

Test Report

Report Number: L20068

Date: Jan 14, 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: L[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: October 1, 2020 through October 8, 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

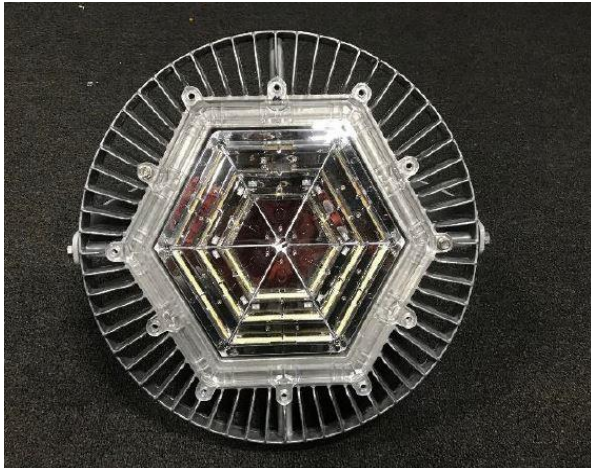
Description of sample:

Sample Number: L20068
Manufacturer: Dialight Corporation
Product Name: Reliant High Bay
Description: High Bay
Model Number: L[C,E,F,W][D,U]-[2,T]UN[2,8]6x-xxx-xx

Report Summary

Sample number L20068
Dialight unit model number L[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:	6502 (lumens)	6328 (lumens)
Electrical Power:	51.1 (W)	50.6 (W)
Luminous Efficacy:	127.3 (lumens/W)	124.9 (lumens/W)

Electrical Measurements:

Input Power (120VAC): 51.1 (W)
Power Factor (120VAC): 0.991612
Current ATHD % (120VAC): 11.0908
Input Power (277VAC): 46.8 (W)
Power Factor (277VAC): 0.94552
Current ATHD % (277VAC): 9.2

Color Measurements:

Correlated Color Temperature (CCT): 4006
Color Rendering Index (CRI): 82.8614
Chromaticity Coordinate (x): 0.382
Chromaticity Coordinate (y): 0.382
Chromaticity Coordinate (u'): 0.224
Chromaticity Coordinate (v'): 0.336
DUV: 0.0021

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L20068.

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

Test Conditions:

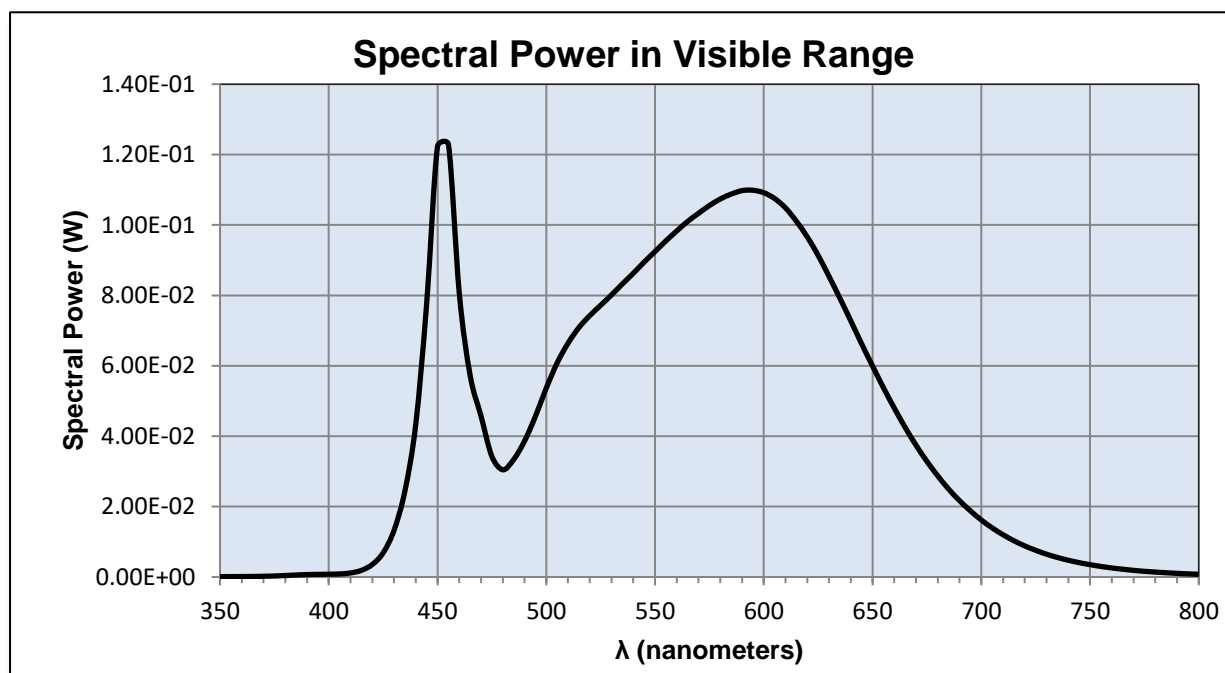
Ambient Temperature: 25 ± 1 (°C)

Electrical Measurements:

Input Voltage: 120 (VAC)
 Input Current: 0.430101 (A)
 Input Power: 51.1 (W)
 Input Power Factor: 0.991612
 Current ATHD: 11.0908 (%)

Photometric measurements:

Luminous Flux: 6502.169 (lumens)
 Luminous Efficacy: 127.3 (lumens/W)
 Correlated Color Temperature (CCT): 4006 (K)
 CRI -Ra: 82.8614
 CRI -R9: 11.286
 DUV: 0.0021
 CIE Coordinate (x): 0.382
 CIE Coordinate (y): 0.382
 CIE Coordinate (u'): 0.224
 CIE Coordinate (v'): 0.336
 TM30_Rf: 82.0
 TM30_Rg: 94.9
 TM30_Rcs_hue1: -11.52 %



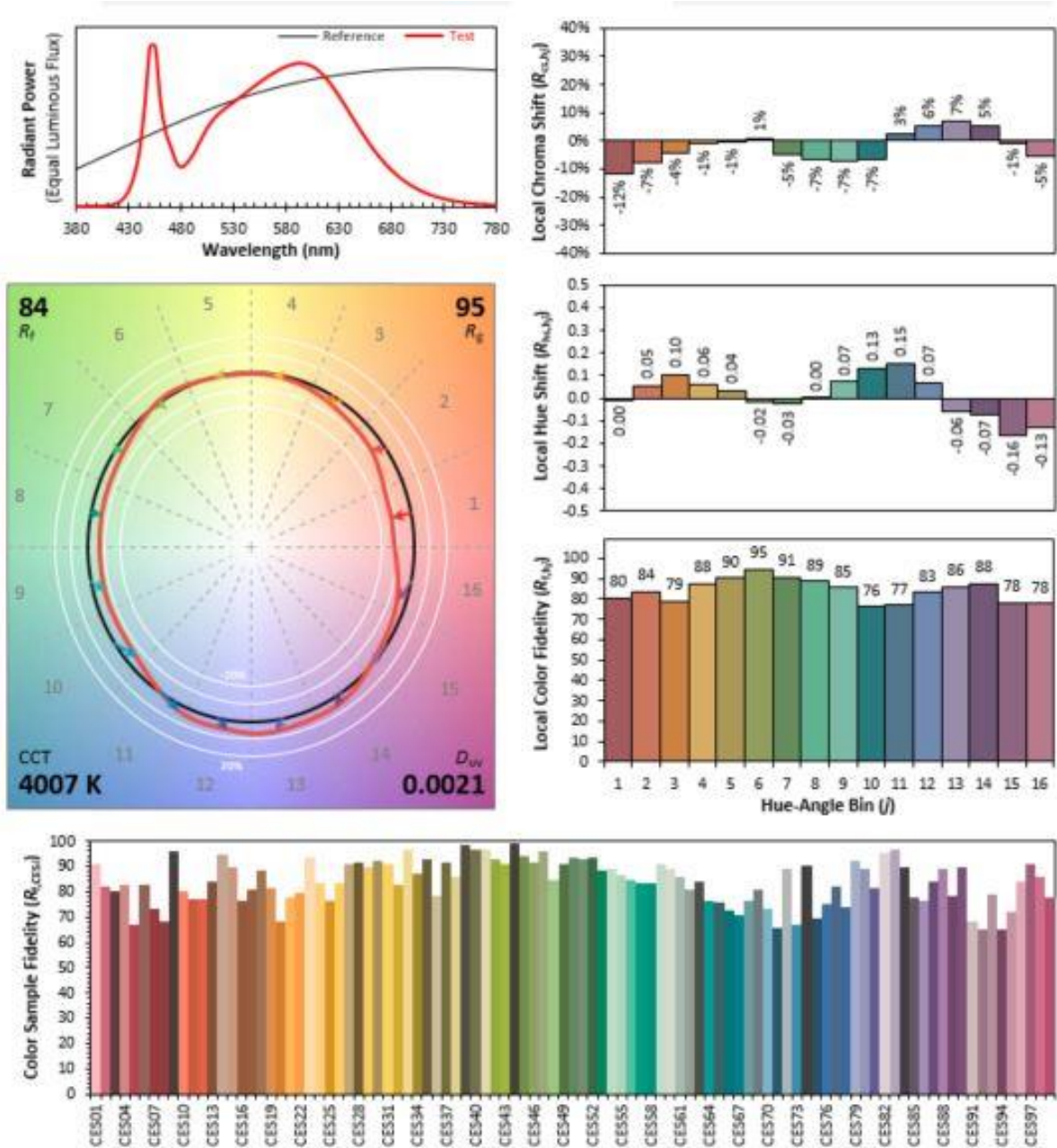
Test Results: Integrating Sphere

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	0.00011	490	0.03861	630	0.08539	770	0.00189
355	0.00012	495	0.04563	635	0.07920	775	0.00163
360	0.00013	500	0.05368	640	0.07277	780	0.00141
365	0.00017	505	0.06083	645	0.06624	785	0.00122
370	0.00022	510	0.06642	650	0.05997	790	0.00104
375	0.00030	515	0.07086	655	0.05381	795	0.00090
380	0.00043	520	0.07425	660	0.04798	800	0.00078
385	0.00058	525	0.07719	665	0.04250		
390	0.00069	530	0.08015	670	0.03745		
395	0.00076	535	0.08327	675	0.03287		
400	0.00080	540	0.08627	680	0.02873		
405	0.00089	545	0.08947	685	0.02498		
410	0.00116	550	0.09246	690	0.02170		
415	0.00189	555	0.09549	695	0.01881		
420	0.00356	560	0.09831	700	0.01621		
425	0.00688	565	0.10102	705	0.01397		
430	0.01329	570	0.10332	710	0.01202		
435	0.02446	575	0.10553	715	0.01031		
440	0.04341	580	0.10739	720	0.00884		
445	0.07763	585	0.10877	725	0.00760		
450	0.12233	590	0.10977	730	0.00649		
455	0.12291	595	0.10987	735	0.00556		
460	0.08058	600	0.10917	740	0.00476		
465	0.05729	605	0.10752	745	0.00408		
470	0.04574	610	0.10485	750	0.00351		
475	0.03425	615	0.10105	755	0.00301		
480	0.03046	620	0.09661	760	0.00258		
485	0.03338	625	0.09137	765	0.00222		

IES TM-30-18 Color Rendition Report



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

x 0.3816
y 0.3820
u' 0.2238
v' 0.5040

CIE 13.3-1995 (CRI)	
R_a	83
R_g	11

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L20068.
Dialight unit model number L[C,E,F,W][D,U]-[2,T]UN[2,8]6x-xxx-xx

Electrical Measurements:

Input Voltage: 120.03 (VAC)
Input current: 0.42771 (A)
Input Power: 50.6 (W)
Power Factor: 0.9867

Photometric measurements:

Absolute Luminous Flux: 6327.7 (lumens)
Luminous Efficacy: 124.9 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	1080	1077	1078	1081	1080	
5.00	1091	1094	1096	1093	1089	111
15.00	1278	1249	1262	1260	1273	360
25.00	1306	1278	1226	1286	1323	600
35.00	1338	1328	1234	1336	1369	837
45.00	1608	1564	1514	1595	1611	1231
55.00	1625	1776	1962	1815	1552	1513
65.00	1434	1362	1453	1341	1272	1355
75.00	553	399	233	327	415	447
85.00	37	19	9	16	22	13
90.00	1	1	1	1	1	

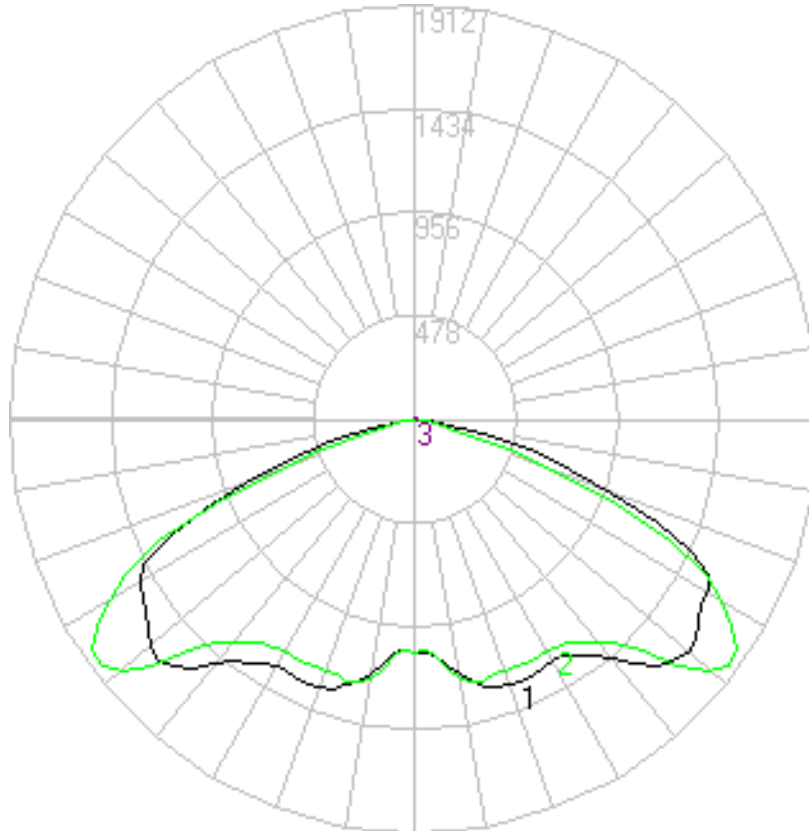
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	1055.16	16.68	16.68
0 to 40	1888.59	29.85	29.85
0 to 60	4642.86	73.37	73.37
0 to 90	6316.83	99.83	99.83
90 to 180	10.86	0.17	0.17
0 to 180	6327.69	100.00	100.00

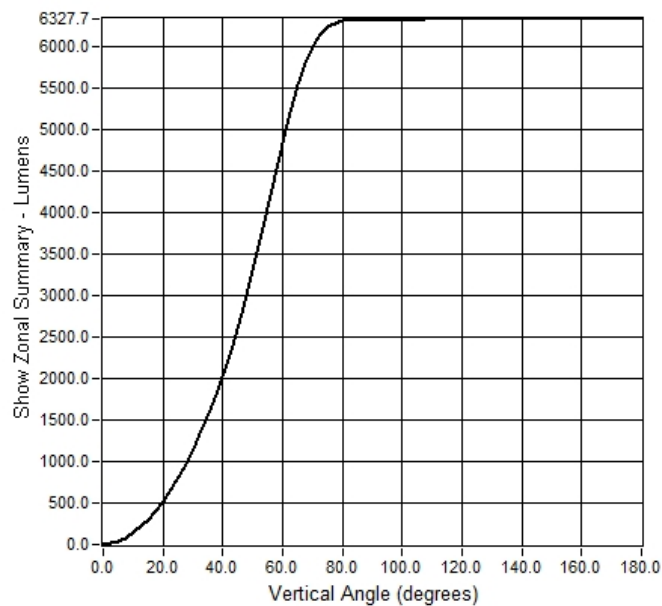
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



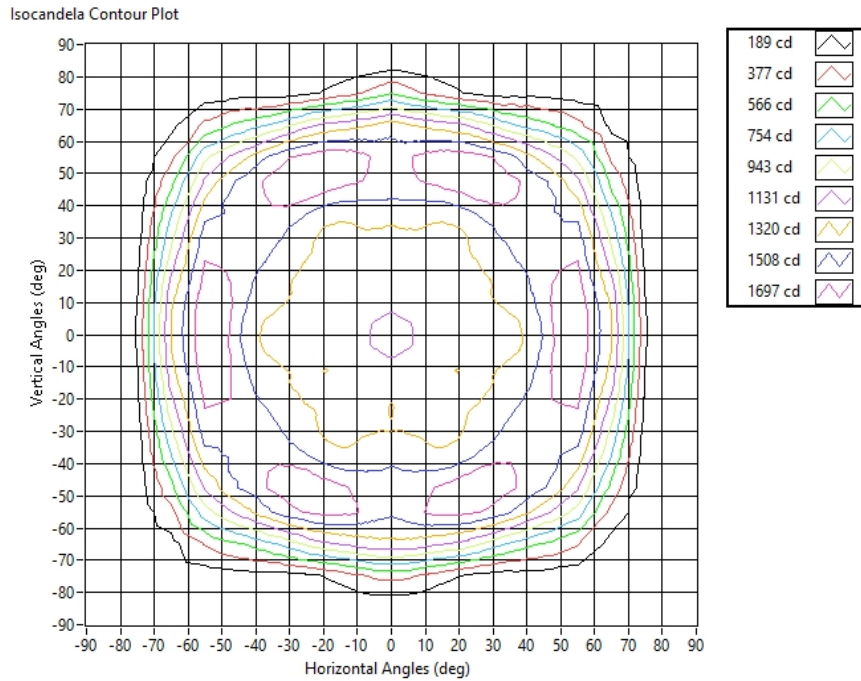
Zonal Flux Graph



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	15.80	11.47	269.8
4	31.61	22.94	67.4
6	47.41	34.41	30.0
8	63.21	45.88	16.9
10	79.02	57.36	10.8
12	94.82	68.83	7.5
14	110.62	80.30	5.5
16	126.43	91.77	4.2
18	142.23	103.24	3.3
20	158.03	114.71	2.7

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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 Dialight Optics Laboratory
 Optical Engineer
 Approved Signatory