

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: P867821

Luminaire Tested: **MEM2-HTN-SA-40-727-U-5WQ**

Issue Date: 08/21/2024



Test Information

Test Method: LM-79-08
Report Number: P867821
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MEM2-HTN-SA-40-727-U-5WQ
Description: EPIC MODERN TALL HOUSING DISCRETE LED ARRAYS 40W 70CRI 2700K
FIXTURE w/ TYPE V SQUARE WIDE DISTRIBUTION OPTIC
Light Source: (10) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

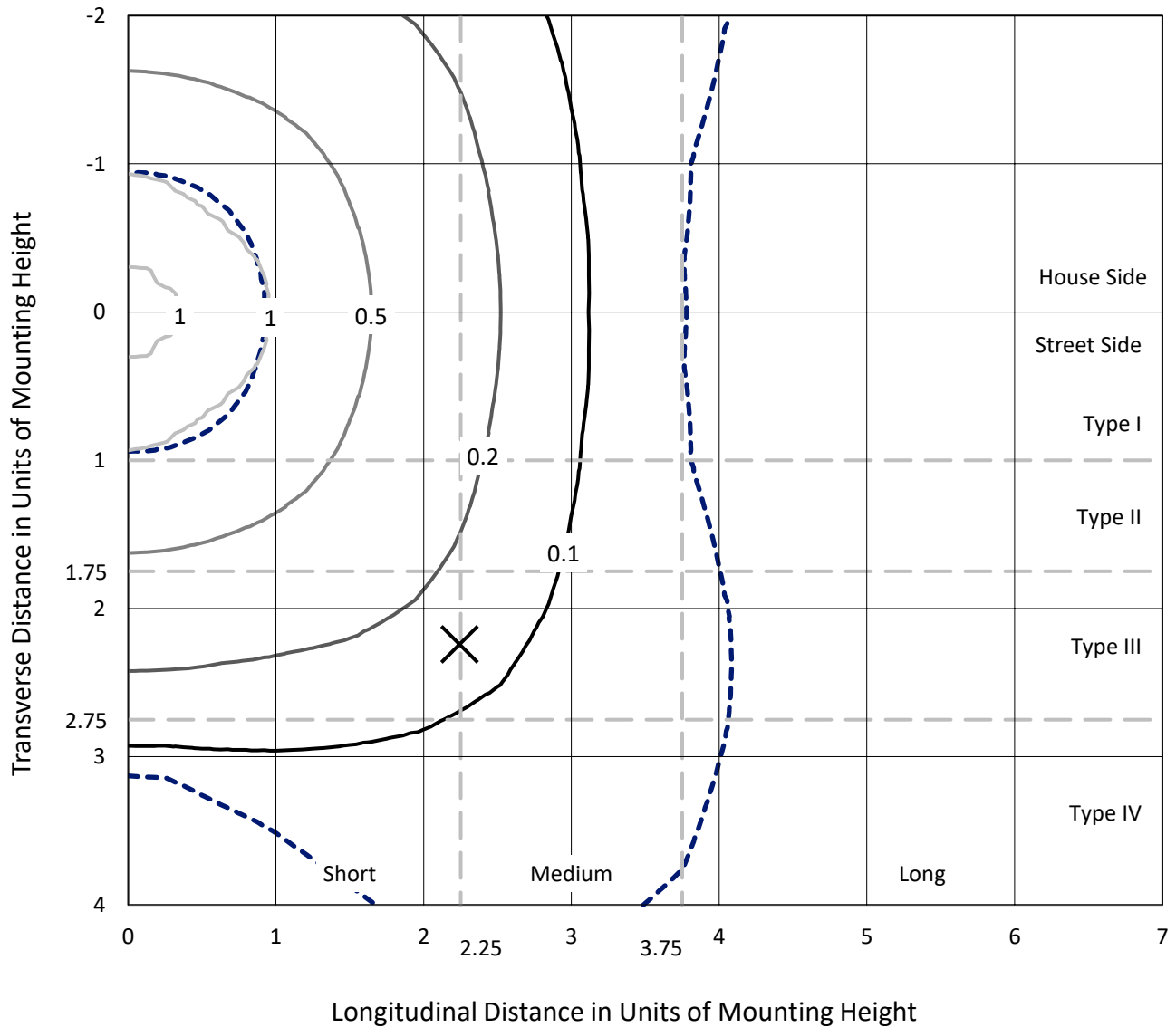
Lumens per Lamp: N/A
Luminaire Lumens: 5964.1 lumens
Efficiency: N/A
Efficacy: 135.5 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G1

Input Watts (W): 44
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 6.91%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

REPORT NUMBER: P867821
 CATALOG NUMBER: MEM2-HTN-SA-40-727-U-5WQ

Iso-Footcandle Lines of Horizontal Illumination

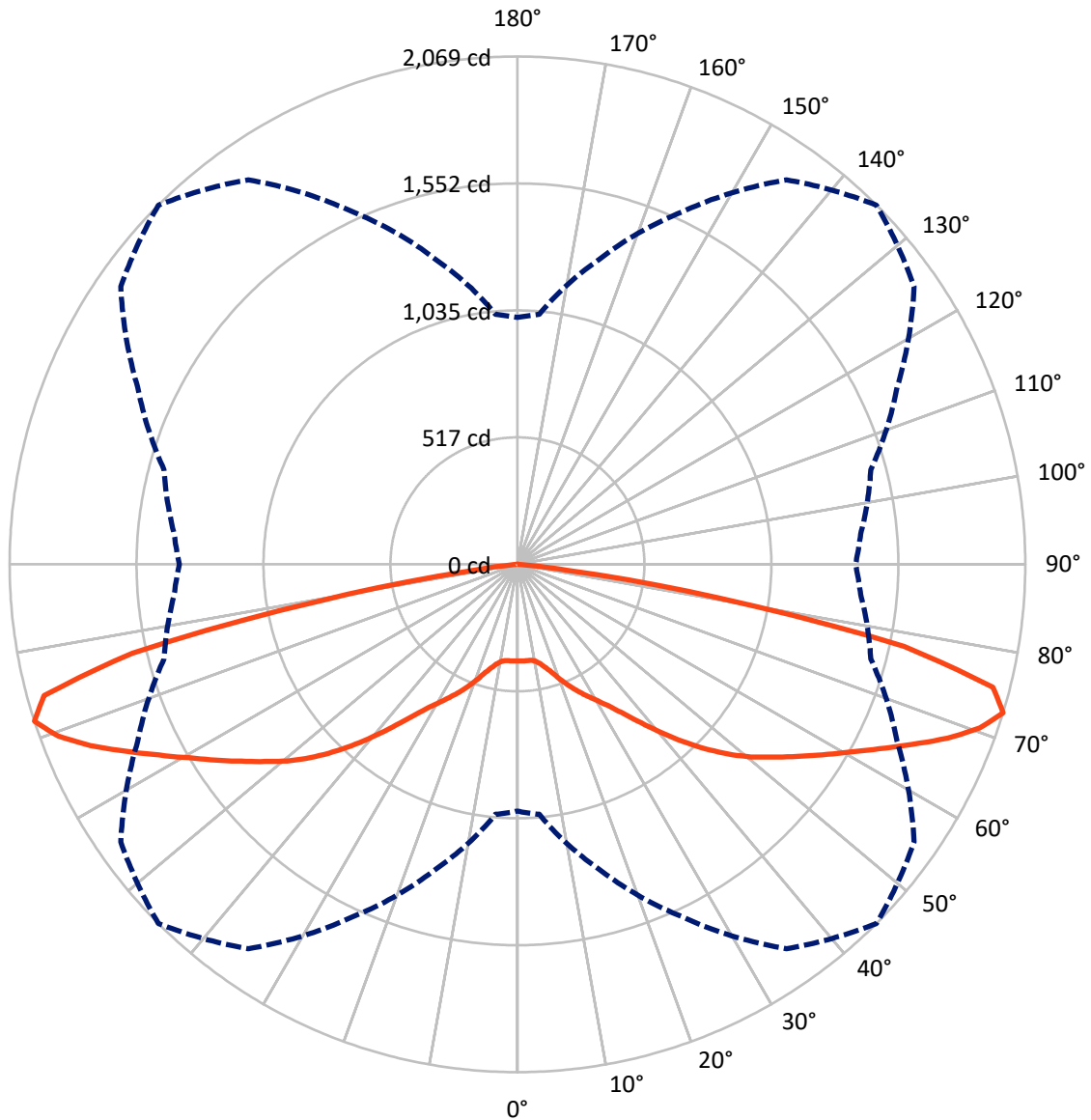
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.1 fc
 Type V - Short - N/A

REPORT NUMBER: P867821
CATALOG NUMBER: MEM2-HTN-SA-40-727-U-5WQ

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	2982.1	0.0	2982.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2982.1	0.0	2982.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	5964.1	0.0	5964.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.6
10°-20°	125.9	2.1
20°-30°	259.9	4.4
30°-40°	478.4	8.0
40°-50°	841.1	14.1
50°-60°	1220.0	20.5
60°-70°	1590.4	26.7
70°-80°	1322.0	22.2
80°-90°	88.8	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°	5964.1	100.0
0°-180°	5964.1	100.0



REPORT NUMBER: P867821

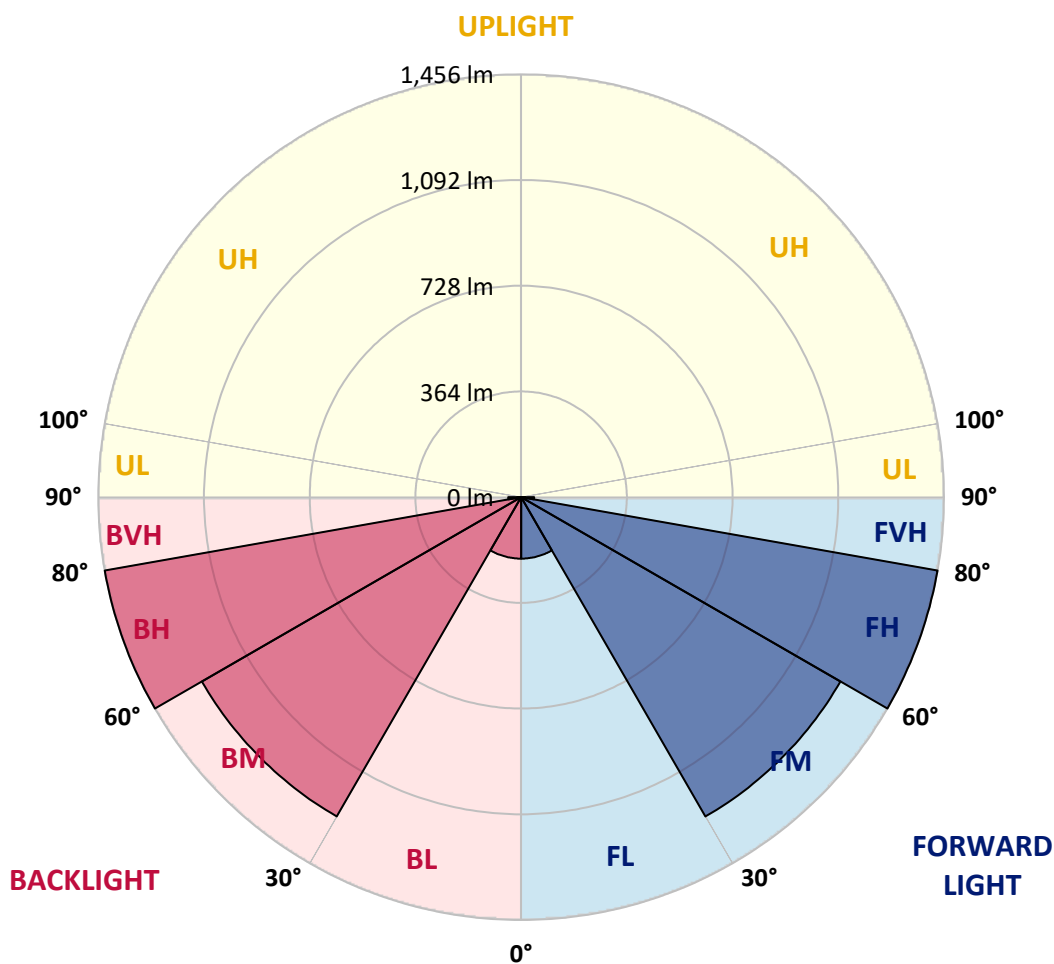
CATALOG NUMBER: MEM2-HTN-SA-40-727-U-5WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	211.8	3.6			
FM (30°-60°)	1269.8	21.3			
FH (60°-80°)	1456.2	24.4			G1/1800
FVH (80°-90°)	44.4	0.7			G1/100
BL (0°-30°)	211.8	3.6	B1/500		
BM (30°-60°)	1269.8	21.3	B2/2500		
BH (60°-80°)	1456.2	24.4	B3/2500		G1/1800
BVH (80°-90°)	44.4	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1

Type V Short





REPORT NUMBER: P867821

CATALOG NUMBER: MEM2-HTN-SA-40-727-U-5WQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	393.7	393.7	393.7	393.7	393.7	393.7	393.7	393.7	393.7	393.7	393.7
2.5°	392.5	393.1	393.1	393.1	393.7	394.4	395.0	395.6	396.8	397.4	397.4
5°	394.4	393.7	393.1	394.4	394.4	394.4	395.0	395.6	395.6	395.6	396.2
7.5°	392.5	393.1	392.5	392.5	394.4	395.0	394.4	393.7	393.7	394.4	394.4
10°	399.3	398.7	398.1	398.1	399.9	400.5	399.9	399.3	399.3	400.5	400.5
12.5°	414.8	416.0	412.3	412.3	414.8	416.0	414.1	413.5	414.1	415.4	415.4
15°	438.9	438.2	435.8	433.3	435.8	437.6	435.1	433.9	434.5	437.6	435.1
17.5°	465.4	466.1	463.6	461.1	463.0	465.4	461.7	458.6	459.3	460.5	459.3
20°	495.1	494.5	493.9	493.9	497.6	500.7	495.1	487.7	485.8	484.6	484.6
22.5°	516.7	518.6	519.2	524.8	533.4	536.5	529.1	519.2	511.8	508.1	505.6
25°	550.7	548.9	547.6	553.8	566.8	572.4	563.1	549.5	542.1	541.5	543.3
27.5°	581.6	581.6	584.1	590.3	602.7	608.2	600.2	586.6	582.9	582.9	581.0
30°	621.8	620.0	622.4	632.9	642.2	645.9	639.1	629.9	626.8	626.8	623.7
32.5°	668.8	669.4	673.1	679.9	689.2	689.8	687.3	683.0	681.2	679.3	682.4
35°	740.5	740.5	739.3	744.2	746.7	747.9	749.2	747.3	747.3	747.3	744.8
37.5°	829.5	824.6	823.9	819.6	816.5	819.6	825.2	831.4	836.3	833.2	832.0
40°	917.9	915.4	908.0	901.2	898.7	900.0	906.8	919.7	925.3	925.3	930.3
42.5°	1013.1	1008.1	998.9	990.8	984.0	985.9	992.1	1008.1	1020.5	1026.1	1023.6
45°	1098.4	1094.1	1084.8	1077.4	1072.4	1071.8	1079.8	1090.3	1107.0	1112.0	1115.7
47.5°	1171.3	1168.2	1160.2	1152.8	1154.6	1155.2	1157.7	1167.0	1180.6	1187.4	1186.8
50°	1230.7	1228.2	1220.8	1223.9	1228.8	1233.7	1230.7	1236.8	1245.5	1248.6	1251.1
52.5°	1285.1	1281.3	1276.4	1282.0	1294.9	1304.8	1306.7	1302.4	1304.8	1306.7	1304.8
55°	1338.8	1334.5	1333.3	1343.2	1362.9	1381.5	1379.6	1367.3	1364.2	1360.5	1358.6
57.5°	1382.7	1379.6	1384.6	1401.3	1439.6	1464.3	1456.3	1427.8	1415.5	1406.8	1404.3
60°	1410.5	1409.9	1421.0	1460.0	1518.1	1552.7	1539.7	1490.9	1463.1	1455.0	1451.3
62.5°	1425.4	1426.0	1445.8	1515.0	1607.7	1654.7	1631.8	1557.0	1513.8	1505.7	1507.0
65°	1439.0	1437.1	1463.1	1561.3	1704.7	1768.4	1737.5	1636.8	1573.7	1557.6	1557.6
67.5°	1448.9	1450.7	1489.6	1607.7	1799.3	1890.2	1845.1	1721.4	1638.0	1613.9	1610.8
70°	1324.0	1341.9	1463.7	1638.6	1874.1	1997.7	1938.4	1773.4	1640.5	1571.9	1565.1
72.5°	1005.7	1022.4	1285.7	1583.6	1912.4	2069.4	1973.0	1707.2	1490.9	1403.7	1377.8
75°	663.2	675.0	958.1	1383.3	1806.1	2001.4	1796.8	1470.5	1173.8	1060.7	1067.5
77.5°	295.5	333.2	610.7	1079.2	1487.8	1610.8	1370.4	1003.2	717.0	607.0	595.2
80°	123.6	135.4	230.6	575.5	862.3	825.2	583.5	336.3	213.9	166.3	160.7
82.5°	35.9	37.1	45.7	99.5	175.5	206.4	124.2	63.0	60.0	47.6	43.9
85°	2.5	2.5	3.7	6.2	8.7	14.2	16.1	18.5	21.0	17.9	17.9
87.5°	1.2	1.2	1.2	1.9	1.9	2.5	1.9	1.9	1.9	1.9	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

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

REPORT NUMBER: SP1-2407-157-3

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

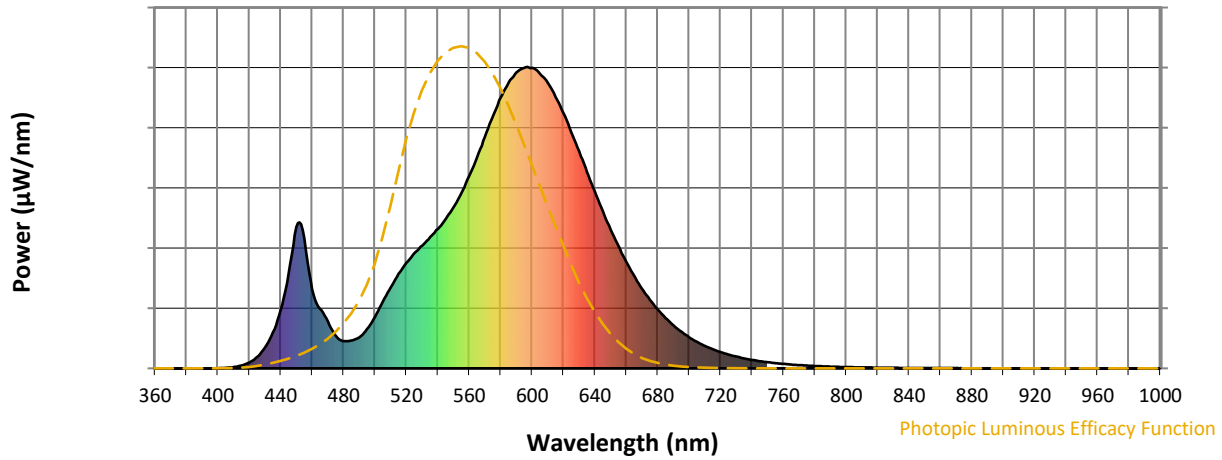


CCT = 2747K
 CIE x = 0.4552
 CIE y = 0.4082
 Duv = -0.0005

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-157-3

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			

REPORT NUMBER: SP1-2407-157-3

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			

REPORT NUMBER: SP1-2407-157-3

Melanopic Flux vs. Wavelength



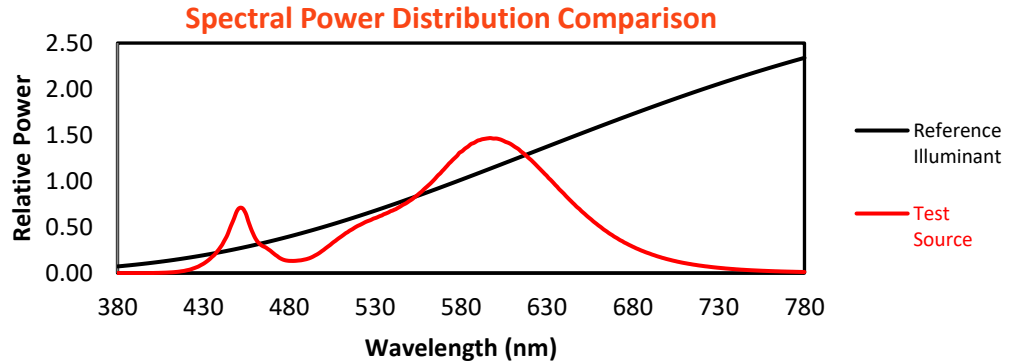
Melanopic Lumens: NR

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 ($R_{f,i}$)

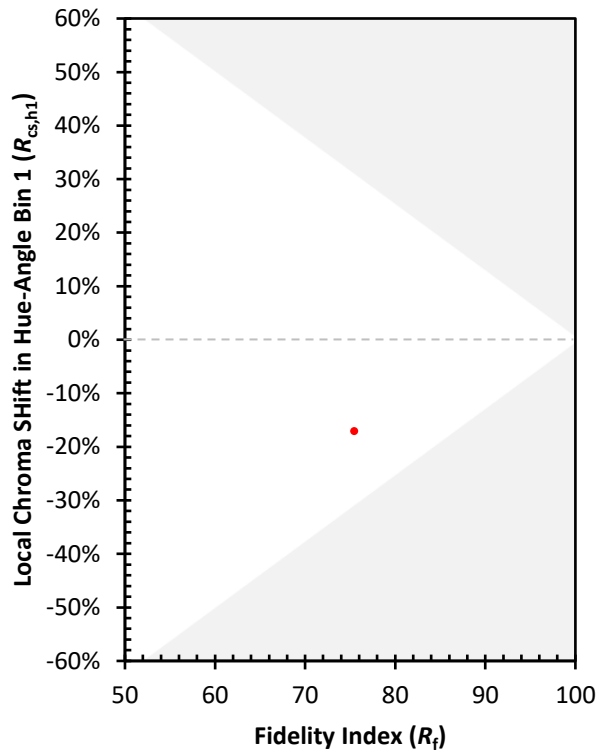
CES01 = 86	CES26 = 68	CES51 = 87	CES76 = 63
CES02 = 63	CES27 = 90	CES52 = 85	CES77 = 79
CES03 = 31	CES28 = 87	CES53 = 78	CES78 = 66
CES04 = 71	CES29 = 71	CES54 = 86	CES79 = 87
CES05 = 50	CES30 = 85	CES55 = 84	CES80 = 85
CES06 = 52	CES31 = 74	CES56 = 75	CES81 = 67
CES07 = 42	CES32 = 66	CES57 = 75	CES82 = 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)