

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P436810

Luminaire Tested: **TT-D3-750-U-5MQ-PM-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P436810
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D3-750-U-5MQ-PM-HSS
Description: TOPTIER LED SITE LUMINAIRE
5000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5658.9 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G2

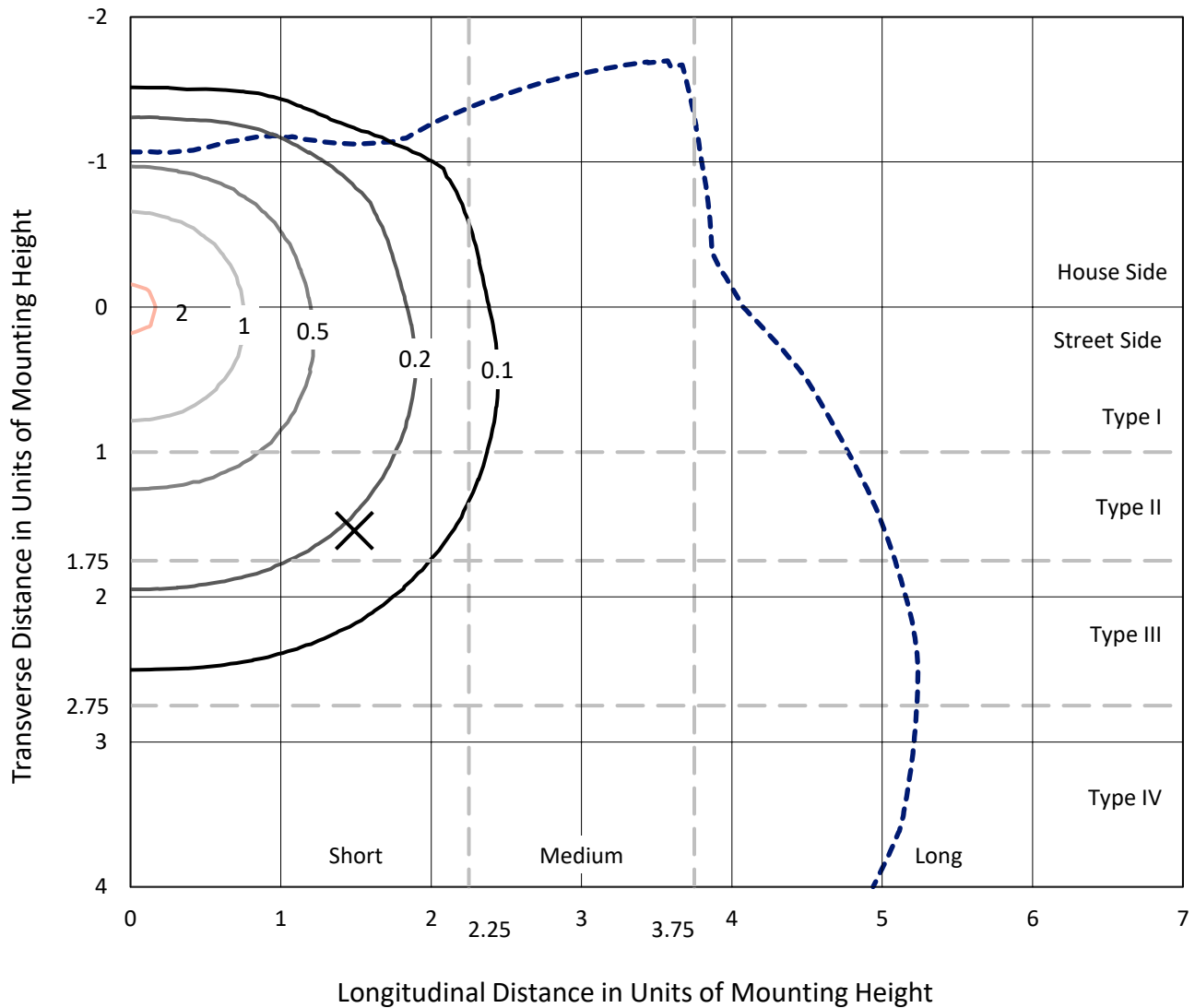
Input Watts (W): 47.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

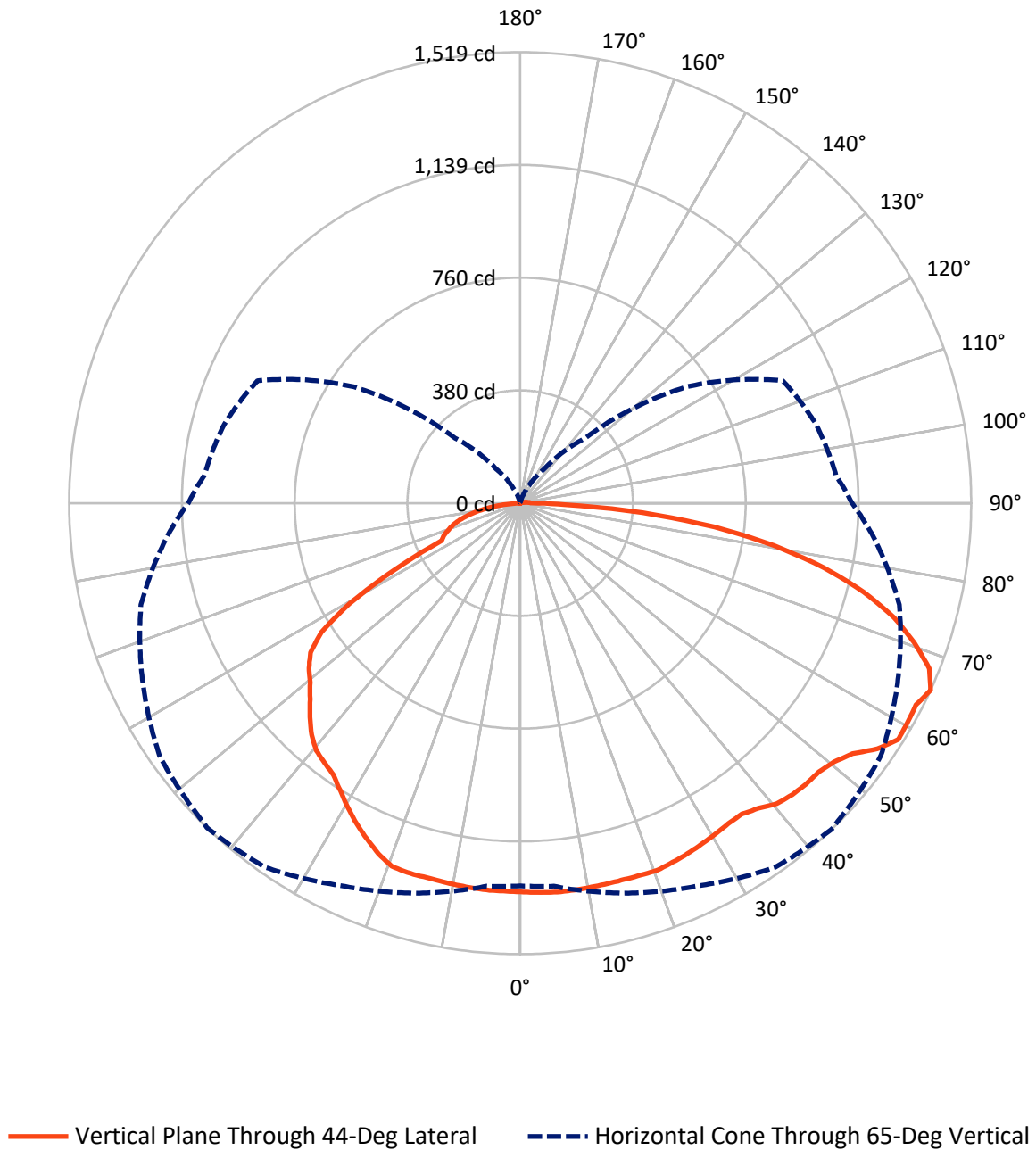
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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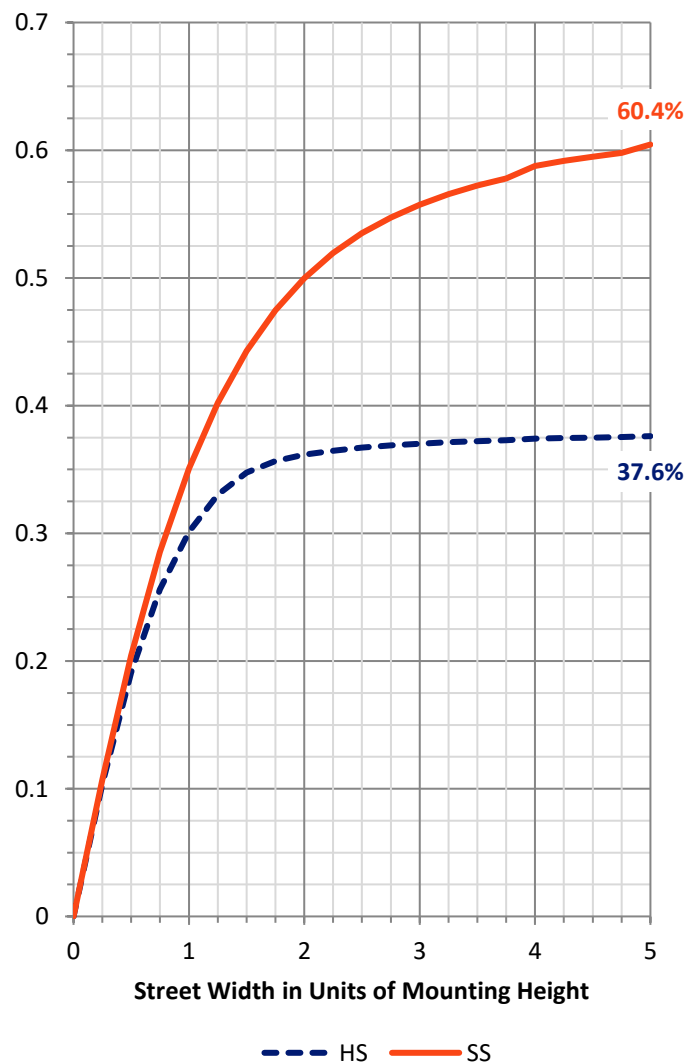
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2142.7	1.5	2144.2
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	3495.5	19.2	3514.7
	% Fixture	61.8	0.3	62.1
Total	Lumens	5638.2	20.7	5658.9
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	2.2
10°-20°	370.3	6.5
20°-30°	589.3	10.4
30°-40°	755.0	13.3
40°-50°	894.5	15.8
50°-60°	979.6	17.3
60°-70°	931.2	16.5
70°-80°	741.4	13.1
80°-90°	251.9	4.5
90°-100°	13.3	0.2
100°-110°	4.4	0.1
110°-120°	1.0	0.0
120°-130°	0.6	0.0
130°-140°	0.5	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	5638.2	99.6
0°-180°	5658.9	100.0

Coefficient of Utilization



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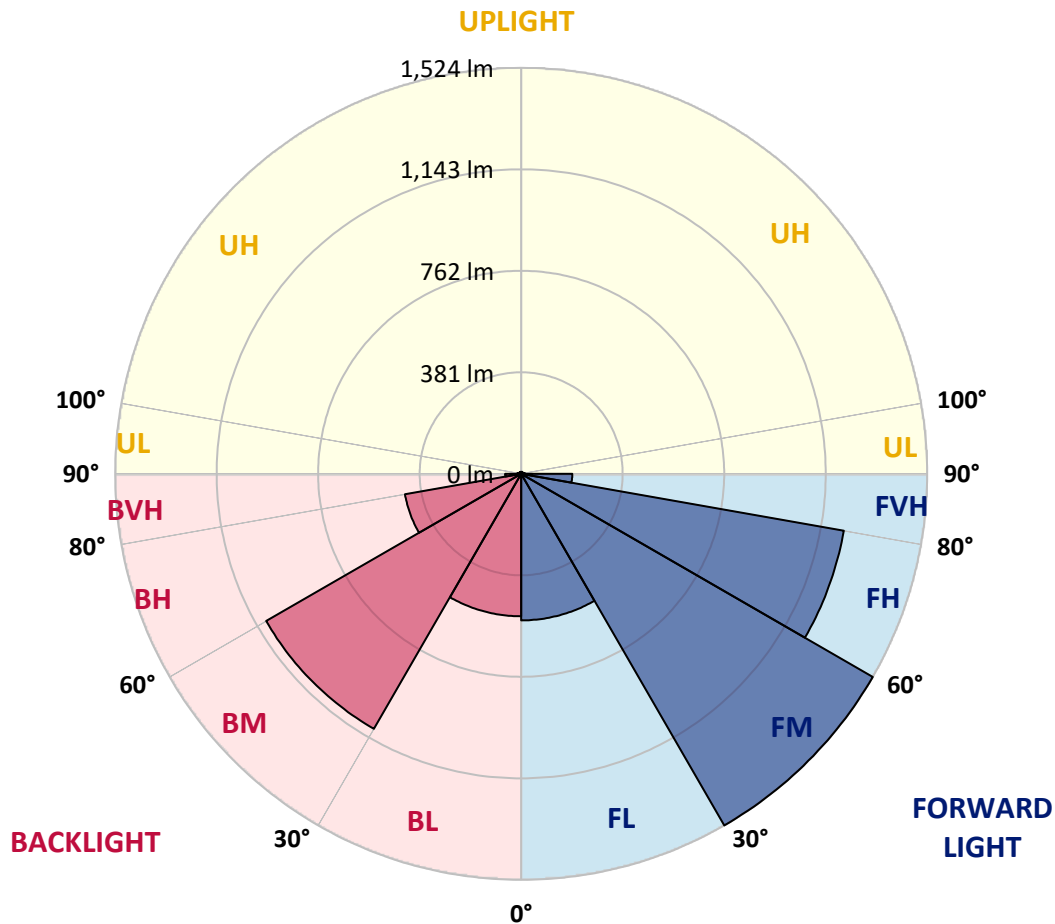
CATALOG NUMBER: TT-D3-750-U-5MQ-PM-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	550.0	9.7			
FM	(30°-60°)	1523.9	26.9			
FH	(60°-80°)	1229.7	21.7			G1/1800
FVH	(80°-90°)	191.8	3.4			G2/225
BL	(0°-30°)	534.7	9.4	B2/1000		
BM	(30°-60°)	1105.2	19.5	B2/2500		
BH	(60°-80°)	442.8	7.8	B1/500		G1/500
BVH	(80°-90°)	60.0	1.1			G1/100
UL	(90°-100°)	13.3	0.2		U2/50	
UH	(100°-180°)	7.4	0.1		U1/10	

BUG Rating: B2-U2-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310
2.5°	1315	1314	1314	1314	1314	1313	1314	1312	1313	1310	1310
5°	1318	1316	1317	1317	1317	1316	1317	1314	1315	1311	1310
7.5°	1319	1318	1318	1318	1318	1316	1317	1315	1314	1311	1309
10°	1319	1318	1318	1318	1317	1315	1316	1313	1313	1309	1307
12.5°	1319	1318	1319	1317	1317	1315	1315	1312	1312	1307	1305
15°	1318	1317	1317	1318	1317	1315	1315	1312	1311	1305	1303
17.5°	1317	1316	1317	1318	1319	1317	1318	1313	1311	1305	1302
20°	1318	1317	1318	1320	1320	1320	1320	1315	1311	1305	1300
22.5°	1315	1315	1315	1315	1317	1314	1314	1311	1306	1301	1296
25°	1308	1308	1309	1310	1310	1308	1307	1304	1300	1294	1288
27.5°	1300	1300	1301	1301	1303	1301	1300	1296	1292	1285	1278
30°	1291	1291	1291	1293	1294	1294	1293	1288	1283	1275	1266
32.5°	1281	1281	1284	1286	1287	1287	1287	1281	1275	1265	1252
35°	1273	1273	1277	1284	1288	1286	1285	1281	1272	1261	1240
37.5°	1278	1278	1287	1297	1306	1304	1304	1297	1285	1267	1241
40°	1290	1291	1305	1318	1329	1331	1331	1323	1305	1282	1246
42.5°	1293	1295	1309	1328	1338	1343	1343	1332	1313	1286	1244
45°	1293	1294	1310	1330	1346	1350	1350	1338	1314	1288	1237
47.5°	1293	1292	1306	1334	1350	1353	1353	1340	1317	1284	1227
50°	1290	1295	1316	1338	1366	1370	1369	1355	1323	1289	1219
52.5°	1297	1296	1324	1368	1393	1402	1403	1385	1352	1303	1214
55°	1326	1327	1354	1405	1443	1460	1458	1435	1388	1331	1228
57.5°	1336	1346	1385	1429	1487	1502	1502	1474	1417	1353	1238
60°	1316	1320	1368	1443	1496	1499	1500	1480	1420	1341	1218
62.5°	1311	1319	1356	1440	1474	1496	1495	1468	1417	1332	1211
65°	1289	1295	1360	1422	1497	1519	1514	1483	1404	1322	1189
67.5°	1244	1250	1310	1397	1465	1486	1491	1455	1373	1275	1142
70°	1169	1178	1239	1324	1396	1408	1406	1384	1302	1197	1073
72.5°	1064	1078	1155	1236	1298	1316	1308	1283	1216	1103	979
75°	953	966	1027	1118	1183	1195	1189	1159	1091	980	868
77.5°	832	843	895	988	1036	1046	1049	1009	945	845	745
80°	669	674	744	805	847	867	865	835	771	688	588
82.5°	494	498	552	604	642	660	650	620	569	498	422
85°	303	296	340	379	402	414	404	387	342	286	233
87.5°	109	103	123	129	155	151	160	129	104	74	52
90°	48	48	47	45	41	37	36	30	22	14	5
92.5°	44	44	43	41	37	33	33	27	20	13	5
95°	37	37	36	34	31	28	28	22	17	11	4
97.5°	29	29	28	27	24	22	22	18	13	8	3
100°	22	22	21	20	19	17	16	13	10	6	2
102.5°	16	16	16	15	13	12	12	10	7	5	2
105°	11	11	11	10	9	8	8	7	5	3	1
107.5°	7	7	7	7	6	5	5	4	3	2	1
110°	4	3	4	4	4	3	3	2	2	1	1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2	2	2	2	2	2	2	1	1	1	1
115°	1	1	1	2	2	1	1	1	1	1	1
117.5°	0	1	1	1	1	1	1	1	1	1	1
120°	0	0	1	1	1	1	1	1	1	1	1
122.5°	0	0	0	1	1	1	1	1	1	1	1
125°	0	0	0	1	1	1	1	1	1	1	1
127.5°	0	0	0	1	1	1	1	1	1	1	1
130°	0	0	0	1	1	1	1	1	1	1	1
132.5°	0	0	0	1	1	1	1	1	1	1	1
135°	0	0	0	0	1	1	1	1	1	1	1
137.5°	0	0	0	0	1	1	1	1	1	1	1
140°	0	1	1	0	0	1	1	1	1	1	1
142.5°	1	1	1	1	1	1	1	1	1	1	1
145°	1	1	1	1	1	1	1	1	1	1	1
147.5°	1	1	0	0	1	1	1	1	1	1	1
150°	1	1	1	0	0	1	1	1	1	1	1
152.5°	1	1	1	1	1	1	1	1	1	1	1
155°	1	1	1	1	1	1	1	1	1	1	1
157.5°	1	1	1	0	1	1	1	1	1	1	1
160°	1	1	1	1	1	1	1	1	1	1	1
162.5°	1	1	1	1	1	1	1	1	1	1	1
165°	1	1	1	1	1	1	1	1	1	1	1
167.5°	1	1	1	1	1	1	1	1	1	1	1
170°	1	1	1	1	1	1	1	1	1	1	1
172.5°	1	1	1	1	1	1	1	1	1	1	1
175°	1	1	1	1	1	1	1	1	1	1	1
177.5°	1	1	1	1	1	1	1	1	1	1	1
180°	1	1	1	1	1	1	1	1	1	1	1

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CATALOG NUMBER: TT-D3-750-U-5MQ-PM-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310
2.5°	1310	1309	1308	1309	1308	1308	1307	1307	1306	1306	1305
5°	1310	1309	1308	1309	1307	1308	1308	1307	1306	1305	1304
7.5°	1309	1309	1307	1308	1306	1306	1305	1305	1304	1304	1303
10°	1307	1306	1306	1306	1304	1304	1303	1302	1302	1301	1300
12.5°	1305	1304	1303	1303	1302	1301	1300	1300	1299	1298	1297
15°	1302	1301	1301	1301	1300	1300	1299	1298	1296	1295	1294
17.5°	1301	1300	1301	1301	1300	1301	1299	1297	1295	1294	1293
20°	1300	1300	1300	1299	1298	1297	1296	1295	1294	1293	1292
22.5°	1295	1294	1292	1286	1279	1274	1273	1275	1275	1275	1272
25°	1286	1283	1275	1264	1252	1244	1239	1239	1238	1236	1235
27.5°	1275	1269	1255	1241	1224	1214	1202	1195	1192	1191	1189
30°	1260	1251	1233	1215	1194	1180	1161	1149	1142	1139	1137
32.5°	1242	1233	1212	1190	1165	1145	1121	1102	1089	1083	1080
35°	1230	1217	1193	1167	1142	1113	1084	1058	1038	1031	1027
37.5°	1225	1213	1187	1161	1133	1098	1064	1027	1000	988	984
40°	1228	1213	1184	1156	1123	1084	1039	993	958	941	937
42.5°	1221	1204	1170	1140	1099	1055	1000	947	900	886	880
45°	1209	1188	1151	1113	1070	1016	959	891	835	818	813
47.5°	1197	1168	1124	1089	1037	974	907	831	761	744	741
50°	1179	1152	1105	1064	1011	938	862	767	688	659	651
52.5°	1171	1136	1091	1059	995	912	816	714	600	564	556
55°	1179	1135	1087	1056	982	879	761	631	499	461	450
57.5°	1165	1127	1079	1044	948	811	681	514	377	328	324
60°	1147	1093	1048	1016	877	683	530	366	227	185	177
62.5°	1140	1084	1032	993	782	502	323	185	94	66	60
65°	1118	1068	1031	976	683	310	139	55	4	3	3
67.5°	1076	1025	1000	968	673	296	126	50	2	0	0
70°	1004	964	947	930	644	274	115	45	1	0	0
72.5°	909	882	879	877	602	253	103	40	1	0	0
75°	814	781	786	798	550	224	89	35	1	0	0
77.5°	694	670	682	702	482	190	73	28	1	0	0
80°	546	530	557	575	394	151	55	20	0	0	0
82.5°	388	379	404	427	293	107	38	13	0	0	0
85°	209	204	228	253	176	61	19	6	0	0	0
87.5°	52	48	49	59	43	13	3	1	0	0	0
90°	1	1	1	1	0	0	0	0	0	0	0
92.5°	1	1	1	1	0	0	0	0	0	0	0
95°	1	1	1	1	0	0	0	0	0	0	0
97.5°	1	1	1	1	1	0	0	0	0	0	0
100°	1	1	1	1	1	1	0	0	0	0	0
102.5°	1	1	1	1	0	0	0	0	0	0	0
105°	1	1	1	1	0	0	0	0	0	0	0
107.5°	1	1	1	1	1	1	0	0	0	0	0
110°	1	1	1	1	1	1	0	0	0	0	0



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 CATALOG NUMBER: TT-D3-750-U-5MQ-PM-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1	1	1	1	1	1	0	0	0	0	0
115°	1	1	1	1	1	1	0	0	0	0	0
117.5°	1	1	1	1	1	0	0	0	0	0	0
120°	1	1	1	1	1	1	0	0	0	0	0
122.5°	1	1	1	1	1	1	0	0	0	0	0
125°	1	1	1	1	1	1	0	0	0	0	0
127.5°	1	1	1	1	1	1	0	0	0	0	0
130°	1	1	1	1	1	0	0	0	0	0	0
132.5°	1	1	1	1	1	1	0	0	0	0	0
135°	1	1	1	1	1	0	0	0	0	0	0
137.5°	1	1	1	1	1	0	0	0	0	0	0
140°	1	1	1	1	1	0	0	0	0	0	0
142.5°	1	1	1	1	1	0	0	0	0	0	0
145°	1	1	1	1	1	1	0	0	0	0	0
147.5°	1	1	1	1	1	0	0	0	0	0	0
150°	1	1	1	1	1	0	0	0	0	0	0
152.5°	1	1	1	1	1	0	0	0	0	0	0
155°	1	1	1	1	1	0	0	0	0	0	0
157.5°	1	1	1	1	1	0	0	0	0	0	0
160°	1	1	1	1	1	1	0	0	0	0	0
162.5°	1	1	1	1	1	1	0	0	0	0	0
165°	1	1	1	1	1	1	0	0	0	0	0
167.5°	1	1	1	1	1	1	0	0	0	0	0
170°	1	1	1	1	1	1	0	0	0	0	0
172.5°	1	1	1	1	1	1	0	0	0	0	0
175°	1	1	1	1	1	1	0	0	0	0	0
177.5°	1	1	1	1	1	1	0	0	0	0	0
180°	1	1	1	1	1	1	1	1	1	1	1

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

McGRAW-EDISON

Report Number: SP1-2006-844-1

Luminaire Tested: TT-D4-750-U-WQ

Data valid for TT-D* and TTN families of products

Test Date: 11/06/2020

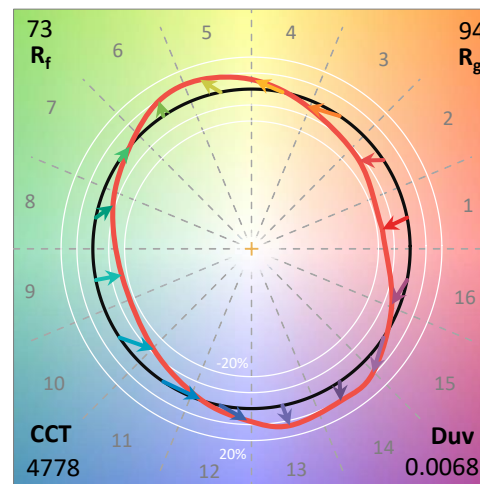
Test Information

Test Method: LM-79-08
 Report Number: SP1-2006-844-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 11/06/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: MCGRAW-EDISON
 Catalog Number: **TT-D4-750-U-WQ**
 Description: MCGRAW EDISON

DISTRIBUTION

Spectral Parameters

CCT (K):	4778	CRI (Ra):	71.0		
CIE u':	0.2092	R1:	67.7	R9:	-28.7
CIE v':	0.4955	R2:	75.2	R10:	41.2
Duv:	0.0068	R3:	80.8	R11:	67.2
CIE x:	0.3535	R4:	71.5	R12:	35.9
CIE y:	0.3721	R5:	67.8	R13:	68.5
CIE z:	0.2744	R6:	65.6	R14:	89.2
Peak Wavelength (nm):	449	R7:	82.2		
Dominant Wavelength (nm):	570	R8:	57.2		
Purity:	17.8				
Rf:	73.3				
Rg:	94.5				



Test Conditions

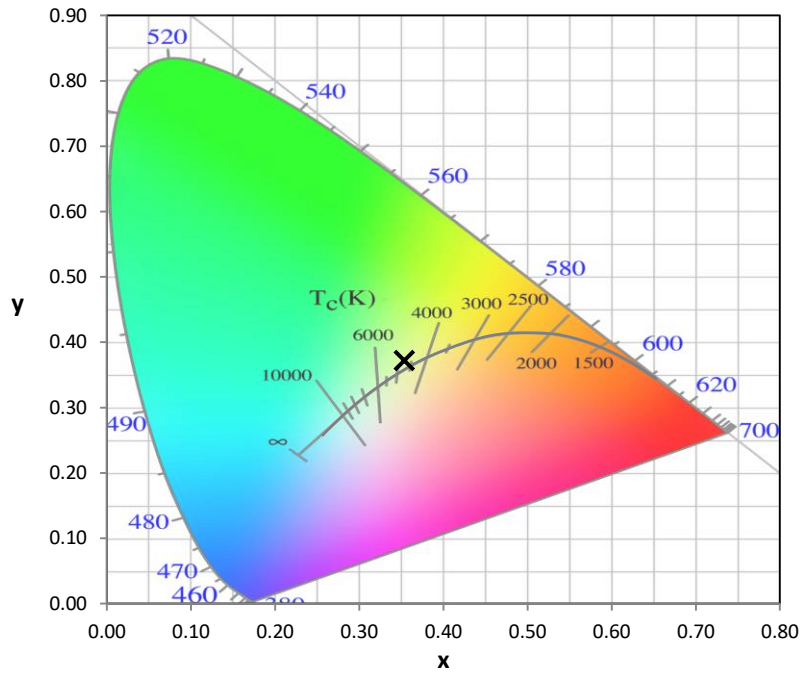
Stabilization Time: 62M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.6/45%
 Sphere Temperature (°C): 24.7

REPORT NUMBER: SP1-2006-844-1

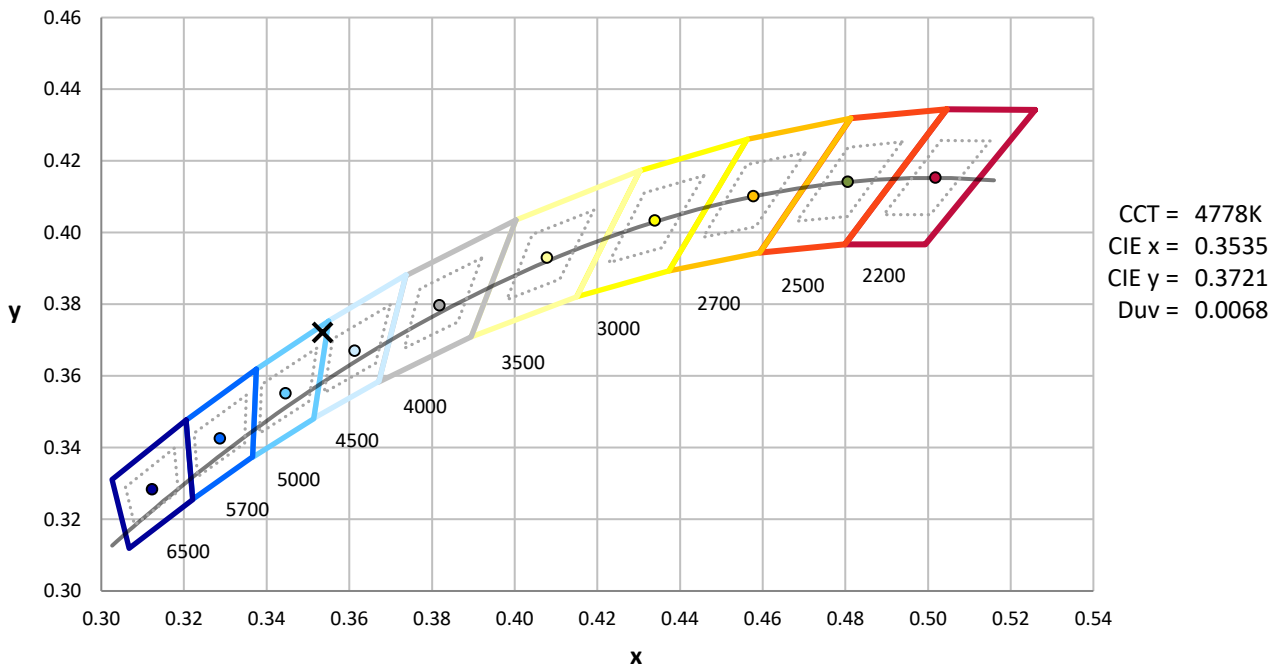
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2019	12/3/2020
AC Power Source	IN0063	12/3/2019	12/3/2020
DC Power Source	IN0208	12/3/2019	12/3/2020
Sphere Thermometer	IN0085	12/3/2019	12/3/2020
Room Thermometer	IN0046	12/3/2019	12/3/2020

REPORT NUMBER: SP1-2006-844-1

CIE 1931 Chromaticity Diagram



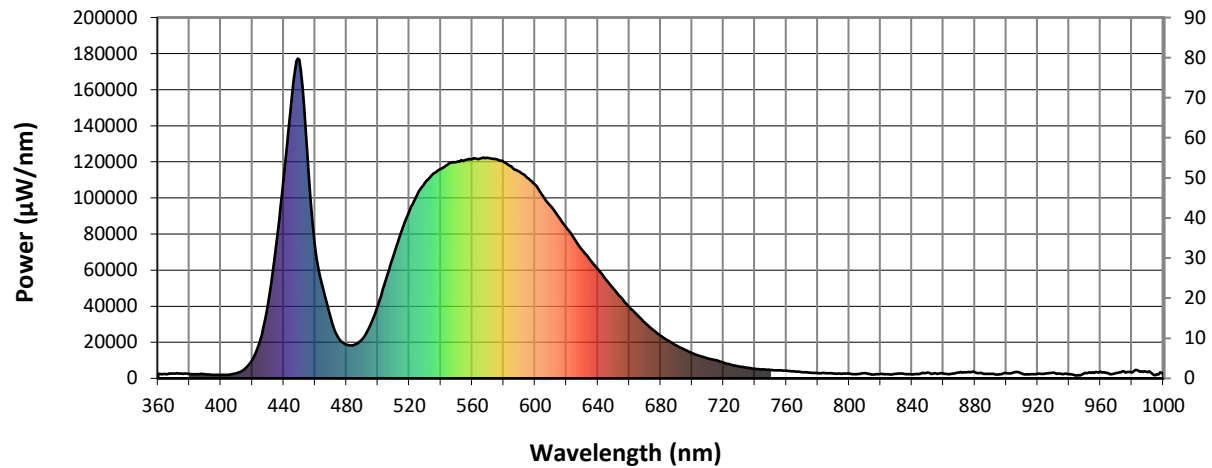
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2006-844-1

Photopic Flux vs. Wavelength

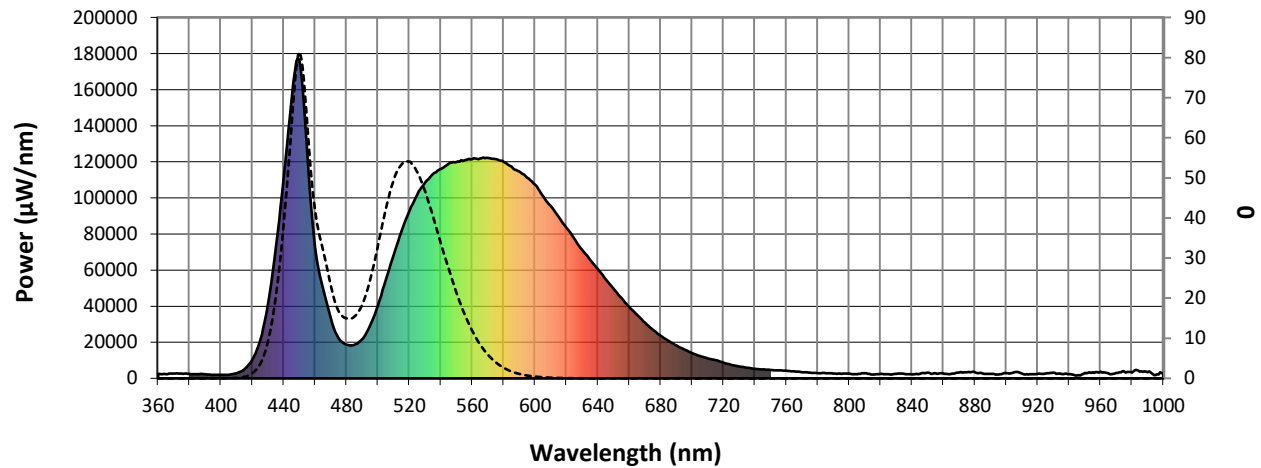


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	2529	0.0	490	21819	3.1	620	83437	21.7	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	5.3	625	77569	17.1	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	9.0	630	71183	12.9	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	15.2	635	65734	9.9	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	23.5	640	60418	7.2	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	33.7	645	54736	5.3	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	45.0	650	49620	3.6	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	54.6	655	44517	2.6	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	63.9	660	39493	1.6	790	2715	0.0	920	2425	0.0
405	2015	0.0	535	113290	70.3	665	35066	1.1	795	2547	0.0	925	2705	0.0
410	2831	0.0	540	116042	75.6	670	30825	0.7	800	2585	0.0	930	3144	0.0
415	5121	0.0	545	118948	79.2	675	27031	0.5	805	2308	0.0	935	2539	0.0
420	10348	0.0	550	119916	81.5	680	23555	0.3	810	2796	0.0	940	2288	0.0
425	21288	0.1	555	120734	82.5	685	20841	0.2	815	2196	0.0	945	1604	0.0
430	41173	0.3	560	121523	82.6	690	18232	0.1	820	2415	0.0	950	3031	0.0
435	73003	0.9	565	121859	81.0	695	16035	0.1	825	2281	0.0	955	3356	0.0
440	111013	1.7	570	122246	79.5	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	3.2	575	121449	75.6	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	4.6	580	120111	71.4	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	4.2	585	117354	65.2	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	3.0	590	114565	59.2	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	2.6	595	111127	52.7	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	2.1	600	107253	46.2	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	1.7	605	101156	39.2	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	1.8	610	95370	32.8	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	2.2	615	89556	27.0	745	5032	0.0	875	3421	0.0			

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Scotopic Flux vs. Wavelength



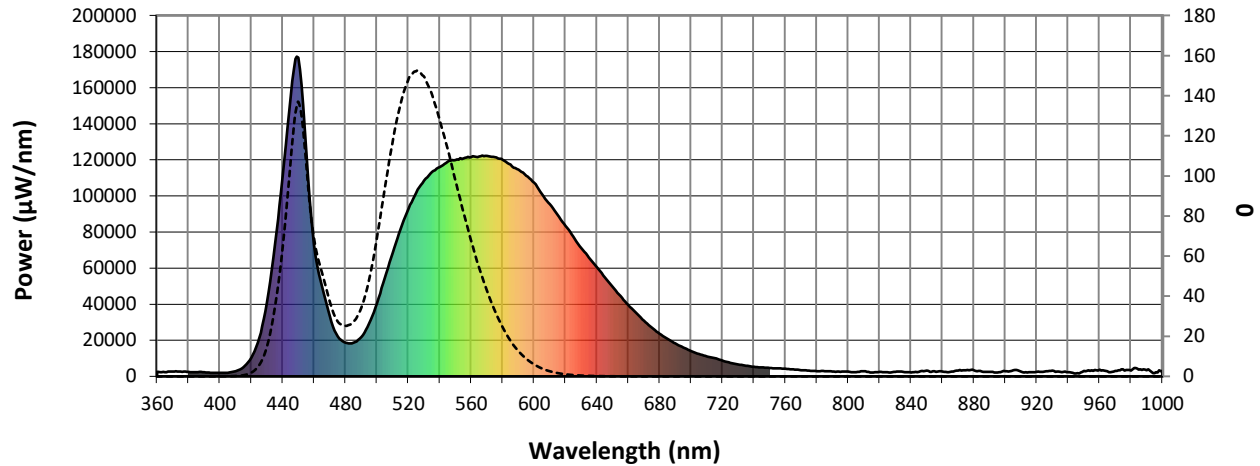
Scotopic Lumens: 4867.6

S/P: 0.66

λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	2529	0.0	490	21819	33.6	620	83437	1.0	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	47.3	625	77569	0.7	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	67.9	630	71183	0.4	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	92.6	635	65734	0.2	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	115.9	640	60418	0.2	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	135.0	645	54736	0.1	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	147.5	650	49620	0.1	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	152.1	655	44517	0.0	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	149.7	660	39493	0.0	790	2715	0.0	920	2425	0.0
405	2015	0.1	535	113290	141.2	665	35066	0.0	795	2547	0.0	925	2705	0.0
410	2831	0.2	540	116042	128.2	670	30825	0.0	800	2585	0.0	930	3144	0.0
415	5121	0.5	545	118948	114.0	675	27031	0.0	805	2308	0.0	935	2539	0.0
420	10348	1.7	550	119916	98.1	680	23555	0.0	810	2796	0.0	940	2288	0.0
425	21288	5.2	555	120734	82.5	685	20841	0.0	815	2196	0.0	945	1604	0.0
430	41173	14.0	560	121523	67.9	690	18232	0.0	820	2415	0.0	950	3031	0.0
435	73003	32.6	565	121859	54.7	695	16035	0.0	825	2281	0.0	955	3356	0.0
440	111013	62.0	570	122246	43.1	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	103.6	575	121449	33.1	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	137.0	580	120111	24.7	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	108.6	585	117354	17.9	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	70.2	590	114565	12.8	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	52.6	595	111127	8.9	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	38.0	600	107253	6.0	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	27.7	605	101156	4.0	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	25.2	610	95370	2.6	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	27.0	615	89556	1.7	745	5032	0.0	875	3421	0.0			

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Melanopic Flux vs. Wavelength

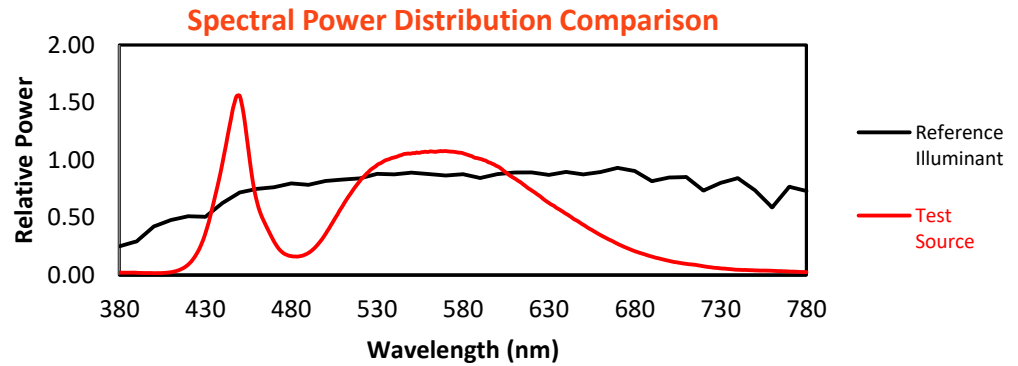


Melanopic Lumens: 12457.9 **S/P: 1.7**

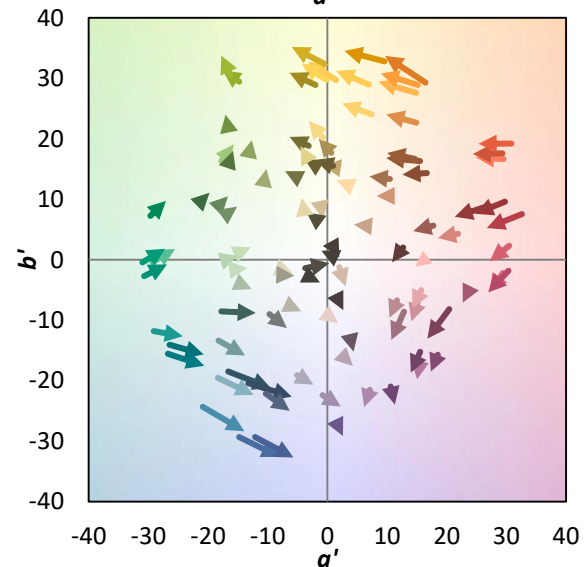
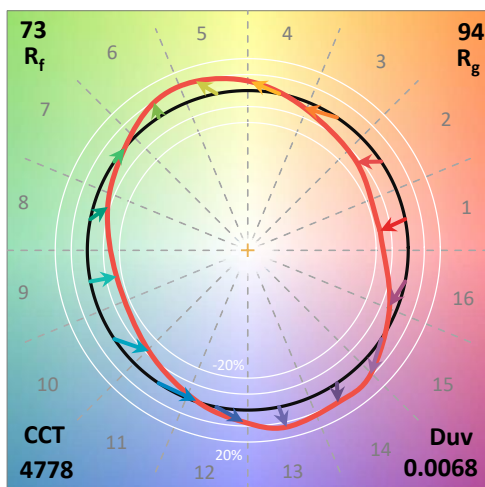
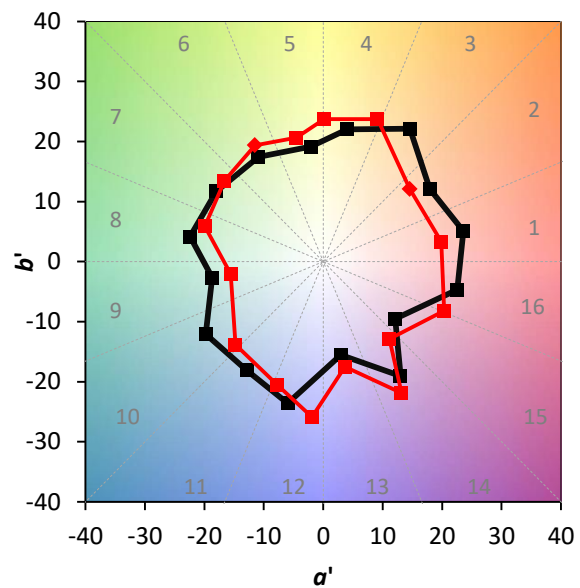
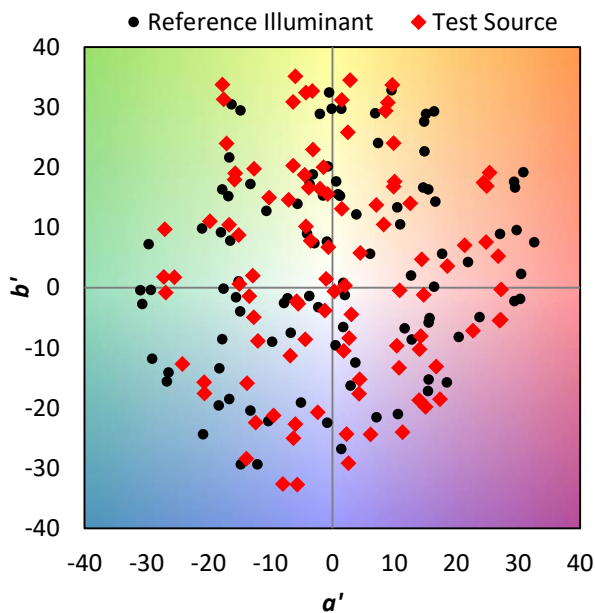
λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	2529	0.0	490	21819	18.2	620	83437	0.1	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	24.2	625	77569	0.0	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	32.6	630	71183	0.0	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	41.8	635	65734	0.0	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	49.1	640	60418	0.0	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	53.2	645	54736	0.0	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	54.0	650	49620	0.0	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	51.6	655	44517	0.0	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	46.9	660	39493	0.0	790	2715	0.0	920	2425	0.0
405	2015	0.0	535	113290	40.8	665	35066	0.0	795	2547	0.0	925	2705	0.0
410	2831	0.1	540	116042	34.0	670	30825	0.0	800	2585	0.0	930	3144	0.0
415	5121	0.3	545	118948	27.6	675	27031	0.0	805	2308	0.0	935	2539	0.0
420	10348	1.2	550	119916	21.5	680	23555	0.0	810	2796	0.0	940	2288	0.0
425	21288	3.3	555	120734	16.3	685	20841	0.0	815	2196	0.0	945	1604	0.0
430	41173	8.7	560	121523	12.0	690	18232	0.0	820	2415	0.0	950	3031	0.0
435	73003	19.5	565	121859	8.6	695	16035	0.0	825	2281	0.0	955	3356	0.0
440	111013	37.1	570	122246	6.0	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	61.1	575	121449	4.0	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	81.4	580	120111	2.7	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	65.1	585	117354	1.7	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	42.8	590	114565	1.1	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	32.5	595	111127	0.7	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	23.6	600	107253	0.5	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	16.9	605	101156	0.3	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	15.0	610	95370	0.2	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	15.3	615	89556	0.1	745	5032	0.0	875	3421	0.0			

Summary

$R_f = 73.3$
 $R_g = 94.5$
 CIE $R_a = 71.0$
 $R_g = -28.7$

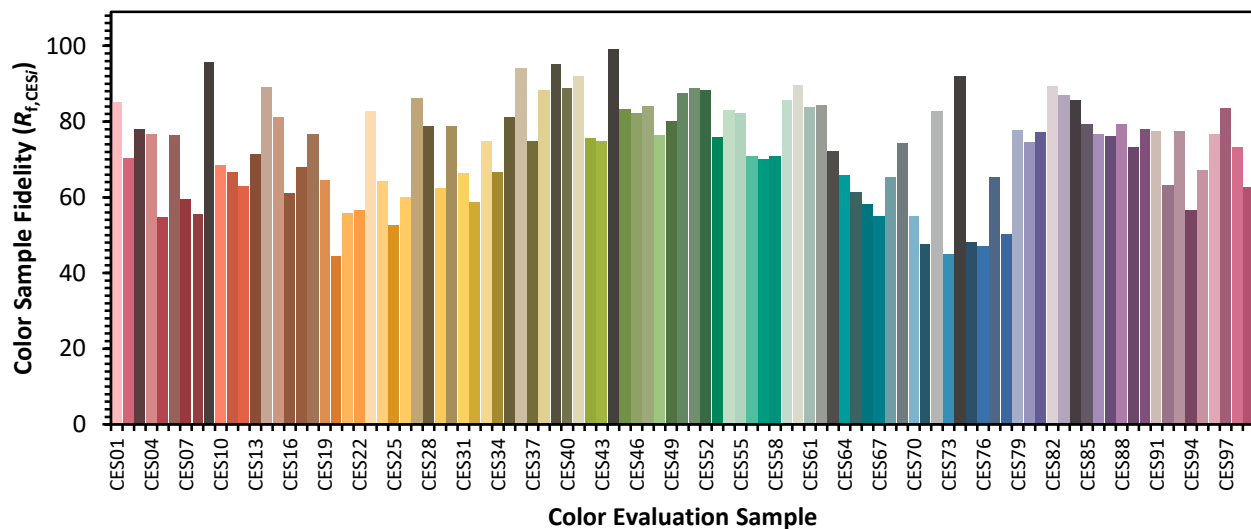


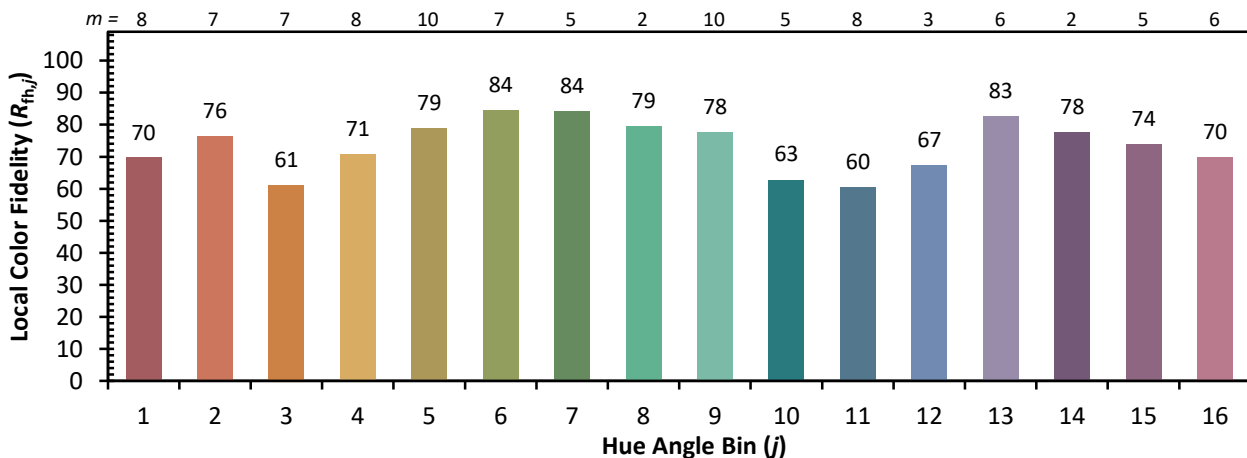
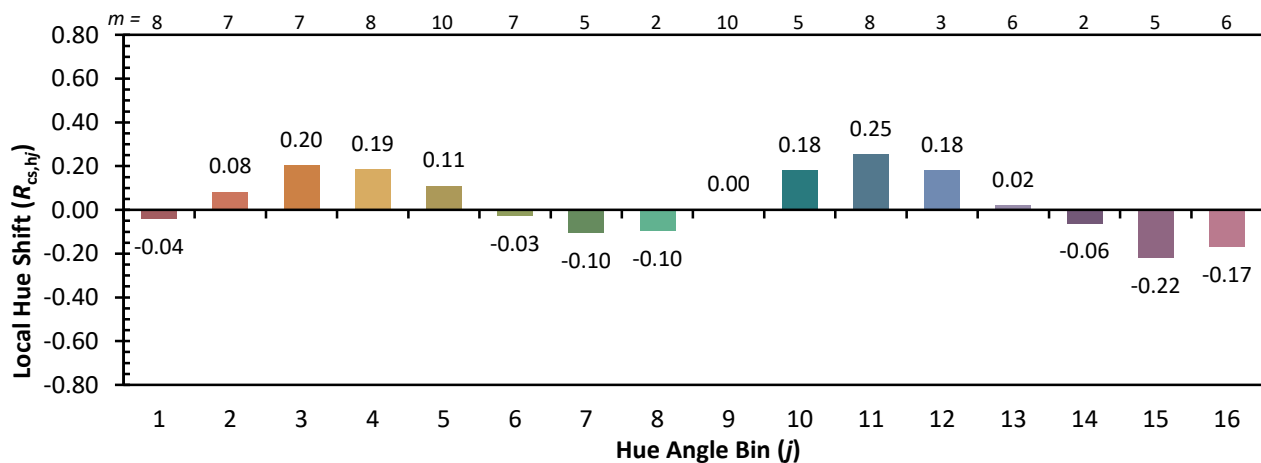
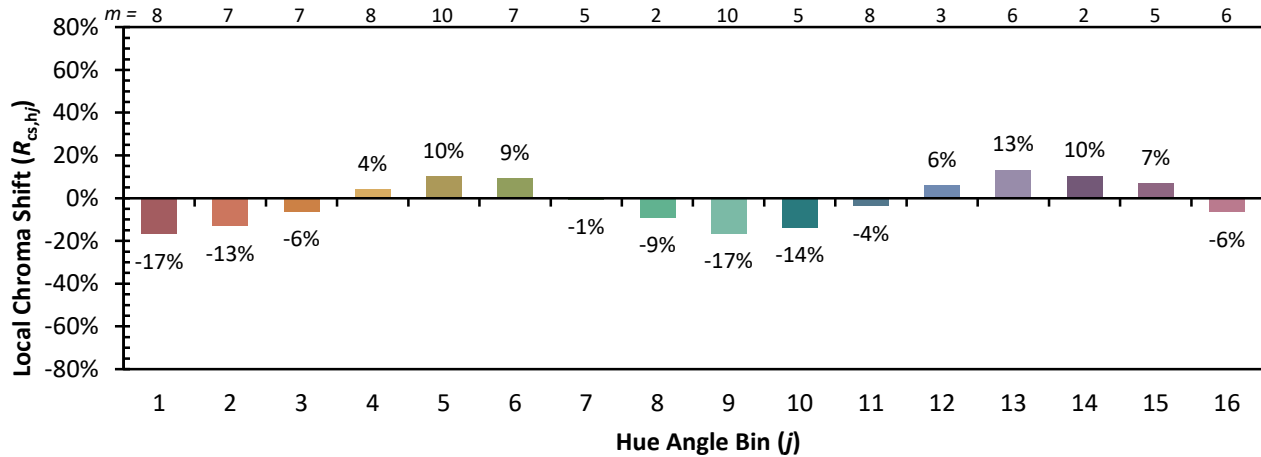
Color Vector Graphics



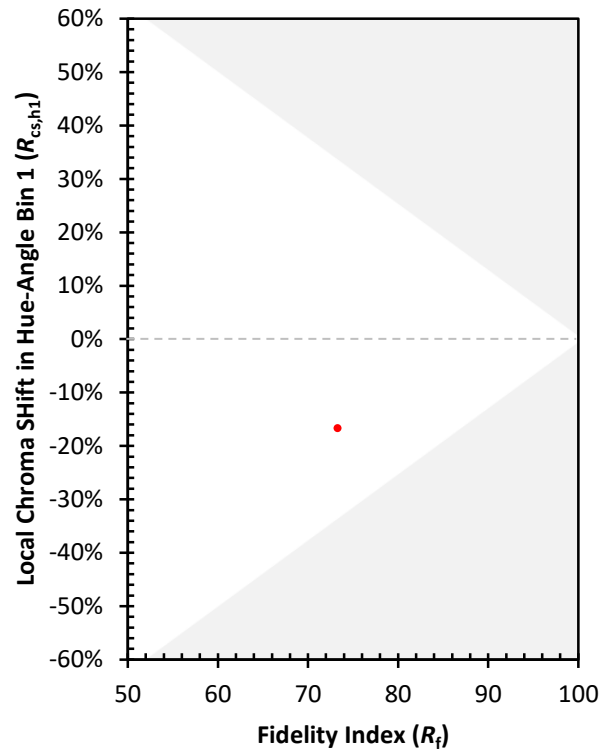
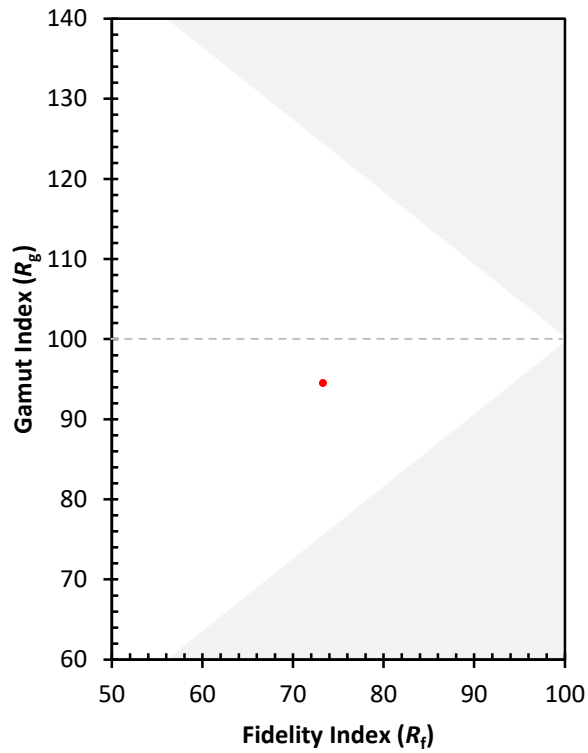
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 47
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 79	CES53 = 76	CES78 = 50
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 59	CES57 = 70	CES82 = 89
CES08 = 38	CES33 = 75	CES58 = 71	CES83 = 87
CES09 = 29	CES34 = 67	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 79
CES11 = 56	CES36 = 94	CES61 = 84	CES86 = 77
CES12 = 61	CES37 = 75	CES62 = 84	CES87 = 76
CES13 = 41	CES38 = 88	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 66	CES89 = 73
CES15 = 70	CES40 = 89	CES65 = 61	CES90 = 78
CES16 = 46	CES41 = 92	CES66 = 58	CES91 = 77
CES17 = 49	CES42 = 75	CES67 = 55	CES92 = 63
CES18 = 55	CES43 = 75	CES68 = 65	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 57
CES20 = 64	CES45 = 83	CES70 = 55	CES95 = 67
CES21 = 85	CES46 = 82	CES71 = 48	CES96 = 77
CES22 = 77	CES47 = 84	CES72 = 83	CES97 = 84
CES23 = 91	CES48 = 76	CES73 = 45	CES98 = 73
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 63
CES25 = 71	CES50 = 88	CES75 = 48	



Color Rendition by Hue-Angle Bin


Measure Comparisons



(END OF REPORT)