

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: P895754

Luminaire Tested: **CLCS30S-PC-5000K-80%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895754
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS30S-PC-5000K-80%
Description: LUMARK LARGE LED CANOPY 16000LM, 120W, PC 80 CRI 5000K FIXTURE @
80% OUTPUT
Light Source: 5000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

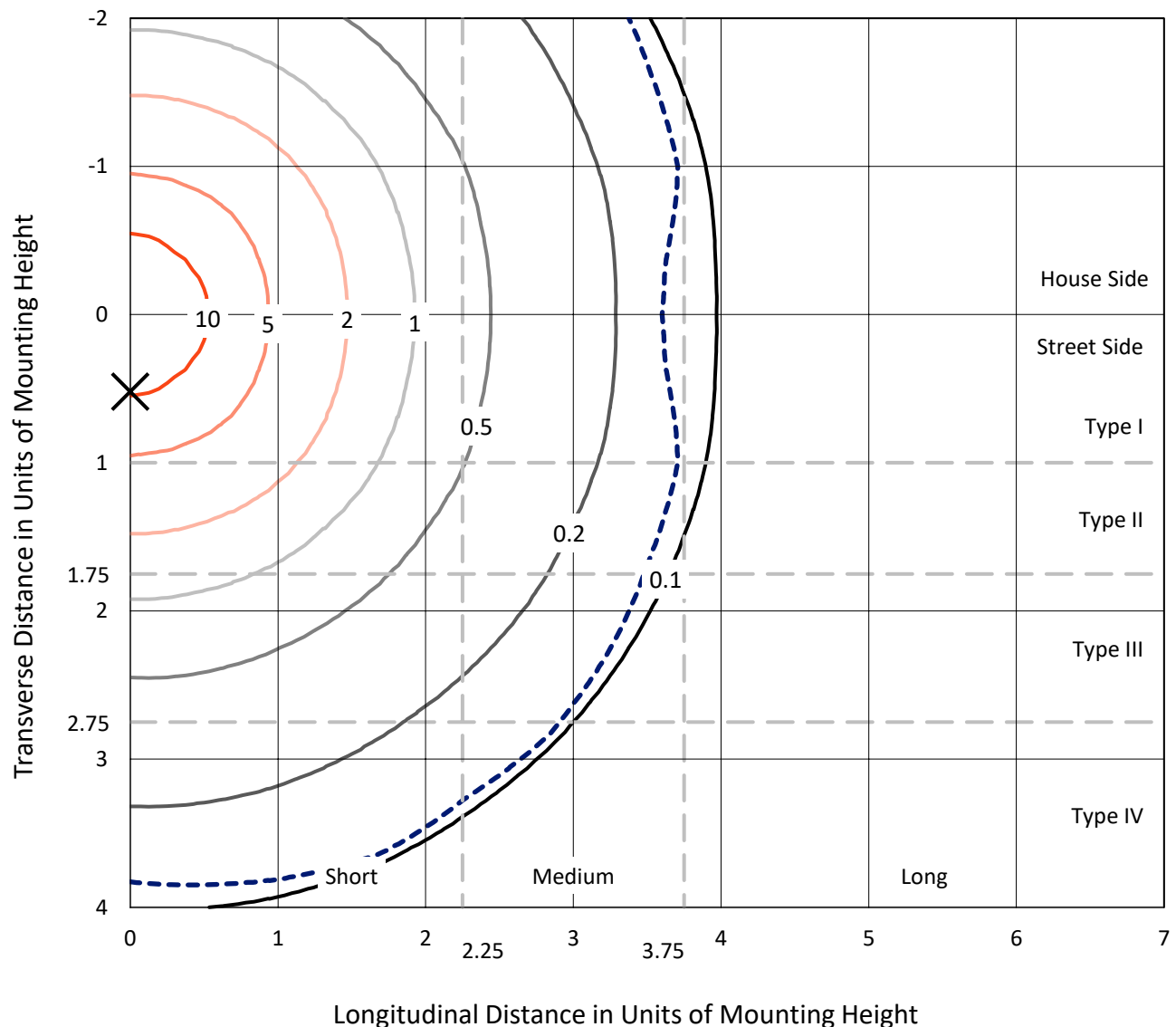
Lumens per Lamp: N/A
Luminaire Lumens: 14279.8 lumens
Efficiency: N/A
Efficacy: 141.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.12')
IES Classification: Type V - Short
BUG Rating: B3 - U3 - G3

Input Watts (W): 101
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: P895754
 CATALOG NUMBER: CLCS30S-PC-5000K-80%

Iso-Footcandle Lines of Horizontal Illumination

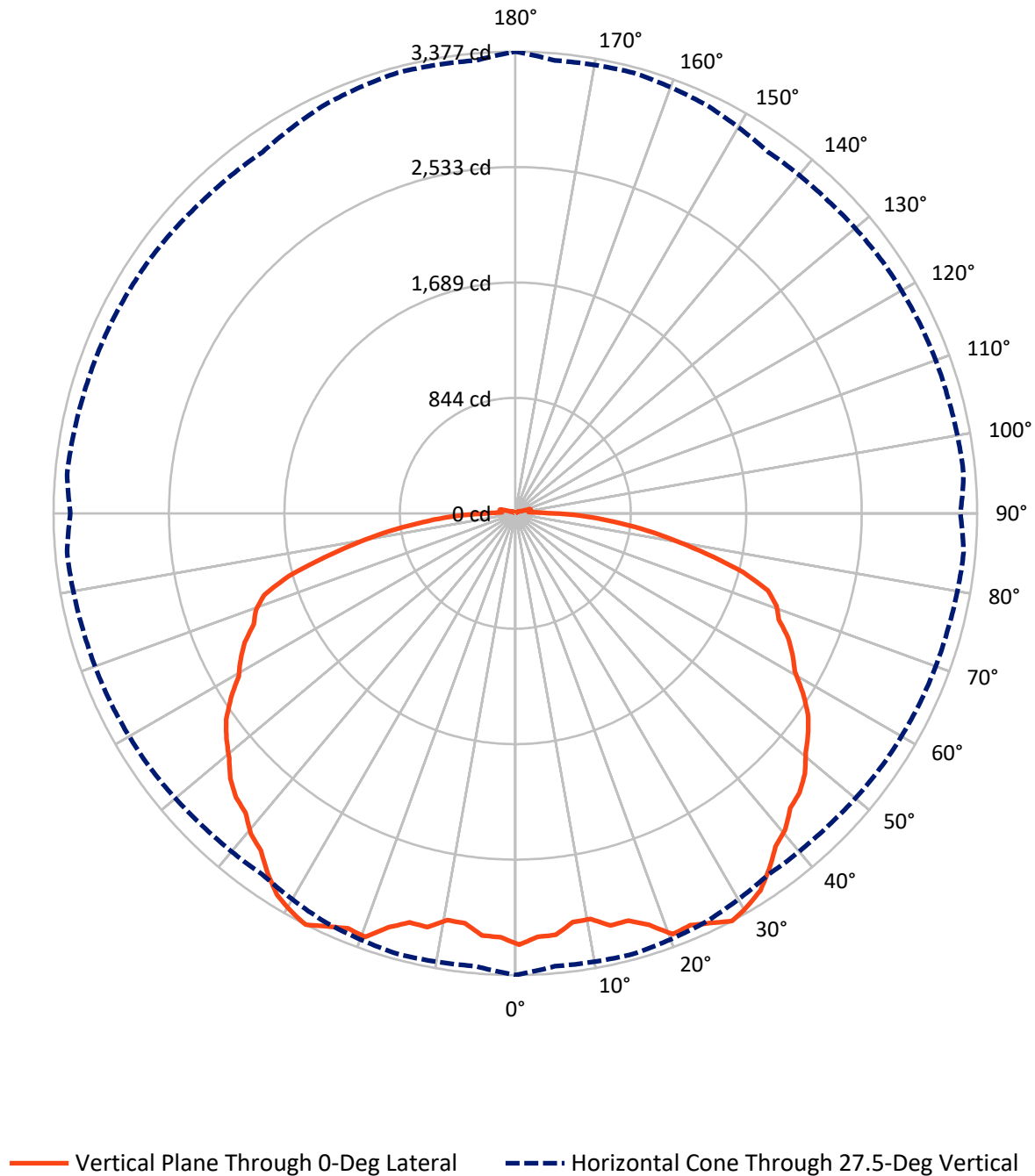
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 14 fc
 Type V - Short - N/A

REPORT NUMBER: P895754
CATALOG NUMBER: CLCS30S-PC-5000K-80%

Luminous Intensity Polar Plot



REPORT NUMBER: P895754

CATALOG NUMBER: CLCS30S-PC-5000K-80%

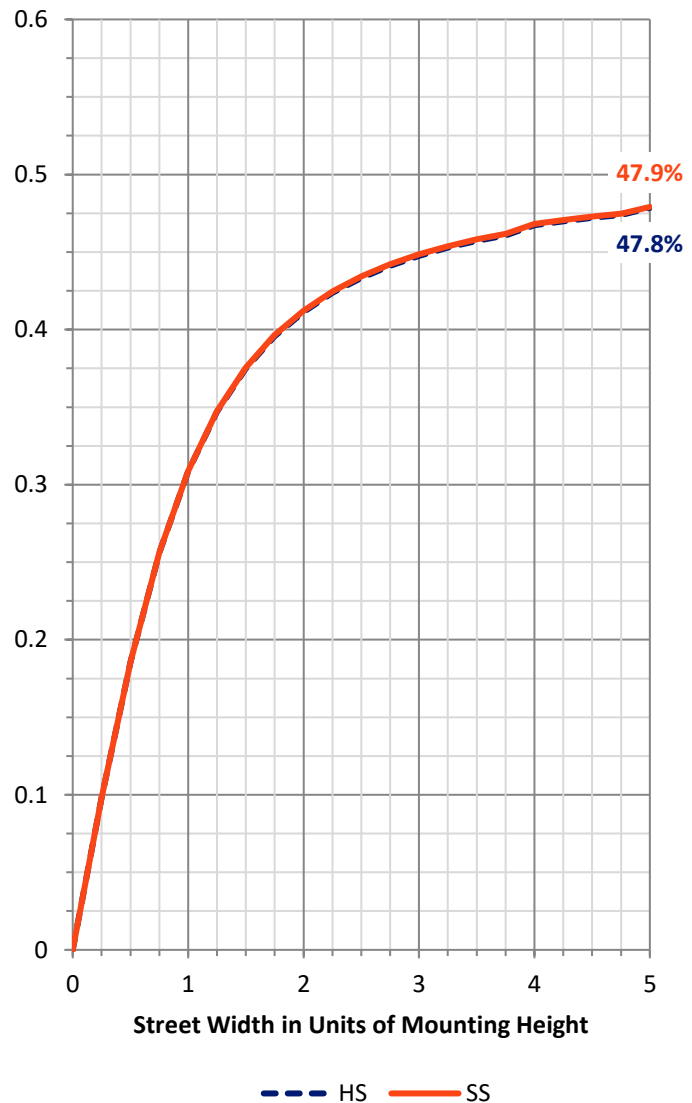
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7020.9	119.0	7139.9
	% Fixture	49.2	0.8	50.0
Street Side	Lumens	7020.9	119.0	7139.9
	% Fixture	49.2	0.8	50.0
Total	Lumens	14041.7	238.0	14279.8
	% Fixture	98.3	1.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.9	2.0
10°-20°	874.0	6.1
20°-30°	1498.7	10.5
30°-40°	1969.3	13.8
40°-50°	2253.3	15.8
50°-60°	2356.6	16.5
60°-70°	2217.3	15.5
70°-80°	1790.9	12.5
80°-90°	795.7	5.6
90°-100°	133.7	0.9
100°-110°	70.4	0.5
110°-120°	23.7	0.2
120°-130°	8.2	0.1
130°-140°	2.0	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°	14041.7	98.3
0°-180°	14279.8	100.0



REPORT NUMBER: P895754

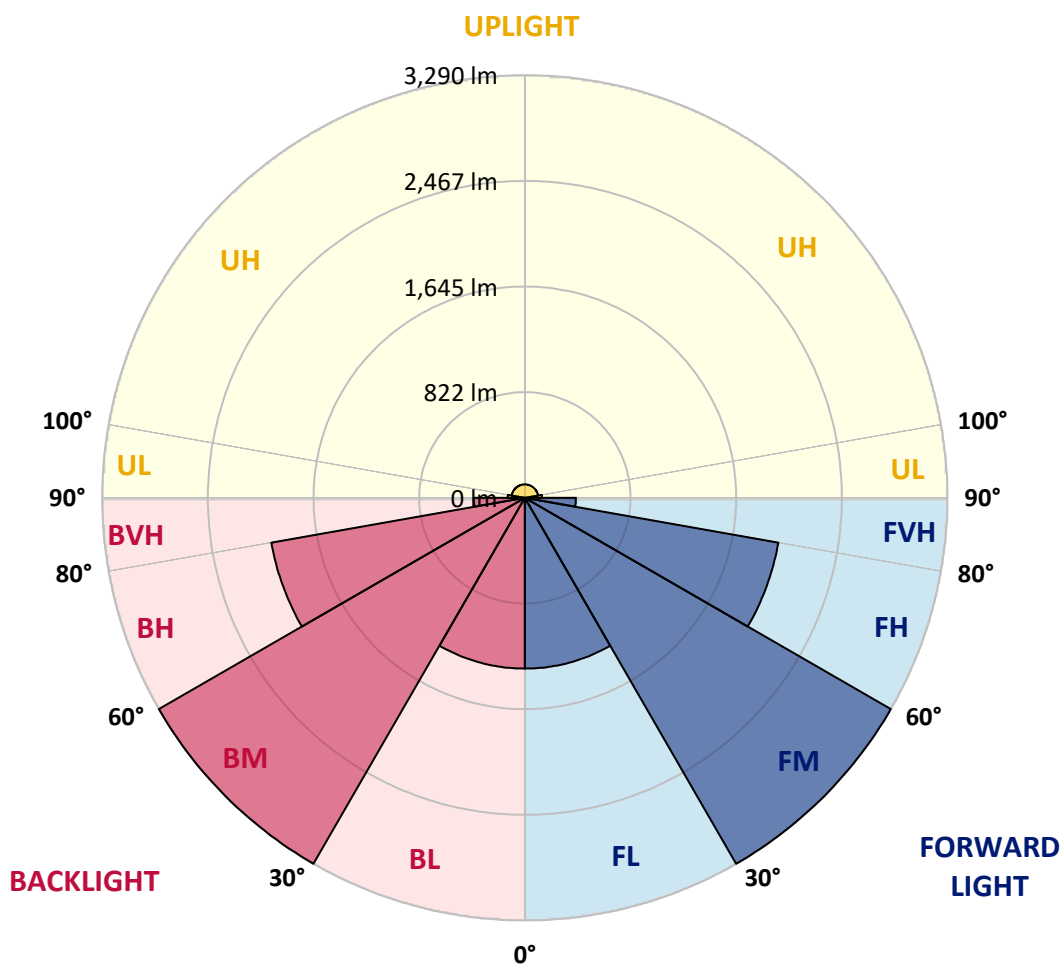
CATALOG NUMBER: CLCS30S-PC-5000K-80%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1329.3	9.3			
FM	(30°-60°)	3289.6	23.0			
FH	(60°-80°)	2004.1	14.0			G2/5000
FVH	(80°-90°)	397.9	2.8			G3/500
BL	(0°-30°)	1329.3	9.3	B3/2500		
BM	(30°-60°)	3289.6	23.0	B3/5000		
BH	(60°-80°)	2004.1	14.0	B3/2500		G2/5000
BVH	(80°-90°)	397.9	2.8			G3/500
UL	(90°-100°)	133.7	0.9		U3/500	
UH	(100°-180°)	104.4	0.7		U3/500	

BUG Rating: B3-U3-G3

Type V Short



REPORT NUMBER: P895754

CATALOG NUMBER: CLCS30S-PC-5000K-80%

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3	3155.3
2.5°	3102.0	3108.0	3114.0	3092.6	3083.1	3087.3	3075.3	3084.8	3092.6	3088.2	3088.2
5°	3096.9	3101.2	3096.0	3051.3	3020.4	2995.4	2975.7	2983.4	2979.1	2991.1	2994.5
7.5°	3019.5	3034.1	3061.6	3024.6	2976.5	2943.8	2936.1	2925.0	2886.3	2872.5	2863.9
10°	3016.9	3025.5	3054.8	3004.0	2961.8	2959.3	2909.4	2879.4	2864.8	2848.5	2837.3
12.5°	3093.4	3083.9	3046.9	3064.2	3058.2	2991.1	2973.1	2925.0	2912.9	2906.9	2892.3
15°	3090.8	3122.6	3141.6	3100.3	3060.8	3089.9	3106.3	3065.1	3040.9	2998.8	2992.0
17.5°	3164.7	3196.5	3146.7	3172.4	3141.6	3152.7	3133.8	3118.3	3112.3	3103.7	3104.6
20°	3286.8	3253.2	3211.1	3189.7	3134.6	3150.1	3182.8	3172.4	3163.9	3180.3	3169.9
22.5°	3273.1	3259.2	3200.0	3228.4	3132.0	3156.1	3182.8	3218.0	3191.4	3163.9	3141.6
25°	3319.5	3283.4	3278.2	3261.0	3200.8	3194.0	3224.9	3219.7	3224.9	3254.1	3239.5
27.5°	3377.0	3324.6	3335.8	3297.1	3224.9	3233.5	3255.0	3267.1	3274.8	3290.2	3254.1
30°	3339.2	3304.8	3310.0	3268.8	3248.1	3313.5	3201.7	3287.6	3261.0	3255.8	3265.3
32.5°	3289.4	3255.0	3266.2	3202.6	3248.1	3249.8	3195.7	3228.4	3202.6	3230.1	3216.3
35°	3195.7	3125.2	3181.1	3117.5	3190.5	3161.3	3161.3	3130.3	3101.2	3112.3	3080.5
37.5°	3090.8	3022.9	3089.9	3034.9	3086.5	3076.2	3084.8	3027.2	3023.8	3027.2	3019.5
40°	3039.2	2976.5	3018.6	3010.1	3013.5	3028.1	2981.7	2986.0	2961.0	2968.8	2938.7
42.5°	2948.1	2900.9	2968.8	2969.7	3010.1	3013.5	2972.2	2943.8	2939.6	2883.7	2892.3
45°	2912.9	2858.7	2893.1	2922.4	2958.4	3024.6	2955.0	2934.4	2889.7	2844.2	2827.8
47.5°	2848.5	2831.2	2845.0	2892.3	2924.1	2965.4	2941.3	2861.3	2808.9	2796.9	2793.4
50°	2752.2	2747.8	2771.9	2791.7	2814.9	2891.4	2862.2	2806.3	2747.8	2728.1	2739.3
52.5°	2680.0	2669.7	2663.6	2756.5	2740.1	2757.4	2794.3	2739.3	2696.3	2626.7	2659.3
55°	2596.6	2606.0	2591.5	2670.6	2688.6	2711.0	2686.0	2653.3	2594.0	2538.2	2548.5
57.5°	2478.8	2509.8	2534.7	2538.2	2612.0	2640.4	2612.9	2546.8	2462.5	2469.4	2470.3
60°	2347.3	2394.6	2409.2	2440.1	2508.1	2500.4	2520.1	2423.0	2391.2	2395.5	2394.6
62.5°	2275.1	2288.9	2303.5	2343.0	2386.0	2381.7	2403.2	2349.9	2305.2	2295.8	2307.8
65°	2191.7	2215.8	2209.0	2239.0	2245.1	2252.8	2283.8	2288.1	2225.3	2184.0	2159.1
67.5°	2077.5	2108.4	2132.5	2138.5	2152.2	2166.0	2146.2	2179.7	2093.8	2063.7	2062.8
70°	2025.8	2043.9	2047.4	2037.1	2024.1	2064.5	2032.8	2040.5	2036.2	2013.8	1998.4
72.5°	1930.4	1951.1	1962.3	1923.6	1903.9	1913.3	1931.3	1915.9	1936.5	1901.3	1879.8
75°	1719.0	1734.5	1758.5	1779.2	1752.5	1769.7	1764.6	1736.3	1722.4	1635.6	1624.5
77.5°	1430.3	1442.3	1494.7	1527.4	1538.5	1539.4	1499.0	1473.3	1444.9	1391.6	1386.4
80°	1166.3	1186.2	1215.3	1238.6	1282.4	1287.5	1277.2	1248.8	1219.7	1176.7	1170.6
82.5°	930.9	936.0	980.7	999.6	1004.8	1022.8	1010.8	997.0	950.6	917.2	899.9
85°	677.3	684.2	695.3	731.4	774.4	798.5	739.2	706.6	660.9	636.9	633.5
87.5°	477.9	472.7	478.7	492.5	514.8	522.6	488.2	457.3	450.4	434.9	432.3
90°	232.9	233.7	249.3	272.4	286.2	302.5	282.0	258.7	251.0	232.9	231.2
92.5°	130.6	130.6	129.8	140.1	146.9	150.5	147.8	139.2	128.9	121.2	119.5
95°	97.1	98.0	96.2	94.5	91.1	85.1	92.0	95.4	96.2	95.4	93.7
97.5°	97.1	96.2	92.0	81.7	67.9	61.0	70.5	88.5	98.0	103.1	101.4
100°	104.0	104.0	92.8	81.7	61.8	61.0	64.5	85.1	102.2	115.2	113.5
102.5°	116.9	116.1	101.4	89.4	62.7	42.1	68.8	98.8	114.3	128.9	128.1
105°	114.3	109.2	92.8	66.2	33.5	25.0	38.7	71.4	93.7	110.9	112.6
107.5°	73.1	72.2	55.8	32.7	25.0	24.1	26.7	37.0	54.1	64.5	65.4
110°	42.1	41.3	36.1	29.3	24.1	19.7	25.0	31.0	37.8	42.1	42.1

REPORT NUMBER: P895754

CATALOG NUMBER: CLCS30S-PC-5000K-80%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	40.4	39.5	34.4	26.7	18.9	12.9	19.7	29.3	36.1	40.4	40.4
115°	35.3	34.4	30.1	21.5	13.7	9.4	14.6	24.1	31.0	37.0	37.8
117.5°	31.8	30.1	23.3	15.4	9.4	6.9	10.3	17.2	26.7	31.8	32.7
120°	23.3	22.4	17.2	12.0	6.9	5.1	7.7	12.9	19.7	26.7	26.7
122.5°	18.0	17.2	13.7	8.6	4.3	3.4	5.1	10.3	15.4	20.6	20.6
125°	14.6	13.7	10.3	6.9	3.4	1.7	4.3	7.7	12.9	17.2	17.2
127.5°	11.1	11.1	8.6	5.1	2.6	0.9	2.6	6.0	10.3	12.9	12.9
130°	8.6	8.6	6.9	4.3	1.7	0.9	1.7	4.3	6.9	8.6	9.4
132.5°	7.7	7.7	6.0	2.6	0.9	0.9	0.9	3.4	6.0	7.7	7.7
135°	5.1	4.3	1.7	0.9	0.9	0.9	0.9	0.9	3.4	6.0	6.0
137.5°	0.9	0.9	0.9	0.9	0.9	0.9	1.7	0.9	0.9	0.9	0.9
140°	0.9	0.9	0.9	0.9	1.7	1.7	1.7	0.9	0.9	0.9	0.9
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

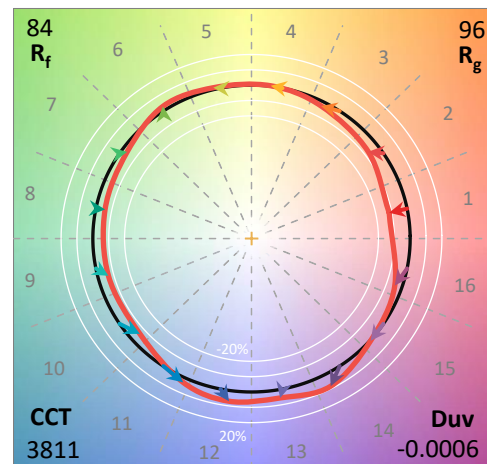
Test Information

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

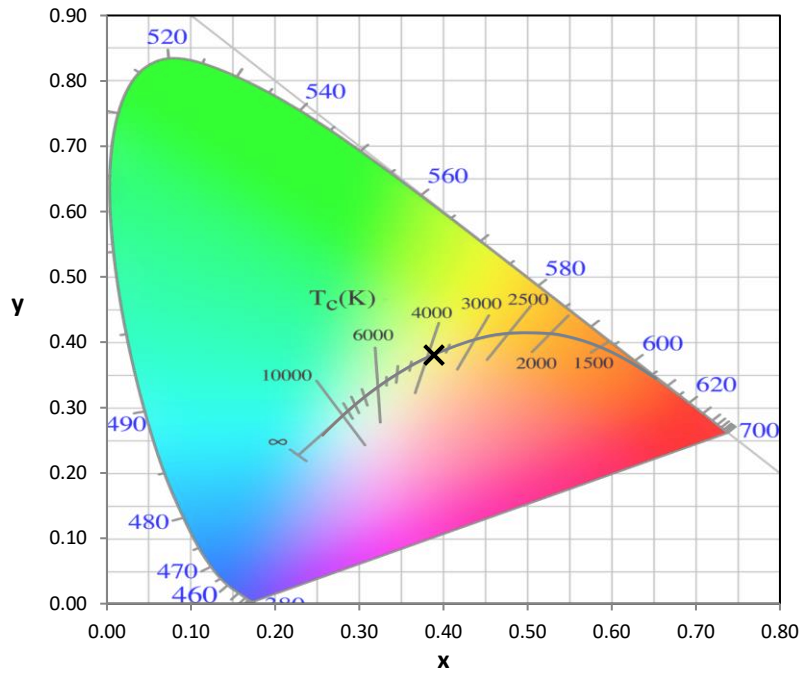
Stabilization Time: 27M
 Operation Time: 1H 27M
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2405-118-2

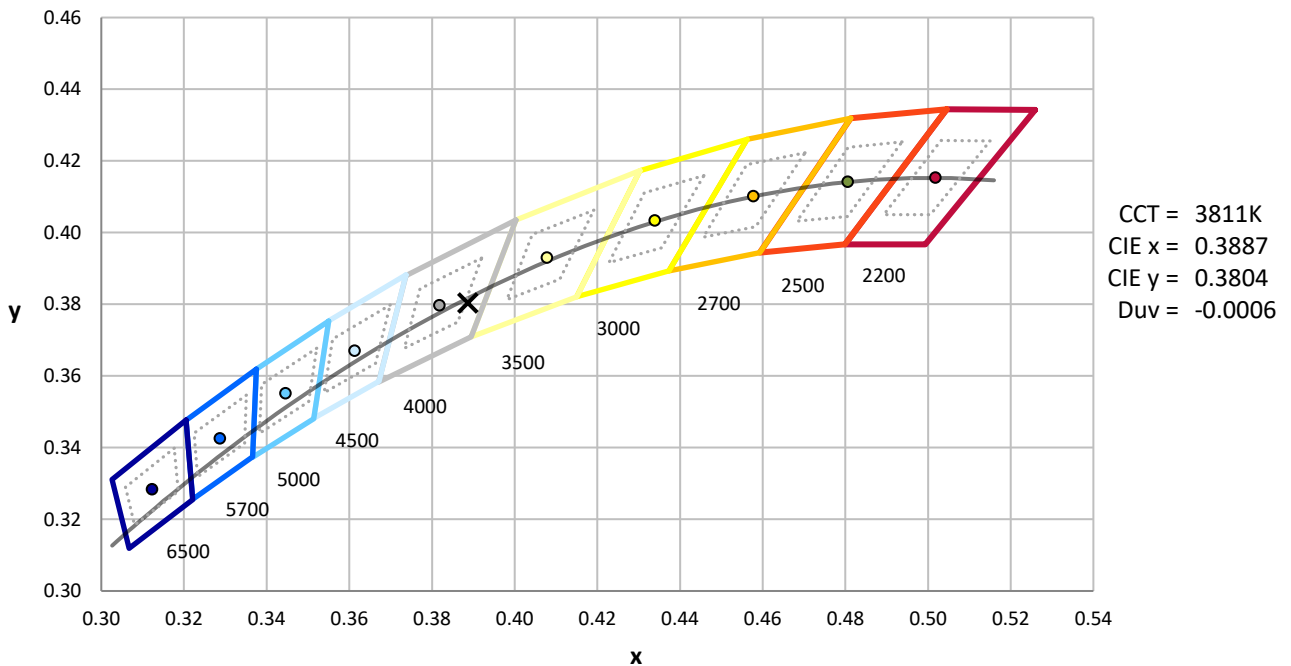
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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



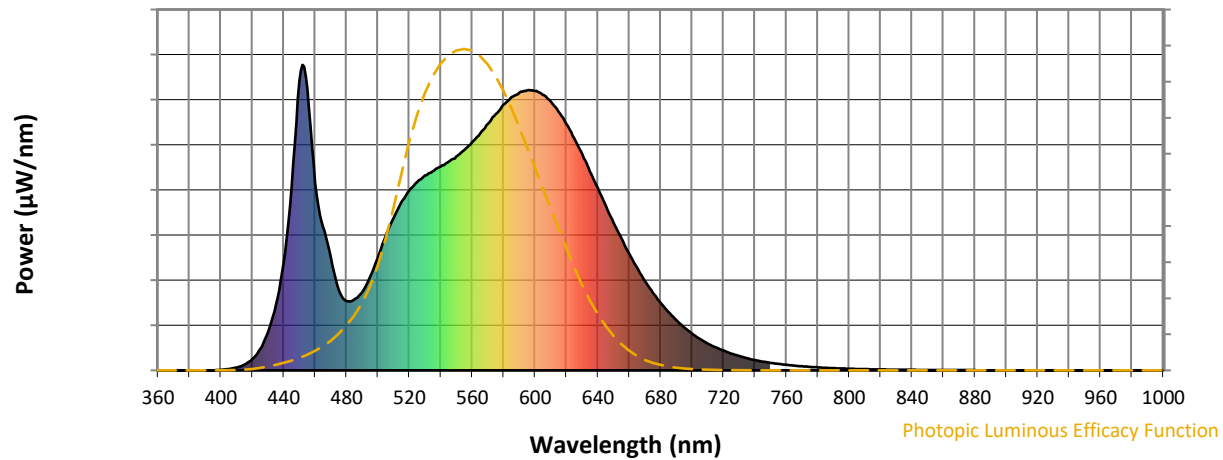
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2405-118-2

Photopic Flux vs. Wavelength

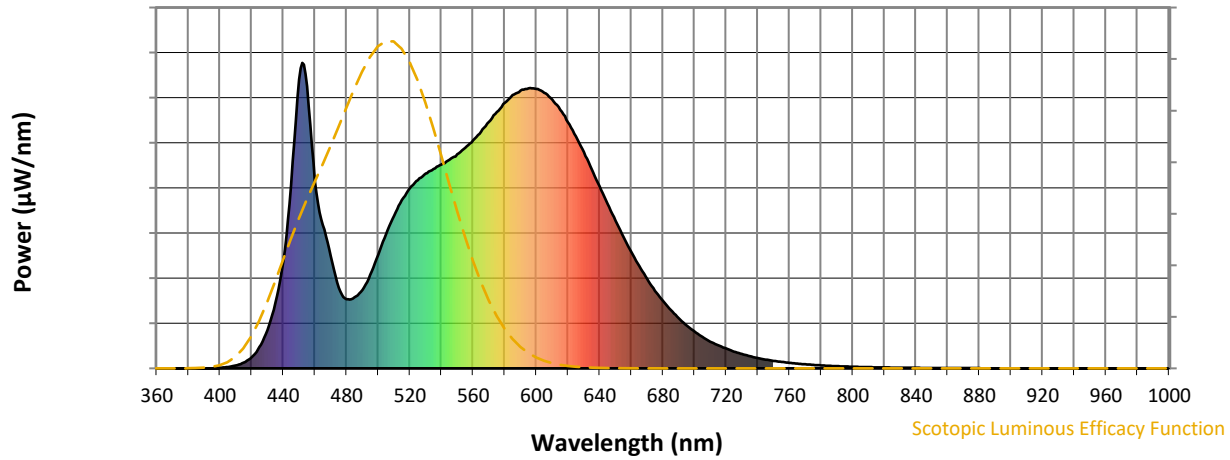


Photopic Lumens: NR

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



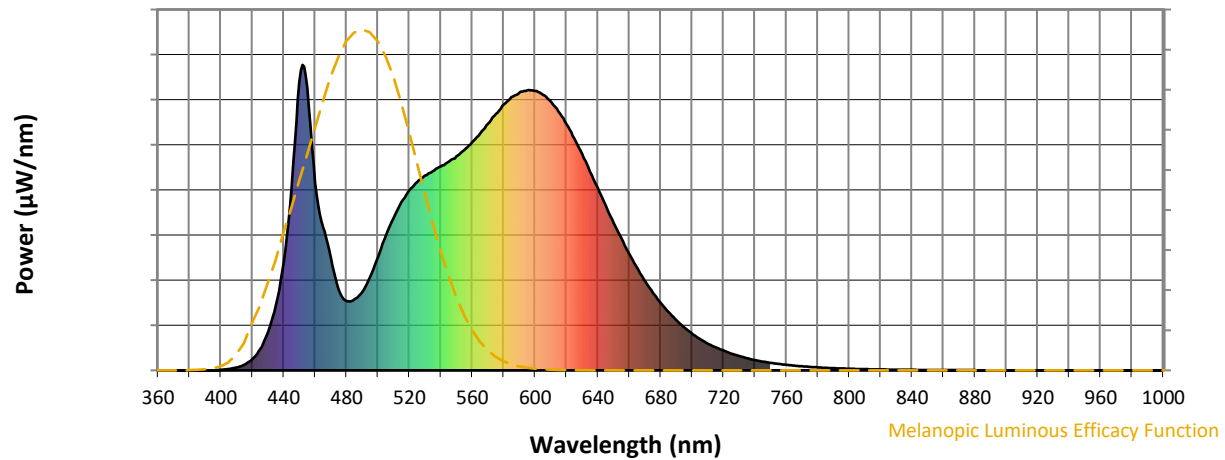
Scotopic Lumens: NR

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

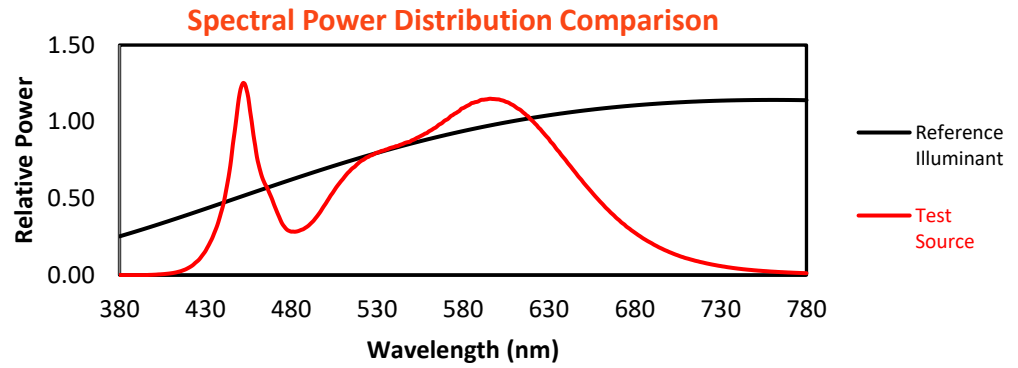
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	257	NR	620	806	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

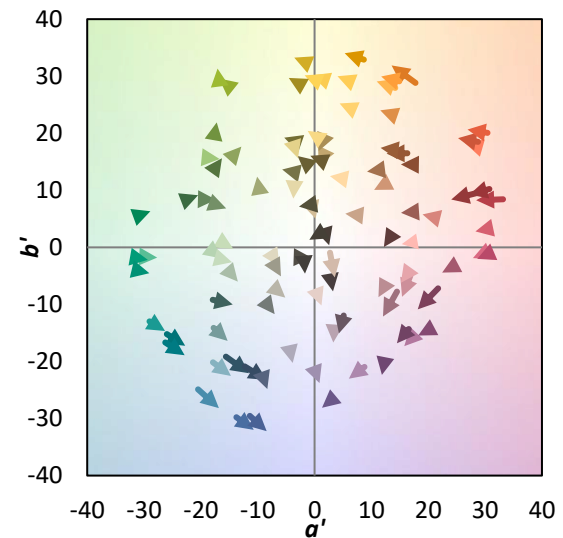
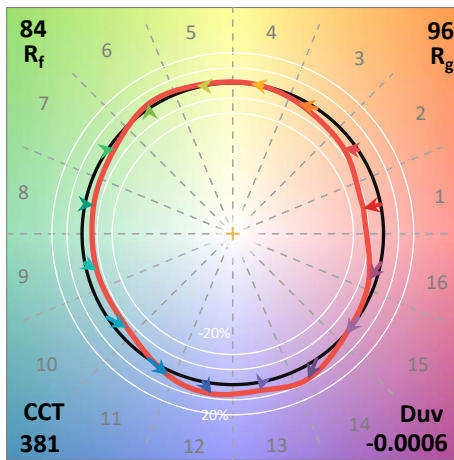
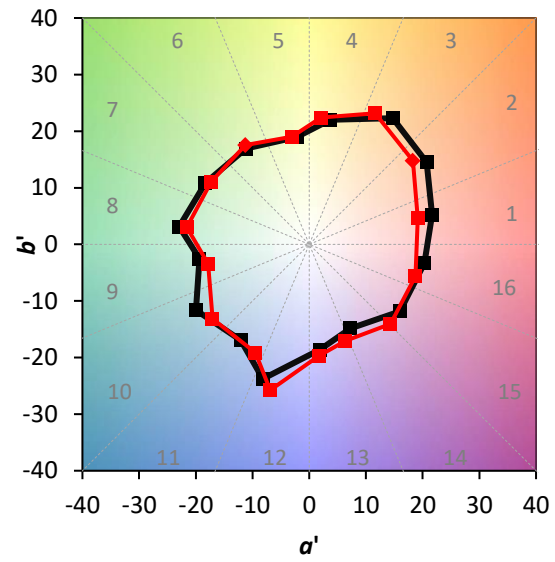
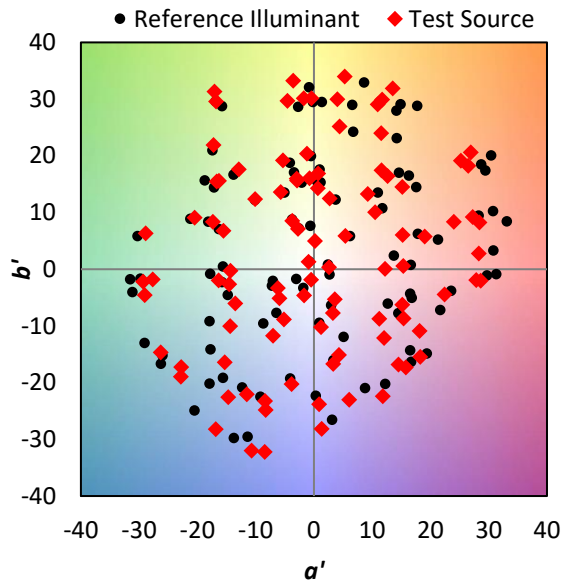
TM-30-18

Summary

$R_f = 83.8$
 $R_g = 96.1$
 $CIE R_a = 83.3$
 $R_9 = 10.7$

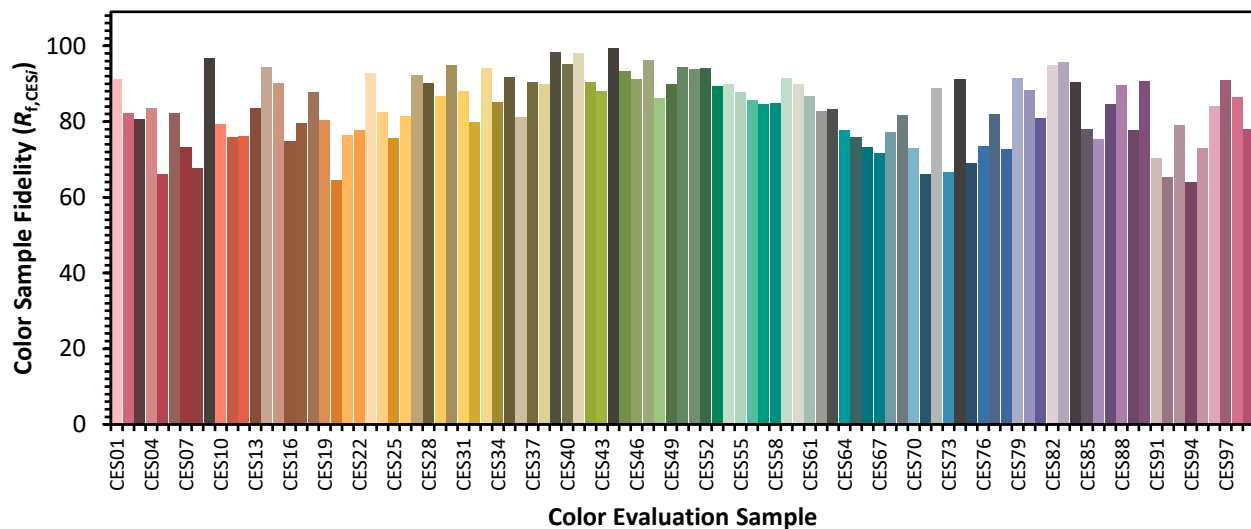


Color Vector Graphics

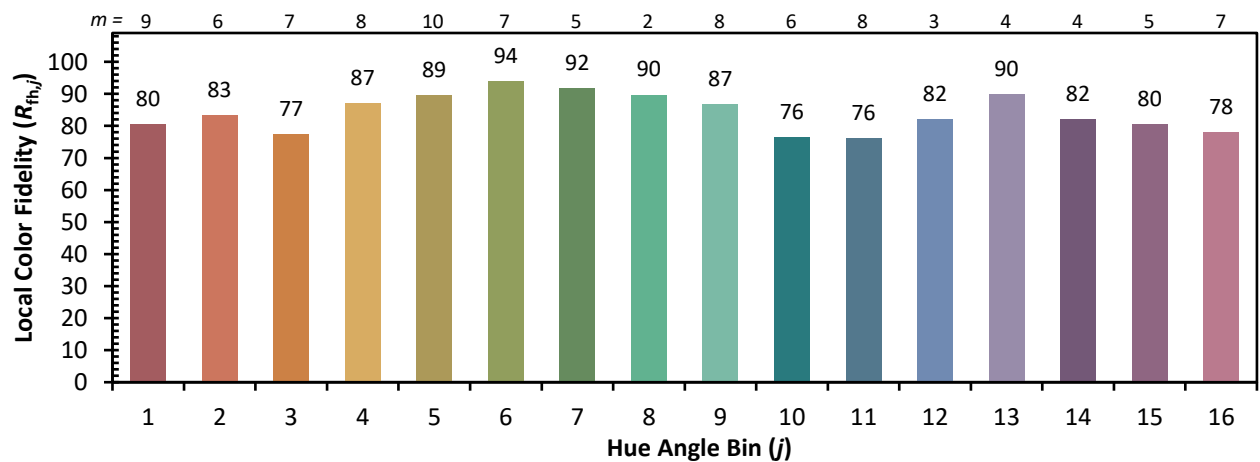
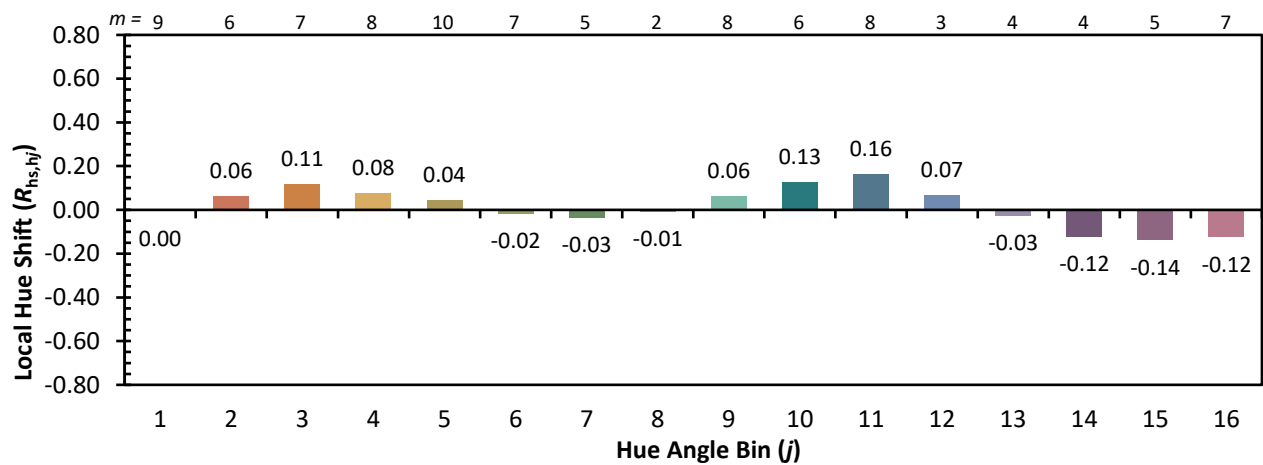
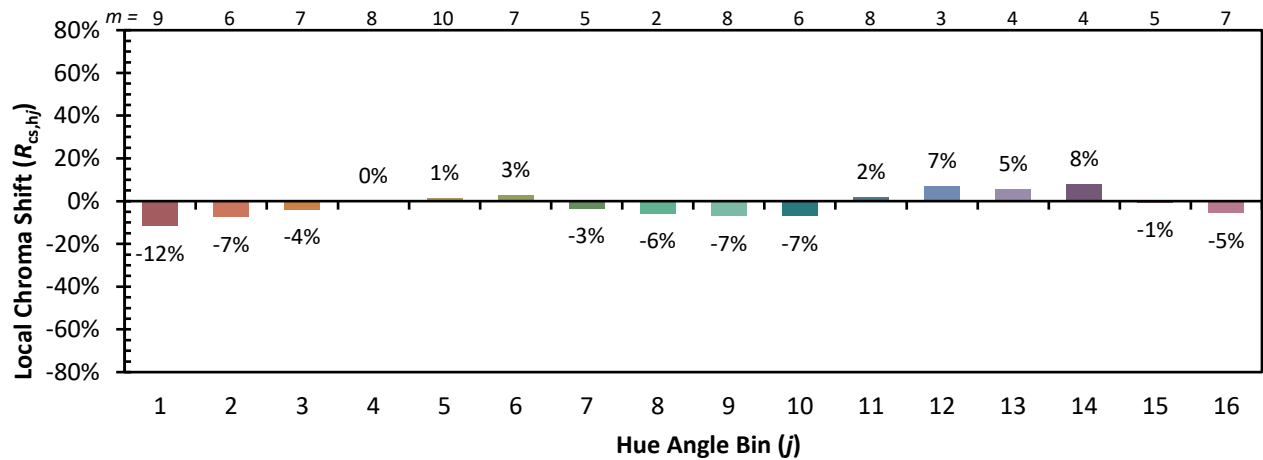


Individual Sample Fidelity Index ($R_{f,i}$)

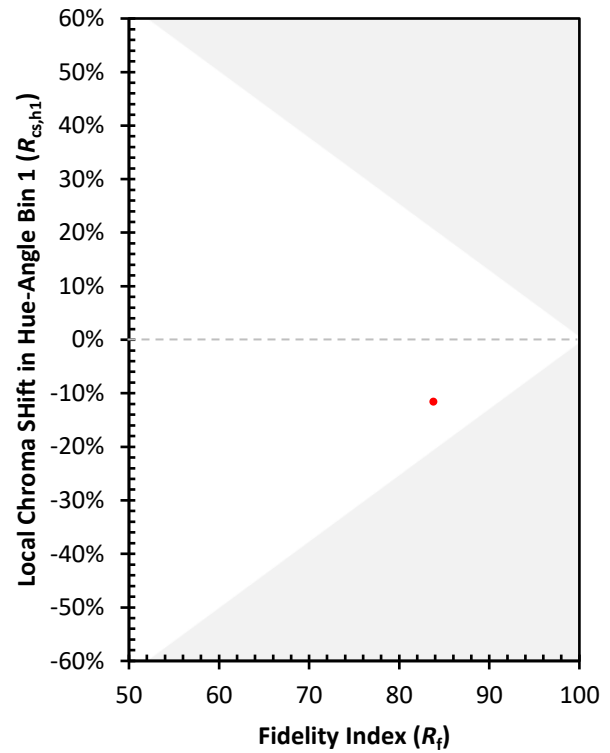
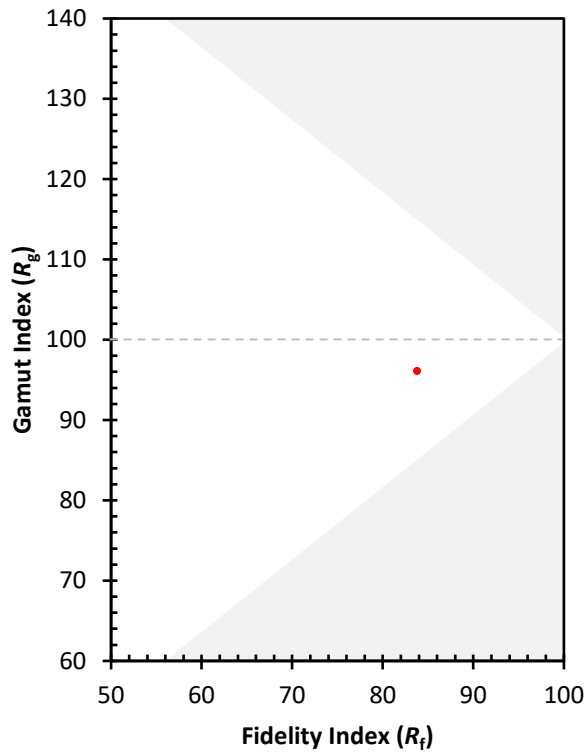
CES01 = 86	CES26 = 81	CES51 = 94	CES76 = 74
CES02 = 61	CES27 = 92	CES52 = 94	CES77 = 82
CES03 = 31	CES28 = 90	CES53 = 89	CES78 = 73
CES04 = 70	CES29 = 87	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 95	CES55 = 88	CES80 = 88
CES06 = 51	CES31 = 88	CES56 = 86	CES81 = 81
CES07 = 41	CES32 = 80	CES57 = 85	CES82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