

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: P868906

Luminaire Tested: **EMM2-HSN-SA3B-722-U-T2U-HSS**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P868906  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA3B-722-U-T2U-HSS  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 150W 70CRI 2200K  
FITXURE w/ TYPE II URBAN DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (30) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

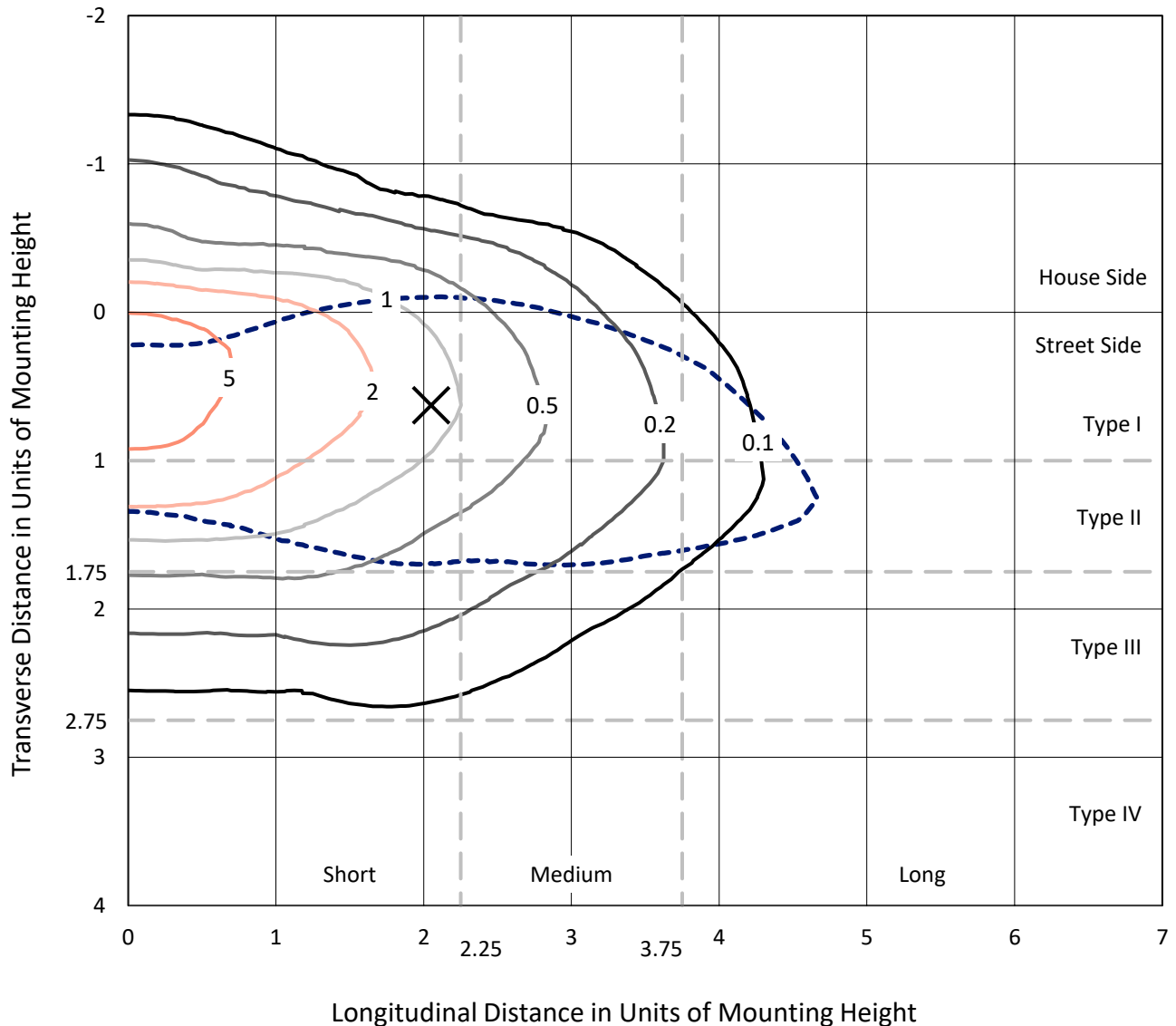
Lumens per Lamp: N/A  
Luminaire Lumens: 11121.4 lumens  
Efficiency: N/A  
Efficacy: 83.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 134  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 6.70%  
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

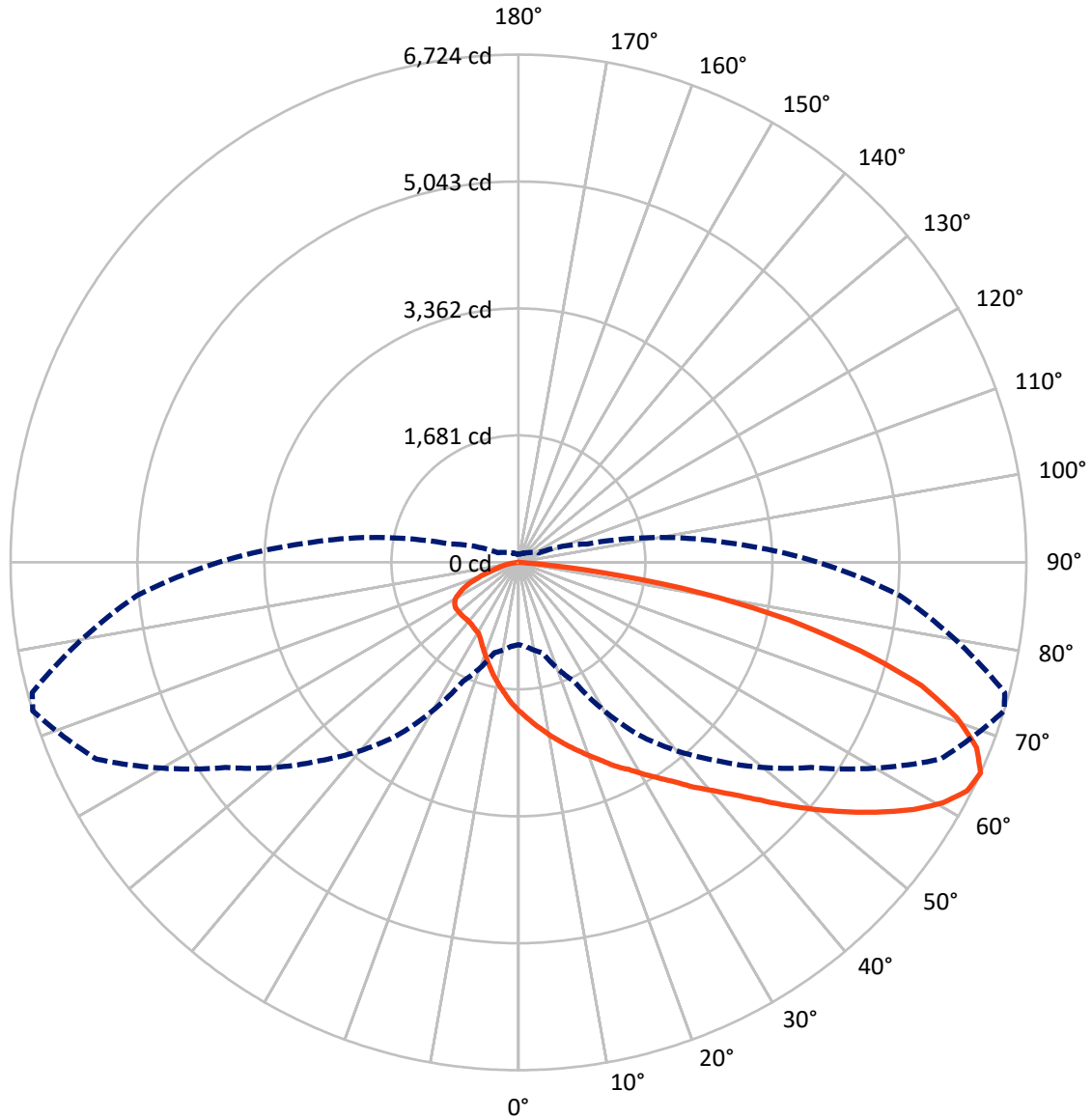
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8 fc  
 Type 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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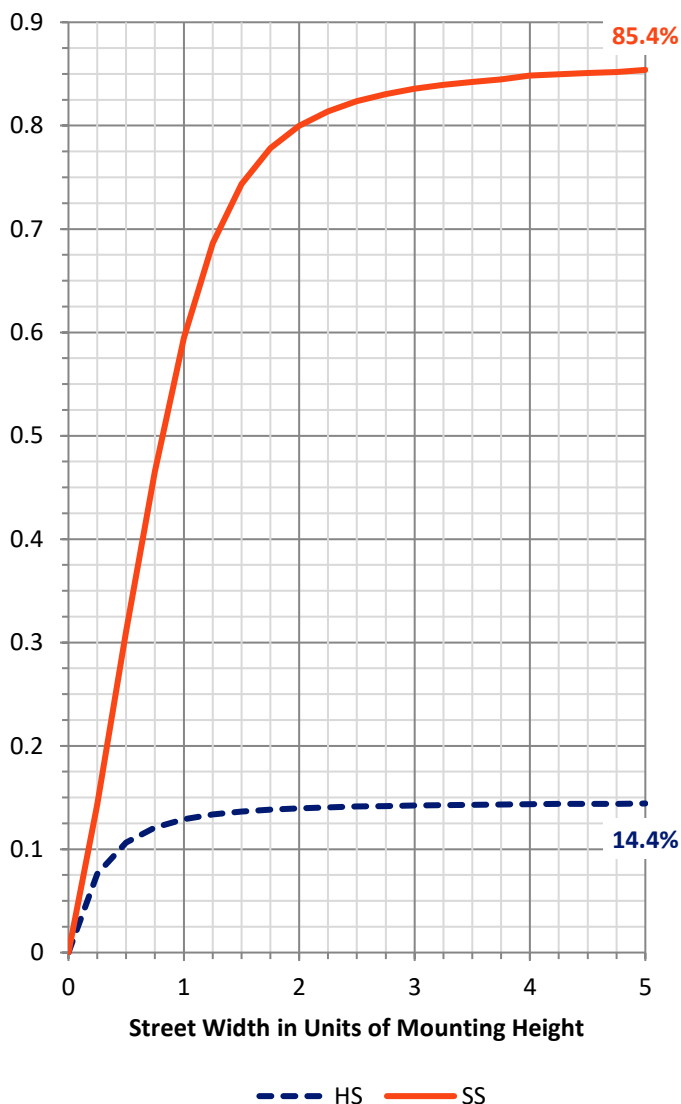
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1617.2	0.0	1617.2
	% Fixture	14.5	0.0	14.5
<b>Street Side</b>	Lumens	9504.2	0.0	9504.2
	% Fixture	85.5	0.0	85.5
<b>Total</b>	Lumens	11121.4	0.0	11121.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.4	1.7
10°-20°	578.8	5.2
20°-30°	969.3	8.7
30°-40°	1462.2	13.1
40°-50°	2066.0	18.6
50°-60°	2324.7	20.9
60°-70°	2084.6	18.7
70°-80°	1267.9	11.4
80°-90°	177.4	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°	11121.4	100.0
0°-180°	11121.4	100.0

**Coefficient of Utilization**



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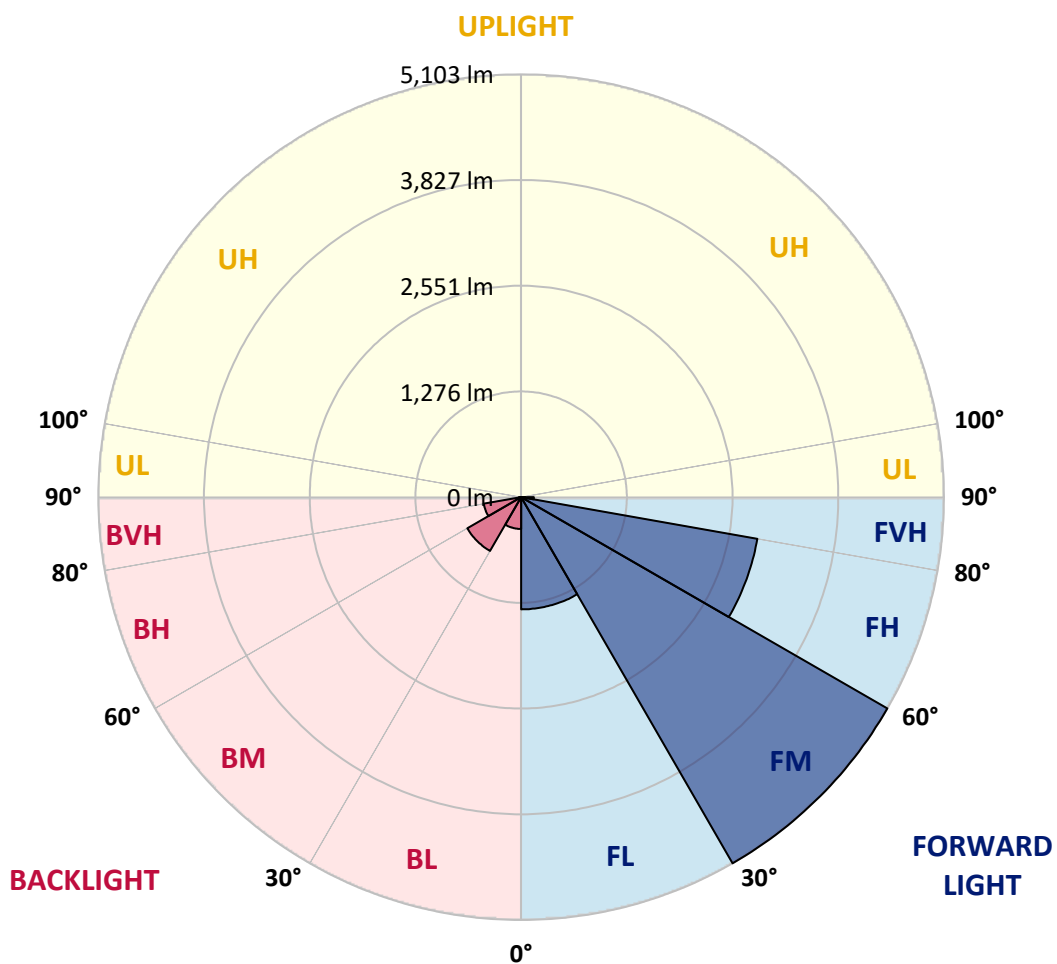
CATALOG NUMBER: EMM2-HSN-SA3B-722-U-T2U-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1354.4	12.2			
FM (30°-60°)	5103.0	45.9			
FH (60°-80°)	2894.4	26.0			G2/5000
FVH (80°-90°)	152.4	1.4			G2/225
BL (0°-30°)	384.2	3.5	B1/500		
BM (30°-60°)	749.9	6.7	B1/1000		
BH (60°-80°)	458.1	4.1	B1/500		G1/500
BVH (80°-90°)	25.0	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	73°	75°	85°
0°	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0
2.5°	2277.2	2264.2	2244.5	2228.2	2198.7	2159.5	2126.7	2084.2	2054.8	2044.9	2002.4
5°	2607.7	2591.4	2568.4	2529.2	2450.7	2404.9	2319.8	2221.6	2143.1	2126.7	2028.6
7.5°	2948.0	2941.4	2889.1	2830.2	2735.3	2633.9	2503.0	2349.2	2234.7	2208.5	2058.0
10°	3235.9	3206.5	3177.0	3121.4	3020.0	2876.0	2705.9	2493.2	2332.9	2290.3	2087.5
12.5°	3409.3	3399.5	3373.3	3307.9	3209.7	3085.4	2882.6	2633.9	2427.8	2368.9	2116.9
15°	3536.9	3546.7	3520.6	3478.0	3376.6	3258.8	3062.5	2781.1	2529.2	2460.5	2149.6
17.5°	3658.0	3651.4	3648.2	3599.1	3507.5	3389.7	3190.1	2902.2	2630.6	2555.4	2182.4
20°	3726.7	3730.0	3723.4	3703.8	3615.5	3500.9	3314.4	3046.1	2741.9	2656.8	2224.9
22.5°	3762.7	3775.8	3788.9	3785.6	3713.6	3625.3	3432.2	3160.7	2856.4	2768.0	2277.2
25°	3785.6	3795.4	3824.9	3864.1	3798.7	3726.7	3563.1	3298.1	2990.5	2889.1	2339.4
27.5°	3805.2	3818.3	3854.3	3913.2	3860.9	3818.3	3677.6	3415.9	3105.0	3013.4	2411.4
30°	3932.8	3949.2	3949.2	3978.6	3919.7	3909.9	3805.2	3556.6	3249.0	3150.8	2503.0
32.5°	4269.8	4237.1	4178.2	4148.8	4008.1	4011.4	3929.6	3697.3	3402.8	3304.6	2617.5
35°	4561.0	4561.0	4489.1	4394.2	4168.4	4122.6	4073.5	3883.8	3569.7	3474.8	2768.0
37.5°	4842.4	4845.7	4770.4	4688.6	4430.2	4266.6	4240.4	4063.7	3775.8	3664.5	2925.1
40°	5019.1	5038.7	5019.1	4956.9	4708.3	4518.5	4404.0	4266.6	3972.1	3887.0	3105.0
42.5°	5048.6	5087.8	5159.8	5179.4	4911.1	4744.3	4613.4	4476.0	4207.7	4112.8	3311.2
45°	4973.3	4986.4	5146.7	5169.6	5061.6	4924.2	4835.9	4721.4	4489.1	4407.3	3540.2
47.5°	4767.2	4741.0	4796.6	4996.2	5038.7	5032.2	5055.1	4999.5	4816.2	4711.5	3792.1
50°	4325.5	4335.3	4515.2	4757.4	4904.6	5071.5	5218.7	5280.9	5146.7	5042.0	4063.7
52.5°	3520.6	3566.4	3909.9	4482.5	4737.7	5045.3	5336.5	5545.9	5490.3	5388.8	4332.0
55°	2892.4	2961.1	3304.6	4040.8	4508.7	4917.7	5405.2	5824.0	5833.8	5755.3	4577.4
57.5°	2264.2	2319.8	2683.0	3357.0	4181.5	4718.1	5415.0	6062.8	6174.1	6082.5	4793.3
60°	1773.4	1812.6	2025.3	2797.5	3779.1	4433.4	5343.0	6252.6	6462.0	6393.3	4979.8
62.5°	1344.8	1374.2	1564.0	2211.8	3285.0	4099.7	5100.9	6321.3	6664.9	6599.4	5084.5
65°	1089.5	1115.7	1240.1	1737.4	2797.5	3713.6	4734.5	6164.3	6723.8	6664.9	5071.5
67.5°	890.0	899.8	1001.2	1354.6	2365.6	3278.5	4197.9	5755.3	6543.8	6540.5	4921.0
70°	719.8	746.0	831.1	1079.7	1966.4	2777.9	3572.9	5114.0	6154.5	6187.2	4619.9
72.5°	611.8	618.4	693.6	893.2	1603.2	2254.3	2957.8	4374.5	5581.9	5608.1	4148.8
75°	517.0	526.8	582.4	723.1	1302.2	1789.7	2378.7	3533.7	4672.3	4783.5	3494.4
77.5°	445.0	448.3	487.5	595.5	926.0	1344.8	1743.9	2650.2	3658.0	3736.5	2745.1
80°	350.1	356.6	399.2	471.2	644.6	873.6	1204.1	1812.6	2444.1	2532.5	1901.0
82.5°	163.6	183.2	193.0	258.5	337.0	431.9	569.3	755.8	1105.9	1102.6	886.7
85°	16.4	13.1	13.1	19.6	29.4	29.4	36.0	42.5	85.1	101.4	78.5
87.5°	0.0	0.0	0.0	3.3	6.5	6.5	6.5	9.8	9.8	9.8	9.8
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°	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0	1973.0
2.5°	1982.8	1953.3	1901.0	1851.9	1819.2	1793.0	1750.5	1724.3	1704.7	1678.5	1675.2
5°	1976.2	1923.9	1819.2	1730.8	1645.8	1573.8	1498.5	1452.7	1403.6	1380.7	1400.4
7.5°	1982.8	1897.7	1734.1	1600.0	1472.4	1357.8	1259.7	1197.5	1151.7	1128.8	1132.1
10°	1986.0	1874.8	1662.1	1475.6	1312.0	1177.9	1066.6	981.6	926.0	912.9	896.5
12.5°	1979.5	1845.4	1590.1	1354.6	1158.3	1011.0	880.1	814.7	759.1	732.9	732.9
15°	1986.0	1822.5	1514.9	1243.3	1020.8	850.7	739.5	667.5	634.8	611.8	615.1
17.5°	1986.0	1802.8	1442.9	1135.4	886.7	729.6	628.2	569.3	536.6	523.5	520.2
20°	2009.0	1786.5	1374.2	1033.9	768.9	621.7	539.9	494.1	467.9	454.8	448.3
22.5°	2025.3	1773.4	1312.0	935.8	670.7	543.1	474.4	431.9	412.3	405.7	405.7
25°	2054.8	1770.1	1256.4	840.9	592.2	484.2	422.1	389.4	373.0	366.5	366.5
27.5°	2097.3	1776.6	1204.1	759.1	533.3	425.3	379.5	353.4	343.6	340.3	337.0
30°	2159.5	1806.1	1171.3	696.9	477.7	389.4	346.8	330.5	323.9	320.6	320.6
32.5°	2241.3	1858.4	1158.3	664.2	445.0	359.9	323.9	310.8	304.3	304.3	301.0
35°	2342.7	1917.3	1148.4	634.8	422.1	340.3	307.6	294.5	291.2	291.2	291.2
37.5°	2463.7	1979.5	1132.1	615.1	409.0	323.9	294.5	281.4	281.4	281.4	281.4
40°	2597.9	2071.1	1128.8	602.0	399.2	314.1	281.4	268.3	268.3	268.3	268.3
42.5°	2748.4	2169.3	1125.5	592.2	392.6	307.6	268.3	255.2	255.2	255.2	255.2
45°	2931.6	2293.6	1132.1	585.7	392.6	301.0	258.5	242.1	238.8	238.8	238.8
47.5°	3111.6	2411.4	1138.6	579.1	386.1	291.2	245.4	229.0	225.8	222.5	222.5
50°	3304.6	2532.5	1138.6	572.6	379.5	281.4	235.6	212.7	209.4	206.1	206.1
52.5°	3494.4	2633.9	1141.9	562.8	363.2	265.0	219.2	199.6	193.0	189.8	186.5
55°	3677.6	2741.9	1145.2	546.4	343.6	248.7	209.4	186.5	176.7	170.1	170.1
57.5°	3815.0	2830.2	1128.8	513.7	317.4	232.3	193.0	170.1	157.1	150.5	150.5
60°	3945.9	2885.8	1099.4	464.6	291.2	215.9	180.0	153.8	140.7	134.1	134.1
62.5°	3998.3	2895.6	1030.7	379.5	258.5	199.6	163.6	140.7	130.9	127.6	127.6
65°	3968.8	2853.1	939.0	301.0	229.0	180.0	150.5	130.9	117.8	108.0	108.0
67.5°	3808.5	2705.9	814.7	238.8	199.6	163.6	137.4	117.8	104.7	94.9	94.9
70°	3504.2	2470.3	634.8	189.8	173.4	144.0	124.3	108.0	94.9	85.1	85.1
72.5°	3056.0	2143.1	461.3	160.3	150.5	127.6	111.2	98.2	85.1	78.5	78.5
75°	2519.4	1652.3	327.2	137.4	134.1	114.5	101.4	88.3	78.5	72.0	72.0
77.5°	1891.2	1151.7	255.2	121.1	117.8	104.7	91.6	81.8	72.0	68.7	65.4
80°	1259.7	713.3	193.0	91.6	88.3	81.8	75.3	68.7	58.9	52.4	52.4
82.5°	562.8	301.0	98.2	52.4	45.8	39.3	32.7	22.9	22.9	19.6	19.6
85°	58.9	39.3	19.6	13.1	13.1	9.8	9.8	9.8	6.5	6.5	6.5
87.5°	9.8	9.8	6.5	6.5	6.5	3.3	3.3	3.3	3.3	3.3	3.3
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 (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (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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**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)