

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: P869222

Luminaire Tested: **EMM2-HSN-SA1A-AMB-U-T2R-HSS**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P869222  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA1A-AMB-U-T2R-HSS  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 15W 0CRI 1540K  
FITXURE w/ TYPE II ROADWAY DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (10) 1540K CCT, 0 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

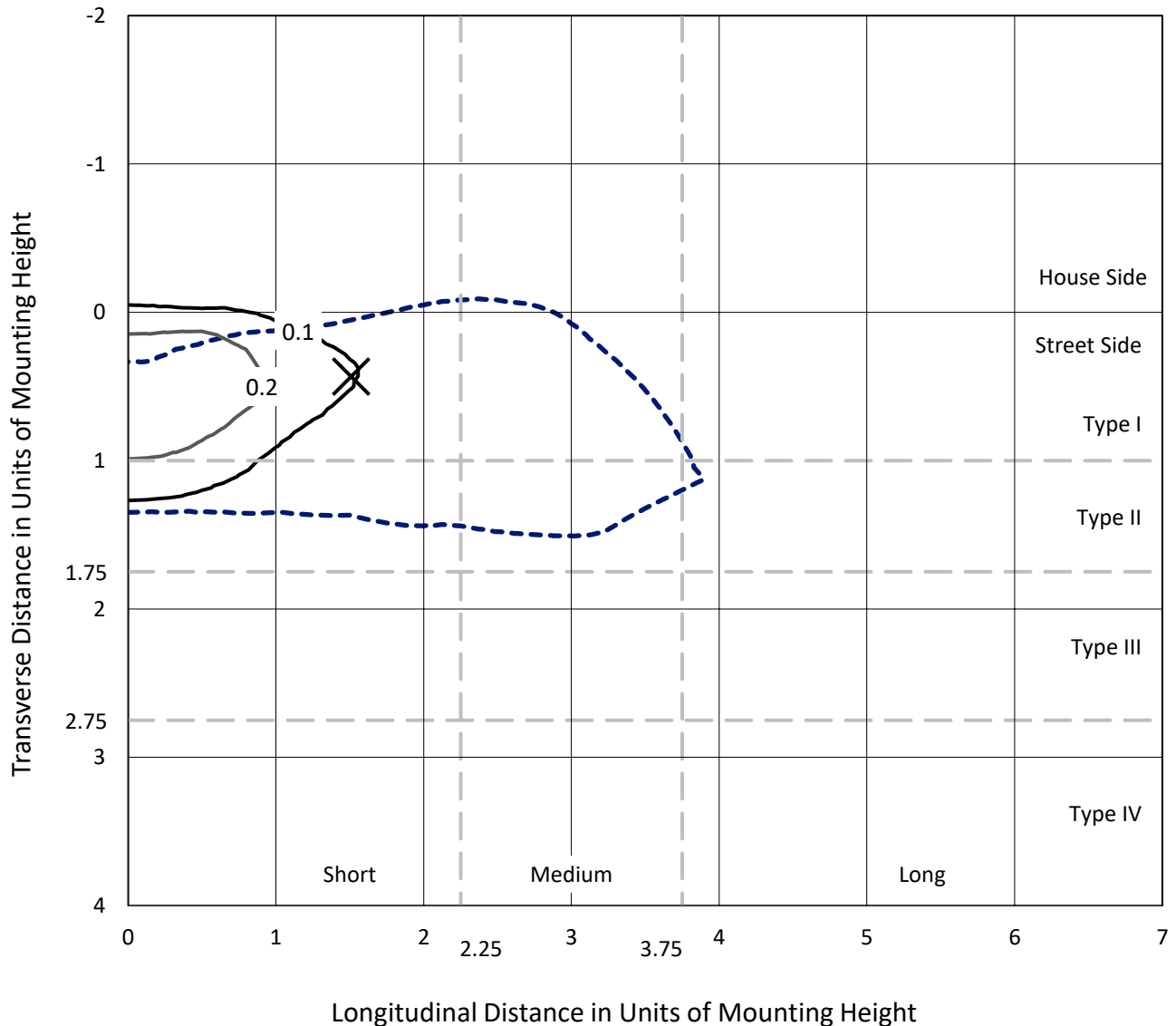
Lumens per Lamp: N/A  
Luminaire Lumens: 417.8 lumens  
Efficiency: N/A  
Efficacy: 26.1 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B0 - U0 - G0

Input Watts (W): 16  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.98  
Total Harmonic Distortion (THDi): 9.98%  
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

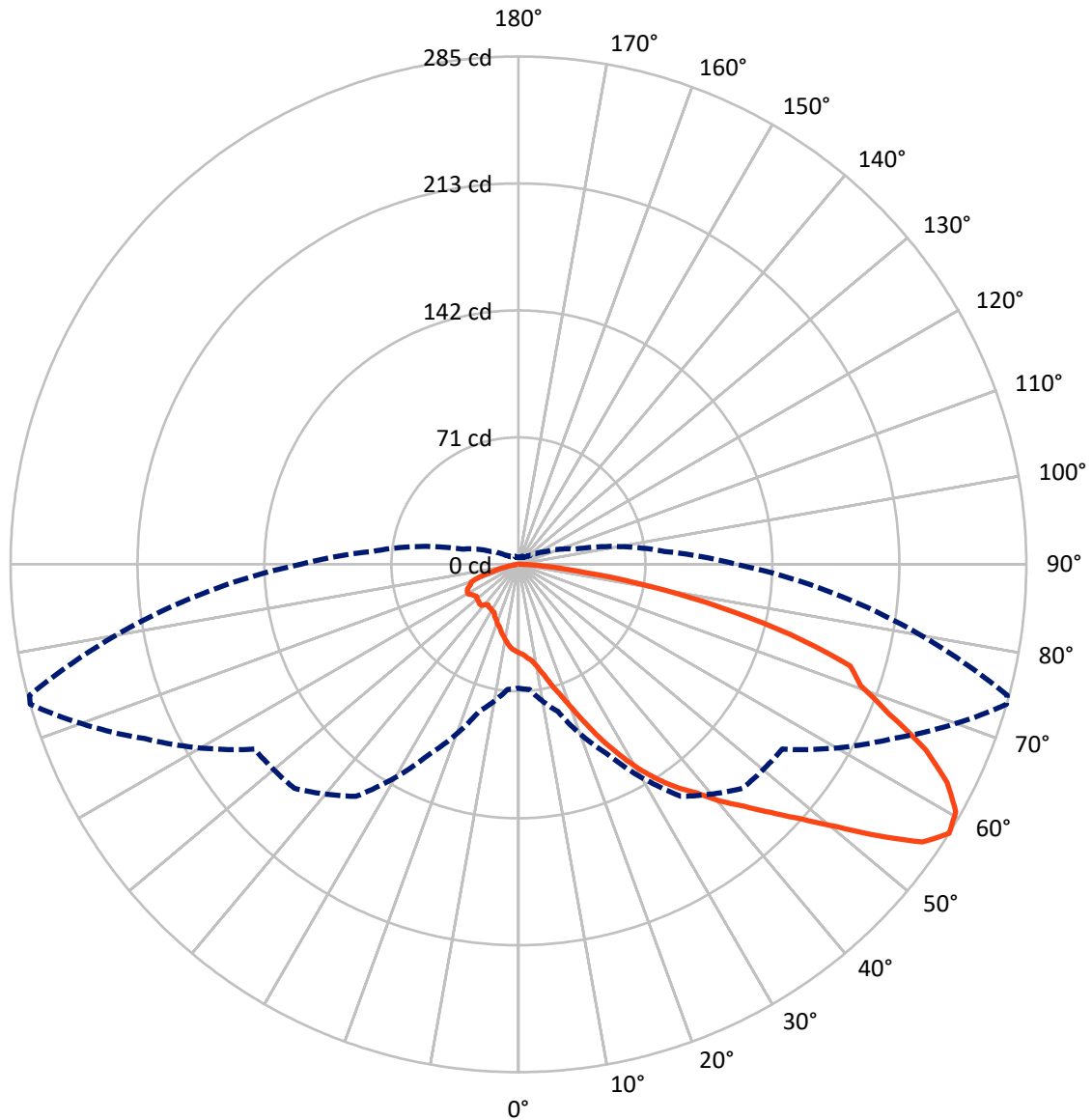
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 0.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 74-Deg Lateral      - - - Horizontal Cone Through 57.5-Deg Vertical

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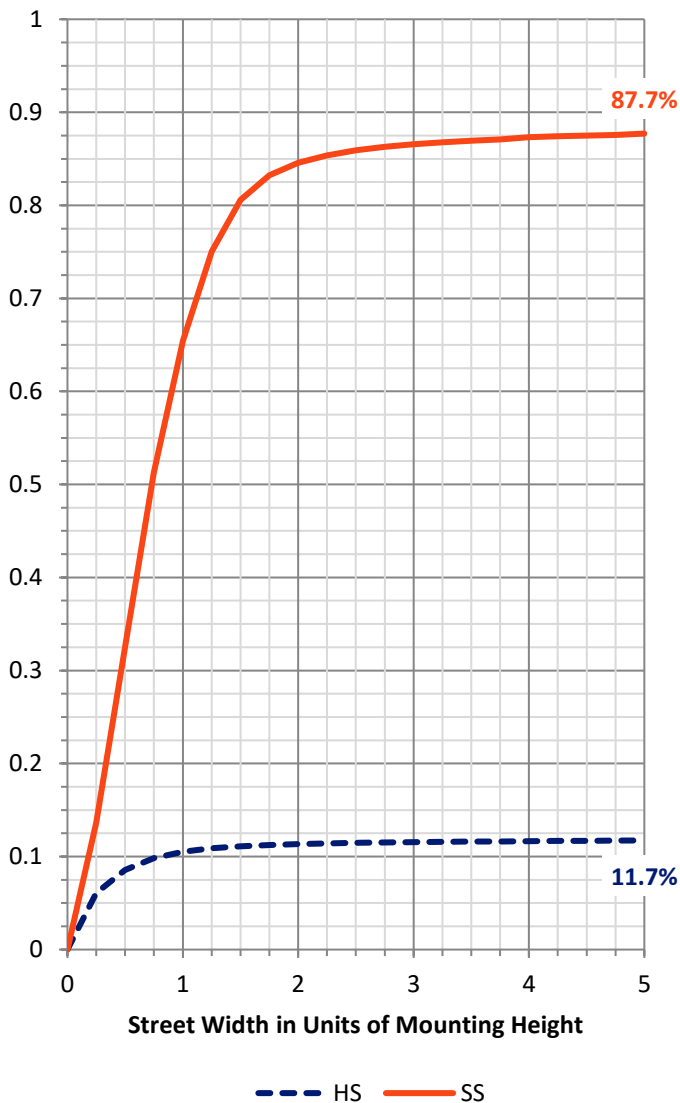
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	49.6	0.0	49.6
	% Fixture	11.9	0.0	11.9
<b>Street Side</b>	Lumens	368.3	0.0	368.3
	% Fixture	88.1	0.0	88.1
<b>Total</b>	Lumens	417.8	0.0	417.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.8	1.2
10°-20°	17.7	4.2
20°-30°	36.5	8.7
30°-40°	65.7	15.7
40°-50°	88.8	21.3
50°-60°	88.0	21.1
60°-70°	71.1	17.0
70°-80°	37.9	9.1
80°-90°	7.4	1.8
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°	417.8	100.0
0°-180°	417.8	100.0

**Coefficient of Utilization**



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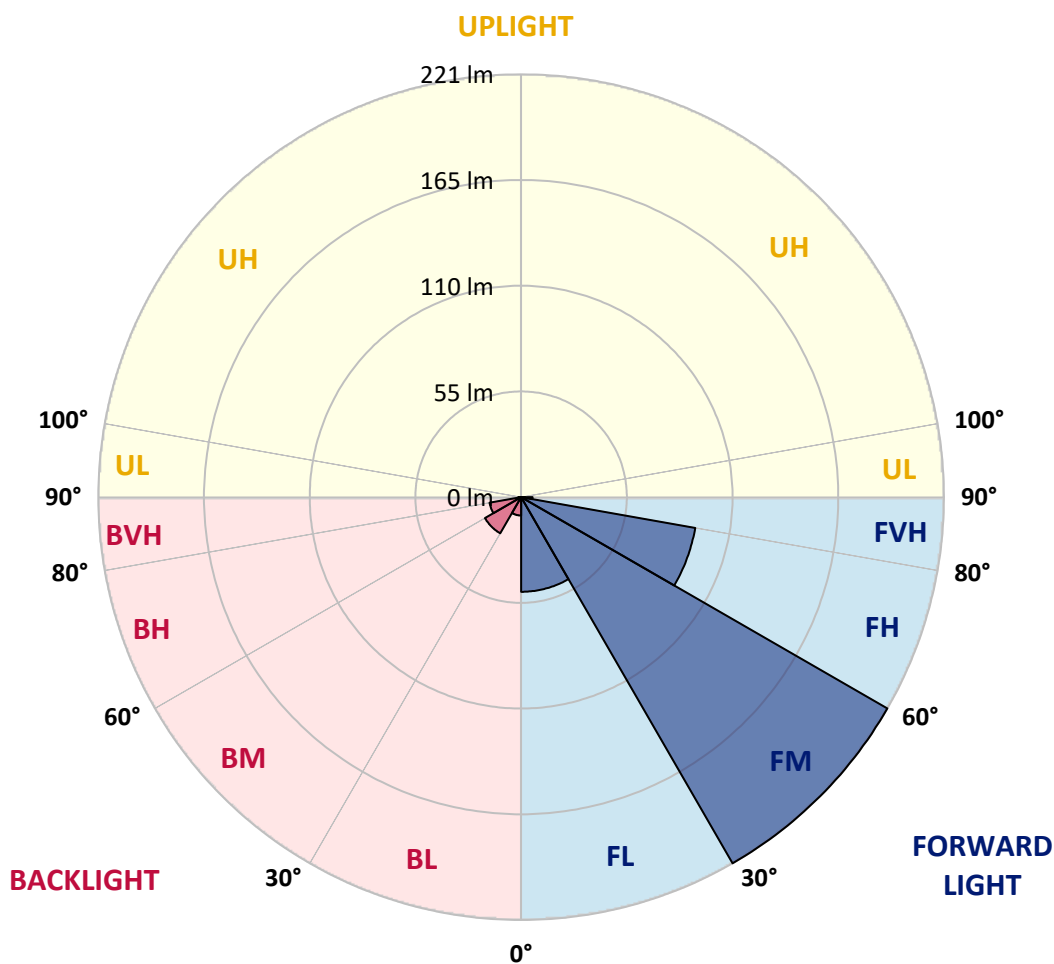
CATALOG NUMBER: EMM2-HSN-SA1A-AMB-U-T2R-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	49.4	11.8			
FM (30°-60°)	220.7	52.8			
FH (60°-80°)	92.3	22.1			G0/660
FVH (80°-90°)	6.0	1.4			G0/10
BL (0°-30°)	9.6	2.3	B0/110		
BM (30°-60°)	21.8	5.2	B0/220		
BH (60°-80°)	16.7	4.0	B0/110		G0/110
BVH (80°-90°)	1.5	0.4			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G0**

Type II Short





REPORT NUMBER: P869222

CATALOG NUMBER: EMM2-HSN-SA1A-AMB-U-T2R-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	74°	75°	85°
0°	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6
2.5°	54.5	54.5	53.5	53.5	53.5	52.6	52.6	51.6	50.6	50.6	50.6
5°	64.5	65.4	64.5	63.5	61.5	59.5	56.5	53.5	52.6	51.6	50.6
7.5°	77.3	76.4	75.4	73.4	71.4	68.4	63.5	58.5	54.5	53.5	51.6
10°	92.2	93.2	90.2	87.3	82.3	77.3	72.4	64.5	58.5	57.5	52.6
12.5°	112.1	112.1	107.1	102.1	98.2	89.2	81.3	73.4	63.5	62.5	53.5
15°	129.9	128.9	127.9	123.0	115.0	104.1	92.2	82.3	70.4	68.4	55.5
17.5°	139.8	139.8	138.8	136.8	130.9	121.0	106.1	92.2	77.3	75.4	58.5
20°	143.8	143.8	142.8	141.8	140.8	135.9	122.0	104.1	86.3	84.3	61.5
22.5°	150.7	149.7	146.8	144.8	146.8	145.8	135.9	118.0	97.2	94.2	65.4
25°	162.6	160.6	155.7	151.7	151.7	152.7	147.8	130.9	109.1	106.1	71.4
27.5°	180.5	178.5	170.6	163.6	158.7	155.7	154.7	143.8	121.0	118.0	78.3
30°	201.3	199.3	193.4	181.5	170.6	161.6	158.7	153.7	132.9	129.9	86.3
32.5°	229.1	228.1	218.2	200.3	187.4	173.5	167.6	161.6	143.8	140.8	94.2
35°	260.8	256.8	248.9	225.1	206.3	190.4	179.5	171.6	153.7	149.7	101.1
37.5°	264.8	264.8	263.8	250.9	231.1	206.3	191.4	182.5	162.6	160.6	109.1
40°	251.9	250.9	254.9	253.9	245.9	227.1	209.2	197.3	174.5	170.6	116.0
42.5°	233.0	234.0	238.0	241.0	240.0	242.0	228.1	211.2	185.4	180.5	118.0
45°	220.1	219.2	222.1	224.1	225.1	239.0	244.9	224.1	198.3	193.4	122.0
47.5°	208.2	207.3	207.3	207.3	209.2	221.1	246.9	245.9	213.2	207.3	127.9
50°	194.4	192.4	191.4	193.4	196.3	199.3	235.0	259.8	231.1	225.1	134.9
52.5°	156.7	158.7	169.6	180.5	186.4	185.4	213.2	258.8	252.9	246.9	143.8
55°	109.1	109.1	125.9	154.7	177.5	178.5	189.4	248.9	274.7	268.7	157.7
57.5°	69.4	70.4	85.3	117.0	158.7	177.5	180.5	231.1	284.6	283.6	174.5
60°	44.6	46.6	54.5	82.3	120.0	170.6	182.5	215.2	281.6	283.6	196.3
62.5°	32.7	33.7	37.7	56.5	87.3	141.8	192.4	209.2	269.7	272.7	212.2
65°	26.8	26.8	28.8	40.7	60.5	97.2	192.4	217.2	250.9	254.9	215.2
67.5°	21.8	22.8	23.8	31.7	44.6	64.5	152.7	242.0	224.1	224.1	203.3
70°	18.8	18.8	20.8	25.8	33.7	44.6	97.2	230.1	203.3	200.3	177.5
72.5°	16.9	16.9	17.8	21.8	26.8	33.7	62.5	174.5	194.4	189.4	142.8
75°	13.9	14.9	15.9	17.8	21.8	25.8	39.7	121.0	157.7	150.7	116.0
77.5°	12.9	12.9	13.9	15.9	17.8	19.8	26.8	74.4	116.0	114.0	86.3
80°	9.9	9.9	10.9	12.9	13.9	14.9	17.8	37.7	74.4	74.4	51.6
82.5°	8.9	8.9	9.9	10.9	10.9	11.9	11.9	17.8	37.7	39.7	23.8
85°	7.9	6.9	6.9	7.9	8.9	7.9	7.9	8.9	15.9	15.9	10.9
87.5°	4.0	4.0	4.0	5.0	5.0	5.0	5.0	4.0	5.0	5.9	5.0
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-HSN-SA1A-AMB-U-T2R-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6
2.5°	49.6	49.6	48.6	47.6	47.6	46.6	46.6	45.6	44.6	44.6	45.6
5°	49.6	49.6	47.6	45.6	43.6	41.6	39.7	37.7	36.7	36.7	35.7
7.5°	49.6	48.6	45.6	42.6	38.7	34.7	30.7	27.8	25.8	24.8	24.8
10°	50.6	47.6	43.6	38.7	32.7	25.8	21.8	18.8	17.8	17.8	16.9
12.5°	50.6	47.6	41.6	34.7	25.8	19.8	16.9	15.9	14.9	14.9	14.9
15°	51.6	47.6	39.7	30.7	20.8	15.9	14.9	13.9	13.9	13.9	13.9
17.5°	53.5	48.6	37.7	25.8	16.9	14.9	13.9	12.9	12.9	12.9	12.9
20°	54.5	48.6	36.7	21.8	14.9	13.9	12.9	11.9	11.9	11.9	11.9
22.5°	56.5	49.6	34.7	18.8	13.9	12.9	11.9	11.9	10.9	10.9	10.9
25°	59.5	50.6	33.7	16.9	12.9	11.9	10.9	10.9	9.9	9.9	9.9
27.5°	63.5	53.5	31.7	14.9	11.9	10.9	10.9	9.9	9.9	9.9	9.9
30°	69.4	56.5	31.7	14.9	11.9	10.9	9.9	8.9	8.9	8.9	8.9
32.5°	74.4	59.5	30.7	14.9	11.9	9.9	8.9	8.9	7.9	7.9	7.9
35°	78.3	61.5	30.7	15.9	11.9	9.9	8.9	7.9	7.9	7.9	7.9
37.5°	82.3	64.5	29.7	15.9	12.9	8.9	7.9	7.9	6.9	6.9	6.9
40°	89.2	68.4	30.7	15.9	12.9	8.9	7.9	6.9	6.9	6.9	6.9
42.5°	92.2	70.4	32.7	15.9	12.9	8.9	6.9	6.9	6.9	5.9	5.9
45°	92.2	70.4	32.7	16.9	11.9	8.9	6.9	5.9	5.9	5.9	5.9
47.5°	94.2	69.4	31.7	17.8	11.9	8.9	6.9	5.9	5.9	5.9	5.9
50°	98.2	70.4	31.7	18.8	10.9	7.9	5.9	5.9	5.9	5.0	5.0
52.5°	104.1	73.4	30.7	18.8	9.9	6.9	5.9	5.9	5.0	5.0	5.0
55°	112.1	77.3	31.7	17.8	9.9	6.9	5.9	5.0	5.0	5.0	5.0
57.5°	122.0	82.3	32.7	16.9	8.9	5.9	5.0	5.0	4.0	4.0	4.0
60°	135.9	90.2	34.7	14.9	7.9	5.0	5.0	4.0	4.0	4.0	4.0
62.5°	148.7	98.2	34.7	12.9	6.9	5.0	5.0	4.0	4.0	3.0	3.0
65°	158.7	108.1	33.7	10.9	5.9	5.0	4.0	4.0	3.0	3.0	3.0
67.5°	160.6	109.1	31.7	6.9	5.0	4.0	4.0	4.0	3.0	3.0	3.0
70°	146.8	101.1	30.7	5.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
72.5°	121.0	82.3	24.8	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
75°	103.1	61.5	15.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0
77.5°	83.3	50.6	9.9	3.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0
80°	52.6	40.7	5.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	24.8	20.8	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	9.9	8.9	2.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0
87.5°	4.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
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: SP1-2407-157-1

Test Date: 08/06/2024

Luminaire Tested: MEM2-HTN-SA-45-AMB-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-45-AMB-U-5WQ-2

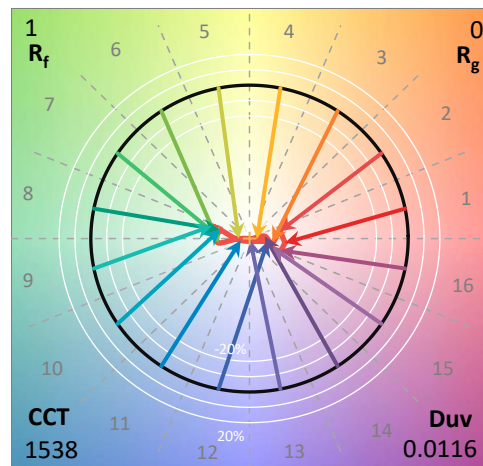
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-1  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 08/20/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-SA-45-AMB-U-5WQ-2**  
 Description: Epic Modern Light Square 45W 5WQ Optic and Flare Trim AMBER LED

**Spectral Parameters**

CCT (K): 1538  
 CIE u': 0.3530  
 CIE v': 0.5469  
 Duv: 0.0116  
 CIE x: 0.5918  
 CIE y: 0.4076  
 CIE z: 0.0006  
 Peak Wavelength (nm): 597  
 Dominant Wavelength (nm): 592  
 Purity: 99.98881  
 R<sub>f</sub>: 1.1  
 R<sub>g</sub>: 0

CRI (Ra):	-21.8		
R1:	-34.3	R9:	-386.6
R2:	52.3	R10:	28.9
R3:	17.0	R11:	-95.5
R4:	-68.4	R12:	-10.5
R5:	-40.8	R13:	-15.5
R6:	41.5	R14:	45.9
R7:	-7.2	R15:	-67.7
R8:	-134.5		



**Test Conditions**

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-157-1

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 outside the range

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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	0	NR	620	30	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	13	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	0	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	0	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	34	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	63	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	113	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	199	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	352	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	614	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	954	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	837	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	417	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	179	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	69	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-1

**Scotopic Flux vs. Wavelength**



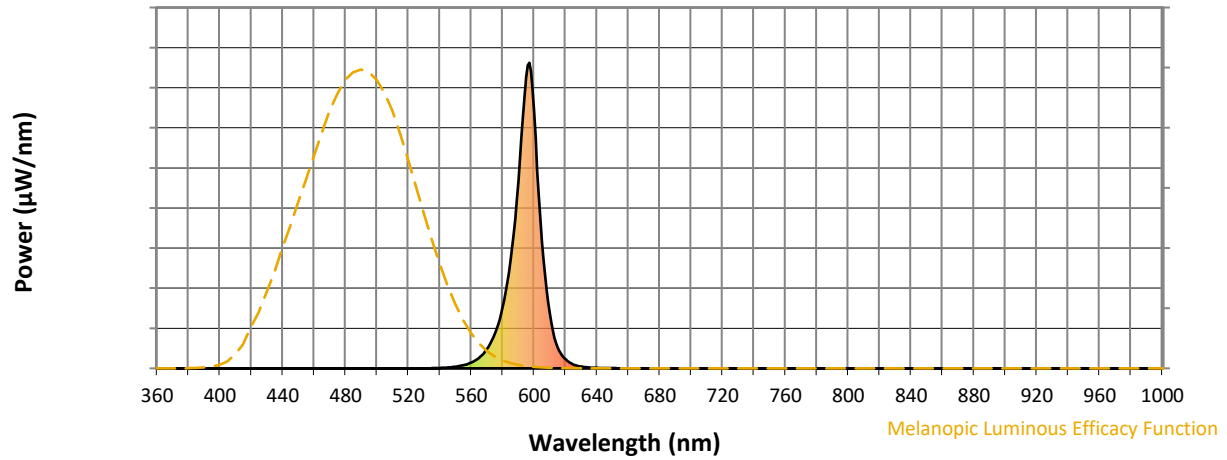
**Scotopic Lumens: NR**

**S/P: 0.22**

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	0	NR	620	30	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	13	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	0	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	0	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	34	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	63	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	113	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	199	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	352	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	614	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	954	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	837	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	417	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	179	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	69	NR	745	0	NR	875	0	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 0.12**

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	0	NR	620	30	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	13	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	0	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	0	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	34	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	63	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	113	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	199	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	352	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	614	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	954	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	837	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	417	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	179	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	69	NR	745	0	NR	875	0	NR			

**Summary**

$R_f = 1.1$   
 $R_g = 0$   
 $CIE R_a = -21.8$   
 $R_g = -386.6$



**Color Vector Graphics**





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

CES01 = 90	CES26 = 0	CES51 = 17	CES76 = 0
CES02 = 70	CES27 = 32	CES52 = 2	CES77 = 0
CES03 = 31	CES28 = 24	CES53 = 0	CES78 = 0
CES04 = 77	CES29 = 1	CES54 = 12	CES79 = 2
CES05 = 52	CES30 = 31	CES55 = 6	CES80 = 1
CES06 = 56	CES31 = 1	CES56 = 0	CES81 = 0
CES07 = 41	CES32 = 0	CES57 = 0	CES82 = 50
CES08 = 38	CES33 = 21	CES58 = 0	CES83 = 21
CES09 = 29	CES34 = 0	CES59 = 9	CES84 = 54
CES10 = 87	CES35 = 23	CES60 = 60	CES85 = 9
CES11 = 70	CES36 = 77	CES61 = 13	CES86 = 0
CES12 = 76	CES37 = 5	CES62 = 53	CES87 = 2
CES13 = 47	CES38 = 41	CES63 = 68	CES88 = 1
CES14 = 77	CES39 = 75	CES64 = 0	CES89 = 0
CES15 = 74	CES40 = 49	CES65 = 0	CES90 = 2
CES16 = 49	CES41 = 75	CES66 = 0	CES91 = 57
CES17 = 56	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 60	CES43 = 0	CES68 = 0	CES93 = 2
CES19 = 80	CES44 = 95	CES69 = 27	CES94 = 0
CES20 = 71	CES45 = 1	CES70 = 0	CES95 = 0
CES21 = 94	CES46 = 5	CES71 = 0	CES96 = 2
CES22 = 87	CES47 = 70	CES72 = 42	CES97 = 1
CES23 = 94	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 95	CES49 = 5	CES74 = 62	CES99 = 0
CES25 = 79	CES50 = 9	CES75 = 0	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)