Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number: P1433313

Luminaire Tested: EHBR1-54-UNV-A1-L930

Issue Date: 3/13/2026

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P1433313
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-5)
Test Lab:	INNOVATION CENTER
Issue Date:	3/13/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-54-UNV-A1-L930
Description:	Elevate Round Highbay at, 53000 lumens, 3000K 90CRI LEDs with A lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	47799.8 lumens
Efficiency:	N/A
Efficacy:	161.5 lumens/watt
Spacing Criteria (0/90/45):	0.8 / 1.07 / 0.95
Luminous Opening:	Circular (Dia: 1.71' x H: 0')
CIE Type:	Direct

Input Watts (W):	296
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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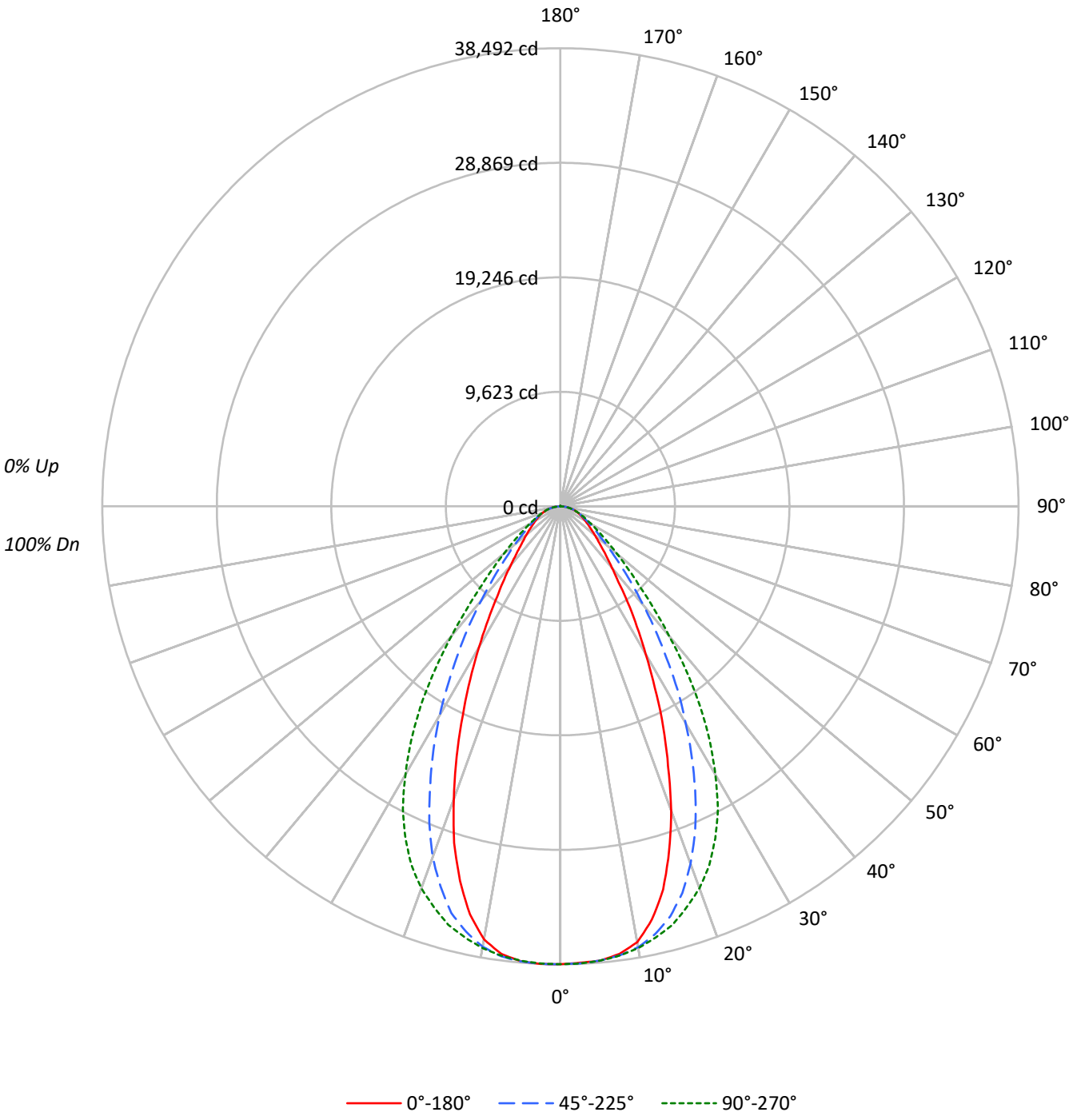
Scaled Data Report

TEST NUMBER: P1433313
CATALOG NUMBER: EHBR1-54-UNV-A1-L930

Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	98	90	83	78	95	88	82	78	85	81	77	83	79	75	80	77	74	72
4	91	82	75	70	89	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	47	42	63	53	46	42	52	46	42	51	46	42	50	45	42	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	180689	180689	180689	180689	180689
5°	180664	180638	180646	180965	180855
10°	177358	179426	179710	179203	176198
15°	162098	173409	176978	172018	158376
20°	136027	159760	170674	156752	130731
25°	105979	139163	159507	134081	100488
30°	77867	114238	141236	109903	73908
35°	56622	88823	117093	84998	52926
40°	41137	66249	87141	63452	39868
45°	32781	49014	61548	46889	31646
50°	27560	37316	45140	36085	27142
55°	24459	29942	34738	29440	24129
60°	22509	25506	28247	25349	22669
65°	21626	23112	24384	23184	21832
70°	21333	21842	22518	21965	21543
75°	21115	20982	21115	21040	21320
80°	21227	19701	19266	20007	21227
85°	19150	16240	16068	16499	19715

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
Vertical Angle: 45°
Luminance: 64487 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3633.5	7.6
10°-20°	9765.6	20.4
20°-30°	11874.8	24.8
30°-40°	9672.9	20.2
40°-50°	5807.6	12.1
50°-60°	3342.3	7.0
60°-70°	2091.8	4.4
70°-80°	1231.9	2.6
80°-90°	360.3	0.8
90°-100°	0.2	0.0
100°-110°	0.2	0.0
110°-120°	0.2	0.0
120°-130°	0.6	0.0
130°-140°	2.4	0.0
140°-150°	4.4	0.0
150°-160°	4.9	0.0
160°-170°	4.4	0.0
170°-180°	1.9	0.0
0°-30°	25273.9	52.9
0°-40°	34946.8	73.1
0°-60°	44096.8	92.3
0°-90°	47780.8	100.0
90°-120°	0.6	0.0
90°-150°	8.0	0.0
90°-180°	19.0	0.0
0°-180°	47799.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38476	38476	38476	38476	38476	
5°	38325	38319	38321	38388	38365	3622
15°	33341	35668	36402	35382	32576	9173
25°	20453	26857	30784	25877	19393	9319
35°	9877	15494	20425	14826	9232	6249
45°	4936	7380	9268	7060	4765	3894
55°	2987	3657	4243	3596	2947	2700
65°	1946	2080	2194	2086	1965	1935
75°	1164	1156	1164	1160	1175	1233
85°	355	301	298	306	366	379
90°	2	0	0	0	1	18
95°	2	0	0	0	1	1
105°	2	0	0	0	2	2
115°	2	0	0	0	2	2
125°	2	0	0	1	2	2
135°	4	3	3	3	4	3
145°	7	6	6	7	8	5
155°	12	10	8	10	13	6
165°	18	15	14	16	18	5
175°	24	21	18	21	24	2
180°	22	22	22	22	22	

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Scaled Data Report

TEST NUMBER: P1433313
CATALOG NUMBER: EHBR1-54-UNV-A1-L930

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	38476.4	38476.4	38476.4	38476.4	38476.4	38476.4	*38476.4*	38476.4	38476.4
2.5°	*38391.7*	*38426.4*	*38440.9*	*38448.9*	*38457.9*	*38482.0*	*38492.4*	*38475.6*	*38490.0*
5°	38324.8	38327.3	38319.2	38355.5	38320.8	38345.0	*38388.5*	38371.6	38365.2
7.5°	37934.8	38015.4	38062.9	38075.0	38081.4	38111.3	*38142.0*	37968.6	37942.9
10°	37193.4	37328.0	37627.0	37712.4	37686.6	37735.0	*37580.3*	37127.3	36950.1
12.5°	35568.0	36041.0	36817.9	37163.6	37100.7	37143.4	*36616.4*	35660.7	35111.0
15°	33341.4	34035.2	35667.9	36349.7	36402.1	36349.7	*35381.8*	33519.4	32575.8
17.5°	30381.4	31662.7	34066.6	35389.8	35314.1	35339.1	*33501.7*	30748.9	29669.0
20°	27219.2	28585.1	31968.1	34175.4	34152.0	34011.9	*31366.2*	27735.7	26159.4
22.5°	23642.7	25404.4	29563.4	32682.1	32673.3	32439.5	*28765.6*	24445.3	22748.1
25°	20453.0	22180.8	26857.3	30852.8	30783.5	30517.5	*25876.6*	21163.0	19393.3
27.5°	17155.4	18951.7	23968.3	28709.2	28661.6	28371.5	*23114.8*	18095.0	16410.8
30°	14359.8	16002.2	21067.1	26350.4	26045.8	26012.7	*20267.6*	15254.4	13629.7
32.5°	11964.8	13372.6	18332.0	23883.6	23344.5	23498.4	*17430.2*	12878.7	11268.5
35°	9876.8	11117.0	15493.7	21030.8	20424.8	20623.9	*14826.4*	10567.4	9232.0
37.5°	8016.0	9208.7	13088.2	18256.3	17329.5	17705.0	*12536.1*	8825.1	7754.9
40°	6710.5	7656.6	10806.8	15211.7	14214.8	14826.4	*10350.6*	7360.8	6503.4
42.5°	5782.2	6399.5	8919.4	12304.9	11540.1	11973.6	*8531.0*	6153.7	5512.1
45°	4935.9	5428.4	7380.2	9710.0	9267.5	9669.7	*7060.2*	5247.0	4765.1
47.5°	4311.4	4691.0	6075.4	7841.1	7566.3	7693.7	*5896.6*	4578.9	4187.3
50°	3772.3	4065.6	5107.7	6328.5	6178.6	6256.8	*4939.2*	3984.2	3715.1
52.5°	3353.3	3568.4	4284.0	5201.1	5127.0	5139.0	*4209.0*	3504.8	3309.7
55°	2987.4	3137.3	3657.1	4260.6	4242.9	4246.1	*3595.8*	3105.8	2947.1
57.5°	2667.4	2791.6	3142.9	3578.9	3553.1	3558.8	*3113.9*	2758.5	2656.1
60°	2396.6	2479.7	2715.7	3024.4	3007.5	3000.3	*2698.9*	2449.0	2413.6
62.5°	2156.5	2209.7	2373.3	2592.5	2560.2	2567.6	*2372.5*	2212.1	2159.8
65°	1946.2	1964.7	2079.9	2215.4	2194.4	2212.1	*2086.4*	1976.8	1964.7
67.5°	1740.7	1759.2	1826.9	1918.0	1893.8	1908.3	*1828.5*	1764.0	1753.6
70°	1553.7	1552.9	1590.8	1640.0	1640.0	1642.4	*1599.7*	1561.0	1569.0
72.5°	1360.3	1355.5	1366.7	1399.8	1390.9	1421.5	*1376.5*	1364.3	1365.9
75°	1163.7	1150.0	1156.4	1173.4	1163.7	1179.8	*1159.6*	1175.0	1175.0
77.5°	978.3	952.5	944.5	946.9	929.2	953.3	*958.2*	968.7	992.8
80°	784.9	748.6	728.5	727.7	712.4	727.7	*739.8*	761.6	784.9
82.5°	582.6	551.3	517.4	510.9	501.3	510.1	*526.2*	552.1	589.9
85°	355.4	322.3	301.4	290.2	298.2	298.2	*306.2*	342.5	365.9
87.5°	128.1	112.0	91.9	92.7	95.1	98.3	*102.3*	128.9	141.1
90°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8
92.5°	0.8	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8
95°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8
97.5°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8
100°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
102.5°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
105°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
107.5°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
110°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6

TEST NUMBER: P1433313
CATALOG NUMBER: EHBR1-54-UNV-A1-L930

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
115°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
117.5°	2.4	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.6
120°	1.6	0.0	0.0	0.0	0.0	0.0	*0.0*	0.8	1.6
122.5°	2.4	0.8	0.0	0.0	0.0	0.0	*0.0*	0.8	2.4
125°	2.4	0.8	0.0	0.0	0.0	0.0	*0.8*	0.8	2.4
127.5°	2.4	0.8	0.0	0.0	0.0	0.0	*0.8*	1.6	2.4
130°	2.4	1.6	0.8	0.0	0.8	0.8	*1.6*	1.6	2.4
132.5°	3.2	2.4	2.4	1.6	1.6	2.4	*2.4*	3.2	3.2
135°	4.0	3.2	3.2	2.4	3.2	3.2	*3.2*	3.2	4.0
137.5°	4.0	4.0	4.0	4.0	4.0	4.0	*4.0*	4.0	4.8
140°	5.6	4.8	4.8	4.8	4.8	4.8	*4.8*	5.6	5.6
142.5°	6.4	6.4	5.6	5.6	5.6	6.4	*6.4*	6.4	7.2
145°	7.2	7.2	6.4	6.4	6.4	7.2	*7.2*	8.0	8.0
147.5°	9.7	8.8	7.2	7.2	7.2	7.2	*8.0*	8.8	9.7
150°	10.5	9.7	8.0	8.0	8.0	8.0	*8.8*	10.5	11.3
152.5°	11.3	10.5	8.8	8.0	8.0	8.0	*9.7*	10.5	12.1
155°	12.1	11.3	9.7	8.0	8.0	8.8	*10.5*	12.1	12.9
157.5°	14.5	12.9	11.3	9.7	9.7	10.5	*12.1*	13.7	14.5
160°	16.1	14.5	12.9	11.3	11.3	12.1	*13.7*	15.3	16.1
162.5°	17.7	16.1	13.7	12.9	12.1	12.9	*14.5*	16.9	17.7
165°	18.5	16.9	15.3	13.7	13.7	13.7	*16.1*	17.7	18.5
167.5°	19.3	18.5	16.1	14.5	14.5	14.5	*16.9*	18.5	19.3
170°	20.1	19.3	16.9	15.3	14.5	15.3	*17.7*	19.3	20.1
172.5°	21.7	20.9	18.5	16.9	16.1	16.9	*19.3*	20.9	21.7
175°	24.1	22.5	20.9	18.5	17.7	18.5	*20.9*	22.5	24.1
177.5°	25.0	23.3	21.7	19.3	18.5	19.3	*21.7*	23.3	25.0
180°	21.7	21.7	21.7	21.7	21.7	21.7	*21.7*	21.7	21.7

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Scaled Data Report

TEST NUMBER: P1433313
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CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.44	21.71	20.81	22.02	22.34	21.42	22.69	21.79	23.00	23.32
	3H	22.01	23.13	22.39	23.46	23.83	22.76	23.89	23.15	24.22	24.59
	4H	22.68	23.73	23.08	24.08	24.46	23.32	24.37	23.73	24.72	25.11
	6H	23.23	24.20	23.65	24.57	24.96	23.75	24.72	24.17	25.09	25.49
	8H	23.43	24.34	23.86	24.74	25.14	23.89	24.81	24.32	25.20	25.60
	12H	23.56	24.43	23.99	24.82	25.25	23.97	24.84	24.40	25.23	25.66
4H	2H	21.01	22.06	21.42	22.41	22.80	21.78	22.83	22.19	23.18	23.57
	3H	22.80	23.67	23.22	24.07	24.48	23.37	24.24	23.79	24.64	25.05
	4H	23.60	24.37	24.03	24.79	25.24	24.07	24.84	24.51	25.26	25.71
	6H	24.28	24.95	24.75	25.40	25.87	24.64	25.31	25.10	25.76	26.22
	8H	24.53	25.15	25.00	25.60	26.08	24.82	25.45	25.30	25.90	26.37
	12H	24.70	25.25	25.19	25.74	26.21	24.94	25.49	25.43	25.98	26.45
8H	4H	23.88	24.50	24.35	24.95	25.42	24.30	24.92	24.77	25.37	25.85
	6H	24.70	25.21	25.20	25.70	26.19	25.00	25.51	25.51	26.01	26.49
	8H	25.03	25.48	25.55	26.00	26.49	25.26	25.72	25.79	26.24	26.73
	12H	25.28	25.68	25.79	26.17	26.75	25.46	25.86	25.97	26.35	26.93
12H	4H	23.90	24.45	24.38	24.93	25.41	24.32	24.86	24.80	25.35	25.82
	6H	24.74	25.20	25.27	25.72	26.21	25.05	25.50	25.57	26.02	26.51
	8H	25.13	25.53	25.65	26.03	26.60	25.36	25.76	25.88	26.26	26.83

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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-5

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L930-N

Data in this report applies to families of products including EHBR-60-L930-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

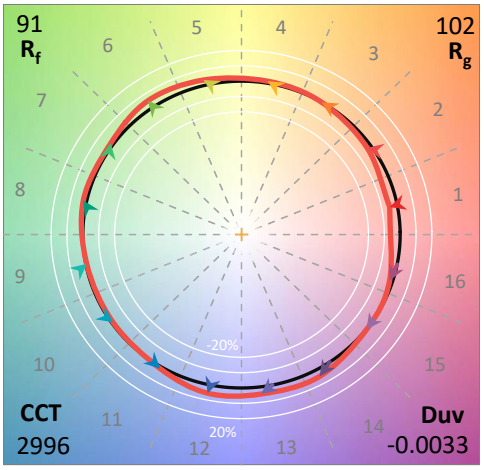
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-5
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/05/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**EHBR-60-L930-N**
Description:	Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K):	2996
CIE u':	0.2519
CIE v':	0.5169
Duv:	-0.0033
CIE x:	0.4325
CIE y:	0.3945
CIE z:	0.1730
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	584
Purity:	48.21818
Rf:	91.3
Rg:	102

CRI (Ra):	94.4
R1:	96.8
R2:	98.1
R3:	97.8
R4:	95.6
R5:	96.9
R6:	95.7
R7:	90.9
R8:	83.0
R9:	61.4
R10:	94.4
R11:	95.7
R12:	88.5
R13:	97.3
R14:	97.8
R15:	92.3



Test Conditions

Stabilization Time:	40M
Operation Time:	1H 40M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-5

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

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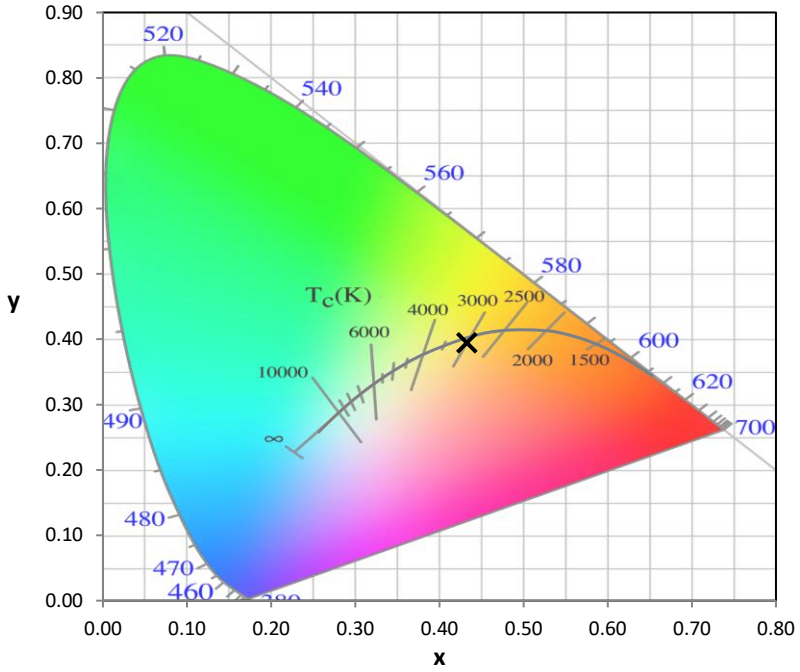
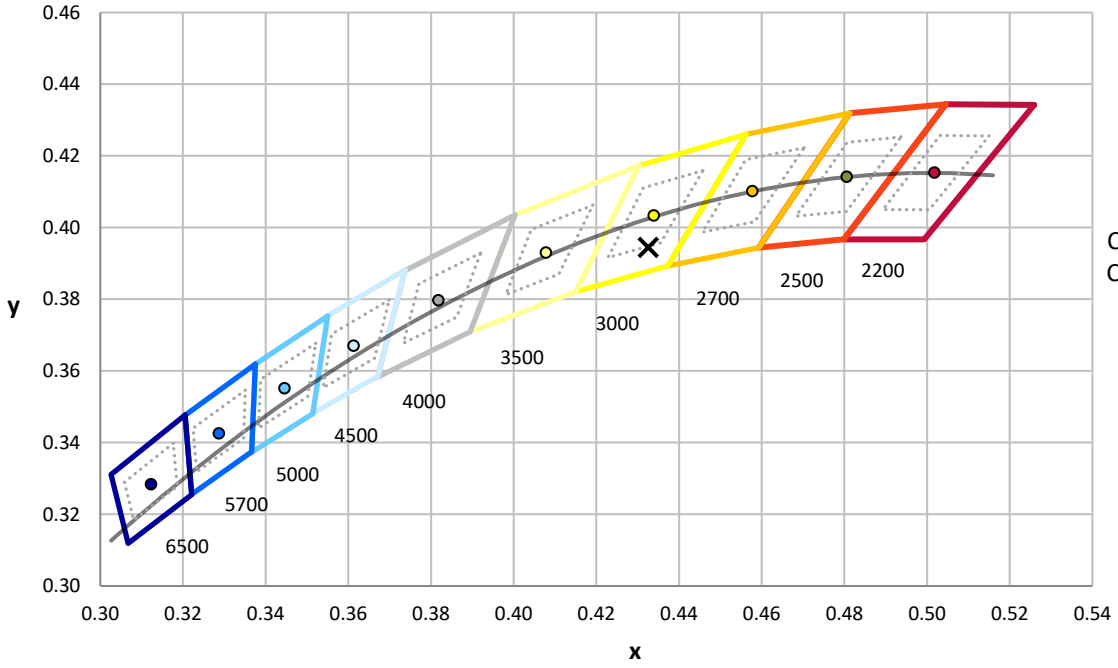
CIE 1931 Chromaticity Diagram



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



CCT = 2996K
CIE x = 0.4325
CIE y = 0.3945
Duv = -0.0033

Point lies inside the ANSI 3000K 7-step quadrangle

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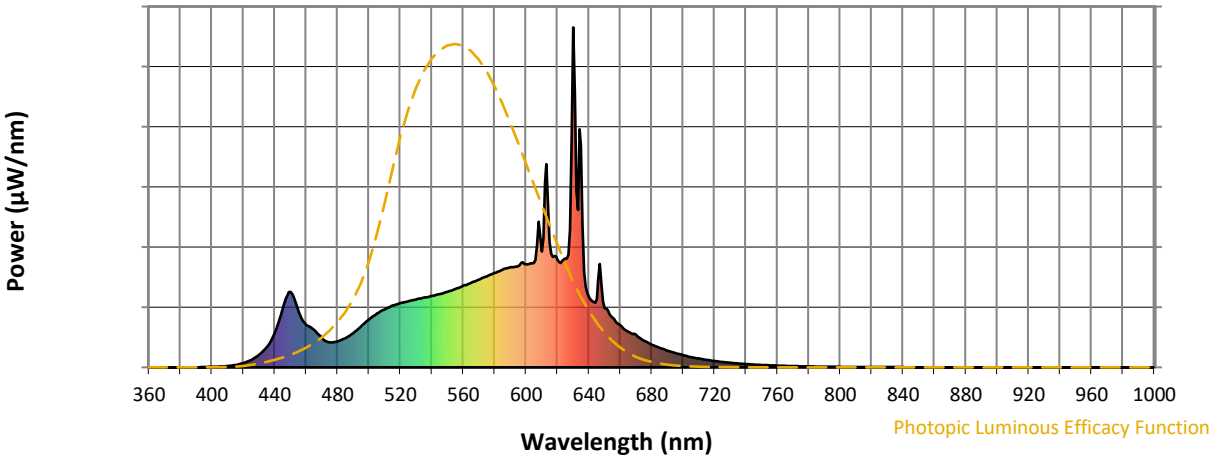
Photopic Flux vs. Wavelength



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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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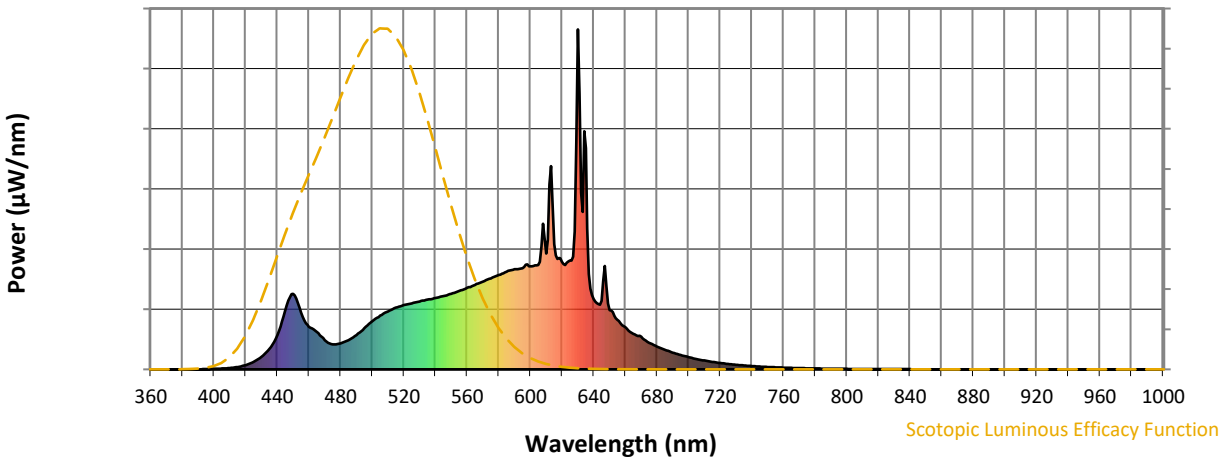
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.44**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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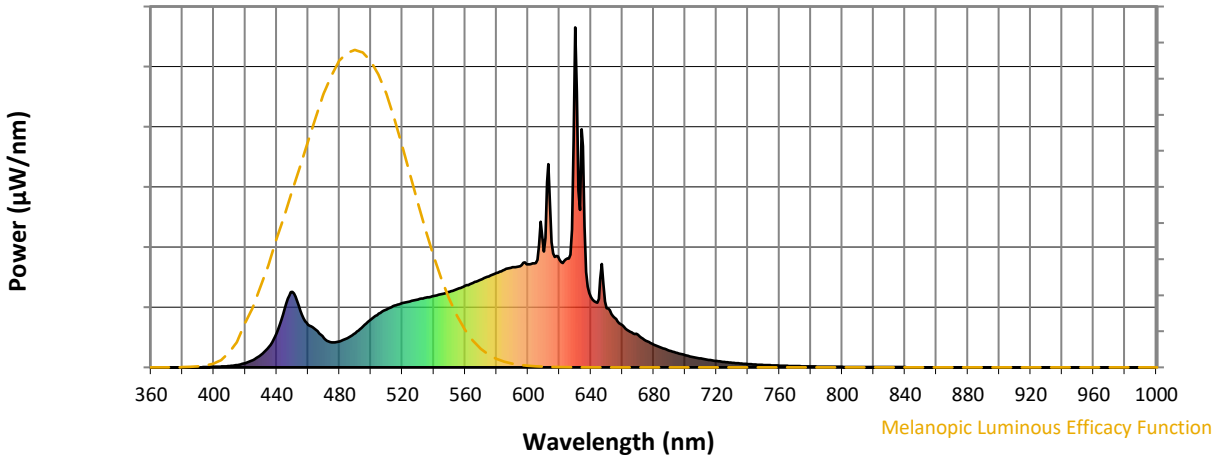
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.85**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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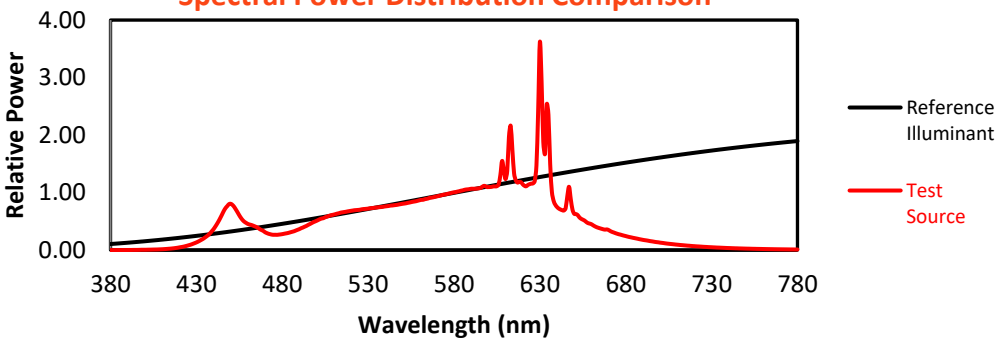
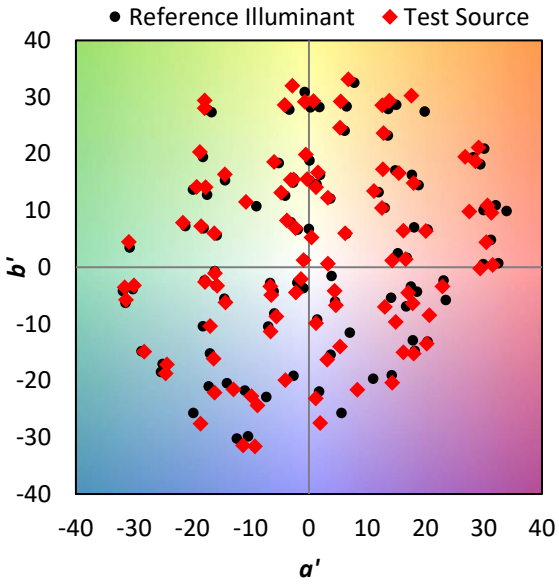
Summary

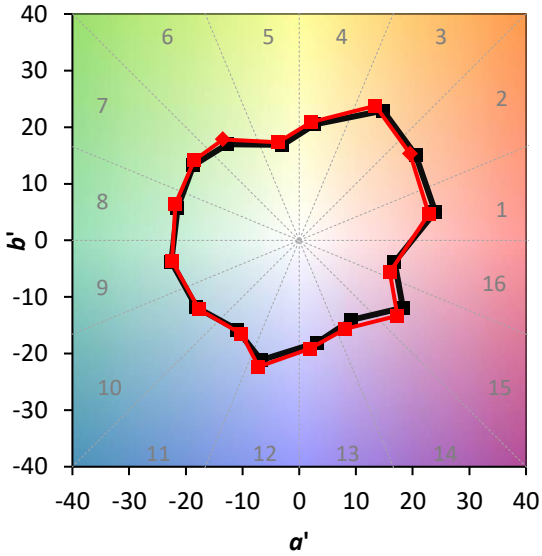
R_f = 91.3
R_g = 102
CIE R_a = 94.4
R_9 = 61.4

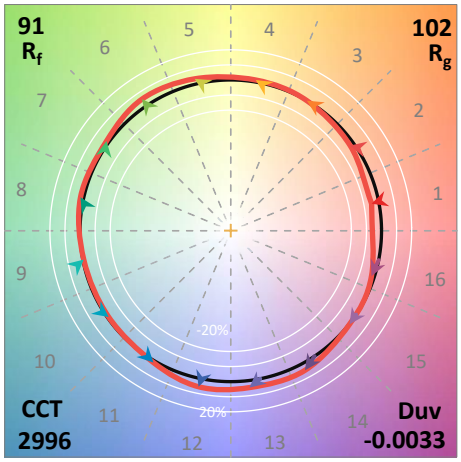
Spectral Power Distribution Comparison

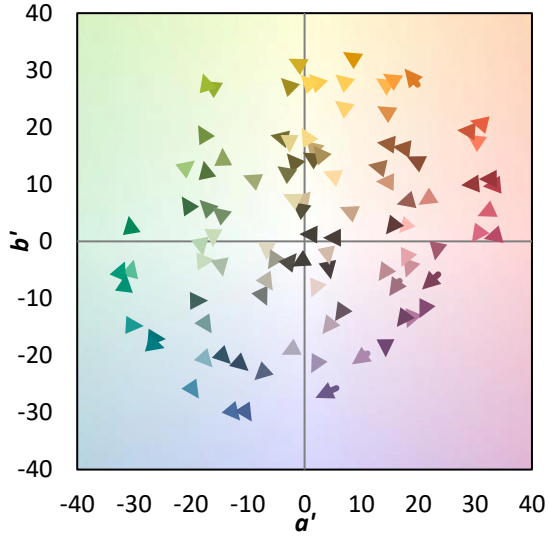


Color Vector Graphics









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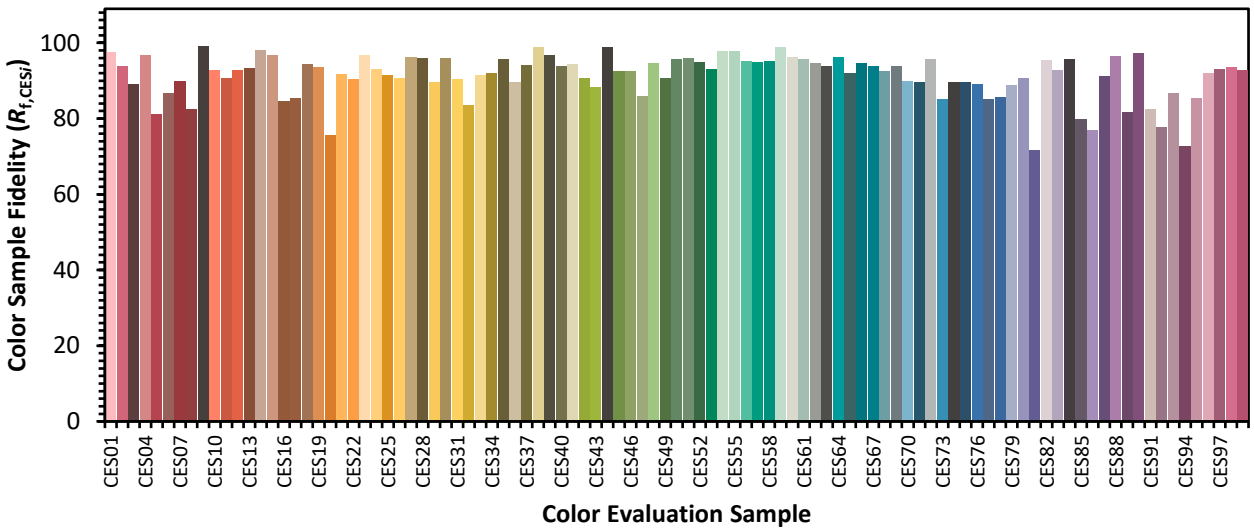
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 91	CES51 = 96	CES76 = 89
CES02 = 63	CES27 = 96	CES52 = 95	CES77 = 85
CES03 = 32	CES28 = 96	CES53 = 93	CES78 = 86
CES04 = 70	CES29 = 90	CES54 = 98	CES79 = 89
CES05 = 51	CES30 = 96	CES55 = 98	CES80 = 91
CES06 = 51	CES31 = 90	CES56 = 95	CES81 = 72
CES07 = 44	CES32 = 84	CES57 = 95	CES82 = 95
CES08 = 42	CES33 = 91	CES58 = 95	CES83 = 93
CES09 = 29	CES34 = 92	CES59 = 99	CES84 = 96
CES10 = 76	CES35 = 96	CES60 = 96	CES85 = 80
CES11 = 59	CES36 = 90	CES61 = 96	CES86 = 77
CES12 = 65	CES37 = 94	CES62 = 95	CES87 = 91
CES13 = 44	CES38 = 99	CES63 = 94	CES88 = 96
CES14 = 74	CES39 = 97	CES64 = 96	CES89 = 82
CES15 = 72	CES40 = 94	CES65 = 92	CES90 = 97
CES16 = 48	CES41 = 94	CES66 = 95	CES91 = 82
CES17 = 50	CES42 = 91	CES67 = 94	CES92 = 78
CES18 = 57	CES43 = 88	CES68 = 93	CES93 = 87
CES19 = 72	CES44 = 99	CES69 = 94	CES94 = 73
CES20 = 67	CES45 = 93	CES70 = 90	CES95 = 85
CES21 = 86	CES46 = 93	CES71 = 90	CES96 = 92
CES22 = 79	CES47 = 86	CES72 = 96	CES97 = 93
CES23 = 92	CES48 = 95	CES73 = 85	CES98 = 94
CES24 = 91	CES49 = 91	CES74 = 90	CES99 = 93
CES25 = 72	CES50 = 96	CES75 = 90	



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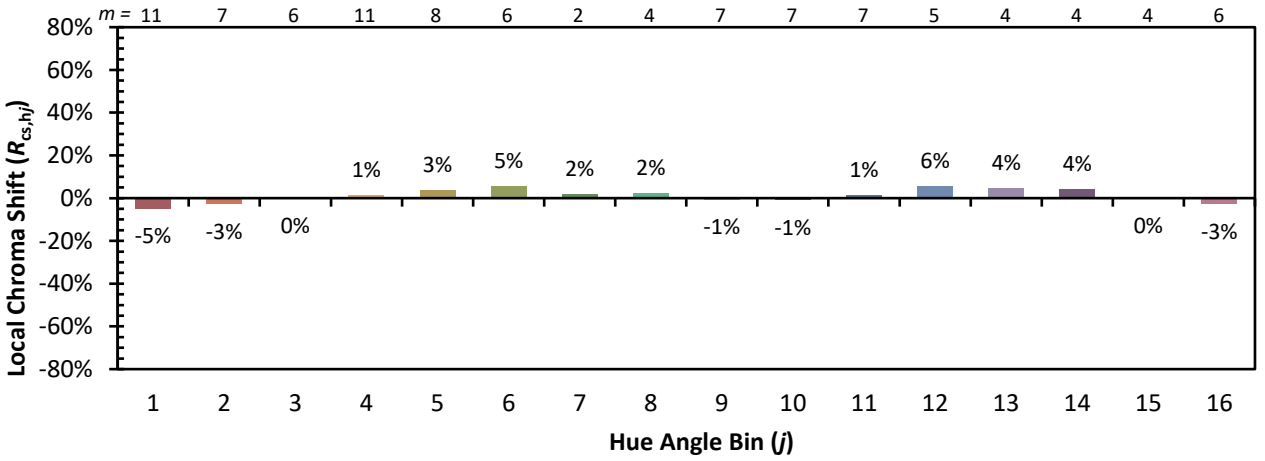
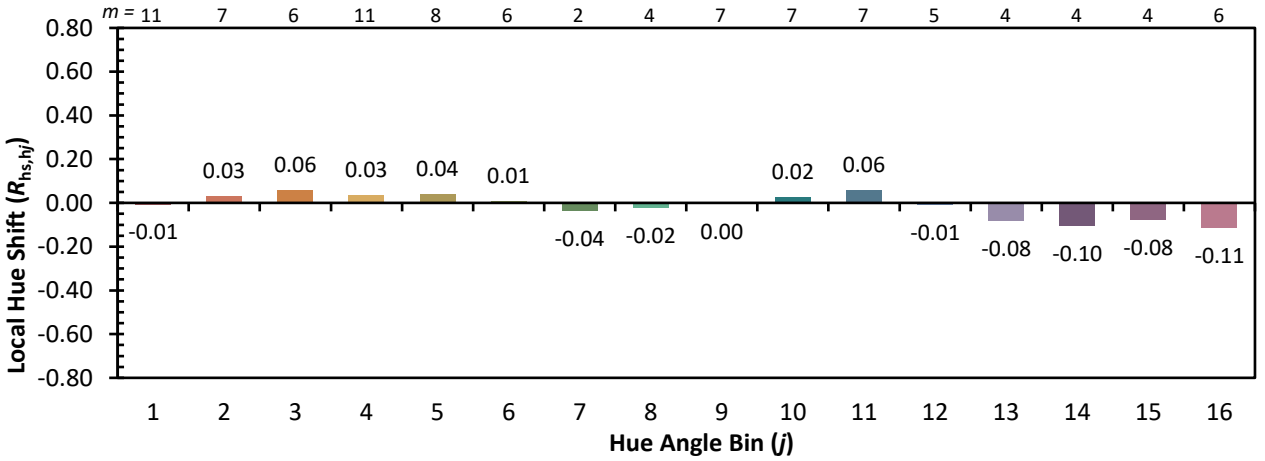
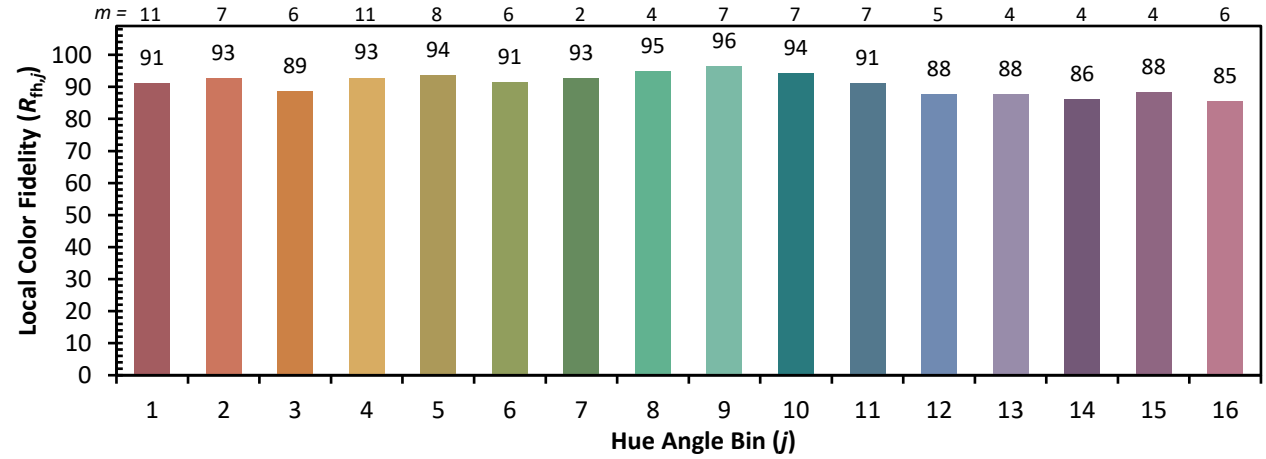
Color Rendition by Hue-Angle Bin







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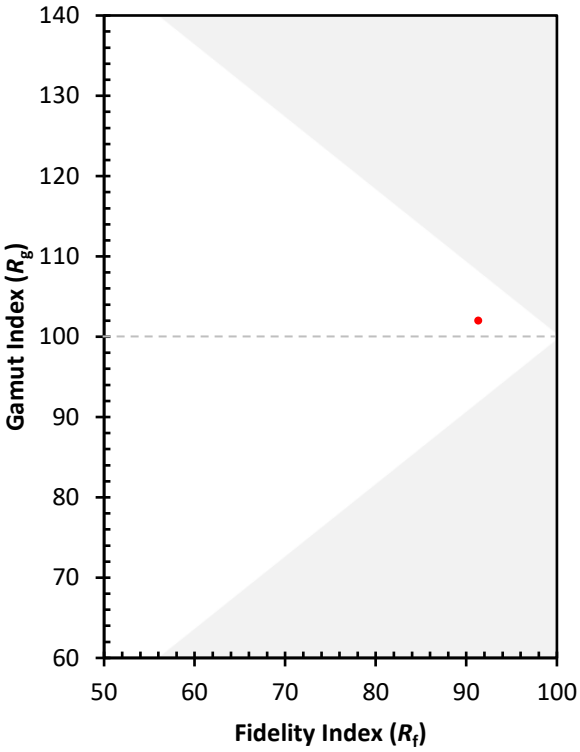
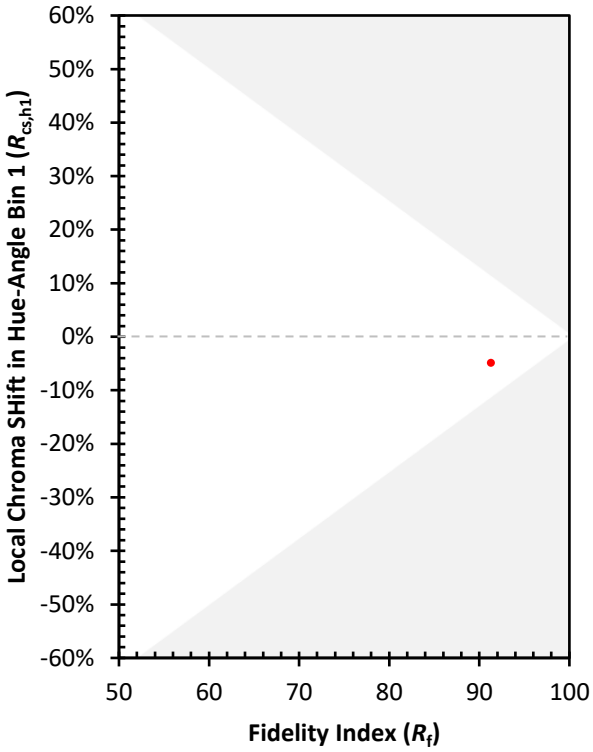
Measure Comparisons





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