



Report No.: BLC2010026E-D

## LM-79-08 Test Report

For

# LEDVANCE LLC

(Brand Name: SYLVANIA)

200 Ballardvale St. Wilmington, MA 01887 USA

## LED Area Lamp

Model name(s):

LED75HIDRODAREA830MOG

LED75HIDRODAREA840MOG

LED75HIDRODAREA850MOG

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:

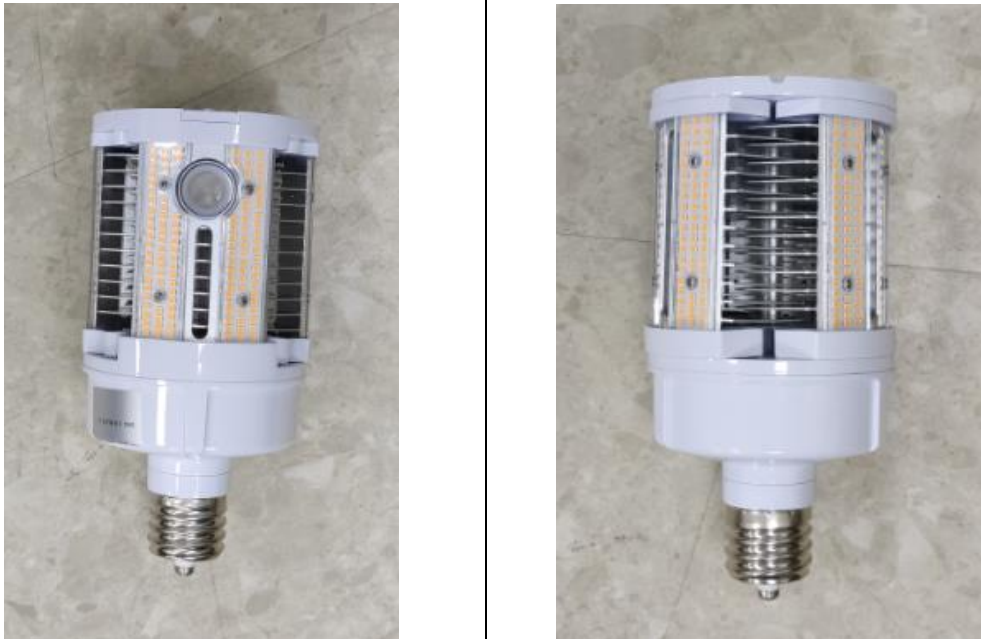
*Jason Luo*

Manager: Jason Luo



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**1.1 Product Information:**

Organization Name	LEDVANCE LLC	
Brand Name	SYLVANIA	
Model Number	LED75HIDRODAREA830MOG LED75HIDRODAREA840MOG LED75HIDRODAREA850MOG	
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	75W	
Rated Stabilized Lamp Lumen	10500 lm (3000K), 11250 lm (4000K/5000K)	
Declared CCT	3000K, 4000K, 5000K	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-XX80RA35000H1	
Sample Number	BLC2010026E-D1(3000K,closed), D2(4000K,closed), D3(5000K,closed), D1(3000K,open), D2(4000K,open), D3(5000K,open)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
<b>Photo</b>		
<b>closed</b>		
		

Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01  
Unit 401, No. 309 Xinxin Seven Road, Zengcheng District,  
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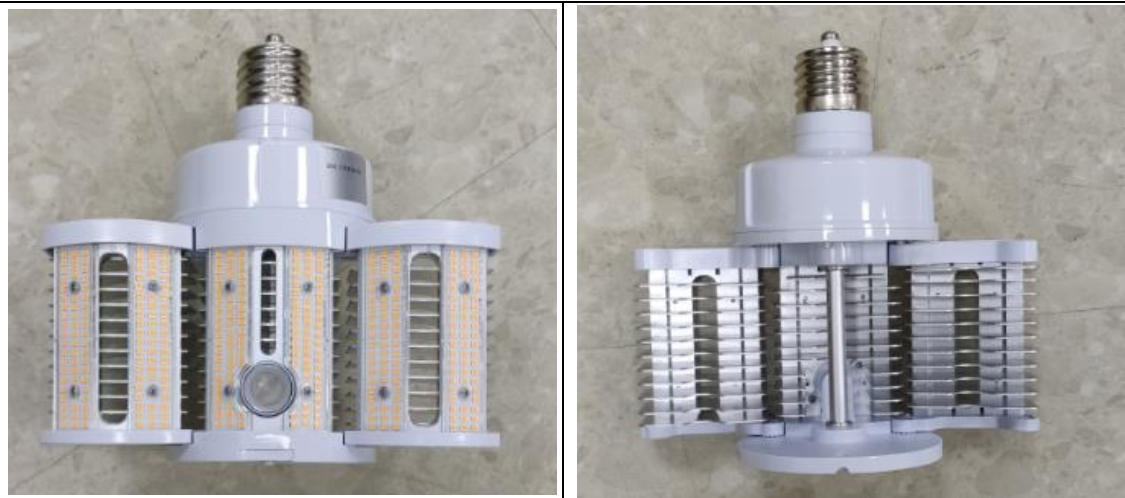
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open





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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"><li>1. Total Luminous Flux</li><li>2. Luminous Distribution Intensity</li><li>3. Luminous Efficacy</li><li>4. Correlated Color Temperature</li><li>5. Color Rendering Index</li><li>6. Chromaticity Coordinate</li><li>7. Electrical Parameters</li></ol>
Reference Standard	<ol style="list-style-type: none"><li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li><li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li><li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li><li>4. CIE 15-2004 Technical Report Colorimetry</li><li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li><li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li></ol>
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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  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)

<b>Test date</b>	2020-11-04	<b>Test Ambient:</b>	25.6 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LED75HIDRODAREA830MOG (closed)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.615	73.14	0.991	8.41
6E-D1	277.0	60	0.298	73.42	0.890	15.97
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	92	R10	83
CCT (K)	2953	R3	95	R11	80
Duv	-0.0013	R4	80	R12	73
Chromaticity (x, y)	x=0.4384 y=0.4012	R5	82	R13	84
Chromaticity (u', v')	u(u')=0.2528 v'=0.5205	R6	91	R14	98
Color Rendering Index (CRI)	82	R7	80	R15	73
R9	5	R8	57	--	--
Rf	84				
Rg	95				
Rcs,h1(%)	-12				

**Photometric Measurement – Goniophotometer Method:**

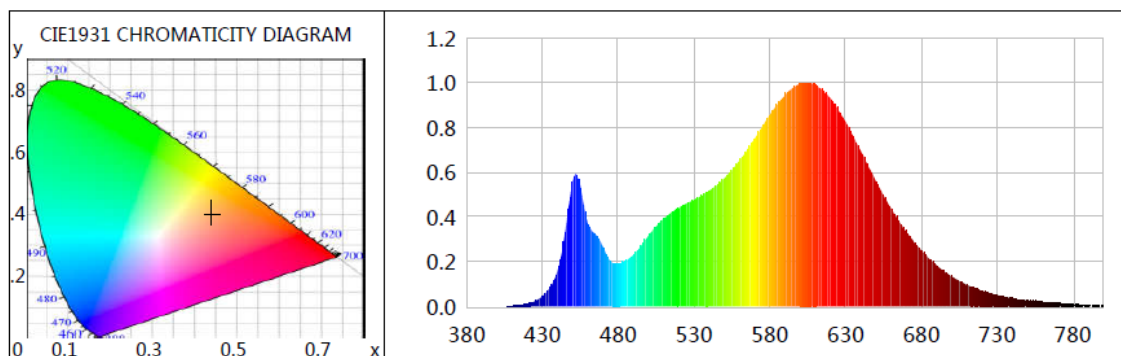
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	10470.0	10297.2	10500	Comply -10%
Luminous Efficacy (lm/W)	143.15	140.25	140	Comply -3%
Most worst Luminous/Highest	140.25		--	--
Beam Angle (°)	--	--	--	--
Center Beam Candle Power (cd)	8	--	--	--



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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	0.0002	0.0398	525	0.4601	100.9772	670	0.3328	73.0342
385	0.0002	0.0418	530	0.4764	104.5514	675	0.2881	63.2280
390	0.0003	0.0594	535	0.4951	108.6742	680	0.2485	54.5454
395	0.0004	0.0951	540	0.5177	113.6328	685	0.2138	46.9325
400	0.0007	0.1520	545	0.5410	118.7335	690	0.1826	40.0739
405	0.0013	0.2794	550	0.5729	125.7380	695	0.1572	34.5014
410	0.0024	0.5226	555	0.6088	133.6144	700	0.1334	29.2733
415	0.0057	1.2490	560	0.6524	143.1975	705	0.1135	24.9195
420	0.0120	2.6355	565	0.6989	153.3928	710	0.0965	21.1830
425	0.0237	5.2088	570	0.7501	164.6302	715	0.0819	17.9852
430	0.0454	9.9641	575	0.8058	176.8487	720	0.0700	15.3558
435	0.0853	18.7320	580	0.8577	188.2394	725	0.0597	13.0927
440	0.1610	35.3268	585	0.9036	198.3291	730	0.0505	11.0749
445	0.3339	73.2830	590	0.9455	207.5222	735	0.0422	9.2580
450	0.5613	123.1874	595	0.9771	214.4488	740	0.0368	8.0753
455	0.5323	116.8239	600	0.9967	218.7611	745	0.0315	6.9180
460	0.3703	81.2700	605	1.0000	219.4775	750	0.0259	5.6902
465	0.3208	70.4082	610	0.9923	217.7972	755	0.0233	5.1172
470	0.2625	57.6090	615	0.9666	212.1425	760	0.0196	4.3099
475	0.2009	44.0891	620	0.9302	204.1638	765	0.0157	3.4566
480	0.1898	41.6539	625	0.8796	193.0482	770	0.0136	2.9762
485	0.2056	45.1342	630	0.8248	181.0176	775	0.0119	2.6041
490	0.2301	50.5047	635	0.7617	167.1861	780	0.0097	2.1290
495	0.2711	59.5081	640	0.6941	152.3498	785	0.0083	1.8242
500	0.3179	69.7820	645	0.6262	137.4449	790	0.0079	1.7230
505	0.3581	78.6004	650	0.5589	122.6663	795	0.0062	1.3535
510	0.3929	86.2253	655	0.4971	109.1029	800	0.0051	1.1100
515	0.4207	92.3308	660	0.4367	95.8509			
520	0.4416	96.9148	665	0.3816	83.7574			

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## TM30

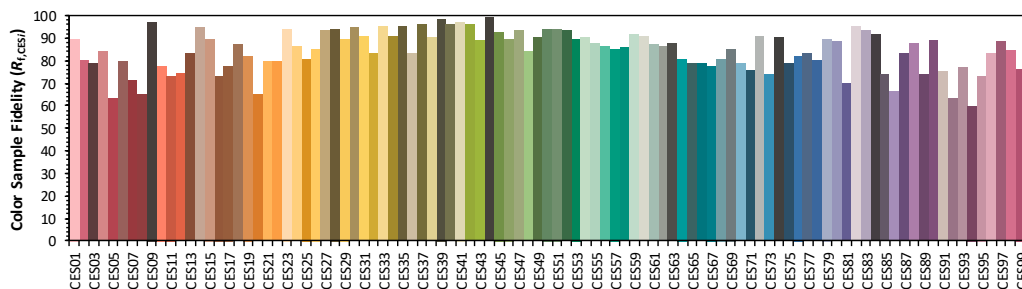
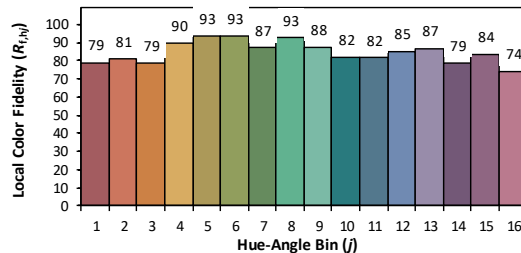
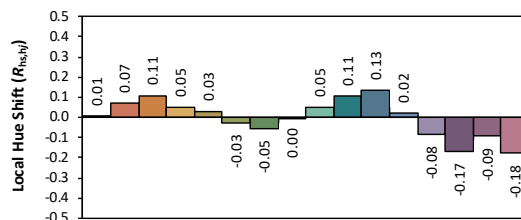
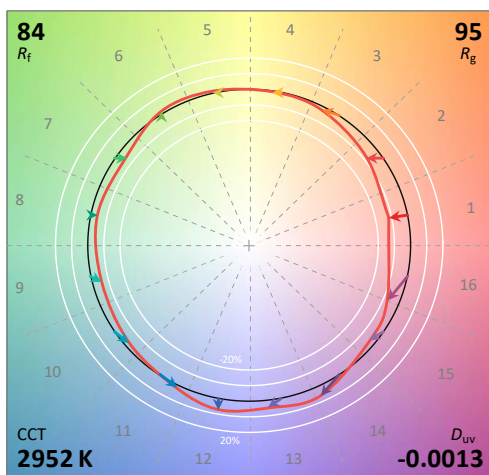
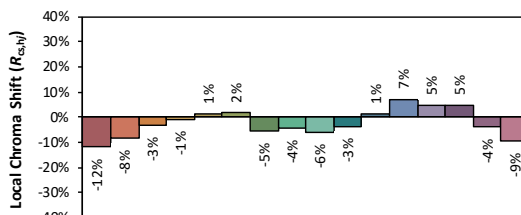
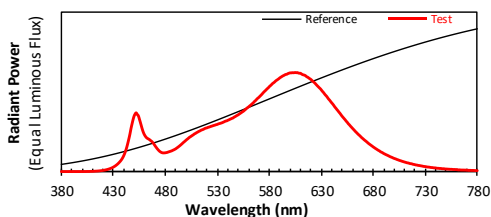
### ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED75HIDRODAREA830MOG(closed)



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

$x$  0.4384  
 $y$  0.4012  
 $u'$  0.2528  
 $v'$  0.5205

CIE 13.3-1995  
(CRI)

$R_a$  82  
 $R_g$  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	186.3	1.8%	1.8%
0-40	512.6	4.9%	4.9%
0-60	1,849.0	17.7%	17.7%
60-90	3,413.7	32.6%	32.6%
70-100	3,663.8	35%	35%
90-120	3,408.8	32.6%	32.6%
0-90	5,262.7	50.3%	50.3%
90-180	5,208.3	49.7%	49.7%
0-180	10,471.0	100%	100%

### Lumens Per Zone

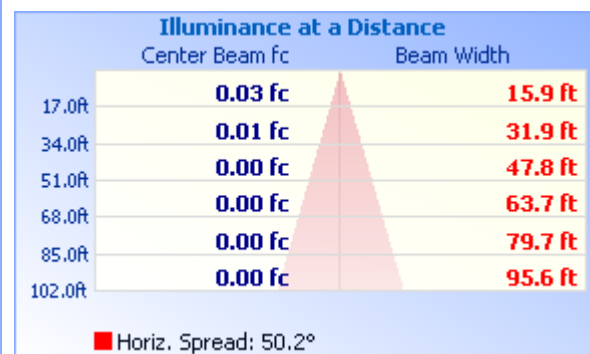
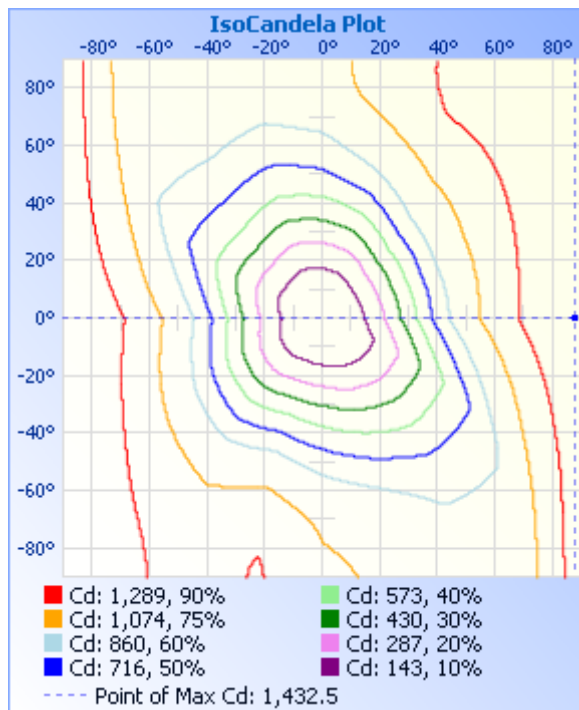
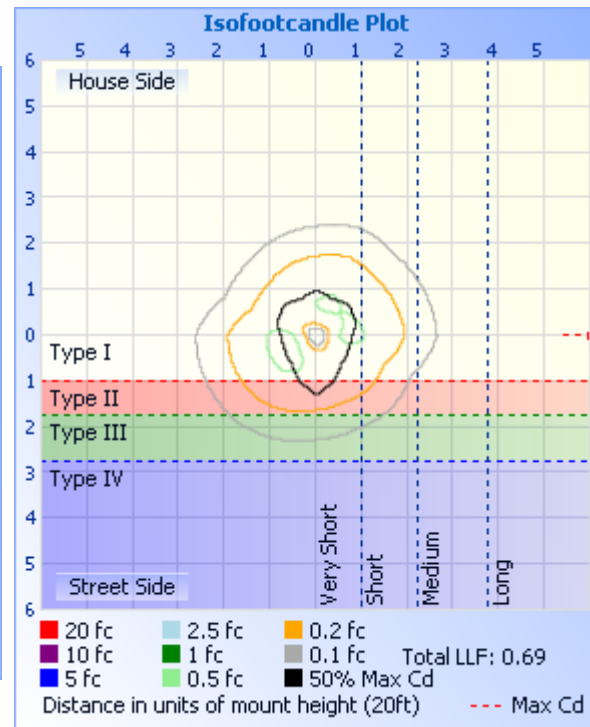
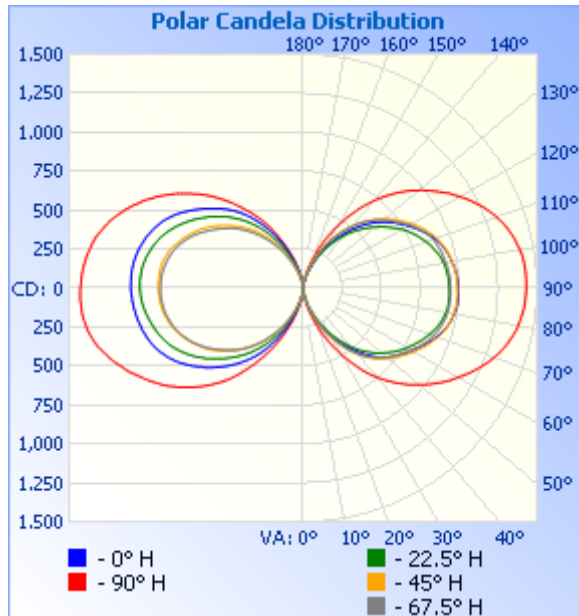
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	3.7	0.0%	90-100	1,248.6	11.9%
10-20	38.5	0.4%	100-110	1,164.3	11.1%
20-30	144.1	1.4%	110-120	996.0	9.5%
30-40	326.3	3.1%	120-130	773.4	7.4%
40-50	552.5	5.3%	130-140	538.4	5.1%
50-60	783.9	7.5%	140-150	313.7	3%
60-70	998.4	9.5%	150-160	135.9	1.3%
70-80	1,165.5	11.1%	160-170	34.8	0.3%
80-90	1,249.7	11.9%	170-180	3.2	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	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
1	12	10	10	8	13	10	8	7	8	9	10	10	14	14	14	14	12
2	15	14	13	11	17	15	13	14	13	13	12	14	18	17	17	18	15
3	18	17	17	14	22	19	19	18	16	16	16	18	25	22	22	22	18
4	23	21	20	18	28	25	24	24	19	19	20	22	31	28	28	27	23
5	27	24	24	21	34	30	29	28	23	23	25	24	37	32	33	31	27
6	31	29	27	24	40	35	33	32	27	27	28	28	43	39	39	37	31
7	35	33	32	29	48	40	38	38	33	33	33	32	50	46	47	44	35
8	41	38	39	35	55	47	44	45	40	39	38	37	58	56	55	50	41
9	48	44	46	42	64	55	51	54	48	46	43	43	68	67	67	58	48
10	56	51	54	52	76	63	60	65	58	54	51	49	79	79	79	66	56
11	64	59	63	60	89	73	71	77	70	62	59	57	92	94	91	76	64
12	74	68	74	71	102	85	82	89	83	73	67	65	105	111	105	86	74
13	84	77	86	83	118	98	93	103	98	83	76	74	120	127	121	97	84
14	96	87	98	95	134	111	105	119	112	94	86	83	137	145	138	109	96
15	108	98	111	108	152	126	120	134	128	106	96	94	156	166	157	122	108
16	120	110	126	125	172	140	135	152	143	119	107	105	176	187	178	136	120
17	134	124	140	141	191	156	152	170	161	135	119	117	196	209	198	153	134
18	149	137	156	157	209	175	169	189	178	149	131	129	216	233	219	168	149
19	165	149	172	172	230	193	185	208	198	164	144	141	235	256	240	183	165
20	180	162	188	187	250	211	203	230	217	180	159	155	255	278	260	198	180
21	195	176	206	203	272	230	221	250	238	197	175	167	277	300	283	214	195
22	211	190	222	220	295	248	240	270	258	213	190	181	304	323	304	232	211
23	227	205	239	238	319	269	260	290	278	232	205	195	329	350	327	249	227
24	243	223	258	257	343	292	280	312	298	248	219	210	354	376	353	270	243
25	259	239	276	275	368	313	299	334	320	266	233	227	379	404	378	291	259
26	276	255	295	295	391	335	319	358	340	284	250	243	404	430	404	312	276
27	293	272	313	313	415	358	341	383	361	302	265	259	431	457	430	332	293
28	313	288	332	332	438	379	362	408	382	323	282	276	456	483	455	351	313
29	331	306	352	349	462	404	384	433	403	342	298	292	480	511	479	372	331

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31	369	340	389	385	517	449	429	480	449	380	332	325	531	562	531	412	369
32	387	358	407	403	543	472	454	506	470	399	350	341	557	589	555	434	387
33	405	376	426	423	570	495	477	529	491	419	366	357	587	612	578	454	405
34	422	394	444	442	597	521	500	552	511	437	382	373	614	639	602	477	422
35	440	411	464	460	625	545	523	575	532	456	398	389	640	664	625	497	440
36	457	429	482	481	654	569	545	598	551	474	413	408	667	692	652	517	457
37	474	448	501	498	680	594	569	623	569	491	430	425	695	718	675	540	474
38	491	465	521	516	705	618	589	645	587	510	445	441	722	743	699	561	491
39	509	483	538	534	727	644	610	667	604	527	461	458	748	768	726	582	509
40	528	500	556	552	752	668	631	688	624	544	475	474	773	793	748	603	528
41	545	516	573	568	774	690	651	710	641	561	489	491	796	818	771	622	545
42	563	531	589	583	796	712	671	733	658	577	504	506	818	841	794	644	563
43	581	548	606	598	817	733	693	754	675	594	520	522	841	863	815	662	581
44	598	563	621	612	840	756	713	774	693	610	534	536	864	882	835	680	598
45	614	577	635	627	862	775	732	795	709	625	549	552	886	905	857	698	614
46	631	591	651	641	883	795	752	817	726	641	565	566	907	924	876	716	631
47	647	607	663	653	905	815	771	837	742	657	581	579	928	942	893	734	647
48	662	621	676	666	926	834	793	857	759	674	595	593	948	960	911	752	662
49	675	634	688	678	945	854	813	877	777	689	610	606	970	979	928	770	675
50	690	647	701	690	966	872	832	897	793	704	624	620	990	995	944	787	690
51	702	659	713	700	986	890	851	916	810	719	639	633	1010	1014	960	804	702
52	715	674	727	712	1004	908	870	936	820	735	653	645	1030	1029	975	821	715
53	726	685	738	725	1023	929	887	957	838	752	666	657	1048	1046	992	837	726
54	739	698	750	731	1040	947	903	970	853	771	680	670	1068	1063	1006	853	739
55	751	710	758	742	1060	965	920	990	869	779	694	684	1086	1078	1019	868	751
56	763	722	770	753	1078	983	938	1006	883	794	706	696	1103	1092	1034	883	763
57	774	734	782	763	1095	1002	953	1023	898	810	718	709	1117	1107	1050	898	774
58	785	745	794	773	1116	1022	969	1039	912	824	730	724	1136	1122	1064	912	785
59	797	757	805	785	1129	1033	983	1054	927	837	742	734	1152	1135	1078	926	797
60	809	769	816	796	1146	1053	998	1070	939	850	754	747	1167	1148	1091	940	809
61	819	775	825	805	1162	1071	1007	1086	951	863	761	757	1183	1162	1107	956	819

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62	828	787	837	816	1180	1090	1024	1099	963	876	774	768	1198	1175	1121	963	828
63	840	797	848	828	1198	1106	1037	1113	974	887	784	779	1215	1188	1136	977	840
64	850	807	859	839	1214	1124	1050	1126	984	898	794	789	1233	1200	1150	991	850
65	862	818	871	848	1229	1140	1063	1140	994	910	805	798	1248	1214	1164	1004	862
66	871	828	881	858	1245	1156	1077	1153	1004	920	814	808	1260	1226	1177	1016	871
67	881	837	891	867	1260	1172	1088	1165	1013	930	822	817	1274	1236	1192	1027	881
68	892	846	900	876	1275	1184	1100	1177	1022	939	832	826	1290	1248	1206	1038	892
69	902	855	910	884	1290	1197	1112	1187	1030	947	841	835	1305	1260	1218	1051	902
70	913	863	920	891	1303	1210	1121	1197	1036	955	848	843	1318	1271	1231	1063	913
71	923	872	928	898	1314	1221	1132	1206	1042	963	856	850	1330	1281	1242	1073	923
72	930	881	936	903	1327	1231	1142	1215	1048	970	864	858	1342	1291	1253	1084	930
73	940	888	944	909	1339	1240	1150	1224	1053	977	871	864	1354	1300	1264	1094	940
74	948	896	951	915	1350	1249	1158	1232	1059	984	877	871	1368	1310	1273	1105	948
75	955	902	956	921	1360	1258	1165	1240	1064	989	884	876	1378	1317	1281	1114	955
76	961	908	962	924	1368	1265	1173	1247	1068	995	889	880	1386	1323	1290	1122	961
77	968	915	967	928	1377	1271	1178	1255	1071	1001	894	885	1394	1329	1297	1130	968
78	973	920	972	933	1386	1278	1185	1262	1076	1006	899	890	1402	1334	1304	1138	973
79	978	925	976	936	1394	1283	1191	1269	1080	1012	905	895	1409	1338	1307	1145	978
80	982	928	979	938	1400	1290	1196	1275	1083	1017	909	899	1414	1342	1311	1151	982
81	986	931	983	940	1405	1295	1200	1280	1086	1022	912	902	1417	1345	1315	1156	986
82	990	935	985	942	1410	1299	1203	1285	1089	1026	915	904	1423	1348	1320	1159	990
83	992	936	988	944	1414	1303	1206	1290	1092	1030	918	907	1426	1350	1324	1162	992
84	994	936	989	945	1419	1307	1210	1294	1095	1034	920	909	1427	1352	1324	1164	994
85	996	937	991	945	1423	1309	1211	1297	1097	1038	922	911	1428	1353	1325	1165	996
86	997	939	991	945	1426	1313	1212	1300	1099	1040	923	913	1430	1354	1327	1167	997
87	997	939	992	947	1427	1315	1214	1302	1101	1042	925	915	1432	1354	1329	1167	997
88	997	939	992	948	1429	1317	1215	1303	1103	1044	927	915	1432	1354	1329	1168	997
89	997	939	991	947	1431	1318	1217	1304	1105	1046	928	916	1431	1354	1327	1168	997
90	995	937	991	946	1432	1318	1217	1305	1106	1047	928	916	1429	1353	1325	1168	995
91	995	936	990	945	1432	1318	1217	1306	1106	1048	929	915	1427	1351	1324	1167	995
92	993	935	989	944	1432	1318	1216	1304	1106	1048	929	914	1425	1351	1323	1166	993
93	992	935	988	944	1431	1318	1217	1303	1106	1048	928	913	1424	1349	1323	1165	992

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94	990	934	987	944	1431	1317	1215	1301	1106	1046	927	912	1421	1348	1321	1165	990
95	989	931	985	942	1429	1316	1213	1298	1106	1045	927	911	1418	1346	1318	1162	989
96	986	929	983	940	1428	1313	1211	1295	1105	1043	927	909	1414	1342	1316	1160	986
97	982	927	981	937	1425	1311	1209	1292	1103	1042	926	907	1410	1339	1312	1157	982
98	979	925	978	936	1423	1308	1206	1288	1101	1039	923	903	1405	1336	1309	1154	979
99	975	921	974	933	1418	1304	1203	1284	1099	1035	921	900	1401	1331	1305	1150	975
100	970	917	970	930	1412	1299	1198	1276	1095	1031	918	896	1394	1327	1299	1146	970
101	966	912	966	927	1406	1294	1193	1269	1092	1026	915	892	1388	1324	1295	1141	966
102	961	908	963	924	1399	1288	1187	1261	1089	1021	911	887	1383	1320	1291	1135	961
103	957	903	960	922	1393	1282	1181	1254	1085	1016	904	882	1375	1315	1287	1129	957
104	952	897	955	919	1385	1275	1173	1246	1080	1009	899	878	1368	1310	1281	1122	952
105	947	890	950	915	1377	1267	1165	1237	1074	1004	894	872	1357	1303	1274	1114	947
106	940	881	944	910	1369	1259	1156	1227	1069	998	888	866	1346	1296	1266	1105	940
107	934	873	938	906	1359	1249	1147	1217	1064	991	881	859	1335	1289	1258	1095	934
108	927	867	931	903	1348	1240	1137	1207	1058	983	873	853	1325	1282	1250	1085	927
109	918	858	925	899	1336	1229	1125	1198	1051	976	863	845	1314	1274	1241	1075	918
110	910	850	918	894	1324	1217	1115	1186	1044	967	853	837	1301	1265	1230	1063	910
111	900	840	910	887	1312	1203	1102	1174	1036	957	845	828	1287	1255	1218	1052	900
112	889	831	902	880	1299	1190	1090	1162	1028	948	837	819	1273	1244	1206	1039	889
113	878	821	892	872	1285	1176	1077	1149	1021	938	828	808	1257	1232	1192	1027	878
114	865	812	882	864	1271	1161	1063	1134	1012	928	817	798	1244	1220	1179	1015	865
115	854	802	873	855	1255	1144	1050	1120	1003	916	808	788	1228	1208	1165	1001	854
116	841	791	863	844	1238	1128	1037	1106	993	905	798	776	1212	1195	1148	988	841
117	828	780	852	834	1222	1112	1021	1091	981	893	787	765	1194	1180	1133	973	828
118	819	771	841	823	1207	1092	1006	1076	968	880	777	753	1179	1165	1117	958	819
119	804	760	829	812	1189	1075	995	1060	957	867	766	740	1163	1151	1103	945	804
120	792	748	817	801	1169	1058	981	1045	944	855	758	726	1143	1135	1088	930	792
121	779	735	805	790	1151	1041	966	1027	931	842	745	714	1123	1121	1070	914	779
122	767	722	792	776	1133	1029	949	1011	916	830	731	701	1109	1104	1054	900	767
123	753	708	779	763	1117	1007	933	994	901	815	719	689	1087	1086	1037	883	753
124	741	694	766	752	1096	989	917	976	887	801	707	675	1067	1067	1019	866	741
125	728	679	757	739	1076	971	900	958	872	787	693	662	1048	1049	1006	851	728

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126	717	666	743	726	1056	952	882	944	857	771	679	650	1028	1028	990	832	717
127	702	653	729	716	1036	934	865	926	840	760	666	635	1009	1016	973	816	702
128	688	638	714	704	1018	916	846	907	825	745	653	623	986	996	957	798	688
129	674	625	701	692	998	898	827	890	814	729	638	611	964	977	938	780	674
130	660	610	689	679	977	877	809	873	796	715	624	598	944	959	920	762	660
131	645	596	675	667	957	858	791	856	779	702	610	585	922	940	902	744	645
132	631	582	662	654	935	839	772	839	765	687	596	570	902	923	882	725	631
133	616	567	647	642	914	817	752	819	750	672	581	555	880	902	864	708	616
134	599	553	633	628	892	798	734	800	735	656	567	541	857	882	842	688	599
135	583	538	616	613	868	778	716	779	719	640	552	524	836	860	821	667	583
136	565	522	602	599	845	755	695	759	703	623	539	509	810	836	799	648	565
137	548	508	586	583	822	732	676	740	687	607	525	494	788	815	777	629	548
138	530	492	571	568	798	709	657	720	670	591	510	478	764	791	755	610	530
139	513	476	555	551	771	687	637	699	652	574	495	461	740	769	732	589	513
140	495	461	538	534	748	662	615	676	635	557	478	445	717	744	707	567	495
141	477	444	520	518	723	640	595	655	616	538	461	429	691	717	684	547	477
142	458	428	503	500	696	616	574	633	596	521	445	412	667	692	660	526	458
143	441	412	486	482	671	593	550	609	576	503	428	396	643	668	633	505	441
144	424	396	470	464	645	568	528	587	556	485	411	381	618	644	609	482	424
145	407	379	452	447	618	546	505	564	534	464	394	365	597	620	583	461	407
146	389	361	436	428	589	523	481	539	514	446	377	348	573	594	558	439	389
147	371	345	417	410	562	501	459	517	493	425	359	333	550	569	532	417	371
148	352	328	398	392	536	475	437	493	471	406	341	317	528	543	505	396	352
149	335	313	382	374	509	452	415	469	448	386	323	299	504	517	480	375	335
150	318	298	363	355	483	428	393	445	426	367	306	283	480	493	453	353	318
151	300	283	344	336	457	405	369	419	405	348	287	267	455	467	427	333	300
152	281	268	326	318	431	379	348	395	382	327	271	251	430	442	403	313	281
153	263	254	308	299	404	356	327	370	362	308	255	234	403	416	377	295	263
154	246	237	290	282	379	331	305	348	341	290	238	218	377	387	353	277	246
155	229	224	272	262	355	309	285	326	320	270	221	203	350	361	325	256	229
156	211	210	255	245	331	288	266	305	300	252	206	188	327	337	301	239	211
157	196	197	236	228	306	267	246	285	277	235	192	173	304	311	276	222	196

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158	179	184	219	210	283	244	226	262	256	217	177	158	280	286	254	203	179
159	165	170	201	192	257	223	207	242	234	200	163	145	259	263	231	187	165
160	149	156	183	174	235	204	190	220	214	183	149	132	236	240	208	171	149
161	136	144	166	158	214	185	174	200	195	167	134	120	217	216	187	155	136
162	123	131	151	144	196	167	156	182	176	149	121	109	197	194	170	141	123
163	110	120	135	128	176	150	141	165	159	134	109	98	178	174	150	126	110
164	98	108	121	114	157	135	125	146	141	120	98	87	159	155	133	113	98
165	88	95	108	102	139	120	112	130	126	106	86	78	141	137	116	102	88
166	79	86	94	89	123	106	99	116	110	93	76	69	125	120	103	90	79
167	69	76	82	78	109	94	87	101	94	81	66	61	109	103	89	79	69
168	61	67	70	66	94	81	76	87	79	71	57	52	94	89	79	70	61
169	54	58	59	56	81	70	66	73	67	61	49	45	81	74	68	61	54
170	48	50	50	48	70	61	57	62	56	51	43	39	69	64	59	53	48
171	42	42	42	40	60	52	48	52	46	43	37	33	58	53	52	46	42
172	38	36	35	34	53	44	42	44	37	35	32	29	50	45	46	41	38
173	33	31	30	29	46	38	37	37	30	29	27	24	42	38	40	34	33
174	28	26	26	25	40	32	32	31	25	23	23	21	36	33	34	31	28
175	25	22	23	22	34	28	26	26	20	19	19	18	30	28	29	26	25
176	21	19	20	18	29	23	21	19	17	16	15	13	24	23	22	21	21
177	14	15	15	13	19	18	16	14	13	12	11	9	18	16	15	16	14
178	8	9	10	9	11	11	9	10	10	8	7	6	11	10	9	8	8
179	4	4	5	4	7	6	5	6	5	5	4	4	6	5	6	5	4
180	5	4	4	4	5	5	5	5	5	5	4	4	5	6	6	5	5

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Report No.: BLC2010026E-D

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

<b>Test date</b>	2020-11-04	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LED75HIDRODAREA840MOG (closed)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.641	76.18	0.991	8.01
6E-D2	277.0	60	0.307	76.04	0.893	16.18
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	3
Frequency (Hz)	60	R2	88	R10	73
CCT (K)	4024	R3	95	R11	80
Duv	0.0016	R4	81	R12	60
Chromaticity (x, y)	x=0.3805 y=0.3802	R5	80	R13	82
Chromaticity (u', v')	u(u')=0.2238 v'=0.5031	R6	84	R14	97
Color Rendering Index (CRI)	82	R7	85	R15	73
R9	3	R8	63	--	--
Rf	84				
Rg	95				
Rcs,h1(%)	-13				

**Photometric Measurement – Goniophotometer Method:**

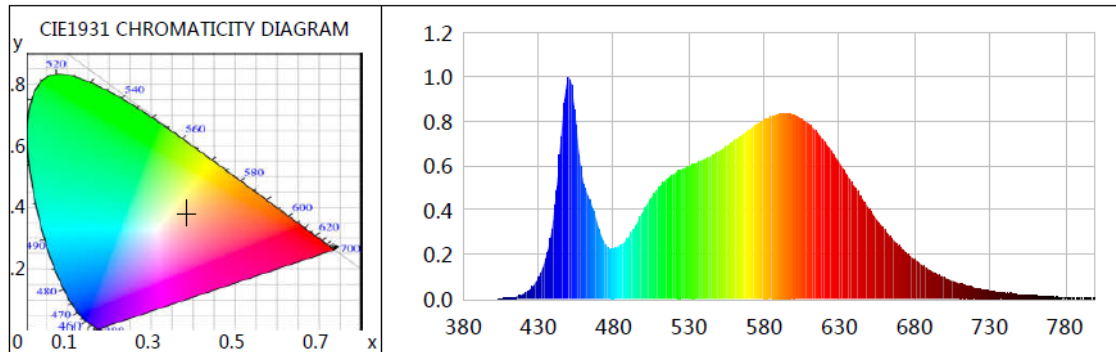
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	11593.8	11461.5	11250	Comply -10%
Luminous Efficacy (lm/W)	152.19	150.73	150	Comply -3%
Most worst Luminous/Highest Watts	150.45		--	--



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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	0.0277	525	0.5828	140.5846	670	0.2348	56.6351
385	0.0004	0.1053	530	0.5970	144.0032	675	0.2048	49.4001
390	0.0004	0.1075	535	0.6111	147.4116	680	0.1764	42.5533
395	0.0007	0.1732	540	0.6288	151.6691	685	0.1517	36.5906
400	0.0013	0.3109	545	0.6432	155.1631	690	0.1302	31.4020
405	0.0016	0.3761	550	0.6654	160.5005	695	0.1111	26.8033
410	0.0041	0.9913	555	0.6866	165.6236	700	0.0953	22.9846
415	0.0098	2.3553	560	0.7137	172.1509	705	0.0814	19.6349
420	0.0223	5.3841	565	0.7374	177.8729	710	0.0690	16.6484
425	0.0470	11.3348	570	0.7613	183.6411	715	0.0587	14.1498
430	0.0959	23.1366	575	0.7876	189.9951	720	0.0499	12.0447
435	0.1868	45.0714	580	0.8085	195.0244	725	0.0424	10.2215
440	0.3673	88.5878	585	0.8217	198.2199	730	0.0361	8.6975
445	0.7272	175.4022	590	0.8329	200.9085	735	0.0308	7.4293
450	1.0000	241.2181	595	0.8346	201.3251	740	0.0267	6.4327
455	0.7848	189.2990	600	0.8294	200.0569	745	0.0234	5.6540
460	0.5215	125.8010	605	0.8126	196.0020	750	0.0192	4.6268
465	0.4295	103.6106	610	0.7875	189.9561	755	0.0174	4.1943
470	0.3188	76.8990	615	0.7527	181.5535	760	0.0145	3.4901
475	0.2388	57.5935	620	0.7111	171.5230	765	0.0111	2.6744
480	0.2263	54.5837	625	0.6639	160.1395	770	0.0112	2.7074
485	0.2430	58.6089	630	0.6131	147.8901	775	0.0093	2.2499
490	0.2784	67.1670	635	0.5603	135.1536	780	0.0080	1.9410
495	0.3363	81.1171	640	0.5069	122.2829	785	0.0048	1.1499
500	0.4000	96.4932	645	0.4541	109.5332	790	0.0066	1.5896
505	0.4556	109.9053	650	0.4025	97.0988	795	0.0057	1.3672
510	0.5028	121.2777	655	0.3555	85.7610	800	0.0031	0.7534
515	0.5378	129.7218	660	0.3110	75.0122			
520	0.5629	135.7886	665	0.2715	65.4839			

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## TM30

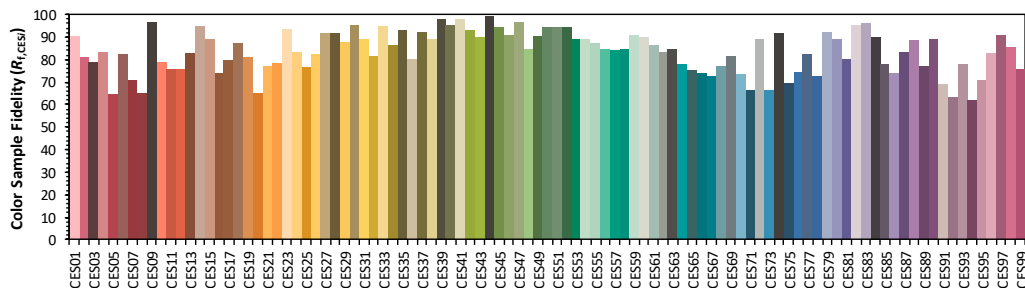
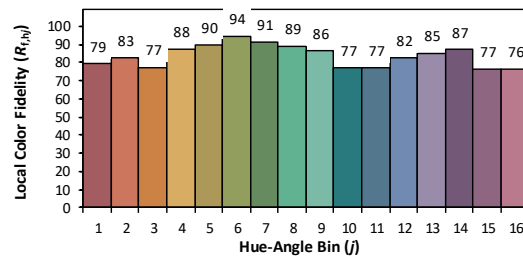
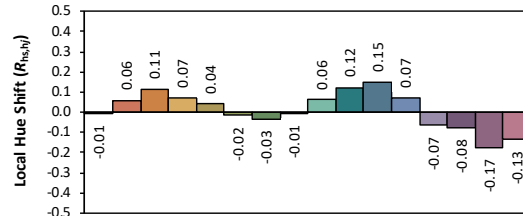
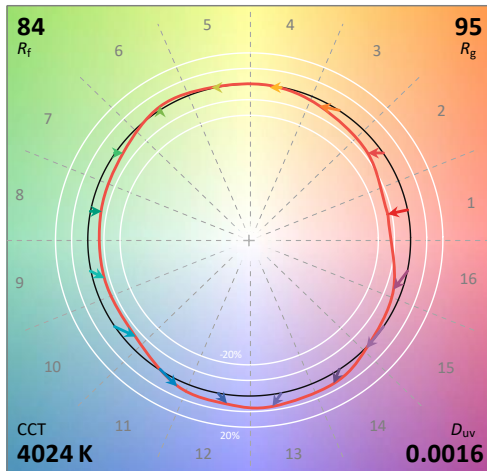
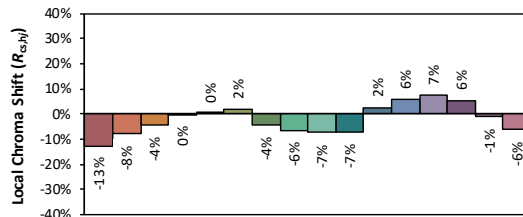
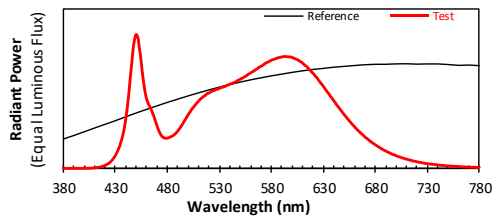
### ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED75HIDRODAREA840MOG (closed)



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

$x$  0.3805  
 $y$  0.3802  
 $u'$  0.2238  
 $v'$  0.5031

CIE 13.3-1995  
(CRI)

$R_a$  82  
 $R_g$  3

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





Report No.: BLC2010026E-D

## Zonal Lumen Tabulation

### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	206.3	1.8%	1.8%
0-40	568.9	4.9%	4.9%
0-60	2,050.5	17.7%	17.7%
60-90	3,768.9	32.5%	32.5%
70-100	4,041.4	34.9%	34.9%
90-120	3,766.0	32.5%	32.5%
0-90	5,819.4	50.2%	50.2%
90-180	5,775.5	49.8%	49.8%
0-180	11,594.9	100%	100%

### Lumens Per Zone

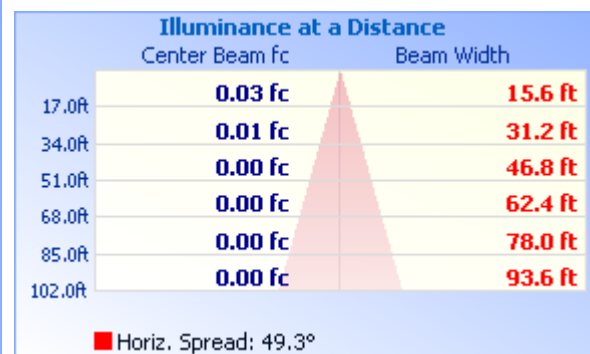
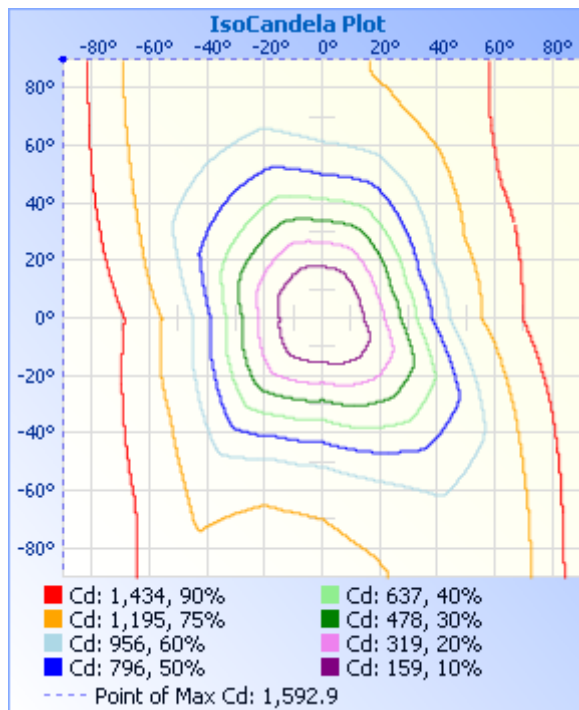
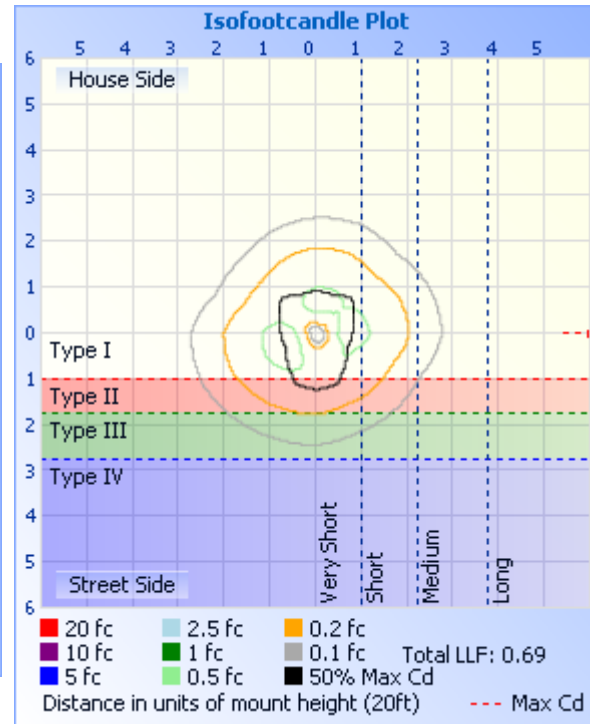
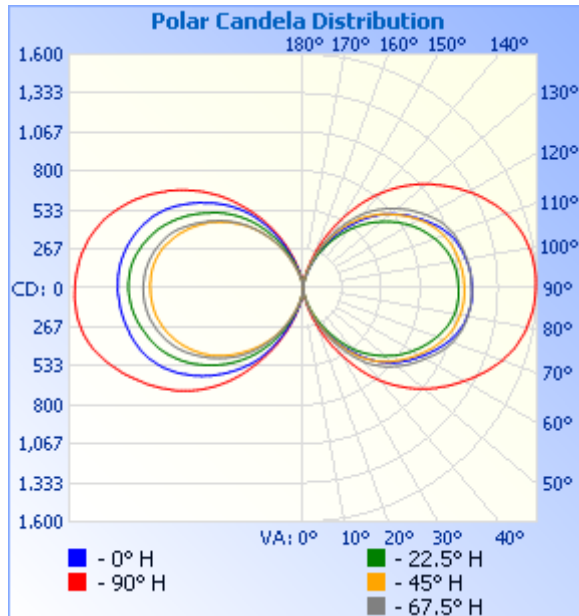
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	4.0	0.0%	90-100	1,377.0	11.9%
10-20	42.3	0.4%	100-110	1,285.0	11.1%
20-30	159.9	1.4%	110-120	1,103.9	9.5%
30-40	362.6	3.1%	120-130	860.3	7.4%
40-50	613.3	5.3%	130-140	600.9	5.2%
50-60	868.2	7.5%	140-150	352.1	3%
60-70	1,104.6	9.5%	150-160	153.2	1.3%
70-80	1,286.1	11.1%	160-170	39.3	0.3%
80-90	1,378.3	11.9%	170-180	3.7	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	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
1	12	10	8	7	9	10	11	13	13	13	13	14	17	15	14	14	12
2	15	13	11	10	15	15	16	16	17	18	16	17	22	19	17	16	15
3	20	16	16	14	22	20	21	21	21	21	20	22	28	26	21	20	20
4	24	21	20	18	29	27	26	25	25	25	24	26	34	31	26	25	24
5	28	26	25	23	35	33	31	31	30	29	28	29	41	37	31	30	28
6	32	30	28	26	41	39	37	37	36	33	33	35	47	43	37	36	32
7	37	34	33	32	48	45	43	44	44	40	38	40	55	52	44	42	37
8	42	39	38	38	57	53	49	53	54	50	44	46	65	61	53	48	42
9	49	46	46	45	67	62	58	64	65	58	53	53	75	75	63	55	49
10	58	52	53	55	78	73	67	76	80	68	60	61	88	88	75	63	58
11	66	60	63	65	90	84	78	88	93	78	70	72	101	103	89	72	66
12	76	69	75	76	104	98	88	104	109	91	79	82	116	121	103	84	76
13	87	79	87	90	120	112	102	119	125	104	92	93	134	140	117	94	87
14	100	88	99	105	138	127	114	134	143	119	102	105	153	160	135	105	100
15	113	100	113	120	154	143	128	151	162	133	114	117	174	181	154	120	113
16	126	113	129	137	178	159	143	168	182	149	127	130	194	206	174	135	126
17	141	127	146	156	200	178	159	187	202	166	140	146	215	232	196	149	141
18	157	142	161	175	220	198	177	209	223	184	157	161	237	256	216	163	157
19	175	155	180	194	240	221	193	228	246	200	172	176	261	281	238	178	175
20	193	170	198	214	264	241	210	249	270	220	188	192	284	307	260	196	193
21	211	185	216	233	288	262	228	269	291	239	204	208	311	333	283	213	211
22	228	202	236	252	313	283	247	291	316	258	220	225	337	362	306	231	228
23	246	219	258	273	341	306	266	315	340	278	237	245	365	391	331	252	246
24	266	236	277	296	368	329	286	340	365	299	257	264	393	422	357	270	266
25	285	255	297	320	394	355	309	364	390	322	275	283	423	453	382	292	285
26	307	273	318	343	423	379	329	389	418	343	294	302	449	483	405	312	307
27	327	291	339	366	449	405	351	414	444	365	313	324	476	513	430	331	327
28	347	309	359	389	476	431	373	441	470	386	331	343	503	541	456	351	347
29	369	329	382	412	503	455	396	466	496	408	352	362	530	569	483	373	369

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30	393	347	403	433	531	484	421	491	521	432	371	382	561	599	509	394	393
31	413	366	425	456	561	510	443	516	546	453	389	401	589	629	533	416	413
32	434	386	447	478	592	536	466	539	571	473	407	421	618	658	557	438	434
33	455	407	469	502	623	562	489	564	593	494	425	442	649	689	584	461	455
34	475	428	488	525	654	589	511	589	615	515	443	462	679	717	610	482	475
35	495	449	511	549	685	617	536	614	636	536	462	481	712	747	634	506	495
36	516	470	534	572	714	647	557	637	657	558	479	501	741	777	662	529	516
37	537	491	554	595	746	675	578	660	679	578	496	520	768	807	686	551	537
38	559	511	575	619	774	702	599	684	699	598	514	541	798	837	711	574	559
39	581	533	598	641	802	728	620	706	720	617	532	560	826	867	734	595	581
40	602	552	615	662	828	754	642	728	740	637	549	579	852	893	757	616	602
41	624	569	634	684	854	782	664	750	759	657	566	596	879	919	779	636	624
42	645	588	653	703	881	807	684	771	780	675	583	614	904	945	802	655	645
43	666	605	670	719	906	830	703	795	800	694	599	633	930	968	824	675	666
44	684	623	688	737	930	855	724	815	819	712	617	650	954	992	843	693	684
45	706	639	705	754	954	878	744	835	839	731	634	666	980	1012	863	712	706
46	725	656	722	771	979	900	763	855	860	749	652	682	1004	1033	883	728	725
47	742	673	738	786	1004	922	783	876	880	768	669	698	1026	1055	902	749	742
48	758	688	753	805	1027	943	802	898	896	785	685	716	1048	1070	920	766	758
49	776	705	767	816	1050	966	823	921	916	803	703	731	1069	1093	939	786	776
50	791	722	783	832	1073	987	842	935	933	819	719	746	1092	1112	953	804	791
51	808	736	793	847	1094	1008	860	955	952	838	735	762	1113	1129	969	821	808
52	823	751	807	861	1115	1028	877	973	968	855	750	776	1134	1147	985	839	823
53	837	766	820	875	1138	1049	895	993	984	871	765	794	1148	1165	999	856	837
54	851	782	834	889	1151	1071	912	1011	1001	887	784	808	1171	1180	1015	874	851
55	865	797	846	901	1175	1090	929	1028	1019	904	793	820	1190	1198	1032	891	865
56	882	811	860	914	1195	1111	943	1044	1036	920	808	837	1208	1213	1045	908	882
57	892	823	873	928	1214	1131	959	1063	1051	936	821	851	1227	1230	1060	923	892
58	907	836	886	940	1233	1152	972	1078	1066	950	833	866	1246	1248	1075	936	907
59	919	851	899	952	1252	1175	987	1094	1080	965	847	880	1264	1265	1090	952	919
60	932	862	911	966	1271	1195	1002	1110	1094	979	858	894	1278	1281	1103	966	932
61	946	874	923	978	1291	1214	1016	1123	1107	992	871	908	1296	1297	1117	982	946

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62	960	887	935	992	1310	1232	1030	1139	1120	1005	882	922	1314	1314	1133	996	960
63	973	899	948	1006	1328	1250	1043	1152	1130	1018	893	935	1332	1329	1148	1008	973
64	987	911	960	1019	1345	1267	1056	1165	1141	1031	904	948	1351	1342	1161	1022	987
65	1001	921	973	1032	1365	1281	1068	1179	1154	1042	915	959	1367	1356	1175	1036	1001
66	1013	933	984	1043	1383	1296	1081	1191	1164	1054	924	970	1381	1368	1187	1049	1013
67	1025	943	994	1054	1400	1309	1094	1203	1172	1064	935	980	1397	1380	1199	1062	1025
68	1038	954	1006	1066	1415	1324	1105	1214	1182	1075	945	989	1414	1391	1212	1073	1038
69	1050	965	1016	1076	1433	1337	1115	1224	1190	1083	953	1000	1429	1405	1227	1086	1050
70	1062	974	1025	1084	1448	1349	1125	1234	1196	1092	961	1008	1444	1419	1240	1099	1062
71	1073	984	1035	1093	1461	1360	1136	1243	1202	1100	970	1015	1456	1429	1249	1109	1073
72	1083	994	1043	1101	1475	1372	1145	1251	1208	1109	978	1024	1471	1439	1257	1119	1083
73	1092	1002	1050	1108	1489	1382	1152	1259	1215	1116	985	1032	1484	1448	1268	1129	1092
74	1100	1011	1058	1114	1502	1392	1160	1269	1220	1123	991	1040	1498	1459	1279	1141	1100
75	1108	1019	1065	1121	1512	1401	1169	1276	1225	1130	999	1046	1507	1467	1287	1151	1108
76	1117	1026	1072	1126	1521	1409	1176	1283	1228	1138	1004	1053	1518	1475	1294	1160	1117
77	1123	1033	1076	1130	1530	1417	1181	1291	1233	1145	1010	1059	1526	1481	1301	1167	1123
78	1130	1039	1081	1135	1541	1425	1187	1297	1238	1151	1016	1065	1534	1488	1307	1174	1130
79	1134	1044	1085	1139	1549	1431	1193	1305	1242	1158	1021	1071	1540	1493	1313	1181	1134
80	1138	1049	1089	1142	1555	1438	1198	1310	1246	1163	1025	1075	1545	1497	1317	1188	1138
81	1142	1053	1092	1144	1560	1443	1200	1316	1250	1169	1029	1078	1551	1500	1321	1193	1142
82	1146	1057	1095	1147	1566	1448	1204	1321	1253	1174	1033	1082	1555	1504	1325	1197	1146
83	1150	1059	1098	1150	1571	1452	1208	1326	1256	1179	1035	1084	1559	1506	1328	1201	1150
84	1153	1061	1100	1151	1576	1455	1210	1330	1259	1182	1038	1087	1561	1509	1330	1204	1153
85	1155	1062	1102	1152	1580	1460	1211	1333	1260	1186	1039	1090	1562	1509	1331	1206	1155
86	1156	1064	1103	1153	1584	1462	1213	1335	1261	1188	1041	1091	1563	1509	1333	1208	1156
87	1157	1065	1103	1155	1587	1464	1215	1336	1264	1191	1044	1093	1565	1509	1334	1209	1157
88	1157	1064	1103	1155	1589	1466	1217	1338	1267	1194	1045	1094	1565	1509	1334	1209	1157
89	1157	1064	1104	1155	1591	1466	1218	1340	1269	1196	1045	1094	1564	1508	1333	1210	1157
90	1156	1063	1103	1154	1592	1468	1217	1341	1269	1197	1046	1094	1562	1508	1333	1210	1156
91	1155	1061	1102	1153	1593	1467	1216	1340	1269	1197	1046	1094	1561	1506	1331	1209	1155
92	1154	1060	1101	1152	1593	1466	1216	1339	1268	1196	1046	1092	1560	1505	1331	1208	1154
93	1153	1060	1100	1152	1593	1465	1216	1337	1269	1194	1045	1090	1557	1505	1330	1207	1153

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94	1152	1059	1099	1151	1592	1463	1215	1335	1269	1193	1045	1089	1554	1503	1328	1207	1152
95	1151	1056	1098	1149	1591	1461	1212	1332	1267	1191	1045	1088	1550	1500	1325	1205	1151
96	1149	1054	1096	1147	1588	1460	1210	1329	1266	1190	1043	1086	1546	1496	1322	1203	1149
97	1145	1052	1093	1145	1585	1457	1208	1325	1264	1187	1041	1083	1543	1494	1319	1199	1145
98	1141	1049	1090	1143	1583	1453	1205	1321	1261	1183	1038	1079	1538	1489	1316	1197	1141
99	1136	1044	1087	1139	1579	1448	1201	1315	1258	1179	1035	1075	1533	1484	1312	1192	1136
100	1132	1039	1083	1136	1573	1442	1196	1307	1254	1173	1032	1070	1524	1480	1307	1188	1132
101	1128	1036	1080	1133	1567	1436	1191	1301	1249	1168	1027	1066	1518	1476	1303	1184	1128
102	1124	1031	1076	1130	1560	1429	1185	1294	1245	1161	1022	1060	1512	1471	1299	1179	1124
103	1119	1025	1073	1127	1554	1421	1178	1286	1240	1154	1016	1055	1505	1467	1295	1174	1119
104	1113	1019	1069	1124	1546	1413	1172	1277	1234	1146	1011	1048	1495	1461	1289	1166	1113
105	1107	1011	1064	1118	1537	1403	1164	1267	1228	1138	1005	1042	1485	1453	1282	1159	1107
106	1102	1003	1058	1113	1527	1394	1155	1256	1221	1130	999	1034	1474	1445	1274	1150	1102
107	1095	994	1052	1109	1517	1385	1146	1246	1214	1121	991	1027	1463	1437	1267	1141	1095
108	1088	987	1046	1105	1506	1374	1135	1237	1208	1112	980	1020	1453	1429	1260	1132	1088
109	1079	978	1040	1101	1494	1362	1125	1226	1200	1102	970	1012	1441	1421	1252	1122	1079
110	1068	969	1033	1095	1482	1349	1114	1213	1192	1093	962	1003	1426	1412	1243	1110	1068
111	1058	958	1026	1087	1469	1336	1101	1201	1183	1081	952	994	1412	1401	1232	1098	1058
112	1047	948	1016	1078	1455	1324	1089	1190	1174	1072	942	984	1396	1390	1220	1086	1047
113	1036	937	1006	1070	1440	1309	1076	1176	1164	1060	931	973	1380	1378	1208	1074	1036
114	1024	927	997	1061	1423	1295	1064	1160	1154	1047	921	961	1364	1366	1195	1061	1024
115	1012	915	987	1051	1405	1280	1050	1145	1144	1035	910	947	1347	1353	1182	1048	1012
116	996	904	977	1041	1389	1264	1036	1132	1133	1020	898	933	1331	1339	1166	1034	996
117	982	893	965	1029	1372	1249	1022	1116	1120	1007	886	918	1314	1324	1152	1020	982
118	968	880	953	1016	1355	1233	1006	1101	1107	994	874	903	1296	1308	1137	1006	968
119	953	868	942	1003	1335	1215	991	1085	1094	980	863	888	1276	1293	1123	992	953
120	940	856	928	990	1317	1196	977	1068	1081	964	850	872	1257	1274	1106	978	940
121	925	842	916	978	1295	1176	962	1051	1064	950	836	858	1237	1255	1089	965	925
122	909	829	902	963	1276	1156	943	1033	1048	935	824	842	1217	1234	1073	949	909
123	893	811	888	949	1258	1132	931	1016	1033	918	810	827	1196	1213	1055	929	893
124	884	802	875	934	1235	1111	914	999	1015	902	797	809	1175	1194	1040	917	884
125	869	786	860	921	1214	1090	897	979	998	886	786	797	1152	1175	1024	899	869

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126	853	769	847	907	1193	1071	879	961	981	870	768	779	1137	1156	1008	881	853
127	837	755	831	893	1173	1050	862	942	964	852	753	764	1112	1138	991	863	837
128	821	738	816	876	1150	1028	844	923	946	836	737	749	1089	1119	972	844	821
129	806	723	801	860	1132	1007	827	904	929	818	720	732	1066	1098	953	824	806
130	790	707	786	845	1108	986	806	886	910	806	703	716	1043	1076	941	807	790
131	773	692	773	829	1087	963	788	867	889	787	688	701	1020	1059	920	788	773
132	756	676	758	812	1064	939	770	849	873	770	671	685	996	1037	902	769	756
133	740	661	742	798	1039	918	751	829	855	753	656	667	974	1017	883	749	740
134	721	643	727	782	1016	896	731	810	837	736	637	651	949	994	862	731	721
135	701	627	709	764	990	871	712	790	817	717	621	634	924	971	842	711	701
136	682	609	693	747	966	848	693	769	798	699	605	615	898	947	820	692	682
137	663	593	677	730	940	823	670	747	779	681	589	596	873	922	798	671	663
138	643	576	659	713	913	799	651	727	760	661	571	578	849	899	774	649	643
139	622	557	643	693	888	770	631	706	738	642	554	559	822	871	753	629	622
140	601	541	624	673	859	744	612	682	718	623	536	538	795	848	728	607	601
141	581	522	605	653	832	718	590	660	698	602	516	520	769	818	703	584	581
142	559	504	586	632	805	688	569	636	675	583	498	500	738	789	679	562	559
143	538	486	567	610	776	661	549	611	654	562	480	481	710	761	654	541	538
144	518	468	550	590	747	635	527	588	632	542	461	460	685	732	630	521	518
145	498	451	529	567	718	608	503	565	609	519	440	442	657	706	604	497	498
146	477	432	509	545	686	578	481	541	584	497	422	423	632	676	576	472	477
147	455	413	490	522	656	552	460	515	560	477	401	402	605	647	549	452	455
148	434	395	468	500	626	526	435	490	535	453	382	383	579	618	522	428	434
149	414	377	448	475	595	497	413	465	510	431	361	364	554	590	496	409	414
150	390	360	429	454	567	471	392	441	482	409	342	345	526	562	471	386	390
151	369	343	408	432	535	445	371	414	456	387	322	325	498	532	444	363	369
152	349	324	388	409	507	420	347	390	431	362	301	304	472	501	418	343	349
153	327	307	368	387	479	392	325	366	404	341	283	285	446	472	392	321	327
154	305	290	346	364	448	367	304	341	379	320	266	264	418	443	364	300	305
155	284	274	325	341	419	343	280	318	355	299	246	245	391	414	338	280	284
156	263	258	306	320	392	320	260	296	330	277	229	227	365	384	312	262	263
157	244	243	285	297	366	295	240	273	303	257	211	209	341	357	289	242	244

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158	224	226	266	276	336	273	222	250	279	238	195	190	315	327	266	225	224
159	207	211	245	254	311	249	203	230	257	218	177	173	289	299	241	207	207
160	188	195	224	231	287	226	187	210	232	199	162	157	264	272	219	190	188
161	170	180	205	210	260	206	170	190	211	180	147	141	239	246	195	172	170
162	153	164	185	191	236	187	154	172	189	162	131	127	218	222	175	156	153
163	138	150	169	171	212	168	137	153	168	144	118	115	196	199	155	142	138
164	124	136	150	153	191	150	123	137	148	128	105	102	175	176	139	130	124
165	113	124	133	137	170	135	110	119	132	113	92	90	154	157	122	116	113
166	99	110	118	120	152	120	96	106	116	99	81	78	135	139	108	101	99
167	90	97	103	105	134	105	84	93	99	86	71	68	118	118	95	91	90
168	80	86	90	92	119	92	74	79	82	74	62	59	104	101	82	80	80
169	71	76	76	78	103	80	65	67	69	64	54	51	87	86	71	70	71
170	62	66	65	66	89	71	56	58	58	53	46	44	74	74	63	61	62
171	55	56	55	56	76	62	49	50	47	45	39	38	63	63	55	53	55
172	49	47	47	47	66	54	43	42	40	37	34	33	52	53	48	46	49
173	43	40	40	40	57	47	37	36	33	31	29	28	46	46	42	40	43
174	38	35	33	34	50	41	32	31	27	25	25	24	38	40	36	36	38
175	33	29	28	29	42	35	28	26	23	20	20	20	33	35	31	31	33
176	28	25	24	25	37	32	24	20	18	16	15	15	27	28	25	25	28
177	22	21	21	21	29	23	18	14	14	12	11	10	20	19	18	19	22
178	13	14	16	16	16	13	10	10	11	8	7	6	12	12	9	10	13
179	6	6	7	6	11	6	5	6	5	5	6	5	7	6	6	5	6
180	6	6	5	5	6	6	6	6	5	6	6	5	7	7	6	6	6

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

<b>Test date</b>	2020-11-04	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LED75HIDRODAREA850MOG (closed)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.620	73.78	0.991	8.12
6E-D3	277.0	60	0.302	73.96	0.885	16.98
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	89	R10	74
CCT (K)	4937	R3	95	R11	79
Duv	0.0037	R4	80	R12	54
Chromaticity (x, y)	x=0.3466 y=0.3603	R5	80	R13	83
Chromaticity (u', v')	u(u')=0.2091 v'=0.4891	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:**

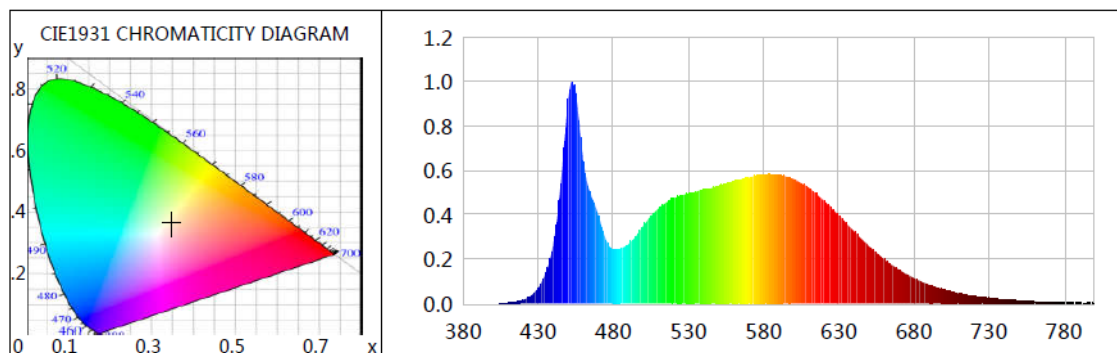
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	11278.0	11169.4	11250	Comply -10%
Luminous Efficacy (lm/W)	152.86	151.02	150	Comply -3%
Most worst Luminous/Highest Watts	151.02			--



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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	0.0002	0.0625	525	0.4853	149.8476	670	0.1521	46.9504
385	0.0002	0.0640	530	0.4956	153.0122	675	0.1321	40.7991
390	0.0005	0.1489	535	0.5031	155.3521	680	0.1140	35.2080
395	0.0003	0.1071	540	0.5133	158.4876	685	0.0984	30.3726
400	0.0009	0.2677	545	0.5196	160.4307	690	0.0843	26.0323
405	0.0014	0.4294	550	0.5292	163.4059	695	0.0728	22.4804
410	0.0027	0.8434	555	0.5386	166.2904	700	0.0619	19.1178
415	0.0073	2.2463	560	0.5513	170.2195	705	0.0532	16.4303
420	0.0162	5.0048	565	0.5600	172.9070	710	0.0448	13.8369
425	0.0340	10.5056	570	0.5669	175.0246	715	0.0394	12.1512
430	0.0705	21.7547	575	0.5759	177.8309	720	0.0324	10.0048
435	0.1390	42.9223	580	0.5809	179.3569	725	0.0295	9.1163
440	0.2656	81.9947	585	0.5797	178.9785	730	0.0240	7.4029
445	0.5404	166.8607	590	0.5794	178.9003	735	0.0196	6.0529
450	0.9225	284.8266	595	0.5722	176.6730	740	0.0179	5.5404
455	0.9431	291.1849	600	0.5610	173.2247	745	0.0149	4.6011
460	0.6364	196.4834	605	0.5417	167.2421	750	0.0129	3.9810
465	0.4883	150.7548	610	0.5212	160.9154	755	0.0108	3.3431
470	0.3925	121.2011	615	0.4942	152.5812	760	0.0099	3.0603
475	0.2862	88.3601	620	0.4645	143.4141	765	0.0079	2.4276
480	0.2424	74.8420	625	0.4312	133.1511	770	0.0075	2.3088
485	0.2477	76.4718	630	0.3968	122.5048	775	0.0065	1.9949
490	0.2665	82.2773	635	0.3611	111.4795	780	0.0056	1.7147
495	0.3033	93.6490	640	0.3263	100.7358	785	0.0033	1.0192
500	0.3503	108.1619	645	0.2923	90.2510	790	0.0046	1.4090
505	0.3934	121.4797	650	0.2579	79.6225	795	0.0033	1.0255
510	0.4285	132.3067	655	0.2278	70.3296	800	0.0018	0.5677
515	0.4548	140.4287	660	0.2002	61.8081			
520	0.4730	146.0414	665	0.1746	53.9199			

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## TM30

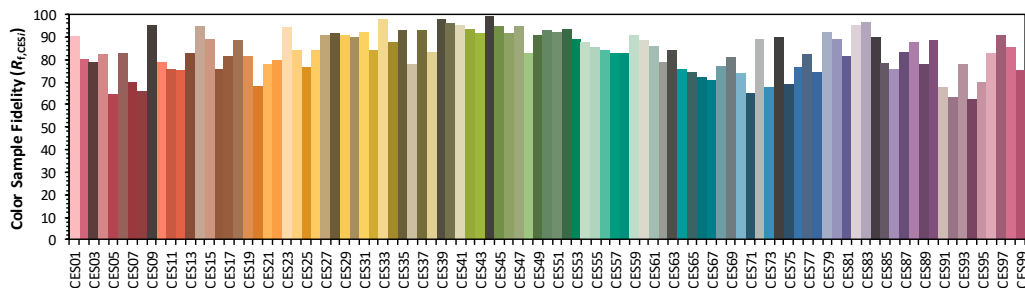
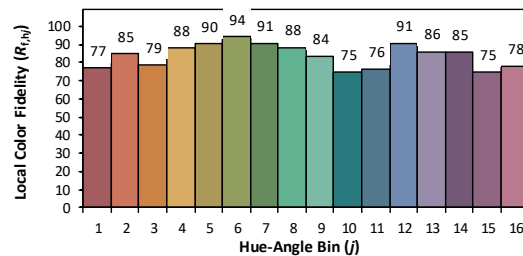
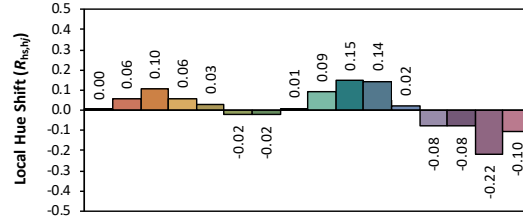
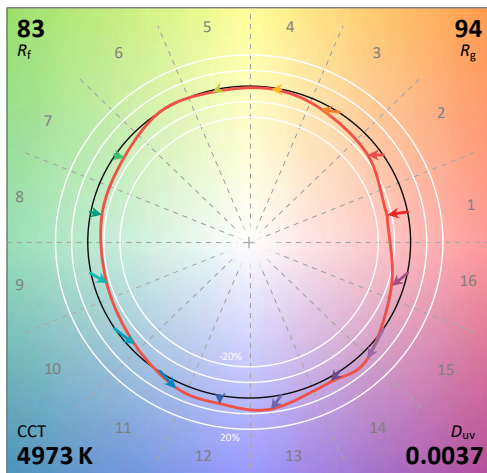
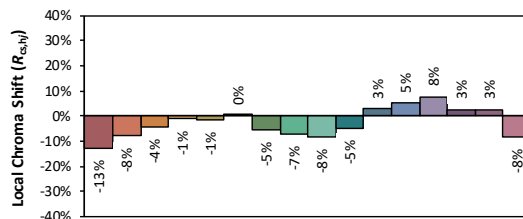
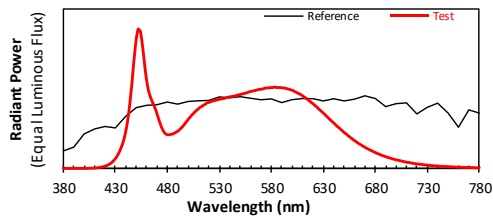
### ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED75HIDRODAREA850MOG (closed)



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

$x$  0.3466

$y$  0.3603

$u'$  0.2091

$v'$  0.4891

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	202.9	1.8%	1.8%
0-40	557.2	4.9%	4.9%
0-60	1,999.9	17.7%	17.7%
60-90	3,667.5	32.5%	32.5%
70-100	3,930.8	34.9%	34.9%
90-120	3,658.2	32.4%	32.4%
0-90	5,667.3	50.3%	50.2%
90-180	5,611.7	49.8%	49.8%
0-180	11,279.0	100%	100%

### Lumens Per Zone

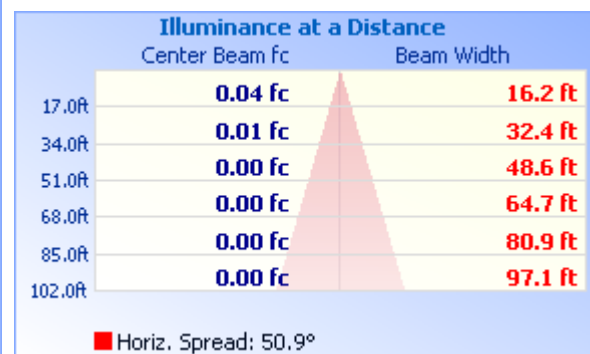
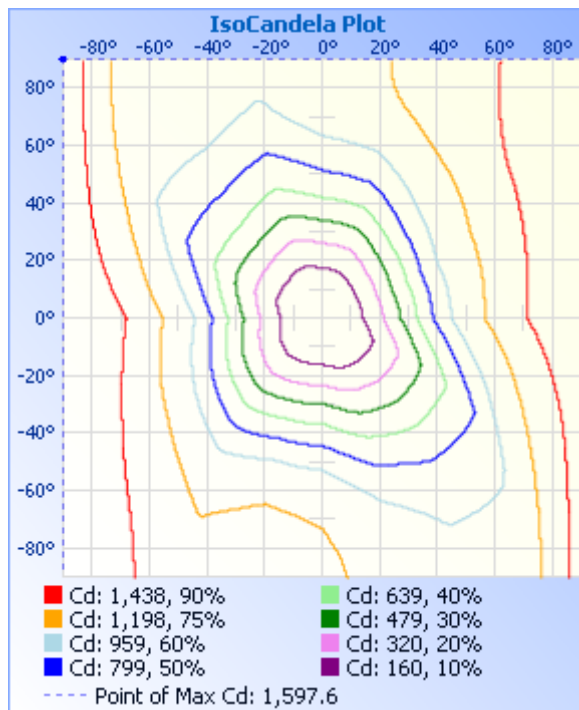
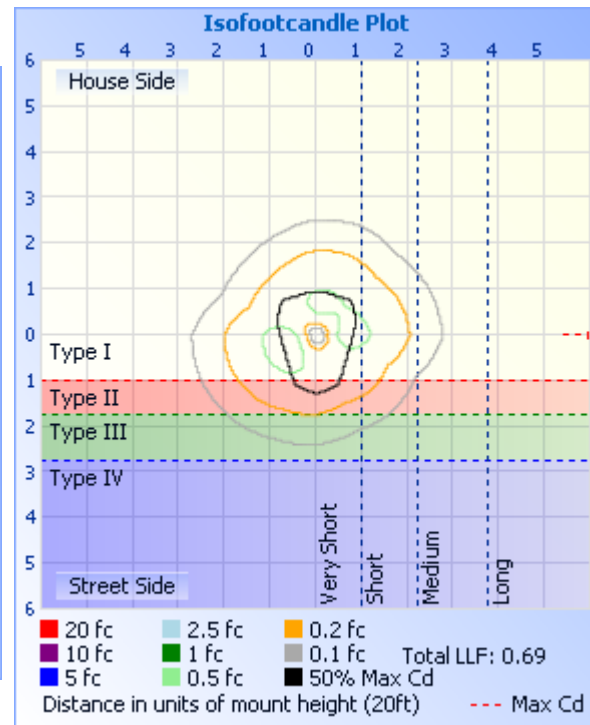
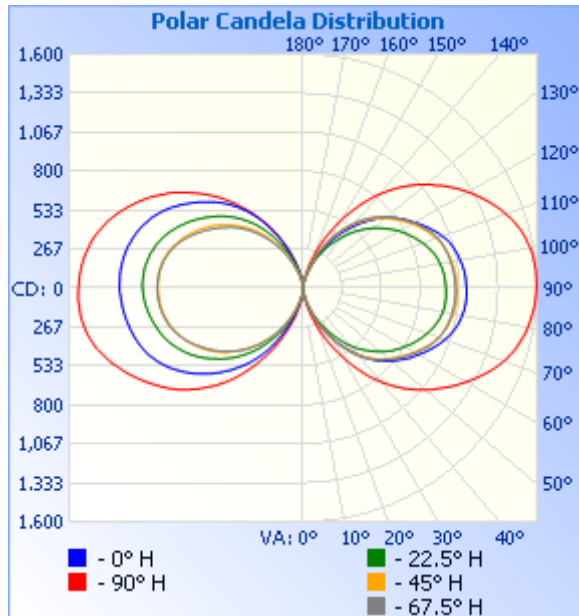
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	4.0	0.0%	90-100	1,339.0	11.9%
10-20	41.8	0.4%	100-110	1,249.6	11.1%
20-30	157.1	1.4%	110-120	1,069.7	9.5%
30-40	354.3	3.1%	120-130	834.6	7.4%
40-50	597.6	5.3%	130-140	584.6	5.2%
50-60	845.1	7.5%	140-150	342.8	3%
60-70	1,075.7	9.5%	150-160	149.5	1.3%
70-80	1,251.9	11.1%	160-170	38.4	0.3%
80-90	1,339.9	11.9%	170-180	3.6	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	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1	14	12	10	9	11	9	8	8	10	11	12	12	17	17	16	16	14
2	18	15	14	13	17	15	13	13	15	15	15	16	21	21	19	19	18
3	23	19	18	15	22	20	19	19	18	18	19	20	28	26	24	24	23
4	27	23	22	20	30	27	24	24	24	22	24	24	35	31	29	29	27
5	31	26	26	23	36	33	29	29	28	26	27	28	40	37	34	33	31
6	35	31	30	26	43	39	35	35	32	30	31	32	49	45	42	39	35
7	41	35	35	32	51	46	40	39	38	35	35	37	58	53	50	46	41
8	46	40	41	38	61	53	46	47	47	42	41	43	67	65	59	52	46
9	55	47	48	46	71	61	54	56	57	49	48	50	80	78	71	60	55
10	63	55	56	54	82	71	64	67	67	56	55	57	93	92	84	69	63
11	72	62	65	64	96	81	75	80	80	66	64	66	107	110	97	78	72
12	82	71	77	75	111	93	85	91	95	76	75	75	122	128	114	89	82
13	94	80	88	88	127	108	96	105	110	88	85	84	141	145	129	101	94
14	105	90	100	101	146	123	108	122	127	99	95	94	160	166	148	114	105
15	119	102	115	116	165	139	122	138	143	111	106	107	181	190	169	129	119
16	134	114	130	133	188	155	137	155	162	126	117	119	204	214	190	144	134
17	149	128	145	150	208	173	154	175	181	141	129	133	225	240	212	159	149
18	164	141	162	167	228	194	171	194	202	158	144	147	245	265	234	174	164
19	181	154	179	184	251	214	188	215	224	176	159	160	267	289	253	190	181
20	199	168	198	203	276	234	206	235	249	192	174	174	293	313	279	206	199
21	217	182	217	220	303	255	225	256	272	209	190	187	318	340	301	225	217
22	234	199	235	240	329	276	244	277	295	227	207	204	344	368	325	243	234
23	252	215	256	261	356	299	266	302	318	246	223	220	372	397	351	263	252
24	270	232	275	281	383	325	286	325	342	265	241	237	399	426	374	282	270
25	290	249	295	303	408	349	307	349	368	286	257	254	427	455	400	302	290
26	311	265	314	325	437	373	328	373	393	306	275	273	456	484	425	323	311
27	332	282	334	346	464	397	353	400	418	326	293	290	482	513	453	342	332
28	352	299	355	366	491	421	375	425	444	346	311	307	508	542	478	362	352
29	373	317	377	385	519	448	399	450	469	365	331	325	534	569	503	385	373

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30	394	335	397	406	548	474	422	475	496	387	348	342	561	596	526	404	394
31	414	353	418	425	577	500	446	499	520	407	365	360	591	623	553	426	414
32	434	372	438	446	610	525	468	526	544	426	382	379	620	651	578	448	434
33	455	391	459	468	640	551	495	550	567	445	398	397	650	682	604	471	455
34	475	409	480	490	671	579	517	575	588	464	417	414	679	710	629	491	475
35	495	429	501	511	701	608	540	598	610	484	434	432	708	738	652	514	495
36	514	449	522	533	733	635	563	623	634	505	450	450	737	767	680	536	514
37	536	467	542	554	761	662	584	648	655	524	467	470	765	796	705	559	536
38	556	486	561	574	787	688	608	670	675	544	483	487	793	822	730	580	556
39	577	503	580	593	815	717	630	694	695	562	501	504	819	851	754	602	577
40	598	521	598	612	841	742	651	717	716	582	517	521	845	880	778	622	598
41	617	537	616	629	867	767	673	739	738	600	533	537	869	904	799	642	617
42	638	554	633	645	893	790	695	762	759	618	549	553	896	927	821	662	638
43	657	569	650	661	918	813	718	786	778	635	565	571	918	949	842	679	657
44	677	584	665	676	942	837	739	806	799	654	583	586	942	970	862	697	677
45	696	600	681	691	969	859	759	828	818	671	599	601	966	993	883	716	696
46	713	615	698	705	992	880	779	851	838	688	615	616	992	1014	903	732	713
47	730	630	712	720	1015	903	800	872	858	704	631	631	1014	1033	922	752	730
48	746	645	726	735	1038	925	822	893	875	721	647	645	1035	1047	940	770	746
49	761	660	740	743	1060	949	841	919	893	738	666	659	1058	1067	956	788	761
50	775	676	753	760	1083	969	859	933	913	754	680	672	1080	1082	972	805	775
51	789	689	766	774	1105	990	878	955	931	766	696	688	1102	1101	988	825	789
52	804	703	778	785	1125	1010	896	976	948	784	710	701	1121	1118	1003	842	804
53	817	718	791	798	1143	1032	915	995	965	800	725	714	1143	1133	1018	858	817
54	832	731	804	811	1165	1050	932	1013	980	815	739	728	1159	1148	1033	873	832
55	846	744	817	824	1186	1074	948	1032	998	831	753	743	1178	1163	1047	888	846
56	860	757	829	835	1207	1095	962	1049	1014	844	766	754	1195	1179	1064	904	860
57	875	766	840	848	1227	1115	980	1066	1030	860	777	767	1213	1194	1077	920	875
58	885	779	852	861	1246	1136	995	1083	1045	873	789	780	1230	1211	1092	930	885
59	898	791	866	873	1265	1158	1010	1098	1060	887	801	792	1249	1226	1106	945	898
60	911	801	878	887	1284	1179	1024	1114	1074	900	813	804	1265	1243	1122	958	911
61	923	813	889	898	1304	1198	1038	1131	1087	912	824	817	1282	1258	1136	971	923

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62	937	825	902	908	1323	1219	1054	1145	1099	925	836	830	1299	1275	1151	983	937
63	951	836	913	921	1343	1237	1067	1159	1113	935	846	842	1318	1291	1166	998	951
64	961	847	925	933	1362	1254	1080	1173	1123	946	856	854	1334	1305	1180	1010	961
65	974	857	937	944	1379	1271	1094	1187	1133	957	866	866	1350	1320	1194	1024	974
66	987	867	948	954	1397	1286	1107	1200	1144	968	876	876	1364	1335	1206	1035	987
67	999	877	959	964	1414	1301	1121	1212	1154	978	885	886	1379	1347	1222	1046	999
68	1010	886	967	972	1431	1315	1132	1223	1163	988	895	896	1395	1363	1236	1060	1010
69	1021	895	976	981	1446	1327	1144	1235	1171	996	904	907	1411	1377	1249	1072	1021
70	1032	905	987	988	1461	1339	1154	1245	1178	1005	911	916	1424	1389	1260	1083	1032
71	1042	913	995	995	1474	1350	1164	1255	1185	1012	920	924	1436	1399	1271	1094	1042
72	1052	921	1002	1002	1486	1360	1175	1264	1191	1020	928	932	1449	1408	1283	1105	1052
73	1061	929	1009	1007	1499	1369	1183	1273	1197	1026	935	940	1462	1418	1293	1116	1061
74	1068	937	1015	1013	1511	1379	1192	1281	1203	1033	941	948	1475	1428	1303	1128	1068
75	1076	942	1021	1017	1520	1388	1199	1289	1208	1039	948	953	1485	1435	1311	1137	1076
76	1083	949	1025	1021	1528	1395	1206	1298	1212	1045	954	959	1494	1441	1320	1144	1083
77	1089	955	1029	1024	1536	1402	1211	1304	1217	1051	958	964	1502	1447	1328	1153	1089
78	1094	961	1033	1027	1546	1409	1217	1312	1221	1056	963	970	1511	1452	1333	1160	1094
79	1099	964	1037	1031	1554	1417	1223	1319	1226	1062	968	976	1516	1456	1338	1166	1099
80	1103	968	1041	1033	1561	1424	1228	1324	1230	1067	973	980	1522	1459	1342	1171	1103
81	1107	971	1043	1035	1566	1429	1232	1330	1233	1072	976	983	1527	1462	1346	1176	1107
82	1111	974	1045	1036	1571	1434	1234	1336	1237	1076	980	986	1532	1465	1351	1179	1111
83	1114	977	1048	1039	1575	1438	1237	1340	1240	1080	983	989	1534	1467	1353	1182	1114
84	1116	977	1051	1041	1581	1443	1241	1346	1244	1085	985	992	1536	1468	1354	1185	1116
85	1117	978	1052	1041	1585	1447	1243	1348	1245	1088	987	993	1537	1469	1355	1186	1117
86	1118	979	1053	1041	1589	1450	1245	1352	1248	1090	988	995	1539	1469	1356	1187	1118
87	1118	979	1053	1042	1591	1451	1247	1354	1250	1093	989	997	1541	1469	1358	1189	1118
88	1118	979	1053	1043	1593	1453	1249	1355	1251	1096	992	999	1542	1468	1358	1190	1118
89	1118	978	1053	1043	1595	1455	1250	1357	1255	1098	993	999	1540	1468	1357	1190	1118
90	1117	976	1053	1042	1596	1456	1251	1359	1257	1099	993	998	1538	1466	1355	1189	1117
91	1116	975	1051	1040	1598	1456	1251	1358	1256	1099	993	998	1536	1464	1354	1188	1116
92	1115	974	1050	1039	1597	1456	1250	1357	1256	1100	994	997	1535	1465	1354	1187	1115
93	1114	974	1049	1038	1597	1455	1250	1355	1256	1099	993	996	1533	1463	1352	1186	1114

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94	1113	972	1048	1039	1597	1453	1250	1353	1257	1098	992	994	1530	1462	1350	1186	1113
95	1111	969	1046	1038	1595	1452	1248	1350	1256	1097	991	993	1526	1459	1347	1183	1111
96	1109	967	1044	1036	1593	1451	1246	1347	1255	1095	991	991	1523	1456	1344	1180	1109
97	1104	964	1042	1033	1590	1448	1244	1344	1252	1094	990	988	1518	1453	1340	1178	1104
98	1102	961	1039	1031	1588	1445	1242	1340	1251	1091	987	984	1514	1449	1336	1175	1102
99	1097	957	1035	1029	1584	1440	1238	1335	1248	1086	984	980	1507	1444	1330	1170	1097
100	1092	953	1033	1025	1578	1436	1234	1329	1246	1083	982	976	1500	1440	1325	1167	1092
101	1088	948	1029	1023	1571	1431	1229	1322	1242	1079	978	972	1493	1436	1321	1161	1088
102	1083	944	1025	1021	1564	1425	1223	1315	1238	1075	973	967	1487	1433	1316	1154	1083
103	1078	939	1021	1018	1558	1417	1217	1308	1234	1070	967	961	1480	1428	1311	1148	1078
104	1072	932	1017	1015	1550	1409	1208	1299	1229	1062	961	954	1470	1422	1304	1141	1072
105	1066	924	1012	1010	1541	1402	1200	1291	1223	1057	956	948	1459	1416	1297	1132	1066
106	1059	915	1006	1006	1530	1393	1190	1280	1217	1051	950	941	1446	1408	1288	1123	1059
107	1053	908	1000	1002	1518	1383	1181	1270	1211	1045	943	933	1435	1400	1280	1113	1053
108	1043	900	994	998	1507	1373	1171	1260	1205	1036	934	925	1425	1392	1272	1103	1043
109	1033	890	985	992	1493	1362	1161	1250	1197	1028	923	916	1412	1383	1262	1094	1033
110	1021	881	978	985	1478	1350	1150	1238	1189	1019	914	905	1399	1371	1252	1081	1021
111	1011	871	969	977	1465	1337	1138	1226	1181	1010	904	896	1383	1360	1240	1070	1011
112	1000	861	960	968	1450	1326	1125	1215	1172	999	896	884	1367	1346	1227	1057	1000
113	987	850	950	960	1434	1312	1113	1203	1162	989	886	873	1352	1331	1213	1046	987
114	975	840	941	951	1418	1297	1100	1187	1152	979	876	860	1335	1317	1200	1033	975
115	961	830	930	942	1400	1282	1086	1173	1142	966	864	848	1320	1302	1186	1020	961
116	948	818	918	930	1383	1264	1074	1160	1131	955	854	835	1302	1286	1169	1008	948
117	934	808	907	920	1366	1248	1058	1145	1118	943	843	823	1285	1268	1154	994	934
118	921	796	896	910	1349	1230	1044	1130	1105	930	832	810	1268	1252	1139	980	921
119	907	785	885	898	1330	1211	1030	1114	1093	918	821	796	1250	1235	1125	966	907
120	893	772	873	887	1312	1192	1016	1098	1078	905	809	783	1232	1218	1108	951	893
121	877	764	860	874	1291	1173	1001	1080	1064	892	796	770	1212	1202	1092	935	877
122	866	748	847	861	1273	1154	984	1063	1049	880	782	756	1192	1183	1075	920	866
123	853	736	835	848	1254	1132	968	1047	1031	865	769	743	1171	1166	1058	907	853
124	839	722	822	836	1232	1113	956	1030	1017	850	761	731	1149	1148	1041	890	839
125	825	708	808	824	1210	1094	937	1010	1001	837	747	716	1133	1129	1024	872	825

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126	811	695	797	811	1191	1073	918	994	983	822	731	703	1111	1111	1009	855	811
127	795	681	784	799	1170	1048	901	976	966	808	717	689	1086	1094	992	836	795
128	782	667	767	785	1144	1033	883	957	951	794	703	675	1063	1075	974	818	782
129	765	653	758	771	1127	1012	863	937	933	779	687	662	1039	1055	956	799	765
130	749	639	742	757	1103	991	846	921	916	766	671	648	1016	1041	940	781	749
131	734	624	730	743	1081	969	827	902	899	751	657	634	993	1019	921	762	734
132	715	610	715	730	1059	948	808	884	880	736	642	620	969	1001	904	744	715
133	699	595	701	716	1034	927	788	863	867	721	626	603	947	978	883	727	699
134	679	579	685	701	1011	903	769	843	849	704	612	589	923	954	862	707	679
135	660	565	669	685	985	881	750	822	830	688	597	572	898	932	840	688	660
136	641	548	653	669	960	858	729	803	813	672	580	556	874	907	819	668	641
137	620	534	637	652	933	834	708	782	794	654	565	541	850	886	796	647	620
138	602	517	620	636	908	810	689	761	776	638	549	524	826	861	773	628	602
139	582	500	604	618	882	782	669	740	755	621	533	506	799	835	751	605	582
140	562	484	586	600	852	756	646	716	736	604	516	489	773	811	725	583	562
141	543	467	568	582	826	728	625	694	716	584	497	472	747	783	699	560	543
142	523	450	548	562	798	702	604	672	694	566	479	453	718	756	673	536	523
143	504	434	530	541	767	677	583	647	672	547	461	436	692	730	648	515	504
144	484	415	513	523	738	651	559	624	650	528	443	419	667	701	625	494	484
145	466	400	494	502	708	622	537	600	626	507	424	402	639	676	598	472	466
146	445	381	473	483	677	596	514	574	603	487	406	384	615	648	570	448	445
147	425	365	454	463	646	570	490	550	580	468	386	366	589	620	547	428	425
148	404	349	435	443	616	542	467	526	555	445	367	349	565	592	517	404	404
149	384	334	416	423	587	516	445	501	528	424	347	332	540	564	490	384	384
150	363	319	398	402	560	489	423	477	503	404	328	314	513	537	464	362	363
151	343	303	379	381	528	463	398	450	478	383	310	294	486	509	437	341	343
152	323	287	360	361	499	434	377	425	452	360	289	276	460	478	411	323	323
153	302	272	341	342	471	409	355	399	427	340	272	258	433	451	384	301	302
154	282	256	320	320	439	383	331	375	403	319	253	240	407	420	359	279	282
155	262	241	301	300	411	358	308	352	378	298	237	224	381	394	330	260	262
156	243	227	282	280	385	332	286	328	354	279	221	207	355	365	306	243	243
157	225	213	262	260	358	309	265	306	327	260	205	191	330	335	280	225	225

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158	206	198	242	241	330	284	244	282	304	242	188	174	303	309	256	208	206
159	189	184	224	221	304	259	226	260	281	221	174	159	278	282	232	189	189
160	172	169	205	201	279	236	208	240	255	203	159	143	254	257	210	174	172
161	155	155	184	182	250	215	189	216	232	185	145	130	229	232	189	159	155
162	141	141	168	164	227	196	170	197	210	168	130	118	211	207	170	143	141
163	127	129	152	149	205	175	154	178	188	149	117	106	189	185	148	130	127
164	113	118	136	132	185	157	139	158	167	134	105	94	167	164	132	117	113
165	101	105	119	117	162	141	123	141	149	118	92	84	148	146	117	105	101
166	91	94	106	103	145	126	110	125	131	103	82	73	131	127	103	93	91
167	80	83	93	90	128	111	97	110	113	90	73	64	114	108	89	82	80
168	71	73	81	78	113	96	85	95	97	78	64	56	98	92	78	72	71
169	62	64	69	66	97	83	74	81	82	68	55	47	84	80	68	63	62
170	55	55	58	56	83	72	65	69	69	56	47	41	73	68	59	55	55
171	48	46	49	48	74	62	56	58	56	47	41	35	61	57	52	47	48
172	42	40	42	41	64	53	47	48	46	38	34	30	51	48	46	41	42
173	37	33	35	35	54	46	40	41	38	32	29	25	44	41	40	36	37
174	32	28	31	29	47	39	34	34	30	25	25	22	38	36	33	31	32
175	28	24	25	25	40	33	28	28	24	20	20	18	31	30	28	26	28
176	23	21	22	21	33	27	23	20	20	16	15	13	23	23	21	21	23
177	17	17	18	16	24	21	17	16	15	12	11	10	16	15	13	15	17
178	11	11	13	12	15	12	11	10	12	8	7	6	9	8	6	8	11
179	6	5	6	5	9	6	6	8	6	5	5	5	5	5	6	6	6
180	6	5	5	5	6	5	6	6	5	5	5	4	6	6	6	5	6

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**2.4 Electrical, Photometric and Chromaticity Measurements**

(Refer to Work Instruction BL-QP-033)

<b>Test date</b>	2020-11-04	<b>Test Ambient:</b>	25.6 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LED75HIDRODAREA830MOG(open)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.621	73.84	0.991	8.55
6E-D1	277.0	60	0.303	74.78	0.891	15.88
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	92	R10	83
CCT (K)	2962	R3	94	R11	80
Duv	-0.0016	R4	80	R12	73
Chromaticity (x, y)	x=0.4374 y=0.4003	R5	82	R13	84
Chromaticity (u', v')	u(u')=0.2525 v'=0.5200	R6	92	R14	98
Color Rendering Index (CRI)	82	R7	80	R15	73
R9	5	R8	57	--	--
Rf	84				
Rg	95				
Rcs,h1(%)	-12				

**Photometric Measurement – Goniophotometer Method:**

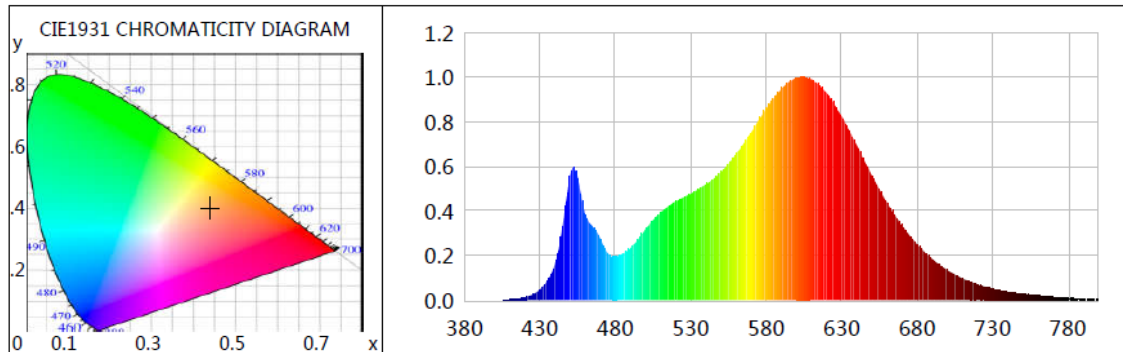
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	10522.9	10523.8	10500	Comply -10%
Luminous Efficacy (lm/W)	142.51	140.73	140	Comply -3%
Most worst Luminous/Highest	140.72		--	--
Beam Angle (°)	--	--	--	--
Center Beam Candle Power (cd)	3568	--	--	--



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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	0.0781	525	0.4604	101.3090	670	0.3341	73.5198
385	0.0005	0.1010	530	0.4775	105.0734	675	0.2898	63.7731
390	0.0004	0.0887	535	0.4958	109.1152	680	0.2489	54.7655
395	0.0004	0.0772	540	0.5197	114.3621	685	0.2143	47.1488
400	0.0007	0.1604	545	0.5425	119.3783	690	0.1839	40.4635
405	0.0011	0.2506	550	0.5742	126.3623	695	0.1571	34.5817
410	0.0028	0.6225	555	0.6110	134.4476	700	0.1342	29.5274
415	0.0063	1.3794	560	0.6550	144.1433	705	0.1145	25.1956
420	0.0131	2.8735	565	0.7011	154.2761	710	0.0972	21.3887
425	0.0253	5.5656	570	0.7530	165.7125	715	0.0831	18.2820
430	0.0473	10.4048	575	0.8087	177.9682	720	0.0705	15.5174
435	0.0869	19.1307	580	0.8611	189.5038	725	0.0599	13.1851
440	0.1620	35.6566	585	0.9053	199.2131	730	0.0505	11.1236
445	0.3291	72.4271	590	0.9486	208.7421	735	0.0430	9.4708
450	0.5567	122.5152	595	0.9788	215.3938	740	0.0363	7.9905
455	0.5491	120.8256	600	0.9980	219.6252	745	0.0326	7.1831
460	0.3862	84.9860	605	1.0000	220.0614	750	0.0268	5.8923
465	0.3302	72.6580	610	0.9910	218.0750	755	0.0225	4.9479
470	0.2734	60.1645	615	0.9663	212.6396	760	0.0201	4.4258
475	0.2093	46.0620	620	0.9299	204.6266	765	0.0169	3.7270
480	0.1948	42.8677	625	0.8790	193.4385	770	0.0141	3.0979
485	0.2095	46.1083	630	0.8245	181.4310	775	0.0122	2.6775
490	0.2333	51.3298	635	0.7620	167.6977	780	0.0097	2.1287
495	0.2724	59.9369	640	0.6943	152.7781	785	0.0084	1.8535
500	0.3185	70.0968	645	0.6272	138.0200	790	0.0085	1.8695
505	0.3590	79.0021	650	0.5602	123.2686	795	0.0054	1.1795
510	0.3932	86.5217	655	0.4956	109.0717	800	0.0060	1.3120
515	0.4205	92.5322	660	0.4369	96.1434			
520	0.4421	97.2904	665	0.3817	83.9940			

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TM30

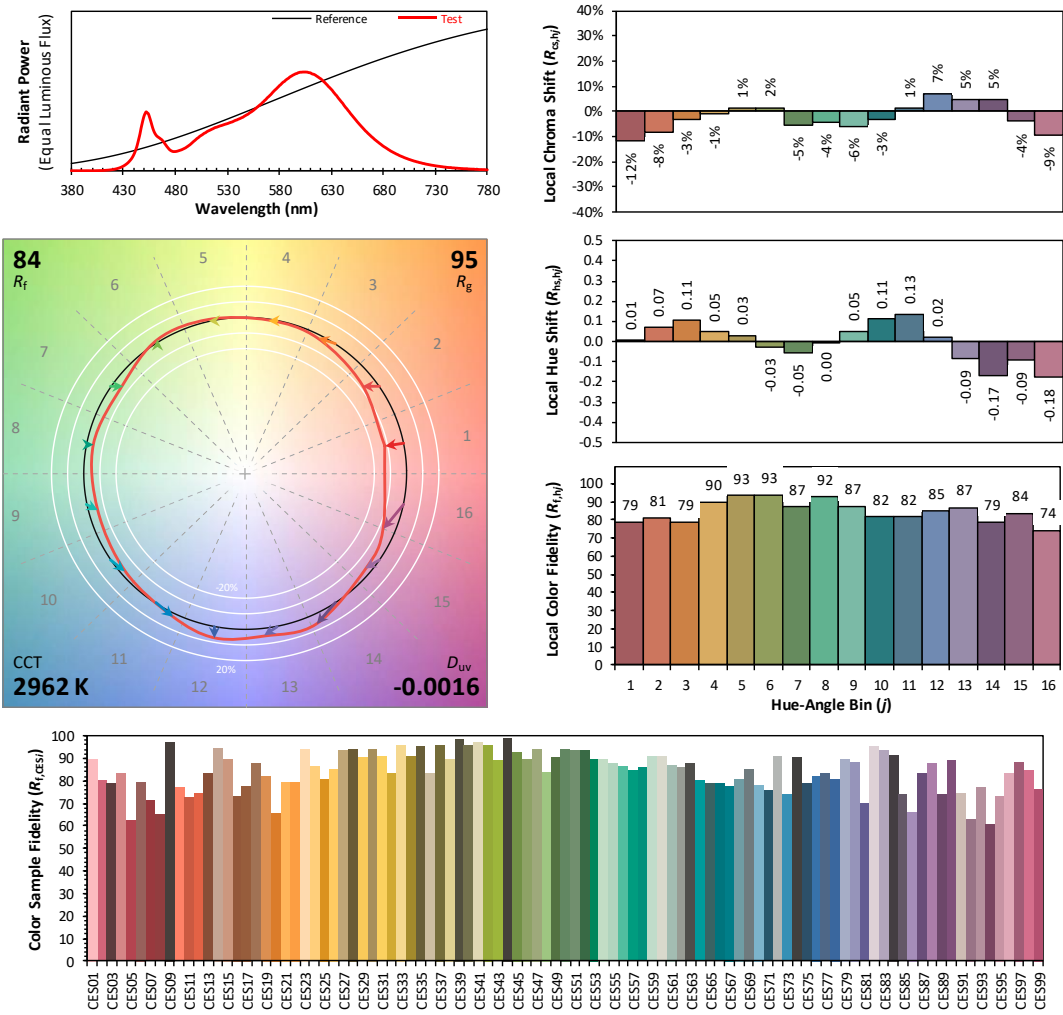
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED75HIDRODAREA830MOG (open)



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

$x$  0.4374  
 $y$  0.4003  
 $u'$  0.2525  
 $v'$  0.5200

CIE 13.3-1995 (CRI)  
 $R_a$  82  
 $R_g$  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

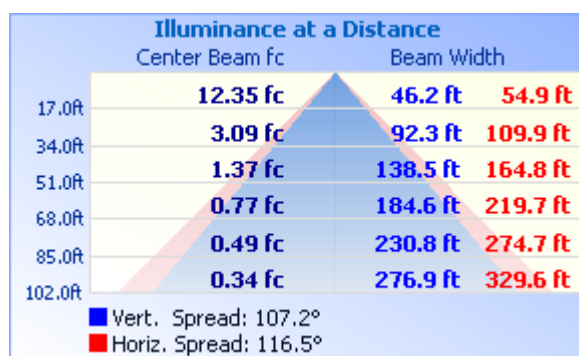
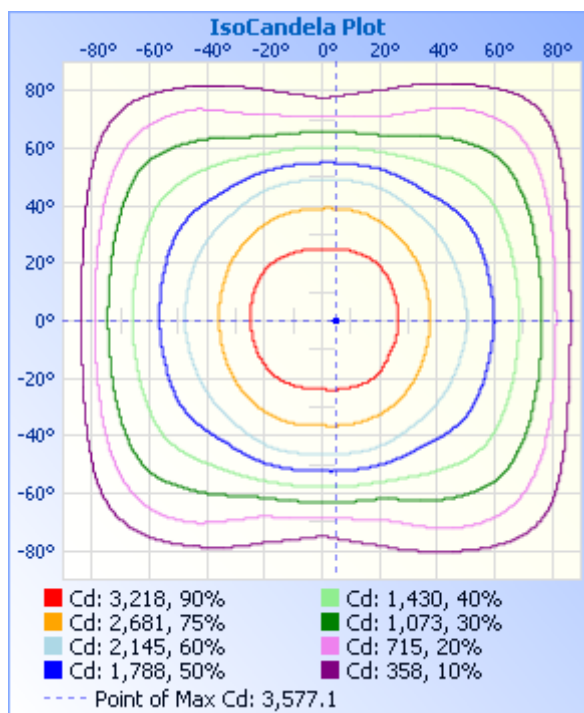
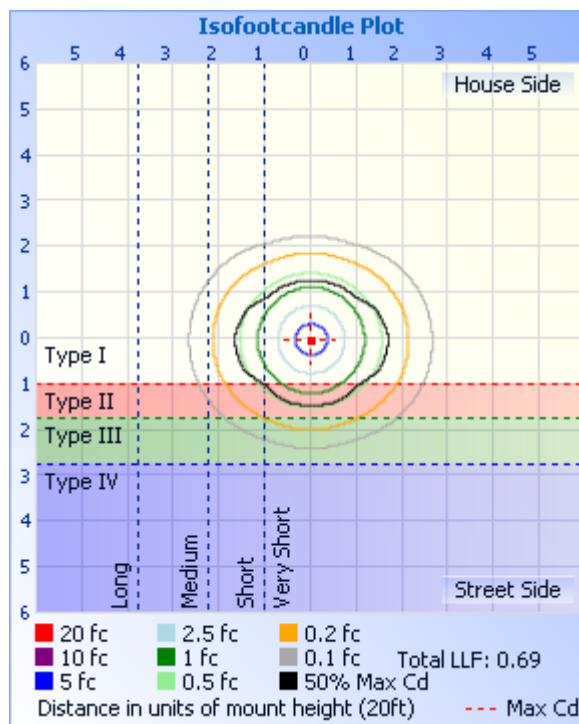
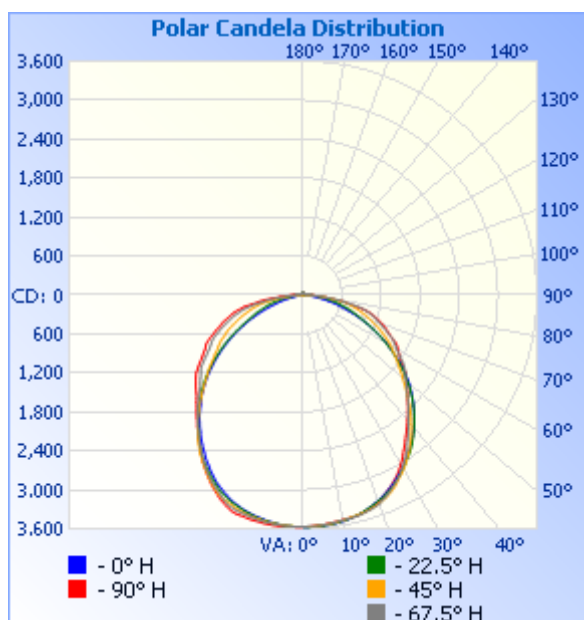
### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	2,812.5	26.7%	26.7%
0-40	4,567.0	43.4%	43.4%
0-60	7,924.2	75.3%	75.3%
60-90	2,385.0	22.7%	22.7%
70-100	1,195.0	11.4%	11.4%
90-120	133.5	1.3%	1.3%
0-90	10,309.2	98%	98%
90-180	212.8	2%	2%
0-180	10,522.0	100%	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	338.7	3.2%	90-100	70.3	0.7%
10-20	982.2	9.3%	100-110	35.5	0.3%
20-30	1,491.6	14.2%	110-120	27.7	0.3%
30-40	1,754.5	16.7%	120-130	24.9	0.2%
40-50	1,766.0	16.8%	130-140	19.5	0.2%
50-60	1,591.2	15.1%	140-150	15.2	0.1%
60-70	1,260.3	12.0%	150-160	10.8	0.1%
70-80	831.1	7.9%	160-170	6.6	0.1%
80-90	293.7	2.8%	170-180	2.2	0%

## 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	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568	3568
1	3571	3570	3566	3562	3567	3571	3564	3569	3568	3567	3568	3567	3570	3571	3570	3574	3571
2	3568	3571	3566	3562	3561	3568	3558	3565	3566	3564	3564	3567	3571	3569	3569	3571	3568
3	3572	3567	3561	3559	3556	3560	3554	3562	3565	3564	3561	3566	3572	3573	3568	3572	3572
4	3569	3564	3558	3555	3549	3555	3549	3557	3560	3561	3559	3564	3577	3572	3569	3573	3569
5	3562	3564	3552	3551	3550	3549	3544	3551	3555	3556	3554	3560	3575	3572	3565	3574	3562
6	3559	3559	3549	3545	3540	3543	3537	3542	3548	3548	3553	3559	3576	3569	3565	3567	3559
7	3555	3553	3544	3540	3532	3538	3527	3533	3541	3542	3549	3552	3573	3570	3560	3565	3555
8	3551	3548	3538	3532	3528	3533	3519	3527	3529	3537	3542	3549	3572	3561	3555	3561	3551
9	3544	3538	3527	3524	3519	3524	3510	3516	3520	3526	3537	3543	3567	3557	3549	3555	3544
10	3535	3529	3521	3519	3515	3516	3499	3507	3508	3517	3529	3537	3566	3548	3543	3547	3535
11	3524	3522	3513	3513	3507	3510	3490	3492	3494	3505	3516	3531	3555	3547	3538	3540	3524
12	3516	3512	3502	3512	3504	3504	3481	3478	3482	3495	3509	3523	3552	3542	3527	3530	3516
13	3502	3498	3493	3505	3502	3500	3466	3463	3467	3479	3500	3510	3549	3533	3522	3519	3502
14	3488	3486	3486	3503	3490	3487	3455	3448	3452	3462	3489	3501	3541	3528	3512	3509	3488
15	3472	3473	3478	3494	3480	3479	3447	3430	3435	3449	3478	3490	3532	3517	3504	3494	3472
16	3455	3452	3472	3480	3471	3466	3430	3412	3418	3429	3465	3482	3528	3504	3492	3478	3455
17	3433	3435	3460	3468	3455	3452	3417	3396	3395	3411	3450	3475	3522	3496	3479	3459	3433
18	3415	3416	3444	3458	3439	3435	3396	3377	3375	3392	3432	3462	3509	3485	3466	3445	3415
19	3392	3399	3432	3442	3415	3416	3376	3357	3351	3371	3410	3443	3487	3471	3450	3420	3392
20	3369	3374	3413	3425	3383	3391	3357	3336	3326	3351	3393	3419	3455	3451	3429	3395	3369
21	3346	3357	3394	3394	3353	3361	3333	3312	3292	3323	3375	3387	3426	3425	3408	3371	3346
22	3317	3332	3374	3367	3323	3323	3311	3282	3265	3300	3355	3348	3392	3389	3389	3347	3317
23	3291	3308	3349	3332	3289	3292	3283	3255	3233	3271	3332	3310	3354	3356	3365	3323	3291
24	3263	3282	3323	3300	3260	3255	3252	3221	3201	3238	3298	3273	3314	3320	3341	3300	3263
25	3231	3253	3290	3261	3224	3219	3217	3191	3168	3202	3259	3234	3275	3283	3315	3271	3231
26	3200	3222	3255	3226	3184	3178	3180	3151	3125	3166	3220	3201	3231	3242	3275	3241	3200
27	3164	3189	3209	3190	3148	3142	3138	3111	3085	3132	3182	3156	3185	3206	3233	3204	3164
28	3131	3152	3169	3150	3105	3100	3097	3073	3045	3092	3135	3117	3140	3166	3194	3168	3131

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29	3098	3117	3134	3101	3059	3055	3048	3029	2998	3054	3092	3070	3095	3121	3149	3134	3098
30	3066	3080	3092	3063	3006	3006	3007	2985	2960	3010	3046	3025	3046	3070	3109	3098	3066
31	3024	3045	3049	3012	2958	2957	2958	2942	2916	2973	3002	2973	2999	3027	3067	3063	3024
32	2987	3003	3006	2962	2899	2908	2914	2900	2866	2931	2955	2927	2947	2976	3022	3022	2987
33	2946	2967	2955	2909	2842	2854	2862	2855	2820	2884	2909	2876	2893	2928	2974	2986	2946
34	2907	2932	2912	2857	2794	2801	2812	2811	2775	2834	2857	2824	2837	2877	2925	2949	2907
35	2870	2890	2858	2795	2738	2744	2757	2768	2728	2786	2802	2774	2788	2824	2879	2913	2870
36	2827	2847	2810	2742	2685	2682	2704	2722	2683	2728	2751	2725	2736	2778	2829	2870	2827
37	2789	2802	2762	2683	2640	2627	2654	2665	2628	2676	2695	2673	2686	2722	2775	2827	2789
38	2744	2753	2707	2628	2593	2571	2598	2611	2579	2624	2638	2617	2641	2670	2721	2783	2744
39	2698	2706	2651	2573	2547	2516	2536	2564	2528	2572	2578	2574	2593	2620	2668	2733	2698
40	2658	2652	2590	2522	2499	2463	2476	2509	2481	2522	2518	2521	2540	2566	2609	2686	2658
41	2606	2606	2533	2464	2456	2401	2418	2459	2428	2465	2460	2473	2496	2517	2556	2631	2606
42	2553	2557	2475	2424	2408	2354	2356	2407	2372	2409	2399	2418	2452	2465	2498	2581	2553
43	2505	2501	2412	2375	2367	2304	2299	2347	2313	2359	2340	2369	2409	2415	2445	2533	2505
44	2456	2450	2356	2327	2318	2250	2232	2294	2267	2299	2277	2324	2362	2366	2386	2480	2456
45	2402	2401	2284	2281	2274	2203	2169	2238	2214	2239	2217	2273	2326	2321	2330	2429	2402
46	2352	2345	2231	2234	2235	2151	2108	2181	2151	2183	2159	2234	2280	2279	2273	2369	2352
47	2297	2288	2171	2187	2194	2105	2049	2112	2093	2126	2099	2188	2245	2232	2219	2312	2297
48	2244	2229	2117	2143	2151	2067	1988	2053	2033	2066	2044	2135	2215	2183	2157	2262	2244
49	2189	2176	2060	2107	2120	2024	1927	1993	1973	2005	1986	2098	2186	2139	2100	2202	2189
50	2134	2110	2007	2065	2092	1985	1874	1932	1911	1944	1933	2069	2154	2098	2046	2144	2134
51	2076	2050	1962	2024	2052	1956	1824	1862	1843	1883	1886	2034	2124	2056	1988	2086	2076
52	2012	1990	1905	1999	2005	1930	1769	1798	1779	1818	1840	1998	2094	2023	1937	2020	2012
53	1949	1935	1856	1973	1973	1892	1714	1738	1716	1755	1783	1970	2067	1996	1885	1960	1949
54	1881	1863	1808	1934	1916	1850	1666	1671	1649	1686	1730	1949	2035	1963	1836	1898	1881
55	1816	1801	1767	1897	1865	1817	1621	1594	1580	1618	1685	1910	1987	1934	1792	1840	1816
56	1746	1733	1721	1857	1819	1760	1582	1534	1515	1550	1642	1859	1938	1900	1736	1769	1746
57	1675	1672	1684	1796	1779	1713	1530	1469	1447	1481	1597	1812	1891	1858	1689	1705	1675
58	1611	1609	1635	1749	1751	1675	1493	1401	1382	1419	1551	1756	1847	1812	1642	1645	1611
59	1545	1538	1595	1704	1717	1631	1454	1332	1314	1350	1520	1715	1805	1761	1593	1580	1545
60	1488	1473	1558	1668	1684	1596	1410	1268	1246	1278	1484	1670	1770	1709	1552	1509	1488

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61	1414	1403	1519	1632	1660	1556	1365	1195	1178	1216	1448	1637	1729	1663	1522	1436	1414
62	1340	1340	1469	1594	1633	1534	1321	1128	1110	1154	1397	1607	1703	1629	1478	1369	1340
63	1272	1271	1424	1565	1591	1491	1276	1070	1034	1089	1352	1580	1678	1584	1440	1304	1272
64	1209	1204	1371	1531	1533	1445	1232	1002	980	1026	1312	1543	1643	1559	1397	1238	1209
65	1138	1143	1331	1475	1485	1397	1188	934	905	966	1275	1499	1594	1530	1358	1172	1138
66	1068	1081	1288	1426	1443	1352	1135	876	841	917	1230	1442	1539	1485	1310	1112	1068
67	1003	1025	1239	1383	1404	1305	1086	820	779	867	1177	1397	1488	1434	1271	1045	1003
68	933	962	1189	1334	1366	1260	1047	773	712	811	1127	1348	1443	1393	1228	981	933
69	870	908	1141	1294	1329	1224	1001	722	649	774	1081	1301	1390	1342	1175	918	870
70	806	857	1103	1255	1293	1182	956	680	589	729	1037	1256	1348	1294	1126	861	806
71	738	814	1054	1217	1250	1147	914	635	534	686	991	1211	1313	1252	1084	813	738
72	686	774	1012	1178	1211	1105	871	589	471	640	944	1164	1266	1215	1037	765	686
73	623	732	967	1139	1163	1058	828	546	425	599	903	1122	1221	1171	995	709	623
74	563	682	924	1096	1120	1010	783	507	378	560	860	1065	1173	1122	954	665	563
75	506	631	879	1052	1066	947	741	467	331	523	811	1016	1132	1073	905	623	506
76	453	591	833	1002	1012	879	696	430	292	475	771	966	1089	1027	860	576	453
77	398	547	794	949	937	824	652	388	248	441	719	907	1029	977	816	536	398
78	349	504	750	881	805	724	598	353	211	396	668	835	966	908	774	498	349
79	302	463	698	790	736	643	524	315	176	362	606	766	915	841	723	457	302
80	269	420	654	684	674	570	461	285	151	322	539	665	797	790	675	420	269
81	227	387	590	621	616	507	388	246	124	282	469	607	716	708	624	382	227
82	189	351	518	565	499	423	327	211	104	251	398	549	668	622	558	345	189
83	162	312	434	492	417	341	269	180	95	205	346	472	604	563	491	310	162
84	137	280	390	393	366	283	216	142	79	168	281	377	493	503	428	278	137
85	113	240	320	339	295	220	159	115	70	134	220	313	400	427	361	243	113
86	93	191	259	283	215	165	126	92	59	109	173	260	355	346	301	208	93
87	82	160	198	202	179	141	105	65	34	87	134	203	283	292	243	167	82
88	66	130	148	163	166	130	89	56	27	68	112	164	221	226	191	135	66
89	57	104	122	154	154	117	80	42	17	55	102	147	176	176	142	104	57
90	41	80	106	138	141	116	70	35	17	48	90	134	166	148	109	90	41
91	31	66	95	131	129	111	71	37	17	39	84	125	150	133	91	69	31
92	20	52	89	121	127	105	63	31	16	29	76	119	139	113	86	60	20

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93	20	43	84	114	121	100	60	27	20	33	73	113	130	116	78	49	20
94	18	37	76	113	119	91	47	24	16	35	66	109	125	108	73	42	18
95	21	29	67	105	112	84	41	24	17	21	58	105	116	102	72	37	21
96	22	33	63	99	97	67	42	25	21	21	50	87	113	98	61	32	22
97	21	31	54	88	83	65	42	21	20	26	55	79	104	85	44	31	21
98	17	31	52	78	67	45	40	18	17	29	49	76	91	73	49	31	17
99	18	25	50	71	68	52	37	23	18	20	45	70	81	71	50	31	18
100	16	28	48	61	65	56	33	21	22	27	40	66	73	67	33	31	16
101	19	21	28	67	65	44	29	24	17	29	32	62	74	61	34	29	19
102	18	27	42	53	49	46	33	18	21	26	34	62	68	59	36	26	18
103	18	29	37	52	48	38	27	24	15	22	36	49	64	59	35	25	18
104	13	23	39	51	39	31	23	25	19	27	30	56	60	49	31	19	13
105	16	26	34	48	56	29	26	18	18	25	28	48	53	45	32	20	16
106	21	25	29	46	56	18	27	21	16	23	29	44	51	41	28	25	21
107	19	24	31	42	42	31	27	21	20	26	29	34	48	40	25	27	19
108	20	23	31	36	43	23	29	14	21	25	27	39	51	34	22	26	20
109	19	30	32	33	26	15	29	18	20	28	31	39	42	36	28	25	19
110	20	28	28	34	31	24	29	18	23	26	27	34	39	34	30	20	20
111	19	23	36	36	28	28	29	19	19	22	28	32	39	33	26	20	19
112	18	26	27	32	29	26	29	17	17	27	29	31	32	26	31	25	18
113	24	26	26	37	28	28	30	22	19	25	33	34	31	26	33	24	24
114	21	29	30	31	29	32	32	21	21	24	34	34	30	25	22	23	21
115	20	24	35	39	29	34	31	19	21	18	29	32	28	22	32	20	20
116	22	23	32	40	34	32	26	19	19	21	30	42	26	30	31	21	22
117	20	22	30	41	36	32	22	12	17	24	27	32	29	34	35	23	20
118	17	26	37	41	38	28	27	22	21	22	36	38	35	32	34	23	17
119	22	23	35	43	42	27	25	17	21	22	34	43	33	35	30	18	22
120	22	27	35	34	43	39	24	18	18	23	37	39	36	37	26	22	22
121	19	24	36	31	42	35	29	17	17	24	29	45	35	36	33	20	19
122	22	21	25	46	45	33	29	16	20	24	30	38	45	35	32	20	22
123	22	23	29	41	42	20	27	19	20	23	25	41	40	38	27	24	22
124	16	23	30	44	18	31	25	21	18	21	26	41	38	33	27	24	16

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125	24	21	33	33	30	30	29	16	22	19	34	42	41	39	27	23	24
126	21	18	34	39	28	25	22	13	19	22	33	42	32	38	23	19	21
127	22	21	29	39	22	24	25	13	22	20	27	37	32	29	30	26	22
128	20	19	29	36	26	30	19	22	21	24	22	37	33	40	28	21	20
129	18	23	29	33	26	27	21	21	22	13	29	29	32	32	28	20	18
130	23	25	30	33	19	24	23	26	22	17	33	38	25	29	29	23	23
131	21	22	31	33	16	24	20	20	23	28	34	36	20	29	30	19	21
132	24	22	29	32	19	27	23	18	22	24	26	35	23	29	28	25	24
133	19	28	30	37	17	25	23	21	22	22	33	34	24	29	24	20	19
134	20	23	25	37	16	28	22	13	22	22	29	34	23	30	24	22	20
135	20	22	28	37	19	23	22	20	22	26	28	34	19	28	25	20	20
136	27	21	28	35	22	30	25	19	18	23	27	36	24	32	23	21	27
137	18	21	29	26	21	30	25	22	22	26	22	39	10	36	28	23	18
138	22	25	28	33	22	28	22	17	25	19	25	37	19	33	29	25	22
139	26	25	25	34	19	28	22	21	19	13	22	37	25	39	26	23	26
140	25	24	28	30	19	18	25	17	25	26	24	35	28	32	24	22	25
141	19	24	24	30	21	26	25	22	24	28	27	32	28	27	22	20	19
142	22	23	28	30	18	21	19	18	29	25	27	34	24	27	23	26	22
143	25	26	29	29	20	25	19	22	26	27	27	31	23	25	26	21	25
144	27	28	27	28	18	22	23	27	25	26	22	29	19	22	25	20	27
145	28	26	28	27	16	21	23	21	24	24	25	31	23	24	28	25	28
146	29	25	27	28	15	17	23	24	22	27	27	26	21	22	20	25	29
147	26	29	26	18	14	14	25	25	23	27	22	30	18	24	27	25	26
148	24	25	27	26	16	17	25	25	26	26	27	31	17	19	20	23	24
149	23	25	27	27	14	20	22	23	25	25	27	27	17	23	26	27	23
150	25	28	23	25	17	20	24	22	24	30	25	31	14	25	18	20	25
151	26	25	27	26	11	21	24	25	18	29	22	28	17	23	23	25	26
152	27	27	28	24	16	20	22	24	27	29	28	26	22	21	21	26	27
153	26	30	29	25	13	17	26	23	26	26	24	29	18	26	22	25	26
154	26	28	24	23	12	20	24	22	28	26	26	23	18	25	27	25	26
155	25	30	28	23	8	19	20	29	22	29	25	29	19	20	25	20	25
156	27	29	26	27	14	17	23	26	27	24	27	30	16	18	22	26	27

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157	27	26	27	28	12	17	25	24	28	29	17	25	18	19	23	27	27
158	18	23	29	21	12	20	24	24	26	28	22	24	14	22	26	21	18
159	28	26	25	24	13	16	25	27	30	29	25	28	17	20	26	20	28
160	30	24	18	26	13	18	25	25	23	25	26	27	18	27	26	22	30
161	29	25	23	26	13	24	19	25	24	28	24	28	14	16	26	27	29
162	20	25	28	25	13	19	20	24	25	27	21	21	16	23	21	26	20
163	29	24	21	29	13	17	25	23	21	30	29	25	16	22	21	25	29
164	28	26	22	26	14	18	21	27	29	27	27	25	15	15	23	26	28
165	28	29	25	18	8	15	21	24	28	24	29	23	20	24	27	21	28
166	27	27	28	24	14	18	19	26	19	32	22	24	16	23	23	24	27
167	24	26	27	27	15	15	27	24	26	31	25	29	16	24	23	23	24
168	24	28	28	28	12	19	22	28	14	28	28	27	19	27	29	25	24
169	24	28	22	26	11	17	22	24	23	29	25	27	21	24	27	25	24
170	29	28	25	28	14	20	20	29	25	28	25	30	21	19	18	24	29
171	22	29	25	30	15	20	25	24	29	27	29	31	20	23	25	21	22
172	27	27	24	26	15	22	24	25	28	30	27	19	17	19	22	25	27
173	29	26	25	23	13	19	17	21	29	28	18	27	20	25	24	20	29
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177	28	27	25	24	12	16	22	25	28	26	16	20	22	23	24	28	28
178	24	26	24	24	10	16	20	27	22	24	22	25	17	21	22	22	24
179	25	21	21	25	13	19	21	24	23	23	26	24	19	24	24	28	25
180	28	26	23	25	14	15	22	28	25	28	26	23	15	22	27	25	28

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**2.5 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	LED75HIDRODAREA840MOG(open)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.647	77.00	0.992	8.02
6E-D2	277.0	60	0.311	77.01	0.894	15.83
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	80	R9	3
Frequency (Hz)	60	R2	89	R10	73
CCT (K)	4050	R3	95	R11	80
Duv	0.0013	R4	81	R12	60
Chromaticity (x, y)	x=0.3791 y=0.3786	R5	81	R13	82
Chromaticity (u', v')	u(u')=0.2235 v'=0.5022	R6	85	R14	97
Color Rendering Index (CRI)	82	R7	85	R15	74
R9	3	R8	63	--	--
Rf	83				
Rg	95				
Rcs,h1(%)	-13				

**Photometric Measurement – Goniophotometer Method:**

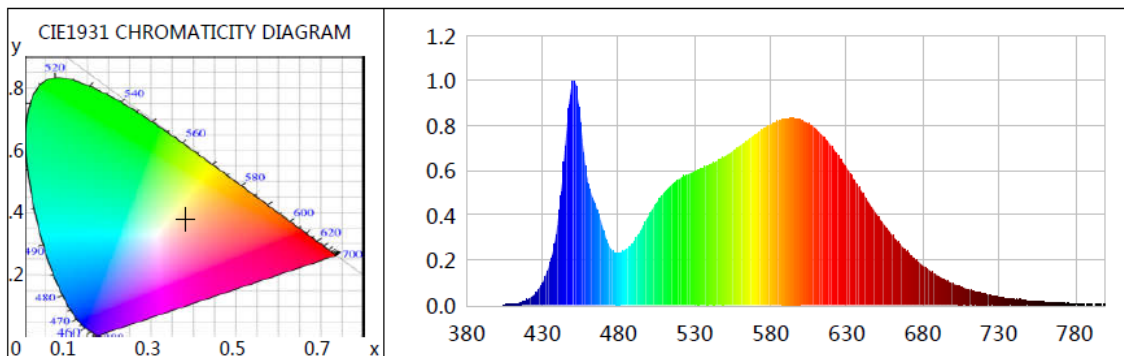
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	11664.7	11568.4	11250	Comply -10%
Luminous Efficacy (lm/W)	151.49	150.22	150	Comply -3%
Most worst Luminous/Highest Watts	150.22		--	--



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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	0.0921	525	0.5807	141.2610	670	0.2357	57.3308
385	0.0007	0.1745	530	0.5957	144.9176	675	0.2037	49.5610
390	0.0004	0.0897	535	0.6098	148.3403	680	0.1755	42.6945
395	0.0003	0.0735	540	0.6273	152.6107	685	0.1516	36.8906
400	0.0008	0.1926	545	0.6418	156.1205	690	0.1299	31.6084
405	0.0020	0.4803	550	0.6623	161.1186	695	0.1115	27.1335
410	0.0044	1.0702	555	0.6843	166.4582	700	0.0948	23.0703
415	0.0110	2.6874	560	0.7114	173.0554	705	0.0818	19.9105
420	0.0240	5.8382	565	0.7350	178.8025	710	0.0698	16.9907
425	0.0495	12.0405	570	0.7597	184.8181	715	0.0586	14.2572
430	0.1001	24.3475	575	0.7861	191.2195	720	0.0503	12.2300
435	0.1912	46.5169	580	0.8060	196.0730	725	0.0429	10.4441
440	0.3661	89.0547	585	0.8196	199.3865	730	0.0366	8.8945
445	0.7150	173.9381	590	0.8306	202.0596	735	0.0306	7.4476
450	1.0000	243.2653	595	0.8324	202.4822	740	0.0262	6.3829
455	0.8106	197.1824	600	0.8258	200.8806	745	0.0233	5.6593
460	0.5415	131.7310	605	0.8093	196.8764	750	0.0197	4.7982
465	0.4425	107.6470	610	0.7844	190.8215	755	0.0168	4.0851
470	0.3318	80.7100	615	0.7492	182.2617	760	0.0133	3.2331
475	0.2486	60.4648	620	0.7079	172.2063	765	0.0117	2.8426
480	0.2329	56.6617	625	0.6588	160.2724	770	0.0095	2.3048
485	0.2490	60.5699	630	0.6099	148.3724	775	0.0092	2.2327
490	0.2809	68.3247	635	0.5562	135.2965	780	0.0080	1.9575
495	0.3384	82.3111	640	0.5038	122.5470	785	0.0061	1.4782
500	0.4000	97.2973	645	0.4514	109.8109	790	0.0056	1.3688
505	0.4553	110.7614	650	0.4010	97.5391	795	0.0046	1.1198
510	0.5024	122.2067	655	0.3541	86.1495	800	0.0028	0.6787
515	0.5364	130.4914	660	0.3095	75.2927			
520	0.5623	136.7827	665	0.2707	65.8513			

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TM30

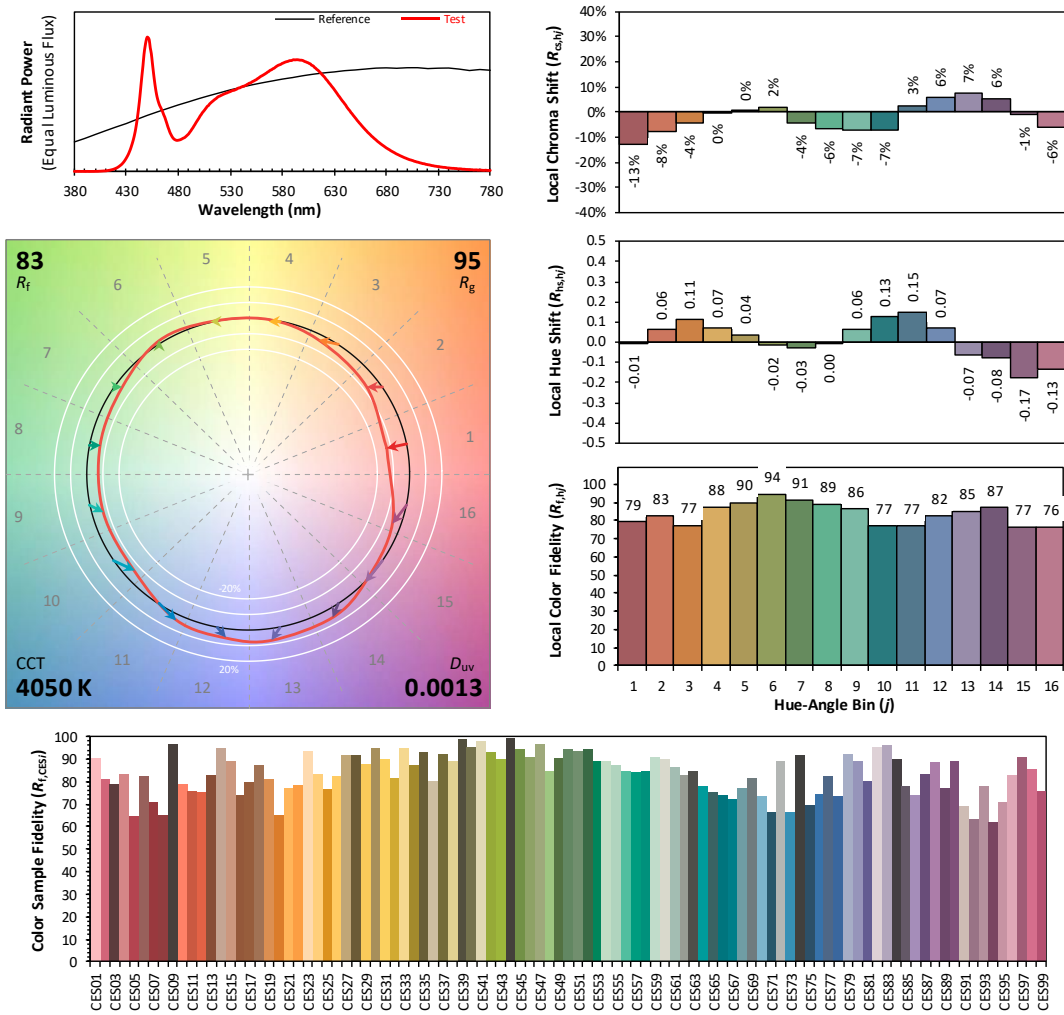
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1

Manufacturer: LEDVANCE LLC

Date: 2020/11/6

Model: LED75HIDRODAREA840MOG (open)



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

$x$  0.3791  
 $y$  0.3786  
 $u'$  0.2235  
 $v'$  0.5022

CIE 13.3-1995 (CRI)  
 $R_a$  82  
 $R_g$  3

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	3,115.8	26.7%	26.7%
0-40	5,068.4	43.5%	43.5%
0-60	8,807.1	75.5%	75.5%
60-90	2,631.7	22.6%	22.6%
70-100	1,312.9	11.3%	11.3%
90-120	143.1	1.2%	1.2%
0-90	11,438.8	98.1%	98.1%
90-180	224.9	1.9%	1.9%
0-180	11,663.7	100%	100%

### Lumens Per Zone

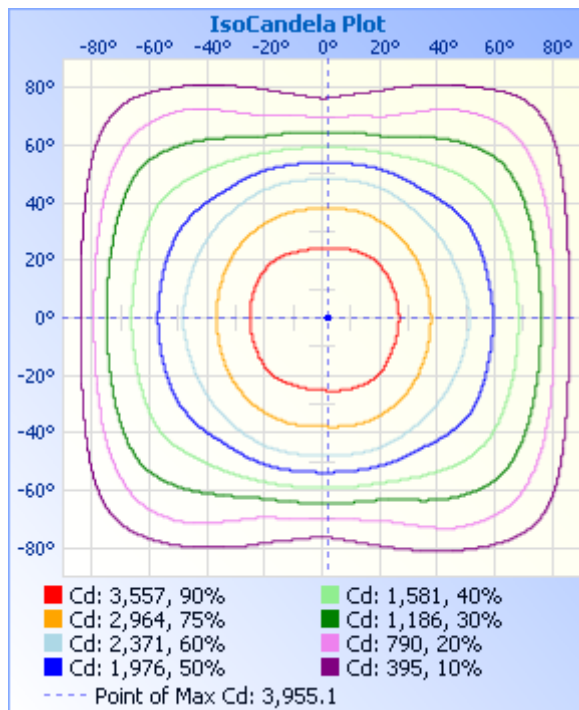
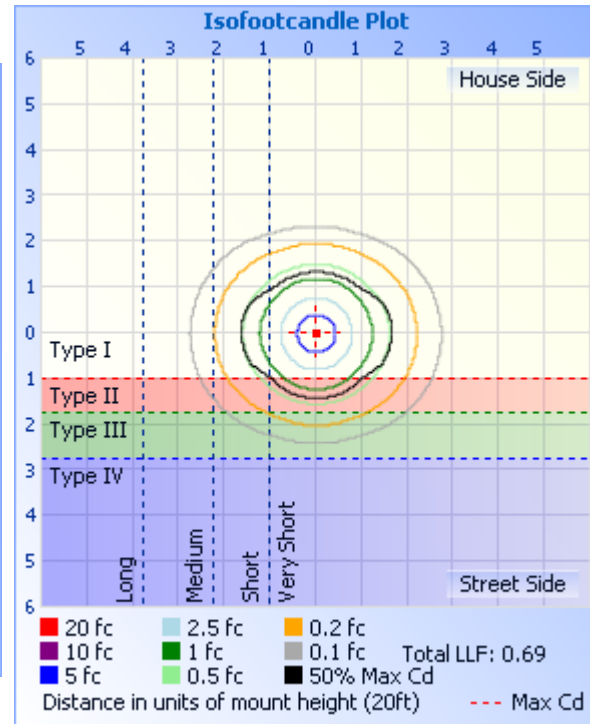
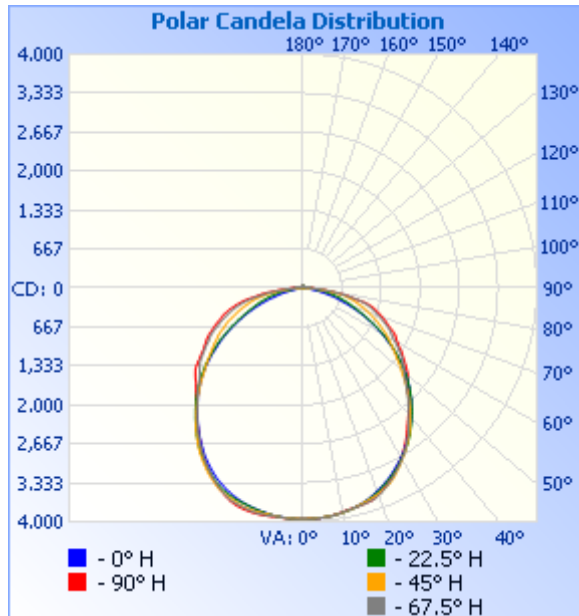
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	375.0	3.2%	90-100	76.3	0.7%
10-20	1,087.2	9.3%	100-110	37.5	0.3%
20-30	1,653.7	14.2%	110-120	29.3	0.3%
30-40	1,952.5	16.7%	120-130	26.5	0.2%
40-50	1,968.3	16.9%	130-140	20.2	0.2%
50-60	1,770.5	15.2%	140-150	15.1	0.1%
60-70	1,395.2	12.0%	150-160	11.0	0.1%
70-80	918.1	7.9%	160-170	6.8	0.1%
80-90	318.4	2.7%	170-180	2.3	0%



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## Photometric Data



	Illuminance at a Distance		
	Center Beam fc	Beam Width	
17.0ft	13.68 fc	46.6 ft	55.2 ft
34.0ft	3.42 fc	93.2 ft	110.4 ft
51.0ft	1.52 fc	139.9 ft	165.7 ft
68.0ft	0.85 fc	186.5 ft	220.9 ft
85.0ft	0.55 fc	233.1 ft	276.1 ft
102.0ft	0.38 fc	279.7 ft	331.3 ft

■ Vert. Spread: 107.8°  
■ Horiz. Spread: 116.8°

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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	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952	3952
1	3951	3950	3949	3952	3948	3950	3949	3953	3954	3953	3947	3953	3952	3950	3953	3953	3951
2	3949	3953	3948	3952	3945	3947	3946	3948	3949	3949	3948	3953	3955	3950	3948	3953	3949
3	3949	3945	3944	3948	3946	3945	3944	3947	3946	3947	3945	3949	3950	3947	3948	3950	3949
4	3947	3943	3941	3945	3945	3940	3942	3941	3945	3945	3943	3948	3945	3946	3946	3944	3947
5	3941	3940	3937	3937	3940	3939	3936	3936	3937	3940	3942	3943	3948	3942	3942	3941	3941
6	3937	3931	3932	3938	3933	3931	3931	3926	3933	3933	3934	3937	3940	3937	3935	3936	3937
7	3928	3929	3928	3930	3924	3925	3925	3923	3926	3926	3927	3935	3940	3933	3926	3931	3928
8	3919	3919	3920	3923	3915	3919	3914	3916	3917	3919	3921	3936	3946	3931	3921	3920	3919
9	3911	3910	3912	3914	3901	3904	3905	3902	3904	3909	3915	3936	3946	3933	3914	3914	3911
10	3898	3903	3902	3898	3887	3892	3892	3891	3890	3897	3913	3934	3948	3934	3909	3901	3898
11	3884	3889	3886	3884	3875	3879	3879	3881	3881	3886	3908	3932	3943	3929	3907	3890	3884
12	3873	3877	3875	3873	3864	3866	3862	3868	3868	3868	3903	3927	3942	3929	3904	3877	3873
13	3857	3861	3859	3860	3856	3852	3846	3856	3853	3859	3898	3919	3935	3918	3895	3863	3857
14	3841	3848	3841	3854	3850	3848	3831	3842	3836	3841	3889	3905	3924	3910	3888	3848	3841
15	3822	3830	3827	3845	3847	3836	3810	3823	3822	3826	3879	3892	3920	3895	3877	3831	3822
16	3800	3811	3810	3838	3833	3825	3796	3804	3800	3814	3865	3880	3905	3889	3865	3814	3800
17	3779	3786	3796	3828	3825	3812	3782	3781	3781	3800	3843	3866	3892	3870	3849	3800	3779
18	3753	3766	3782	3816	3816	3804	3764	3760	3758	3789	3821	3850	3871	3855	3826	3778	3753
19	3726	3739	3765	3802	3793	3787	3749	3736	3737	3769	3802	3832	3843	3833	3809	3760	3726
20	3696	3714	3750	3777	3762	3765	3731	3713	3707	3751	3787	3801	3811	3804	3785	3738	3696
21	3665	3683	3726	3749	3727	3734	3710	3684	3681	3728	3766	3767	3777	3773	3762	3714	3665
22	3639	3652	3704	3711	3692	3698	3688	3658	3651	3705	3742	3731	3741	3737	3740	3689	3639
23	3606	3623	3680	3675	3656	3653	3663	3624	3617	3672	3716	3692	3703	3699	3707	3663	3606
24	3574	3589	3651	3633	3620	3616	3635	3590	3585	3639	3678	3649	3663	3660	3677	3629	3574
25	3540	3559	3617	3596	3582	3575	3604	3558	3549	3603	3639	3612	3624	3620	3638	3596	3540
26	3502	3525	3575	3554	3536	3537	3563	3526	3511	3561	3602	3569	3578	3577	3599	3557	3502
27	3464	3487	3528	3514	3489	3495	3519	3488	3470	3522	3562	3523	3526	3534	3558	3516	3464
28	3426	3455	3484	3471	3446	3451	3473	3447	3428	3482	3519	3478	3477	3486	3508	3480	3426

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29	3387	3409	3436	3428	3404	3407	3421	3406	3384	3443	3470	3430	3430	3442	3463	3437	3387
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31	3306	3323	3339	3332	3308	3308	3327	3316	3294	3354	3378	3325	3323	3335	3372	3359	3306
32	3261	3284	3294	3287	3249	3260	3280	3264	3240	3312	3327	3271	3267	3279	3322	3322	3261
33	3218	3244	3238	3231	3197	3205	3228	3220	3193	3262	3273	3217	3206	3220	3270	3273	3218
34	3171	3201	3190	3173	3143	3149	3170	3173	3141	3209	3219	3164	3149	3168	3216	3231	3171
35	3128	3151	3140	3117	3081	3092	3115	3126	3090	3157	3159	3104	3094	3114	3156	3182	3128
36	3080	3104	3088	3058	3024	3028	3064	3074	3036	3096	3099	3049	3038	3048	3097	3135	3080
37	3030	3047	3032	2993	2963	2970	3008	3013	2978	3040	3042	2990	2988	2994	3043	3080	3030
38	2982	2996	2972	2933	2905	2908	2946	2954	2927	2983	2982	2936	2933	2936	2982	3025	2982
39	2934	2940	2913	2869	2851	2847	2889	2902	2873	2928	2911	2883	2878	2880	2921	2971	2934
40	2880	2887	2855	2814	2800	2787	2825	2845	2820	2870	2849	2824	2828	2821	2859	2913	2880
41	2826	2834	2793	2746	2749	2718	2759	2785	2764	2810	2787	2765	2781	2761	2793	2860	2826
42	2770	2779	2728	2686	2690	2662	2698	2727	2705	2753	2723	2716	2730	2705	2731	2804	2770
43	2711	2716	2665	2635	2642	2605	2629	2669	2645	2694	2661	2655	2679	2652	2668	2750	2711
44	2664	2667	2605	2579	2590	2544	2563	2610	2592	2636	2592	2602	2638	2602	2608	2688	2664
45	2599	2604	2534	2515	2536	2489	2496	2550	2531	2570	2524	2549	2587	2546	2537	2626	2599
46	2542	2547	2464	2464	2491	2432	2431	2487	2467	2506	2465	2501	2546	2495	2470	2568	2542
47	2483	2483	2396	2404	2444	2375	2360	2417	2410	2440	2400	2444	2506	2443	2410	2505	2483
48	2425	2415	2332	2348	2403	2324	2286	2359	2346	2378	2334	2394	2465	2383	2344	2442	2425
49	2360	2361	2261	2300	2363	2273	2224	2294	2283	2316	2268	2352	2428	2339	2280	2374	2360
50	2295	2292	2200	2253	2333	2224	2160	2226	2216	2241	2207	2316	2407	2305	2219	2312	2295
51	2227	2221	2139	2216	2295	2184	2093	2163	2146	2171	2154	2276	2373	2262	2167	2244	2227
52	2158	2162	2079	2172	2247	2154	2037	2088	2074	2105	2097	2246	2344	2228	2105	2173	2158
53	2086	2087	2014	2140	2193	2124	1969	2017	2003	2031	2042	2213	2307	2190	2047	2102	2086
54	2008	2014	1965	2106	2148	2079	1910	1948	1929	1956	1982	2184	2255	2156	1993	2033	2008
55	1936	1944	1907	2059	2095	2025	1852	1880	1848	1885	1929	2140	2193	2117	1928	1960	1936
56	1859	1875	1856	2004	2051	1981	1802	1797	1777	1815	1881	2086	2130	2071	1875	1890	1859
57	1782	1803	1807	1955	2007	1934	1750	1723	1706	1742	1833	2038	2080	2025	1830	1811	1782
58	1705	1731	1756	1906	1951	1892	1700	1648	1632	1671	1789	1987	2024	1966	1779	1739	1705
59	1633	1654	1717	1861	1905	1830	1658	1577	1559	1589	1736	1946	1973	1912	1730	1663	1633
60	1560	1582	1665	1806	1866	1779	1610	1496	1477	1511	1693	1892	1940	1870	1688	1596	1560

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67	1027	1074	1323	1510	1559	1478	1244	991	952	1027	1343	1556	1632	1552	1350	1073	1027
68	958	1005	1275	1464	1520	1421	1194	928	876	967	1295	1511	1586	1506	1294	1010	958
69	881	951	1220	1419	1477	1382	1148	863	806	913	1238	1454	1540	1460	1237	949	881
70	808	897	1167	1369	1433	1333	1107	809	739	868	1192	1401	1491	1407	1188	888	808
71	740	850	1125	1326	1397	1289	1052	761	669	818	1133	1356	1448	1351	1135	836	740
72	683	800	1083	1280	1352	1241	1006	709	609	766	1089	1303	1406	1305	1086	783	683
73	618	750	1036	1239	1312	1196	961	663	536	716	1040	1255	1351	1260	1042	737	618
74	554	696	990	1198	1264	1155	911	614	478	672	985	1196	1300	1202	989	681	554
75	488	649	943	1148	1211	1099	870	570	423	625	936	1139	1237	1145	938	635	488
76	431	603	895	1104	1156	1024	819	524	381	573	890	1085	1181	1096	895	588	431
77	378	555	844	1033	1074	959	768	477	325	528	836	1009	1107	1016	841	540	378
78	329	510	797	958	922	875	722	431	279	484	785	934	1047	943	790	498	329
79	284	466	749	847	839	758	657	391	239	444	712	854	941	874	735	453	284
80	244	422	690	752	770	680	588	355	201	403	647	747	825	790	672	411	244
81	204	390	616	686	703	612	502	319	167	352	578	678	764	708	597	379	204
82	171	343	521	618	603	544	423	274	140	303	488	617	699	631	529	337	171
83	141	304	462	535	490	440	365	244	112	247	422	532	594	562	449	296	141
84	116	267	393	434	430	371	295	198	95	189	351	430	502	473	387	252	116
85	97	224	321	382	353	290	237	158	72	140	271	359	433	412	324	214	97
86	82	184	258	305	269	230	185	126	61	114	211	301	371	347	261	175	82
87	72	146	195	223	217	175	136	105	49	93	167	232	291	263	205	142	72
88	57	113	145	185	183	152	106	75	35	78	132	185	238	222	161	110	57
89	44	90	130	164	166	137	98	65	30	63	123	162	195	173	130	91	44
90	29	67	106	153	150	126	85	50	15	60	113	152	180	158	100	68	29
91	21	59	99	135	138	118	77	42	19	52	99	143	161	142	99	57	21
92	21	50	91	126	138	113	74	37	18	45	94	137	156	140	83	47	21

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93	22	42	80	124	126	111	67	37	17	42	86	139	153	132	76	43	22
94	22	35	79	117	125	109	64	28	18	36	80	129	152	125	74	36	22
95	15	39	77	112	117	94	53	29	23	37	72	119	143	113	66	35	15
96	18	35	64	102	109	81	47	30	22	36	66	104	126	99	60	29	18
97	22	31	60	90	87	72	46	23	18	34	61	92	103	88	54	29	22
98	20	35	41	85	80	56	43	26	16	31	52	85	94	81	48	25	20
99	20	30	49	73	72	60	38	26	17	25	51	77	87	71	35	31	20
100	24	27	45	70	66	56	36	22	16	27	46	75	76	65	46	23	24
101	20	28	47	66	65	50	24	26	20	29	46	68	69	65	36	27	20
102	22	21	37	54	59	47	32	24	21	29	45	65	65	64	32	25	22
103	19	23	40	52	59	43	31	22	18	27	37	64	61	53	26	30	19
104	24	25	37	55	56	37	26	22	20	27	42	56	62	48	31	28	24
105	20	25	37	47	60	34	22	27	21	15	37	51	53	39	27	23	20
106	22	32	29	38	55	36	27	23	18	24	37	45	48	43	28	28	22
107	18	30	33	44	47	29	24	21	15	30	35	43	54	32	29	24	18
108	24	29	36	37	40	31	22	25	18	27	33	41	52	34	9	25	24
109	20	26	32	33	38	27	21	22	16	30	34	38	45	33	29	26	20
110	24	26	35	35	29	29	25	22	20	27	34	40	46	32	28	24	24
111	20	25	34	39	27	30	34	16	18	20	36	35	36	30	30	27	20
112	17	25	38	37	30	29	30	21	19	26	35	37	30	29	30	20	17
113	19	25	37	33	32	30	29	19	21	24	32	38	24	30	29	22	19
114	17	28	39	35	29	20	32	22	14	26	39	37	34	32	34	14	17
115	21	26	39	38	26	26	36	22	19	23	32	36	35	29	30	23	21
116	22	25	38	38	34	31	30	24	19	21	35	38	35	34	35	23	22
117	22	22	37	44	37	34	27	21	20	22	37	42	44	33	29	20	22
118	22	21	38	42	41	34	24	19	21	19	38	42	42	41	29	17	22
119	20	27	35	42	43	30	20	21	21	23	41	44	47	36	32	21	20
120	22	23	37	40	46	35	23	22	23	23	34	48	50	34	32	24	22
121	23	19	36	44	47	33	27	20	25	18	35	46	52	36	21	23	23
122	20	24	31	46	47	35	30	22	23	20	37	43	52	33	31	24	20
123	18	24	36	42	47	32	24	21	24	18	34	42	50	38	28	21	18
124	21	19	32	43	41	34	30	16	24	25	33	38	45	34	29	19	21

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125	23	25	31	40	36	28	16	23	21	25	33	40	41	32	32	23	23
126	24	24	36	35	31	34	20	24	23	24	34	43	35	41	27	20	24
127	25	21	37	44	30	32	26	26	17	26	30	34	37	32	24	16	25
128	19	12	36	36	27	28	23	20	22	11	30	42	37	30	24	23	19
129	22	12	30	39	28	24	22	21	25	25	35	31	27	27	29	20	22
130	24	22	32	32	20	21	23	24	19	24	30	39	26	31	25	18	24
131	23	21	29	31	18	30	24	21	27	22	37	29	25	28	27	22	23
132	24	21	30	34	18	32	22	22	22	24	30	34	22	28	28	25	24
133	24	29	30	38	16	29	21	23	21	26	31	38	22	30	25	24	24
134	25	23	30	38	16	32	20	22	27	23	33	42	20	32	28	20	25
135	20	21	31	33	21	30	23	23	21	21	30	44	20	33	20	18	20
136	21	21	30	35	25	29	20	24	23	22	29	36	21	32	25	23	21
137	18	26	29	36	20	29	24	24	29	22	26	41	22	30	23	21	18
138	21	29	27	33	15	23	19	21	29	23	28	35	25	28	26	25	21
139	26	26	32	30	18	24	17	26	26	26	24	39	23	31	23	25	26
140	25	27	26	30	21	22	27	23	25	26	28	38	23	24	19	23	25
141	24	26	32	34	18	21	24	22	21	28	26	35	17	26	28	24	24
142	23	21	27	33	17	25	21	27	21	23	29	25	24	27	27	26	23
143	20	26	21	27	16	24	26	25	25	25	30	32	23	16	24	21	20
144	25	19	30	26	16	23	27	29	26	22	26	27	14	13	26	22	25
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146	26	30	29	29	11	22	25	21	10	25	16	31	20	28	25	20	26
147	27	26	26	21	12	22	18	23	23	29	23	34	21	21	18	22	27
148	16	29	23	28	11	20	21	22	25	27	31	36	22	21	24	28	16
149	25	26	28	26	11	19	24	29	24	27	28	33	19	24	26	28	25
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151	16	25	24	26	11	21	23	29	28	28	29	25	13	20	24	22	16
152	25	29	26	24	14	18	23	25	29	18	28	31	16	24	26	24	25
153	25	28	25	23	11	20	21	28	32	28	27	33	16	21	27	23	25
154	26	29	26	29	11	17	22	18	27	22	30	30	16	13	26	24	26
155	29	27	25	28	14	20	26	21	23	27	29	31	15	19	27	25	29
156	27	24	23	32	15	24	20	25	31	30	24	28	20	21	25	28	27

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157	24	32	26	27	11	20	25	23	32	28	32	34	15	24	25	29	24
158	25	30	27	28	0	22	23	23	22	25	27	33	17	21	24	26	25
159	30	25	24	25	10	20	22	23	28	25	30	31	17	12	24	28	30
160	31	28	23	29	10	21	18	22	27	26	28	28	17	21	26	30	31
161	25	31	29	21	9	8	24	26	23	29	30	21	16	18	29	26	25
162	29	30	26	27	8	22	25	21	24	29	29	32	18	26	23	28	29
163	29	27	26	26	10	12	26	21	29	30	27	30	20	19	20	25	29
164	27	29	29	28	12	17	24	24	29	24	30	30	18	20	26	23	27
165	30	29	19	29	8	15	25	29	26	25	27	21	18	21	25	24	30
166	24	28	28	24	12	17	23	25	31	29	25	34	22	18	28	22	24
167	26	28	26	26	11	18	23	31	24	26	26	29	19	25	23	28	26
168	32	24	29	28	13	22	23	28	28	28	30	24	18	23	26	21	32
169	24	24	27	19	11	16	26	25	20	27	28	33	20	20	28	27	24
170	20	28	25	28	11	19	25	25	29	19	22	27	16	21	27	27	20
171	26	26	24	20	12	23	22	29	24	28	25	29	18	25	27	22	26
172	29	24	28	30	10	19	23	20	20	29	29	32	17	23	23	27	29
173	23	27	28	26	0	19	25	22	28	19	27	29	18	18	27	28	23
174	20	28	28	29	11	19	16	28	19	29	30	27	20	19	27	30	20
175	23	22	28	28	9	20	21	27	29	29	30	30	20	20	27	27	23
176	26	28	26	24	11	19	24	26	28	28	27	30	16	23	25	25	26
177	25	32	29	30	7	20	22	26	30	27	19	31	21	27	26	27	25
178	29	28	28	20	10	21	21	20	29	23	27	31	19	24	27	23	29
179	21	24	27	29	9	18	24	21	29	24	22	30	16	20	19	29	21
180	28	26	25	29	13	20	25	25	24	28	26	25	20	25	24	23	28

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

<b>Test date</b>	2020-11-04	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	LED75HIDRODAREA850MOG(open)		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201002	120.0	60	0.625	74.29	0.991	8.18
6E-D3	277.0	60	0.306	74.99	0.886	16.92
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	90	R10	75
CCT (K)	5008	R3	95	R11	81
Duv	0.0033	R4	82	R12	60
Chromaticity (x, y)	x=0.3455 y=0.3586	R5	82	R13	84
Chromaticity (u', v')	u(u')=0.2090 v'=0.4881	R6	85	R14	97
Color Rendering Index (CRI)	83	R7	86	R15	76
R9	5	R8	65	--	--
Rf	84		--		--
Rg	94		--		--
Rcs,h1(%)	-13		--		--

**Photometric Measurement – Sphere-Spectroradiometer Method:**

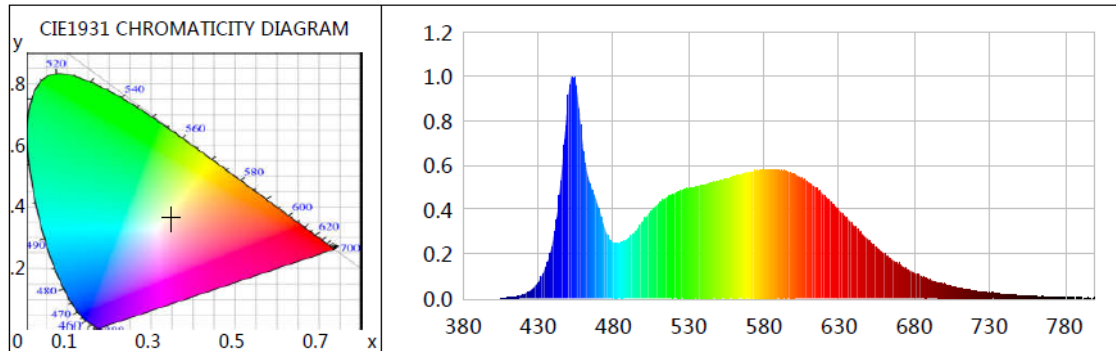
Parameter	Result		Rating	Tolerance
Test Voltage (V)	120.0	277.0	--	--
Frequency (Hz)	60	60	--	--
Total Luminous (lm)	11419.9	11252.2	11250	Comply -10%
Luminous Efficacy (lm/W)	153.72	150.05	150	Comply -3%
Most worst Luminous/Highest Watts	150.05			--



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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	0.1337	525	0.4849	151.5950	670	0.1525	47.6811
385	0.0005	0.1557	530	0.4944	154.5666	675	0.1323	41.3468
390	0.0006	0.1928	535	0.5029	157.2207	680	0.1146	35.8193
395	0.0008	0.2449	540	0.5125	160.2045	685	0.0984	30.7716
400	0.0008	0.2636	545	0.5195	162.3921	690	0.0853	26.6744
405	0.0015	0.4754	550	0.5286	165.2555	695	0.0733	22.9291
410	0.0037	1.1530	555	0.5387	168.4030	700	0.0629	19.6782
415	0.0080	2.4868	560	0.5505	172.0821	705	0.0536	16.7578
420	0.0177	5.5346	565	0.5592	174.8174	710	0.0456	14.2644
425	0.0365	11.3961	570	0.5671	177.2799	715	0.0396	12.3716
430	0.0733	22.9264	575	0.5748	179.7062	720	0.0338	10.5789
435	0.1419	44.3618	580	0.5796	181.1780	725	0.0282	8.8175
440	0.2680	83.7886	585	0.5788	180.9528	730	0.0249	7.7862
445	0.5325	166.4760	590	0.5786	180.8919	735	0.0200	6.2627
450	0.9138	285.6783	595	0.5715	178.6581	740	0.0182	5.7018
455	0.9608	300.3646	600	0.5616	175.5699	745	0.0158	4.9348
460	0.6618	206.8869	605	0.5439	170.0195	750	0.0125	3.9206
465	0.5033	157.3394	610	0.5215	163.0251	755	0.0106	3.3228
470	0.4061	126.9399	615	0.4953	154.8455	760	0.0098	3.0627
475	0.2984	93.2768	620	0.4658	145.6085	765	0.0087	2.7331
480	0.2502	78.2243	625	0.4309	134.7171	770	0.0071	2.2103
485	0.2537	79.3072	630	0.3968	124.0382	775	0.0058	1.8208
490	0.2716	84.9083	635	0.3612	112.9222	780	0.0040	1.2481
495	0.3054	95.4735	640	0.3262	101.9612	785	0.0034	1.0569
500	0.3516	109.9274	645	0.2923	91.3837	790	0.0040	1.2483
505	0.3932	122.9049	650	0.2592	81.0150	795	0.0030	0.9501
510	0.4288	134.0354	655	0.2289	71.5678	800	0.0030	0.9518
515	0.4540	141.9407	660	0.2010	62.8258			
520	0.4715	147.4121	665	0.1753	54.7955			

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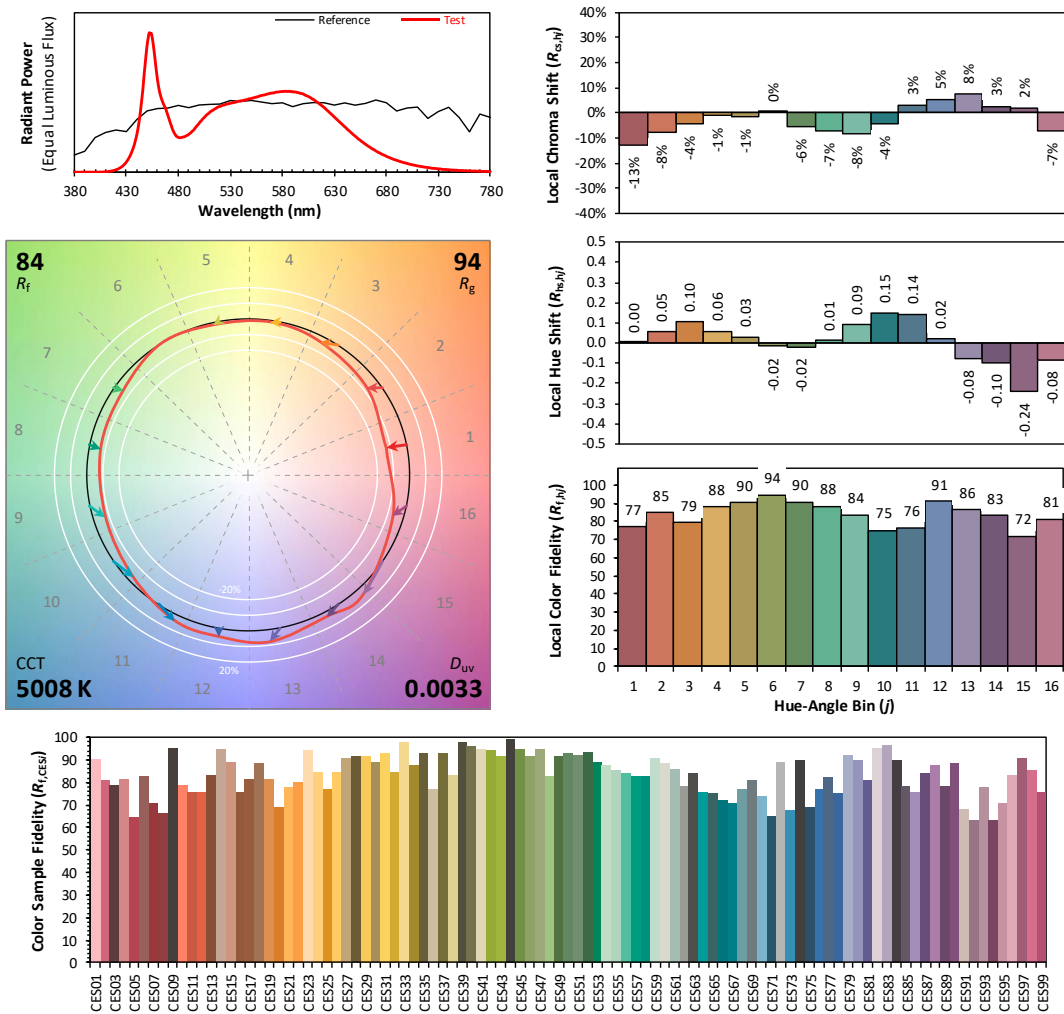


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TM30

ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1  
Date: 2020/11/6  
Manufacturer: LEDVANCE LLC  
Model: LED75HIDRODAREA850MOG (open)



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

$x$  0.3455  
 $y$  0.3586  
 $u'$  0.2090  
 $v'$  0.4881

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	3,035.3	26.6%	26.6%
0-40	4,936.5	43.2%	43.2%
0-60	8,596.9	75.3%	75.3%
60-90	2,594.7	22.7%	22.7%
70-100	1,298.9	11.4%	11.4%
90-120	144.2	1.3%	1.3%
0-90	11,191.6	98%	98%
90-180	227.4	2%	2%
0-180	11,418.9	100%	100%

### Lumens Per Zone

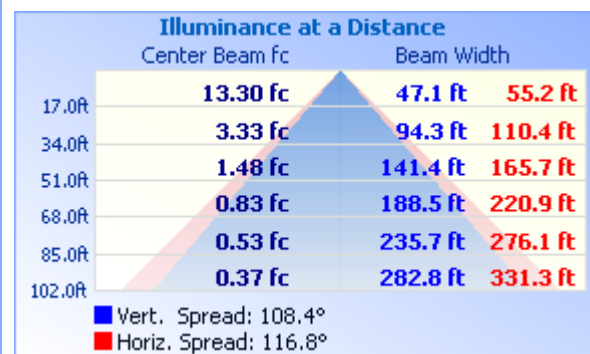
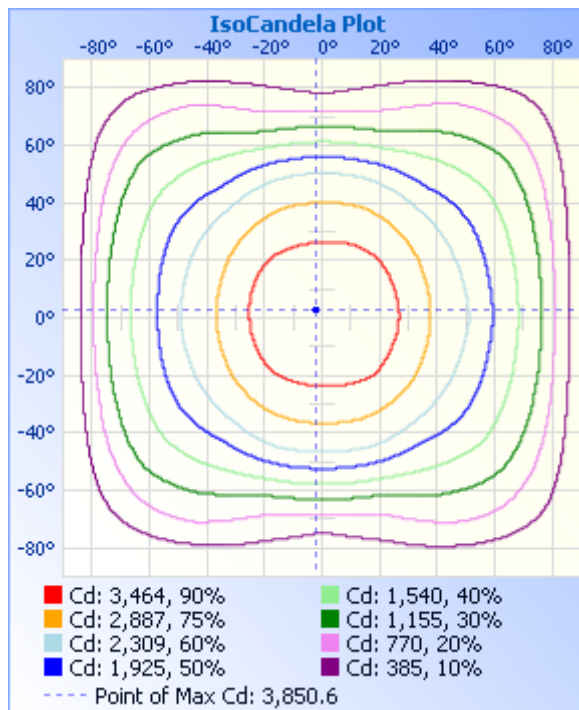
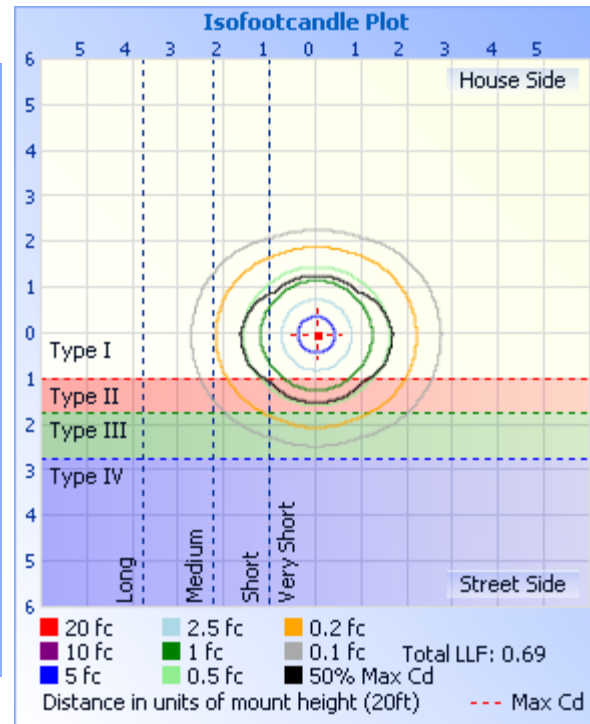
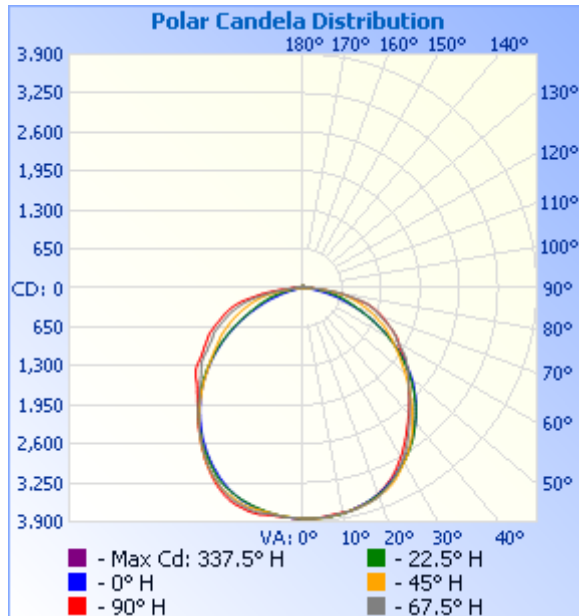
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	364.7	3.2%	90-100	78.3	0.7%
10-20	1,059.7	9.3%	100-110	36.7	0.3%
20-30	1,610.8	14.1%	110-120	29.1	0.3%
30-40	1,901.2	16.6%	120-130	26.4	0.2%
40-50	1,922.6	16.8%	130-140	20.6	0.2%
50-60	1,737.8	15.2%	140-150	15.8	0.1%
60-70	1,374.1	12.0%	150-160	11.4	0.1%
70-80	903.3	7.9%	160-170	6.7	0.1%
80-90	317.3	2.8%	170-180	2.3	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	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844	3844
1	3843	3846	3845	3846	3844	3843	3844	3842	3846	3844	3840	3842	3847	3844	3843	3851	3843
2	3847	3845	3849	3848	3844	3843	3840	3838	3842	3838	3836	3834	3842	3838	3839	3845	3847
3	3848	3846	3849	3847	3842	3840	3837	3838	3837	3833	3832	3837	3838	3835	3840	3842	3848
4	3840	3845	3849	3845	3841	3838	3836	3830	3834	3826	3823	3834	3836	3831	3832	3841	3840
5	3842	3846	3845	3843	3831	3833	3832	3826	3827	3819	3823	3826	3836	3830	3831	3836	3842
6	3837	3841	3844	3838	3826	3830	3820	3818	3817	3812	3814	3821	3830	3825	3828	3831	3837
7	3835	3839	3833	3832	3815	3818	3813	3812	3810	3803	3806	3812	3828	3819	3825	3827	3835
8	3827	3831	3830	3823	3808	3808	3807	3800	3800	3791	3794	3808	3823	3818	3821	3824	3827
9	3822	3827	3821	3817	3804	3801	3792	3786	3785	3780	3787	3810	3831	3813	3813	3820	3822
10	3814	3820	3815	3811	3799	3792	3779	3774	3777	3768	3780	3814	3836	3820	3811	3809	3814
11	3807	3807	3805	3802	3801	3789	3767	3762	3761	3754	3773	3813	3845	3821	3806	3800	3807
12	3798	3796	3797	3802	3795	3784	3758	3749	3750	3741	3770	3813	3843	3824	3804	3795	3798
13	3781	3787	3789	3797	3780	3769	3744	3733	3735	3728	3767	3804	3837	3826	3806	3783	3781
14	3764	3774	3780	3788	3765	3757	3737	3717	3715	3711	3764	3792	3828	3817	3802	3764	3764
15	3750	3761	3766	3769	3755	3740	3721	3703	3701	3693	3755	3775	3811	3802	3797	3749	3750
16	3736	3745	3759	3756	3739	3725	3707	3675	3683	3677	3741	3757	3796	3791	3790	3741	3736
17	3719	3725	3746	3745	3726	3712	3688	3658	3660	3657	3718	3744	3787	3773	3776	3721	3719
18	3699	3706	3731	3733	3710	3701	3669	3634	3634	3637	3697	3729	3770	3756	3759	3710	3699
19	3679	3687	3712	3717	3683	3674	3646	3610	3608	3612	3675	3706	3746	3741	3741	3696	3679
20	3656	3667	3693	3697	3652	3645	3625	3580	3576	3589	3655	3674	3714	3711	3714	3676	3656
21	3630	3644	3669	3665	3623	3613	3601	3552	3547	3567	3631	3640	3686	3680	3692	3659	3630
22	3604	3618	3653	3635	3593	3579	3574	3522	3512	3537	3609	3610	3649	3651	3674	3642	3604
23	3577	3591	3630	3599	3561	3546	3544	3488	3474	3512	3576	3569	3611	3615	3650	3618	3577
24	3547	3562	3602	3566	3527	3508	3508	3453	3444	3473	3538	3529	3572	3574	3618	3598	3547
25	3515	3530	3569	3531	3492	3471	3469	3415	3399	3433	3500	3491	3529	3536	3585	3565	3515
26	3482	3501	3532	3494	3446	3430	3423	3371	3360	3390	3461	3449	3483	3497	3543	3529	3482
27	3448	3464	3492	3450	3403	3387	3380	3333	3323	3350	3414	3406	3430	3458	3503	3496	3448
28	3411	3432	3449	3410	3356	3344	3335	3295	3279	3307	3368	3362	3383	3411	3464	3460	3411
29	3375	3393	3404	3363	3305	3298	3292	3252	3234	3259	3321	3313	3331	3358	3413	3425	3375

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30	3341	3357	3365	3315	3256	3245	3243	3209	3189	3218	3276	3263	3282	3310	3371	3387	3341
31	3303	3322	3317	3264	3207	3194	3199	3170	3143	3176	3225	3215	3221	3268	3321	3345	3303
32	3265	3278	3278	3215	3153	3142	3148	3124	3096	3130	3170	3157	3170	3209	3281	3312	3265
33	3225	3239	3227	3160	3100	3086	3089	3076	3046	3089	3113	3102	3113	3152	3230	3268	3225
34	3184	3203	3180	3104	3047	3035	3037	3024	3002	3036	3060	3053	3053	3105	3181	3228	3184
35	3141	3154	3127	3049	2995	2979	2978	2973	2945	2980	3001	2996	2999	3046	3130	3185	3141
36	3102	3112	3074	2994	2937	2914	2923	2920	2891	2928	2946	2938	2949	2992	3076	3135	3102
37	3052	3057	3018	2935	2888	2857	2863	2859	2838	2876	2879	2881	2896	2939	3016	3084	3052
38	3010	3012	2967	2881	2839	2802	2797	2808	2787	2818	2818	2823	2846	2880	2962	3029	3010
39	2961	2963	2902	2822	2786	2747	2738	2755	2730	2761	2757	2769	2790	2821	2904	2976	2961
40	2909	2910	2841	2764	2743	2681	2676	2702	2683	2707	2697	2716	2735	2774	2845	2927	2909
41	2864	2858	2783	2707	2690	2629	2616	2647	2626	2647	2636	2663	2679	2720	2785	2870	2864
42	2807	2808	2725	2653	2640	2575	2551	2589	2564	2589	2576	2605	2632	2660	2722	2814	2807
43	2758	2752	2656	2608	2598	2524	2486	2529	2510	2534	2506	2545	2588	2608	2659	2757	2758
44	2710	2699	2597	2549	2553	2471	2425	2470	2458	2473	2445	2493	2539	2556	2599	2701	2710
45	2655	2637	2532	2507	2497	2424	2355	2411	2391	2412	2383	2444	2498	2502	2534	2646	2655
46	2600	2583	2464	2453	2453	2376	2302	2345	2332	2349	2320	2391	2459	2453	2472	2588	2600
47	2544	2523	2408	2412	2413	2328	2238	2281	2265	2287	2258	2342	2418	2408	2413	2527	2544
48	2491	2460	2348	2365	2369	2288	2173	2222	2201	2218	2189	2302	2386	2363	2353	2464	2491
49	2432	2402	2286	2328	2332	2245	2116	2152	2134	2154	2128	2261	2356	2320	2292	2409	2432
50	2372	2335	2228	2289	2293	2204	2057	2092	2058	2089	2068	2220	2334	2283	2235	2337	2372
51	2308	2276	2165	2254	2253	2169	2005	2015	1992	2016	2016	2192	2306	2244	2180	2278	2308
52	2239	2210	2109	2216	2211	2131	1954	1949	1925	1951	1952	2154	2272	2209	2125	2213	2239
53	2171	2135	2055	2174	2168	2085	1893	1878	1853	1872	1900	2125	2239	2179	2072	2146	2171
54	2102	2070	2002	2130	2122	2037	1838	1808	1783	1808	1850	2088	2187	2145	2017	2078	2102
55	2036	2008	1947	2098	2076	1998	1793	1733	1704	1738	1800	2035	2119	2107	1962	2013	2036
56	1955	1944	1899	2056	2012	1952	1745	1660	1635	1662	1745	1982	2058	2065	1910	1933	1955
57	1887	1874	1851	2007	1958	1901	1695	1588	1569	1586	1702	1913	2009	2017	1859	1865	1887
58	1809	1797	1796	1948	1908	1837	1653	1517	1491	1514	1656	1869	1966	1947	1807	1795	1809
59	1731	1722	1747	1891	1873	1794	1609	1444	1415	1444	1615	1819	1925	1891	1763	1726	1731
60	1664	1651	1708	1838	1835	1746	1562	1375	1343	1372	1575	1770	1889	1843	1728	1651	1664
61	1592	1580	1660	1793	1805	1718	1525	1298	1269	1300	1530	1734	1844	1800	1677	1581	1592

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62	1518	1508	1611	1754	1776	1687	1473	1223	1199	1223	1476	1703	1808	1752	1626	1512	1518
63	1438	1425	1570	1723	1729	1639	1431	1159	1119	1158	1417	1675	1776	1718	1590	1432	1438
64	1365	1356	1530	1682	1679	1587	1379	1095	1048	1087	1379	1634	1742	1688	1543	1360	1365
65	1289	1282	1481	1641	1632	1536	1323	1028	976	1021	1331	1576	1691	1654	1480	1286	1289
66	1214	1207	1426	1583	1584	1484	1271	967	906	961	1279	1523	1641	1605	1436	1226	1214
67	1142	1140	1368	1531	1537	1440	1221	911	833	899	1232	1472	1590	1555	1390	1159	1142
68	1062	1069	1321	1480	1491	1391	1171	860	760	846	1186	1419	1539	1502	1341	1085	1062
69	984	1009	1268	1427	1453	1347	1128	810	693	795	1130	1370	1491	1455	1292	1020	984
70	914	948	1222	1379	1410	1301	1078	762	635	752	1082	1328	1448	1408	1237	964	914
71	837	889	1175	1344	1369	1251	1026	712	572	702	1035	1278	1404	1365	1193	913	837
72	775	841	1123	1299	1326	1208	975	669	503	658	983	1235	1366	1317	1144	857	775
73	705	793	1075	1255	1275	1164	933	624	446	610	935	1176	1317	1273	1093	815	705
74	637	742	1017	1202	1226	1109	878	575	399	569	882	1122	1267	1216	1044	766	637
75	578	692	972	1160	1163	1034	829	528	352	524	835	1067	1217	1169	995	712	578
76	517	656	922	1106	1112	968	782	483	303	476	789	1003	1165	1120	944	671	517
77	457	607	870	1043	1021	891	722	439	255	434	737	929	1096	1056	897	620	457
78	395	553	827	969	895	786	660	397	214	385	678	862	1027	986	847	573	395
79	355	513	776	878	811	702	582	357	187	337	606	764	926	915	793	529	355
80	302	462	723	767	762	639	498	318	157	296	540	676	819	835	740	477	302
81	258	425	658	692	681	573	430	279	129	267	459	608	747	745	677	437	258
82	221	386	580	641	590	477	371	237	106	229	392	549	694	666	603	397	221
83	188	344	497	565	475	387	302	189	90	196	338	448	594	598	532	353	188
84	155	306	436	469	416	321	234	152	75	159	272	367	507	521	460	313	155
85	130	267	373	387	329	247	182	119	64	127	214	313	424	434	386	276	130
86	110	227	311	329	266	192	135	93	54	102	169	244	366	370	328	232	110
87	95	185	232	251	196	159	111	72	32	81	133	197	283	305	261	190	95
88	80	149	187	186	179	145	103	61	21	53	114	173	228	238	206	157	80
89	67	118	138	165	165	134	92	46	17	56	106	158	196	194	162	123	67
90	44	90	118	154	157	123	89	40	17	50	101	146	181	171	127	102	44
91	32	75	104	143	140	121	82	40	17	43	94	144	168	156	112	72	32
92	22	65	95	137	139	119	77	34	15	41	83	143	160	145	106	66	22
93	23	50	87	124	136	116	62	32	21	35	78	135	150	140	96	48	23

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94	18	45	78	124	135	107	58	29	20	33	68	118	154	135	86	43	18
95	20	38	82	116	126	93	47	26	19	32	64	109	144	123	76	34	20
96	22	32	71	105	109	80	44	24	17	30	54	89	125	111	68	33	22
97	19	28	61	89	92	66	48	24	15	25	55	83	112	97	67	33	19
98	21	33	52	82	79	63	47	21	20	27	48	82	93	77	60	31	21
99	22	26	51	71	73	59	43	20	14	25	45	75	89	81	44	28	22
100	16	29	47	67	67	57	34	21	12	26	43	64	81	69	45	28	16
101	20	25	43	66	63	52	29	22	19	20	28	51	72	67	47	25	20
102	26	27	44	62	58	40	36	24	11	28	32	55	68	54	43	20	26
103	18	27	40	57	53	45	27	21	22	25	35	55	59	56	40	22	18
104	23	26	37	51	49	43	32	20	12	28	27	49	56	50	40	30	23
105	20	29	35	44	53	37	27	28	18	25	30	35	53	52	31	25	20
106	20	28	21	40	47	38	29	23	23	28	31	40	53	46	26	27	20
107	21	27	31	43	50	30	28	24	18	22	32	45	53	46	29	25	21
108	22	19	32	38	40	30	31	19	21	20	33	32	51	22	34	26	22
109	17	24	23	39	35	30	29	15	17	29	32	36	39	38	20	24	17
110	14	24	34	38	36	31	28	24	16	19	38	33	41	36	36	25	14
111	21	28	32	33	37	23	33	23	18	20	35	32	37	31	33	25	21
112	22	27	35	33	23	30	26	18	17	22	39	38	36	33	25	25	22
113	18	26	36	36	36	21	35	19	22	18	29	36	36	31	35	22	18
114	20	26	33	37	37	34	37	19	12	18	24	38	36	28	31	23	20
115	21	23	34	37	34	32	34	16	18	23	33	37	40	34	37	20	21
116	12	19	35	40	37	34	31	13	24	21	35	45	40	30	27	23	12
117	23	20	32	41	33	32	35	22	14	22	35	35	42	34	34	16	23
118	20	26	37	42	33	35	29	15	18	26	33	49	45	42	36	15	20
119	19	20	35	41	37	41	31	18	15	24	30	44	40	42	30	17	19
120	22	23	37	30	46	31	33	22	21	21	34	41	52	35	33	19	22
121	23	24	33	46	45	36	31	18	16	23	32	47	51	45	33	19	23
122	11	22	31	41	37	35	30	20	19	21	24	34	51	33	35	16	11
123	22	24	32	43	39	32	25	22	17	23	27	42	49	38	25	21	22
124	20	20	31	44	36	32	23	21	21	22	29	31	47	40	28	22	20
125	25	24	34	45	38	34	29	19	23	26	30	45	46	41	29	15	25

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126	20	23	32	45	30	31	20	20	18	23	31	38	37	36	34	22	20
127	21	22	31	43	31	32	32	16	17	24	29	43	36	39	31	21	21
128	18	22	34	38	31	32	30	23	20	18	27	30	35	36	33	21	18
129	24	18	24	40	26	28	31	21	23	24	18	37	35	28	27	23	24
130	21	22	32	33	25	16	25	20	22	25	29	38	26	35	29	22	21
131	26	19	30	35	21	30	29	20	22	26	29	40	26	33	28	20	26
132	25	25	29	35	17	32	27	25	22	27	23	37	23	33	27	17	25
133	28	25	30	36	18	32	29	20	17	22	24	34	23	39	24	23	28
134	24	18	29	36	25	31	22	22	24	28	30	35	26	36	29	22	24
135	22	23	26	38	24	31	26	15	24	22	25	29	28	30	27	25	22
136	21	24	27	30	20	35	27	24	23	26	26	27	29	32	27	25	21
137	23	19	26	35	24	32	29	27	18	29	31	37	27	30	24	18	23
138	25	25	27	38	22	34	25	21	25	24	29	39	22	32	23	23	25
139	28	24	29	33	20	29	26	19	24	26	30	35	23	31	24	26	28
140	26	22	33	35	22	28	24	22	21	27	25	37	24	34	26	19	26
141	26	22	28	31	23	23	27	18	21	26	26	27	22	32	27	26	26
142	24	18	31	33	25	23	27	22	23	21	21	32	29	35	21	20	24
143	25	24	27	31	21	24	19	30	25	29	25	29	25	32	23	25	25
144	28	19	28	33	20	25	26	24	23	24	30	28	18	30	24	27	28
145	25	23	28	31	19	23	23	18	25	27	28	27	23	25	24	24	25
146	24	23	21	28	17	25	20	22	25	31	31	26	21	27	25	26	24
147	21	17	29	29	16	23	27	20	25	28	29	30	24	30	24	27	21
148	29	26	24	30	16	25	27	26	25	25	25	27	22	28	25	22	29
149	27	30	29	25	14	24	30	20	22	25	24	31	19	26	24	25	27
150	23	25	28	31	19	17	29	27	15	27	25	30	22	25	23	24	23
151	29	29	22	30	17	21	25	21	29	26	27	25	21	19	21	27	29
152	26	27	27	28	17	26	25	25	21	26	29	28	18	29	21	24	26
153	26	28	17	18	18	22	27	24	24	25	22	24	18	19	30	24	26
154	28	28	30	28	12	18	25	26	29	29	23	27	25	30	20	26	28
155	23	24	30	16	16	21	24	25	24	32	31	22	20	25	22	27	23
156	26	32	30	27	17	24	26	22	26	29	23	26	20	25	19	26	26
157	28	28	32	17	18	19	26	24	28	28	28	29	16	21	26	27	28

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158	30	31	24	20	16	24	27	28	20	27	25	33	20	22	20	27	30
159	25	28	29	29	18	24	28	25	26	27	29	24	22	27	25	24	25
160	26	28	23	27	16	22	21	28	29	31	29	29	20	24	27	23	26
161	26	27	28	28	17	21	27	22	18	26	22	28	20	23	21	23	26
162	31	26	29	30	12	24	29	25	24	23	23	21	19	15	26	23	31
163	29	32	26	28	15	20	24	22	22	27	23	26	23	26	23	23	29
164	27	27	23	28	17	21	22	25	20	31	22	24	20	21	25	22	27
165	28	30	22	26	15	22	26	20	15	28	25	26	21	23	21	28	28
166	26	22	23	28	15	24	25	24	26	30	27	26	21	18	23	29	26
167	22	23	23	31	14	21	24	25	22	20	22	31	18	28	28	25	22
168	30	25	25	29	11	21	23	22	27	25	28	24	19	24	13	26	30
169	27	22	28	28	13	18	22	26	20	28	29	28	21	26	27	20	27
170	22	22	28	31	16	25	28	27	22	26	24	26	21	22	23	26	22
171	24	27	21	21	13	22	25	28	27	28	25	30	17	24	23	23	24
172	28	28	27	26	14	21	27	21	28	29	31	28	18	22	25	25	28
173	25	25	29	24	17	22	24	21	25	29	32	29	18	24	25	21	25
174	28	24	33	30	17	24	23	30	25	29	28	23	23	19	15	27	28
175	28	24	27	29	14	21	23	25	25	23	27	22	20	23	23	24	28
176	28	26	18	24	17	17	25	24	26	25	28	28	22	22	26	25	28
177	26	27	28	30	15	22	27	26	23	26	21	23	18	23	25	27	26
178	27	22	25	15	15	25	17	22	25	24	28	23	21	24	18	21	27
179	24	25	27	26	12	21	20	22	24	24	24	22	20	26	20	27	24
180	20	26	22	26	14	18	23	22	22	20	25	22	18	23	22	22	20

Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01

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Report Format Number BL-FM-SA-012



Report No.: BLC2010026E-D

Certificate#4810.01

### 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 \*\*\*\*\*