



LM-79 Distribution Test Report (Luminaire)

Total Luminous Flux, Luminous Intensity Distribution and
Electrical Characteristics of Customer Submitted Luminaire

CURTIS-STRAUS

Report No.: PHM-RPT-180309-13
Date: March 09, 2018

LM-79 Distribution Testing: Total Luminous Flux, Luminous Intensity Distribution, Electrical Characteristics and Efficacy.

Report Prepared for:

**Vantage Lighting
181 Narragansett Park Drive
East Providence, RI 02916
USA
Telephone: (860) 564-4512**

**Description : VGC4VEFLED
Model Tested: VGC4VEFLEDU-1535K
WO/CS#: S0461**

**Report Issue Date: March 9, 2018
Date of Test(s): March 5- March 9, 2018
Total Number of Pages : 9 (including this page)**

Report Reviewed by:

**Mark Razvi
Photometric Lab Supervisor
Curtis-Straus**



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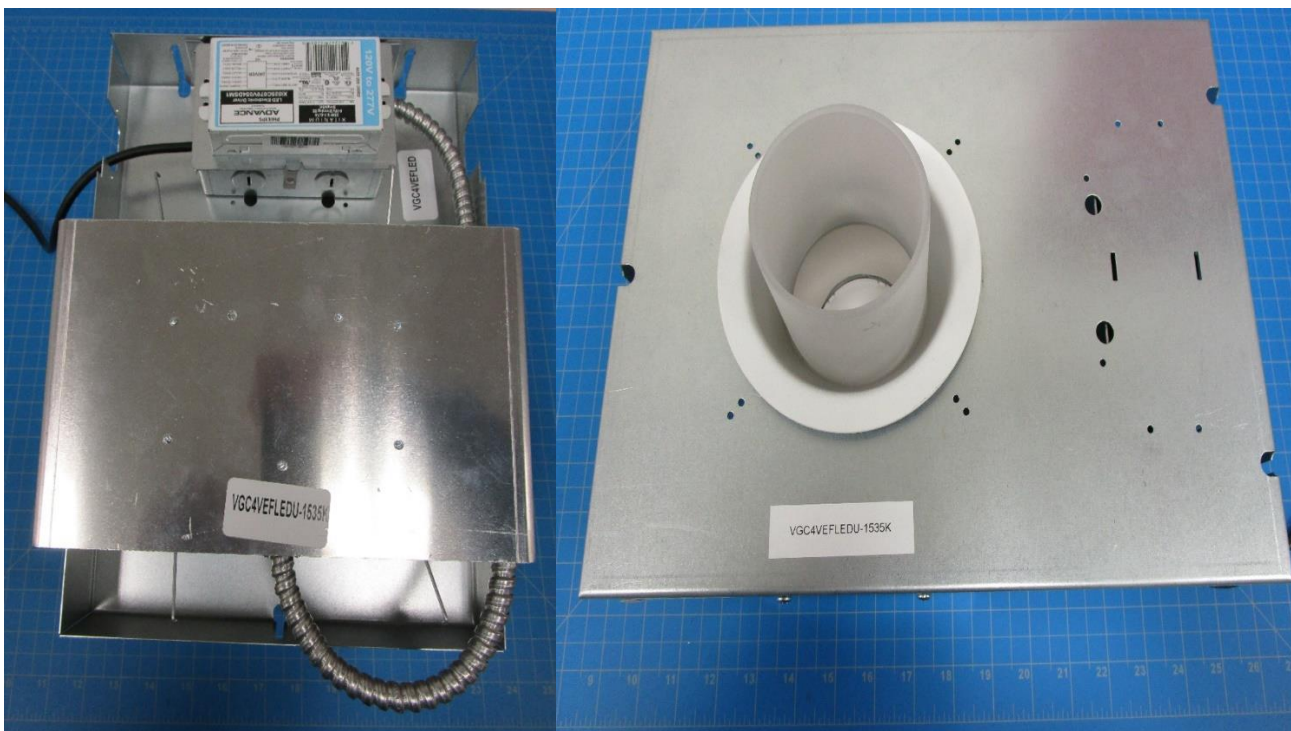
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DETAILED PRODUCT DESCRIPTION

Model #	VGC4VEFLEDU-1535K
CS/WO#	S0461
Description	VGC4VEFLED
Supply Voltage	120VAC

Pictures:





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Curtis-Straus Photometric Testing Information

Photometric Testing is performed in accordance with the procedures outlined in LM-79-2008 . The test sample is evaluated for photometric and electrical characteristics using the equipment listed below.

Curtis-Straus Environmental Testing Info

Curtis-Straus testing laboratory temperature during testing: 25.5 °C .

LIST OF EQUIPMENT USED:

Description	Model No.	Serial No.	Asset No	Cal. Date	Cal. Due
Yokogawa Power Meter	WT-310E	C2SK10001V	2360	04-21-17	04-21-18
Chroma AC Power Supply	61603	616030001283	2355	04-21-17	04-21-18
LabSphere Type-C GoniometerSystem	PM-150-140	022172153	AA-30058-195	02-09-18	03-09-18
Digital Thermometer	4627	160739886	2392	09-07-16	09-07-18

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LM-79-2008 Distribution Test Data

Model # VGC4VEFLEDU-1535K
CS/WO# S0461
Description VGC4VEFLEDU
Supply Voltage 120VAC

Result of Tests

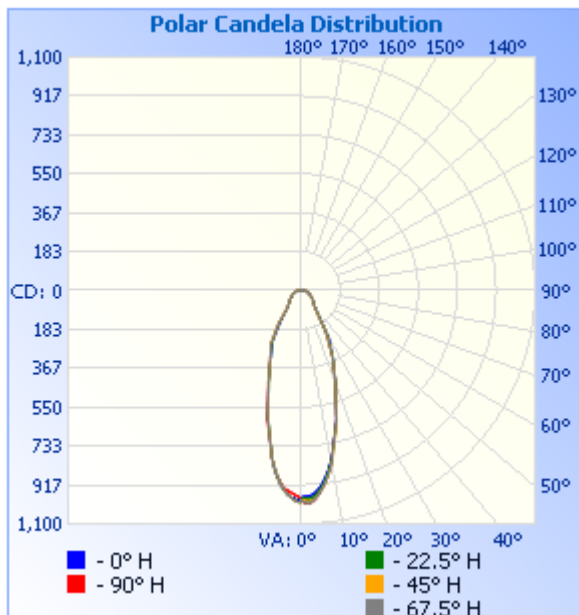
Photometric and Electrical Test Data

Input Voltage: 120 VAC

Base Orientation: Base Up

Lumens (lm)	Watts (W)	Volts (VAC)	Amps (A)	Efficacy	PF	Ithd (%)
781.08	20.83	120.20	0.17	37.49	0.9908	0.13

Luminous Intensity Summary: Cd



Illumination Cone of Light
Mounting Ht: 10 ft.

Distance (ft)	Illuminance at a Distance	
	Center Beam fc	Beam Width
1.7R	340 fc	1.2 ft
3.3R	90.3 fc	2.2 ft
5.0R	39.3 fc	3.4 ft
6.7R	21.9 fc	4.5 ft
8.3R	14.3 fc	5.6 ft
10.0R	9.83 fc	6.8 ft

■ Vert. Spread: 37.4°
 ■ Horiz. Spread: 37.8°



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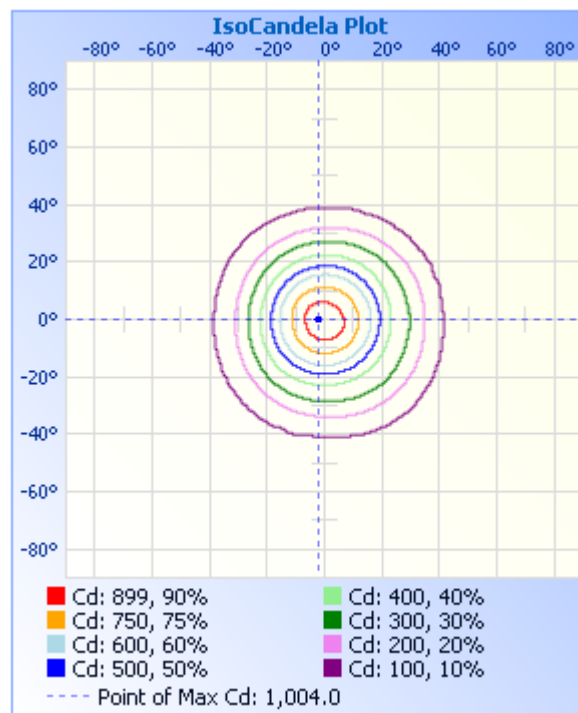
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IsoCandela Plot



Zonal Lumens Summary

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	419.9	53.8%
0-40	523.6	67%
0-60	643.1	82.3%
60-90	104.2	13.3%
70-100	74.9	9.6%
90-120	25.4	3.3%
0-90	747.3	95.7%
90-180	33.8	4.3%
0-180	781.1	100%

Lumens per Zone

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	85.6	11.0%	90-100	15.6	2%
10-20	172.9	22.1%	100-110	6.8	0.9%
20-30	161.4	20.7%	110-120	2.9	0.4%
30-40	103.7	13.3%	120-130	2.2	0.3%
40-50	64.3	8.2%	130-140	2.0	0.2%
50-60	55.1	7.1%	140-150	1.7	0.2%
60-70	44.9	5.8%	150-160	1.4	0.2%
70-80	34.6	4.4%	160-170	0.9	0.1%
80-90	24.6	3.2%	170-180	0.3	0%



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Candela Table - Type C

0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360	
0	983	983	983	983	983	983	983	983	983	983	983	983	983	983	983	983	
0.1	973	979	984	993	995	991	988	982	990	997	996	994	978	967	966	972	972
0.2	973	979	985	994	995	992	988	983	990	997	997	995	977	966	966	972	973
0.3	972	979	985	994	996	992	989	983	990	997	997	995	976	966	966	972	973
0.4	972	979	986	995	996	992	989	983	990	997	996	995	975	965	966	971	973
0.5	972	980	987	996	997	993	989	984	989	997	996	996	974	965	966	971	973
0.6	972	980	987	996	997	993	990	984	989	997	996	996	974	964	965	971	973
0.7	972	980	988	997	998	994	990	985	989	996	996	996	973	964	965	971	972
0.8	972	981	989	997	999	994	991	985	989	996	996	996	972	963	965	970	972
0.9	971	981	990	998	999	995	991	985	988	995	995	996	971	963	964	969	972
1	971	981	990	998	1000	996	992	985	987	994	995	996	970	962	964	969	972
1.1	971	981	991	999	1000	996	992	985	987	993	995	996	969	962	964	968	972
1.2	971	981	991	999	1001	997	993	985	986	992	995	995	968	961	963	967	971
1.3	971	981	992	1000	1002	997	993	984	985	992	995	994	968	961	963	967	971
1.4	971	981	992	1000	1002	998	993	984	985	991	994	994	967	960	962	966	971
1.5	970	982	992	1001	1003	999	993	984	984	990	993	993	966	960	961	966	971
1.6	970	982	992	1001	1003	999	993	984	983	989	992	992	965	959	961	965	970
1.7	969	982	993	1002	1004	1000	993	984	982	988	990	990	964	959	960	964	970
1.8	969	982	993	1002	1003	999	993	984	982	988	989	989	963	958	959	964	970
1.9	969	982	993	1003	1003	999	993	984	981	987	988	988	962	958	958	963	969
2	968	982	994	1003	1002	998	993	983	980	985	987	987	961	957	957	962	969
2.1	968	982	994	1002	1002	997	993	983	980	984	986	985	961	957	956	962	968
2.2	968	982	994	1001	1001	996	993	982	979	983	985	984	960	956	955	961	968
2.3	967	981	994	1000	1001	996	993	982	978	982	984	983	959	956	954	960	968
2.4	967	980	993	999	1000	995	993	981	978	981	983	982	958	955	953	960	967
2.5	966	980	992	998	999	994	992	981	977	980	982	981	957	955	953	959	967
2.6	966	979	991	997	999	994	991	980	977	979	981	979	956	954	952	958	966
2.7	965	978	990	996	998	993	990	980	976	978	979	978	955	954	951	958	965
2.8	964	977	989	995	998	992	989	979	975	977	978	977	954	953	950	957	964
2.9	963	976	989	994	996	991	988	979	975	976	977	975	954	953	949	956	963
3	962	976	988	993	995	989	987	978	974	975	976	974	953	952	948	955	963
3.1	961	975	987	992	993	988	986	977	973	973	974	973	952	952	947	953	962
3.2	960	974	986	991	992	986	984	976	972	972	973	972	951	951	946	952	961
3.3	959	973	985	989	991	984	983	975	971	971	972	970	950	951	945	951	960
3.4	958	972	984	988	989	983	982	973	969	970	970	969	949	949	944	950	959
3.5	957	971	983	986	988	981	981	972	968	968	969	968	948	948	943	948	958



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3.6	957	969	981	985	986	980	980	971	967	967	968	966	947	947	942	947	957
3.7	955	968	980	983	985	978	978	969	965	966	966	965	947	945	940	946	956
3.8	954	966	978	981	983	976	976	968	964	965	964	963	946	944	939	945	954
3.9	953	965	977	980	982	975	974	967	963	963	963	962	945	943	937	944	953
4	951	963	975	978	980	973	972	965	962	962	961	960	944	941	936	942	951
4.1	950	962	974	977	978	971	971	964	960	961	959	958	943	940	934	940	950
4.2	948	961	972	975	976	969	969	962	959	959	958	956	942	938	933	939	949
4.3	947	959	971	973	974	966	967	960	957	957	956	954	941	937	931	937	947
4.4	946	958	969	971	972	964	965	958	956	955	954	953	940	936	930	936	946
4.5	944	956	968	969	969	962	963	956	954	953	952	951	940	934	928	934	944
4.6	943	954	966	967	967	960	962	954	952	952	951	949	939	932	927	933	943
4.7	941	952	964	965	965	958	960	952	950	950	949	947	938	930	925	931	942
4.8	940	951	962	963	963	956	958	950	948	948	947	946	937	929	924	929	940
4.9	938	949	960	961	961	954	955	948	947	946	945	944	936	927	922	928	938
5	936	947	958	959	959	952	953	946	945	944	943	941	935	925	920	926	936
5.1	934	945	956	957	957	949	951	944	943	943	941	939	934	923	918	924	934
5.2	932	943	954	955	954	947	949	942	941	941	939	937	932	922	916	923	932
5.3	930	941	952	953	952	944	946	940	940	938	936	935	930	920	914	921	931
5.4	928	939	950	951	949	942	944	937	938	936	934	933	928	918	912	919	929
5.5	927	937	948	949	947	939	942	935	935	934	932	930	925	916	910	917	927
5.6	925	935	946	946	944	937	940	933	933	932	930	928	923	914	908	915	925
5.7	923	933	944	944	942	935	938	931	931	929	928	926	921	912	906	913	923
5.8	921	931	942	942	939	932	935	928	928	927	926	924	919	910	904	911	921
5.9	919	929	939	939	937	930	933	926	926	925	924	922	917	908	902	910	919
6	917	926	937	937	934	927	930	924	924	922	921	919	915	906	900	908	917
6.1	914	924	934	935	932	925	927	922	921	920	919	916	913	904	898	906	914
6.2	912	922	932	932	929	922	925	919	919	918	916	914	911	901	896	904	912
6.3	909	919	930	930	927	920	922	917	917	916	913	911	908	899	894	902	910
6.4	907	917	927	928	924	917	919	915	914	913	911	909	906	897	891	899	908
6.5	905	915	925	925	921	914	916	912	912	910	908	906	903	895	889	897	905
6.6	902	912	922	923	918	911	914	909	909	908	905	903	901	893	887	895	903
6.7	900	910	920	920	915	909	911	907	906	905	903	901	898	890	885	892	901
6.8	897	907	917	917	913	906	908	904	904	902	900	898	896	888	883	890	898
6.9	895	905	915	915	910	903	906	901	901	900	897	895	894	885	880	888	896
7	893	902	912	912	907	900	903	898	898	897	895	893	891	883	878	886	894
7.1	890	899	909	909	904	898	900	896	896	894	892	890	889	880	876	883	891
7.2	887	897	907	907	901	895	897	893	893	892	889	887	886	878	873	881	888
7.3	885	894	904	904	898	892	894	890	890	889	886	884	884	875	871	879	886
7.4	882	891	901	901	895	889	891	887	887	886	883	881	881	873	868	876	883
7.5	880	888	899	899	892	886	888	885	885	883	881	879	878	870	866	873	880



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7.6	877	886	896	896	889	883	885	882	882	880	878	876	875	868	863	871	878
7.7	875	883	893	893	886	880	882	879	879	877	875	873	872	865	861	868	875
7.8	872	880	890	890	883	877	880	876	876	874	872	870	870	863	858	865	872
7.9	870	877	888	887	880	874	877	873	873	871	869	867	867	860	856	863	870
8	867	874	885	884	876	871	874	870	870	868	867	864	864	857	853	860	867
8.1	865	871	882	881	873	868	871	866	867	865	864	862	861	854	851	857	864
8.2	862	868	879	878	870	865	868	863	864	862	860	859	858	852	848	854	862
8.3	859	865	876	875	867	862	864	860	861	859	857	856	855	849	845	852	859
8.4	856	862	873	872	864	859	861	857	858	856	854	853	852	846	843	849	856
8.5	853	859	870	869	860	856	858	854	855	853	851	850	849	843	840	846	853
8.6	850	856	867	866	857	853	855	851	852	850	848	847	846	840	837	843	850
8.7	847	853	864	863	854	850	851	848	849	846	844	844	843	837	835	840	847
8.8	844	850	861	860	850	846	848	845	846	843	841	841	840	834	832	837	844
8.9	841	847	858	856	847	843	845	841	842	840	838	838	837	832	829	835	841
9	838	843	855	853	844	840	842	838	839	836	835	835	834	829	827	832	838
9.1	835	840	851	850	840	836	838	834	835	833	832	832	831	825	824	829	836
9.2	832	837	848	847	837	833	835	831	832	830	828	829	828	822	821	826	833
9.3	829	834	845	843	834	830	832	828	828	826	825	826	825	819	818	823	830
9.4	826	830	842	840	830	826	828	824	824	823	822	822	822	816	815	820	827
9.5	823	827	838	837	827	823	825	821	821	820	819	819	819	813	812	817	823
9.6	820	824	835	834	824	820	822	818	817	816	815	816	815	810	809	814	820
9.7	817	821	832	830	820	816	818	814	814	813	812	812	812	807	806	811	817
9.8	814	817	828	827	817	813	815	811	810	810	809	809	809	804	803	808	814
9.9	810	814	825	824	814	810	812	807	807	806	806	806	806	801	800	805	811
10	807	811	822	820	810	806	808	803	803	803	802	802	803	798	796	801	808
15	632	635	639	636	631	630	625	624	619	615	616	620	627	629	628	630	633
20	467	466	465	466	465	465	466	461	456	454	455	456	462	467	469	471	467
25	347	347	344	342	342	347	354	347	346	346	348	350	351	350	351	350	348
30	256	245	238	228	230	240	258	273	273	283	292	291	291	284	279	270	256
35	140	132	127	123	124	130	143	159	170	183	191	192	192	183	168	153	140
40	92	92	93	92	93	95	97	100	102	104	106	106	104	101	96	94	92
45	80	79	79	79	80	81	83	85	86	87	86	86	84	82	81	80	80
50	69	68	68	68	68	70	72	74	75	75	75	75	74	72	70	69	69
55	59	58	58	58	58	60	62	63	64	65	65	65	64	62	61	60	59
60	50	50	50	49	50	51	53	54	55	56	56	56	55	54	52	51	50
65	43	42	43	42	42	44	46	46	47	48	49	48	48	46	45	44	43
70	36	36	36	36	36	37	39	39	40	40	42	42	41	40	39	37	36
75	30	30	30	30	30	32	33	33	33	34	36	36	36	35	33	31	30
80	25	25	25	25	25	26	27	28	28	28	30	31	30	30	28	26	25
85	21	20	20	20	21	22	22	23	23	24	24	25	24	24	23	22	21



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90	17	18	17	17	18	19	19	19	19	19	20	19	19	19	18	17	17
95	15	14	13	14	15	16	16	16	17	16	15	12	13	12	14	15	15
100	11	10	8	10	12	11	10	12	13	12	9	6	6	6	8	11	11
105	8	7	5	7	8	8	6	9	9	8	5	2	3	2	5	7	8
110	5	4	3	4	5	5	3	5	6	5	3	2	2	2	3	4	5
115	3	3	3	3	3	3	3	3	4	3	2	2	2	2	2	3	3
120	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2
125	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2
130	2	2	3	2	3	3	3	3	2	2	2	2	2	2	2	2	2
135	3	3	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2
140	3	3	3	3	3	3	3	3	3	3	2	3	3	2	2	2	3
145	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
150	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
155	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
160	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
165	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
170	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
175	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
180	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3