

Report of Test

LLIA001130-001A

Catalog Number: HEC7MCPANNWNGN

High Bay mounted, cast aluminum housing, white center reflector, clear plastic enclosure.
252 white LEDs, one 1500-HIB-0049-00 RevA LED board with circular white baffles around LEDs.
One LED driver.

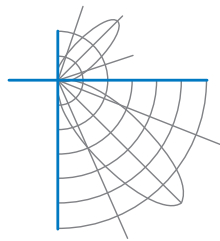
480.0Vac, 60.00Hz, 0.1523A, 70.32W, 0.962PF, 24.4%THD(i)



Performance Summary

Total Light Output	9388 lm
Luminaire Power	70.3 W
Luminous Efficacy	133.5 lm/W

PREPARED FOR : Dialight, 1501 Route 34 South, Farmingdale, NJ 07727, USA



Test Report No. LLIA001130-001A

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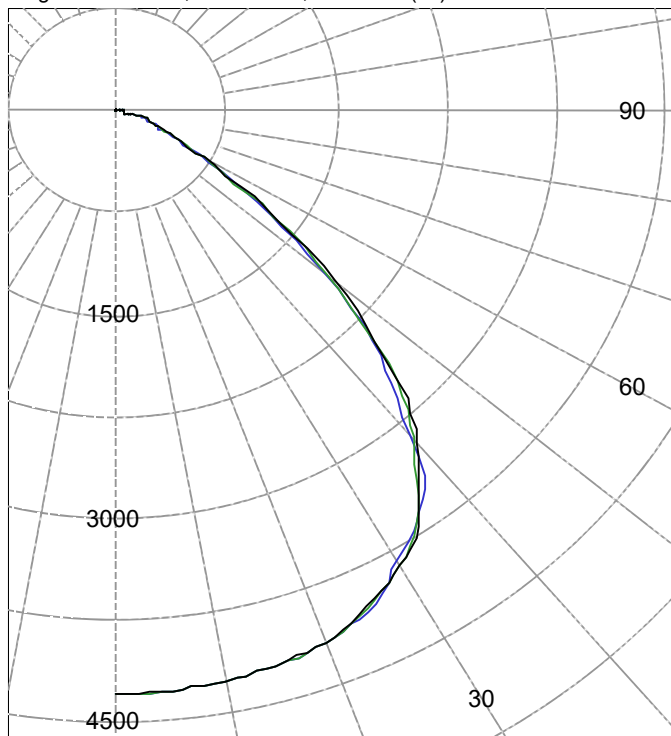
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Legend: C0-Black, C45-Green, C90-Blue (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	4302	4302	4302	4302	4302	409
5.0	4290	4293	4293	4291	4292	
10.0	4268	4265	4266	4266	4267	
15.0	4228	4228	4228	4230	4230	1196
20.0	4166	4169	4169	4168	4172	1863
25.0	4030	4059	4048	4036	4067	
30.0	3870	3844	3867	3868	3822	
35.0	3596	3601	3594	3602	3604	2227
40.0	3188	3145	3139	3146	3124	1967
45.0	2593	2551	2616	2598	2527	
50.0	1943	1869	1871	1939	1818	
55.0	1252	1172	1206	1197	1174	1090
60.0	688	677	677	683	654	413
65.0	398	389	394	392	374	
70.0	269	266	269	267	260	
75.0	166	169	170	166	165	180
80.0	88	88	89	89	87	43
85.0	37	37	38	37	37	
90.0	0	0	0	0	0	

AVERAGE LUMINANCE (cd / m²)

Gamma	C0	C45	C90
45.0	65494	66071	63831
55.0	38983	37542	36542
65.0	16820	16647	15810
75.0	11477	11700	11372
85.0	7511	7700	7503

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	3468	N / A	36.9
0-40	5695	N / A	60.7
0-60	8751	N / A	93.2
0-90	9388	N / A	100.0
40-90	3693	N / A	39.3
60-90	637	N / A	6.8
90-180	0	N / A	0.0
0-180	9388	N / A	100.0

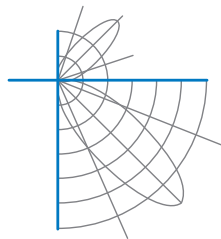
Total Light Output = 9,388 lm

Spacing Criterion: 0-180 1.3
Spacing Criterion: 90-270 1.3

Signed:

Authorized Signatory

Date of test 14-Jun-2019
Date of report 18-Jun-2019



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High Bay mounted, cast aluminum housing, white center reflector, clear plastic enclosure.

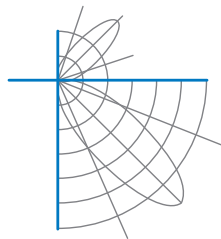
252 white LEDs, one 1500-HIB-0049-00 RevA LED board with circular white baffles around LEDs.

One LED driver.

480.0Vac, 60.00Hz, 0.1523A, 70.32W, 0.962PF, 24.4%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	4302	4302	4302	4302	4302
2.5	4297	4300	4301	4300	4299
5.0	4290	4293	4293	4291	4292
7.5	4282	4281	4281	4280	4282
10.0	4268	4265	4266	4266	4267
12.5	4248	4248	4248	4250	4249
15.0	4228	4228	4228	4230	4230
17.5	4202	4202	4202	4203	4205
20.0	4166	4169	4169	4168	4172
22.5	4118	4125	4124	4122	4127
25.0	4030	4059	4048	4036	4067
27.5	3947	3957	3951	3948	3959
30.0	3870	3844	3867	3868	3822
32.5	3777	3721	3754	3771	3721
35.0	3596	3601	3594	3602	3604
37.5	3376	3392	3341	3354	3457
40.0	3188	3145	3139	3146	3124
42.5	2956	2864	2914	2919	2799
45.0	2593	2551	2616	2598	2527
47.5	2262	2202	2202	2277	2239
50.0	1943	1869	1871	1939	1818
52.5	1573	1517	1543	1539	1474
55.0	1252	1172	1206	1197	1174
57.5	947	899	908	917	878
60.0	688	677	677	683	654
62.5	514	504	510	509	495
65.0	398	389	394	392	374
67.5	326	316	323	322	308
70.0	269	266	269	267	260
72.5	218	217	218	215	212
75.0	166	169	170	166	165
77.5	122	124	125	123	123
80.0	88	88	89	89	87
82.5	62	61	62	62	60
85.0	37	37	38	37	37
87.5	18	19	19	19	19
90.0	0	0	0	0	0



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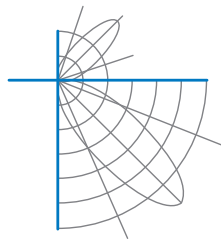
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252 white LEDs, one 1500-HIB-0049-00 RevA LED board with circular white baffles around LEDs.

One LED driver.

480.0Vac, 60.00Hz, 0.1523A, 70.32W, 0.962PF, 24.4%THD(i)

Intensity data (cd)					
Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	0	0	0	0	0
92.5	0	0	0	0	0
95.0	0	0	0	0	0
97.5	0	0	0	0	0
100.0	0	0	0	0	0
102.5	0	0	0	0	0
105.0	0	0	0	0	0
107.5	0	0	0	0	0
110.0	0	0	0	0	0
112.5	0	0	0	0	0
115.0	0	0	0	0	0
117.5	0	0	0	0	0
120.0	0	0	0	0	0
122.5	0	0	0	0	0
125.0	0	0	0	0	0
127.5	0	0	0	0	0
130.0	0	0	0	0	0
132.5	0	0	0	0	0
135.0	0	0	0	0	0
137.5	0	0	0	0	0
140.0	0	0	0	0	0
142.5	0	0	0	0	0
145.0	0	0	0	0	0
147.5	0	0	0	0	0
150.0	0	0	0	0	0
152.5	0	0	0	0	0
155.0	0	0	0	0	0
157.5	0	0	0	0	0
160.0	0	0	0	0	0
162.5	0	0	0	0	0
165.0	0	0	0	0	0
167.5	0	0	0	0	0
170.0	0	0	0	0	0
172.5	0	0	0	0	0
175.0	0	0	0	0	0
177.5	0	0	0	0	0
180.0	0	0	0	0	0



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Coefficients Of Utilization - Zonal Cavity Method

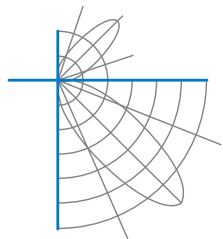
Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	43
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35
10	58	46	39	34	57	46	38	34	45	38	34	44	38	33	43	37	33	32

For absolute test reports, CUs are expressed as a percentage of total lumen output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Circle of Light Plot

Height(ft)	Illuminance at Nadir (fc)	Beam Width (across 50% Nadir Illum)	
		0-180	90-270
6.0	119.5	7.97	7.89
8.0	67.2	10.62	10.51
10.0	43.0	13.28	13.14
12.0	29.9	15.94	15.77
14.0	22.0	18.59	18.40
16.0	16.8	21.25	21.03



Test Report No. LLIA001130-001A

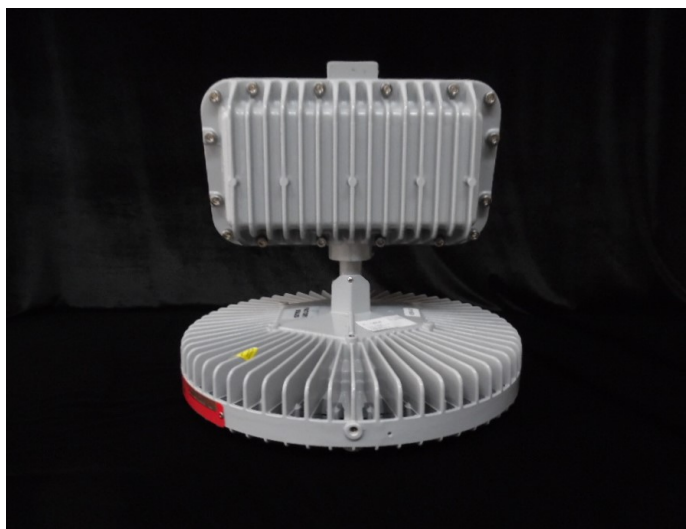
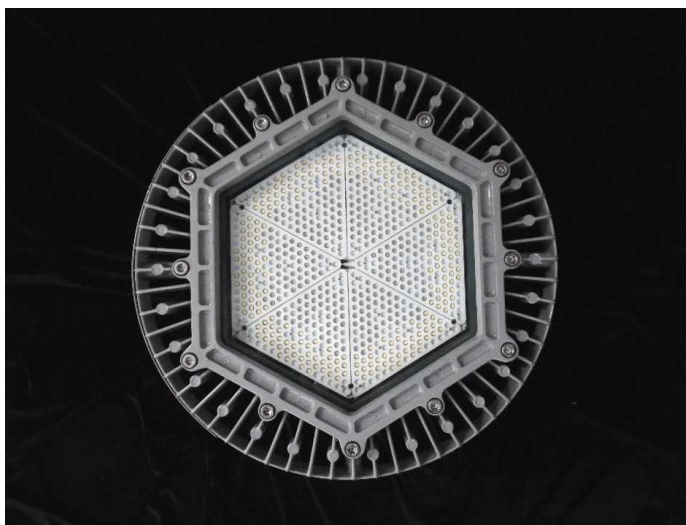
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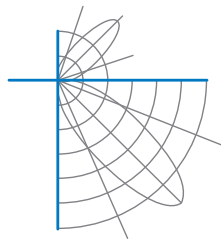
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Test Distance 9.5 m
Test Temperature 25.2 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-08 (Sec. 12), IES LM-16-93, IES LM-58-13, CIE 13.3:1995, CIE 15:2004, ANSI C78.377:2017, ANSI C82.77-10:2014.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

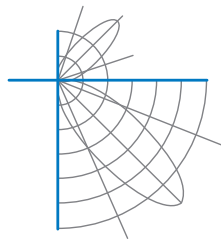
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with * are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.



Report of Test

LLIA001130-001B

Integrating Sphere Report

Catalog Number: HEC7MCPANNWNGN

High Bay mounted, cast aluminum housing, white center reflector, clear plastic enclosure.
252 white LEDs, one 1500-HIB-0049-00 RevA LED board with circular white baffles around LEDs.
One LED driver.



Performance Summary

Voltage	480.0 Vac
Current	0.1520 A
Power	70.12 W
Frequency	59.99 Hz
Power Factor	0.962
Current THD	24.4 %
Total Luminous Flux	9710.5 lm
Efficacy	138.5 lm/W
Chromaticity (x,y)	(0.3487, 0.3603)
(u',v')	(0.2105, 0.4894)
Duv	0.0029
CCT	4900 K
CRI (Ra)	82
R9	5
TM-30: Rf	81
TM-30: Rg	96

Prepared For:

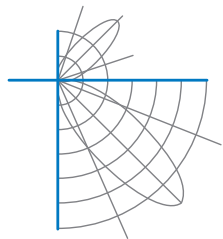
Dialight

1501 Route 34 South

Farmingdale, NJ 07727, USA

Test date: 06/14/2019

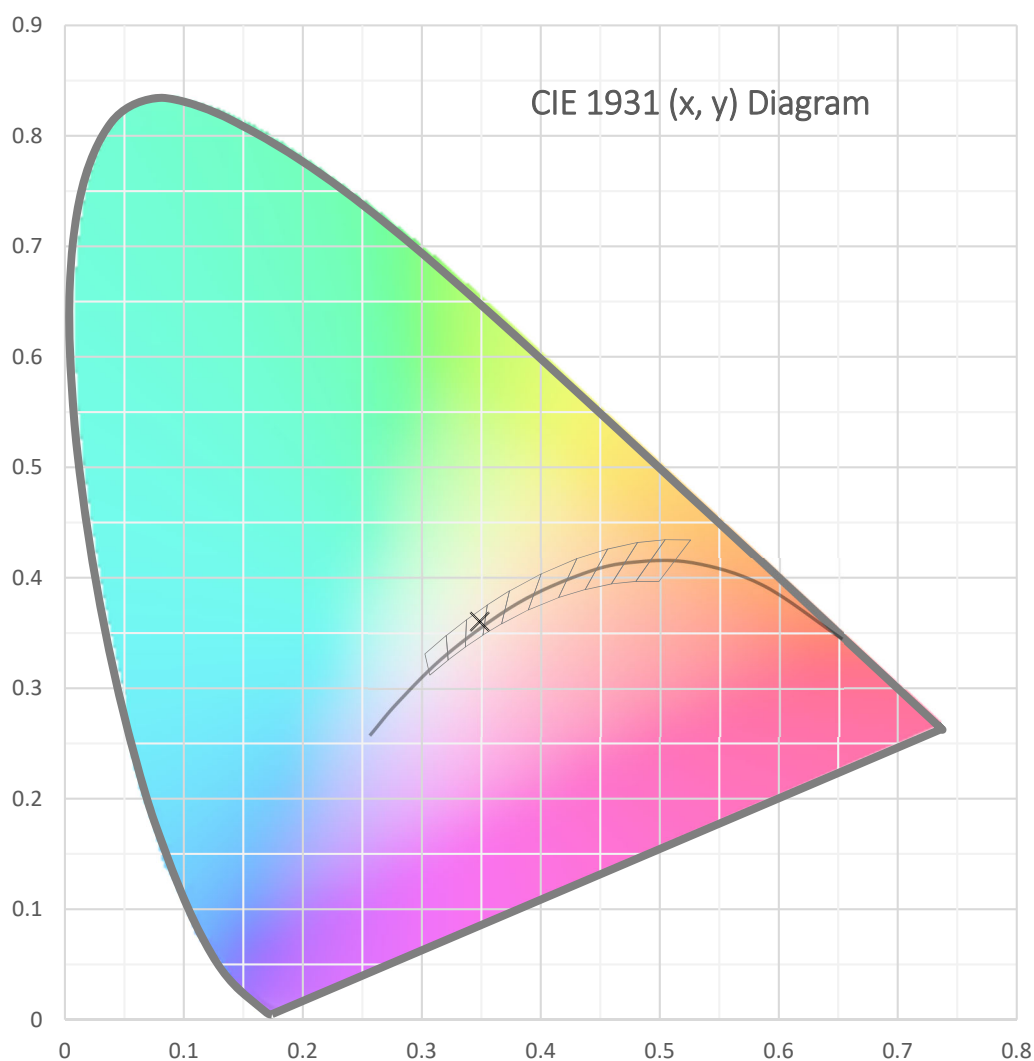
Report date: 06/18/2019

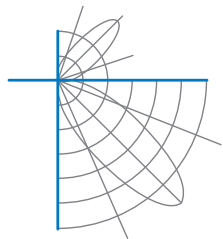


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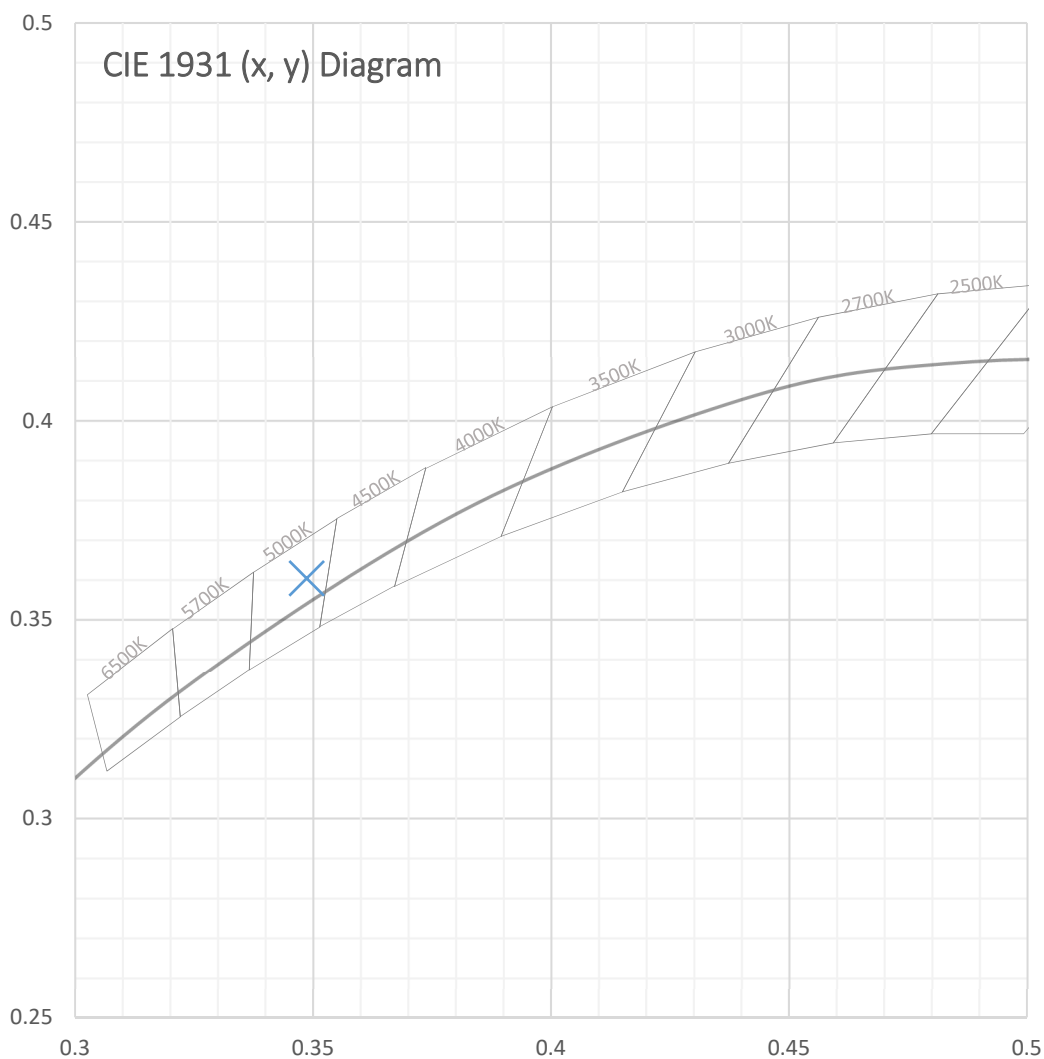


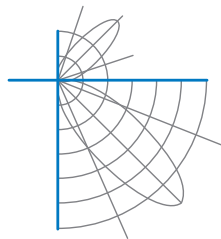


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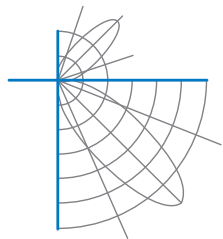
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Spectral Data	Total Radiant Flux	29.98 W
	Total Luminous Flux	9710.5 Lm
	Chromaticity CIE 1931 (x, y)	(0.3487, 0.3603)
	Chromaticity CIE 1976 (u', v')	(0.2105, 0.4894)
	Correlated Color Temperature (CCT)	4900 K
	Color Rendering Index (Ra)	82
	R1	80
	R2	86
	R3	91
	R4	83
	R5	81
	R6	81
	R7	87
	R8	67
	R9	5
	R10	68
	R11	83
	R12	57
	R13	82
	R14	95
	TM-30: Rf	81
	TM-30: Rg	96
Electrical Data	Distance from Planckian Locus (Duv)	0.0029
	Scotopic/Photopic Ratio *	1.904

Voltage	480.0 Vac
Current	0.1520 A
Power	70.12 W
Frequency	59.99 Hz
Power Factor	0.962
Current THD	24.4 %



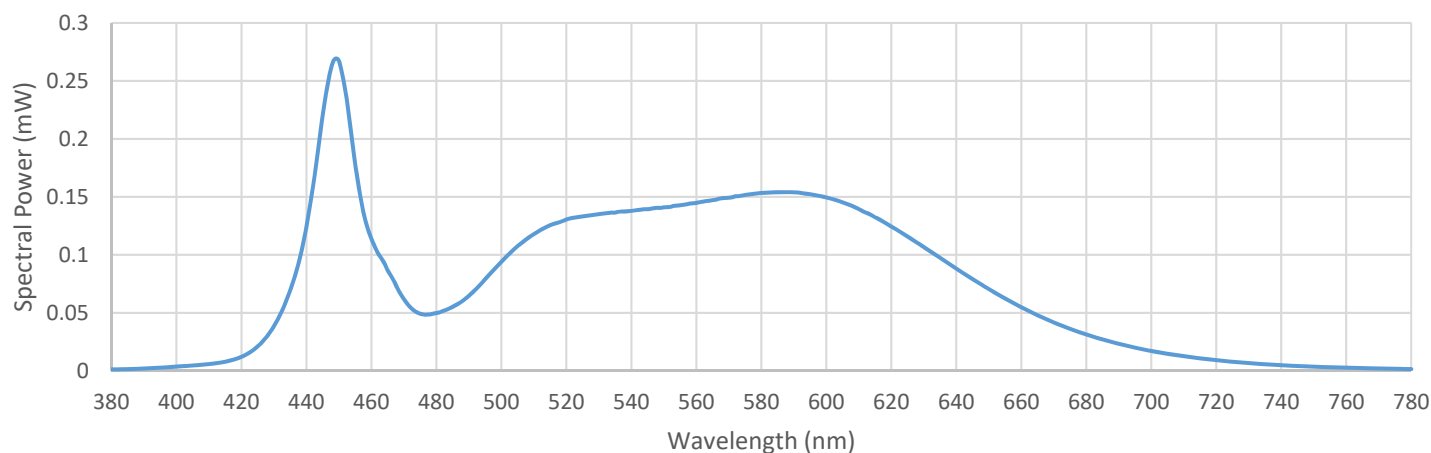
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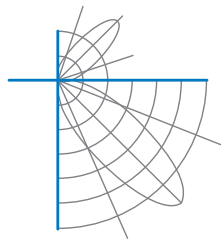
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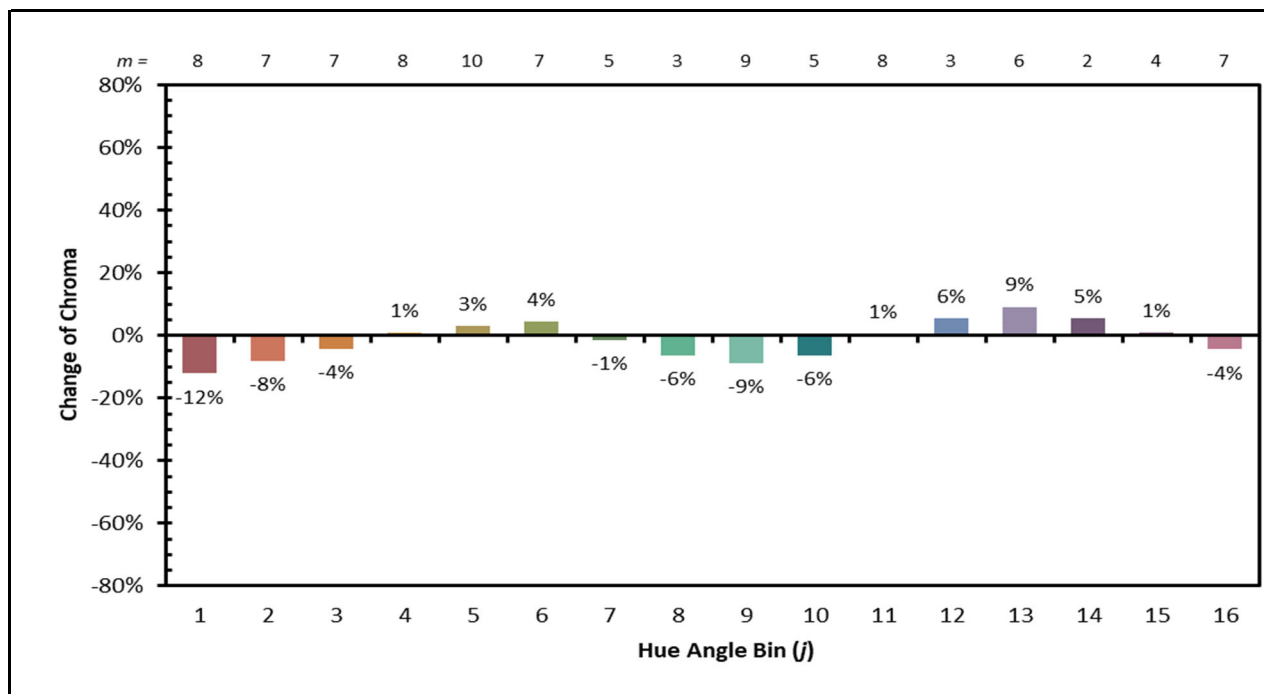
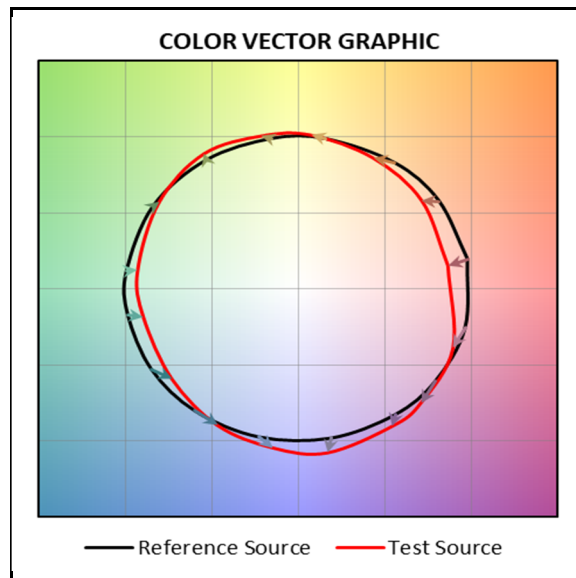
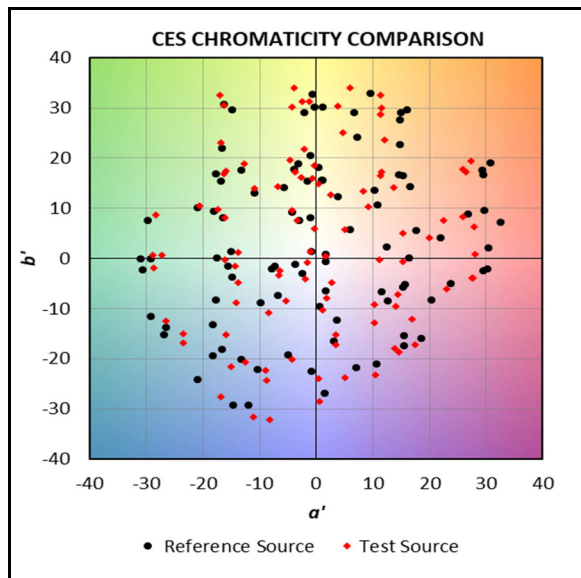
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

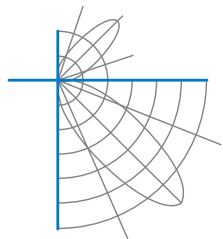
380	0.001178	480	0.049804	580	0.153466	680	0.031288
385	0.001397	485	0.055241	585	0.153950	685	0.026991
390	0.001934	490	0.064673	590	0.153855	690	0.023177
395	0.002661	495	0.079039	595	0.152410	695	0.020013
400	0.003597	500	0.094289	600	0.149525	700	0.017087
405	0.004584	505	0.107573	605	0.145295	705	0.014631
410	0.005803	510	0.117918	610	0.139470	710	0.012458
415	0.007755	515	0.125580	615	0.132322	715	0.010712
420	0.012056	520	0.130512	620	0.124314	720	0.009137
425	0.020872	525	0.133301	625	0.115853	725	0.007786
430	0.038603	530	0.135157	630	0.106593	730	0.006660
435	0.069332	535	0.136419	635	0.097581	735	0.005675
440	0.123698	540	0.138056	640	0.088023	740	0.004823
445	0.219799	545	0.139316	645	0.079026	745	0.004136
450	0.267301	550	0.140980	650	0.070493	750	0.003548
455	0.178217	555	0.142770	655	0.062386	755	0.003046
460	0.114286	560	0.144773	660	0.054919	760	0.002630
465	0.086534	565	0.147156	665	0.047968	765	0.002260
470	0.061718	570	0.149295	670	0.041689	770	0.001943
475	0.049083	575	0.151673	675	0.036215	775	0.001686
						780	0.001456





IES TM-30 Details



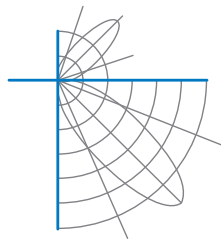


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One LED driver.

Test Equipment Configuration:	LightLab International Allentown 2m Integrating Sphere Measurements acquired using a Labsphere CDS 2600 spectroradiometer Testing was performed using 4π geometry
Test Temperature:	24.7 °C
Test Procedure:	Tested in accordance with the applicable sections of: LM-79-08, LM-78-07, LM-58-13, ANSI_ANSLG C78.377-2017, ANSI C82-77-10:2014, TM-30-15
Significance:	The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.
Notes:	The measurements and other derived quantities contained in this report are based on the absolute data as measured. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with * are not covered.



Report of Test

LLIA001130-001C

ISTM Report

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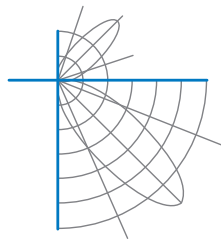
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One LED driver.



Prepared For:
Dialight
1501 Route 34 South
Farmingdale, NJ 07727, USA

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 06/18/2019
Report date: 06/18/2019

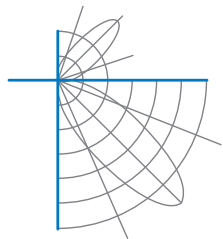


Test Report Number: LLIA001130-001C

Catalog Number: HEC7MCPANNWNGN

High Bay mounted, cast aluminum housing, white center reflector, clear plastic enclosure.
252 white LEDs, one 1500-HIB-0049-00 RevA LED board with circular white baffles around LEDs.
One LED driver.

Purpose of Test:	To determine the in-situ temperature of the specified LED Ts point and driver Tc point. In this test, in-situ temperature refers to standard laboratory conditions with the luminaire configured in accordance with appropriate sections of UL1598-2008
Luminaire Mounting:	Highbay
LED Test Point:	Thermocouples were attached to the LED case temperature point (Ts) as specified by report number SQETMN558601, issued 06/11/2016 by Nichia Corporation LED Testing Laboratory. The measured LED was selected according to guidance provided by DLC and ENERGY STAR for lumen maintenance projection.
Driver Test Point:	Thermocouples were attached to the driver case in the location (Tc) designated by the manufacturer.
Sample Selection:	LightLab International Allentown. LLC has not participated in the selection of sample(s) being tested. Testing is performed on the understanding that the significance of the report is limited to the extent to which the sample is representative of production units.
Disclaimer:	This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
Procedure:	In-situ temperature measurements were performed with the luminaire mounted suspended from a simulated ceiling. The luminaire supply voltage and frequency was set according to the luminaire manufacturer's instructions. The luminaire was allowed to reach stabilization as defined in UL1598-2008 prior to reported measurements. Testing was performed in a draft-free, temperature-controlled environment with an ambient temperature of 25 +/- 5 °C.
Test Equipment:	GW Instek APS-7100 AC Power Source Xitron 2801 Power Analyzer Fluke 52-ii Thermometer



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Electrical Measurements

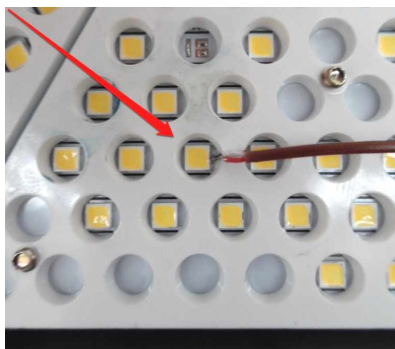
Voltage	480.0 Vac
Current	0.1524 A
Power	70.32 W
Frequency	60.0 Hz
Power Factor	0.961
Current THD	25.0 %
Driver #1 Output	0.142 Adc

Temperature Measurements

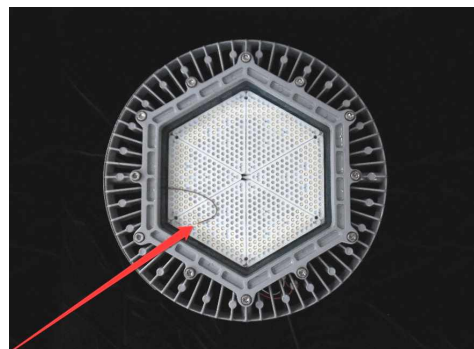
LED #1 (Ts)	41.1°C	Driver #1 (Tc)	N/A
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*The above temperatures have been normalized to 25°C ambient.

Measured Ambient Temperature (Ta) 23.9°C



LED Thermocouple Location



Selected LED Location