

# Report of Test

## LLI-17113-10

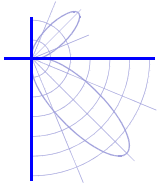
Vantage Lighting - 6" downlight luminaire. Product ID: A6VEFLEDU-5035K-L6011SCL  
Unpainted formed steel housing and specular reflector with clear flat glass lens mounted midway.  
80 LEDs in circular array mounted in plastic housing with flat white plastic lens.  
Philips Advance Xitanium LED driver. Model: XI050C140V054DSM1 set to 1400mA.  
Operating at 120 VAC and 60 Hz



### Performance Summary

Total Light Output	4095 lm	Min Power Factor	0.99 @ 277 V
Luminaire Power	58.3 W	Max THD(i)*	3.2 % @ 277 V
Luminous Efficacy	70.2 lm/W		
CCT	3520 K		
CIE(x,y) 1931	(0.406, 0.393)		
CRI	84		

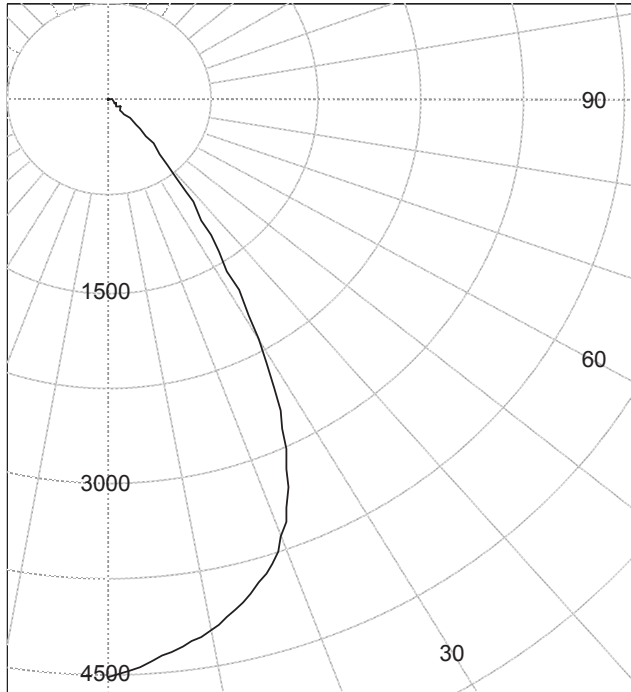
**PREPARED FOR : Lexington Lighting Group, East Providence, RI**



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Legend: All planes - Solid (cd)



**INTENSITY SUMMARY (cd)**

Gamma	All Planes	Flux (lm)	Gamma	C0	Flux (lm)
0	4504		90	0	
5	4378	413	95	0	0
10	4221		100	0	0
15	4002	1119	105	0	0
20	3646		110	0	0
25	3019	1361	115	0	0
30	2158		120	0	0
35	1279	811	125	0	0
40	658		130	0	0
45	253	221	135	0	0
50	96		140	0	0
55	74	68	145	0	0
60	65		150	0	0
65	63	61	155	0	0
70	55		160	0	0
75	47	40	165	0	0
80	1		170	0	0
85	0	0	175	0	0
90	0		180	0	0

**ZONAL FLUX AND PERCENTAGES**

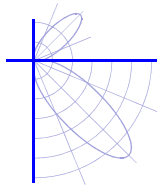
Zone	Flux (lm)	%Lamp	%Luminaire
0-30	2893	N / A	70.6
0-40	3704	N / A	90.5
0-60	3993	N / A	97.5
0-90	4095	N / A	100.0
40-90	391	N / A	9.5
60-90	102	N / A	2.5
90-180	0	N / A	0.0
0-180	4095	N / A	100.0

Total Light Output = 4,095 lm

Signed:

*Ryder Tunney*  
Ryder Tunney  
Authorized Signatory

Date of test 8-May-2017  
Date of report 19-May-2017

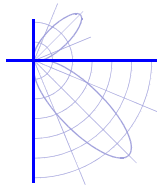


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**Intensity (cd) and Flux (lm) data**

Gamma	Intensity	Flux	Gamma	Intensity	Flux
0.0	4504		90.0	0	
2.5	4465		92.5	0	
5.0	4378	413	95.0	0	
7.5	4303		97.5	0	0
10.0	4221		100.0	0	
12.5	4124		102.5	0	
15.0	4002	1119	105.0	0	
17.5	3846		107.5	0	0
20.0	3646		110.0	0	
22.5	3371		112.5	0	
25.0	3019	1361	115.0	0	
27.5	2631		117.5	0	0
30.0	2158		120.0	0	
32.5	1670		122.5	0	
35.0	1279	811	125.0	0	
37.5	950		127.5	0	0
40.0	658		130.0	0	
42.5	426		132.5	0	
45.0	253	221	135.0	0	
47.5	139		137.5	0	0
50.0	96		140.0	0	
52.5	82		142.5	0	
55.0	74	68	145.0	0	
57.5	69		147.5	0	0
60.0	65		150.0	0	
62.5	64		152.5	0	
65.0	63	61	155.0	0	
67.5	59		157.5	0	0
70.0	55		160.0	0	
72.5	53		162.5	0	
75.0	47	40	165.0	0	
77.5	28		167.5	0	0
80.0	1		170.0	0	
82.5	0		172.5	0	
85.0	0	0	175.0	0	
87.5	0		177.5	0	0
90.0	0		180.0	0	



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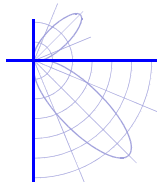
**LM-79 Performance Data**

<b>Spectral</b>	CIE 1931 (x, y) <sup>(1)</sup>	(0.406, 0.393)
	CIE 1976 (u', v') <sup>(1)</sup>	(0.235, 0.512)
	Correlated Color Temperature (CCT) <sup>(1)</sup>	3520 K
	Spatial Δ (u', v') Uniformity <sup>(2)</sup>	0.0014
	Color Rendering Index (Ra) <sup>(1)</sup>	83.6
	Special CRI 9 (R <sub>9</sub> ) <sup>(1),(3)</sup>	11.9
	Distance from Planckian Locus (Duv) <sup>(1),(3)</sup>	0.0012
	Scotopic/Photopic Ratio <sup>(1),(3)</sup>	1.57

<b>Electrical</b>	Voltage	120.0 V	(Setpoint 1)
	Frequency	60.0 Hz	
	Current	0.487 A	
	Power	58.3 W	
	Power Factor	0.997	
	Current THD	0.8 %	
	Voltage	277.0 V	(Setpoint 2)
	Frequency	60.0 Hz	
	Current	0.209 A	
	Power	57.1 W	
	Power Factor	0.986	
	Current THD	3.2 %	

Performance data in accordance with IESNA LM-79-08. Spectral calculations are for a CIE 2° observer  
Photometric and spectral values were measured at Setpoint 1

- (1) Value is computed from the weighted average of the spatial measurements
- (2) Value is the maximum deviation of the spatial u' and v' measurements from the weighted average
- (3) Quantity is in addition to the scope of IESNA LM-79-08



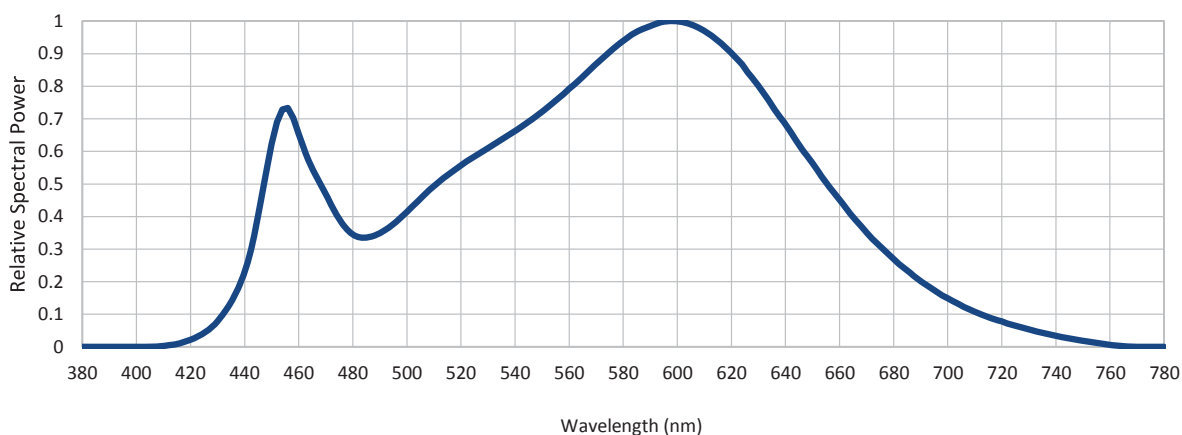
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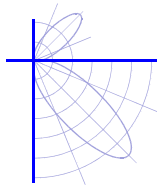
**LM-79 Performance Data**

**Summary relative spectral irradiance distribution (wavelength – nm, irradiance – relative to peak = 1)**

380	0.000	480	0.345	580	0.939	680	0.269
385	0.000	485	0.336	585	0.967	685	0.234
390	0.000	490	0.349	590	0.985	690	0.201
395	0.000	495	0.377	595	0.998	695	0.174
400	0.000	500	0.415	600	0.999	700	0.149
405	0.000	505	0.455	605	0.990	705	0.127
410	0.003	510	0.494	610	0.970	710	0.108
415	0.009	515	0.527	615	0.940	715	0.091
420	0.022	520	0.557	620	0.902	720	0.078
425	0.043	525	0.584	625	0.854	725	0.065
430	0.079	530	0.610	630	0.801	730	0.054
435	0.138	535	0.636	635	0.742	735	0.043
440	0.232	540	0.662	640	0.683	740	0.034
445	0.402	545	0.691	645	0.621	745	0.026
450	0.622	550	0.722	650	0.564	750	0.019
455	0.731	555	0.756	655	0.504	755	0.012
460	0.654	560	0.792	660	0.452	760	0.006
465	0.548	565	0.830	665	0.398	765	0.002
470	0.470	570	0.868	670	0.351	770	0.000
475	0.392	575	0.905	675	0.309	775	0.000
						780	0.000



The relative spectral power distribution combines the weighted spectral power distributions of all spatial measurements.



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**LM-79 Performance Data**

**Spatial measurements**

Vert. angle (°)	CIE 1976 (u',v') coordinates	
	Horiz. 0° plane	Horiz. 90° plane
0.0	( 0.235, 0.513)	( 0.235, 0.513)
5.0	( 0.235, 0.513)	( 0.235, 0.513)
10.0	( 0.235, 0.513)	( 0.235, 0.513)
15.0	( 0.235, 0.513)	( 0.235, 0.513)
20.0	( 0.235, 0.512)	( 0.235, 0.512)
25.0	( 0.235, 0.513)	( 0.235, 0.512)
30.0	( 0.234, 0.512)	( 0.234, 0.512)
35.0	( 0.234, 0.512)	( 0.234, 0.512)
40.0	( 0.233, 0.512)	( 0.234, 0.512)
45.0	<= 10% peak	<= 10% peak

**Spatial measurements**

Vert. angle (°)	CIE 1976 (u',v') coordinates	
	Horiz. 0° plane	Horiz. 90° plane
45.0	<= 10% peak	<= 10% peak
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

**Test procedure**

All measurements were performed in an environmentally controlled laboratory employing suitable baffling to minimize stray light. The sample was mounted in its normal operating orientation on a rotating mirror goniophotometer and operated from a stabilized supply. The photometric output was monitored and measurements were performed once stability was achieved.

The goniophotometer was used to measure the spatial distribution of both luminous intensity and, in conjunction with a spectroradiometer, spectral irradiance. The distribution locus comprises points in two or more planes (as indicated in the table above) at no more than 10° vertical intervals. The CIE (x,y) coordinates and other derived metrics (CIE (u', v'), CCT and CRI) are calculated from the weighted sum (weighted for intensity and represented solid angle) of the measured spectral irradiances.

Sample Orientation                      Horizontal                                      Stabilization & total operation time    62.75 / 63.75 hours

**Equipment and uncertainties**

LightLab International R80A C-gamma rotating mirror goniophotometer with a test distance of 8 m.

Luminous Intensity	± 4 %	Temperature	± 1 °C
Luminous Flux	± 4 %	Luminous Efficacy	± 4.5 %
Horiz., Vert. Angles	± 0.25°		

PhotoResearch PR-670 spectroradiometer (grating with 380 - 780 nm range, 2 nm / pixel, 5 nm bandwidth, incandescent/halogen calibration source). Measured at a distance from the sample deemed >5 times the maximum observed luminous opening dimension.

CIE (x, y) coordinates	± 0.003	CCT	± 100 K
CIE (u', v') coordinates	± 0.002	CRI (Ra)	± 2
Spatial Δ (u', v') uniformity	± 0.001	Scotopic / Photopic Ratio *	± 0.02
Rel. Spectral Irradiance *	± 2 %	R9 *	± 2
Duv *	± 5E-04		

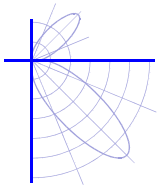
Yokogawa WT210 power meter connected in circuit to the sample electrical supply

Voltage	± 0.5 %	Frequency *	± 0.1 Hz
Current	± 0.5 %	Power	± 0.5 %
Current THD *	± 3 %	Power Factor	± 0.02

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

Calculator / report version 1.0.7 / 5.7 (30th Jan 2017)

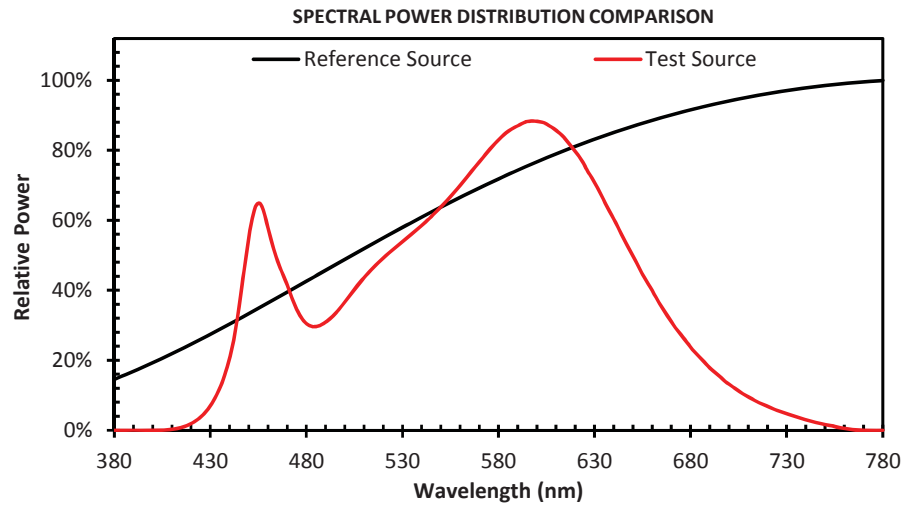




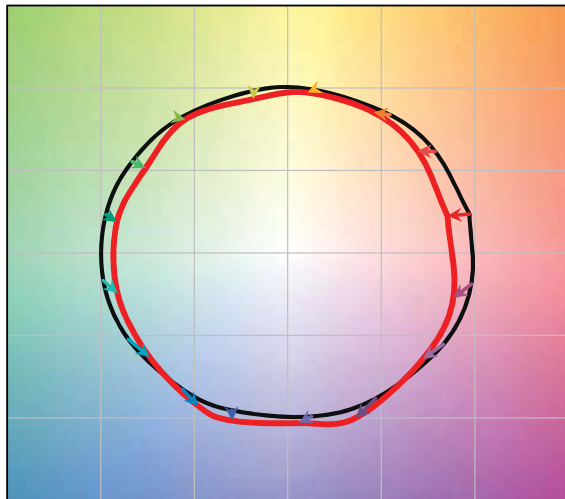
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$R_f$	<b>82</b>
$R_g$	<b>93</b>



COLOR VECTOR GRAPHIC

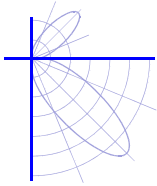


COLOR DISTORTION GRAPHIC



— Reference Illuminant      — Test Source

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**Test Distance** 8.0 m  
**Test Temperature** 24.8 °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 C78.377:2011, ANSI C82.77:2002.

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.

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