

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: P895745

Luminaire Tested: **CLCS30S-PC-3000K-100%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895745
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS30S-PC-3000K-100%
Description: LUMARK LARGE LED CANOPY 16000LM, 120W, PC 80 CRI 3000K FIXTURE @
100% OUTPUT
Light Source: 3000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16386.7 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.12')
IES Classification: Type V - Short
BUG Rating: B3 - U3 - G3

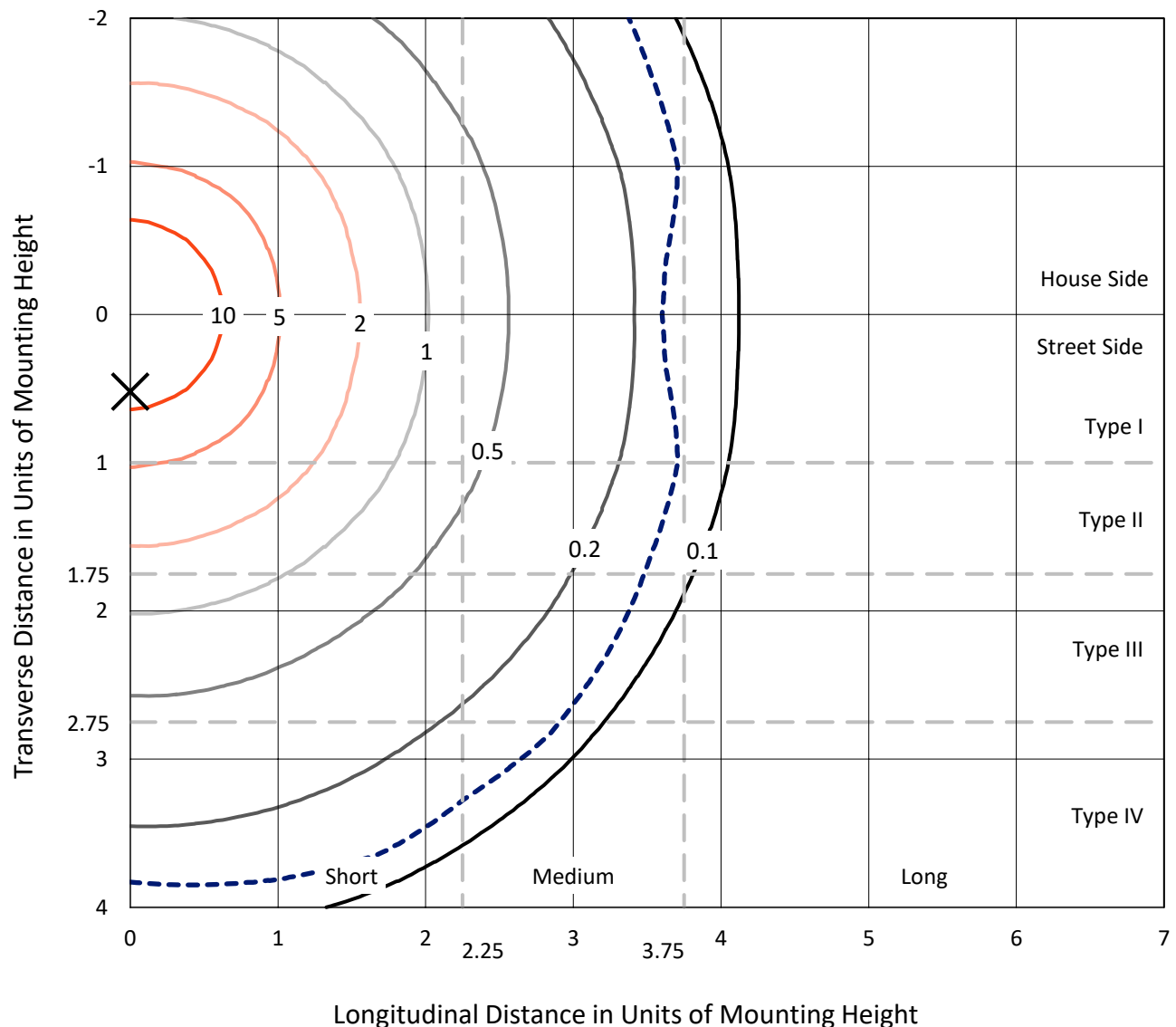
Input Watts (W): 124
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

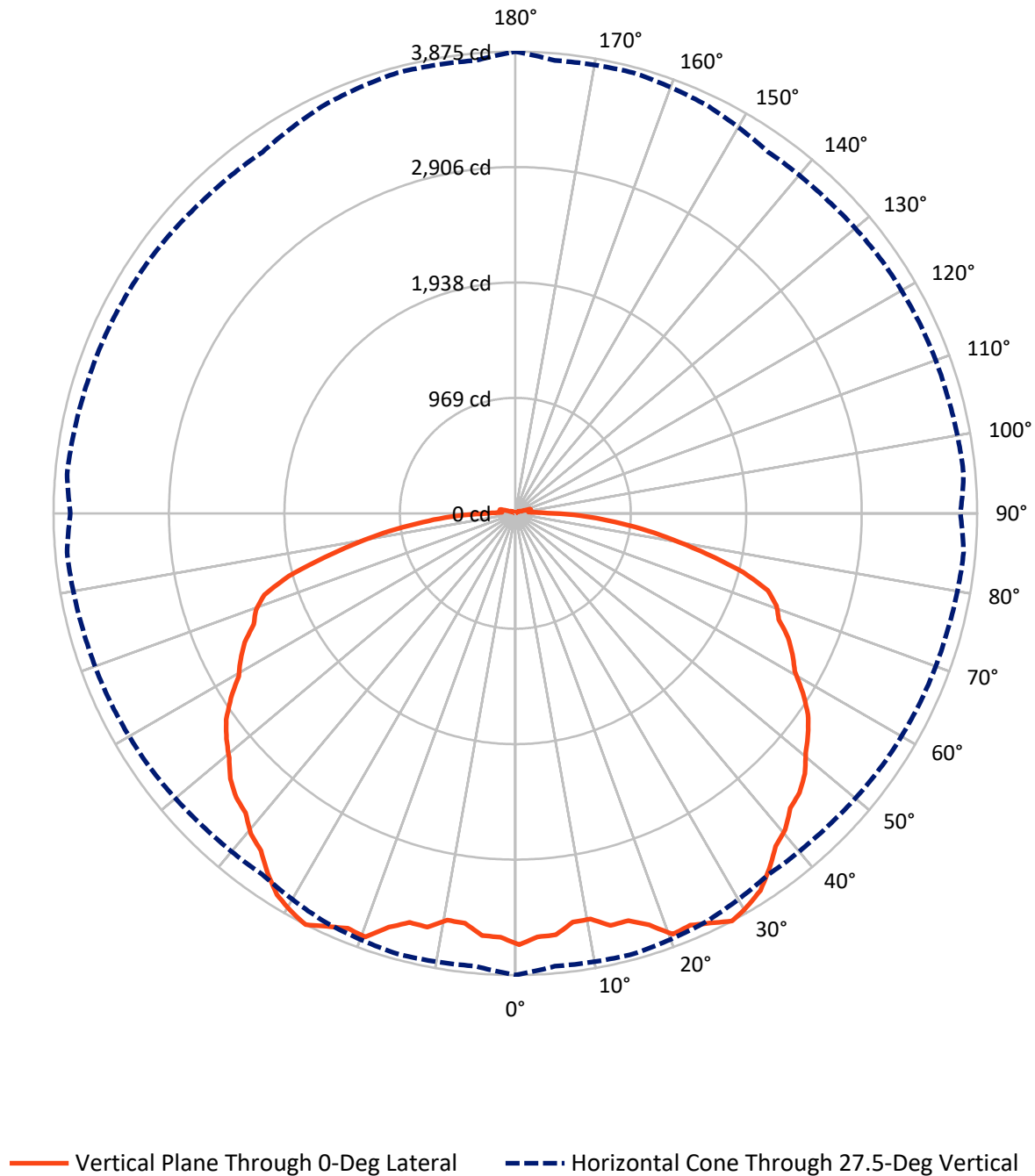
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 16.1 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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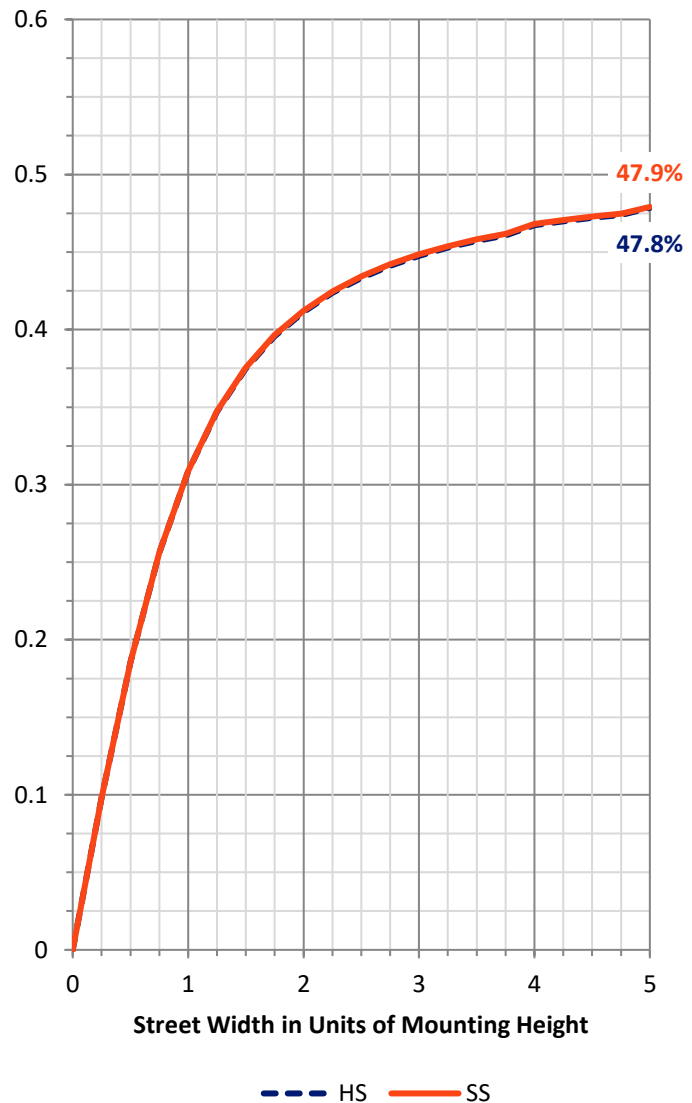
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8056.8	136.6	8193.4
	% Fixture	49.2	0.8	50.0
Street Side	Lumens	8056.8	136.6	8193.4
	% Fixture	49.2	0.8	50.0
Total	Lumens	16113.6	273.1	16386.7
	% Fixture	98.3	1.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.1	2.0
10°-20°	1003.0	6.1
20°-30°	1719.9	10.5
30°-40°	2259.8	13.8
40°-50°	2585.8	15.8
50°-60°	2704.3	16.5
60°-70°	2544.5	15.5
70°-80°	2055.1	12.5
80°-90°	913.2	5.6
90°-100°	153.4	0.9
100°-110°	80.7	0.5
110°-120°	27.2	0.2
120°-130°	9.4	0.1
130°-140°	2.3	0.0
140°-150°	0.1	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	16113.6	98.3
0°-180°	16386.7	100.0



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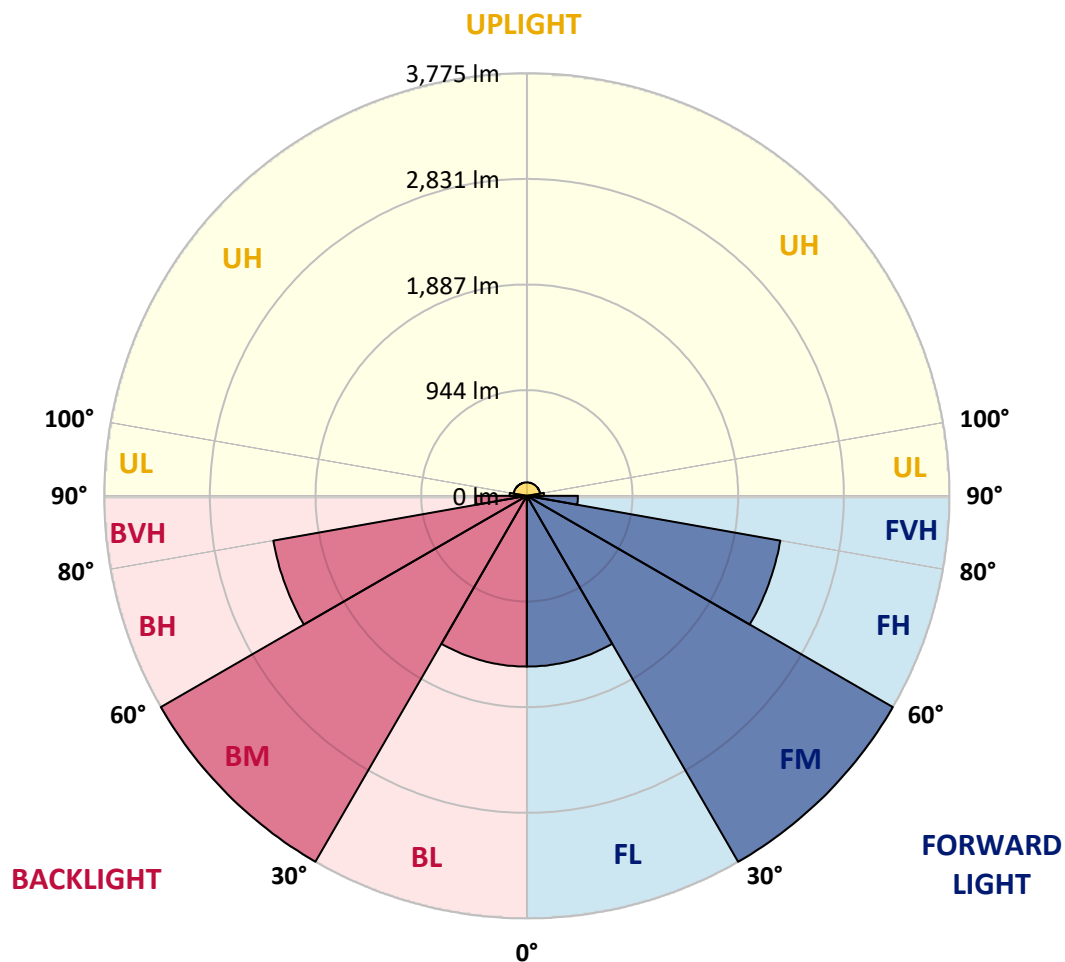
CATALOG NUMBER: CLCS30S-PC-3000K-100%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1525.5	9.3			
FM	(30°-60°)	3774.9	23.0			
FH	(60°-80°)	2299.8	14.0			G2/5000
FVH	(80°-90°)	456.6	2.8			G3/500
BL	(0°-30°)	1525.5	9.3	B3/2500		
BM	(30°-60°)	3774.9	23.0	B3/5000		
BH	(60°-80°)	2299.8	14.0	B3/2500		G2/5000
BVH	(80°-90°)	456.6	2.8			G3/500
UL	(90°-100°)	153.4	0.9		U3/500	
UH	(100°-180°)	119.7	0.7		U3/500	

BUG Rating: B3-U3-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8	3620.8
2.5°	3559.7	3566.6	3573.5	3548.8	3538.0	3542.9	3529.1	3540.0	3548.8	3543.9	3543.9
5°	3553.8	3558.7	3552.8	3501.5	3466.0	3437.4	3414.7	3423.6	3418.6	3432.5	3436.4
7.5°	3465.0	3481.8	3513.3	3470.9	3415.7	3378.2	3369.3	3356.5	3312.1	3296.3	3286.5
10°	3462.0	3471.9	3505.4	3447.2	3398.9	3396.0	3338.8	3304.2	3287.5	3268.7	3255.9
12.5°	3549.8	3539.0	3496.6	3516.3	3509.4	3432.5	3411.7	3356.5	3342.7	3335.8	3319.0
15°	3546.9	3583.4	3605.1	3557.7	3512.3	3545.9	3564.6	3517.3	3489.7	3441.3	3433.4
17.5°	3631.7	3668.2	3611.0	3640.6	3605.1	3617.9	3596.2	3578.4	3571.5	3561.7	3562.6
20°	3771.8	3733.3	3685.0	3660.3	3597.2	3614.9	3652.4	3640.6	3630.7	3649.4	3637.6
22.5°	3756.0	3740.2	3672.1	3704.7	3594.2	3621.8	3652.4	3692.8	3662.3	3630.7	3605.1
25°	3809.2	3767.8	3761.9	3742.2	3673.1	3665.2	3700.7	3694.8	3700.7	3734.3	3717.5
27.5°	3875.3	3815.2	3828.0	3783.6	3700.7	3710.6	3735.3	3749.1	3757.9	3775.7	3734.3
30°	3831.9	3792.5	3798.4	3751.0	3727.4	3802.3	3674.1	3772.7	3742.2	3736.2	3747.1
32.5°	3774.7	3735.3	3748.1	3675.1	3727.4	3729.3	3667.2	3704.7	3675.1	3706.7	3690.9
35°	3667.2	3586.3	3650.4	3577.4	3661.3	3627.7	3627.7	3592.2	3558.7	3571.5	3535.0
37.5°	3546.9	3468.9	3545.9	3482.8	3541.9	3530.1	3540.0	3473.9	3469.9	3473.9	3465.0
40°	3487.7	3415.7	3464.0	3454.2	3458.1	3474.9	3421.6	3426.5	3397.9	3406.8	3372.3
42.5°	3383.1	3328.9	3406.8	3407.8	3454.2	3458.1	3410.8	3378.2	3373.3	3309.2	3319.0
45°	3342.7	3280.6	3320.0	3353.5	3395.0	3470.9	3391.0	3367.4	3316.1	3263.8	3245.0
47.5°	3268.7	3249.0	3264.8	3319.0	3355.5	3402.9	3375.2	3283.5	3223.3	3209.5	3205.6
50°	3158.3	3153.3	3180.9	3203.6	3230.3	3318.0	3284.5	3220.4	3153.3	3130.6	3143.5
52.5°	3075.4	3063.6	3056.7	3163.2	3144.4	3164.2	3206.6	3143.5	3094.1	3014.2	3051.7
55°	2979.7	2990.6	2973.8	3064.5	3085.3	3110.9	3082.3	3044.8	2976.8	2912.7	2924.5
57.5°	2844.6	2880.1	2908.7	2912.7	2997.5	3030.0	2998.5	2922.5	2825.9	2833.7	2834.7
60°	2693.7	2747.9	2764.7	2800.2	2878.1	2869.3	2891.9	2780.5	2744.0	2748.9	2747.9
62.5°	2610.8	2626.6	2643.4	2688.8	2738.1	2733.1	2757.8	2696.6	2645.4	2634.5	2648.3
65°	2515.2	2542.8	2534.9	2569.4	2576.3	2585.2	2620.7	2625.6	2553.6	2506.3	2477.7
67.5°	2384.0	2419.5	2447.1	2454.0	2469.8	2485.6	2462.9	2501.4	2402.7	2368.2	2367.2
70°	2324.8	2345.5	2349.5	2337.6	2322.8	2369.2	2332.7	2341.6	2336.6	2311.0	2293.2
72.5°	2215.3	2239.0	2251.8	2207.4	2184.7	2195.6	2216.3	2198.5	2222.2	2181.8	2157.1
75°	1972.7	1990.4	2018.0	2041.7	2011.1	2030.9	2024.9	1992.4	1976.6	1877.0	1864.2
77.5°	1641.3	1655.1	1715.2	1752.7	1765.5	1766.5	1720.2	1690.6	1658.0	1596.9	1591.0
80°	1338.5	1361.1	1394.7	1421.3	1471.6	1477.5	1465.7	1433.1	1399.6	1350.3	1343.4
82.5°	1068.2	1074.1	1125.4	1147.1	1153.0	1173.7	1159.9	1144.2	1090.9	1052.4	1032.7
85°	777.2	785.1	797.9	839.4	888.7	916.3	848.2	810.8	758.5	730.9	726.9
87.5°	548.4	542.5	549.4	565.2	590.8	599.7	560.2	524.7	516.8	499.1	496.1
90°	267.3	268.3	286.0	312.7	328.5	347.2	323.5	296.9	288.0	267.3	265.3
92.5°	149.9	149.9	148.9	160.8	168.7	172.6	169.6	159.8	148.0	139.1	137.1
95°	111.5	112.4	110.5	108.5	104.6	97.6	105.5	109.5	110.5	109.5	107.5
97.5°	111.5	110.5	105.5	93.7	77.9	70.0	80.9	101.6	112.4	118.4	116.4
100°	119.3	119.3	106.5	93.7	71.0	70.0	74.0	97.6	117.4	132.2	130.2
102.5°	134.1	133.2	116.4	102.6	72.0	48.3	78.9	113.4	131.2	148.0	147.0
105°	131.2	125.3	106.5	75.9	38.5	28.6	44.4	81.9	107.5	127.2	129.2
107.5°	83.8	82.9	64.1	37.5	28.6	27.6	30.6	42.4	62.1	74.0	75.0
110°	48.3	47.3	41.4	33.5	27.6	22.7	28.6	35.5	43.4	48.3	48.3



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CATALOG NUMBER: CLCS30S-PC-3000K-100%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	46.4	45.4	39.5	30.6	21.7	14.8	22.7	33.5	41.4	46.4	46.4
115°	40.4	39.5	34.5	24.7	15.8	10.8	16.8	27.6	35.5	42.4	43.4
117.5°	36.5	34.5	26.6	17.8	10.8	7.9	11.8	19.7	30.6	36.5	37.5
120°	26.6	25.6	19.7	13.8	7.9	5.9	8.9	14.8	22.7	30.6	30.6
122.5°	20.7	19.7	15.8	9.9	4.9	3.9	5.9	11.8	17.8	23.7	23.7
125°	16.8	15.8	11.8	7.9	3.9	2.0	4.9	8.9	14.8	19.7	19.7
127.5°	12.8	12.8	9.9	5.9	3.0	1.0	3.0	6.9	11.8	14.8	14.8
130°	9.9	9.9	7.9	4.9	2.0	1.0	2.0	4.9	7.9	9.9	10.8
132.5°	8.9	8.9	6.9	3.0	1.0	1.0	1.0	3.9	6.9	8.9	8.9
135°	5.9	4.9	2.0	1.0	1.0	1.0	1.0	1.0	3.9	6.9	6.9
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
140°	1.0	1.0	1.0	1.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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

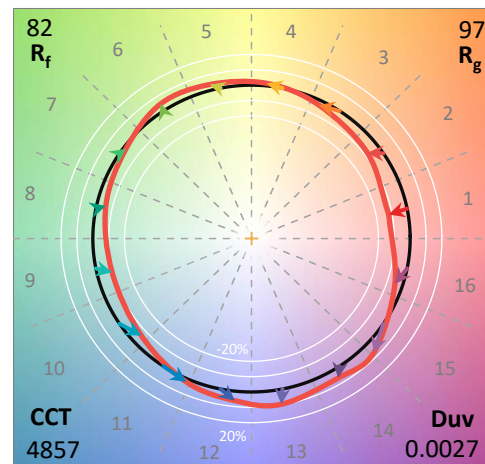
Test Information

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

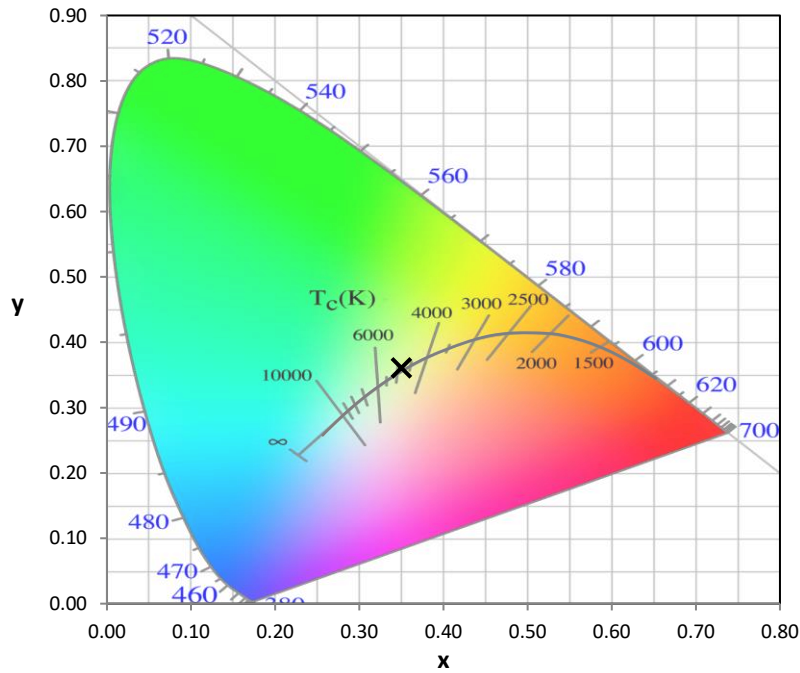
Stabilization Time: 72M
 Operation Time: 2H 12M
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2405-118-3

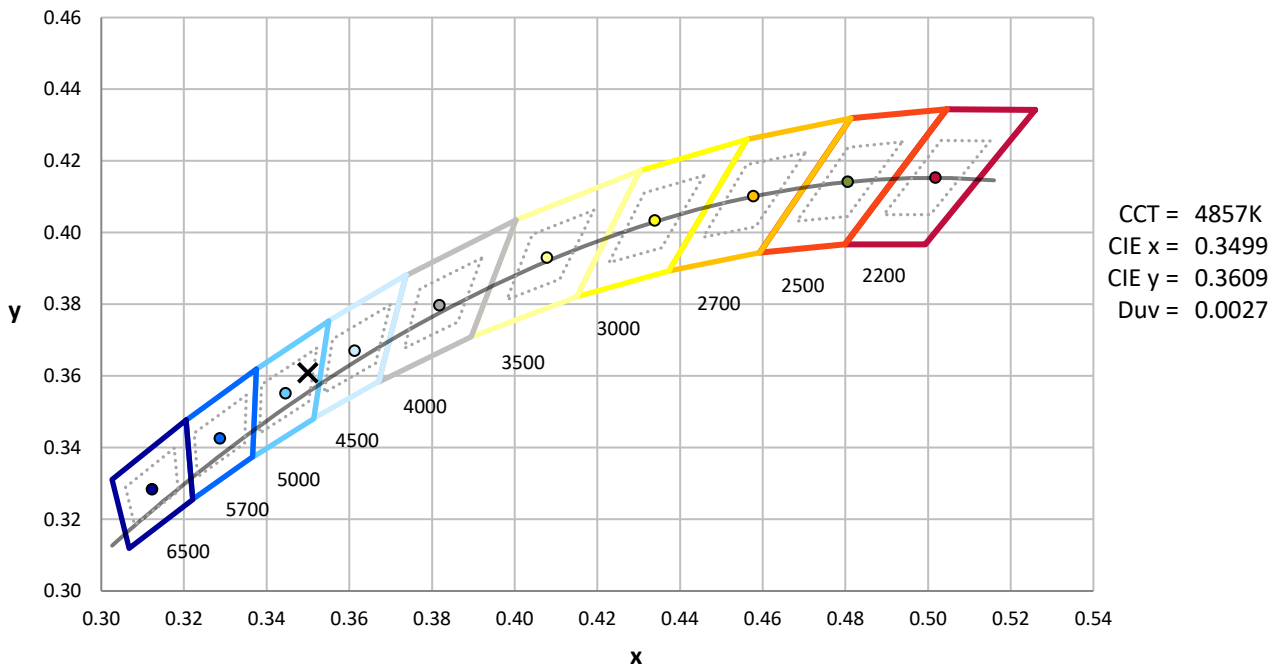
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



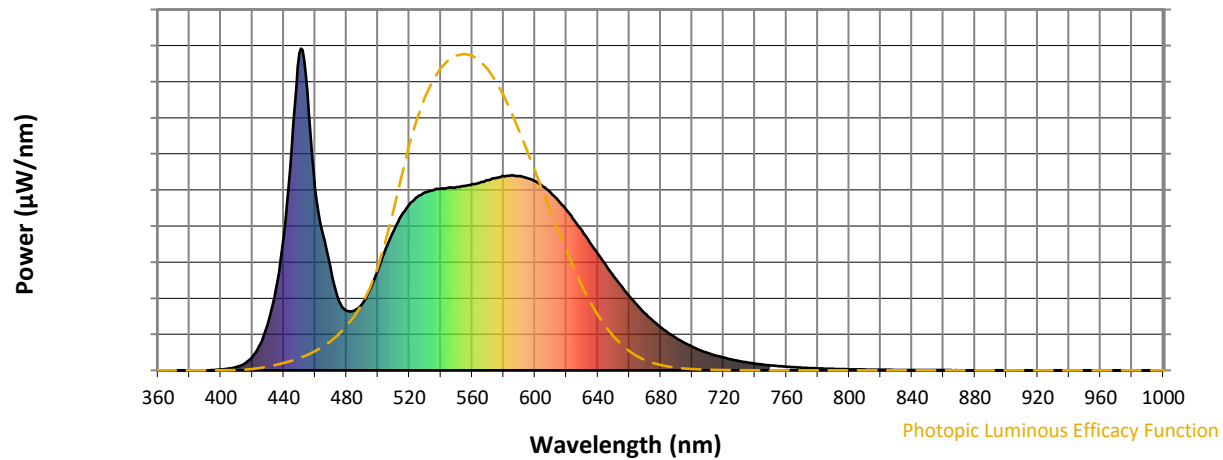
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

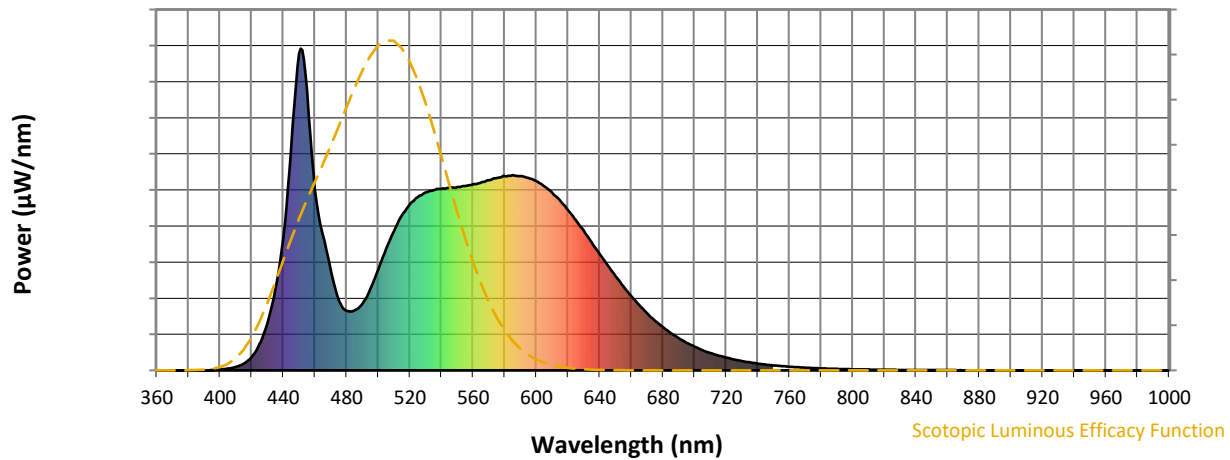


Photopic Lumens: NR

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



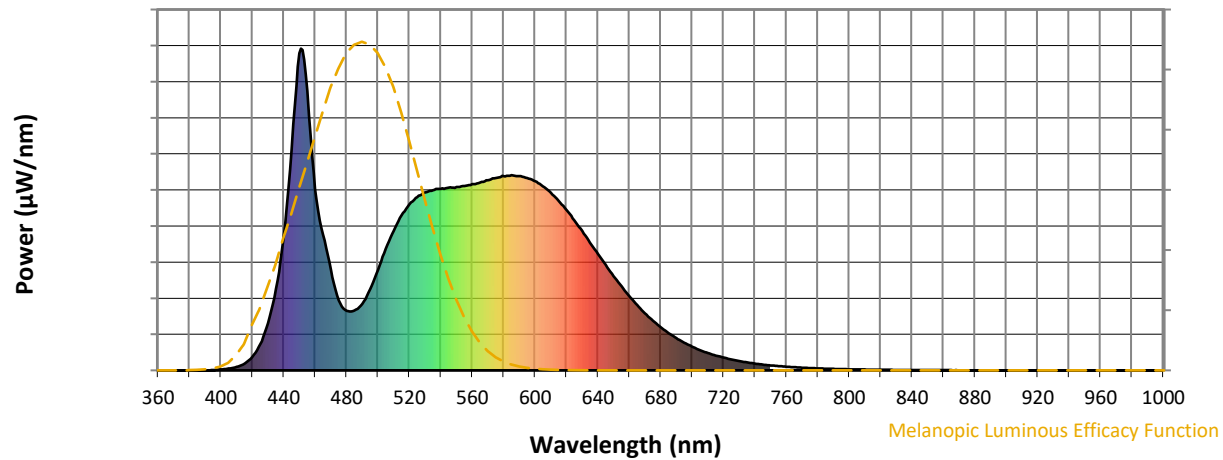
Scotopic Lumens: NR

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

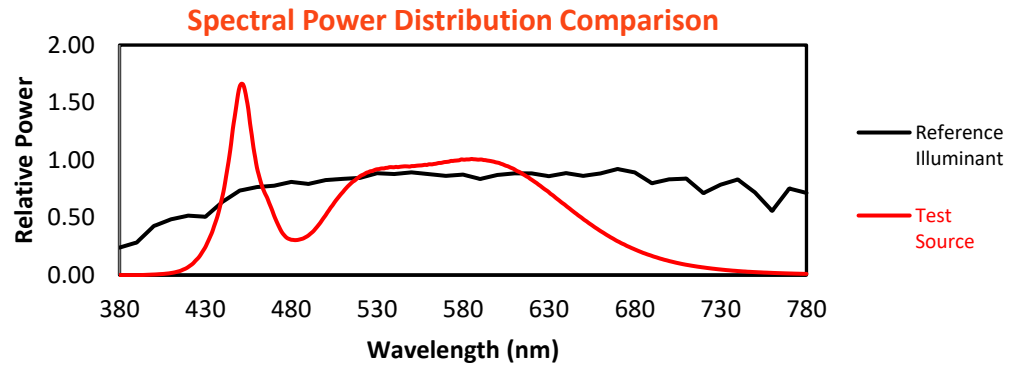
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	207	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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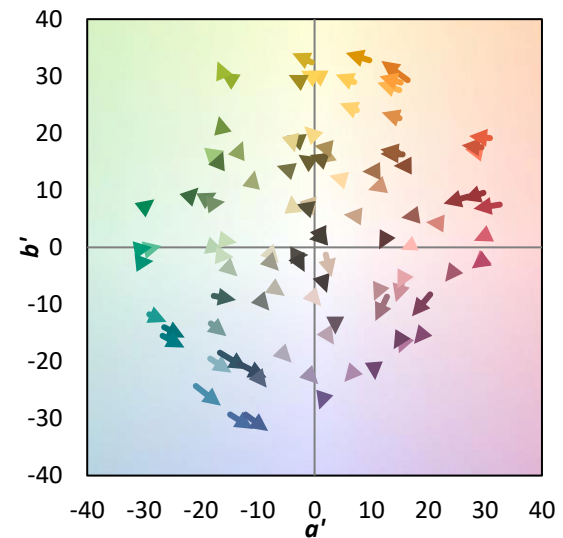
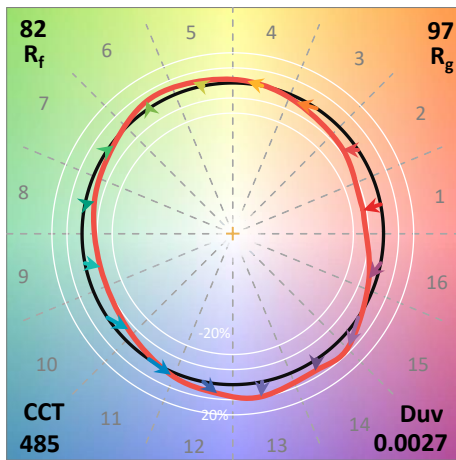
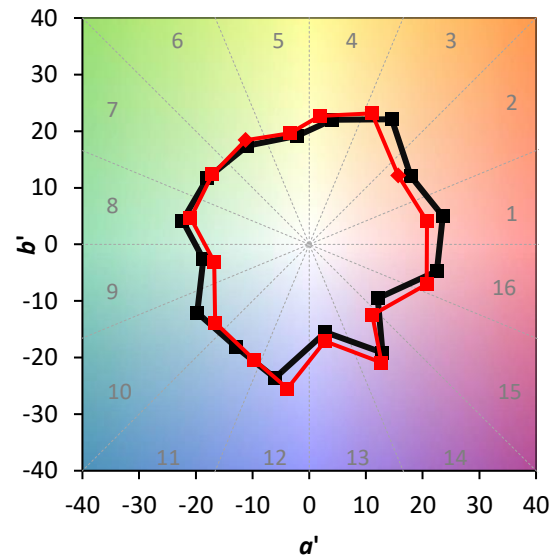
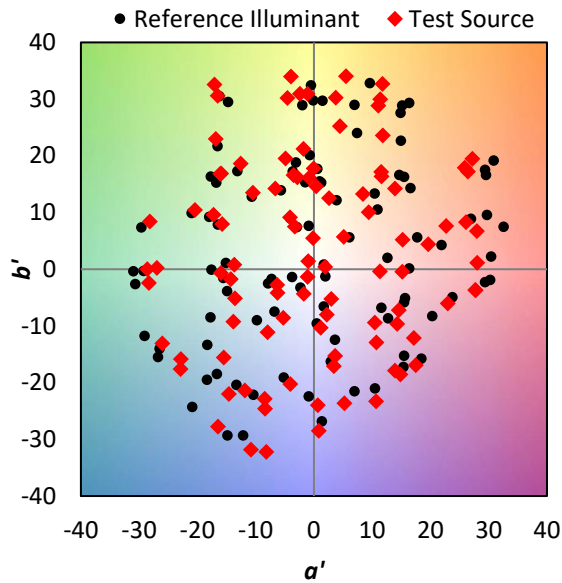
TM-30-18

Summary

$R_f = 82.4$
 $R_g = 96.8$
 $CIE R_a = 81.9$
 $R_9 = 8.5$

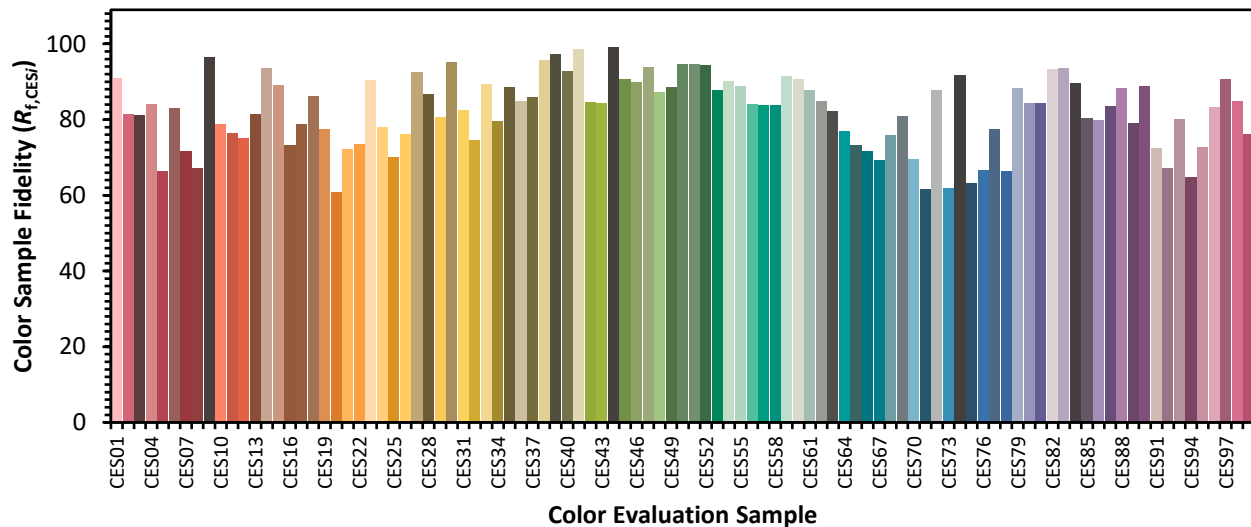


Color Vector Graphics

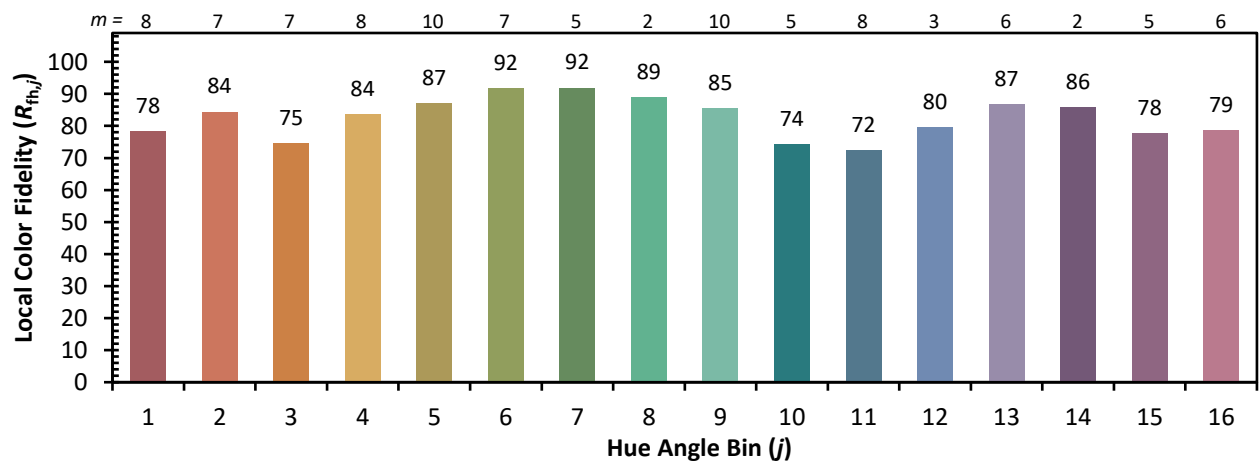
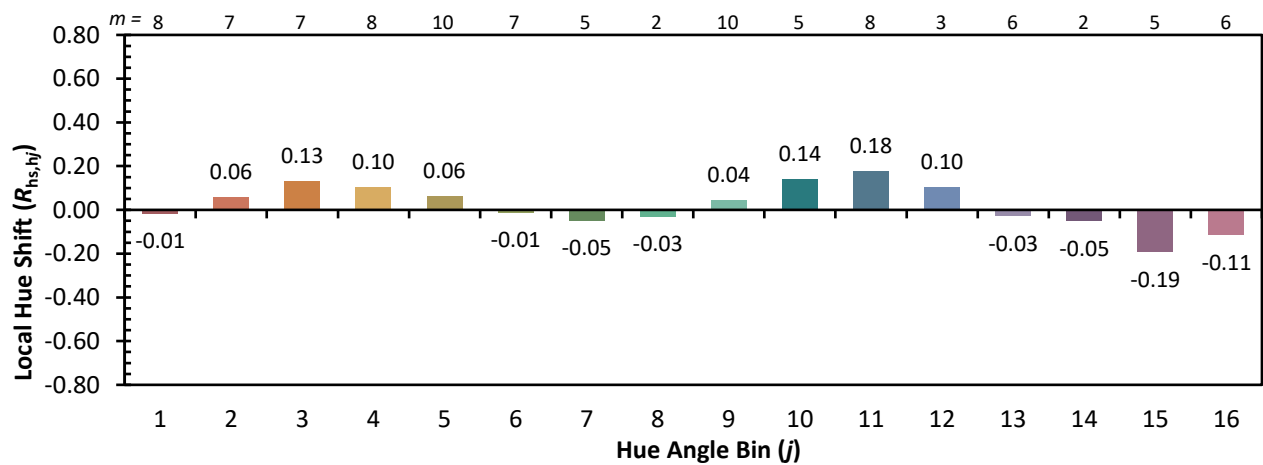
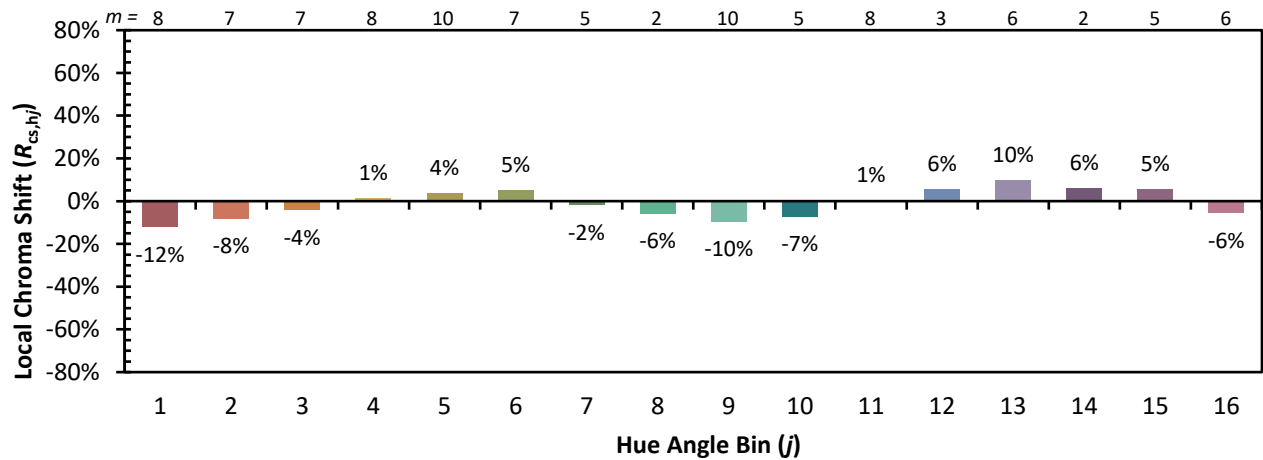


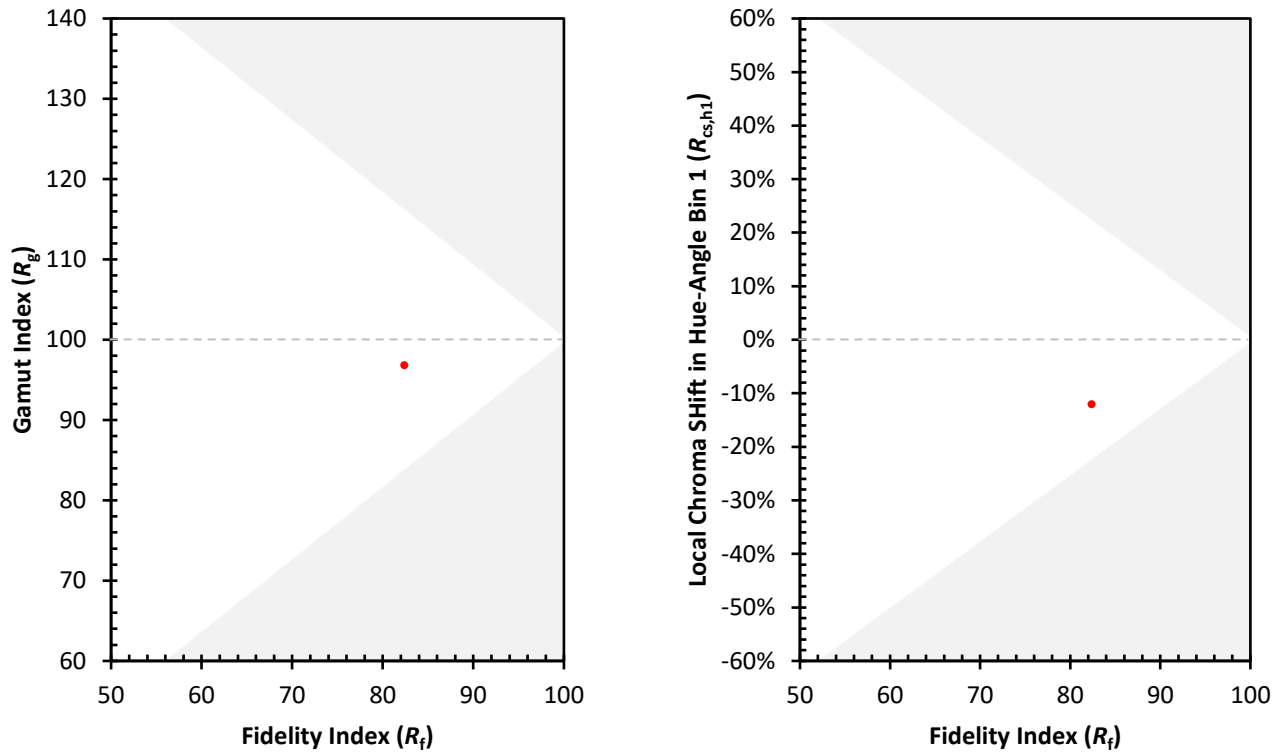
Individual Sample Fidelity Index ($R_{f,i}$)

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)