

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: P867977

Luminaire Tested: **MEM2-HSN-SA-90-740-U-T2U**

Issue Date: 08/21/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P867977  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: MEM2-HSN-SA-90-740-U-T2U  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 90W 70CRI 4000K  
FITXURE w/ TYPE II URBAN DISTRIBUTION OPTIC  
Light Source: (20) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

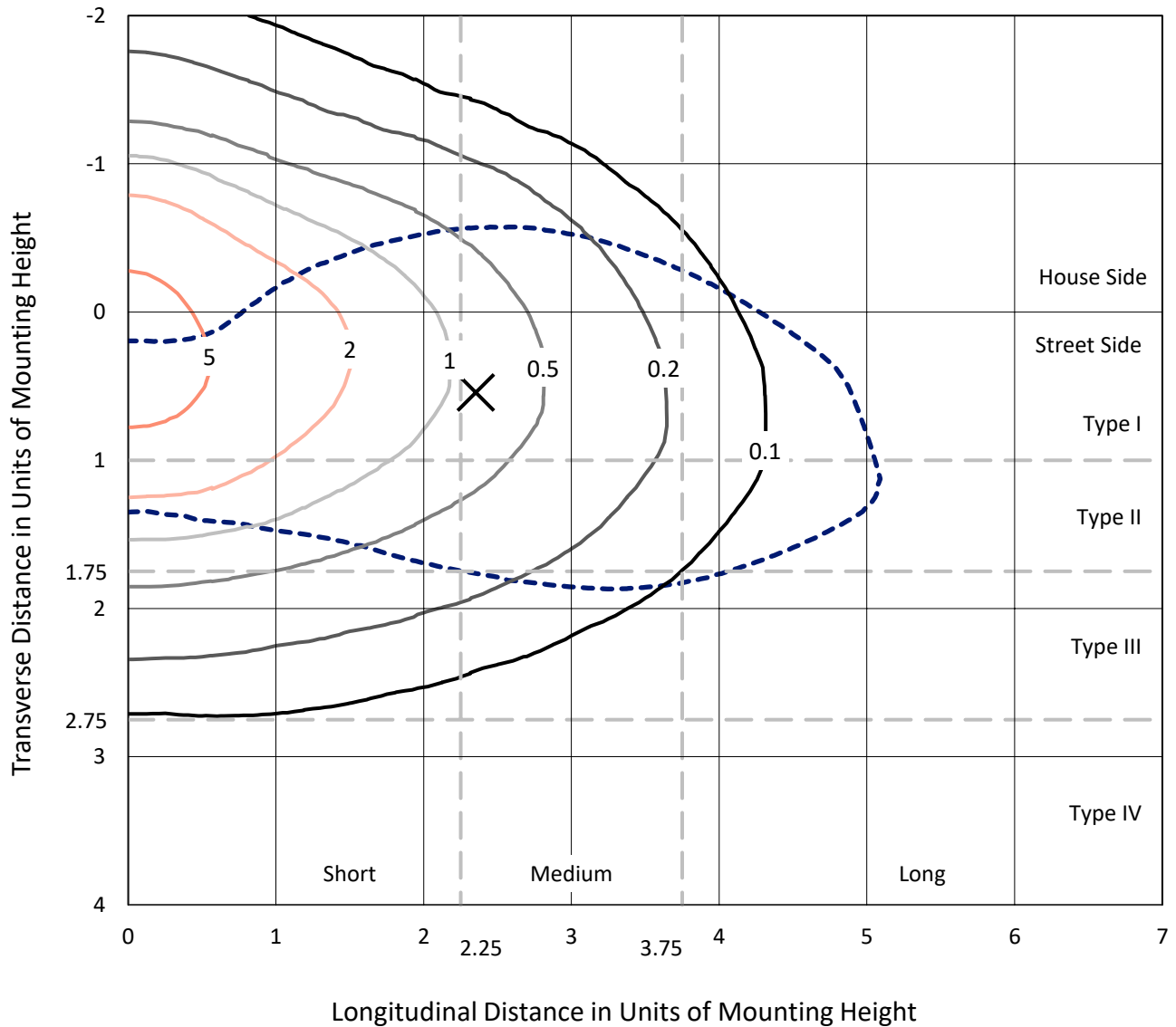
Lumens per Lamp: N/A  
Luminaire Lumens: 12942.5 lumens  
Efficiency: N/A  
Efficacy: 143.8 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

Input Watts (W): 90  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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-90-740-U-T2U

### Iso-Footcandle Lines of Horizontal Illumination

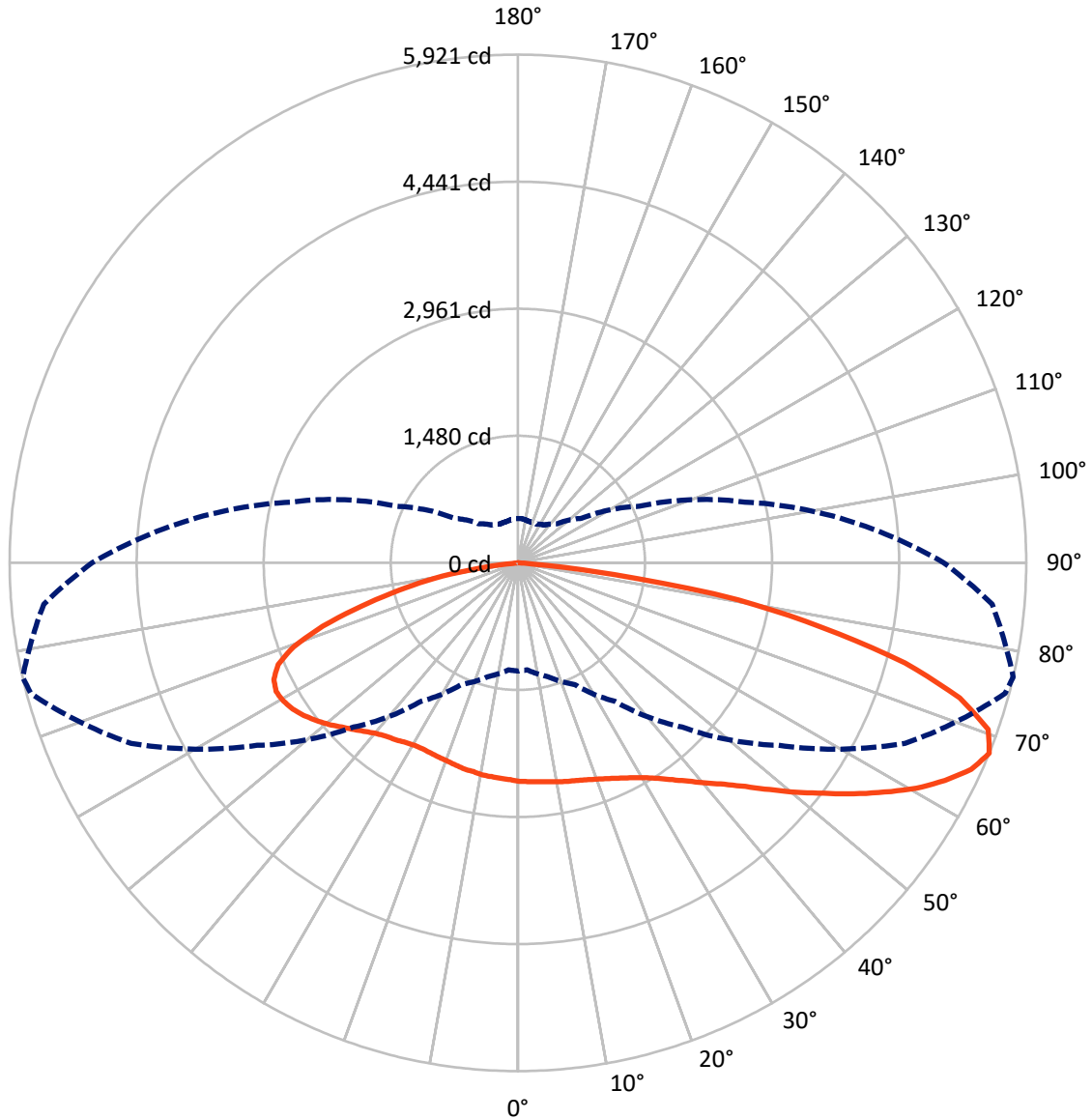
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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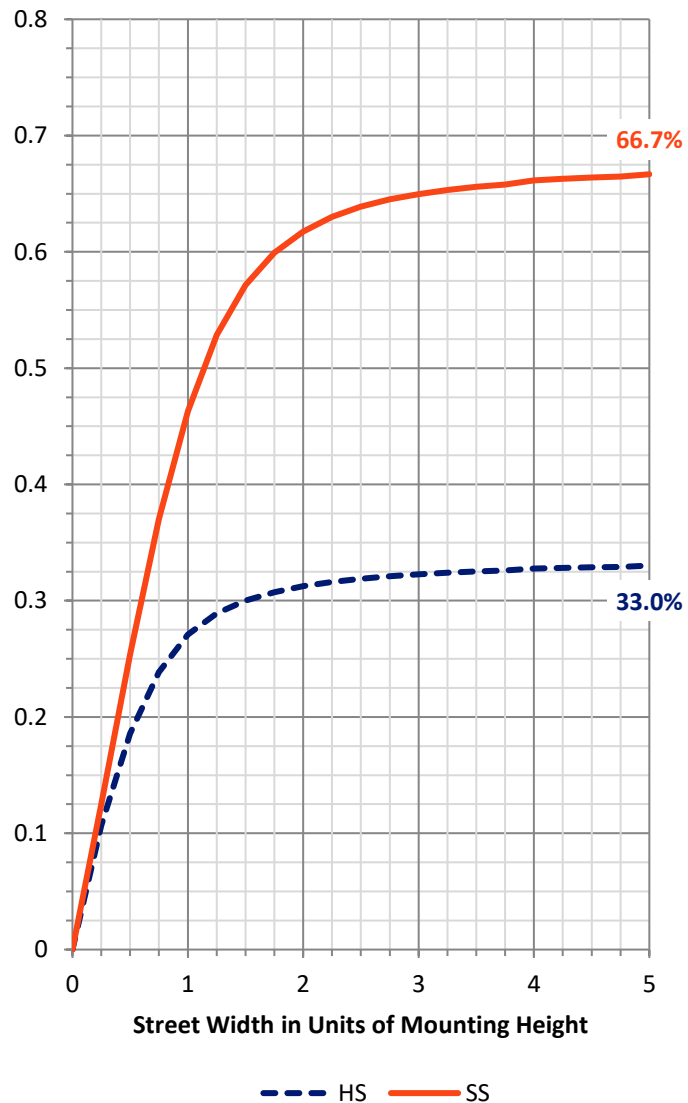
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4303.8	0.0	4303.8
	% Fixture	33.3	0.0	33.3
<b>Street Side</b>	Lumens	8638.7	0.0	8638.7
	% Fixture	66.7	0.0	66.7
<b>Total</b>	Lumens	12942.5	0.0	12942.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.6	1.9
10°-20°	741.7	5.7
20°-30°	1250.5	9.7
30°-40°	1774.6	13.7
40°-50°	2245.2	17.3
50°-60°	2459.5	19.0
60°-70°	2377.5	18.4
70°-80°	1599.0	12.4
80°-90°	249.9	1.9
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°	12942.5	100.0
0°-180°	12942.5	100.0



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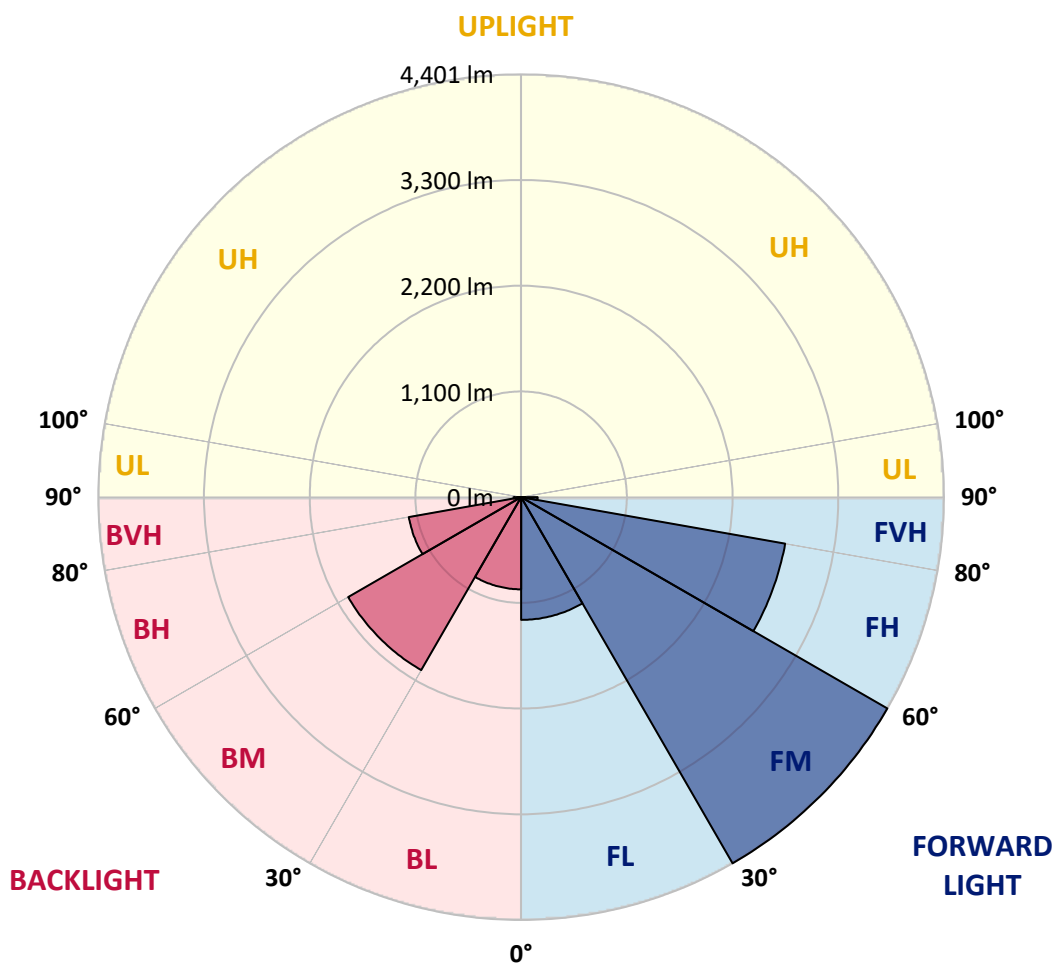
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1277.4	9.9			
FM (30°-60°)	4400.6	34.0			
FH (60°-80°)	2789.5	21.6			G2/5000
FVH (80°-90°)	171.1	1.3			G2/225
BL (0°-30°)	959.4	7.4	B2/1000		
BM (30°-60°)	2078.6	16.1	B2/2500		
BH (60°-80°)	1187.0	9.2	B3/2500		G3/2500
BVH (80°-90°)	78.8	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6
2.5°	2601.0	2598.4	2585.6	2590.7	2575.4	2585.6	2570.2	2557.4	2554.9	2552.3	2554.9
5°	2682.9	2670.1	2657.3	2649.6	2636.8	2631.7	2606.1	2580.5	2565.1	2562.6	2557.4
7.5°	2777.6	2772.5	2754.6	2744.3	2708.5	2690.6	2654.7	2608.6	2585.6	2575.4	2562.6
10°	2874.9	2887.7	2864.6	2844.2	2803.2	2764.8	2703.4	2644.5	2598.4	2593.3	2565.1
12.5°	2995.2	2992.6	2977.3	2941.4	2892.8	2839.0	2764.8	2682.9	2621.4	2611.2	2570.2
15°	3102.7	3100.2	3079.7	3046.4	2982.4	2915.8	2816.0	2721.3	2644.5	2629.1	2580.5
17.5°	3202.6	3197.4	3184.6	3148.8	3069.4	2987.5	2890.2	2764.8	2672.6	2654.7	2588.2
20°	3289.6	3294.7	3279.4	3243.5	3169.3	3082.2	2959.4	2821.1	2708.5	2688.0	2611.2
22.5°	3384.3	3386.9	3379.2	3366.4	3271.7	3179.5	3046.4	2885.1	2749.4	2729.0	2636.8
25°	3484.2	3486.7	3491.8	3484.2	3376.6	3276.8	3136.0	2964.5	2805.8	2777.6	2672.6
27.5°	3599.4	3601.9	3612.2	3596.8	3481.6	3376.6	3235.8	3049.0	2864.6	2833.9	2703.4
30°	3729.9	3740.2	3732.5	3727.4	3594.2	3491.8	3335.7	3136.0	2941.4	2903.0	2757.1
32.5°	3886.1	3883.5	3868.2	3852.8	3717.1	3609.6	3448.3	3248.6	3036.2	2992.6	2844.2
35°	3998.7	3998.7	3975.7	3968.0	3842.6	3729.9	3571.2	3374.1	3143.7	3102.7	2936.3
37.5°	4067.8	4078.1	4060.2	4065.3	3945.0	3840.0	3694.1	3502.1	3261.4	3225.6	3049.0
40°	4093.4	4119.0	4134.4	4154.9	4034.6	3945.0	3824.6	3640.3	3412.5	3371.5	3184.6
42.5°	4098.6	4137.0	4190.7	4234.2	4098.6	4024.3	3950.1	3781.1	3561.0	3525.1	3333.1
45°	4073.0	4055.0	4185.6	4190.7	4134.4	4088.3	4060.2	3950.1	3776.0	3717.1	3517.4
47.5°	3878.4	3857.9	3893.8	4057.6	4090.9	4116.5	4172.8	4147.2	3991.0	3945.0	3729.9
50°	3563.5	3553.3	3696.6	3873.3	3983.4	4113.9	4265.0	4336.6	4229.1	4201.0	3998.7
52.5°	3043.8	3015.7	3307.5	3650.6	3842.6	4088.3	4329.0	4531.2	4497.9	4457.0	4229.1
55°	2713.6	2713.6	2910.7	3338.2	3663.4	3996.2	4369.9	4736.0	4794.9	4748.8	4492.8
57.5°	2360.3	2388.5	2593.3	2887.7	3404.8	3827.2	4364.8	4907.5	5081.6	5038.1	4771.8
60°	2058.2	2081.3	2199.0	2496.0	3100.2	3604.5	4308.5	5048.3	5347.8	5332.5	5017.6
62.5°	1751.0	1779.2	1873.9	2153.0	2698.2	3348.5	4190.7	5125.1	5598.7	5583.4	5265.9
65°	1505.3	1507.8	1602.6	1835.5	2296.3	3038.7	3983.4	5109.8	5793.3	5803.5	5475.8
67.5°	1259.5	1251.8	1374.7	1564.2	1968.6	2705.9	3706.9	4974.1	5875.2	5921.3	5545.0
70°	926.7	937.0	1108.5	1318.4	1664.0	2321.9	3320.3	4710.4	5742.1	5813.8	5386.2
72.5°	696.3	716.8	883.2	1100.8	1390.1	1937.9	2897.9	4252.2	5370.9	5381.1	4902.4
75°	565.8	570.9	719.4	913.9	1139.2	1553.9	2327.0	3550.7	4541.4	4659.2	4165.1
77.5°	481.3	476.2	547.8	737.3	919.0	1241.6	1753.6	2700.8	3566.1	3619.8	3261.4
80°	409.6	407.0	432.6	596.5	719.4	885.8	1200.6	1881.6	2544.6	2603.5	2316.8
82.5°	215.0	230.4	225.3	368.6	407.0	465.9	576.0	855.0	1111.0	1126.4	1065.0
85°	10.2	10.2	10.2	15.4	25.6	41.0	79.4	79.4	87.0	166.4	189.4
87.5°	2.6	2.6	5.1	5.1	5.1	7.7	7.7	10.2	10.2	10.2	10.2
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-90-740-U-T2U

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6	2544.6
2.5°	2549.8	2539.5	2524.2	2526.7	2524.2	2524.2	2511.4	2501.1	2498.6	2503.7	2513.9
5°	2552.3	2537.0	2513.9	2506.2	2498.6	2493.4	2473.0	2457.6	2449.9	2455.0	2457.6
7.5°	2552.3	2529.3	2503.7	2488.3	2467.8	2452.5	2429.4	2409.0	2398.7	2401.3	2406.4
10°	2547.2	2521.6	2501.1	2470.4	2437.1	2419.2	2383.4	2357.8	2345.0	2347.5	2334.7
12.5°	2547.2	2519.0	2478.1	2449.9	2403.8	2365.4	2337.3	2309.1	2298.9	2288.6	2283.5
15°	2549.8	2513.9	2473.0	2414.1	2360.3	2319.4	2283.5	2265.6	2250.2	2245.1	2247.7
17.5°	2549.8	2513.9	2452.5	2383.4	2321.9	2270.7	2240.0	2219.5	2214.4	2209.3	2209.3
20°	2562.6	2516.5	2434.6	2352.6	2275.8	2222.1	2193.9	2181.1	2181.1	2173.4	2173.4
22.5°	2583.0	2521.6	2424.3	2327.0	2237.4	2178.6	2147.8	2132.5	2140.2	2135.0	2132.5
25°	2606.1	2539.5	2411.5	2291.2	2186.2	2124.8	2094.1	2083.8	2081.3	2068.5	2086.4
27.5°	2624.0	2552.3	2403.8	2255.4	2140.2	2068.5	2030.1	2012.2	1999.4	2004.5	1999.4
30°	2672.6	2588.2	2406.4	2224.6	2089.0	2001.9	1955.8	1935.4	1930.2	1930.2	1930.2
32.5°	2739.2	2634.2	2424.3	2211.8	2040.3	1937.9	1881.6	1861.1	1856.0	1845.8	1850.9
35°	2823.7	2703.4	2452.5	2191.4	2001.9	1863.7	1802.2	1774.1	1766.4	1756.2	1756.2
37.5°	2918.4	2772.5	2473.0	2181.1	1950.7	1786.9	1717.8	1681.9	1676.8	1666.6	1671.7
40°	3038.7	2867.2	2506.2	2160.6	1891.8	1717.8	1625.6	1566.7	1579.5	1584.6	1594.9
42.5°	3174.4	2987.5	2557.4	2140.2	1845.8	1646.1	1510.4	1451.5	1466.9	1461.8	1472.0
45°	3358.7	3128.3	2621.4	2132.5	1789.4	1559.0	1392.6	1326.1	1321.0	1313.3	1318.4
47.5°	3550.7	3297.3	2682.9	2117.1	1728.0	1451.5	1259.5	1175.0	1154.6	1144.3	1134.1
50°	3750.4	3466.2	2754.6	2106.9	1646.1	1331.2	1126.4	1029.1	990.7	977.9	965.1
52.5°	3975.7	3648.0	2816.0	2081.3	1556.5	1205.8	1006.1	896.0	852.5	826.9	829.4
55°	4213.8	3814.4	2872.3	2050.6	1454.1	1088.0	885.8	793.6	750.1	742.4	742.4
57.5°	4433.9	3985.9	2913.3	1996.8	1351.7	972.8	785.9	706.6	686.1	696.3	696.3
60°	4659.2	4124.2	2933.8	1937.9	1246.7	875.5	716.8	652.8	642.6	663.0	665.6
62.5°	4841.0	4234.2	2928.6	1856.0	1131.5	791.0	650.2	599.0	604.2	640.0	647.7
65°	4971.5	4288.0	2864.6	1733.1	1021.4	716.8	591.4	542.7	542.7	568.3	576.0
67.5°	4961.3	4218.9	2736.6	1561.6	903.7	642.6	537.6	499.2	499.2	517.1	514.6
70°	4751.4	3980.8	2493.4	1354.2	788.5	578.6	491.5	463.4	460.8	468.5	465.9
72.5°	4247.0	3497.0	2114.6	1118.7	681.0	514.6	445.4	419.8	414.7	404.5	396.8
75°	3504.6	2872.3	1651.2	890.9	576.0	453.1	401.9	378.9	358.4	371.2	363.5
77.5°	2718.7	2204.2	1228.8	691.2	468.5	394.2	358.4	332.8	327.7	373.8	358.4
80°	1984.0	1523.2	867.8	494.1	363.5	320.0	299.5	279.0	353.3	473.6	471.0
82.5°	880.6	734.7	396.8	235.5	169.0	140.8	117.8	133.1	222.7	217.6	225.3
85°	79.4	81.9	43.5	28.2	17.9	15.4	10.2	10.2	7.7	7.7	7.7
87.5°	10.2	10.2	7.7	7.7	5.1	5.1	5.1	5.1	2.6	2.6	2.6
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: SP1-2407-157-5

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-30-740-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-30-740-U-5WQ-2

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 08/20/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-SA-30-740-U-5WQ-2**  
 Description: Epic Modern Light Square 30W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 3915  
 CIE u': 0.2262  
 CIE v': 0.5044  
 Duv: 0.0010  
 CIE x: 0.3850  
 CIE y: 0.3816  
 CIE z: 0.2334  
 Peak Wavelength (nm): 449  
 Dominant Wavelength (nm): 578  
 Purity: 30.05482  
 R<sub>f</sub>: 73.2  
 R<sub>g</sub>: 93.9

CRI (Ra):	71.0		
R1:	67.6	R9:	-38.4
R2:	78.3	R10:	48.9
R3:	87.1	R11:	65.3
R4:	69.7	R12:	40.4
R5:	67.4	R13:	69.3
R6:	69.3	R14:	92.6
R7:	79.7	R15:	59.9
R8:	48.7		



**Test Conditions**

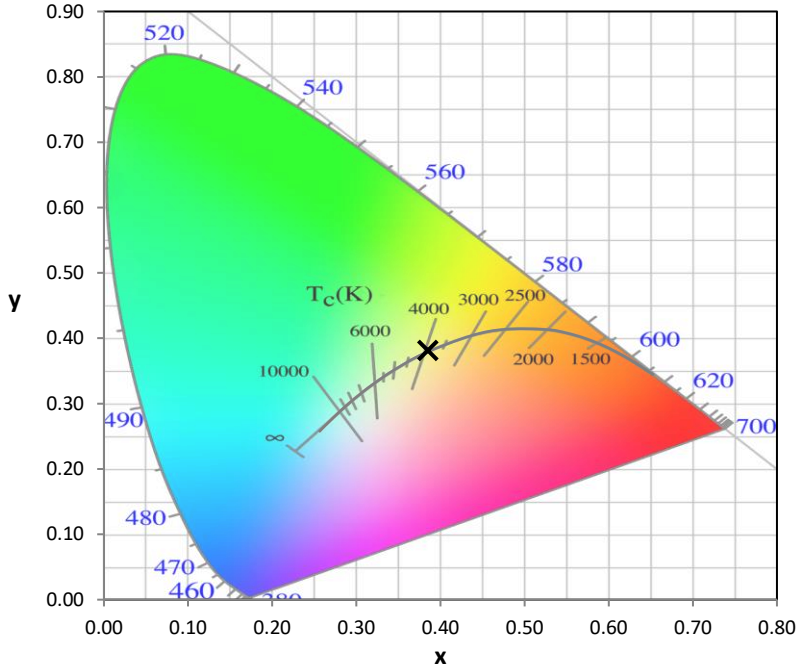
Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 24.2

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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

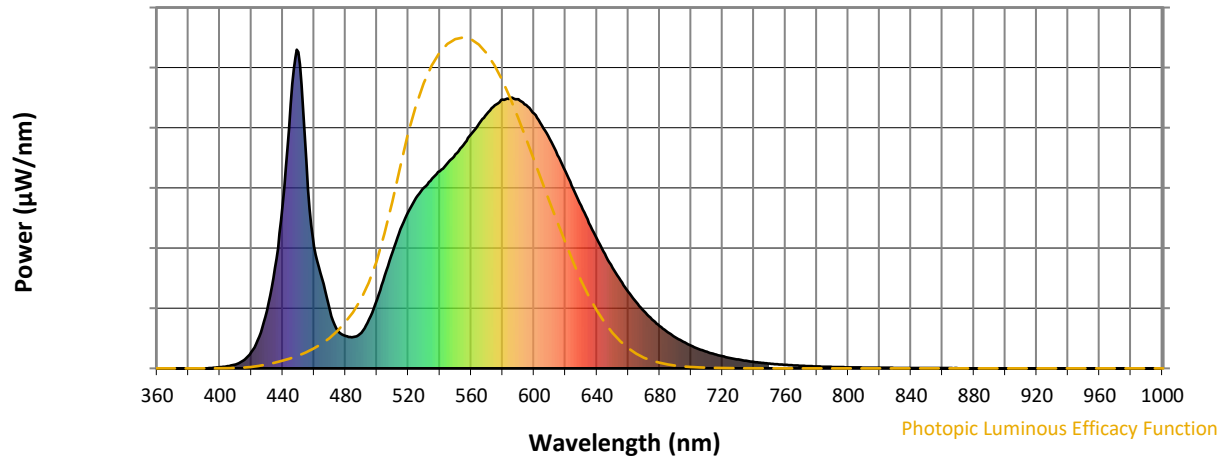


CCT = 3915K  
 CIE x = 0.3850  
 CIE y = 0.3816  
 Duv = 0.0010

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-157-5

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



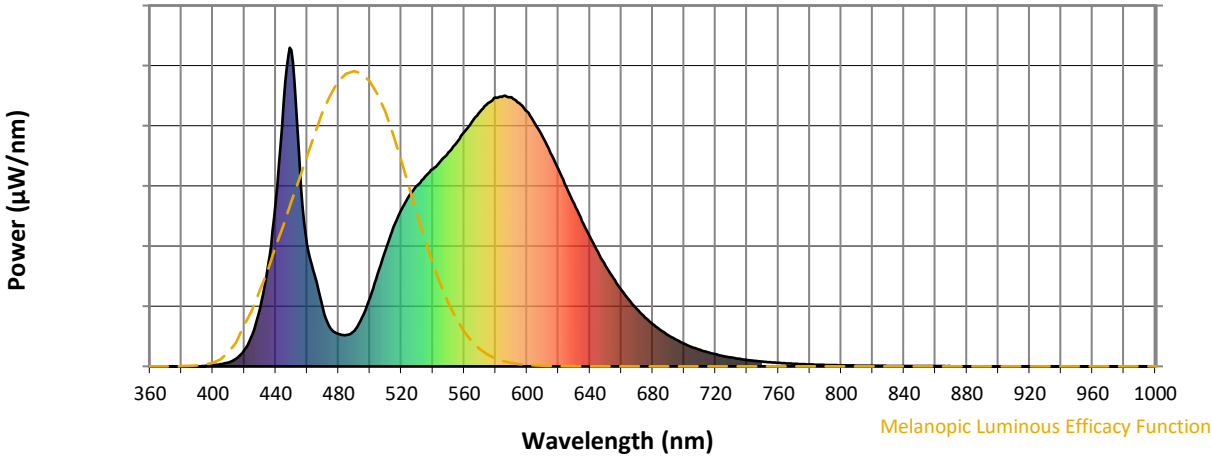
**Scotopic Lumens: NR**

**S/P: 1.49**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.88

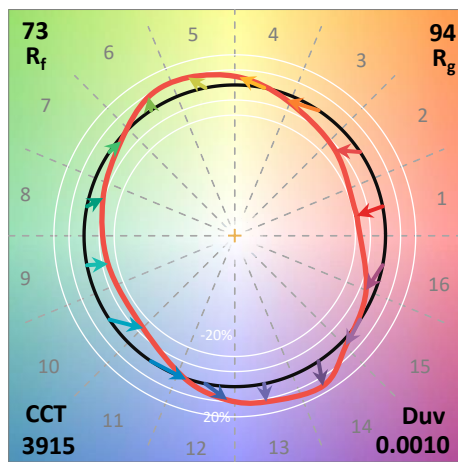
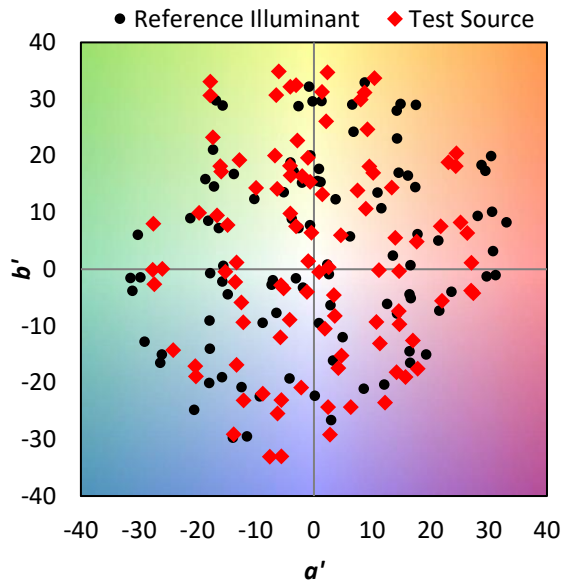
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	112	NR	620	618	NR	750	15	NR	880	0	NR
365	0	NR	495	153	NR	625	563	NR	755	13	NR	885	0	NR
370	0	NR	500	216	NR	630	510	NR	760	11	NR	890	0	NR
375	0	NR	505	291	NR	635	456	NR	765	9	NR	895	0	NR
380	0	NR	510	366	NR	640	407	NR	770	8	NR	900	0	NR
385	0	NR	515	436	NR	645	359	NR	775	7	NR	905	0	NR
390	0	NR	520	492	NR	650	316	NR	780	6	NR	910	0	NR
395	2	NR	525	536	NR	655	277	NR	785	5	NR	915	0	NR
400	4	NR	530	567	NR	660	240	NR	790	4	NR	920	0	NR
405	7	NR	535	596	NR	665	208	NR	795	4	NR	925	0	NR
410	12	NR	540	619	NR	670	179	NR	800	3	NR	930	0	NR
415	25	NR	545	644	NR	675	154	NR	805	3	NR	935	0	NR
420	51	NR	550	671	NR	680	133	NR	810	3	NR	940	0	NR
425	100	NR	555	701	NR	685	114	NR	815	2	NR	945	0	NR
430	180	NR	560	735	NR	690	98	NR	820	2	NR	950	0	NR
435	315	NR	565	768	NR	695	83	NR	825	2	NR	955	0	NR
440	514	NR	570	798	NR	700	71	NR	830	1	NR	960	0	NR
445	828	NR	575	825	NR	705	61	NR	835	1	NR	965	0	NR
450	992	NR	580	843	NR	710	52	NR	840	1	NR	970	0	NR
455	652	NR	585	848	NR	715	44	NR	845	1	NR	975	0	NR
460	382	NR	590	844	NR	720	38	NR	850	1	NR	980	0	NR
465	282	NR	595	826	NR	725	32	NR	855	1	NR	985	0	NR
470	180	NR	600	800	NR	730	28	NR	860	1	NR	990	0	NR
475	119	NR	605	762	NR	735	24	NR	865	1	NR	995	0	NR
480	101	NR	610	719	NR	740	20	NR	870	1	NR	1000	0	NR
485	98	NR	615	669	NR	745	17	NR	875	0	NR			

**Summary**

$R_f = 73.2$   
 $R_g = 93.9$   
 $CIE R_a = 71.0$   
 $R_g = -38.4$



**Color Vector Graphics**



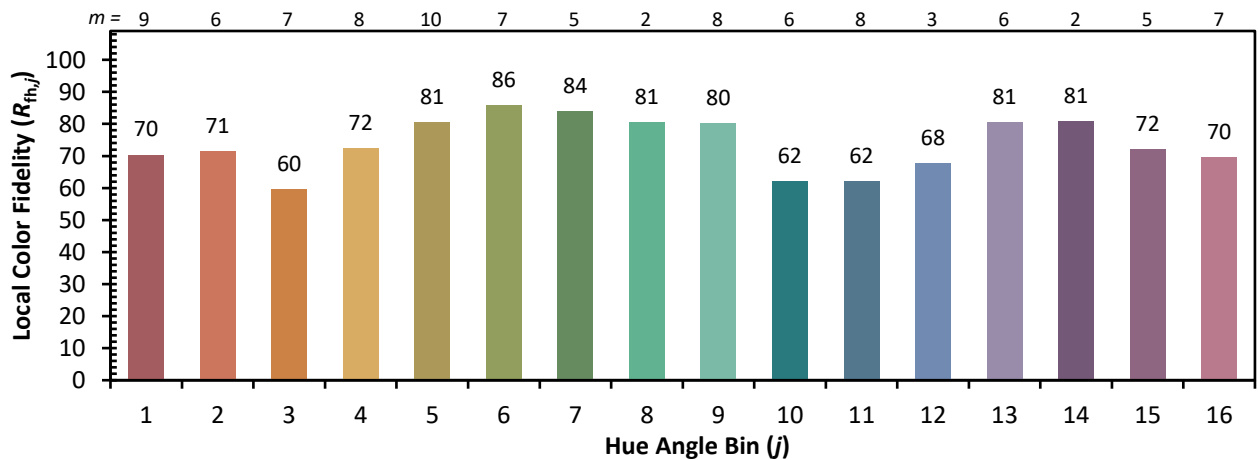
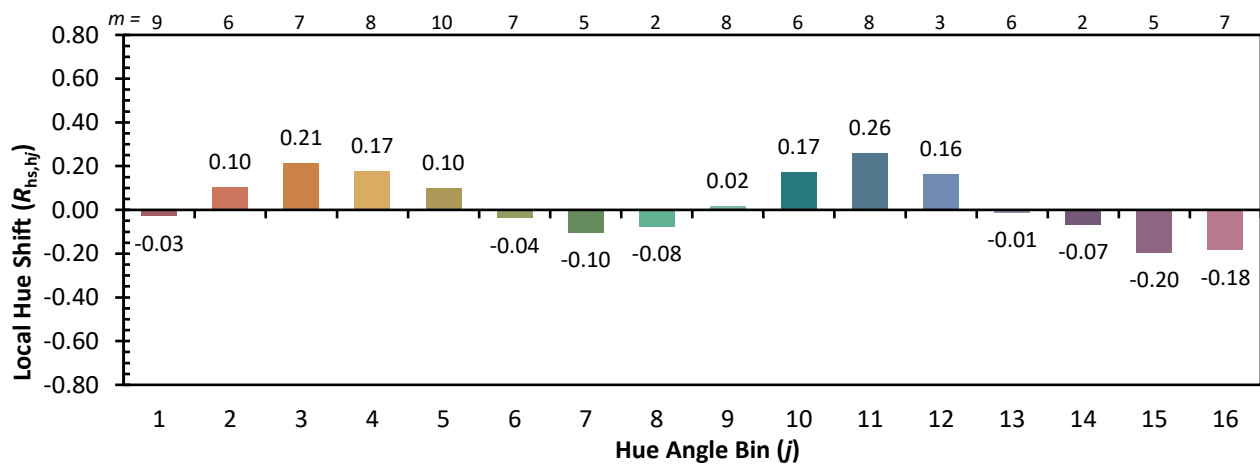
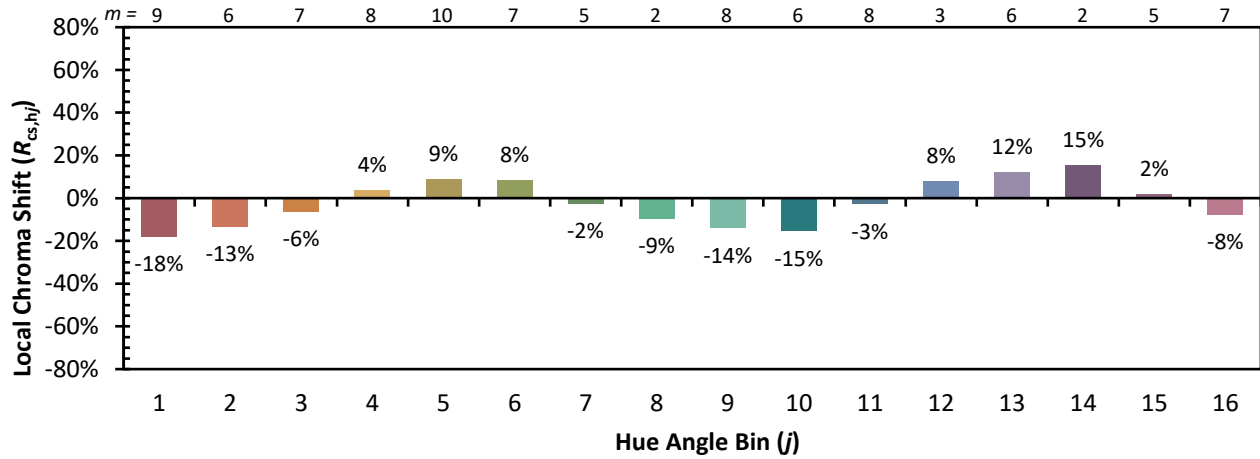


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

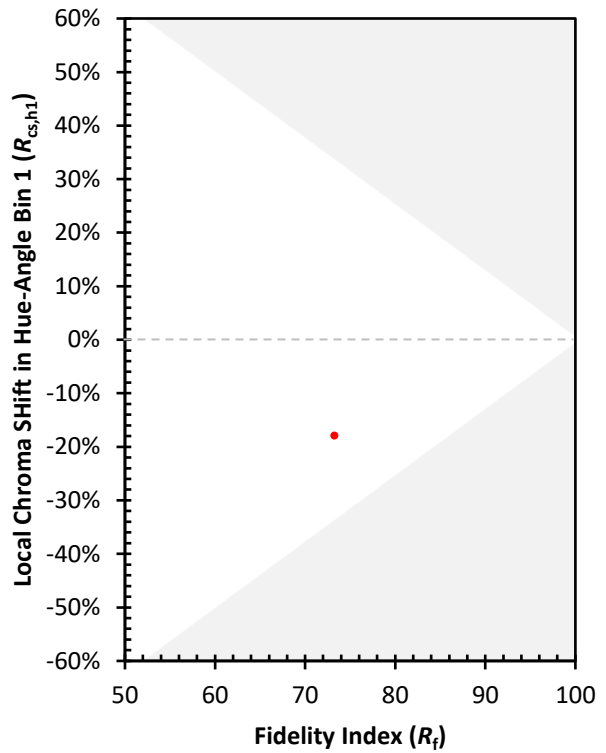
CES01 = 85	CES26 = 61	CES51 = 88	CES76 = 50
CES02 = 61	CES27 = 88	CES52 = 87	CES77 = 69
CES03 = 30	CES28 = 81	CES53 = 77	CES78 = 53
CES04 = 70	CES29 = 65	CES54 = 84	CES79 = 81
CES05 = 47	CES30 = 81	CES55 = 83	CES80 = 78
CES06 = 50	CES31 = 69	CES56 = 73	CES81 = 77
CES07 = 40	CES32 = 60	CES57 = 72	CES82 = 91
CES08 = 39	CES33 = 76	CES58 = 73	CES83 = 89
CES09 = 29	CES34 = 70	CES59 = 85	CES84 = 86
CES10 = 74	CES35 = 83	CES60 = 89	CES85 = 77
CES11 = 57	CES36 = 91	CES61 = 81	CES86 = 71
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 76
CES13 = 42	CES38 = 92	CES63 = 72	CES88 = 80
CES14 = 74	CES39 = 96	CES64 = 64	CES89 = 70
CES15 = 71	CES40 = 91	CES65 = 61	CES90 = 79
CES16 = 46	CES41 = 93	CES66 = 57	CES91 = 74
CES17 = 49	CES42 = 80	CES67 = 54	CES92 = 57
CES18 = 56	CES43 = 76	CES68 = 63	CES93 = 74
CES19 = 72	CES44 = 99	CES69 = 73	CES94 = 51
CES20 = 65	CES45 = 85	CES70 = 55	CES95 = 65
CES21 = 86	CES46 = 82	CES71 = 48	CES96 = 76
CES22 = 78	CES47 = 86	CES72 = 83	CES97 = 84
CES23 = 92	CES48 = 77	CES73 = 45	CES98 = 75
CES24 = 91	CES49 = 80	CES74 = 93	CES99 = 62
CES25 = 72	CES50 = 88	CES75 = 51	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)