

Test Report

Report Number: L21093

Date: Jul 16, 2021

Issued by:

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

Test of one Highbay

Unit manufacturer: Dialight Corporation

Unit model number: [K,V][C,E,F,W][D,U]-[2,T]RN-[2,8]Jx-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: July 12, 2021 through July 14, 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: L21093

Manufacturer: Dialight Corporation

Product Name: Highbay

Description: Highbay

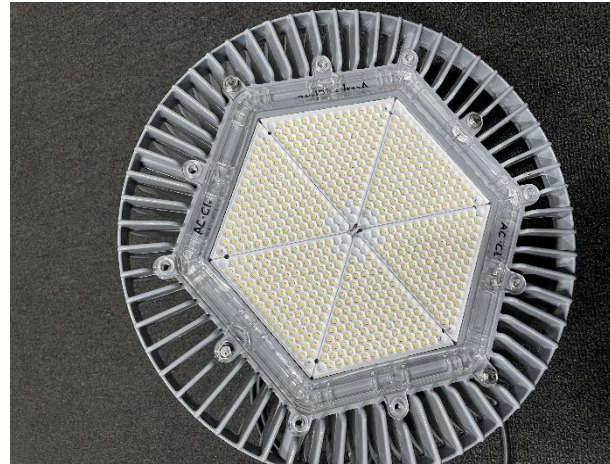
Model Number: [K,V][C,E,F,W][D,U]-[2,T]RN-[2,8]Jx-xxx-xx

Report Summary

Sample number L21093

Dialight unit model number [K,V][C,E,F,W][D,U]-[2,T]RN-[2,8]Jx-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:	39234 (lumens)	39054 (lumens)
Electrical Power:	229.4 (W)	229.0 (W)
Luminous Efficacy:	171.1 (lumens/W)	170.5 (lumens/W)

Electrical Measurements:

Input Power (120VAC): 229.4 (W)
 Power Factor (120VAC): 0.996
 Current ATHD % (120VAC): 4.75
 Input Power (277VAC): 221.3 (W)
 Power Factor (277VAC): 0.975
 Current ATHD % (277VAC): 8.50

Color Measurements:

Correlated Color Temperature (CCT): 4099
 Color Rendering Index (CRI): 80.5
 Chromaticity Coordinate (x): 0.377
 Chromaticity Coordinate (y): 0.377
 Chromaticity Coordinate (u'): 0.223
 Chromaticity Coordinate (v'): 0.501
 DUV: 0.0013

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L21093.

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

Test Conditions:

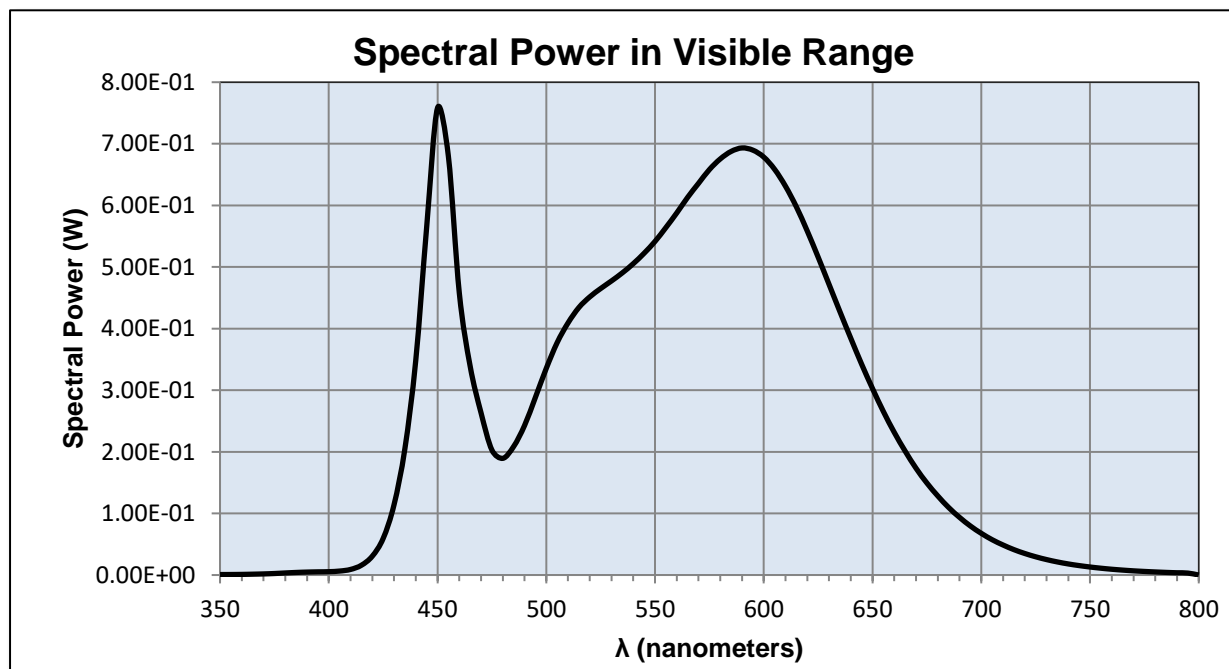
Ambient Temperature: 25 ± 1 (°C)

Electrical Measurements:

Input Voltage: 120 (VAC)
Input Current: 1.94 (A)
Input Power: 229.4 (W)
Input Power Factor: 0.9963
Current ATHD: 4.8 (%)

Photometric measurements:

Luminous Flux: 39234.2 (lumens)
Luminous Efficacy: 171.1 (lumens/W)
Correlated Color Temperature (CCT): 4099 (K)
CRI -Ra: 80.5
CRI -R9: -7.6319
DUV: 0.0013
CIE Coordinate (x): 0.377
CIE Coordinate (y): 0.377
CIE Coordinate (u'): 0.223
CIE Coordinate (v'): 0.501
TM30_Rf: 82.5
TM30_Rg: 94.2
TM30_Rcs_hue1: -13.96 %



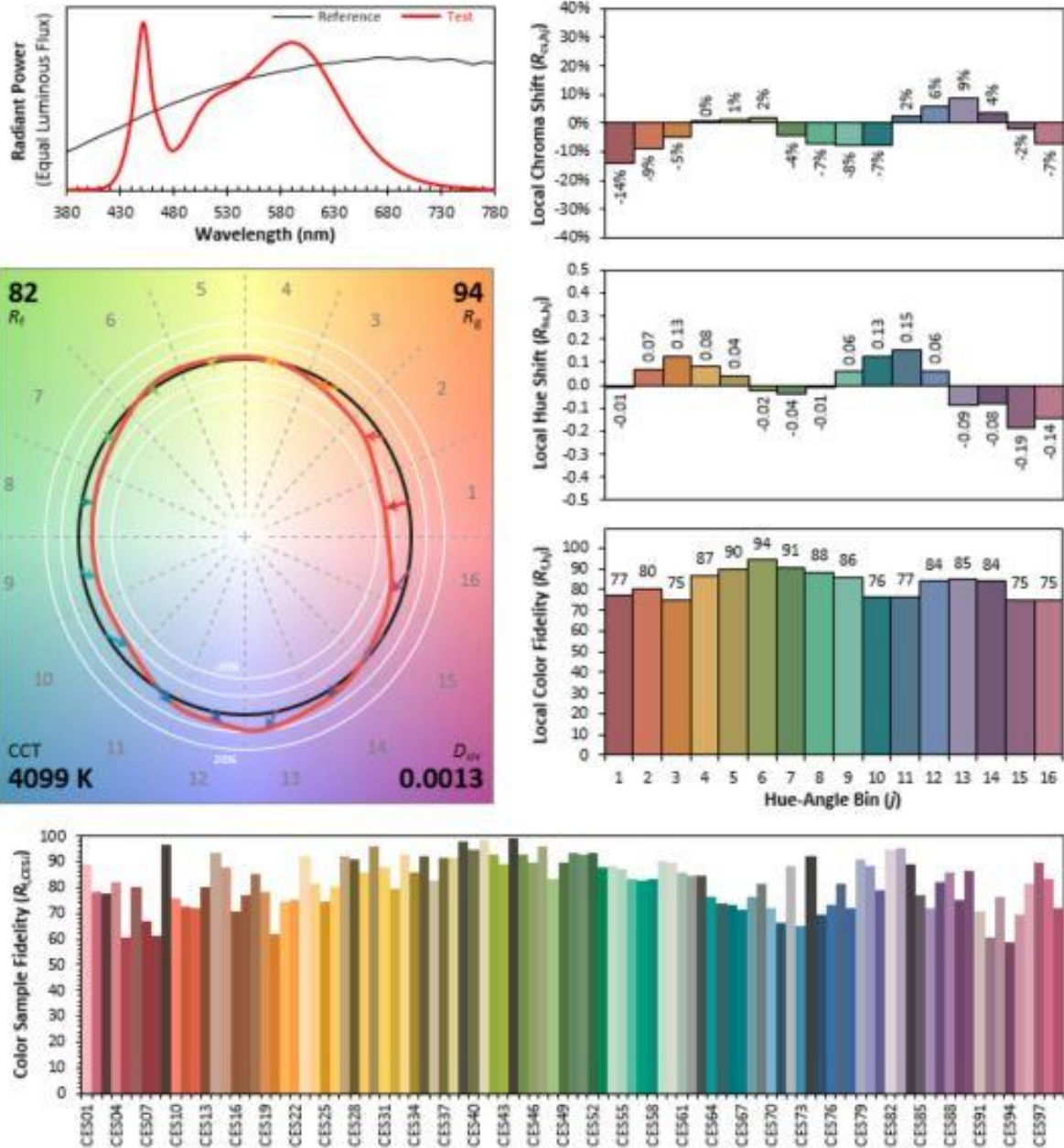
Test Results: Integrating Sphere

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	0.00081	490	0.24263	630	0.47191	770	0.00680
355	0.00084	495	0.28836	635	0.42761	775	0.00583
360	0.00103	500	0.33547	640	0.38432	780	0.00500
365	0.00138	505	0.37723	645	0.34225	785	0.00429
370	0.00179	510	0.40925	650	0.30269	790	0.00367
375	0.00245	515	0.43425	655	0.26539	795	0.00317
380	0.00337	520	0.45148	660	0.23155	800	0.00271
385	0.00418	525	0.46502	665	0.20109		
390	0.00481	530	0.47748	670	0.17341		
395	0.00516	535	0.49062	675	0.14936		
400	0.00545	540	0.50542	680	0.12841		
405	0.00642	545	0.52241	685	0.10962		
410	0.00907	550	0.54159	690	0.09361		
415	0.01587	555	0.56407	695	0.07960		
420	0.03056	560	0.58783	700	0.06771		
425	0.05939	565	0.61313	705	0.05736		
430	0.11409	570	0.63583	710	0.04877		
435	0.20533	575	0.65815	715	0.04125		
440	0.34861	580	0.67547	720	0.03497		
445	0.56441	585	0.68767	725	0.02964		
450	0.75829	590	0.69329	730	0.02508		
455	0.67937	595	0.68969	735	0.02125		
460	0.45805	600	0.67846	740	0.01797		
465	0.33911	605	0.65850	745	0.01531		
470	0.26334	610	0.63106	750	0.01303		
475	0.20291	615	0.59756	755	0.01108		
480	0.18940	620	0.55839	760	0.00940		
485	0.20866	625	0.51605	765	0.00801		

IES TM-30-18 Color Rendition Report



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

x 0.3770
 y 0.3773
 u' 0.2226
 v' 0.5013

CIE 13.3-1995

(CRI)

R_a 81

R_g -8

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L21093.

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

Electrical Measurements:

Input Voltage: 120.08 (VAC)
Input current: 1.9154 (A)
Input Power: 229.0 (W)
Power Factor: 0.9955

Photometric measurements:

Absolute Luminous Flux: 39054.2 (lumens)
Luminous Efficacy: 170.5 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	15081	15085	15092	15088	15081	
5.00	15044	15059	15058	15060	15017	1526
15.00	14782	14785	14791	14796	14758	4189
25.00	13942	13994	14025	14017	13910	6461
35.00	12403	12476	12518	12524	12351	7806
45.00	10283	10399	10477	10472	10237	8001
55.00	7978	8229	8198	8221	7975	7237
65.00	3448	4139	4245	3694	3210	3564
75.00	561	597	632	621	540	609
85.00	57	69	83	88	51	36
90.00	4	5	7	7	3	

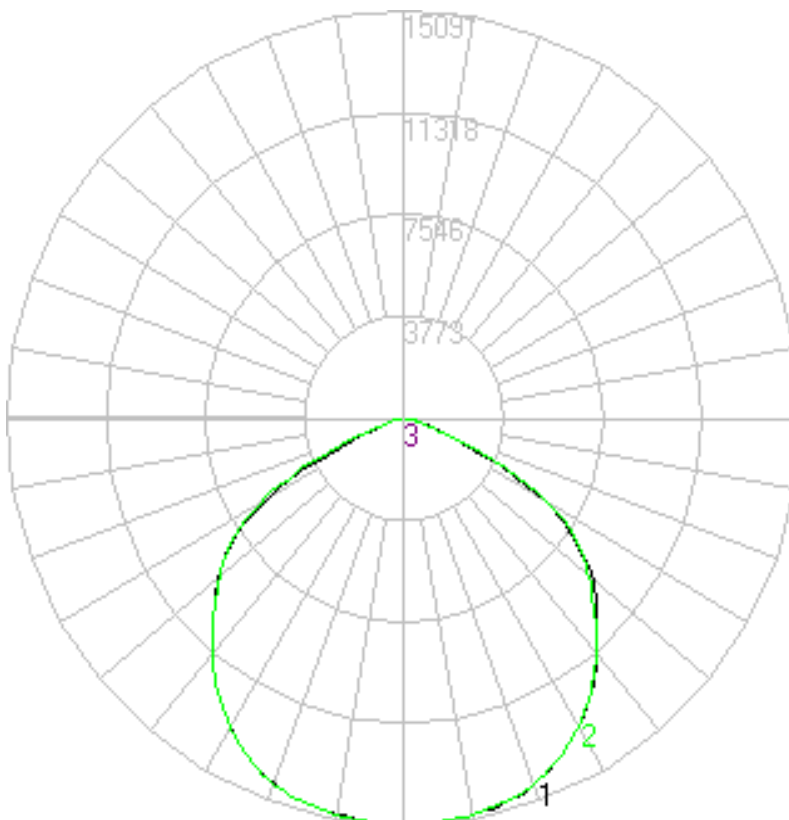
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	12020.31	30.78	30.78
0 to 40	19750.71	50.57	50.57
0 to 60	34751.78	88.98	88.98
0 to 90	39054.18	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	39054.18	100.00	100.00

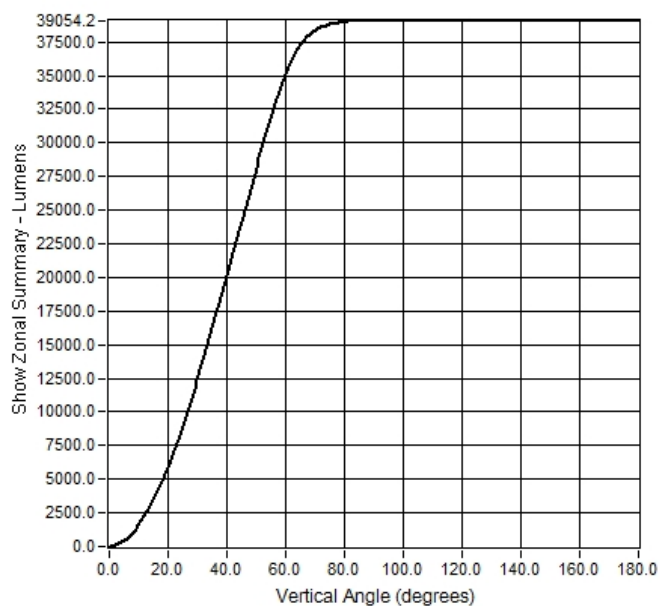
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



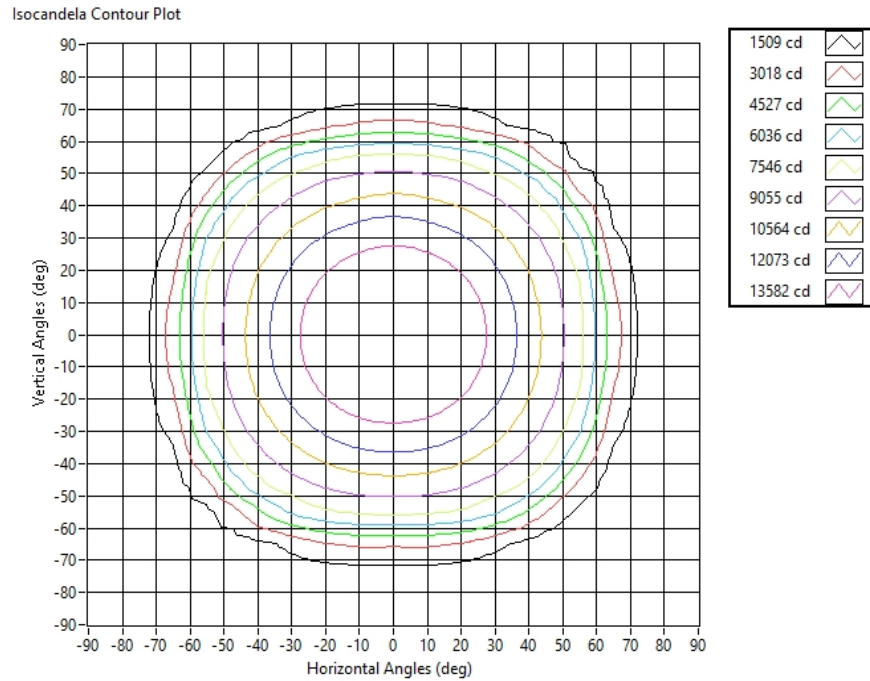
Zonal Flux Graph



Test Results: Goniometer

Results continued from previous page.

Illuminance Plot:



Illuminance-Cone of Light:



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
Fluke 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
Fluke 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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Approved Signatory