

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: STREETWORKS

Report Number: P868096

Luminaire Tested: **MEM2-HSN-SA-90-722-U-T4W**

Issue Date: 08/21/2024

Test Information

Test Method: LM-79-08
Report Number: P868096
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HSN-SA-90-722-U-T4W
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 90W 70CRI 2200K
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC
Light Source: (20) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10884.6 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

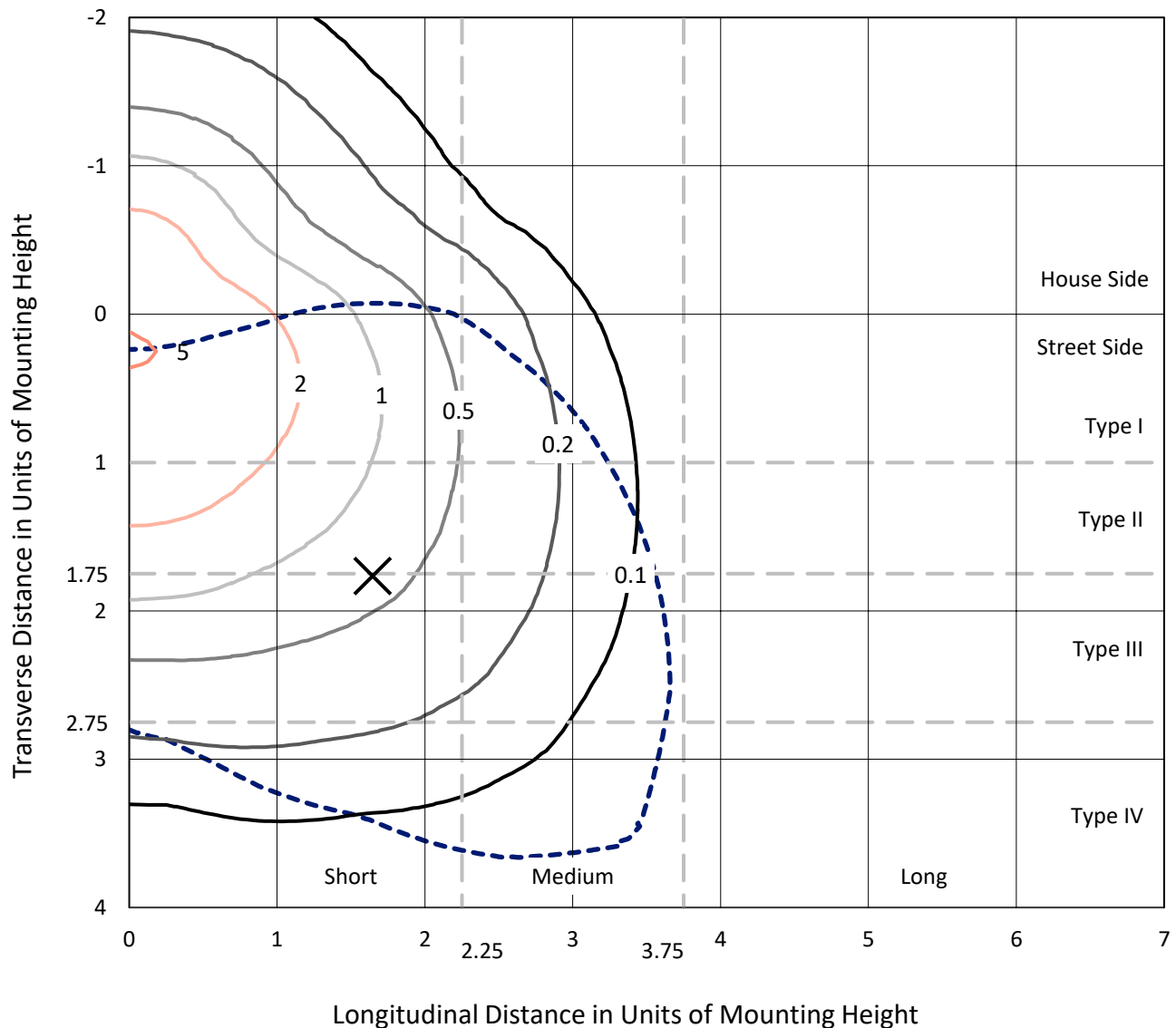
Input Watts (W): 90
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 6.20%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: MEM2-HSN-SA-90-722-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

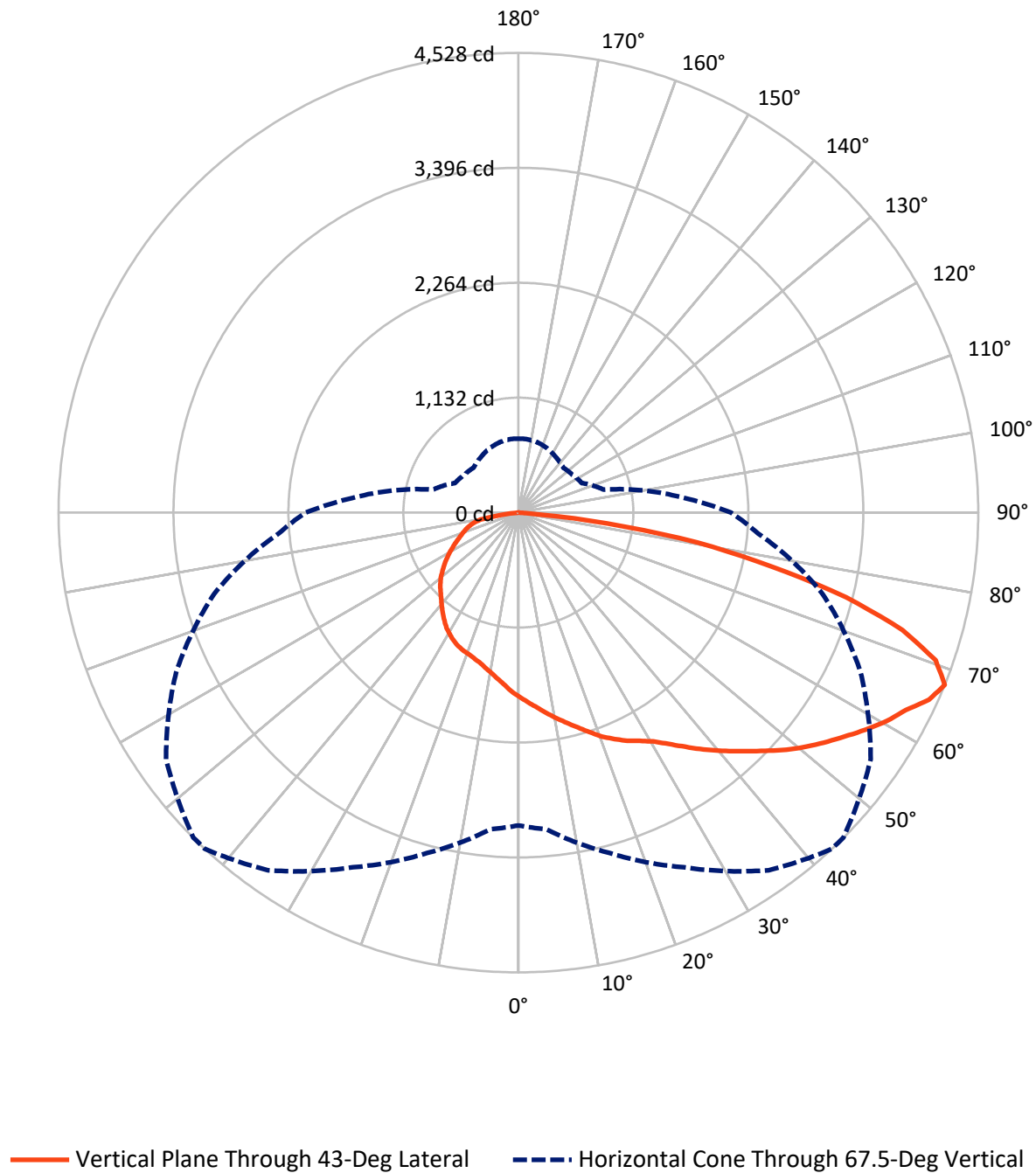


Based on 20 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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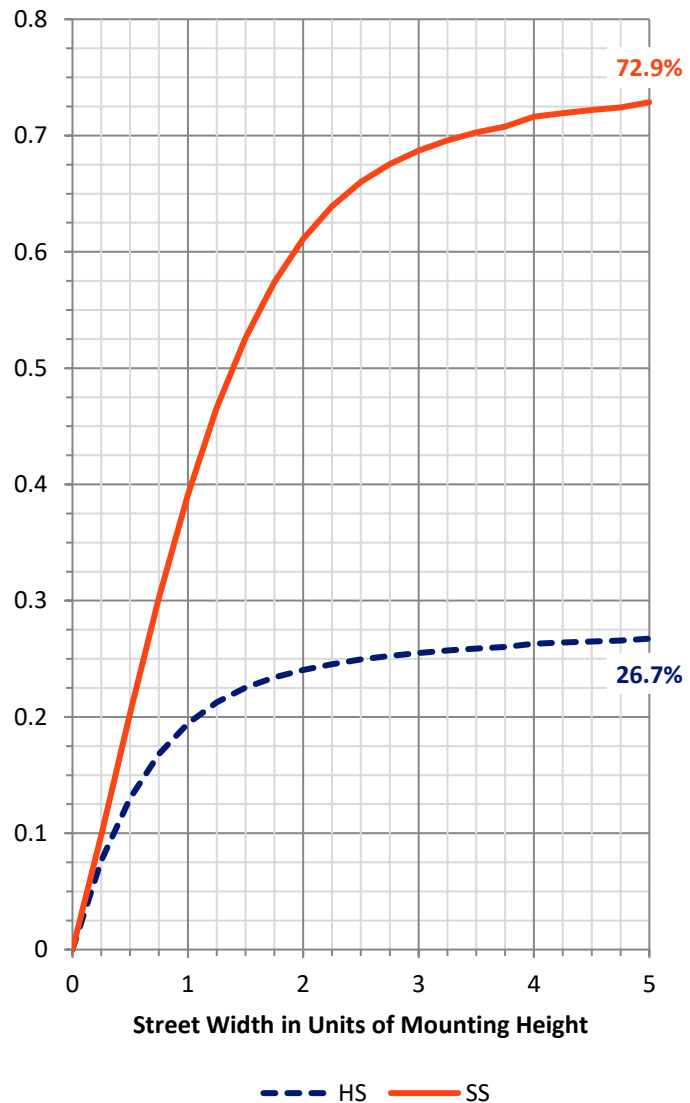
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2928.0	0.0	2928.0
	% Fixture	26.9	0.0	26.9
Street Side	Lumens	7956.6	0.0	7956.6
	% Fixture	73.1	0.0	73.1
Total	Lumens	10884.6	0.0	10884.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.9	1.6
10°-20°	531.0	4.9
20°-30°	906.0	8.3
30°-40°	1321.4	12.1
40°-50°	1775.1	16.3
50°-60°	2173.1	20.0
60°-70°	2287.0	21.0
70°-80°	1493.1	13.7
80°-90°	224.0	2.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	10884.6	100.0
0°-180°	10884.6	100.0

Coefficient of Utilization



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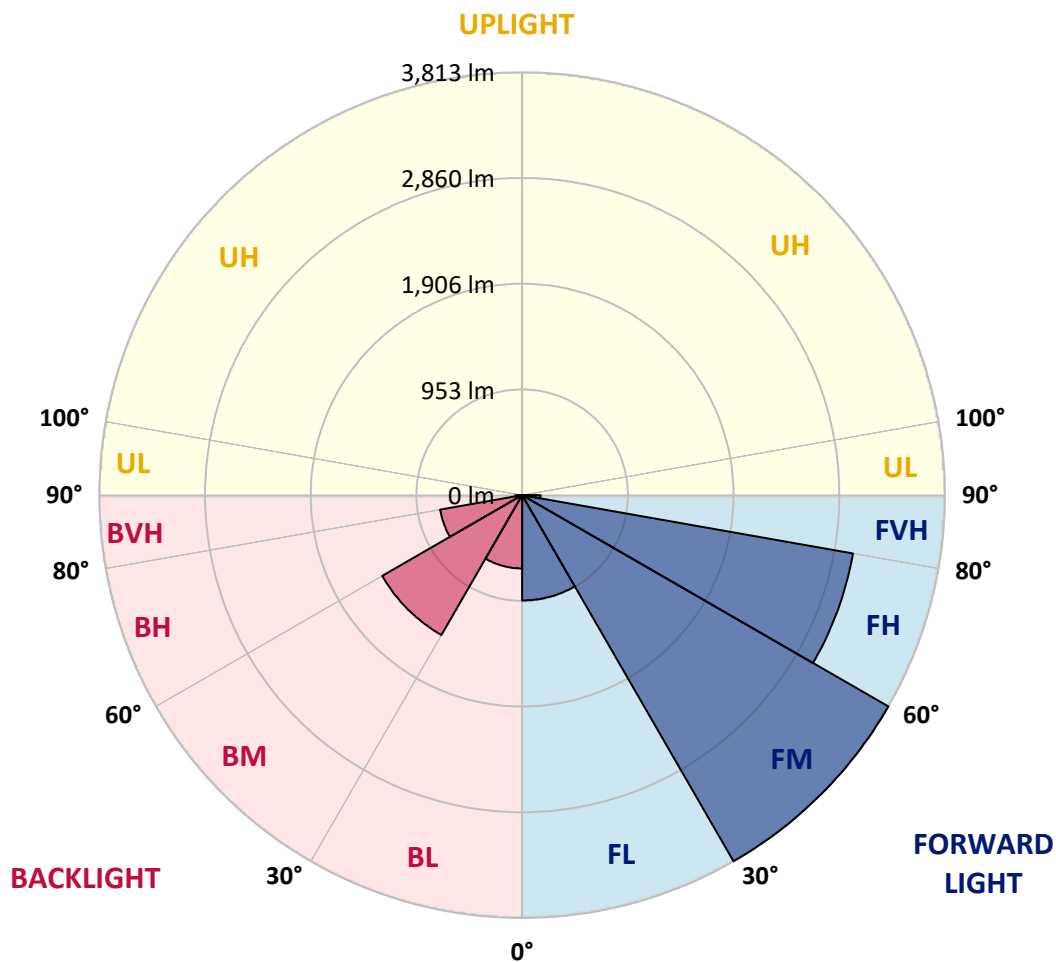
CATALOG NUMBER: MEM2-HSN-SA-90-722-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	949.9	8.7			
FM	(30°-60°)	3812.8	35.0			
FH	(60°-80°)	3028.7	27.8			G2/5000
FVH	(80°-90°)	165.2	1.5			G2/225
BL	(0°-30°)	661.0	6.1	B2/1000		
BM	(30°-60°)	1456.8	13.4	B2/2500		
BH	(60°-80°)	751.4	6.9	B2/1000		G2/1000
BVH	(80°-90°)	58.7	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0
2.5°	1900.7	1898.4	1891.8	1887.4	1874.2	1872.0	1872.0	1858.8	1843.4	1834.6	1825.8
5°	1986.5	1975.5	1971.1	1962.3	1940.3	1927.1	1931.5	1907.3	1876.4	1854.4	1830.2
7.5°	2063.6	2059.2	2043.8	2032.8	2006.4	1993.2	1988.7	1951.3	1911.7	1878.6	1839.0
10°	2156.1	2145.1	2136.3	2114.3	2079.0	2059.2	2052.6	2004.2	1953.5	1909.5	1856.6
12.5°	2239.8	2226.6	2215.6	2193.6	2158.3	2125.3	2116.5	2061.4	1997.6	1938.1	1872.0
15°	2303.7	2305.9	2294.9	2275.1	2235.4	2195.8	2189.2	2116.5	2039.4	1966.7	1887.4
17.5°	2363.2	2372.0	2365.4	2352.1	2312.5	2272.9	2266.2	2184.8	2092.3	1999.8	1905.1
20°	2420.4	2420.4	2418.2	2409.4	2380.8	2354.3	2341.1	2259.6	2142.9	2035.0	1929.3
22.5°	2453.4	2462.3	2462.3	2462.3	2444.6	2422.6	2418.2	2338.9	2211.2	2079.0	1951.3
25°	2504.1	2515.1	2515.1	2510.7	2495.3	2488.7	2482.1	2407.2	2277.3	2129.7	1975.5
27.5°	2612.0	2609.8	2592.2	2570.2	2548.2	2545.9	2537.1	2484.3	2354.3	2184.8	2008.6
30°	2761.8	2766.2	2744.2	2675.9	2625.2	2614.2	2616.4	2570.2	2444.6	2248.6	2046.0
32.5°	2990.8	2990.8	2904.9	2816.8	2744.2	2715.5	2708.9	2669.3	2537.1	2319.1	2087.9
35°	3162.6	3156.0	3107.6	3004.0	2913.7	2832.3	2821.2	2768.4	2640.7	2398.4	2134.1
37.5°	3292.6	3305.8	3268.3	3189.0	3100.9	2960.0	2938.0	2863.1	2735.4	2475.5	2180.4
40°	3543.6	3510.6	3420.3	3347.6	3241.9	3085.5	3065.7	2973.2	2832.3	2561.4	2237.6
42.5°	3726.4	3680.2	3576.7	3479.8	3347.6	3211.1	3193.4	3092.1	2944.6	2658.3	2297.1
45°	3988.5	3885.0	3741.8	3655.9	3468.7	3347.6	3325.6	3215.5	3061.3	2761.8	2372.0
47.5°	4241.8	4061.2	3909.2	3869.6	3600.9	3495.2	3477.6	3349.8	3186.8	2874.1	2444.6
50°	4208.7	4089.8	4039.2	4001.7	3715.4	3633.9	3616.3	3486.4	3314.6	2993.0	2517.3
52.5°	4125.1	4136.1	4138.3	4048.0	3823.3	3763.9	3746.2	3633.9	3446.7	3096.5	2587.8
55°	4213.1	4226.4	4224.2	4087.6	3948.9	3893.8	3882.8	3783.7	3574.5	3193.4	2638.4
57.5°	4347.5	4303.4	4296.8	4186.7	4083.2	4032.6	4019.3	3933.4	3682.4	3263.9	2678.1
60°	4371.7	4283.6	4312.3	4208.7	4184.5	4169.1	4164.7	4063.4	3783.7	3321.2	2693.5
62.5°	4100.8	4085.4	4197.7	4155.9	4237.4	4281.4	4283.6	4155.9	3838.7	3343.2	2678.1
65°	3638.3	3700.0	3942.3	4063.4	4316.7	4442.2	4437.8	4210.9	3832.1	3279.3	2583.4
67.5°	3081.1	3129.6	3470.9	3854.2	4299.0	4528.1	4525.9	4235.2	3717.6	3103.2	2369.8
70°	2336.7	2488.7	2973.2	3477.6	4061.2	4358.5	4395.9	4098.6	3455.5	2781.6	2046.0
72.5°	1777.3	1801.5	2387.4	2915.9	3636.1	3955.5	3948.9	3662.6	3017.3	2343.3	1704.6
75°	1262.0	1314.8	1797.1	2259.6	2979.8	3334.4	3319.0	3004.0	2407.2	1823.6	1303.8
77.5°	940.4	960.2	1314.8	1676.0	2228.8	2548.2	2541.5	2220.0	1770.7	1339.0	971.2
80°	687.1	720.2	947.0	1169.5	1510.8	1786.1	1777.3	1473.4	1136.4	936.0	709.2
82.5°	385.4	409.6	550.6	707.0	797.3	883.2	845.7	707.0	517.6	403.0	348.0
85°	11.0	13.2	19.8	24.2	41.8	70.5	77.1	68.3	81.5	50.7	55.1
87.5°	4.4	4.4	4.4	4.4	4.4	6.6	6.6	6.6	6.6	6.6	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CATALOG NUMBER: MEM2-HSN-SA-90-722-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0	1817.0
2.5°	1821.4	1812.6	1794.9	1783.9	1777.3	1768.5	1755.3	1746.5	1739.9	1748.7	1746.5
5°	1819.2	1801.5	1770.7	1748.7	1726.7	1709.0	1689.2	1673.8	1665.0	1669.4	1667.2
7.5°	1819.2	1797.1	1748.7	1713.4	1680.4	1654.0	1632.0	1612.1	1603.3	1605.5	1603.3
10°	1828.0	1797.1	1733.3	1682.6	1638.6	1607.7	1583.5	1565.9	1559.3	1565.9	1568.1
12.5°	1836.8	1797.1	1720.1	1656.2	1598.9	1565.9	1543.9	1532.9	1537.3	1539.5	1541.7
15°	1841.2	1794.9	1706.8	1625.4	1561.5	1526.2	1513.0	1510.8	1521.8	1532.9	1535.1
17.5°	1852.2	1792.7	1687.0	1594.5	1528.5	1499.8	1493.2	1502.0	1524.0	1539.5	1543.9
20°	1865.4	1797.1	1665.0	1557.1	1495.4	1473.4	1484.4	1504.2	1530.7	1552.7	1557.1
22.5°	1878.6	1799.3	1645.2	1524.0	1460.2	1455.8	1480.0	1508.6	1539.5	1561.5	1565.9
25°	1894.0	1799.3	1618.7	1482.2	1424.9	1431.5	1469.0	1506.4	1535.1	1563.7	1568.1
27.5°	1909.5	1803.7	1590.1	1436.0	1380.9	1400.7	1447.0	1493.2	1524.0	1552.7	1559.3
30°	1935.9	1812.6	1565.9	1396.3	1336.8	1363.3	1418.3	1471.2	1504.2	1535.1	1541.7
32.5°	1962.3	1825.8	1546.1	1354.5	1292.8	1323.6	1385.3	1444.8	1480.0	1508.6	1513.0
35°	1997.6	1843.4	1530.7	1312.6	1248.7	1273.0	1339.0	1405.1	1444.8	1466.8	1477.8
37.5°	2035.0	1867.6	1517.4	1275.2	1200.3	1222.3	1292.8	1363.3	1405.1	1427.1	1431.5
40°	2081.2	1900.7	1508.6	1239.9	1154.0	1171.7	1242.1	1319.2	1358.9	1374.3	1383.1
42.5°	2131.9	1935.9	1502.0	1204.7	1103.4	1121.0	1195.9	1270.8	1310.4	1323.6	1330.2
45°	2195.8	1982.1	1497.6	1167.3	1061.5	1077.0	1151.8	1226.7	1259.8	1277.4	1284.0
47.5°	2255.2	2028.4	1484.4	1123.2	1015.3	1037.3	1105.6	1171.7	1209.1	1220.1	1226.7
50°	2314.7	2068.0	1458.0	1074.8	973.5	993.3	1054.9	1103.4	1132.0	1145.2	1149.6
52.5°	2372.0	2096.7	1416.1	1024.1	929.4	942.6	993.3	1039.5	1059.3	1063.7	1077.0
55°	2409.4	2112.1	1356.7	964.6	885.4	889.8	927.2	969.0	980.1	982.3	982.3
57.5°	2435.8	2103.3	1286.2	905.2	841.3	841.3	863.3	896.4	900.8	903.0	907.4
60°	2440.2	2072.4	1195.9	850.1	792.9	786.2	808.3	828.1	830.3	834.7	839.1
62.5°	2407.2	2004.2	1099.0	797.3	746.6	731.2	751.0	770.8	781.8	788.5	792.9
65°	2305.9	1865.4	988.9	744.4	702.6	676.1	700.4	733.4	755.4	757.6	757.6
67.5°	2094.5	1640.8	872.1	689.3	649.7	625.5	656.3	691.5	718.0	729.0	726.8
70°	1775.1	1391.9	764.2	632.1	596.8	581.4	614.5	654.1	676.1	684.9	689.3
72.5°	1429.3	1114.4	669.5	574.8	550.6	541.8	574.8	614.5	645.3	658.5	660.7
75°	1112.2	876.5	590.2	515.4	495.5	497.7	533.0	572.6	605.7	612.3	592.4
77.5°	863.3	698.2	515.4	444.9	433.9	449.3	484.5	526.4	546.2	552.8	539.6
80°	623.3	535.2	416.2	350.2	350.2	374.4	405.2	453.7	460.3	451.5	455.9
82.5°	295.1	259.9	204.8	169.6	158.6	176.2	187.2	202.6	220.2	224.6	213.6
85°	39.6	26.4	19.8	22.0	19.8	13.2	8.8	8.8	8.8	6.6	6.6
87.5°	6.6	6.6	4.4	4.4	4.4	4.4	4.4	4.4	2.2	2.2	2.2
90°	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

Streetworks

Report Number: SP1-2407-157-2

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-30-722-U-5WQ-2

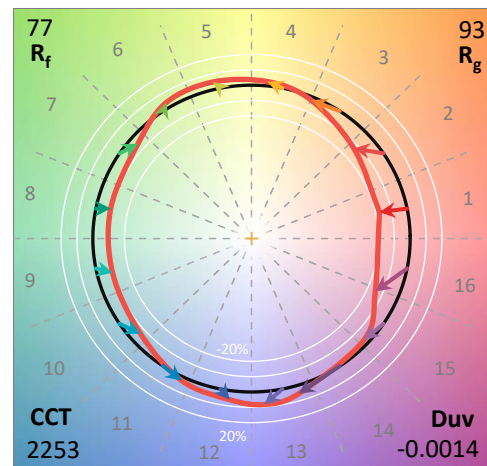
Data in this report applies to families of products including MEM2-HTN-SA-30-722-U-5WQ-2

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-157-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/20/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-SA-30-722-U-5WQ-2**
 Description: Epic Modern Light Square 30W 5WQ Optic and Flare Trim

Spectral Parameters

CCT (K):	2253	CRI (Ra):	70.6		
CIE u':	0.2868	R1:	68.4	R9:	-36.0
CIE v':	0.5332	R2:	88.7	R10:	78.2
Duv:	-0.0014	R3:	85.4	R11:	61.0
CIE x:	0.4974	R4:	63.5	R12:	74.2
CIE y:	0.4110	R5:	69.0	R13:	72.8
CIE z:	0.0915	R6:	88.9	R14:	92.2
Peak Wavelength (nm):	603	R7:	68.5	R15:	58.0
Dominant Wavelength (nm):	587	R8:	32.0		
Purity:	72.69432				
Rf:	76.9				
Rg:	92.7				



Test Conditions

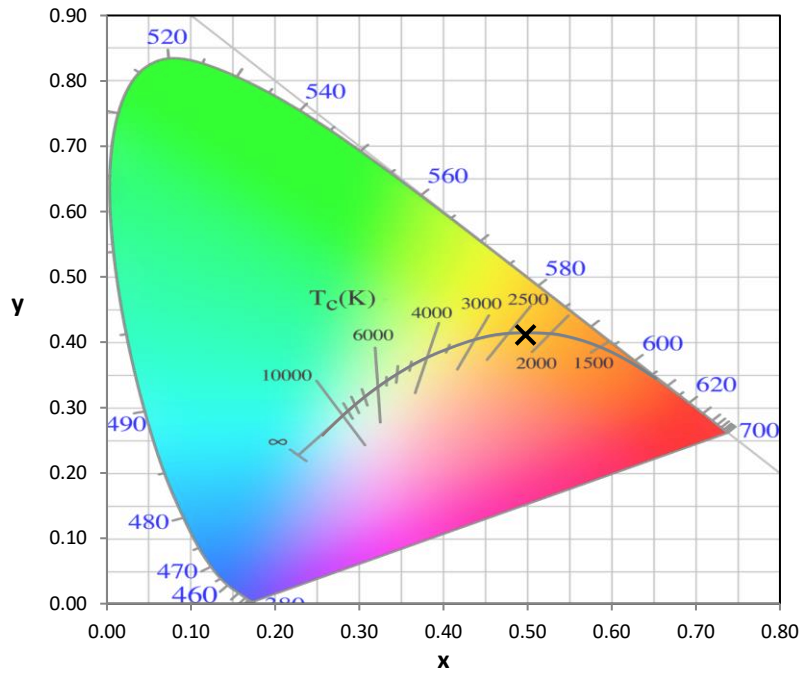
Stabilization Time: 29M
 Operation Time: 1H 29M
 Sphere Temperature (°C): 24.1

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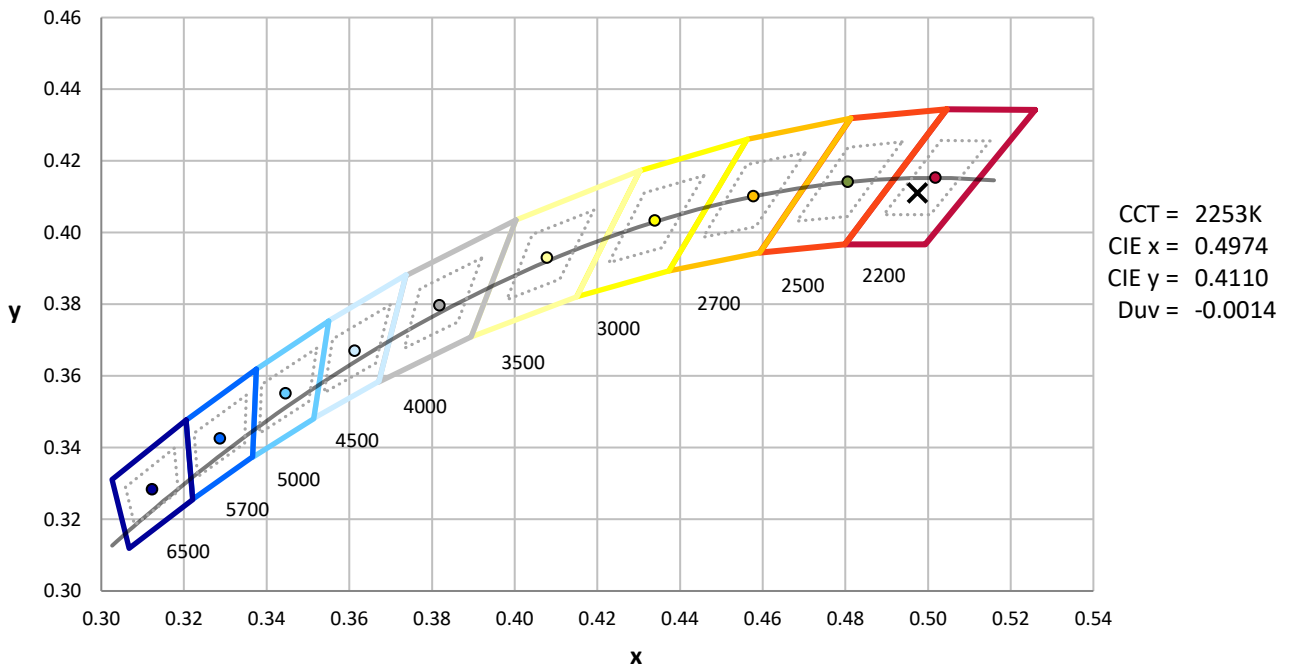
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



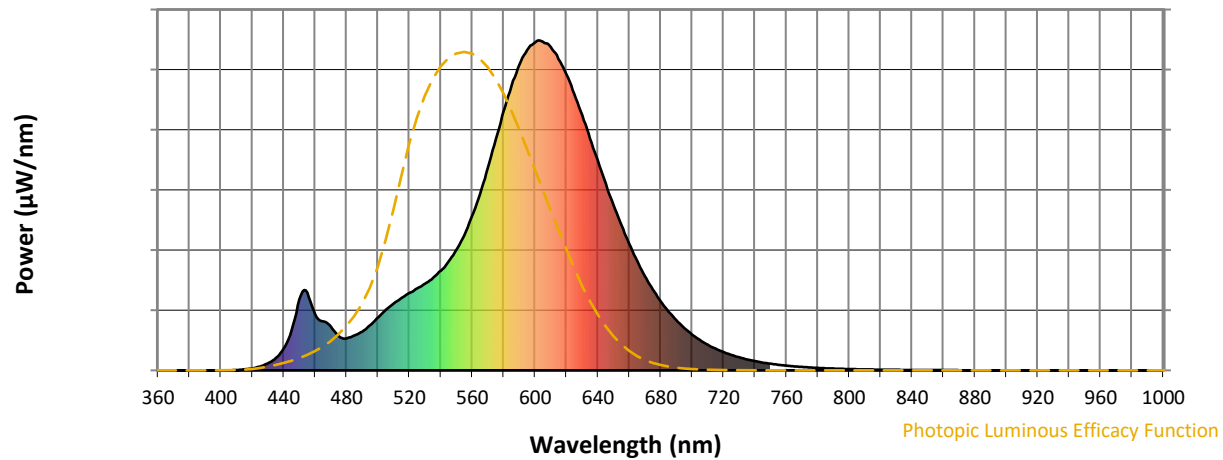
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 4-step quadrangle

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Photopic Flux vs. Wavelength

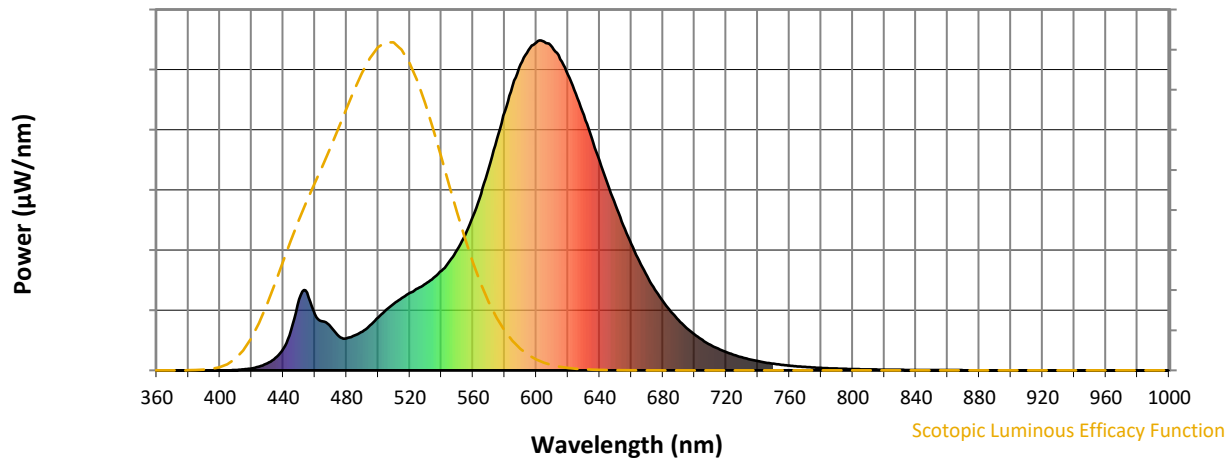


Photopic Lumens: NR

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



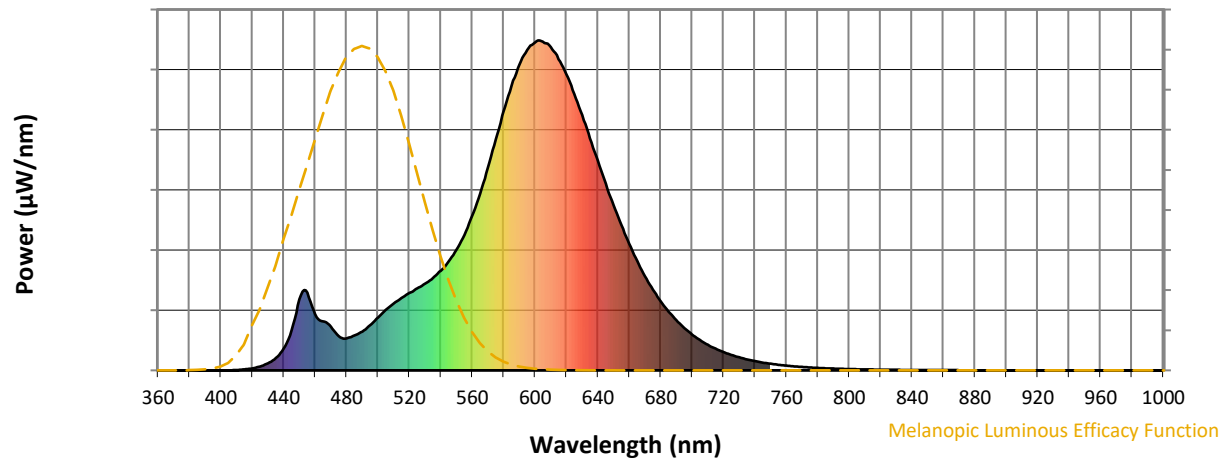
Scotopic Lumens: NR

S/P: 0.96

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.71

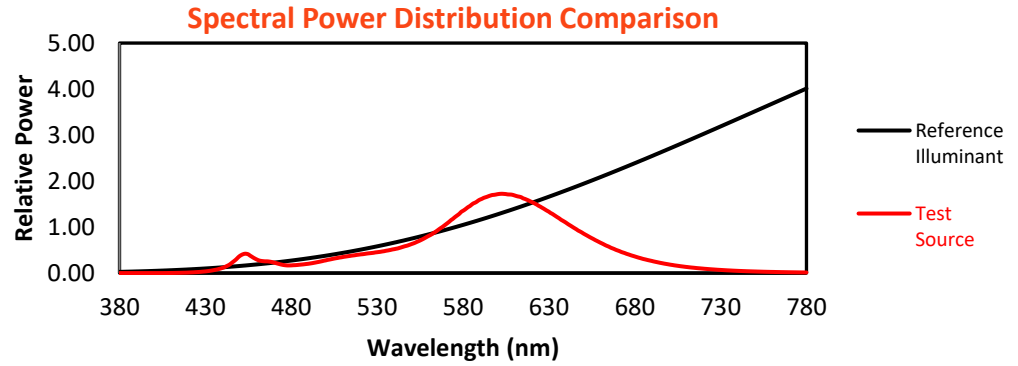
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

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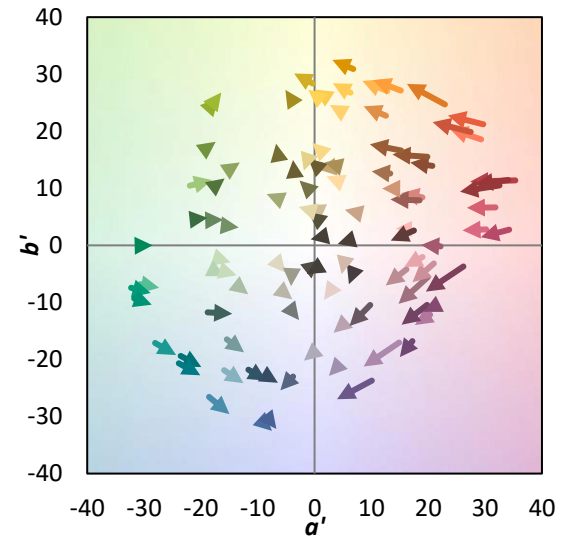
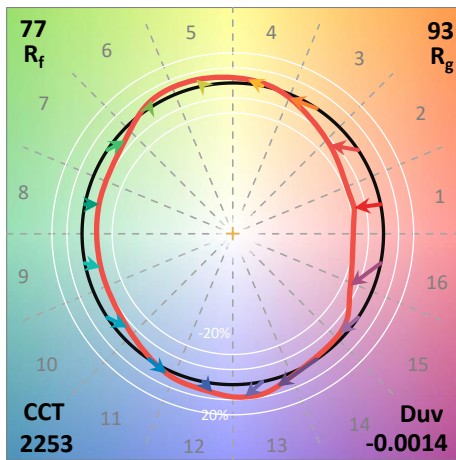
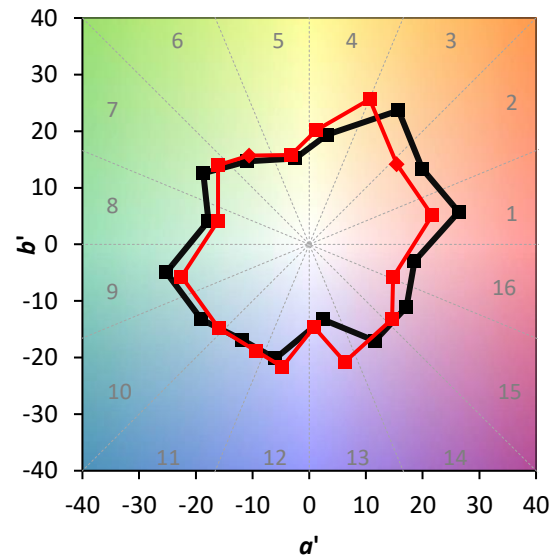
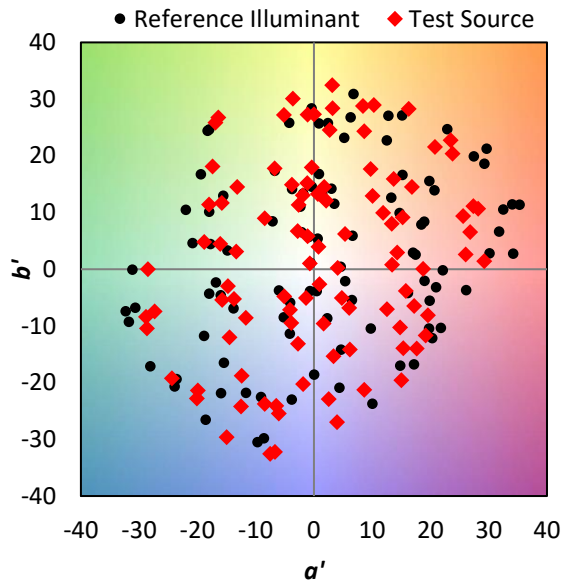
TM-30-18

Summary

$R_f = 76.9$
 $R_g = 92.7$
 $CIE R_a = 70.6$
 $R_g = -36.0$

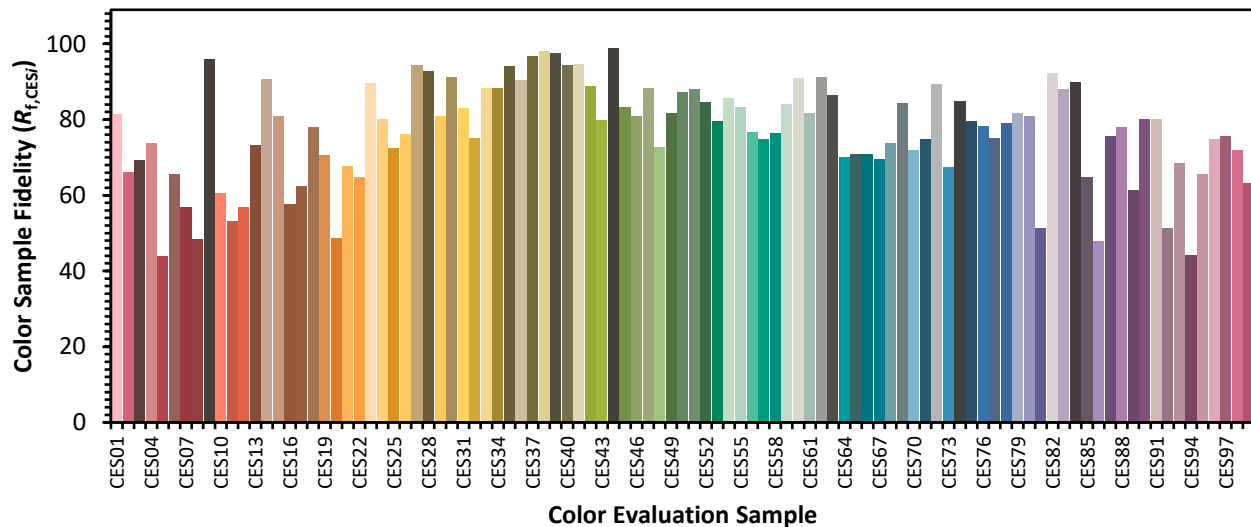


Color Vector Graphics

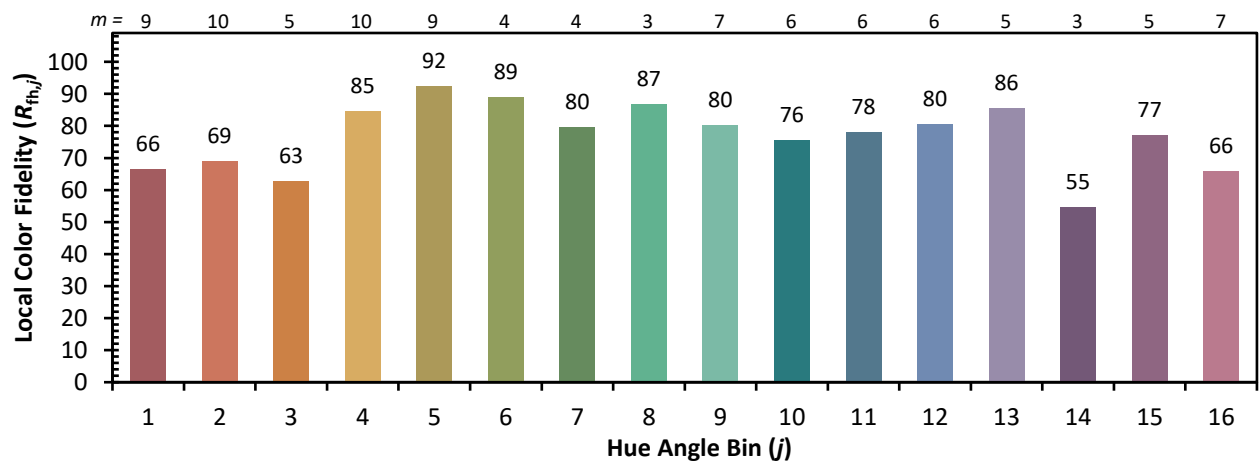
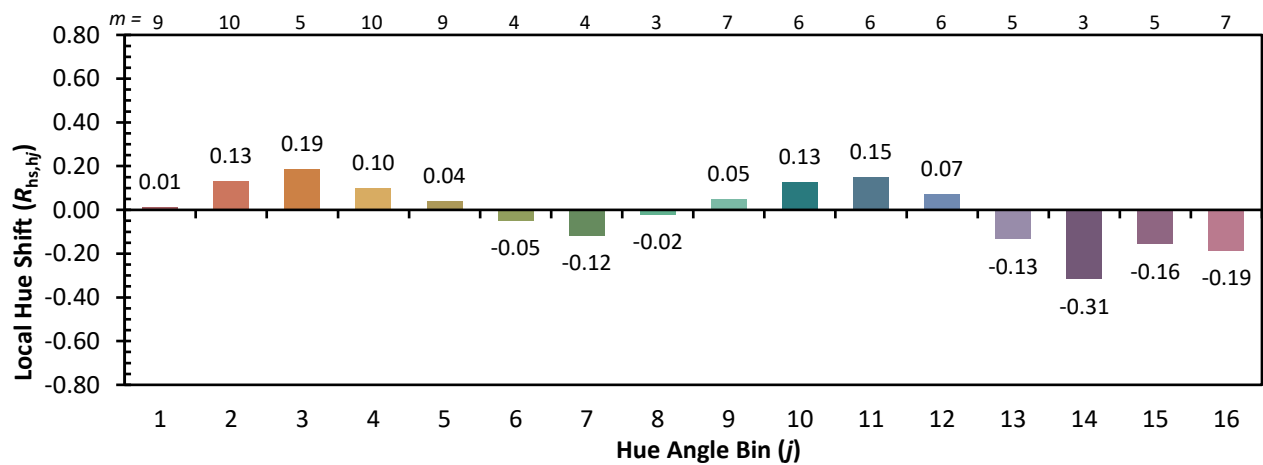
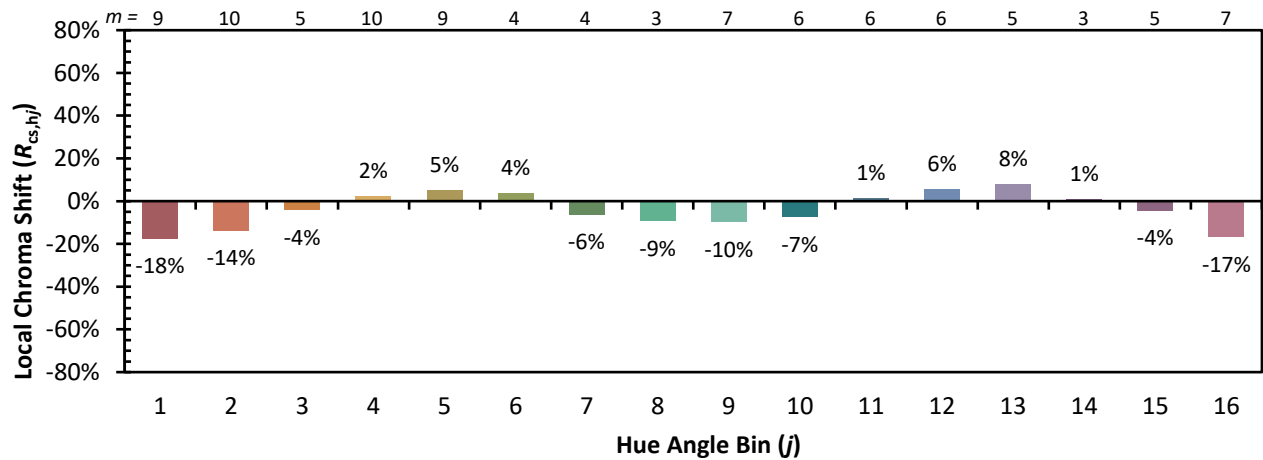


Individual Sample Fidelity Index ($R_{f,i}$)

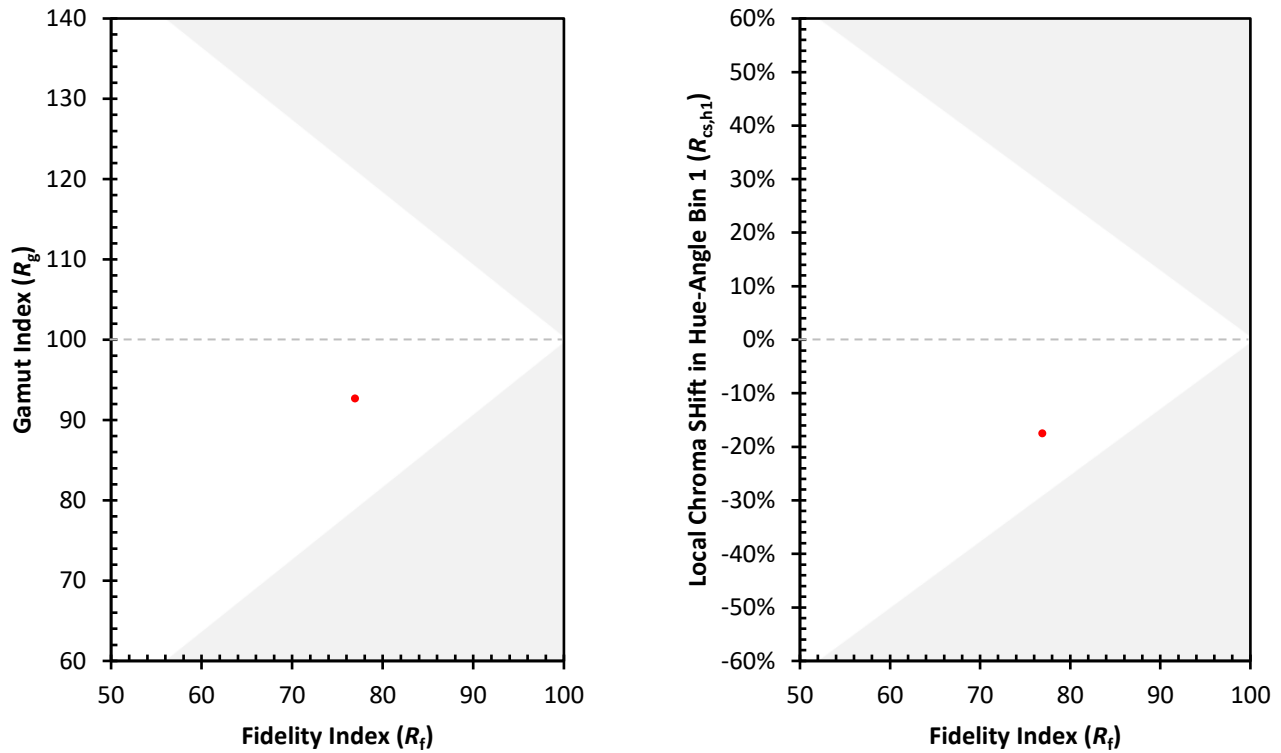
CES01 = 87	CES26 = 76	CES51 = 88	CES76 = 78
CES02 = 65	CES27 = 94	CES52 = 85	CES77 = 75
CES03 = 32	CES28 = 93	CES53 = 80	CES78 = 79
CES04 = 72	CES29 = 81	CES54 = 86	CES79 = 82
CES05 = 51	CES30 = 91	CES55 = 83	CES80 = 81
CES06 = 52	CES31 = 83	CES56 = 77	CES81 = 51
CES07 = 44	CES32 = 75	CES57 = 75	CES82 = 92
CES08 = 42	CES33 = 88	CES58 = 76	CES83 = 88
CES09 = 29	CES34 = 88	CES59 = 84	CES84 = 90
CES10 = 79	CES35 = 94	CES60 = 91	CES85 = 65
CES11 = 62	CES36 = 90	CES61 = 82	CES86 = 48
CES12 = 68	CES37 = 97	CES62 = 91	CES87 = 76
CES13 = 45	CES38 = 98	CES63 = 86	CES88 = 78
CES14 = 75	CES39 = 97	CES64 = 70	CES89 = 61
CES15 = 72	CES40 = 94	CES65 = 71	CES90 = 80
CES16 = 48	CES41 = 95	CES66 = 71	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 70	CES92 = 51
CES18 = 57	CES43 = 80	CES68 = 74	CES93 = 68
CES19 = 74	CES44 = 99	CES69 = 84	CES94 = 44
CES20 = 68	CES45 = 83	CES70 = 72	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 75	CES96 = 75
CES22 = 81	CES47 = 88	CES72 = 89	CES97 = 76
CES23 = 92	CES48 = 73	CES73 = 68	CES98 = 72
CES24 = 92	CES49 = 82	CES74 = 85	CES99 = 63
CES25 = 73	CES50 = 87	CES75 = 80	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)