

Test Report

Report Number: L24009

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: S1xNQB2CxxxxxN

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

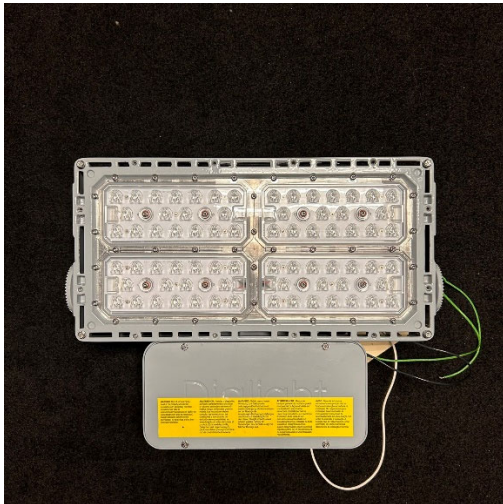
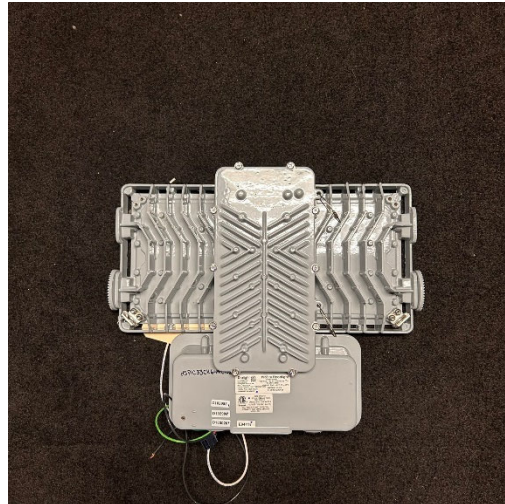
Description of sample:

Sample Number: L24009
Manufacturer: Dialight Corporation
Product Name: ProSite Streetlight
Description: Streetlight
Model Number: S1xNQB2CxxxxxN

Report Summary

Sample number L24009
Dialight unit model number S1xNQB2CxxxxxN

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	17986 (lumens)	17942 (lumens)
Electrical Power:	125.1 (W)	125.1 (W)
Luminous Efficacy:	143.8 (lumens/W)	143.4 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (277VAC):	125.1 (W)
	Power Factor (277VAC):	0.9954
	Current ATHD % (277VAC):	5.21
Secondary Voltage:	Input Power (120VAC):	120.8 (W)
	Power Factor (120VAC):	0.9616
	Current ATHD % (120VAC):	9.92

Color Measurements:

Correlated Color Temperature (CCT):	4908 (K)
Color Rendering Index (CRI):	70.80
Chromaticity Coordinate (x):	0.348
Chromaticity Coordinate (y):	0.360
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.489
DUV:	0.0029

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24009.

Dialight unit model number S1xNQB2CxxxxxN

Test Conditions:

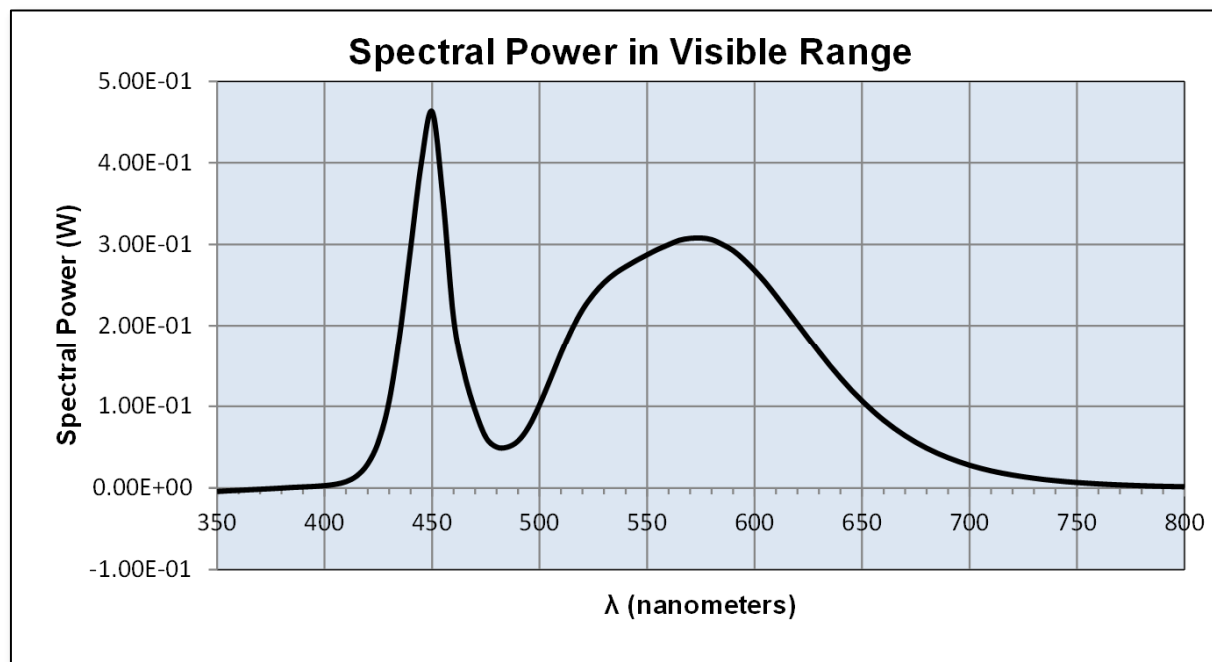
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.7 (VAC)
Input Current: 1.041 (A)
Input Power: 125.1 (W)
Input Power Factor: 0.9954
Current ATHD: 5.21 (%)

Photometric measurements:

Luminous Flux: 17986.4 (lumens)
Luminous Efficacy: 143.8 (lumens/W)
Correlated Color Temperature (CCT): 4908 (K)
CRI -Ra: 70.80
CRI -R9: -36.35
DUV: 0.0029
CIE Coordinate (x): 0.348
CIE Coordinate (y): 0.360
CIE Coordinate (u'): 0.210
CIE Coordinate (v'): 0.489
TM30_Rf: 72.2
TM30_Rg: 94.1
TM30_Rcs_hue1: -18.12 %



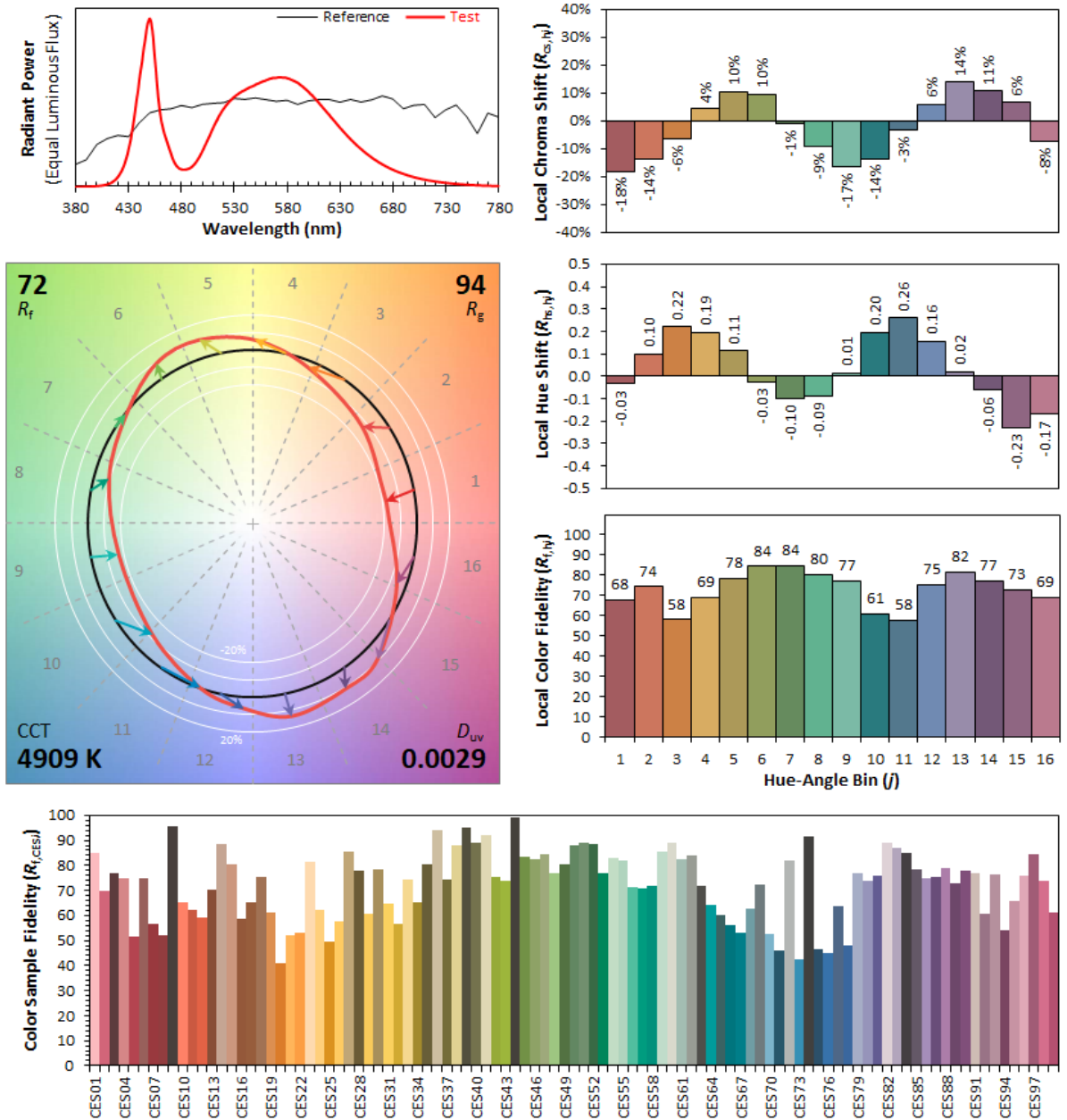
Test Results: Integrating Sphere

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	-0.00421	490	0.05765	630	0.16693	770	0.00383
355	-0.00338	495	0.07532	635	0.15024	775	0.00333
360	-0.00281	500	0.10216	640	0.13471	780	0.00288
365	-0.00213	505	0.13342	645	0.12004	785	0.00248
370	-0.00148	510	0.16607	650	0.10667	790	0.00214
375	-0.00078	515	0.19536	655	0.09441	795	0.00184
380	-0.00001	520	0.21985	660	0.08312	800	0.00159
385	0.00075	525	0.23845	665	0.07309		
390	0.00136	530	0.25303	670	0.06407		
395	0.00200	535	0.26403	675	0.05600		
400	0.00294	540	0.27255	680	0.04888		
405	0.00458	545	0.28020	685	0.04261		
410	0.00787	550	0.28717	690	0.03713		
415	0.01500	555	0.29391	695	0.03227		
420	0.02938	560	0.29966	700	0.02795		
425	0.05671	565	0.30502	705	0.02424		
430	0.10640	570	0.30742	710	0.02100		
435	0.18968	575	0.30784	715	0.01828		
440	0.29517	580	0.30587	720	0.01593		
445	0.40030	585	0.29993	725	0.01381		
450	0.46292	590	0.29239	730	0.01199		
455	0.35712	595	0.28114	735	0.01034		
460	0.20851	600	0.26792	740	0.00896		
465	0.14018	605	0.25321	745	0.00778		
470	0.09498	610	0.23649	750	0.00676		
475	0.06216	615	0.21926	755	0.00588		
480	0.05020	620	0.20178	760	0.00508		
485	0.05012	625	0.18429	765	0.00440		

IES TM-30-18 Color Rendition Report



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

x 0.3484
y 0.3601
 u' 0.2104
 v' 0.4892

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 L24009.

Dialight unit model number S1xNQB2CxxxxxN

Electrical Measurements:

Input Voltage: 120.2 (VAC)
Input current: 1.05 (A)
Input Power: 125.08 (W)
Power Factor: 0.9952

Photometric measurements:

Absolute Luminous Flux: 17942.1 (lumens)
Luminous Efficacy: 143.4 (lumens/W)

BUG Rating: B3 - U0 - G3

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	6336	6336	6336	6336	6336	
5.00	6481	6423	5683	6292	6187	635
15.00	5261	4353	4234	4057	3253	1202
25.00	4083	2743	3939	2404	2189	1433
35.00	3997	2439	4644	2337	2717	2058
45.00	4665	3482	4509	2116	2028	2598
55.00	3023	4978	4869	1434	847	2350
65.00	767	3981	7263	978	643	1954
75.00	455	2293	4975	692	707	1437
85.00	216	987	987	355	282	269
90.00	85	63	12	213	98	

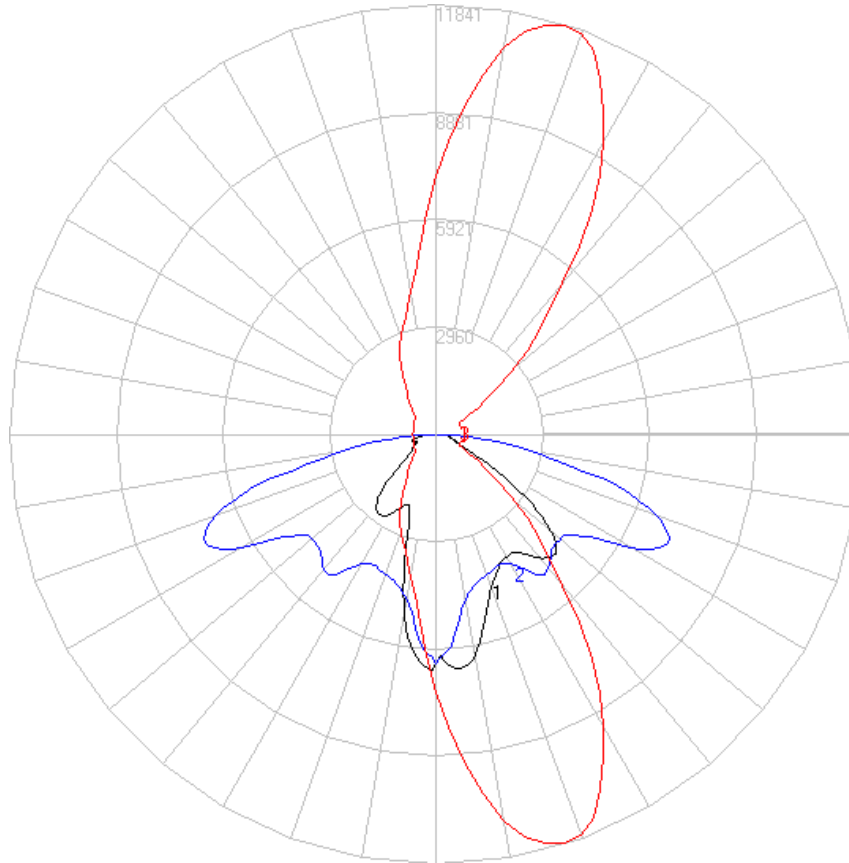
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	3090.02	17.28	17.28
0 to 40	5147.40	28.79	28.79
0 to 60	11244.35	62.89	62.89
0 to 90	17879.19	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	17879.19	100.00	100.00

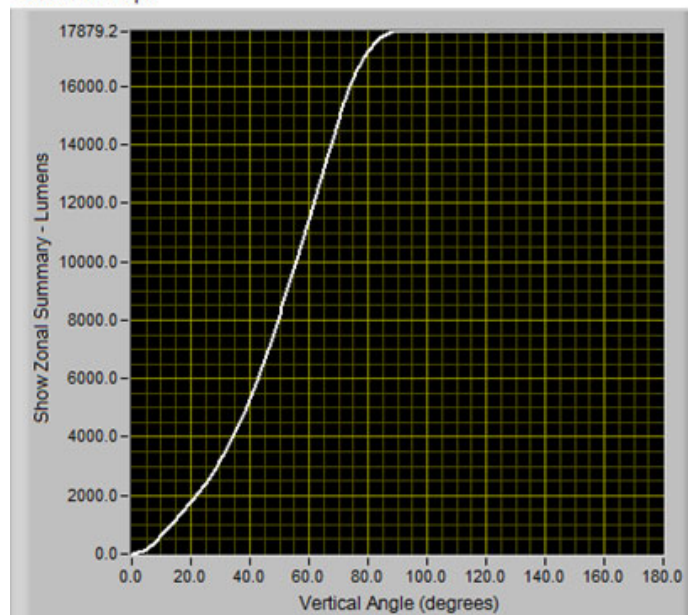
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



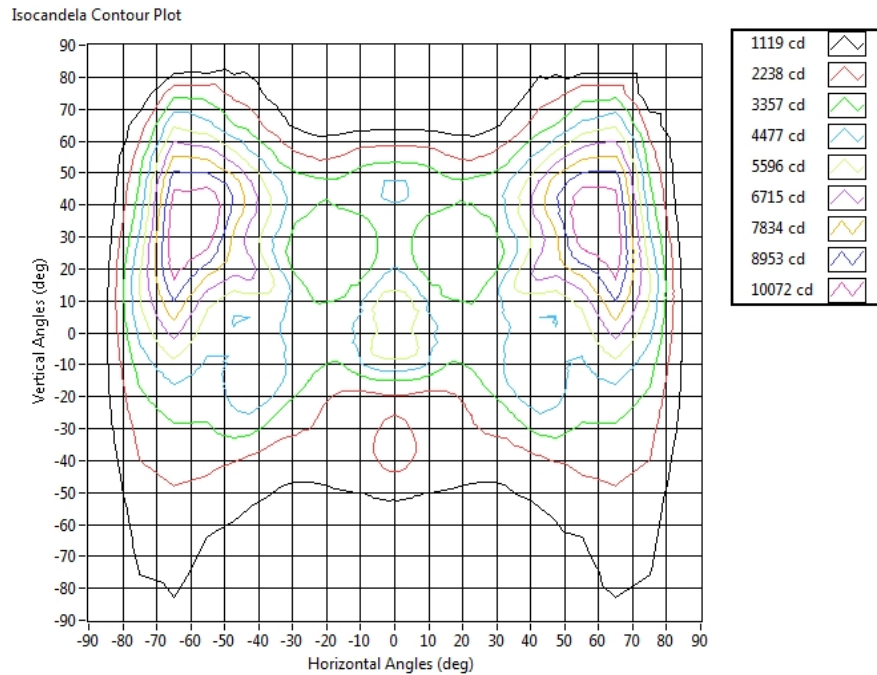
Zonal Flux Graph



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	3.38	20.10	1583.9
4	6.75	40.19	396.0
6	10.13	60.29	176.0
8	13.51	80.39	99.0
10	16.89	100.48	63.4
12	20.26	120.58	44.0
14	23.64	140.68	32.3
16	27.02	160.77	24.7
18	30.39	180.87	19.6
20	33.77	200.97	15.8

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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