

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: P871043

Luminaire Tested: **EMM2-HSN-SA2A-840-U-T2R**

Issue Date: 09/05/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P871043  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2A-840-U-T2R  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 70W 80CRI 4000K  
FITXURE w/ TYPE II ROADWAY DISTRIBUTION OPTIC  
Light Source: (20) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

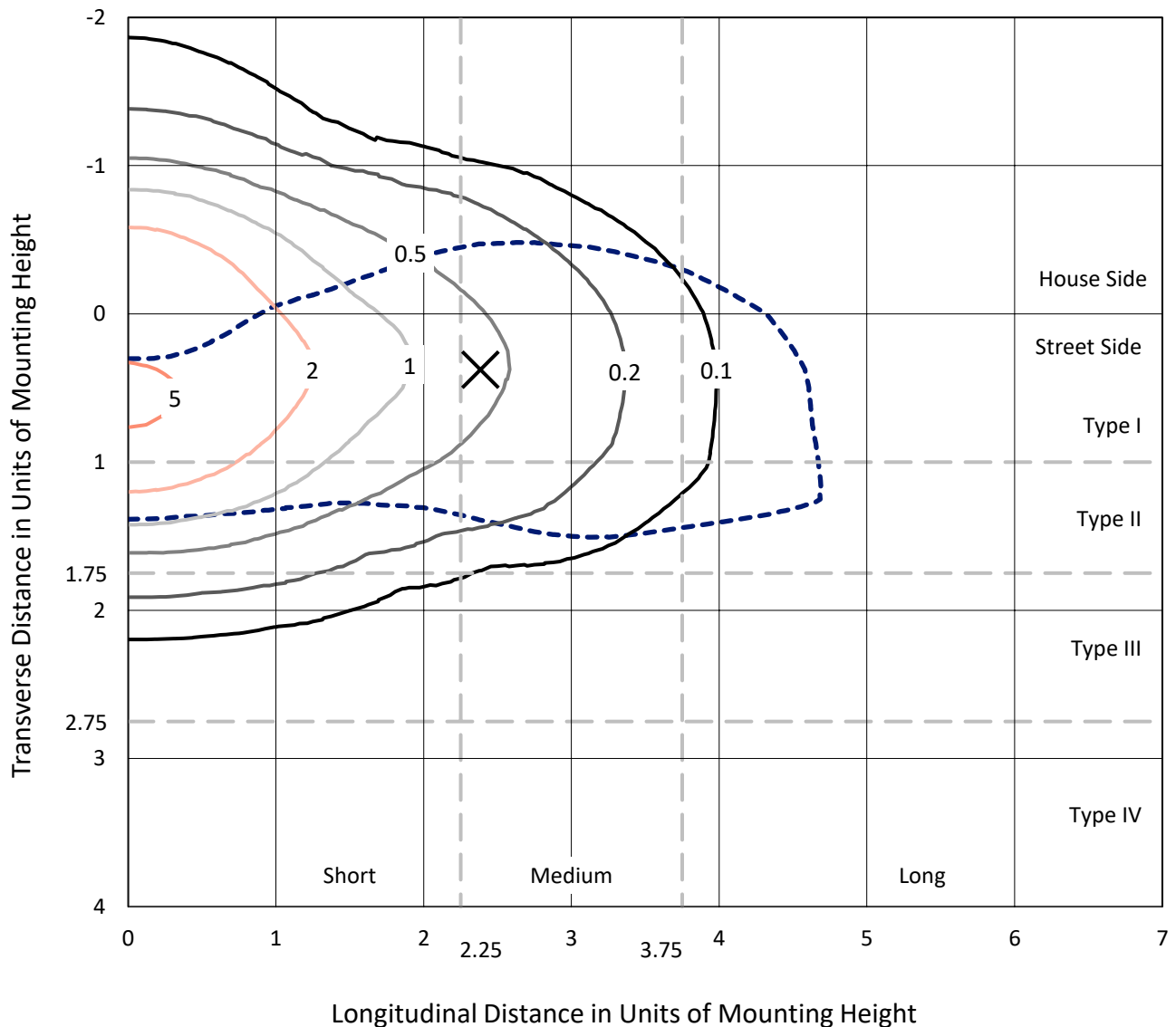
Lumens per Lamp: N/A  
Luminaire Lumens: 8917.3 lumens  
Efficiency: N/A  
Efficacy: 146.2 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2

Input Watts (W): 61  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 9.89%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

REPORT NUMBER: P871043  
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### Iso-Footcandle Lines of Horizontal Illumination

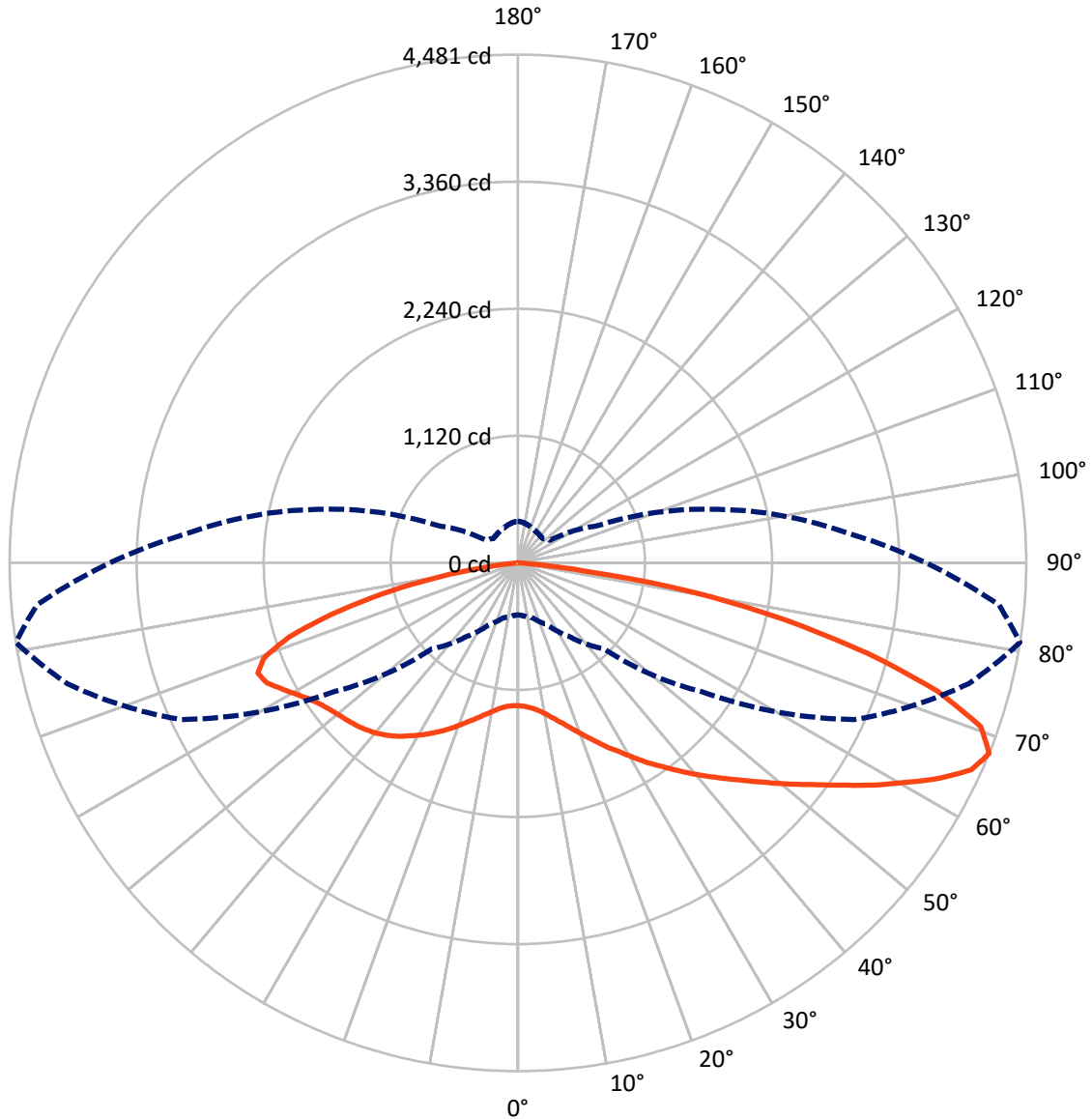
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.7 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 81-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2732.5	0.0	2732.5
	% Fixture	30.6	0.0	30.6
<b>Street Side</b>	Lumens	6184.8	0.0	6184.8
	% Fixture	69.4	0.0	69.4
<b>Total</b>	Lumens	8917.3	0.0	8917.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.4	1.4
10°-20°	455.7	5.1
20°-30°	907.7	10.2
30°-40°	1426.0	16.0
40°-50°	1768.5	19.8
50°-60°	1728.8	19.4
60°-70°	1453.8	16.3
70°-80°	923.8	10.4
80°-90°	124.7	1.4
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°	8917.3	100.0
0°-180°	8917.3	100.0

**Coefficient of Utilization**



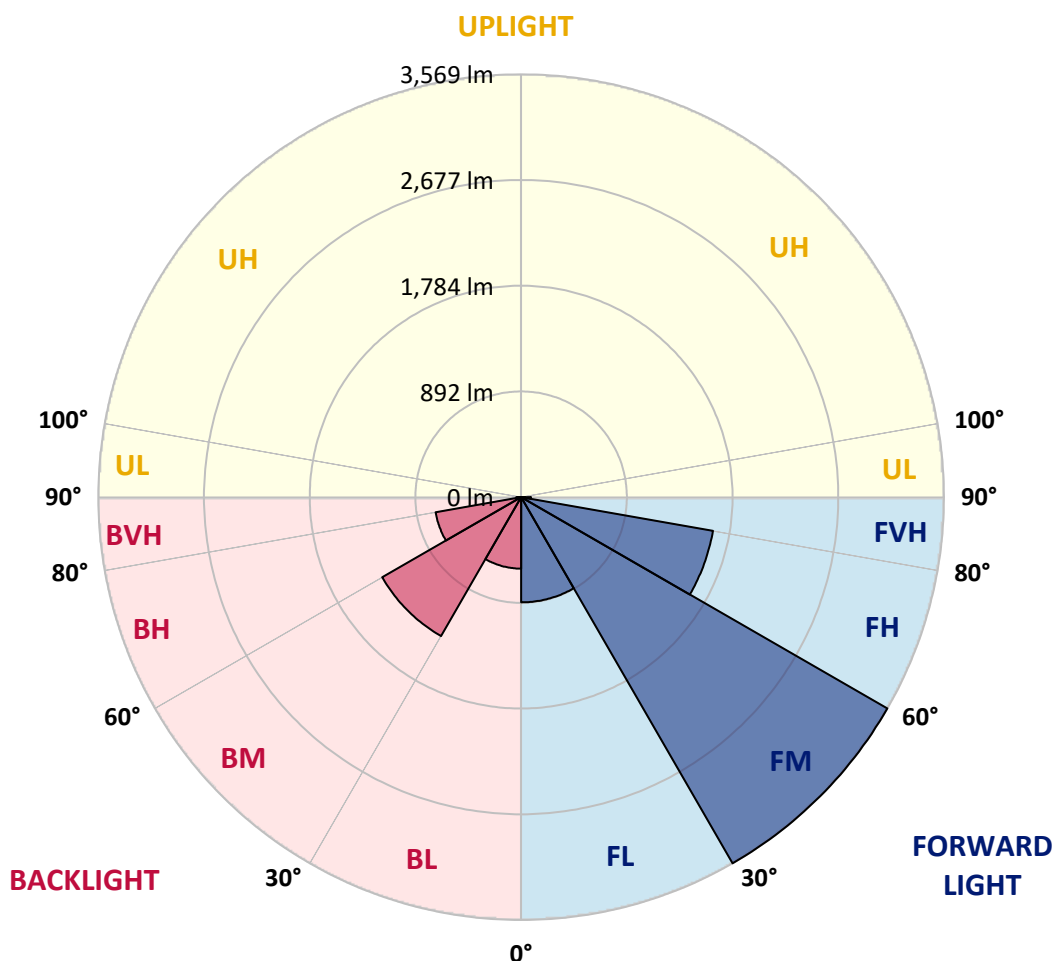
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	888.2	10.0			
FM (30°-60°)	3569.0	40.0			
FH (60°-80°)	1644.1	18.4			G1/1800
FVH (80°-90°)	83.5	0.9			G1/100
BL (0°-30°)	603.6	6.8	B2/1000		
BM (30°-60°)	1354.3	15.2	B2/2500		
BH (60°-80°)	733.5	8.2	B2/1000		G2/1000
BVH (80°-90°)	41.1	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 II Medium





REPORT NUMBER: P871043

CATALOG NUMBER: EMM2-HSN-SA2A-840-U-T2R

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	81°	85°
0°	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0
2.5°	1303.2	1301.4	1301.4	1287.3	1287.3	1283.7	1285.5	1274.9	1269.6	1267.8	1266.0
5°	1396.9	1396.9	1386.3	1377.4	1359.8	1343.8	1329.7	1308.5	1292.6	1285.5	1280.2
7.5°	1538.3	1527.7	1524.2	1497.7	1460.5	1428.7	1400.4	1354.4	1324.4	1313.8	1306.7
10°	1711.6	1697.5	1671.0	1640.9	1593.2	1545.4	1488.8	1426.9	1377.4	1356.2	1347.4
12.5°	1890.2	1870.8	1833.6	1805.3	1743.5	1671.0	1591.4	1506.5	1437.6	1407.5	1391.6
15°	2086.5	2075.9	2031.7	1975.1	1902.6	1800.0	1701.0	1596.7	1508.3	1465.8	1439.3
17.5°	2298.7	2282.8	2235.0	2166.1	2063.5	1941.5	1826.6	1692.2	1589.6	1534.8	1504.7
20°	2507.3	2503.8	2433.1	2367.6	2247.4	2095.3	1946.8	1805.3	1676.3	1612.6	1573.7
22.5°	2740.7	2717.7	2655.9	2563.9	2420.7	2281.0	2105.9	1922.0	1770.0	1695.7	1651.5
25°	2983.0	2981.2	2905.2	2792.0	2624.0	2447.2	2258.0	2054.7	1881.4	1791.2	1732.8
27.5°	3283.6	3260.6	3163.3	3034.2	2839.7	2636.4	2417.1	2192.6	1987.5	1879.6	1808.9
30°	3547.0	3540.0	3430.3	3285.3	3067.8	2825.6	2588.7	2348.2	2113.0	1985.7	1907.9
32.5°	3761.0	3752.1	3658.4	3513.4	3280.0	3028.9	2756.6	2494.9	2238.6	2100.6	1998.1
35°	3939.6	3925.4	3828.2	3683.2	3481.6	3227.0	2937.0	2648.8	2376.5	2208.5	2111.2
37.5°	4010.3	3997.9	3918.4	3798.1	3612.5	3379.0	3099.7	2818.5	2514.4	2330.5	2220.9
40°	3983.8	3976.7	3920.1	3837.0	3695.6	3501.1	3255.3	2995.3	2670.0	2459.6	2328.7
42.5°	3858.2	3858.2	3822.9	3780.4	3709.7	3570.0	3393.2	3165.1	2820.3	2588.7	2431.3
45°	3681.4	3674.3	3662.0	3646.0	3635.4	3582.4	3483.4	3311.9	2986.5	2730.1	2555.1
47.5°	3446.2	3451.5	3442.7	3449.8	3494.0	3527.6	3522.3	3448.0	3156.3	2885.7	2677.1
50°	3076.7	3101.4	3129.7	3212.8	3303.0	3396.7	3483.4	3545.3	3356.1	3062.5	2818.5
52.5°	2618.7	2629.3	2705.4	2901.6	3094.4	3218.1	3382.6	3589.5	3532.9	3246.4	2984.7
55°	2054.7	2074.1	2189.0	2466.7	2809.7	3046.6	3239.4	3570.0	3713.2	3456.9	3179.2
57.5°	1472.9	1485.3	1669.2	1955.6	2403.0	2800.8	3076.7	3492.2	3858.2	3695.6	3379.0
60°	1046.8	1069.8	1188.2	1467.6	1897.3	2461.3	2928.2	3379.0	3992.6	3929.0	3640.7
62.5°	772.7	785.1	868.2	1071.5	1425.2	1998.1	2735.4	3295.9	4081.0	4180.0	3902.4
65°	581.7	587.0	643.6	783.3	1066.2	1472.9	2431.3	3280.0	4130.5	4394.0	4134.1
67.5°	458.0	466.8	502.2	597.7	793.9	1071.5	1980.4	3269.4	4112.9	4480.6	4256.1
70°	385.5	387.2	413.8	466.8	594.1	770.9	1480.0	3110.3	4013.8	4328.6	4142.9
72.5°	334.2	334.2	346.6	389.0	477.4	583.5	1007.9	2730.1	3762.8	3867.1	3750.4
75°	270.5	268.8	290.0	330.7	383.7	449.1	677.2	2067.0	3235.8	3182.8	3087.3
77.5°	235.2	233.4	251.1	286.5	316.5	358.9	463.3	1342.1	2546.2	2387.1	2327.0
80°	201.6	196.3	210.4	244.0	259.9	279.4	320.0	781.5	1663.9	1564.9	1492.4
82.5°	152.1	139.7	136.2	164.4	175.1	162.7	162.7	274.1	604.7	610.0	564.1
85°	12.4	14.1	17.7	21.2	30.1	33.6	35.4	58.4	90.2	86.6	88.4
87.5°	1.8	1.8	1.8	3.5	3.5	5.3	5.3	5.3	7.1	7.1	7.1
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°	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0	1259.0
2.5°	1264.3	1260.7	1257.2	1257.2	1257.2	1253.7	1251.9	1251.9	1250.1	1244.8	1243.1
5°	1276.6	1271.3	1266.0	1266.0	1266.0	1264.3	1262.5	1264.3	1262.5	1257.2	1255.4
7.5°	1301.4	1294.3	1287.3	1287.3	1290.8	1289.0	1289.0	1290.8	1289.0	1283.7	1282.0
10°	1336.8	1326.2	1322.6	1322.6	1326.2	1324.4	1322.6	1322.6	1320.9	1312.0	1315.5
12.5°	1375.7	1365.1	1361.5	1363.3	1361.5	1358.0	1359.8	1354.4	1352.7	1338.5	1336.8
15°	1425.2	1412.8	1405.7	1407.5	1402.2	1395.1	1388.0	1384.5	1377.4	1365.1	1361.5
17.5°	1481.8	1462.3	1453.5	1453.5	1442.9	1428.7	1418.1	1407.5	1396.9	1382.7	1379.2
20°	1536.6	1518.9	1504.7	1501.2	1480.0	1457.0	1437.6	1419.9	1407.5	1391.6	1388.0
22.5°	1605.5	1580.8	1561.3	1545.4	1513.6	1476.5	1446.4	1421.6	1404.0	1386.3	1381.0
25°	1678.0	1642.7	1610.8	1580.8	1536.6	1483.5	1441.1	1405.7	1382.7	1363.3	1359.8
27.5°	1750.5	1704.6	1658.6	1610.8	1543.6	1474.7	1414.6	1372.1	1342.1	1317.3	1313.8
30°	1828.3	1771.7	1699.3	1630.3	1541.9	1451.7	1375.7	1315.5	1280.2	1251.9	1248.4
32.5°	1907.9	1837.2	1738.2	1644.4	1533.0	1418.1	1319.1	1255.4	1211.2	1179.4	1170.6
35°	1996.3	1909.7	1773.5	1649.7	1508.3	1368.6	1259.0	1179.4	1128.1	1096.3	1089.2
37.5°	2086.5	1976.9	1796.5	1646.2	1472.9	1310.2	1181.2	1099.8	1039.7	995.5	988.4
40°	2178.4	2038.7	1810.6	1628.5	1423.4	1237.7	1108.7	1009.6	923.0	882.3	862.9
42.5°	2263.3	2095.3	1817.7	1603.8	1368.6	1161.7	1013.2	884.1	802.8	758.6	767.4
45°	2351.7	2148.4	1819.5	1573.7	1296.1	1064.5	892.9	772.7	691.4	657.8	654.2
47.5°	2427.8	2192.6	1816.0	1531.3	1214.8	953.1	767.4	652.5	592.4	560.5	557.0
50°	2528.5	2242.1	1810.6	1481.8	1108.7	825.8	650.7	557.0	502.2	477.4	475.6
52.5°	2629.3	2296.9	1807.1	1412.8	997.3	705.5	544.6	470.3	433.2	420.8	417.3
55°	2761.9	2364.1	1808.9	1333.2	870.0	581.7	461.5	410.2	390.8	385.5	385.5
57.5°	2914.0	2450.7	1819.5	1244.8	737.3	481.0	401.4	378.4	376.6	380.2	381.9
60°	3097.9	2565.7	1840.7	1152.9	615.3	406.7	366.0	364.3	369.6	381.9	385.5
62.5°	3304.8	2691.2	1867.2	1032.6	498.6	357.2	346.6	353.6	360.7	374.9	376.6
65°	3486.9	2832.7	1883.1	917.7	417.3	328.9	334.2	337.7	355.4	374.9	374.9
67.5°	3596.5	2935.2	1823.0	772.7	348.3	304.1	314.7	325.4	344.8	362.5	366.0
70°	3559.4	2901.6	1617.9	599.4	295.3	281.1	293.5	309.4	328.9	350.1	360.7
72.5°	3301.2	2662.9	1313.8	436.7	256.4	259.9	275.8	297.1	314.7	337.7	351.9
75°	2760.2	2222.6	947.8	314.7	224.6	238.7	263.5	281.1	293.5	298.8	300.6
77.5°	2095.3	1633.8	645.4	235.2	194.5	214.0	240.5	259.9	263.5	267.0	270.5
80°	1368.6	1039.7	364.3	164.4	148.5	175.1	196.3	217.5	210.4	221.0	224.6
82.5°	578.2	454.4	166.2	81.3	69.0	74.3	79.6	70.7	65.4	65.4	56.6
85°	76.0	58.4	24.8	10.6	8.8	5.3	5.3	5.3	3.5	3.5	3.5
87.5°	7.1	7.1	5.3	5.3	3.5	3.5	1.8	3.5	1.8	1.8	1.8
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

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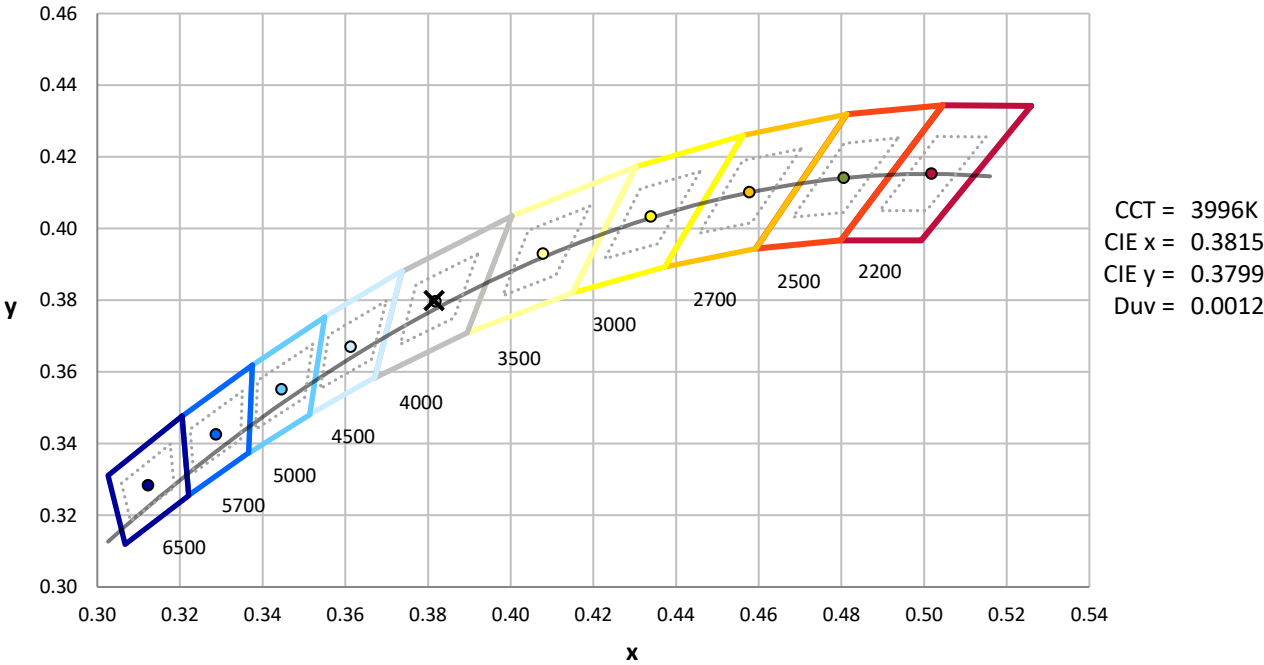
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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 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

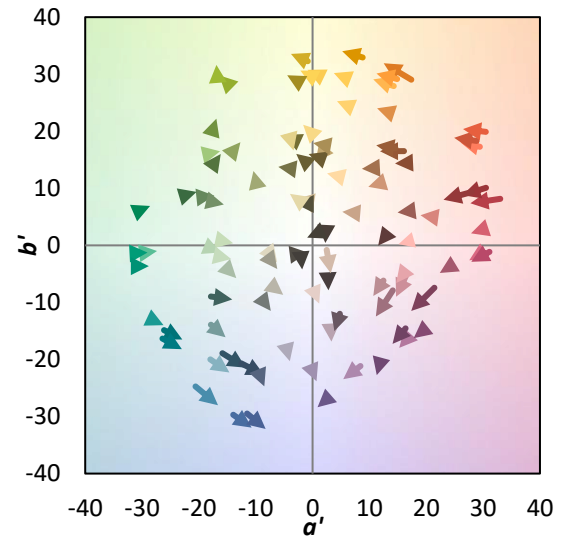
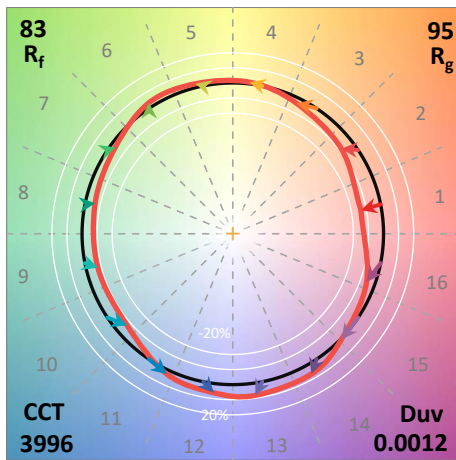
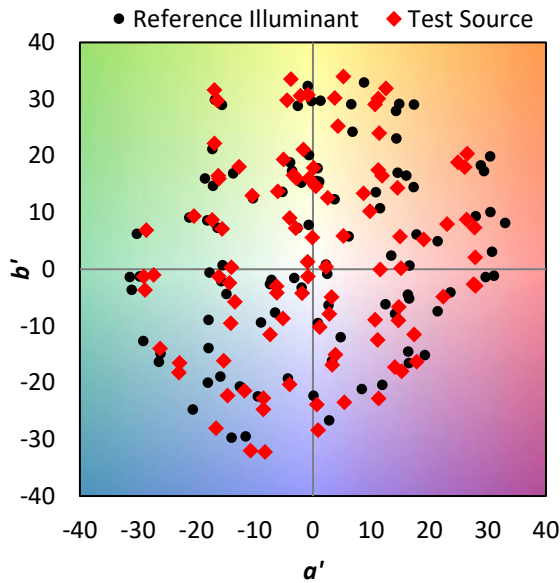
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	289	NR	620	725	NR	750	17	NR	880	0	NR
365	0	NR	495	351	NR	625	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**



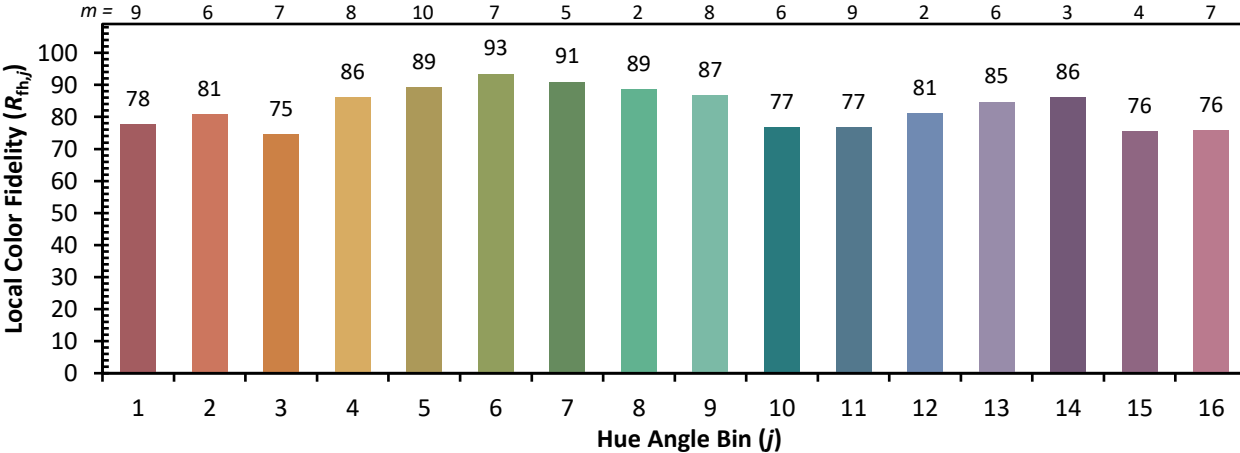


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)