

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: P868625

Luminaire Tested: **EMM2-HTN-SA3A-722-U-T4W-HSS**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P868625  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HTN-SA3A-722-U-T4W-HSS  
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 130W 70CRI 2200K  
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (30) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

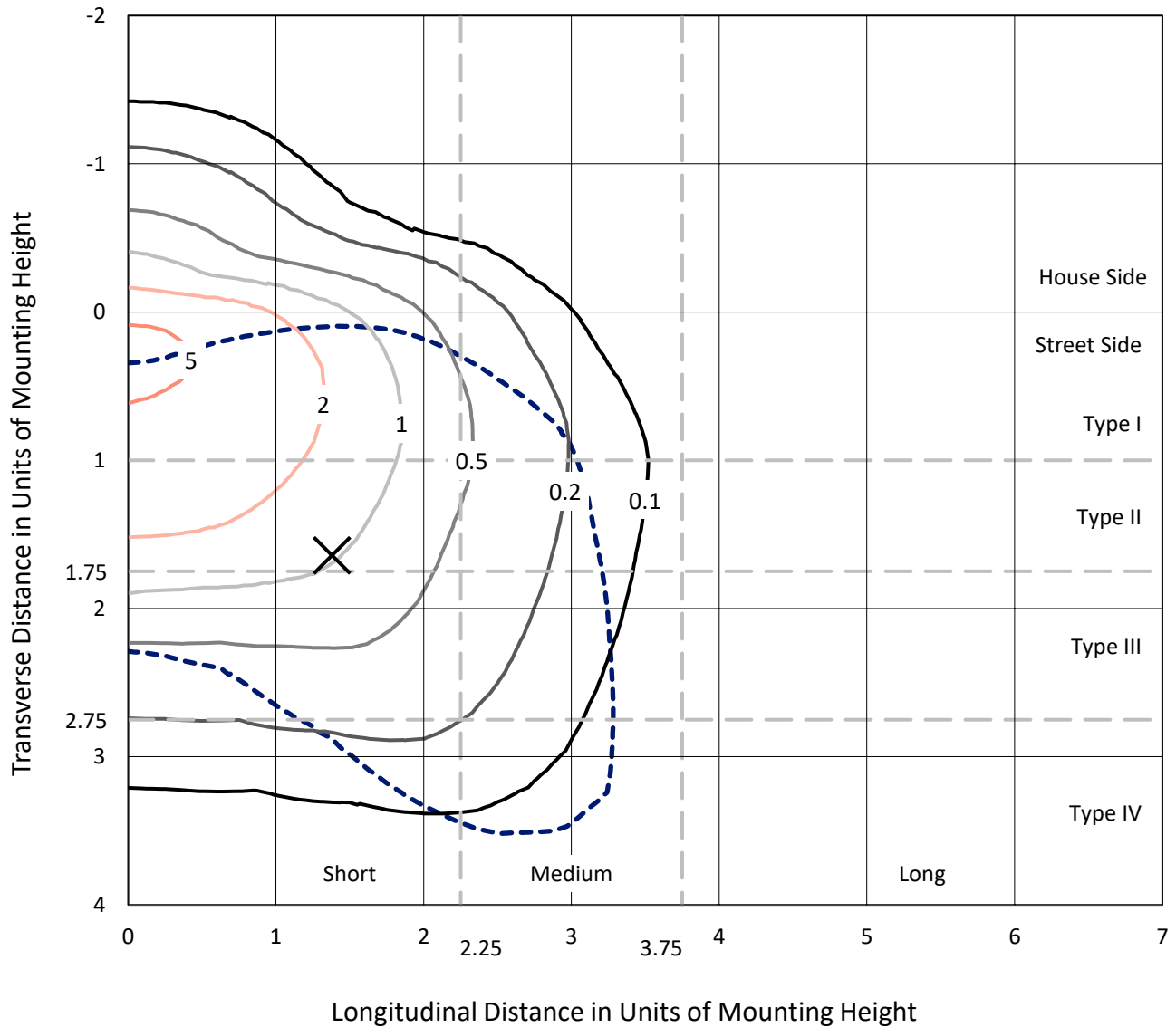
Lumens per Lamp: N/A  
Luminaire Lumens: 10271.9 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

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

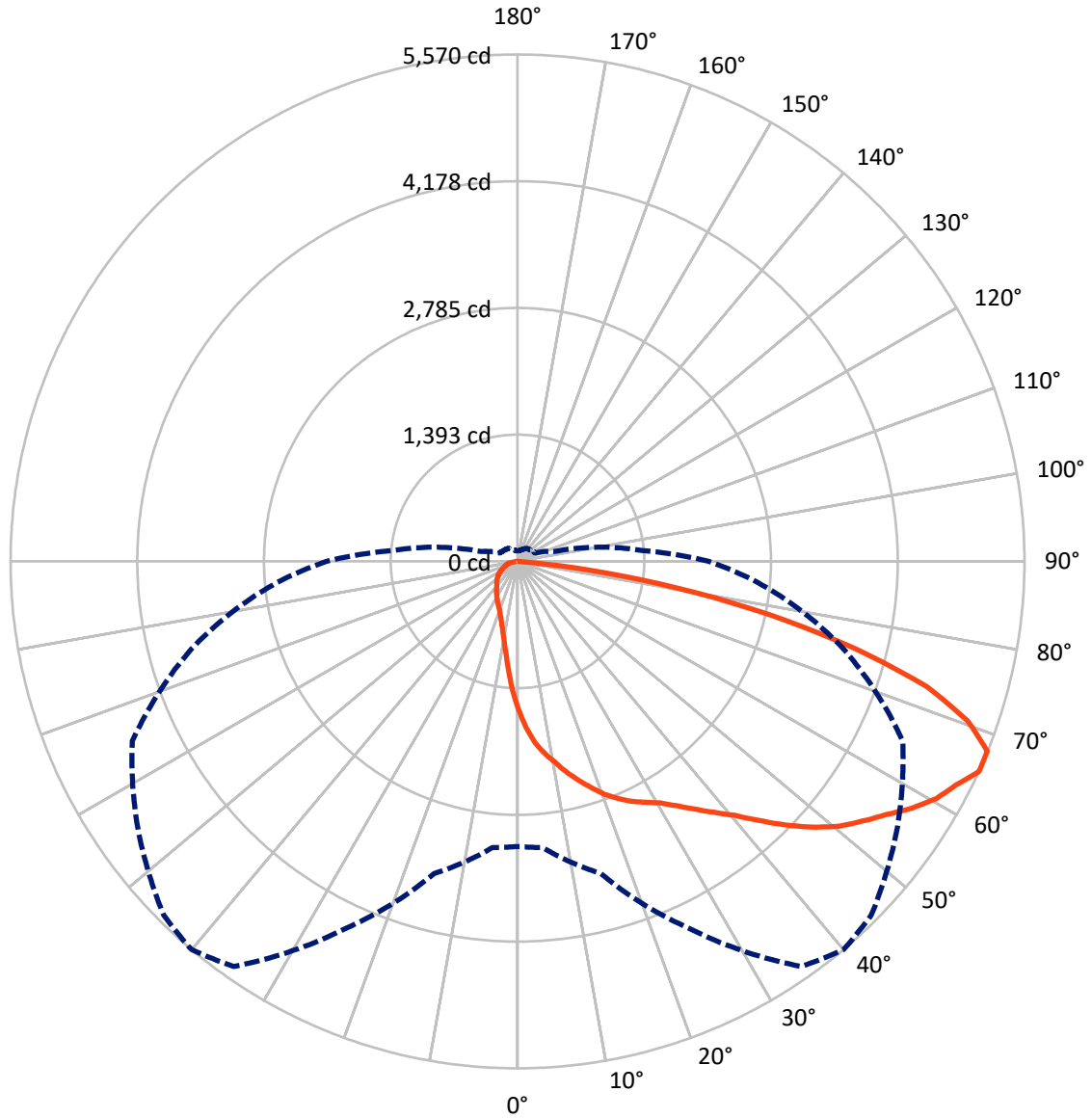
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1229.8	0.0	1229.8
	% Fixture	12.0	0.0	12.0
<b>Street Side</b>	Lumens	9042.1	0.0	9042.1
	% Fixture	88.0	0.0	88.0
<b>Total</b>	Lumens	10271.9	0.0	10271.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.8	1.5
10°-20°	459.6	4.5
20°-30°	790.6	7.7
30°-40°	1195.1	11.6
40°-50°	1747.5	17.0
50°-60°	2231.9	21.7
60°-70°	2227.4	21.7
70°-80°	1306.2	12.7
80°-90°	160.9	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°	10271.9	100.0
0°-180°	10271.9	100.0



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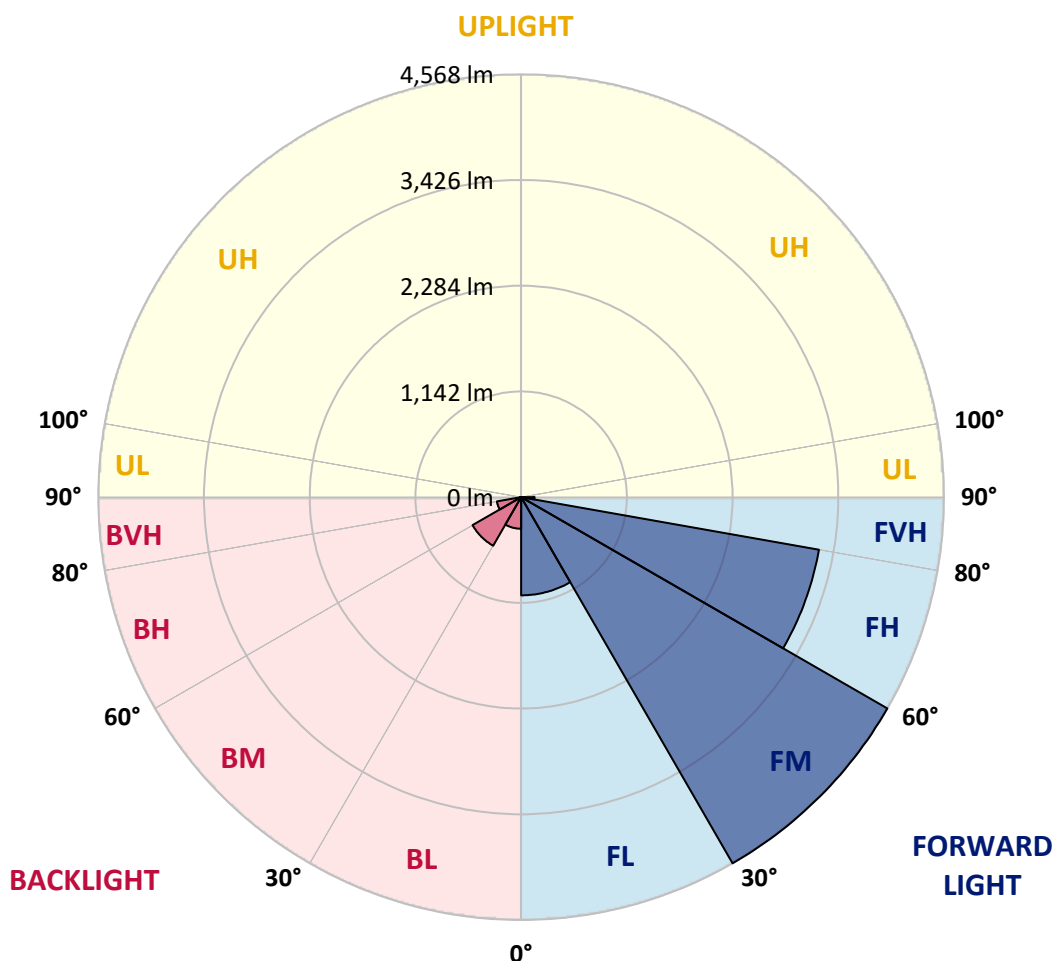
CATALOG NUMBER: EMM2-HTN-SA3A-722-U-T4W-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1060.9	10.3			
FM	(30°-60°)	4568.4	44.5			
FH	(60°-80°)	3267.3	31.8			G2/5000
FVH	(80°-90°)	145.4	1.4			G2/225
BL	(0°-30°)	342.0	3.3	B1/500		
BM	(30°-60°)	606.0	5.9	B1/1000		
BH	(60°-80°)	266.3	2.6	B1/500		G1/500
BVH	(80°-90°)	15.5	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8
2.5°	1904.9	1896.2	1878.9	1864.4	1844.1	1826.8	1809.4	1777.5	1737.0	1702.3	1658.8
5°	2093.1	2078.6	2067.0	2049.7	2014.9	2000.5	1988.9	1922.3	1852.8	1780.4	1684.9
7.5°	2226.3	2237.9	2214.7	2188.6	2145.2	2127.8	2110.5	2043.9	1957.0	1852.8	1716.7
10°	2379.7	2382.6	2353.7	2321.8	2275.5	2240.7	2217.6	2136.5	2041.0	1925.2	1751.5
12.5°	2527.4	2527.4	2510.0	2463.7	2402.9	2371.0	2330.5	2237.9	2122.1	1986.0	1792.0
15°	2646.1	2651.8	2637.4	2602.6	2536.0	2492.6	2452.1	2345.0	2197.3	2055.5	1823.9
17.5°	2753.2	2750.3	2741.6	2709.7	2646.1	2611.3	2570.8	2452.1	2284.2	2110.5	1873.1
20°	2825.5	2825.5	2822.6	2805.3	2759.0	2732.9	2683.7	2559.2	2379.7	2191.5	1925.2
22.5°	2880.5	2877.7	2877.7	2880.5	2854.5	2828.4	2808.2	2683.7	2478.1	2261.0	1977.3
25°	2926.9	2924.0	2932.7	2938.4	2926.9	2921.1	2897.9	2802.4	2599.7	2342.1	2029.4
27.5°	2987.7	2996.3	2993.5	2993.5	2990.6	2996.3	2993.5	2912.4	2718.4	2428.9	2084.4
30°	3083.2	3097.7	3089.0	3077.4	3077.4	3080.3	3094.8	3042.7	2857.4	2536.0	2145.2
32.5°	3306.1	3291.6	3230.8	3190.3	3196.1	3199.0	3213.5	3184.5	2996.3	2657.6	2208.9
35°	3560.9	3543.5	3476.9	3384.3	3352.4	3340.9	3338.0	3320.6	3146.9	2787.9	2284.2
37.5°	3890.9	3896.7	3798.3	3665.1	3569.6	3497.2	3482.7	3445.1	3277.2	2906.6	2362.3
40°	4226.7	4203.6	4119.6	3989.3	3801.2	3668.0	3624.6	3572.5	3424.8	3031.1	2437.6
42.5°	4551.0	4507.6	4397.5	4255.7	4035.7	3890.9	3792.5	3725.9	3560.9	3167.2	2510.0
45°	4973.6	4849.2	4652.3	4524.9	4249.9	4131.2	4041.5	3893.8	3723.0	3303.2	2596.8
47.5°	5306.6	5066.3	4886.8	4831.8	4472.8	4362.8	4281.7	4076.2	3888.0	3456.7	2686.6
50°	5245.8	5098.1	5054.7	5005.5	4640.7	4574.1	4498.9	4284.6	4055.9	3618.8	2773.4
52.5°	5089.5	5106.8	5161.8	5077.9	4788.4	4742.0	4692.8	4507.6	4223.8	3751.9	2851.6
55°	4965.0	4999.7	5147.4	5121.3	4965.0	4912.9	4878.1	4727.6	4386.0	3873.5	2918.2
57.5°	4739.2	4710.2	4895.5	5196.6	5153.1	5112.6	5077.9	4959.2	4551.0	3960.4	2961.6
60°	4383.1	4275.9	4524.9	5103.9	5283.4	5289.2	5268.9	5132.9	4684.1	3960.4	2938.4
62.5°	3882.2	3780.9	4087.8	4794.2	5352.9	5407.9	5396.3	5193.7	4742.0	3873.5	2848.7
65°	3132.4	3155.6	3552.2	4443.9	5434.0	5570.0	5497.6	5095.2	4669.7	3705.6	2646.1
67.5°	2501.3	2570.8	2926.9	3989.3	5396.3	5567.1	5465.8	4817.3	4359.9	3471.1	2336.3
70°	1974.4	2020.7	2316.0	3375.6	5066.3	5245.8	5118.4	4391.7	3835.9	3109.3	1942.6
72.5°	1543.0	1586.5	1838.3	2701.1	4493.1	4701.5	4542.3	3818.5	3181.6	2637.4	1543.0
75°	1172.5	1204.3	1392.5	2081.5	3578.2	3838.8	3723.0	3057.1	2483.9	2087.3	1181.2
77.5°	755.6	799.0	1010.4	1459.1	2527.4	2840.0	2854.5	2284.2	1786.2	1508.3	868.5
80°	500.8	518.2	648.5	949.6	1554.6	1797.8	1881.8	1543.0	1140.6	961.1	625.3
82.5°	208.4	231.6	309.8	477.7	778.8	781.7	894.6	651.4	463.2	408.2	263.4
85°	5.8	11.6	8.7	23.2	20.3	31.8	37.6	52.1	37.6	40.5	40.5
87.5°	0.0	0.0	2.9	2.9	5.8	5.8	5.8	5.8	5.8	8.7	5.8
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°	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8	1632.8
2.5°	1638.6	1612.5	1560.4	1519.9	1476.5	1444.6	1415.7	1383.8	1363.6	1366.5	1346.2
5°	1638.6	1589.4	1485.1	1392.5	1308.6	1247.8	1181.2	1129.1	1091.4	1085.6	1103.0
7.5°	1647.3	1566.2	1409.9	1270.9	1155.1	1059.6	990.1	938.0	911.9	894.6	891.7
10°	1656.0	1548.8	1340.4	1163.8	1019.0	914.8	854.0	796.1	767.2	764.3	755.6
12.5°	1661.7	1528.6	1276.7	1056.7	906.1	807.7	746.9	700.6	677.4	677.4	674.5
15°	1682.0	1522.8	1210.1	975.6	819.3	723.8	671.6	634.0	619.5	610.8	608.0
17.5°	1699.4	1511.2	1152.2	894.6	741.1	657.2	608.0	581.9	567.4	561.6	558.7
20°	1725.4	1505.4	1097.2	828.0	683.2	602.2	564.5	541.4	532.7	526.9	526.9
22.5°	1751.5	1499.6	1042.2	770.1	634.0	561.6	526.9	506.6	497.9	495.0	492.2
25°	1783.3	1496.7	995.9	720.9	590.6	529.8	497.9	480.6	469.0	463.2	463.2
27.5°	1815.2	1499.6	949.6	671.6	552.9	500.8	469.0	448.7	440.0	428.5	431.4
30°	1858.6	1502.5	911.9	631.1	521.1	471.9	442.9	416.9	405.3	399.5	399.5
32.5°	1902.0	1514.1	874.3	593.5	489.3	448.7	414.0	390.8	376.4	373.5	370.6
35°	1948.4	1522.8	839.6	561.6	463.2	422.7	387.9	364.8	353.2	350.3	350.3
37.5°	2000.5	1537.3	813.5	532.7	437.1	396.6	364.8	341.6	332.9	330.0	330.0
40°	2055.5	1560.4	793.2	506.6	416.9	373.5	344.5	324.2	318.5	315.6	315.6
42.5°	2110.5	1580.7	775.9	486.4	396.6	353.2	330.0	309.8	301.1	301.1	301.1
45°	2162.6	1595.2	758.5	466.1	376.4	338.7	312.7	295.3	286.6	286.6	286.6
47.5°	2208.9	1609.6	732.4	445.8	356.1	318.5	298.2	280.8	272.1	272.1	272.1
50°	2258.1	1618.3	703.5	419.8	335.8	304.0	283.7	263.4	257.7	254.8	254.8
52.5°	2298.6	1618.3	665.9	393.7	312.7	283.7	266.3	249.0	240.3	234.5	234.5
55°	2327.6	1618.3	625.3	361.9	289.5	266.3	249.0	231.6	220.0	211.3	211.3
57.5°	2345.0	1609.6	579.0	324.2	266.3	243.2	231.6	211.3	188.2	170.8	165.0
60°	2330.5	1583.6	529.8	283.7	240.3	222.9	214.2	188.2	156.3	147.6	147.6
62.5°	2269.7	1522.8	480.6	249.0	220.0	202.7	194.0	165.0	141.9	133.2	133.2
65°	2098.9	1375.1	419.8	217.1	196.9	185.3	173.7	147.6	127.4	115.8	115.8
67.5°	1849.9	1187.0	350.3	191.1	176.6	167.9	159.2	133.2	112.9	101.3	101.3
70°	1499.6	958.3	298.2	167.9	156.3	150.5	141.9	121.6	98.4	89.7	89.7
72.5°	1178.3	752.7	249.0	150.5	144.8	133.2	127.4	107.1	89.7	81.1	81.1
75°	877.2	561.6	220.0	133.2	133.2	118.7	115.8	95.5	78.2	72.4	72.4
77.5°	645.6	416.9	191.1	115.8	115.8	104.2	98.4	84.0	72.4	66.6	66.6
80°	437.1	283.7	141.9	86.9	86.9	84.0	78.2	72.4	60.8	55.0	52.1
82.5°	185.3	118.7	69.5	43.4	40.5	31.8	26.1	20.3	20.3	17.4	17.4
85°	31.8	14.5	14.5	11.6	8.7	8.7	8.7	5.8	5.8	5.8	5.8
87.5°	5.8	5.8	5.8	5.8	5.8	5.8	2.9	2.9	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



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-157-2

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-722-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-722-U-5WQ-2

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 08/20/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-SA-40-722-U-5WQ-2**  
 Description: Epic Modern Light Square 40W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 2253  
 CIE u': 0.2868  
 CIE v': 0.5332  
 Duv: -0.0014  
 CIE x: 0.4974  
 CIE y: 0.4110  
 CIE z: 0.0915  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 587  
 Purity: 72.69432  
 Rf: 76.9  
 Rg: 92.7

CRI (Ra):	70.6		
R1:	68.4	R9:	-36.0
R2:	88.7	R10:	78.2
R3:	85.4	R11:	61.0
R4:	63.5	R12:	74.2
R5:	69.0	R13:	72.8
R6:	88.9	R14:	92.2
R7:	68.5	R15:	58.0
R8:	32.0		



**Test Conditions**

Stabilization Time: 29M  
 Operation Time: 1H 29M  
 Sphere Temperature (°C): 24.1

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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 2200K 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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 0.96**

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.71

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	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

**Summary**

$R_f = 76.9$   
 $R_g = 92.7$   
 CIE  $R_a = 70.6$   
 $R_9 = -36.0$



**Color Vector Graphics**





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

CES01 = 87	CES26 = 76	CES51 = 88	CES76 = 78
CES02 = 65	CES27 = 94	CES52 = 85	CES77 = 75
CES03 = 32	CES28 = 93	CES53 = 80	CES78 = 79
CES04 = 72	CES29 = 81	CES54 = 86	CES79 = 82
CES05 = 51	CES30 = 91	CES55 = 83	CES80 = 81
CES06 = 52	CES31 = 83	CES56 = 77	CES81 = 51
CES07 = 44	CES32 = 75	CES57 = 75	CES82 = 92
CES08 = 42	CES33 = 88	CES58 = 76	CES83 = 88
CES09 = 29	CES34 = 88	CES59 = 84	CES84 = 90
CES10 = 79	CES35 = 94	CES60 = 91	CES85 = 65
CES11 = 62	CES36 = 90	CES61 = 82	CES86 = 48
CES12 = 68	CES37 = 97	CES62 = 91	CES87 = 76
CES13 = 45	CES38 = 98	CES63 = 86	CES88 = 78
CES14 = 75	CES39 = 97	CES64 = 70	CES89 = 61
CES15 = 72	CES40 = 94	CES65 = 71	CES90 = 80
CES16 = 48	CES41 = 95	CES66 = 71	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 70	CES92 = 51
CES18 = 57	CES43 = 80	CES68 = 74	CES93 = 68
CES19 = 74	CES44 = 99	CES69 = 84	CES94 = 44
CES20 = 68	CES45 = 83	CES70 = 72	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 75	CES96 = 75
CES22 = 81	CES47 = 88	CES72 = 89	CES97 = 76
CES23 = 92	CES48 = 73	CES73 = 68	CES98 = 72
CES24 = 92	CES49 = 82	CES74 = 85	CES99 = 63
CES25 = 73	CES50 = 87	CES75 = 80	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)