

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: P870887

Luminaire Tested: **EMM2-HTN-SA1A-840-U-T4W-HSS**

Issue Date: 09/05/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P870887  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 09/05/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HTN-SA1A-840-U-T4W-HSS  
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 40W 80CRI 4000K  
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (10) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

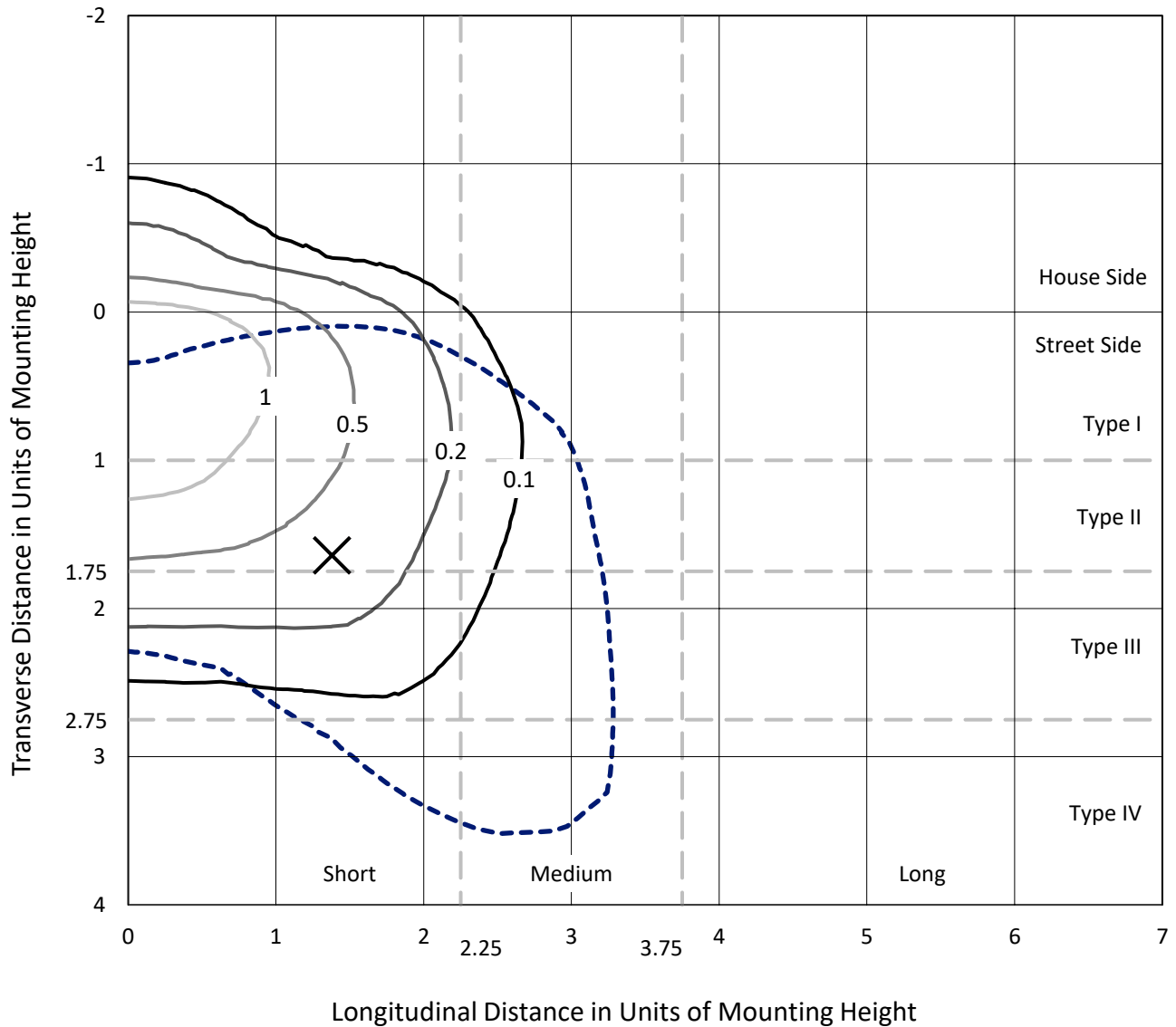
Lumens per Lamp: N/A  
Luminaire Lumens: 3328.2 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1

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

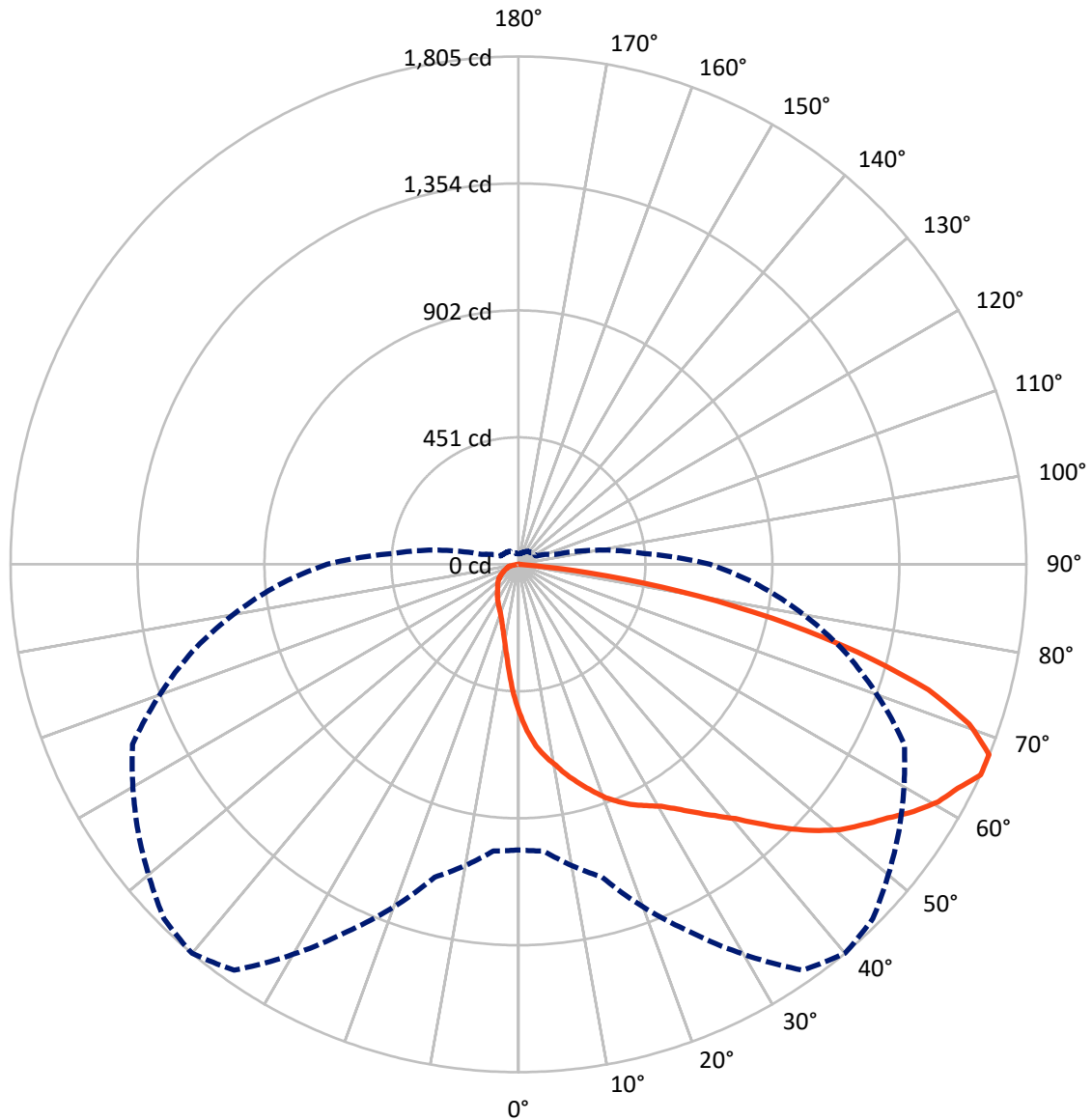
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.9 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	398.5	0.0	398.5
	% Fixture	12.0	0.0	12.0
<b>Street Side</b>	Lumens	2929.8	0.0	2929.8
	% Fixture	88.0	0.0	88.0
<b>Total</b>	Lumens	3328.2	0.0	3328.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.5	1.5
10°-20°	148.9	4.5
20°-30°	256.2	7.7
30°-40°	387.2	11.6
40°-50°	566.2	17.0
50°-60°	723.2	21.7
60°-70°	721.7	21.7
70°-80°	423.2	12.7
80°-90°	52.1	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°	3328.2	100.0
0°-180°	3328.2	100.0



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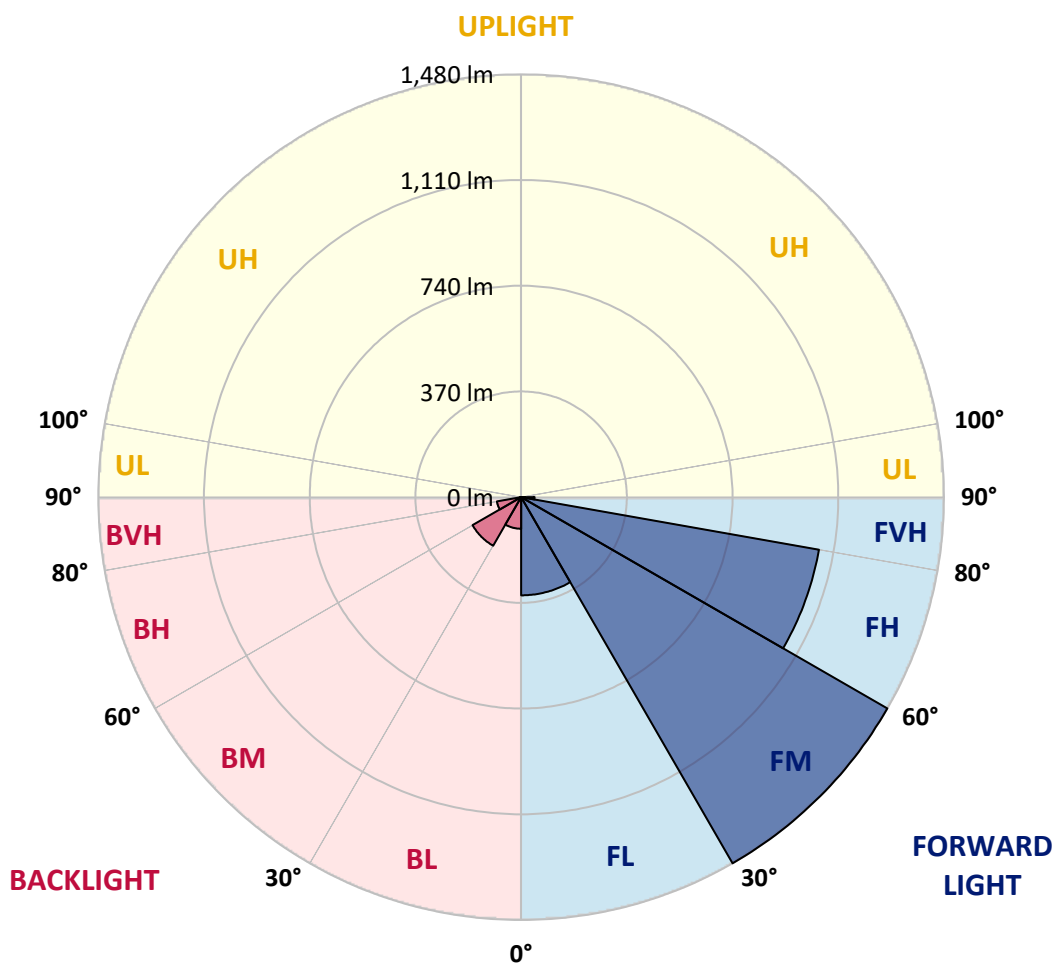
CATALOG NUMBER: EMM2-HTN-SA1A-840-U-T4W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	343.8	10.3			
FM (30°-60°)	1480.2	44.5			
FH (60°-80°)	1058.7	31.8			G1/1800
FVH (80°-90°)	47.1	1.4			G1/100
BL (0°-30°)	110.8	3.3	B1/500		
BM (30°-60°)	196.3	5.9	B0/220		
BH (60°-80°)	86.3	2.6	B0/110		G0/110
BVH (80°-90°)	5.0	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0
2.5°	617.2	614.4	608.8	604.1	597.5	591.9	586.3	575.9	562.8	551.6	537.5
5°	678.2	673.5	669.7	664.1	652.9	648.2	644.4	622.8	600.3	576.9	545.9
7.5°	721.3	725.1	717.6	709.1	695.1	689.4	683.8	662.2	634.1	600.3	556.2
10°	771.1	772.0	762.6	752.3	737.3	726.0	718.5	692.3	661.3	623.8	567.5
12.5°	818.9	818.9	813.3	798.3	778.6	768.2	755.1	725.1	687.6	643.5	580.6
15°	857.4	859.2	854.5	843.3	821.7	807.6	794.5	759.8	712.0	666.0	591.0
17.5°	892.1	891.1	888.3	878.0	857.4	846.1	833.0	794.5	740.1	683.8	606.9
20°	915.5	915.5	914.6	908.9	893.9	885.5	869.5	829.2	771.1	710.1	623.8
22.5°	933.3	932.4	932.4	933.3	924.9	916.5	909.9	869.5	802.9	732.6	640.7
25°	948.3	947.4	950.2	952.1	948.3	946.5	939.0	908.0	842.3	758.9	657.6
27.5°	968.0	970.9	969.9	969.9	969.0	970.9	969.9	943.7	880.8	787.0	675.4
30°	999.0	1003.7	1000.9	997.1	997.1	998.1	1002.7	985.9	925.8	821.7	695.1
32.5°	1071.2	1066.5	1046.8	1033.7	1035.6	1036.5	1041.2	1031.8	970.9	861.1	715.7
35°	1153.8	1148.1	1126.6	1096.6	1086.2	1082.5	1081.5	1075.9	1019.6	903.3	740.1
37.5°	1260.7	1262.6	1230.7	1187.5	1156.6	1133.1	1128.4	1116.2	1061.8	941.8	765.4
40°	1369.5	1362.0	1334.8	1292.6	1231.6	1188.5	1174.4	1157.5	1109.7	982.1	789.8
42.5°	1474.6	1460.5	1424.9	1378.9	1307.6	1260.7	1228.8	1207.2	1153.8	1026.2	813.3
45°	1611.5	1571.2	1507.4	1466.1	1377.0	1338.6	1309.5	1261.6	1206.3	1070.3	841.4
47.5°	1719.4	1641.5	1583.4	1565.6	1449.2	1413.6	1387.3	1320.7	1259.8	1120.0	870.5
50°	1699.7	1651.9	1637.8	1621.8	1503.7	1482.1	1457.7	1388.3	1314.2	1172.5	898.6
52.5°	1649.0	1654.7	1672.5	1645.3	1551.5	1536.5	1520.5	1460.5	1368.6	1215.7	924.0
55°	1608.7	1620.0	1667.8	1659.4	1608.7	1591.8	1580.6	1531.8	1421.1	1255.1	945.5
57.5°	1535.5	1526.2	1586.2	1683.8	1669.7	1656.6	1645.3	1606.8	1474.6	1283.2	959.6
60°	1420.2	1385.5	1466.1	1653.7	1711.9	1713.8	1707.2	1663.1	1517.7	1283.2	952.1
62.5°	1257.9	1225.1	1324.5	1553.4	1734.4	1752.2	1748.5	1682.8	1536.5	1255.1	923.0
65°	1014.9	1022.4	1151.0	1439.9	1760.7	1804.8	1781.3	1650.9	1513.0	1200.7	857.4
67.5°	810.5	833.0	948.3	1292.6	1748.5	1803.8	1771.0	1560.9	1412.7	1124.7	757.0
70°	639.7	654.7	750.4	1093.7	1641.5	1699.7	1658.4	1423.0	1242.9	1007.4	629.4
72.5°	500.0	514.0	595.6	875.2	1455.8	1523.4	1471.8	1237.3	1030.9	854.5	500.0
75°	379.9	390.2	451.2	674.4	1159.4	1243.8	1206.3	990.6	804.8	676.3	382.7
77.5°	244.8	258.9	327.4	472.8	818.9	920.2	924.9	740.1	578.8	488.7	281.4
80°	162.3	167.9	210.1	307.7	503.7	582.5	609.7	500.0	369.6	311.4	202.6
82.5°	67.5	75.0	100.4	154.8	252.3	253.3	289.8	211.1	150.1	132.3	85.4
85°	1.9	3.8	2.8	7.5	6.6	10.3	12.2	16.9	12.2	13.1	13.1
87.5°	0.0	0.0	0.9	0.9	1.9	1.9	1.9	1.9	1.9	2.8	1.9
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-840-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0	529.0
2.5°	530.9	522.5	505.6	492.5	478.4	468.1	458.7	448.4	441.8	442.7	436.2
5°	530.9	515.0	481.2	451.2	424.0	404.3	382.7	365.8	353.6	351.8	357.4
7.5°	533.7	507.5	456.8	411.8	374.3	343.3	320.8	303.9	295.5	289.8	288.9
10°	536.6	501.8	434.3	377.1	330.2	296.4	276.7	258.0	248.6	247.6	244.8
12.5°	538.4	495.3	413.7	342.4	293.6	261.7	242.0	227.0	219.5	219.5	218.6
15°	545.0	493.4	392.1	316.1	265.5	234.5	217.6	205.4	200.7	197.9	197.0
17.5°	550.6	489.6	373.3	289.8	240.1	212.9	197.0	188.5	183.9	182.0	181.0
20°	559.1	487.8	355.5	268.3	221.4	195.1	182.9	175.4	172.6	170.7	170.7
22.5°	567.5	485.9	337.7	249.5	205.4	182.0	170.7	164.2	161.3	160.4	159.5
25°	577.8	485.0	322.7	233.6	191.4	171.7	161.3	155.7	152.0	150.1	150.1
27.5°	588.1	485.9	307.7	217.6	179.2	162.3	152.0	145.4	142.6	138.8	139.8
30°	602.2	486.8	295.5	204.5	168.8	152.9	143.5	135.1	131.3	129.4	129.4
32.5°	616.3	490.6	283.3	192.3	158.5	145.4	134.1	126.6	121.9	121.0	120.1
35°	631.3	493.4	272.0	182.0	150.1	137.0	125.7	118.2	114.4	113.5	113.5
37.5°	648.2	498.1	263.6	172.6	141.6	128.5	118.2	110.7	107.9	106.9	106.9
40°	666.0	505.6	257.0	164.2	135.1	121.0	111.6	105.1	103.2	102.2	102.2
42.5°	683.8	512.2	251.4	157.6	128.5	114.4	106.9	100.4	97.6	97.6	97.6
45°	700.7	516.9	245.8	151.0	121.9	109.7	101.3	95.7	92.9	92.9	92.9
47.5°	715.7	521.5	237.3	144.5	115.4	103.2	96.6	91.0	88.2	88.2	88.2
50°	731.7	524.4	227.9	136.0	108.8	98.5	91.9	85.4	83.5	82.5	82.5
52.5°	744.8	524.4	215.7	127.6	101.3	91.9	86.3	80.7	77.9	76.0	76.0
55°	754.2	524.4	202.6	117.3	93.8	86.3	80.7	75.0	71.3	68.5	68.5
57.5°	759.8	521.5	187.6	105.1	86.3	78.8	75.0	68.5	61.0	55.3	53.5
60°	755.1	513.1	171.7	91.9	77.9	72.2	69.4	61.0	50.7	47.8	47.8
62.5°	735.4	493.4	155.7	80.7	71.3	65.7	62.8	53.5	46.0	43.1	43.1
65°	680.1	445.6	136.0	70.4	63.8	60.0	56.3	47.8	41.3	37.5	37.5
67.5°	599.4	384.6	113.5	61.9	57.2	54.4	51.6	43.1	36.6	32.8	32.8
70°	485.9	310.5	96.6	54.4	50.7	48.8	46.0	39.4	31.9	29.1	29.1
72.5°	381.8	243.9	80.7	48.8	46.9	43.1	41.3	34.7	29.1	26.3	26.3
75°	284.2	182.0	71.3	43.1	43.1	38.5	37.5	31.0	25.3	23.5	23.5
77.5°	209.2	135.1	61.9	37.5	37.5	33.8	31.9	27.2	23.5	21.6	21.6
80°	141.6	91.9	46.0	28.1	28.1	27.2	25.3	23.5	19.7	17.8	16.9
82.5°	60.0	38.5	22.5	14.1	13.1	10.3	8.4	6.6	6.6	5.6	5.6
85°	10.3	4.7	4.7	3.8	2.8	2.8	2.8	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	0.9	0.9	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



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

REPORT NUMBER: SP1-2407-157-8

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**

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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**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**



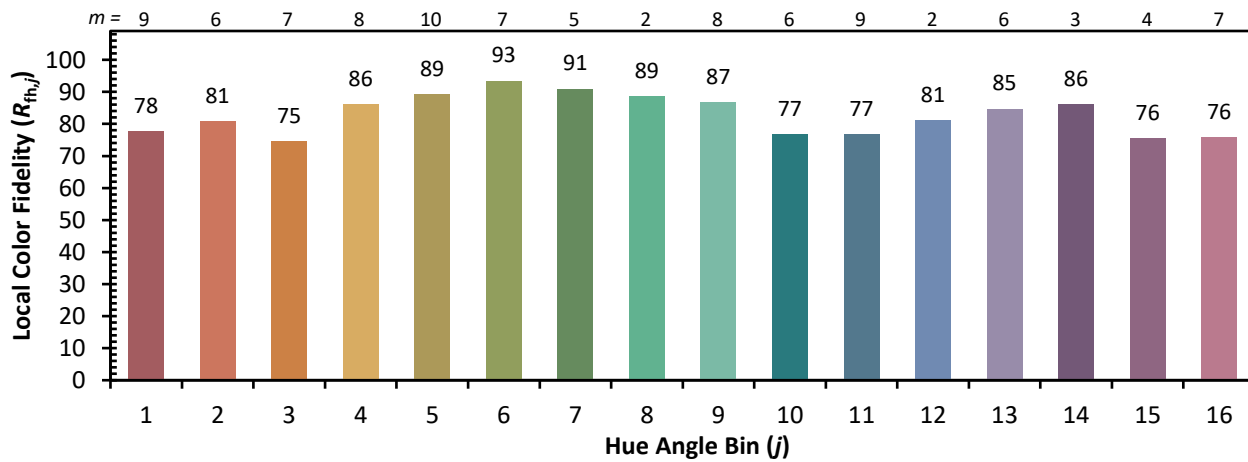


Individual Sample Fidelity Index ( $R_{f,i}$ )

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)