

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: P871142

Luminaire Tested: **EMM2-HSN-SA2B-830-U-T2U-HSS**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P871142  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2B-830-U-T2U-HSS  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 100W 80CRI 3000K  
FIXTURE w/ TYPE II URBAN DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (20) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

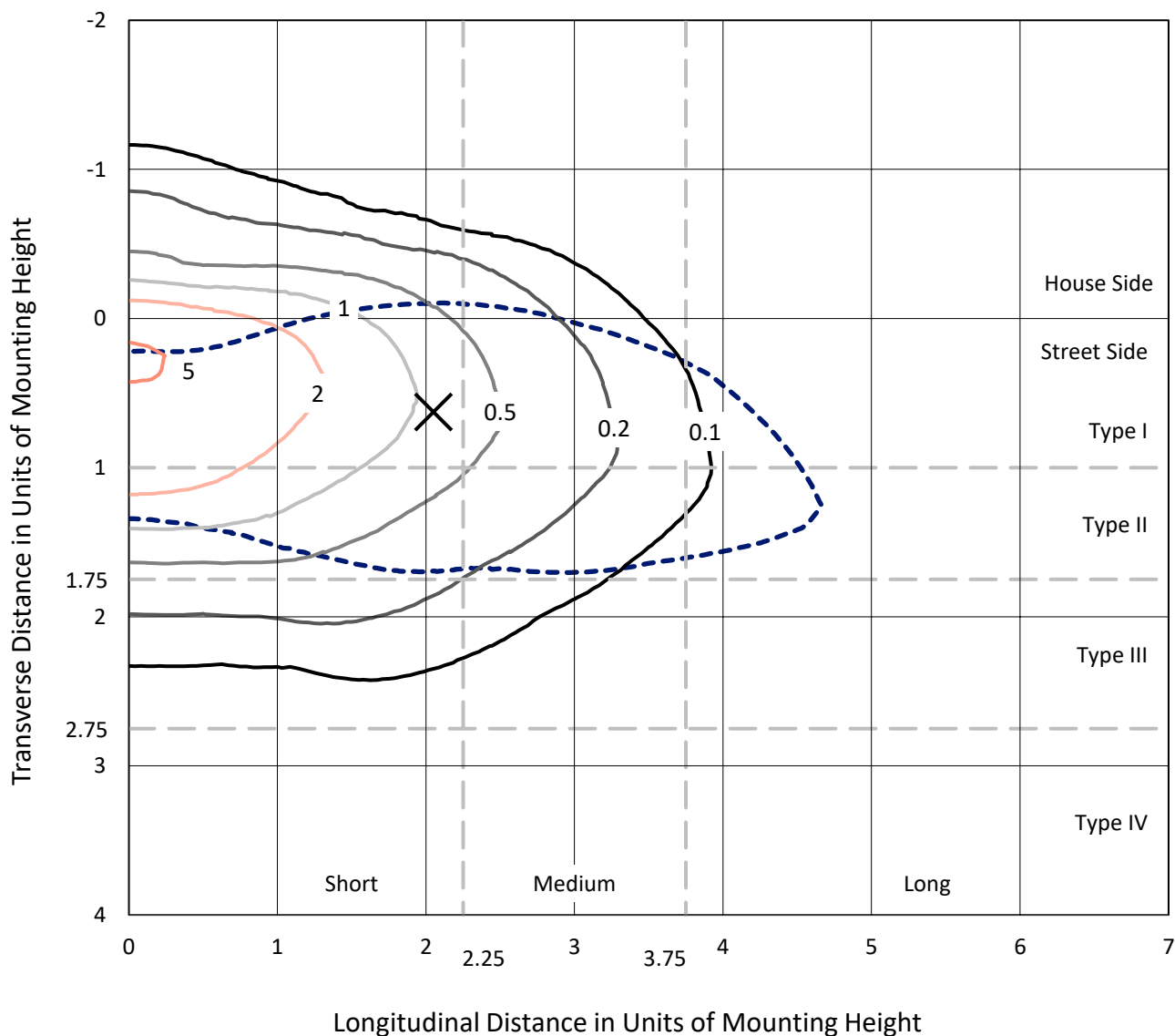
Lumens per Lamp: N/A  
Luminaire Lumens: 7600.3 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

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

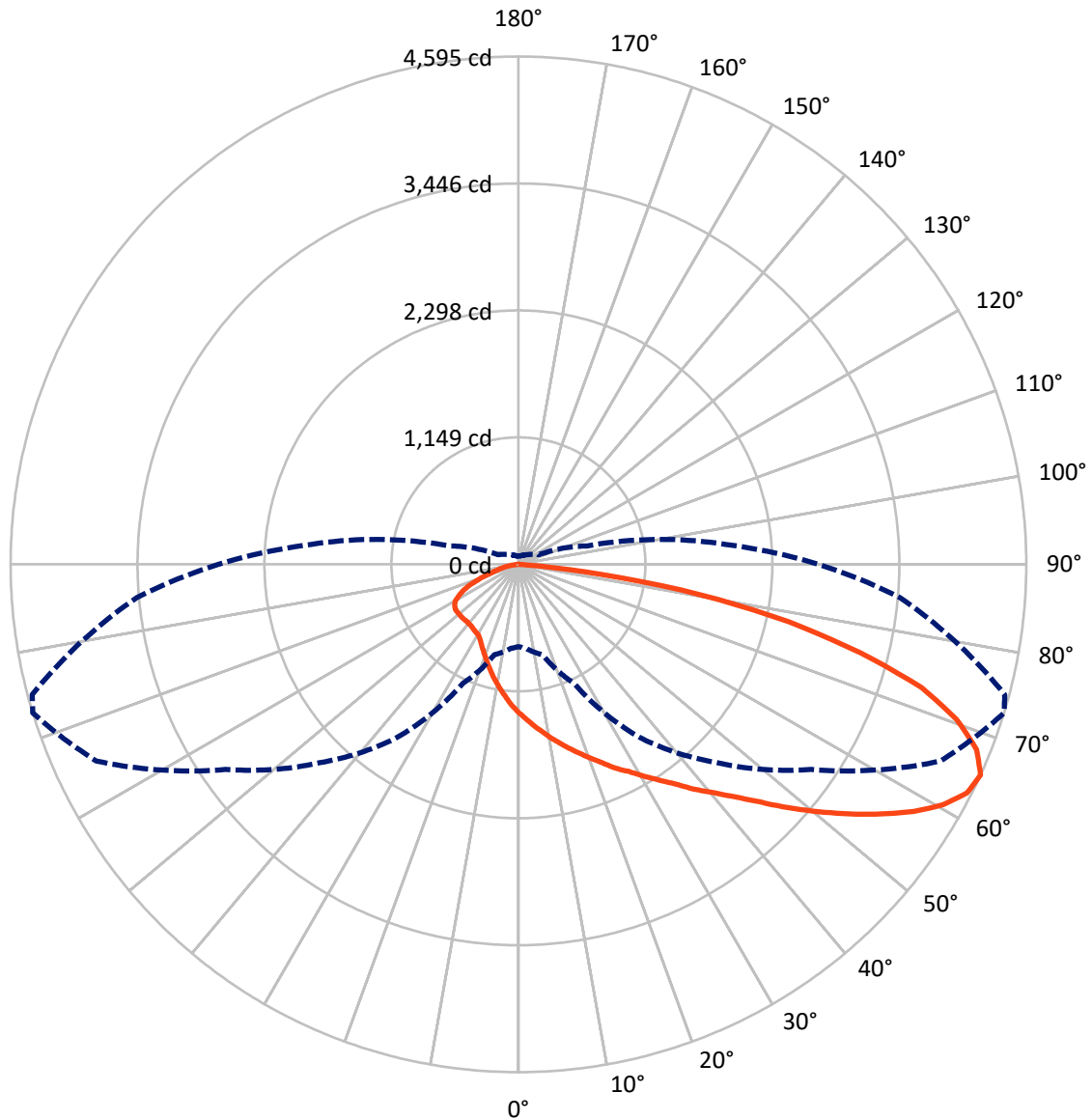
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 73-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1105.2	0.0	1105.2
	% Fixture	14.5	0.0	14.5
<b>Street Side</b>	Lumens	6495.1	0.0	6495.1
	% Fixture	85.5	0.0	85.5
<b>Total</b>	Lumens	7600.3	0.0	7600.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.1	1.7
10°-20°	395.5	5.2
20°-30°	662.4	8.7
30°-40°	999.2	13.1
40°-50°	1411.9	18.6
50°-60°	1588.7	20.9
60°-70°	1424.6	18.7
70°-80°	866.5	11.4
80°-90°	121.2	1.6
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°	7600.3	100.0
0°-180°	7600.3	100.0



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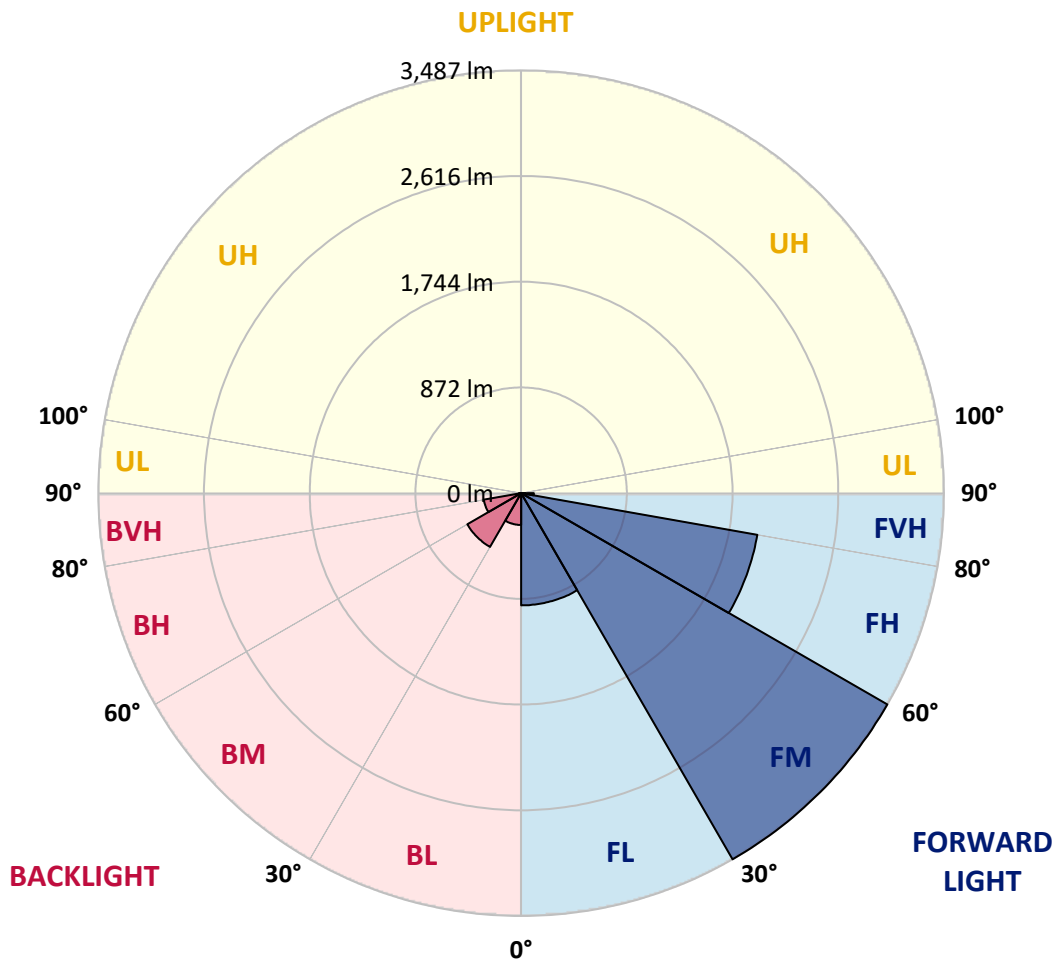
CATALOG NUMBER: EMM2-HSN-SA2B-830-U-T2U-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	925.6	12.2			
FM (30°-60°)	3487.4	45.9			
FH (60°-80°)	1978.0	26.0			G2/5000
FVH (80°-90°)	104.2	1.4			G2/225
BL (0°-30°)	262.6	3.5	B1/500		
BM (30°-60°)	512.5	6.7	B1/1000		
BH (60°-80°)	313.1	4.1	B1/500		G1/500
BVH (80°-90°)	17.1	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





REPORT NUMBER: P871142

CATALOG NUMBER: EMM2-HSN-SA2B-830-U-T2U-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	73°	75°	85°
0°	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3
2.5°	1556.3	1547.3	1533.9	1522.7	1502.6	1475.8	1453.4	1424.3	1404.2	1397.5	1368.4
5°	1782.1	1770.9	1755.3	1728.4	1674.8	1643.5	1585.3	1518.3	1464.6	1453.4	1386.3
7.5°	2014.6	2010.2	1974.4	1934.1	1869.3	1800.0	1710.5	1605.5	1527.2	1509.3	1406.5
10°	2211.4	2191.3	2171.2	2133.2	2063.8	1965.5	1849.2	1703.8	1594.3	1565.2	1426.6
12.5°	2329.9	2323.2	2305.3	2260.6	2193.5	2108.6	1969.9	1800.0	1659.1	1618.9	1446.7
15°	2417.1	2423.8	2405.9	2376.9	2307.6	2227.1	2092.9	1900.6	1728.4	1681.5	1469.1
17.5°	2499.9	2495.4	2493.2	2459.6	2397.0	2316.5	2180.1	1983.3	1797.8	1746.3	1491.4
20°	2546.8	2549.1	2544.6	2531.2	2470.8	2392.5	2265.1	2081.7	1873.8	1815.6	1520.5
22.5°	2571.4	2580.4	2589.3	2587.1	2537.9	2477.5	2345.6	2160.0	1952.0	1891.7	1556.3
25°	2587.1	2593.8	2613.9	2640.7	2596.0	2546.8	2435.0	2253.9	2043.7	1974.4	1598.7
27.5°	2600.5	2609.4	2634.0	2674.3	2638.5	2609.4	2513.3	2334.4	2122.0	2059.4	1647.9
30°	2687.7	2698.9	2698.9	2719.0	2678.7	2672.0	2600.5	2430.5	2220.4	2153.3	1710.5
32.5°	2918.0	2895.6	2855.4	2835.3	2739.1	2741.3	2685.4	2526.7	2325.5	2258.4	1788.8
35°	3117.0	3117.0	3067.8	3003.0	2848.7	2817.4	2783.8	2654.1	2439.5	2374.6	1891.7
37.5°	3309.3	3311.5	3260.1	3204.2	3027.6	2915.8	2897.9	2777.1	2580.4	2504.3	1999.0
40°	3430.0	3443.5	3430.0	3387.6	3217.6	3087.9	3009.7	2915.8	2714.5	2656.4	2122.0
42.5°	3450.2	3477.0	3526.2	3539.6	3356.3	3242.2	3152.8	3058.9	2875.5	2810.7	2262.8
45°	3398.7	3407.7	3517.2	3532.9	3459.1	3365.2	3304.8	3226.6	3067.8	3011.9	2419.4
47.5°	3257.9	3240.0	3278.0	3414.4	3443.5	3439.0	3454.6	3416.6	3291.4	3219.9	2591.5
50°	2956.0	2962.7	3085.7	3251.2	3351.8	3465.8	3566.4	3608.9	3517.2	3445.7	2777.1
52.5°	2405.9	2437.3	2672.0	3063.3	3237.7	3447.9	3646.9	3790.0	3752.0	3682.7	2960.5
55°	1976.6	2023.6	2258.4	2761.5	3081.2	3360.7	3693.9	3980.1	3986.8	3933.1	3128.2
57.5°	1547.3	1585.3	1833.5	2294.1	2857.6	3224.3	3700.6	4143.3	4219.4	4156.7	3275.8
60°	1211.9	1238.7	1384.1	1911.8	2582.6	3029.8	3651.4	4273.0	4416.1	4369.2	3403.2
62.5°	919.0	939.1	1068.8	1511.5	2245.0	2801.7	3485.9	4320.0	4554.8	4510.0	3474.8
65°	744.6	762.5	847.4	1187.3	1911.8	2537.9	3235.5	4212.6	4595.0	4554.8	3465.8
67.5°	608.2	614.9	684.2	925.7	1616.6	2240.5	2868.8	3933.1	4472.0	4469.8	3363.0
70°	491.9	509.8	567.9	737.9	1343.8	1898.4	2441.7	3494.9	4205.9	4228.3	3157.2
72.5°	418.1	422.6	474.0	610.4	1095.6	1540.6	2021.4	2989.5	3814.6	3832.5	2835.3
75°	353.3	360.0	398.0	494.2	889.9	1223.1	1625.6	2414.9	3193.0	3269.0	2388.1
77.5°	304.1	306.3	333.2	407.0	632.8	919.0	1191.8	1811.2	2499.9	2553.5	1876.0
80°	239.3	243.7	272.8	322.0	440.5	597.0	822.9	1238.7	1670.3	1730.7	1299.1
82.5°	111.8	125.2	131.9	176.6	230.3	295.2	389.1	516.5	755.8	753.5	606.0
85°	11.2	8.9	8.9	13.4	20.1	20.1	24.6	29.1	58.1	69.3	53.7
87.5°	0.0	0.0	0.0	2.2	4.5	4.5	4.5	6.7	6.7	6.7	6.7
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3	1348.3
2.5°	1355.0	1334.9	1299.1	1265.6	1243.2	1225.3	1196.3	1178.4	1165.0	1147.1	1144.8
5°	1350.6	1314.8	1243.2	1182.8	1124.7	1075.5	1024.1	992.8	959.2	943.6	957.0
7.5°	1355.0	1296.9	1185.1	1093.4	1006.2	927.9	860.9	818.4	787.1	771.4	773.7
10°	1357.3	1281.2	1135.9	1008.4	896.6	805.0	728.9	670.8	632.8	623.8	612.7
12.5°	1352.8	1261.1	1086.7	925.7	791.5	690.9	601.5	556.8	518.8	500.9	500.9
15°	1357.3	1245.5	1035.3	849.7	697.6	581.4	505.3	456.1	433.8	418.1	420.4
17.5°	1357.3	1232.0	986.1	775.9	606.0	498.6	429.3	389.1	366.7	357.8	355.5
20°	1372.9	1220.9	939.1	706.6	525.5	424.8	368.9	337.6	319.7	310.8	306.3
22.5°	1384.1	1211.9	896.6	639.5	458.4	371.2	324.2	295.2	281.7	277.3	277.3
25°	1404.2	1209.7	858.6	574.7	404.7	330.9	288.4	266.1	254.9	250.4	250.4
27.5°	1433.3	1214.2	822.9	518.8	364.5	290.7	259.4	241.5	234.8	232.5	230.3
30°	1475.8	1234.3	800.5	476.3	326.5	266.1	237.0	225.8	221.4	219.1	219.1
32.5°	1531.7	1270.1	791.5	453.9	304.1	246.0	221.4	212.4	207.9	207.9	205.7
35°	1601.0	1310.3	784.8	433.8	288.4	232.5	210.2	201.2	199.0	199.0	199.0
37.5°	1683.7	1352.8	773.7	420.4	279.5	221.4	201.2	192.3	192.3	192.3	192.3
40°	1775.4	1415.4	771.4	411.4	272.8	214.7	192.3	183.4	183.4	183.4	183.4
42.5°	1878.2	1482.5	769.2	404.7	268.3	210.2	183.4	174.4	174.4	174.4	174.4
45°	2003.5	1567.4	773.7	400.2	268.3	205.7	176.6	165.5	163.2	163.2	163.2
47.5°	2126.4	1647.9	778.1	395.8	263.8	199.0	167.7	156.5	154.3	152.0	152.0
50°	2258.4	1730.7	778.1	391.3	259.4	192.3	161.0	145.3	143.1	140.9	140.9
52.5°	2388.1	1800.0	780.4	384.6	248.2	181.1	149.8	136.4	131.9	129.7	127.5
55°	2513.3	1873.8	782.6	373.4	234.8	169.9	143.1	127.5	120.7	116.3	116.3
57.5°	2607.2	1934.1	771.4	351.1	216.9	158.8	131.9	116.3	107.3	102.9	102.9
60°	2696.6	1972.2	751.3	317.5	199.0	147.6	123.0	105.1	96.1	91.7	91.7
62.5°	2732.4	1978.9	704.3	259.4	176.6	136.4	111.8	96.1	89.4	87.2	87.2
65°	2712.3	1949.8	641.7	205.7	156.5	123.0	102.9	89.4	80.5	73.8	73.8
67.5°	2602.7	1849.2	556.8	163.2	136.4	111.8	93.9	80.5	71.6	64.8	64.8
70°	2394.8	1688.2	433.8	129.7	118.5	98.4	85.0	73.8	64.8	58.1	58.1
72.5°	2088.4	1464.6	315.3	109.6	102.9	87.2	76.0	67.1	58.1	53.7	53.7
75°	1721.7	1129.2	223.6	93.9	91.7	78.3	69.3	60.4	53.7	49.2	49.2
77.5°	1292.4	787.1	174.4	82.7	80.5	71.6	62.6	55.9	49.2	47.0	44.7
80°	860.9	487.5	131.9	62.6	60.4	55.9	51.4	47.0	40.2	35.8	35.8
82.5°	384.6	205.7	67.1	35.8	31.3	26.8	22.4	15.7	15.7	13.4	13.4
85°	40.2	26.8	13.4	8.9	8.9	6.7	6.7	6.7	4.5	4.5	4.5
87.5°	6.7	6.7	4.5	4.5	4.5	2.2	2.2	2.2	2.2	2.2	2.2
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			

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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			

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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**

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



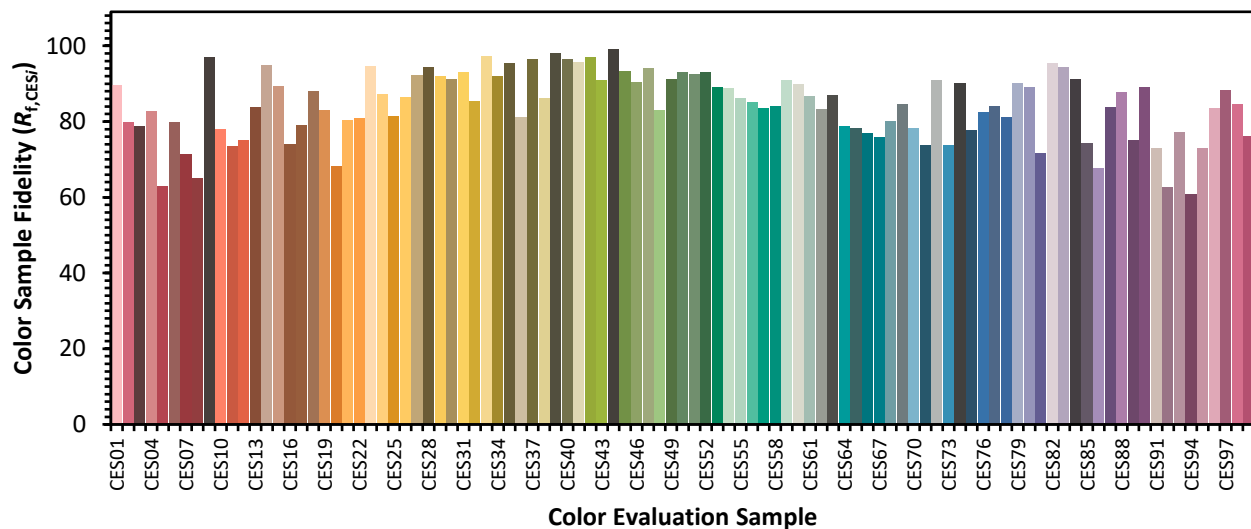
**Color Vector Graphics**





**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)