



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-180412-02
Date: April 12, 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 : 4" LUNU SQUARE
Model Tested: VGCSQ44VEFLEDU-1535K-LVGCSQ4421-
200SCL
WO/CS#: S0747

Report Issue Date: April 12, 2018
Date of Test(s): April 9- April 12, 2018
Total Number of Pages : 9 (including this page)

Report Reviewed by:

Mark Razvi
Photometric Lab Supervisor
Curtis-Straus



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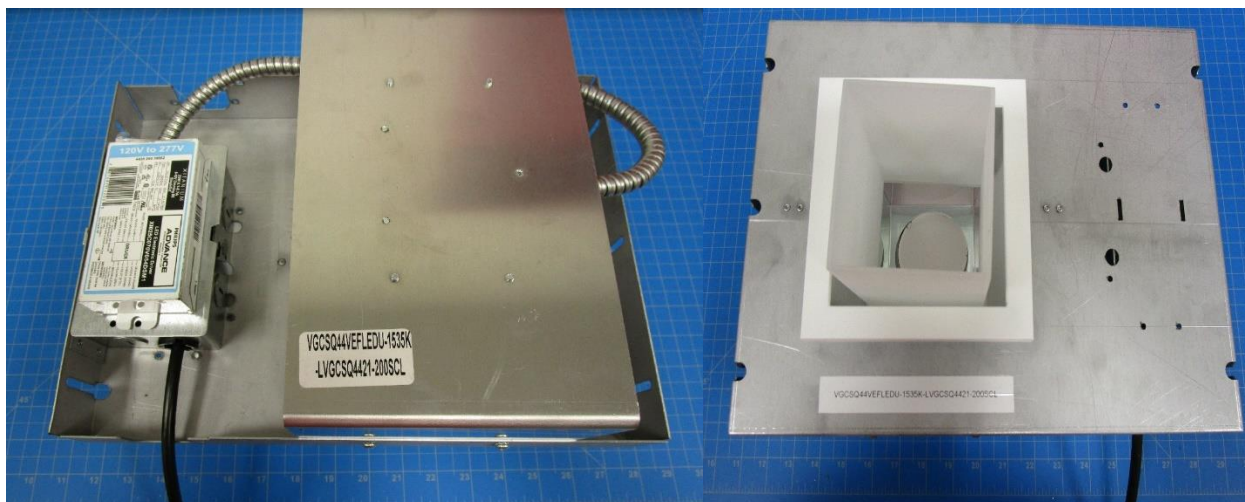
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DETAILED PRODUCT DESCRIPTION

Model # VGCSQ44VEFLEDU-1535K-LVGCSQ4421-200SCL
CS/WO# S0747
Description 4" LUNU SQUARE
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: 25.6 °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	04-09-18	05-09-18
Digital Thermometer	4627	160739886	2392	09-07-16	09-07-18

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LM-79-2008 Distribution Test Data

Model # VGCSQ44VEFLEDU-1535K-LVGCSQ4421-200SCL
CS/WO# S0747
Description 4" LUNU SQUARE
Supply Voltage 120VAC

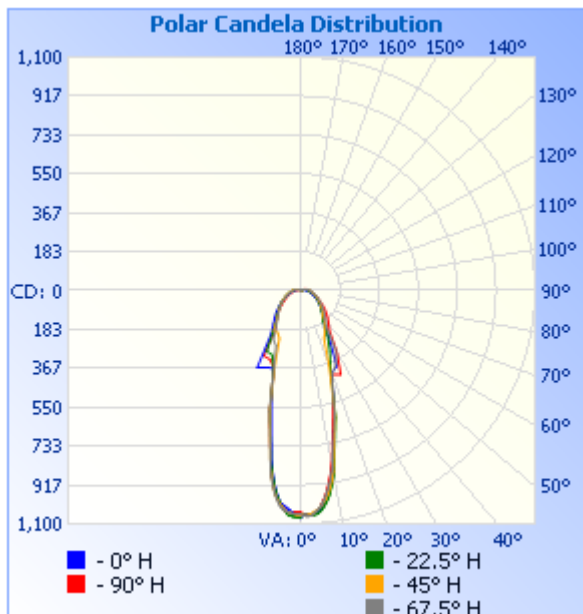
Result of Tests

Photometric and Electrical Test Data

Input Voltage: 120 VAC
 Base Orientation: Base Up

Lumens (lm)	Watts (W)	Volts (VAC)	Amps (A)	Efficacy	PF	Ithd (%)
1058.32	21.05	120.20	0.18	50.27	0.9909	0.28

Luminous Intensity Summary: Cd



Illumination Cone of Light
 Mounting Ht: 10 ft.

	Illuminance at a Distance	
	Center Beam fc	Beam Width
1.7ft	366 fc	1.0 ft 1.0 ft
3.3ft	97.0 fc	1.9 ft 1.9 ft
5.0ft	42.3 fc	2.9 ft 2.9 ft
6.7ft	23.5 fc	3.9 ft 3.9 ft
8.3ft	15.3 fc	4.8 ft 4.9 ft
10.0ft	10.6 fc	5.8 ft 5.9 ft

■ Vert. Spread: 32.5°
■ Horiz. Spread: 32.7°



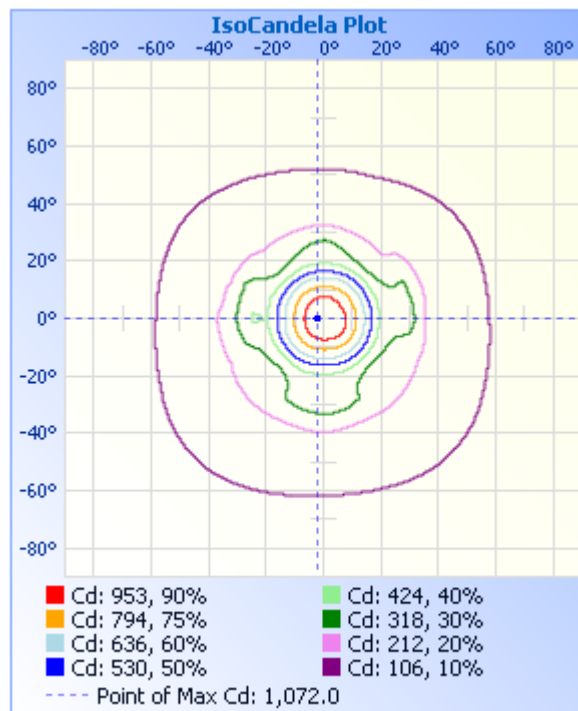
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IsoCandela Plot



Zonal Lumens Summary

Zone	Lumens	% Luminaire
0-30	407.4	38.5%
0-40	545.1	51.5%
0-60	767.3	72.5%
60-90	202.2	19.1%
70-100	153.1	14.5%
90-120	72.0	6.8%
0-90	969.5	91.6%
90-180	88.8	8.4%
0-180	1,058.3	100%

Lumens per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	92.0	8.7%	90-100	36.4	3.4%
10-20	163.7	15.5%	100-110	23.3	2.2%
20-30	151.7	14.3%	110-120	12.3	1.2%
30-40	137.7	13.0%	120-130	6.2	0.6%
40-50	118.5	11.2%	130-140	4.1	0.4%
50-60	103.8	9.8%	140-150	3.0	0.3%
60-70	85.5	8.1%	150-160	2.0	0.2%
70-80	67.2	6.4%	160-170	1.1	0.1%
80-90	49.4	4.7%	170-180	0.4	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	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057	1057
0.1	1056	1059	1057	1060	1061	1059	1067	1066	1072	1070	1062	1054	1043	1028	1042	1054	1056
0.2	1056	1059	1057	1060	1061	1059	1067	1065	1072	1070	1061	1054	1043	1028	1042	1054	1056
0.3	1056	1059	1058	1061	1061	1059	1067	1064	1072	1069	1061	1054	1043	1029	1043	1054	1056
0.4	1056	1059	1058	1061	1061	1059	1067	1062	1070	1069	1060	1054	1043	1029	1043	1054	1056
0.5	1056	1059	1058	1061	1061	1059	1067	1061	1069	1069	1060	1054	1043	1029	1043	1054	1056
0.6	1056	1059	1058	1061	1061	1058	1067	1060	1068	1069	1059	1054	1043	1030	1043	1054	1056
0.7	1056	1059	1059	1062	1061	1058	1066	1059	1067	1068	1059	1054	1043	1030	1044	1054	1056
0.8	1056	1059	1059	1062	1061	1058	1066	1058	1065	1068	1058	1053	1043	1030	1044	1054	1056
0.9	1056	1059	1059	1062	1061	1058	1066	1057	1064	1068	1058	1053	1043	1031	1044	1054	1056
1	1056	1059	1059	1062	1061	1057	1066	1056	1063	1068	1057	1053	1043	1031	1044	1054	1056
1.1	1055	1059	1059	1063	1061	1057	1066	1054	1062	1067	1057	1053	1043	1031	1044	1054	1055
1.2	1055	1059	1058	1063	1061	1057	1066	1053	1060	1067	1056	1053	1043	1032	1045	1054	1055
1.3	1055	1059	1058	1063	1061	1056	1065	1052	1059	1067	1056	1053	1043	1032	1045	1054	1055
1.4	1055	1059	1058	1063	1061	1056	1065	1051	1058	1067	1055	1053	1043	1032	1045	1054	1055
1.5	1055	1059	1058	1064	1061	1055	1064	1050	1057	1066	1055	1053	1043	1033	1045	1054	1055
1.6	1054	1059	1058	1064	1061	1055	1064	1049	1055	1066	1055	1052	1043	1033	1045	1054	1055
1.7	1054	1059	1058	1064	1061	1054	1063	1047	1054	1066	1054	1052	1043	1033	1046	1054	1054
1.8	1054	1059	1057	1063	1061	1054	1063	1046	1053	1066	1054	1052	1043	1034	1046	1054	1054
1.9	1054	1059	1057	1062	1060	1054	1062	1045	1052	1066	1053	1052	1043	1034	1046	1054	1054
2	1054	1059	1057	1062	1060	1053	1062	1044	1050	1066	1053	1052	1043	1034	1046	1054	1054
2.1	1054	1059	1056	1061	1060	1053	1061	1043	1049	1065	1052	1052	1043	1034	1046	1054	1054
2.2	1053	1059	1055	1061	1060	1052	1061	1042	1048	1065	1052	1051	1043	1035	1045	1053	1053
2.3	1053	1059	1054	1060	1060	1052	1060	1041	1047	1065	1051	1051	1043	1035	1045	1053	1053
2.4	1053	1059	1053	1060	1059	1051	1059	1039	1046	1064	1051	1051	1043	1035	1045	1053	1053
2.5	1053	1059	1052	1059	1059	1050	1058	1038	1044	1064	1050	1051	1043	1035	1044	1053	1053
2.6	1053	1058	1052	1059	1059	1050	1057	1037	1043	1063	1050	1050	1043	1035	1044	1053	1053
2.7	1052	1058	1051	1058	1059	1049	1056	1036	1042	1063	1049	1050	1043	1035	1044	1053	1053
2.8	1052	1058	1050	1057	1058	1049	1054	1035	1041	1062	1049	1049	1043	1036	1044	1053	1052
2.9	1052	1058	1049	1056	1056	1048	1053	1034	1039	1062	1048	1049	1043	1036	1043	1053	1052
3	1052	1058	1048	1054	1055	1048	1052	1033	1038	1061	1048	1048	1043	1036	1043	1052	1052
3.1	1051	1058	1047	1053	1054	1047	1051	1031	1037	1061	1047	1047	1043	1036	1042	1052	1051
3.2	1050	1058	1046	1052	1053	1046	1050	1030	1036	1060	1047	1047	1043	1036	1041	1052	1051
3.3	1050	1057	1045	1050	1052	1045	1049	1029	1034	1060	1047	1046	1043	1035	1040	1052	1050
3.4	1049	1057	1043	1049	1051	1044	1047	1028	1033	1059	1046	1046	1043	1035	1039	1052	1050



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3.5	1049	1057	1042	1048	1050	1043	1046	1027	1032	1057	1046	1045	1043	1035	1037	1052	1049
3.6	1048	1056	1041	1046	1049	1042	1044	1026	1031	1056	1045	1045	1043	1034	1036	1051	1048
3.7	1047	1056	1040	1045	1048	1041	1042	1024	1029	1054	1045	1044	1043	1034	1035	1051	1048
3.8	1047	1056	1038	1044	1047	1040	1041	1023	1028	1052	1044	1043	1043	1034	1034	1051	1047
3.9	1046	1055	1037	1042	1045	1039	1039	1022	1027	1050	1044	1043	1043	1034	1033	1050	1046
4	1045	1055	1036	1040	1043	1038	1037	1021	1026	1049	1043	1042	1042	1033	1032	1049	1046
4.1	1045	1055	1035	1038	1040	1037	1035	1020	1024	1047	1042	1041	1041	1033	1030	1049	1045
4.2	1043	1054	1033	1036	1038	1035	1034	1019	1023	1045	1040	1040	1039	1033	1029	1048	1043
4.3	1042	1053	1032	1034	1036	1034	1032	1018	1022	1043	1038	1040	1038	1031	1027	1047	1042
4.4	1040	1052	1030	1032	1034	1032	1030	1016	1021	1042	1037	1039	1037	1029	1025	1046	1040
4.5	1039	1050	1028	1030	1032	1030	1028	1015	1019	1040	1035	1038	1035	1028	1023	1045	1038
4.6	1037	1048	1027	1028	1030	1028	1027	1014	1018	1038	1033	1038	1034	1026	1021	1045	1036
4.7	1036	1047	1025	1027	1027	1026	1024	1013	1017	1035	1031	1037	1032	1025	1019	1044	1035
4.8	1034	1045	1023	1025	1025	1025	1022	1012	1016	1032	1029	1035	1031	1023	1017	1043	1033
4.9	1033	1044	1022	1023	1023	1023	1020	1011	1014	1029	1028	1034	1029	1022	1015	1042	1031
5	1031	1042	1020	1021	1020	1021	1018	1010	1013	1027	1026	1032	1028	1020	1013	1041	1029
5.1	1030	1040	1018	1018	1017	1019	1016	1008	1012	1024	1024	1030	1026	1019	1011	1039	1028
5.2	1028	1039	1017	1015	1014	1017	1014	1007	1011	1021	1022	1028	1024	1017	1009	1037	1026
5.3	1026	1037	1015	1013	1011	1015	1012	1006	1009	1019	1020	1027	1021	1016	1007	1035	1024
5.4	1023	1035	1013	1010	1009	1013	1010	1005	1008	1016	1018	1025	1019	1013	1005	1033	1021
5.5	1021	1033	1011	1008	1006	1010	1008	1004	1007	1013	1016	1023	1016	1011	1002	1031	1019
5.6	1019	1031	1009	1005	1003	1007	1006	1003	1006	1011	1014	1022	1014	1008	1000	1029	1017
5.7	1016	1028	1007	1002	1000	1004	1004	1000	1004	1008	1012	1020	1011	1006	998	1027	1015
5.8	1014	1026	1005	1000	997	1002	1001	997	1003	1005	1010	1018	1009	1003	995	1025	1012
5.9	1011	1024	1003	997	994	999	999	994	1000	1002	1007	1015	1006	1001	993	1023	1010
6	1009	1021	1001	995	991	996	997	990	997	999	1005	1013	1004	998	991	1021	1008
6.1	1007	1019	999	992	988	993	994	987	993	996	1003	1010	1001	996	988	1019	1006
6.2	1004	1017	997	989	985	990	992	983	990	993	1001	1007	998	994	986	1016	1003
6.3	1002	1014	995	985	981	987	990	980	986	990	999	1004	995	991	984	1013	1001
6.4	999	1012	993	982	978	984	987	976	983	987	997	1001	992	989	981	1010	999
6.5	996	1009	991	979	974	982	985	973	979	984	994	998	989	986	979	1007	996
6.6	992	1007	989	976	971	978	982	969	976	981	991	995	985	982	976	1004	992
6.7	989	1004	986	972	968	974	980	966	972	978	988	992	982	979	973	1001	989
6.8	986	1001	983	969	964	970	978	963	969	974	986	989	979	976	970	998	986
6.9	983	998	980	966	961	966	974	959	966	971	983	987	976	973	967	995	983
7	980	995	977	962	958	962	970	956	962	967	980	983	973	970	965	992	980
7.1	977	992	975	959	954	958	967	953	958	963	977	979	969	966	962	989	977
7.2	974	989	972	956	950	954	963	950	954	959	975	975	966	963	959	986	974
7.3	970	987	969	952	946	950	959	946	950	955	972	972	963	960	956	982	971
7.4	967	984	966	948	942	946	956	943	946	951	969	968	959	957	953	979	968



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7.5	964	981	963	945	938	942	952	940	942	947	965	964	955	954	950	975	965
7.6	960	978	961	941	933	938	948	936	938	943	961	960	951	950	947	971	961
7.7	956	974	957	937	929	934	944	933	934	939	957	957	947	946	944	968	958
7.8	952	970	953	933	925	930	941	930	930	935	952	953	943	942	941	964	954
7.9	948	966	949	929	921	926	937	927	926	931	948	949	939	938	938	961	950
8	945	962	946	926	916	922	932	922	922	927	944	945	935	934	935	957	946
8.1	941	958	942	922	912	917	927	918	917	922	939	941	931	931	931	954	942
8.2	937	954	938	918	908	913	922	914	912	917	935	936	927	927	928	950	938
8.3	933	950	934	914	904	909	917	910	907	912	931	932	923	923	925	946	935
8.4	929	946	931	910	899	905	912	905	902	907	926	927	919	919	922	942	931
8.5	926	942	927	906	894	901	907	901	897	903	922	923	914	915	919	938	927
8.6	921	938	923	901	890	896	902	897	892	898	917	918	910	911	915	934	923
8.7	917	934	920	896	885	892	897	893	887	893	912	914	905	907	912	929	919
8.8	913	930	915	892	880	888	891	888	881	888	907	909	901	903	908	925	915
8.9	909	926	911	887	876	884	886	884	876	883	902	905	896	899	905	921	910
9	905	921	907	883	871	880	881	880	871	878	897	900	892	894	901	917	906
9.1	901	917	903	878	866	875	876	875	866	873	892	896	887	890	897	912	902
9.2	896	912	898	873	861	871	872	869	861	869	887	891	882	886	893	908	897
9.3	892	908	894	869	857	867	867	864	855	864	882	886	878	881	890	904	893
9.4	888	903	890	864	852	863	862	858	849	859	877	881	873	877	886	900	889
9.5	884	899	886	860	847	859	858	853	844	854	872	876	869	873	882	895	884
9.6	880	894	881	855	842	854	853	848	838	849	866	870	864	869	878	890	880
9.7	875	890	877	850	837	850	848	842	832	844	861	865	859	864	875	885	876
9.8	871	885	873	845	832	846	844	837	826	839	857	860	854	860	871	881	871
9.9	866	881	868	841	827	842	839	831	821	834	852	855	849	855	866	876	867
10	862	876	864	836	822	837	834	826	815	829	847	849	844	851	861	871	862
15	604	617	610	597	573	590	590	575	552	575	586	588	579	596	618	622	604
20	412	397	378	419	420	393	375	397	389	386	367	382	384	390	384	395	412
25	393	313	248	383	436	314	264	346	398	332	248	286	356	322	240	279	393
30	256	244	222	323	331	288	242	346	420	329	227	268	355	333	206	227	257
35	185	176	191	201	227	213	241	242	251	234	231	212	213	209	198	166	185
40	158	152	157	172	197	187	187	192	207	186	183	178	185	166	151	145	158
45	135	133	138	150	171	165	165	169	180	163	158	157	160	144	132	127	136
50	115	116	121	131	146	145	146	148	156	143	140	138	138	126	117	111	115
55	97	101	106	114	122	126	129	130	132	125	123	121	115	110	103	97	97
60	81	87	93	99	101	110	113	113	110	108	108	105	96	95	90	85	81
65	68	75	81	86	84	95	99	97	92	94	95	91	80	83	79	74	68
70	57	64	70	74	71	82	86	85	77	82	83	80	68	72	70	64	57
75	47	55	61	64	58	70	74	73	65	71	72	69	57	62	60	55	47
80	39	46	52	54	48	59	64	62	54	61	63	59	47	53	52	47	39



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85	32	38	44	45	39	49	54	52	44	51	54	49	39	45	44	39	31
90	27	34	41	41	33	40	45	44	36	42	45	40	32	37	37	33	27
95	23	29	35	38	33	39	43	38	30	37	40	36	27	32	32	28	23
100	20	25	31	32	29	34	36	31	26	32	33	30	21	23	25	24	20
105	17	21	24	27	26	28	28	26	22	26	24	17	12	11	19	20	17
110	14	16	17	22	22	22	22	22	18	21	17	9	6	5	12	15	14
115	11	12	11	16	17	17	15	17	15	16	11	7	6	4	8	11	11
120	8	9	9	12	13	14	10	11	10	11	7	5	3	4	5	8	8
125	5	7	8	9	10	11	9	8	7	7	6	3	3	4	4	6	6
130	4	5	7	8	8	9	8	6	4	5	6	3	3	4	4	4	3
135	3	4	7	8	8	9	7	6	3	5	5	3	3	4	4	4	3
140	3	4	6	8	8	8	7	5	3	4	4	3	3	4	4	4	3
145	4	3	6	7	8	8	7	4	3	4	3	3	3	4	4	4	3
150	4	4	5	6	7	7	7	4	4	4	4	4	4	4	4	3	4
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160	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4
165	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
170	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
175	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
180	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4