

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: P1433582

Luminaire Tested: EHBR1-42-UNV-ASM-L935-UPL24

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433582
REPORT IS A COMBINATION OF REPORTS P1431907 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-42-UNV-ASM-L935-UPL24
Description: Elevate Round Highbay at, 42000 lumens, 3500K 90CRI LEDs with ASM lens
Light Source: -
Ballast/Driver: -

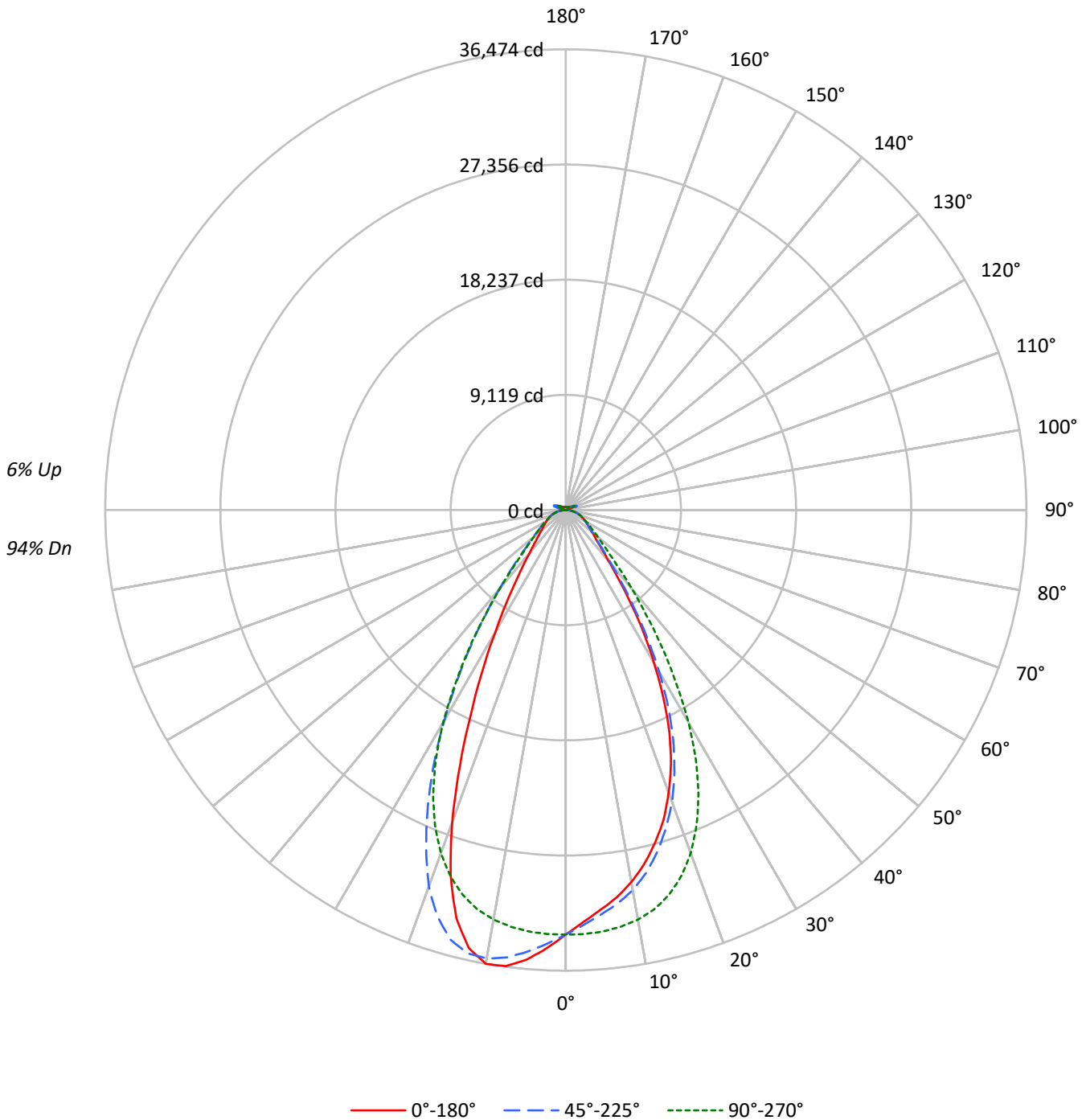
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39790.7 lumens
Efficiency: N/A
Efficacy: 165.2 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): 240.9
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P1433582
CATALOG NUMBER: EHBR1-42-UNV-ASM-L935-UPL24

Luminous Intensity Polar Plot





TEST NUMBER: P1433582
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	0
RCR																					
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	97	97	97	94
1	111	107	104	101	107	104	102	99	99	97	95	94	93	91	90	89	87	87	87	87	85
2	104	98	93	88	101	95	91	87	91	87	84	87	84	82	84	81	79	79	79	79	77
3	97	89	83	79	94	87	82	78	84	79	76	81	77	74	78	75	72	72	72	72	70
4	91	82	76	71	89	81	75	70	78	73	68	75	71	67	72	69	66	66	66	66	64
5	86	76	69	64	84	75	68	64	72	67	62	70	65	61	68	64	60	60	60	60	59
6	81	71	64	59	79	69	63	58	67	62	57	65	60	57	63	59	56	56	56	56	54
7	76	66	59	54	75	65	58	54	63	57	53	61	56	52	60	55	52	52	52	52	50
8	72	61	55	50	71	61	54	50	59	53	49	57	52	49	56	52	48	48	48	48	47
9	68	58	51	47	67	57	51	46	55	50	46	54	49	45	53	48	45	45	45	45	43
10	65	54	48	44	64	54	47	43	52	47	43	51	46	43	50	45	42	42	42	42	41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	157855	157855	157855	157855	157855
5°	148752	150490	156893	164418	167376
10°	140781	143762	154964	169697	171673
15°	130043	133517	150389	167957	159538
20°	115832	119733	140652	154385	127927
25°	97072	100747	124488	129494	88635
30°	72630	76840	101080	100070	57664
35°	48351	51271	72498	71326	37344
40°	30493	32587	46872	47174	25739
45°	21727	22630	29740	31017	19938
50°	18097	18241	22085	22661	16942
55°	15975	16012	18032	18508	15434
60°	14791	14665	15614	15945	14702
65°	14119	13992	14234	14512	14178
70°	13713	13477	13491	13749	13893
75°	13037	12644	12616	13064	13441
80°	11862	11035	11082	11862	12688
85°	8638	7169	7169	8199	9060

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 41813 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3196.2	8.0
10°-20°	8695.4	21.9
20°-30°	10197.9	25.6
30°-40°	7092.0	17.8
40°-50°	3524.4	8.9
50°-60°	2108.0	5.3
60°-70°	1483.7	3.7
70°-80°	955.7	2.4
80°-90°	307.5	0.8
90°-100°	59.8	0.2
100°-110°	386.5	1.0
110°-120°	713.3	1.8
120°-130°	424.5	1.1
130°-140°	257.6	0.6
140°-150°	179.0	0.4
150°-160°	117.7	0.3
160°-170°	68.5	0.2
170°-180°	23.0	0.1
0°-30°	22089.5	55.5
0°-40°	29181.5	73.3
0°-60°	34813.8	87.5
0°-90°	37560.7	94.4
90°-120°	1159.6	2.9
90°-150°	2020.8	5.1
90°-180°	2230.0	5.6
0°-180°	39790.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	33614	33614	33614	33614	33614	
5°	31761	32132	33499	35106	35738	2979
15°	27282	28011	31551	35236	33470	7608
25°	19385	20119	24860	25860	17700	8747
35°	8874	9410	13306	13091	6854	5653
45°	3515	3662	4812	5018	3226	2842
55°	2159	2164	2437	2501	2086	1959
65°	1474	1460	1486	1515	1480	1463
75°	918	891	889	920	947	969
85°	297	246	246	282	311	306
90°	17	45	17	48	21	23
95°	28	100	32	86	32	27
105°	135	673	178	719	93	180
115°	616	796	759	882	650	568
125°	445	428	486	474	511	406
135°	326	329	309	344	357	255
145°	273	286	281	287	294	173
155°	245	252	251	251	262	114
165°	236	240	240	240	249	67
175°	237	241	241	241	248	23
180°	241	241	241	241	241	



TEST NUMBER: P1433582
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	33614.0	33614.0	33614.0	33614.0	33614.0	33614.0	33614.0	33614.0	33614.0
2.5°	32616.2	32637.6	32865.8	33162.6	33594.4	34028.7	34380.4	34612.4	34727.0
5°	31760.8	31879.3	32132.1	32677.3	33499.2	34369.0	35105.9	35588.0	35737.5
7.5°	30927.5	30996.2	31419.2	32108.1	33271.6	34626.9	35721.7	36284.6	36422.0
10°	29910.9	30066.5	30544.3	31356.8	32924.3	34789.5	36054.5	36457.9	36474.3
12.5°	28714.5	28920.6	29414.1	30439.1	32370.3	34731.5	35943.0	35810.5	35509.9
15°	27282.4	27463.3	28011.1	29199.9	31550.9	34388.0	35236.4	34159.1	33470.2
17.5°	25735.7	25899.6	26375.5	27684.6	30396.2	33745.0	33761.4	31630.4	30330.6
20°	23806.9	23935.5	24608.7	25893.2	28908.0	32713.9	31730.5	27832.7	26292.8
22.5°	21754.6	21875.0	22473.2	23810.0	27042.3	31323.4	28902.3	24012.4	21911.5
25°	19385.2	19450.8	20119.0	21327.8	24860.2	29619.7	25859.9	19849.8	17700.4
27.5°	16719.7	16831.3	17530.2	18765.0	22293.5	27460.2	22620.0	16220.5	14237.5
30°	13970.3	14155.0	14780.2	15885.8	19442.6	24691.9	19248.5	12917.6	11091.6
32.5°	11404.3	11537.2	11982.9	13138.3	16250.7	21978.4	16010.6	10350.4	8803.5
35°	8874.1	9007.2	9410.0	10544.5	13305.9	18583.5	13090.9	8133.0	6854.0
37.5°	6783.4	7018.5	7276.9	8197.8	10442.4	15375.9	10435.5	6549.0	5559.3
40°	5285.2	5323.0	5648.2	6237.5	8124.1	12022.6	8176.5	5227.8	4461.3
42.5°	4230.7	4333.4	4473.4	4914.6	6155.6	9193.1	6426.7	4290.6	3789.5
45°	3515.3	3555.6	3661.5	3957.8	4811.8	6765.1	5018.5	3619.9	3225.9
47.5°	3075.3	3057.7	3125.8	3347.6	3918.6	5228.4	4067.4	3104.9	2828.8
50°	2697.1	2686.4	2718.5	2866.6	3291.5	4012.0	3377.3	2710.4	2525.0
52.5°	2403.4	2412.8	2416.0	2508.0	2827.6	3271.9	2876.1	2415.4	2290.6
55°	2158.8	2170.8	2163.9	2231.9	2436.8	2750.7	2501.1	2172.0	2085.7
57.5°	1967.8	1959.0	1949.5	1986.1	2139.9	2333.4	2172.0	1964.7	1907.3
60°	1778.1	1769.9	1763.0	1786.9	1877.1	2020.8	1916.8	1783.7	1767.4
62.5°	1615.5	1610.5	1609.8	1605.4	1674.7	1765.5	1694.9	1621.2	1606.7
65°	1473.7	1468.0	1460.5	1453.5	1485.7	1570.1	1514.7	1475.0	1479.9
67.5°	1331.9	1331.9	1318.6	1307.9	1339.4	1383.5	1359.6	1336.9	1342.5
70°	1203.2	1203.9	1182.5	1174.2	1183.8	1231.0	1206.4	1209.6	1219.0
72.5°	1065.2	1050.1	1034.3	1033.7	1034.9	1071.6	1063.3	1070.9	1081.0
75°	918.4	900.7	890.7	879.3	888.7	916.5	920.3	931.0	946.8
77.5°	776.5	749.4	741.3	735.6	729.2	760.8	772.7	787.2	810.6
80°	624.0	594.4	580.5	572.3	583.0	597.5	624.0	634.7	667.5
82.5°	461.4	439.3	422.3	421.7	426.7	439.9	462.7	482.8	501.7
85°	296.9	261.6	246.4	252.1	246.4	266.6	281.8	305.7	311.4
87.5°	107.1	83.8	80.0	88.3	86.4	92.6	105.9	115.4	116.0
90°	16.6	26.4	44.8	28.8	16.6	28.2	48.5	28.3	21.0
92.5°	23.9	39.9	71.7	37.3	21.5	38.0	68.1	36.9	27.1
95°	27.6	46.0	99.9	49.7	31.9	46.6	86.5	40.5	32.0
97.5°	35.5	50.8	114.6	60.6	49.0	57.6	97.4	43.1	38.2
100°	46.6	59.5	178.3	74.8	65.0	65.0	177.1	49.1	43.1
102.5°	78.4	125.6	377.9	139.7	98.1	126.9	409.2	96.3	51.7
105°	134.8	264.0	673.1	291.6	177.6	288.6	719.2	244.5	92.7
107.5°	232.7	472.3	888.1	515.8	335.7	537.2	926.2	479.7	211.5
110°	433.7	626.5	931.0	708.1	536.5	750.4	1010.6	656.1	424.6



TEST NUMBER: P1433582
 CATALOG NUMBER: EHBR1-42-UNV-ASM-L935-UPL24

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	585.6	673.1	891.8	781.5	698.2	836.1	987.4	727.1	586.3
115°	616.2	647.4	796.3	763.2	759.0	823.9	882.0	724.7	650.0
117.5°	595.4	591.1	676.2	686.6	733.2	754.1	762.0	680.7	653.7
120°	551.3	526.1	564.7	599.7	662.2	653.6	642.6	615.7	616.9
122.5°	496.1	466.8	484.5	510.9	573.3	555.0	543.3	550.1	566.7
125°	445.4	415.3	427.6	434.4	486.4	468.0	474.2	493.9	511.0
127.5°	400.1	379.8	387.2	380.5	413.6	404.9	424.0	446.1	460.8
130°	369.4	352.2	362.1	345.6	361.5	363.3	388.5	407.5	416.7
132.5°	344.3	333.3	344.9	324.8	329.1	338.2	362.2	378.8	384.3
135°	325.9	316.8	329.1	310.7	308.9	322.3	344.4	354.8	357.3
137.5°	310.6	302.7	315.6	301.5	297.3	310.7	327.3	335.9	334.1
140°	297.2	290.5	304.0	293.0	290.6	304.0	311.3	321.2	319.8
142.5°	282.6	277.6	293.7	286.3	283.9	296.0	299.7	307.1	305.2
145°	272.8	269.1	285.6	281.4	280.7	289.9	286.9	296.1	293.6
147.5°	264.2	261.7	276.4	274.5	274.5	281.4	277.7	285.6	283.2
150°	256.9	254.4	268.5	266.6	267.8	272.7	267.2	276.4	276.4
152.5°	249.6	246.5	259.3	257.5	258.7	263.6	258.7	269.1	268.5
155°	244.7	241.6	252.1	250.8	251.4	253.9	251.4	261.8	262.5
157.5°	241.7	239.2	247.2	246.5	246.5	248.4	247.2	256.4	257.0
160°	239.3	237.5	244.2	243.5	242.9	245.3	244.8	252.8	253.4
162.5°	236.9	235.0	243.0	241.7	241.7	241.7	241.8	249.8	251.1
165°	235.7	235.1	240.5	240.5	240.0	241.2	240.0	246.2	248.7
167.5°	235.7	234.5	240.6	240.6	240.0	238.8	240.1	245.5	248.1
170°	235.7	235.1	240.0	239.5	238.2	238.8	238.9	244.3	246.9
172.5°	237.0	236.4	241.9	240.7	240.1	240.1	239.5	243.8	247.5
175°	237.0	236.5	240.6	240.6	241.3	240.7	240.7	243.9	247.6
177.5°	238.8	238.2	240.6	240.6	240.1	241.4	242.6	245.7	250.7
180°	241.4	241.4	241.4	241.4	241.4	241.4	241.4	241.4	241.4



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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	17.63	18.75	18.10	19.18	19.64	18.40	19.52	18.86	19.95	20.41
	3H	19.45	20.44	19.93	20.89	21.40	19.96	20.95	20.44	21.40	21.91
	4H	20.18	21.11	20.69	21.58	22.10	20.60	21.53	21.11	22.00	22.52
	6H	20.75	21.61	21.27	22.09	22.62	21.10	21.96	21.61	22.44	22.97
	8H	20.94	21.74	21.47	22.25	22.79	21.26	22.07	21.79	22.57	23.11
	12H	21.04	21.81	21.57	22.30	22.87	21.34	22.11	21.87	22.60	23.17
4H	2H	18.15	19.08	18.65	19.54	20.07	18.78	19.71	19.28	20.17	20.69
	3H	20.19	20.96	20.70	21.47	22.01	20.58	21.35	21.10	21.87	22.41
	4H	21.05	21.74	21.58	22.27	22.84	21.37	22.06	21.90	22.59	23.16
	6H	21.75	22.34	22.31	22.89	23.49	22.01	22.60	22.57	23.15	23.75
	8H	21.97	22.53	22.54	23.08	23.68	22.21	22.77	22.78	23.32	23.92
	12H	22.11	22.60	22.69	23.18	23.78	22.33	22.82	22.91	23.40	24.00
8H	4H	21.31	21.87	21.88	22.42	23.02	21.61	22.17	22.18	22.72	23.32
	6H	22.13	22.58	22.72	23.18	23.79	22.38	22.83	22.98	23.43	24.04
	8H	22.43	22.83	23.04	23.44	24.06	22.66	23.06	23.27	23.67	24.30
	12H	22.63	22.98	23.24	23.57	24.27	22.85	23.20	23.45	23.79	24.49
12H	4H	21.32	21.81	21.90	22.39	23.00	21.62	22.11	22.21	22.70	23.30
	6H	22.17	22.57	22.78	23.18	23.80	22.42	22.82	23.04	23.44	24.06
	8H	22.51	22.87	23.12	23.46	24.15	22.75	23.10	23.36	23.70	24.39

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

Metalux

Report Number: SP1-2506-472-6

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L935-N

Data in this report applies to families of products including EHBR-60-L935-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-6
 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-L935-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3500K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 3406
 CIE u': 0.2394
 CIE v': 0.5094
 Duv: -0.0028
 CIE x: 0.4076
 CIE y: 0.3856
 CIE z: 0.2068
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 582
 Purity: 38.0517
 Rf: 91.3
 Rg: 100

CRI (Ra):	94.6		
R1:	96.6	R9:	63.8
R2:	98.4	R10:	94.7
R3:	98.1	R11:	96.6
R4:	95.8	R12:	80.9
R5:	96.2	R13:	97.4
R6:	95.4	R14:	98.3
R7:	91.8	R15:	93.1
R8:	84.4		



Test Conditions

Stabilization Time: 35M
 Operation Time: 1H 35M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-6

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: SP1-2506-472-6

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-6

Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W^{\wedge}/nm	Lumens (ϕ/nm)	λ (nm)	Power W^{\wedge}/nm	Lumens (ϕ/nm)	λ (nm)	Power W^{\wedge}/nm	Lumens (ϕ/nm)	λ (nm)	Power W^{\wedge}/nm	Lumens (ϕ/nm)	λ (nm)	Power W^{\wedge}/nm	Lumens (ϕ/nm)
360	0	NR	490	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.62

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.3

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

Summary

$R_f = 91.3$
 $R_g = 100$
 $CIE R_a = 94.6$
 $R_9 = 63.8$

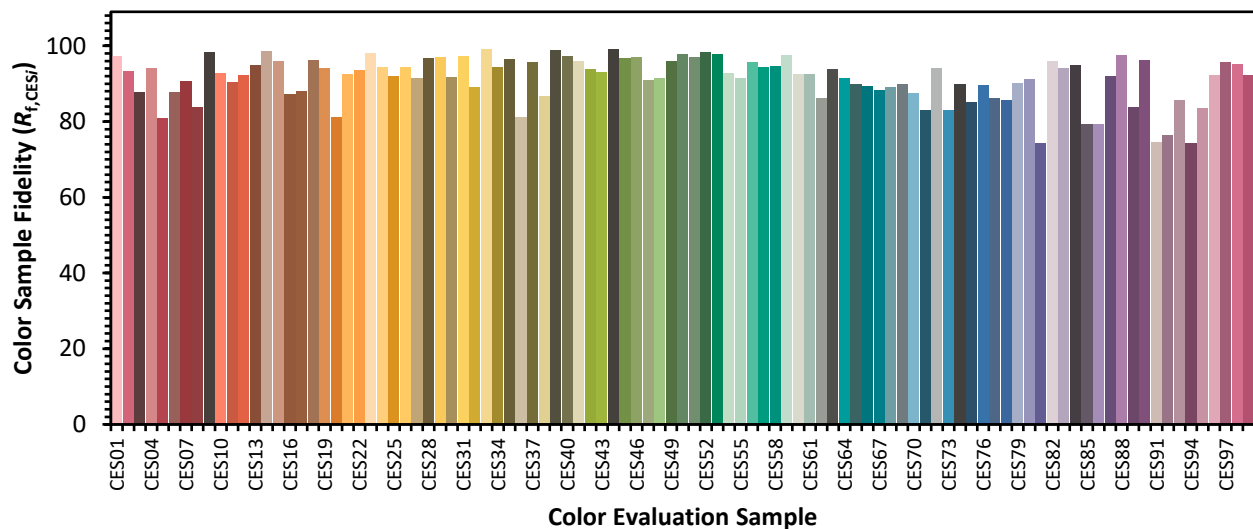


Color Vector Graphics

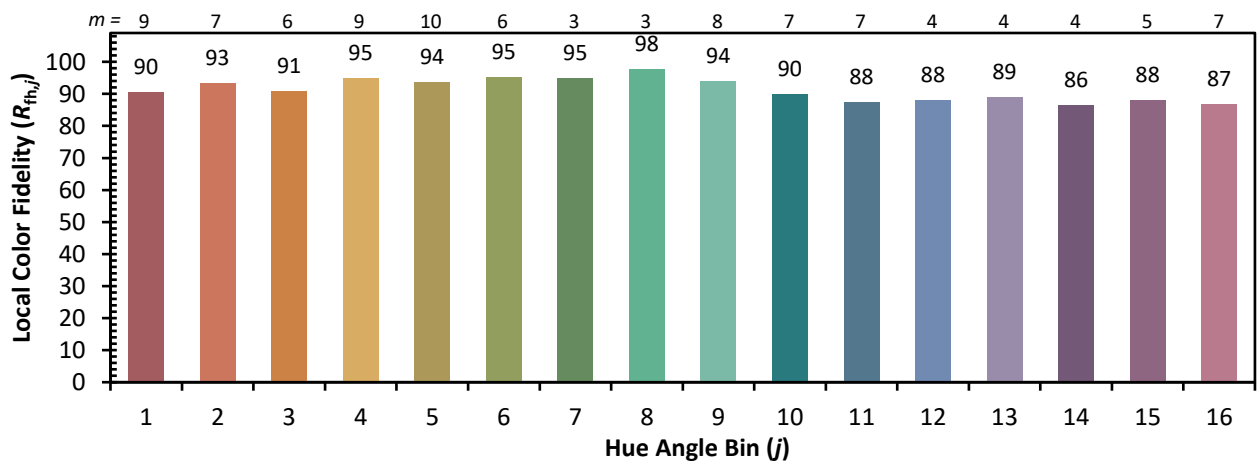
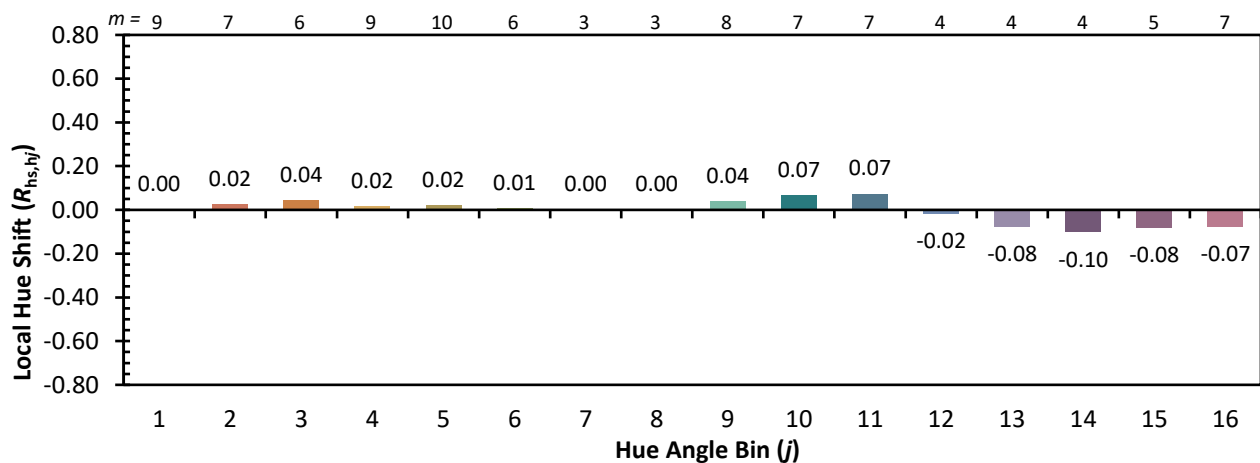
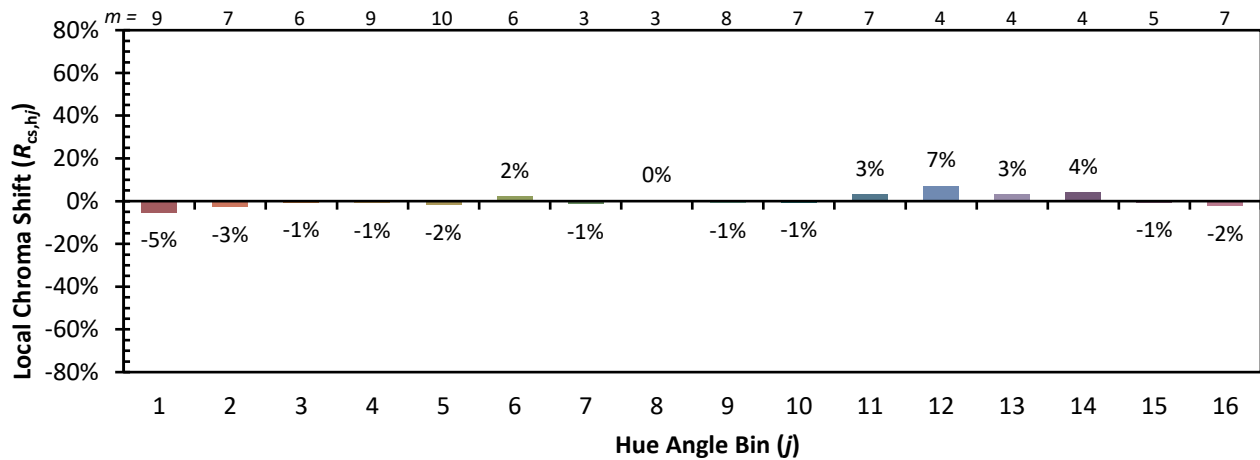


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 90
CES02 = 63	CES27 = 92	CES52 = 98	CES77 = 86
CES03 = 31	CES28 = 97	CES53 = 98	CES78 = 86
CES04 = 70	CES29 = 97	CES54 = 93	CES79 = 90
CES05 = 50	CES30 = 92	CES55 = 92	CES80 = 91
CES06 = 51	CES31 = 97	CES56 = 96	CES81 = 74
CES07 = 43	CES32 = 89	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 99	CES58 = 95	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 97	CES60 = 92	CES85 = 79
CES11 = 58	CES36 = 81	CES61 = 93	CES86 = 79
CES12 = 64	CES37 = 96	CES62 = 86	CES87 = 92
CES13 = 44	CES38 = 87	CES63 = 94	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 84
CES15 = 72	CES40 = 97	CES65 = 90	CES90 = 96
CES16 = 48	CES41 = 96	CES66 = 89	CES91 = 75
CES17 = 49	CES42 = 94	CES67 = 88	CES92 = 76
CES18 = 56	CES43 = 93	CES68 = 89	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 90	CES94 = 74
CES20 = 67	CES45 = 97	CES70 = 88	CES95 = 83
CES21 = 86	CES46 = 97	CES71 = 83	CES96 = 92
CES22 = 78	CES47 = 91	CES72 = 94	CES97 = 96
CES23 = 91	CES48 = 91	CES73 = 83	CES98 = 95
CES24 = 90	CES49 = 96	CES74 = 90	CES99 = 92
CES25 = 71	CES50 = 98	CES75 = 85	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)