

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: P895747

Luminaire Tested: **CLCS30S-PC-3000K-60%**

Issue Date: 11/14/2024

Test Information

Test Method: LM-79-08
Report Number: P895747
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: CLCS30S-PC-3000K-60%
Description: LUMARK LARGE LED CANOPY 16000LM, 120W, PC 80 CRI 3000K FIXTURE @
60% OUTPUT
Light Source: 3000K CCT,80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

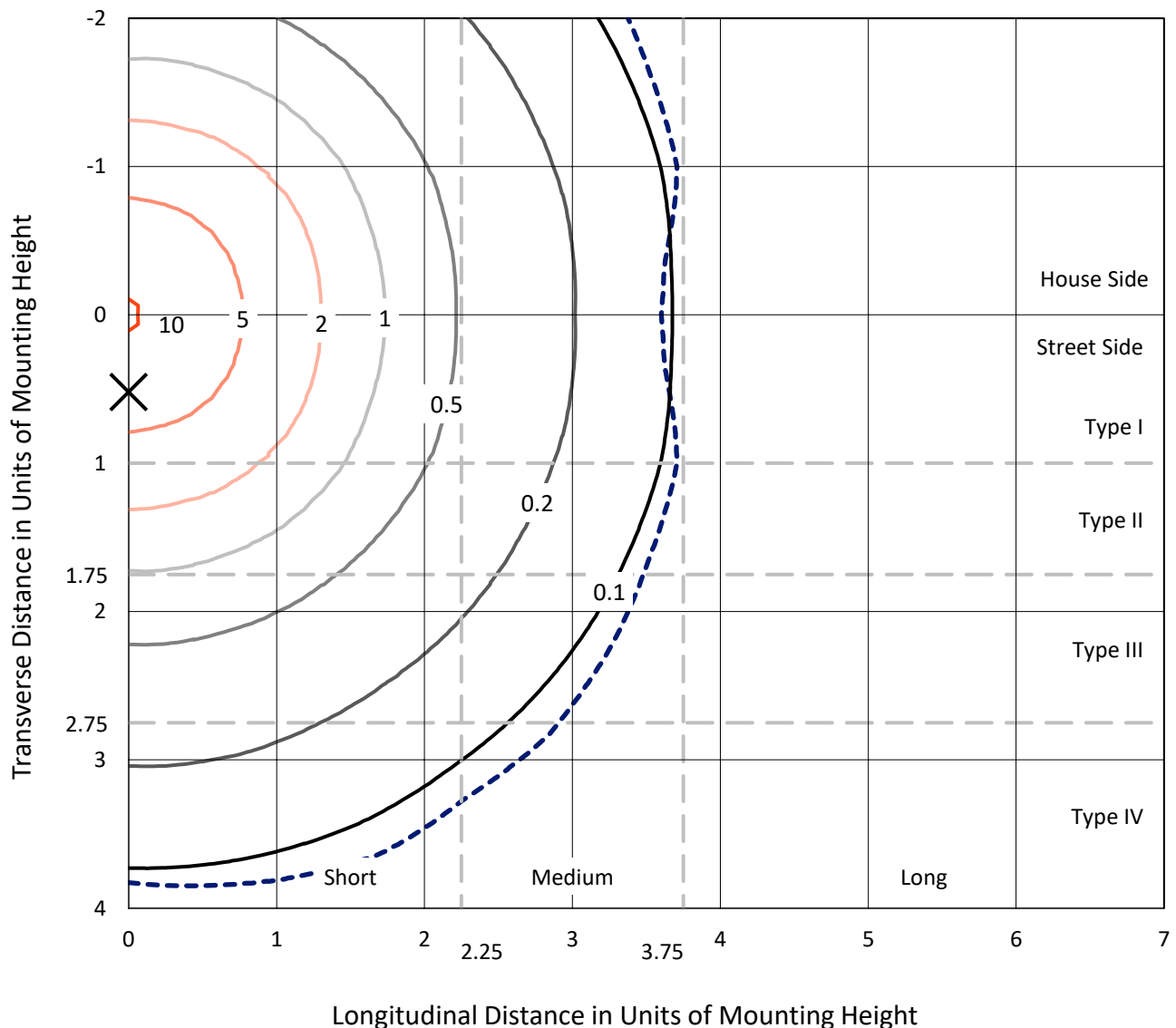
Lumens per Lamp: N/A
Luminaire Lumens: 10749.8 lumens
Efficiency: N/A
Efficacy: 141.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.12')
IES Classification: Type V - Short
BUG Rating: B3 - U3 - G3

Input Watts (W): 76
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: P895747
 CATALOG NUMBER: CLCS30S-PC-3000K-60%

Iso-Footcandle Lines of Horizontal Illumination

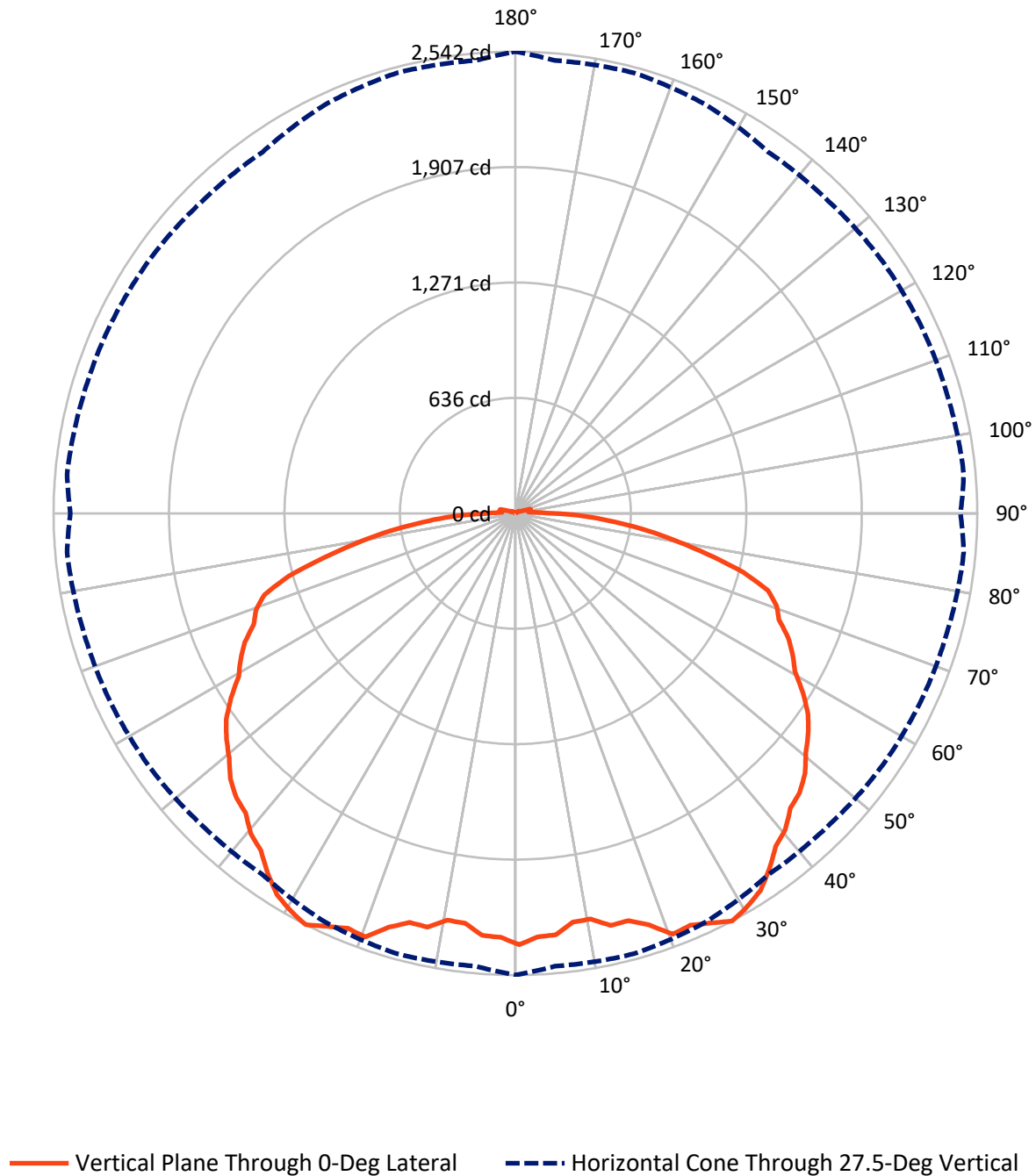
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 10.6 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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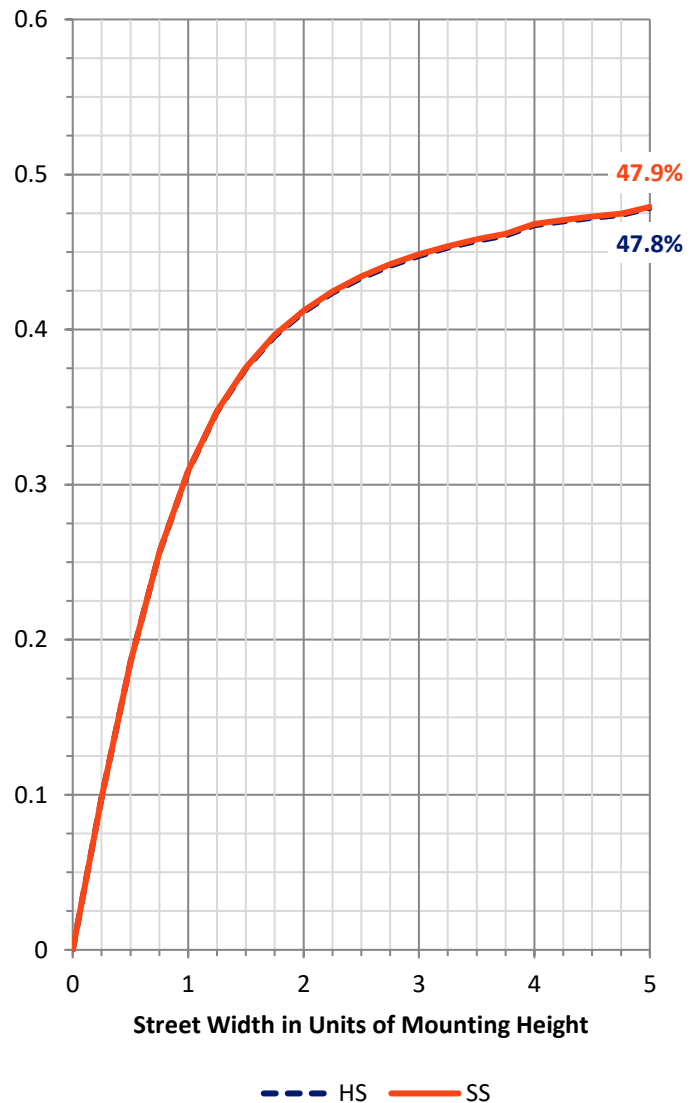
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5285.3	89.6	5374.9
	% Fixture	49.2	0.8	50.0
Street Side	Lumens	5285.3	89.6	5374.9
	% Fixture	49.2	0.8	50.0
Total	Lumens	10570.6	179.2	10749.8
	% Fixture	98.3	1.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.2	2.0
10°-20°	657.9	6.1
20°-30°	1128.3	10.5
30°-40°	1482.5	13.8
40°-50°	1696.3	15.8
50°-60°	1774.0	16.5
60°-70°	1669.2	15.5
70°-80°	1348.2	12.5
80°-90°	599.0	5.6
90°-100°	100.6	0.9
100°-110°	53.0	0.5
110°-120°	17.8	0.2
120°-130°	6.2	0.1
130°-140°	1.5	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°	10570.6	98.3
0°-180°	10749.8	100.0



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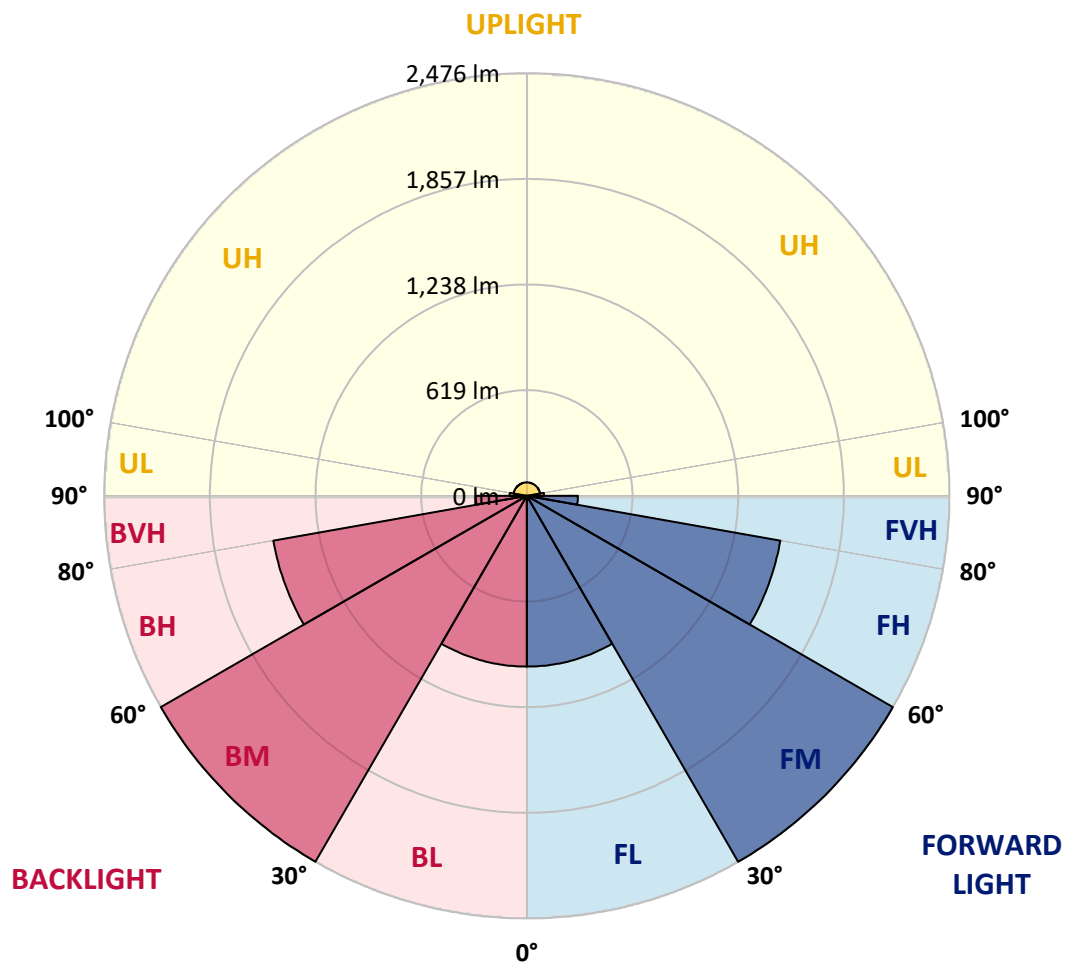
CATALOG NUMBER: CLCS30S-PC-3000K-60%

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1000.7	9.3			
FM	(30°-60°)	2476.4	23.0			
FH	(60°-80°)	1508.7	14.0			G1/1800
FVH	(80°-90°)	299.5	2.8			G3/500
BL	(0°-30°)	1000.7	9.3	B3/2500		
BM	(30°-60°)	2476.4	23.0	B2/2500		
BH	(60°-80°)	1508.7	14.0	B3/2500		G1/1800
BVH	(80°-90°)	299.5	2.8			G3/500
UL	(90°-100°)	100.6	0.9		U3/500	
UH	(100°-180°)	78.5	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°	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3	2375.3
2.5°	2335.2	2339.7	2344.3	2328.1	2320.9	2324.2	2315.1	2322.2	2328.1	2324.8	2324.8
5°	2331.3	2334.5	2330.7	2297.0	2273.7	2254.9	2240.0	2245.8	2242.6	2251.7	2254.3
7.5°	2273.0	2284.0	2304.8	2276.9	2240.7	2216.2	2210.3	2201.9	2172.8	2162.4	2156.0
10°	2271.1	2277.6	2299.6	2261.4	2229.8	2227.8	2190.3	2167.6	2156.6	2144.3	2135.9
12.5°	2328.7	2321.6	2293.8	2306.7	2302.2	2251.7	2238.1	2201.9	2192.9	2188.3	2177.3
15°	2326.8	2350.7	2365.0	2333.9	2304.1	2326.1	2338.4	2307.3	2289.2	2257.5	2252.3
17.5°	2382.4	2406.4	2368.9	2388.3	2365.0	2373.4	2359.1	2347.5	2343.0	2336.5	2337.1
20°	2474.3	2449.0	2417.3	2401.2	2359.8	2371.4	2396.0	2388.3	2381.8	2394.1	2386.3
22.5°	2463.9	2453.6	2409.0	2430.3	2357.8	2376.0	2396.0	2422.5	2402.5	2381.8	2365.0
25°	2498.9	2471.7	2467.8	2454.9	2409.5	2404.5	2427.7	2423.8	2427.7	2449.7	2438.7
27.5°	2542.3	2502.8	2511.2	2482.0	2427.7	2434.1	2450.3	2459.4	2465.2	2476.9	2449.7
30°	2513.8	2487.9	2491.8	2460.7	2445.1	2494.3	2410.2	2474.9	2454.9	2451.0	2458.1
32.5°	2476.2	2450.3	2458.7	2410.8	2445.1	2446.4	2405.8	2430.3	2410.8	2431.6	2421.2
35°	2405.8	2352.7	2394.7	2346.8	2401.9	2379.9	2379.9	2356.6	2334.5	2343.0	2319.0
37.5°	2326.8	2275.6	2326.1	2284.7	2323.5	2315.8	2322.2	2278.9	2276.3	2278.9	2273.0
40°	2287.9	2240.7	2272.4	2265.9	2268.5	2279.5	2244.6	2247.8	2229.1	2234.8	2212.3
42.5°	2219.4	2183.8	2234.8	2235.5	2265.9	2268.5	2237.4	2216.2	2212.9	2170.8	2177.3
45°	2192.9	2152.1	2178.0	2200.0	2227.2	2276.9	2224.6	2209.0	2175.4	2141.1	2128.8
47.5°	2144.3	2131.4	2141.7	2177.3	2201.3	2232.3	2214.2	2154.0	2114.5	2105.5	2102.9
50°	2071.8	2068.6	2086.7	2101.6	2119.1	2176.7	2154.7	2112.6	2068.6	2053.7	2062.1
52.5°	2017.5	2009.7	2005.2	2075.0	2062.7	2075.7	2103.5	2062.1	2029.8	1977.4	2002.0
55°	1954.7	1961.8	1950.8	2010.4	2024.0	2040.8	2022.0	1997.4	1952.8	1910.7	1918.5
57.5°	1866.1	1889.3	1908.1	1910.7	1966.4	1987.7	1967.0	1917.2	1853.8	1859.0	1859.6
60°	1767.1	1802.7	1813.7	1837.0	1888.0	1882.2	1897.1	1824.0	1800.1	1803.3	1802.7
62.5°	1712.7	1723.0	1734.0	1763.8	1796.2	1793.0	1809.1	1769.0	1735.3	1728.2	1737.3
65°	1650.0	1668.1	1662.9	1685.6	1690.1	1695.9	1719.2	1722.4	1675.2	1644.2	1625.4
67.5°	1563.9	1587.2	1605.3	1609.8	1620.2	1630.6	1615.7	1640.9	1576.2	1553.5	1552.9
70°	1525.0	1538.6	1541.2	1533.5	1523.7	1554.2	1530.2	1536.0	1532.8	1516.1	1504.4
72.5°	1453.3	1468.8	1477.2	1448.1	1433.2	1440.3	1453.9	1442.3	1457.8	1431.3	1415.1
75°	1294.1	1305.8	1323.9	1339.3	1319.4	1332.3	1328.4	1307.1	1296.7	1231.3	1222.9
77.5°	1076.7	1085.7	1125.2	1149.8	1158.3	1158.9	1128.5	1109.1	1087.7	1047.5	1043.7
80°	878.0	892.9	914.9	932.4	965.4	969.3	961.5	940.2	918.2	885.8	881.3
82.5°	700.7	704.6	738.3	752.5	756.4	770.0	760.9	750.6	715.6	690.4	677.4
85°	509.9	515.0	523.5	550.6	583.0	601.1	556.5	531.9	497.6	479.4	476.8
87.5°	359.8	355.9	360.4	370.8	387.6	393.4	367.5	344.2	339.0	327.4	325.4
90°	175.3	176.0	187.6	205.1	215.5	227.8	212.2	194.8	188.9	175.3	174.1
92.5°	98.3	98.3	97.7	105.4	110.6	113.2	111.3	104.8	97.0	91.2	89.9
95°	73.2	73.8	72.5	71.2	68.6	64.1	69.3	71.9	72.5	71.9	70.6
97.5°	73.2	72.5	69.3	61.5	51.1	46.0	53.1	66.7	73.8	77.7	76.4
100°	78.3	78.3	69.9	61.5	46.6	46.0	48.6	64.1	77.0	86.8	85.5
102.5°	88.0	87.4	76.4	67.3	47.3	31.7	51.8	74.5	86.1	97.0	96.4
105°	86.1	82.2	69.9	49.9	25.2	18.8	29.1	53.7	70.6	83.5	84.8
107.5°	55.0	54.4	42.1	24.6	18.8	18.1	20.1	27.8	40.8	48.6	49.2
110°	31.7	31.1	27.2	22.0	18.1	14.9	18.8	23.3	28.5	31.7	31.7

REPORT NUMBER: P895747

CATALOG NUMBER: CLCS30S-PC-3000K-60%

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	30.4	29.8	25.9	20.1	14.2	9.7	14.9	22.0	27.2	30.4	30.4
115°	26.5	25.9	22.7	16.2	10.4	7.1	11.0	18.1	23.3	27.8	28.5
117.5°	24.0	22.7	17.5	11.7	7.1	5.2	7.8	12.9	20.1	24.0	24.6
120°	17.5	16.8	12.9	9.1	5.2	3.9	5.8	9.7	14.9	20.1	20.1
122.5°	13.6	12.9	10.4	6.5	3.2	2.6	3.9	7.8	11.7	15.5	15.5
125°	11.0	10.4	7.8	5.2	2.6	1.3	3.2	5.8	9.7	12.9	12.9
127.5°	8.4	8.4	6.5	3.9	1.9	0.6	1.9	4.5	7.8	9.7	9.7
130°	6.5	6.5	5.2	3.2	1.3	0.6	1.3	3.2	5.2	6.5	7.1
132.5°	5.8	5.8	4.5	1.9	0.6	0.6	0.6	2.6	4.5	5.8	5.8
135°	3.9	3.2	1.3	0.6	0.6	0.6	0.6	0.6	2.6	4.5	4.5
137.5°	0.6	0.6	0.6	0.6	0.6	0.6	1.3	0.6	0.6	0.6	0.6
140°	0.6	0.6	0.6	0.6	1.3	1.3	1.3	0.6	0.6	0.6	0.6
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

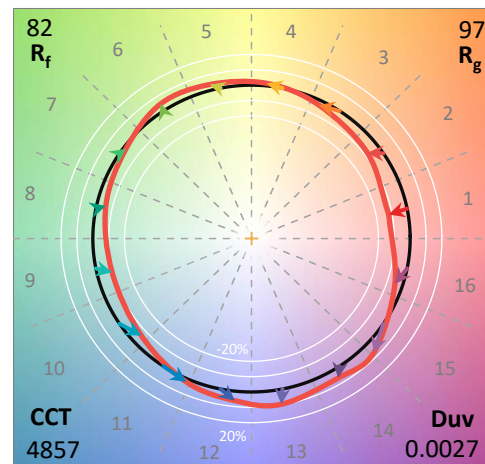
Test Information

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

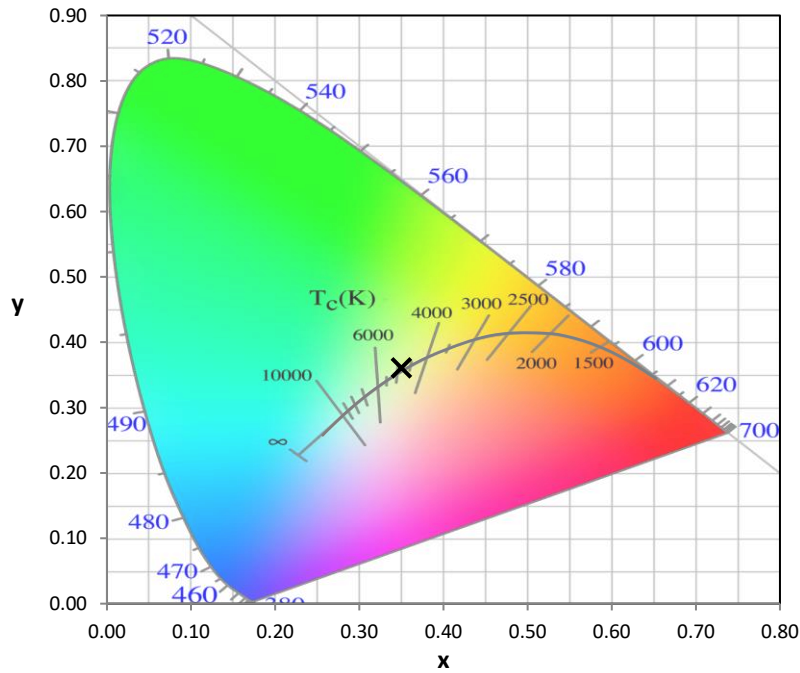
Stabilization Time: 72M
 Operation Time: 2H 12M
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2405-118-3

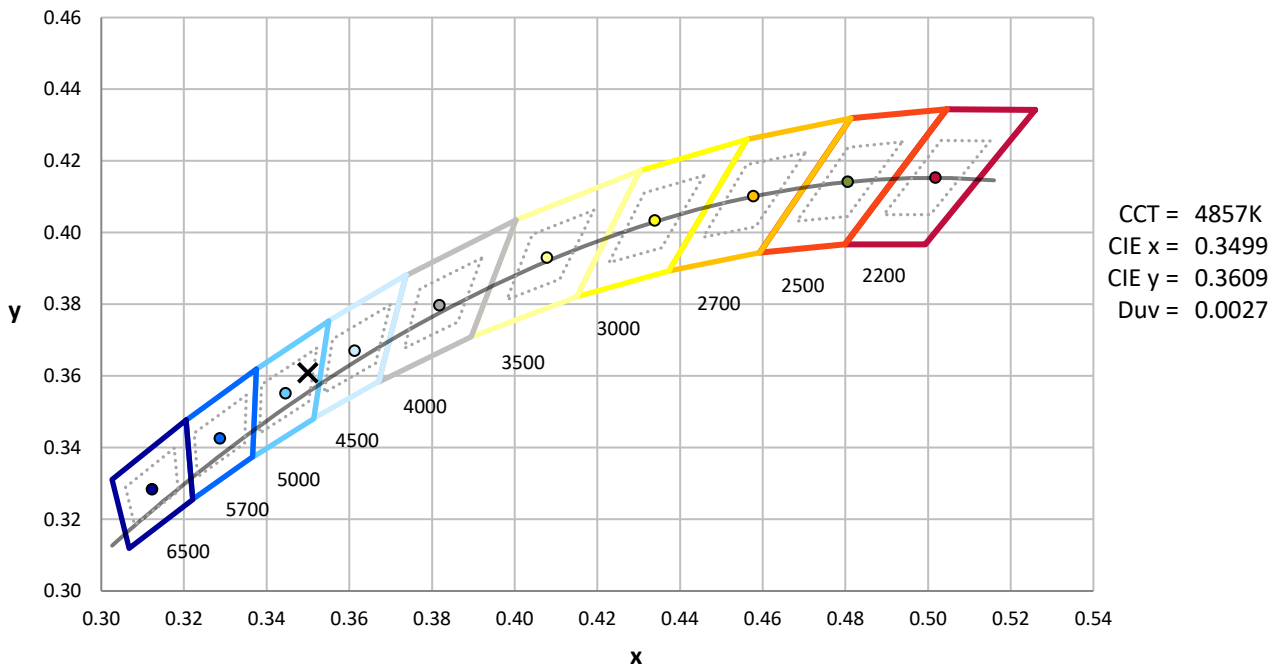
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



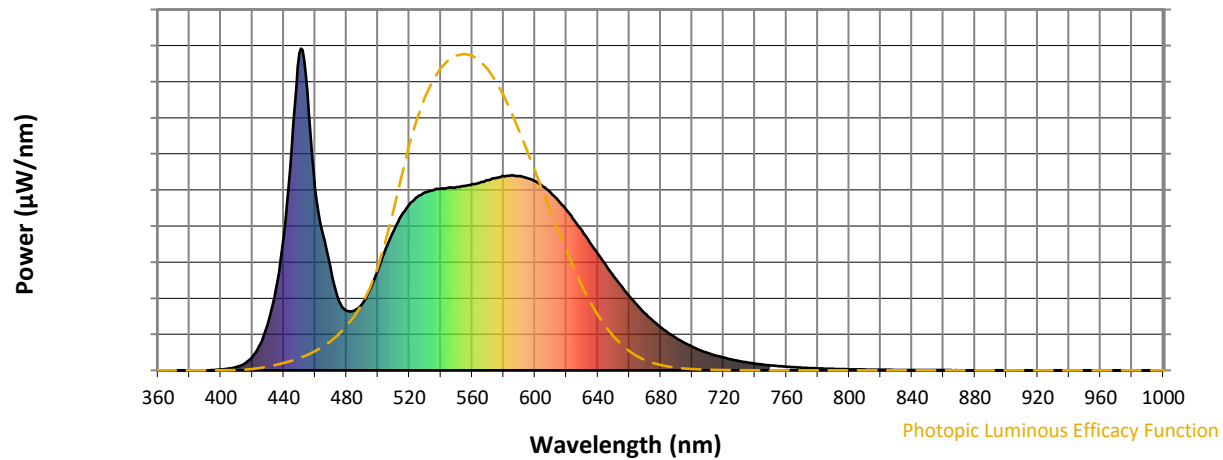
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

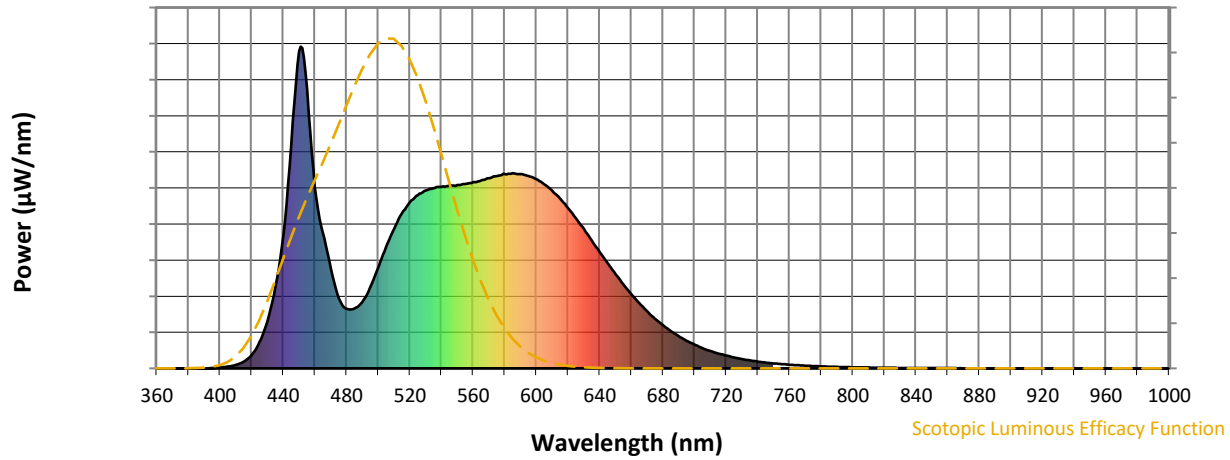


Photopic Lumens: NR

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



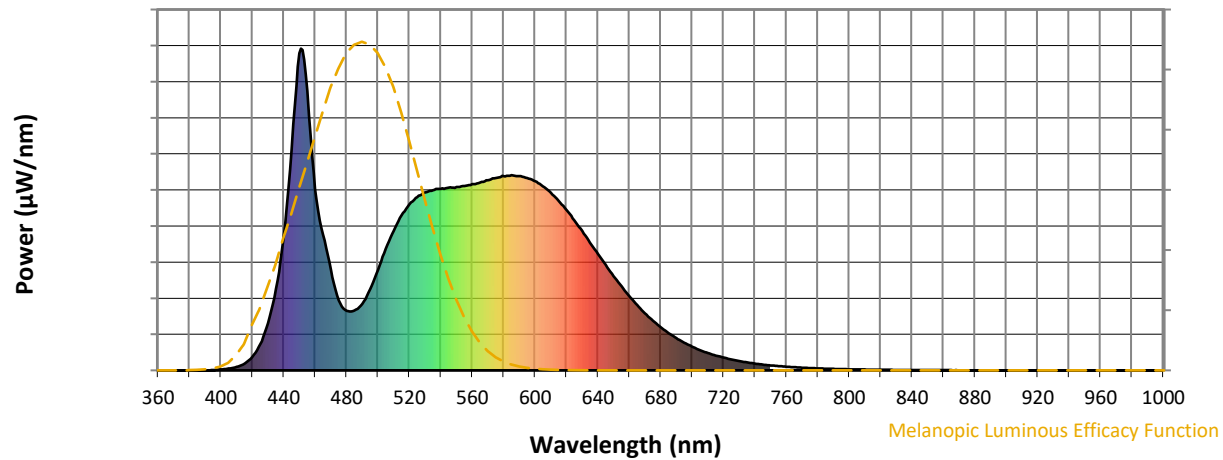
Scotopic Lumens: NR

S/P: 1.88

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.92

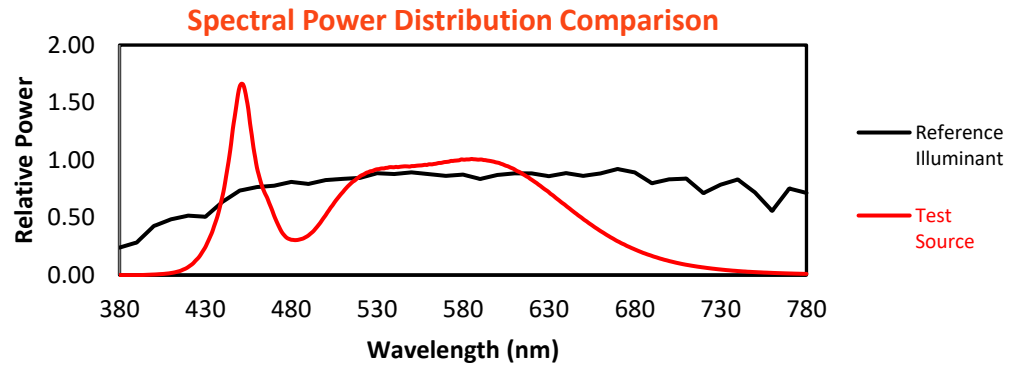
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	207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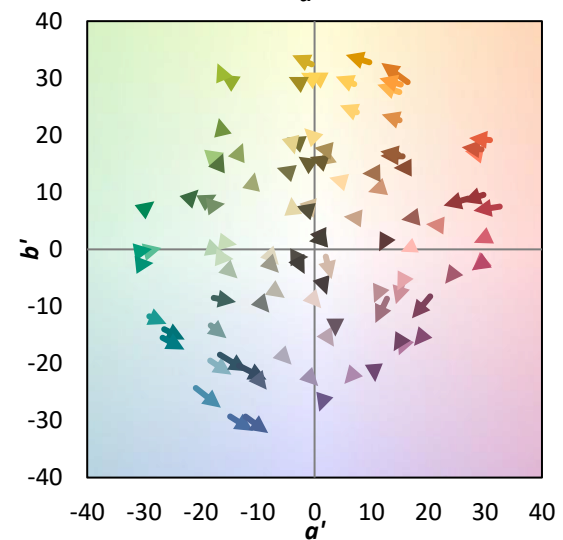
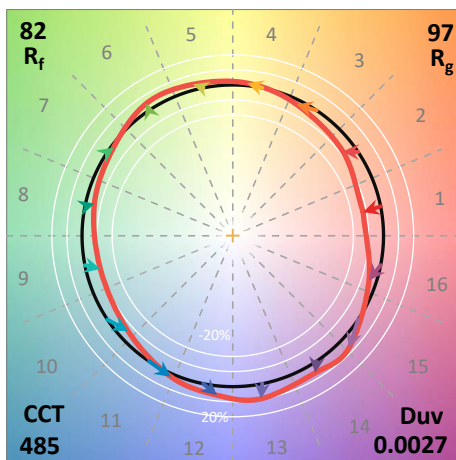
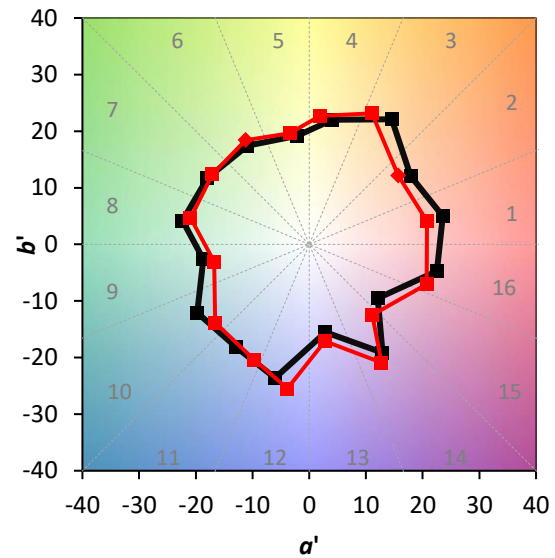
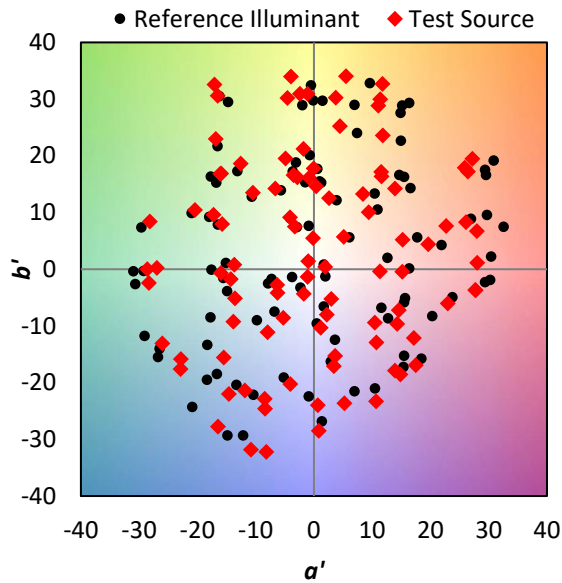
TM-30-18

Summary

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

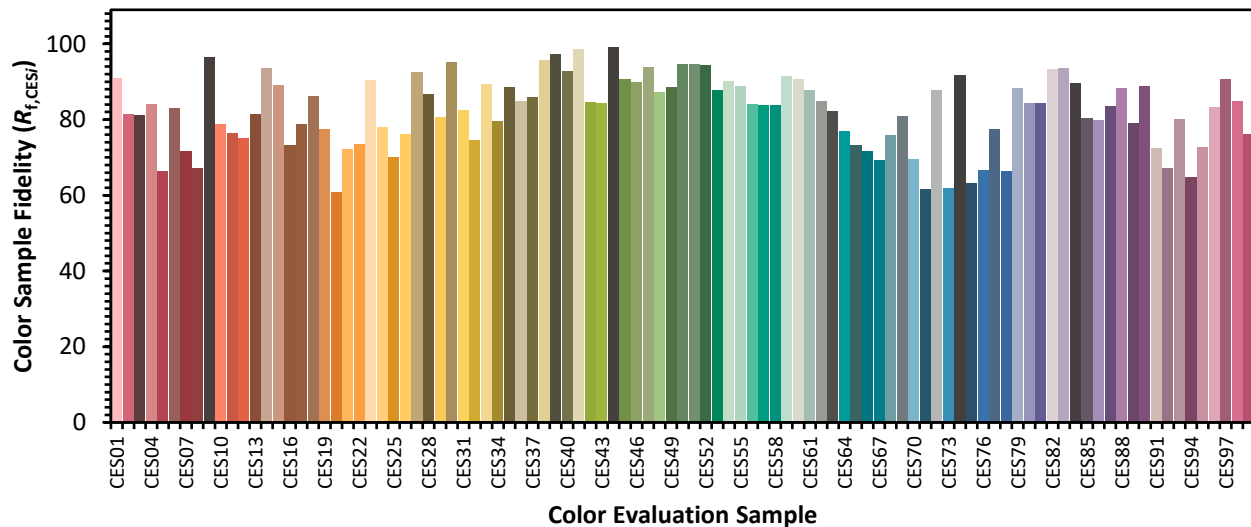


Color Vector Graphics

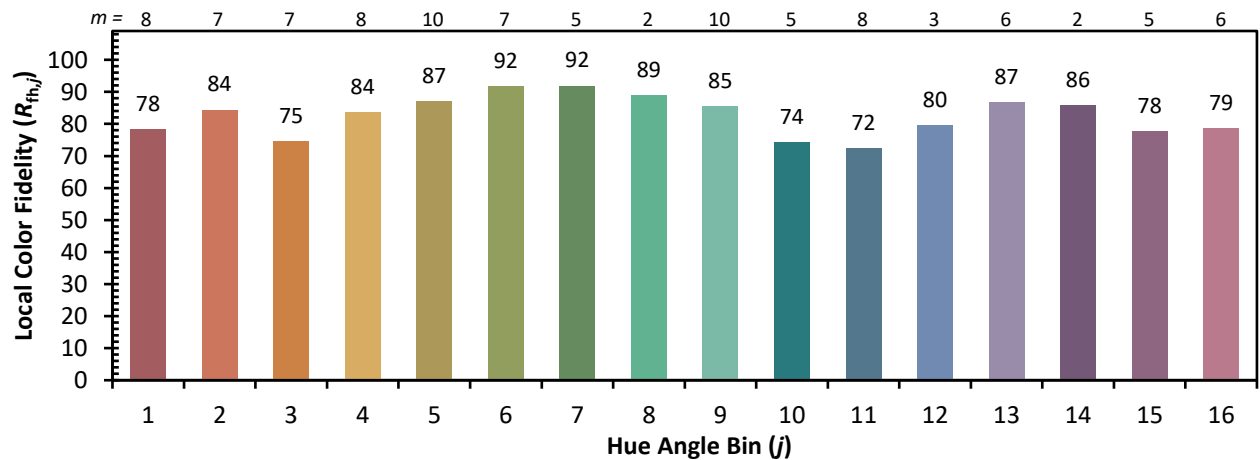
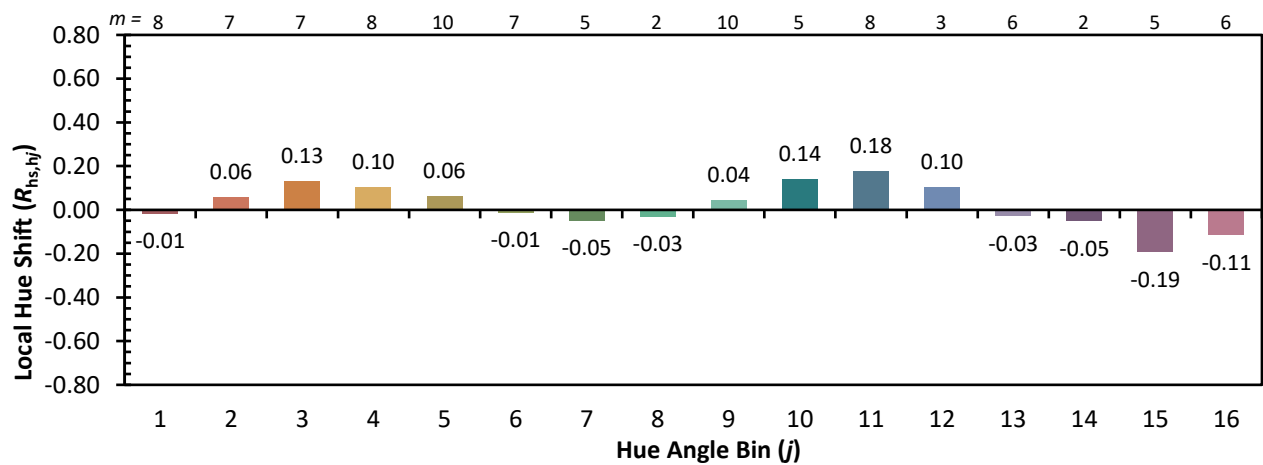
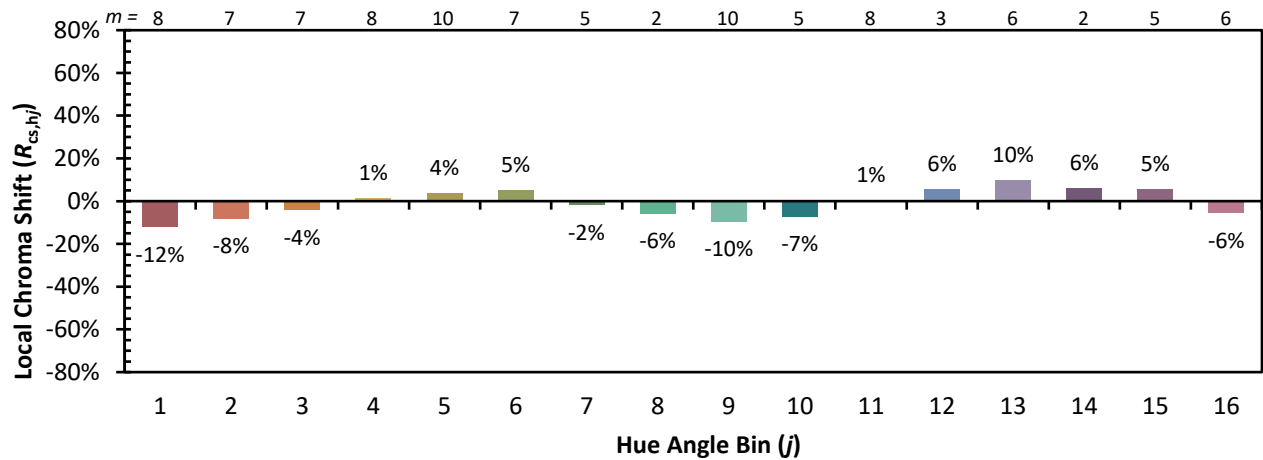


Individual Sample Fidelity Index ($R_{f,i}$)

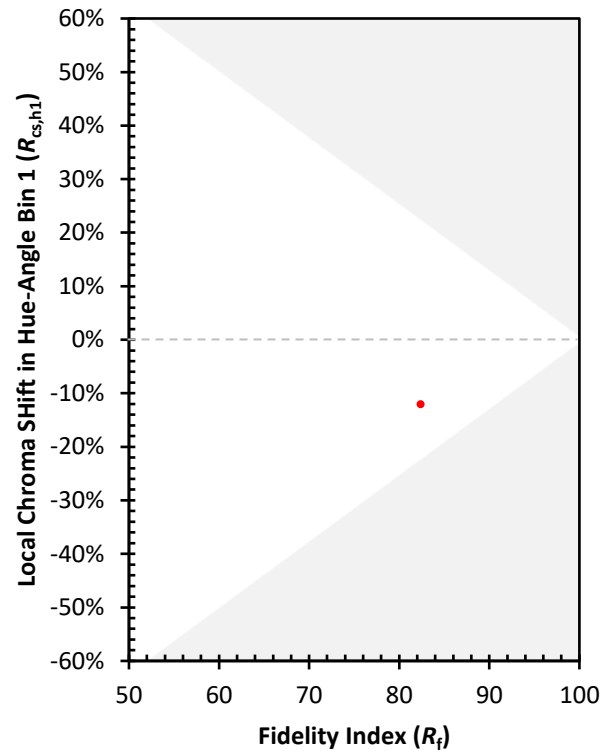
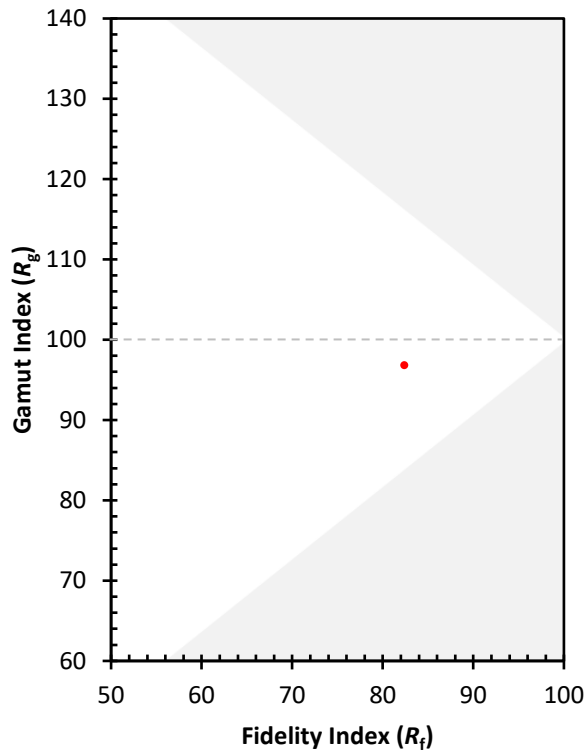
CES01 = 85	CES26 = 76	CES51 = 95	CES76 = 67
CES02 = 60	CES27 = 92	CES52 = 94	CES77 = 77
CES03 = 30	CES28 = 87	CES53 = 88	CES78 = 66
CES04 = 69	CES29 = 81	CES54 = 90	CES79 = 88
CES05 = 47	CES30 = 95	CES55 = 89	CES80 = 84
CES06 = 50	CES31 = 82	CES56 = 84	CES81 = 84
CES07 = 40	CES32 = 74	CES57 = 84	CES82 = 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)