

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: P870459

Luminaire Tested: **MEM2-HSN-SA-130-840-U-T4W**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P870459  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: MEM2-HSN-SA-130-840-U-T4W  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 130W 80CRI 4000K  
FITXURE w/ TYPE IV WIDE DISTRIBUTION OPTIC  
Light Source: (30) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

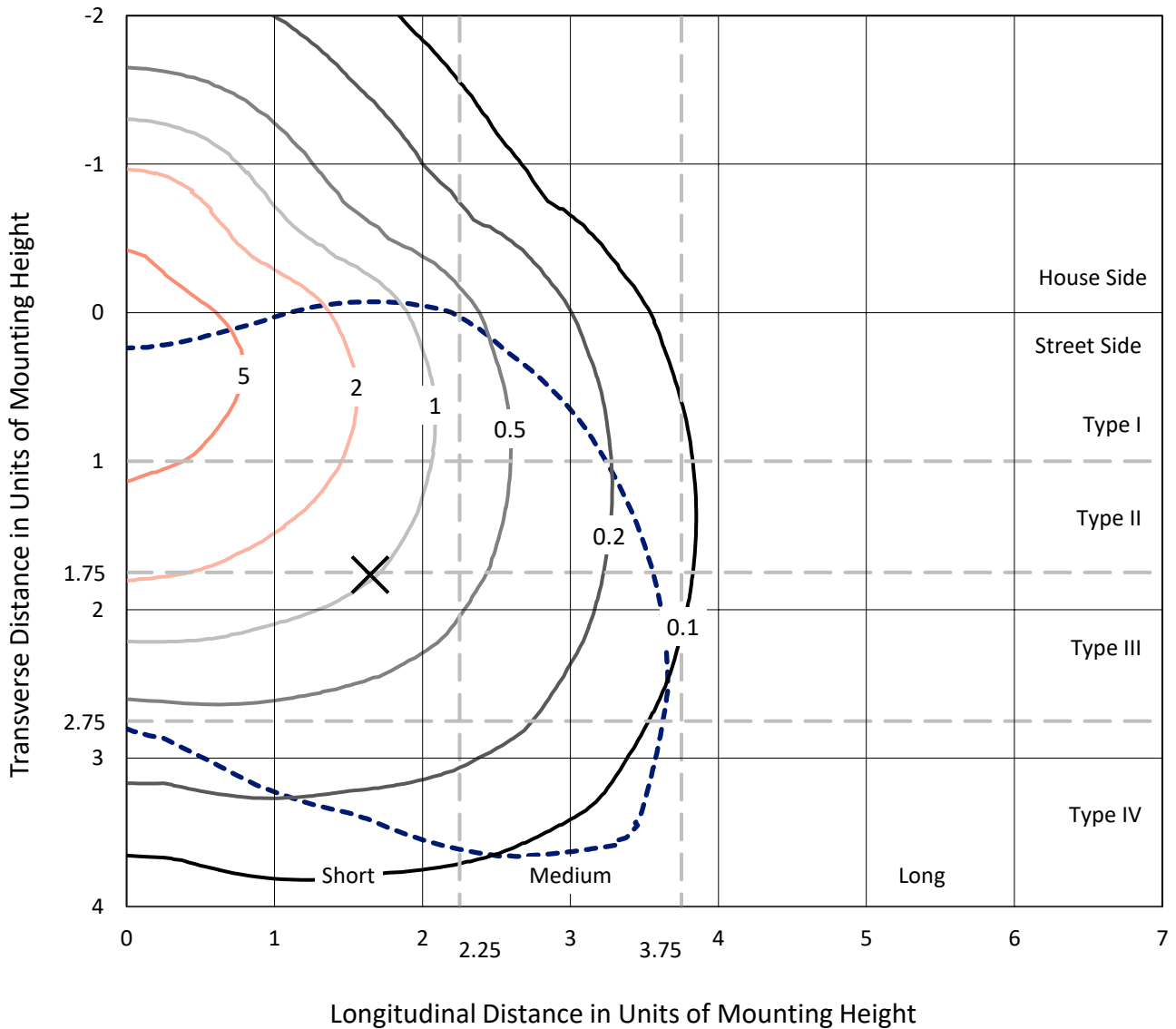
Lumens per Lamp: N/A  
Luminaire Lumens: 17844.4 lumens  
Efficiency: N/A  
Efficacy: 133.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

Input Watts (W): 134  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 6.70%  
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-130-840-U-T4W

### Iso-Footcandle Lines of Horizontal Illumination

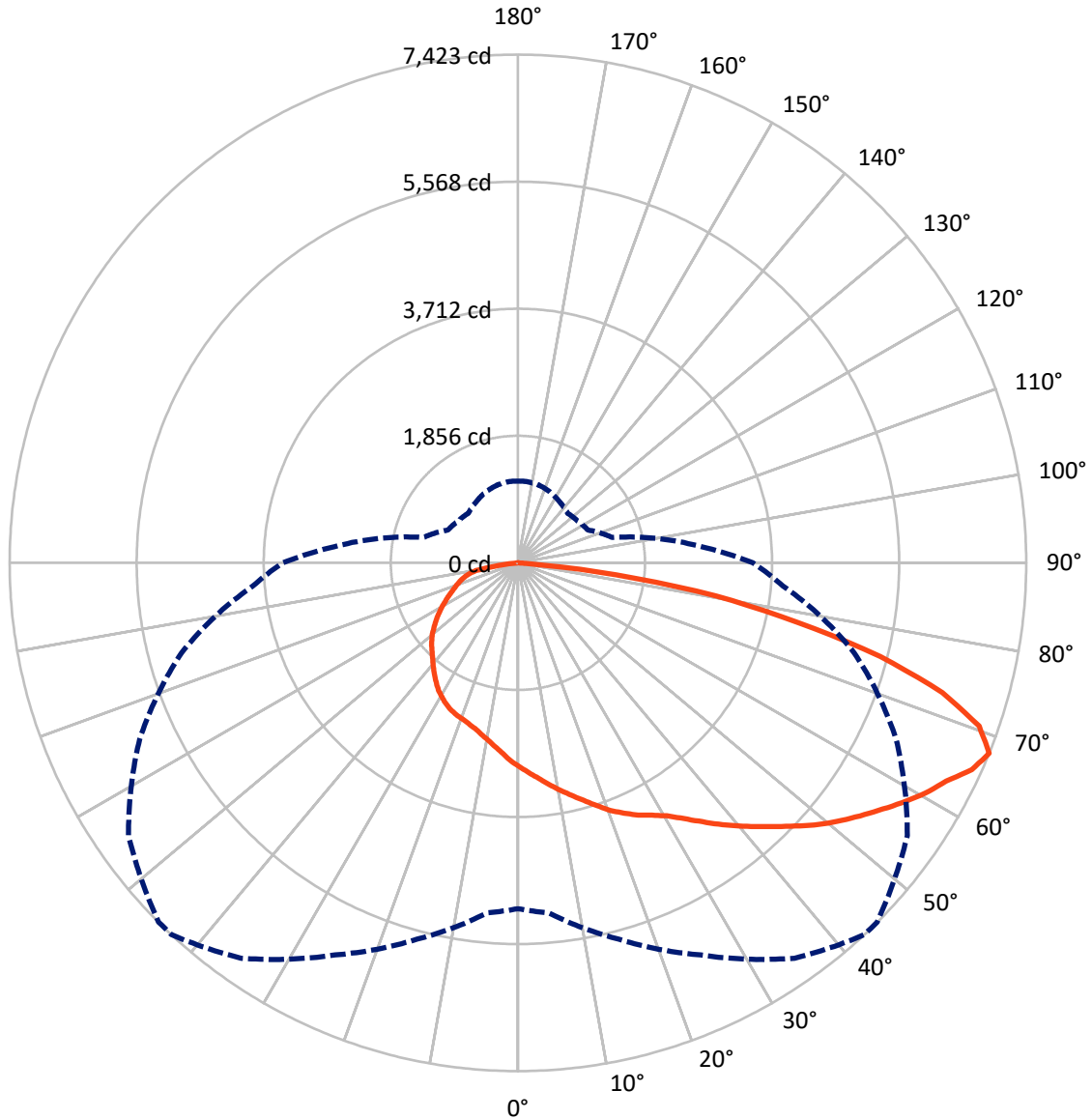
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 43-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4800.2	0.0	4800.2
	% Fixture	26.9	0.0	26.9
<b>Street Side</b>	Lumens	13044.2	0.0	13044.2
	% Fixture	73.1	0.0	73.1
<b>Total</b>	Lumens	17844.4	0.0	17844.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.1	1.6
10°-20°	870.6	4.9
20°-30°	1485.3	8.3
30°-40°	2166.3	12.1
40°-50°	2910.2	16.3
50°-60°	3562.6	20.0
60°-70°	3749.3	21.0
70°-80°	2447.8	13.7
80°-90°	367.2	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°	17844.4	100.0
0°-180°	17844.4	100.0



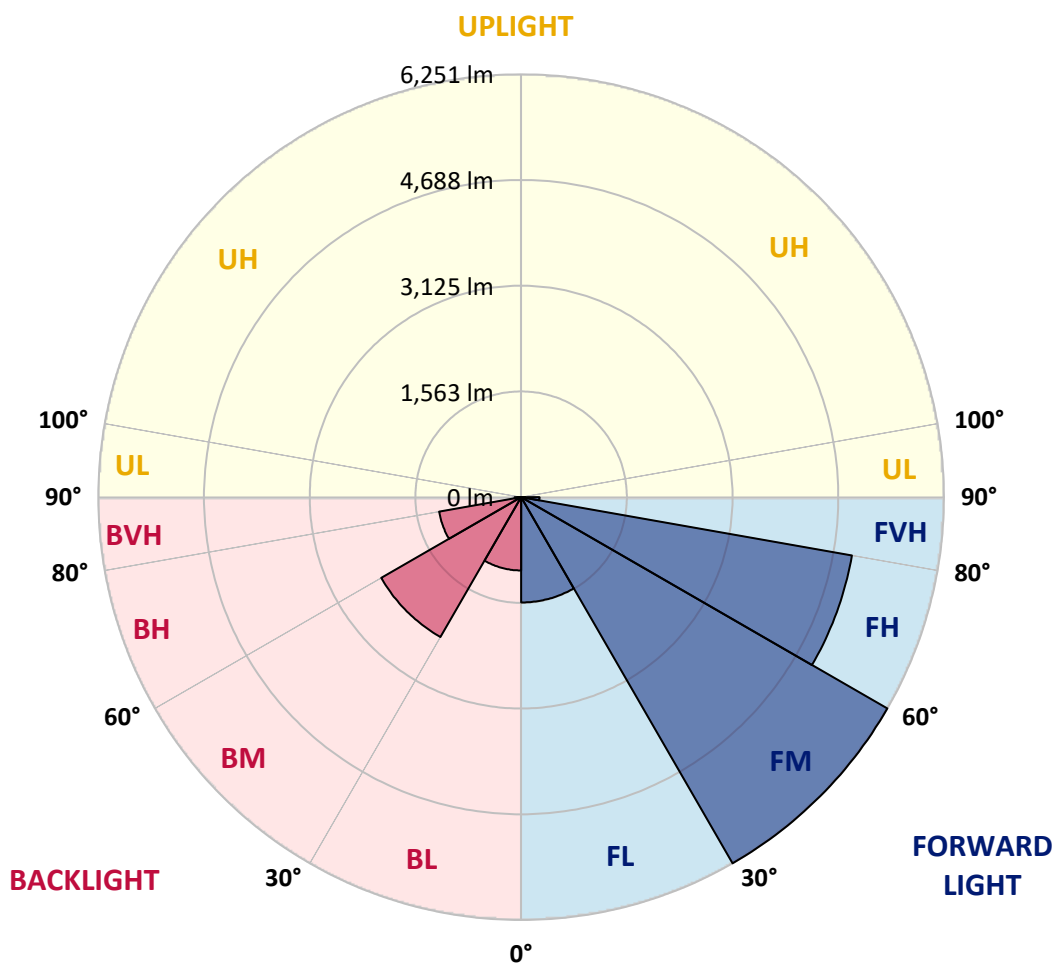
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1557.3	8.7			
FM (30°-60°)	6250.7	35.0			
FH (60°-80°)	4965.2	27.8			G2/5000
FVH (80°-90°)	270.9	1.5			G3/500
BL (0°-30°)	1083.7	6.1	B3/2500		
BM (30°-60°)	2388.3	13.4	B2/2500		
BH (60°-80°)	1231.9	6.9	B3/2500		G3/2500
BVH (80°-90°)	96.3	0.5			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8
2.5°	3116.0	3112.4	3101.5	3094.3	3072.6	3069.0	3069.0	3047.4	3022.1	3007.6	2993.2
5°	3256.8	3238.7	3231.5	3217.1	3181.0	3159.3	3166.5	3126.8	3076.2	3040.1	3000.4
7.5°	3383.2	3375.9	3350.7	3332.6	3289.3	3267.6	3260.4	3199.0	3134.0	3079.9	3014.9
10°	3534.8	3516.7	3502.3	3466.2	3408.4	3375.9	3365.1	3285.7	3202.6	3130.4	3043.8
12.5°	3672.0	3650.3	3632.3	3596.2	3538.4	3484.2	3469.8	3379.5	3274.8	3177.3	3069.0
15°	3776.7	3780.3	3762.3	3729.8	3664.8	3599.8	3589.0	3469.8	3343.4	3224.3	3094.3
17.5°	3874.2	3888.6	3877.8	3856.1	3791.2	3726.2	3715.3	3581.7	3430.1	3278.4	3123.2
20°	3968.1	3968.1	3964.5	3950.0	3903.1	3859.8	3838.1	3704.5	3513.1	3336.2	3162.9
22.5°	4022.2	4036.7	4036.7	4036.7	4007.8	3971.7	3964.5	3834.5	3625.1	3408.4	3199.0
25°	4105.3	4123.3	4123.3	4116.1	4090.8	4080.0	4069.2	3946.4	3733.4	3491.5	3238.7
27.5°	4282.2	4278.6	4249.7	4213.6	4177.5	4173.9	4159.4	4072.8	3859.8	3581.7	3292.9
30°	4527.7	4534.9	4498.8	4386.9	4303.9	4285.8	4289.4	4213.6	4007.8	3686.4	3354.3
32.5°	4903.2	4903.2	4762.4	4618.0	4498.8	4451.9	4441.1	4376.1	4159.4	3802.0	3422.9
35°	5184.8	5174.0	5094.6	4924.9	4776.8	4643.3	4625.2	4538.5	4329.1	3932.0	3498.7
37.5°	5397.9	5419.5	5358.2	5228.2	5083.8	4852.7	4816.6	4693.8	4484.4	4058.3	3574.5
40°	5809.5	5755.3	5607.3	5488.1	5314.8	5058.5	5026.0	4874.3	4643.3	4199.2	3668.4
42.5°	6109.2	6033.3	5863.6	5704.8	5488.1	5264.3	5235.4	5069.3	4827.4	4358.0	3765.9
45°	6538.8	6369.1	6134.4	5993.6	5686.7	5488.1	5452.0	5271.5	5018.8	4527.7	3888.6
47.5°	6954.1	6658.0	6408.8	6343.9	5903.4	5730.1	5701.2	5491.8	5224.6	4711.9	4007.8
50°	6899.9	6704.9	6621.9	6560.5	6091.1	5957.5	5928.6	5715.6	5434.0	4906.8	4126.9
52.5°	6762.7	6780.7	6784.4	6636.3	6268.0	6170.5	6141.7	5957.5	5650.6	5076.5	4242.5
55°	6907.1	6928.8	6925.2	6701.3	6473.8	6383.6	6365.5	6203.0	5860.0	5235.4	4325.5
57.5°	7127.4	7055.2	7044.3	6863.8	6694.1	6611.0	6589.4	6448.6	6037.0	5350.9	4390.5
60°	7167.1	7022.7	7069.6	6899.9	6860.2	6834.9	6827.7	6661.6	6203.0	5444.8	4415.8
62.5°	6723.0	6697.7	6881.8	6813.2	6946.8	7019.0	7022.7	6813.2	6293.3	5480.9	4390.5
65°	5964.7	6065.8	6463.0	6661.6	7076.8	7282.6	7275.4	6903.5	6282.5	5376.2	4235.3
67.5°	5051.3	5130.7	5690.3	6318.6	7047.9	7423.4	7419.8	6943.2	6094.7	5087.4	3885.0
70°	3830.9	4080.0	4874.3	5701.2	6658.0	7145.4	7206.8	6719.4	5665.1	4560.2	3354.3
72.5°	2913.8	2953.5	3913.9	4780.5	5961.1	6484.7	6473.8	6004.5	4946.5	3841.7	2794.6
75°	2068.9	2155.5	2946.3	3704.5	4885.2	5466.5	5441.2	4924.9	3946.4	2989.6	2137.5
77.5°	1541.7	1574.2	2155.5	2747.7	3653.9	4177.5	4166.7	3639.5	2902.9	2195.3	1592.3
80°	1126.5	1180.7	1552.6	1917.2	2476.9	2928.2	2913.8	2415.5	1863.1	1534.5	1162.6
82.5°	631.9	671.6	902.7	1159.0	1307.0	1447.9	1386.5	1159.0	848.5	660.7	570.5
85°	18.1	21.7	32.5	39.7	68.6	115.5	126.4	111.9	133.6	83.0	90.3
87.5°	7.2	7.2	7.2	7.2	7.2	10.8	10.8	10.8	10.8	10.8	10.8
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8	2978.8
2.5°	2986.0	2971.5	2942.7	2924.6	2913.8	2899.3	2877.7	2863.2	2852.4	2866.8	2863.2
5°	2982.4	2953.5	2902.9	2866.8	2830.7	2801.8	2769.3	2744.1	2729.6	2736.8	2733.2
7.5°	2982.4	2946.3	2866.8	2809.1	2754.9	2711.6	2675.5	2643.0	2628.5	2632.1	2628.5
10°	2996.8	2946.3	2841.6	2758.5	2686.3	2635.8	2596.0	2567.2	2556.3	2567.2	2570.8
12.5°	3011.3	2946.3	2819.9	2715.2	2621.3	2567.2	2531.0	2513.0	2520.2	2523.8	2527.4
15°	3018.5	2942.7	2798.2	2664.6	2559.9	2502.2	2480.5	2476.9	2494.9	2513.0	2516.6
17.5°	3036.5	2939.0	2765.7	2614.1	2505.8	2458.8	2448.0	2462.4	2498.5	2523.8	2531.0
20°	3058.2	2946.3	2729.6	2552.7	2451.6	2415.5	2433.6	2466.1	2509.4	2545.5	2552.7
22.5°	3079.9	2949.9	2697.1	2498.5	2393.8	2386.6	2426.3	2473.3	2523.8	2559.9	2567.2
25°	3105.1	2949.9	2653.8	2429.9	2336.1	2346.9	2408.3	2469.7	2516.6	2563.5	2570.8
27.5°	3130.4	2957.1	2606.9	2354.1	2263.9	2296.4	2372.2	2448.0	2498.5	2545.5	2556.3
30°	3173.7	2971.5	2567.2	2289.1	2191.6	2235.0	2325.2	2411.9	2466.1	2516.6	2527.4
32.5°	3217.1	2993.2	2534.7	2220.5	2119.4	2170.0	2271.1	2368.6	2426.3	2473.3	2480.5
35°	3274.8	3022.1	2509.4	2151.9	2047.2	2086.9	2195.3	2303.6	2368.6	2404.7	2422.7
37.5°	3336.2	3061.8	2487.7	2090.5	1967.8	2003.9	2119.4	2235.0	2303.6	2339.7	2346.9
40°	3412.0	3116.0	2473.3	2032.8	1892.0	1920.8	2036.4	2162.8	2227.8	2253.0	2267.5
42.5°	3495.1	3173.7	2462.4	1975.0	1808.9	1837.8	1960.6	2083.3	2148.3	2170.0	2180.8
45°	3599.8	3249.6	2455.2	1913.6	1740.3	1765.6	1888.4	2011.1	2065.3	2094.2	2105.0
47.5°	3697.3	3325.4	2433.6	1841.4	1664.5	1700.6	1812.5	1920.8	1982.2	2000.3	2011.1
50°	3794.8	3390.4	2390.2	1762.0	1595.9	1628.4	1729.5	1808.9	1855.9	1877.5	1884.7
52.5°	3888.6	3437.3	2321.6	1678.9	1523.7	1545.3	1628.4	1704.2	1736.7	1743.9	1765.6
55°	3950.0	3462.6	2224.1	1581.5	1451.5	1458.7	1520.1	1588.7	1606.7	1610.3	1610.3
57.5°	3993.3	3448.1	2108.6	1484.0	1379.3	1379.3	1415.4	1469.5	1476.7	1480.4	1487.6
60°	4000.6	3397.6	1960.6	1393.7	1299.8	1289.0	1325.1	1357.6	1361.2	1368.4	1375.6
62.5°	3946.4	3285.7	1801.7	1307.0	1224.0	1198.7	1231.2	1263.7	1281.8	1292.6	1299.8
65°	3780.3	3058.2	1621.2	1220.4	1151.8	1108.5	1148.2	1202.3	1238.4	1242.1	1242.1
67.5°	3433.7	2689.9	1429.8	1130.1	1065.1	1025.4	1076.0	1133.7	1177.1	1195.1	1191.5
70°	2910.2	2281.9	1252.9	1036.2	978.5	953.2	1007.4	1072.4	1108.5	1122.9	1130.1
72.5°	2343.3	1827.0	1097.6	942.4	902.7	888.2	942.4	1007.4	1057.9	1079.6	1083.2
75°	1823.4	1437.0	967.6	844.9	812.4	816.0	873.8	938.8	992.9	1003.8	971.3
77.5°	1415.4	1144.6	844.9	729.3	711.3	736.6	794.3	862.9	895.4	906.3	884.6
80°	1021.8	877.4	682.4	574.1	574.1	613.8	664.4	743.8	754.6	740.2	747.4
82.5°	483.8	426.1	335.8	278.0	260.0	288.8	306.9	332.2	361.1	368.3	350.2
85°	65.0	43.3	32.5	36.1	32.5	21.7	14.4	14.4	14.4	10.8	10.8
87.5°	10.8	10.8	7.2	7.2	7.2	7.2	7.2	7.2	3.6	3.6	3.6
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: SP1-2407-157-8

Test Date: 09/05/2024

Luminaire Tested: MEM2-HTN-SA-30-840-U-5WQ

Data in this report applies to families of products including MEM2-HTN-SA-30-840-U-5WQ

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-8  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 09/05/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-SA-30-840-U-5WQ**  
 Description: Epic Modern Light Square 30W 5WQ Optic

**Spectral Parameters**

CCT (K): 3996  
 CIE u': 0.2245  
 CIE v': 0.5031  
 Duv: 0.0012  
 CIE x: 0.3815  
 CIE y: 0.3799  
 CIE z: 0.2386  
 Peak Wavelength (nm): 449  
 Dominant Wavelength (nm): 578  
 Purity: 28.49233  
 Rf: 82.6  
 Rg: 95.1

CRI (Ra):	80.6		
R1:	78.1	R9:	-5.8
R2:	87.1	R10:	70.3
R3:	94.5	R11:	78.7
R4:	79.7	R12:	60.5
R5:	78.7	R13:	80.2
R6:	82.7	R14:	97.2
R7:	84.3	R15:	70.6
R8:	59.5		



**Test Conditions**

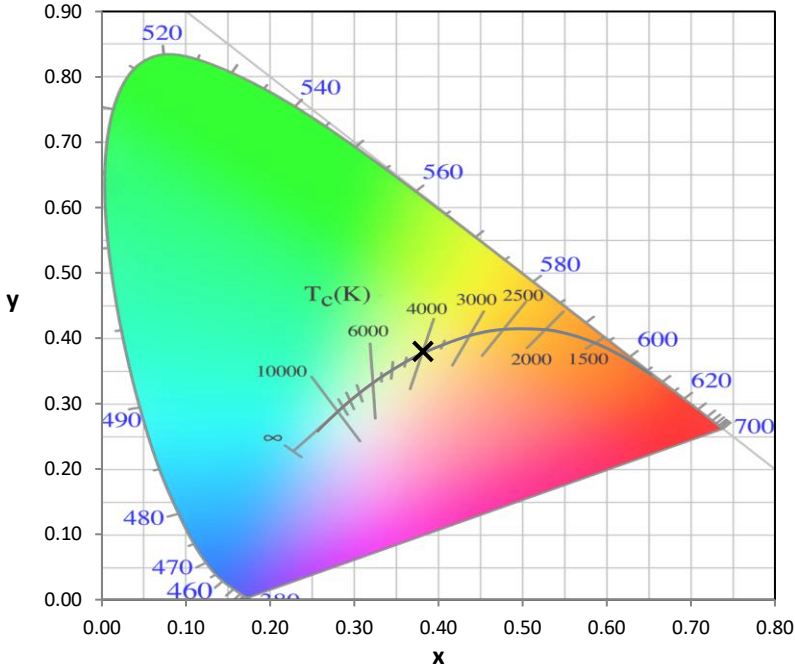
Stabilization Time: 29M  
 Operation Time: 1H 29M  
 Sphere Temperature (°C): 24.3

REPORT NUMBER: SP1-2407-157-8

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 4000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.66**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.37

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	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	673	NR	755	15	NR	885	0	NR
370	0	NR	500	414	NR	630	619	NR	760	13	NR	890	0	NR
375	0	NR	505	470	NR	635	562	NR	765	11	NR	895	0	NR
380	0	NR	510	513	NR	640	506	NR	770	9	NR	900	0	NR
385	0	NR	515	546	NR	645	452	NR	775	8	NR	905	0	NR
390	0	NR	520	571	NR	650	400	NR	780	7	NR	910	0	NR
395	1	NR	525	592	NR	655	352	NR	785	6	NR	915	0	NR
400	3	NR	530	606	NR	660	307	NR	790	5	NR	920	0	NR
405	6	NR	535	624	NR	665	267	NR	795	4	NR	925	0	NR
410	12	NR	540	642	NR	670	231	NR	800	4	NR	930	0	NR
415	22	NR	545	663	NR	675	199	NR	805	3	NR	935	0	NR
420	44	NR	550	686	NR	680	171	NR	810	3	NR	940	0	NR
425	83	NR	555	713	NR	685	146	NR	815	2	NR	945	0	NR
430	150	NR	560	745	NR	690	125	NR	820	2	NR	950	0	NR
435	267	NR	565	774	NR	695	106	NR	825	2	NR	955	0	NR
440	466	NR	570	806	NR	700	90	NR	830	1	NR	960	0	NR
445	804	NR	575	835	NR	705	76	NR	835	1	NR	965	0	NR
450	1000	NR	580	858	NR	710	65	NR	840	1	NR	970	0	NR
455	715	NR	585	875	NR	715	55	NR	845	1	NR	975	0	NR
460	492	NR	590	884	NR	720	47	NR	850	1	NR	980	0	NR
465	402	NR	595	880	NR	725	40	NR	855	1	NR	985	0	NR
470	288	NR	600	868	NR	730	34	NR	860	1	NR	990	0	NR
475	226	NR	605	844	NR	735	28	NR	865	1	NR	995	0	NR
480	227	NR	610	814	NR	740	24	NR	870	0	NR	1000	0	NR
485	248	NR	615	771	NR	745	20	NR	875	0	NR			

**Summary**

$R_f = 82.6$   
 $R_g = 95.1$   
 CIE  $R_a = 80.6$   
 $R_9 = -5.8$



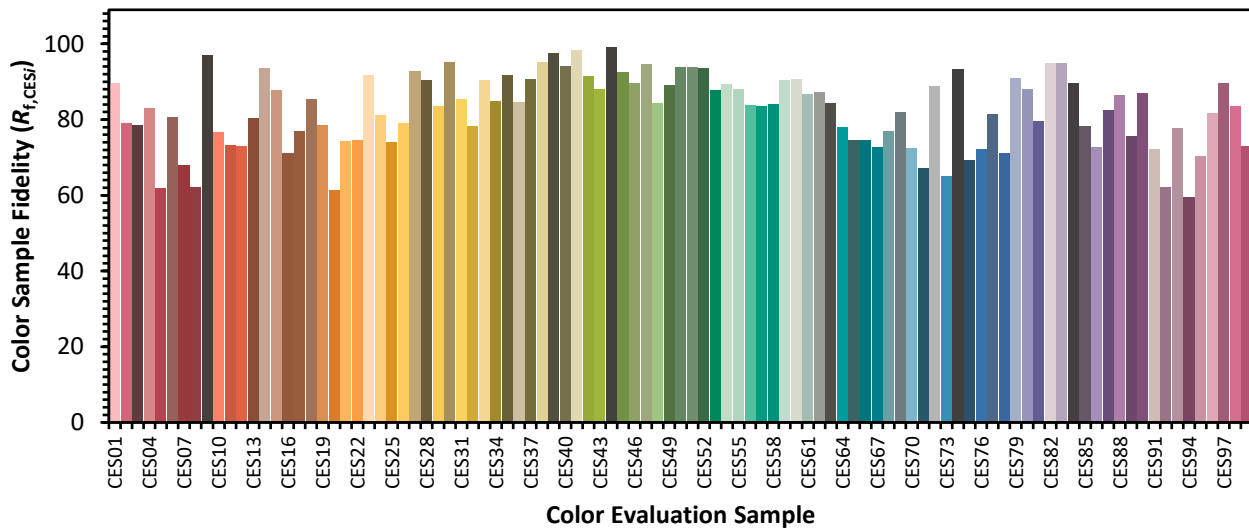
**Color Vector Graphics**



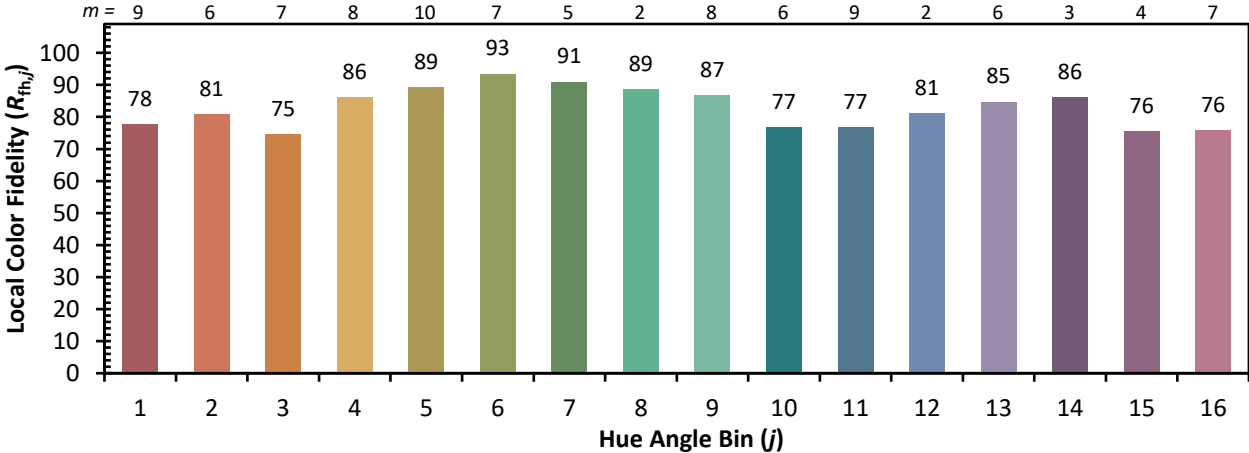


Individual Sample Fidelity Index ( $R_{f,i}$ )

CES01 = 85	CES26 = 79	CES51 = 94	CES76 = 72
CES02 = 61	CES27 = 93	CES52 = 94	CES77 = 82
CES03 = 31	CES28 = 90	CES53 = 88	CES78 = 71
CES04 = 69	CES29 = 83	CES54 = 89	CES79 = 91
CES05 = 48	CES30 = 95	CES55 = 88	CES80 = 88
CES06 = 50	CES31 = 86	CES56 = 84	CES81 = 80
CES07 = 40	CES32 = 78	CES57 = 84	CES82 = 95
CES08 = 39	CES33 = 90	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 85	CES59 = 90	CES84 = 90
CES10 = 74	CES35 = 92	CES60 = 91	CES85 = 78
CES11 = 57	CES36 = 85	CES61 = 87	CES86 = 73
CES12 = 63	CES37 = 91	CES62 = 87	CES87 = 83
CES13 = 42	CES38 = 95	CES63 = 84	CES88 = 86
CES14 = 74	CES39 = 98	CES64 = 78	CES89 = 76
CES15 = 71	CES40 = 94	CES65 = 75	CES90 = 87
CES16 = 46	CES41 = 98	CES66 = 75	CES91 = 72
CES17 = 49	CES42 = 92	CES67 = 73	CES92 = 62
CES18 = 56	CES43 = 88	CES68 = 77	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 82	CES94 = 60
CES20 = 65	CES45 = 93	CES70 = 72	CES95 = 70
CES21 = 86	CES46 = 90	CES71 = 67	CES96 = 82
CES22 = 78	CES47 = 95	CES72 = 89	CES97 = 90
CES23 = 91	CES48 = 84	CES73 = 65	CES98 = 84
CES24 = 90	CES49 = 89	CES74 = 93	CES99 = 73
CES25 = 71	CES50 = 94	CES75 = 69	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)