

Test Report

Report Number: L23030

Date: Nov 3, 2023

Issued by:

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

Test of one GRP Linear
Unit manufacturer: Dialight Corporation
Unit model number: P2ABMN23xxxxxx

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: October 24, 2023 through October 27, 2023

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

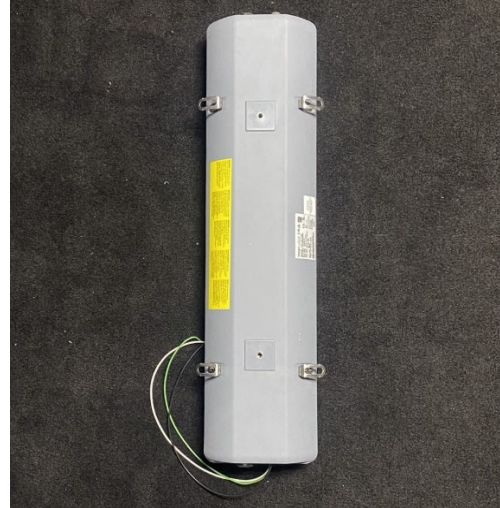
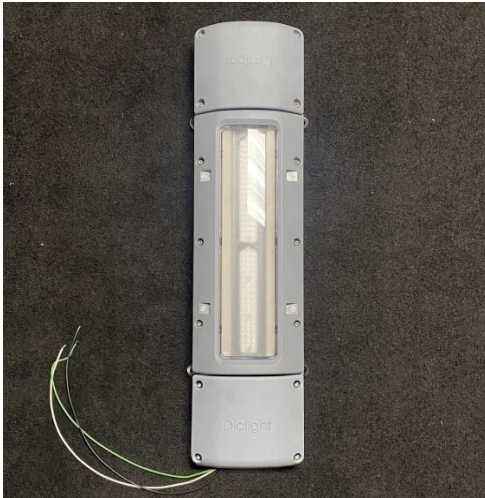
Description of sample:

Sample Number: L23030
Manufacturer: Dialight Corporation
Product Name: SafeSite GRP LED Linear, 2ft, Medium
Description: GRP Linear
Model Number: P2ABMN23xxxxxx

Report Summary

Sample number L23030
Dialight unit model number P2ABMN23xxxxxx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	2732 (lumens)	2730 (lumens)
Electrical Power:	25.1 (W)	25.2 (W)
Luminous Efficacy:	108.7 (lumens/W)	108.5 (lumens/W)

Electrical Measurements:

Primary Voltage:	Input Power (120VAC):	25.1 (W)
	Power Factor (120VAC):	0.9875
	Current ATHD % (120VAC):	12.51
Secondary Voltage:	Input Power (277VAC):	25.1 (W)
	Power Factor (277VAC):	0.8950
	Current ATHD % (277VAC):	12.46

Color Measurements:

Correlated Color Temperature (CCT):	3900 (K)
Color Rendering Index (CRI):	84.39
Chromaticity Coordinate (x):	0.385
Chromaticity Coordinate (y):	0.381
Chromaticity Coordinate (u'):	0.227
Chromaticity Coordinate (v'):	0.504
DUV:	0.0006

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L23030.

Dialight unit model number P2ABMN23xxxxxx

Test Conditions:

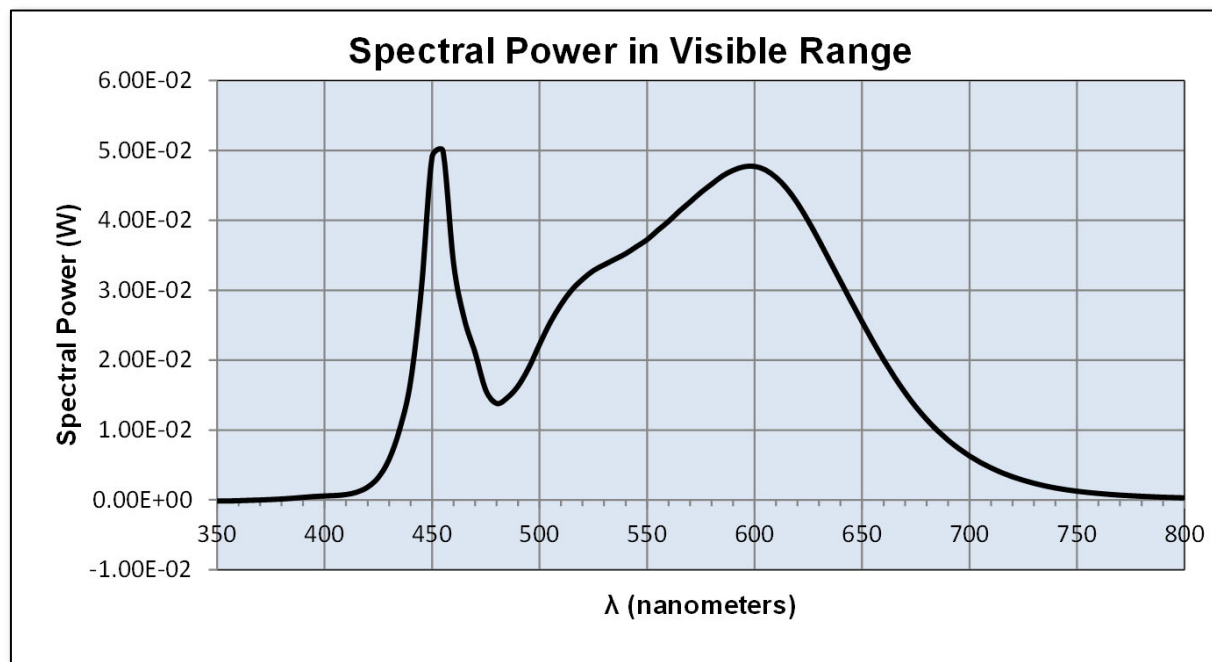
Ambient Temperature: 25 ± 1.2 (°C)
Ambient Relative Humidity: 10 to 65 (%RH)

Electrical Measurements:

Input Voltage: 120.4 (VAC)
Input Current: 0.212 (A)
Input Power: 25.1 (W)
Input Power Factor: 0.9875
Current ATHD: 12.51 (%)

Photometric measurements:

Luminous Flux: 2732.2 (lumens)
Luminous Efficacy: 108.7 (lumens/W)
Correlated Color Temperature (CCT): 3900 (K)
CRI -Ra: 84.39
CRI -R9: 13.92
DUV: 0.0006
CIE Coordinate (x): 0.385
CIE Coordinate (y): 0.381
CIE Coordinate (u'): 0.227
CIE Coordinate (v'): 0.504
TM30_Rf: 84.9
TM30_Rg: 95.5
TM30_Rcs_hue1: -11.17 %



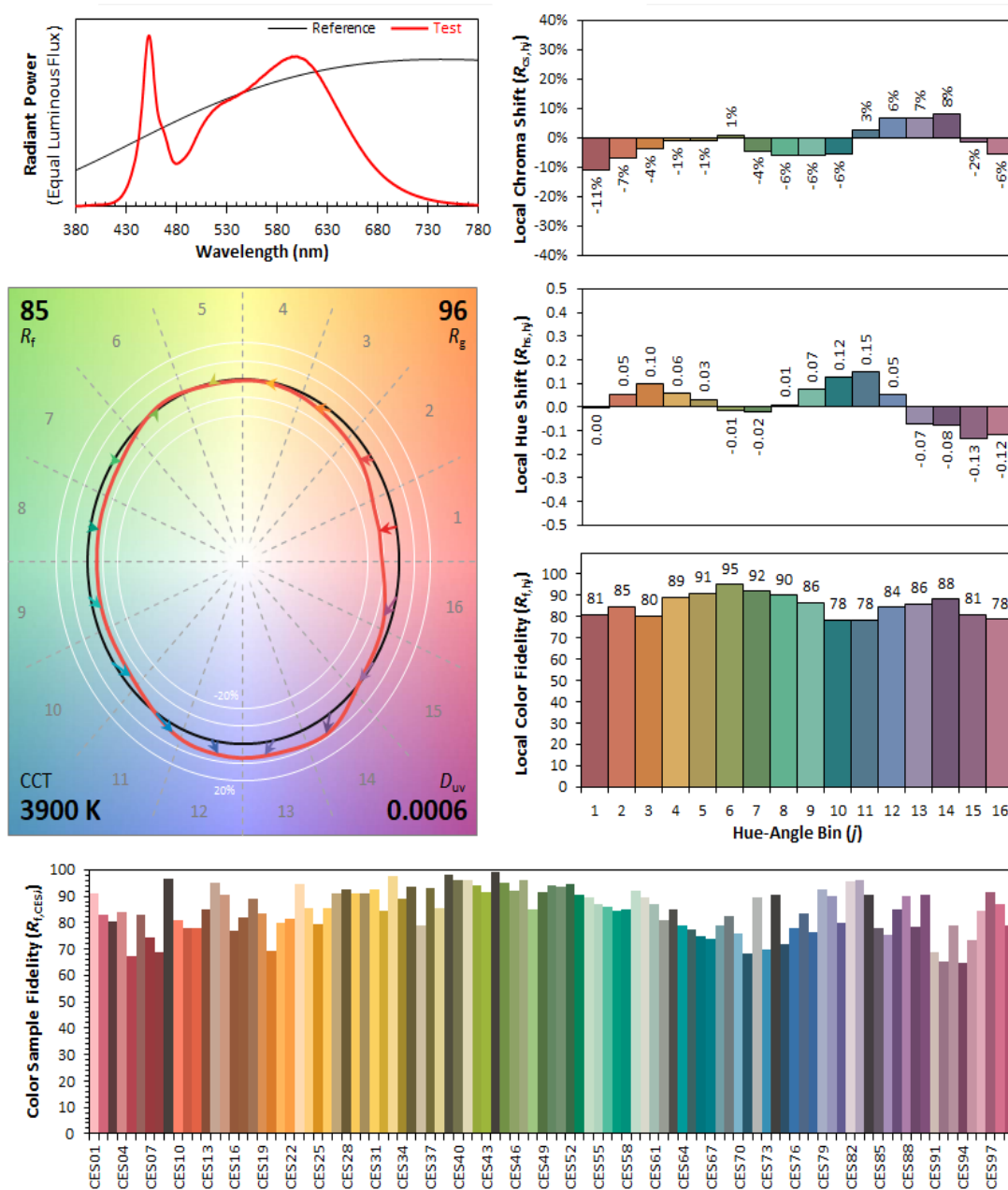
Test Results: Integrating Sphere

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	-0.00015	490	0.01631	630	0.03710	770	0.00069
355	-0.00014	495	0.01894	635	0.03417	775	0.00060
360	-0.00010	500	0.02228	640	0.03126	780	0.00052
365	-0.00005	505	0.02542	645	0.02834	785	0.00045
370	0.00000	510	0.02799	650	0.02548	790	0.00039
375	0.00006	515	0.03007	655	0.02270	795	0.00034
380	0.00014	520	0.03159	660	0.02007	800	0.00030
385	0.00024	525	0.03281	665	0.01761		
390	0.00037	530	0.03365	670	0.01536		
395	0.00049	535	0.03444	675	0.01332		
400	0.00057	540	0.03523	680	0.01153		
405	0.00064	545	0.03623	685	0.00994		
410	0.00078	550	0.03724	690	0.00855		
415	0.00111	555	0.03859	695	0.00735		
420	0.00184	560	0.03986	700	0.00628		
425	0.00323	565	0.04131	705	0.00537		
430	0.00582	570	0.04264	710	0.00458		
435	0.01020	575	0.04400	715	0.00389		
440	0.01698	580	0.04518	720	0.00331		
445	0.03015	585	0.04635	725	0.00282		
450	0.04915	590	0.04716	730	0.00239		
455	0.04998	595	0.04768	735	0.00202		
460	0.03380	600	0.04773	740	0.00171		
465	0.02587	605	0.04723	745	0.00146		
470	0.02105	610	0.04614	750	0.00125		
475	0.01567	615	0.04455	755	0.00107		
480	0.01381	620	0.04244	760	0.00093		
485	0.01464	625	0.03991	765	0.00080		

IES TM-30-18 Color Rendition Report



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

x 0.3854
 y 0.3810
 u' 0.2266
 v' 0.5042

CIE 13.3-1995
(CRI)

R_a 84
 R_g 14

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 L23030.
Dialight unit model number P2ABMN23xxxxxx

Electrical Measurements:

Input Voltage: 119.9 (VAC)
Input current: 0.21 (A)
Input Power: 25.16 (W)
Power Factor: 0.9872

Photometric measurements:

Absolute Luminous Flux: 2729.7 (lumens)
Luminous Efficacy: 108.5 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	1065	1065	1065	1065	1065	
5.00	1071	1053	1050	1055	1069	108
15.00	1039	1030	1026	1020	1029	292
25.00	972	988	972	965	947	447
35.00	846	895	871	856	836	536
45.00	662	728	713	710	637	523
55.00	434	480	487	482	444	409
65.00	202	240	234	253	228	223
75.00	77	106	99	111	95	99
85.00	8	33	33	37	21	14
90.00	1	14	18	17	2	

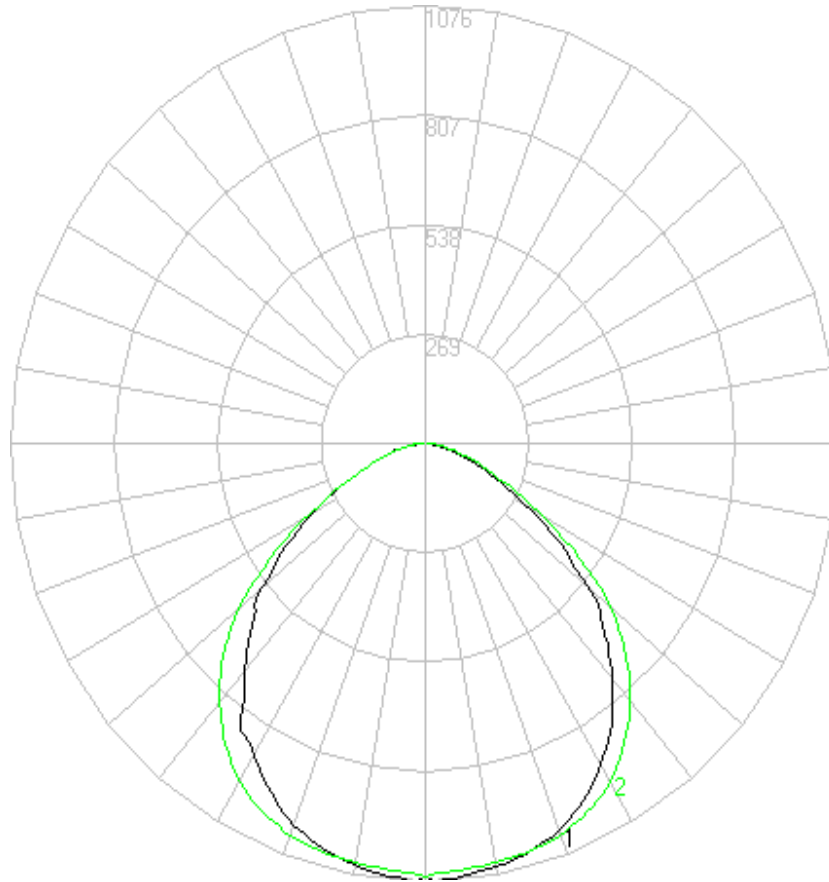
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	847.64	31.06	31.06
0 to 40	1397.50	51.21	51.21
0 to 60	2363.77	86.61	86.61
0 to 90	2729.08	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	2729.08	100.00	100.00

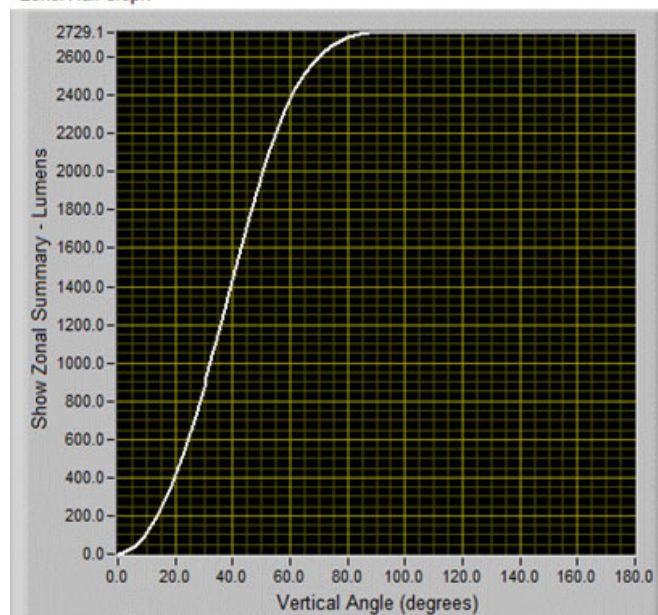
Test Results: Goniometer

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Polar Plot:



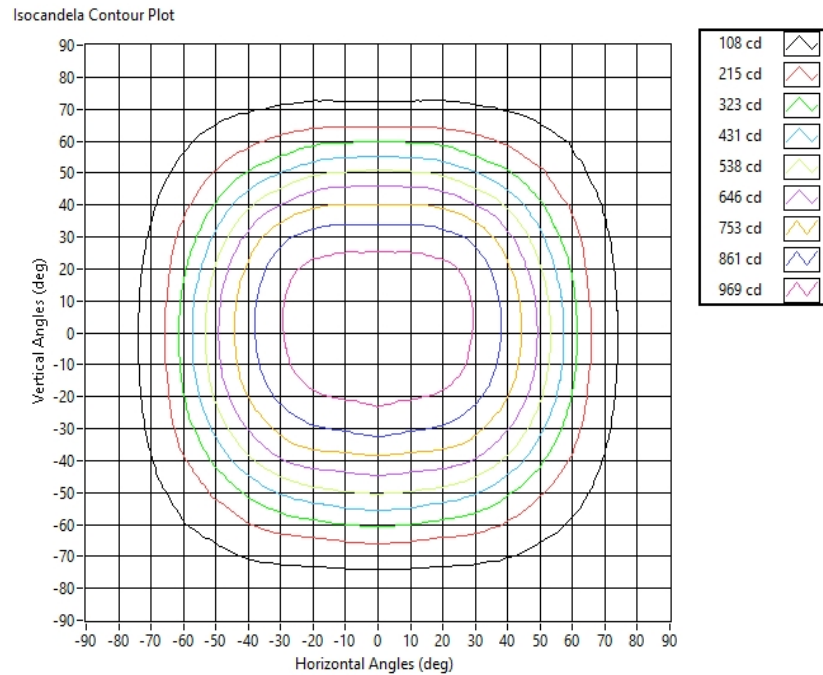
Zonal Flux Graph



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	4.82	5.39	266.3
4	9.63	10.77	66.6
6	14.45	16.16	29.6
8	19.26	21.55	16.6
10	24.08	26.93	10.7
12	28.90	32.32	7.4
14	33.71	37.70	5.4
16	38.53	43.09	4.2
18	43.35	48.48	3.3
20	48.16	53.86	2.7

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 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
Xitron Power Analyzer	XT2640
Xitron Power Analyzer	XT2640
LPS-525 DC Power Supply	LPS-525
Omega Temperature Controller	DP41-RTD-A
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
Labshere Spectrometer- CDS 2600 Spectrometer	CDS-2600

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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