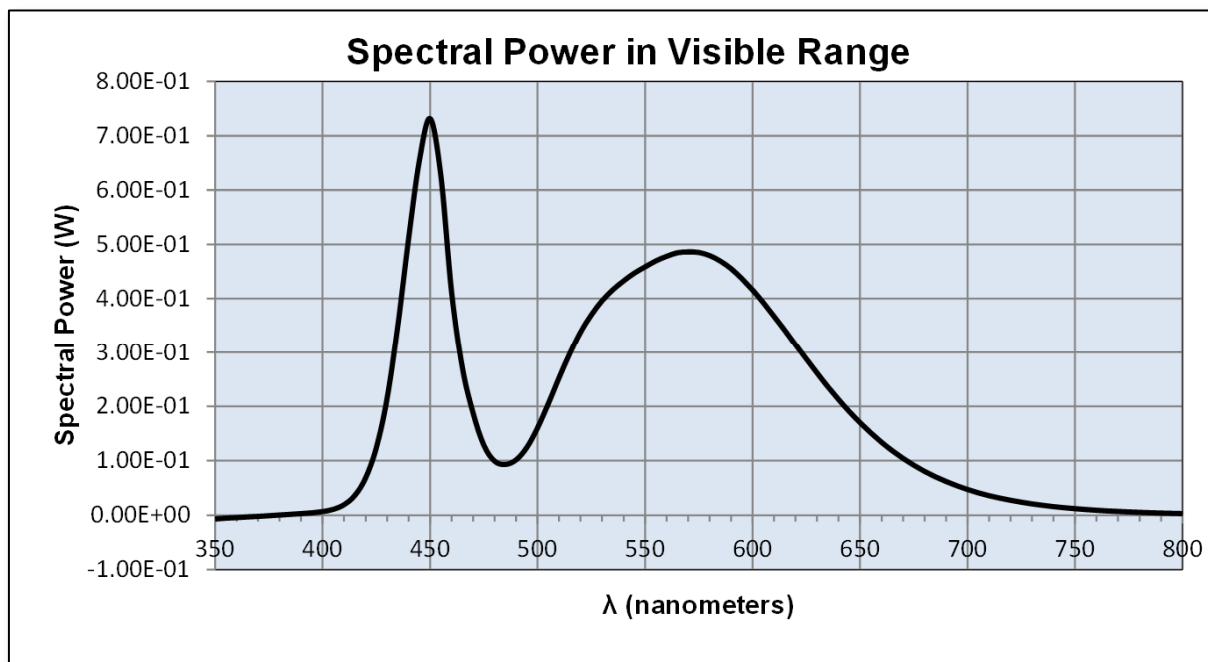
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 119.6 (VAC)
Input Current: 1.976 (A)
Input Power: 235.1 (W)
Input Power Factor: 0.9953
Current ATHD: 4.63 (%)

Photometric measurements:

Luminous Flux: 28378.1 (lumens)
Luminous Efficacy: 120.7 (lumens/W)
Correlated Color Temperature (CCT): 5187 (K)
CRI -Ra: 71.86
CRI -R9: -29.69
DUV: -0.0001
CIE Coordinate (x): 0.340
CIE Coordinate (y): 0.347
CIE Coordinate (u'): 0.210
CIE Coordinate (v'): 0.482
TM30_Rf: 72.3
TM30_Rg: 94.3
TM30_Rcs_hue1: -17.99 %



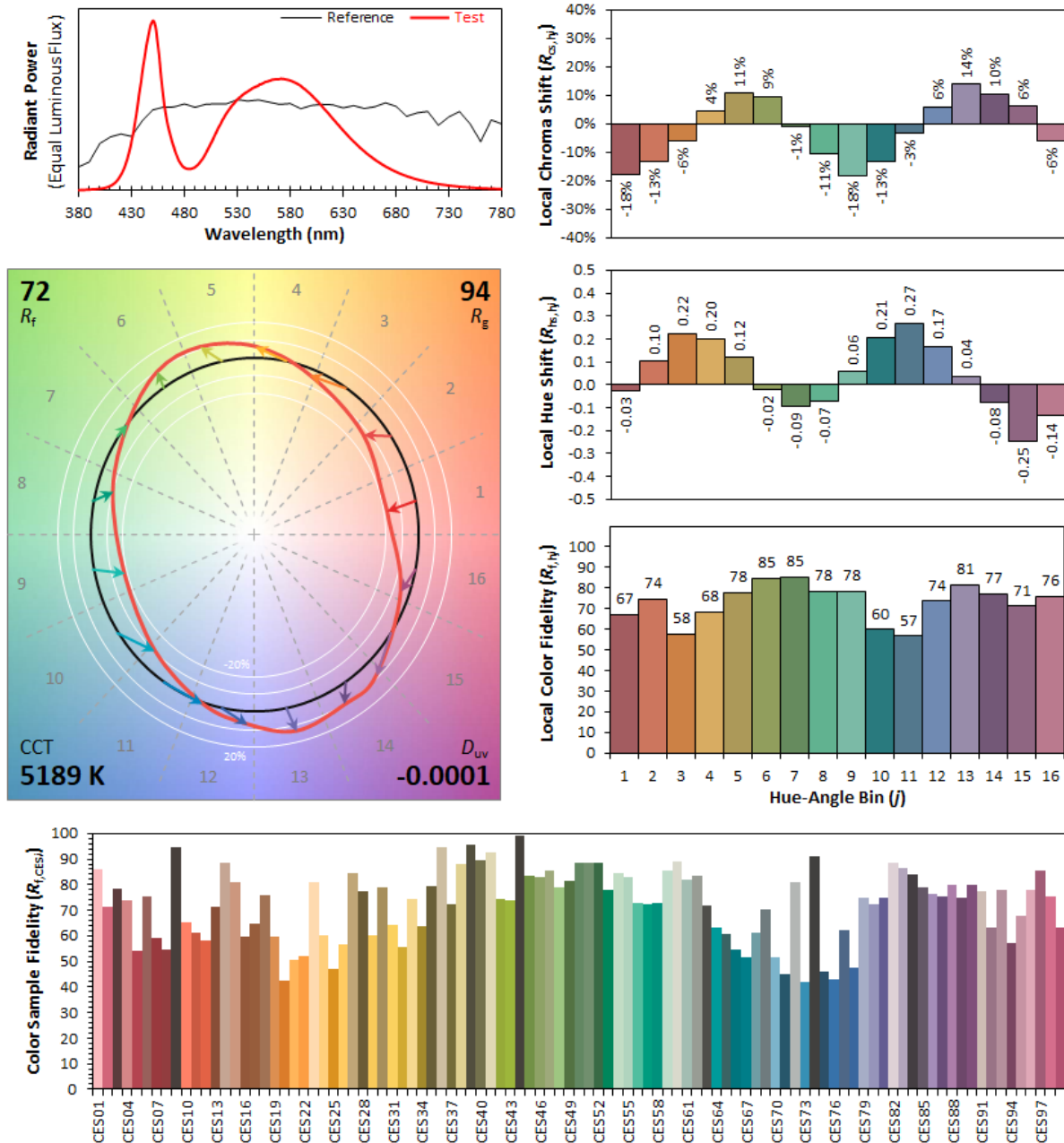
Test Results: Integrating Sphere

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	-0.00675	490	0.10188	630	0.26139	770	0.00702
355	-0.00529	495	0.12461	635	0.23619	775	0.00611
360	-0.00429	500	0.16090	640	0.21268	780	0.00533
365	-0.00310	505	0.20517	645	0.19045	785	0.00463
370	-0.00200	510	0.25327	650	0.17007	790	0.00401
375	-0.00084	515	0.29816	655	0.15134	795	0.00348
380	0.00045	520	0.33807	660	0.13401	800	0.00305
385	0.00174	525	0.37001	665	0.11846		
390	0.00301	530	0.39607	670	0.10444		
395	0.00443	535	0.41640	675	0.09191		
400	0.00676	540	0.43254	680	0.08066		
405	0.01092	545	0.44703	685	0.07074		
410	0.01946	550	0.45849	690	0.06202		
415	0.03647	555	0.46952	695	0.05414		
420	0.06869	560	0.47792	700	0.04728		
425	0.12444	565	0.48451	705	0.04113		
430	0.21516	570	0.48615	710	0.03594		
435	0.35046	575	0.48500	715	0.03145		
440	0.51057	580	0.47932	720	0.02754		
445	0.65436	585	0.46913	725	0.02403		
450	0.73162	590	0.45518	730	0.02090		
455	0.62619	595	0.43674	735	0.01825		
460	0.41138	600	0.41580	740	0.01577		
465	0.27141	605	0.39238	745	0.01380		
470	0.18764	610	0.36693	750	0.01209		
475	0.12846	615	0.34112	755	0.01057		
480	0.09944	620	0.31398	760	0.00920		
485	0.09347	625	0.28757	765	0.00799		

IES TM-30-18 Color Rendition Report



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

x 0.3400
 y 0.3472
 u' 0.2097
 v' 0.4817

CIE 13.3-1995
(CRI)

R_a 72
 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 L24016.

Dialight unit model number S1xNPB2FxxxxN

Electrical Measurements:

Input Voltage: 119.9 (VAC)
Input current: 1.97 (A)
Input Power: 235.26 (W)
Power Factor: 0.9952

Photometric measurements:

Absolute Luminous Flux: 28002.0 (lumens)
Luminous Efficacy: 119.0 (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	9757	9757	9757	9757	9757	
5.00	10155	10078	8392	9371	9117	965
15.00	8017	7888	6736	5850	4079	1797
25.00	7599	5415	6923	3428	2827	2420
35.00	8058	5780	7145	3734	3820	3640
45.00	5202	4379	6234	4203	3192	3466
55.00	1648	3258	10987	2697	1440	2766
65.00	970	5048	18135	1354	1201	3718
75.00	618	3630	11822	1005	702	2613
85.00	256	1751	1215	518	264	365
90.00	5	598	29	261	92	

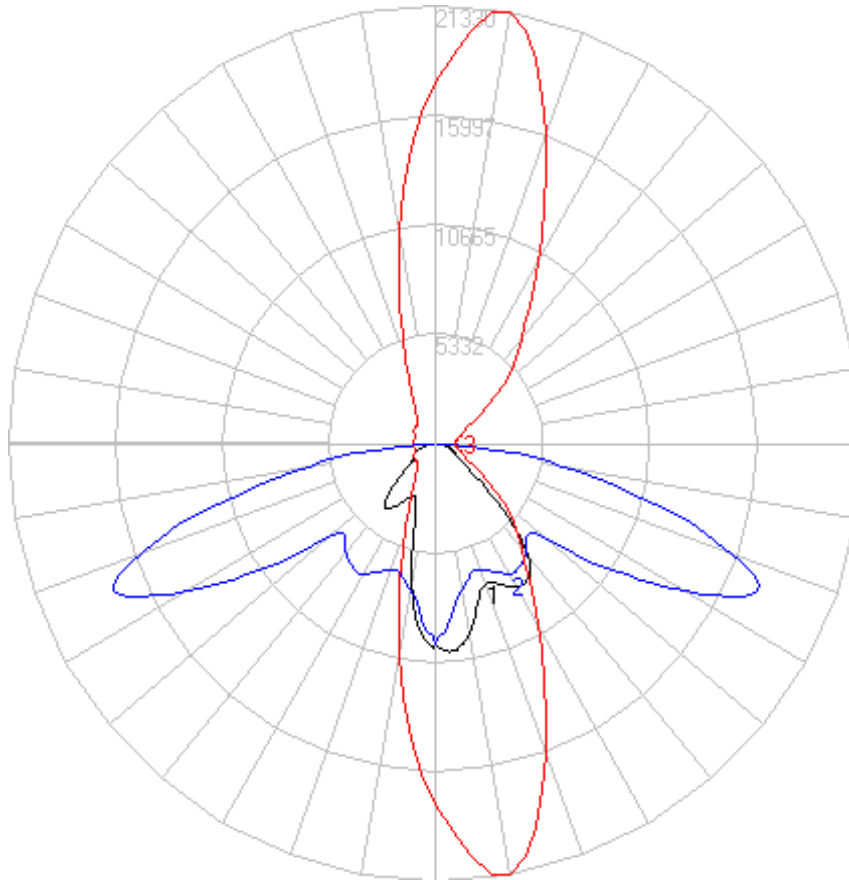
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	5115.23	18.33	18.33
0 to 40	8666.10	31.05	31.05
0 to 60	16621.37	59.56	59.56
0 to 90	27907.19	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	27907.19	100.00	100.00

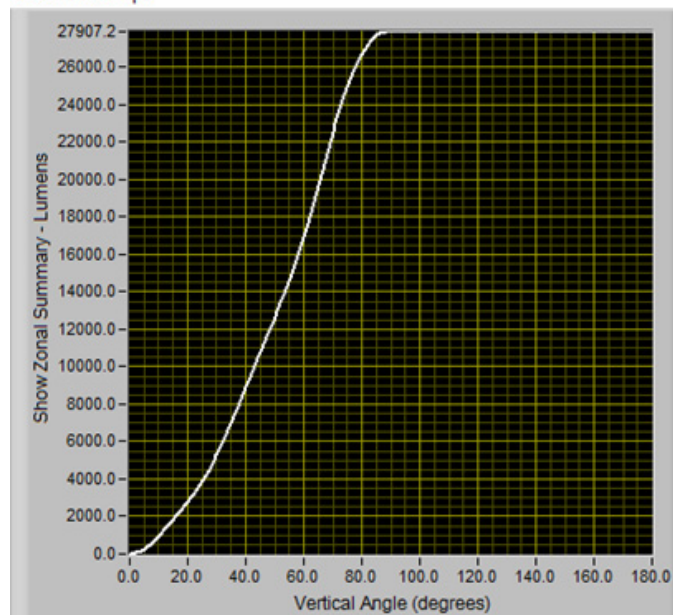
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



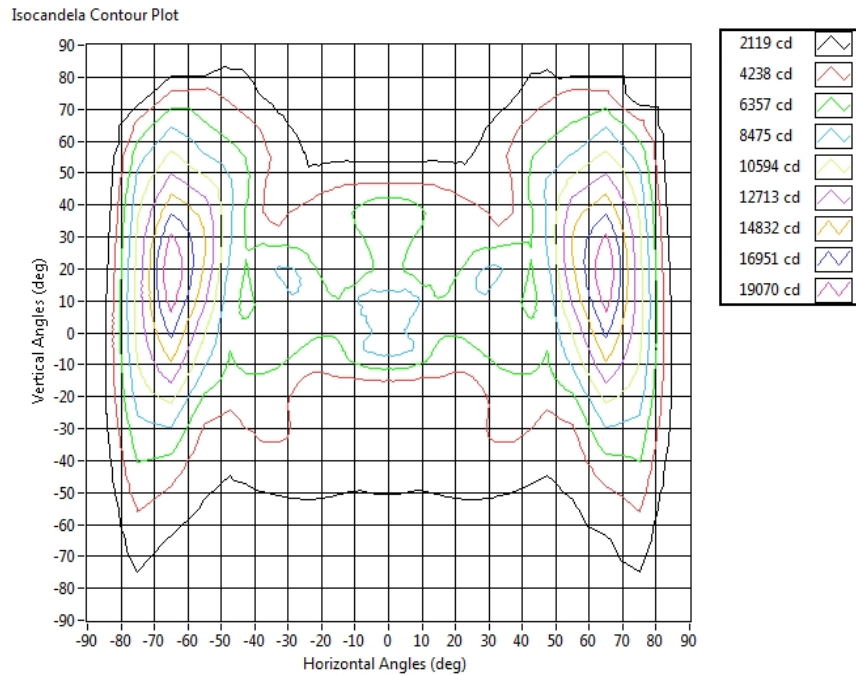
Zonal Flux Graph



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	2.51	32.28	2439.2
4	5.02	64.57	609.8
6	7.53	96.85	271.0
8	10.03	129.13	152.4
10	12.54	161.42	97.6
12	15.05	193.70	67.8
14	17.56	225.98	49.8
16	20.07	258.27	38.1
18	22.58	290.55	30.1
20	25.09	322.83	24.4

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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