

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: LUMARK

Report Number: P895739

Luminaire Tested: **CLCS15S-PC-4000K-60%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895739
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS15S-PC-4000K-60%
Description: LUMARK SMALL LED CANOPY 8000LM, 60W, PC 80 CRI 4000K FIXTURE @ 60%
OUTPUT
Light Source: 4000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

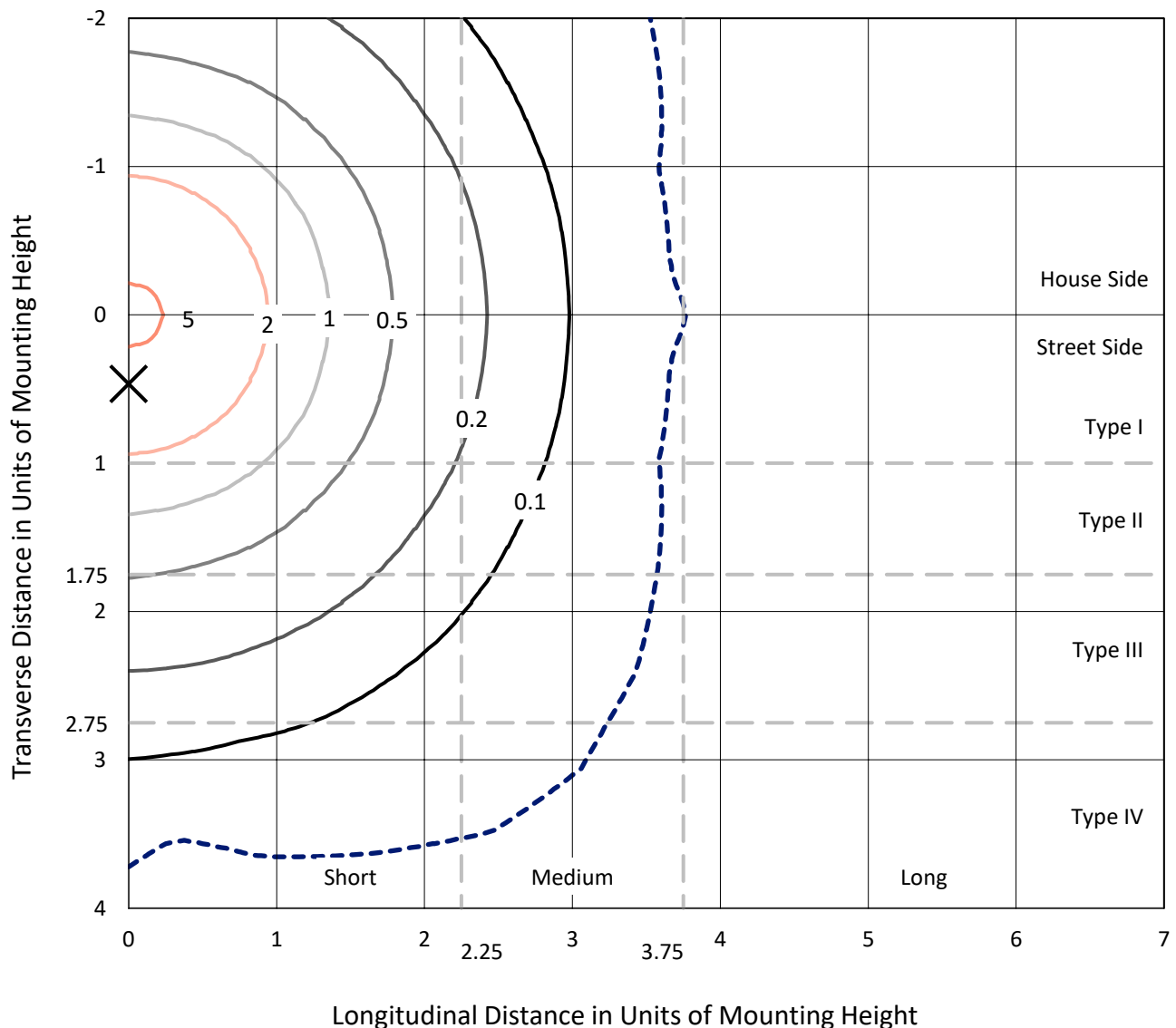
Lumens per Lamp: N/A
Luminaire Lumens: 5369.7 lumens
Efficiency: N/A
Efficacy: 147.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.8' x L: 0.8' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U3 - G1

Input Watts (W): 36.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P895739
 CATALOG NUMBER: CLCS15S-PC-4000K-60%

Iso-Footcandle Lines of Horizontal Illumination

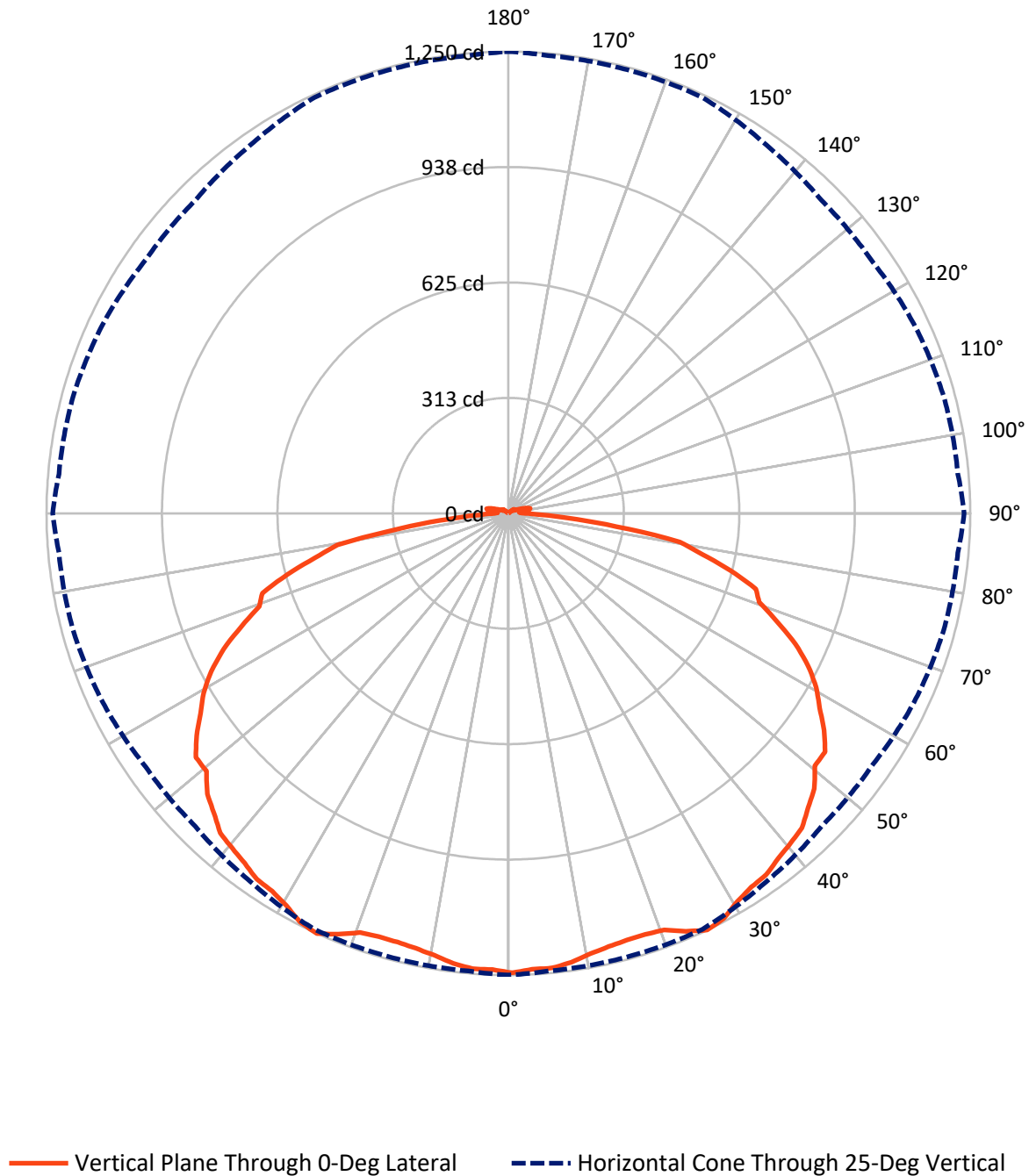
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.5 fc
 Type V - Short - N/A

REPORT NUMBER: P895739
CATALOG NUMBER: CLCS15S-PC-4000K-60%

Luminous Intensity Polar Plot



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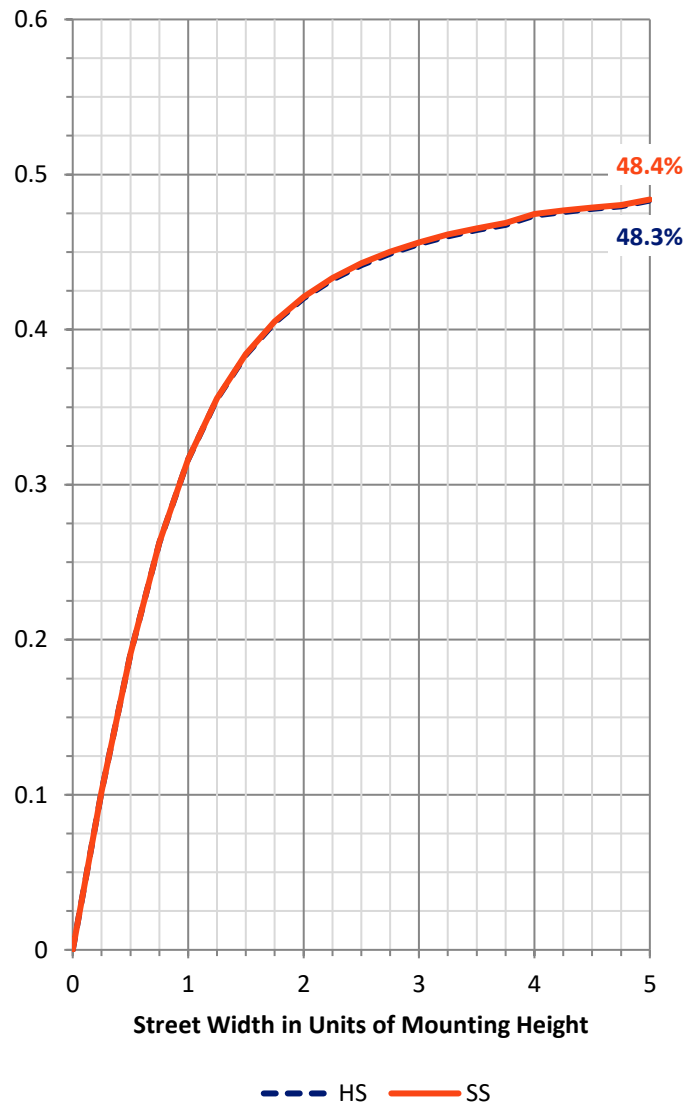
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2632.1	52.8	2684.9
	% Fixture	49.0	1.0	50.0
Street Side	Lumens	2632.1	52.8	2684.9
	% Fixture	49.0	1.0	50.0
Total	Lumens	5264.2	105.6	5369.7
	% Fixture	98.0	2.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	2.2
10°-20°	341.3	6.4
20°-30°	561.2	10.5
30°-40°	744.0	13.9
40°-50°	880.1	16.4
50°-60°	925.8	17.2
60°-70°	846.7	15.8
70°-80°	653.8	12.2
80°-90°	193.5	3.6
90°-100°	36.8	0.7
100°-110°	40.9	0.8
110°-120°	16.0	0.3
120°-130°	8.8	0.2
130°-140°	2.6	0.0
140°-150°	0.4	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5264.2	98.0
0°-180°	5369.7	100.0



REPORT NUMBER: P895739

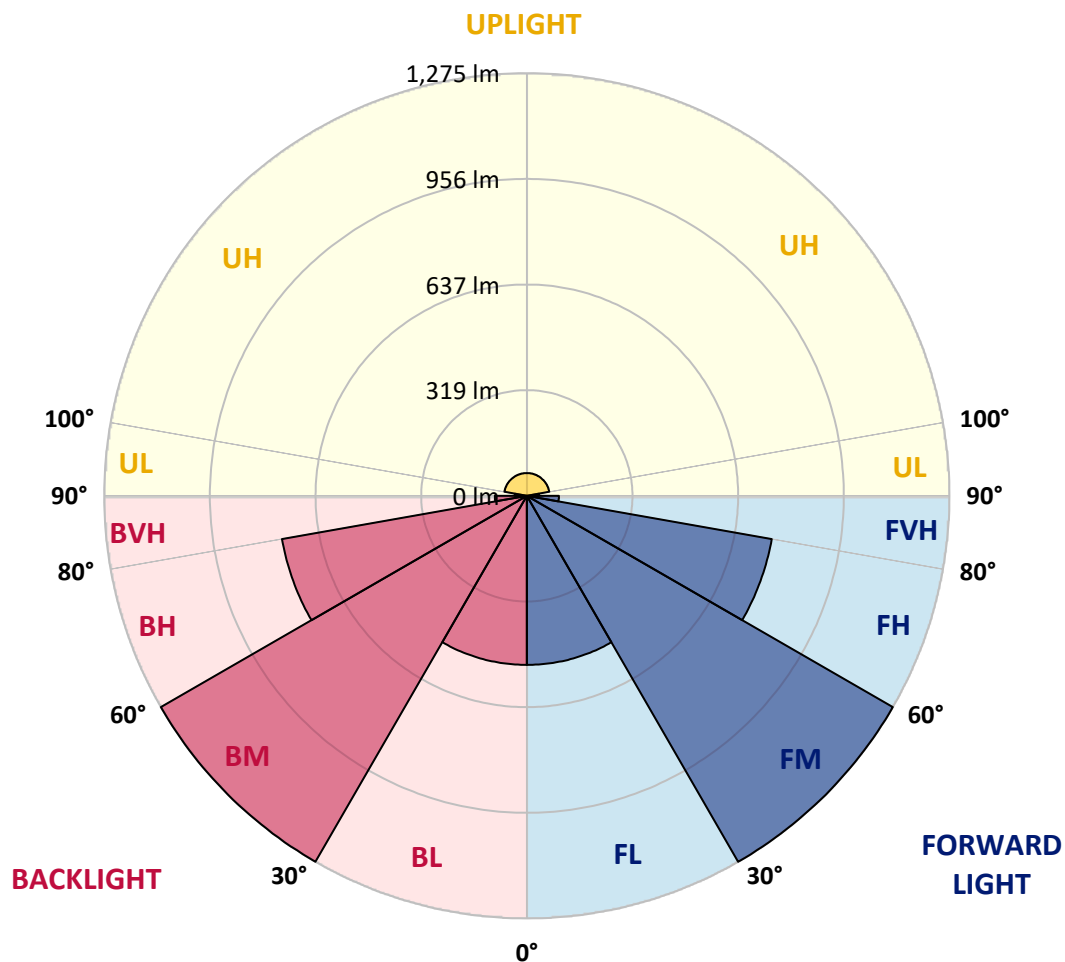
CATALOG NUMBER: CLCS15S-PC-4000K-60%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	510.1	9.5			
FM	(30°-60°)	1275.0	23.7			
FH	(60°-80°)	750.2	14.0			G1/1800
FVH	(80°-90°)	96.7	1.8			G1/100
BL	(0°-30°)	510.1	9.5	B2/1000		
BM	(30°-60°)	1275.0	23.7	B2/2500		
BH	(60°-80°)	750.2	14.0	B2/1000		G1/1800
BVH	(80°-90°)	96.7	1.8			G1/100
UL	(90°-100°)	36.8	0.7		U2/50	
UH	(100°-180°)	68.7	1.3		U3/500	

BUG Rating: B2-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1	1244.1
2.5°	1236.0	1236.7	1238.0	1240.7	1239.4	1240.0	1240.0	1238.0	1240.7	1240.0	1244.1
5°	1236.7	1236.7	1236.7	1240.0	1240.0	1240.7	1242.1	1242.1	1243.4	1244.1	1246.8
7.5°	1227.3	1228.7	1227.3	1230.0	1230.7	1234.1	1235.3	1234.7	1237.3	1237.3	1242.7
10°	1213.2	1213.9	1213.9	1216.6	1219.3	1223.3	1223.3	1222.7	1223.9	1223.3	1227.3
12.5°	1203.9	1203.9	1203.2	1207.3	1210.0	1212.6	1213.2	1213.9	1215.9	1218.6	1222.7
15°	1199.3	1199.3	1198.6	1203.9	1203.2	1203.2	1205.9	1208.6	1208.6	1210.6	1216.6
17.5°	1198.6	1196.6	1189.8	1197.2	1195.2	1194.5	1196.6	1195.9	1201.2	1201.9	1203.9
20°	1203.9	1201.2	1200.5	1202.5	1194.5	1192.5	1194.5	1193.2	1196.6	1197.9	1204.6
22.5°	1229.3	1228.0	1221.3	1213.2	1195.2	1186.5	1184.5	1194.5	1205.9	1204.6	1207.3
25°	1250.1	1244.1	1243.4	1242.7	1217.3	1198.6	1197.9	1211.3	1220.0	1221.3	1233.4
27.5°	1242.1	1234.7	1238.0	1239.4	1218.6	1195.9	1187.8	1207.3	1219.3	1230.0	1238.0
30°	1220.0	1214.6	1218.0	1220.7	1208.6	1188.5	1176.4	1192.5	1213.2	1230.0	1226.6
32.5°	1206.6	1206.6	1206.6	1198.6	1191.8	1179.1	1161.1	1189.1	1197.9	1204.6	1210.0
35°	1201.9	1201.2	1201.2	1192.5	1177.7	1168.4	1168.4	1175.1	1183.2	1186.5	1199.3
37.5°	1185.9	1175.1	1184.5	1186.5	1171.8	1167.0	1168.4	1169.1	1179.8	1189.1	1188.5
40°	1175.1	1162.4	1158.4	1162.4	1165.0	1165.0	1160.4	1163.7	1173.8	1178.4	1172.4
42.5°	1165.0	1156.3	1155.7	1149.7	1144.3	1152.3	1147.0	1148.3	1153.0	1163.7	1166.4
45°	1137.0	1135.6	1134.9	1134.3	1120.2	1148.3	1144.3	1137.0	1147.7	1147.0	1166.4
47.5°	1114.2	1121.5	1108.1	1109.5	1123.6	1126.9	1123.6	1118.8	1137.6	1132.9	1153.6
50°	1074.7	1074.7	1082.0	1092.0	1109.5	1104.8	1105.4	1116.8	1113.5	1120.9	1142.9
52.5°	1073.3	1049.2	1041.2	1050.6	1072.6	1085.4	1072.6	1105.4	1067.3	1084.0	1090.8
55°	1036.5	1007.8	1012.4	1017.8	1033.8	1035.8	1068.0	1048.5	1035.8	1052.6	1062.6
57.5°	993.0	970.2	961.5	988.9	984.9	1013.1	1009.0	1006.4	1015.8	1014.4	1015.8
60°	957.5	936.8	916.0	940.1	964.2	954.8	971.6	983.0	972.3	974.9	969.6
62.5°	910.7	910.0	893.9	905.2	901.9	924.1	918.0	931.4	928.0	924.7	932.7
65°	853.7	849.0	846.3	858.4	861.1	861.1	855.0	869.1	866.4	864.5	873.8
67.5°	785.4	783.4	786.1	787.4	801.5	802.8	800.1	811.5	810.2	808.8	812.2
70°	719.8	708.4	694.4	732.6	748.6	752.6	742.6	735.2	729.9	722.4	726.5
72.5°	700.3	687.6	689.6	715.1	713.7	720.5	704.4	681.0	681.0	673.0	676.2
75°	621.4	593.9	630.7	660.9	683.0	670.3	677.6	652.1	620.7	618.0	627.3
77.5°	537.0	520.9	521.6	561.8	598.6	610.0	589.9	559.8	534.3	526.3	531.6
80°	470.8	453.3	418.5	404.4	413.1	432.6	416.5	399.8	408.5	418.5	428.5
82.5°	293.9	290.6	300.7	281.2	253.8	244.4	245.7	266.5	268.5	265.2	268.5
85°	160.1	154.7	152.0	146.0	139.2	136.6	133.3	136.0	138.6	131.9	133.9
87.5°	73.0	70.3	74.3	78.3	73.0	71.6	70.3	71.0	71.0	71.6	71.6
90°	38.9	39.5	40.2	39.5	39.5	38.9	38.2	37.5	37.5	38.9	38.9
92.5°	30.8	30.1	28.2	27.5	26.8	26.8	26.1	26.1	26.8	27.5	27.5
95°	29.5	29.5	27.5	26.1	25.5	24.1	24.8	26.1	27.5	28.8	28.8
97.5°	44.8	44.8	42.1	38.2	34.1	30.8	33.5	38.2	40.9	42.8	42.8
100°	57.6	57.6	53.6	46.2	38.9	35.5	38.2	45.5	51.6	54.2	54.9
102.5°	60.3	59.6	54.2	46.2	36.8	32.8	36.2	44.8	52.9	56.9	57.6
105°	52.9	52.3	48.2	39.5	30.1	24.8	30.1	38.9	46.9	50.9	51.6
107.5°	43.5	43.5	40.2	32.1	22.1	17.5	22.1	31.4	38.9	41.6	42.8
110°	32.8	32.1	29.5	23.4	16.1	12.1	15.4	23.4	28.8	31.4	32.1



REPORT NUMBER: P895739

CATALOG NUMBER: CLCS15S-PC-4000K-60%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	26.1	26.1	23.4	18.7	11.4	8.7	11.4	18.0	22.8	24.8	24.8
115°	22.1	22.1	20.1	14.8	9.4	7.3	9.4	14.8	19.4	20.7	20.7
117.5°	17.5	18.0	17.5	13.4	8.0	5.4	8.0	12.1	16.1	17.5	16.8
120°	14.1	14.8	16.1	12.7	7.3	4.7	7.3	12.1	14.8	14.1	14.1
122.5°	13.4	13.4	16.8	12.7	8.0	4.1	6.7	11.4	15.4	13.4	12.7
125°	18.7	18.7	16.1	10.0	4.7	3.4	4.1	8.7	14.8	16.8	16.8
127.5°	14.8	14.8	12.1	6.7	3.4	2.7	3.4	6.7	10.7	13.4	14.1
130°	11.4	10.7	8.0	4.7	2.7	2.0	2.7	4.7	6.7	8.7	9.4
132.5°	6.0	6.0	5.4	4.1	2.0	1.4	2.0	4.1	5.4	6.0	6.0
135°	4.7	4.7	4.1	3.4	2.0	0.7	2.0	3.4	4.1	4.7	4.7
137.5°	4.1	4.1	3.4	2.0	0.7	0.7	0.7	2.0	3.4	4.1	4.1
140°	2.7	2.7	2.7	1.4	0.7	0.7	0.7	1.4	2.0	2.7	2.7
142.5°	2.0	2.0	1.4	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4
145°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2405-118-2

Test Date: 07/17/2024

Luminaire Tested: CLCS40S-4000K-HIGH

Data in this report applies to families of products including CLCS40S-4000K-HIGH

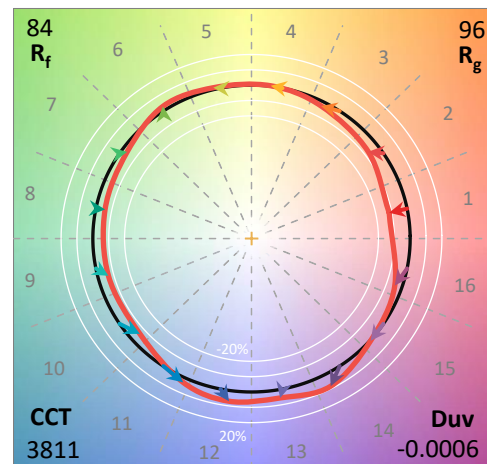
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2405-118-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/18/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Lumark
 Catalog Number: **CLCS40S-4000K-HIGH**
 Description: 120W LUMARK AP CANOPY SELECTABLE FIXTURE HIGHEST OUTPUT @4000K

Spectral Parameters

CCT (K): 3811
 CIE u' : 0.2291
 CIE v' : 0.5044
 Duv: -0.0006
 CIE x: 0.3887
 CIE y: 0.3804
 CIE z: 0.2310
 Peak Wavelength (nm): 452
 Dominant Wavelength (nm): 580
 Purity: 30.78715
 R_f: 83.8
 R_g: 96.1

CRI (Ra): 83.3
 R1: 82.1
 R2: 89.5
 R3: 94.6
 R4: 82.3
 R5: 81.8
 R6: 85.2
 R7: 85.9
 R8: 64.7
 R9: 10.7
 R10: 74.6
 R11: 81.3
 R12: 61.2
 R13: 84.0
 R14: 97.1
 R15: 75.9



Test Conditions

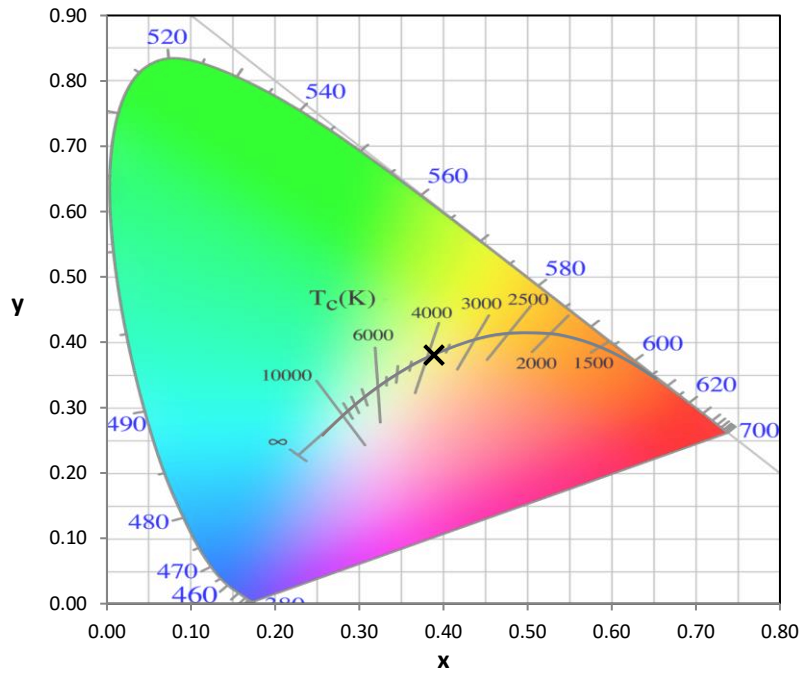
Stabilization Time: 27M
 Operation Time: 1H 27M
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2405-118-2

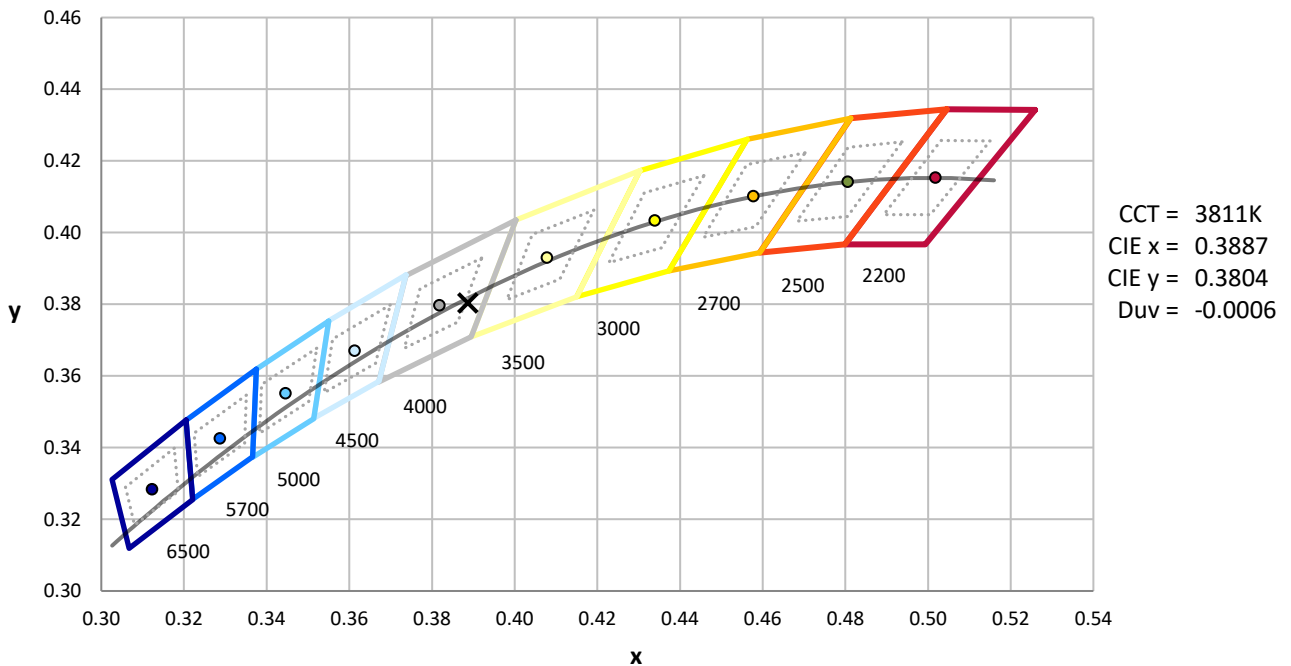
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



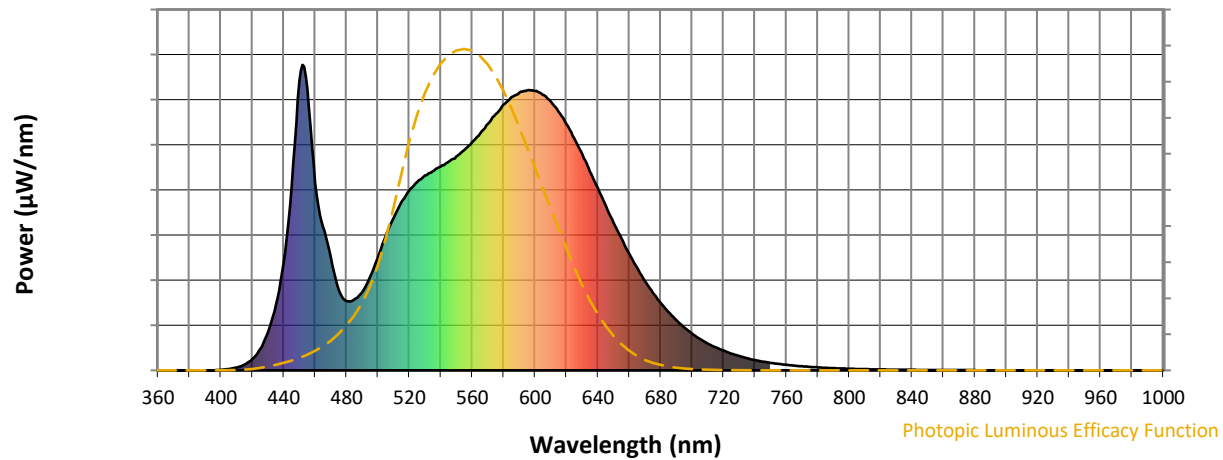
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

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Photopic Flux vs. Wavelength

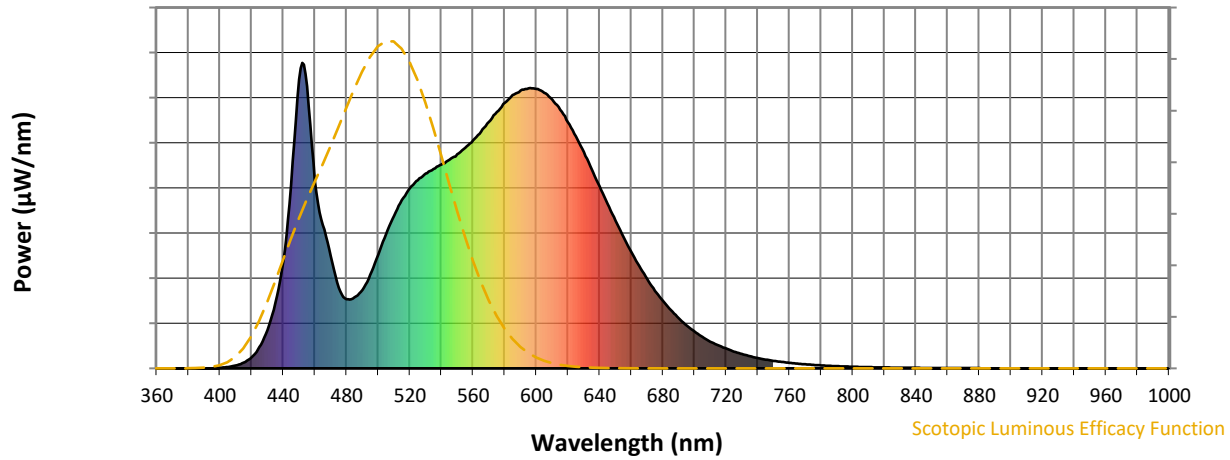


Photopic Lumens: NR

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	257	NR	620	806	NR	750	25	NR	880	1	NR
365	0	NR	495	306	NR	625	760	NR	755	21	NR	885	1	NR
370	0	NR	500	371	NR	630	709	NR	760	18	NR	890	0	NR
375	0	NR	505	440	NR	635	651	NR	765	15	NR	895	0	NR
380	0	NR	510	499	NR	640	596	NR	770	13	NR	900	0	NR
385	0	NR	515	551	NR	645	539	NR	775	11	NR	905	0	NR
390	0	NR	520	590	NR	650	483	NR	780	10	NR	910	0	NR
395	0	NR	525	616	NR	655	431	NR	785	8	NR	915	0	NR
400	2	NR	530	638	NR	660	381	NR	790	7	NR	920	0	NR
405	5	NR	535	653	NR	665	335	NR	795	6	NR	925	0	NR
410	9	NR	540	667	NR	670	292	NR	800	5	NR	930	0	NR
415	19	NR	545	683	NR	675	254	NR	805	5	NR	935	0	NR
420	37	NR	550	700	NR	680	221	NR	810	4	NR	940	0	NR
425	70	NR	555	722	NR	685	190	NR	815	3	NR	945	0	NR
430	124	NR	560	747	NR	690	165	NR	820	3	NR	950	0	NR
435	215	NR	565	775	NR	695	141	NR	825	3	NR	955	0	NR
440	352	NR	570	807	NR	700	120	NR	830	2	NR	960	0	NR
445	602	NR	575	839	NR	705	103	NR	835	2	NR	965	0	NR
450	946	NR	580	869	NR	710	88	NR	840	2	NR	970	0	NR
455	923	NR	585	895	NR	715	75	NR	845	1	NR	975	0	NR
460	615	NR	590	910	NR	720	65	NR	850	1	NR	980	0	NR
465	469	NR	595	917	NR	725	55	NR	855	1	NR	985	0	NR
470	366	NR	600	915	NR	730	47	NR	860	1	NR	990	0	NR
475	264	NR	605	902	NR	735	40	NR	865	1	NR	995	0	NR
480	226	NR	610	880	NR	740	34	NR	870	1	NR	1000	0	NR
485	232	NR	615	847	NR	745	29	NR	875	1	NR			

REPORT NUMBER: SP1-2405-118-2

Scotopic Flux vs. Wavelength



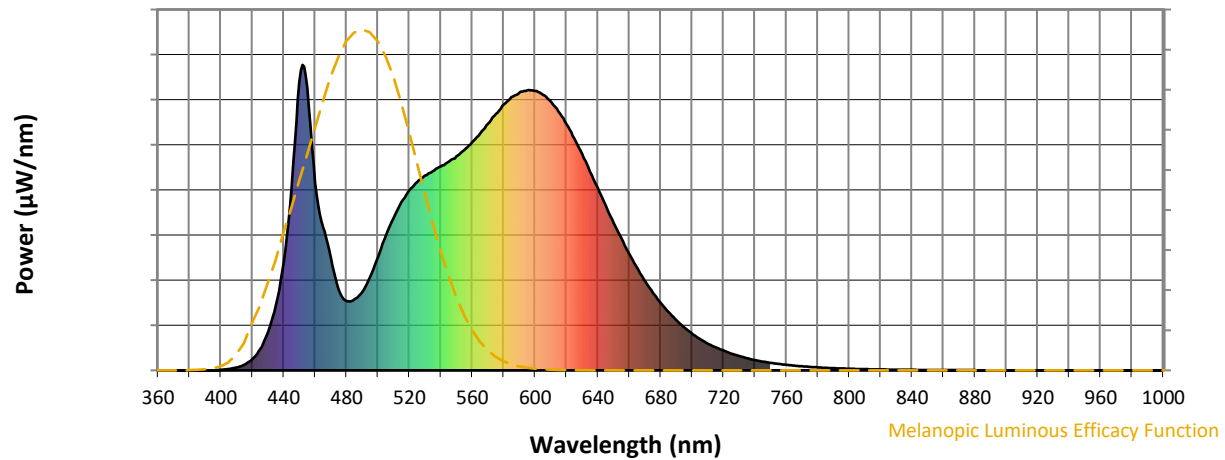
Scotopic Lumens: NR

S/P: 1.62

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	257	NR	620	806	NR	750	25	NR	880	1	NR
365	0	NR	495	306	NR	625	760	NR	755	21	NR	885	1	NR
370	0	NR	500	371	NR	630	709	NR	760	18	NR	890	0	NR
375	0	NR	505	440	NR	635	651	NR	765	15	NR	895	0	NR
380	0	NR	510	499	NR	640	596	NR	770	13	NR	900	0	NR
385	0	NR	515	551	NR	645	539	NR	775	11	NR	905	0	NR
390	0	NR	520	590	NR	650	483	NR	780	10	NR	910	0	NR
395	0	NR	525	616	NR	655	431	NR	785	8	NR	915	0	NR
400	2	NR	530	638	NR	660	381	NR	790	7	NR	920	0	NR
405	5	NR	535	653	NR	665	335	NR	795	6	NR	925	0	NR
410	9	NR	540	667	NR	670	292	NR	800	5	NR	930	0	NR
415	19	NR	545	683	NR	675	254	NR	805	5	NR	935	0	NR
420	37	NR	550	700	NR	680	221	NR	810	4	NR	940	0	NR
425	70	NR	555	722	NR	685	190	NR	815	3	NR	945	0	NR
430	124	NR	560	747	NR	690	165	NR	820	3	NR	950	0	NR
435	215	NR	565	775	NR	695	141	NR	825	3	NR	955	0	NR
440	352	NR	570	807	NR	700	120	NR	830	2	NR	960	0	NR
445	602	NR	575	839	NR	705	103	NR	835	2	NR	965	0	NR
450	946	NR	580	869	NR	710	88	NR	840	2	NR	970	0	NR
455	923	NR	585	895	NR	715	75	NR	845	1	NR	975	0	NR
460	615	NR	590	910	NR	720	65	NR	850	1	NR	980	0	NR
465	469	NR	595	917	NR	725	55	NR	855	1	NR	985	0	NR
470	366	NR	600	915	NR	730	47	NR	860	1	NR	990	0	NR
475	264	NR	605	902	NR	735	40	NR	865	1	NR	995	0	NR
480	226	NR	610	880	NR	740	34	NR	870	1	NR	1000	0	NR
485	232	NR	615	847	NR	745	29	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.3

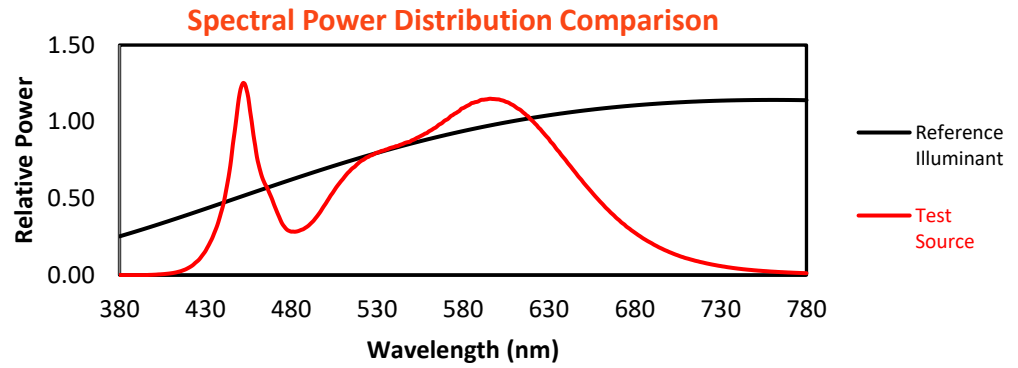
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	257	NR	620	806	NR	750	25	NR	880	1	NR
365	0	NR	495	306	NR	625	760	NR	755	21	NR	885	1	NR
370	0	NR	500	371	NR	630	709	NR	760	18	NR	890	0	NR
375	0	NR	505	440	NR	635	651	NR	765	15	NR	895	0	NR
380	0	NR	510	499	NR	640	596	NR	770	13	NR	900	0	NR
385	0	NR	515	551	NR	645	539	NR	775	11	NR	905	0	NR
390	0	NR	520	590	NR	650	483	NR	780	10	NR	910	0	NR
395	0	NR	525	616	NR	655	431	NR	785	8	NR	915	0	NR
400	2	NR	530	638	NR	660	381	NR	790	7	NR	920	0	NR
405	5	NR	535	653	NR	665	335	NR	795	6	NR	925	0	NR
410	9	NR	540	667	NR	670	292	NR	800	5	NR	930	0	NR
415	19	NR	545	683	NR	675	254	NR	805	5	NR	935	0	NR
420	37	NR	550	700	NR	680	221	NR	810	4	NR	940	0	NR
425	70	NR	555	722	NR	685	190	NR	815	3	NR	945	0	NR
430	124	NR	560	747	NR	690	165	NR	820	3	NR	950	0	NR
435	215	NR	565	775	NR	695	141	NR	825	3	NR	955	0	NR
440	352	NR	570	807	NR	700	120	NR	830	2	NR	960	0	NR
445	602	NR	575	839	NR	705	103	NR	835	2	NR	965	0	NR
450	946	NR	580	869	NR	710	88	NR	840	2	NR	970	0	NR
455	923	NR	585	895	NR	715	75	NR	845	1	NR	975	0	NR
460	615	NR	590	910	NR	720	65	NR	850	1	NR	980	0	NR
465	469	NR	595	917	NR	725	55	NR	855	1	NR	985	0	NR
470	366	NR	600	915	NR	730	47	NR	860	1	NR	990	0	NR
475	264	NR	605	902	NR	735	40	NR	865	1	NR	995	0	NR
480	226	NR	610	880	NR	740	34	NR	870	1	NR	1000	0	NR
485	232	NR	615	847	NR	745	29	NR	875	1	NR			

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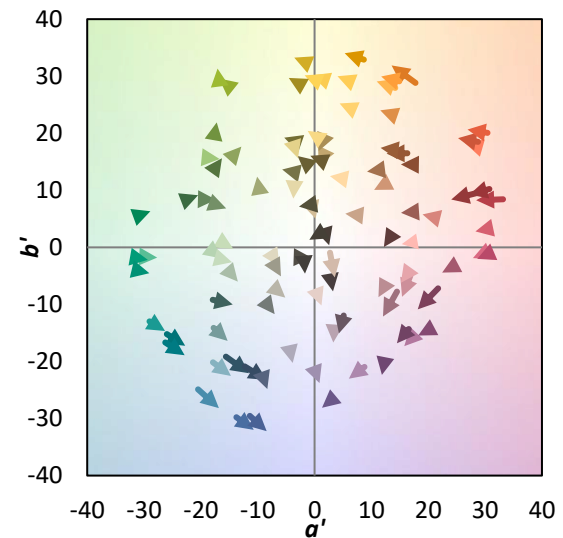
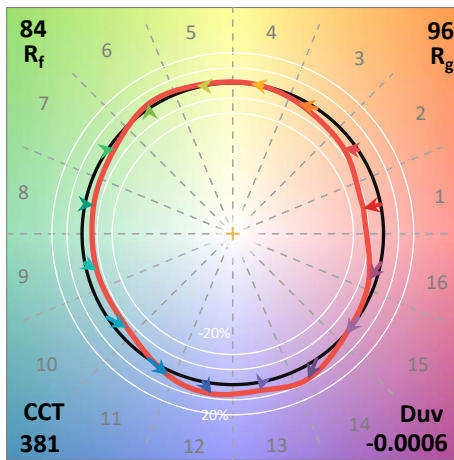
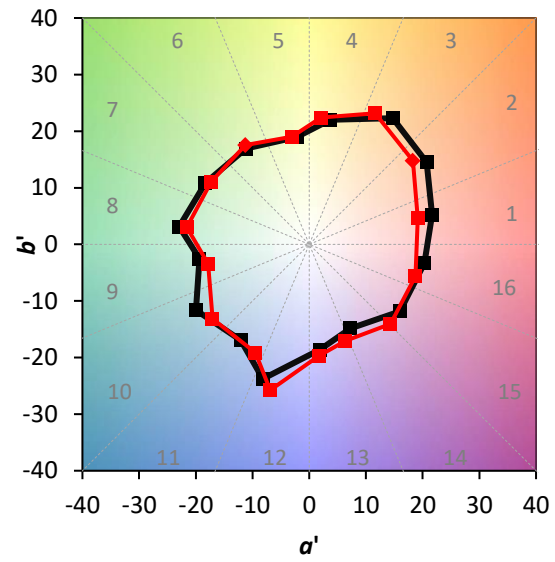
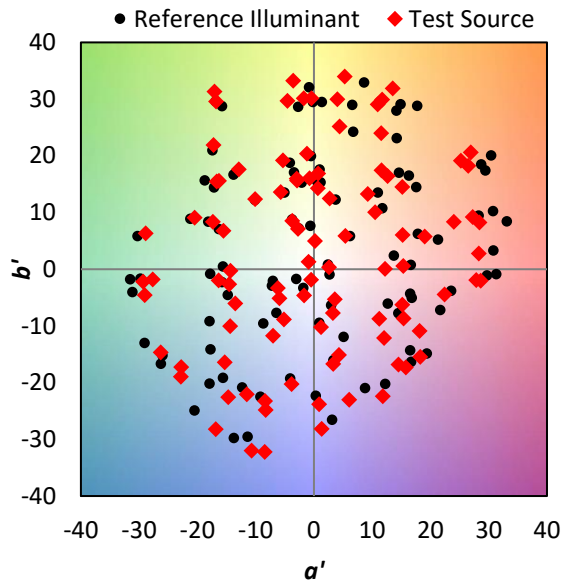
TM-30-18

Summary

$R_f = 83.8$
 $R_g = 96.1$
 $CIE R_a = 83.3$
 $R_g = 10.7$

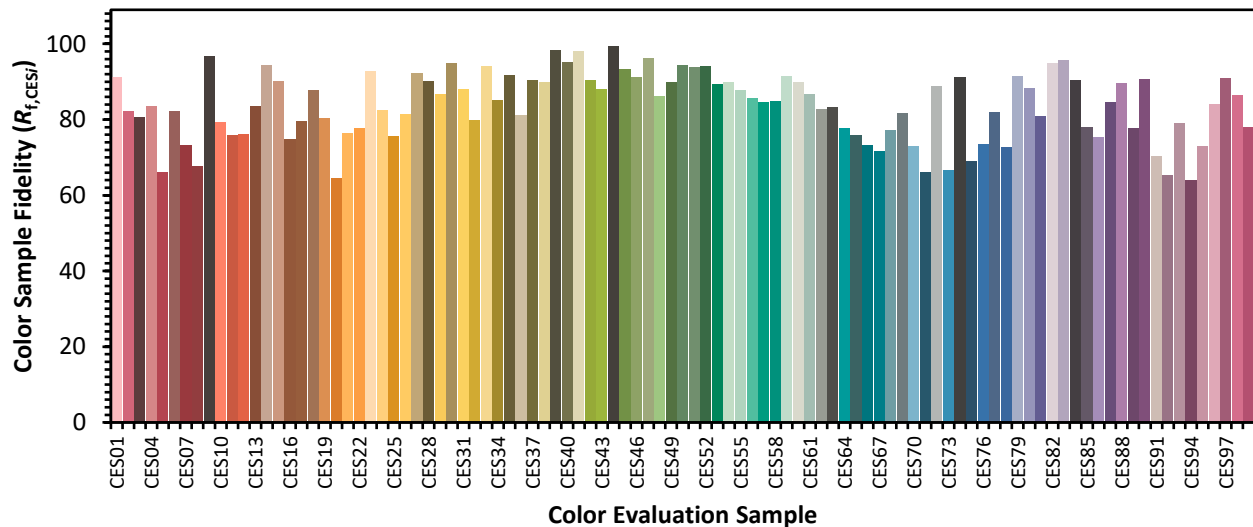


Color Vector Graphics

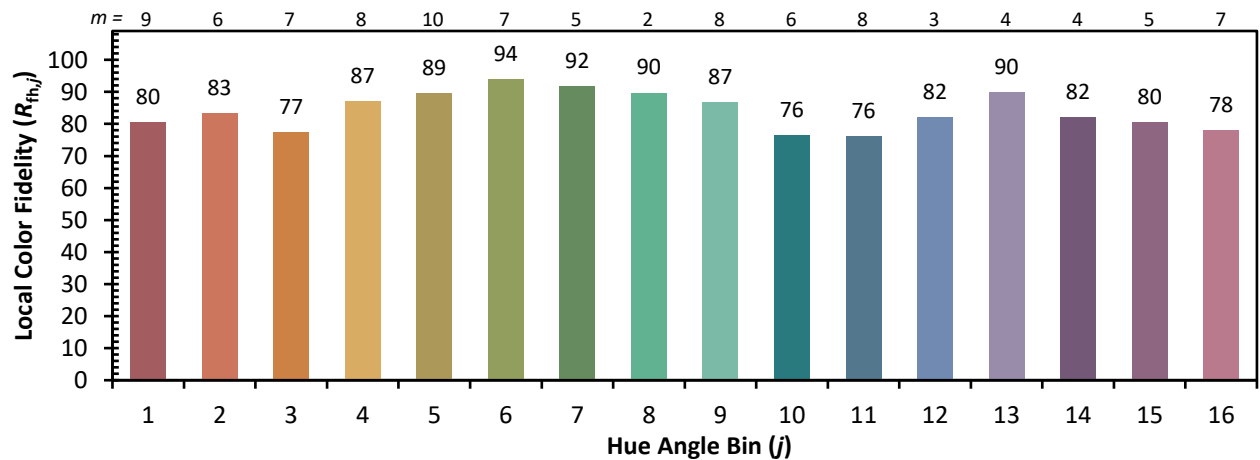
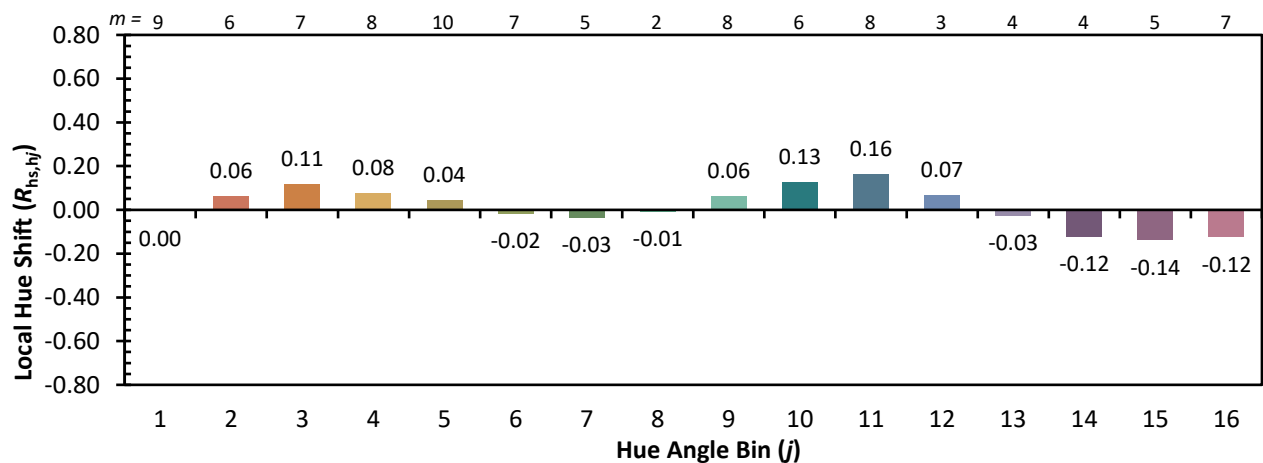
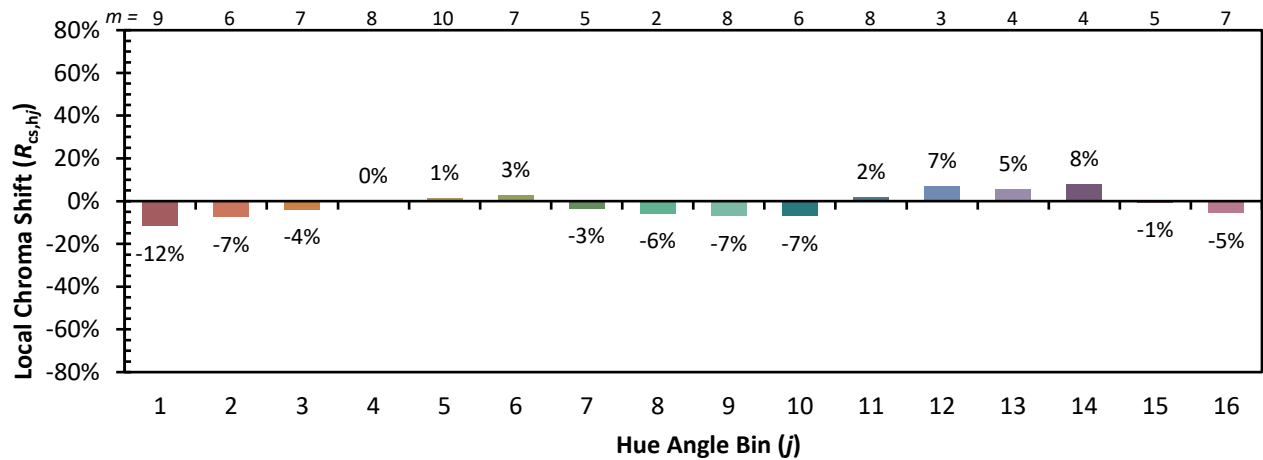


Individual Sample Fidelity Index ($R_{f,i}$)

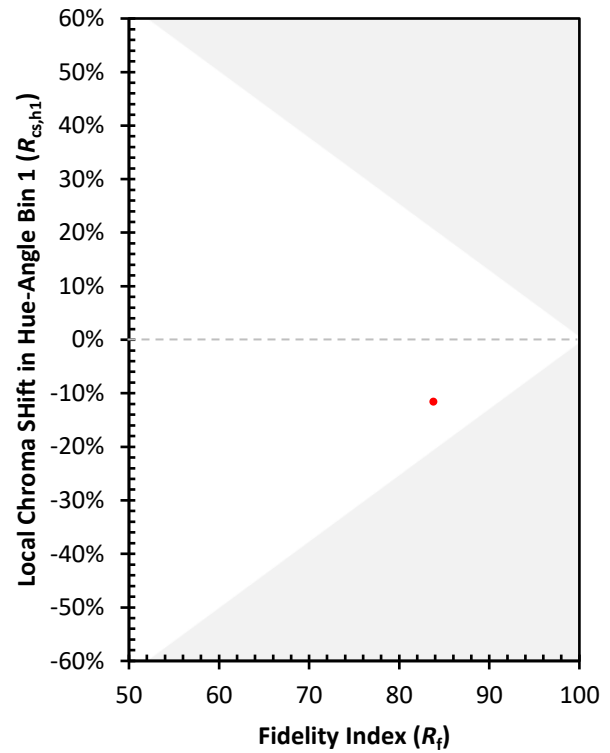
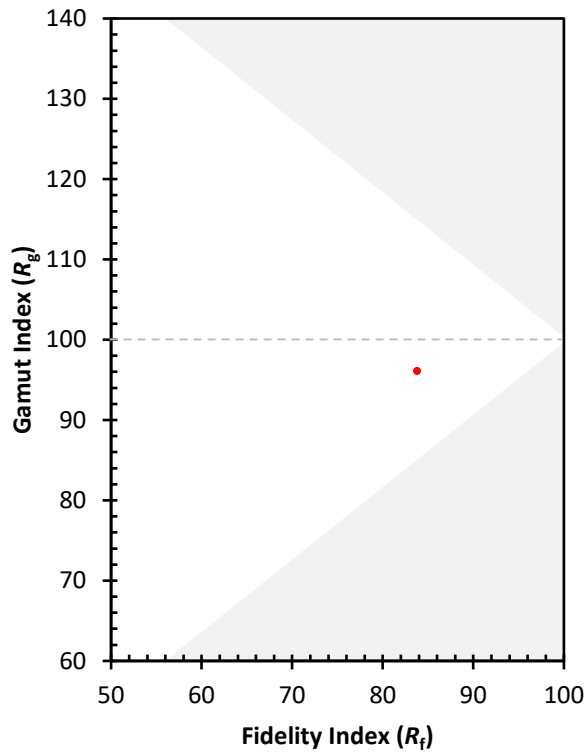
CES01 = 86	CES26 = 81	CES51 = 94	CES76 = 74
CES02 = 61	CES27 = 92	CES52 = 94	CES77 = 82
CES03 = 31	CES28 = 90	CES53 = 89	CES78 = 73
CES04 = 70	CES29 = 87	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 95	CES55 = 88	CES80 = 88
CES06 = 51	CES31 = 88	CES56 = 86	CES81 = 81
CES07 = 41	CES32 = 80	CES57 = 85	CES82 = 95
CES08 = 40	CES33 = 94	CES58 = 85	CES83 = 96
CES09 = 29	CES34 = 85	CES59 = 91	CES84 = 90
CES10 = 74	CES35 = 92	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 81	CES61 = 87	CES86 = 75
CES12 = 63	CES37 = 90	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 90	CES63 = 83	CES88 = 90
CES14 = 74	CES39 = 98	CES64 = 78	CES89 = 78
CES15 = 71	CES40 = 95	CES65 = 76	CES90 = 91
CES16 = 47	CES41 = 98	CES66 = 73	CES91 = 70
CES17 = 49	CES42 = 91	CES67 = 72	CES92 = 65
CES18 = 56	CES43 = 88	CES68 = 77	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 82	CES94 = 64
CES20 = 65	CES45 = 93	CES70 = 73	CES95 = 73
CES21 = 86	CES46 = 91	CES71 = 66	CES96 = 84
CES22 = 78	CES47 = 96	CES72 = 89	CES97 = 91
CES23 = 91	CES48 = 86	CES73 = 67	CES98 = 86
CES24 = 90	CES49 = 90	CES74 = 91	CES99 = 78
CES25 = 71	CES50 = 94	CES75 = 69	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)