

Test Report

Report Number: L20075

Date: Dec 15, 2020

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]-[2,T]NN-[2,8]Ex-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: December 10, 2020 through December 10, 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: L20075

Manufacturer: Dialight Corporation

Product Name: HIGH BAY

Description: HIGH BAY

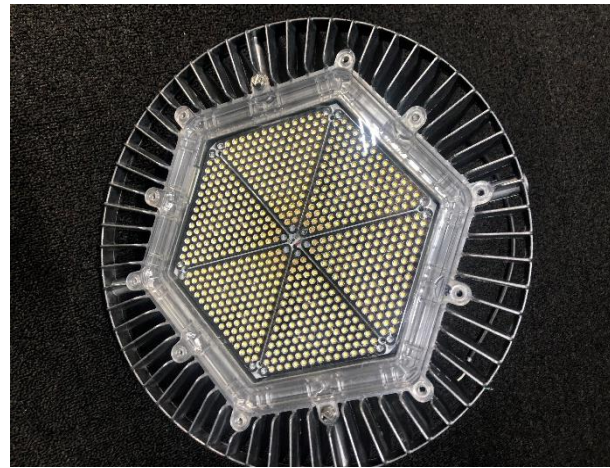
Model Number: H[C,E,F,W][D,U]-[2,T]NN-[2,8]Ex-xxx-xx

Report Summary

Sample number L20075

Dialight unit model number H[C,E,F,W][D,U]-[2,T]NN-[2,8]Ex-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:	26532 (lumens)	26575 (lumens)
Electrical Power:	185.3 (W)	183.9 (W)
Luminous Efficacy:	143.2 (lumens/W)	144.5 (lumens/W)

Electrical Measurements:

Input Power (120VAC): 185.3 (W)
 Power Factor (120VAC): 0.995534
 Current ATHD % (120VAC): 5.10032
 Input Power (277VAC): 178.9 (W)
 Power Factor (277VAC): 0.9608
 Current ATHD % (277VAC): 9.52

Color Measurements:

Correlated Color Temperature (CCT): 4014
 Color Rendering Index (CRI): 83.5738
 Chromaticity Coordinate (x): 0.381
 Chromaticity Coordinate (y): 0.379
 Chromaticity Coordinate (u'): 0.224
 Chromaticity Coordinate (v'): 0.335
 DUV: 0.0012

Test Results: Integrating Sphere

Results include unit color, flux, efficacy and electrical power for sample number L20075.

Dialight unit model number H[C,E,F,W][D,U]-[2,T]NN-[2,8]Ex-xxx-xx

Test Conditions:

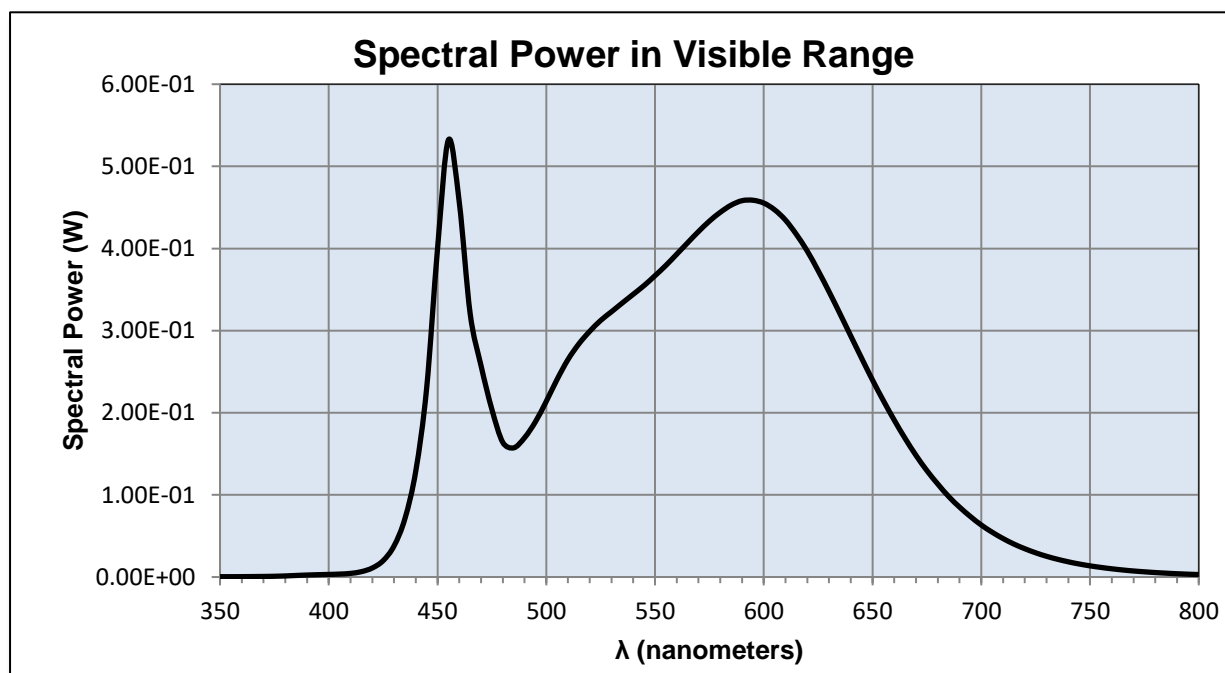
Ambient Temperature: 25 ± 1 (°C)

Electrical Measurements:

Input Voltage: 119.742 (VAC)
Input Current: 1.55431 (A)
Input Power: 185.3 (W)
Input Power Factor: 0.995534
Current ATHD: 5.10032 (%)

Photometric measurements:

Luminous Flux: 26531.86 (lumens)
Luminous Efficacy: 143.2 (lumens/W)
Correlated Color Temperature (CCT): 4014 (K)
CRI -Ra: 83.5738
CRI -R9: 11.6112
DUV: 0.0012
CIE Coordinate (x): 0.381
CIE Coordinate (y): 0.379
CIE Coordinate (u'): 0.224
CIE Coordinate (v'): 0.335
TM30_Rf: 81.2
TM30_Rg: 92.9
TM30_Rcs_hue1: -11.82 %



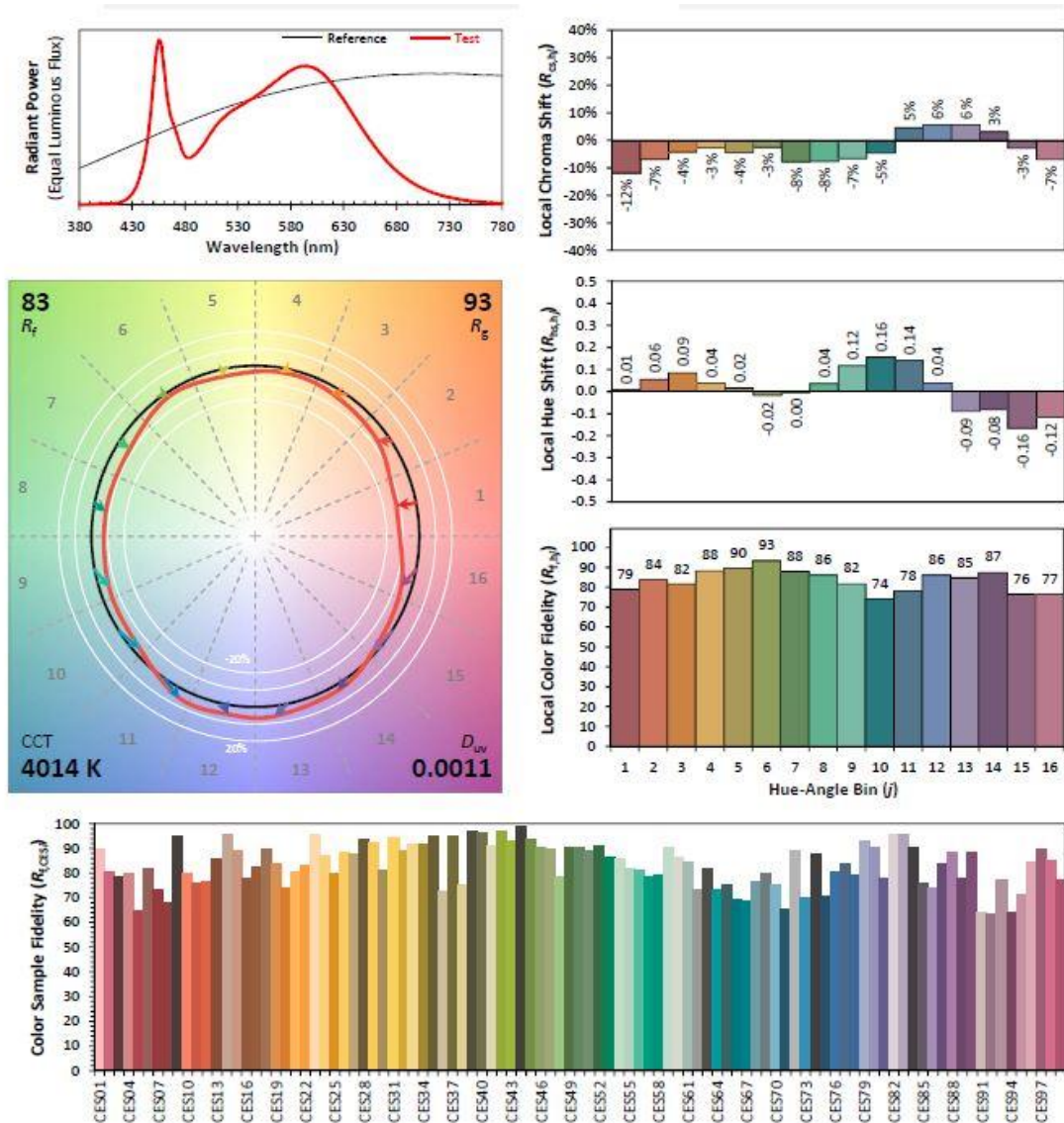
Test Results: Integrating Sphere

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	0.00041	490	0.16953	630	0.34748	770	0.00735
355	0.00040	495	0.18896	635	0.32075	775	0.00635
360	0.00047	500	0.21387	640	0.29345	780	0.00546
365	0.00059	505	0.24074	645	0.26641	785	0.00468
370	0.00072	510	0.26488	650	0.23981	790	0.00402
375	0.00094	515	0.28388	655	0.21471	795	0.00348
380	0.00134	520	0.29924	660	0.19094	800	0.00302
385	0.00191	525	0.31236	665	0.16866		
390	0.00241	530	0.32303	670	0.14810		
395	0.00285	535	0.33377	675	0.12961		
400	0.00317	540	0.34427	680	0.11322		
405	0.00360	545	0.35493	685	0.09806		
410	0.00444	550	0.36689	690	0.08515		
415	0.00653	555	0.37938	695	0.07367		
420	0.01100	560	0.39308	700	0.06332		
425	0.01995	565	0.40700	705	0.05459		
430	0.03785	570	0.42061	710	0.04688		
435	0.07101	575	0.43328	715	0.04015		
440	0.12904	580	0.44403	720	0.03448		
445	0.22997	585	0.45279	725	0.02951		
450	0.39968	590	0.45820	730	0.02524		
455	0.53217	595	0.45873	735	0.02165		
460	0.45600	600	0.45531	740	0.01853		
465	0.32081	605	0.44707	745	0.01586		
470	0.25739	610	0.43453	750	0.01360		
475	0.20400	615	0.41707	755	0.01170		
480	0.16391	620	0.39686	760	0.01001		
485	0.15724	625	0.37299	765	0.00859		

IES TM-30-18 Color Rendition Report



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

x 0.3806
y 0.3793
u' 0.2242
v' 0.5027

CIE 13.3-1995 (CRI)	
R_a	84
R_g	12

Test Results: Goniometer

Results include unit flux, distribution, efficacy, and electrical power for sample number L20075.
Dialight unit model number H[C,E,F,W][D,U]-[2,T]NN-[2,8]Ex-xxx-xx

Electrical Measurements:

Input Voltage: 120 (VAC)
Input current: 1.5417 (A)
Input Power: 183.9 (W)
Power Factor: 0.9944

Photometric measurements:

Absolute Luminous Flux: 26575.3 (lumens)
Luminous Efficacy: 144.5 (lumens/W)

Intensity Summary:

Candlepower Summary

H/V	0.00	45.00	90.00	135.00	180.00	Lumens
0.00	25557	25598	25642	25619	25557	
5.00	25280	24892	24618	24618	24717	2529
15.00	18833	18774	18574	18592	17894	5235
25.00	11292	11407	11296	11195	10840	5163
35.00	8316	8303	8312	8287	8211	5200
45.00	6605	6547	6534	6558	6476	5067
55.00	3882	3696	3681	3706	3394	3283
65.00	414	450	433	465	354	406
75.00	81	85	81	89	79	87
85.00	13	13	13	16	13	8
90.00	1	2	2	2	1	

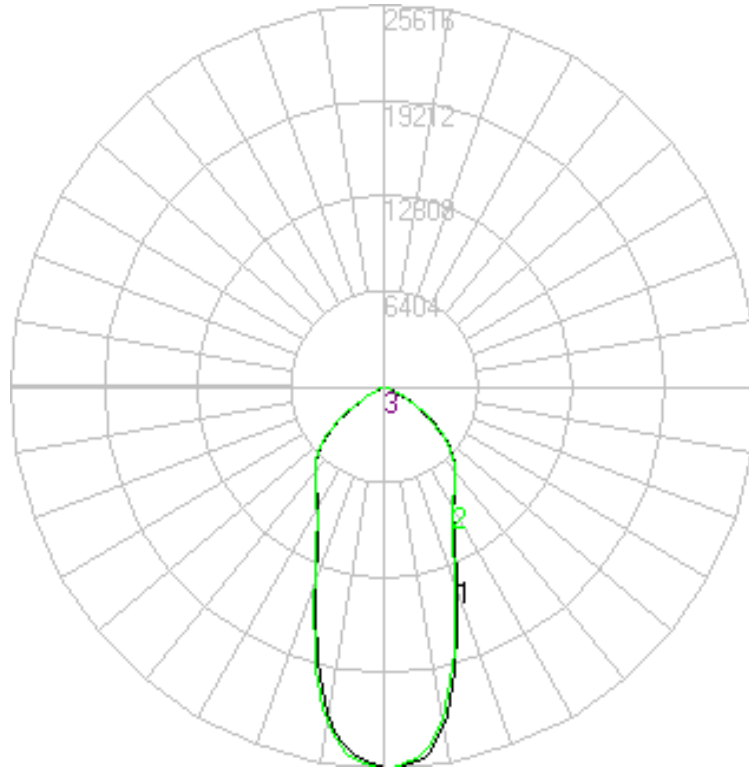
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0 to 30	12559.53	47.26	47.26
0 to 40	17754.49	66.81	66.81
0 to 60	25927.02	97.56	97.56
0 to 90	26575.34	100.00	100.00
90 to 180	0.00	0.00	0.00
0 to 180	26575.34	100.00	100.00

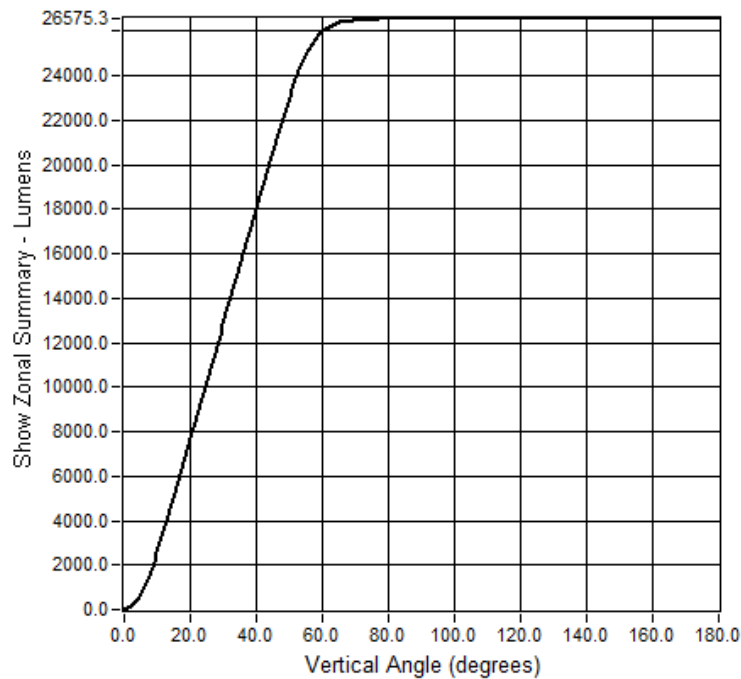
Test Results: Goniometer

Results continued from previous page.

Polar Plot:



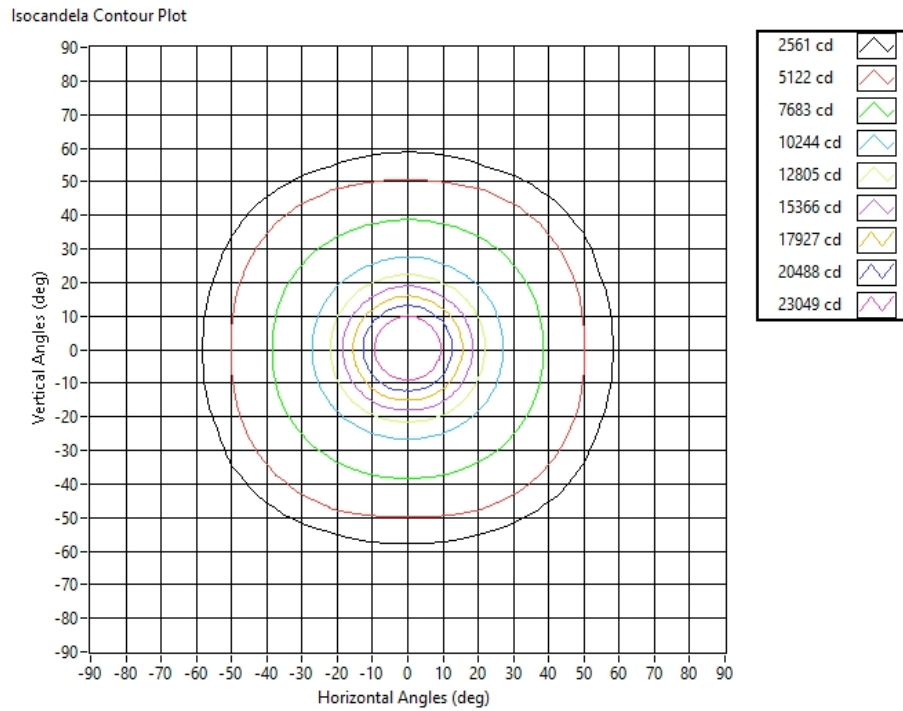
Zonal Flux Graph



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	1.63	1.55	6402.6
4	3.25	3.10	1600.7
6	4.88	4.66	711.4
8	6.51	6.21	400.2
10	8.13	7.76	256.1
12	9.76	9.31	177.9
14	11.38	10.86	130.7
16	13.01	12.42	100.0
18	14.64	13.97	79.0
20	16.26	15.52	64.0

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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 Optical Engineer
 Approved Signatory