

Test Report

Report Number: L20097

Date: Jan 6, 2021

Issued by:

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

Test of one High Bay

Unit manufacturer: Dialight Corporation

Unit model number: H[C,E,F,W][D,U]-[L,Z]EN-[5,9]Bx-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: January 0, 1900 through November 17, 2020

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: L20097

Manufacturer: Dialight Corporation

Product Name: High Bay

Description: High Bay

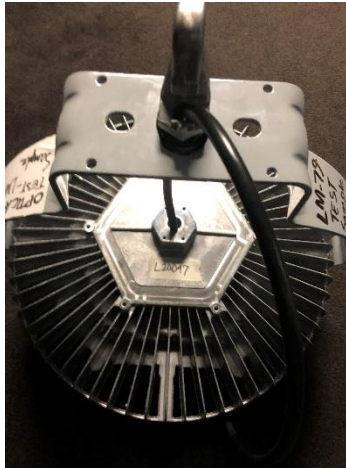
Model Number: H[C,E,F,W][D,U]-[L,Z]EN-[5,9]Bx-xxx-xx

Report Summary

Sample number L20097

Dialight unit model number H[C,E,F,W][D,U]-[L,Z]EN-[5,9]Bx-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:	13527 (lumens)	13341 (lumens)
Electrical Power:	99.3 (W)	99.3 (W)
Luminous Efficacy:	136.3 (lumens/W)	134.4 (lumens/W)

Electrical Measurements:

Input Power (480VAC): 99.3 (W)
 Power Factor (480VAC): 0.946441
 Current ATHD % (480VAC): 12.2109
 Input Power (347VAC): 98.6 (W)
 Power Factor (347VAC): 0.9887
 Current ATHD % (347VAC): 15.001

Color Measurements:

Correlated Color Temperature (CCT): 3954
 Color Rendering Index (CRI): 83.3416
 Chromaticity Coordinate (x): 0.384
 Chromaticity Coordinate (y): 0.384
 Chromaticity Coordinate (u'): 0.225
 Chromaticity Coordinate (v'): 0.337
 DUV: 0.0025

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L20097.

Dialight unit model number H[C,E,F,W][D,U]-[L,Z]EN-[5,9]Bx-xxx-xx

Test Conditions:

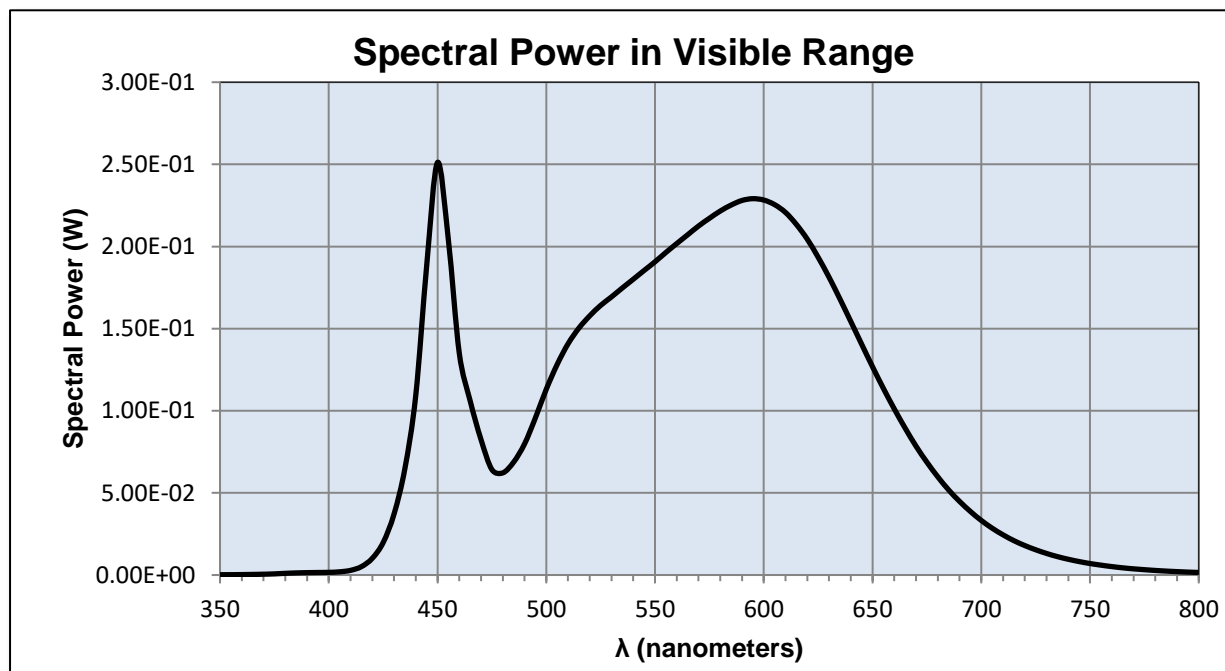
Ambient Temperature: 25 ± 1 (°C)

Electrical Measurements:

Input Voltage: 480 (VAC)
Input Current: 0.218525 (A)
Input Power: 99.3 (W)
Input Power Factor: 0.946441
Current ATHD: 12.2109 (%)

Photometric measurements:

Luminous Flux: 13527.26 (lumens)
Luminous Efficacy: 136.3 (lumens/W)
Correlated Color Temperature (CCT): 3954 (K)
CRI -Ra: 83.3416
CRI -R9: 13.0106
DUV: 0.0025
CIE Coordinate (x): 0.384
CIE Coordinate (y): 0.384
CIE Coordinate (u'): 0.225
CIE Coordinate (v'): 0.337
TM30_Rf: 83.1
TM30_Rg: 96.0
TM30_Rcs_hue1: -11.05 %



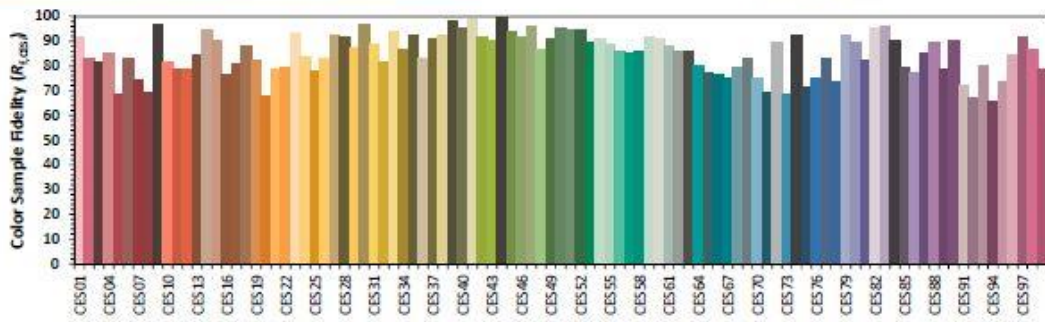
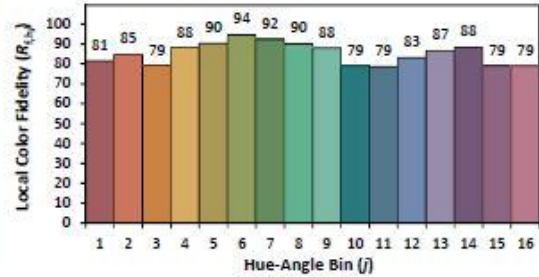
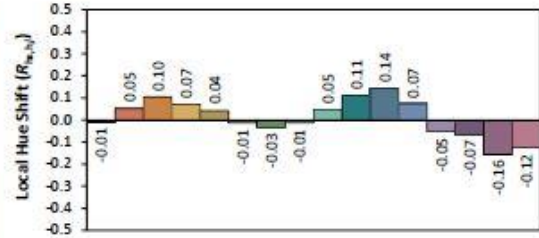
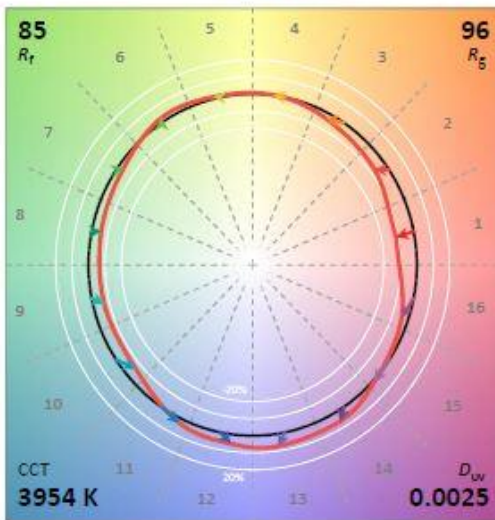
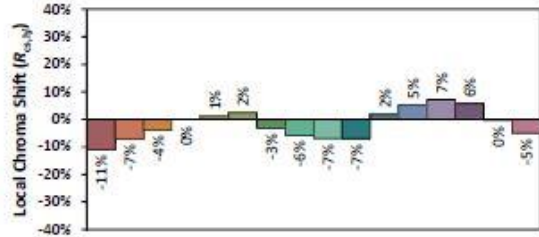
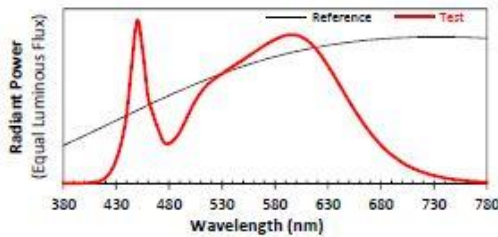
Test Results: Integrating Sphere

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	0.00019	490	0.07978	630	0.18131	770	0.00376
355	0.00021	495	0.09565	635	0.16808	775	0.00325
360	0.00027	500	0.11308	640	0.15435	780	0.00278
365	0.00037	505	0.12817	645	0.14052	785	0.00240
370	0.00049	510	0.14074	650	0.12679	790	0.00207
375	0.00070	515	0.15032	655	0.11360	795	0.00179
380	0.00103	520	0.15780	660	0.10113	800	0.00155
385	0.00128	525	0.16412	665	0.08940		
390	0.00144	530	0.16932	670	0.07845		
395	0.00154	535	0.17479	675	0.06869		
400	0.00163	540	0.18005	680	0.05980		
405	0.00195	545	0.18541	685	0.05179		
410	0.00284	550	0.19068	690	0.04485		
415	0.00509	555	0.19637	695	0.03869		
420	0.01016	560	0.20179	700	0.03324		
425	0.01977	565	0.20712	705	0.02852		
430	0.03713	570	0.21244	710	0.02447		
435	0.06488	575	0.21715	715	0.02092		
440	0.10941	580	0.22158	720	0.01794		
445	0.18804	585	0.22523	725	0.01538		
450	0.25115	590	0.22802	730	0.01315		
455	0.20379	595	0.22910	735	0.01121		
460	0.13500	600	0.22826	740	0.00959		
465	0.10608	605	0.22546	745	0.00820		
470	0.08242	610	0.22071	750	0.00700		
475	0.06419	615	0.21340	755	0.00601		
480	0.06218	620	0.20445	760	0.00514		
485	0.06874	625	0.19344	765	0.00439		

IES TM-30-18 Color Rendition Report



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

x 0.3843
y 0.3845
u' 0.2246
v' 0.5055

CIE 13.3-1995 (CRI)	
R _a	83
R _g	13

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L20097.
Dialight unit model number H[C,E,F,W][D,U]-[L,Z]EN-[5,9]Bx-xxx-xx

Electrical Measurements:

Input Voltage: 480 (VAC)
Input current: 0.21861 (A)
Input Power: 99.3 (W)
Power Factor: 0.9467

Photometric measurements:

Absolute Luminous Flux: 13341 (lumens)
Luminous Efficacy: 134.4 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	7666	7665	7651	7638	7666	
5.00	7381	7489	7614	7543	7418	757
15.00	5864	6487	7345	6562	5928	1767
25.00	4454	5164	6846	5193	4540	2296
35.00	3311	4035	6142	4079	3487	2454
45.00	1718	2988	5275	3097	1976	1994
55.00	576	1643	4160	1754	681	1200
65.00	244	571	2829	610	267	656
75.00	142	202	1393	218	151	337
85.00	86	94	291	103	90	86
90.00	75	75	138	81	77	

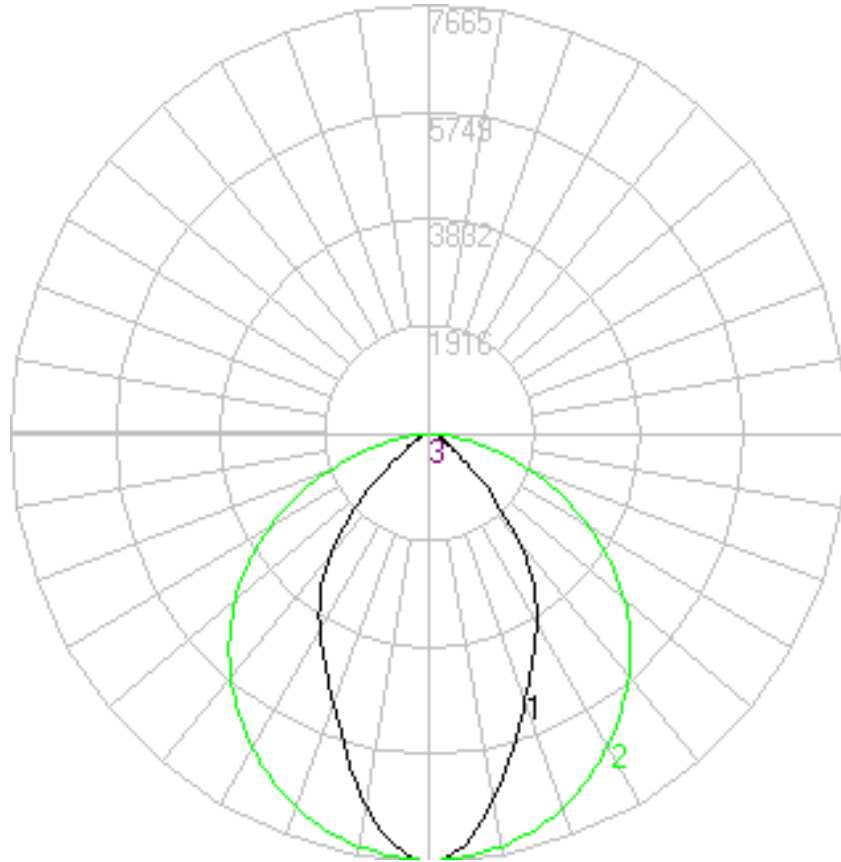
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	5024.90	37.67	37.67
0 to 40	7728.74	57.93	57.93
0 to 60	11833.32	88.70	88.70
0 to 90	13340.96	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	13340.96	100.00	100.00

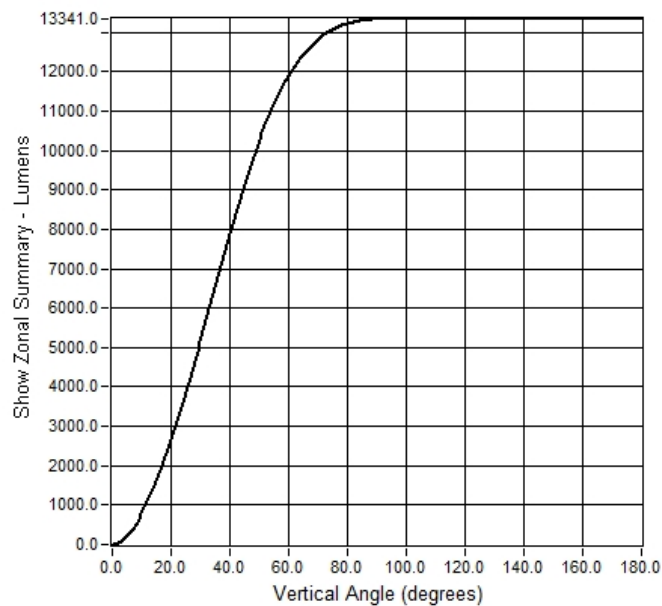
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



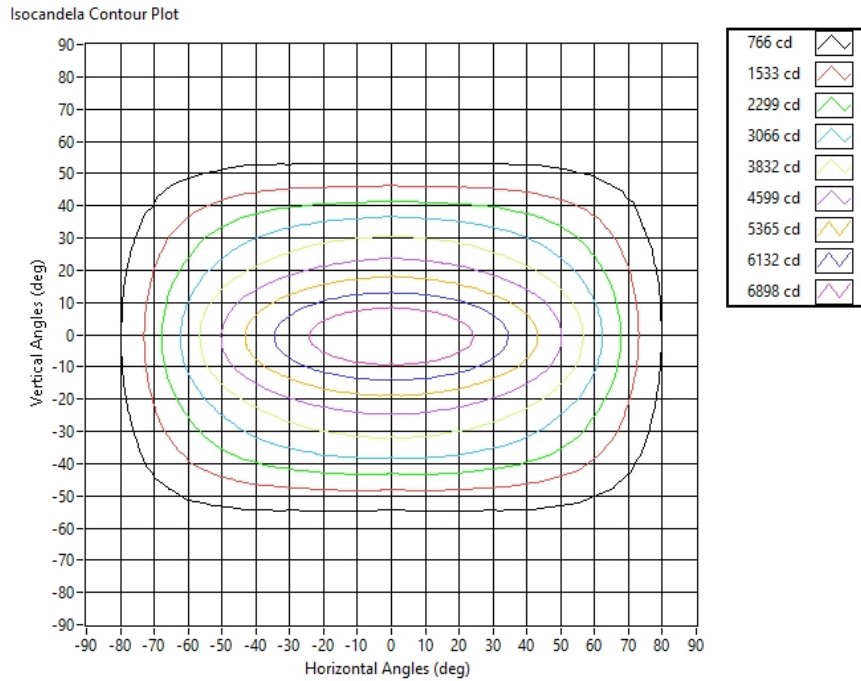
Zonal Flux Graph



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	2.37	6.00	1912.8
4	4.74	11.99	478.2
6	7.11	17.99	212.5
8	9.48	23.99	119.6
10	11.85	29.99	76.5
12	14.22	35.98	53.1
14	16.59	41.98	39.0
16	18.97	47.98	29.9
18	21.34	53.97	23.6
20	23.71	59.97	19.1

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 Spectrometer- 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. This report shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. This report shall not be reproduced, except in full, without the express written permission of Dialight Optics Laboratory.

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 Lighting Division

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 Dialight Optics Laboratory
 Optical Engineer
 Approved Signatory