

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: P871114

Luminaire Tested: **EMM2-HSN-SA2B-840-U-T2U**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P871114  
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-T2U  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 100W 80CRI 4000K  
FITXURE w/ TYPE II URBAN DISTRIBUTION OPTIC  
Light Source: (20) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

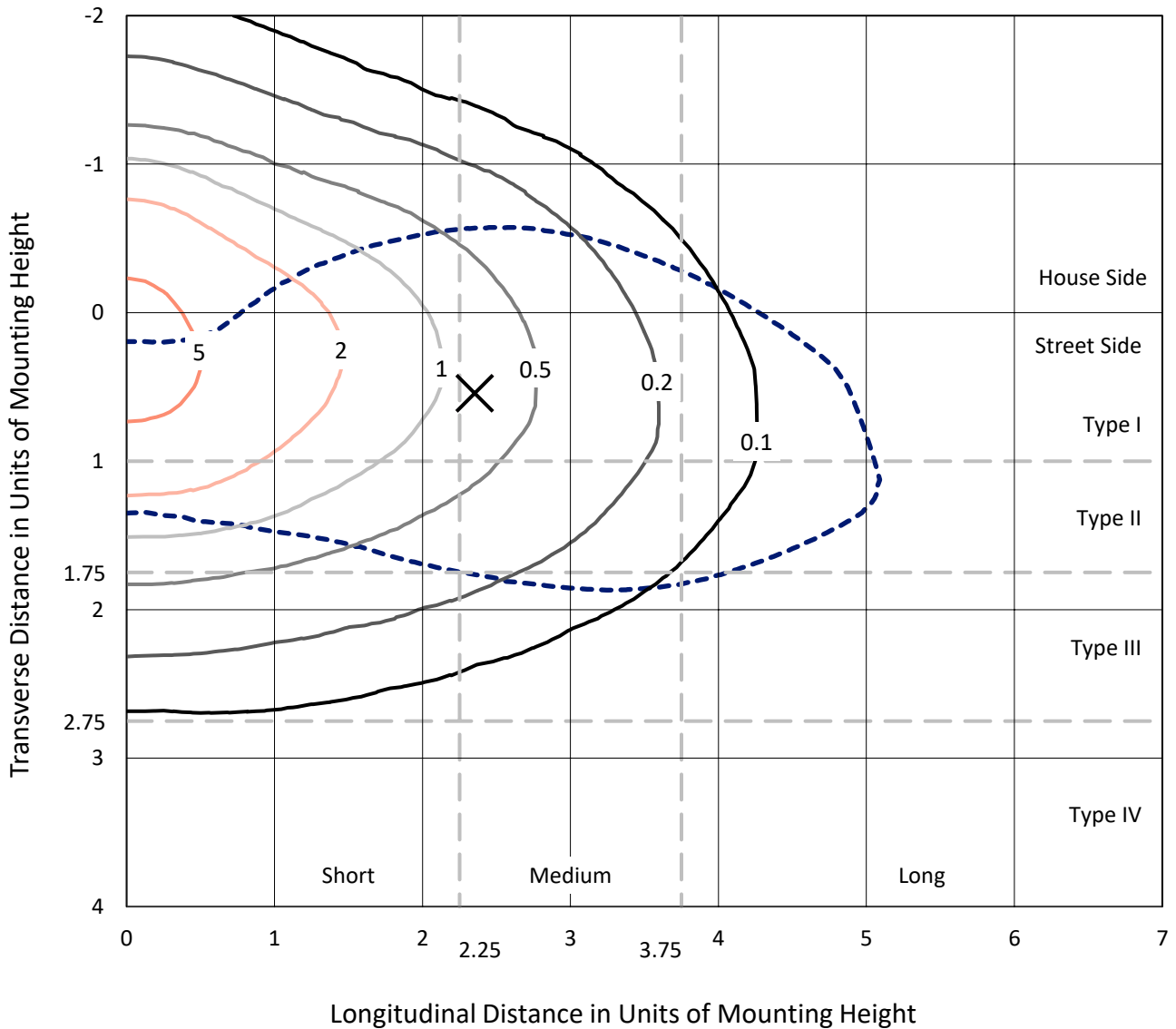
Lumens per Lamp: N/A  
Luminaire Lumens: 12287.6 lumens  
Efficiency: N/A  
Efficacy: 136.5 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

Input Watts (W): 90  
Input Voltage (V): 120  
Input Current (Ain): 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

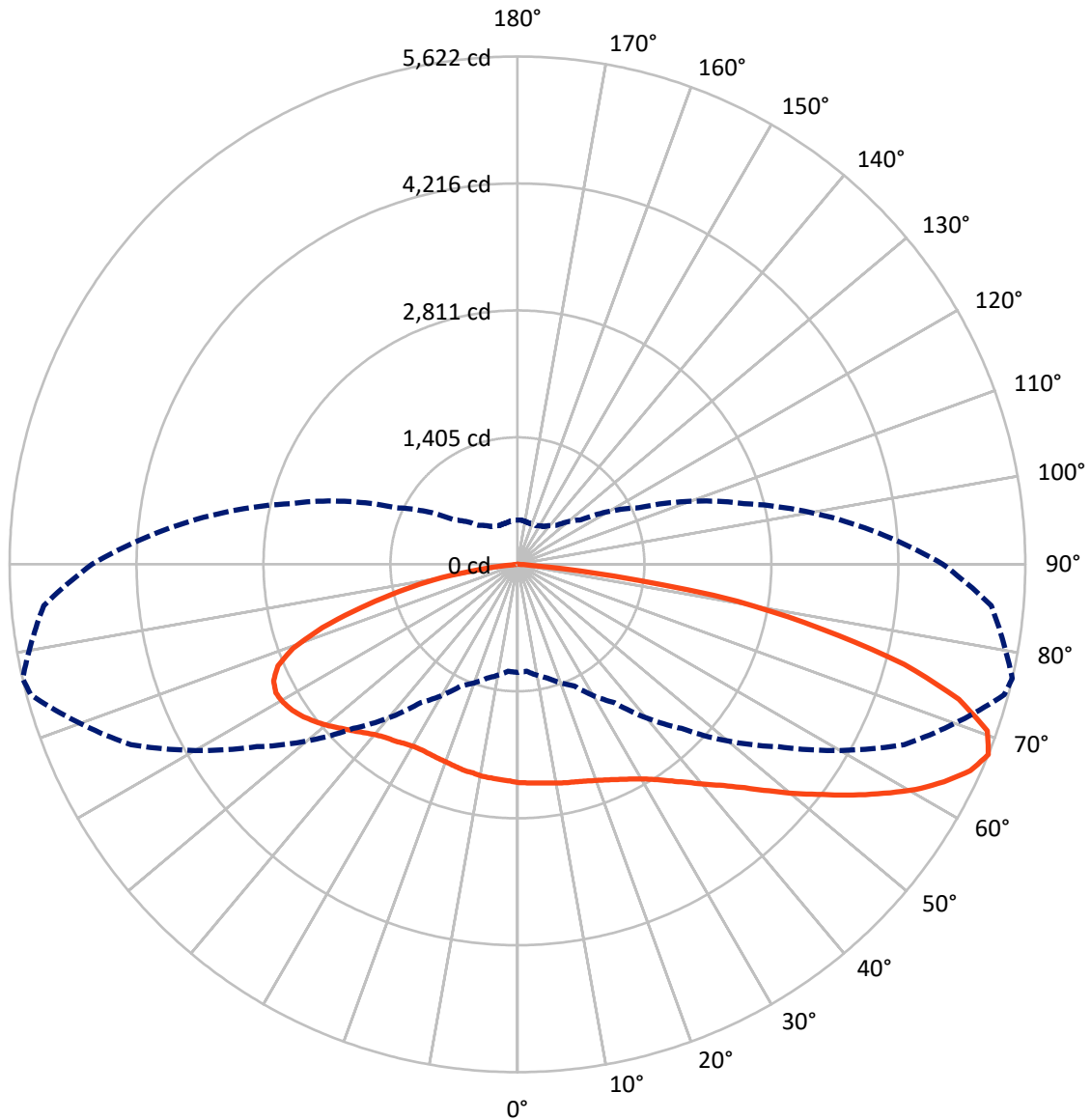
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.6 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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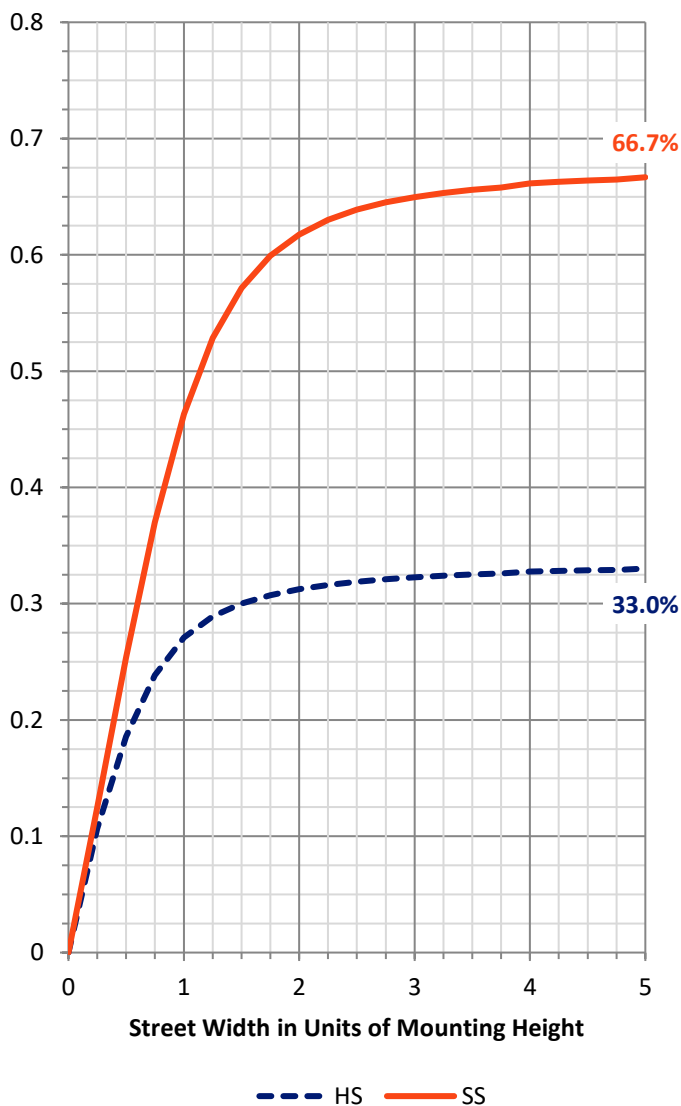
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4086.1	0.0	4086.1
	% Fixture	33.3	0.0	33.3
<b>Street Side</b>	Lumens	8201.6	0.0	8201.6
	% Fixture	66.7	0.0	66.7
<b>Total</b>	Lumens	12287.6	0.0	12287.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.2	1.9
10°-20°	704.2	5.7
20°-30°	1187.3	9.7
30°-40°	1684.8	13.7
40°-50°	2131.6	17.3
50°-60°	2335.1	19.0
60°-70°	2257.2	18.4
70°-80°	1518.1	12.4
80°-90°	237.2	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°	12287.6	100.0
0°-180°	12287.6	100.0

**Coefficient of Utilization**



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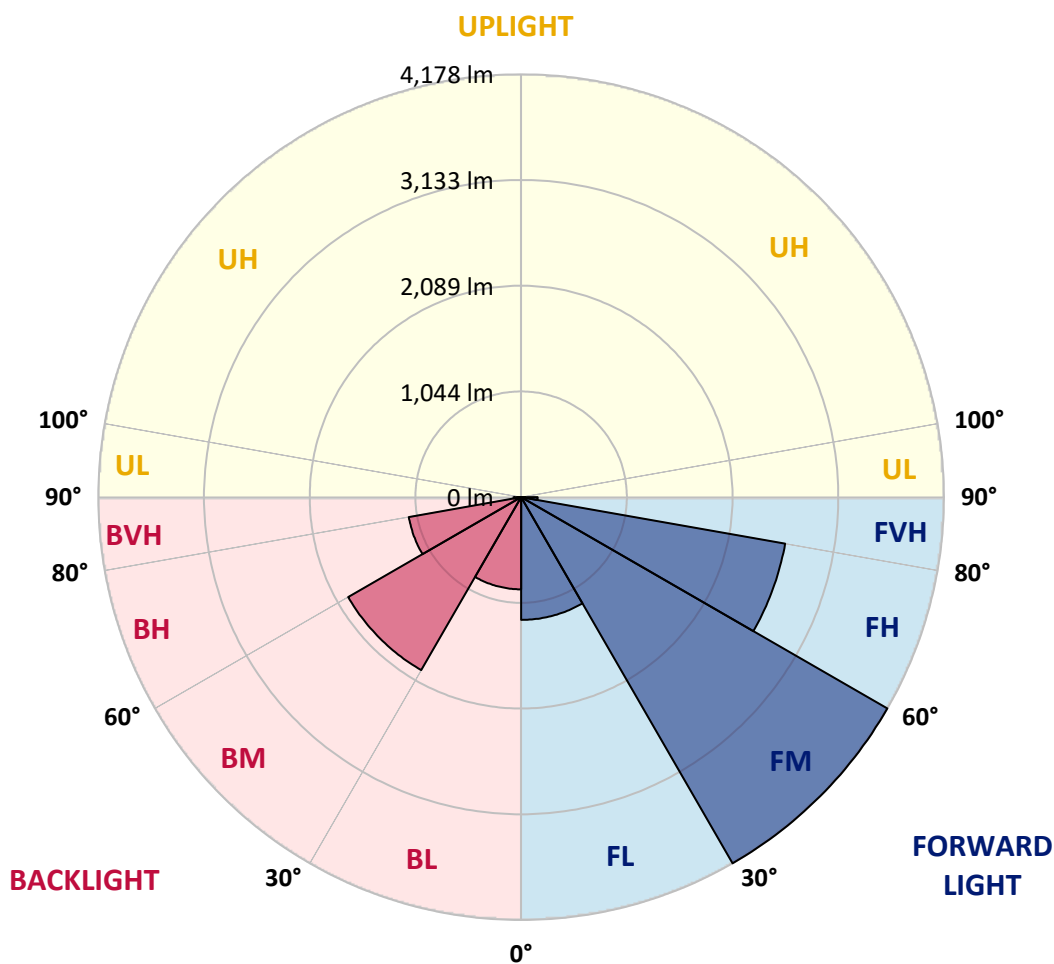
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1212.8	9.9			
FM	(30°-60°)	4177.9	34.0			
FH	(60°-80°)	2648.4	21.6			G2/5000
FVH	(80°-90°)	162.4	1.3			G2/225
BL	(0°-30°)	910.9	7.4	B2/1000		
BM	(30°-60°)	1973.5	16.1	B2/2500		
BH	(60°-80°)	1126.9	9.2	B3/2500		G3/2500
BVH	(80°-90°)	74.8	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°	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9
2.5°	2469.4	2466.9	2454.8	2459.6	2445.0	2454.8	2440.2	2428.0	2425.6	2423.2	2425.6
5°	2547.1	2535.0	2522.8	2515.5	2503.4	2498.5	2474.2	2449.9	2435.3	2432.9	2428.0
7.5°	2637.1	2632.2	2615.2	2605.5	2571.4	2554.4	2520.4	2476.6	2454.8	2445.0	2432.9
10°	2729.4	2741.6	2719.7	2700.2	2661.4	2624.9	2566.6	2510.7	2466.9	2462.1	2435.3
12.5°	2843.6	2841.2	2826.6	2792.6	2746.4	2695.4	2624.9	2547.1	2488.8	2479.1	2440.2
15°	2945.7	2943.3	2923.8	2892.3	2831.5	2768.3	2673.5	2583.6	2510.7	2496.1	2449.9
17.5°	3040.5	3035.6	3023.5	2989.5	2914.1	2836.4	2744.0	2624.9	2537.4	2520.4	2457.2
20°	3123.1	3128.0	3113.4	3079.4	3008.9	2926.3	2809.6	2678.4	2571.4	2552.0	2479.1
22.5°	3213.1	3215.5	3208.2	3196.1	3106.1	3018.6	2892.3	2739.1	2610.3	2590.9	2503.4
25°	3307.9	3310.3	3315.2	3307.9	3205.8	3111.0	2977.3	2814.5	2663.8	2637.1	2537.4
27.5°	3417.2	3419.7	3429.4	3414.8	3305.4	3205.8	3072.1	2894.7	2719.7	2690.5	2566.6
30°	3541.2	3550.9	3543.6	3538.8	3412.4	3315.2	3166.9	2977.3	2792.6	2756.1	2617.6
32.5°	3689.4	3687.0	3672.4	3657.8	3529.0	3427.0	3273.8	3084.3	2882.5	2841.2	2700.2
35°	3796.4	3796.4	3774.5	3767.2	3648.1	3541.2	3390.5	3203.4	2984.6	2945.7	2787.7
37.5°	3862.0	3871.7	3854.7	3859.6	3745.3	3645.7	3507.2	3324.9	3096.4	3062.4	2894.7
40°	3886.3	3910.6	3925.2	3944.6	3830.4	3745.3	3631.1	3456.1	3239.8	3200.9	3023.5
42.5°	3891.2	3927.6	3978.7	4020.0	3891.2	3820.7	3750.2	3589.8	3380.8	3346.7	3164.5
45°	3866.9	3849.9	3973.8	3978.7	3925.2	3881.5	3854.7	3750.2	3584.9	3529.0	3339.5
47.5°	3682.2	3662.7	3696.7	3852.3	3883.9	3908.2	3961.7	3937.4	3789.1	3745.3	3541.2
50°	3383.2	3373.5	3509.6	3677.3	3781.8	3905.8	4049.2	4117.2	4015.1	3988.4	3796.4
52.5°	2889.8	2863.1	3140.2	3465.8	3648.1	3881.5	4109.9	4301.9	4270.3	4231.4	4015.1
55°	2576.3	2576.3	2763.4	3169.3	3478.0	3794.0	4148.8	4496.4	4552.3	4508.5	4265.5
57.5°	2240.9	2267.6	2462.1	2741.6	3232.5	3633.5	4143.9	4659.2	4824.5	4783.2	4530.4
60°	1954.1	1976.0	2087.8	2369.7	2943.3	3422.1	4090.5	4792.9	5077.2	5062.7	4763.7
62.5°	1662.4	1689.2	1779.1	2044.0	2561.7	3179.0	3978.7	4865.8	5315.4	5300.8	4999.5
65°	1429.1	1431.5	1521.5	1742.6	2180.1	2885.0	3781.8	4851.2	5500.1	5509.9	5198.8
67.5°	1195.8	1188.5	1305.2	1485.0	1869.0	2569.0	3519.3	4722.4	5577.9	5621.7	5264.4
70°	879.8	889.5	1052.4	1251.7	1579.8	2204.4	3152.3	4472.1	5451.5	5519.6	5113.7
72.5°	661.1	680.5	838.5	1045.1	1319.7	1839.9	2751.3	4037.0	5099.1	5108.8	4654.3
75°	537.1	542.0	683.0	867.7	1081.6	1475.3	2209.3	3371.1	4311.6	4423.4	3954.4
77.5°	456.9	452.1	520.1	700.0	872.5	1178.8	1664.9	2564.1	3385.6	3436.7	3096.4
80°	388.9	386.4	410.7	566.3	683.0	840.9	1139.9	1786.4	2415.9	2471.8	2199.6
82.5°	204.2	218.7	213.9	350.0	386.4	442.3	546.9	811.8	1054.8	1069.4	1011.1
85°	9.7	9.7	9.7	14.6	24.3	38.9	75.3	75.3	82.6	158.0	179.9
87.5°	2.4	2.4	4.9	4.9	4.9	7.3	7.3	9.7	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-840-U-T2U

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9	2415.9
2.5°	2420.7	2411.0	2396.4	2398.9	2396.4	2396.4	2384.3	2374.6	2372.1	2377.0	2386.7
5°	2423.2	2408.6	2386.7	2379.4	2372.1	2367.3	2347.8	2333.2	2326.0	2330.8	2333.2
7.5°	2423.2	2401.3	2377.0	2362.4	2343.0	2328.4	2306.5	2287.1	2277.3	2279.8	2284.6
10°	2418.3	2394.0	2374.6	2345.4	2313.8	2296.8	2262.8	2238.5	2226.3	2228.7	2216.6
12.5°	2418.3	2391.6	2352.7	2326.0	2282.2	2245.7	2219.0	2192.3	2182.6	2172.8	2168.0
15°	2420.7	2386.7	2347.8	2291.9	2240.9	2202.0	2168.0	2151.0	2136.4	2131.5	2133.9
17.5°	2420.7	2386.7	2328.4	2262.8	2204.4	2155.8	2126.7	2107.2	2102.4	2097.5	2097.5
20°	2432.9	2389.1	2311.4	2233.6	2160.7	2109.6	2082.9	2070.8	2070.8	2063.5	2063.5
22.5°	2452.3	2394.0	2301.6	2209.3	2124.2	2068.3	2039.2	2024.6	2031.9	2027.0	2024.6
25°	2474.2	2411.0	2289.5	2175.3	2075.6	2017.3	1988.1	1978.4	1976.0	1963.8	1980.8
27.5°	2491.2	2423.2	2282.2	2141.2	2031.9	1963.8	1927.4	1910.3	1898.2	1903.1	1898.2
30°	2537.4	2457.2	2284.6	2112.1	1983.3	1900.6	1856.9	1837.4	1832.6	1832.6	1832.6
32.5°	2600.6	2500.9	2301.6	2099.9	1937.1	1839.9	1786.4	1766.9	1762.1	1752.4	1757.2
35°	2680.8	2566.6	2328.4	2080.5	1900.6	1769.4	1711.0	1684.3	1677.0	1667.3	1667.3
37.5°	2770.7	2632.2	2347.8	2070.8	1852.0	1696.5	1630.8	1596.8	1592.0	1582.2	1587.1
40°	2885.0	2722.1	2379.4	2051.3	1796.1	1630.8	1543.3	1487.4	1499.6	1504.5	1514.2
42.5°	3013.8	2836.4	2428.0	2031.9	1752.4	1562.8	1434.0	1378.1	1392.7	1387.8	1397.5
45°	3188.8	2970.0	2488.8	2024.6	1698.9	1480.2	1322.2	1259.0	1254.1	1246.8	1251.7
47.5°	3371.1	3130.4	2547.1	2010.0	1640.6	1378.1	1195.8	1115.6	1096.1	1086.4	1076.7
50°	3560.6	3290.8	2615.2	2000.3	1562.8	1263.8	1069.4	977.0	940.6	928.4	916.3
52.5°	3774.5	3463.4	2673.5	1976.0	1477.7	1144.7	955.2	850.7	809.3	785.0	787.5
55°	4000.5	3621.4	2727.0	1946.8	1380.5	1032.9	840.9	753.4	712.1	704.8	704.8
57.5°	4209.6	3784.2	2765.9	1895.8	1283.3	923.6	746.2	670.8	651.4	661.1	661.1
60°	4423.4	3915.5	2785.3	1839.9	1183.6	831.2	680.5	619.8	610.0	629.5	631.9
62.5°	4596.0	4020.0	2780.5	1762.1	1074.3	751.0	617.3	568.7	573.6	607.6	614.9
65°	4720.0	4071.0	2719.7	1645.4	969.8	680.5	561.4	515.3	515.3	539.6	546.9
67.5°	4710.2	4005.4	2598.2	1482.6	858.0	610.0	510.4	473.9	473.9	491.0	488.5
70°	4510.9	3779.4	2367.3	1285.7	748.6	549.3	466.6	439.9	437.5	444.8	442.3
72.5°	4032.1	3320.0	2007.6	1062.1	646.5	488.5	422.9	398.6	393.7	384.0	376.7
75°	3327.3	2727.0	1567.6	845.8	546.9	430.2	381.6	359.7	340.3	352.4	345.1
77.5°	2581.2	2092.6	1166.6	656.2	444.8	374.3	340.3	316.0	311.1	354.8	340.3
80°	1883.6	1446.1	823.9	469.1	345.1	303.8	284.4	264.9	335.4	449.6	447.2
82.5°	836.1	697.5	376.7	223.6	160.4	133.7	111.8	126.4	211.5	206.6	213.9
85°	75.3	77.8	41.3	26.7	17.0	14.6	9.7	9.7	7.3	7.3	7.3
87.5°	9.7	9.7	7.3	7.3	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

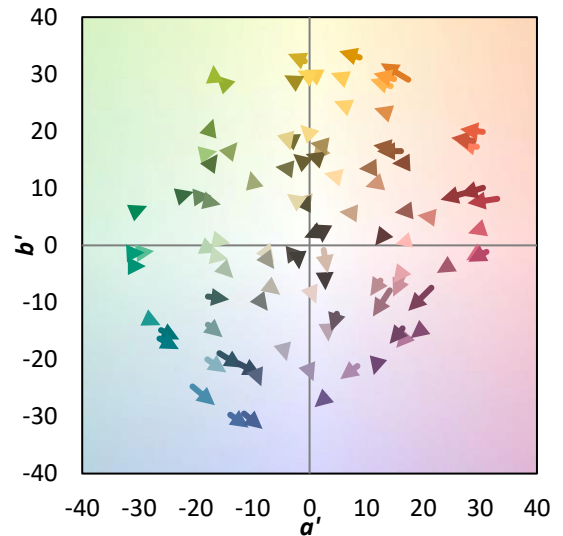
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	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  $R_a = 80.6$   
 $R_9 = -5.8$



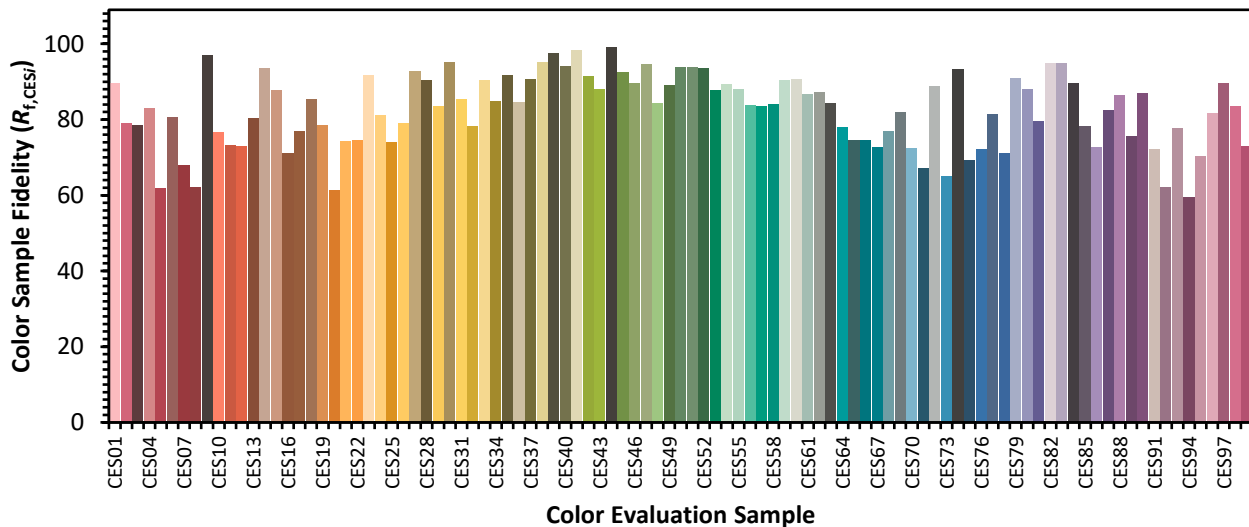
**Color Vector Graphics**



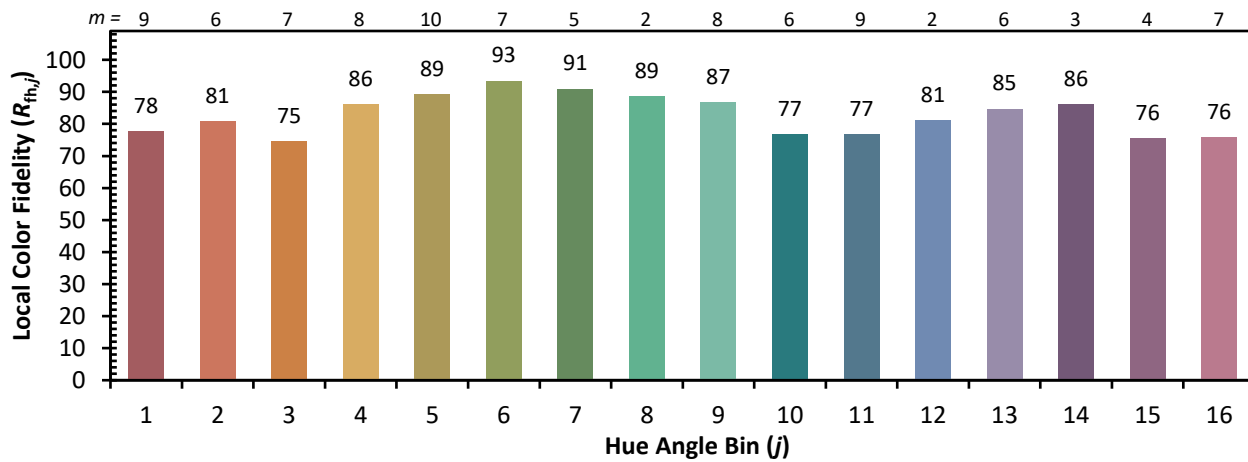


Individual Sample Fidelity Index ( $R_{f,i}$ )

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)