

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: P868445

Luminaire Tested: **EMM2-HTN-SA1A-722-U-T2U**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P868445  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HTN-SA1A-722-U-T2U  
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 40W 70CRI 2200K  
FITXURE w/ TYPE II URBAN DISTRIBUTION OPTIC  
Light Source: (10) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

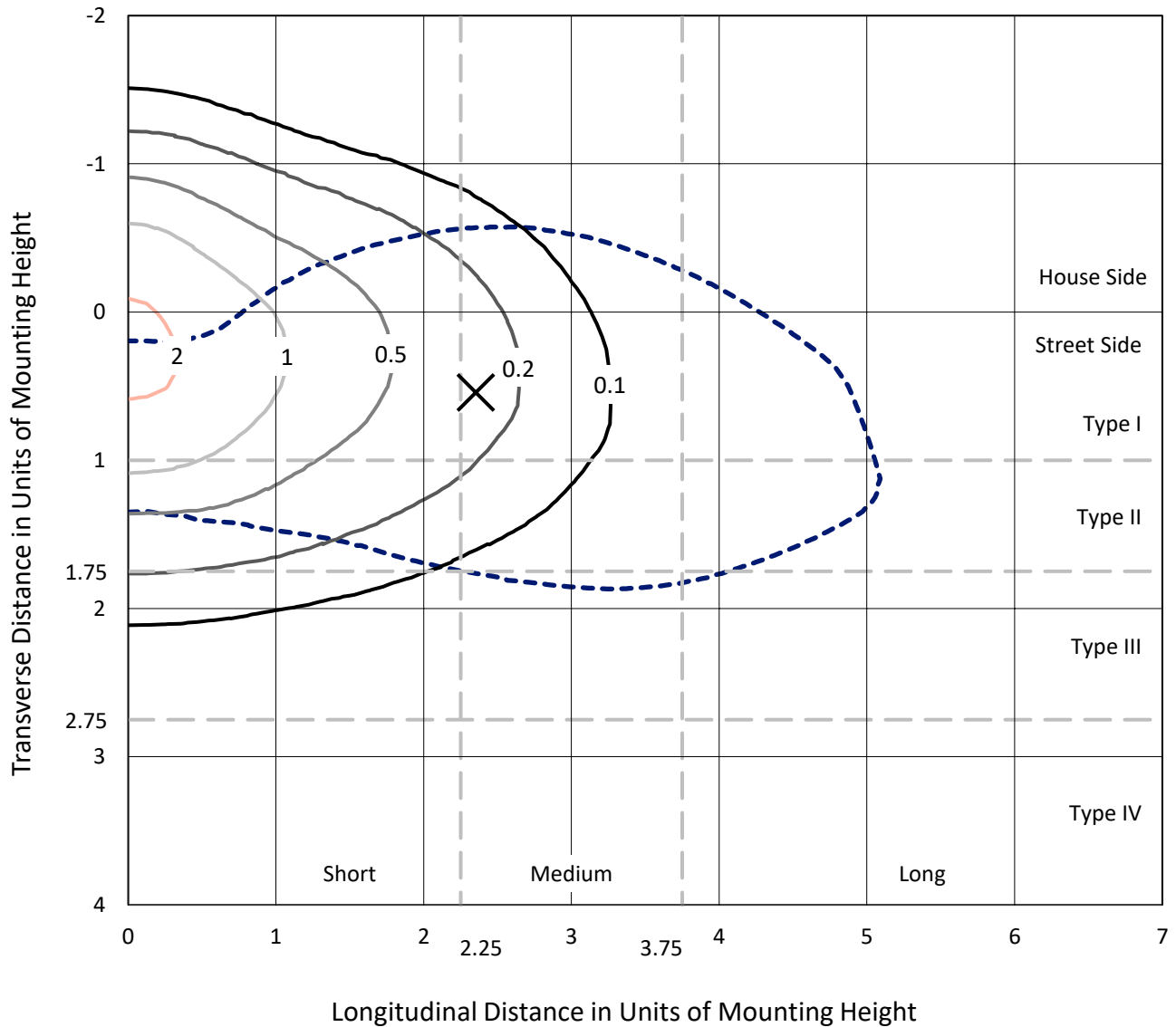
Lumens per Lamp: N/A  
Luminaire Lumens: 4297.5 lumens  
Efficiency: N/A  
Efficacy: 131.0 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 9.76%  
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

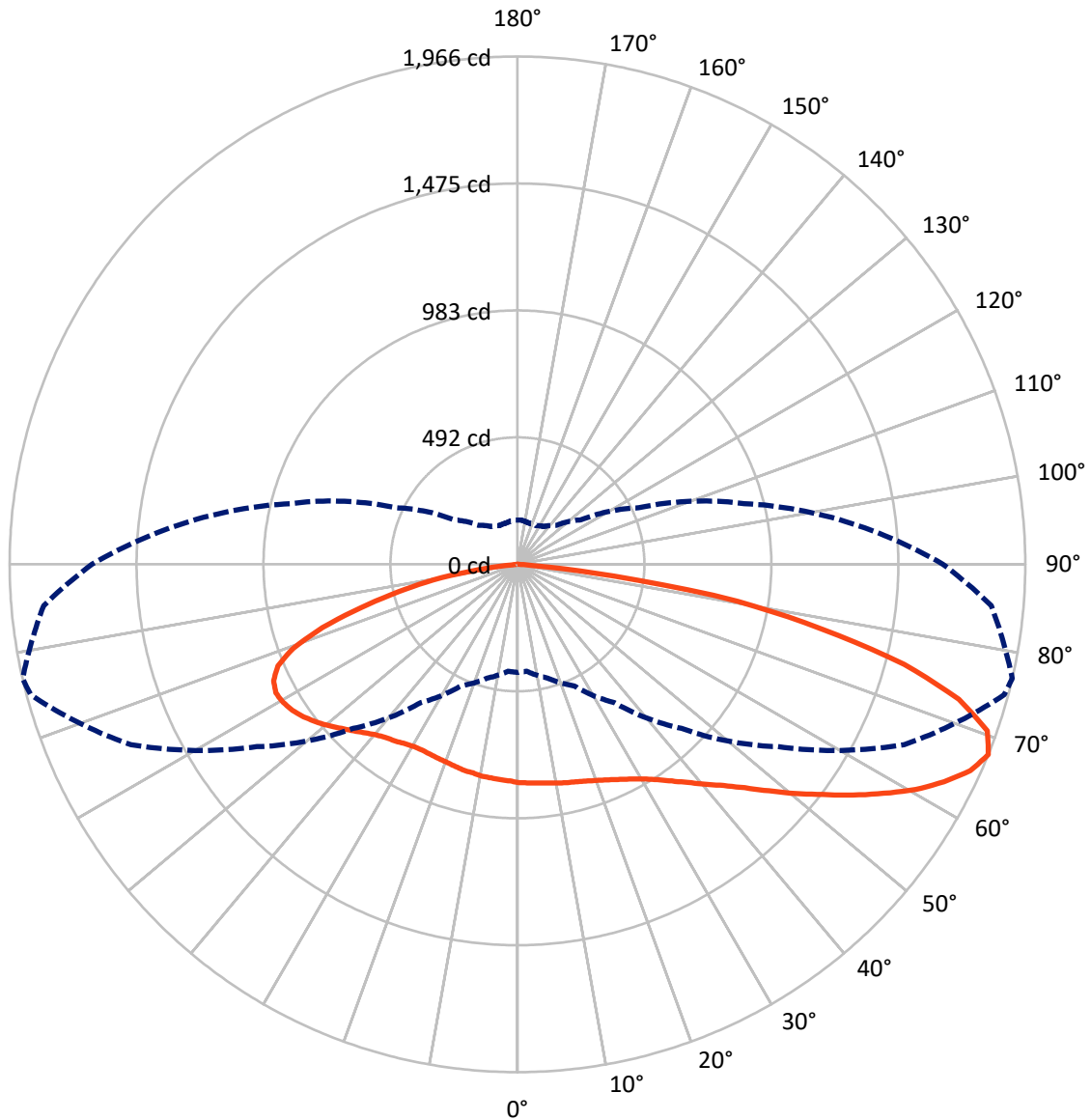
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.3 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	1429.1	0.0	1429.1
	% Fixture	33.3	0.0	33.3
<b>Street Side</b>	Lumens	2868.4	0.0	2868.4
	% Fixture	66.7	0.0	66.7
<b>Total</b>	Lumens	4297.5	0.0	4297.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.2	1.9
10°-20°	246.3	5.7
20°-30°	415.2	9.7
30°-40°	589.2	13.7
40°-50°	745.5	17.3
50°-60°	816.7	19.0
60°-70°	789.4	18.4
70°-80°	531.0	12.4
80°-90°	83.0	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°	4297.5	100.0
0°-180°	4297.5	100.0

**Coefficient of Utilization**

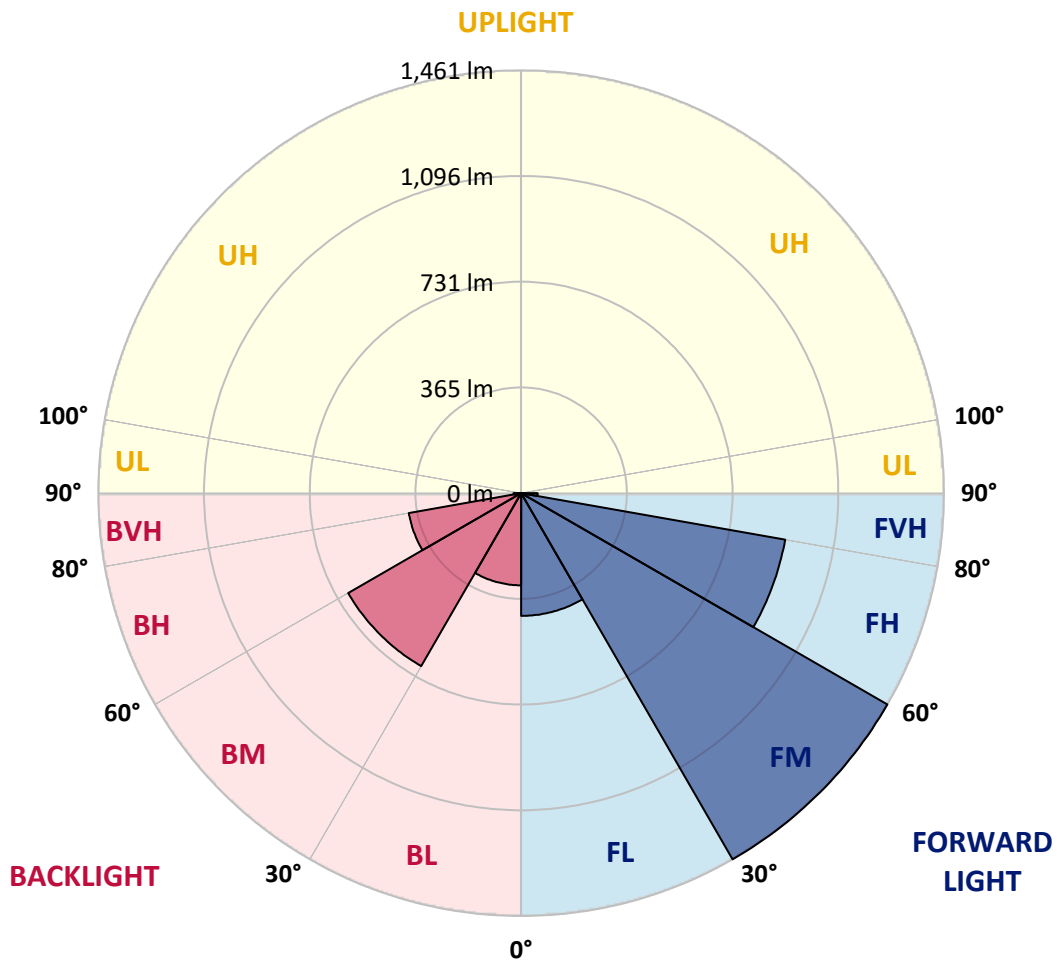


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	424.2	9.9			
FM (30°-60°)	1461.2	34.0			
FH (60°-80°)	926.3	21.6			G1/1800
FVH (80°-90°)	56.8	1.3			G1/100
BL (0°-30°)	318.6	7.4	B1/500		
BM (30°-60°)	690.2	16.1	B1/1000		
BH (60°-80°)	394.1	9.2	B1/500		G1/500
BVH (80°-90°)	26.2	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type III Medium





REPORT NUMBER: P868445

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9
2.5°	863.6	862.8	858.5	860.2	855.1	858.5	853.4	849.2	848.3	847.5	848.3
5°	890.8	886.6	882.3	879.8	875.5	873.8	865.3	856.8	851.7	850.9	849.2
7.5°	922.3	920.6	914.6	911.2	899.3	893.4	881.5	866.2	858.5	855.1	850.9
10°	954.6	958.8	951.2	944.4	930.8	918.0	897.6	878.1	862.8	861.1	851.7
12.5°	994.5	993.7	988.6	976.7	960.5	942.7	918.0	890.8	870.4	867.0	853.4
15°	1030.2	1029.4	1022.6	1011.5	990.3	968.2	935.0	903.6	878.1	873.0	856.8
17.5°	1063.4	1061.7	1057.4	1045.5	1019.2	992.0	959.7	918.0	887.4	881.5	859.4
20°	1092.3	1094.0	1088.9	1077.0	1052.3	1023.4	982.6	936.7	899.3	892.5	867.0
22.5°	1123.7	1124.6	1122.0	1117.8	1086.3	1055.7	1011.5	958.0	912.9	906.1	875.5
25°	1156.9	1157.7	1159.4	1156.9	1121.2	1088.0	1041.3	984.3	931.6	922.3	887.4
27.5°	1195.1	1196.0	1199.4	1194.3	1156.0	1121.2	1074.4	1012.4	951.2	941.0	897.6
30°	1238.5	1241.9	1239.3	1237.6	1193.4	1159.4	1107.6	1041.3	976.7	963.9	915.5
32.5°	1290.3	1289.5	1284.4	1279.3	1234.2	1198.5	1145.0	1078.7	1008.1	993.7	944.4
35°	1327.7	1327.7	1320.1	1317.5	1275.9	1238.5	1185.8	1120.3	1043.8	1030.2	975.0
37.5°	1350.7	1354.1	1348.1	1349.8	1309.9	1275.0	1226.6	1162.8	1082.9	1071.0	1012.4
40°	1359.2	1367.7	1372.8	1379.6	1339.6	1309.9	1269.9	1208.7	1133.1	1119.5	1057.4
42.5°	1360.9	1373.6	1391.5	1405.9	1360.9	1336.2	1311.6	1255.5	1182.4	1170.5	1106.7
45°	1352.4	1346.4	1389.8	1391.5	1372.8	1357.5	1348.1	1311.6	1253.8	1234.2	1167.9
47.5°	1287.8	1281.0	1292.9	1347.3	1358.3	1366.8	1385.5	1377.0	1325.2	1309.9	1238.5
50°	1183.2	1179.8	1227.4	1286.1	1322.6	1366.0	1416.1	1439.9	1404.2	1394.9	1327.7
52.5°	1010.7	1001.3	1098.2	1212.1	1275.9	1357.5	1437.4	1504.5	1493.5	1479.9	1404.2
55°	901.0	901.0	966.5	1108.4	1216.4	1326.9	1451.0	1572.6	1592.1	1576.8	1491.8
57.5°	783.7	793.1	861.1	958.8	1130.5	1270.8	1449.3	1629.5	1687.3	1672.9	1584.5
60°	683.4	691.1	730.2	828.8	1029.4	1196.8	1430.6	1676.3	1775.7	1770.6	1666.1
62.5°	581.4	590.8	622.2	714.9	895.9	1111.8	1391.5	1701.8	1859.0	1853.9	1748.5
65°	499.8	500.7	532.1	609.5	762.5	1009.0	1322.6	1696.7	1923.6	1927.0	1818.2
67.5°	418.2	415.7	456.5	519.4	653.7	898.5	1230.8	1651.6	1950.8	1966.1	1841.2
70°	307.7	311.1	368.1	437.8	552.5	771.0	1102.5	1564.1	1906.6	1930.4	1788.5
72.5°	231.2	238.0	293.3	365.5	461.6	643.5	962.2	1411.9	1783.4	1786.8	1627.8
75°	187.9	189.6	238.9	303.5	378.3	516.0	772.7	1179.0	1507.9	1547.1	1383.0
77.5°	159.8	158.1	181.9	244.8	305.2	412.3	582.3	896.8	1184.1	1201.9	1082.9
80°	136.0	135.2	143.7	198.1	238.9	294.1	398.7	624.8	844.9	864.5	769.3
82.5°	71.4	76.5	74.8	122.4	135.2	154.7	191.3	283.9	368.9	374.0	353.6
85°	3.4	3.4	3.4	5.1	8.5	13.6	26.4	26.4	28.9	55.3	62.9
87.5°	0.9	0.9	1.7	1.7	1.7	2.6	2.6	3.4	3.4	3.4	3.4
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-SA1A-722-U-T2U

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9	844.9
2.5°	846.6	843.2	838.1	839.0	838.1	838.1	833.9	830.5	829.6	831.3	834.7
5°	847.5	842.4	834.7	832.2	829.6	827.9	821.1	816.0	813.5	815.2	816.0
7.5°	847.5	839.8	831.3	826.2	819.4	814.3	806.7	799.9	796.5	797.3	799.0
10°	845.8	837.3	830.5	820.3	809.2	803.3	791.4	782.9	778.6	779.5	775.2
12.5°	845.8	836.4	822.8	813.5	798.2	785.4	776.1	766.7	763.3	759.9	758.2
15°	846.6	834.7	821.1	801.6	783.7	770.1	758.2	752.3	747.2	745.5	746.3
17.5°	846.6	834.7	814.3	791.4	771.0	754.0	743.8	737.0	735.3	733.6	733.6
20°	850.9	835.6	808.4	781.2	755.7	737.8	728.5	724.2	724.2	721.7	721.7
22.5°	857.7	837.3	805.0	772.7	742.9	723.4	713.2	708.1	710.6	708.9	708.1
25°	865.3	843.2	800.7	760.8	725.9	705.5	695.3	691.9	691.1	686.8	692.8
27.5°	871.3	847.5	798.2	748.9	710.6	686.8	674.1	668.1	663.9	665.6	663.9
30°	887.4	859.4	799.0	738.7	693.6	664.7	649.4	642.6	640.9	640.9	640.9
32.5°	909.5	874.7	805.0	734.4	677.5	643.5	624.8	618.0	616.3	612.9	614.6
35°	937.6	897.6	814.3	727.6	664.7	618.8	598.4	589.1	586.5	583.1	583.1
37.5°	969.0	920.6	821.1	724.2	647.7	593.3	570.4	558.5	556.8	553.4	555.1
40°	1009.0	952.0	832.2	717.4	628.2	570.4	539.8	520.2	524.5	526.2	529.6
42.5°	1054.0	992.0	849.2	710.6	612.9	546.6	501.5	482.0	487.1	485.4	488.8
45°	1115.2	1038.7	870.4	708.1	594.2	517.7	462.4	440.3	438.6	436.1	437.8
47.5°	1179.0	1094.8	890.8	703.0	573.8	482.0	418.2	390.2	383.4	380.0	376.6
50°	1245.3	1150.9	914.6	699.6	546.6	442.0	374.0	341.7	329.0	324.7	320.5
52.5°	1320.1	1211.3	935.0	691.1	516.8	400.4	334.1	297.5	283.1	274.6	275.4
55°	1399.1	1266.5	953.7	680.9	482.8	361.3	294.1	263.5	249.1	246.5	246.5
57.5°	1472.2	1323.5	967.3	663.0	448.8	323.0	261.0	234.6	227.8	231.2	231.2
60°	1547.1	1369.4	974.1	643.5	414.0	290.7	238.0	216.8	213.4	220.2	221.0
62.5°	1607.4	1405.9	972.4	616.3	375.7	262.7	215.9	198.9	200.6	212.5	215.1
65°	1650.8	1423.8	951.2	575.5	339.2	238.0	196.4	180.2	180.2	188.7	191.3
67.5°	1647.4	1400.8	908.7	518.5	300.1	213.4	178.5	165.8	165.8	171.7	170.9
70°	1577.7	1321.8	827.9	449.7	261.8	192.1	163.2	153.9	153.0	155.6	154.7
72.5°	1410.2	1161.1	702.1	371.5	226.1	170.9	147.9	139.4	137.7	134.3	131.8
75°	1163.7	953.7	548.3	295.8	191.3	150.5	133.5	125.8	119.0	123.3	120.7
77.5°	902.7	731.9	408.0	229.5	155.6	130.9	119.0	110.5	108.8	124.1	119.0
80°	658.8	505.8	288.2	164.1	120.7	106.3	99.5	92.7	117.3	157.3	156.4
82.5°	292.4	244.0	131.8	78.2	56.1	46.8	39.1	44.2	74.0	72.3	74.8
85°	26.4	27.2	14.5	9.4	6.0	5.1	3.4	3.4	2.6	2.6	2.6
87.5°	3.4	3.4	2.6	2.6	1.7	1.7	1.7	1.7	0.9	0.9	0.9
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>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</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)