

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P821234

Luminaire Tested: **TT-D3-740-24VDC-5MQ-PM-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821234
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-D3-740-24VDC-5MQ-PM-HSS
Description: TOPTIER LED SITE LUMINAIRE
4000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

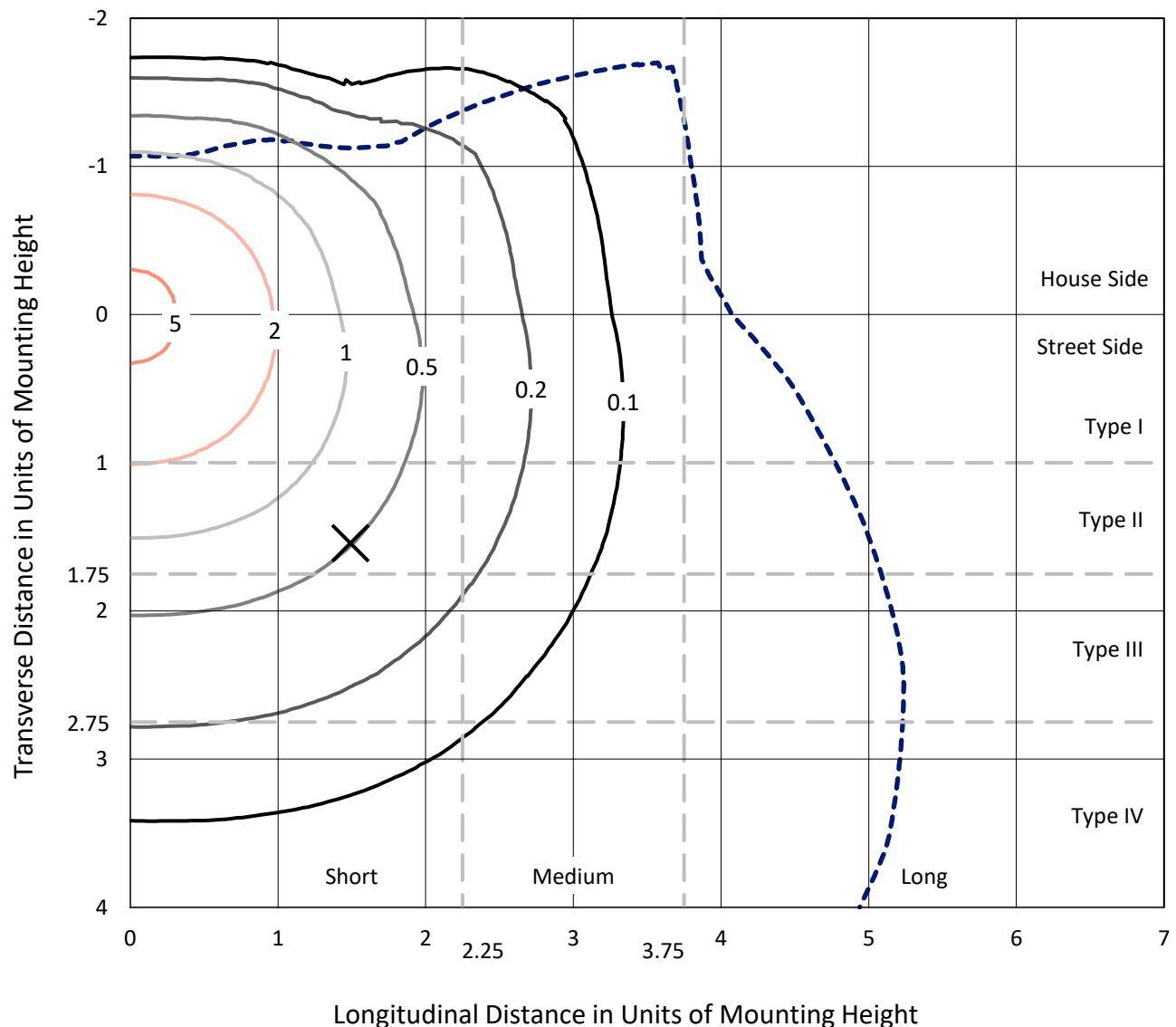
Lumens per Lamp: N/A
Luminaire Lumens: 5658.9 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G2

Input Watts (W): 46
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: 25 FT

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Iso-Footcandle Lines of Horizontal Illumination

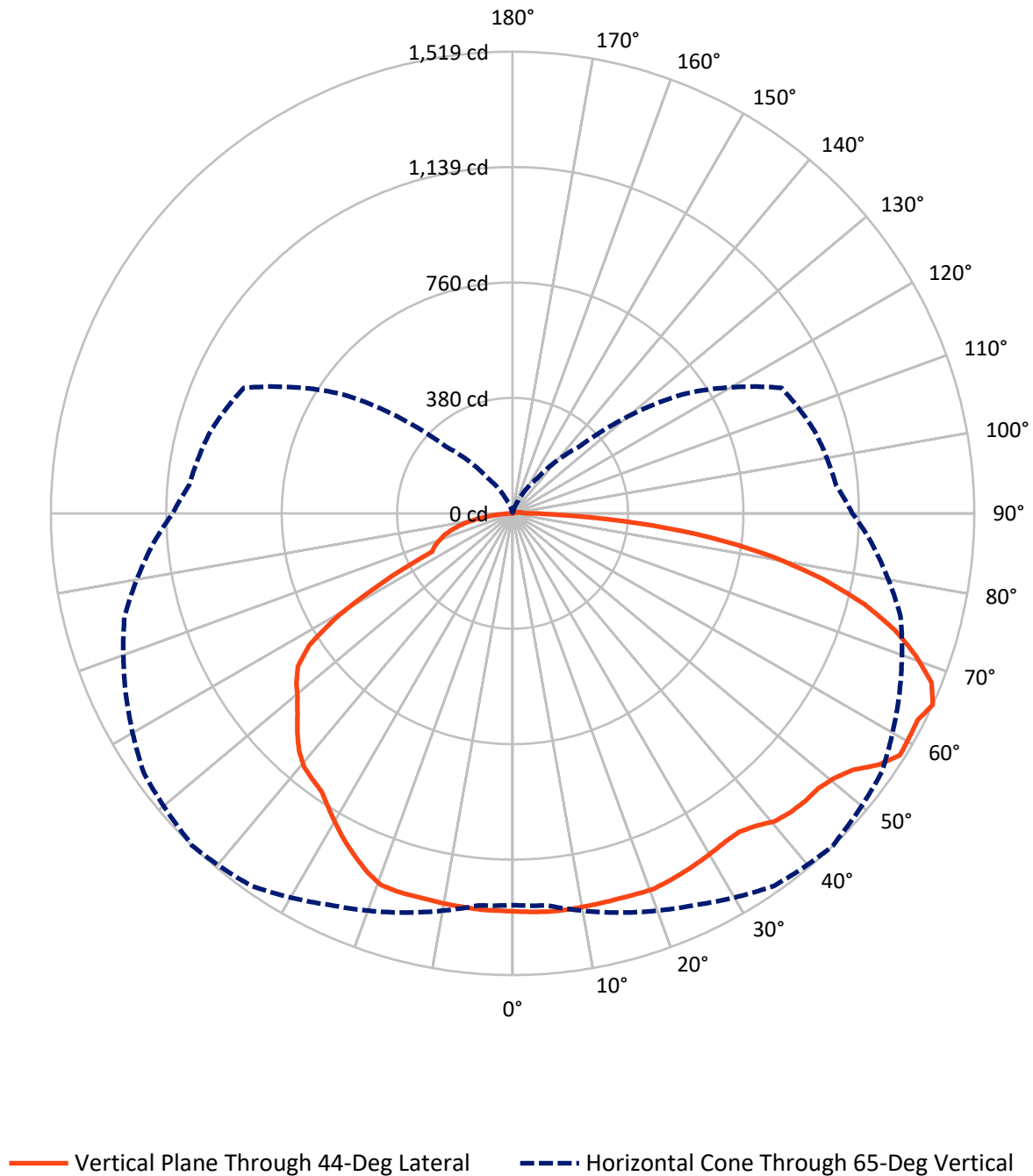
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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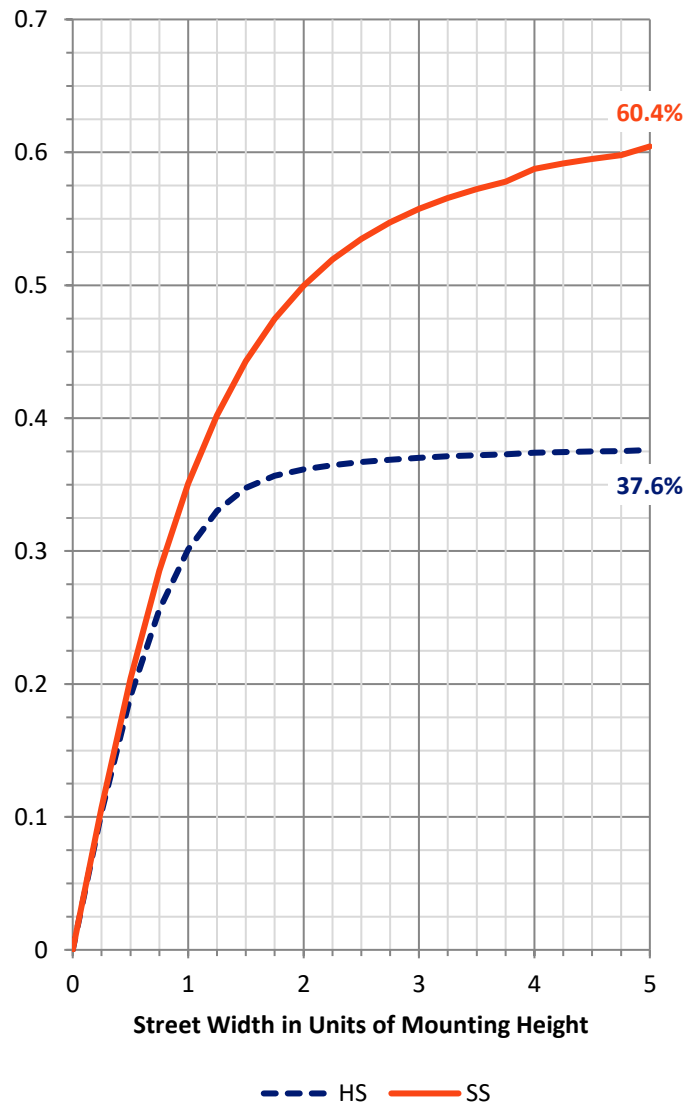
FLUX DISTRIBUTION:

		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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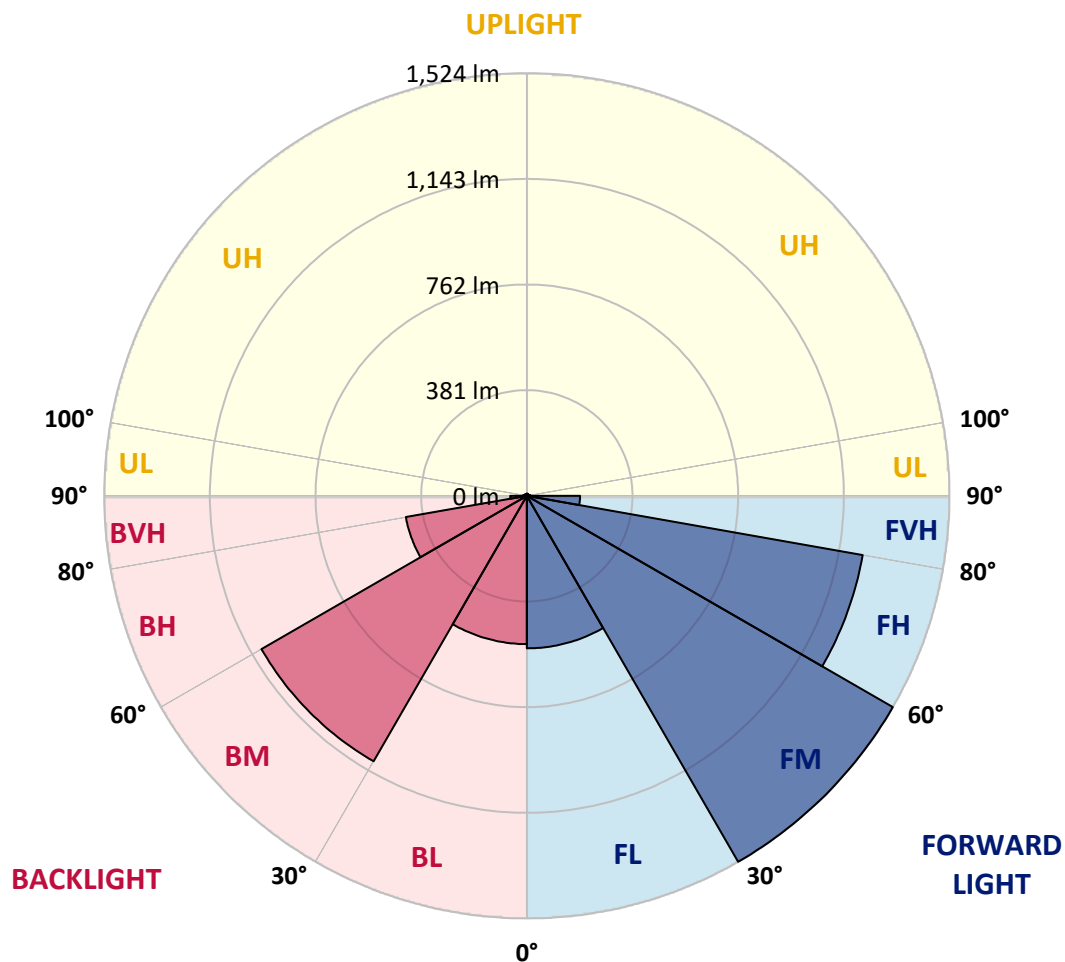
CATALOG NUMBER: TT-D3-740-24VDC-5MQ-PM-HSS

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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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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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-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-5

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-740-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-740-U-WQ

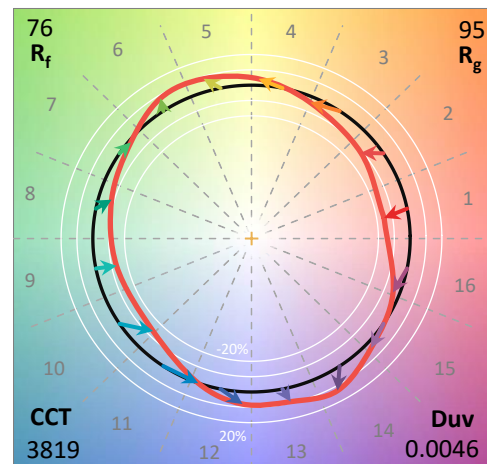
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-176-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 09/27/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-VA-30-740-U-WQ**
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K): 3819
 CIE u' : 0.2261
 CIE v' : 0.5108
 Duv: 0.0046
 CIE x: 0.3926
 CIE y: 0.3942
 CIE z: 0.2132
 Peak Wavelength (nm): 450
 Dominant Wavelength (nm): 577
 Purity: 36.15483
 R_f: 75.6
 R_g: 94.8

CRI (Ra): 72.9
 R1: 70.1
 R2: 78.4
 R3: 85.0
 R4: 72.9
 R5: 69.1
 R6: 69.2
 R7: 82.8
 R8: 55.4
 R9: -21.5
 R10: 48.5
 R11: 68.4
 R12: 39.0
 R13: 71.1
 R14: 91.3
 R15: 63.2



Test Conditions

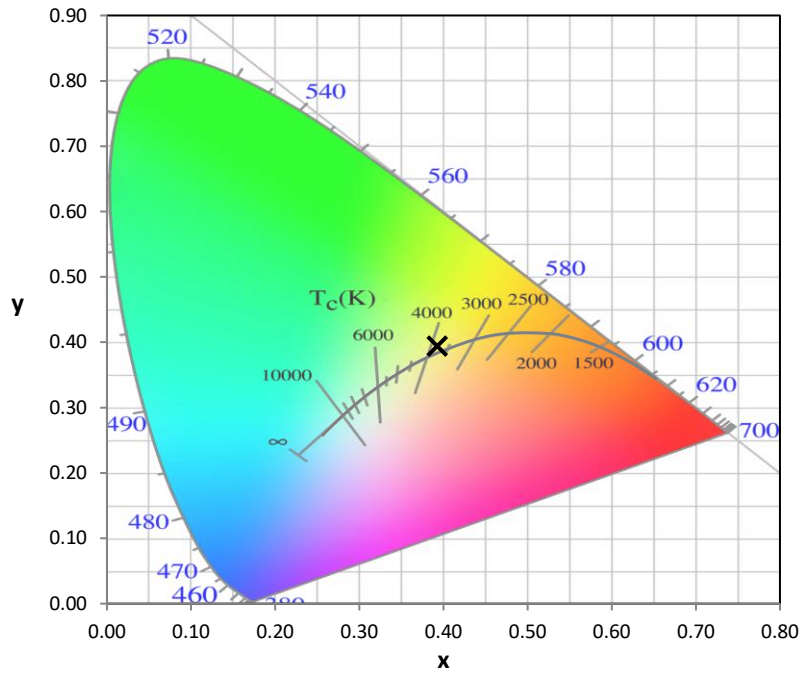
Stabilization Time: 30M
 Operation Time: 1H 30M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-176-5

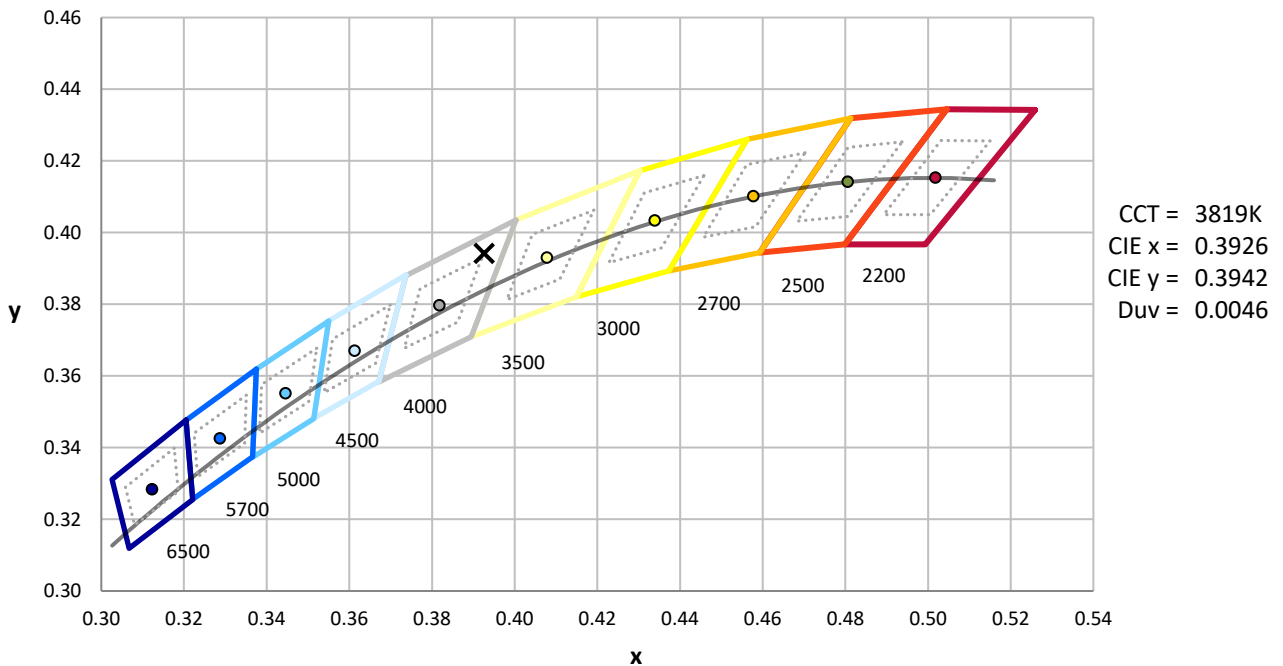
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2407-176-5

CIE 1931 Chromaticity Diagram



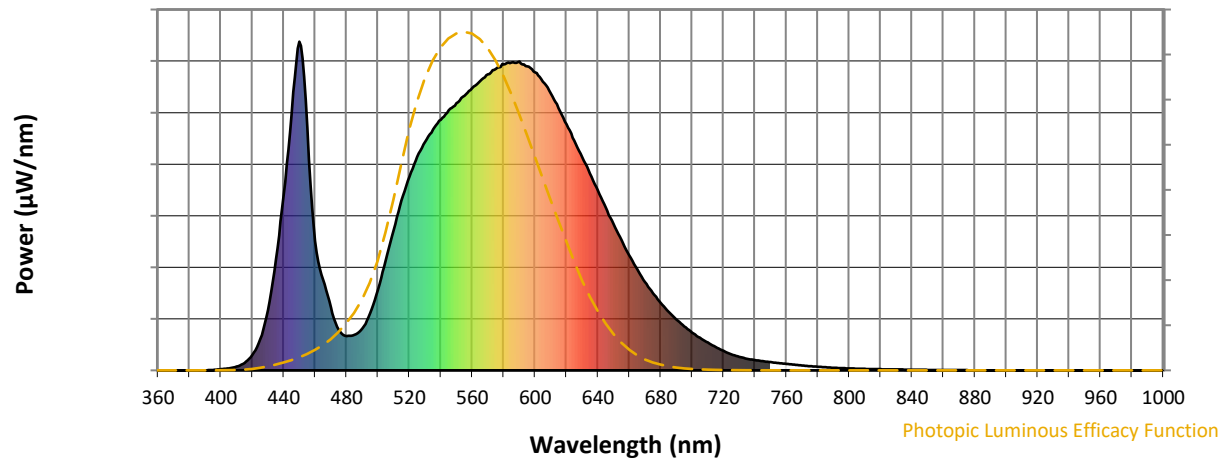
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

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Photopic Flux vs. Wavelength

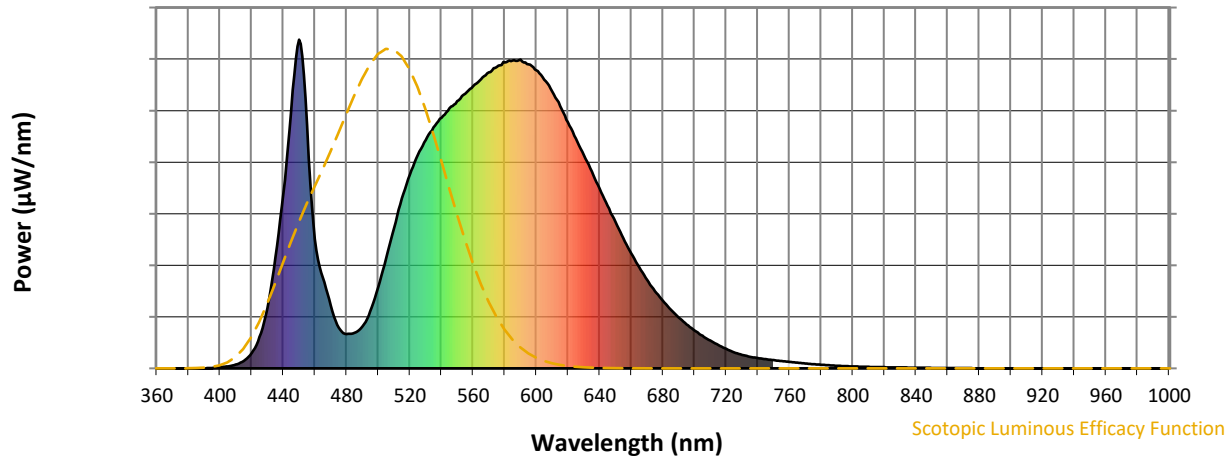


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



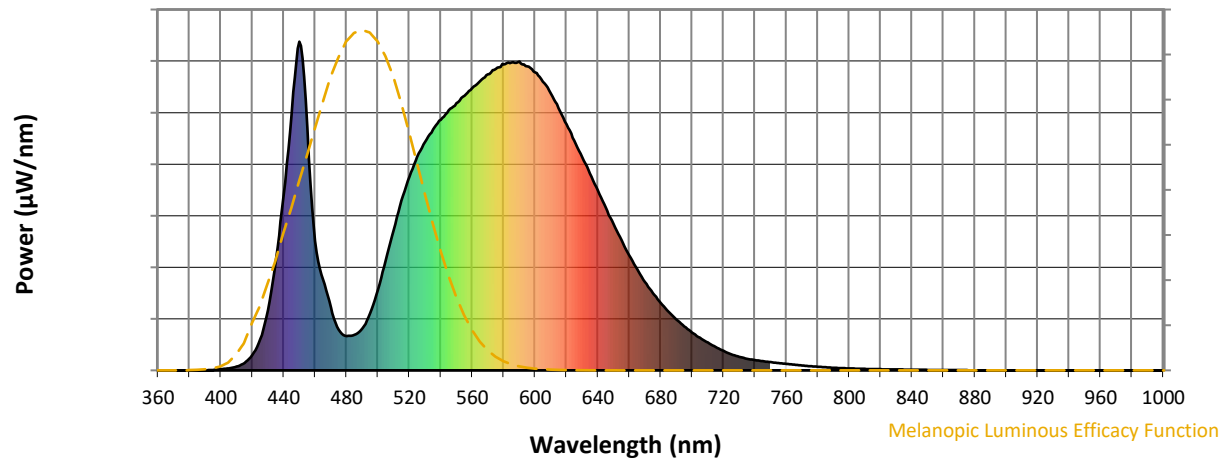
Scotopic Lumens: NR

S/P: 1.45

λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)
360	0	NR	490	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.76

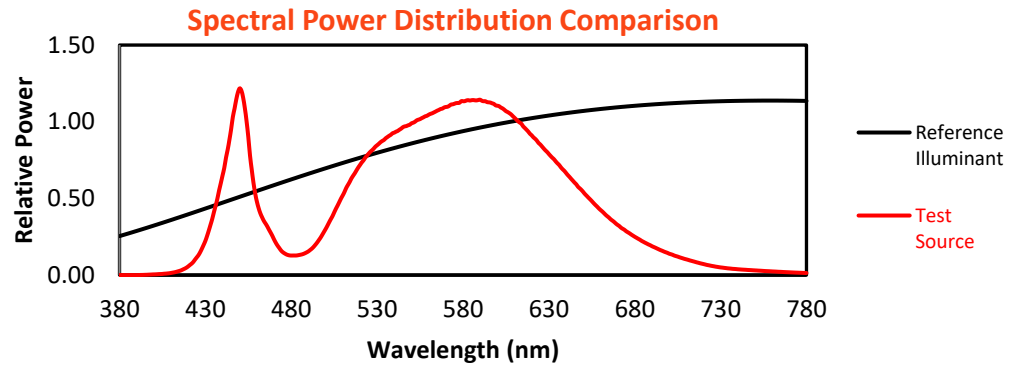
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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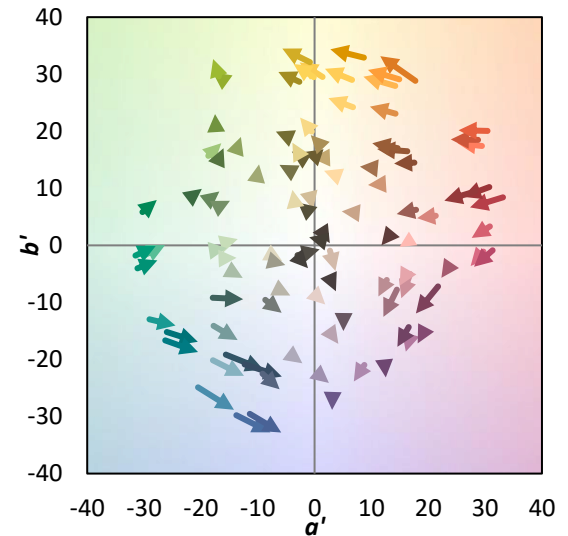
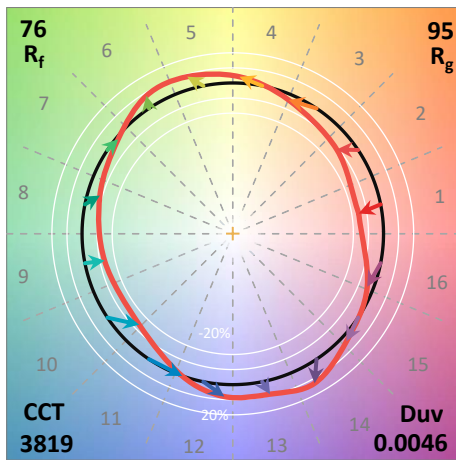
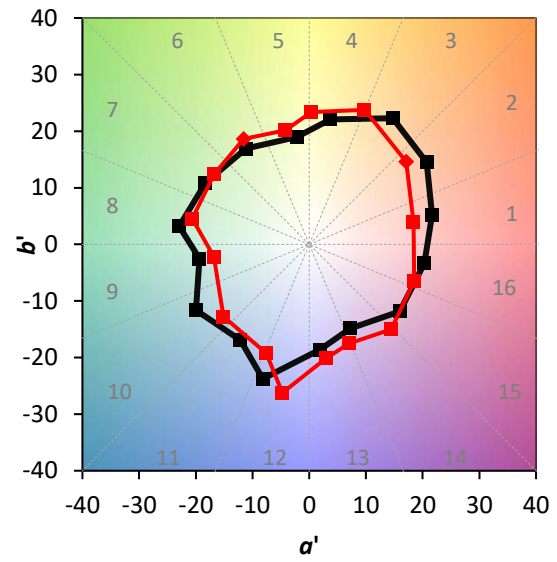
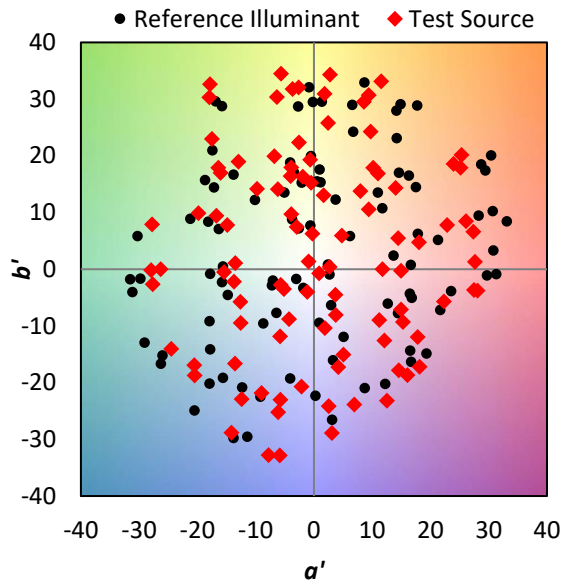
TM-30-18

Summary

$R_f = 75.6$
 $R_g = 94.8$
 $CIE R_a = 72.9$
 $R_g = -21.5$

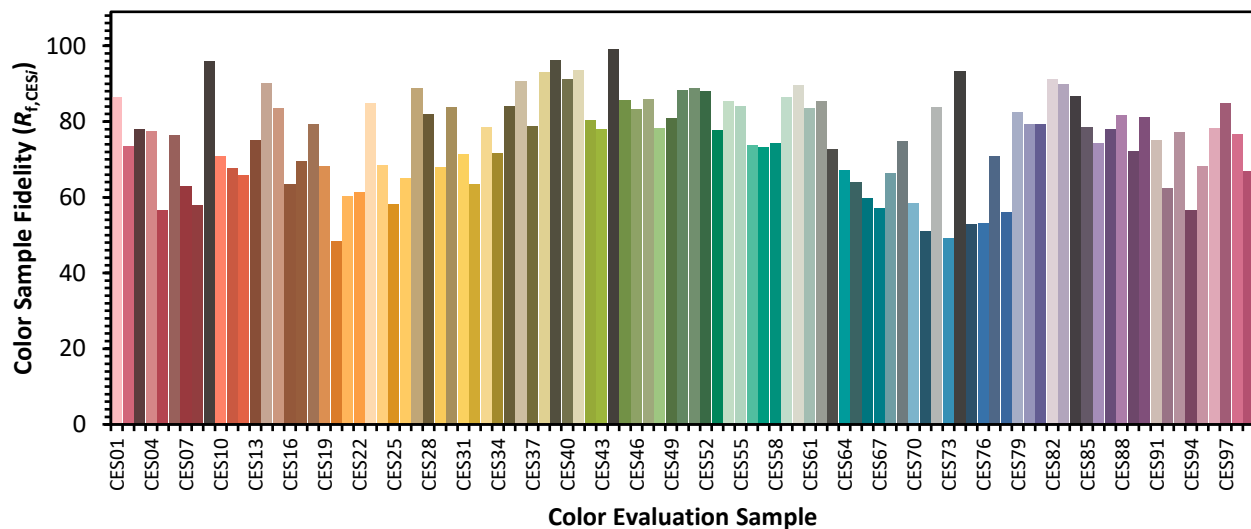


Color Vector Graphics

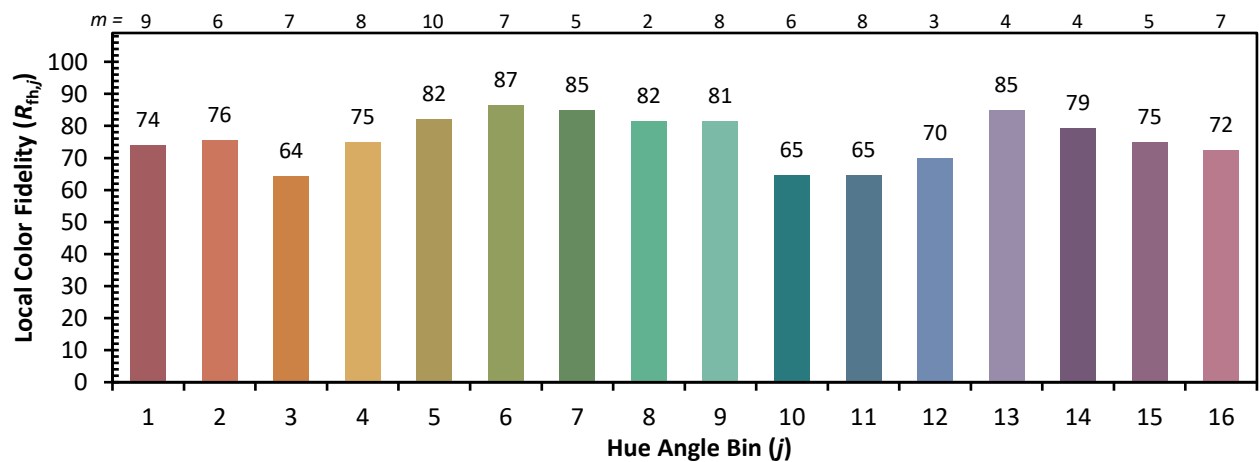
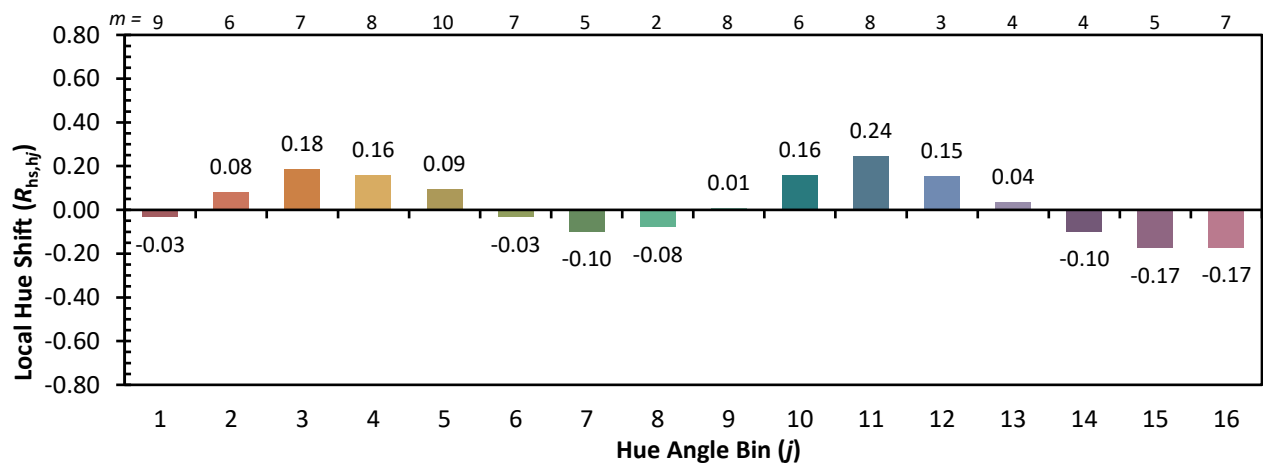
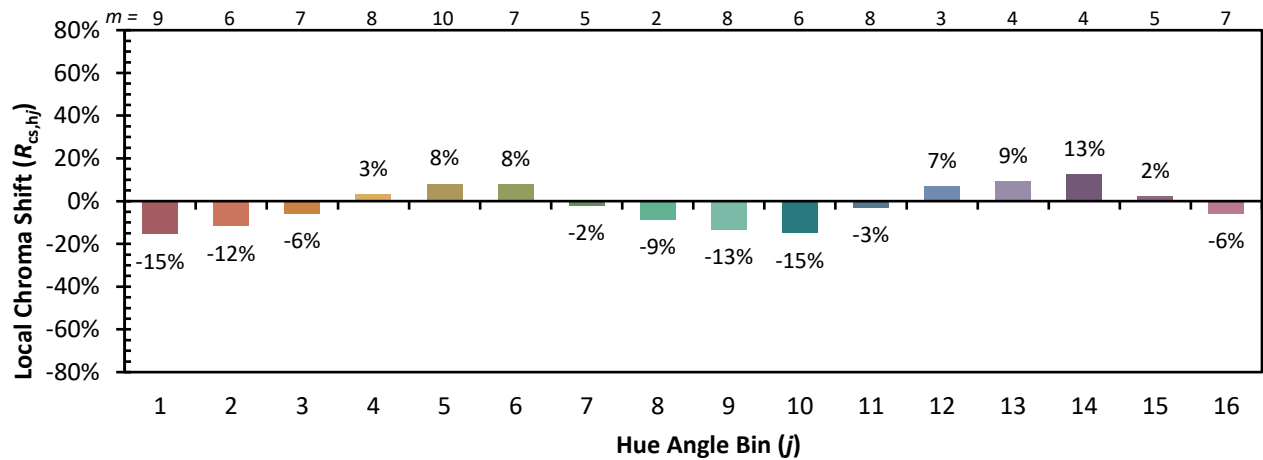


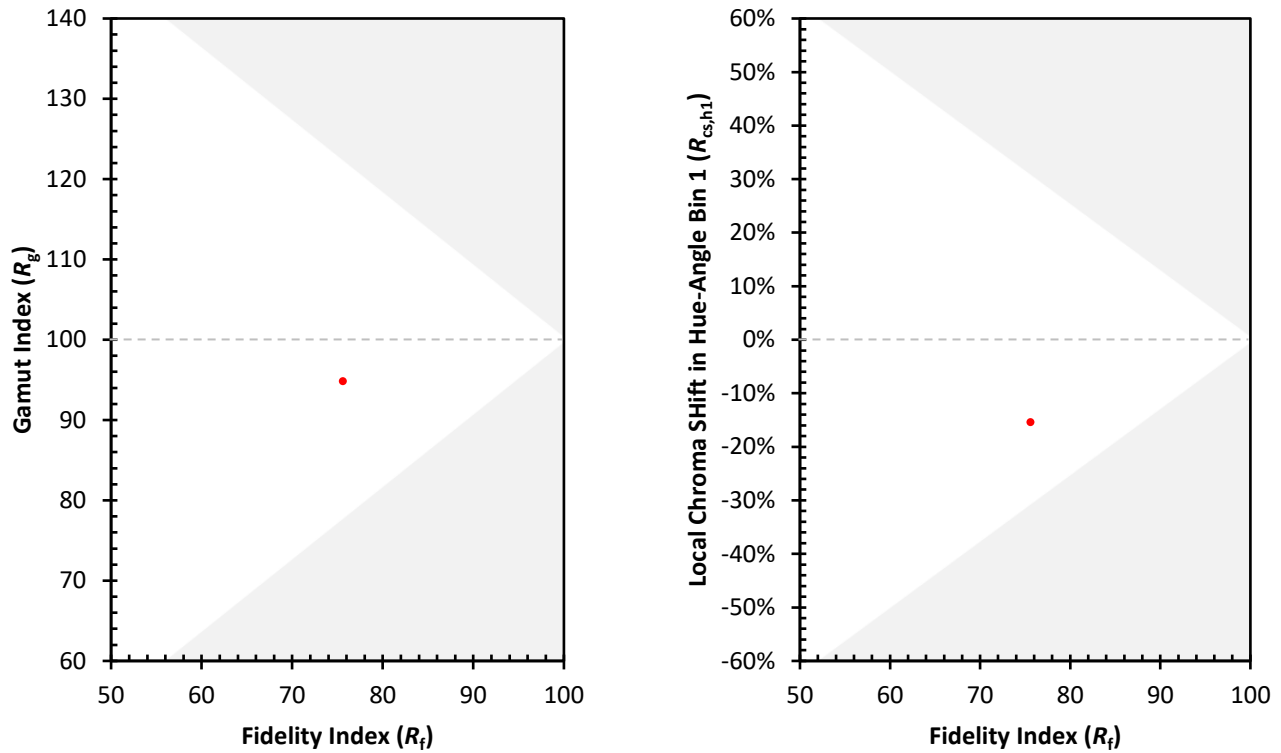
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82 = 91
CES08 = 39	CES33 = 79	CES58 = 74	CES83 = 90
CES09 = 29	CES34 = 72	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 84	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 91	CES61 = 84	CES86 = 74
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 78
CES13 = 42	CES38 = 93	CES63 = 73	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 67	CES89 = 72
CES15 = 71	CES40 = 91	CES65 = 64	CES90 = 81
CES16 = 47	CES41 = 93	CES66 = 60	CES91 = 75
CES17 = 49	CES42 = 80	CES67 = 57	CES92 = 62
CES18 = 56	CES43 = 78	CES68 = 66	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 75	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 58	CES95 = 68
CES21 = 86	CES46 = 83	CES71 = 51	CES96 = 78
CES22 = 78	CES47 = 86	CES72 = 84	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 49	CES98 = 77
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 67
CES25 = 72	CES50 = 88	CES75 = 53	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)