

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: P895742

Luminaire Tested: **CLCS15S-PC-5000K-80%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895742
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS15S-PC-5000K-80%
Description: LUMARK SMALL LED CANOPY 8000LM, 60W, PC 80 CRI 5000K FIXTURE @ 80%
OUTPUT
Light Source: 5000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6819.6 lumens
Efficiency: N/A
Efficacy: 138.9 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 - G2

Input Watts (W): 49.1
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

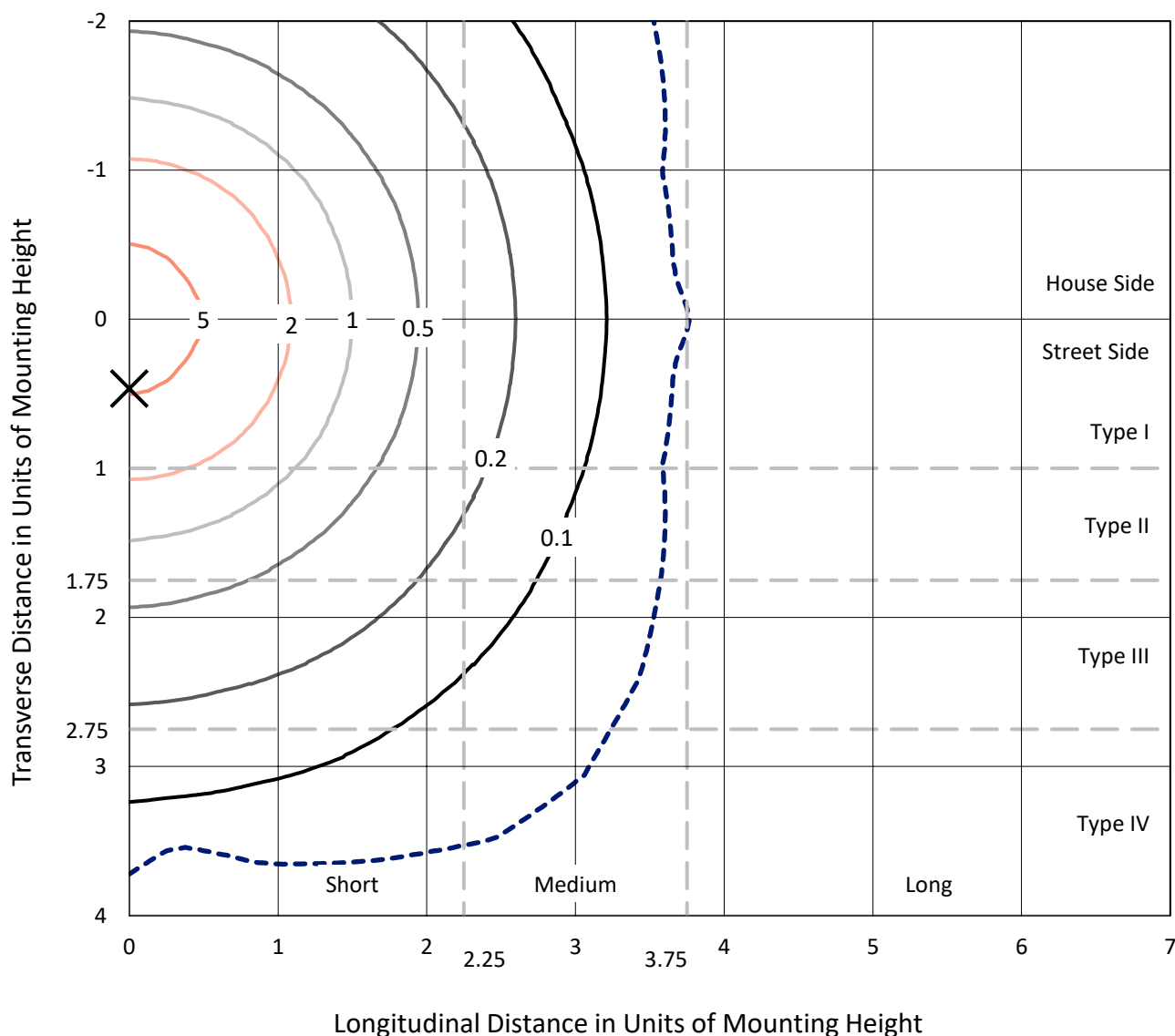
REPORT NUMBER: P895742

CATALOG NUMBER: CLCS15S-PC-5000K-80%

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

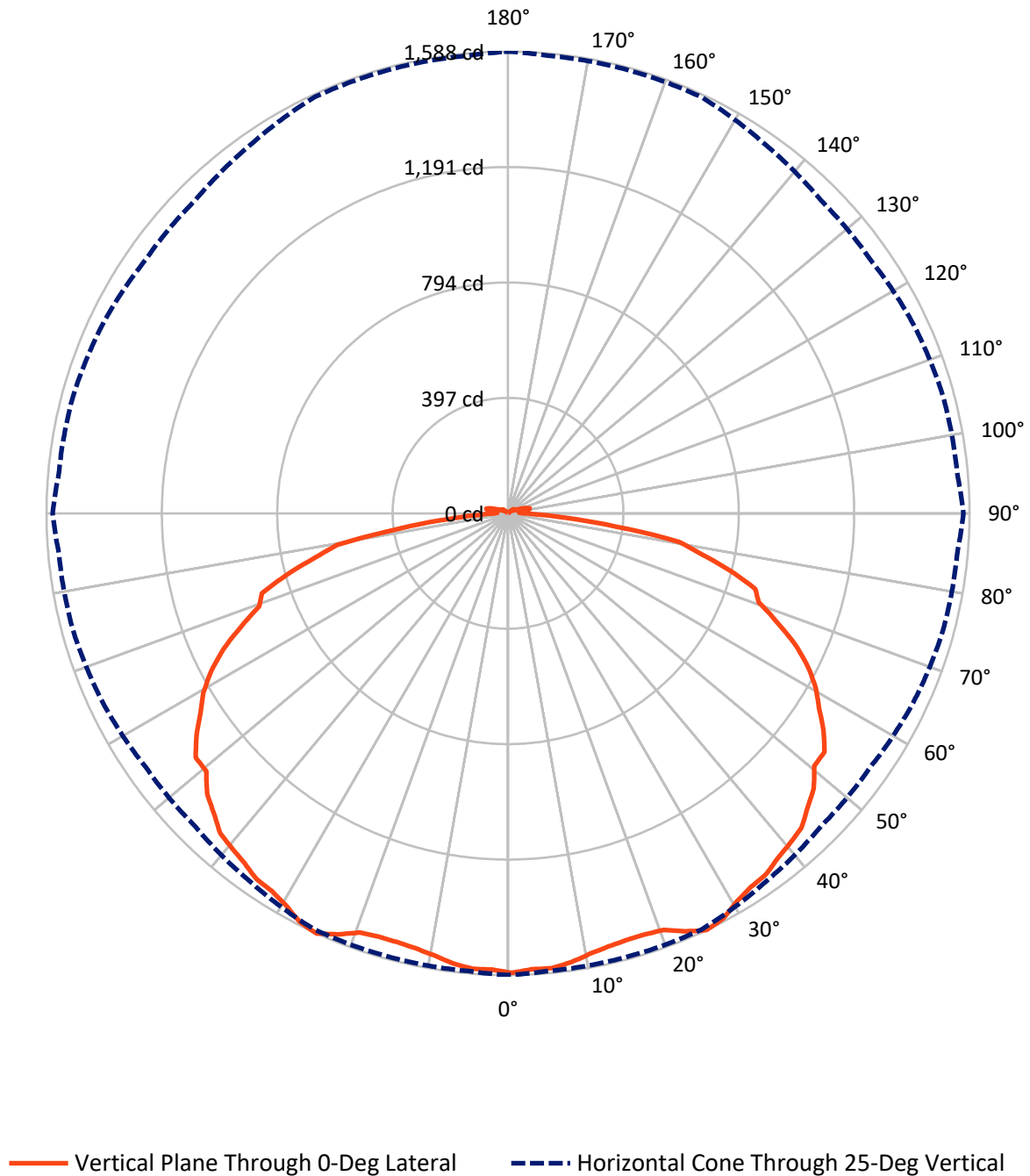


Based on 15 foot mounting height. Maximum calculated value = 7 fc

Type V - Short - N/A

REPORT NUMBER: P895742
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Luminous Intensity Polar Plot



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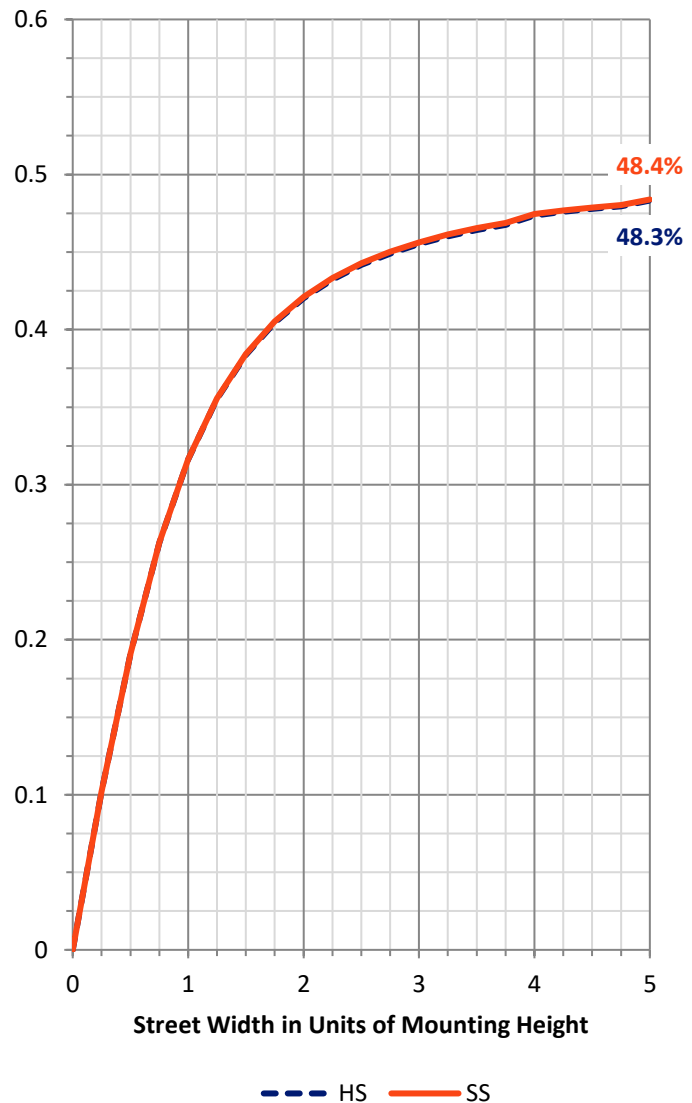
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3342.8	67.0	3409.8
	% Fixture	49.0	1.0	50.0
Street Side	Lumens	3342.8	67.0	3409.8
	% Fixture	49.0	1.0	50.0
Total	Lumens	6685.6	134.0	6819.6
	% Fixture	98.0	2.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.5	2.2
10°-20°	433.5	6.4
20°-30°	712.8	10.5
30°-40°	945.0	13.9
40°-50°	1117.8	16.4
50°-60°	1175.8	17.2
60°-70°	1075.3	15.8
70°-80°	830.3	12.2
80°-90°	245.7	3.6
90°-100°	46.8	0.7
100°-110°	52.0	0.8
110°-120°	20.3	0.3
120°-130°	11.1	0.2
130°-140°	3.3	0.0
140°-150°	0.5	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	6685.6	98.0
0°-180°	6819.6	100.0



REPORT NUMBER: P895742

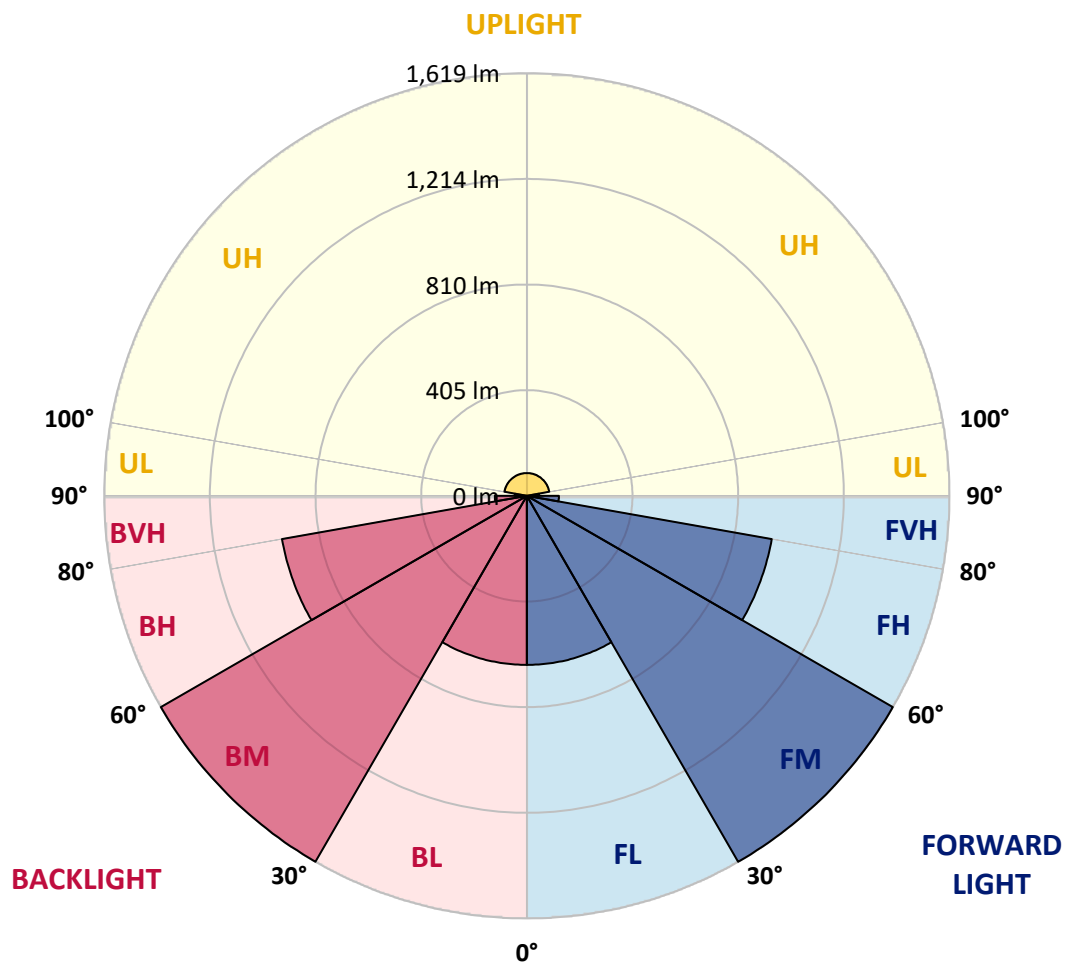
CATALOG NUMBER: CLCS15S-PC-5000K-80%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	647.9	9.5			
FM	(30°-60°)	1619.3	23.7			
FH	(60°-80°)	952.8	14.0			G1/1800
FVH	(80°-90°)	122.9	1.8			G2/225
BL	(0°-30°)	647.9	9.5	B2/1000		
BM	(30°-60°)	1619.3	23.7	B2/2500		
BH	(60°-80°)	952.8	14.0	B2/1000		G1/1800
BVH	(80°-90°)	122.9	1.8			G2/225
UL	(90°-100°)	46.8	0.7		U2/50	
UH	(100°-180°)	87.2	1.3		U3/500	

BUG Rating: B2-U3-G2

Type V Short





REPORT NUMBER: P895742

CATALOG NUMBER: CLCS15S-PC-5000K-80%

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0	1580.0
2.5°	1569.8	1570.6	1572.4	1575.7	1574.1	1574.9	1574.9	1572.4	1575.7	1574.9	1580.0
5°	1570.6	1570.6	1570.6	1574.9	1574.9	1575.7	1577.4	1577.4	1579.2	1580.0	1583.4
7.5°	1558.7	1560.5	1558.7	1562.1	1563.0	1567.3	1568.9	1568.1	1571.4	1571.4	1578.3
10°	1540.9	1541.7	1541.7	1545.1	1548.5	1553.7	1553.7	1552.8	1554.5	1553.7	1558.7
12.5°	1529.0	1529.0	1528.2	1533.2	1536.6	1540.1	1540.9	1541.7	1544.3	1547.7	1552.8
15°	1523.0	1523.0	1522.2	1529.0	1528.2	1528.2	1531.5	1535.0	1535.0	1537.5	1545.1
17.5°	1522.2	1519.6	1511.1	1520.4	1517.9	1517.1	1519.6	1518.8	1525.5	1526.4	1529.0
20°	1529.0	1525.5	1524.7	1527.3	1517.1	1514.6	1517.1	1515.4	1519.6	1521.4	1529.8
22.5°	1561.3	1559.6	1551.1	1540.9	1517.9	1506.8	1504.3	1517.1	1531.5	1529.8	1533.2
25°	1587.6	1580.0	1579.2	1578.3	1545.9	1522.2	1521.4	1538.3	1549.4	1551.1	1566.4
27.5°	1577.4	1568.1	1572.4	1574.1	1547.7	1518.8	1508.6	1533.2	1548.5	1562.1	1572.4
30°	1549.4	1542.6	1546.9	1550.2	1535.0	1509.4	1494.1	1514.6	1540.9	1562.1	1557.9
32.5°	1532.3	1532.3	1532.3	1522.2	1513.6	1497.5	1474.5	1510.3	1521.4	1529.8	1536.6
35°	1526.4	1525.5	1525.5	1514.6	1495.9	1483.9	1483.9	1492.4	1502.6	1506.8	1523.0
37.5°	1506.0	1492.4	1504.3	1506.8	1488.1	1482.2	1483.9	1484.8	1498.4	1510.3	1509.4
40°	1492.4	1476.2	1471.2	1476.2	1479.7	1479.7	1473.7	1478.0	1490.7	1496.7	1489.0
42.5°	1479.7	1468.6	1467.7	1460.1	1453.3	1463.4	1456.7	1458.4	1464.4	1478.0	1481.3
45°	1443.9	1442.2	1441.4	1440.5	1422.7	1458.4	1453.3	1443.9	1457.6	1456.7	1481.3
47.5°	1415.0	1424.3	1407.4	1409.1	1427.0	1431.1	1427.0	1421.0	1444.8	1438.9	1465.2
50°	1364.9	1364.9	1374.2	1386.9	1409.1	1403.1	1404.0	1418.4	1414.2	1423.5	1451.6
52.5°	1363.2	1332.6	1322.3	1334.2	1362.3	1378.4	1362.3	1404.0	1355.5	1376.8	1385.2
55°	1316.3	1279.9	1285.7	1292.6	1313.0	1315.5	1356.4	1331.7	1315.5	1336.8	1349.6
57.5°	1261.1	1232.2	1221.1	1256.0	1250.9	1286.7	1281.5	1278.1	1290.0	1288.3	1290.0
60°	1216.1	1189.6	1163.3	1193.9	1224.6	1212.6	1233.9	1248.4	1234.7	1238.1	1231.4
62.5°	1156.5	1155.7	1135.3	1149.7	1145.4	1173.5	1165.9	1182.8	1178.7	1174.4	1184.6
65°	1084.3	1078.3	1074.8	1090.2	1093.6	1093.6	1085.9	1103.8	1100.4	1097.8	1109.8
67.5°	997.5	995.0	998.3	1000.0	1017.9	1019.6	1016.2	1030.6	1028.9	1027.3	1031.5
70°	914.2	899.7	881.9	930.4	950.7	955.9	943.1	933.7	926.9	917.5	922.6
72.5°	889.5	873.4	875.9	908.2	906.5	915.0	894.6	864.8	864.8	854.7	858.9
75°	789.1	754.3	801.0	839.3	867.4	851.2	860.6	828.2	788.3	784.9	796.8
77.5°	682.0	661.6	662.4	713.4	760.3	774.7	749.2	710.9	678.6	668.4	675.2
80°	597.8	575.7	531.5	513.6	524.7	549.4	528.9	507.7	518.8	531.5	544.3
82.5°	373.3	369.1	381.8	357.1	322.3	310.4	312.1	338.4	341.0	336.7	341.0
85°	203.2	196.4	193.0	185.4	176.9	173.4	169.3	172.6	176.1	167.5	170.1
87.5°	92.7	89.3	94.4	99.5	92.7	91.0	89.3	90.1	90.1	91.0	91.0
90°	49.3	50.2	51.0	50.2	50.2	49.3	48.5	47.7	47.7	49.3	49.3
92.5°	39.1	38.3	35.8	34.8	34.0	34.0	33.1	33.1	34.0	34.8	34.8
95°	37.4	37.4	34.8	33.1	32.3	30.6	31.5	33.1	34.8	36.6	36.6
97.5°	57.0	57.0	53.5	48.5	43.4	39.1	42.5	48.5	51.9	54.5	54.5
100°	73.2	73.2	68.1	58.7	49.3	45.1	48.5	57.8	65.4	68.9	69.7
102.5°	76.5	75.7	68.9	58.7	46.7	41.7	45.9	57.0	67.2	72.2	73.2
105°	67.2	66.3	61.3	50.2	38.3	31.5	38.3	49.3	59.5	64.6	65.4
107.5°	55.3	55.3	51.0	40.8	28.0	22.1	28.0	39.9	49.3	52.7	54.5
110°	41.7	40.8	37.4	29.8	20.4	15.3	19.6	29.8	36.6	39.9	40.8



REPORT NUMBER: P895742
 CATALOG NUMBER: CLCS15S-PC-5000K-80%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	33.1	33.1	29.8	23.8	14.4	11.1	14.4	23.0	29.0	31.5	31.5
115°	28.0	28.0	25.5	18.7	11.9	9.3	11.9	18.7	24.7	26.3	26.3
117.5°	22.1	23.0	22.1	17.0	10.2	6.8	10.2	15.3	20.4	22.1	21.2
120°	17.9	18.7	20.4	16.2	9.3	6.0	9.3	15.3	18.7	17.9	17.9
122.5°	17.0	17.0	21.2	16.2	10.2	5.1	8.5	14.4	19.6	17.0	16.2
125°	23.8	23.8	20.4	12.8	6.0	4.3	5.1	11.1	18.7	21.2	21.2
127.5°	18.7	18.7	15.3	8.5	4.3	3.4	4.3	8.5	13.6	17.0	17.9
130°	14.4	13.6	10.2	6.0	3.4	2.5	3.4	6.0	8.5	11.1	11.9
132.5°	7.6	7.6	6.8	5.1	2.5	1.7	2.5	5.1	6.8	7.6	7.6
135°	6.0	6.0	5.1	4.3	2.5	0.8	2.5	4.3	5.1	6.0	6.0
137.5°	5.1	5.1	4.3	2.5	0.8	0.8	0.8	2.5	4.3	5.1	5.1
140°	3.4	3.4	3.4	1.7	0.8	0.8	0.8	1.7	2.5	3.4	3.4
142.5°	2.5	2.5	1.7	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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: SP1-2405-118-3

Test Date: 07/18/2024

Luminaire Tested: CLCS40S-5000K-HIGH

Data in this report applies to families of products including CLCS40S-5000K-HIGH

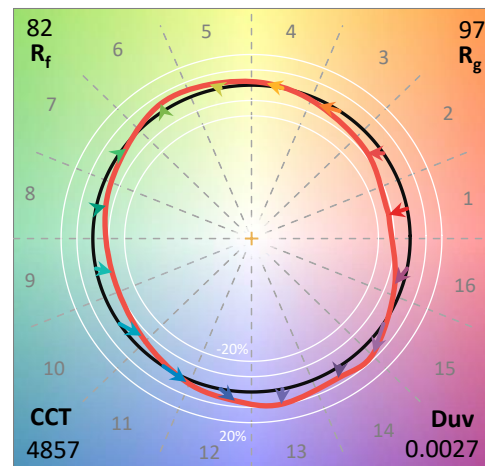
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2405-118-3
 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-5000K-HIGH**
 Description: 120W LUMARK AP CANOPY SELECTABLE FIXTURE HIGHEST OUTPUT @5000K

Spectral Parameters

CCT (K): 4857
 CIE u' : 0.2111
 CIE v' : 0.4898
 Duv: 0.0027
 CIE x: 0.3499
 CIE y: 0.3609
 CIE z: 0.2892
 Peak Wavelength (nm): 451
 Dominant Wavelength (nm): 572
 Purity: 13.28172
 R_f: 82.4
 R_g: 96.8

CRI (Ra): 81.9
 R1: 80.4
 R2: 86.0
 R3: 89.7
 R4: 82.2
 R5: 80.0
 R6: 80.1
 R7: 88.2
 R8: 68.4
 R9: 8.5
 R10: 66.0
 R11: 80.6
 R12: 52.5
 R13: 81.8
 R14: 94.3
 R15: 74.7



Test Conditions

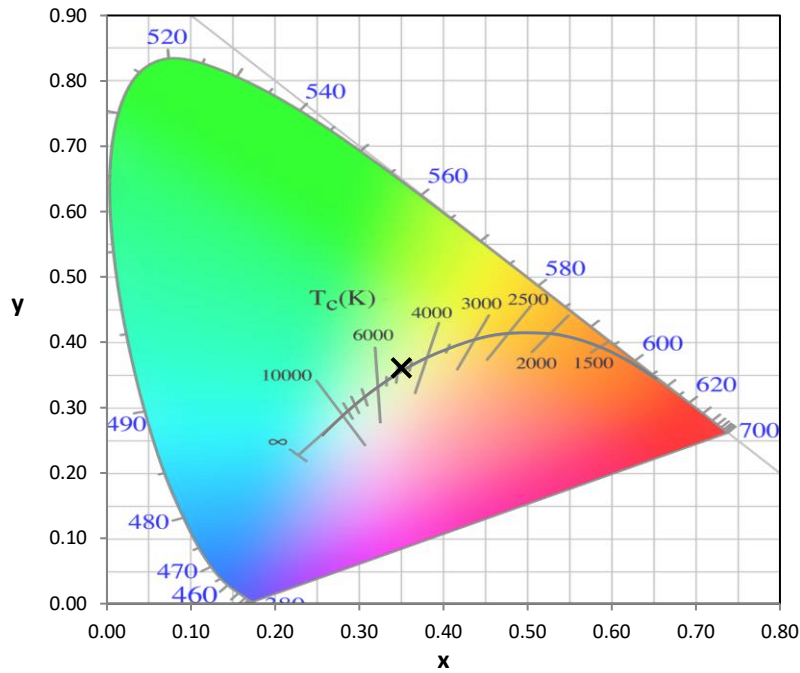
Stabilization Time: 72M
 Operation Time: 2H 12M
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2405-118-3

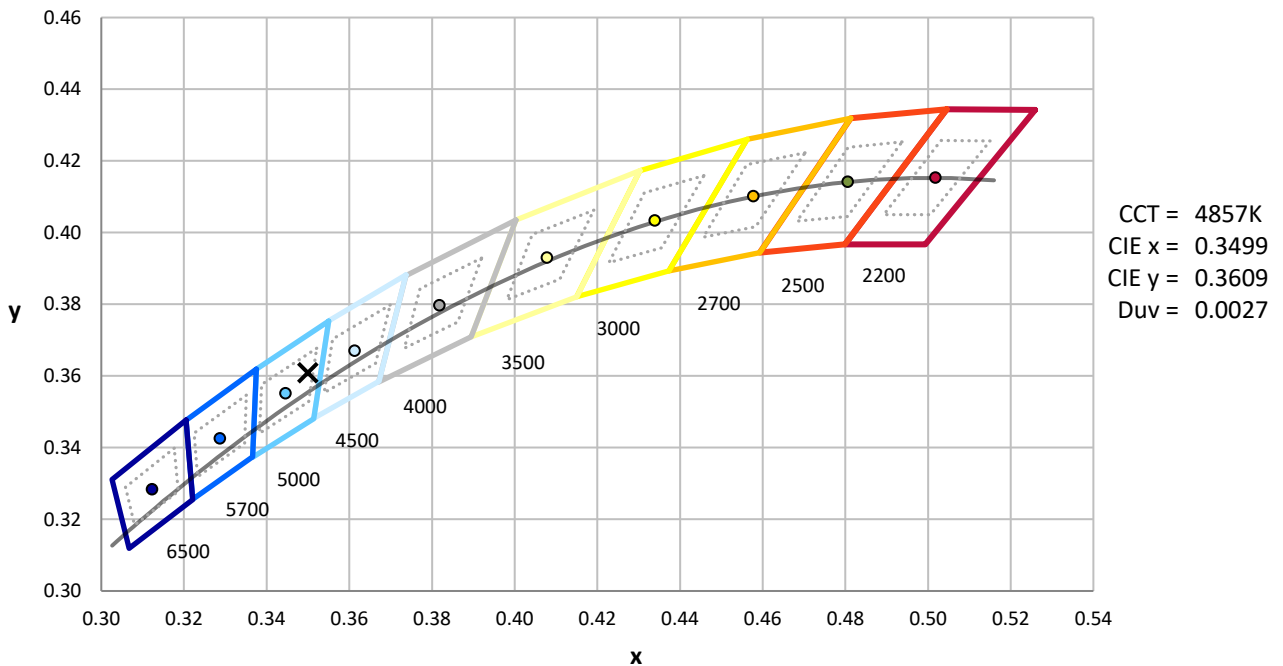
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



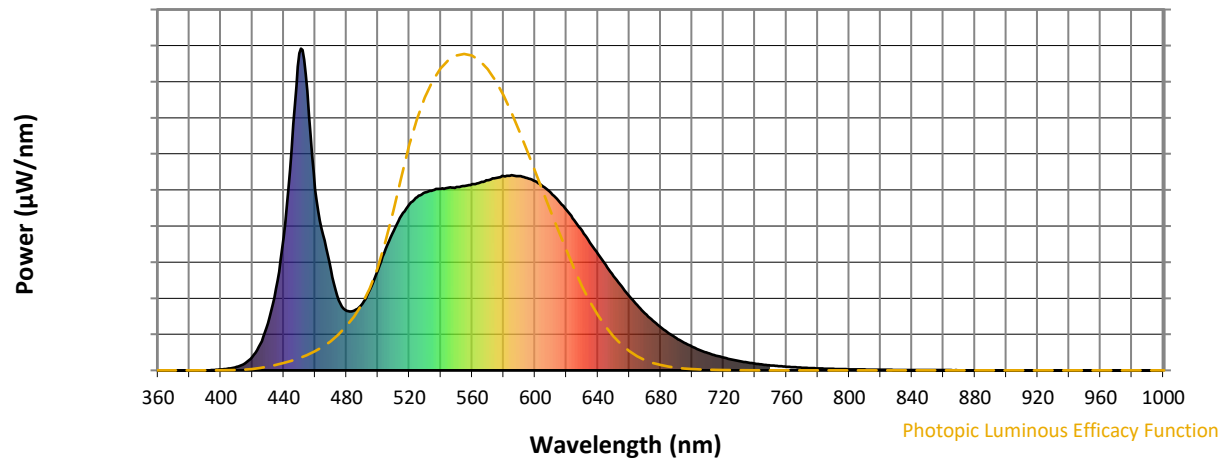
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

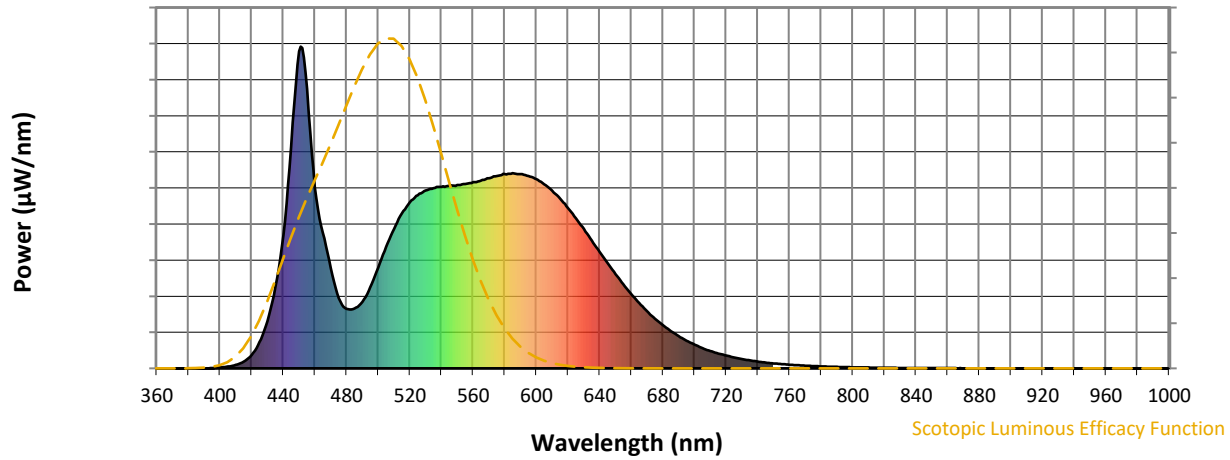


Photopic Lumens: NR

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	207	NR	620	498	NR	750	15	NR	880	0	NR
365	0	NR	495	252	NR	625	467	NR	755	13	NR	885	0	NR
370	0	NR	500	313	NR	630	433	NR	760	11	NR	890	0	NR
375	0	NR	505	378	NR	635	397	NR	765	10	NR	895	0	NR
380	0	NR	510	433	NR	640	362	NR	770	8	NR	900	0	NR
385	0	NR	515	481	NR	645	327	NR	775	7	NR	905	0	NR
390	0	NR	520	516	NR	650	293	NR	780	6	NR	910	0	NR
395	1	NR	525	538	NR	655	261	NR	785	5	NR	915	0	NR
400	3	NR	530	553	NR	660	231	NR	790	5	NR	920	0	NR
405	6	NR	535	560	NR	665	203	NR	795	4	NR	925	0	NR
410	11	NR	540	564	NR	670	177	NR	800	3	NR	930	0	NR
415	21	NR	545	568	NR	675	154	NR	805	3	NR	935	0	NR
420	42	NR	550	570	NR	680	134	NR	810	3	NR	940	0	NR
425	82	NR	555	573	NR	685	116	NR	815	2	NR	945	0	NR
430	146	NR	560	579	NR	690	100	NR	820	2	NR	950	0	NR
435	253	NR	565	584	NR	695	86	NR	825	2	NR	955	0	NR
440	414	NR	570	591	NR	700	73	NR	830	1	NR	960	0	NR
445	689	NR	575	598	NR	705	63	NR	835	1	NR	965	0	NR
450	986	NR	580	604	NR	710	54	NR	840	1	NR	970	0	NR
455	868	NR	585	607	NR	715	46	NR	845	1	NR	975	0	NR
460	563	NR	590	604	NR	720	40	NR	850	1	NR	980	0	NR
465	421	NR	595	598	NR	725	34	NR	855	1	NR	985	0	NR
470	311	NR	600	588	NR	730	29	NR	860	1	NR	990	0	NR
475	218	NR	605	572	NR	735	25	NR	865	1	NR	995	0	NR
480	185	NR	610	552	NR	740	21	NR	870	0	NR	1000	0	NR
485	186	NR	615	527	NR	745	18	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



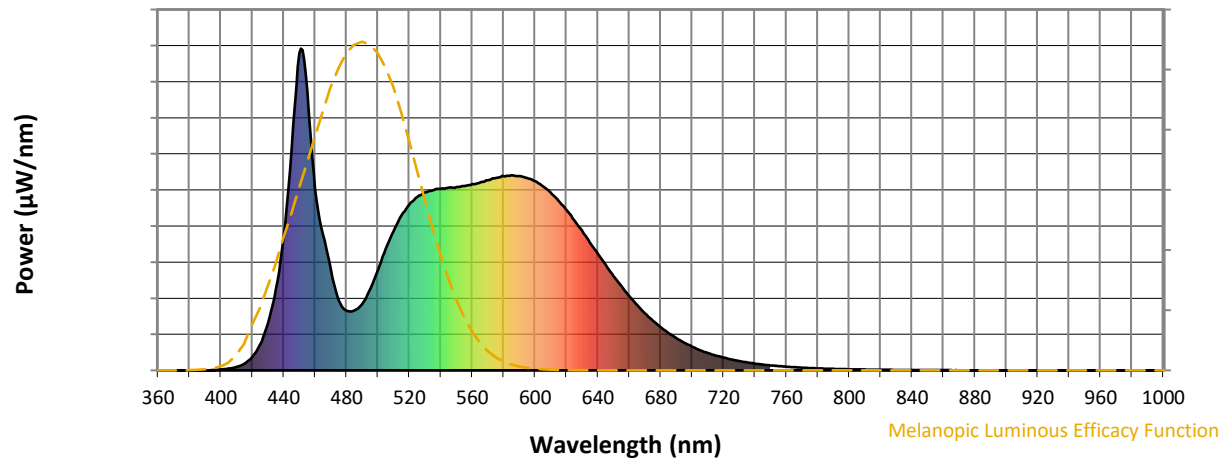
Scotopic Lumens: NR

S/P: 1.88

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	207	NR	620	498	NR	750	15	NR	880	0	NR
365	0	NR	495	252	NR	625	467	NR	755	13	NR	885	0	NR
370	0	NR	500	313	NR	630	433	NR	760	11	NR	890	0	NR
375	0	NR	505	378	NR	635	397	NR	765	10	NR	895	0	NR
380	0	NR	510	433	NR	640	362	NR	770	8	NR	900	0	NR
385	0	NR	515	481	NR	645	327	NR	775	7	NR	905	0	NR
390	0	NR	520	516	NR	650	293	NR	780	6	NR	910	0	NR
395	1	NR	525	538	NR	655	261	NR	785	5	NR	915	0	NR
400	3	NR	530	553	NR	660	231	NR	790	5	NR	920	0	NR
405	6	NR	535	560	NR	665	203	NR	795	4	NR	925	0	NR
410	11	NR	540	564	NR	670	177	NR	800	3	NR	930	0	NR
415	21	NR	545	568	NR	675	154	NR	805	3	NR	935	0	NR
420	42	NR	550	570	NR	680	134	NR	810	3	NR	940	0	NR
425	82	NR	555	573	NR	685	116	NR	815	2	NR	945	0	NR
430	146	NR	560	579	NR	690	100	NR	820	2	NR	950	0	NR
435	253	NR	565	584	NR	695	86	NR	825	2	NR	955	0	NR
440	414	NR	570	591	NR	700	73	NR	830	1	NR	960	0	NR
445	689	NR	575	598	NR	705	63	NR	835	1	NR	965	0	NR
450	986	NR	580	604	NR	710	54	NR	840	1	NR	970	0	NR
455	868	NR	585	607	NR	715	46	NR	845	1	NR	975	0	NR
460	563	NR	590	604	NR	720	40	NR	850	1	NR	980	0	NR
465	421	NR	595	598	NR	725	34	NR	855	1	NR	985	0	NR
470	311	NR	600	588	NR	730	29	NR	860	1	NR	990	0	NR
475	218	NR	605	572	NR	735	25	NR	865	1	NR	995	0	NR
480	185	NR	610	552	NR	740	21	NR	870	0	NR	1000	0	NR
485	186	NR	615	527	NR	745	18	NR	875	0	NR			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 3.92

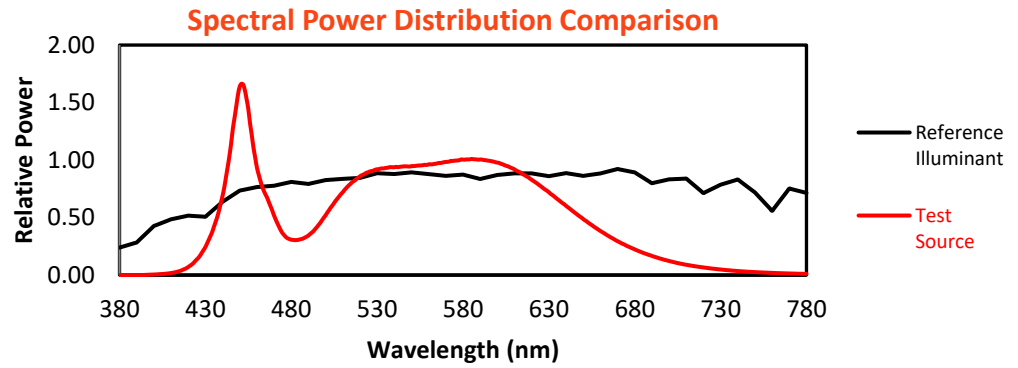
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	207	NR	620	498	NR	750	15	NR	880	0	NR
365	0	NR	495	252	NR	625	467	NR	755	13	NR	885	0	NR
370	0	NR	500	313	NR	630	433	NR	760	11	NR	890	0	NR
375	0	NR	505	378	NR	635	397	NR	765	10	NR	895	0	NR
380	0	NR	510	433	NR	640	362	NR	770	8	NR	900	0	NR
385	0	NR	515	481	NR	645	327	NR	775	7	NR	905	0	NR
390	0	NR	520	516	NR	650	293	NR	780	6	NR	910	0	NR
395	1	NR	525	538	NR	655	261	NR	785	5	NR	915	0	NR
400	3	NR	530	553	NR	660	231	NR	790	5	NR	920	0	NR
405	6	NR	535	560	NR	665	203	NR	795	4	NR	925	0	NR
410	11	NR	540	564	NR	670	177	NR	800	3	NR	930	0	NR
415	21	NR	545	568	NR	675	154	NR	805	3	NR	935	0	NR
420	42	NR	550	570	NR	680	134	NR	810	3	NR	940	0	NR
425	82	NR	555	573	NR	685	116	NR	815	2	NR	945	0	NR
430	146	NR	560	579	NR	690	100	NR	820	2	NR	950	0	NR
435	253	NR	565	584	NR	695	86	NR	825	2	NR	955	0	NR
440	414	NR	570	591	NR	700	73	NR	830	1	NR	960	0	NR
445	689	NR	575	598	NR	705	63	NR	835	1	NR	965	0	NR
450	986	NR	580	604	NR	710	54	NR	840	1	NR	970	0	NR
455	868	NR	585	607	NR	715	46	NR	845	1	NR	975	0	NR
460	563	NR	590	604	NR	720	40	NR	850	1	NR	980	0	NR
465	421	NR	595	598	NR	725	34	NR	855	1	NR	985	0	NR
470	311	NR	600	588	NR	730	29	NR	860	1	NR	990	0	NR
475	218	NR	605	572	NR	735	25	NR	865	1	NR	995	0	NR
480	185	NR	610	552	NR	740	21	NR	870	0	NR	1000	0	NR
485	186	NR	615	527	NR	745	18	NR	875	0	NR			

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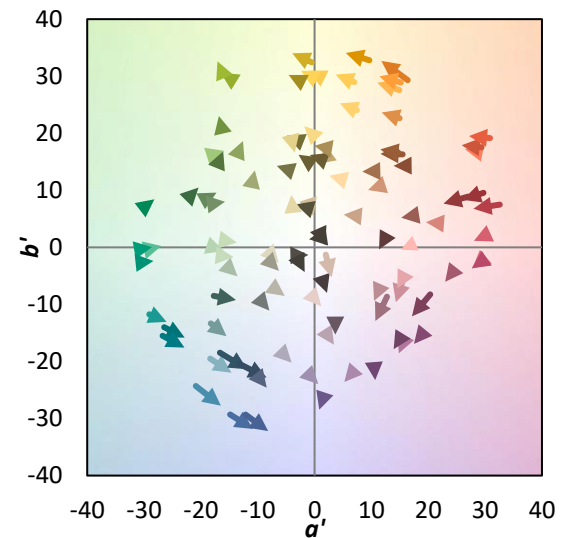
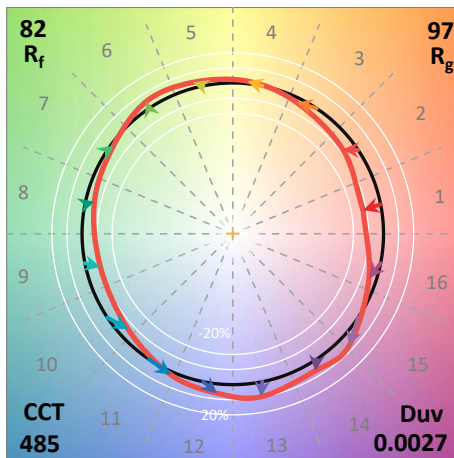
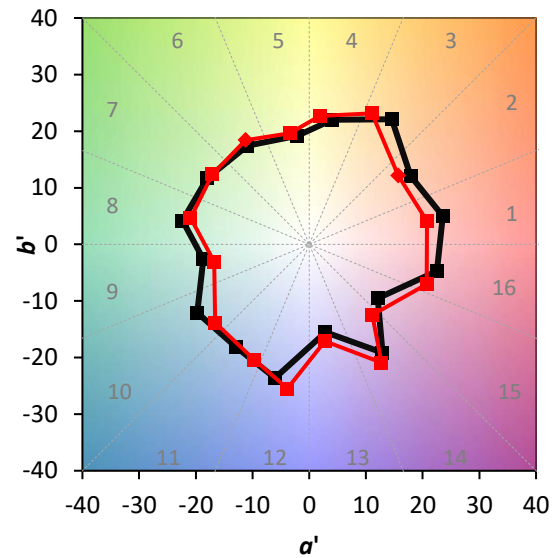
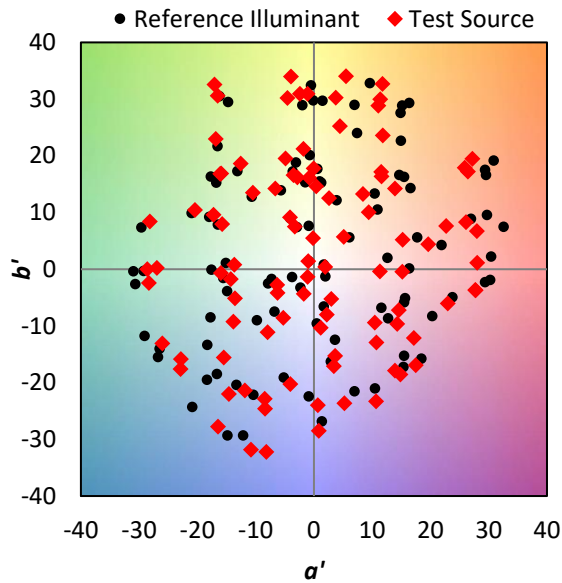
TM-30-18

Summary

$R_f = 82.4$
 $R_g = 96.8$
 $\text{CIE } R_a = 81.9$
 $R_9 = 8.5$

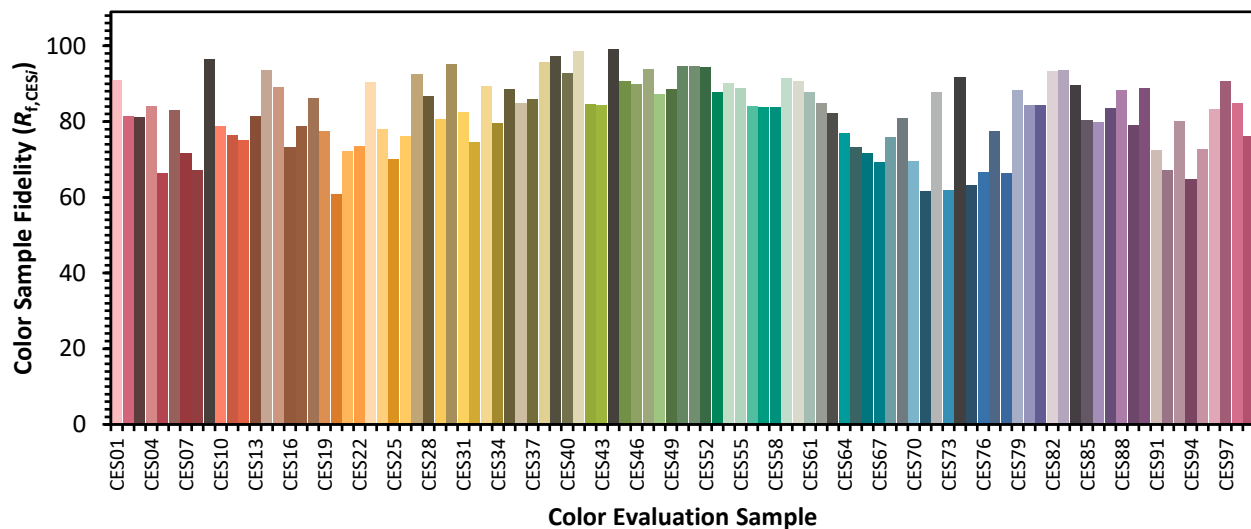


Color Vector Graphics

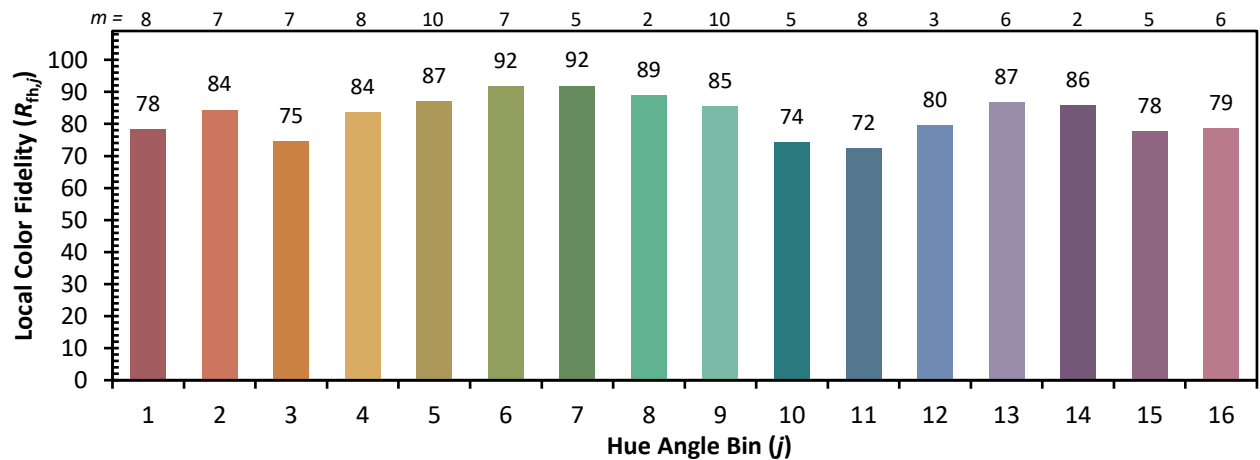
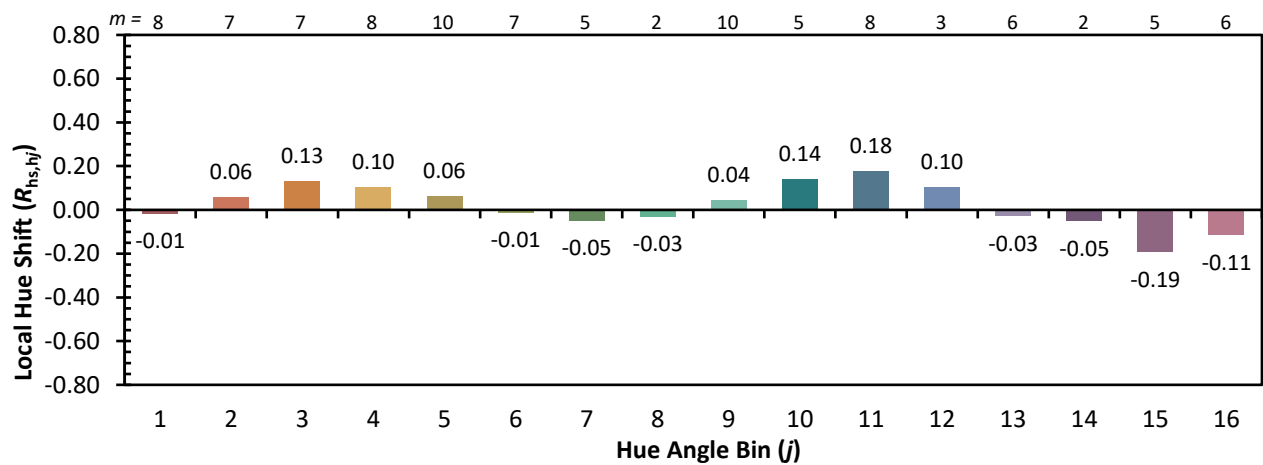
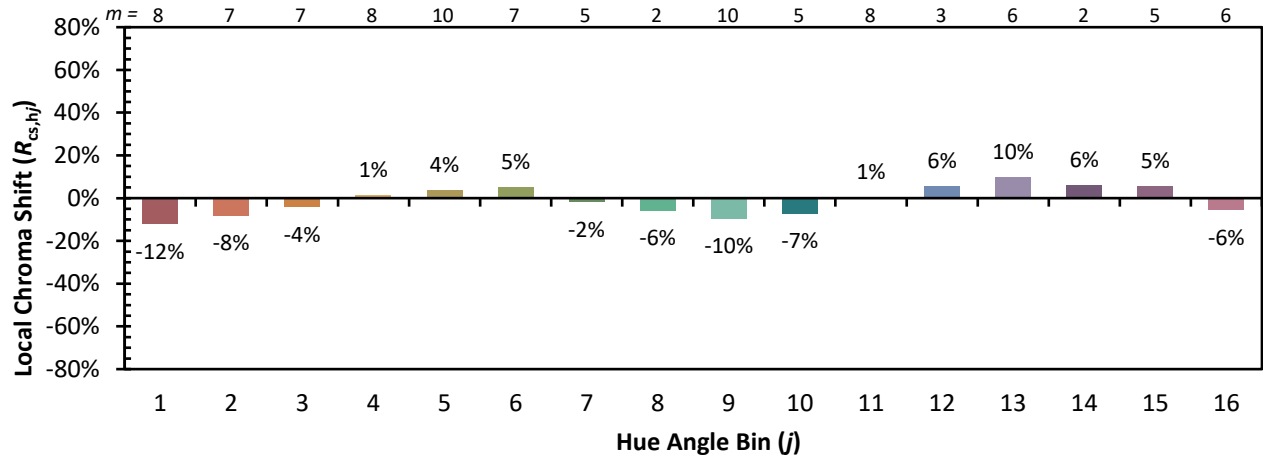


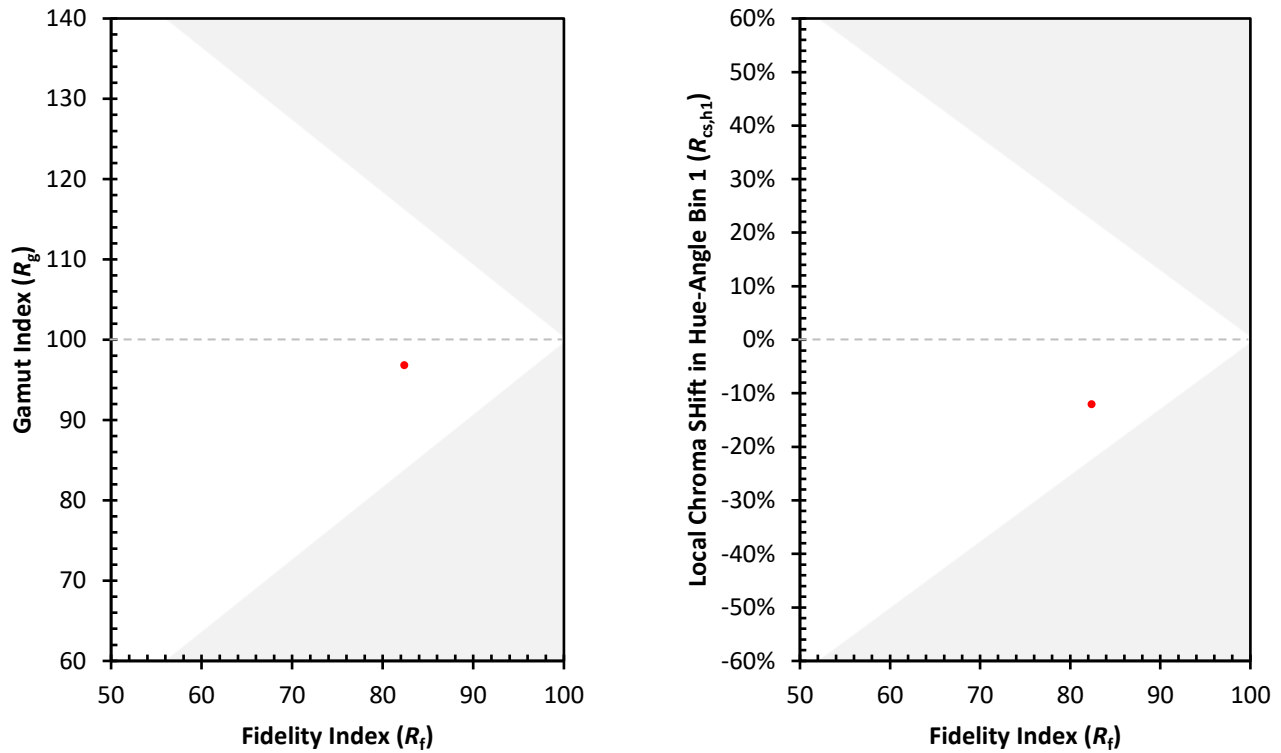
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 76	CES51 = 95	CES76 = 67
CES02 = 60	CES27 = 92	CES52 = 94	CES77 = 77
CES03 = 30	CES28 = 87	CES53 = 88	CES78 = 66
CES04 = 69	CES29 = 81	CES54 = 90	CES79 = 88
CES05 = 47	CES30 = 95	CES55 = 89	CES80 = 84
CES06 = 50	CES31 = 82	CES56 = 84	CES81 = 84
CES07 = 40	CES32 = 74	CES57 = 84	CES82 = 93
CES08 = 39	CES33 = 89	CES58 = 84	CES83 = 94
CES09 = 29	CES34 = 80	CES59 = 91	CES84 = 90
CES10 = 73	CES35 = 88	CES60 = 91	CES85 = 80
CES11 = 56	CES36 = 85	CES61 = 88	CES86 = 80
CES12 = 62	CES37 = 86	CES62 = 85	CES87 = 83
CES13 = 42	CES38 = 96	CES63 = 82	CES88 = 88
CES14 = 74	CES39 = 97	CES64 = 77	CES89 = 79
CES15 = 71	CES40 = 93	CES65 = 73	CES90 = 89
CES16 = 46	CES41 = 99	CES66 = 72	CES91 = 73
CES17 = 49	CES42 = 85	CES67 = 69	CES92 = 67
CES18 = 56	CES43 = 84	CES68 = 76	CES93 = 80
CES19 = 71	CES44 = 99	CES69 = 81	CES94 = 65
CES20 = 64	CES45 = 91	CES70 = 70	CES95 = 73
CES21 = 85	CES46 = 90	CES71 = 62	CES96 = 83
CES22 = 77	CES47 = 94	CES72 = 88	CES97 = 91
CES23 = 91	CES48 = 87	CES73 = 62	CES98 = 85
CES24 = 90	CES49 = 88	CES74 = 92	CES99 = 76
CES25 = 71	CES50 = 95	CES75 = 63	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)