

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: P868812

Luminaire Tested: **EMM2-HSN-SA2B-730-U-T2R**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P868812  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2B-730-U-T2R  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 100W 70CRI 3000K  
FITXURE w/ TYPE II ROADWAY DISTRIBUTION OPTIC  
Light Source: (20) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

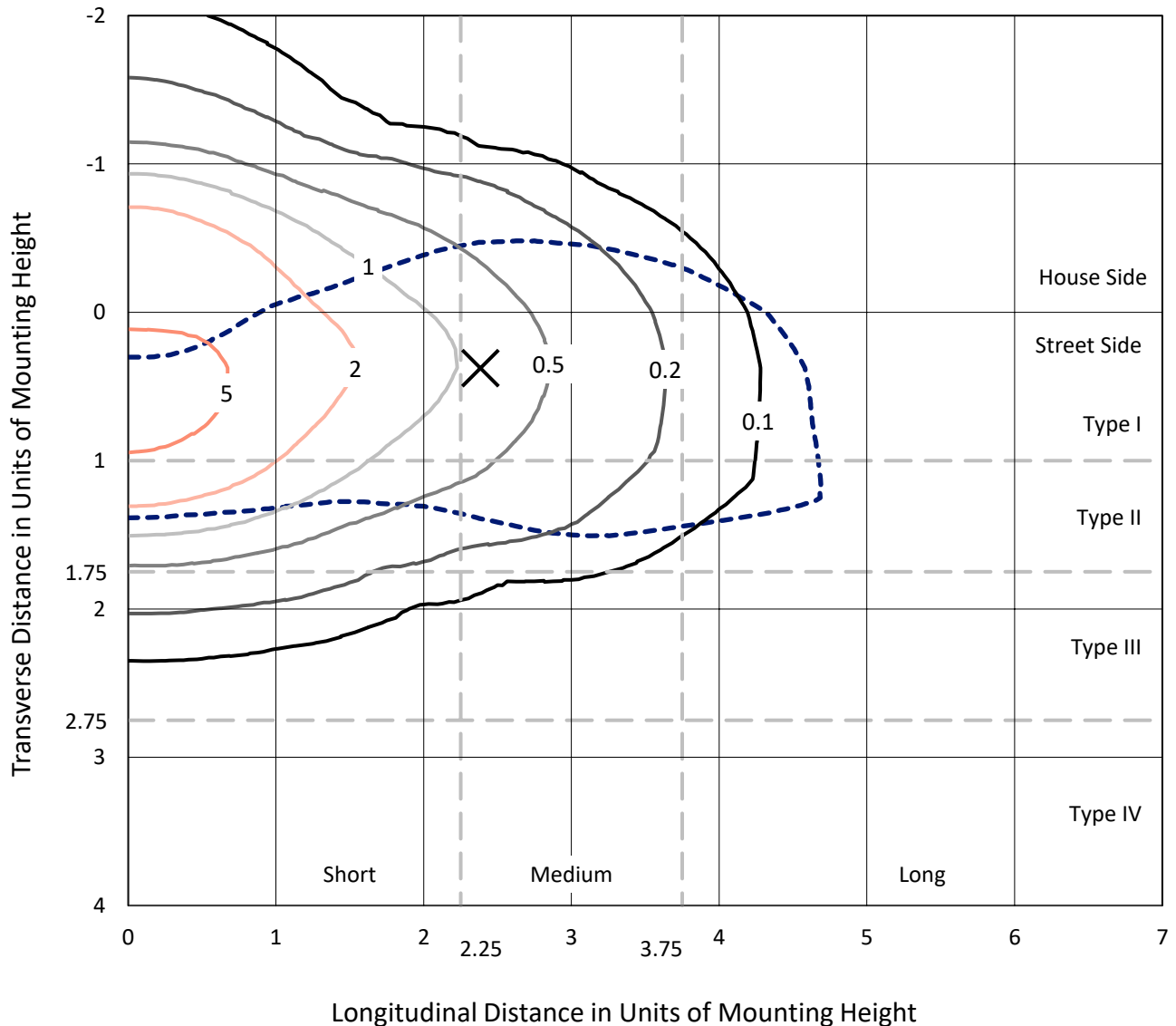
Lumens per Lamp: N/A  
Luminaire Lumens: 12175.9 lumens  
Efficiency: N/A  
Efficacy: 135.3 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

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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### Iso-Footcandle Lines of Horizontal Illumination

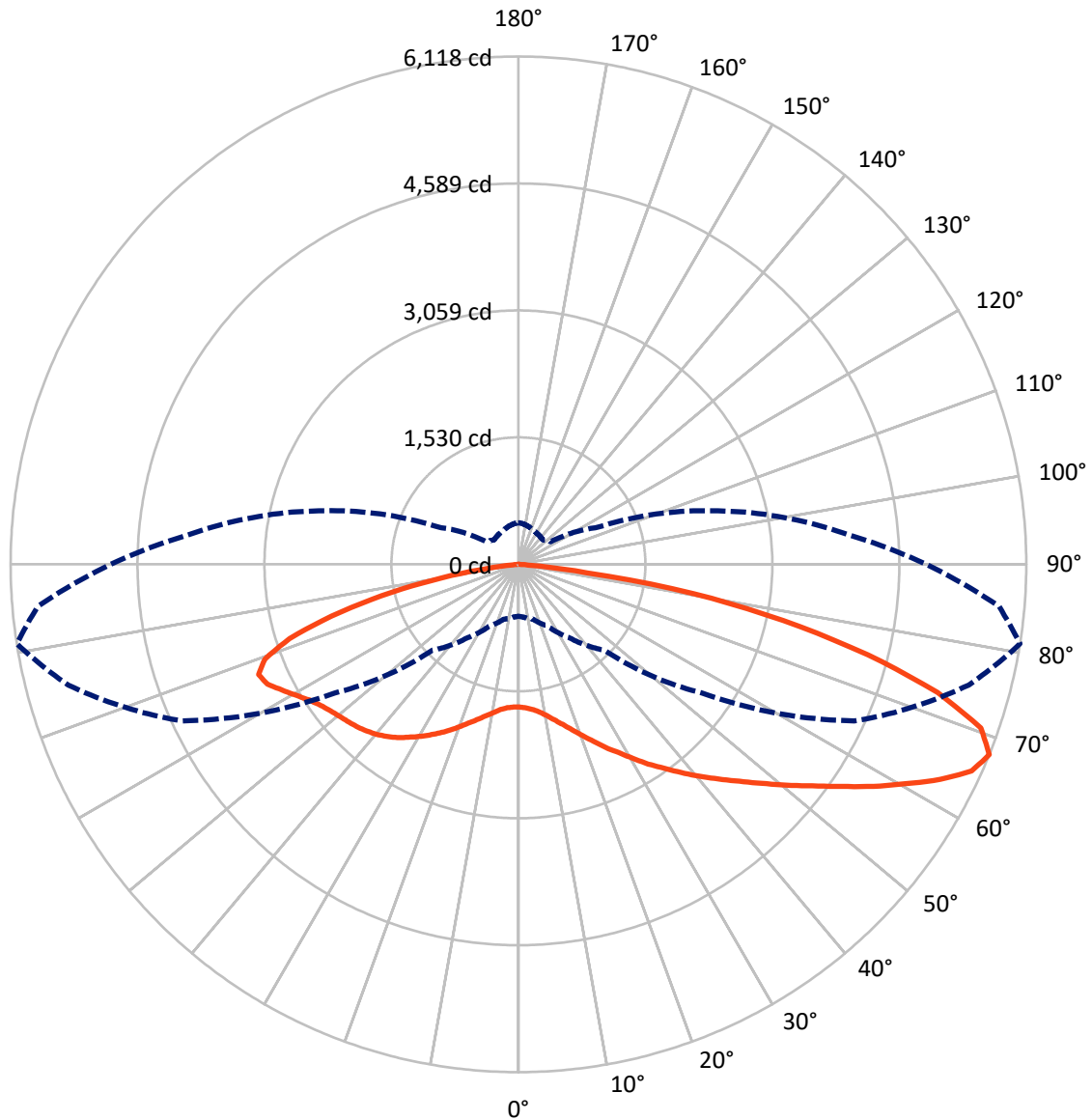
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.7 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 81-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3731.0	0.0	3731.0
	% Fixture	30.6	0.0	30.6
<b>Street Side</b>	Lumens	8444.9	0.0	8444.9
	% Fixture	69.4	0.0	69.4
<b>Total</b>	Lumens	12175.9	0.0	12175.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.3	1.4
10°-20°	622.3	5.1
20°-30°	1239.4	10.2
30°-40°	1947.1	16.0
40°-50°	2414.7	19.8
50°-60°	2360.5	19.4
60°-70°	1985.1	16.3
70°-80°	1261.3	10.4
80°-90°	170.2	1.4
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°	12175.9	100.0
0°-180°	12175.9	100.0

**Coefficient of Utilization**



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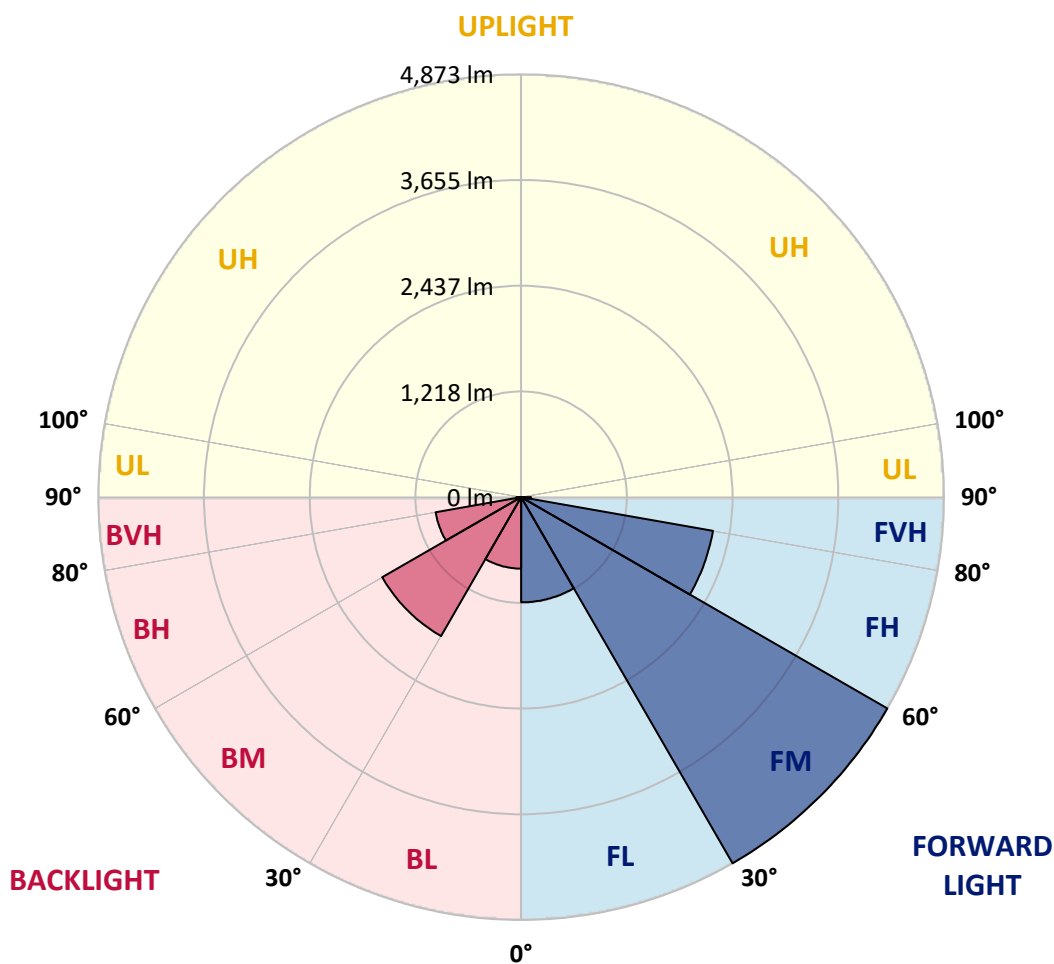
CATALOG NUMBER: EMM2-HSN-SA2B-730-U-T2R

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1212.8	10.0			
FM (30°-60°)	4873.2	40.0			
FH (60°-80°)	2244.9	18.4			G2/5000
FVH (80°-90°)	114.1	0.9			G2/225
BL (0°-30°)	824.1	6.8	B2/1000		
BM (30°-60°)	1849.2	15.2	B2/2500		
BH (60°-80°)	1001.5	8.2	B3/2500		G3/2500
BVH (80°-90°)	56.2	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	81°	85°
0°	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0
2.5°	1779.4	1777.0	1777.0	1757.7	1757.7	1752.8	1755.2	1740.8	1733.5	1731.1	1728.7
5°	1907.3	1907.3	1892.9	1880.8	1856.6	1834.9	1815.6	1786.6	1764.9	1755.2	1748.0
7.5°	2100.5	2086.0	2081.2	2045.0	1994.3	1950.8	1912.2	1849.4	1808.4	1793.9	1784.2
10°	2337.1	2317.8	2281.6	2240.5	2175.3	2110.1	2032.9	1948.4	1880.8	1851.8	1839.7
12.5°	2581.0	2554.4	2503.7	2465.1	2380.6	2281.6	2172.9	2057.0	1962.9	1921.8	1900.1
15°	2848.9	2834.5	2774.1	2696.8	2597.9	2457.8	2322.6	2180.2	2059.4	2001.5	1965.3
17.5°	3138.7	3116.9	3051.8	2957.6	2817.6	2651.0	2494.0	2310.5	2170.5	2095.7	2054.6
20°	3423.6	3418.7	3322.2	3232.8	3068.7	2861.0	2658.2	2465.1	2288.8	2201.9	2148.8
22.5°	3742.3	3710.9	3626.4	3500.8	3305.3	3114.5	2875.5	2624.4	2416.8	2315.4	2255.0
25°	4073.0	4070.6	3966.8	3812.3	3582.9	3341.5	3083.1	2805.5	2568.9	2445.7	2366.1
27.5°	4483.5	4452.1	4319.3	4143.0	3877.5	3599.8	3300.4	2993.8	2713.7	2566.5	2469.9
30°	4843.2	4833.5	4683.9	4485.9	4188.9	3858.1	3534.6	3206.3	2885.2	2711.3	2605.1
32.5°	5135.3	5123.3	4995.3	4797.3	4478.6	4135.8	3764.0	3406.7	3056.6	2868.3	2728.2
35°	5379.2	5359.9	5227.1	5029.1	4753.9	4406.2	4010.3	3616.7	3244.9	3015.5	2882.7
37.5°	5475.8	5458.9	5350.2	5186.0	4932.5	4613.8	4232.4	3848.5	3433.2	3182.1	3032.4
40°	5439.6	5429.9	5352.6	5239.2	5046.0	4780.4	4444.8	4089.9	3645.7	3358.4	3179.7
42.5°	5268.1	5268.1	5219.8	5161.9	5065.3	4874.6	4633.2	4321.7	3850.9	3534.6	3319.7
45°	5026.7	5017.0	5000.1	4978.4	4963.9	4891.5	4756.3	4522.1	4077.9	3727.8	3488.7
47.5°	4705.6	4712.8	4700.8	4710.4	4770.8	4816.6	4809.4	4708.0	4309.6	3940.2	3655.3
50°	4201.0	4234.8	4273.4	4386.9	4510.0	4638.0	4756.3	4840.8	4582.5	4181.7	3848.5
52.5°	3575.7	3590.2	3694.0	3962.0	4225.1	4394.1	4618.7	4901.1	4823.9	4432.8	4075.4
55°	2805.5	2832.0	2989.0	3368.0	3836.4	4159.9	4423.1	4874.6	5070.2	4720.1	4341.0
57.5°	2011.2	2028.1	2279.2	2670.3	3281.1	3824.3	4201.0	4768.4	5268.1	5046.0	4613.8
60°	1429.3	1460.7	1622.4	2003.9	2590.6	3360.8	3998.2	4613.8	5451.6	5364.7	4971.2
62.5°	1055.1	1072.0	1185.5	1463.1	1946.0	2728.2	3735.0	4500.4	5572.3	5707.5	5328.5
65°	794.3	801.6	878.8	1069.6	1455.9	2011.2	3319.7	4478.6	5639.9	5999.7	5644.8
67.5°	625.3	637.4	685.7	816.1	1084.0	1463.1	2704.1	4464.2	5615.8	6118.0	5811.4
70°	526.3	528.7	565.0	637.4	811.2	1052.7	2020.8	4246.9	5480.6	5910.4	5656.8
72.5°	456.3	456.3	473.2	531.2	651.9	796.7	1376.2	3727.8	5137.8	5280.2	5120.9
75°	369.4	367.0	396.0	451.5	523.9	613.2	924.7	2822.4	4418.3	4345.8	4215.5
77.5°	321.1	318.7	342.8	391.1	432.2	490.1	632.6	1832.5	3476.7	3259.4	3177.3
80°	275.2	268.0	287.3	333.2	354.9	381.5	437.0	1067.1	2271.9	2136.7	2037.7
82.5°	207.6	190.7	185.9	224.5	239.0	222.1	222.1	374.2	825.7	833.0	770.2
85°	16.9	19.3	24.1	29.0	41.0	45.9	48.3	79.7	123.1	118.3	120.7
87.5°	2.4	2.4	2.4	4.8	4.8	7.2	7.2	7.2	9.7	9.7	9.7
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: EMM2-HSN-SA2B-730-U-T2R

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0	1719.0
2.5°	1726.3	1721.4	1716.6	1716.6	1716.6	1711.8	1709.4	1709.4	1707.0	1699.7	1697.3
5°	1743.2	1735.9	1728.7	1728.7	1728.7	1726.3	1723.9	1726.3	1723.9	1716.6	1714.2
7.5°	1777.0	1767.3	1757.7	1757.7	1762.5	1760.1	1760.1	1762.5	1760.1	1752.8	1750.4
10°	1825.3	1810.8	1805.9	1805.9	1810.8	1808.4	1805.9	1805.9	1803.5	1791.5	1796.3
12.5°	1878.4	1863.9	1859.1	1861.5	1859.1	1854.2	1856.6	1849.4	1847.0	1827.7	1825.3
15°	1946.0	1929.1	1919.4	1921.8	1914.6	1904.9	1895.3	1890.4	1880.8	1863.9	1859.1
17.5°	2023.2	1996.7	1984.6	1984.6	1970.1	1950.8	1936.3	1921.8	1907.3	1888.0	1883.2
20°	2098.1	2073.9	2054.6	2049.8	2020.8	1989.4	1962.9	1938.7	1921.8	1900.1	1895.3
22.5°	2192.2	2158.4	2131.9	2110.1	2066.7	2016.0	1974.9	1941.1	1917.0	1892.9	1885.6
25°	2291.2	2242.9	2199.5	2158.4	2098.1	2025.6	1967.7	1919.4	1888.0	1861.5	1856.6
27.5°	2390.2	2327.4	2264.7	2199.5	2107.7	2013.6	1931.5	1873.5	1832.5	1798.7	1793.9
30°	2496.4	2419.2	2320.2	2226.0	2105.3	1982.2	1878.4	1796.3	1748.0	1709.4	1704.5
32.5°	2605.1	2508.5	2373.3	2245.4	2093.2	1936.3	1801.1	1714.2	1653.8	1610.4	1598.3
35°	2725.8	2607.5	2421.6	2252.6	2059.4	1868.7	1719.0	1610.4	1540.4	1496.9	1487.2
37.5°	2848.9	2699.3	2453.0	2247.8	2011.2	1789.0	1612.8	1501.7	1419.6	1359.3	1349.6
40°	2974.5	2783.8	2472.3	2223.6	1943.6	1690.1	1513.8	1378.6	1260.3	1204.8	1178.2
42.5°	3090.4	2861.0	2482.0	2189.8	1868.7	1586.2	1383.4	1207.2	1096.1	1035.8	1047.8
45°	3211.1	2933.4	2484.4	2148.8	1769.7	1453.4	1219.3	1055.1	944.0	898.1	893.3
47.5°	3314.9	2993.8	2479.5	2090.8	1658.7	1301.3	1047.8	890.9	808.8	765.4	760.5
50°	3452.5	3061.4	2472.3	2023.2	1513.8	1127.5	888.5	760.5	685.7	651.9	649.5
52.5°	3590.2	3136.3	2467.5	1929.1	1361.7	963.3	743.6	642.2	591.5	574.6	569.8
55°	3771.2	3228.0	2469.9	1820.4	1187.9	794.3	630.1	560.1	533.6	526.3	526.3
57.5°	3978.9	3346.3	2484.4	1699.7	1006.8	656.7	548.1	516.7	514.3	519.1	521.5
60°	4230.0	3503.2	2513.3	1574.2	840.2	555.3	499.8	497.4	504.6	521.5	526.3
62.5°	4512.4	3674.7	2549.6	1410.0	680.8	487.7	473.2	482.9	492.5	511.8	514.3
65°	4761.1	3867.8	2571.3	1253.1	569.8	449.1	456.3	461.1	485.3	511.8	511.8
67.5°	4910.8	4007.8	2489.2	1055.1	475.6	415.3	429.8	444.2	470.8	494.9	499.8
70°	4860.1	3962.0	2209.1	818.5	403.2	383.9	400.8	422.5	449.1	478.0	492.5
72.5°	4507.6	3636.0	1793.9	596.3	350.1	354.9	376.6	405.6	429.8	461.1	480.5
75°	3768.8	3034.8	1294.1	429.8	306.6	325.9	359.7	383.9	400.8	408.0	410.4
77.5°	2861.0	2230.9	881.2	321.1	265.6	292.1	328.4	354.9	359.7	364.6	369.4
80°	1868.7	1419.6	497.4	224.5	202.8	239.0	268.0	297.0	287.3	301.8	306.6
82.5°	789.5	620.5	226.9	111.1	94.2	101.4	108.6	96.6	89.3	89.3	77.3
85°	103.8	79.7	33.8	14.5	12.1	7.2	7.2	7.2	4.8	4.8	4.8
87.5°	9.7	9.7	7.2	7.2	4.8	4.8	2.4	4.8	2.4	2.4	2.4
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: SP1-2407-157-4

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-730-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-730-U-5WQ-2

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-4  
 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-40-730-U-5WQ-2**  
 Description: Epic Modern Light Square 40W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 3057  
 CIE u': 0.2487  
 CIE v': 0.5199  
 Duv: -0.0002  
 CIE x: 0.4326  
 CIE y: 0.4020  
 CIE z: 0.1654  
 Peak Wavelength (nm): 593  
 Dominant Wavelength (nm): 582  
 Purity: 50.50735  
 Rf: 74.6  
 Rg: 94

CRI (Ra):	71.7		
R1:	68.1	R9:	-34.8
R2:	82.0	R10:	58.5
R3:	93.5	R11:	62.5
R4:	67.5	R12:	47.5
R5:	67.2	R13:	70.7
R6:	74.9	R14:	96.4
R7:	77.4	R15:	60.0
R8:	43.1		



**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



Point lies inside the ANSI 3000K 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	104	NR	620	818	NR	750	20	NR	880	1	NR
365	0	NR	495	135	NR	625	755	NR	755	17	NR	885	0	NR
370	0	NR	500	184	NR	630	691	NR	760	15	NR	890	0	NR
375	0	NR	505	247	NR	635	625	NR	765	13	NR	895	0	NR
380	0	NR	510	309	NR	640	561	NR	770	11	NR	900	0	NR
385	0	NR	515	369	NR	645	499	NR	775	9	NR	905	0	NR
390	0	NR	520	419	NR	650	441	NR	780	8	NR	910	0	NR
395	0	NR	525	460	NR	655	388	NR	785	7	NR	915	0	NR
400	1	NR	530	492	NR	660	338	NR	790	6	NR	920	0	NR
405	3	NR	535	524	NR	665	294	NR	795	5	NR	925	0	NR
410	7	NR	540	553	NR	670	253	NR	800	4	NR	930	0	NR
415	15	NR	545	588	NR	675	218	NR	805	4	NR	935	0	NR
420	31	NR	550	625	NR	680	188	NR	810	3	NR	940	0	NR
425	60	NR	555	670	NR	685	161	NR	815	3	NR	945	0	NR
430	107	NR	560	723	NR	690	139	NR	820	3	NR	950	0	NR
435	183	NR	565	780	NR	695	118	NR	825	2	NR	955	0	NR
440	289	NR	570	837	NR	700	100	NR	830	2	NR	960	0	NR
445	460	NR	575	894	NR	705	85	NR	835	2	NR	965	0	NR
450	646	NR	580	942	NR	710	73	NR	840	1	NR	970	0	NR
455	561	NR	585	976	NR	715	62	NR	845	1	NR	975	0	NR
460	331	NR	590	998	NR	720	53	NR	850	1	NR	980	0	NR
465	238	NR	595	1000	NR	725	45	NR	855	1	NR	985	0	NR
470	178	NR	600	990	NR	730	39	NR	860	1	NR	990	0	NR
475	120	NR	605	962	NR	735	33	NR	865	1	NR	995	0	NR
480	96	NR	610	925	NR	740	28	NR	870	1	NR	1000	0	NR
485	95	NR	615	873	NR	745	24	NR	875	1	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.23**

$\lambda$ (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	104	NR	620	818	NR	750	20	NR	880	1	NR
365	0	NR	495	135	NR	625	755	NR	755	17	NR	885	0	NR
370	0	NR	500	184	NR	630	691	NR	760	15	NR	890	0	NR
375	0	NR	505	247	NR	635	625	NR	765	13	NR	895	0	NR
380	0	NR	510	309	NR	640	561	NR	770	11	NR	900	0	NR
385	0	NR	515	369	NR	645	499	NR	775	9	NR	905	0	NR
390	0	NR	520	419	NR	650	441	NR	780	8	NR	910	0	NR
395	0	NR	525	460	NR	655	388	NR	785	7	NR	915	0	NR
400	1	NR	530	492	NR	660	338	NR	790	6	NR	920	0	NR
405	3	NR	535	524	NR	665	294	NR	795	5	NR	925	0	NR
410	7	NR	540	553	NR	670	253	NR	800	4	NR	930	0	NR
415	15	NR	545	588	NR	675	218	NR	805	4	NR	935	0	NR
420	31	NR	550	625	NR	680	188	NR	810	3	NR	940	0	NR
425	60	NR	555	670	NR	685	161	NR	815	3	NR	945	0	NR
430	107	NR	560	723	NR	690	139	NR	820	3	NR	950	0	NR
435	183	NR	565	780	NR	695	118	NR	825	2	NR	955	0	NR
440	289	NR	570	837	NR	700	100	NR	830	2	NR	960	0	NR
445	460	NR	575	894	NR	705	85	NR	835	2	NR	965	0	NR
450	646	NR	580	942	NR	710	73	NR	840	1	NR	970	0	NR
455	561	NR	585	976	NR	715	62	NR	845	1	NR	975	0	NR
460	331	NR	590	998	NR	720	53	NR	850	1	NR	980	0	NR
465	238	NR	595	1000	NR	725	45	NR	855	1	NR	985	0	NR
470	178	NR	600	990	NR	730	39	NR	860	1	NR	990	0	NR
475	120	NR	605	962	NR	735	33	NR	865	1	NR	995	0	NR
480	96	NR	610	925	NR	740	28	NR	870	1	NR	1000	0	NR
485	95	NR	615	873	NR	745	24	NR	875	1	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.27**

$\lambda$ (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	104	NR	620	818	NR	750	20	NR	880	1	NR
365	0	NR	495	135	NR	625	755	NR	755	17	NR	885	0	NR
370	0	NR	500	184	NR	630	691	NR	760	15	NR	890	0	NR
375	0	NR	505	247	NR	635	625	NR	765	13	NR	895	0	NR
380	0	NR	510	309	NR	640	561	NR	770	11	NR	900	0	NR
385	0	NR	515	369	NR	645	499	NR	775	9	NR	905	0	NR
390	0	NR	520	419	NR	650	441	NR	780	8	NR	910	0	NR
395	0	NR	525	460	NR	655	388	NR	785	7	NR	915	0	NR
400	1	NR	530	492	NR	660	338	NR	790	6	NR	920	0	NR
405	3	NR	535	524	NR	665	294	NR	795	5	NR	925	0	NR
410	7	NR	540	553	NR	670	253	NR	800	4	NR	930	0	NR
415	15	NR	545	588	NR	675	218	NR	805	4	NR	935	0	NR
420	31	NR	550	625	NR	680	188	NR	810	3	NR	940	0	NR
425	60	NR	555	670	NR	685	161	NR	815	3	NR	945	0	NR
430	107	NR	560	723	NR	690	139	NR	820	3	NR	950	0	NR
435	183	NR	565	780	NR	695	118	NR	825	2	NR	955	0	NR
440	289	NR	570	837	NR	700	100	NR	830	2	NR	960	0	NR
445	460	NR	575	894	NR	705	85	NR	835	2	NR	965	0	NR
450	646	NR	580	942	NR	710	73	NR	840	1	NR	970	0	NR
455	561	NR	585	976	NR	715	62	NR	845	1	NR	975	0	NR
460	331	NR	590	998	NR	720	53	NR	850	1	NR	980	0	NR
465	238	NR	595	1000	NR	725	45	NR	855	1	NR	985	0	NR
470	178	NR	600	990	NR	730	39	NR	860	1	NR	990	0	NR
475	120	NR	605	962	NR	735	33	NR	865	1	NR	995	0	NR
480	96	NR	610	925	NR	740	28	NR	870	1	NR	1000	0	NR
485	95	NR	615	873	NR	745	24	NR	875	1	NR			

**Summary**

$R_f = 74.6$   
 $R_g = 94$   
 $CIE R_a = 71.7$   
 $R_9 = -34.8$



**Color Vector Graphics**



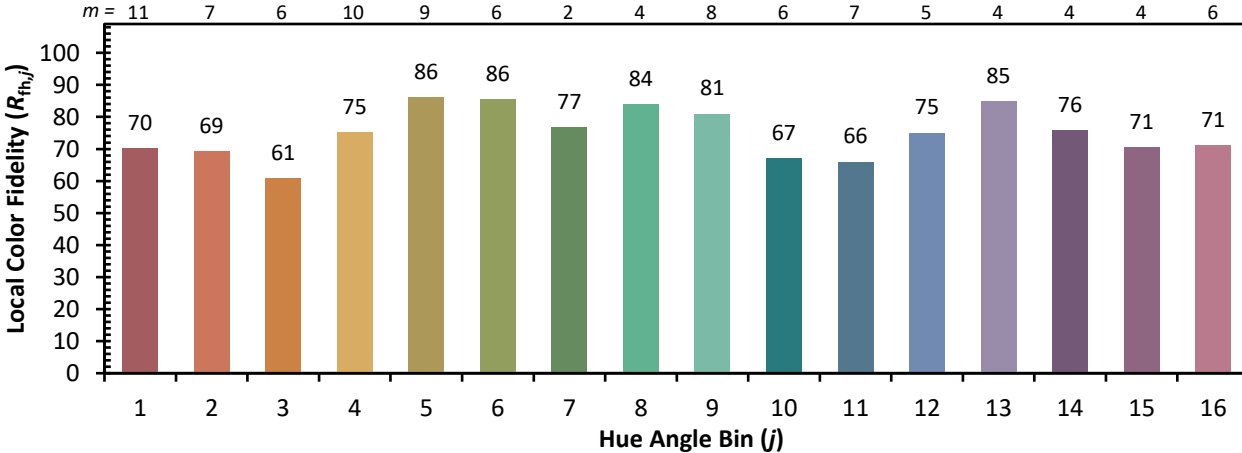


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 65	CES51 = 87	CES76 = 58
CES02 = 62	CES27 = 89	CES52 = 85	CES77 = 76
CES03 = 31	CES28 = 84	CES53 = 77	CES78 = 61
CES04 = 71	CES29 = 68	CES54 = 85	CES79 = 86
CES05 = 49	CES30 = 83	CES55 = 84	CES80 = 83
CES06 = 51	CES31 = 71	CES56 = 74	CES81 = 73
CES07 = 41	CES32 = 64	CES57 = 74	CES82 = 93
CES08 = 40	CES33 = 78	CES58 = 75	CES83 = 91
CES09 = 29	CES34 = 75	CES59 = 85	CES84 = 88
CES10 = 76	CES35 = 87	CES60 = 90	CES85 = 75
CES11 = 59	CES36 = 92	CES61 = 81	CES86 = 64
CES12 = 65	CES37 = 84	CES62 = 89	CES87 = 77
CES13 = 43	CES38 = 92	CES63 = 75	CES88 = 80
CES14 = 74	CES39 = 96	CES64 = 65	CES89 = 67
CES15 = 71	CES40 = 92	CES65 = 64	CES90 = 80
CES16 = 47	CES41 = 93	CES66 = 60	CES91 = 78
CES17 = 50	CES42 = 86	CES67 = 58	CES92 = 56
CES18 = 56	CES43 = 77	CES68 = 66	CES93 = 73
CES19 = 73	CES44 = 99	CES69 = 75	CES94 = 49
CES20 = 66	CES45 = 85	CES70 = 60	CES95 = 66
CES21 = 87	CES46 = 81	CES71 = 56	CES96 = 76
CES22 = 79	CES47 = 86	CES72 = 85	CES97 = 82
CES23 = 92	CES48 = 75	CES73 = 52	CES98 = 76
CES24 = 91	CES49 = 79	CES74 = 95	CES99 = 64
CES25 = 73	CES50 = 86	CES75 = 60	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)