

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: P871249

Luminaire Tested: **EMM2-HSN-SA3A-830-U-T4W**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P871249  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA3A-830-U-T4W  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 130W 80CRI 3000K  
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC  
Light Source: (30) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

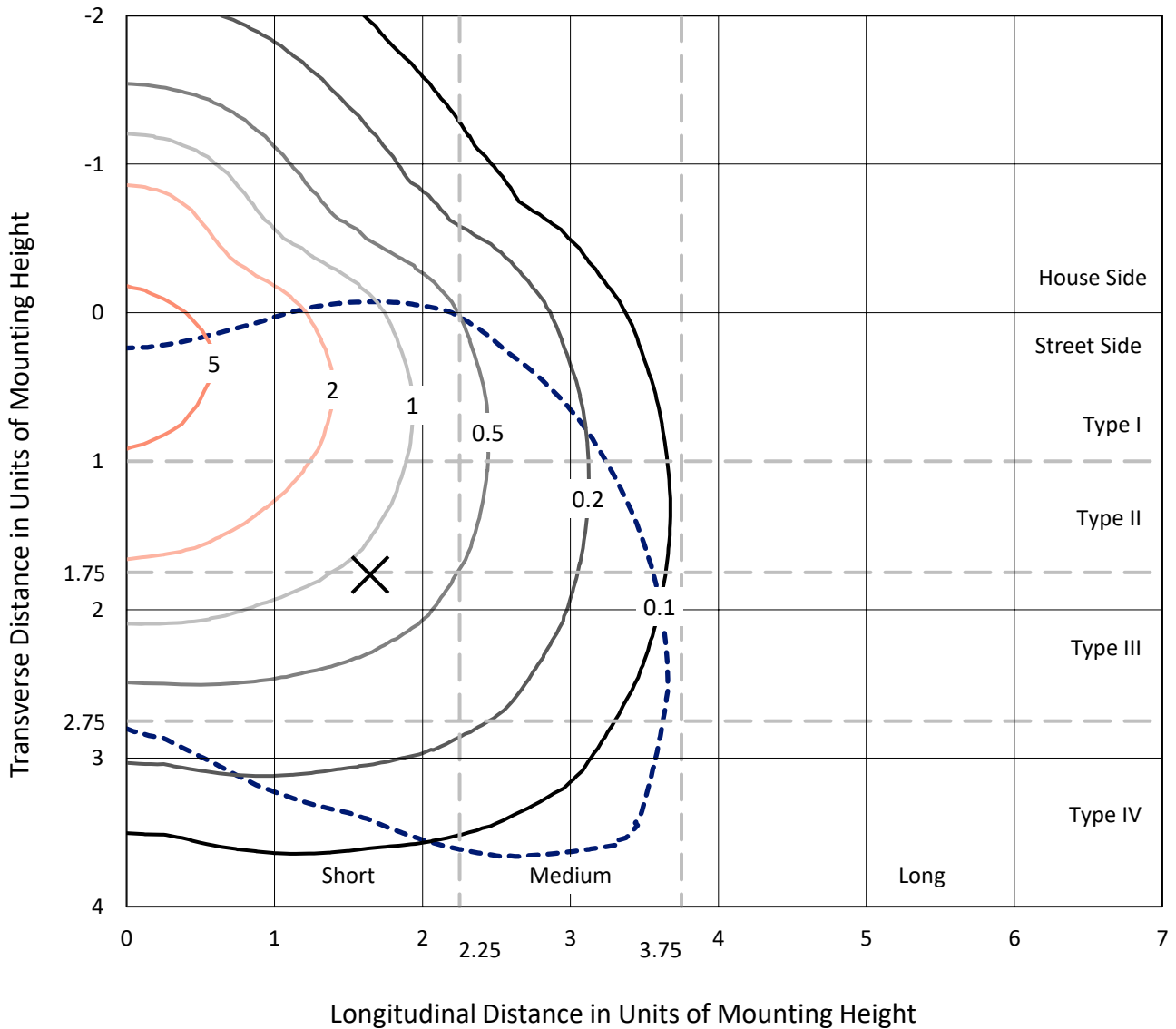
Lumens per Lamp: N/A  
Luminaire Lumens: 14526.3 lumens  
Efficiency: N/A  
Efficacy: 128.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

Input Watts (W): 113  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 7.77%  
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-SA3A-830-U-T4W

### Iso-Footcandle Lines of Horizontal Illumination

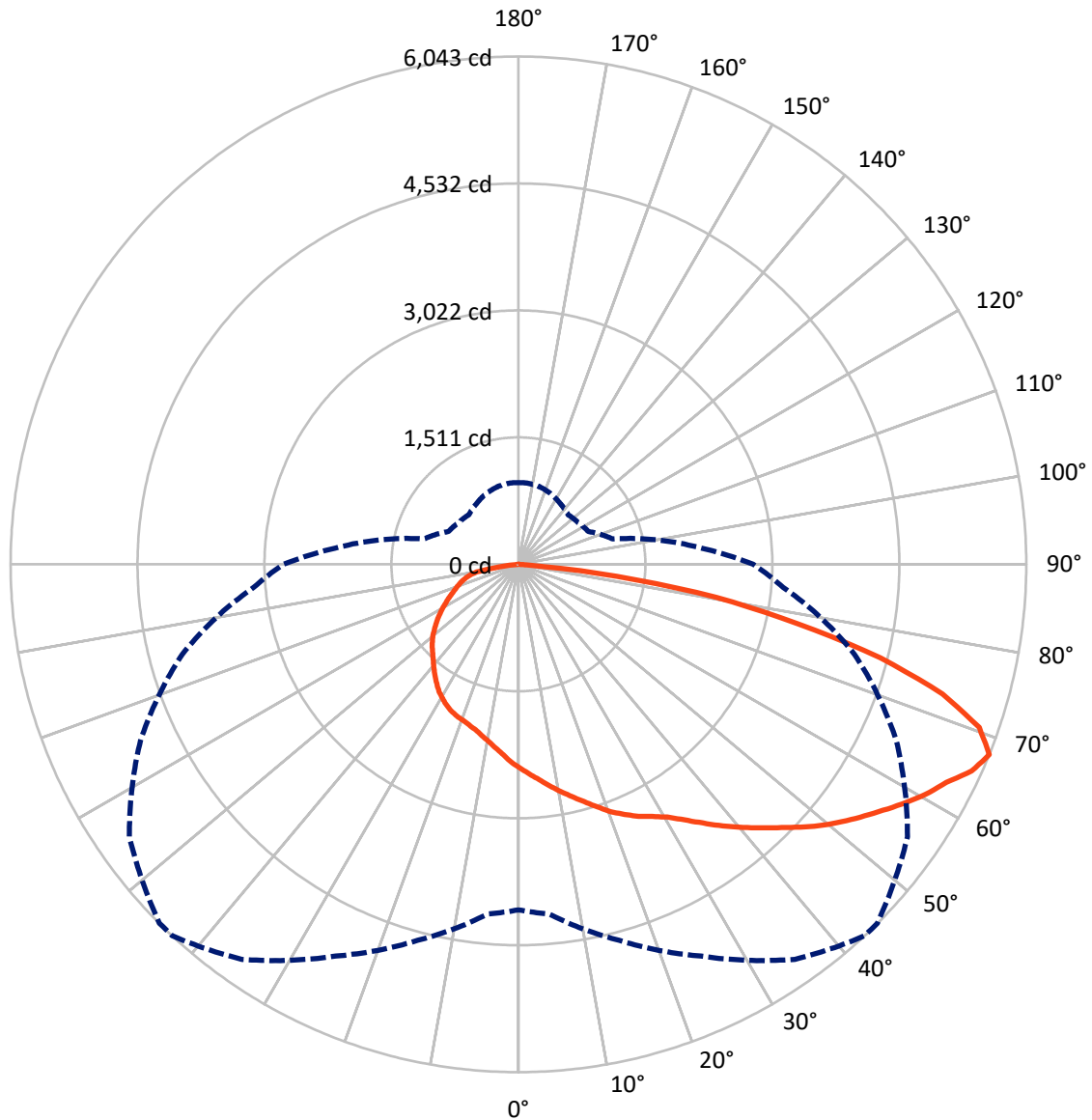
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.9 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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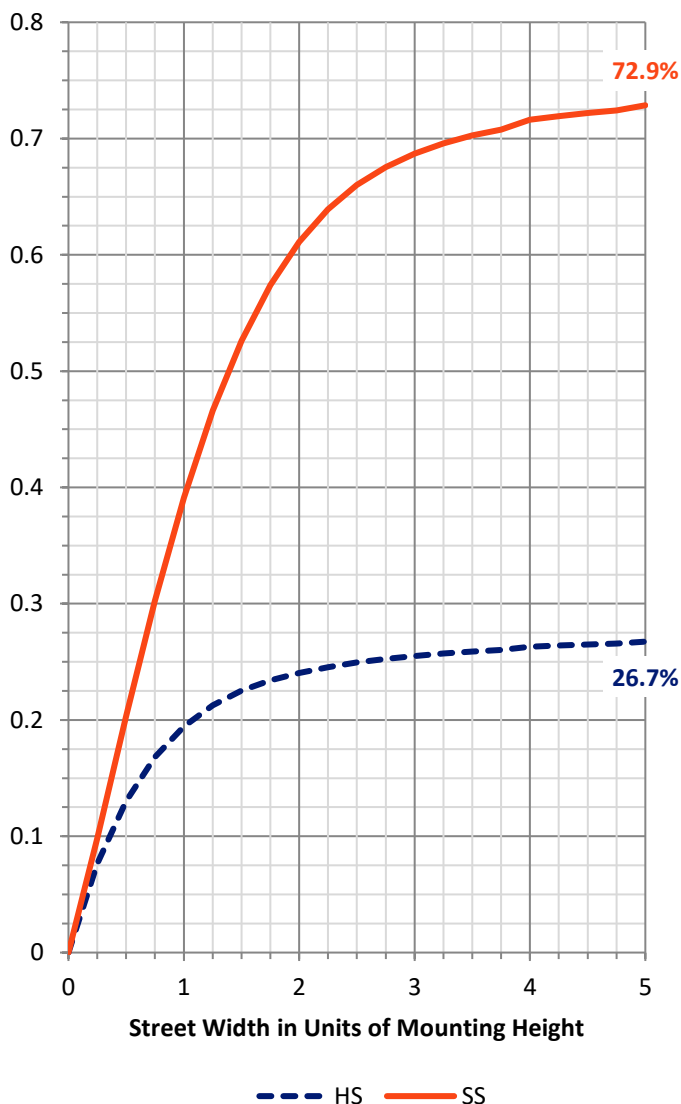
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3907.6	0.0	3907.6
	% Fixture	26.9	0.0	26.9
<b>Street Side</b>	Lumens	10618.7	0.0	10618.7
	% Fixture	73.1	0.0	73.1
<b>Total</b>	Lumens	14526.3	0.0	14526.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.1	1.6
10°-20°	708.7	4.9
20°-30°	1209.2	8.3
30°-40°	1763.5	12.1
40°-50°	2369.1	16.3
50°-60°	2900.1	20.0
60°-70°	3052.2	21.0
70°-80°	1992.6	13.7
80°-90°	298.9	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°	14526.3	100.0
0°-180°	14526.3	100.0



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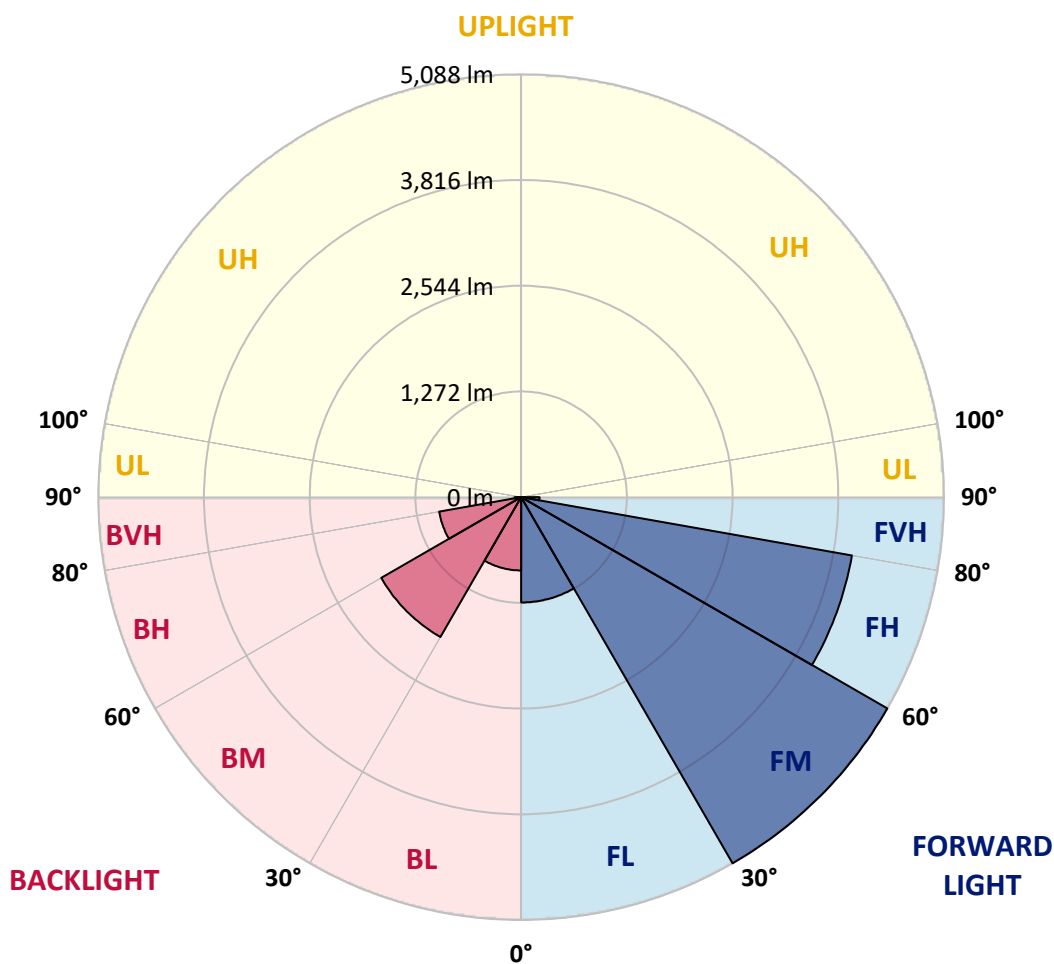
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1267.7	8.7			
FM (30°-60°)	5088.4	35.0			
FH (60°-80°)	4042.0	27.8			G2/5000
FVH (80°-90°)	220.5	1.5			G2/225
BL (0°-30°)	882.2	6.1	B2/1000		
BM (30°-60°)	1944.2	13.4	B2/2500		
BH (60°-80°)	1002.8	6.9	B3/2500		G3/2500
BVH (80°-90°)	78.4	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°	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9
2.5°	2536.6	2533.6	2524.8	2518.9	2501.3	2498.4	2498.4	2480.7	2460.1	2448.4	2436.6
5°	2651.2	2636.5	2630.6	2618.9	2589.5	2571.8	2577.7	2545.4	2504.2	2474.8	2442.5
7.5°	2754.1	2748.2	2727.6	2712.9	2677.6	2660.0	2654.1	2604.2	2551.3	2507.2	2454.3
10°	2877.5	2862.8	2851.1	2821.7	2774.6	2748.2	2739.4	2674.7	2607.1	2548.3	2477.8
12.5°	2989.2	2971.6	2956.9	2927.5	2880.5	2836.4	2824.6	2751.1	2665.9	2586.5	2498.4
15°	3074.4	3077.4	3062.7	3036.2	2983.3	2930.4	2921.6	2824.6	2721.7	2624.7	2518.9
17.5°	3153.8	3165.6	3156.7	3139.1	3086.2	3033.3	3024.5	2915.7	2792.3	2668.8	2542.4
20°	3230.2	3230.2	3227.3	3215.5	3177.3	3142.0	3124.4	3015.7	2859.9	2715.9	2574.8
22.5°	3274.3	3286.1	3286.1	3286.1	3262.6	3233.2	3227.3	3121.5	2951.0	2774.6	2604.2
25°	3341.9	3356.6	3356.6	3350.7	3330.2	3321.3	3312.5	3212.6	3039.2	2842.2	2636.5
27.5°	3485.9	3483.0	3459.5	3430.1	3400.7	3397.8	3386.0	3315.5	3142.0	2915.7	2680.6
30°	3685.8	3691.7	3662.3	3571.2	3503.6	3488.9	3491.8	3430.1	3262.6	3001.0	2730.6
32.5°	3991.5	3991.5	3876.9	3759.3	3662.3	3624.1	3615.3	3562.4	3386.0	3095.0	2786.4
35°	4220.8	4211.9	4147.3	4009.1	3888.6	3779.9	3765.2	3694.6	3524.2	3200.8	2848.1
37.5°	4394.2	4411.8	4361.8	4256.0	4138.5	3950.3	3920.9	3821.0	3650.5	3303.7	2909.8
40°	4729.2	4685.2	4564.6	4467.6	4326.6	4117.9	4091.4	3968.0	3779.9	3418.3	2986.3
42.5°	4973.2	4911.5	4773.3	4644.0	4467.6	4285.4	4261.9	4126.7	3929.8	3547.7	3065.6
45°	5323.0	5184.8	4993.8	4879.1	4629.3	4467.6	4438.3	4291.3	4085.5	3685.8	3165.6
47.5°	5661.0	5420.0	5217.2	5164.2	4805.7	4664.6	4641.1	4470.6	4253.1	3835.7	3262.6
50°	5616.9	5458.2	5390.6	5340.6	4958.5	4849.7	4826.2	4652.8	4423.6	3994.4	3359.6
52.5°	5505.2	5519.9	5522.8	5402.3	5102.5	5023.2	4999.6	4849.7	4599.9	4132.6	3453.6
55°	5622.8	5640.4	5637.5	5455.2	5270.1	5196.6	5181.9	5049.6	4770.4	4261.9	3521.2
57.5°	5802.1	5743.3	5734.5	5587.5	5449.4	5381.8	5364.1	5249.5	4914.4	4356.0	3574.1
60°	5834.4	5716.8	5755.0	5616.9	5584.6	5564.0	5558.1	5422.9	5049.6	4432.4	3594.7
62.5°	5472.9	5452.3	5602.2	5546.3	5655.1	5713.9	5716.8	5546.3	5123.1	4461.8	3574.1
65°	4855.6	4937.9	5261.2	5422.9	5760.9	5928.4	5922.6	5619.8	5114.3	4376.5	3447.7
67.5°	4112.0	4176.7	4632.2	5143.7	5737.4	6043.1	6040.1	5652.2	4961.4	4141.4	3162.6
70°	3118.5	3321.3	3968.0	4641.1	5420.0	5816.8	5866.7	5469.9	4611.7	3712.3	2730.6
72.5°	2372.0	2404.3	3186.1	3891.6	4852.7	5278.9	5270.1	4888.0	4026.8	3127.4	2275.0
75°	1684.2	1754.7	2398.4	3015.7	3976.8	4450.0	4429.4	4009.1	3212.6	2433.7	1740.0
77.5°	1255.1	1281.5	1754.7	2236.8	2974.5	3400.7	3391.9	2962.8	2363.2	1787.1	1296.2
80°	917.0	961.1	1263.9	1560.7	2016.3	2383.7	2372.0	1966.4	1516.6	1249.2	946.4
82.5°	514.4	546.7	734.8	943.5	1064.0	1178.6	1128.7	943.5	690.7	537.9	464.4
85°	14.7	17.6	26.5	32.3	55.8	94.1	102.9	91.1	108.8	67.6	73.5
87.5°	5.9	5.9	5.9	5.9	5.9	8.8	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°	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9	2424.9
2.5°	2430.8	2419.0	2395.5	2380.8	2372.0	2360.2	2342.6	2330.8	2322.0	2333.8	2330.8
5°	2427.8	2404.3	2363.2	2333.8	2304.4	2280.9	2254.4	2233.8	2222.1	2227.9	2225.0
7.5°	2427.8	2398.4	2333.8	2286.7	2242.6	2207.4	2178.0	2151.5	2139.8	2142.7	2139.8
10°	2439.6	2398.4	2313.2	2245.6	2186.8	2145.6	2113.3	2089.8	2081.0	2089.8	2092.7
12.5°	2451.3	2398.4	2295.5	2210.3	2133.9	2089.8	2060.4	2045.7	2051.6	2054.5	2057.5
15°	2457.2	2395.5	2277.9	2169.2	2083.9	2036.9	2019.3	2016.3	2031.0	2045.7	2048.7
17.5°	2471.9	2392.5	2251.5	2128.0	2039.8	2001.6	1992.8	2004.6	2034.0	2054.5	2060.4
20°	2489.5	2398.4	2222.1	2078.0	1995.7	1966.4	1981.0	2007.5	2042.8	2072.2	2078.0
22.5°	2507.2	2401.4	2195.6	2034.0	1948.7	1942.8	1975.2	2013.4	2054.5	2083.9	2089.8
25°	2527.7	2401.4	2160.3	1978.1	1901.7	1910.5	1960.5	2010.4	2048.7	2086.9	2092.7
27.5°	2548.3	2407.2	2122.1	1916.4	1842.9	1869.4	1931.1	1992.8	2034.0	2072.2	2081.0
30°	2583.6	2419.0	2089.8	1863.5	1784.1	1819.4	1892.9	1963.4	2007.5	2048.7	2057.5
32.5°	2618.9	2436.6	2063.3	1807.6	1725.3	1766.5	1848.8	1928.1	1975.2	2013.4	2019.3
35°	2665.9	2460.1	2042.8	1751.8	1666.5	1698.9	1787.1	1875.2	1928.1	1957.5	1972.2
37.5°	2715.9	2492.5	2025.1	1701.8	1601.9	1631.3	1725.3	1819.4	1875.2	1904.6	1910.5
40°	2777.6	2536.6	2013.4	1654.8	1540.2	1563.7	1657.7	1760.6	1813.5	1834.1	1845.8
42.5°	2845.2	2583.6	2004.6	1607.8	1472.6	1496.1	1596.0	1695.9	1748.8	1766.5	1775.3
45°	2930.4	2645.3	1998.7	1557.8	1416.7	1437.3	1537.2	1637.2	1681.2	1704.8	1713.6
47.5°	3009.8	2707.0	1981.0	1499.0	1355.0	1384.4	1475.5	1563.7	1613.6	1628.3	1637.2
50°	3089.1	2759.9	1945.8	1434.3	1299.1	1325.6	1407.9	1472.6	1510.8	1528.4	1534.3
52.5°	3165.6	2798.2	1889.9	1366.7	1240.4	1258.0	1325.6	1387.3	1413.8	1419.7	1437.3
55°	3215.5	2818.7	1810.6	1287.4	1181.6	1187.5	1237.4	1293.3	1308.0	1310.9	1310.9
57.5°	3250.8	2807.0	1716.5	1208.0	1122.8	1122.8	1152.2	1196.3	1202.1	1205.1	1211.0
60°	3256.7	2765.8	1596.0	1134.5	1058.1	1049.3	1078.7	1105.2	1108.1	1114.0	1119.9
62.5°	3212.6	2674.7	1466.7	1064.0	996.4	975.8	1002.3	1028.7	1043.4	1052.2	1058.1
65°	3077.4	2489.5	1319.7	993.5	937.6	902.3	934.7	978.8	1008.2	1011.1	1011.1
67.5°	2795.2	2189.7	1163.9	920.0	867.1	834.7	875.9	922.9	958.2	972.9	969.9
70°	2369.0	1857.6	1019.9	843.6	796.5	776.0	820.0	873.0	902.3	914.1	920.0
72.5°	1907.6	1487.3	893.5	767.1	734.8	723.1	767.1	820.0	861.2	878.8	881.8
75°	1484.3	1169.8	787.7	687.8	661.3	664.3	711.3	764.2	808.3	817.1	790.7
77.5°	1152.2	931.7	687.8	593.7	579.0	599.6	646.6	702.5	728.9	737.7	720.1
80°	831.8	714.2	555.5	467.3	467.3	499.7	540.8	605.5	614.3	602.5	608.4
82.5°	393.9	346.8	273.3	226.3	211.6	235.1	249.8	270.4	293.9	299.8	285.1
85°	52.9	35.3	26.5	29.4	26.5	17.6	11.8	11.8	11.8	8.8	8.8
87.5°	8.8	8.8	5.9	5.9	5.9	5.9	5.9	5.9	2.9	2.9	2.9
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: SP1-2407-157-7

Test Date: 09/05/2024

Luminaire Tested: MEM2-HTN-SA-40-830-U-5WQ

Data in this report applies to families of products including MEM2-HTN-SA-40-830-U-5WQ

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-7  
 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-40-830-U-5WQ**  
 Description: Epic Modern Light Square 40W 5WQ Optic

**Spectral Parameters**

CCT (K): 3126  
 CIE u': 0.2465  
 CIE v': 0.5182  
 Duv: -0.0004  
 CIE x: 0.4277  
 CIE y: 0.3997  
 CIE z: 0.1727  
 Peak Wavelength (nm): 601  
 Dominant Wavelength (nm): 582  
 Purity: 48.31913  
 Rf: 84.4  
 Rg: 94.7

CRI (Ra):	82.6		
R1:	81.4	R9:	5.1
R2:	92.2	R10:	82.2
R3:	94.9	R11:	79.8
R4:	80.1	R12:	70.4
R5:	81.8	R13:	84.2
R6:	90.5	R14:	97.9
R7:	81.8	R15:	73.6
R8:	58.0		



**Test Conditions**

Stabilization Time: 22M  
 Operation Time: 1H 22M  
 Sphere Temperature (°C): 24.3

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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



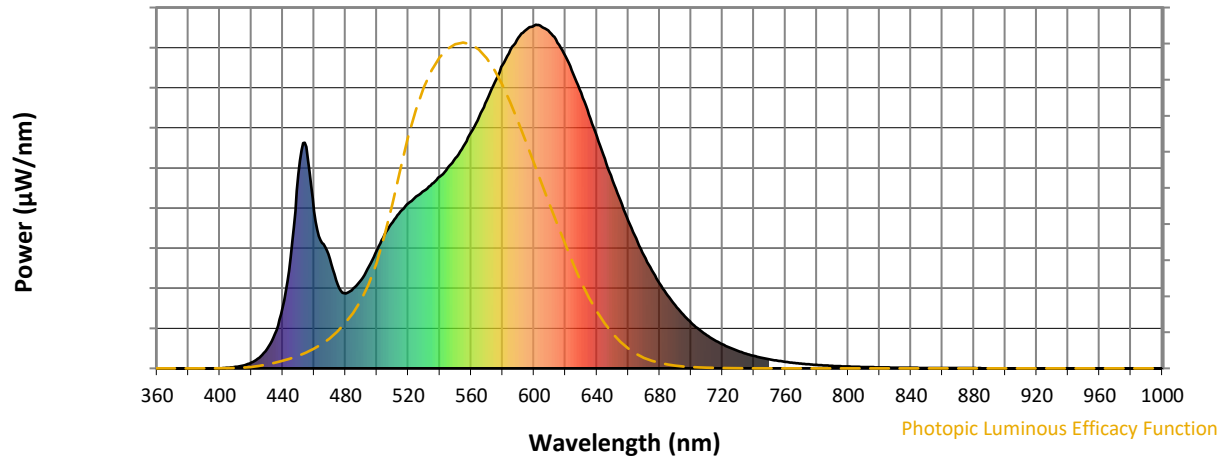
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



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	258	NR	620	908	NR	750	26	NR	880	1	NR
365	0	NR	495	297	NR	625	857	NR	755	22	NR	885	0	NR
370	0	NR	500	345	NR	630	801	NR	760	19	NR	890	0	NR
375	0	NR	505	391	NR	635	738	NR	765	16	NR	895	0	NR
380	0	NR	510	426	NR	640	675	NR	770	14	NR	900	0	NR
385	0	NR	515	456	NR	645	610	NR	775	12	NR	905	0	NR
390	0	NR	520	480	NR	650	547	NR	780	10	NR	910	0	NR
395	0	NR	525	500	NR	655	488	NR	785	9	NR	915	0	NR
400	0	NR	530	517	NR	660	429	NR	790	7	NR	920	0	NR
405	2	NR	535	538	NR	665	378	NR	795	6	NR	925	0	NR
410	4	NR	540	558	NR	670	328	NR	800	5	NR	930	0	NR
415	9	NR	545	584	NR	675	285	NR	805	5	NR	935	0	NR
420	16	NR	550	611	NR	680	247	NR	810	4	NR	940	0	NR
425	31	NR	555	646	NR	685	212	NR	815	3	NR	945	0	NR
430	56	NR	560	687	NR	690	183	NR	820	3	NR	950	0	NR
435	101	NR	565	731	NR	695	156	NR	825	3	NR	955	0	NR
440	178	NR	570	780	NR	700	133	NR	830	2	NR	960	0	NR
445	323	NR	575	832	NR	705	114	NR	835	2	NR	965	0	NR
450	566	NR	580	883	NR	710	96	NR	840	2	NR	970	0	NR
455	645	NR	585	927	NR	715	82	NR	845	1	NR	975	0	NR
460	457	NR	590	963	NR	720	70	NR	850	1	NR	980	0	NR
465	365	NR	595	985	NR	725	59	NR	855	1	NR	985	0	NR
470	317	NR	600	998	NR	730	50	NR	860	1	NR	990	0	NR
475	244	NR	605	994	NR	735	43	NR	865	1	NR	995	0	NR
480	218	NR	610	978	NR	740	36	NR	870	1	NR	1000	0	NR
485	233	NR	615	947	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-157-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.42

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	258	NR	620	908	NR	750	26	NR	880	1	NR
365	0	NR	495	297	NR	625	857	NR	755	22	NR	885	0	NR
370	0	NR	500	345	NR	630	801	NR	760	19	NR	890	0	NR
375	0	NR	505	391	NR	635	738	NR	765	16	NR	895	0	NR
380	0	NR	510	426	NR	640	675	NR	770	14	NR	900	0	NR
385	0	NR	515	456	NR	645	610	NR	775	12	NR	905	0	NR
390	0	NR	520	480	NR	650	547	NR	780	10	NR	910	0	NR
395	0	NR	525	500	NR	655	488	NR	785	9	NR	915	0	NR
400	0	NR	530	517	NR	660	429	NR	790	7	NR	920	0	NR
405	2	NR	535	538	NR	665	378	NR	795	6	NR	925	0	NR
410	4	NR	540	558	NR	670	328	NR	800	5	NR	930	0	NR
415	9	NR	545	584	NR	675	285	NR	805	5	NR	935	0	NR
420	16	NR	550	611	NR	680	247	NR	810	4	NR	940	0	NR
425	31	NR	555	646	NR	685	212	NR	815	3	NR	945	0	NR
430	56	NR	560	687	NR	690	183	NR	820	3	NR	950	0	NR
435	101	NR	565	731	NR	695	156	NR	825	3	NR	955	0	NR
440	178	NR	570	780	NR	700	133	NR	830	2	NR	960	0	NR
445	323	NR	575	832	NR	705	114	NR	835	2	NR	965	0	NR
450	566	NR	580	883	NR	710	96	NR	840	2	NR	970	0	NR
455	645	NR	585	927	NR	715	82	NR	845	1	NR	975	0	NR
460	457	NR	590	963	NR	720	70	NR	850	1	NR	980	0	NR
465	365	NR	595	985	NR	725	59	NR	855	1	NR	985	0	NR
470	317	NR	600	998	NR	730	50	NR	860	1	NR	990	0	NR
475	244	NR	605	994	NR	735	43	NR	865	1	NR	995	0	NR
480	218	NR	610	978	NR	740	36	NR	870	1	NR	1000	0	NR
485	233	NR	615	947	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-157-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.79

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	258	NR	620	908	NR	750	26	NR	880	1	NR
365	0	NR	495	297	NR	625	857	NR	755	22	NR	885	0	NR
370	0	NR	500	345	NR	630	801	NR	760	19	NR	890	0	NR
375	0	NR	505	391	NR	635	738	NR	765	16	NR	895	0	NR
380	0	NR	510	426	NR	640	675	NR	770	14	NR	900	0	NR
385	0	NR	515	456	NR	645	610	NR	775	12	NR	905	0	NR
390	0	NR	520	480	NR	650	547	NR	780	10	NR	910	0	NR
395	0	NR	525	500	NR	655	488	NR	785	9	NR	915	0	NR
400	0	NR	530	517	NR	660	429	NR	790	7	NR	920	0	NR
405	2	NR	535	538	NR	665	378	NR	795	6	NR	925	0	NR
410	4	NR	540	558	NR	670	328	NR	800	5	NR	930	0	NR
415	9	NR	545	584	NR	675	285	NR	805	5	NR	935	0	NR
420	16	NR	550	611	NR	680	247	NR	810	4	NR	940	0	NR
425	31	NR	555	646	NR	685	212	NR	815	3	NR	945	0	NR
430	56	NR	560	687	NR	690	183	NR	820	3	NR	950	0	NR
435	101	NR	565	731	NR	695	156	NR	825	3	NR	955	0	NR
440	178	NR	570	780	NR	700	133	NR	830	2	NR	960	0	NR
445	323	NR	575	832	NR	705	114	NR	835	2	NR	965	0	NR
450	566	NR	580	883	NR	710	96	NR	840	2	NR	970	0	NR
455	645	NR	585	927	NR	715	82	NR	845	1	NR	975	0	NR
460	457	NR	590	963	NR	720	70	NR	850	1	NR	980	0	NR
465	365	NR	595	985	NR	725	59	NR	855	1	NR	985	0	NR
470	317	NR	600	998	NR	730	50	NR	860	1	NR	990	0	NR
475	244	NR	605	994	NR	735	43	NR	865	1	NR	995	0	NR
480	218	NR	610	978	NR	740	36	NR	870	1	NR	1000	0	NR
485	233	NR	615	947	NR	745	31	NR	875	1	NR			

**Summary**

$R_f = 84.4$   
 $R_g = 94.7$   
 $CIE R_a = 82.6$   
 $R_9 = 5.1$



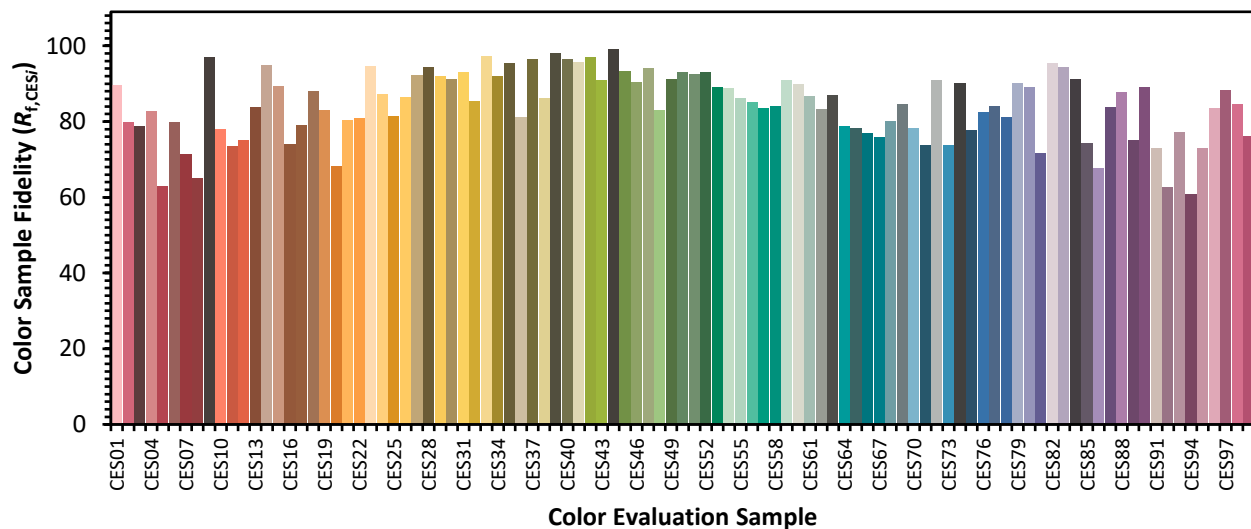
**Color Vector Graphics**





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

CES01 = 86	CES26 = 86	CES51 = 93	CES76 = 82
CES02 = 63	CES27 = 92	CES52 = 93	CES77 = 84
CES03 = 31	CES28 = 94	CES53 = 89	CES78 = 81
CES04 = 70	CES29 = 92	CES54 = 89	CES79 = 90
CES05 = 49	CES30 = 91	CES55 = 86	CES80 = 89
CES06 = 51	CES31 = 93	CES56 = 85	CES81 = 72
CES07 = 42	CES32 = 85	CES57 = 83	CES82 = 95
CES08 = 41	CES33 = 97	CES58 = 84	CES83 = 94
CES09 = 29	CES34 = 92	CES59 = 91	CES84 = 91
CES10 = 76	CES35 = 96	CES60 = 90	CES85 = 74
CES11 = 59	CES36 = 81	CES61 = 87	CES86 = 68
CES12 = 65	CES37 = 96	CES62 = 83	CES87 = 84
CES13 = 43	CES38 = 86	CES63 = 87	CES88 = 88
CES14 = 74	CES39 = 98	CES64 = 79	CES89 = 75
CES15 = 71	CES40 = 96	CES65 = 78	CES90 = 89
CES16 = 47	CES41 = 96	CES66 = 77	CES91 = 73
CES17 = 50	CES42 = 97	CES67 = 76	CES92 = 63
CES18 = 56	CES43 = 91	CES68 = 80	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 85	CES94 = 61
CES20 = 66	CES45 = 93	CES70 = 78	CES95 = 73
CES21 = 87	CES46 = 90	CES71 = 74	CES96 = 84
CES22 = 79	CES47 = 94	CES72 = 91	CES97 = 88
CES23 = 92	CES48 = 83	CES73 = 74	CES98 = 85
CES24 = 91	CES49 = 91	CES74 = 90	CES99 = 76
CES25 = 72	CES50 = 93	CES75 = 78	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)