

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: STREETWORKS

Report Number: P867826

Luminaire Tested: **MEM2-HTN-SA-130-727-U-5WQ**

Issue Date: 08/21/2024



Test Information

Test Method: LM-79-08
Report Number: P867826
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HTN-SA-130-727-U-5WQ
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 130W 70CRI 2700K
FIXTURE w/ TYPE V SQUARE WIDE DISTRIBUTION OPTIC
Light Source: (30) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

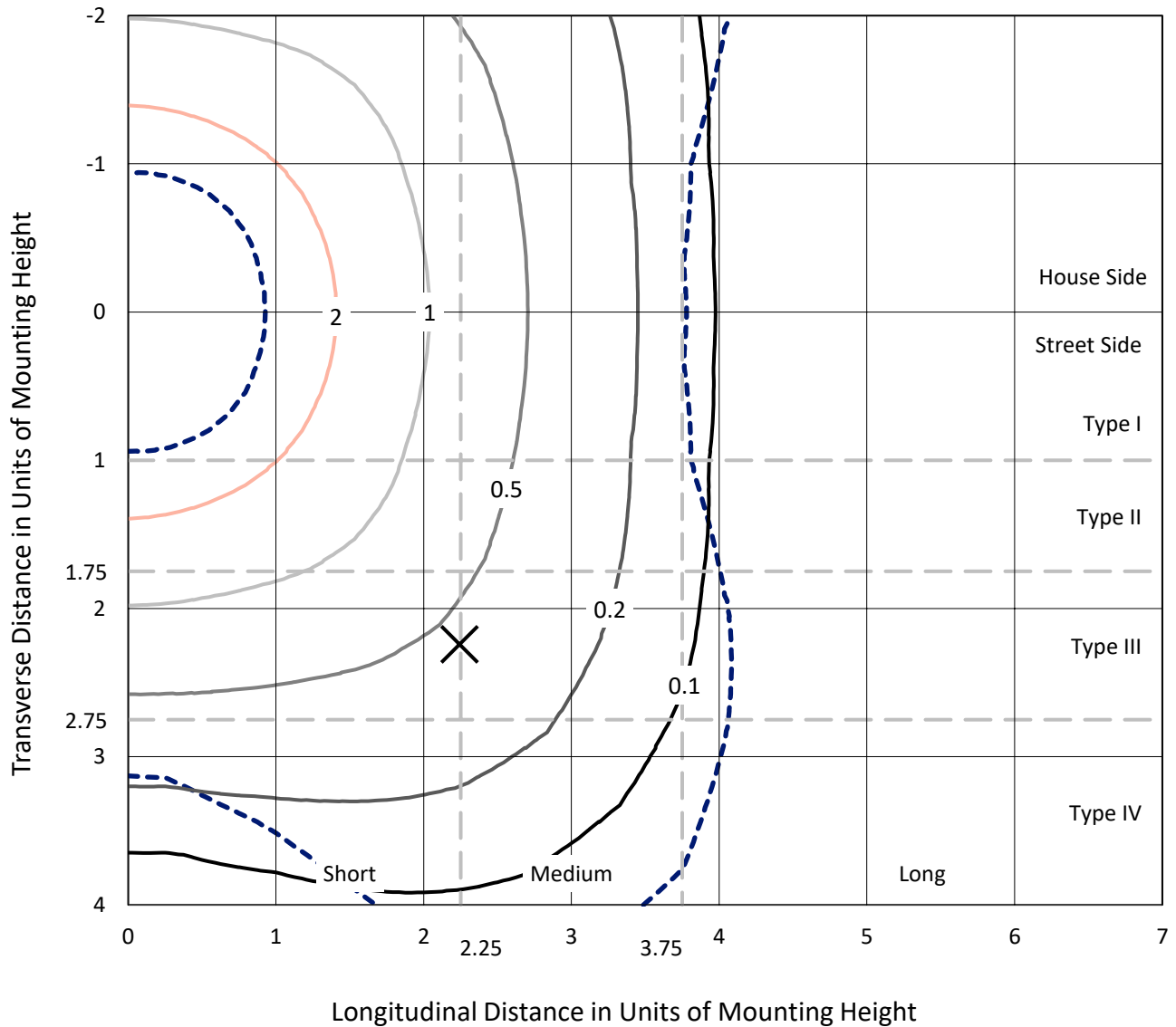
Lumens per Lamp: N/A
Luminaire Lumens: 18187.8 lumens
Efficiency: N/A
Efficacy: 135.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G2

Input Watts (W): 134
Input Voltage (V): 120
Input Current (A_{in}): 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

REPORT NUMBER: P867826
 CATALOG NUMBER: MEM2-HTN-SA-130-727-U-5WQ

Iso-Footcandle Lines of Horizontal Illumination

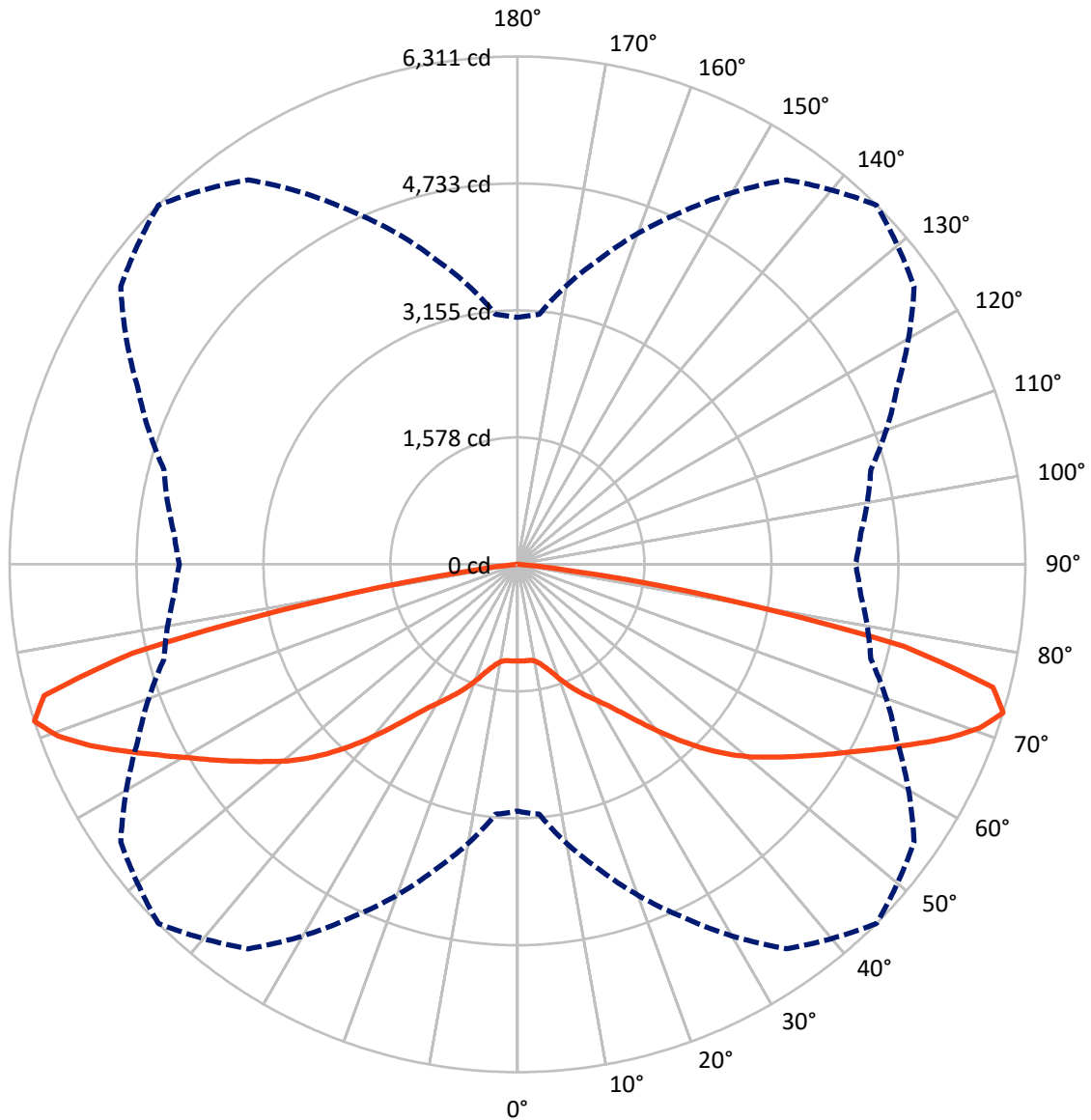
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9093.9	0.0	9093.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9093.9	0.0	9093.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	18187.8	0.0	18187.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	0.6
10°-20°	384.1	2.1
20°-30°	792.4	4.4
30°-40°	1458.9	8.0
40°-50°	2565.1	14.1
50°-60°	3720.3	20.5
60°-70°	4849.8	26.7
70°-80°	4031.4	22.2
80°-90°	270.7	1.5
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°	18187.8	100.0
0°-180°	18187.8	100.0



REPORT NUMBER: P867826

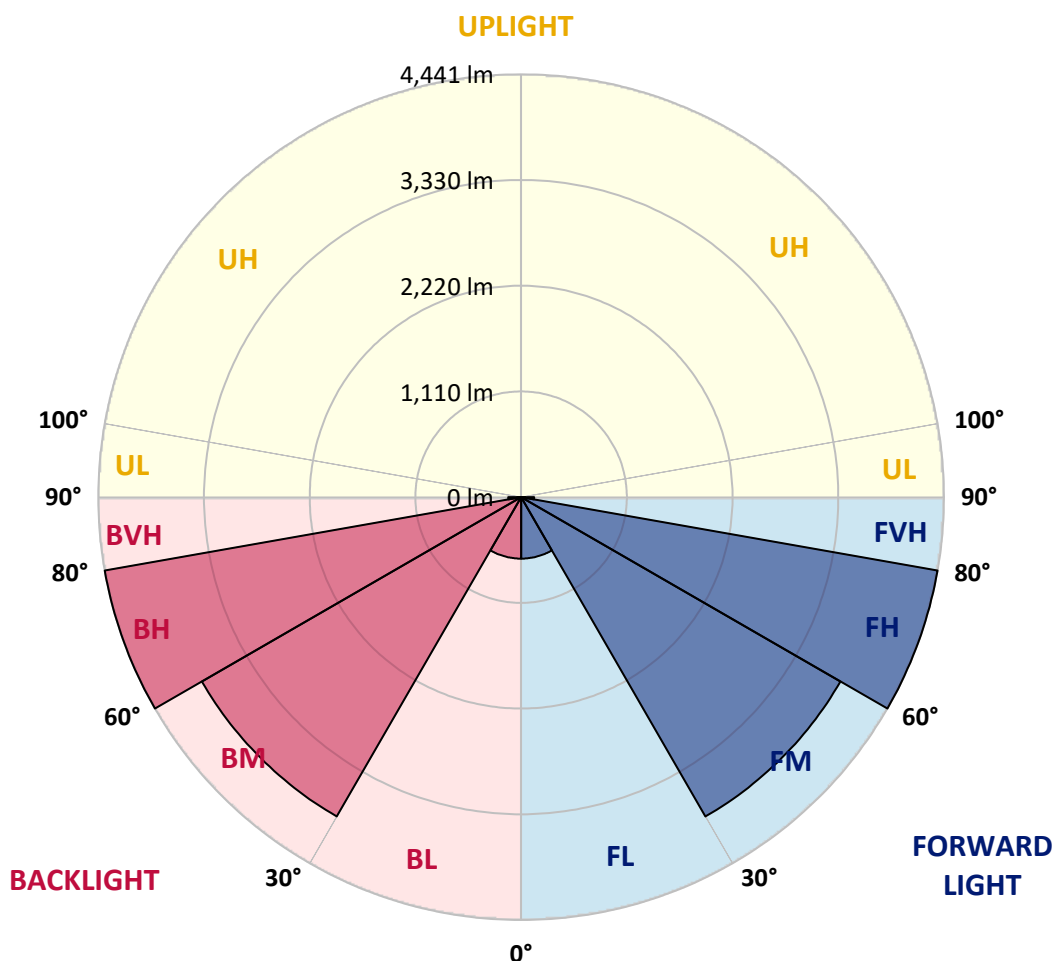
CATALOG NUMBER: MEM2-HTN-SA-130-727-U-5WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	645.8	3.6			
FM (30°-60°)	3872.1	21.3			
FH (60°-80°)	4440.6	24.4			G2/5000
FVH (80°-90°)	135.3	0.7			G2/225
BL (0°-30°)	645.8	3.6	B2/1000		
BM (30°-60°)	3872.1	21.3	B3/5000		
BH (60°-80°)	4440.6	24.4	B4/5000		G2/5000
BVH (80°-90°)	135.3	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P867826

CATALOG NUMBER: MEM2-HTN-SA-130-727-U-5WQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7	1200.7
2.5°	1196.9	1198.8	1198.8	1198.8	1200.7	1202.6	1204.5	1206.4	1210.1	1212.0	1212.0
5°	1202.6	1200.7	1198.8	1202.6	1202.6	1202.6	1204.5	1206.4	1206.4	1206.4	1208.3
7.5°	1196.9	1198.8	1196.9	1196.9	1202.6	1204.5	1202.6	1200.7	1200.7	1202.6	1202.6
10°	1217.7	1215.8	1213.9	1213.9	1219.6	1221.4	1219.6	1217.7	1217.7	1221.4	1221.4
12.5°	1264.8	1268.6	1257.3	1257.3	1264.8	1268.6	1262.9	1261.0	1262.9	1266.7	1266.7
15°	1338.3	1336.4	1328.9	1321.3	1328.9	1334.5	1327.0	1323.2	1325.1	1334.5	1327.0
17.5°	1419.4	1421.2	1413.7	1406.2	1411.8	1419.4	1408.1	1398.6	1400.5	1404.3	1400.5
20°	1509.8	1508.0	1506.1	1506.1	1517.4	1526.8	1509.8	1487.2	1481.6	1477.8	1477.8
22.5°	1575.8	1581.5	1583.4	1600.3	1626.7	1636.1	1613.5	1583.4	1560.7	1549.4	1541.9
25°	1679.5	1673.8	1670.1	1688.9	1728.5	1745.5	1717.2	1675.7	1653.1	1651.2	1656.9
27.5°	1773.7	1773.7	1781.3	1800.1	1837.8	1854.8	1830.3	1788.8	1777.5	1777.5	1771.8
30°	1896.3	1890.6	1898.1	1930.2	1958.5	1969.8	1949.0	1920.8	1911.3	1911.3	1901.9
32.5°	2039.5	2041.4	2052.7	2073.4	2101.7	2103.6	2096.1	2082.9	2077.2	2071.6	2081.0
35°	2258.2	2258.2	2254.4	2269.5	2277.0	2280.8	2284.6	2278.9	2278.9	2278.9	2271.4
37.5°	2529.6	2514.5	2512.6	2499.4	2490.0	2499.4	2516.4	2535.3	2550.3	2540.9	2537.1
40°	2799.1	2791.6	2769.0	2748.3	2740.7	2744.5	2765.2	2804.8	2821.8	2821.8	2836.8
42.5°	3089.4	3074.3	3046.1	3021.6	3000.8	3006.5	3025.3	3074.3	3112.0	3129.0	3121.5
45°	3349.5	3336.4	3308.1	3285.5	3270.4	3268.5	3293.0	3325.0	3375.9	3391.0	3402.3
47.5°	3572.0	3562.5	3538.0	3515.4	3521.1	3523.0	3530.5	3558.8	3600.2	3621.0	3619.1
50°	3752.9	3745.4	3722.8	3732.2	3747.3	3762.4	3752.9	3771.8	3798.2	3807.6	3815.1
52.5°	3918.8	3907.5	3892.4	3909.4	3949.0	3979.1	3984.8	3971.6	3979.1	3984.8	3979.1
55°	4082.8	4069.6	4065.8	4096.0	4156.3	4212.9	4207.2	4169.5	4160.1	4148.8	4143.1
57.5°	4216.6	4207.2	4222.3	4273.2	4390.0	4465.4	4440.9	4354.2	4316.5	4290.1	4282.6
60°	4301.4	4299.6	4333.5	4452.2	4629.4	4735.0	4695.4	4546.5	4461.7	4437.2	4425.9
62.5°	4346.7	4348.6	4408.9	4620.0	4902.7	5046.0	4976.3	4748.2	4616.2	4591.7	4595.5
65°	4388.2	4382.5	4461.7	4761.4	5198.7	5392.8	5298.6	4991.3	4799.1	4750.1	4750.1
67.5°	4418.3	4424.0	4542.7	4902.7	5487.1	5764.2	5626.6	5249.6	4995.1	4921.6	4912.2
70°	4037.6	4092.2	4463.6	4997.0	5715.2	6092.1	5911.2	5407.9	5002.6	4793.4	4772.7
72.5°	3066.8	3117.7	3920.7	4829.2	5832.0	6310.8	6016.7	5206.2	4546.5	4280.7	4201.5
75°	2022.5	2058.4	2921.7	4218.5	5507.8	6103.5	5479.5	4484.3	3579.5	3234.6	3255.3
77.5°	901.0	1016.0	1862.3	3291.1	4537.1	4912.2	4178.9	3059.3	2186.5	1851.0	1815.2
80°	377.0	412.8	703.1	1754.9	2629.5	2516.4	1779.4	1025.4	652.2	507.1	490.1
82.5°	109.3	113.1	139.5	303.5	535.3	629.6	378.9	192.3	182.8	145.1	133.8
85°	7.5	7.5	11.3	18.8	26.4	43.4	49.0	56.5	64.1	54.7	54.7
87.5°	3.8	3.8	3.8	5.7	5.7	7.5	5.7	5.7	5.7	5.7	5.7
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: SP1-2407-157-3

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-30-727-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-30-727-U-5WQ-2

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-157-3
 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-30-727-U-5WQ-2**
 Description: Epic Modern Light Square 30W 5WQ Optic and Flare Trim

Spectral Parameters

CCT (K): 2747
 CIE u': 0.2606
 CIE v': 0.5257
 Duv: -0.0005
 CIE x: 0.4552
 CIE y: 0.4082
 CIE z: 0.1366
 Peak Wavelength (nm): 597
 Dominant Wavelength (nm): 584
 Purity: 59.16856
 Rf: 75.5
 Rg: 93.6

CRI (Ra):	71.7		
R1:	68.1	R9:	-35.3
R2:	83.9	R10:	64.2
R3:	94.7	R11:	61.7
R4:	66.3	R12:	53.9
R5:	67.4	R13:	71.2
R6:	78.7	R14:	97.6
R7:	75.0	R15:	59.3
R8:	39.4		



Test Conditions

Stabilization Time: 22M
 Operation Time: 1H 22M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-157-3

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



CCT = 2747K
 CIE x = 0.4552
 CIE y = 0.4082
 Duv = -0.0005

Point lies inside the ANSI 2700K 4-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.13

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



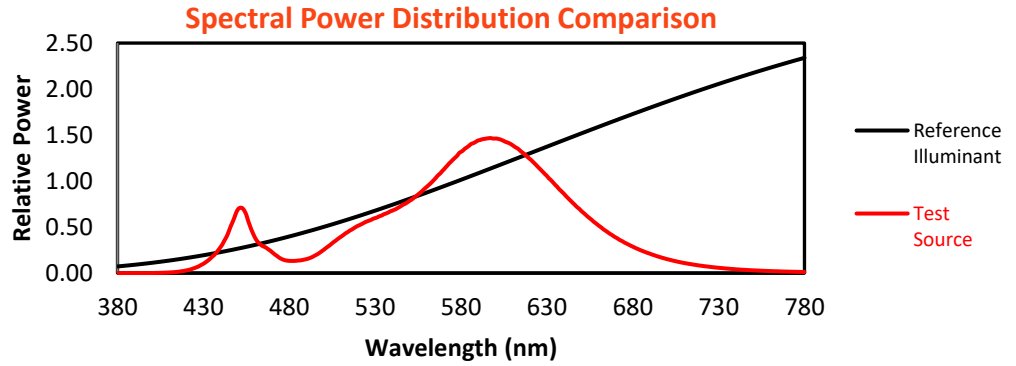
Melanopic Lumens: NR

M/P: 2.04

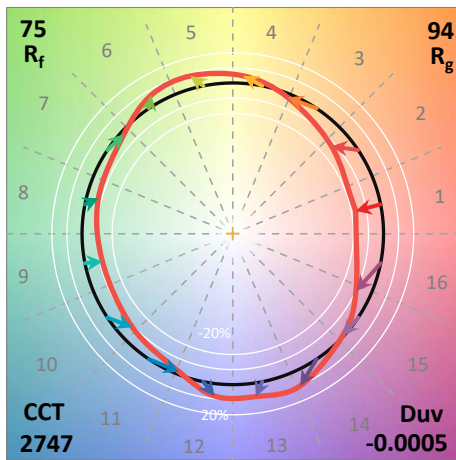
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

Summary

$R_f = 75.5$
 $R_g = 93.6$
 $CIE R_a = 71.7$
 $R_9 = -35.3$

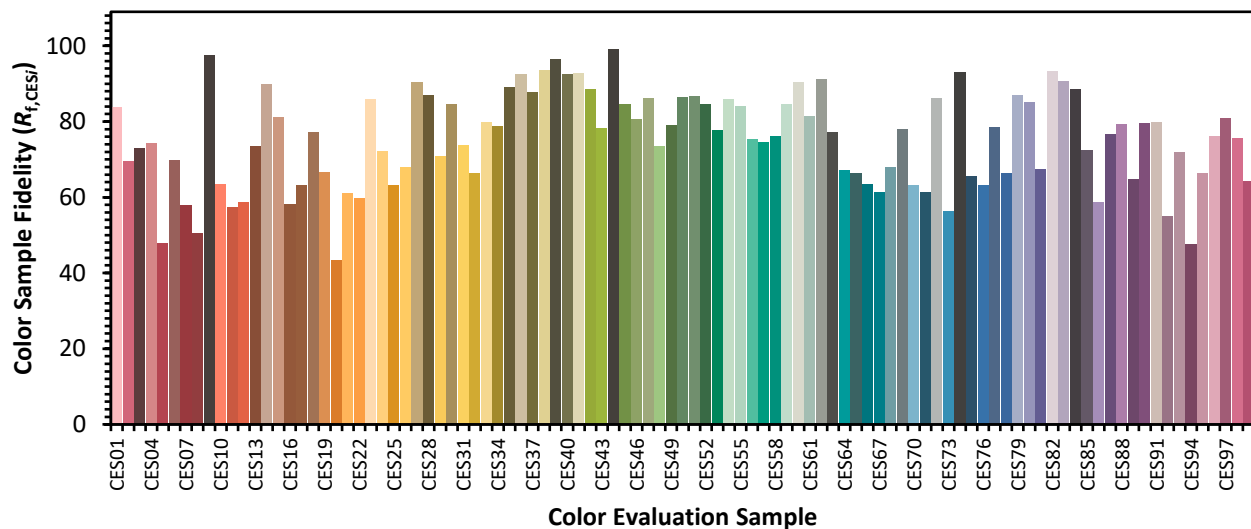


Color Vector Graphics

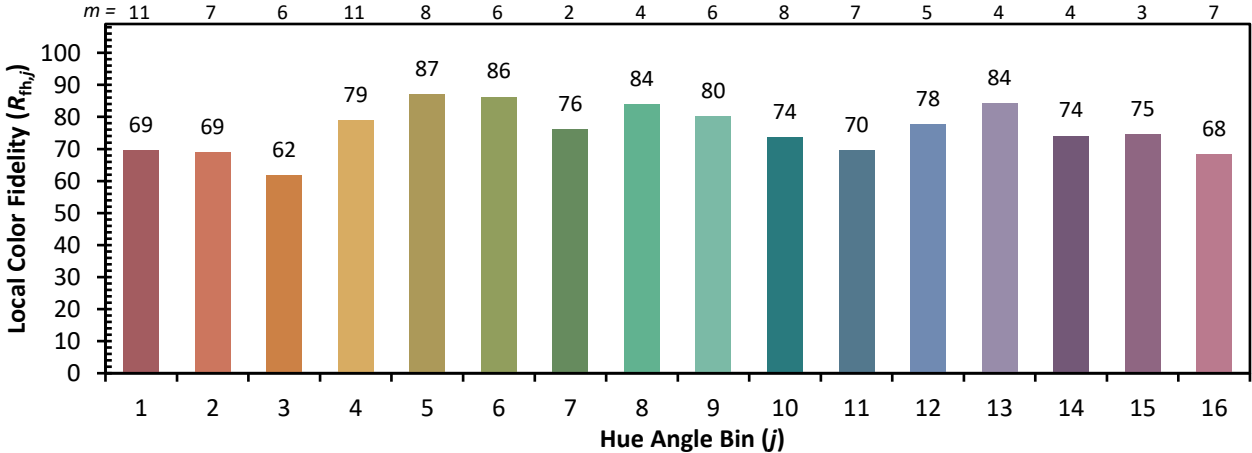


Individual Sample Fidelity Index ($R_{f,i}$)

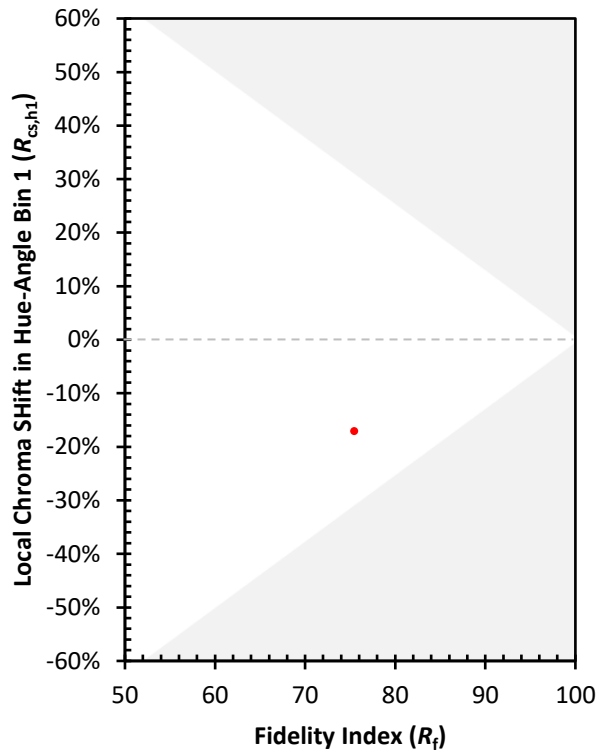
CES01 = 86	CES26 = 68	CES51 = 87	CES76 = 63
CES02 = 63	CES27 = 90	CES52 = 85	CES77 = 79
CES03 = 31	CES28 = 87	CES53 = 78	CES78 = 66
CES04 = 71	CES29 = 71	CES54 = 86	CES79 = 87
CES05 = 50	CES30 = 85	CES55 = 84	CES80 = 85
CES06 = 52	CES31 = 74	CES56 = 75	CES81 = 67
CES07 = 42	CES32 = 66	CES57 = 75	CES82 = 93
CES08 = 41	CES33 = 80	CES58 = 76	CES83 = 91
CES09 = 29	CES34 = 79	CES59 = 85	CES84 = 89
CES10 = 77	CES35 = 89	CES60 = 90	CES85 = 72
CES11 = 60	CES36 = 93	CES61 = 81	CES86 = 59
CES12 = 66	CES37 = 88	CES62 = 91	CES87 = 77
CES13 = 43	CES38 = 93	CES63 = 77	CES88 = 79
CES14 = 74	CES39 = 97	CES64 = 67	CES89 = 65
CES15 = 72	CES40 = 93	CES65 = 66	CES90 = 80
CES16 = 48	CES41 = 93	CES66 = 63	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 61	CES92 = 55
CES18 = 57	CES43 = 78	CES68 = 68	CES93 = 72
CES19 = 73	CES44 = 99	CES69 = 78	CES94 = 48
CES20 = 67	CES45 = 85	CES70 = 63	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 61	CES96 = 76
CES22 = 80	CES47 = 86	CES72 = 86	CES97 = 81
CES23 = 92	CES48 = 74	CES73 = 56	CES98 = 76
CES24 = 91	CES49 = 79	CES74 = 93	CES99 = 64
CES25 = 73	CES50 = 86	CES75 = 66	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)