Test Report

Report Number: L24012 Date: Jul 31, 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: S1xNQB2ExxxxxN

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 30, 2024 through July 31, 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

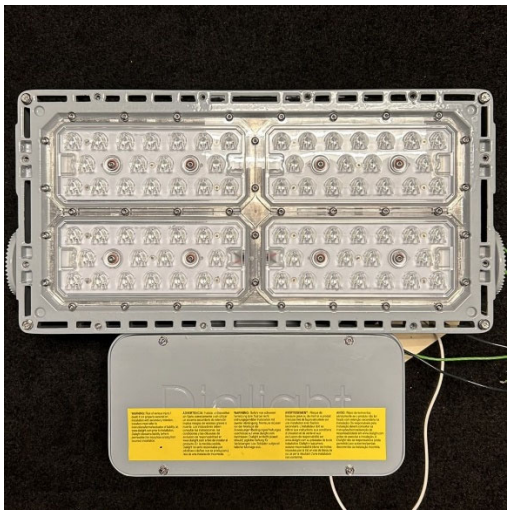
Description of sample:

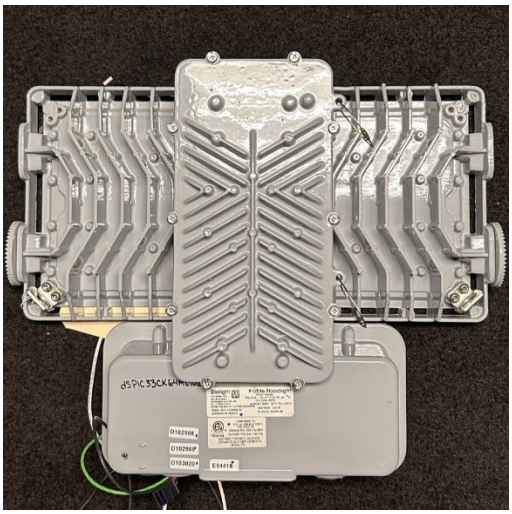
Sample Number:	L24012
Manufacturer:	Dialight Corporation
Product Name:	ProSite Street Light
Description:	Street Light
Model Number:	S1xNQB2ExxxxxN

Report Summary

Sample number L24012
Dialight unit model number S1xNQB2ExxxxxN

Photograph(s) of sample:





*Photographs not to scale. For reference only.

Summary of Results:

	Integrating Sphere	Goniophotometer
Luminous Flux:	23712 (lumens)	23557 (lumens)
Electrical Power:	173.8 (W)	174.0 (W)
Luminous Efficacy:	136.5 (lumens/W)	135.4 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	173.8	(W)
	Power Factor (120VAC):	0.9964	
	Current ATHD % (120VAC):	4.90	
Secondary Voltage:	Input Power (277VAC):	168.4	(W)
	Power Factor (277VAC):	0.9723	
	Current ATHD % (277VAC):	9.59	

Color Measurements:

Correlated Color Temperature (CCT):	5012	(K)
Color Rendering Index (CRI):	71.08	
Chromaticity Coordinate (x):	0.345	
Chromaticity Coordinate (y):	0.355	
Chromaticity Coordinate (u'):	0.210	
Chromaticity Coordinate (v'):	0.486	
DUV:	0.0018	

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L24012.
Dialight unit model number S1xNQB2ExxxxxN

Test Conditions:

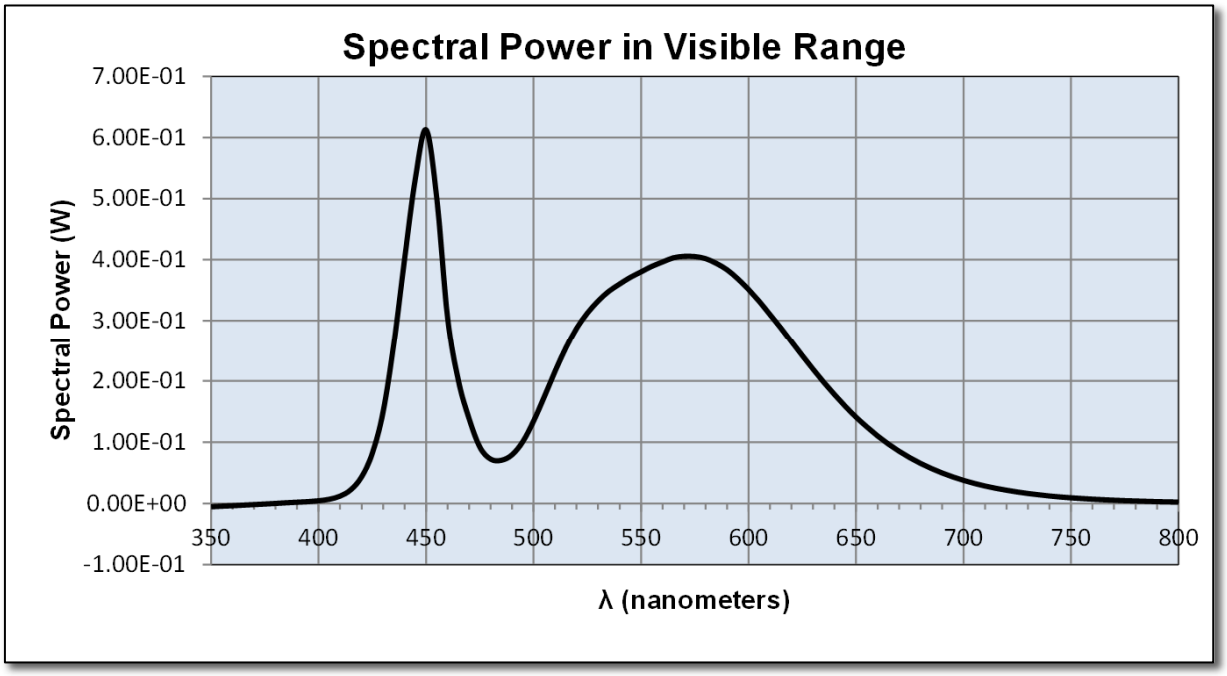
Ambient Temperature:	25 ± 1.2	(°C)
Ambient Relative Humidity:	10 to 65	(%RH)

Electrical Measurements:

Input Voltage:	120.3	(VAC)
Input Current:	1.450	(A)
Input Power:	173.8	(W)
Input Power Factor:	0.9964	
Current ATHD:	4.90	(%)

Photometric measurements:

Luminous Flux:	23712.3	(lumens)
Luminous Efficacy:	136.5	(lumens/W)
Correlated Color Temperature (CCT):	5012	(K)
CRI -Ra:	71.08	
CRI -R9:	-35.20	
DUV:	0.0018	
CIE Coordinate (x):	0.345	
CIE Coordinate (y):	0.355	
CIE Coordinate (u'):	0.210	
CIE Coordinate (v'):	0.486	
TM30_Rf:	72.3	
TM30_Rg:	94.4	
TM30_Rcs_hue1:	-17.91	%



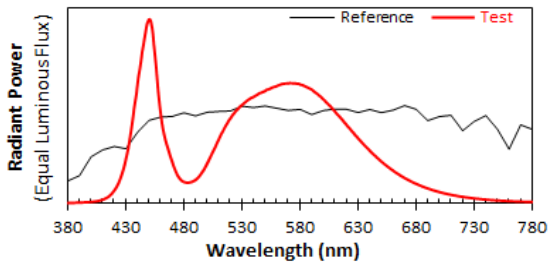
Test Results: Integrating Sphere

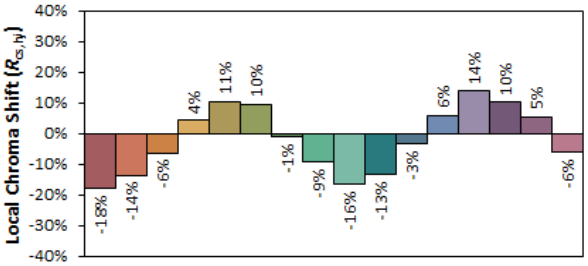
Results continued from previous page.

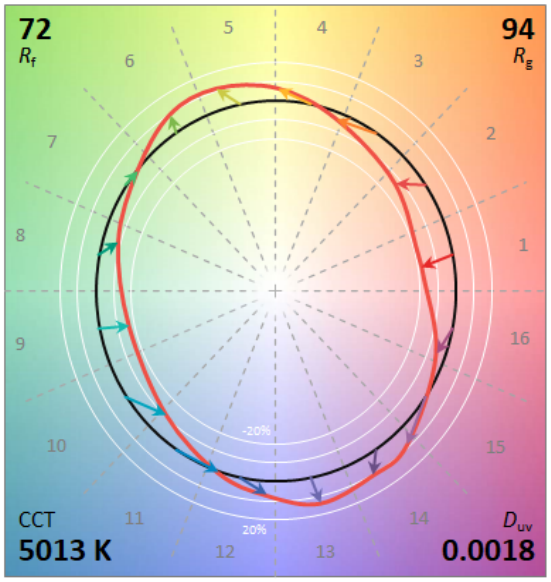
Tabulated Spectral Power in Visible Range:

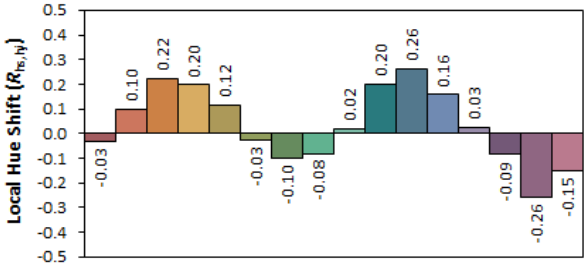
λ(nm)	(W/nm)	λ(nm)	(W/nm)	λ(nm)	(W/nm)	λ(nm)	(W/nm)
350	-0.00540	**490**	0.07957	**630**	0.21929	**770**	0.00527
355	-0.00438	**495**	0.10113	**635**	0.19778	**775**	0.00461
360	-0.00364	**500**	0.13462	**640**	0.17763	**780**	0.00401
365	-0.00273	**505**	0.17455	**645**	0.15854	**785**	0.00346
370	-0.00184	**510**	0.21636	**650**	0.14090	**790**	0.00298
375	-0.00092	**515**	0.25468	**655**	0.12506	**795**	0.00258
380	0.00012	**520**	0.28730	**660**	0.11029	**800**	0.00222
385	0.00114	**525**	0.31249	**665**	0.09709		
390	0.00202	**530**	0.33235	**670**	0.08526		
395	0.00296	**535**	0.34837	**675**	0.07472		
400	0.00443	**540**	0.36015	**680**	0.06543		
405	0.00690	**545**	0.37112	**685**	0.05715		
410	0.01203	**550**	0.38012	**690**	0.04982		
415	0.02249	**555**	0.38916	**695**	0.04331		
420	0.04349	**560**	0.39636	**700**	0.03766		
425	0.08225	**565**	0.40317	**705**	0.03271		
430	0.14997	**570**	0.40547	**710**	0.02843		
435	0.26197	**575**	0.40518	**715**	0.02476		
440	0.40133	**580**	0.40179	**720**	0.02159		
445	0.53313	**585**	0.39397	**725**	0.01874		
450	0.61272	**590**	0.38353	**730**	0.01625		
455	0.49894	**595**	0.36865	**735**	0.01413		
460	0.30442	**600**	0.35123	**740**	0.01222		
465	0.20102	**605**	0.33157	**745**	0.01060		
470	0.13829	**610**	0.30976	**750**	0.00927		
475	0.09194	**615**	0.28787	**755**	0.00806		
480	0.07236	**620**	0.26463	**760**	0.00700		
485	0.07056	**625**	0.24177	**765**	0.00605		

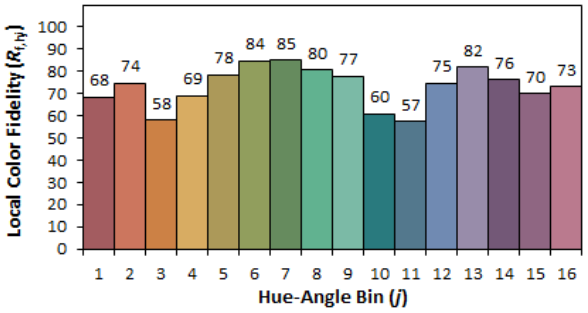
IES TM-30-18 Color Renditon Report

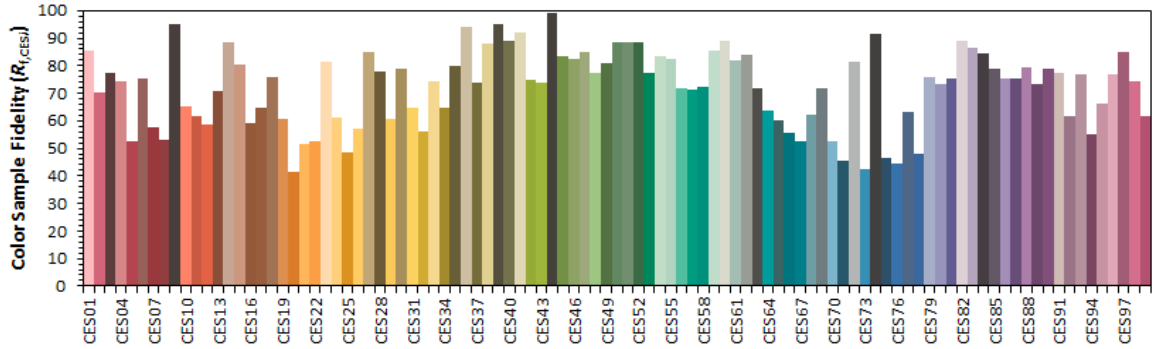












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	**0.3451**
y	**0.3551**
u'	**0.2100**
v'	**0.4864**

CIE 13.3-1995
(CRI)

R_a	71
R_9	-35

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 L24012.
Dialight unit model number S1xNQB2ExxxxxN

Electrical Measurements:

Input Voltage:	120.1	(VAC)
Input current:	1.45	(A)
Input Power:	174.01	(W)
Power Factor:	0.9963	

Photometric measurements:

Absolute Luminous Flux:	23557.2	(lumens)
Luminous Efficacy:	135.4	(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	8325	8325	8325	8325	8325	
5.00	8535	8471	7448	8284	8110	835
15.00	6927	5811	5628	5425	4198	1583
25.00	5355	3558	5165	3308	2856	1884
35.00	5199	3193	6127	3211	3488	2689
45.00	6079	4445	5827	2888	2569	3367
55.00	3942	5980	6734	2074	1109	3075
65.00	1009	4287	10824	1449	841	2629
75.00	591	2379	7696	1034	890	1959
85.00	287	962	1102	555	368	327
90.00	114	80	14	397	113	

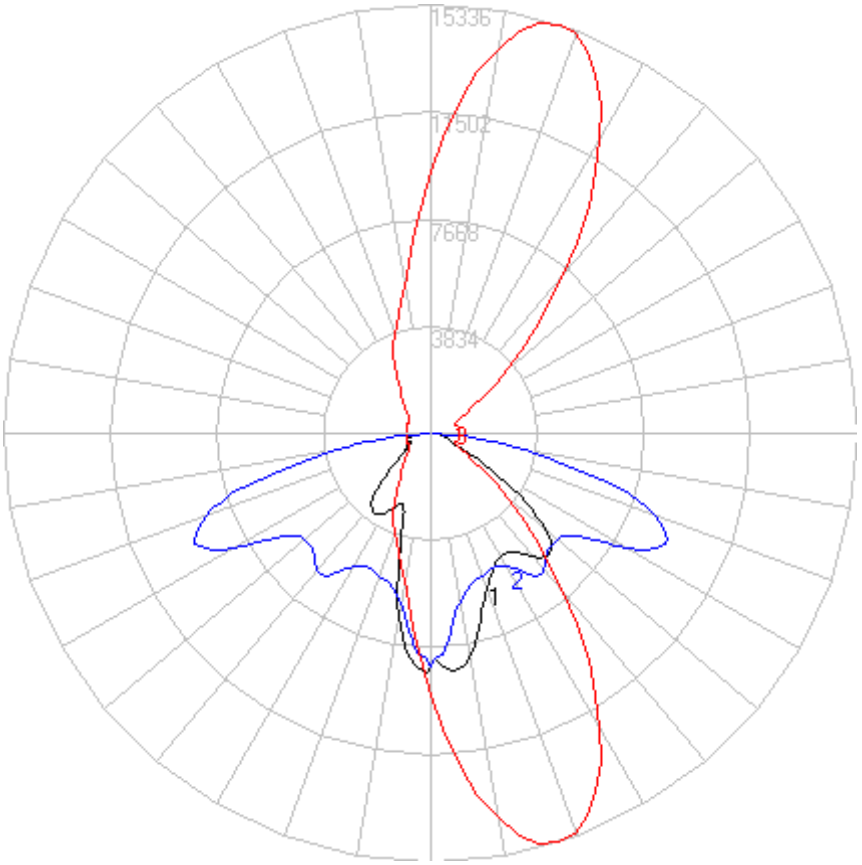
Zonal Lumen Summary

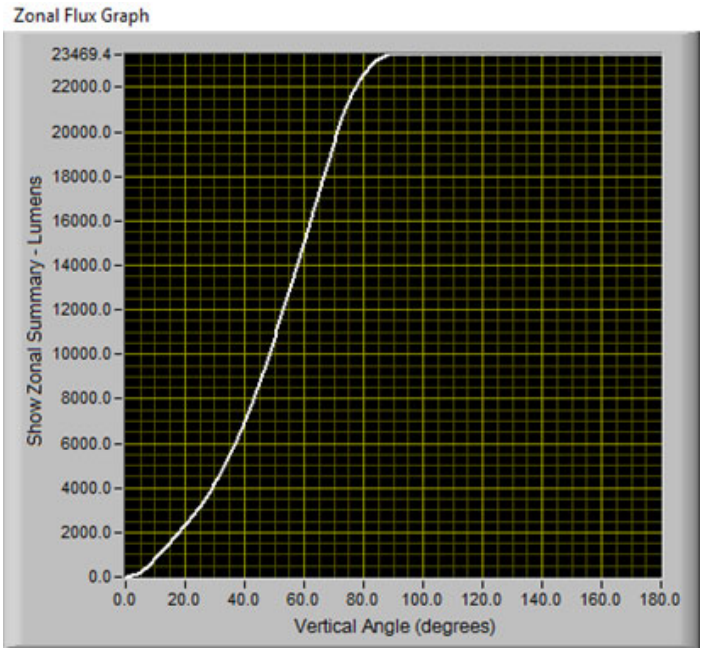
Zone	Lumens	% Lamp	% Fixture
0 to 30	4058.33	17.29	17.29
0 to 40	6761.87	28.81	28.81
0 to 60	14762.33	62.90	62.90
0 to 90	23469.40	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	23469.40	100.00	100.00

Test Results: Goniometer

Results continued from previous page.

Polar Plot:

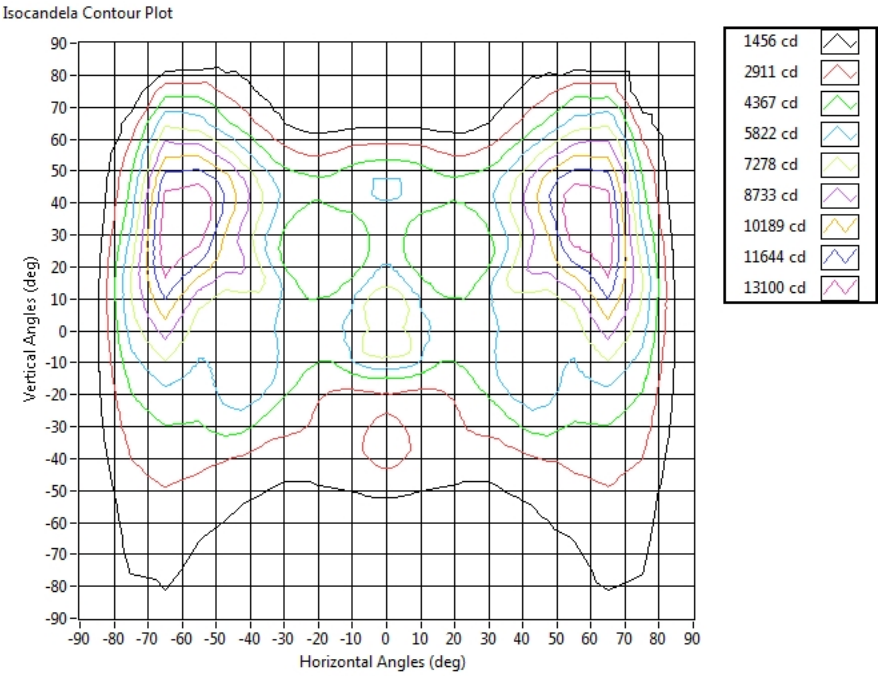




Test Results: Goniometer

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	3.39	20.07	2081.2
4	6.77	40.13	520.3
6	10.16	60.20	231.2
8	13.55	80.27	130.1
10	16.94	100.33	83.2
12	20.32	120.40	57.8
14	23.71	140.47	42.5
16	27.10	160.53	32.5
18	30.49	180.60	25.7
20	33.87	200.67	20.8

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 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.
This report shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

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