

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: INVUE

Report Number: P868938

Luminaire Tested: **EMM2-HSN-SA2B-722-U-T3**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P868938  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2B-722-U-T3  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 100W 70CRI 2200K  
FITXURE w/ TYPE III DISTRIBUTION OPTIC  
Light Source: (20) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

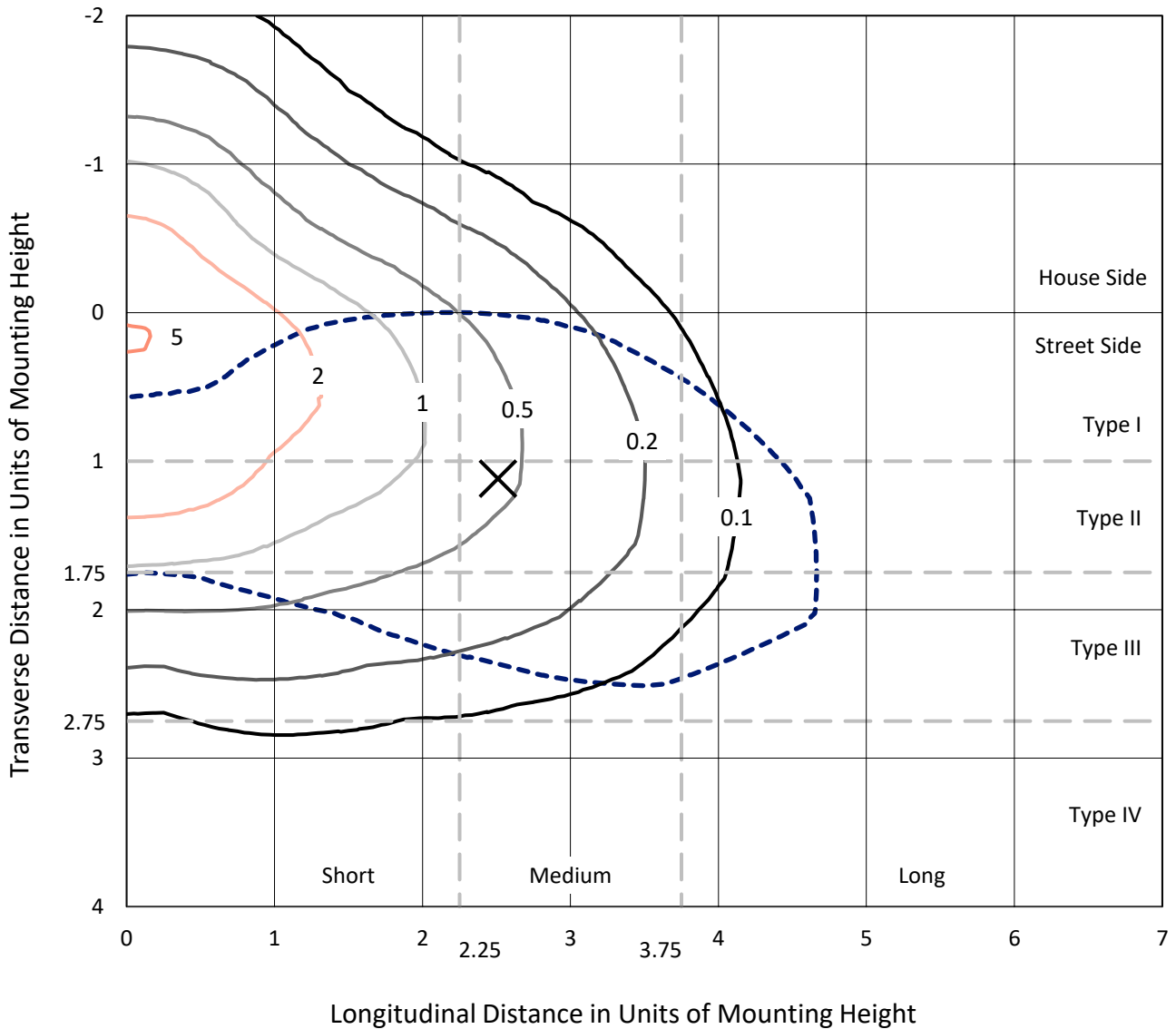
Lumens per Lamp: N/A  
Luminaire Lumens: 11084.4 lumens  
Efficiency: N/A  
Efficacy: 123.2 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G2

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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### Iso-Footcandle Lines of Horizontal Illumination

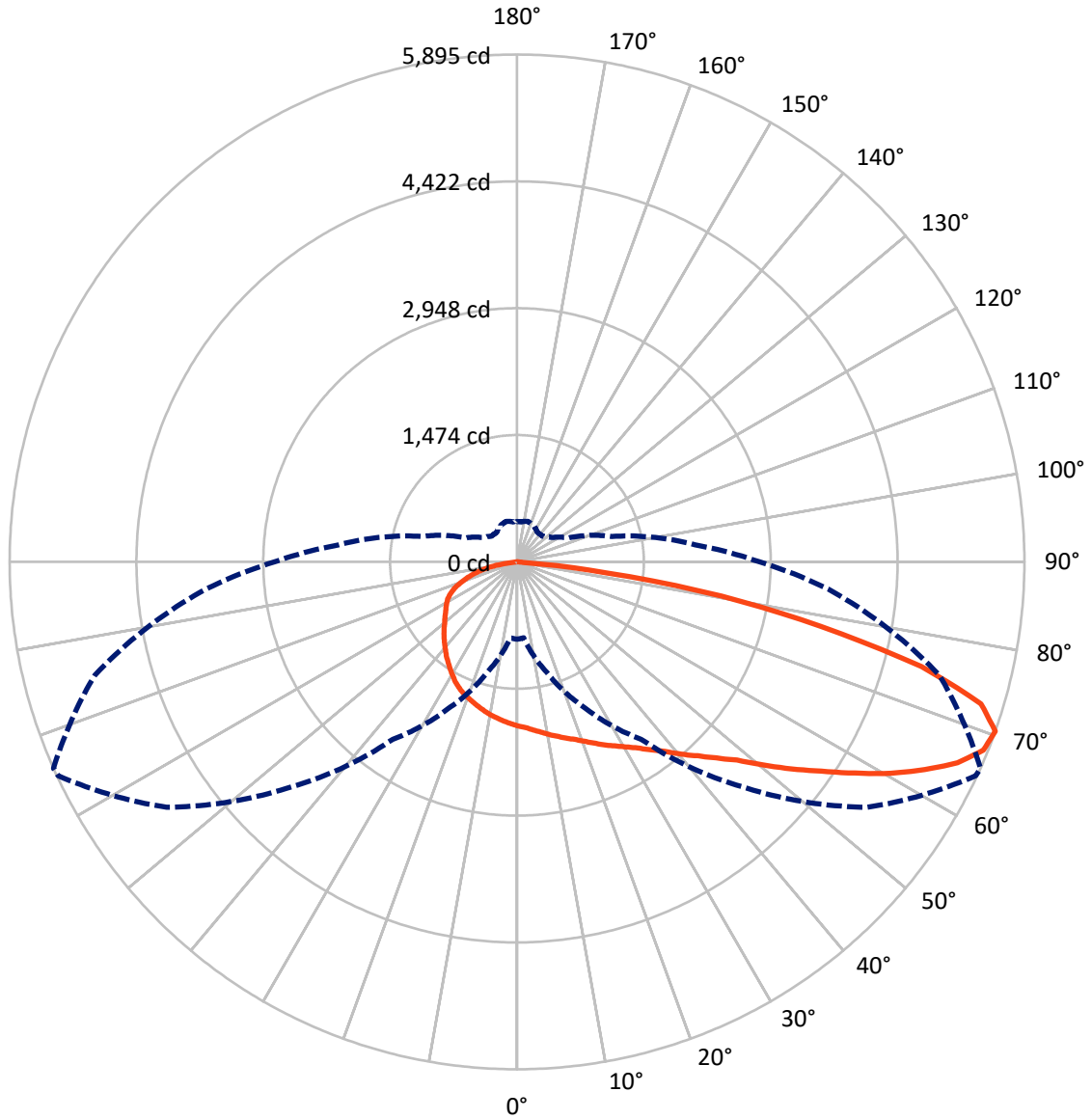
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2856.5	0.0	2856.5
	% Fixture	25.8	0.0	25.8
<b>Street Side</b>	Lumens	8227.9	0.0	8227.9
	% Fixture	74.2	0.0	74.2
<b>Total</b>	Lumens	11084.4	0.0	11084.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.5	1.6
10°-20°	543.6	4.9
20°-30°	913.1	8.2
30°-40°	1375.7	12.4
40°-50°	1867.6	16.8
50°-60°	2219.3	20.0
60°-70°	2264.9	20.4
70°-80°	1514.9	13.7
80°-90°	202.7	1.8
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°	11084.4	100.0
0°-180°	11084.4	100.0

**Coefficient of Utilization**



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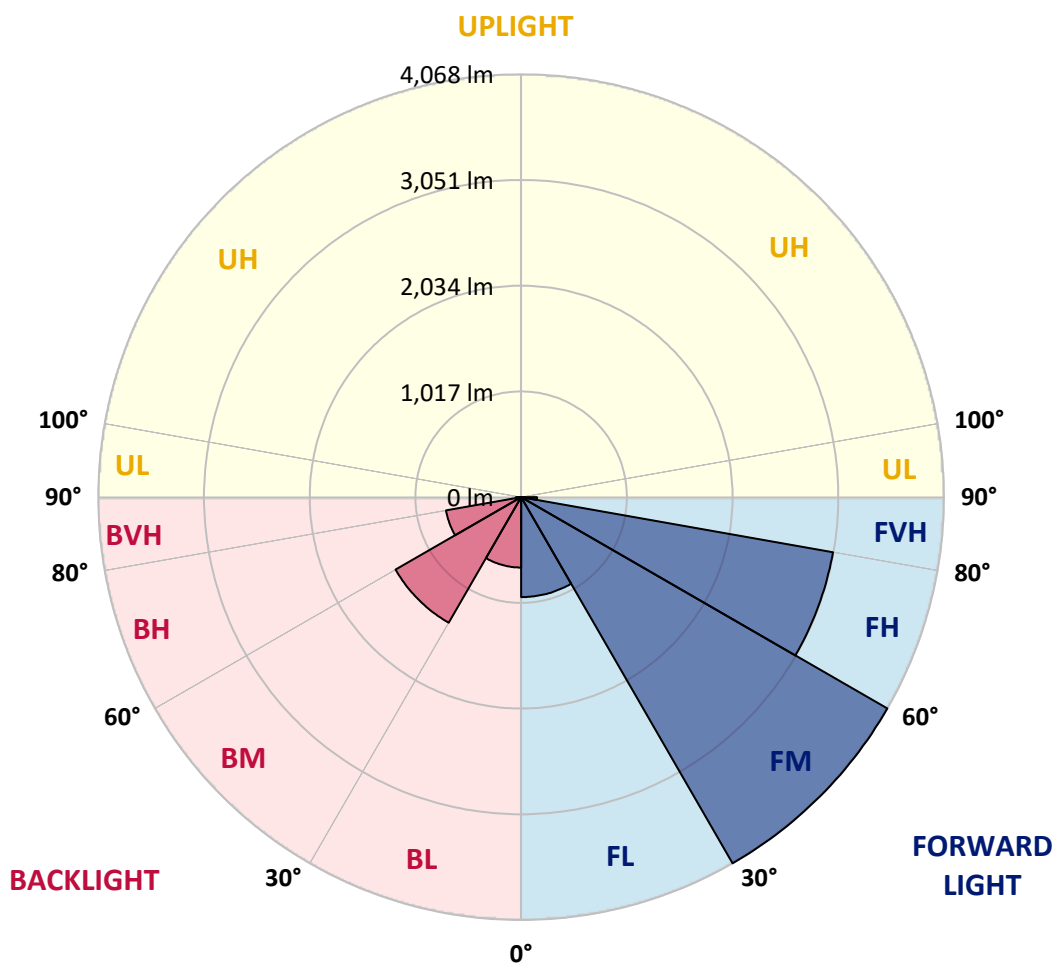
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	961.9	8.7			
FM	(30°-60°)	4067.8	36.7			
FH	(60°-80°)	3046.4	27.5			G2/5000
FVH	(80°-90°)	151.8	1.4			G2/225
BL	(0°-30°)	677.3	6.1	B2/1000		
BM	(30°-60°)	1394.8	12.6	B2/2500		
BH	(60°-80°)	733.5	6.6	B2/1000		G2/1000
BVH	(80°-90°)	50.9	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1
2.5°	1975.4	1966.6	1960.0	1964.4	1951.2	1955.6	1940.2	1929.2	1927.0	1922.5	1918.1
5°	2037.1	2037.1	2026.1	2026.1	2010.6	2008.4	1986.4	1962.2	1962.2	1946.8	1929.2
7.5°	2103.1	2098.7	2085.5	2083.3	2065.7	2061.3	2037.1	1999.6	1997.4	1968.8	1942.4
10°	2149.4	2151.6	2142.8	2142.8	2129.6	2118.5	2083.3	2043.7	2039.3	2001.8	1960.0
12.5°	2184.6	2189.0	2186.8	2186.8	2175.8	2175.8	2136.2	2083.3	2078.9	2030.5	1971.0
15°	2222.1	2219.8	2226.5	2228.7	2224.3	2217.6	2189.0	2127.4	2125.2	2061.3	1986.4
17.5°	2255.1	2252.9	2255.1	2266.1	2268.3	2268.3	2239.7	2175.8	2167.0	2098.7	1999.6
20°	2274.9	2279.3	2288.1	2301.3	2307.9	2325.6	2301.3	2233.1	2224.3	2138.4	2028.3
22.5°	2349.8	2336.6	2343.2	2352.0	2360.8	2385.0	2363.0	2292.5	2285.9	2197.8	2061.3
25°	2477.5	2477.5	2462.1	2446.7	2435.7	2446.7	2429.1	2360.8	2356.4	2250.7	2098.7
27.5°	2699.9	2699.9	2666.9	2609.6	2537.0	2517.1	2503.9	2433.5	2420.3	2307.9	2123.0
30°	2981.8	2990.6	2931.2	2834.3	2699.9	2611.8	2578.8	2501.7	2495.1	2365.2	2160.4
32.5°	3283.5	3301.1	3257.1	3116.2	2895.9	2724.2	2671.3	2592.0	2576.6	2433.5	2208.8
35°	3554.4	3572.0	3512.6	3380.4	3098.5	2887.1	2781.4	2691.1	2682.3	2521.6	2281.5
37.5°	3774.6	3779.0	3741.6	3580.8	3268.1	3023.7	2918.0	2810.0	2792.4	2627.3	2358.6
40°	4008.1	4025.7	3988.2	3790.0	3422.3	3171.2	3054.5	2953.2	2937.8	2737.4	2431.3
42.5°	4252.5	4250.3	4250.3	3970.6	3576.4	3294.5	3202.0	3089.7	3080.9	2849.7	2510.5
45°	4402.3	4411.1	4386.8	4078.5	3803.3	3422.3	3345.2	3263.7	3248.3	3006.0	2614.0
47.5°	4439.7	4419.9	4309.8	4162.2	4058.7	3554.4	3525.8	3477.3	3442.1	3177.8	2741.8
50°	4389.0	4358.2	4294.4	4199.7	4153.4	3713.0	3708.6	3732.8	3708.6	3387.0	2889.3
52.5°	4199.7	4195.2	4184.2	4206.3	4131.4	3838.5	3915.6	3999.3	3994.8	3600.6	3043.5
55°	3801.1	3829.7	3961.8	4100.6	4047.7	3924.4	4146.8	4307.6	4289.9	3851.7	3202.0
57.5°	3393.6	3422.3	3591.8	3922.2	3966.2	4016.9	4406.7	4657.7	4629.1	4124.8	3347.4
60°	3039.1	3008.2	3177.8	3653.5	3851.7	4100.6	4664.3	5012.3	4988.1	4397.9	3497.1
62.5°	2477.5	2508.3	2779.2	3261.5	3690.9	4153.4	4875.7	5333.8	5318.4	4648.9	3618.3
65°	1960.0	1918.1	2325.6	2849.7	3413.5	4135.8	5058.5	5635.5	5624.5	4895.6	3710.8
67.5°	1332.3	1303.7	1841.1	2440.1	3036.9	3994.8	5100.4	5838.1	5842.5	5040.9	3735.0
70°	898.5	885.3	1323.5	1876.3	2514.9	3690.9	4970.4	5880.0	5895.4	5078.3	3627.1
72.5°	662.9	660.7	969.0	1339.0	1871.9	3116.2	4615.9	5606.9	5635.5	4814.1	3310.0
75°	521.9	528.5	691.5	951.4	1248.7	2305.7	3882.5	4807.5	4851.5	4157.8	2748.4
77.5°	427.2	427.2	484.5	682.7	834.6	1431.5	2792.4	3519.2	3607.3	3208.7	2116.3
80°	345.8	352.4	359.0	475.7	552.8	817.0	1625.2	2347.6	2411.4	2235.3	1528.3
82.5°	189.4	202.6	196.0	246.6	277.5	378.8	645.3	949.2	1046.1	931.5	693.7
85°	13.2	8.8	15.4	19.8	24.2	37.4	50.7	70.5	66.1	94.7	48.4
87.5°	2.2	2.2	2.2	4.4	4.4	6.6	8.8	8.8	8.8	8.8	8.8
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°	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1
2.5°	1915.9	1904.9	1887.3	1882.9	1876.3	1867.5	1858.7	1845.5	1841.1	1845.5	1849.9
5°	1918.1	1902.7	1874.1	1856.5	1838.9	1823.4	1805.8	1788.2	1777.2	1779.4	1788.2
7.5°	1924.7	1902.7	1858.7	1830.1	1801.4	1777.2	1748.6	1728.8	1715.5	1717.7	1724.3
10°	1933.6	1902.7	1849.9	1801.4	1761.8	1726.5	1697.9	1673.7	1660.5	1658.3	1660.5
12.5°	1935.8	1900.5	1830.1	1770.6	1722.1	1675.9	1645.1	1623.0	1609.8	1603.2	1607.6
15°	1942.4	1893.9	1810.2	1737.6	1678.1	1629.7	1592.2	1565.8	1557.0	1552.6	1550.4
17.5°	1951.2	1891.7	1792.6	1704.5	1634.1	1579.0	1546.0	1519.5	1508.5	1504.1	1508.5
20°	1964.4	1893.9	1772.8	1671.5	1594.4	1539.4	1501.9	1475.5	1466.7	1464.5	1462.3
22.5°	1982.0	1898.3	1757.4	1640.7	1550.4	1495.3	1457.9	1440.3	1433.7	1435.9	1435.9
25°	1999.6	1902.7	1735.4	1598.8	1504.1	1446.9	1420.4	1407.2	1411.6	1420.4	1420.4
27.5°	2015.0	1900.5	1704.5	1554.8	1449.1	1396.2	1376.4	1378.6	1389.6	1405.0	1407.2
30°	2034.9	1900.5	1671.5	1499.7	1387.4	1336.8	1332.3	1350.0	1367.6	1383.0	1383.0
32.5°	2065.7	1913.7	1645.1	1444.7	1323.5	1283.9	1303.7	1327.9	1347.8	1363.2	1367.6
35°	2118.5	1942.4	1627.4	1389.6	1261.9	1233.2	1270.7	1310.3	1323.5	1334.6	1336.8
37.5°	2169.2	1968.8	1605.4	1336.8	1198.0	1187.0	1237.7	1279.5	1281.7	1288.3	1288.3
40°	2217.6	1988.6	1576.8	1279.5	1136.4	1136.4	1195.8	1231.0	1226.6	1220.0	1222.2
42.5°	2270.5	1999.6	1543.8	1226.6	1085.7	1085.7	1134.1	1165.0	1162.8	1171.6	1178.2
45°	2334.4	2021.6	1499.7	1178.2	1032.8	1024.0	1063.7	1090.1	1123.1	1162.8	1173.8
47.5°	2422.5	2052.5	1464.5	1125.3	988.8	958.0	973.4	1028.4	1065.9	1098.9	1103.3
50°	2514.9	2096.5	1433.7	1070.3	935.9	880.9	894.1	955.8	977.8	991.0	997.6
52.5°	2614.0	2131.8	1407.2	1024.0	880.9	801.6	819.2	878.7	894.1	905.1	907.3
55°	2699.9	2160.4	1374.2	980.0	821.4	726.7	748.8	806.0	821.4	834.6	834.6
57.5°	2790.2	2186.8	1352.2	942.6	757.6	665.1	680.5	737.7	759.8	764.2	770.8
60°	2865.1	2211.0	1332.3	907.3	698.1	610.0	621.0	671.7	698.1	700.3	704.7
62.5°	2918.0	2226.5	1321.3	863.3	638.6	555.0	563.8	614.4	645.3	651.9	654.1
65°	2951.0	2235.3	1301.5	806.0	588.0	508.7	508.7	559.4	590.2	605.6	610.0
67.5°	2935.6	2219.8	1248.7	739.9	541.7	462.5	460.3	510.9	537.3	546.2	548.4
70°	2816.7	2129.6	1140.8	658.5	493.3	420.6	416.2	462.5	486.7	466.9	469.1
72.5°	2574.4	1924.7	993.2	577.0	442.6	381.0	376.6	416.2	418.4	418.4	416.2
75°	2169.2	1572.4	792.8	491.1	389.8	339.1	341.3	372.2	374.4	385.4	378.8
77.5°	1662.7	1165.0	618.8	392.0	330.3	301.7	312.7	323.7	339.1	354.6	339.1
80°	1209.0	803.8	429.4	292.9	255.5	255.5	259.9	270.9	292.9	308.3	292.9
82.5°	517.5	354.6	198.2	145.3	125.5	123.3	125.5	125.5	154.2	158.6	138.7
85°	39.6	33.0	24.2	24.2	19.8	11.0	11.0	8.8	6.6	6.6	6.6
87.5°	8.8	6.6	6.6	6.6	4.4	4.4	4.4	4.4	4.4	4.4	4.4
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-40-722-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-722-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-40-722-U-5WQ-2**  
 Description: Epic Modern Light Square 40W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 2253  
 CIE u': 0.2868  
 CIE v': 0.5332  
 Duv: -0.0014  
 CIE x: 0.4974  
 CIE y: 0.4110  
 CIE z: 0.0915  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 587  
 Purity: 72.69432  
 Rf: 76.9  
 Rg: 92.7

CRI (Ra):	70.6		
R1:	68.4	R9:	-36.0
R2:	88.7	R10:	78.2
R3:	85.4	R11:	61.0
R4:	63.5	R12:	74.2
R5:	69.0	R13:	72.8
R6:	88.9	R14:	92.2
R7:	68.5	R15:	58.0
R8:	32.0		



**Test Conditions**

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

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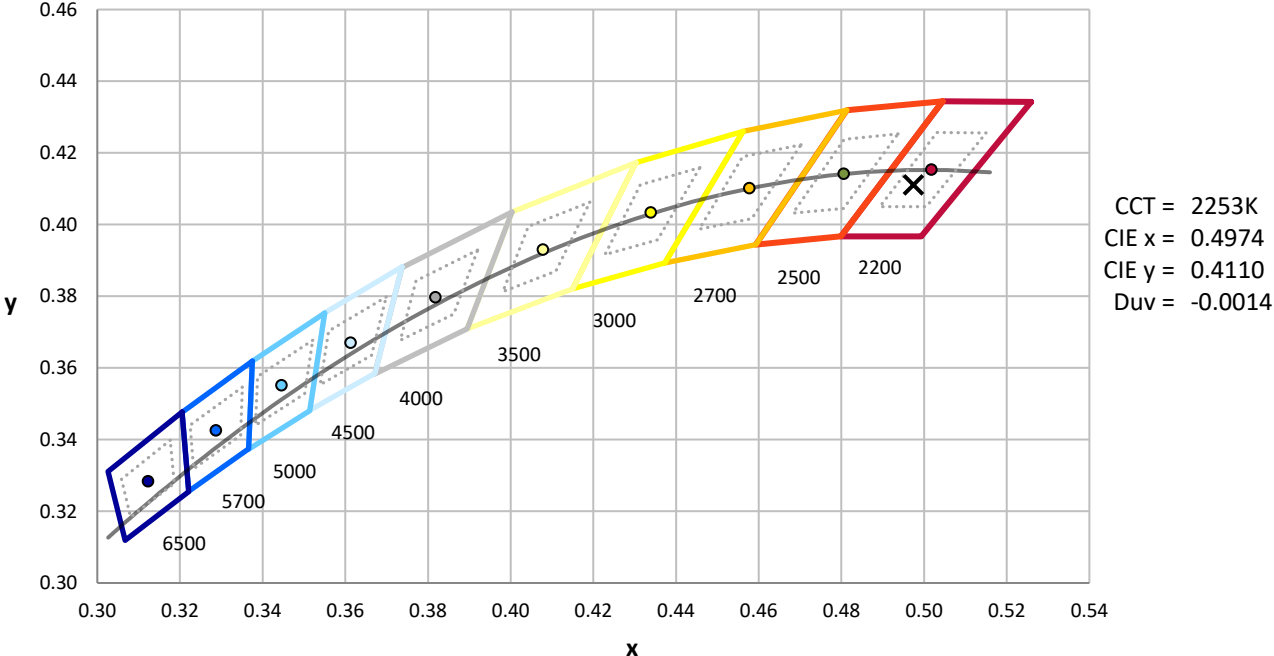
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

$\lambda$ (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	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 <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	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 <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /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			

**Summary**

$R_f = 76.9$   
 $R_g = 92.7$   
 $CIE R_a = 70.6$   
 $R_9 = -36.0$



**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)