

# Test Report

Report Number: L25025

Date: Sep 2, 2025

Issued by:

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

Test of one Area Light

Unit manufacturer: Dialight Corporation  
Unit model number: ALU5WC29DNNNGN

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 28, 2025 through August 29, 2025

**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

**Description of sample:**

Sample Number: L25025  
Manufacturer: Dialight Corporation  
Product Name: Area Light 8.5K  
Description: Area Light  
Model Number: ALU5WC29DNNNGN

## Report Summary

Sample number L25025  
Dialight unit model number ALU5WC29DNNNGN

**Photograph(s) of sample:**



\*Photographs not to scale. For reference only.

**Summary of Results:**

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	8366 (lumens)	8398 (lumens)
Electrical Power:	71.9 (W)	72.0 (W)
Luminous Efficacy:	116.3 (lumens/W)	116.6 (lumens/W)

**Electrical Measurements:**

Primary Voltage:	Input Power (120VAC):	71.9 (W)
	Power Factor (120VAC):	0.9969
	Current ATHD % (120VAC):	7.04
Secondary Voltage:	Input Power (277VAC):	69.8 (W)
	Power Factor (277VAC):	0.9844
	Current ATHD % (277VAC):	4.62

**Color Measurements:**

Correlated Color Temperature (CCT):	5091 (K)
Color Rendering Index (CRI):	83.49
Chromaticity Coordinate (x):	0.343
Chromaticity Coordinate (y):	0.351
Chromaticity Coordinate (u')	0.210
Chromaticity Coordinate (v')	0.484
DUV:	0.0006

## Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L25025.

Dialight unit model number ALU5WC29DNNNGN

### Test Conditions:

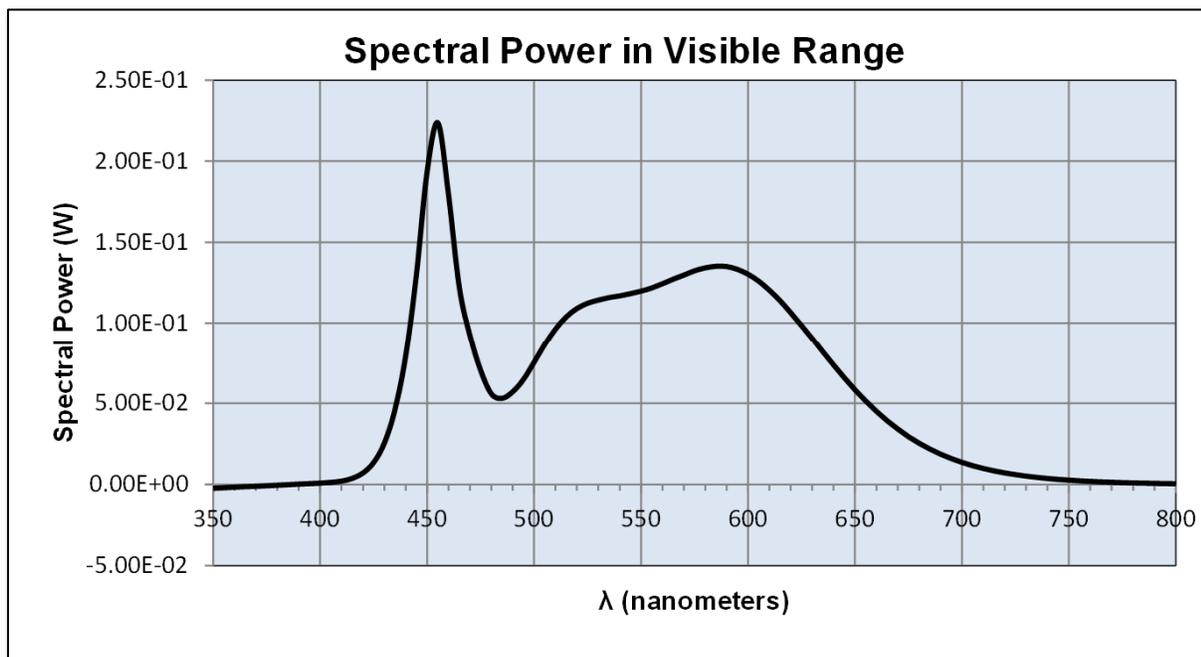
Ambient Temperature: 25 ± 1.2 (°C)  
Ambient Relative Humidity: 10 to 65 (%RH)

### Electrical Measurements:

Input Voltage: 121.1 (VAC)  
Input Current: 0.596 (A)  
Input Power: 71.9 (W)  
Input Power Factor: 0.9969  
Current ATHD: 7.04 (%)

### Photometric measurements:

Luminous Flux: 8366.3 (lumens)  
Luminous Efficacy: 116.3 (lumens/W)  
Correlated Color Temperature (CCT): 5091 (K)  
CRI -Ra: 83.49  
CRI -R9: 6.22  
DUV: 0.0006  
CIE Coordinate (x): 0.343  
CIE Coordinate (y): 0.351  
CIE Coordinate (u'): 0.210  
CIE Coordinate (v'): 0.484  
TM30\_Rf: 83.2  
TM30\_Rg: 95.1  
TM30\_Rcs\_hue1: -12.70 %



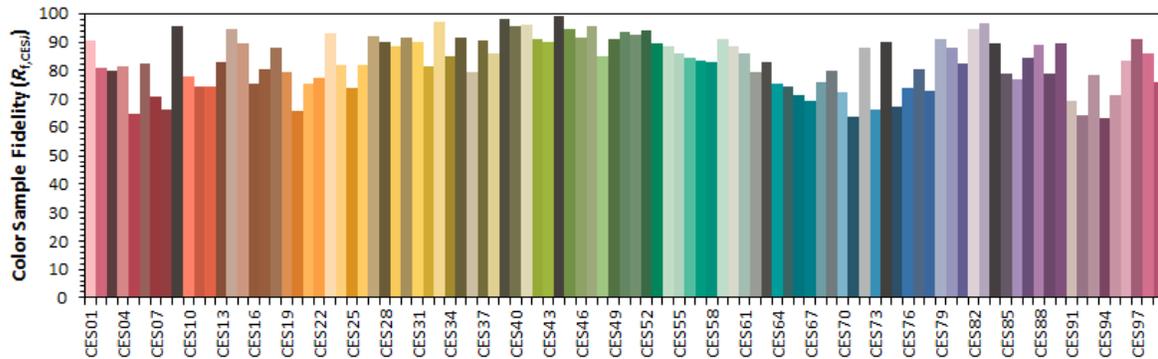
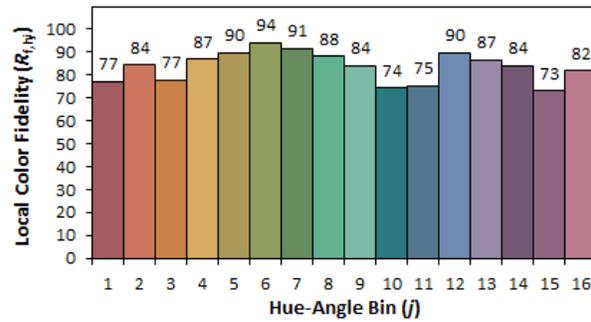
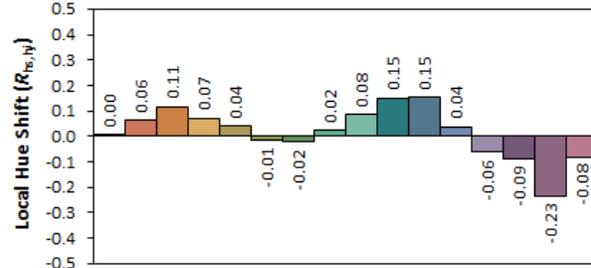
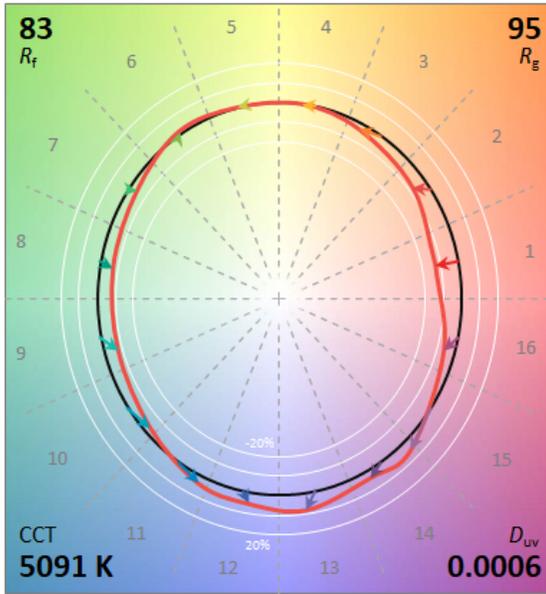
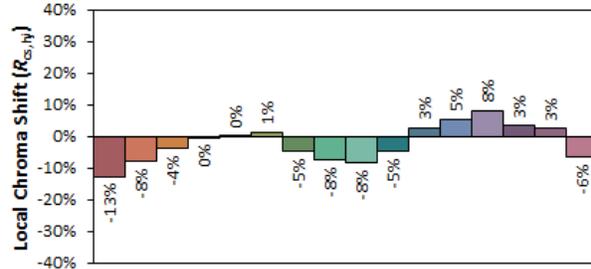
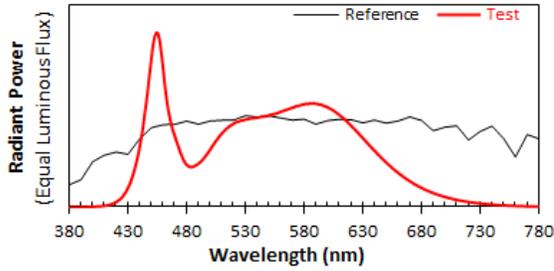
## Test Results: Integrating Sphere

Results continued from previous page.

### Tabulated Spectral Power in Visible Range:

$\lambda$ (nm)	(W/nm)	$\lambda$ (nm)	(W/nm)	$\lambda$ (nm)	(W/nm)	$\lambda$ (nm)	(W/nm)
350	-0.00235	490	0.05714	630	0.09029	770	0.00138
355	-0.00196	495	0.06472	635	0.08186	775	0.00117
360	-0.00164	500	0.07539	640	0.07366	780	0.00100
365	-0.00130	505	0.08653	645	0.06579	785	0.00084
370	-0.00105	510	0.09630	650	0.05834	790	0.00071
375	-0.00075	515	0.10380	655	0.05150	795	0.00058
380	-0.00043	520	0.10904	660	0.04509	800	0.00049
385	-0.00008	525	0.11230	665	0.03931		
390	0.00026	530	0.11425	670	0.03419		
395	0.00056	535	0.11582	675	0.02946		
400	0.00087	540	0.11686	680	0.02541		
405	0.00132	545	0.11822	685	0.02186		
410	0.00212	550	0.11978	690	0.01869		
415	0.00379	555	0.12177	695	0.01599		
420	0.00711	560	0.12435	700	0.01365		
425	0.01353	565	0.12720	705	0.01160		
430	0.02548	570	0.12971	710	0.00987		
435	0.04638	575	0.13236	715	0.00840		
440	0.07954	580	0.13419	720	0.00716		
445	0.12996	585	0.13513	725	0.00610		
450	0.19383	590	0.13497	730	0.00517		
455	0.22371	595	0.13325	735	0.00439		
460	0.17913	600	0.13024	740	0.00373		
465	0.12248	605	0.12596	745	0.00315		
470	0.09223	610	0.12032	750	0.00269		
475	0.07036	615	0.11386	755	0.00228		
480	0.05591	620	0.10635	760	0.00192		
485	0.05311	625	0.09843	765	0.00163		

**IES TM-30-18 Color Rendition Report**



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

x **0.3427**  
y **0.3508**  
u' **0.2101**  
v' **0.4839**

CIE 13.3-1995 (CRI)	
R <sub>a</sub>	83
R <sub>g</sub>	6

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 L25025.

Dialight unit model number ALU5WC29DNNNGN

### Electrical Measurements:

Input Voltage:	120.5	(VAC)
Input current:	0.60	(A)
Input Power:	72.00	(W)
Power Factor:	0.9965	

### Photometric measurements:

Absolute Luminous Flux:	8398.2	(lumens)
Luminous Efficacy:	116.6	(lumens/W)

BUG Rating: B3 - U0 - G3

### Photometric Distribution Summary:

#### Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	1856	1856	1856	1856	1856	
5.00	1800	1844	1898	1975	2013	193
15.00	1620	1709	1882	2188	2054	530
25.00	1368	1647	1788	2128	1806	781
35.00	1166	1472	1696	1887	1506	921
45.00	964	1229	1578	1684	1152	947
55.00	748	969	1897	1412	804	915
65.00	264	867	2153	1588	324	754
75.00	100	801	2398	1667	107	712
85.00	57	408	702	621	52	172
90.00	48	206	323	269	40	

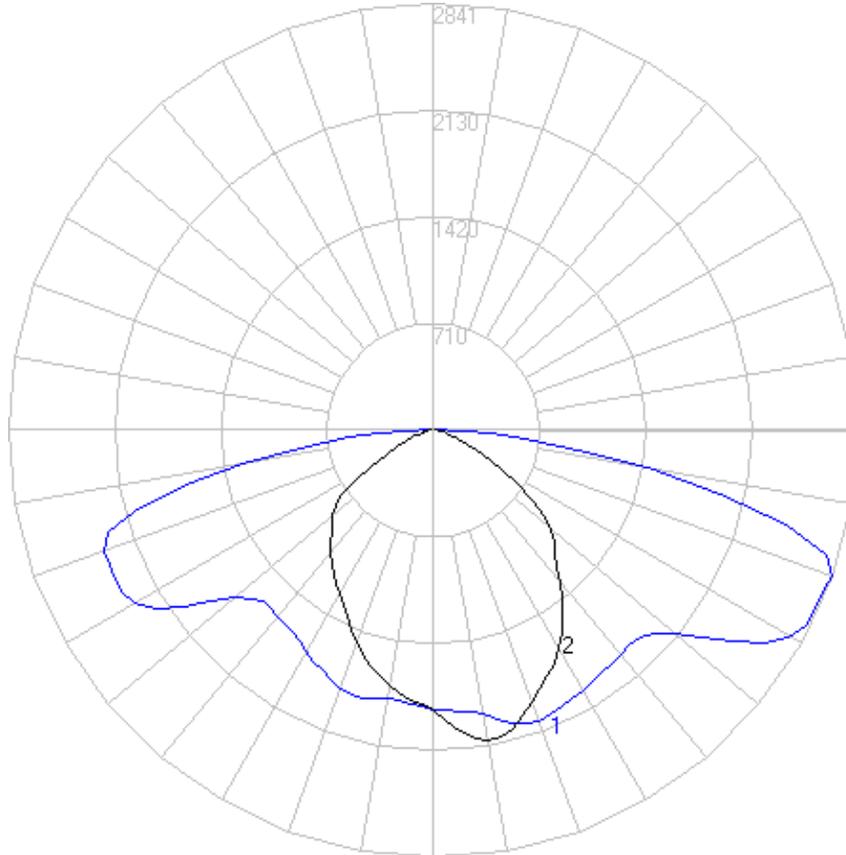
#### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	1558.75	19.10	19.10
0 to 40	2600.34	31.86	31.86
0 to 60	5040.35	61.75	61.75
0 to 90	8161.91	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	8161.91	100.00	100.00

## Test Results: Goniometer

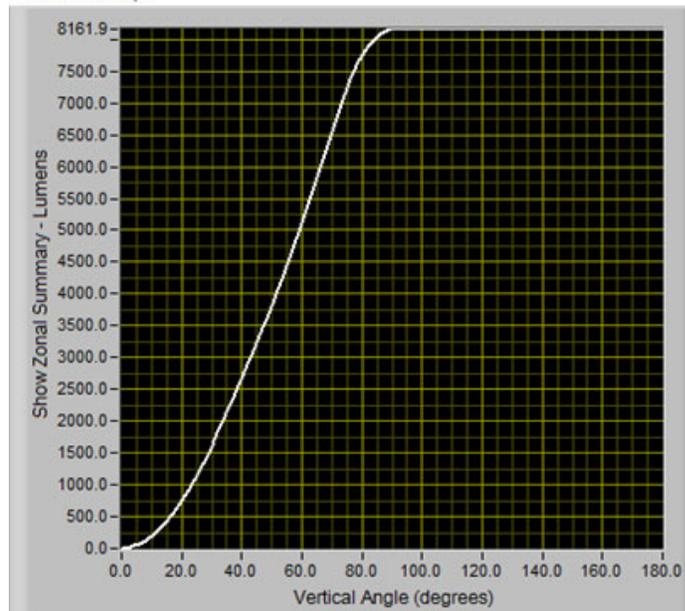
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### Polar Plot:



### Zonal Flux:

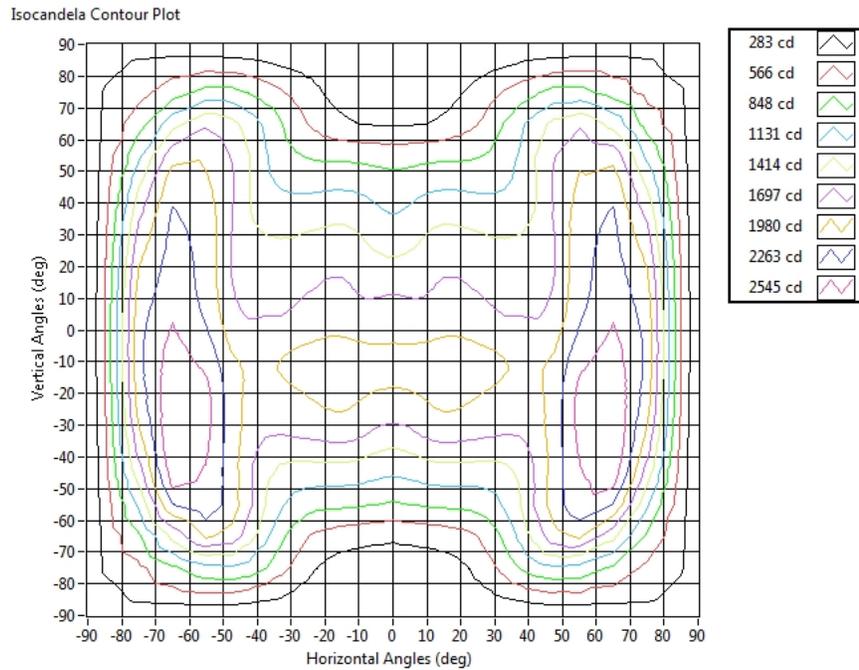
Zonal Flux Graph



## 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	4.65	31.08	464.0
4	9.30	62.16	116.0
6	13.96	93.24	51.6
8	18.61	124.31	29.0
10	23.26	155.39	18.6
12	27.91	186.47	12.9
14	32.56	217.55	9.5
16	37.22	248.63	7.2
18	41.87	279.71	5.7
20	46.52	310.79	4.6

**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
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
Labisphere calibration lamp for 2M sphere	SCL-1400
Labisphere calibration lamp for 2M sphere	SCL-1400
Labisphere 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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