

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: P895753

Luminaire Tested: **CLCS30S-PC-5000K-100%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895753
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS30S-PC-5000K-100%
Description: LUMARK LARGE LED CANOPY 16000LM, 120W, PC 80 CRI 5000K FIXTURE @
100% OUTPUT
Light Source: 5000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17156.9 lumens
Efficiency: N/A
Efficacy: 139.5 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): 123
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

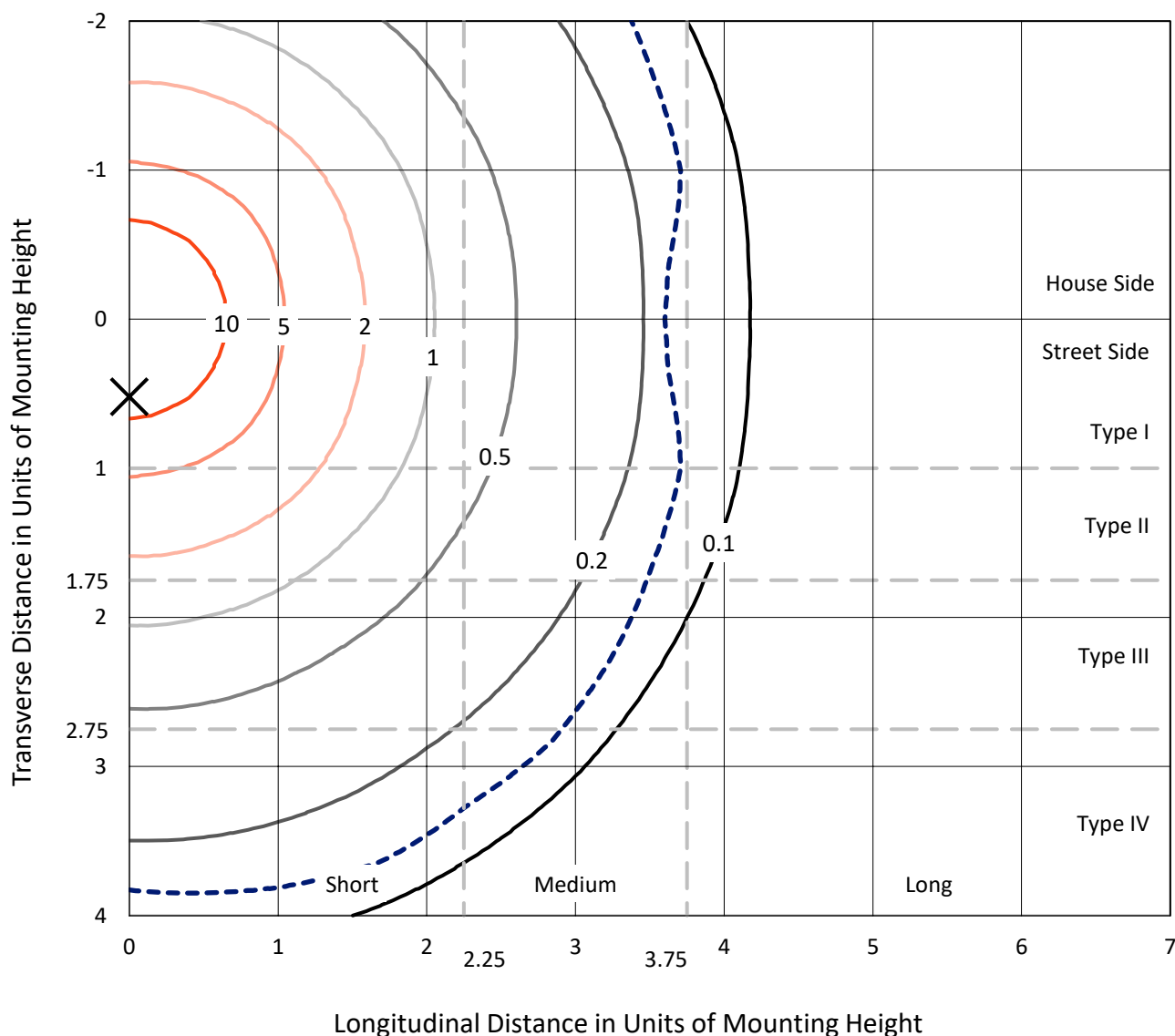
REPORT NUMBER: P895753

CATALOG NUMBER: CLCS30S-PC-5000K-100%

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

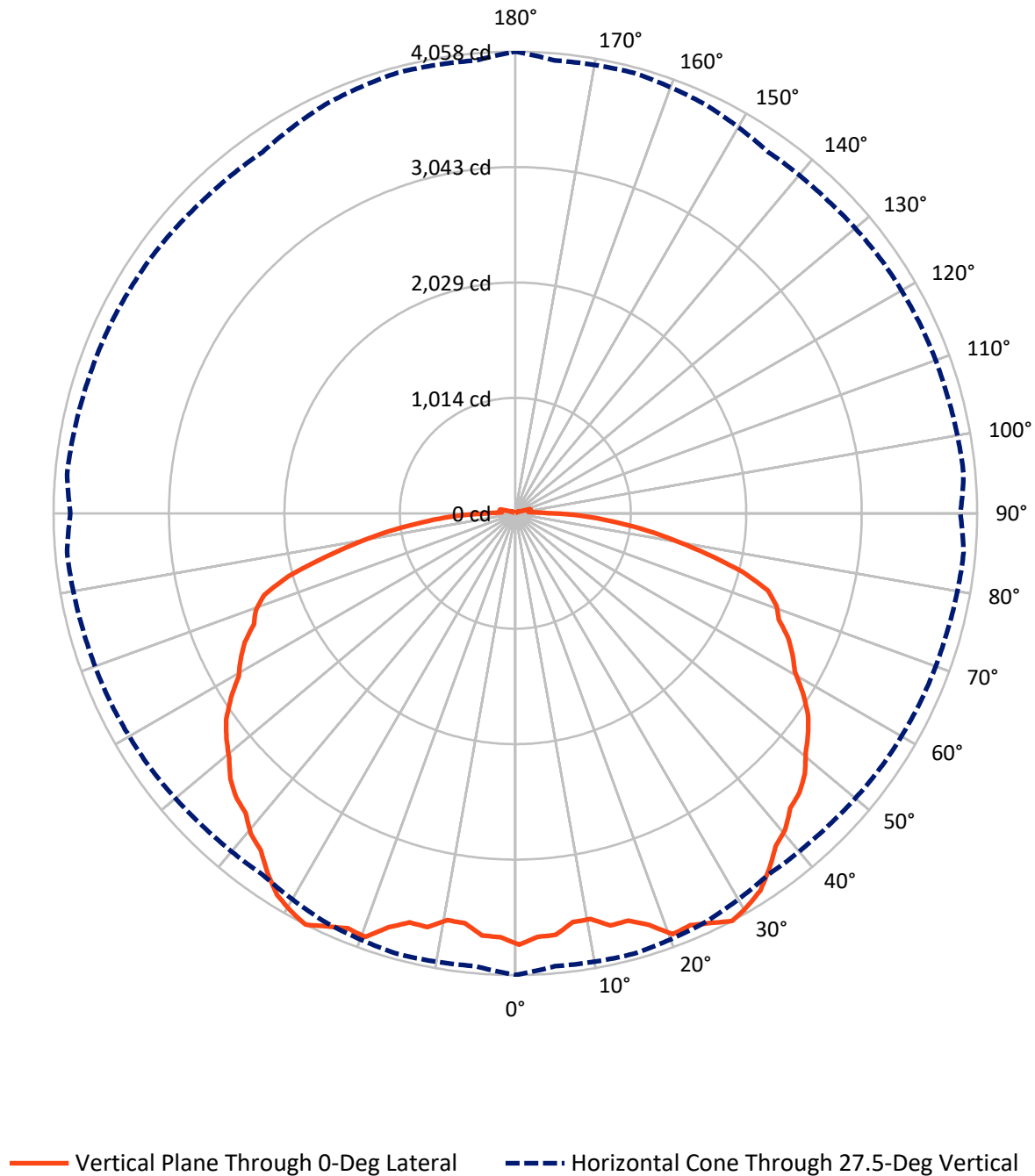


Based on 15 foot mounting height. Maximum calculated value = 16.8 fc

Type V - Short - N/A

REPORT NUMBER: P895753
CATALOG NUMBER: CLCS30S-PC-5000K-100%

Luminous Intensity Polar Plot



REPORT NUMBER: P895753

CATALOG NUMBER: CLCS30S-PC-5000K-100%

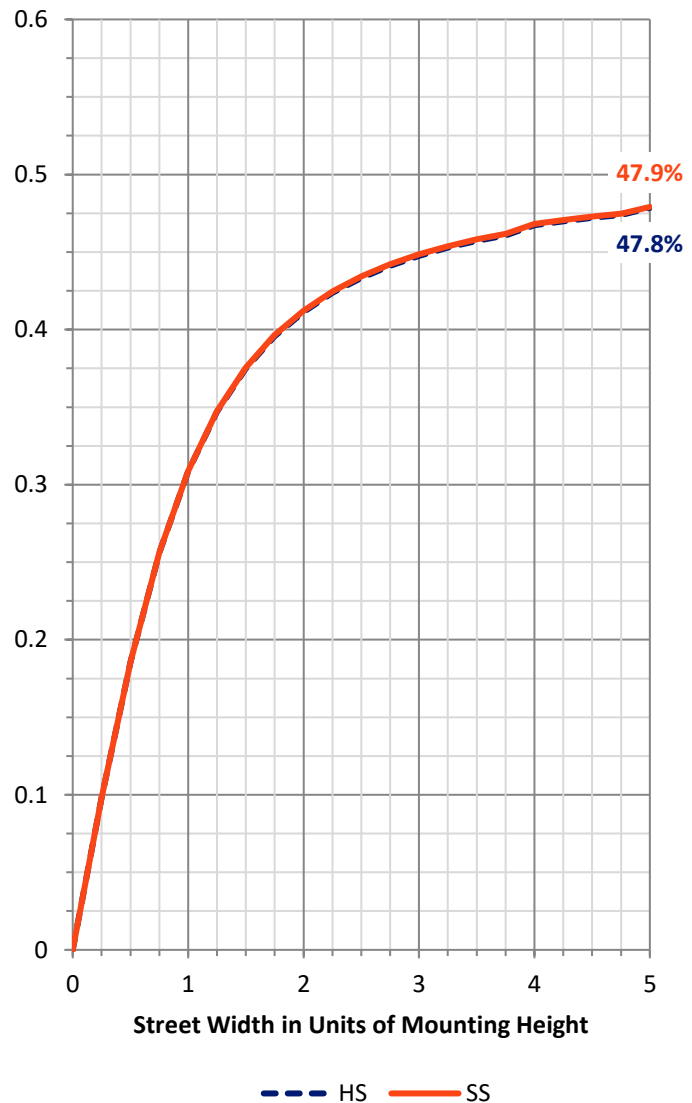
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8435.5	143.0	8578.4
	% Fixture	49.2	0.8	50.0
Street Side	Lumens	8435.5	143.0	8578.4
	% Fixture	49.2	0.8	50.0
Total	Lumens	16870.9	286.0	17156.9
	% Fixture	98.3	1.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.5	2.0
10°-20°	1050.1	6.1
20°-30°	1800.7	10.5
30°-40°	2366.1	13.8
40°-50°	2707.3	15.8
50°-60°	2831.4	16.5
60°-70°	2664.1	15.5
70°-80°	2151.7	12.5
80°-90°	956.1	5.6
90°-100°	160.6	0.9
100°-110°	84.5	0.5
110°-120°	28.5	0.2
120°-130°	9.8	0.1
130°-140°	2.4	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°	16870.9	98.3
0°-180°	17156.9	100.0



REPORT NUMBER: P895753

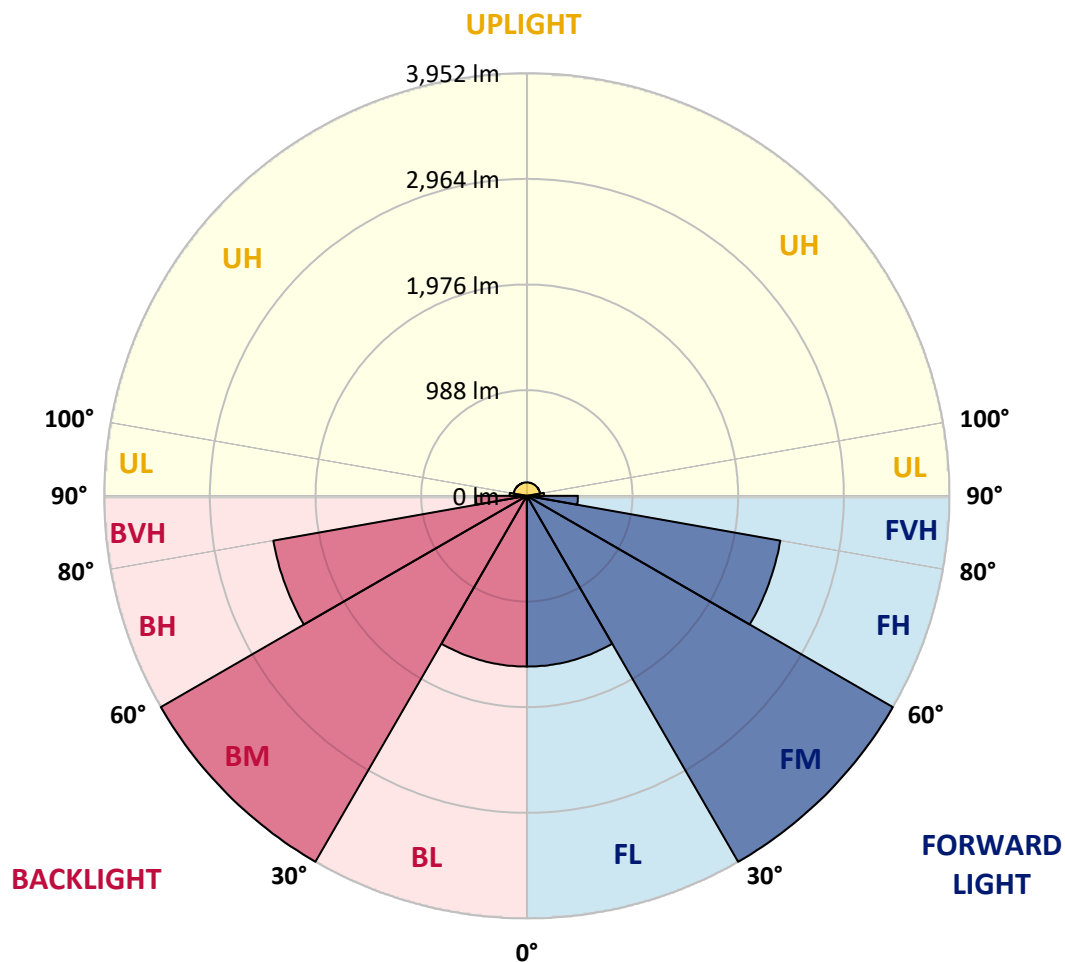
CATALOG NUMBER: CLCS30S-PC-5000K-100%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1597.2	9.3			
FM	(30°-60°)	3952.4	23.0			
FH	(60°-80°)	2407.9	14.0			G2/5000
FVH	(80°-90°)	478.0	2.8			G3/500
BL	(0°-30°)	1597.2	9.3	B3/2500		
BM	(30°-60°)	3952.4	23.0	B3/5000		
BH	(60°-80°)	2407.9	14.0	B3/2500		G2/5000
BVH	(80°-90°)	478.0	2.8			G3/500
UL	(90°-100°)	160.6	0.9		U3/500	
UH	(100°-180°)	125.4	0.7		U3/500	

BUG Rating: B3-U3-G3

Type V Short



REPORT NUMBER: P895753

CATALOG NUMBER: CLCS30S-PC-5000K-100%

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0	3791.0
2.5°	3727.0	3734.2	3741.5	3715.6	3704.3	3709.4	3695.0	3706.3	3715.6	3710.5	3710.5
5°	3720.8	3726.0	3719.8	3666.1	3628.9	3598.9	3575.2	3584.5	3579.3	3593.8	3597.9
7.5°	3627.9	3645.4	3678.5	3634.1	3576.2	3537.0	3527.7	3514.3	3467.8	3451.3	3440.9
10°	3624.8	3635.1	3670.2	3609.3	3558.7	3555.6	3495.7	3459.5	3442.0	3422.4	3408.9
12.5°	3716.7	3705.3	3660.9	3681.6	3674.3	3593.8	3572.1	3514.3	3499.8	3492.6	3475.0
15°	3713.6	3751.8	3774.5	3724.9	3677.4	3712.5	3732.2	3682.6	3653.7	3603.1	3594.8
17.5°	3802.4	3840.6	3780.7	3811.7	3774.5	3787.9	3765.2	3746.6	3739.4	3729.1	3730.1
20°	3949.0	3908.7	3858.1	3832.3	3766.2	3784.8	3824.1	3811.7	3801.3	3821.0	3808.6
22.5°	3932.5	3916.0	3844.7	3878.8	3763.1	3792.1	3824.1	3866.4	3834.4	3801.3	3774.5
25°	3988.3	3944.9	3938.7	3918.0	3845.8	3837.5	3874.7	3868.5	3874.7	3909.8	3892.2
27.5°	4057.5	3994.5	4007.9	3961.4	3874.7	3885.0	3910.8	3925.3	3934.6	3953.2	3909.8
30°	4012.0	3970.7	3976.9	3927.3	3902.6	3981.0	3846.8	3950.1	3918.0	3911.8	3923.2
32.5°	3952.1	3910.8	3924.2	3847.8	3902.6	3904.6	3839.6	3878.8	3847.8	3880.9	3864.3
35°	3839.6	3754.9	3822.0	3745.6	3833.4	3798.3	3798.3	3761.1	3726.0	3739.4	3701.2
37.5°	3713.6	3632.0	3712.5	3646.4	3708.4	3696.0	3706.3	3637.2	3633.0	3637.2	3627.9
40°	3651.6	3576.2	3626.8	3616.5	3620.6	3638.2	3582.4	3587.6	3557.6	3566.9	3530.8
42.5°	3542.1	3485.3	3566.9	3568.0	3616.5	3620.6	3571.1	3537.0	3531.8	3464.7	3475.0
45°	3499.8	3434.7	3476.1	3511.2	3554.5	3634.1	3550.4	3525.6	3471.9	3417.2	3397.6
47.5°	3422.4	3401.7	3418.2	3475.0	3513.2	3562.8	3533.9	3437.8	3374.8	3360.4	3356.3
50°	3306.7	3301.5	3330.4	3354.2	3382.1	3474.0	3438.9	3371.7	3301.5	3277.8	3291.2
52.5°	3219.9	3207.5	3200.3	3311.9	3292.2	3312.9	3357.3	3291.2	3239.6	3155.9	3195.2
55°	3119.8	3131.1	3113.6	3208.6	3230.3	3257.1	3227.2	3187.9	3116.7	3049.5	3061.9
57.5°	2978.3	3015.5	3045.4	3049.5	3138.4	3172.4	3139.4	3059.9	2958.7	2966.9	2968.0
60°	2820.3	2877.1	2894.6	2931.8	3013.4	3004.1	3027.9	2911.2	2873.0	2878.1	2877.1
62.5°	2733.5	2750.1	2767.6	2815.1	2866.8	2861.6	2887.4	2823.4	2769.7	2758.3	2772.8
65°	2633.4	2662.3	2654.0	2690.2	2697.4	2706.7	2743.9	2749.0	2673.6	2624.1	2594.1
67.5°	2496.0	2533.2	2562.1	2569.3	2585.9	2602.4	2578.6	2618.9	2515.6	2479.5	2478.5
70°	2434.1	2455.7	2459.9	2447.5	2432.0	2480.5	2442.3	2451.6	2446.5	2419.6	2401.0
72.5°	2319.4	2344.2	2357.6	2311.2	2287.4	2298.8	2320.5	2301.9	2326.7	2284.3	2258.5
75°	2065.4	2084.0	2112.9	2137.7	2105.7	2126.3	2120.1	2086.0	2069.5	1965.2	1951.8
77.5°	1718.4	1732.9	1795.9	1835.1	1848.5	1849.6	1801.0	1770.0	1736.0	1671.9	1665.7
80°	1401.4	1425.1	1460.2	1488.1	1540.8	1547.0	1534.6	1500.5	1465.4	1413.8	1406.5
82.5°	1118.4	1124.6	1178.3	1201.0	1207.2	1228.9	1214.4	1197.9	1142.2	1101.9	1081.2
85°	813.8	822.0	835.4	878.8	930.5	959.4	888.1	848.9	794.1	765.2	761.1
87.5°	574.2	568.0	575.2	591.7	618.6	627.9	586.6	549.4	541.1	522.5	519.4
90°	279.9	280.9	299.5	327.4	343.9	363.5	338.7	310.8	301.5	279.9	277.8
92.5°	157.0	157.0	155.9	168.3	176.6	180.7	177.6	167.3	154.9	145.6	143.5
95°	116.7	117.7	115.7	113.6	109.5	102.2	110.5	114.6	115.7	114.6	112.6
97.5°	116.7	115.7	110.5	98.1	81.6	73.3	84.7	106.4	117.7	123.9	121.9
100°	125.0	125.0	111.5	98.1	74.4	73.3	77.5	102.2	122.9	138.4	136.3
102.5°	140.4	139.4	121.9	107.4	75.4	50.6	82.6	118.8	137.3	154.9	153.9
105°	137.3	131.2	111.5	79.5	40.3	29.9	46.5	85.7	112.6	133.2	135.3
107.5°	87.8	86.7	67.1	39.2	29.9	28.9	32.0	44.4	65.1	77.5	78.5
110°	50.6	49.6	43.4	35.1	28.9	23.8	29.9	37.2	45.4	50.6	50.6



REPORT NUMBER: P895753

CATALOG NUMBER: CLCS30S-PC-5000K-100%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	48.5	47.5	41.3	32.0	22.7	15.5	23.8	35.1	43.4	48.5	48.5
115°	42.3	41.3	36.1	25.8	16.5	11.4	17.6	28.9	37.2	44.4	45.4
117.5°	38.2	36.1	27.9	18.6	11.4	8.3	12.4	20.7	32.0	38.2	39.2
120°	27.9	26.9	20.7	14.5	8.3	6.2	9.3	15.5	23.8	32.0	32.0
122.5°	21.7	20.7	16.5	10.3	5.2	4.1	6.2	12.4	18.6	24.8	24.8
125°	17.6	16.5	12.4	8.3	4.1	2.1	5.2	9.3	15.5	20.7	20.7
127.5°	13.4	13.4	10.3	6.2	3.1	1.0	3.1	7.2	12.4	15.5	15.5
130°	10.3	10.3	8.3	5.2	2.1	1.0	2.1	5.2	8.3	10.3	11.4
132.5°	9.3	9.3	7.2	3.1	1.0	1.0	1.0	4.1	7.2	9.3	9.3
135°	6.2	5.2	2.1	1.0	1.0	1.0	1.0	1.0	4.1	7.2	7.2
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	1.0	1.0	1.0	1.0
140°	1.0	1.0	1.0	1.0	2.1	2.1	2.1	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: SP1-2405-118-2

Test Date: 07/17/2024

Luminaire Tested: CLCS40S-4000K-HIGH

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

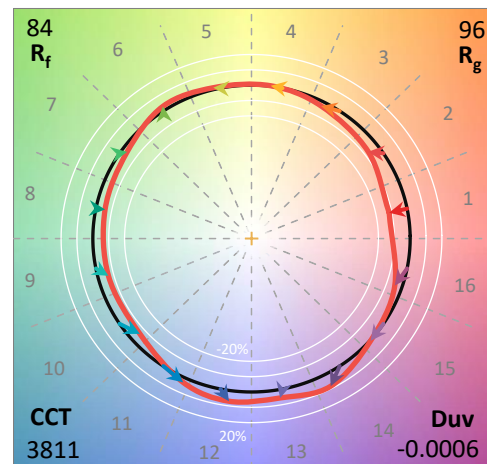
Test Information

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

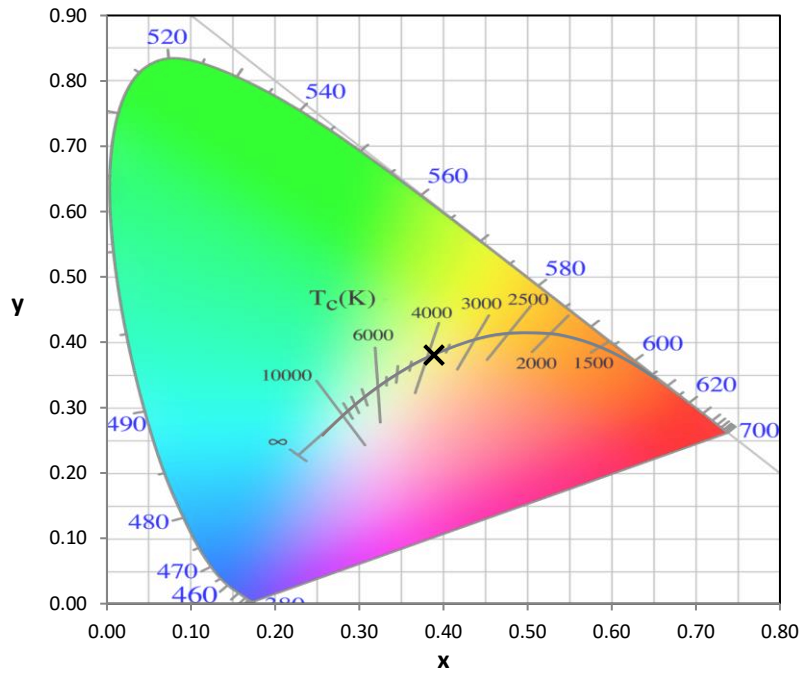
Stabilization Time: 27M
 Operation Time: 1H 27M
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2405-118-2

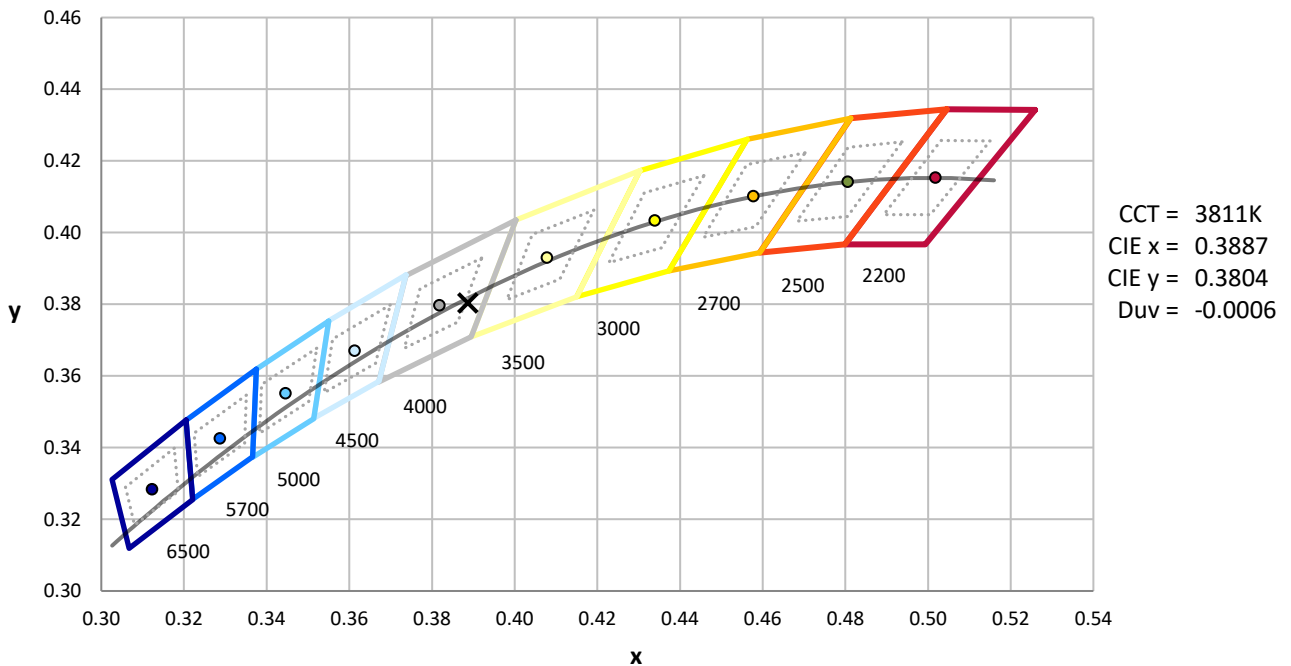
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2405-118-2

CIE 1931 Chromaticity Diagram



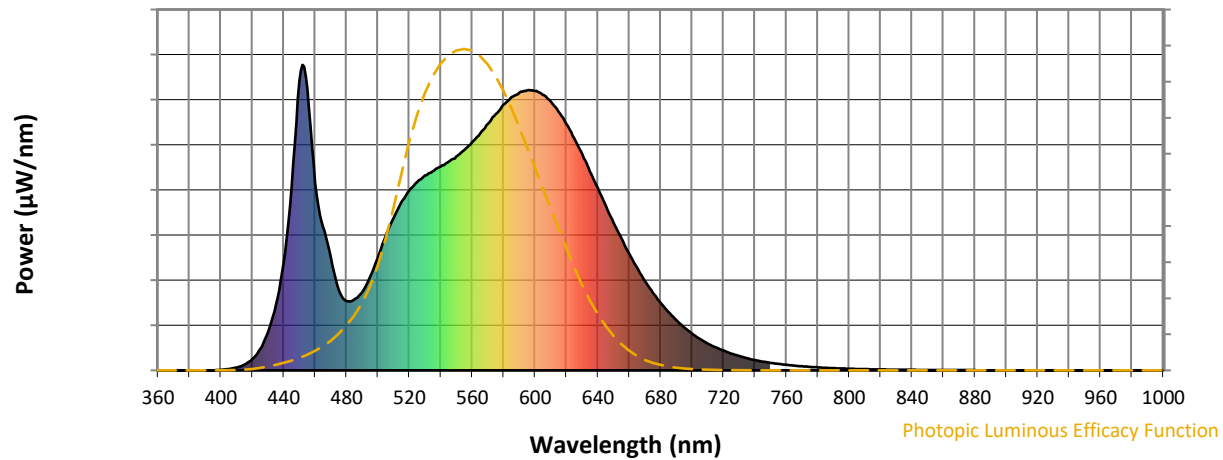
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2405-118-2

Photopic Flux vs. Wavelength

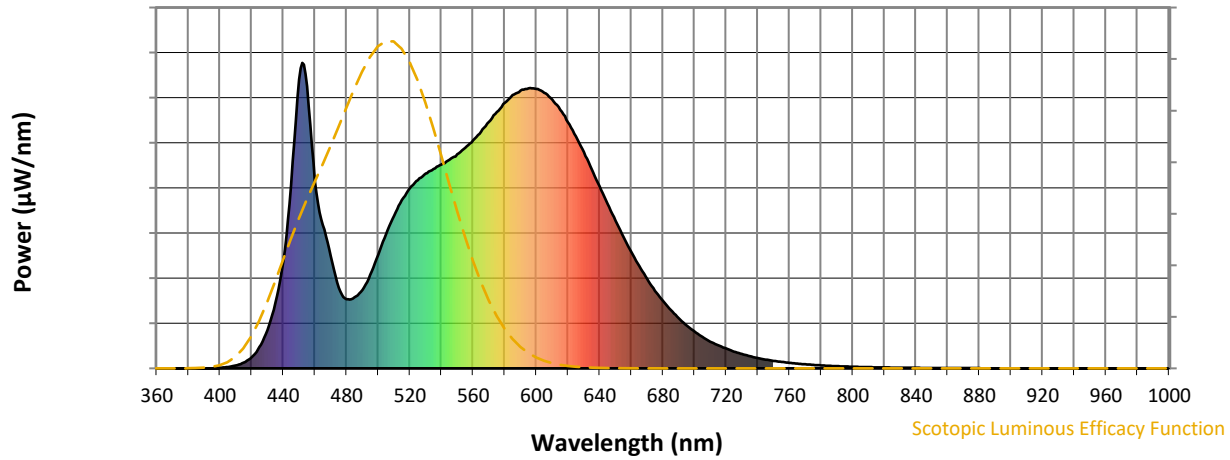


Photopic Lumens: NR

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	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



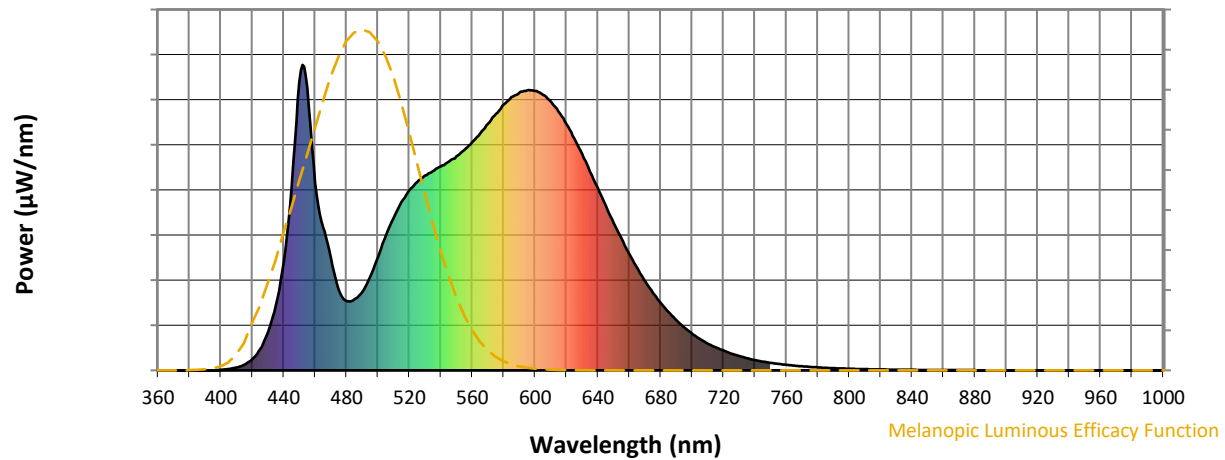
Scotopic Lumens: NR

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			

REPORT NUMBER: SP1-2405-118-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.3

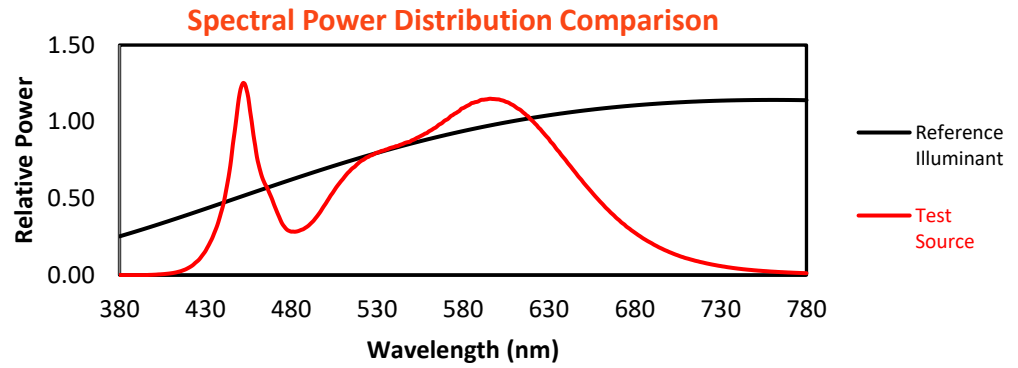
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	257	NR	620	806	NR	750	25	NR	880	1	NR
365	0	NR	495	306	NR	625	760	NR	755	21	NR	885	1	NR
370	0	NR	500	371	NR	630	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			

REPORT NUMBER: SP1-2405-118-2

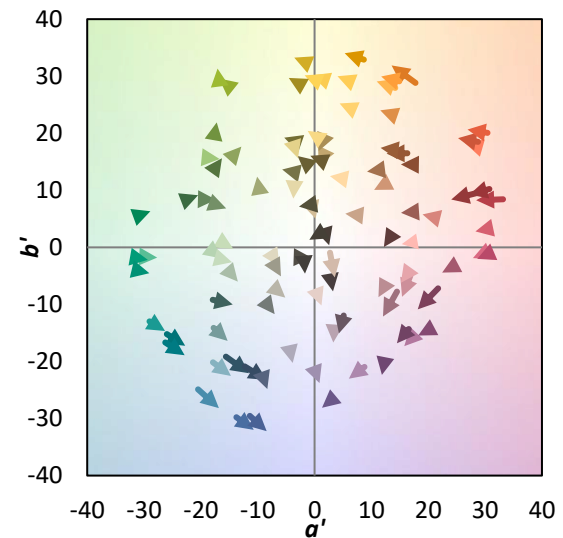
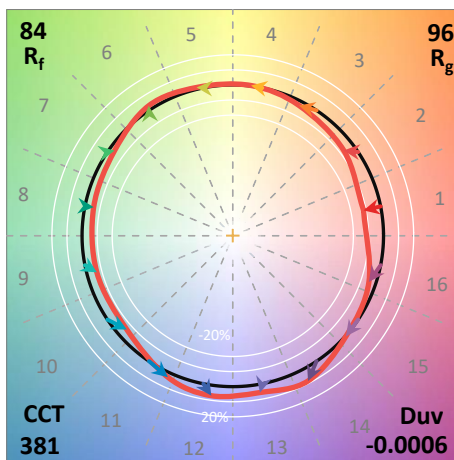
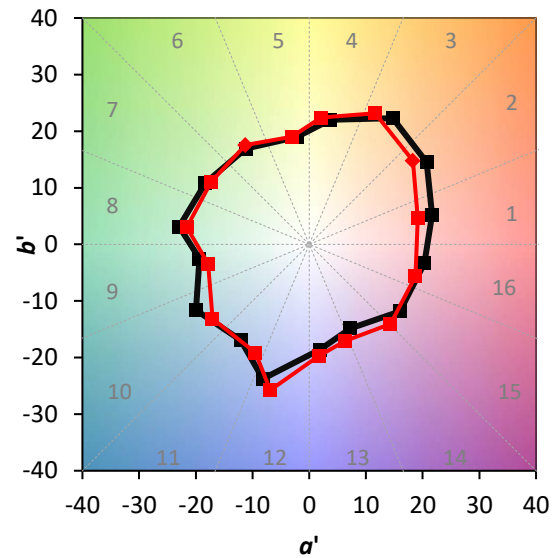
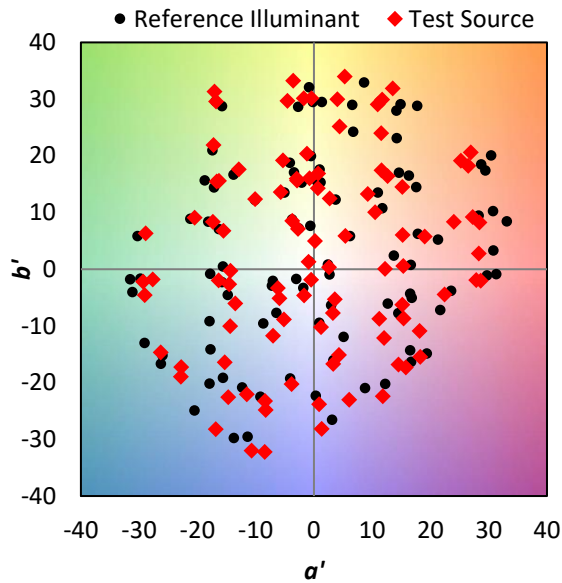
TM-30-18

Summary

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

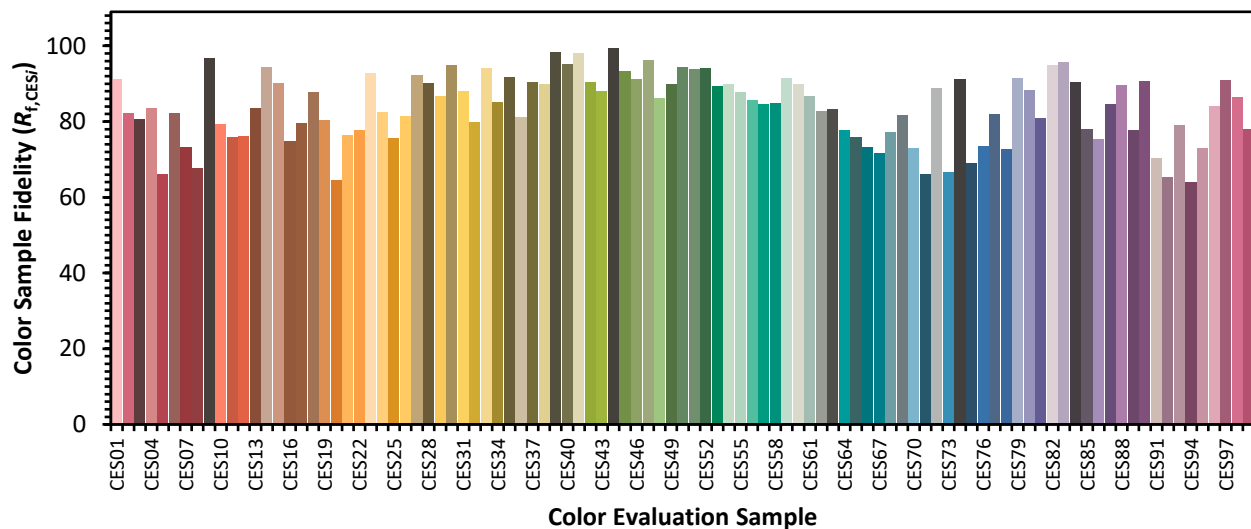


Color Vector Graphics

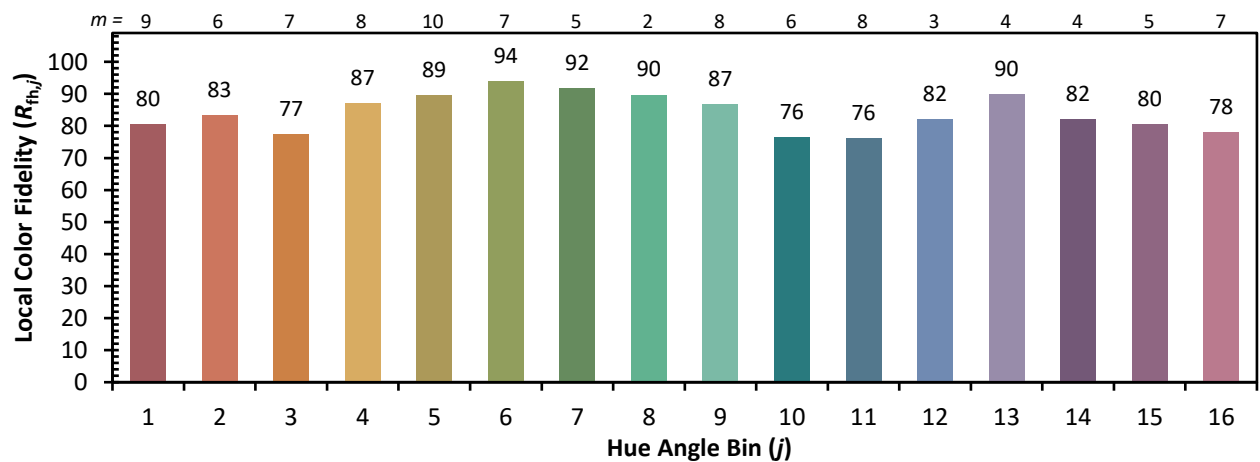
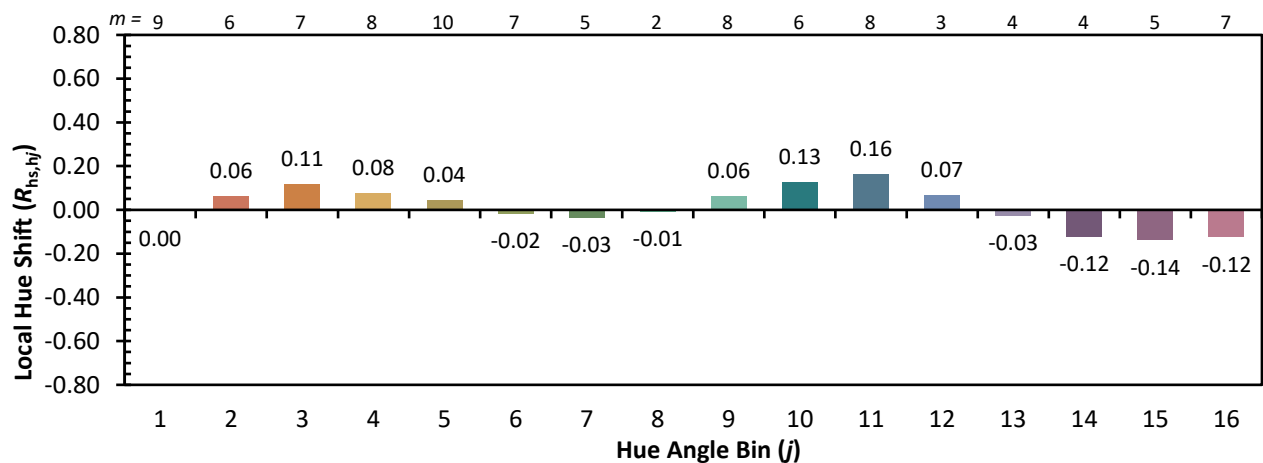
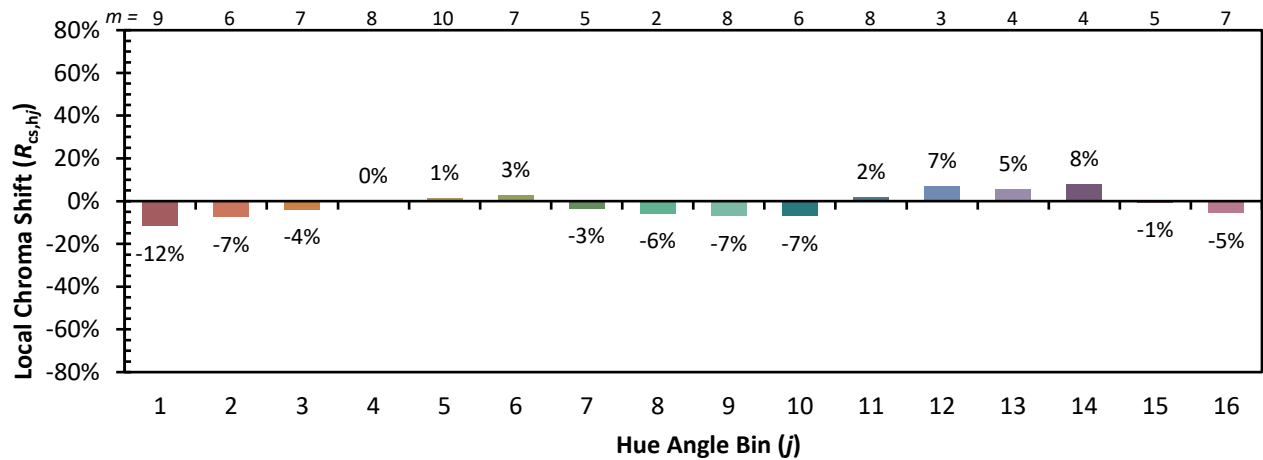


Individual Sample Fidelity Index ($R_{f,i}$)

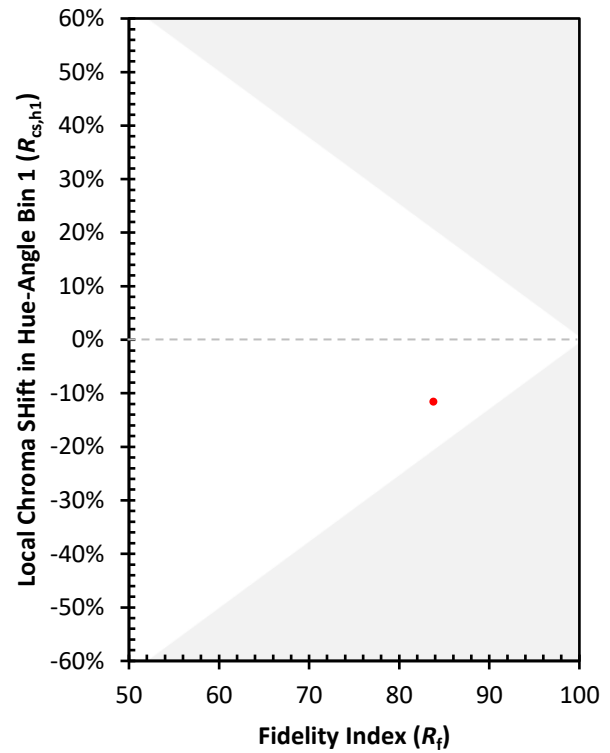
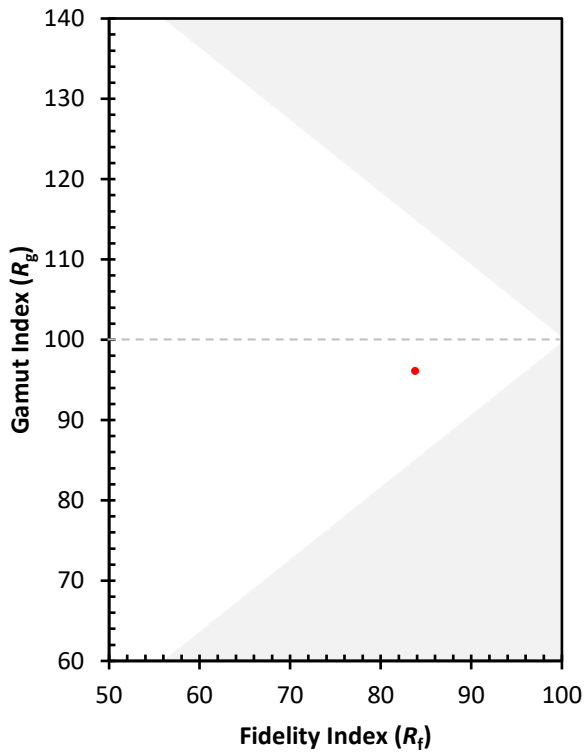
CES01 = 86	CES26 = 81	CES51 = 94	CES76 = 74
CES02 = 61	CES27 = 92	CES52 = 94	CES77 = 82
CES03 = 31	CES28 = 90	CES53 = 89	CES78 = 73
CES04 = 70	CES29 = 87	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 95	CES55 = 88	CES80 = 88
CES06 = 51	CES31 = 88	CES56 = 86	CES81 = 81
CES07 = 41	CES32 = 80	CES57 = 85	CES82 = 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)