

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: P870710

Luminaire Tested: **EMM2-HTN-SA3A-830-U-T2U**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P870710  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HTN-SA3A-830-U-T2U  
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 130W 80CRI 3000K  
FIXTURE w/ TYPE II URBAN DISTRIBUTION OPTIC  
Light Source: (30) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

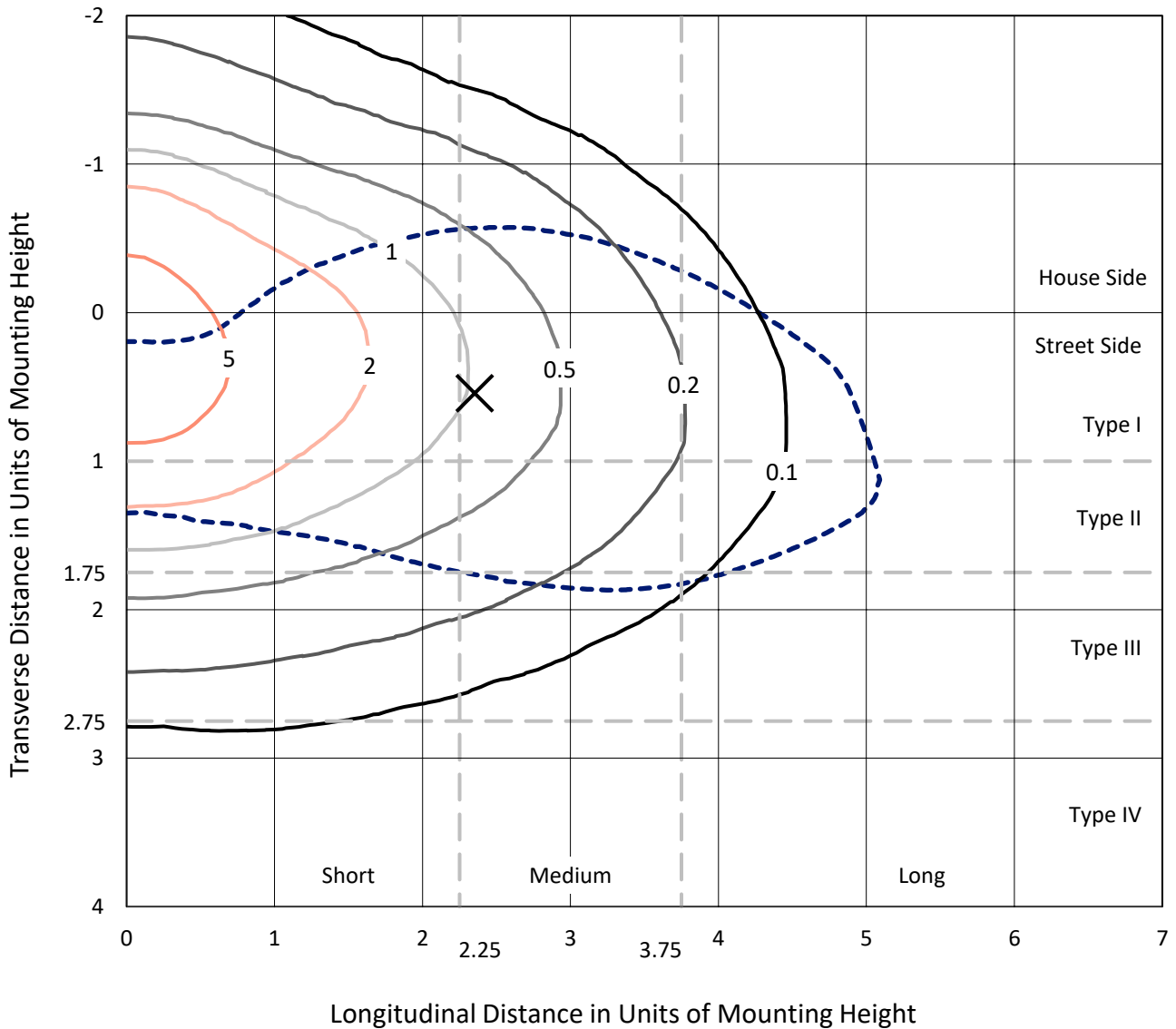
Lumens per Lamp: N/A  
Luminaire Lumens: 14859.8 lumens  
Efficiency: N/A  
Efficacy: 131.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

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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### Iso-Footcandle Lines of Horizontal Illumination

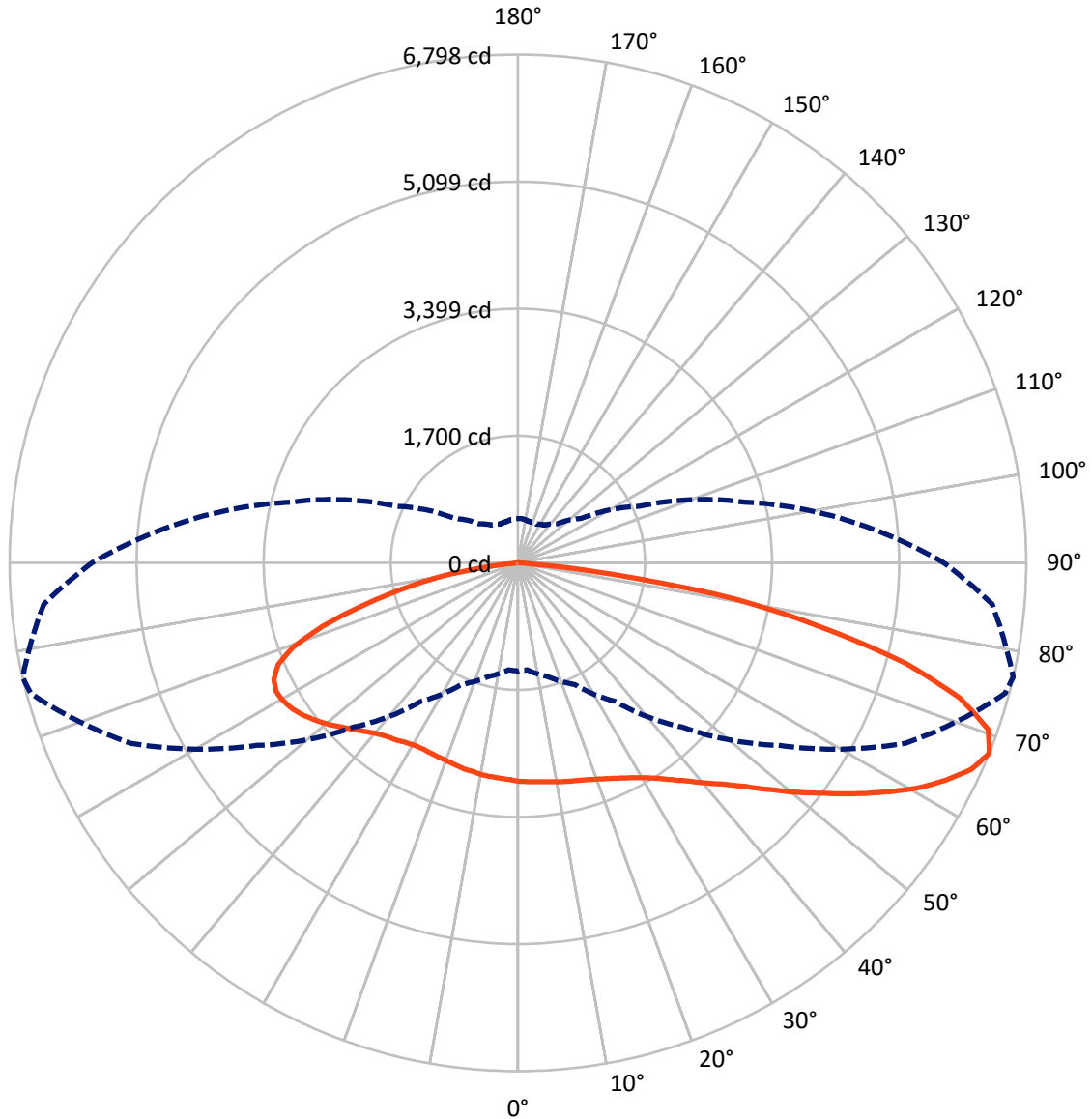
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8 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	4941.4	0.0	4941.4
	% Fixture	33.3	0.0	33.3
<b>Street Side</b>	Lumens	9918.4	0.0	9918.4
	% Fixture	66.7	0.0	66.7
<b>Total</b>	Lumens	14859.8	0.0	14859.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.8	1.9
10°-20°	851.6	5.7
20°-30°	1435.8	9.7
30°-40°	2037.4	13.7
40°-50°	2577.8	17.3
50°-60°	2823.9	19.0
60°-70°	2729.7	18.4
70°-80°	1835.9	12.4
80°-90°	286.9	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°	14859.8	100.0
0°-180°	14859.8	100.0



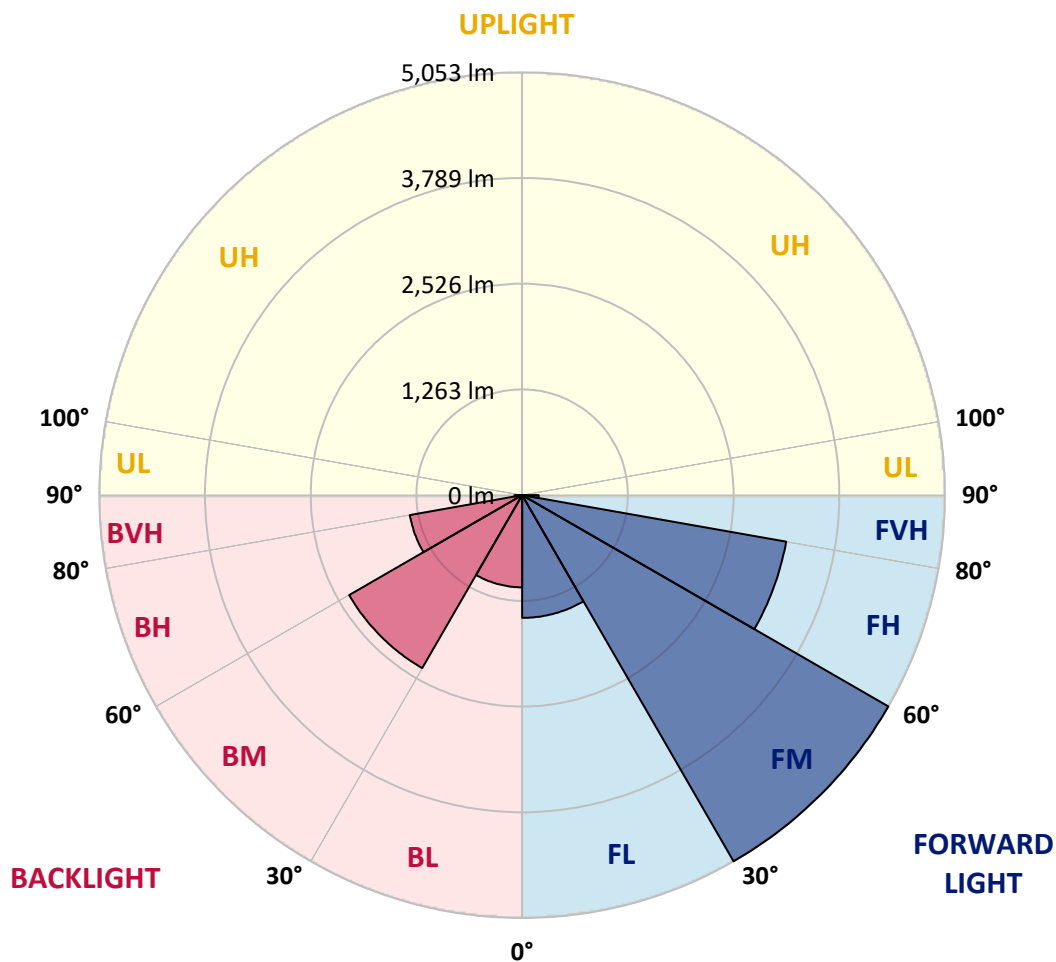
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1466.7	9.9			
FM (30°-60°)	5052.5	34.0			
FH (60°-80°)	3202.8	21.6			G2/5000
FVH (80°-90°)	196.5	1.3			G2/225
BL (0°-30°)	1101.5	7.4	B3/2500		
BM (30°-60°)	2386.6	16.1	B2/2500		
BH (60°-80°)	1362.8	9.2	B3/2500		G3/2500
BVH (80°-90°)	90.4	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°	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6
2.5°	2986.3	2983.3	2968.6	2974.5	2956.9	2968.6	2951.0	2936.3	2933.4	2930.4	2933.4
5°	3080.3	3065.6	3050.9	3042.1	3027.4	3021.5	2992.1	2962.7	2945.1	2942.2	2936.3
7.5°	3189.1	3183.2	3162.6	3150.9	3109.7	3089.1	3048.0	2995.1	2968.6	2956.9	2942.2
10°	3300.8	3315.5	3289.0	3265.5	3218.5	3174.4	3103.8	3036.2	2983.3	2977.4	2945.1
12.5°	3438.9	3436.0	3418.3	3377.2	3321.3	3259.6	3174.4	3080.3	3009.8	2998.0	2951.0
15°	3562.3	3559.4	3535.9	3497.7	3424.2	3347.8	3233.2	3124.4	3036.2	3018.6	2962.7
17.5°	3677.0	3671.1	3656.4	3615.3	3524.1	3430.1	3318.4	3174.4	3068.6	3048.0	2971.6
20°	3776.9	3782.8	3765.2	3724.0	3638.8	3538.8	3397.7	3239.0	3109.7	3086.2	2998.0
22.5°	3885.7	3888.6	3879.8	3865.1	3756.3	3650.5	3497.7	3312.5	3156.7	3133.2	3027.4
25°	4000.3	4003.2	4009.1	4000.3	3876.8	3762.2	3600.6	3403.6	3221.4	3189.1	3068.6
27.5°	4132.6	4135.5	4147.3	4129.6	3997.4	3876.8	3715.2	3500.6	3289.0	3253.7	3103.8
30°	4282.5	4294.2	4285.4	4279.5	4126.7	4009.1	3829.8	3600.6	3377.2	3333.1	3165.5
32.5°	4461.7	4458.8	4441.2	4423.5	4267.8	4144.3	3959.1	3729.9	3485.9	3436.0	3265.5
35°	4591.1	4591.1	4564.6	4555.8	4411.8	4282.5	4100.2	3873.9	3609.4	3562.3	3371.3
37.5°	4670.4	4682.2	4661.6	4667.5	4529.4	4408.8	4241.3	4020.9	3744.6	3703.4	3500.6
40°	4699.8	4729.2	4746.9	4770.4	4632.2	4529.4	4391.2	4179.6	3918.0	3871.0	3656.4
42.5°	4705.7	4749.8	4811.5	4861.5	4705.7	4620.5	4535.2	4341.2	4088.5	4047.3	3826.9
45°	4676.3	4655.7	4805.6	4811.5	4746.9	4693.9	4661.6	4535.2	4335.4	4267.8	4038.5
47.5°	4452.9	4429.4	4470.6	4658.7	4696.9	4726.3	4790.9	4761.6	4582.3	4529.4	4282.5
50°	4091.4	4079.6	4244.2	4447.1	4573.4	4723.3	4896.8	4979.1	4855.6	4823.3	4591.1
52.5°	3494.7	3462.4	3797.5	4191.3	4411.8	4693.9	4970.2	5202.4	5164.2	5117.2	4855.6
55°	3115.6	3115.6	3341.9	3832.8	4206.0	4588.1	5017.3	5437.6	5505.2	5452.3	5158.3
57.5°	2710.0	2742.3	2977.4	3315.5	3909.2	4394.1	5011.4	5634.5	5834.4	5784.4	5478.7
60°	2363.1	2389.6	2524.8	2865.7	3559.4	4138.4	4946.7	5796.2	6140.0	6122.4	5760.9
62.5°	2010.4	2042.8	2151.5	2471.9	3097.9	3844.5	4811.5	5884.3	6428.1	6410.5	6046.0
65°	1728.3	1731.2	1840.0	2107.4	2636.5	3488.9	4573.4	5866.7	6651.5	6663.2	6287.0
67.5°	1446.1	1437.3	1578.4	1795.9	2260.3	3106.8	4256.0	5710.9	6745.5	6798.4	6366.4
70°	1064.0	1075.8	1272.7	1513.7	1910.5	2665.9	3812.2	5408.2	6592.7	6675.0	6184.1
72.5°	799.5	823.0	1014.0	1263.9	1596.0	2225.0	3327.2	4882.1	6166.5	6178.3	5628.6
75°	649.6	655.4	825.9	1049.3	1308.0	1784.1	2671.8	4076.7	5214.2	5349.4	4782.1
77.5°	552.6	546.7	629.0	846.5	1055.2	1425.5	2013.4	3100.9	4094.3	4156.1	3744.6
80°	470.3	467.3	496.7	684.8	825.9	1017.0	1378.5	2160.3	2921.6	2989.2	2660.0
82.5°	246.9	264.5	258.7	423.2	467.3	534.9	661.3	981.7	1275.6	1293.3	1222.7
85°	11.8	11.8	11.8	17.6	29.4	47.0	91.1	91.1	99.9	191.0	217.5
87.5°	2.9	2.9	5.9	5.9	5.9	8.8	8.8	11.8	11.8	11.8	11.8
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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 CATALOG NUMBER: EMM2-HTN-SA3A-830-U-T2U

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6	2921.6
2.5°	2927.5	2915.7	2898.1	2901.0	2898.1	2898.1	2883.4	2871.6	2868.7	2874.6	2886.3
5°	2930.4	2912.8	2886.3	2877.5	2868.7	2862.8	2839.3	2821.7	2812.8	2818.7	2821.7
7.5°	2930.4	2904.0	2874.6	2856.9	2833.4	2815.8	2789.3	2765.8	2754.1	2757.0	2762.9
10°	2924.5	2895.1	2871.6	2836.4	2798.1	2777.6	2736.4	2707.0	2692.3	2695.3	2680.6
12.5°	2924.5	2892.2	2845.2	2812.8	2759.9	2715.8	2683.5	2651.2	2639.4	2627.7	2621.8
15°	2927.5	2886.3	2839.3	2771.7	2710.0	2662.9	2621.8	2601.2	2583.6	2577.7	2580.6
17.5°	2927.5	2886.3	2815.8	2736.4	2665.9	2607.1	2571.8	2548.3	2542.4	2536.6	2536.6
20°	2942.2	2889.3	2795.2	2701.2	2613.0	2551.3	2518.9	2504.2	2504.2	2495.4	2495.4
22.5°	2965.7	2895.1	2783.4	2671.8	2568.9	2501.3	2466.0	2448.4	2457.2	2451.3	2448.4
25°	2992.1	2915.7	2768.8	2630.6	2510.1	2439.6	2404.3	2392.5	2389.6	2374.9	2395.5
27.5°	3012.7	2930.4	2759.9	2589.5	2457.2	2374.9	2330.8	2310.2	2295.5	2301.4	2295.5
30°	3068.6	2971.6	2762.9	2554.2	2398.4	2298.5	2245.6	2222.1	2216.2	2216.2	2216.2
32.5°	3145.0	3024.5	2783.4	2539.5	2342.6	2225.0	2160.3	2136.8	2130.9	2119.2	2125.1
35°	3242.0	3103.8	2815.8	2516.0	2298.5	2139.8	2069.2	2036.9	2028.1	2016.3	2016.3
37.5°	3350.7	3183.2	2839.3	2504.2	2239.7	2051.6	1972.2	1931.1	1925.2	1913.4	1919.3
40°	3488.9	3291.9	2877.5	2480.7	2172.1	1972.2	1866.4	1798.8	1813.5	1819.4	1831.1
42.5°	3644.6	3430.1	2936.3	2457.2	2119.2	1889.9	1734.1	1666.5	1684.2	1678.3	1690.1
45°	3856.3	3591.7	3009.8	2448.4	2054.5	1790.0	1598.9	1522.5	1516.6	1507.8	1513.7
47.5°	4076.7	3785.7	3080.3	2430.7	1984.0	1666.5	1446.1	1349.1	1325.6	1313.8	1302.1
50°	4306.0	3979.7	3162.6	2419.0	1889.9	1528.4	1293.3	1181.6	1137.5	1122.8	1108.1
52.5°	4564.6	4188.4	3233.2	2389.6	1787.1	1384.4	1155.1	1028.7	978.8	949.4	952.3
55°	4838.0	4379.5	3297.8	2354.3	1669.5	1249.2	1017.0	911.2	861.2	852.4	852.4
57.5°	5090.7	4576.4	3344.8	2292.6	1551.9	1116.9	902.3	811.2	787.7	799.5	799.5
60°	5349.4	4735.1	3368.4	2225.0	1431.4	1005.2	823.0	749.5	737.7	761.3	764.2
62.5°	5558.1	4861.5	3362.5	2130.9	1299.1	908.2	746.6	687.8	693.7	734.8	743.6
65°	5708.0	4923.2	3289.0	1989.9	1172.8	823.0	679.0	623.1	623.1	652.5	661.3
67.5°	5696.2	4843.8	3142.0	1792.9	1037.5	737.7	617.2	573.1	573.1	593.7	590.8
70°	5455.2	4570.5	2862.8	1554.9	905.3	664.3	564.3	532.0	529.1	537.9	534.9
72.5°	4876.2	4015.0	2427.8	1284.4	781.8	590.8	511.4	482.0	476.2	464.4	455.6
75°	4023.8	3297.8	1895.8	1022.9	661.3	520.2	461.5	435.0	411.5	426.2	417.4
77.5°	3121.5	2530.7	1410.8	793.6	537.9	452.6	411.5	382.1	376.2	429.1	411.5
80°	2277.9	1748.8	996.4	567.3	417.4	367.4	343.9	320.4	405.6	543.8	540.8
82.5°	1011.1	843.6	455.6	270.4	194.0	161.7	135.2	152.8	255.7	249.8	258.7
85°	91.1	94.1	50.0	32.3	20.6	17.6	11.8	11.8	8.8	8.8	8.8
87.5°	11.8	11.8	8.8	8.8	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)