

Test Report

Report Number: L21117

Date: Aug 13, 2021

Issued by:

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

Test of one Ultra Wide/Acrylic Lens/Neutral White

Unit manufacturer: Dialight Corporation

Unit model number: [K,V][C,E,F,W][D,U]-[2,T]UN-[2,8]6x-xxx-xx

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 6, 2021 through August 9, 2021

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-79:2008: Electrical and Photometric 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: L21117

Manufacturer: Dialight Corporation

Product Name: Highbay

Description: Ultra Wide/Acrylic Lens/Neutral White

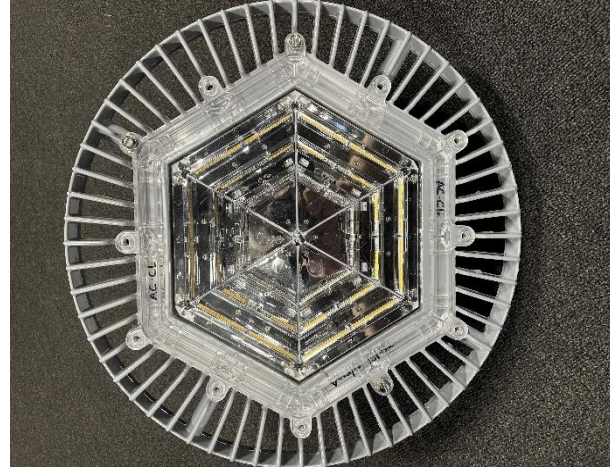
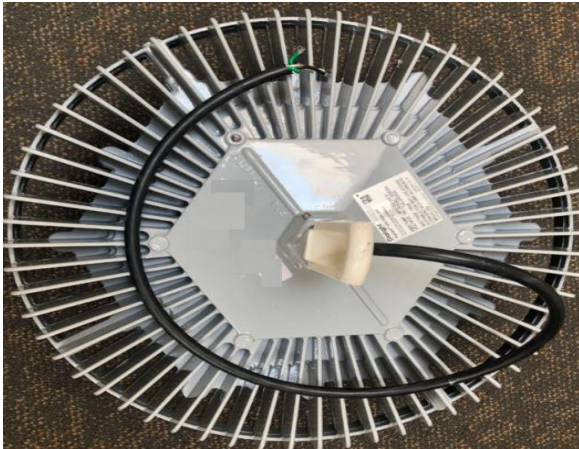
Model Number: [K,V][C,E,F,W][D,U]-[2,T]UN-[2,8]6x-xxx-xx

Report Summary

Sample number L21117

Dialight unit model number [K,V][C,E,F,W][D,U]-[2,T]UN-[2,8]6x-xxx-xx

Photograph(s) of sample:



*Photographs not to scale. For reference only.

Summary of Results:

	<u>Integrating Sphere</u>	<u>Goniophotometer</u>
Luminous Flux:	6137 (lumens)	6169 (lumens)
Electrical Power:	43.1 (W)	43.0 (W)
Luminous Efficacy:	142.3 (lumens/W)	143.5 (lumens/W)

Electrical Measurements:

Input Power (120VAC): 43.1 (W)
 Power Factor (120VAC): 0.9894
 Current ATHD % (120VAC): 12.56
 Input Power (277VAC): 42.7 (W)
 Power Factor (277VAC): 0.9203
 Current ATHD % (277VAC): 17.50

Color Measurements:

Correlated Color Temperature (CCT): 4140
 Color Rendering Index (CRI): 82.70
 Chromaticity Coordinate (x): 0.375
 Chromaticity Coordinate (y): 0.375
 Chromaticity Coordinate (u'): 0.222
 Chromaticity Coordinate (v'): 0.500
 DUV: 0.0009

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L21117.

Dialight unit model number [K,V][C,E,F,W][D,U]-[2,T]UN-[2,8]6x-xxx-xx

Test Conditions:

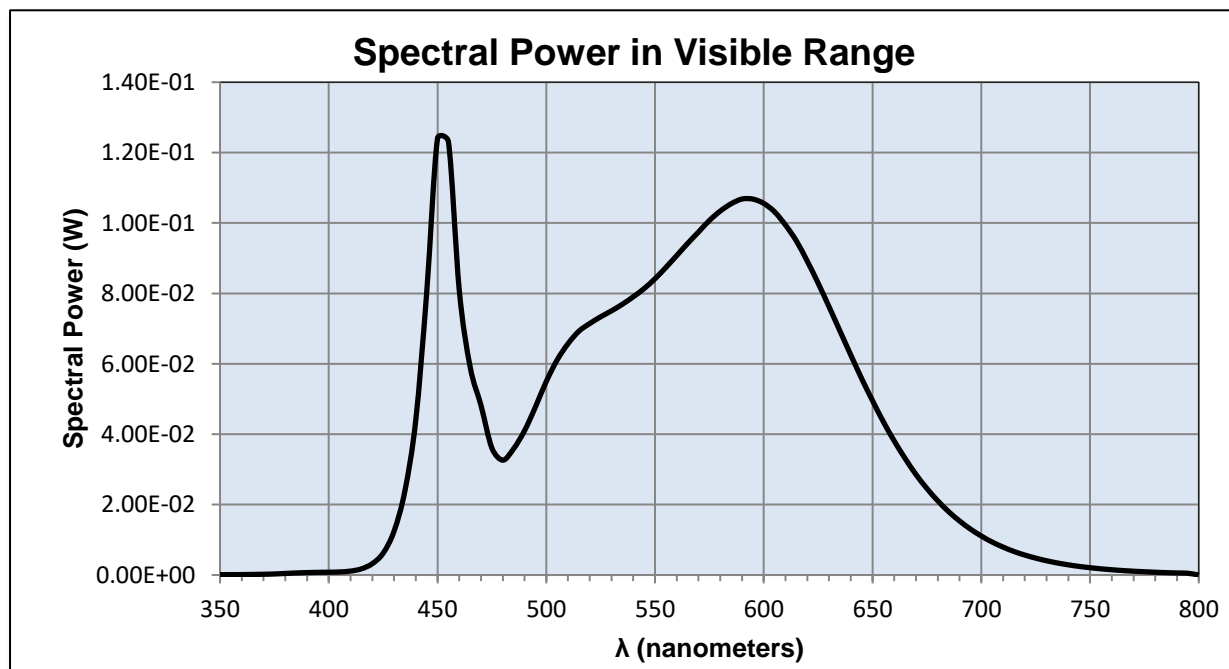
Ambient Temperature: 25 ± 1 (°C)

Electrical Measurements:

Input Voltage: 120.0 (VAC)
Input Current: 0.363 (A)
Input Power: 43.1 (W)
Input Power Factor: 0.9894
Current ATHD: 12.56 (%)

Photometric measurements:

Luminous Flux: 6137.4 (lumens)
Luminous Efficacy: 142.3 (lumens/W)
Correlated Color Temperature (CCT): 4140 (K)
CRI -Ra: 82.70
CRI -R9: 2.43
DUV: 0.0009
CIE Coordinate (x): 0.375
CIE Coordinate (y): 0.375
CIE Coordinate (u'): 0.222
CIE Coordinate (v'): 0.500
TM30_Rf: 83.6
TM30_Rg: 94.2
TM30_Rcs_hue1: -12.82 %



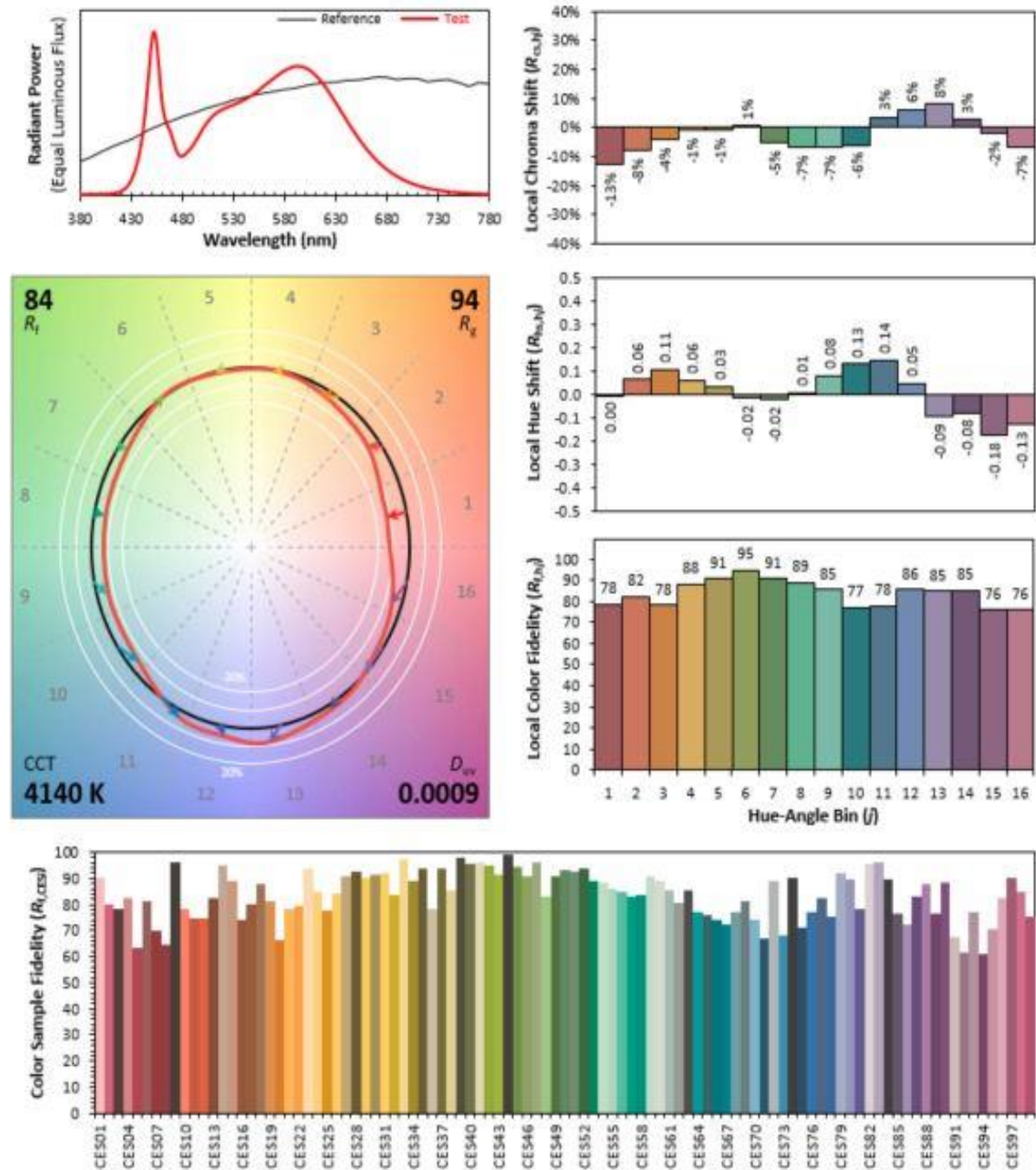
Test Results: Integrating Sphere

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	0.00011	490	0.04099	630	0.07623	770	0.00109
355	0.00011	495	0.04771	635	0.06935	775	0.00093
360	0.00013	500	0.05500	640	0.06251	780	0.00079
365	0.00017	505	0.06109	645	0.05581	785	0.00068
370	0.00021	510	0.06573	650	0.04953	790	0.00058
375	0.00030	515	0.06926	655	0.04352	795	0.00050
380	0.00044	520	0.07145	660	0.03805	800	0.00042
385	0.00059	525	0.07335	665	0.03310		
390	0.00070	530	0.07506	670	0.02854		
395	0.00076	535	0.07694	675	0.02458		
400	0.00080	540	0.07904	680	0.02108		
405	0.00088	545	0.08139	685	0.01800		
410	0.00112	550	0.08418	690	0.01536		
415	0.00175	555	0.08738	695	0.01306		
420	0.00322	560	0.09077	700	0.01109		
425	0.00621	565	0.09420	705	0.00938		
430	0.01244	570	0.09744	710	0.00794		
435	0.02391	575	0.10072	715	0.00670		
440	0.04401	580	0.10340	720	0.00568		
445	0.08005	585	0.10547	725	0.00480		
450	0.12405	590	0.10681	730	0.00405		
455	0.12310	595	0.10679	735	0.00342		
460	0.08084	600	0.10557	740	0.00290		
465	0.05914	605	0.10315	745	0.00245		
470	0.04815	610	0.09940	750	0.00208		
475	0.03606	615	0.09489	755	0.00177		
480	0.03263	620	0.08917	760	0.00150		
485	0.03590	625	0.08292	765	0.00127		

IES TM-30-18 Color Rendition Report



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

x 0.3750
y 0.3751
u' 0.2222
v' 0.5001

CIE 13.3-1995
(CRI)

R_a 83
R_g 2

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L21117.

Dialight unit model number [K,V][C,E,F,W][D,U]-[2,T]UN-[2,8]6x-xxx-xx

Electrical Measurements:

Input Voltage: 120.0 (VAC)
 Input current: 0.36 (A)
 Input Power: 42.99 (W)
 Power Factor: 0.9894

Photometric measurements:

Absolute Luminous Flux: 6168.5 (lumens)
 Luminous Efficacy: 143.5 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	887	892	895	894	887	
5.00	926	921	923	953	1009	96
15.00	1164	1183	1232	1155	1136	330
25.00	1118	1211	1222	1163	1091	528
35.00	1126	1229	1218	1175	1055	713
45.00	1329	1437	1438	1388	1302	1049
55.00	1985	1762	1572	1869	1888	1669
65.00	1453	1337	1270	1378	1388	1376
75.00	286	389	572	290	208	329
85.00	13	24	33	18	9	9
90.00	1	1	1	1	1	

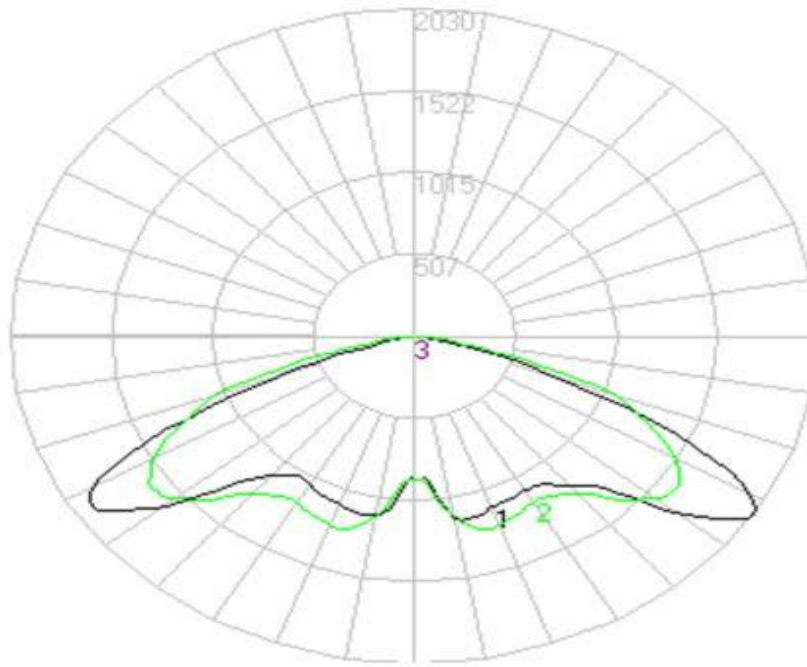
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	975.97	15.82	15.82
0 to 40	1718.71	27.86	27.86
0 to 60	4381.11	71.02	71.02
0 to 90	6168.45	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	6168.45	100.00	100.00

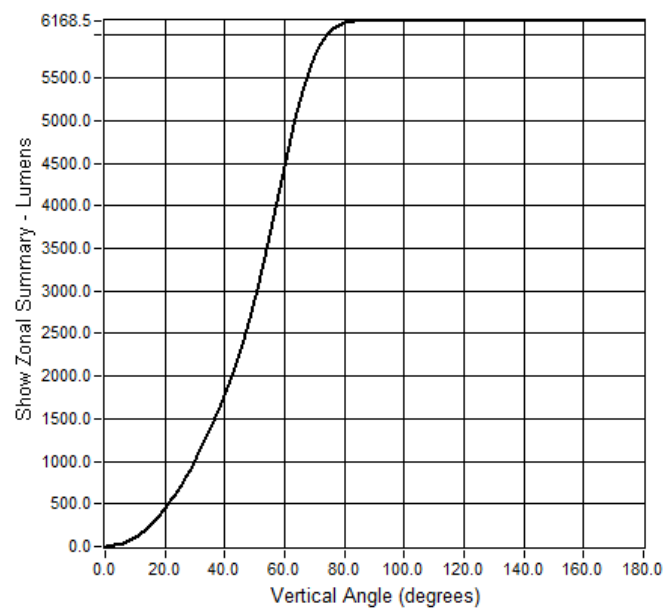
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



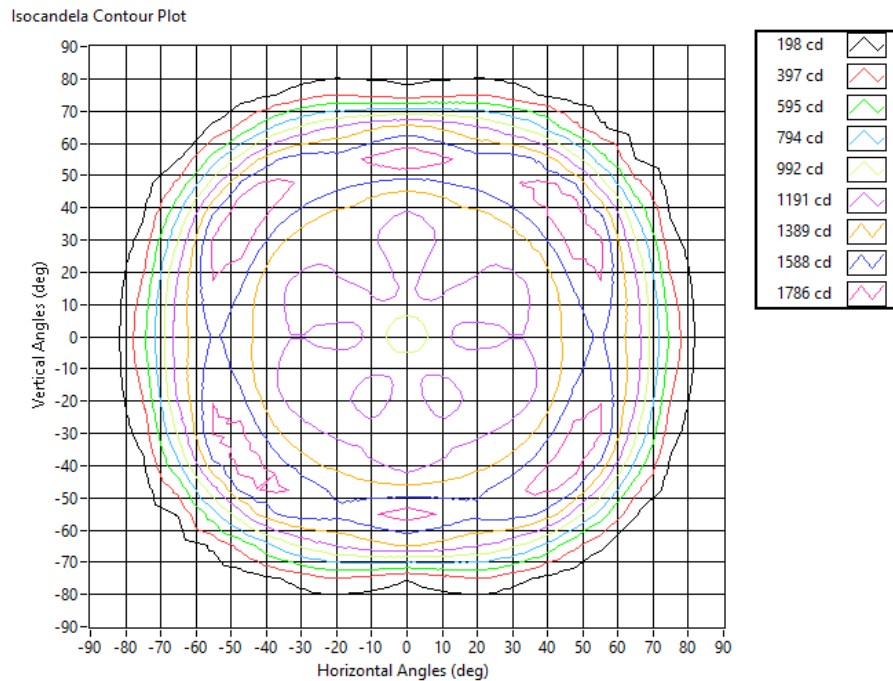
Zonal Flux Graph



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	13.02	15.03	223.2
4	26.05	30.05	55.8
6	39.07	45.08	24.8
8	52.09	60.10	13.9
10	65.12	75.13	8.9
12	78.14	90.16	6.2
14	91.16	105.18	4.6
16	104.19	120.21	3.5
18	117.21	135.24	2.8
20	130.23	150.26	2.2

Equipment Used:

Equipment Name	Model Number
Omega TC	DPI8
YOKOGAWA Digital Power Meter	11/26/3981
LSI High Speed Mirror Goniometer	6240T
Elgar AC Power Supply	CW1251P
Sorensen DC Power Supply	XHR150-7
Dialight Confirmation Sample	HB1N4N
Dialight Confirmation Sample	HB1N4J
Fuke 8808A Digit Multimeter	8808A
Step-Up Transformer	
ITL Osram Calibraton lamps for Goniometer	J9a8
ITL Osram Calibraton lamps for Goniometer	J9a8
ITL Osram Calibraton lamps for Goniometer	J9a8
Fuke 971 Humidity Meter	8/28/1902
GwINSTEK DC Power Supply	GEP172679
Dialight Confirmation Sample	1/0/1900
Labsphere calibration lamp for 2M sphere	SCL-1400
Labshere 2M sphere	Illumia Plus 2600-1
Labshere Controller	PM-150-140
Labshere Spectrameter- CDS 2600 Spectrometer	CDS-2600
Xitron Power Analyzer	9/1/1907
LED Bulb for Electrical Confirmation Test-Gold Sample	Monte Carlo
LED Bulb for Electrical Confirmation Test-Gold Sample	Monte Carlo
LED Bulb for Electrical Confirmation Test-Gold Sample	Monte Carlo

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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Test Report Issued By:

Richard Huegi
Dialight Optics Laboratory
Senior Optical Engineering Technician
Lighting Division

Test Report Reviewed and Approved By:

Vishnu Shastry
Dialight Optics Laboratory
Optical Engineer
Approved Signatory