Test Report

Report Number: L24023 Date: Aug 22, 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: S1xNQW2FxxxxxN

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 22, 2024 through August 22, 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:

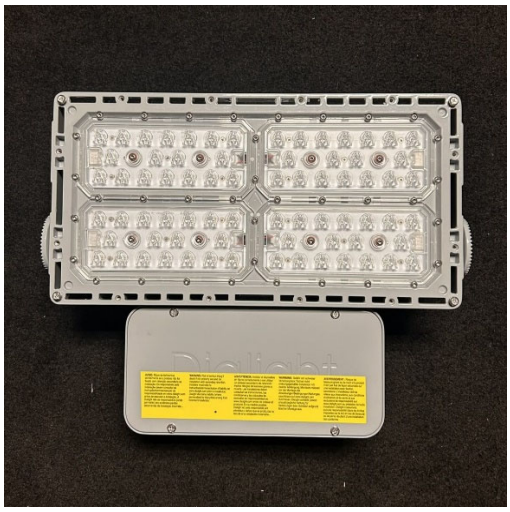
Sample Number:	L24023
Manufacturer:	Dialight Corporation
Product Name:	ProSite Street Light
Description:	Street Light
Model Number:	S1xNQW2FxxxxxN

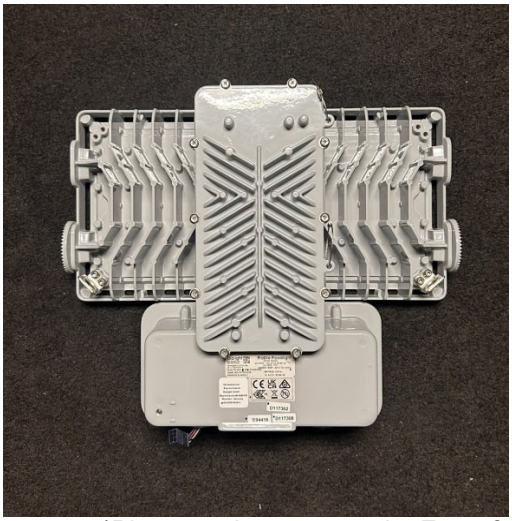
Report Summary

Sample number L24023

Dialight unit model number S1xNQW2FxxxxxN

Photograph(s) of sample:





*Photographs not to scale. For reference only.

Summary of Results:

	Integrating Sphere	Goniophotometer
Luminous Flux:	23924 (lumens)	23675 (lumens)
Electrical Power:	233.1 (W)	233.1 (W)
Luminous Efficacy:	102.6 (lumens/W)	101.5 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	233.1	(W)
	Power Factor (120VAC):	0.9970	
	Current ATHD % (120VAC):	4.71	
Secondary Voltage:	Input Power (277VAC):	224.4	(W)
	Power Factor (277VAC):	0.9832	
	Current ATHD % (277VAC):	8.79	

Color Measurements:

Correlated Color Temperature (CCT):	2835	(K)
Color Rendering Index (CRI):	83.02	
Chromaticity Coordinate (x):	0.449	
Chromaticity Coordinate (y):	0.407	
Chromaticity Coordinate (u'):	0.257	
Chromaticity Coordinate (v'):	0.524	
DUV:	-0.0003	

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24023.
Dialight unit model number S1xNQW2FxxxxxN

Test Conditions:

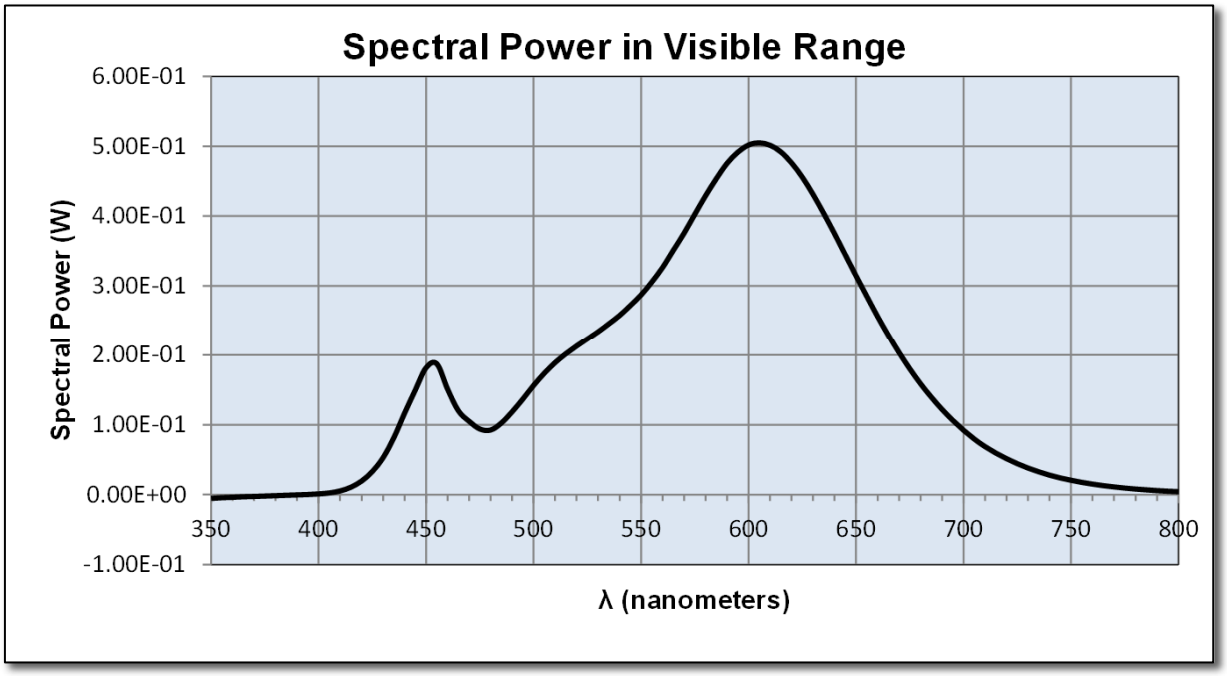
Ambient Temperature:	25 ± 1.2	(°C)
Ambient Relative Humidity:	10 to 65	(%RH)

Electrical Measurements:

Input Voltage:	120.2	(VAC)
Input Current:	1.946	(A)
Input Power:	233.1	(W)
Input Power Factor:	0.9970	
Current ATHD:	4.71	(%)

Photometric measurements:

Luminous Flux:	23923.8	(lumens)
Luminous Efficacy:	102.6	(lumens/W)
Correlated Color Temperature (CCT):	2835	(K)
CRI -Ra:	83.02	
CRI -R9:	9.75	
DUV:	-0.0003	
CIE Coordinate (x):	0.449	
CIE Coordinate (y):	0.407	
CIE Coordinate (u'):	0.257	
CIE Coordinate (v'):	0.524	
TM30_Rf:	85.9	
TM30_Rg:	96.0	
TM30_Rcs_hue1:	-11.06	%



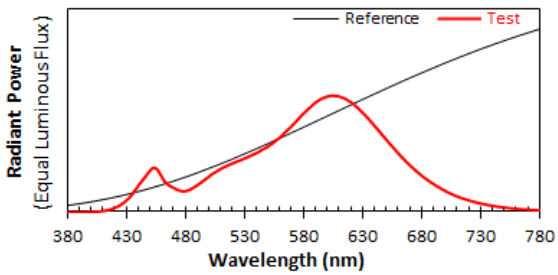
Test Results: Integrating Sphere

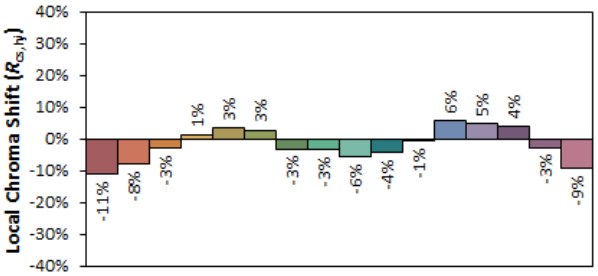
Results continued from previous page.

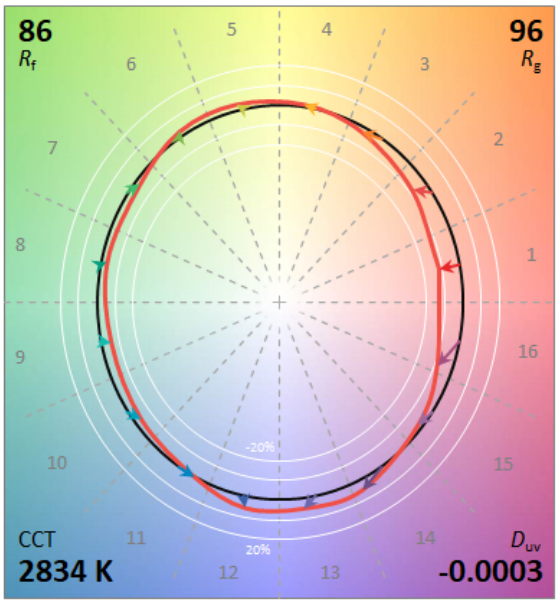
Tabulated Spectral Power in Visible Range:

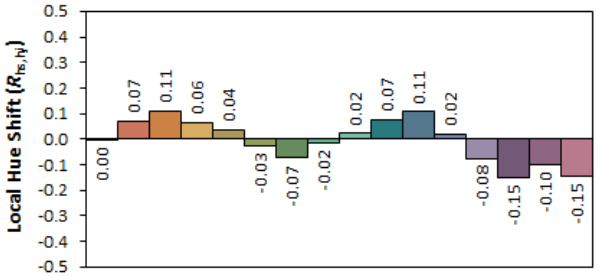
λ(nm)	(W/nm)	λ(nm)	(W/nm)	λ(nm)	(W/nm)	λ(nm)	(W/nm)
350	-0.00527	**490**	0.11857	**630**	0.43088	**770**	0.01109
355	-0.00426	**495**	0.13682	**635**	0.40342	**775**	0.00946
360	-0.00366	**500**	0.15634	**640**	0.37449	**780**	0.00809
365	-0.00293	**505**	0.17379	**645**	0.34430	**785**	0.00694
370	-0.00246	**510**	0.18906	**650**	0.31409	**790**	0.00588
375	-0.00190	**515**	0.20174	**655**	0.28473	**795**	0.00503
380	-0.00136	**520**	0.21293	**660**	0.25582	**800**	0.00427
385	-0.00084	**525**	0.22339	**665**	0.22873		
390	-0.00028	**530**	0.23377	**670**	0.20341		
395	0.00026	**535**	0.24533	**675**	0.17997		
400	0.00112	**540**	0.25735	**680**	0.15855		
405	0.00257	**545**	0.27162	**685**	0.13947		
410	0.00543	**550**	0.28699	**690**	0.12183		
415	0.01063	**555**	0.30545	**695**	0.10625		
420	0.01956	**560**	0.32628	**700**	0.09209		
425	0.03317	**565**	0.35098	**705**	0.07953		
430	0.05302	**570**	0.37557	**710**	0.06872		
435	0.08151	**575**	0.40276	**715**	0.05952		
440	0.11663	**580**	0.42933	**720**	0.05147		
445	0.14981	**585**	0.45374	**725**	0.04436		
450	0.18166	**590**	0.47572	**730**	0.03807		
455	0.18707	**595**	0.49160	**735**	0.03270		
460	0.15074	**600**	0.50189	**740**	0.02796		
465	0.11996	**605**	0.50501	**745**	0.02394		
470	0.10495	**610**	0.50151	**750**	0.02064		
475	0.09390	**615**	0.49199	**755**	0.01765		
480	0.09244	**620**	0.47619	**760**	0.01515		
485	0.10254	**625**	0.45566	**765**	0.01291		

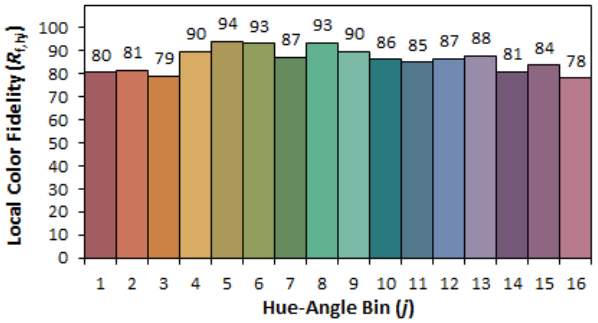
IES TM-30-18 Color Renditon Report

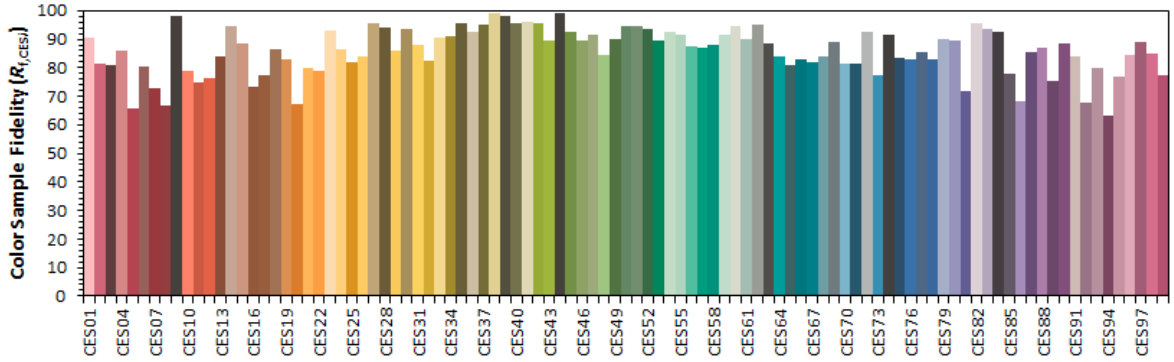












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	**0.4487**
y	**0.4069**
u'	**0.2569**
v'	**0.5242**

CIE 13.3-1995 (CRI)

R_a	83
R_9	10

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

Dialight
OPTICS LABORATORY

NVLAP TESTING
NVLAP LAB CODE 201033-0

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L24023.
Dialight unit model number S1xNQW2FxxxxxN

Electrical Measurements:

Input Voltage:	120.0	(VAC)
Input current:	1.95	(A)
Input Power:	233.14	(W)
Power Factor:	0.9969	

Photometric measurements:

Absolute Luminous Flux:	23675.4	(lumens)
Luminous Efficacy:	101.5	(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	8295	8295	8295	8295	8295	
5.00	8461	8253	7434	8273	8237	834
15.00	6923	5494	5531	5411	4552	1599
25.00	5464	3480	5224	3386	2851	1902
35.00	5249	3343	6502	3258	3642	2774
45.00	6055	4715	6049	2938	2860	3484
55.00	3995	5930	6403	1998	1176	3057
65.00	979	4422	10360	1360	894	2584
75.00	589	2301	7055	962	925	1865
85.00	274	827	1164	532	459	332
90.00	97	11	14	349	163	

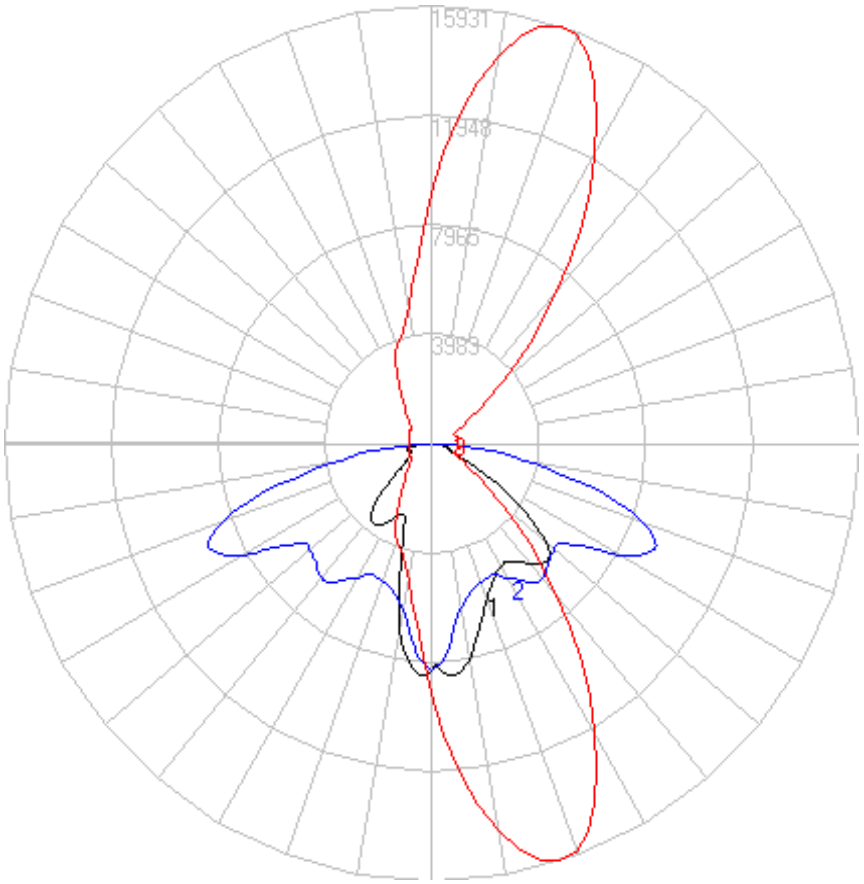
Zonal Lumen Summary

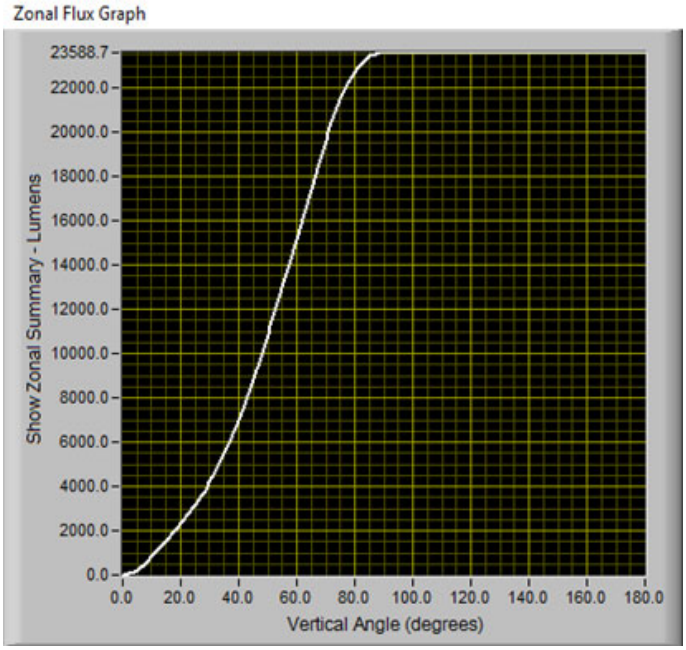
Zone	Lumens	% Lamp	% Fixture
0 to 30	4072.80	17.27	17.27
0 to 40	6808.99	28.87	28.87
0 to 60	14902.12	63.17	63.17
0 to 90	23588.67	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	23588.67	100.00	100.00

Test Results: Goniometer

Results continued from previous page.

Polar Plot:

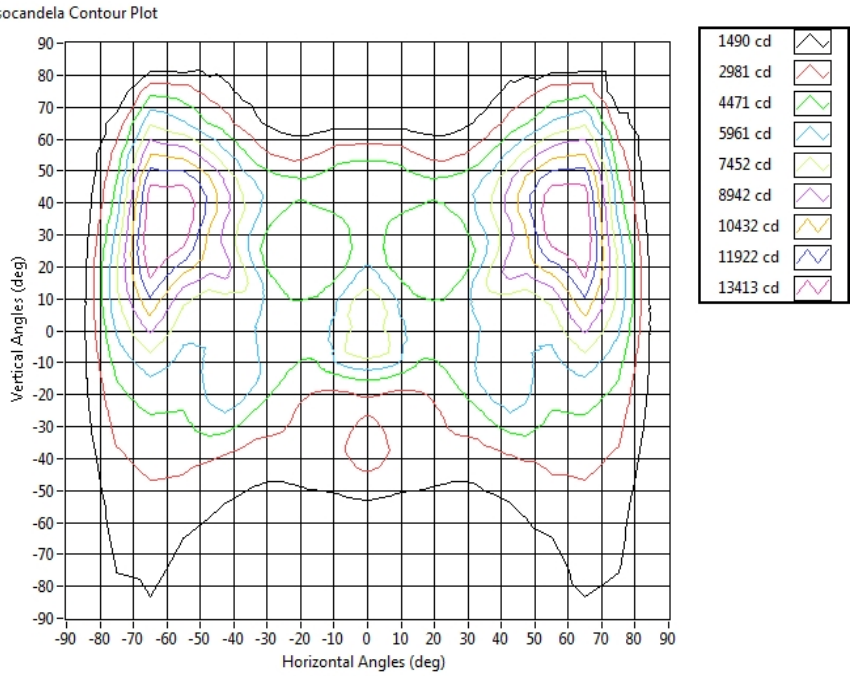




Test Results: Goniometer

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	3.34	19.95	2073.7
4	6.68	39.89	518.4
6	10.02	59.84	230.4
8	13.35	79.79	129.6
10	16.69	99.73	82.9
12	20.03	119.68	57.6
14	23.37	139.62	42.3
16	26.71	159.57	32.4
18	30.05	179.52	25.6
20	33.38	199.46	20.7

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 Spectrameter- 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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Callan McCormick
Dialight Optics Laboratory
Optics Lab Engineer
Approved Signatory