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:

Luminaire Tested: EHBR1-54-UNV-ASM-L840-UPL15

Issue Date: 3/20/2026

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:	
	REPORT IS A COMBINATION OF REPORTS P1431869 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-54-UNV-ASM-L840-UPL15
Description:	Elevate Round Highbay at, 54000 lumens, 4000K 80CRI LEDs with ASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	55228.9 lumens
Efficiency:	N/A
Efficacy:	180.9 lumens/watt
Spacing Criteria (0/90/45):	0.84 / 0.99 / 0.92
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	305.3
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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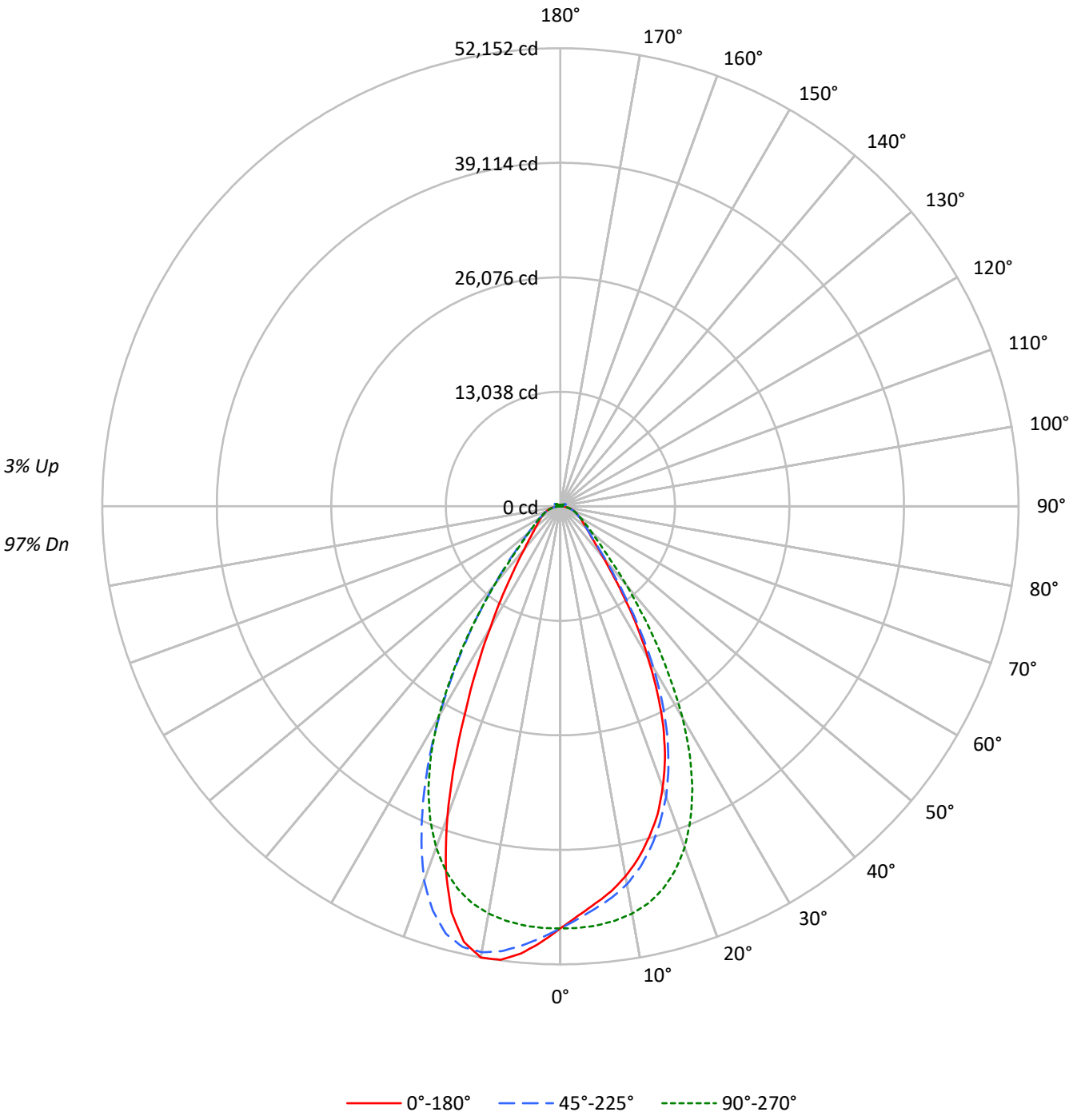
Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-54-UNV-ASM-L840-UPL15

Luminous Intensity Polar Plot



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Scaled Data Report

TEST NUMBER:
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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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97
1	111	108	105	102	108	105	103	100	101	98	96	96	95	93	93	91	90	88
2	104	98	93	89	102	96	92	88	93	89	86	89	86	83	86	83	81	79
3	98	90	84	79	95	88	83	79	85	81	77	82	79	75	80	77	74	72
4	92	83	76	71	90	82	76	71	79	74	70	77	72	69	74	71	67	66
5	87	77	70	65	85	76	69	65	73	68	64	71	67	63	70	65	62	60
6	82	71	65	60	80	70	64	59	69	63	59	67	62	58	65	61	57	56
7	77	67	60	55	75	66	59	55	64	58	54	63	57	54	61	57	53	52
8	73	62	56	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48
9	69	58	52	47	68	58	52	47	57	51	47	55	50	47	54	50	46	45
10	66	55	49	44	64	54	48	44	53	48	44	52	47	44	51	47	43	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	225705	225705	225705	225705	225705
5°	212690	215176	224331	235091	239320
10°	201293	205556	221574	242639	245464
15°	185940	190907	215032	240149	228112
20°	165621	171199	201109	220744	182915
25°	138797	144050	177997	185155	126734
30°	103848	109869	144527	143084	82450
35°	69134	73308	103659	101985	53396
40°	43600	46594	67019	67451	36804
45°	31065	32357	42523	44350	28509
50°	25876	26082	31579	32401	24225
55°	22842	22895	25782	26462	22068
60°	21149	20969	22326	22798	21021
65°	20187	20006	20351	20749	20274
70°	19608	19268	19289	19659	19864
75°	18640	18078	18040	18679	19217
80°	16960	15777	15846	16960	18142
85°	12351	10253	10253	11723	12953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
Vertical Angle: 45°
Luminance: 59785 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4570.0	8.3
10°-20°	12433.0	22.5
20°-30°	14581.3	26.4
30°-40°	10140.4	18.4
40°-50°	5039.3	9.1
50°-60°	3014.0	5.5
60°-70°	2121.4	3.8
70°-80°	1366.5	2.5
80°-90°	436.7	0.8
90°-100°	41.7	0.1
100°-110°	262.4	0.5
110°-120°	482.9	0.9
120°-130°	288.5	0.5
130°-140°	176.6	0.3
140°-150°	124.1	0.2
150°-160°	83.2	0.2
160°-170°	49.9	0.1
170°-180°	17.1	0.0
0°-30°	31584.3	57.2
0°-40°	41724.6	75.5
0°-60°	49778.0	90.1
0°-90°	53702.6	97.2
90°-120°	787.0	1.4
90°-150°	1376.3	2.5
90°-180°	1526.0	2.8
0°-180°	55228.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	48062	48062	48062	48062	48062	
5°	45413	45944	47898	50196	51099	4260
15°	39009	40051	45113	50382	47857	10879
25°	27718	28767	35546	36975	25309	12506
35°	12689	13455	19025	18718	9800	8083
45°	5026	5235	6880	7176	4613	4063
55°	3087	3094	3484	3576	2982	2801
65°	2107	2088	2124	2166	2116	2092
75°	1313	1274	1271	1316	1354	1386
85°	424	352	352	403	445	437
90°	12	31	12	34	18	26
95°	19	68	22	60	25	19
105°	92	455	121	487	67	123
115°	417	538	514	597	443	384
125°	302	290	330	323	350	275
135°	222	225	212	236	246	174
145°	189	198	195	198	204	120
155°	174	178	177	177	186	81
165°	172	175	175	176	183	49
175°	176	179	180	180	188	17
180°	180	180	180	180	180	

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TEST NUMBER:
CATALOG NUMBER: EHBR1-54-UNV-ASM-L840-UPL15

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	48062.3	48062.3	48062.3	48062.3	48062.3	48062.3	48062.3	48062.3	*48062.3*
2.5°	46635.7	46666.3	46992.5	47417.0	48034.4	48655.3	49158.2	49489.9	*49653.9*
5°	45412.7	45582.1	45943.5	46723.1	47898.3	49142.0	50195.6	50885.0	*51098.6*
7.5°	44221.2	44319.5	44924.2	45909.3	47572.9	49510.6	51076.1	51880.9	*52077.4*
10°	*42767.5*	*42990.1*	*43673.3*	*44835.0*	*47076.4*	*49743.1*	*51551.9*	*52128.7*	*52152.2*
12.5°	41057.0	41351.7	42057.3	43522.8	46284.2	49660.2	51392.4	51203.2	*50773.3*
15°	39009.3	39268.0	40051.2	41750.9	45112.6	49169.0	50382.1	48841.9	*47856.8*
17.5°	36797.7	37032.0	37712.5	39584.3	43461.5	48249.8	48273.2	45226.1	*43367.8*
20°	34039.9	34223.8	35186.3	37023.0	41333.7	46775.3	45369.4	39796.1	*37594.4*
22.5°	31105.5	31277.6	32132.9	34044.4	38666.0	44787.2	41325.5	34333.7	*31329.9*
25°	27717.7	27811.4	28766.7	30495.3	35545.9	42351.2	36975.2	28381.9	*25308.7*
27.5°	23906.3	24065.9	25065.3	26830.9	31876.0	39263.5	32342.9	23192.6	*20357.2*
30°	19975.1	20239.2	21133.2	22714.0	27799.7	35305.2	27522.1	18470.0	*15859.2*
32.5°	16306.2	16496.3	17133.5	18785.5	23235.8	31425.4	22892.4	14799.3	*12587.6*
35°	12688.6	12878.7	13454.6	15076.9	19025.2	26571.3	18717.9	11628.7	*9800.1*
37.5°	9699.2	10035.3	10404.8	11721.6	14930.9	21984.9	14921.0	9363.9	*7949.0*
40°	7556.9	7611.0	8076.0	8918.7	11616.1	17190.3	11690.9	7474.9	*6379.0*
42.5°	6049.1	6196.0	6396.1	7027.0	8801.5	13144.6	9189.1	6134.8	*5418.3*
45°	5026.2	5083.9	5235.3	5658.9	6880.1	9673.0	7175.7	5175.8	*4612.6*
47.5°	4397.2	4371.9	4469.3	4786.5	5603.0	7475.8	5815.7	4439.5	*4044.8*
50°	3856.4	3841.1	3887.1	4098.8	4706.3	5736.4	4828.9	3875.3	*3610.4*
52.5°	3436.4	3450.0	3454.5	3586.0	4043.0	4678.3	4112.4	3453.6	*3275.1*
55°	3086.8	3103.9	3094.0	3191.3	3484.2	3933.0	3576.1	3105.7	*2982.2*
57.5°	2813.7	2801.1	2787.5	2839.8	3059.7	3336.4	3105.7	2809.2	*2727.2*
60°	2542.4	2530.7	2520.8	2555.0	2683.9	2889.4	2740.7	2550.5	*2527.1*
62.5°	2309.9	2302.7	2301.8	2295.5	2394.6	2524.4	2423.4	2318.0	*2297.3*
65°	2107.1	2099.0	2088.2	2078.3	2124.2	2245.0	2165.7	2108.9	*2116.1*
67.5°	1904.3	1904.3	1885.4	1870.1	1915.1	1978.2	1944.0	1911.5	*1919.6*
70°	1720.5	1721.4	1690.7	1679.0	1692.5	1760.1	1725.0	1729.5	*1743.0*
72.5°	1523.1	1501.5	1478.9	1478.0	1479.8	1532.1	1520.4	1531.2	*1545.6*
75°	1313.1	1287.9	1273.5	1257.2	1270.8	1310.4	1315.8	1331.1	*1353.7*
77.5°	1110.3	1071.6	1059.9	1051.7	1042.7	1087.8	1104.9	1125.7	*1159.0*
80°	892.2	849.9	830.0	818.3	833.6	854.4	892.2	907.6	*954.4*
82.5°	659.7	628.2	603.8	602.9	610.1	629.1	661.5	690.4	*717.4*
85°	424.5	374.0	352.4	360.5	352.4	381.2	402.9	437.1	*445.2*
87.5°	153.2	119.9	114.5	126.2	123.5	132.5	151.4	164.9	*165.8*
90°	11.6	18.3	30.7	19.9	11.6	20.0	34.1	21.9	*17.9*
92.5°	16.6	27.4	48.8	25.7	15.0	26.6	47.3	27.7	*22.1*
95°	19.1	31.5	67.9	34.0	22.5	32.4	59.7	30.2	*25.4*
97.5°	24.9	34.8	77.8	41.4	34.0	39.8	67.2	31.9	*29.5*
100°	32.4	40.6	120.8	51.4	44.8	44.8	120.9	36.0	*32.8*
102.5°	53.9	85.2	255.5	95.2	67.1	87.0	278.0	68.3	*38.6*
105°	91.9	178.6	454.7	197.7	120.8	196.1	487.2	168.3	*66.8*
107.5°	158.0	319.1	600.3	349.0	227.5	363.9	626.9	327.0	*147.0*
110°	293.6	423.3	629.2	478.7	363.0	507.8	683.9	446.1	*290.8*

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Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-54-UNV-ASM-L840-UPL15

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	396.1	454.7	602.7	528.3	472.1	565.6	668.2	494.0	*399.9*
115°	416.8	437.3	538.3	515.9	513.5	557.4	597.1	492.3	*442.9*
117.5°	402.7	399.3	457.3	464.8	496.2	510.2	516.1	462.6	*445.4*
120°	372.9	355.5	382.0	406.1	448.2	442.5	436.0	418.8	*420.6*
122.5°	335.7	315.9	328.4	346.6	388.8	376.4	369.0	375.0	*386.7*
125°	301.9	281.2	290.4	295.5	330.1	317.7	322.8	337.0	*349.6*
127.5°	271.3	257.2	263.2	259.1	281.4	275.6	288.9	304.8	*315.7*
130°	250.7	239.1	246.7	236.0	246.8	247.5	265.0	279.2	*285.9*
132.5°	234.2	226.8	236.1	222.9	225.3	231.1	247.7	260.3	*264.5*
135°	221.8	216.1	225.3	213.9	212.2	220.3	236.2	243.7	*246.3*
137.5°	212.0	207.1	217.2	208.2	204.8	213.0	224.6	231.4	*230.6*
140°	203.9	199.8	209.9	202.4	200.8	208.9	213.9	221.4	*221.6*
142.5°	194.9	191.6	203.3	198.4	196.7	204.0	206.5	212.4	*211.7*
145°	189.3	186.8	198.4	195.1	195.1	200.8	198.3	205.0	*204.3*
147.5°	184.5	182.8	192.7	191.0	191.0	195.1	192.6	198.4	*197.8*
150°	180.5	178.8	187.8	186.1	186.9	190.2	186.0	192.7	*193.7*
152.5°	176.5	173.9	182.1	180.4	181.2	184.5	181.2	188.7	*188.8*
155°	174.2	171.6	178.1	176.3	177.2	178.9	177.2	184.8	*185.7*
157.5°	173.5	170.9	175.8	174.9	174.9	176.6	175.8	182.5	*183.4*
160°	172.9	171.1	175.2	174.3	174.4	176.0	176.1	182.0	*182.9*
162.5°	172.2	170.5	175.3	174.5	174.5	174.5	175.5	181.4	*183.2*
165°	172.3	171.4	174.7	174.7	174.7	175.6	175.7	180.8	*183.4*
167.5°	172.3	171.5	175.6	175.6	175.7	174.9	176.7	181.9	*184.5*
170°	173.3	172.4	175.7	175.8	175.0	175.9	176.8	182.0	*184.6*
172.5°	175.1	174.2	178.4	177.6	177.7	177.7	178.7	183.1	*186.6*
175°	176.1	175.2	178.6	178.6	179.5	179.5	180.5	184.1	*187.6*
177.5°	177.8	176.9	178.6	178.6	178.6	180.4	182.2	185.9	*190.1*
180°	180.4	180.4	180.4	180.4	180.4	180.4	180.4	180.4	*180.4*

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Scaled Data Report

TEST NUMBER: CATALOG
CATALOG NUMBER: EHBR1-54-UNV-ASM-L840-UPL15

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	19.10	20.26	19.52	20.64	21.02	19.87	21.03	20.28	21.40	21.79
	3H	20.92	21.95	21.35	22.34	22.78	21.43	22.46	21.86	22.85	23.29
	4H	21.66	22.62	22.11	23.03	23.49	22.08	23.04	22.53	23.45	23.91
	6H	22.23	23.11	22.69	23.54	24.01	22.57	23.46	23.04	23.89	24.35
	8H	22.41	23.25	22.89	23.70	24.17	22.73	23.57	23.21	24.02	24.49
	12H	22.51	23.31	22.99	23.75	24.25	22.81	23.61	23.30	24.05	24.55
4H	2H	19.62	20.59	20.07	21.00	21.45	20.25	21.21	20.70	21.62	22.08
	3H	21.66	22.46	22.13	22.92	23.39	22.06	22.86	22.52	23.32	23.79
	4H	22.53	23.24	23.01	23.72	24.23	22.85	23.56	23.33	24.03	24.55
	6H	23.22	23.84	23.74	24.34	24.87	23.48	24.10	24.00	24.60	25.13
	8H	23.45	24.02	23.97	24.52	25.06	23.69	24.26	24.21	24.76	25.30
	12H	23.59	24.09	24.12	24.63	25.17	23.81	24.31	24.34	24.85	25.39
8H	4H	22.79	23.36	23.31	23.86	24.40	23.09	23.67	23.61	24.17	24.70
	6H	23.61	24.07	24.16	24.62	25.17	23.86	24.32	24.41	24.87	25.42
	8H	23.91	24.32	24.48	24.89	25.45	24.14	24.55	24.71	25.12	25.68
	12H	24.11	24.47	24.67	25.02	25.66	24.32	24.69	24.89	25.23	25.87
12H	4H	22.80	23.30	23.33	23.84	24.38	23.10	23.61	23.64	24.14	24.68
	6H	23.64	24.06	24.21	24.62	25.18	23.90	24.32	24.47	24.88	25.44
	8H	23.99	24.36	24.56	24.90	25.54	24.23	24.60	24.79	25.14	25.78

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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: SP1-2506-472-1

Test Date: 07/30/2025

Luminaire Tested: EHBR-60-L840-N

Data in this report applies to families of products including EHBR-60-L840-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

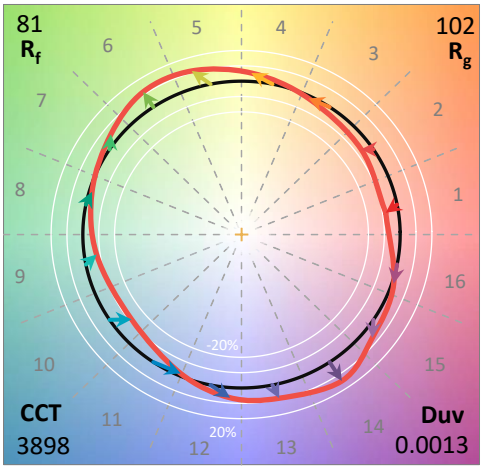
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-1
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-L840-N**
Description:	Elevate Round Highbay at, 60000 lumens, 4000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K):	3898
CIE u':	0.2263
CIE v':	0.5052
Duv:	0.0013
CIE x:	0.3861
CIE y:	0.3831
CIE z:	0.2308
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	578
Purity:	30.85729
Rf:	80.7
Rg:	102.1

CRI (Ra):	82.1				
R1:	84.4	R9:	38.5		
R2:	83.5	R10:	58.9		
R3:	80.8	R11:	83.6		
R4:	83.9	R12:	54.2		
R5:	82.1	R13:	82.8		
R6:	77.3	R14:	88.2		
R7:	86.4	R15:	81.2		
R8:	78.3				



Test Conditions

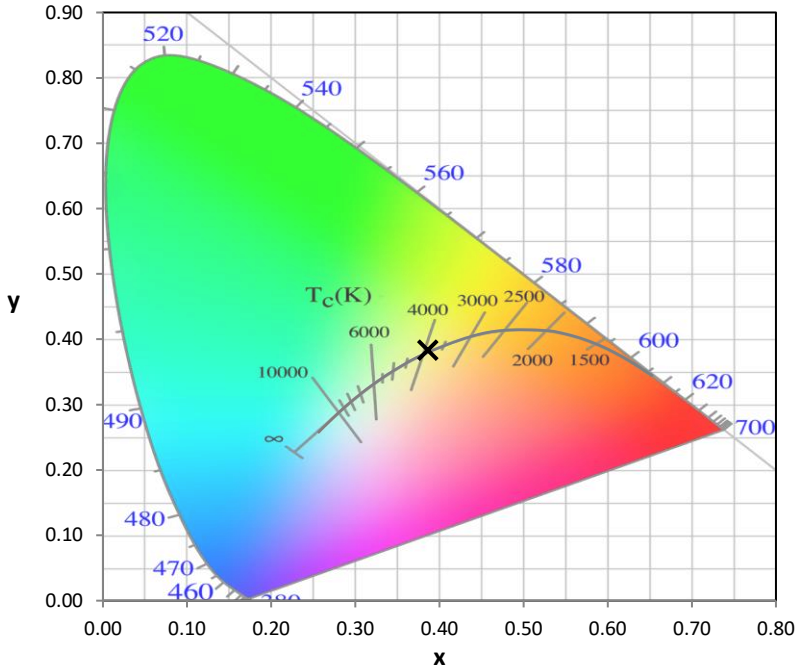
Stabilization Time:	42M
Operation Time:	1H 42M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-1

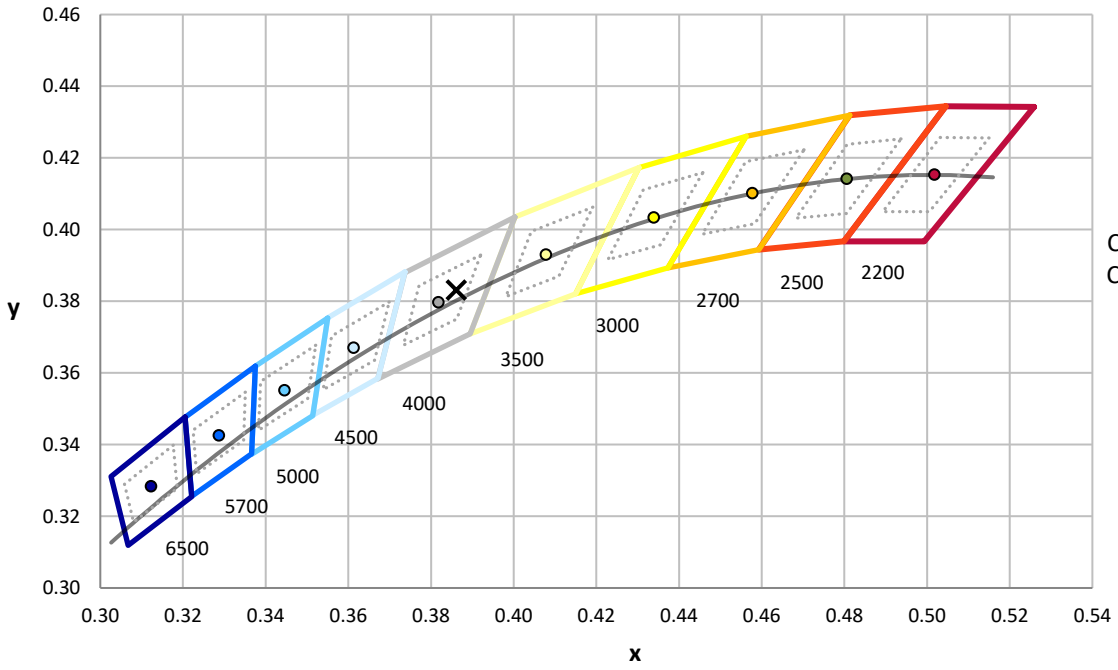
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2506-472-1

CIE 1931 Chromaticity Diagram



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

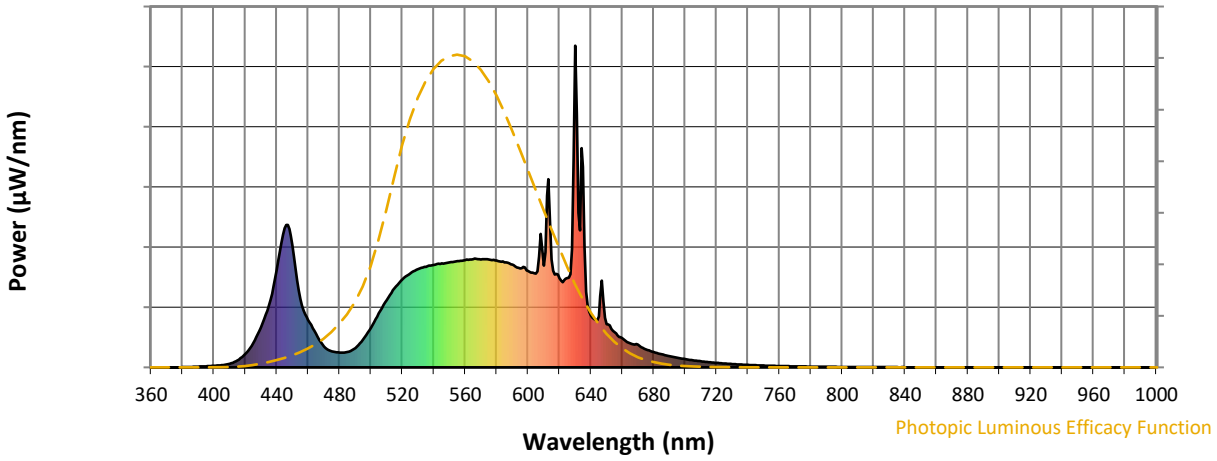


CCT = 3898K
CIE x = 0.3861
CIE y = 0.3831
Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-1

Photopic Flux vs. Wavelength

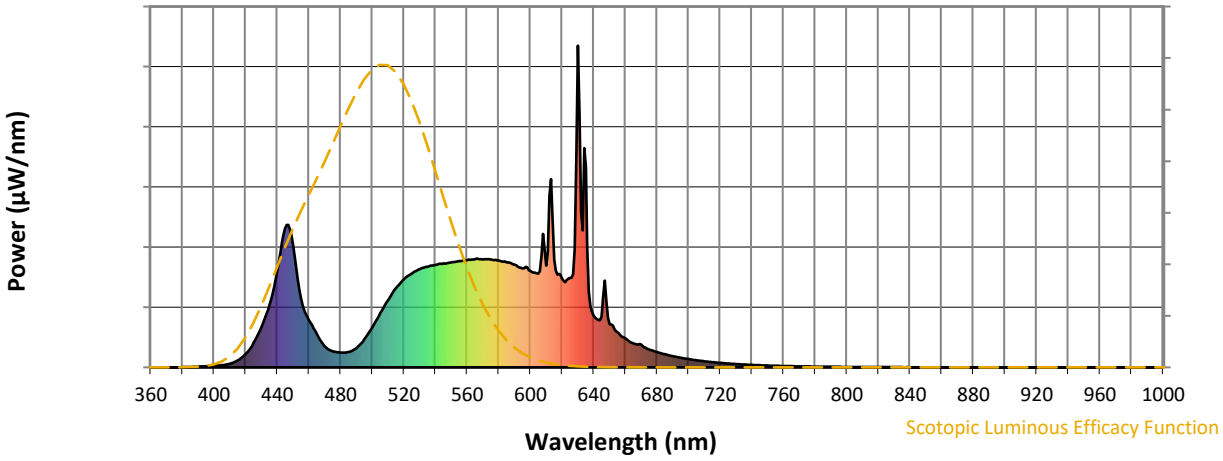


Photopic Lumens: NR

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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-1

Scotopic Flux vs. Wavelength

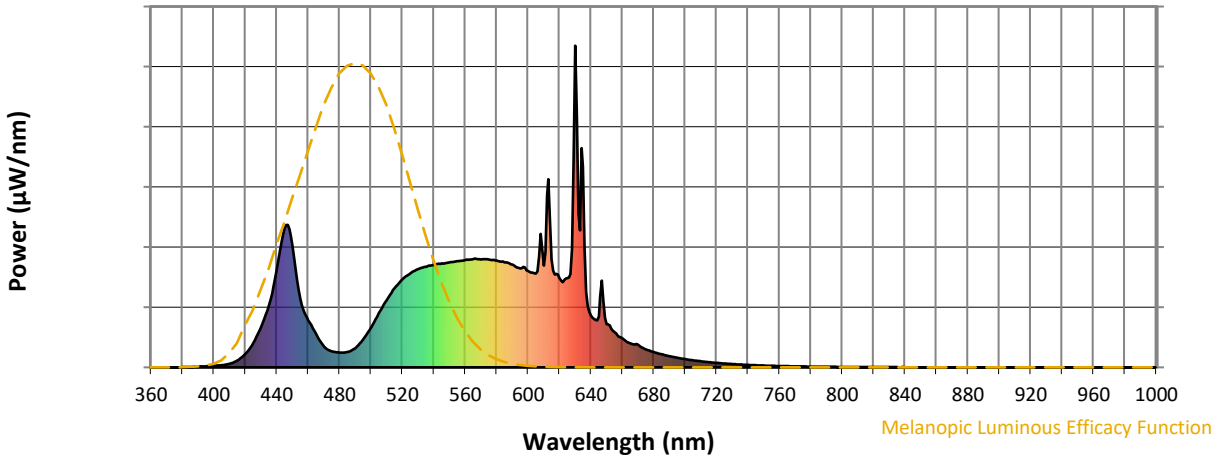


Scotopic Lumens: NR **S/P: 1.55**

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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.99**

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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

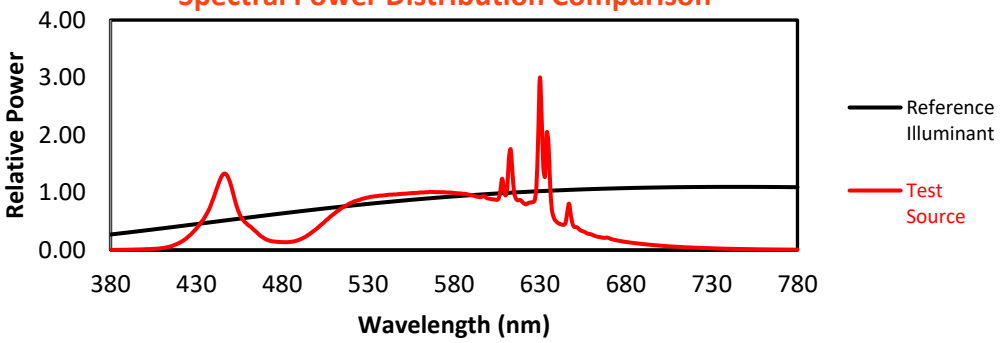
REPORT NUMBER: SP1-2506-472-1

TM-30-18

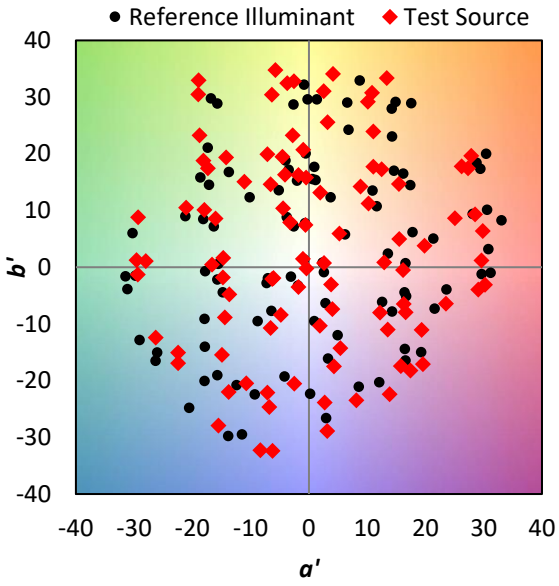
Summary

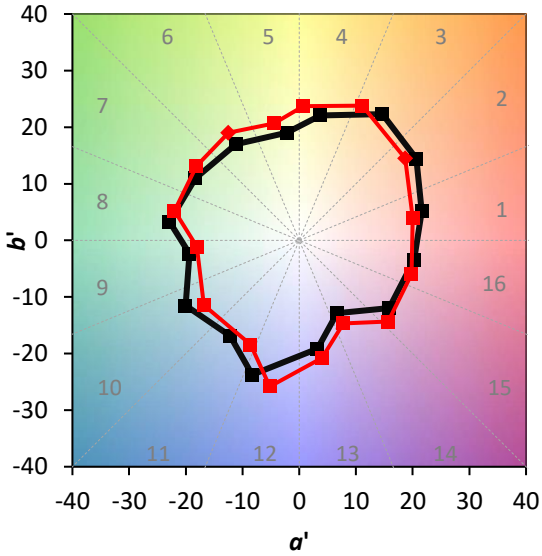
R_f = 80.7
R_g = 102.1
CIE R_a = 82.1
R_9 = 38.5

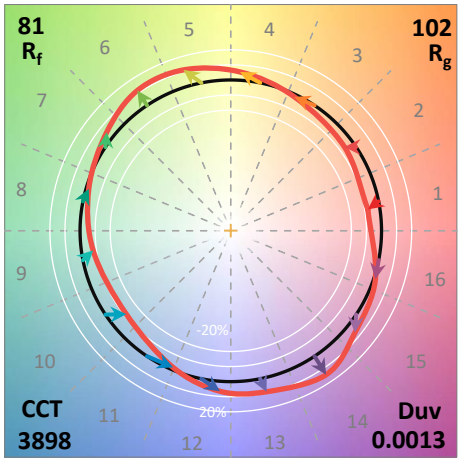
Spectral Power Distribution Comparison

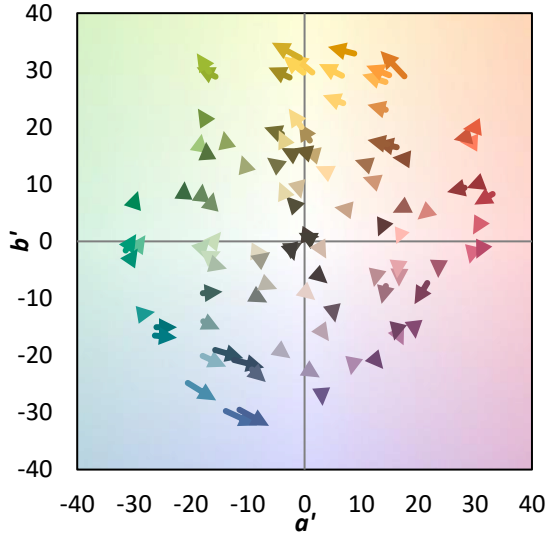


Color Vector Graphics







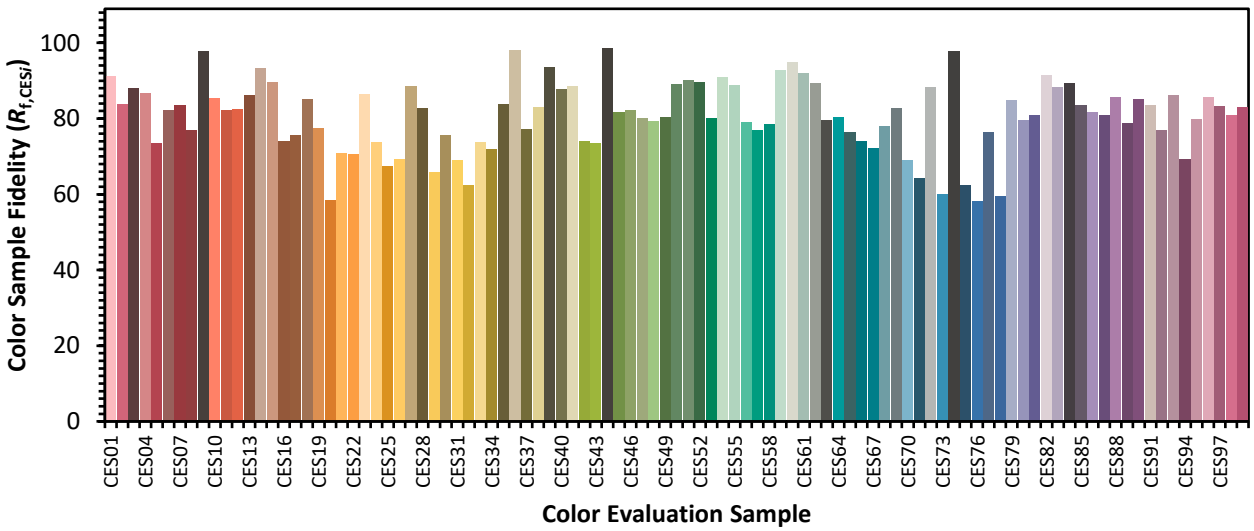


REPORT NUMBER: SP1-2506-472-1

TM-30-18

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

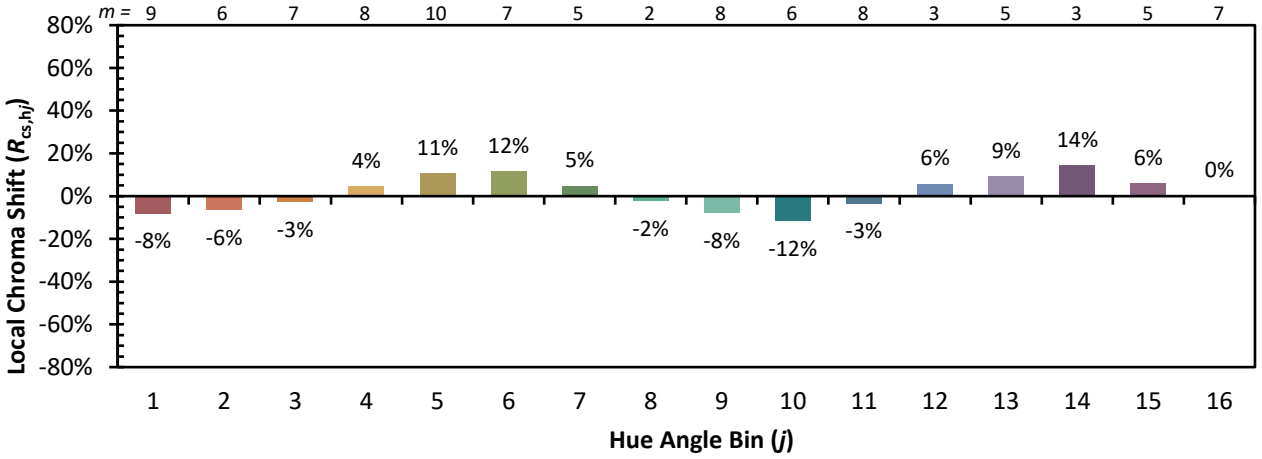
CES01 = 85	CES26 = 69	CES51 = 90	CES76 = 58
CES02 = 61	CES27 = 89	CES52 = 90	CES77 = 76
CES03 = 31	CES28 = 83	CES53 = 80	CES78 = 60
CES04 = 69	CES29 = 66	CES54 = 91	CES79 = 85
CES05 = 48	CES30 = 76	CES55 = 89	CES80 = 79
CES06 = 50	CES31 = 69	CES56 = 79	CES81 = 81
CES07 = 41	CES32 = 62	CES57 = 77	CES82 = 91
CES08 = 40	CES33 = 74	CES58 = 79	CES83 = 88
CES09 = 29	CES34 = 72	CES59 = 93	CES84 = 89
CES10 = 74	CES35 = 84	CES60 = 95	CES85 = 84
CES11 = 57	CES36 = 98	CES61 = 92	CES86 = 82
CES12 = 63	CES37 = 77	CES62 = 89	CES87 = 81
CES13 = 43	CES38 = 83	CES63 = 80	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 80	CES89 = 79
CES15 = 71	CES40 = 88	CES65 = 77	CES90 = 85
CES16 = 47	CES41 = 89	CES66 = 74	CES91 = 83
CES17 = 49	CES42 = 74	CES67 = 72	CES92 = 77
CES18 = 56	CES43 = 73	CES68 = 78	CES93 = 86
CES19 = 71	CES44 = 98	CES69 = 83	CES94 = 69
CES20 = 65	CES45 = 82	CES70 = 69	CES95 = 80
CES21 = 86	CES46 = 82	CES71 = 64	CES96 = 86
CES22 = 78	CES47 = 80	CES72 = 88	CES97 = 83
CES23 = 91	CES48 = 79	CES73 = 60	CES98 = 81
CES24 = 90	CES49 = 80	CES74 = 98	CES99 = 83
CES25 = 71	CES50 = 89	CES75 = 62	

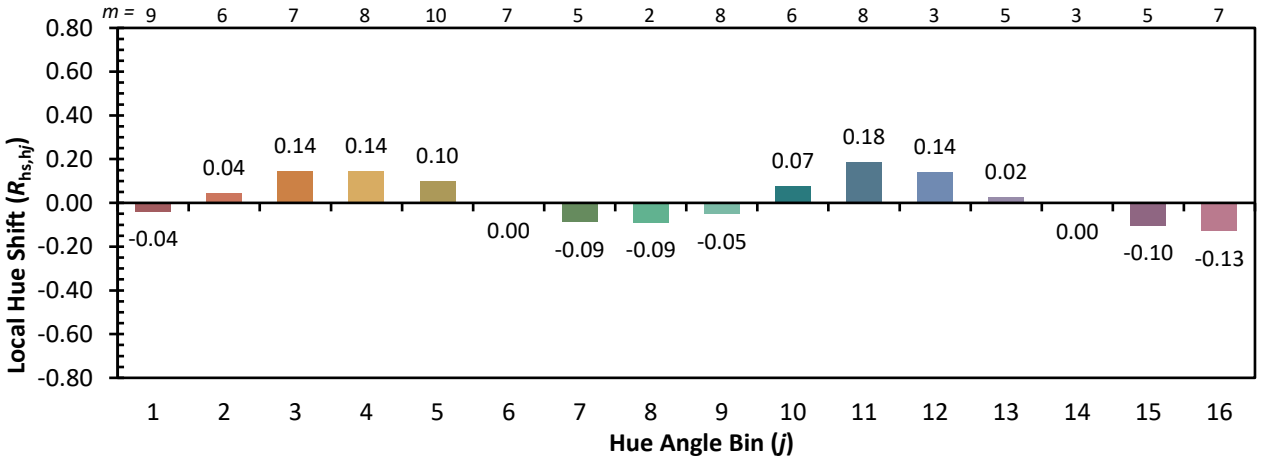


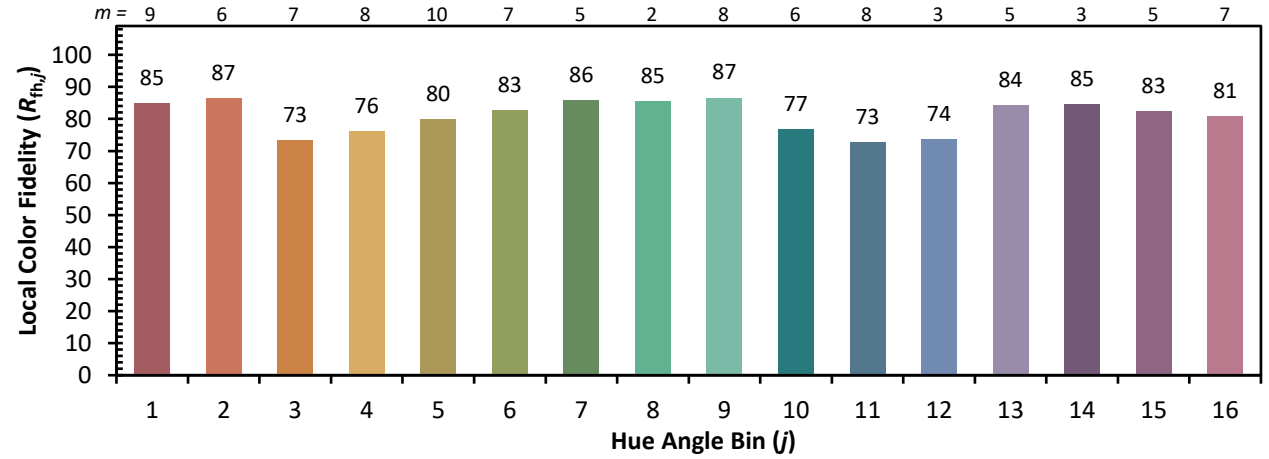
REPORT NUMBER: SP1-2506-472-1

TM-30-18

Color Rendition by Hue-Angle Bin



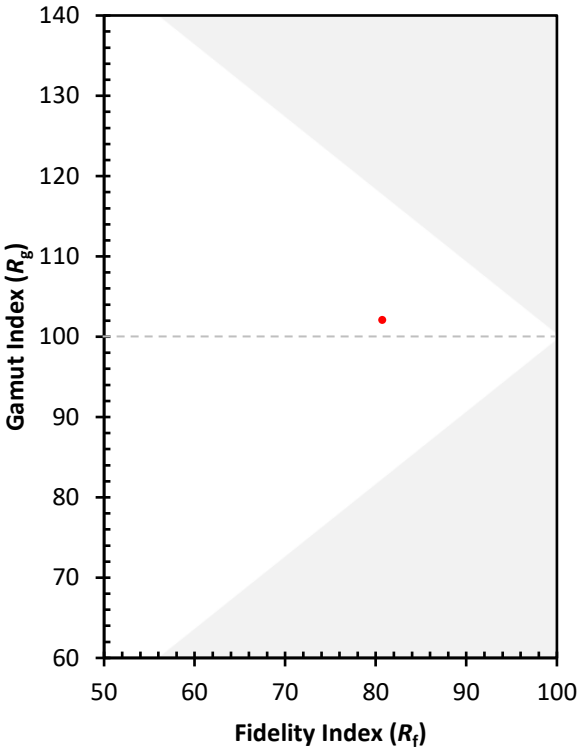


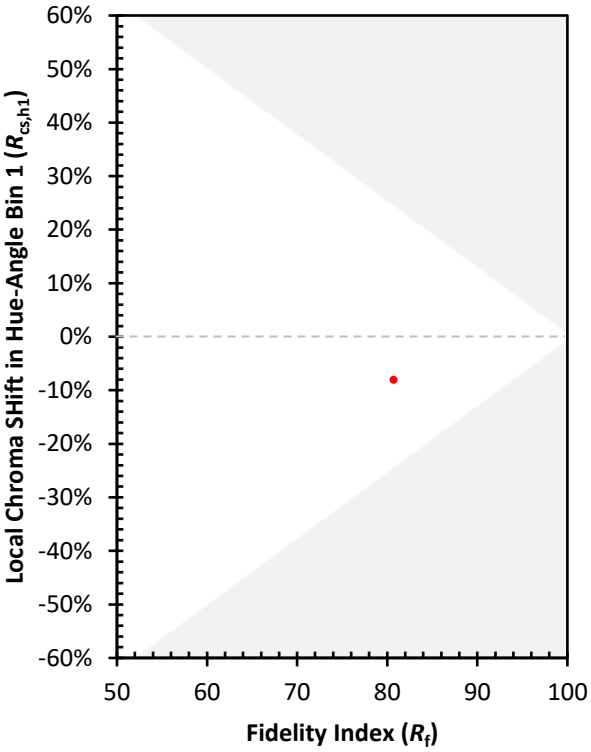


REPORT NUMBER: SP1-2506-472-1

TM-30-18

Measure Comparisons





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