



Report No.: BLC2010026E-B

LM-79-08 Test Report

For

LEDVANCE LLC

(Brand Name: SYLVANIA)

200 Ballardvale St. Wilmington, MA 01887 USA

LED Area Lamp

Model name(s):

LED27HIDRODAREA830MED

LED27HIDRODAREA840MED

LED27HIDRODAREA850MED

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Lily Yang

Engineer: Lily Yang

Date: 2020-11-06

Review By:

Jason Luo

Manager: Jason Luo



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1.1 Product Information:

Organization Name	LEDVANCE LLC	
Brand Name	SYLVANIA	
Model Number	LED27HIDRODAREA830MED LED27HIDRODAREA840MED LED27HIDRODAREA850MED	
SKU (if available)	N/A	
Type of Product (for integral lamps, list base type and lamp type)	LED Area Lamp	
Rated Voltage / Frequency	120-277Vac, 50/60 Hz	
Nominal Power	27W	
Rated Stabilized Lamp Lumen	3780 lm (3000K), 4050 lm (4000K/5000K)	
Declared CCT	3000K, 4000K, 5000K	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-XX80RA35000H1	
Sample Number	BLC2010026E-B1(3000K), B2(4000K), B3(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Photo		
		



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1.2 Test Specifications:

Date of Receipt	2020-11-02
Date of Test	2020-11-04
Test item	<ol style="list-style-type: none">1. Total Luminous Flux2. Luminous Distribution Intensity3. Luminous Efficacy4. Correlated Color Temperature5. Color Rendering Index6. Chromaticity Coordinate7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none">1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources4. CIE 15-2004 Technical Report Colorimetry5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	BL-QP-033

1.3 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.



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2.1 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-11-04	Test Ambient:	25.6 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRODAREA830MED		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.226	26.80	0.989	10.67
6E-B1	277.0	60	0.106	26.76	0.911	12.97
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	4
Frequency (Hz)	60	R2	92	R10	82
CCT (K)	2936	R3	95	R11	80
Duv	-0.0014	R4	80	R12	73
Chromaticity (x, y)	x=0.4395 y=0.4014	R5	82	R13	84
Chromaticity (u', v')	u(u')=0.2534 v'=0.5207	R6	91	R14	98
Color Rendering Index (CRI)	82	R7	80	R15	73
R9	4	R8	56	--	--
Rf	84				
Rg	95				
Rcs,h1(%)	-12				

Photometric Measurement – Goniophotometer Method:

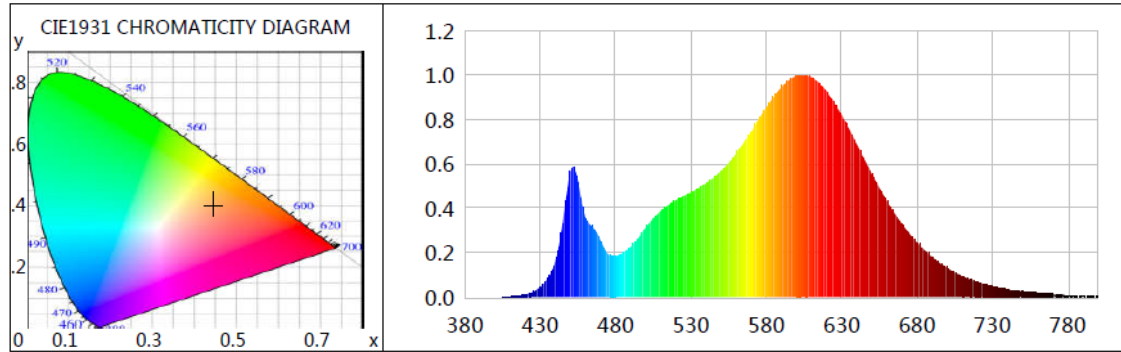
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	3842.1	3828.2	3780	Comply -10%
Luminous Efficacy (lm/W)	143.36	143.06	140	Comply -3%
Most worst Luminous/Highest	142.84		--	--
Beam Angle (°)	--	--	--	--
Center Beam Candle Power (cd)	1368	--	--	--



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0086	525	0.4550	36.8729	670	0.3286	26.6237
385	0.0004	0.0315	530	0.4717	38.2214	675	0.2848	23.0747
390	0.0003	0.0279	535	0.4904	39.7397	680	0.2445	19.8154
395	0.0003	0.0279	540	0.5125	41.5244	685	0.2107	17.0764
400	0.0008	0.0643	545	0.5366	43.4816	690	0.1811	14.6763
405	0.0012	0.1004	550	0.5671	45.9514	695	0.1528	12.3844
410	0.0021	0.1693	555	0.6039	48.9309	700	0.1312	10.6311
415	0.0052	0.4222	560	0.6473	52.4511	705	0.1112	9.0136
420	0.0117	0.9497	565	0.6948	56.3032	710	0.0939	7.6062
425	0.0229	1.8560	570	0.7452	60.3861	715	0.0804	6.5118
430	0.0450	3.6461	575	0.8020	64.9867	720	0.0690	5.5941
435	0.0848	6.8712	580	0.8559	69.3510	725	0.0572	4.6379
440	0.1625	13.1669	585	0.9008	72.9886	730	0.0492	3.9827
445	0.3386	27.4345	590	0.9450	76.5731	735	0.0401	3.2529
450	0.5647	45.7597	595	0.9775	79.2094	740	0.0345	2.7954
455	0.5182	41.9869	600	0.9979	80.8595	745	0.0304	2.4664
460	0.3583	29.0305	605	0.9997	81.0043	750	0.0253	2.0490
465	0.3121	25.2933	610	0.9897	80.1957	755	0.0226	1.8339
470	0.2530	20.5023	615	0.9653	78.2197	760	0.0194	1.5740
475	0.1937	15.6918	620	0.9273	75.1399	765	0.0160	1.2937
480	0.1841	14.9182	625	0.8747	70.8783	770	0.0156	1.2681
485	0.2004	16.2367	630	0.8198	66.4280	775	0.0113	0.9148
490	0.2252	18.2513	635	0.7562	61.2727	780	0.0093	0.7542
495	0.2663	21.5766	640	0.6874	55.7024	785	0.0070	0.5667
500	0.3128	25.3429	645	0.6212	50.3362	790	0.0093	0.7570
505	0.3538	28.6660	650	0.5548	44.9588	795	0.0053	0.4287
510	0.3885	31.4787	655	0.4923	39.8895	800	0.0033	0.2672
515	0.4153	33.6536	660	0.4321	35.0169			
520	0.4362	35.3432	665	0.3772	30.5651			

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TM30

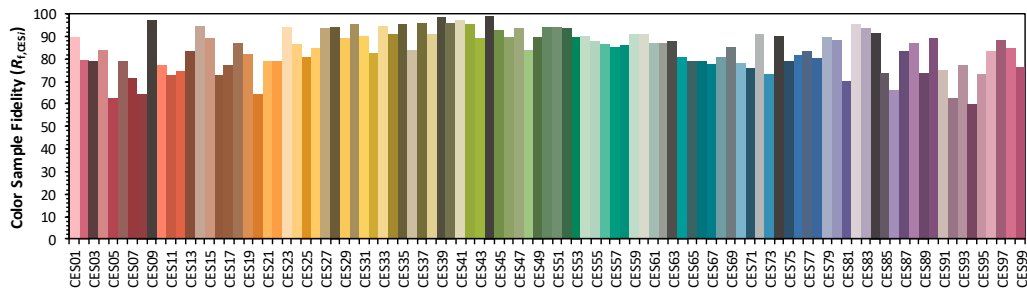
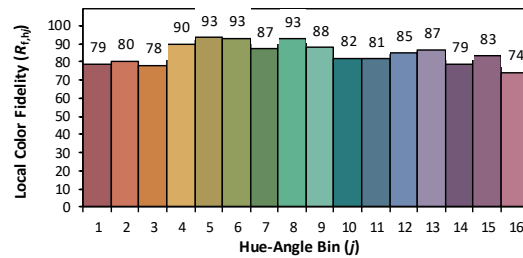
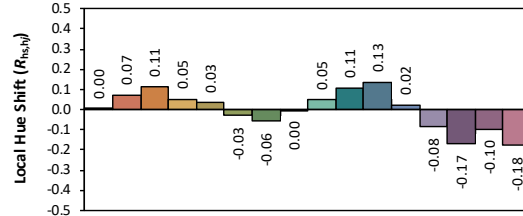
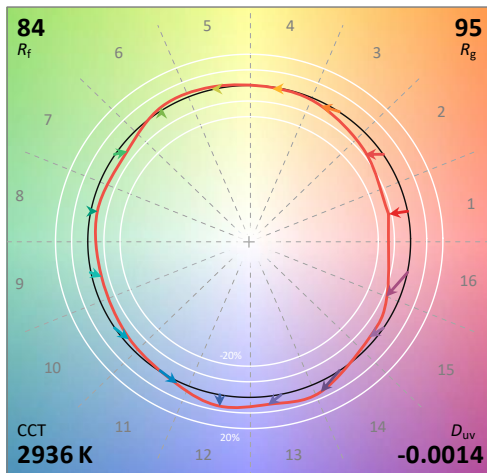
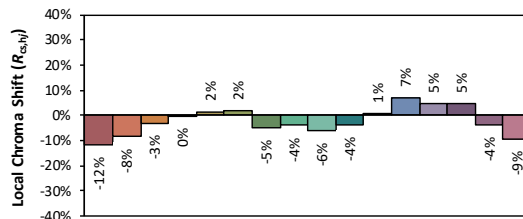
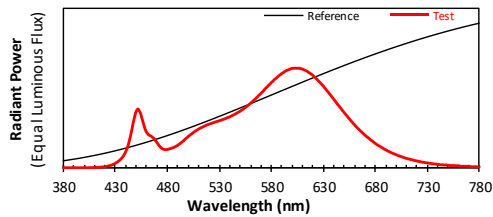
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED27HIDRODAREA830MED



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

x 0.4395

y 0.4014

u' 0.2534

v' 0.5207

CIE 13.3-1995
(CRI)

R_a 82

R_g 4

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00

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Zonal Lumen Tabulation

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,077.2	28%	28%
0-40	1,774.5	46.2%	46.2%
0-60	3,118.0	81.2%	81.2%
60-90	670.9	17.5%	17.5%
70-100	258.6	6.7%	6.7%
90-120	39.0	1%	1%
0-90	3,788.9	98.6%	98.6%
90-180	52.8	1.4%	1.4%
0-180	3,841.7	100%	100%

Lumens Per Zone

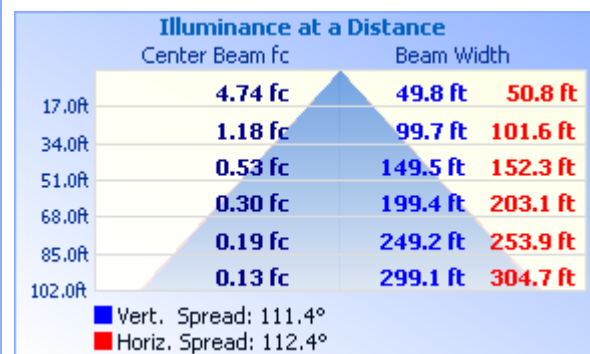
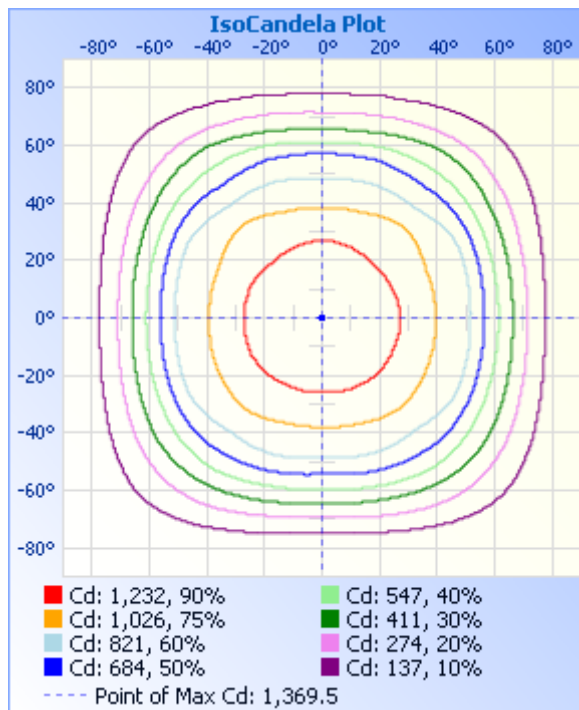
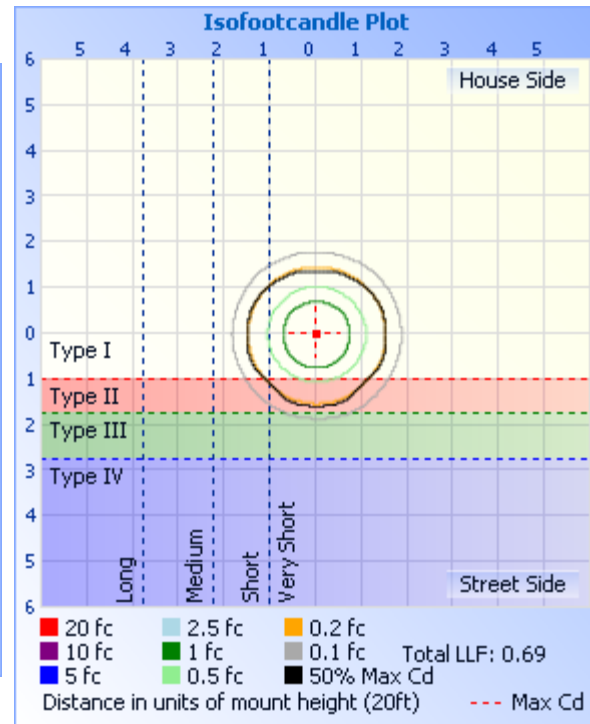
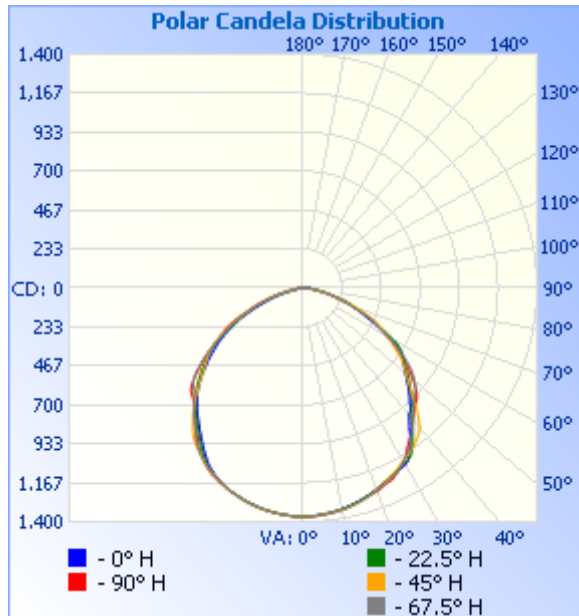
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	129.4	3.4%	90-100	19.1	0.5%
10-20	373.1	9.7%	100-110	14.1	0.4%
20-30	574.7	15.0%	110-120	5.7	0.1%
30-40	697.3	18.2%	120-130	3.8	0.1%
40-50	710.9	18.5%	130-140	3.2	0.1%
50-60	632.6	16.5%	140-150	2.8	0.1%
60-70	431.5	11.2%	150-160	2.2	0.1%
70-80	193.4	5.0%	160-170	1.4	0%
80-90	46.0	1.2%	170-180	0.5	0%



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Photometric Data





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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	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368	1368
1	1368	1367	1369	1369	1369	1368	1369	1369	1369	1368	1369	1368	1369	1366	1368	1367	1368
2	1366	1366	1367	1367	1367	1368	1368	1368	1369	1367	1369	1368	1367	1365	1366	1365	1366
3	1365	1363	1366	1367	1368	1367	1368	1366	1367	1366	1366	1366	1366	1363	1363	1363	1365
4	1361	1361	1364	1365	1365	1364	1365	1365	1365	1363	1364	1364	1362	1362	1361	1360	1361
5	1358	1359	1361	1362	1363	1362	1363	1363	1362	1360	1362	1361	1361	1360	1359	1359	1358
6	1357	1355	1359	1361	1360	1359	1360	1359	1360	1357	1360	1359	1359	1357	1356	1356	1357
7	1353	1354	1356	1358	1357	1356	1356	1356	1358	1353	1357	1357	1356	1355	1354	1352	1353
8	1350	1350	1353	1355	1355	1354	1354	1353	1353	1351	1354	1354	1354	1352	1350	1349	1350
9	1345	1347	1350	1352	1352	1351	1350	1350	1350	1347	1350	1351	1350	1349	1348	1346	1345
10	1342	1343	1346	1349	1348	1348	1347	1346	1346	1344	1348	1348	1348	1346	1344	1343	1342
11	1337	1338	1344	1345	1343	1343	1345	1340	1341	1340	1344	1343	1343	1341	1340	1337	1337
12	1333	1334	1339	1340	1337	1339	1339	1334	1337	1335	1339	1338	1339	1337	1336	1332	1333
13	1328	1328	1334	1334	1333	1334	1334	1331	1331	1330	1334	1334	1334	1332	1332	1328	1328
14	1322	1324	1329	1329	1327	1327	1329	1326	1327	1325	1329	1329	1328	1327	1327	1322	1322
15	1316	1318	1323	1323	1322	1322	1324	1320	1322	1320	1324	1323	1323	1322	1320	1316	1316
16	1310	1310	1318	1317	1315	1316	1318	1314	1314	1313	1317	1318	1318	1316	1315	1311	1310
17	1304	1303	1309	1311	1309	1309	1310	1308	1307	1307	1311	1311	1311	1310	1307	1304	1304
18	1297	1298	1303	1303	1303	1303	1303	1301	1301	1301	1303	1304	1303	1302	1300	1297	1297
19	1289	1290	1295	1296	1299	1295	1294	1296	1295	1295	1296	1295	1296	1295	1294	1289	1289
20	1281	1283	1286	1290	1295	1290	1287	1289	1288	1287	1289	1288	1289	1286	1285	1281	1281
21	1273	1275	1278	1284	1288	1284	1279	1282	1280	1281	1281	1280	1282	1276	1276	1273	1273
22	1265	1267	1270	1278	1281	1277	1271	1273	1269	1273	1273	1272	1275	1270	1268	1266	1265
23	1260	1258	1260	1269	1274	1269	1262	1263	1260	1263	1262	1262	1268	1261	1258	1256	1260
24	1253	1251	1250	1260	1268	1262	1251	1253	1249	1254	1253	1255	1259	1252	1248	1250	1253
25	1249	1244	1242	1253	1264	1253	1244	1242	1239	1244	1243	1246	1250	1244	1236	1243	1249
26	1240	1238	1233	1245	1252	1248	1238	1232	1227	1232	1236	1236	1242	1234	1227	1236	1240
27	1234	1229	1224	1239	1240	1241	1230	1219	1214	1221	1225	1227	1233	1224	1217	1229	1234
28	1230	1223	1214	1229	1225	1230	1220	1206	1200	1210	1215	1218	1221	1215	1206	1221	1230

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30	1221	1210	1195	1200	1201	1201	1196	1177	1164	1182	1191	1195	1189	1192	1188	1209	1221
31	1212	1206	1188	1186	1186	1187	1184	1160	1146	1161	1178	1180	1176	1176	1178	1206	1212
32	1195	1199	1181	1174	1166	1176	1173	1141	1126	1143	1167	1165	1163	1160	1169	1198	1195
33	1173	1187	1173	1160	1144	1161	1165	1120	1107	1123	1153	1149	1146	1146	1160	1188	1173
34	1144	1168	1165	1142	1126	1142	1152	1100	1088	1103	1142	1134	1124	1130	1151	1168	1144
35	1117	1145	1153	1121	1110	1120	1137	1081	1069	1084	1126	1115	1102	1112	1141	1145	1117
36	1090	1118	1142	1099	1094	1099	1118	1063	1052	1065	1113	1094	1084	1091	1134	1116	1090
37	1058	1092	1131	1081	1074	1082	1098	1046	1033	1048	1094	1071	1068	1068	1121	1090	1058
38	1033	1065	1119	1065	1057	1065	1079	1027	1017	1030	1075	1050	1050	1049	1109	1062	1033
39	1008	1033	1106	1046	1038	1048	1058	1010	1000	1013	1050	1032	1031	1029	1090	1030	1008
40	987	1008	1085	1025	1021	1028	1039	993	984	996	1026	1015	1010	1010	1070	1003	987
41	977	986	1058	1006	1005	1010	1013	978	967	979	1006	996	992	989	1048	979	977
42	960	969	1030	986	990	989	987	963	948	960	983	974	977	968	1019	960	960
43	935	959	998	969	975	973	959	946	931	943	956	955	960	951	985	949	935
44	918	939	968	953	965	957	933	929	913	926	927	938	945	936	951	928	918
45	898	916	935	939	958	941	910	911	895	906	900	922	932	919	917	906	898
46	879	900	905	927	947	929	888	893	873	888	877	905	923	906	886	888	879
47	859	878	877	917	930	918	865	875	852	869	855	892	917	896	859	868	859
48	838	859	851	906	910	906	843	854	829	848	833	882	904	889	832	848	838
49	819	840	827	890	885	887	819	835	804	826	805	872	883	880	807	829	819
50	800	822	804	872	862	866	798	813	781	800	782	858	858	868	782	809	800
51	783	802	786	852	835	841	781	790	753	778	762	836	826	846	762	791	783
52	765	783	769	833	811	819	765	765	730	756	741	811	795	821	743	774	765
53	752	763	749	811	787	797	748	736	706	734	723	778	771	792	728	754	752
54	742	743	730	782	756	769	730	712	681	711	708	749	741	763	713	735	742
55	732	725	704	755	724	739	709	685	655	685	693	720	711	735	697	718	732
56	719	711	679	723	698	707	681	660	631	660	675	686	683	693	674	705	719
57	700	698	656	689	671	674	652	633	608	635	651	650	655	662	650	692	700
58	674	683	633	656	640	643	628	603	583	609	624	620	625	632	624	676	674
59	634	662	612	628	609	612	605	575	558	579	598	592	596	602	601	654	634
60	593	637	588	593	584	580	581	544	529	549	571	559	571	568	574	624	593

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62	527	556	540	530	538	522	525	482	471	485	512	506	529	508	521	535	527
63	496	520	521	501	520	495	497	456	446	453	480	483	507	484	503	500	496
64	463	488	501	477	495	474	468	434	421	426	449	462	477	460	488	470	463
65	432	460	481	455	460	457	440	413	386	401	422	440	442	434	467	442	432
66	406	430	457	427	424	428	409	385	354	375	394	409	409	401	441	414	406
67	383	404	427	395	390	398	374	356	325	347	360	375	375	369	410	393	383
68	361	373	397	359	360	362	344	327	298	322	334	342	346	331	376	369	361
69	336	348	365	326	333	333	323	299	269	302	312	313	327	305	348	344	336
70	312	325	333	297	312	307	303	275	242	276	292	293	304	287	316	320	312
71	302	299	305	277	289	284	275	244	218	247	265	271	278	265	285	292	302
72	277	282	272	257	263	260	249	218	194	218	237	245	246	240	249	276	277
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74	224	240	213	213	209	213	196	171	144	166	184	194	203	193	204	224	224
75	188	210	191	190	190	190	171	151	122	142	161	175	178	179	176	199	188
76	167	181	173	174	169	171	152	127	103	119	145	154	158	162	162	167	167
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81	95	95	94	89	83	86	71	45	25	41	64	78	77	75	88	95	95
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88	33	33	29	25	19	20	15	8	2	8	15	20	19	22	26	29	33
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93	24	20	20	20	18	17	12	5	3	4	12	18	20	21	20	20	24
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106	27	24	10	16	17	14	6	2	3	3	6	13	17	15	10	18	27
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122	4	9	10	5	2	2	3	2	4	3	3	4	3	5	5	4	4
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124	4	8	8	5	2	3	3	3	3	3	4	4	2	4	5	4	4

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179	6	5	5	5	4	4	5	6	5	5	6	5	4	5	5	5	6
180	5	5	5	6	4	5	5	5	5	5	5	5	5	5	5	5	5

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2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-11-04	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRODAREA840MED		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.227	26.85	0.987	11.15
6E-B2	277.0	60	0.106	26.84	0.910	12.73
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	4
Frequency (Hz)	60	R2	88	R10	73
CCT (K)	4034	R3	95	R11	81
Duv	0.0014	R4	82	R12	60
Chromaticity (x, y)	x=0.3799 y=0.3794	R5	81	R13	82
Chromaticity (u', v')	u(u')=0.2237 v'=0.5027	R6	84	R14	97
Color Rendering Index (CRI)	82	R7	85	R15	74
R9	4	R8	63	--	--
Rf	84				
Rg	95				
Rcs,h1(%)	-12				

Photometric Measurement – Goniophotometer Method:

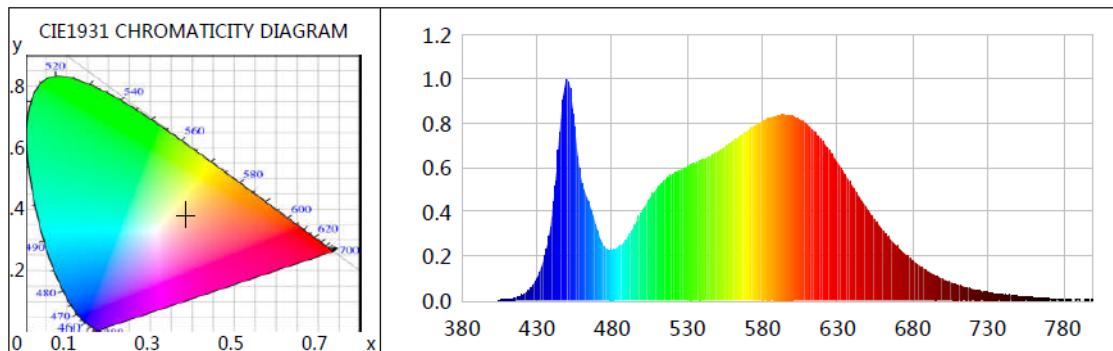
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	4036.7	4027.5	4050	Comply -10%
Luminous Efficacy (lm/W)	150.34	150.06	150	Comply -3%
Most worst Luminous/Highest Watts	150.00		--	--



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0044	525	0.5886	49.0361	670	0.2408	20.0588
385	0.0006	0.0467	530	0.6041	50.3278	675	0.2092	17.4240
390	0.0008	0.0627	535	0.6184	51.5196	680	0.1803	15.0236
395	0.0007	0.0581	540	0.6353	52.9209	685	0.1543	12.8561
400	0.0009	0.0754	545	0.6498	54.1306	690	0.1320	10.9991
405	0.0019	0.1616	550	0.6712	55.9196	695	0.1123	9.3570
410	0.0041	0.3449	555	0.6924	57.6836	700	0.0959	7.9889
415	0.0110	0.9159	560	0.7173	59.7542	705	0.0827	6.8889
420	0.0243	2.0230	565	0.7424	61.8483	710	0.0699	5.8240
425	0.0510	4.2512	570	0.7655	63.7715	715	0.0594	4.9493
430	0.1038	8.6472	575	0.7899	65.8044	720	0.0505	4.2103
435	0.1999	16.6553	580	0.8111	67.5708	725	0.0432	3.5996
440	0.3899	32.4793	585	0.8235	68.6064	730	0.0367	3.0582
445	0.7582	63.1609	590	0.8359	69.6334	735	0.0301	2.5107
450	1.0000	83.3069	595	0.8373	69.7548	740	0.0274	2.2785
455	0.7799	64.9686	600	0.8337	69.4542	745	0.0238	1.9799
460	0.5264	43.8553	605	0.8166	68.0292	750	0.0188	1.5693
465	0.4305	35.8620	610	0.7939	66.1413	755	0.0176	1.4662
470	0.3170	26.4117	615	0.7609	63.3854	760	0.0142	1.1841
475	0.2395	19.9551	620	0.7201	59.9882	765	0.0110	0.9173
480	0.2281	19.0043	625	0.6720	55.9784	770	0.0109	0.9043
485	0.2453	20.4392	630	0.6221	51.8228	775	0.0092	0.7674
490	0.2818	23.4767	635	0.5682	47.3333	780	0.0063	0.5223
495	0.3413	28.4355	640	0.5143	42.8441	785	0.0043	0.3557
500	0.4059	33.8177	645	0.4614	38.4395	790	0.0077	0.6445
505	0.4618	38.4727	650	0.4103	34.1808	795	0.0044	0.3685
510	0.5097	42.4652	655	0.3620	30.1539	800	0.0040	0.3339
515	0.5446	45.3687	660	0.3163	26.3464			
520	0.5698	47.4693	665	0.2764	23.0249			

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TM30

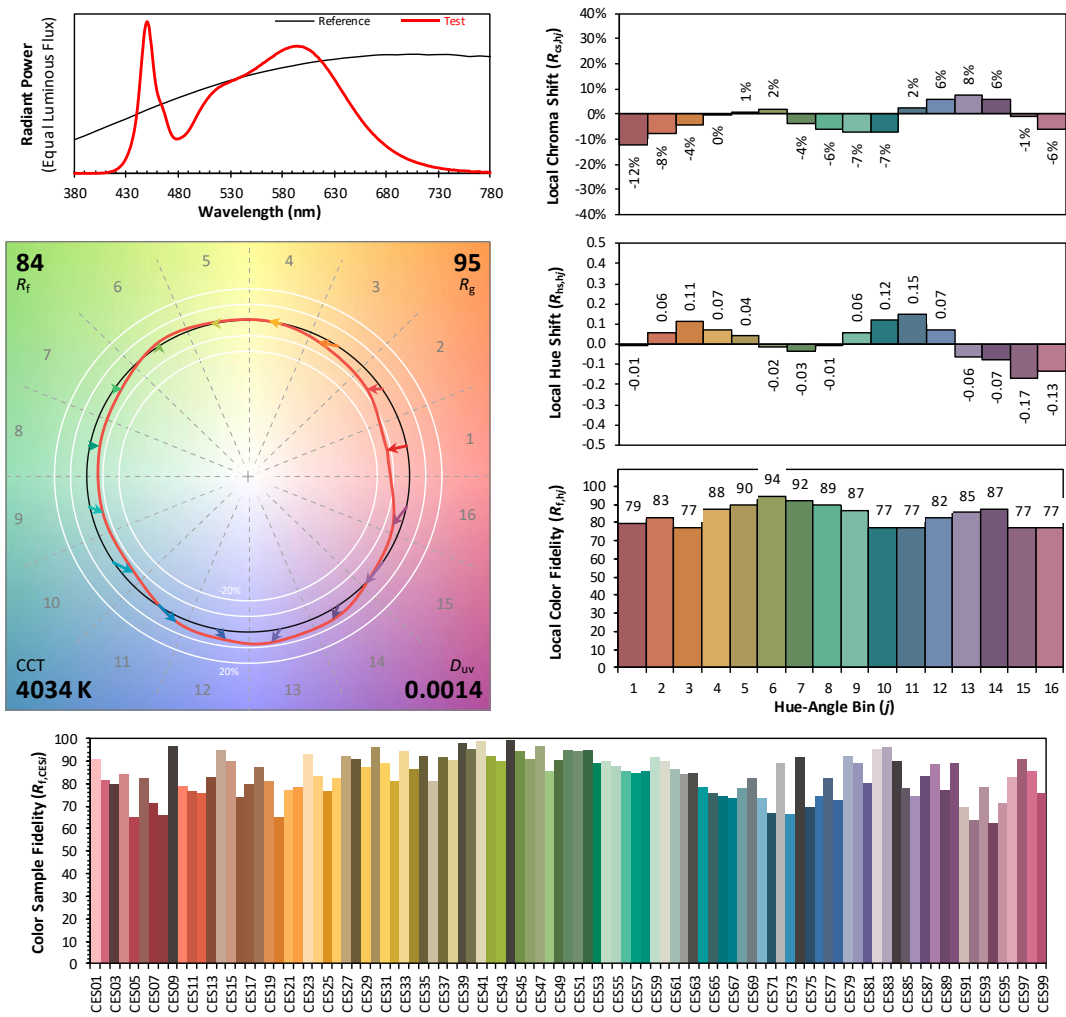
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED27HIDRODAREA840MED



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

x 0.3799
 y 0.3794
 u' 0.2237
 v' 0.5027

CIE 13.3-1995 (CRI)
 R_a 82
 R_g 4

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00



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Zonal Lumen Tabulation

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,120.0	27.7%	27.7%
0-40	1,847.6	45.8%	45.8%
0-60	3,258.3	80.7%	80.7%
60-90	720.3	17.8%	17.8%
70-100	282.5	7%	7%
90-120	42.6	1.1%	1.1%
0-90	3,978.6	98.6%	98.6%
90-180	57.7	1.4%	1.4%
0-180	4,036.3	100%	100%

Lumens Per Zone

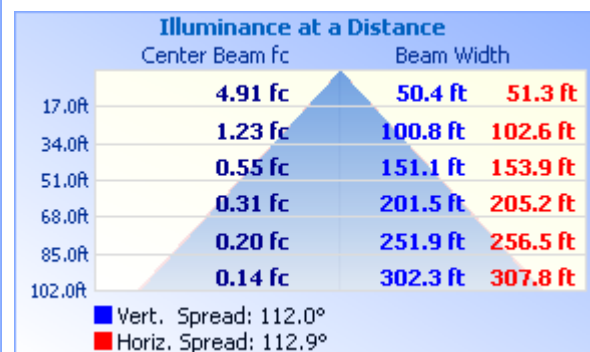
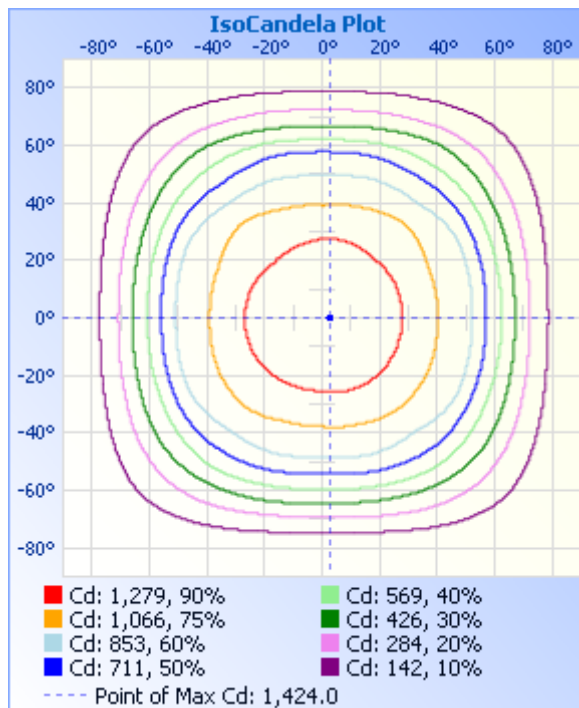
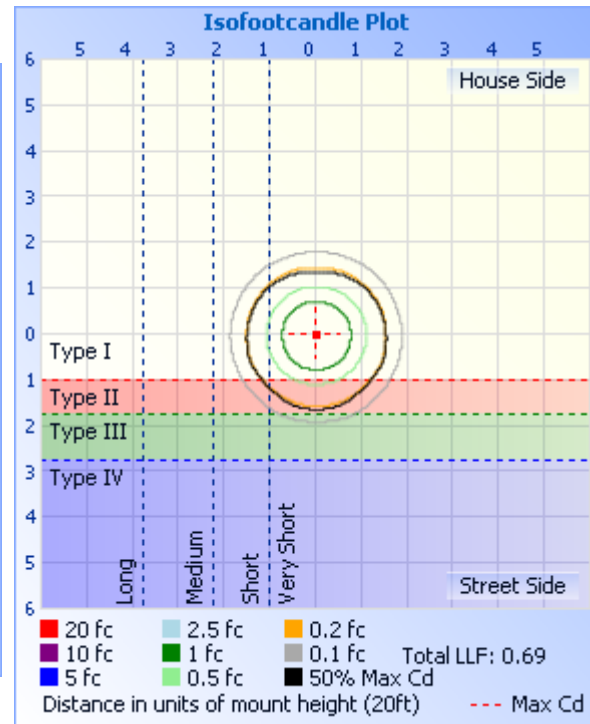
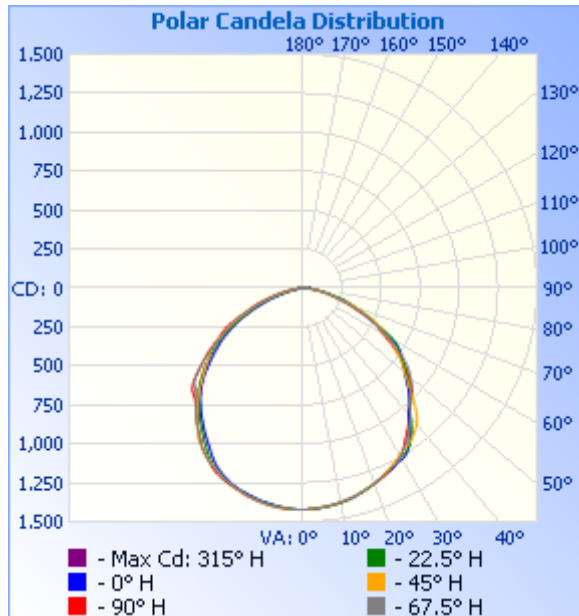
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	134.5	3.3%	90-100	21.3	0.5%
10-20	387.8	9.6%	100-110	15.2	0.4%
20-30	597.6	14.8%	110-120	6.2	0.2%
30-40	727.6	18.0%	120-130	4.1	0.1%
40-50	746.3	18.5%	130-140	3.4	0.1%
50-60	664.5	16.5%	140-150	3.0	0.1%
60-70	459.1	11.4%	150-160	2.4	0.1%
70-80	209.2	5.2%	160-170	1.6	0%
80-90	52.0	1.3%	170-180	0.5	0%



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Photometric Data





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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	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420
1	1420	1421	1419	1419	1419	1419	1420	1419	1421	1421	1421	1422	1422	1421	1424	1421	1420
2	1419	1422	1418	1418	1418	1417	1419	1418	1419	1421	1421	1423	1421	1421	1423	1420	1419
3	1418	1417	1416	1415	1417	1416	1417	1416	1418	1418	1420	1421	1422	1421	1422	1418	1418
4	1415	1414	1415	1412	1414	1414	1415	1413	1416	1417	1419	1419	1421	1420	1420	1417	1415
5	1414	1414	1412	1409	1412	1410	1412	1411	1412	1414	1418	1417	1420	1420	1419	1415	1414
6	1412	1410	1409	1407	1408	1407	1410	1408	1410	1413	1415	1415	1418	1418	1417	1413	1412
7	1408	1408	1406	1405	1405	1405	1407	1405	1407	1410	1414	1414	1416	1416	1416	1411	1408
8	1405	1404	1403	1402	1402	1403	1404	1401	1402	1407	1409	1410	1413	1413	1412	1407	1405
9	1401	1402	1398	1397	1398	1398	1399	1397	1398	1403	1409	1408	1409	1411	1407	1406	1401
10	1397	1398	1394	1394	1394	1395	1395	1394	1395	1400	1405	1402	1406	1405	1405	1401	1397
11	1393	1393	1390	1388	1389	1390	1390	1389	1391	1396	1400	1397	1401	1401	1400	1398	1393
12	1389	1389	1385	1384	1384	1385	1384	1383	1385	1390	1394	1394	1397	1396	1396	1393	1389
13	1383	1383	1380	1379	1380	1378	1380	1379	1380	1386	1389	1389	1393	1393	1393	1388	1383
14	1378	1376	1374	1373	1374	1372	1376	1373	1373	1380	1384	1384	1387	1389	1386	1383	1378
15	1371	1370	1370	1369	1367	1367	1369	1367	1369	1375	1378	1378	1382	1383	1381	1376	1371
16	1364	1365	1362	1360	1361	1360	1363	1360	1362	1368	1372	1372	1376	1378	1377	1371	1364
17	1356	1358	1355	1353	1354	1354	1354	1353	1358	1362	1364	1365	1368	1369	1370	1364	1356
18	1349	1350	1348	1346	1348	1347	1347	1349	1351	1357	1359	1356	1361	1361	1362	1357	1349
19	1341	1344	1341	1340	1341	1338	1339	1341	1343	1351	1351	1350	1355	1355	1355	1351	1341
20	1334	1336	1334	1332	1335	1330	1332	1334	1335	1346	1344	1341	1350	1349	1348	1342	1334
21	1325	1326	1323	1325	1332	1324	1323	1323	1325	1337	1335	1335	1343	1340	1338	1333	1325
22	1318	1318	1314	1318	1325	1320	1314	1315	1314	1328	1324	1327	1335	1332	1328	1325	1318
23	1309	1308	1307	1312	1316	1314	1308	1304	1304	1316	1317	1320	1328	1325	1319	1317	1309
24	1302	1299	1298	1305	1308	1305	1298	1294	1294	1305	1308	1310	1320	1315	1310	1308	1302
25	1298	1290	1287	1296	1302	1296	1289	1282	1281	1296	1298	1301	1312	1305	1299	1299	1298
26	1292	1284	1276	1287	1295	1287	1279	1270	1267	1286	1288	1292	1301	1298	1290	1292	1292
27	1286	1278	1267	1280	1285	1281	1268	1259	1252	1273	1278	1283	1288	1289	1280	1288	1286
28	1279	1272	1259	1273	1272	1273	1259	1244	1233	1259	1268	1272	1273	1278	1271	1282	1279
29	1271	1262	1251	1262	1254	1259	1249	1227	1215	1239	1255	1258	1259	1264	1259	1274	1271

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31	1263	1249	1229	1233	1229	1227	1225	1189	1176	1203	1230	1226	1233	1232	1238	1259	1263
32	1252	1241	1220	1216	1214	1214	1213	1167	1158	1183	1217	1213	1217	1219	1229	1254	1252
33	1234	1234	1214	1203	1193	1202	1201	1148	1140	1165	1204	1200	1197	1206	1221	1246	1234
34	1212	1221	1209	1188	1172	1186	1191	1128	1124	1144	1190	1181	1175	1189	1212	1235	1212
35	1190	1201	1201	1169	1155	1164	1175	1112	1107	1126	1173	1161	1156	1165	1202	1218	1190
36	1161	1181	1187	1148	1135	1142	1155	1093	1089	1109	1152	1138	1141	1145	1187	1195	1161
37	1134	1156	1177	1126	1117	1124	1133	1074	1072	1092	1129	1122	1122	1126	1173	1171	1134
38	1104	1131	1163	1107	1096	1107	1108	1057	1055	1075	1106	1106	1105	1111	1161	1143	1104
39	1076	1102	1148	1088	1074	1089	1086	1041	1038	1055	1086	1088	1082	1089	1150	1113	1076
40	1051	1073	1133	1068	1055	1067	1065	1025	1021	1038	1066	1069	1061	1070	1133	1086	1051
41	1037	1048	1112	1046	1036	1045	1044	1007	1002	1020	1043	1047	1046	1048	1111	1058	1037
42	1023	1024	1086	1024	1020	1023	1018	989	984	1003	1018	1024	1030	1027	1084	1035	1023
43	1000	1013	1058	1003	1006	1003	988	975	967	986	987	1007	1013	1010	1054	1021	1000
44	980	995	1028	986	994	987	964	960	946	969	964	990	998	993	1026	1003	980
45	961	973	995	969	986	971	941	942	927	950	942	971	987	975	995	979	961
46	939	955	963	958	975	959	918	920	906	931	920	955	979	960	964	960	939
47	916	933	932	948	956	948	893	898	882	908	894	944	970	951	934	938	916
48	892	910	906	936	934	933	867	876	857	885	869	938	956	945	904	916	892
49	871	890	879	921	906	912	845	855	832	860	846	925	937	935	880	897	871
50	852	868	851	898	885	888	823	831	804	837	824	907	908	920	852	874	852
51	834	849	831	880	861	864	803	808	778	813	803	885	873	899	830	854	834
52	815	829	812	862	836	841	787	783	753	791	783	852	842	871	810	831	815
53	797	809	792	840	809	813	773	758	728	763	765	817	817	845	792	809	797
54	782	789	771	816	781	784	751	733	703	737	750	786	791	818	776	787	782
55	770	768	744	786	749	752	725	705	676	712	734	754	760	788	757	767	770
56	757	748	718	754	720	722	692	679	652	688	710	720	735	752	737	749	757
57	743	733	693	717	690	685	667	652	628	661	685	689	703	722	711	732	743
58	722	718	668	683	656	653	643	626	602	633	657	660	671	691	680	715	722
59	694	700	643	654	623	622	620	597	572	601	632	629	642	655	655	698	694
60	652	677	622	619	596	586	594	564	544	568	602	595	618	624	627	675	652
61	613	646	596	583	573	555	568	528	517	535	572	568	596	592	597	641	613

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62	579	607	570	554	553	526	535	500	490	501	538	545	574	565	569	602	579
63	549	566	548	525	531	504	506	475	460	472	508	521	551	543	545	560	549
64	514	532	526	502	504	485	476	452	428	445	477	500	521	515	526	527	514
65	478	502	504	478	473	463	443	422	395	419	446	474	482	484	507	500	478
66	451	469	479	450	435	435	405	391	365	389	415	442	447	451	484	471	451
67	425	438	449	417	400	400	373	360	336	361	383	408	415	416	460	443	425
68	400	408	420	376	367	367	346	331	305	338	358	369	384	378	429	416	400
69	377	379	386	343	343	337	323	302	276	313	335	343	363	347	398	390	377
70	349	355	358	314	321	310	300	270	250	283	310	319	339	325	367	365	349
71	329	328	328	292	294	287	275	241	224	253	284	298	311	303	332	336	329
72	309	305	296	272	265	263	247	217	194	228	254	271	281	276	294	309	309
73	282	290	263	249	238	239	216	192	169	198	226	241	252	246	263	286	282
74	259	265	235	223	216	214	189	169	144	169	195	217	231	223	241	261	259
75	225	236	207	200	193	190	169	146	120	144	177	197	208	204	213	239	225
76	194	204	187	183	172	169	151	120	100	124	158	176	185	187	186	209	194
77	180	176	173	167	154	150	131	102	81	103	135	155	166	169	173	179	180
78	171	166	158	147	136	134	112	80	62	84	116	137	146	149	159	166	171
79	144	150	135	130	117	115	96	65	47	71	101	121	127	129	138	154	144
80	126	128	115	110	102	100	81	53	33	53	83	105	109	114	117	128	126
81	112	109	103	94	84	85	69	40	22	41	72	90	95	97	105	111	112
82	99	100	91	76	70	72	56	32	15	33	60	77	79	81	95	101	99
83	89	86	78	65	60	61	47	25	10	26	49	65	66	68	80	87	89
84	79	78	66	56	51	50	37	19	7	20	40	55	58	59	70	81	79
85	73	70	56	50	43	42	29	16	6	16	34	47	50	51	59	71	73
86	64	61	50	40	29	30	23	11	5	13	27	36	39	42	51	63	64
87	54	51	41	31	23	23	17	9	4	10	19	27	28	32	43	52	54
88	42	40	34	27	20	20	14	8	4	9	17	22	22	27	34	40	42
89	36	32	28	24	19	18	13	7	4	7	15	20	20	24	29	32	36
90	32	27	24	22	18	18	12	7	3	7	13	19	19	21	24	27	32
91	30	24	23	21	18	17	12	6	3	7	13	18	18	20	22	25	30
92	28	23	21	22	19	17	12	5	3	6	13	19	19	21	21	23	28
93	26	22	23	24	22	20	12	5	3	6	13	20	21	23	22	22	26

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94	26	23	22	27	27	23	14	4	3	6	14	24	26	25	22	23	26
95	28	25	22	27	27	24	14	5	3	5	15	27	29	28	22	25	28
96	31	28	24	26	28	25	14	5	3	5	15	26	29	27	24	27	31
97	35	30	25	26	26	23	14	5	3	5	14	25	28	26	25	29	35
98	37	32	27	24	23	23	13	4	3	5	13	25	28	25	26	32	37
99	38	31	25	24	23	21	11	4	3	4	13	23	27	24	26	32	38
100	38	29	25	22	21	20	11	4	3	4	12	23	25	23	26	29	38
101	38	27	21	23	20	19	11	3	3	3	12	21	24	24	24	26	38
102	37	25	19	22	19	17	9	3	3	3	11	20	24	23	19	25	37
103	35	25	15	20	17	16	8	3	3	3	10	18	23	21	16	24	35
104	33	26	13	20	18	16	8	3	3	3	8	18	21	20	13	25	33
105	31	27	10	17	18	14	5	3	3	3	8	17	21	20	11	24	31
106	28	27	9	16	17	13	5	3	3	3	7	16	20	17	9	22	28
107	25	25	8	14	15	12	5	3	3	4	6	15	19	16	7	21	25
108	21	24	7	13	14	10	5	3	3	4	4	14	17	14	7	18	21
109	13	23	6	11	13	10	3	3	3	3	4	13	17	13	6	16	13
110	10	20	7	10	12	9	2	3	4	3	3	12	15	12	6	15	10
111	8	20	8	10	11	7	3	3	3	4	3	10	14	10	6	14	8
112	8	18	9	8	10	6	3	3	3	4	4	9	12	10	6	13	8
113	7	17	9	7	9	6	2	3	3	4	4	8	11	8	6	12	7
114	6	16	9	5	8	4	3	3	3	4	4	7	9	8	5	11	6
115	5	14	9	5	6	3	3	3	3	3	4	4	9	5	6	10	5
116	4	14	10	4	3	3	3	3	3	4	4	4	6	4	6	9	4
117	4	13	10	5	2	3	3	4	4	4	3	2	3	4	6	7	4
118	4	11	10	5	3	3	3	4	4	4	4	4	3	4	6	7	4
119	4	11	10	5	3	3	3	4	3	4	4	3	3	4	5	7	4
120	4	10	10	4	2	3	3	3	4	4	3	3	3	4	7	6	4
121	4	9	10	6	2	3	4	4	4	4	4	4	3	4	7	6	4
122	4	9	10	6	2	4	3	4	4	4	4	4	3	5	6	5	4
123	3	8	9	6	2	3	4	3	4	4	4	4	2	5	5	5	3
124	4	8	9	6	3	3	4	4	4	4	4	4	3	5	6	5	4
125	4	8	8	6	3	3	3	4	4	4	4	4	3	5	5	3	4

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126	4	7	8	6	3	3	4	4	4	4	4	5	3	5	6	5	4
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128	4	6	8	6	3	3	3	3	4	3	4	4	2	5	6	4	4
129	4	6	8	6	3	3	4	3	4	4	4	4	3	4	6	4	4
130	3	6	8	6	3	3	4	4	4	4	4	4	3	5	5	4	3
131	3	6	6	5	3	3	4	4	4	4	4	5	3	4	6	4	3
132	4	4	8	5	3	3	4	5	4	5	4	5	3	4	5	4	4
133	4	5	7	5	3	4	4	4	4	5	5	5	3	5	5	4	4
134	4	5	8	5	3	3	4	4	4	5	4	5	3	3	4	4	4
135	4	5	7	5	3	4	4	4	4	4	5	5	3	4	5	4	4
136	4	5	7	5	3	4	5	4	4	4	5	5	3	4	5	4	4
137	4	5	7	5	3	3	5	5	5	5	4	4	3	4	5	5	4
138	4	5	7	5	4	4	5	4	5	4	5	5	4	4	5	4	4
139	4	5	7	5	3	4	4	3	4	5	5	5	3	5	4	4	4
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141	5	5	7	5	4	4	5	5	5	5	5	5	3	4	5	5	5
142	5	5	7	5	4	4	4	4	5	5	5	5	4	4	4	4	5
143	5	5	6	5	3	4	5	5	5	5	5	5	3	4	4	4	5
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145	5	3	6	5	4	5	5	5	5	5	5	6	4	5	4	5	5
146	5	5	5	5	4	4	5	5	5	5	5	6	4	4	5	5	5
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156	5	6	6	6	4	5	6	5	6	4	6	5	5	5	6	5	5
157	6	5	6	6	4	5	5	5	5	5	6	6	5	5	5	5	6

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158	5	5	6	5	4	5	5	6	5	6	7	6	5	5	5	6	5
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163	5	6	6	6	5	5	6	6	6	6	6	6	4	5	4	6	5
164	6	6	6	6	4	5	6	6	6	6	6	7	5	5	5	6	6
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167	6	6	6	6	5	5	6	6	6	6	6	7	5	6	6	6	6
168	6	6	6	5	3	5	5	6	6	6	6	6	5	5	6	6	6
169	6	5	6	6	3	5	6	6	6	6	7	7	4	5	6	6	6
170	5	6	4	6	5	5	6	6	6	7	6	7	5	4	5	6	5
171	6	6	6	6	3	5	6	5	6	6	6	7	5	6	5	6	6
172	6	6	6	6	5	5	6	6	6	6	7	6	5	5	5	5	6
173	6	6	6	6	5	5	6	5	6	6	6	6	4	5	5	6	6
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177	5	5	6	5	4	5	6	6	6	6	6	6	4	4	5	5	5
178	6	6	6	6	4	5	6	6	6	4	6	6	4	6	5	6	6
179	6	6	6	5	5	3	6	6	6	6	6	6	5	5	5	6	6
180	6	6	6	6	5	5	5	5	4	6	6	6	5	5	5	4	6

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2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-11-04	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRODAREA850MED		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.225	26.67	0.987	11.65
6E-B3	277.0	60	0.106	26.71	0.913	10.48
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	89	R10	74
CCT (K)	4952	R3	95	R11	79
Duv	0.0036	R4	80	R12	54
Chromaticity (x, y)	x=0.3472 y=0.3604	R5	81	R13	83
Chromaticity (u', v')	u(u')=0.2095 v'=0.4892	R6	85	R14	97
Color Rendering Index (CRI)	83	R7	86	R15	75
R9	5	R8	66	--	--
Rf	83		--		--
Rg	94		--		--
Rcs,h1(%)	-13		--		--

Photometric Measurement – Sphere-Spectroradiometer Method:

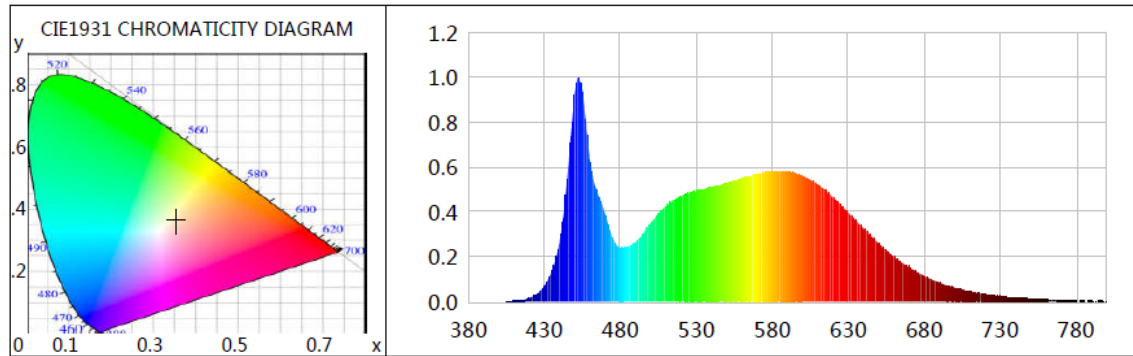
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	4051.2	4066.2	4050	Comply -10%
Luminous Efficacy (lm/W)	151.90	152.24	150	Comply -3%
Most worst Luminous/Highest Watts	151.67			--



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0475	525	0.4836	53.7762	670	0.1527	16.9830
385	0.0005	0.0567	530	0.4932	54.8416	675	0.1326	14.7493
390	0.0009	0.0989	535	0.5005	55.6545	680	0.1143	12.7064
395	0.0008	0.0868	540	0.5107	56.7887	685	0.0974	10.8244
400	0.0007	0.0767	545	0.5182	57.6208	690	0.0847	9.4151
405	0.0019	0.2118	550	0.5273	58.6354	695	0.0719	7.9941
410	0.0034	0.3792	555	0.5382	59.8483	700	0.0615	6.8405
415	0.0069	0.7645	560	0.5495	61.0970	705	0.0521	5.7946
420	0.0159	1.7700	565	0.5584	62.0874	710	0.0446	4.9570
425	0.0338	3.7633	570	0.5683	63.1846	715	0.0372	4.1336
430	0.0698	7.7621	575	0.5751	63.9475	720	0.0328	3.6475
435	0.1382	15.3622	580	0.5800	64.4867	725	0.0283	3.1509
440	0.2663	29.6094	585	0.5794	64.4257	730	0.0236	2.6279
445	0.5453	60.6285	590	0.5784	64.3121	735	0.0193	2.1421
450	0.9283	103.2190	595	0.5724	63.6464	740	0.0181	2.0175
455	0.9328	103.7141	600	0.5603	62.3046	745	0.0158	1.7602
460	0.6247	69.4654	605	0.5424	60.3104	750	0.0127	1.4086
465	0.4823	53.6242	610	0.5229	58.1436	755	0.0124	1.3795
470	0.3874	43.0800	615	0.4948	55.0173	760	0.0098	1.0947
475	0.2810	31.2471	620	0.4652	51.7213	765	0.0090	1.0024
480	0.2394	26.6163	625	0.4319	48.0193	770	0.0068	0.7600
485	0.2456	27.3130	630	0.3973	44.1722	775	0.0065	0.7259
490	0.2651	29.4790	635	0.3626	40.3150	780	0.0033	0.3623
495	0.3020	33.5817	640	0.3259	36.2373	785	0.0030	0.3352
500	0.3494	38.8448	645	0.2912	32.3797	790	0.0045	0.5059
505	0.3923	43.6226	650	0.2595	28.8569	795	0.0032	0.3600
510	0.4275	47.5366	655	0.2288	25.4390	800	0.0029	0.3235
515	0.4530	50.3702	660	0.1992	22.1474			
520	0.4705	52.3167	665	0.1756	19.5301			

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TM30

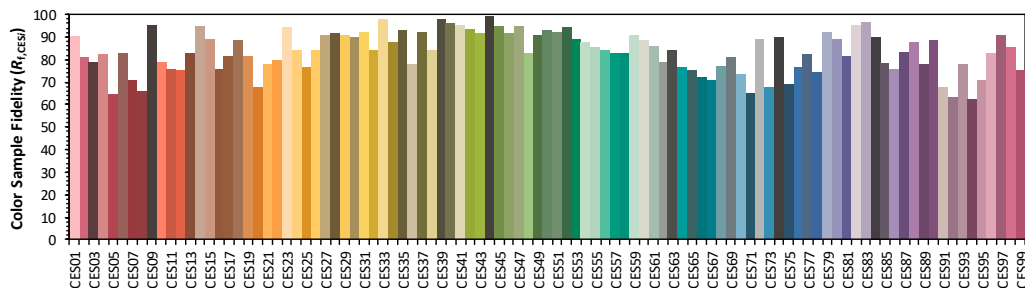
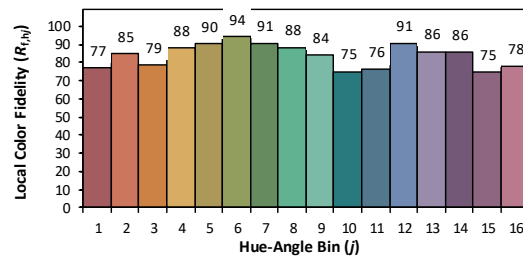
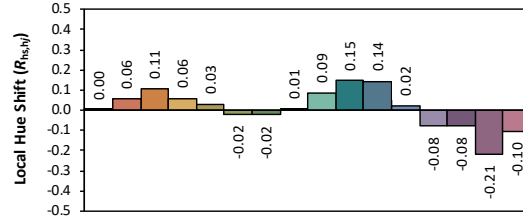
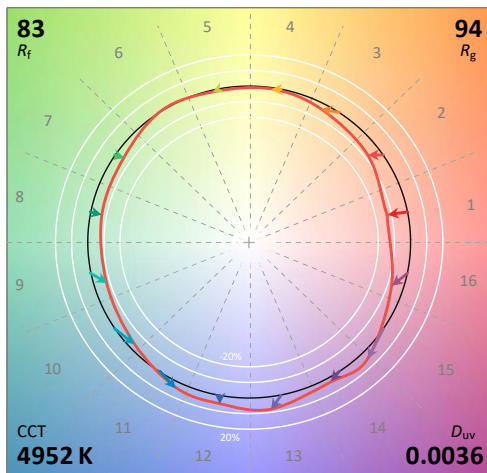
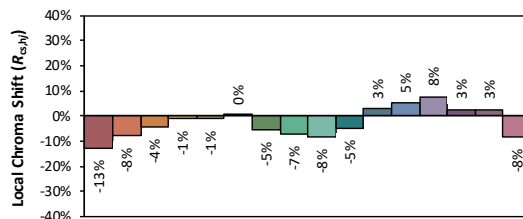
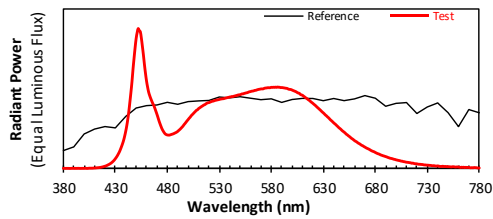
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED27HIDRODAREA850MED



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

x 0.3472

y 0.3604

u' 0.2095

v' 0.4892

CIE 13.3-1995
(CRI)

R_a 83

R_g 5

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00

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Zonal Lumen Tabulation

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,122.8	27.7%	27.7%
0-40	1,854.0	45.8%	45.8%
0-60	3,277.8	80.9%	80.9%
60-90	720.6	17.8%	17.8%
70-100	276.5	6.8%	6.8%
90-120	39.3	1%	1%
0-90	3,998.5	98.7%	98.7%
90-180	52.3	1.3%	1.3%
0-180	4,050.8	100%	100%

Lumens Per Zone

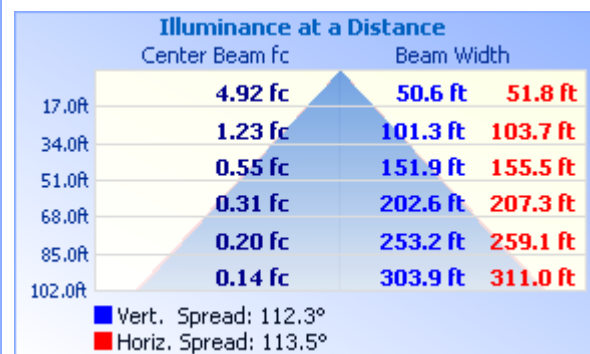
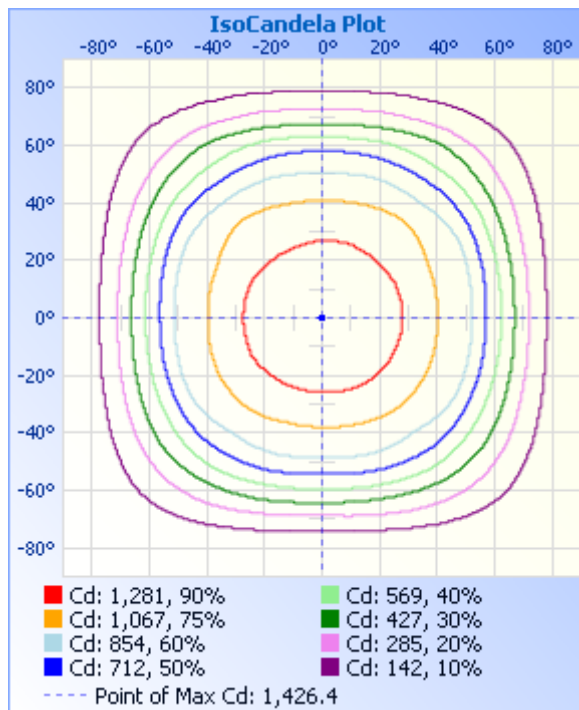
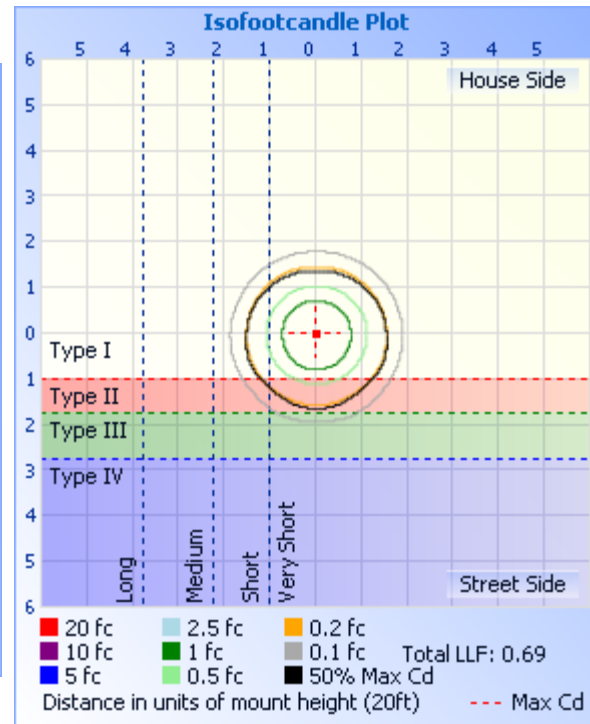
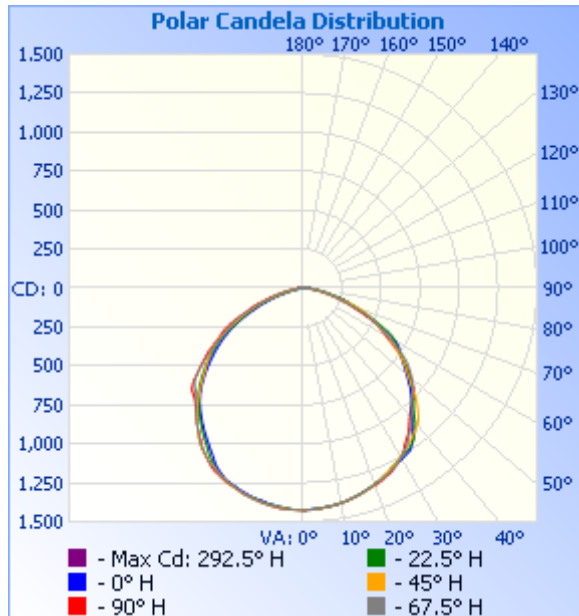
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	134.7	3.3%	90-100	19.6	0.5%
10-20	388.7	9.6%	100-110	14.2	0.4%
20-30	599.3	14.8%	110-120	5.5	0.1%
30-40	731.3	18.1%	120-130	3.5	0.1%
40-50	754.3	18.6%	130-140	2.9	0.1%
50-60	669.5	16.5%	140-150	2.6	0.1%
60-70	463.8	11.4%	150-160	2.1	0.1%
70-80	206.9	5.1%	160-170	1.4	0%
80-90	50.0	1.2%	170-180	0.5	0%



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Photometric Data





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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	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423
1	1422	1423	1423	1422	1423	1424	1423	1422	1421	1422	1423	1424	1424	1426	1424	1424	1422
2	1420	1421	1421	1422	1423	1423	1422	1419	1421	1421	1424	1424	1423	1426	1424	1421	1420
3	1419	1419	1421	1422	1421	1422	1420	1417	1421	1421	1421	1423	1423	1426	1420	1420	1419
4	1417	1419	1418	1419	1419	1420	1417	1417	1417	1417	1419	1422	1422	1423	1418	1419	1417
5	1414	1416	1416	1416	1416	1416	1414	1413	1413	1415	1418	1421	1420	1420	1417	1418	1414
6	1412	1413	1414	1412	1413	1414	1408	1413	1413	1413	1415	1418	1420	1419	1415	1415	1412
7	1412	1410	1410	1410	1410	1410	1405	1409	1406	1410	1412	1414	1417	1419	1412	1411	1412
8	1407	1407	1407	1406	1406	1405	1405	1406	1404	1406	1411	1411	1413	1414	1410	1409	1407
9	1404	1404	1402	1403	1404	1405	1400	1400	1401	1403	1407	1408	1409	1411	1409	1406	1404
10	1401	1400	1399	1400	1400	1400	1395	1397	1395	1401	1403	1404	1405	1406	1405	1404	1401
11	1395	1397	1395	1396	1395	1395	1391	1390	1389	1395	1398	1400	1401	1402	1399	1401	1395
12	1392	1391	1390	1392	1390	1392	1386	1387	1386	1390	1394	1395	1396	1399	1399	1397	1392
13	1384	1384	1387	1387	1386	1387	1384	1383	1382	1385	1389	1391	1391	1393	1390	1389	1384
14	1380	1380	1382	1382	1380	1380	1377	1379	1378	1382	1383	1386	1387	1387	1387	1386	1380
15	1375	1373	1377	1376	1374	1375	1369	1372	1371	1378	1378	1380	1380	1381	1379	1380	1375
16	1367	1367	1370	1370	1367	1366	1366	1367	1364	1373	1371	1373	1376	1377	1373	1374	1367
17	1361	1361	1364	1362	1361	1360	1358	1358	1359	1365	1366	1367	1369	1371	1370	1369	1361
18	1356	1354	1358	1355	1355	1353	1351	1351	1351	1358	1360	1357	1360	1362	1361	1364	1356
19	1347	1347	1349	1348	1351	1346	1347	1343	1344	1350	1352	1349	1353	1354	1356	1353	1347
20	1339	1338	1341	1341	1347	1342	1336	1336	1338	1342	1346	1341	1349	1346	1347	1347	1339
21	1331	1331	1331	1336	1343	1335	1332	1328	1331	1334	1337	1334	1343	1341	1339	1340	1331
22	1323	1324	1323	1331	1336	1328	1322	1320	1324	1325	1327	1327	1335	1333	1328	1332	1323
23	1315	1315	1315	1324	1327	1323	1312	1314	1310	1318	1316	1319	1326	1327	1318	1324	1315
24	1307	1306	1304	1317	1319	1313	1303	1303	1297	1310	1307	1311	1319	1316	1309	1312	1307
25	1298	1298	1294	1307	1314	1305	1292	1293	1284	1299	1296	1301	1309	1308	1298	1304	1298
26	1289	1287	1287	1299	1305	1296	1282	1280	1270	1284	1286	1292	1301	1299	1291	1296	1289
27	1283	1278	1279	1292	1293	1290	1277	1265	1251	1268	1276	1283	1291	1290	1279	1286	1283
28	1278	1269	1271	1283	1276	1279	1267	1246	1228	1252	1267	1271	1276	1280	1270	1275	1278
29	1273	1262	1261	1270	1262	1266	1260	1226	1209	1233	1258	1258	1260	1265	1260	1270	1273

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31	1261	1248	1239	1240	1237	1238	1235	1188	1174	1194	1233	1229	1231	1234	1238	1257	1261
32	1256	1241	1229	1227	1221	1227	1222	1168	1157	1175	1219	1216	1217	1222	1226	1250	1256
33	1250	1235	1220	1213	1198	1212	1208	1152	1140	1158	1205	1202	1197	1206	1215	1244	1250
34	1237	1228	1210	1198	1181	1197	1193	1135	1123	1142	1188	1185	1176	1190	1204	1238	1237
35	1217	1219	1200	1178	1165	1172	1171	1115	1109	1125	1169	1163	1159	1173	1195	1230	1217
36	1196	1204	1188	1157	1149	1154	1150	1099	1091	1106	1145	1141	1142	1151	1183	1214	1196
37	1171	1184	1174	1140	1129	1136	1126	1081	1077	1089	1123	1124	1124	1130	1170	1192	1171
38	1145	1164	1162	1123	1107	1118	1104	1066	1057	1072	1100	1107	1105	1114	1156	1173	1145
39	1115	1141	1151	1104	1086	1099	1085	1048	1043	1053	1079	1086	1084	1095	1148	1147	1115
40	1086	1116	1141	1081	1066	1076	1063	1031	1025	1037	1058	1067	1061	1076	1134	1120	1086
41	1059	1086	1127	1060	1050	1054	1039	1015	1008	1019	1035	1044	1046	1053	1119	1090	1059
42	1036	1059	1103	1039	1035	1035	1013	1000	991	1000	1010	1023	1030	1031	1099	1064	1036
43	1025	1037	1079	1018	1021	1016	989	985	971	982	985	1007	1014	1013	1070	1035	1025
44	1003	1018	1054	1001	1010	1000	966	964	952	967	960	989	999	997	1044	1019	1003
45	982	1001	1029	987	1002	985	943	947	930	948	939	972	987	979	1019	999	982
46	961	979	1002	974	991	973	921	927	907	927	916	958	980	963	990	977	961
47	941	958	970	961	974	962	896	904	881	905	892	946	972	953	959	956	941
48	915	937	936	948	951	947	874	883	855	881	867	937	959	944	927	934	915
49	893	915	908	931	926	926	852	857	830	858	843	924	937	935	896	910	893
50	868	890	882	912	901	903	829	835	804	832	820	903	910	922	869	888	868
51	845	870	856	892	877	871	811	811	779	809	801	879	872	904	842	867	845
52	824	844	837	871	851	847	796	786	753	786	782	846	844	877	821	843	824
53	806	820	813	851	824	819	778	759	726	761	765	810	820	848	797	821	806
54	785	797	792	828	795	790	758	734	702	735	749	777	792	822	782	796	785
55	767	776	769	803	768	757	727	709	678	708	728	748	761	799	766	775	767
56	750	754	739	772	739	726	698	683	649	683	705	713	735	760	744	754	750
57	738	731	716	742	706	694	675	653	624	656	679	684	704	734	719	733	738
58	726	713	690	711	672	664	650	624	597	627	652	655	671	699	689	713	726
59	707	697	662	675	641	633	622	592	570	594	622	621	641	667	662	696	707
60	687	681	634	639	614	600	595	558	541	560	592	590	617	632	633	680	687
61	650	661	607	606	590	567	567	526	514	524	562	564	596	599	600	657	650

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62	609	638	580	576	566	541	537	496	482	493	529	539	575	573	571	630	609
63	572	606	553	548	546	515	505	473	452	465	494	518	547	549	544	593	572
64	540	565	529	522	517	497	474	447	418	435	465	494	517	523	521	549	540
65	508	526	503	498	487	472	443	417	385	406	436	468	479	491	500	517	508
66	472	496	482	468	449	441	406	385	352	376	403	434	445	455	479	487	472
67	438	465	458	435	410	410	373	352	324	353	372	396	407	421	458	459	438
68	412	430	438	397	377	376	344	324	294	329	344	362	378	378	439	428	412
69	387	398	415	358	351	342	324	295	263	298	324	335	359	348	410	399	387
70	360	366	381	325	328	314	298	262	236	267	297	314	333	323	378	373	360
71	327	342	350	300	302	289	273	232	209	242	269	287	303	303	340	347	327
72	309	313	314	277	272	265	242	208	181	215	237	258	267	276	306	311	309
73	295	289	281	254	243	238	213	182	157	180	209	229	244	243	265	285	295
74	267	273	248	229	218	211	186	161	129	154	184	207	221	217	241	267	267
75	244	250	219	203	196	188	166	134	110	132	166	185	198	199	219	243	244
76	207	220	195	184	175	168	146	110	90	112	142	165	174	179	185	218	207
77	179	192	171	167	155	148	126	91	70	91	121	146	155	164	165	185	179
78	171	164	157	150	138	130	106	73	52	75	107	127	136	147	158	166	171
79	156	154	146	134	117	113	91	59	39	60	89	109	119	126	139	151	156
80	131	135	120	116	102	97	76	45	25	46	74	95	102	110	116	131	131
81	111	116	105	98	86	82	64	34	17	36	62	81	87	92	101	114	111
82	102	98	92	79	70	69	52	28	11	28	52	68	71	76	92	99	102
83	86	90	82	66	59	58	43	21	8	21	42	57	60	64	79	87	86
84	79	77	67	55	49	47	35	16	6	17	35	49	52	56	67	79	79
85	70	69	59	48	42	40	27	12	5	14	28	40	45	47	57	68	70
86	61	62	50	41	33	29	21	10	3	10	22	30	34	40	48	61	61
87	54	52	42	31	24	23	16	8	3	8	17	23	25	29	40	52	54
88	44	42	34	27	19	19	14	7	3	7	15	20	21	26	33	41	44
89	36	33	29	23	18	17	12	5	3	6	13	19	19	23	27	34	36
90	32	28	24	21	17	16	11	5	3	5	12	18	18	21	23	27	32
91	29	24	22	20	17	16	11	5	2	6	12	18	18	20	22	24	29
92	27	23	21	20	17	16	11	5	2	4	12	18	18	20	21	22	27
93	26	21	20	21	19	18	12	4	2	5	13	20	20	21	21	21	26

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94	25	21	21	24	23	21	13	4	3	4	14	23	25	24	21	22	25
95	25	21	20	25	25	22	13	4	2	4	14	24	28	27	21	23	25
96	28	24	21	25	25	22	13	4	2	5	14	24	28	25	22	25	28
97	31	26	21	23	24	22	12	4	3	4	13	24	27	24	22	27	31
98	33	27	22	22	24	21	12	3	2	4	12	23	26	24	24	28	33
99	35	24	24	22	22	19	11	3	2	4	12	22	26	24	25	26	35
100	36	23	21	21	21	19	10	2	2	2	11	21	25	23	23	23	36
101	35	22	19	21	20	17	10	3	2	3	11	20	24	23	21	22	35
102	35	23	16	21	20	16	9	2	2	3	10	19	24	22	17	22	35
103	34	23	14	19	17	14	7	2	2	3	9	17	22	19	14	22	34
104	31	25	11	18	17	15	7	2	2	2	8	17	20	20	11	24	31
105	30	26	9	17	17	14	6	2	2	3	7	17	20	19	9	24	30
106	29	26	8	16	17	13	5	2	2	3	6	15	20	16	7	22	29
107	26	26	6	14	16	11	3	2	3	3	5	14	19	15	6	20	26
108	23	24	6	12	15	10	3	2	2	3	4	13	17	13	6	18	23
109	8	23	6	11	13	9	3	2	2	3	3	12	16	12	5	16	8
110	7	21	6	10	12	8	2	3	3	2	3	10	14	11	5	15	7
111	6	19	8	9	10	7	2	3	3	3	3	9	13	9	5	13	6
112	6	18	8	8	9	6	2	3	3	3	3	8	11	8	5	13	6
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114	5	16	9	4	7	3	3	3	2	3	3	4	8	6	6	10	5
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117	5	13	8	3	2	2	2	2	2	3	3	3	3	3	5	7	5
118	3	12	9	5	2	2	3	3	3	3	3	3	1	3	6	7	3
119	4	10	10	5	2	2	3	3	2	3	3	3	2	4	6	6	4
120	4	10	9	5	2	2	3	3	3	3	3	3	2	4	6	6	4
121	4	9	10	5	2	2	3	3	3	3	3	3	2	4	6	5	4
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123	4	8	9	6	2	2	3	3	3	2	3	4	2	4	5	4	4
124	3	8	9	5	2	2	3	3	3	3	4	2	2	4	6	4	3
125	3	8	8	6	2	2	3	3	2	3	4	4	2	3	6	5	3

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126	3	7	8	5	2	2	3	3	3	4	3	3	2	4	5	4	3
127	3	6	8	5	2	2	2	3	4	4	3	4	2	3	4	3	3
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178	5	5	5	5	4	4	5	5	5	4	4	6	4	5	5	5	5
179	5	5	5	4	4	5	4	5	5	4	6	5	4	5	5	5	5
180	5	5	5	5	4	4	5	5	5	5	5	5	4	5	5	5	5

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3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2021/2/26
AC Power Source	CHP-500C	N/A	2021/3/29
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2021/3/1
Digital Power Meter	WT500	DYDWQ200006	2021/3/29
Integral Sphere (2M)	2M	DYJCE120067	2021/2/26
Digital Power Meter	WT500	DYDWQ200006	2021/3/29
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2021/2/26
Expand Uncertainty: Photometric Measurement (Sphere): 2.08%, k=2 Chromaticity Measurement(Sphere):25.6K, k=2 Photometric Measurement(Goniophotometer):2.645%, k=2			

***** END OF REPORT *****