

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: P871254

Luminaire Tested: **EMM2-HSN-SA2B-840-U-T4W**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P871254  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2B-840-U-T4W  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 100W 80CRI 4000K  
FITXURE w/ TYPE IV WIDE DISTRIBUTION OPTIC  
Light Source: (20) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

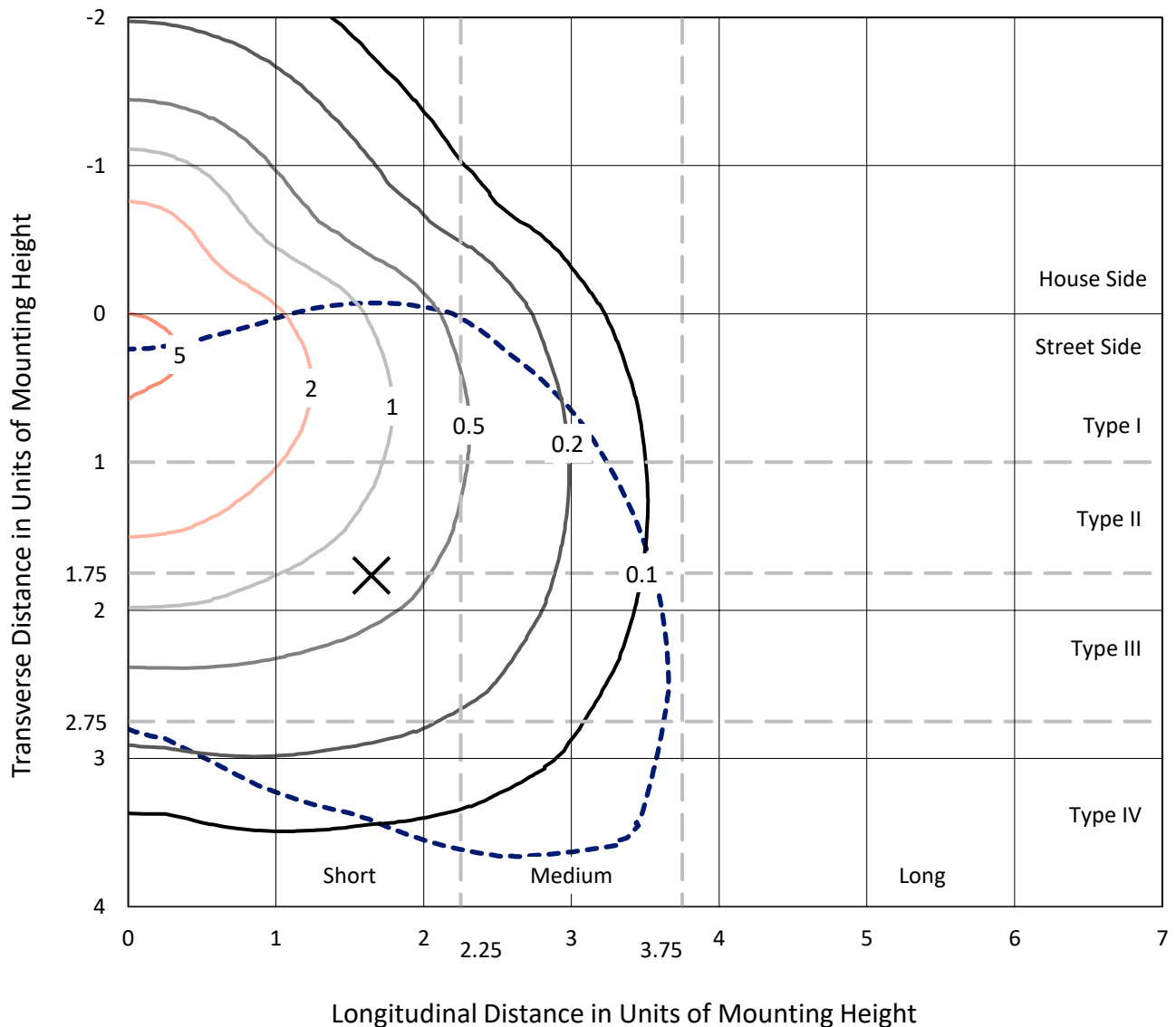
Lumens per Lamp: N/A  
Luminaire Lumens: 12011.9 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

Input Watts (W): 90  
Input Voltage (V): 120  
Input Current (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: EMM2-HSN-SA2B-840-U-T4W

### Iso-Footcandle Lines of Horizontal Illumination

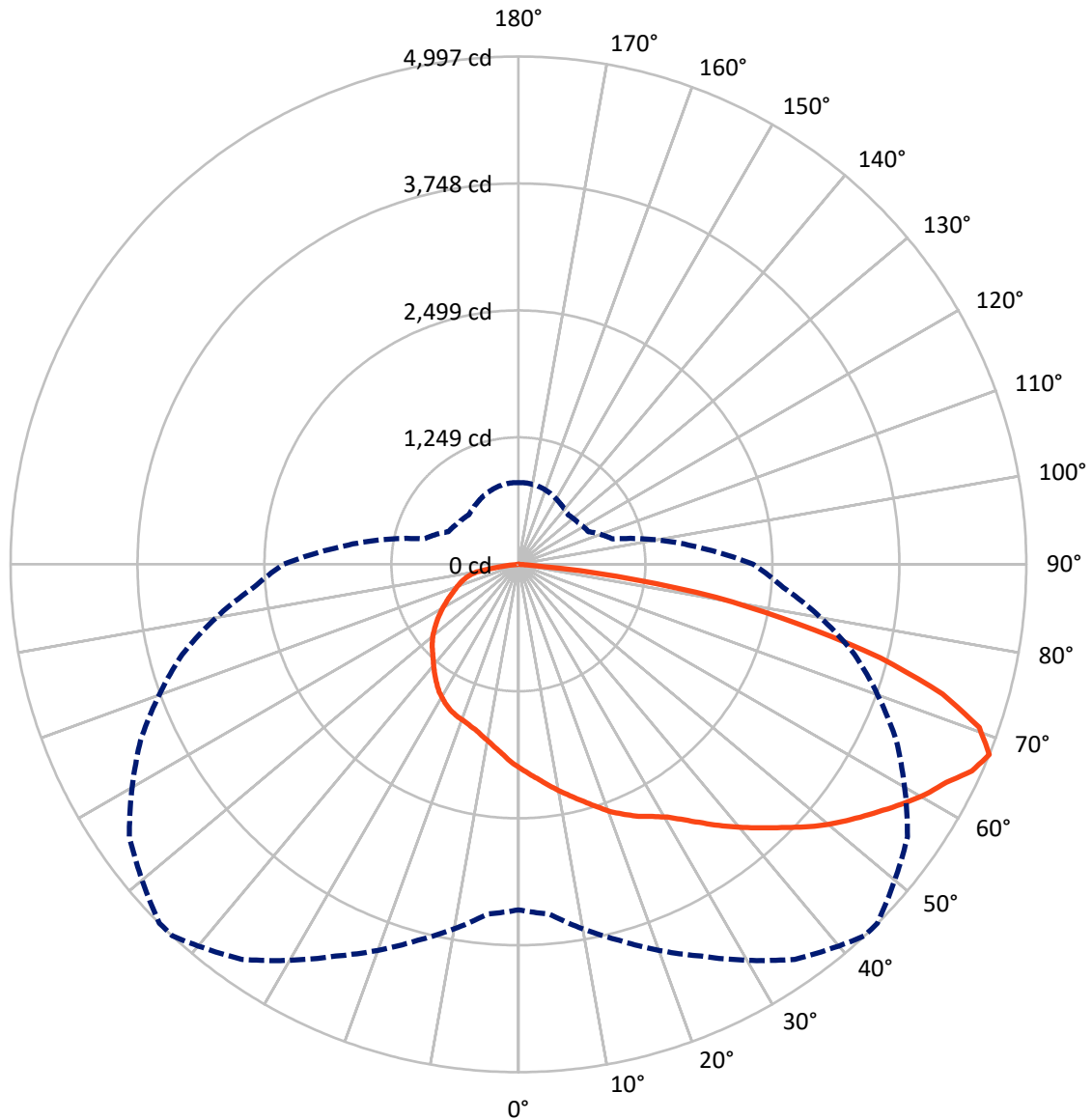
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.7 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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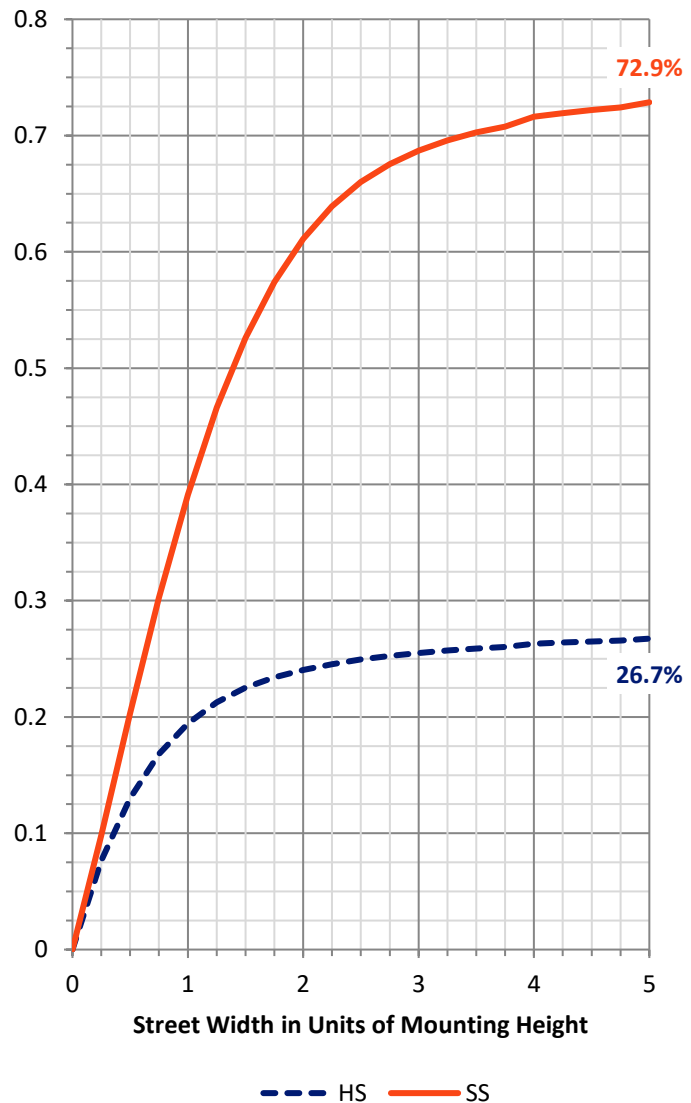
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3231.3	0.0	3231.3
	% Fixture	26.9	0.0	26.9
<b>Street Side</b>	Lumens	8780.6	0.0	8780.6
	% Fixture	73.1	0.0	73.1
<b>Total</b>	Lumens	12011.9	0.0	12011.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.9	1.6
10°-20°	586.0	4.9
20°-30°	999.9	8.3
30°-40°	1458.2	12.1
40°-50°	1959.0	16.3
50°-60°	2398.1	20.0
60°-70°	2523.9	21.0
70°-80°	1647.7	13.7
80°-90°	247.2	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°	12011.9	100.0
0°-180°	12011.9	100.0



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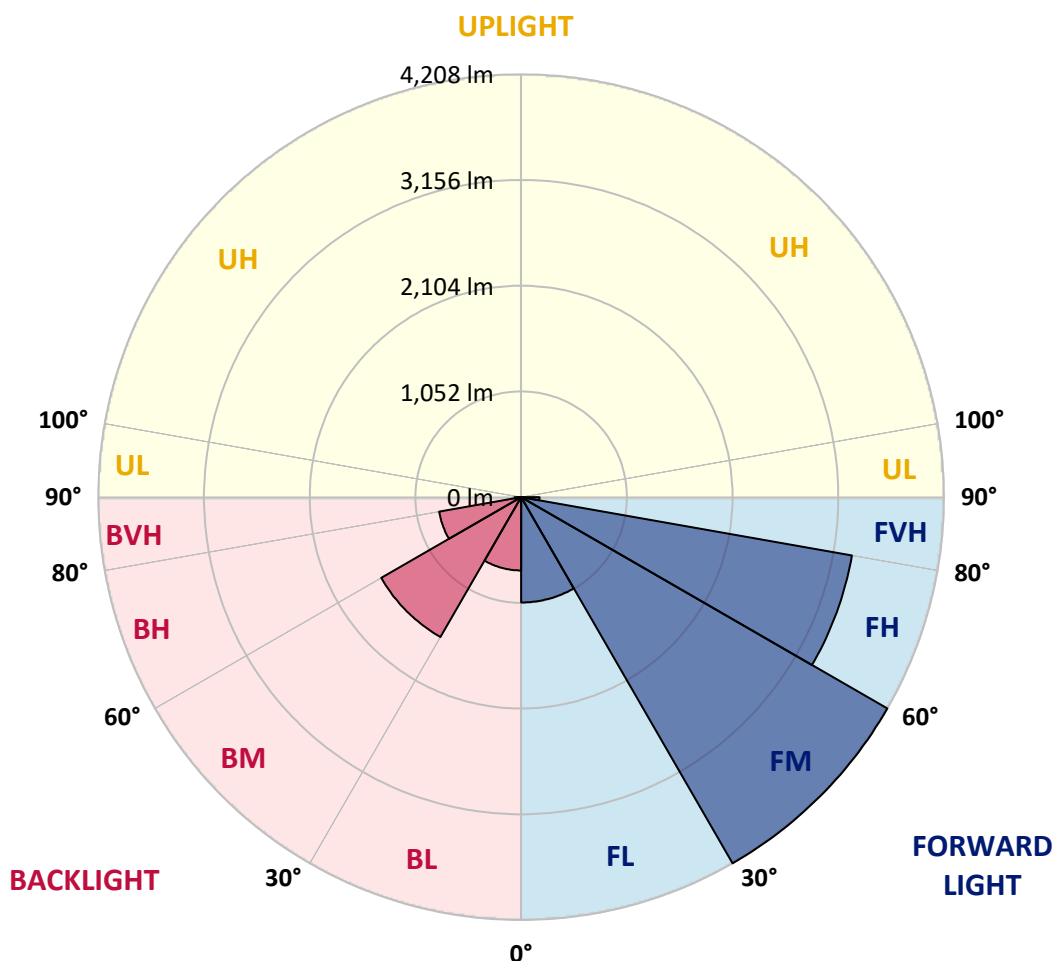
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1048.3	8.7			
FM (30°-60°)	4207.7	35.0			
FH (60°-80°)	3342.3	27.8			G2/5000
FVH (80°-90°)	182.4	1.5			G2/225
BL (0°-30°)	729.5	6.1	B2/1000		
BM (30°-60°)	1607.7	13.4	B2/2500		
BH (60°-80°)	829.3	6.9	B2/1000		G2/1000
BVH (80°-90°)	64.8	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°	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1
2.5°	2097.5	2095.1	2087.8	2082.9	2068.3	2065.9	2065.9	2051.3	2034.3	2024.6	2014.9
5°	2192.3	2180.1	2175.3	2165.6	2141.2	2126.7	2131.5	2104.8	2070.8	2046.5	2019.7
7.5°	2277.4	2272.5	2255.5	2243.3	2214.2	2199.6	2194.7	2153.4	2109.7	2073.2	2029.4
10°	2379.4	2367.3	2357.6	2333.3	2294.4	2272.5	2265.2	2211.7	2155.8	2107.2	2048.9
12.5°	2471.8	2457.2	2445.1	2420.8	2381.9	2345.4	2335.7	2274.9	2204.4	2138.8	2065.9
15°	2542.3	2544.7	2532.6	2510.7	2466.9	2423.2	2415.9	2335.7	2250.6	2170.4	2082.9
17.5°	2607.9	2617.6	2610.3	2595.7	2552.0	2508.2	2501.0	2411.0	2309.0	2206.9	2102.4
20°	2671.1	2671.1	2668.7	2658.9	2627.3	2598.2	2583.6	2493.7	2364.9	2245.8	2129.1
22.5°	2707.5	2717.3	2717.3	2717.3	2697.8	2673.5	2668.7	2581.2	2440.2	2294.4	2153.4
25°	2763.4	2775.6	2775.6	2770.7	2753.7	2746.4	2739.1	2656.5	2513.1	2350.3	2180.1
27.5°	2882.5	2880.1	2860.7	2836.4	2812.1	2809.6	2799.9	2741.6	2598.2	2411.0	2216.6
30°	3047.8	3052.7	3028.4	2953.0	2897.1	2885.0	2887.4	2836.4	2697.8	2481.5	2257.9
32.5°	3300.6	3300.6	3205.8	3108.6	3028.4	2996.8	2989.5	2945.7	2799.9	2559.3	2304.1
35°	3490.2	3482.9	3429.4	3315.2	3215.5	3125.6	3113.4	3055.1	2914.1	2646.8	2355.1
37.5°	3633.6	3648.1	3606.8	3519.3	3422.1	3266.6	3242.3	3159.6	3018.6	2731.9	2406.2
40°	3910.6	3874.2	3774.5	3694.3	3577.7	3405.1	3383.2	3281.1	3125.6	2826.6	2469.4
42.5°	4112.4	4061.3	3947.1	3840.2	3694.3	3543.6	3524.2	3412.4	3249.5	2933.6	2535.0
45°	4401.6	4287.4	4129.4	4034.6	3828.0	3694.3	3670.0	3548.5	3378.4	3047.8	2617.6
47.5°	4681.1	4481.8	4314.1	4270.3	3973.8	3857.2	3837.7	3696.8	3516.9	3171.8	2697.8
50°	4644.6	4513.4	4457.5	4416.2	4100.2	4010.3	3990.8	3847.4	3657.9	3303.0	2778.0
52.5°	4552.3	4564.4	4566.9	4467.2	4219.3	4153.7	4134.2	4010.3	3803.7	3417.2	2855.8
55°	4649.5	4664.1	4661.7	4511.0	4357.8	4297.1	4284.9	4175.6	3944.7	3524.2	2911.7
57.5°	4797.8	4749.1	4741.9	4620.3	4506.1	4450.2	4435.6	4340.8	4063.8	3602.0	2955.5
60°	4824.5	4727.3	4758.9	4644.6	4617.9	4600.9	4596.0	4484.2	4175.6	3665.2	2972.5
62.5°	4525.5	4508.5	4632.5	4586.3	4676.2	4724.8	4727.3	4586.3	4236.3	3689.5	2955.5
65°	4015.1	4083.2	4350.5	4484.2	4763.7	4902.3	4897.4	4647.1	4229.0	3619.0	2850.9
67.5°	3400.2	3453.7	3830.4	4253.3	4744.3	4997.1	4994.6	4673.8	4102.6	3424.5	2615.2
70°	2578.7	2746.4	3281.1	3837.7	4481.8	4809.9	4851.2	4523.1	3813.4	3069.7	2257.9
72.5°	1961.4	1988.1	2634.6	3217.9	4012.7	4365.1	4357.8	4041.9	3329.8	2586.0	1881.2
75°	1392.7	1451.0	1983.3	2493.7	3288.4	3679.7	3662.7	3315.2	2656.5	2012.4	1438.8
77.5°	1037.8	1059.7	1451.0	1849.6	2459.6	2812.1	2804.8	2449.9	1954.1	1477.7	1071.8
80°	758.3	794.8	1045.1	1290.6	1667.3	1971.1	1961.4	1626.0	1254.1	1033.0	782.6
82.5°	425.3	452.1	607.6	780.2	879.8	974.6	933.3	780.2	571.2	444.8	384.0
85°	12.2	14.6	21.9	26.7	46.2	77.8	85.1	75.3	89.9	55.9	60.8
87.5°	4.9	4.9	4.9	4.9	4.9	7.3	7.3	7.3	7.3	7.3	7.3
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-840-U-T4W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1	2005.1
2.5°	2010.0	2000.3	1980.8	1968.7	1961.4	1951.7	1937.1	1927.4	1920.1	1929.8	1927.4
5°	2007.6	1988.1	1954.1	1929.8	1905.5	1886.0	1864.2	1847.2	1837.4	1842.3	1839.9
7.5°	2007.6	1983.3	1929.8	1890.9	1854.5	1825.3	1801.0	1779.1	1769.4	1771.8	1769.4
10°	2017.3	1983.3	1912.8	1856.9	1808.3	1774.2	1747.5	1728.1	1720.8	1728.1	1730.5
12.5°	2027.0	1983.3	1898.2	1827.7	1764.5	1728.1	1703.8	1691.6	1696.5	1698.9	1701.3
15°	2031.9	1980.8	1883.6	1793.7	1723.2	1684.3	1669.7	1667.3	1679.5	1691.6	1694.0
17.5°	2044.0	1978.4	1861.7	1759.7	1686.7	1655.2	1647.9	1657.6	1681.9	1698.9	1703.8
20°	2058.6	1983.3	1837.4	1718.3	1650.3	1626.0	1638.1	1660.0	1689.2	1713.5	1718.3
22.5°	2073.2	1985.7	1815.6	1681.9	1611.4	1606.5	1633.3	1664.9	1698.9	1723.2	1728.1
25°	2090.2	1985.7	1786.4	1635.7	1572.5	1579.8	1621.1	1662.4	1694.0	1725.6	1730.5
27.5°	2107.2	1990.6	1754.8	1584.7	1523.9	1545.8	1596.8	1647.9	1681.9	1713.5	1720.8
30°	2136.4	2000.3	1728.1	1540.9	1475.3	1504.5	1565.2	1623.6	1660.0	1694.0	1701.3
32.5°	2165.6	2014.9	1706.2	1494.7	1426.7	1460.7	1528.8	1594.4	1633.3	1664.9	1669.7
35°	2204.4	2034.3	1689.2	1448.6	1378.1	1404.8	1477.7	1550.6	1594.4	1618.7	1630.8
37.5°	2245.8	2061.0	1674.6	1407.2	1324.6	1348.9	1426.7	1504.5	1550.6	1574.9	1579.8
40°	2296.8	2097.5	1664.9	1368.4	1273.6	1293.0	1370.8	1455.9	1499.6	1516.6	1526.3
42.5°	2352.7	2136.4	1657.6	1329.5	1217.7	1237.1	1319.7	1402.4	1446.1	1460.7	1468.0
45°	2423.2	2187.4	1652.7	1288.2	1171.5	1188.5	1271.1	1353.8	1390.2	1409.7	1417.0
47.5°	2488.8	2238.5	1638.1	1239.5	1120.4	1144.8	1220.1	1293.0	1334.3	1346.5	1353.8
50°	2554.4	2282.2	1609.0	1186.1	1074.3	1096.1	1164.2	1217.7	1249.3	1263.8	1268.7
52.5°	2617.6	2313.8	1562.8	1130.2	1025.7	1040.2	1096.1	1147.2	1169.1	1173.9	1188.5
55°	2658.9	2330.8	1497.2	1064.5	977.1	981.9	1023.2	1069.4	1081.6	1084.0	1084.0
57.5°	2688.1	2321.1	1419.4	998.9	928.4	928.4	952.7	989.2	994.1	996.5	1001.4
60°	2693.0	2287.1	1319.7	938.2	875.0	867.7	892.0	913.9	916.3	921.1	926.0
62.5°	2656.5	2211.7	1212.8	879.8	823.9	806.9	828.8	850.7	862.8	870.1	875.0
65°	2544.7	2058.6	1091.3	821.5	775.3	746.2	772.9	809.3	833.7	836.1	836.1
67.5°	2311.4	1810.7	962.5	760.7	717.0	690.3	724.3	763.2	792.3	804.5	802.1
70°	1959.0	1536.1	843.4	697.5	658.7	641.6	678.1	721.9	746.2	755.9	760.7
72.5°	1577.4	1229.8	738.9	634.4	607.6	597.9	634.4	678.1	712.1	726.7	729.1
75°	1227.4	967.3	651.4	568.7	546.9	549.3	588.2	631.9	668.4	675.7	653.8
77.5°	952.7	770.5	568.7	491.0	478.8	495.8	534.7	580.9	602.8	610.0	595.5
80°	687.8	590.6	459.4	386.4	386.4	413.2	447.2	500.7	508.0	498.2	503.1
82.5°	325.7	286.8	226.0	187.1	175.0	194.4	206.6	223.6	243.0	247.9	235.8
85°	43.7	29.2	21.9	24.3	21.9	14.6	9.7	9.7	9.7	7.3	7.3
87.5°	7.3	7.3	4.9	4.9	4.9	4.9	4.9	4.9	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



Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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-40-840-U-5WQ

Data in this report applies to families of products including MEM2-HTN-SA-40-840-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-40-840-U-5WQ**  
 Description: Epic Modern Light Square 40W 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**

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			

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**Melanopic Flux vs. Wavelength**



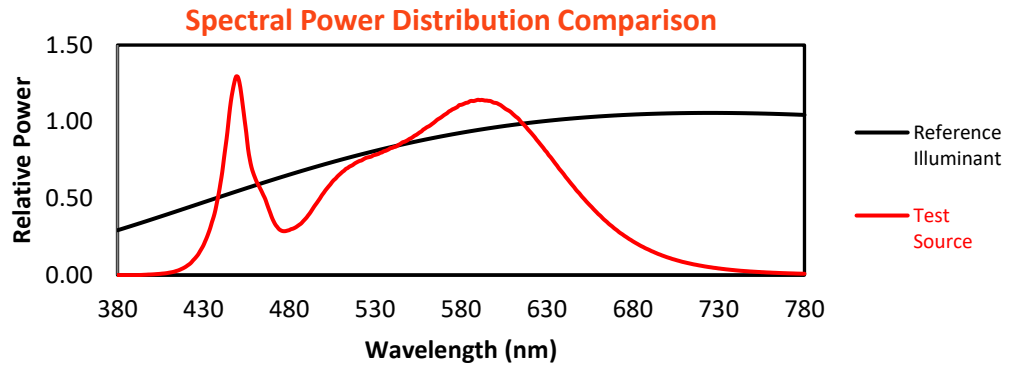
**Melanopic Lumens: NR**

**M/P: 3.37**

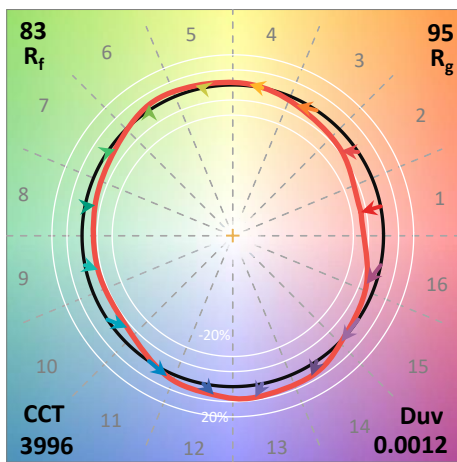
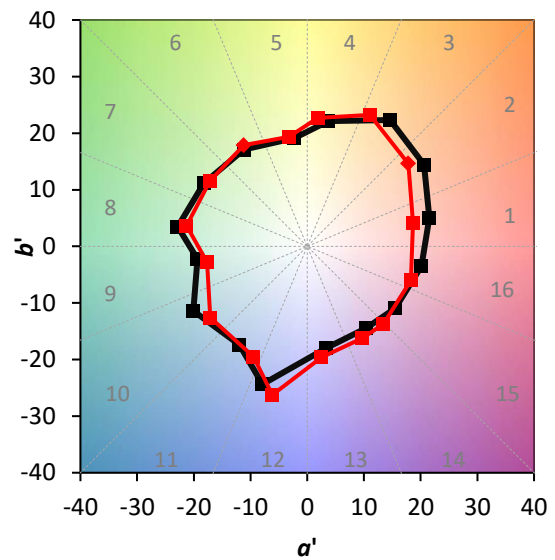
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	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  $R_a = 80.6$   
 $R_g = -5.8$



**Color Vector Graphics**



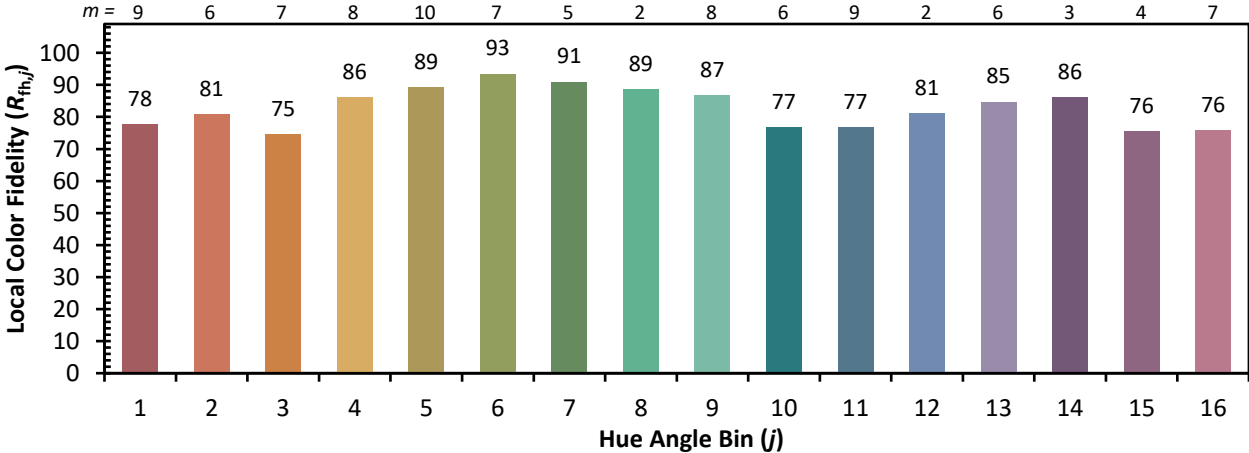


Individual Sample Fidelity Index ( $R_{f,i}$ )

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)