

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: P1433966

Luminaire Tested: EHBR1-60-UNV-ASM-L940-UPL24

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433966
REPORT IS A COMBINATION OF REPORTS P1431903 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-60-UNV-ASM-L940-UPL24
Description: Elevate Round Highbay at, 60000 lumens, 4000K 90CRI LEDs with ASM lens
Light Source: -
Ballast/Driver: -

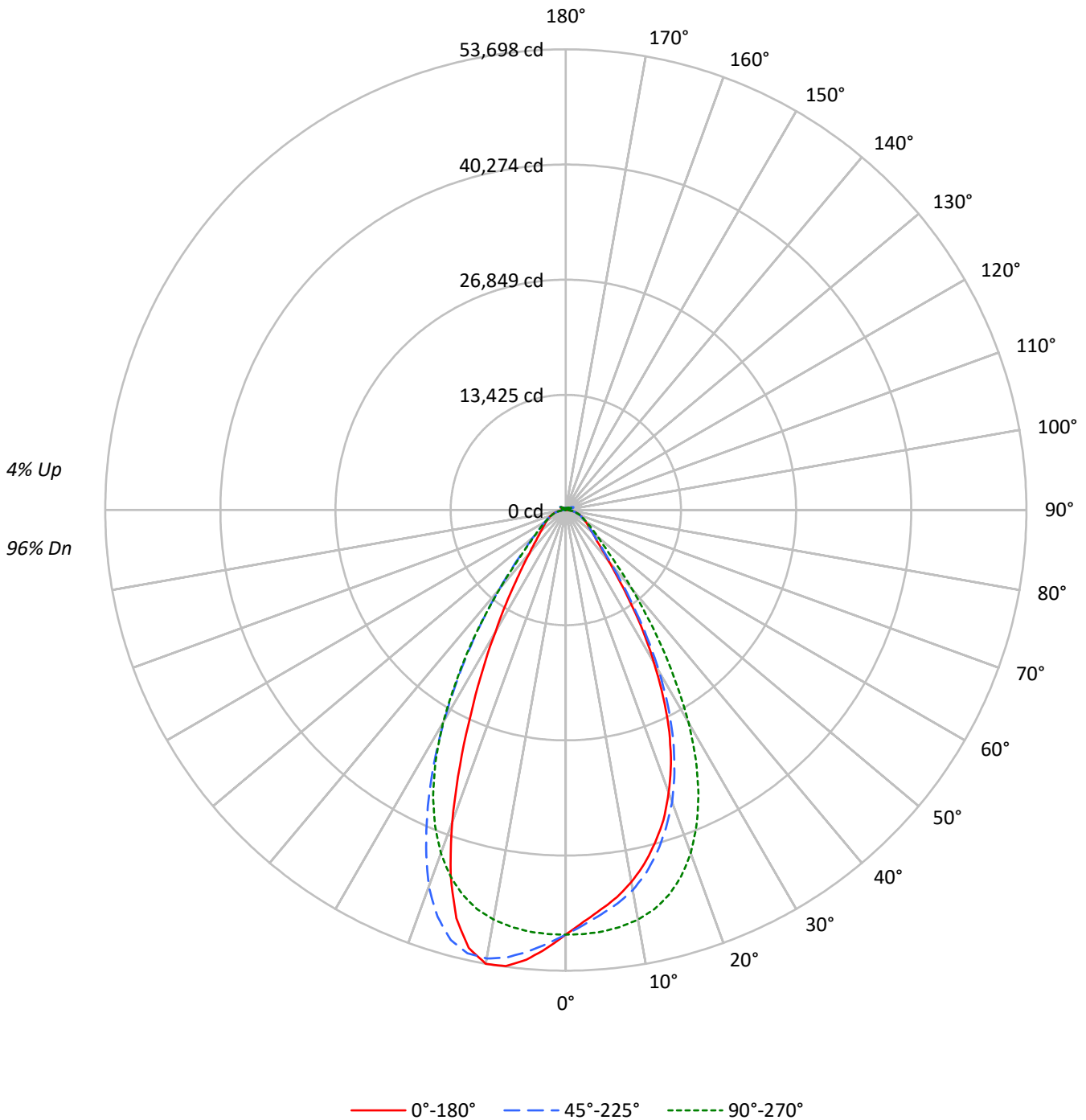
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 57600.9 lumens
Efficiency: N/A
Efficacy: 166.0 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): 346.9
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

TEST NUMBER: P1433966
CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

Luminous Intensity Polar Plot





TEST NUMBER: P1433966

CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

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
RCR																				
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	98	96	
1	111	107	104	102	108	105	102	100	100	98	96	96	94	92	91	90	89	89	87	
2	104	98	93	89	101	96	91	88	92	88	85	88	85	83	85	82	80	80	78	
3	98	90	84	79	95	88	83	78	85	80	76	82	78	75	79	76	73	73	71	
4	92	83	76	71	89	81	75	70	78	73	69	76	71	68	73	70	67	67	65	
5	86	76	70	65	84	75	69	64	73	67	63	71	66	62	69	65	61	61	60	
6	81	71	64	59	79	70	64	59	68	62	58	66	61	57	64	60	57	57	55	
7	77	66	59	55	75	65	59	54	64	58	54	62	57	53	60	56	53	53	51	
8	73	62	55	51	71	61	55	50	60	54	50	58	53	49	57	52	49	49	47	
9	69	58	51	47	67	57	51	47	56	50	46	55	50	46	54	49	46	46	44	
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	51	46	43	43	41	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	232397	232397	232397	232397	232397
5°	218995	221555	230982	242060	246415
10°	207261	211650	228142	249832	252741
15°	191453	196566	221406	247269	234875
20°	170531	176274	207071	227289	188338
25°	142912	148321	183274	190644	130491
30°	106927	113126	148811	147326	84894
35°	71184	75481	106733	105008	54979
40°	44892	47976	69006	69450	37895
45°	31986	33317	43784	45665	29354
50°	26643	26855	32515	33361	24943
55°	23518	23573	26547	27247	22722
60°	21775	21590	22987	23474	21644
65°	20785	20599	20955	21364	20874
70°	20188	19841	19861	20242	20453
75°	19193	18613	18574	19232	19786
80°	17463	16247	16315	17463	18680
85°	12715	10559	10559	12069	13337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 61558 cd/sqm



TEST NUMBER: P1433966
 CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4705.5	8.2
10°-20°	12801.5	22.2
20°-30°	15013.6	26.1
30°-40°	10441.0	18.1
40°-50°	5188.7	9.0
50°-60°	3103.4	5.4
60°-70°	2184.3	3.8
70°-80°	1407.0	2.4
80°-90°	450.9	0.8
90°-100°	62.3	0.1
100°-110°	398.2	0.7
110°-120°	734.2	1.3
120°-130°	437.6	0.8
130°-140°	266.5	0.5
140°-150°	186.0	0.3
150°-160°	123.2	0.2
160°-170°	72.5	0.1
170°-180°	24.5	0.0
0°-30°	32520.6	56.5
0°-40°	42961.6	74.6
0°-60°	51253.7	89.0
0°-90°	55295.9	96.0
90°-120°	1194.7	2.1
90°-150°	2084.8	3.6
90°-180°	2305.0	4.0
0°-180°	57600.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	49487	49487	49487	49487	49487	
5°	46759	47306	49318	51684	52614	4386
15°	40166	41239	46450	51876	49276	11201
25°	28539	29620	36600	38071	26059	12877
35°	13065	13854	19589	19273	10091	8322
45°	5175	5390	7084	7388	4749	4183
55°	3178	3186	3588	3682	3071	2884
65°	2170	2150	2187	2230	2179	2154
75°	1352	1311	1308	1355	1394	1427
85°	437	363	363	415	458	450
90°	17	46	17	51	24	30
95°	29	103	33	90	35	28
105°	139	692	183	740	98	186
115°	634	819	781	908	671	584
125°	459	441	501	489	528	418
135°	336	340	320	356	370	263
145°	284	297	292	298	305	179
155°	257	264	263	263	275	120
165°	250	254	254	255	265	71
175°	253	257	258	258	266	24
180°	258	258	258	258	258	



TEST NUMBER: P1433966
 CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	49487.2	49487.2	49487.2	49487.2	49487.2	49487.2	49487.2	49487.2	49487.2
2.5°	48018.2	48049.7	48385.7	48822.7	49458.4	50097.8	50615.6	50957.0	51125.9
5°	46758.9	46933.4	47305.5	48108.2	49318.3	50598.8	51683.6	52393.5	52613.5
7.5°	45532.1	45633.3	46256.0	47270.2	48983.2	50978.4	52590.3	53418.9	53621.3
10°	44035.4	44264.6	44968.0	46164.2	48472.0	51217.8	53080.3	53674.1	53698.2
12.5°	42274.1	42577.5	43304.1	44813.0	47656.3	51132.5	52916.0	52721.1	52278.5
15°	40165.8	40432.1	41238.6	42988.7	46449.9	50626.7	51875.7	50289.9	49275.6
17.5°	37888.6	38129.8	38830.4	40757.8	44749.9	49680.2	49704.3	46566.8	44653.4
20°	35049.0	35238.3	36229.4	38120.6	42559.0	48162.0	46714.4	40975.9	38708.9
22.5°	32027.6	32204.9	33085.5	35053.6	39812.2	46115.0	42550.7	35351.6	32258.6
25°	28539.4	28635.9	29619.5	31399.4	36599.6	43606.7	38071.4	29223.3	26059.0
27.5°	24615.0	24779.3	25808.5	27626.3	32821.0	40427.5	33301.7	23880.1	20960.7
30°	20567.3	20839.2	21759.7	23387.4	28623.8	36351.9	28338.1	19017.6	16329.3
32.5°	16789.6	16985.4	17641.5	19342.4	23924.7	32357.0	23571.1	15238.0	12960.8
35°	13064.8	13260.6	13853.5	15523.8	19589.3	27359.0	19272.8	11973.4	10090.7
37.5°	9986.7	10332.8	10713.3	12069.0	15373.5	22636.7	15363.3	9641.5	8184.6
40°	7780.9	7836.6	8315.4	9183.0	11960.5	17699.9	12037.5	7696.5	6568.1
42.5°	6228.4	6379.7	6585.7	7235.3	9062.5	13534.3	9461.5	6316.7	5578.9
45°	5175.2	5234.6	5390.5	5826.7	7084.0	9959.8	7388.4	5329.3	4749.3
47.5°	4527.5	4501.5	4601.8	4928.4	5769.1	7697.4	5988.2	4571.1	4164.6
50°	3970.8	3954.9	4002.3	4220.4	4845.8	5906.4	4972.0	3990.2	3717.4
52.5°	3538.3	3552.3	3556.8	3692.4	4162.8	4817.1	4234.2	3555.9	3372.2
55°	3178.2	3195.9	3185.7	3285.9	3587.5	4049.6	3682.1	3197.8	3070.6
57.5°	2897.0	2884.1	2870.2	2924.0	3150.5	3435.4	3197.8	2892.5	2808.0
60°	2617.7	2605.7	2595.5	2630.8	2763.4	2975.0	2822.0	2626.1	2602.0
62.5°	2378.4	2370.9	2370.0	2363.5	2465.6	2599.2	2495.3	2386.7	2365.4
65°	2169.5	2161.2	2150.1	2139.9	2187.2	2311.5	2229.9	2171.4	2178.8
67.5°	1960.7	1960.7	1941.3	1925.5	1971.9	2036.9	2001.6	1968.2	1976.6
70°	1771.4	1772.4	1740.9	1728.8	1742.7	1812.3	1776.1	1780.7	1794.6
72.5°	1568.2	1546.0	1522.8	1521.8	1523.7	1577.6	1565.4	1576.6	1591.4
75°	1352.0	1326.0	1311.2	1294.5	1308.4	1349.2	1354.8	1370.6	1393.8
77.5°	1143.2	1103.3	1091.2	1082.9	1073.6	1120.0	1137.6	1159.1	1193.3
80°	918.7	875.1	854.7	842.6	858.3	879.7	918.7	934.4	982.7
82.5°	679.3	646.7	621.7	620.8	628.2	647.7	681.1	710.8	738.7
85°	437.0	385.1	362.9	371.2	362.9	392.5	414.8	450.1	458.4
87.5°	157.7	123.4	117.9	129.9	127.2	136.4	155.9	169.8	170.8
90°	17.3	27.4	46.3	29.9	17.3	29.5	50.7	30.7	23.9
92.5°	24.9	41.3	74.0	38.7	22.4	39.6	70.8	39.6	30.1
95°	28.6	47.5	102.9	51.3	33.4	48.4	89.7	43.3	35.1
97.5°	37.1	52.5	118.0	62.6	51.0	59.8	101.0	45.9	41.5
100°	48.4	61.4	183.5	77.4	67.4	67.4	182.9	52.2	46.5
102.5°	81.1	129.4	388.8	144.1	101.4	131.3	421.8	101.0	55.3
105°	139.1	271.7	692.2	300.3	183.2	297.5	740.4	253.3	97.8
107.5°	239.8	485.8	913.5	530.8	345.6	553.0	953.2	495.1	220.0
110°	446.4	644.3	957.5	728.5	552.1	772.1	1040.0	676.4	439.0



TEST NUMBER: P1433966
 CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	602.5	692.2	917.3	803.9	718.3	860.3	1016.1	749.4	605.2
115°	634.0	665.8	819.1	785.1	781.0	847.7	907.8	746.9	670.7
117.5°	612.6	607.9	695.7	706.7	754.5	776.0	784.4	701.6	674.5
120°	567.3	541.1	581.1	617.3	681.5	672.6	661.9	634.8	636.7
122.5°	510.5	480.4	498.9	526.3	590.5	571.7	559.9	567.7	585.1
125°	458.6	427.4	440.7	447.9	501.1	482.2	489.1	509.9	528.1
127.5°	412.1	390.9	399.1	392.5	426.5	417.7	437.5	460.8	476.4
130°	380.6	362.9	373.6	356.9	373.3	374.9	401.0	421.4	431.2
132.5°	355.1	343.7	356.5	336.1	340.2	349.4	374.2	392.1	398.1
135°	336.1	327.0	340.2	321.9	319.7	333.0	356.3	367.3	370.3
137.5°	320.7	312.8	326.9	312.8	308.1	321.3	338.7	348.1	346.5
140°	307.4	300.8	315.3	304.0	301.5	314.7	322.3	333.0	332.2
142.5°	293.0	287.9	304.9	297.4	294.9	306.8	310.6	318.7	317.1
145°	283.5	279.7	297.0	292.4	292.0	301.1	297.7	307.4	305.4
147.5°	275.2	272.7	287.8	285.6	285.6	292.4	288.5	297.0	295.1
150°	268.2	265.7	279.9	277.7	278.9	284.0	278.1	287.8	288.3
152.5°	261.3	257.9	270.7	268.6	269.8	274.8	269.8	280.8	280.5
155°	256.9	253.4	263.8	262.0	262.9	265.4	262.9	273.9	274.8
157.5°	254.6	251.5	259.4	258.4	258.4	260.7	259.4	269.2	270.1
160°	252.7	250.5	257.1	256.2	255.8	258.3	258.1	266.5	267.5
162.5°	250.8	248.6	256.5	255.2	255.2	255.2	255.8	264.3	266.2
165°	250.1	249.2	254.5	254.5	254.2	255.5	254.8	261.7	264.9
167.5°	250.1	248.8	255.2	255.2	254.8	253.6	255.5	262.0	265.1
170°	250.7	249.8	254.8	254.5	253.2	254.2	254.8	261.3	264.4
172.5°	252.6	251.6	257.6	256.4	256.0	256.0	256.3	261.5	265.9
175°	253.2	252.3	256.9	256.9	257.9	257.6	258.1	262.2	266.5
177.5°	255.4	254.4	256.9	256.9	256.7	258.5	260.3	264.3	270.0
180°	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5



TEST NUMBER: P1433966
 CATALOG NUMBER: EHBR1-60-UNV-ASM-L940-UPL24

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	20.25	19.54	20.65	21.06	19.87	21.01	20.31	21.41	21.83
	3H	20.92	21.94	21.37	22.35	22.82	21.43	22.45	21.88	22.86	23.33
	4H	21.66	22.61	22.13	23.04	23.53	22.08	23.03	22.55	23.46	23.95
	6H	22.23	23.10	22.71	23.55	24.05	22.57	23.45	23.06	23.90	24.39
	8H	22.41	23.24	22.91	23.71	24.21	22.73	23.56	23.23	24.03	24.53
	12H	22.51	23.30	23.02	23.76	24.29	22.81	23.60	23.32	24.06	24.59
4H	2H	19.62	20.57	20.10	21.01	21.49	20.25	21.20	20.73	21.63	22.12
	3H	21.66	22.45	22.15	22.93	23.43	22.06	22.84	22.55	23.33	23.83
	4H	22.53	23.23	23.03	23.73	24.27	22.85	23.55	23.35	24.05	24.59
	6H	23.22	23.83	23.76	24.35	24.91	23.48	24.09	24.02	24.61	25.17
	8H	23.45	24.01	23.99	24.54	25.10	23.69	24.25	24.23	24.77	25.34
	12H	23.58	24.08	24.14	24.64	25.21	23.80	24.30	24.36	24.86	25.43
8H	4H	22.79	23.35	23.33	23.88	24.44	23.09	23.66	23.63	24.18	24.74
	6H	23.60	24.06	24.18	24.63	25.21	23.85	24.32	24.43	24.89	25.46
	8H	23.90	24.31	24.49	24.90	25.49	24.14	24.55	24.73	25.13	25.72
	12H	24.11	24.47	24.69	25.03	25.70	24.32	24.68	24.91	25.25	25.91
12H	4H	22.79	23.29	23.35	23.85	24.42	23.10	23.60	23.66	24.16	24.72
	6H	23.64	24.05	24.23	24.64	25.22	23.90	24.31	24.49	24.89	25.48
	8H	23.99	24.35	24.57	24.91	25.58	24.23	24.59	24.81	25.15	25.82

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-7

Test Date: 08/04/2025

Luminaire Tested: EHBR-60-L940-N

Data in this report applies to families of products including EHBR-60-L940-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-7
 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-L940-N**
 Description: Elevate Round Highbay at, 60000 lumens, 4000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 3963
 CIE u': 0.2267
 CIE v': 0.5003
 Duv: -0.0016
 CIE x: 0.3810
 CIE y: 0.3738
 CIE z: 0.2453
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 580
 Purity: 26.49712
 R_f: 90.7
 R_g: 101

CRI (Ra):	93.4		
R1:	95.2	R9:	66.4
R2:	95.1	R10:	86.6
R3:	93.3	R11:	94.4
R4:	94.5	R12:	75.4
R5:	94.2	R13:	95.0
R6:	92.9	R14:	95.4
R7:	94.0	R15:	92.8
R8:	87.7		



Test Conditions

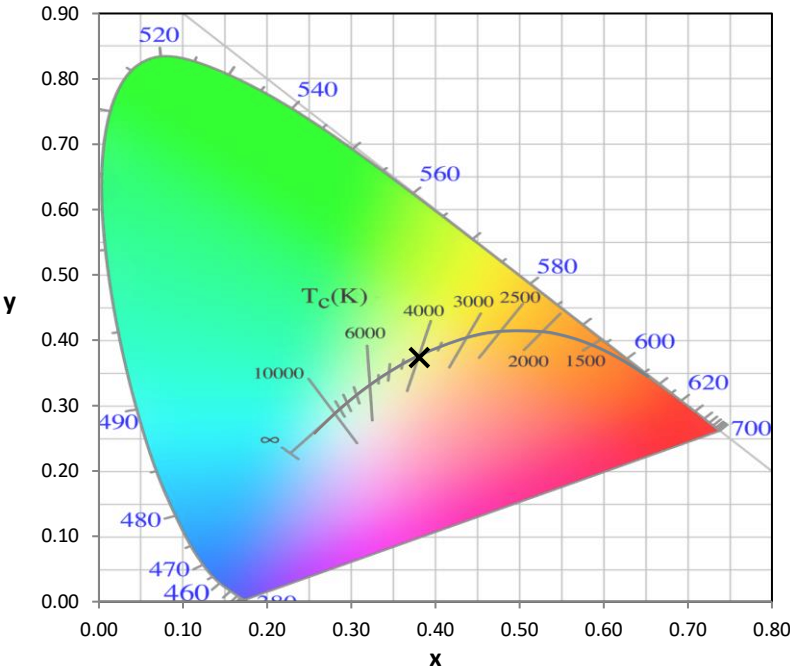
Stabilization Time: 44M
 Operation Time: 1H 44M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-7

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: SP1-2506-472-7

CIE 1931 Chromaticity Diagram



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



CCT = 3963K
 CIE x = 0.3810
 CIE y = 0.3738
 Duv = -0.0016

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-7

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	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.76

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	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.64

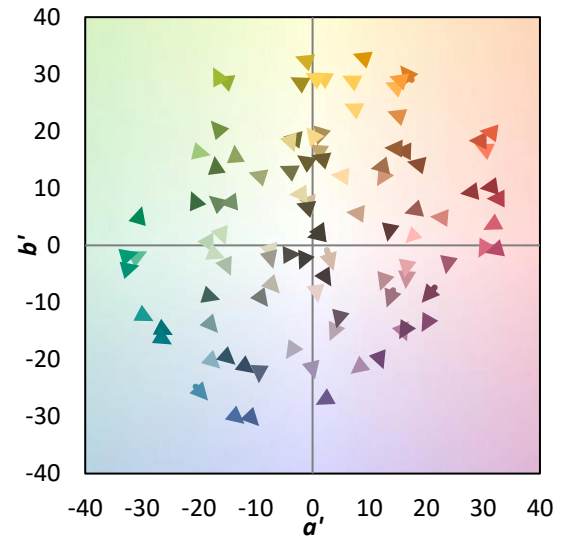
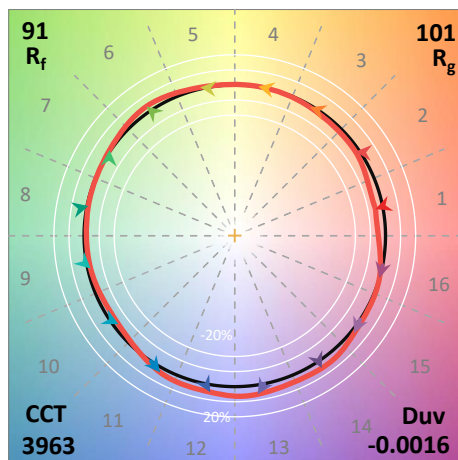
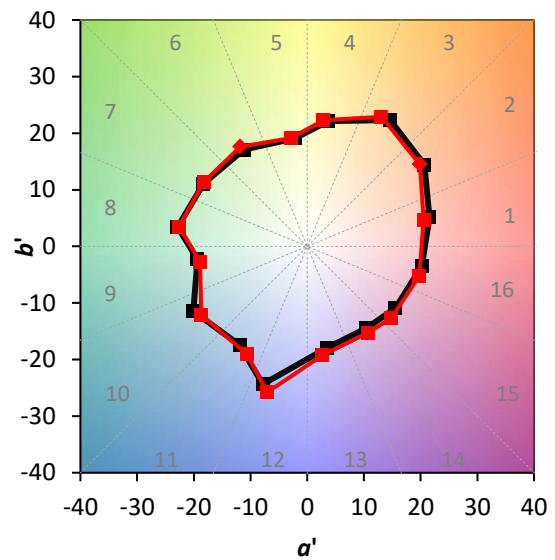
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

Summary

$R_f = 90.7$
 $R_g = 101$
 $CIE R_a = 93.4$
 $R_9 = 66.4$



Color Vector Graphics

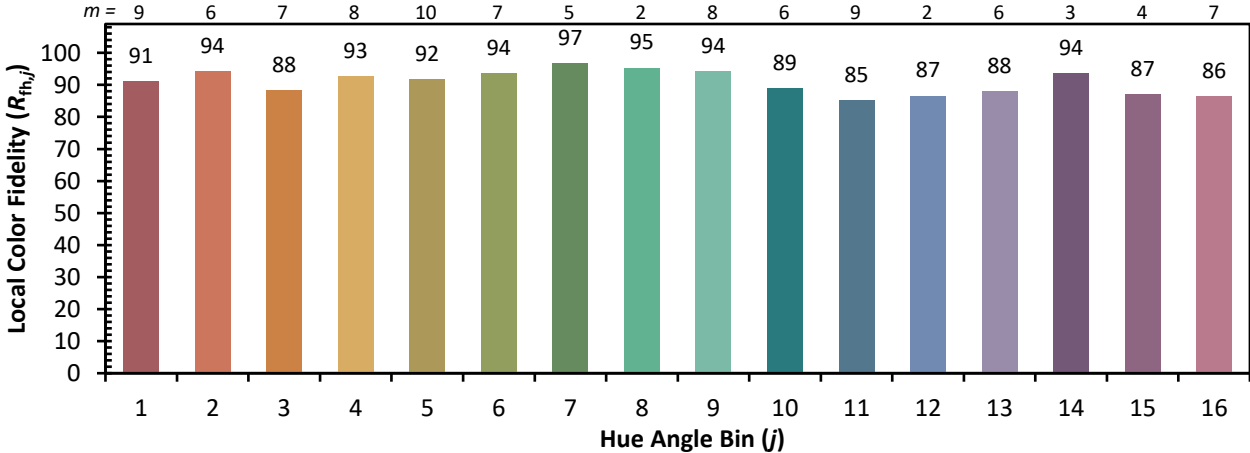


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 90	CES51 = 99	CES76 = 83
CES02 = 62	CES27 = 93	CES52 = 97	CES77 = 87
CES03 = 31	CES28 = 94	CES53 = 95	CES78 = 79
CES04 = 69	CES29 = 91	CES54 = 96	CES79 = 94
CES05 = 49	CES30 = 98	CES55 = 95	CES80 = 91
CES06 = 50	CES31 = 92	CES56 = 95	CES81 = 80
CES07 = 42	CES32 = 84	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 95	CES58 = 95	CES83 = 95
CES09 = 29	CES34 = 90	CES59 = 98	CES84 = 93
CES10 = 74	CES35 = 94	CES60 = 93	CES85 = 82
CES11 = 57	CES36 = 84	CES61 = 93	CES86 = 84
CES12 = 63	CES37 = 92	CES62 = 90	CES87 = 90
CES13 = 43	CES38 = 93	CES63 = 92	CES88 = 97
CES14 = 74	CES39 = 98	CES64 = 91	CES89 = 84
CES15 = 71	CES40 = 96	CES65 = 88	CES90 = 99
CES16 = 47	CES41 = 98	CES66 = 88	CES91 = 74
CES17 = 49	CES42 = 89	CES67 = 87	CES92 = 78
CES18 = 56	CES43 = 89	CES68 = 87	CES93 = 87
CES19 = 71	CES44 = 99	CES69 = 88	CES94 = 75
CES20 = 66	CES45 = 93	CES70 = 84	CES95 = 83
CES21 = 85	CES46 = 95	CES71 = 80	CES96 = 91
CES22 = 78	CES47 = 92	CES72 = 93	CES97 = 93
CES23 = 91	CES48 = 96	CES73 = 78	CES98 = 93
CES24 = 90	CES49 = 93	CES74 = 92	CES99 = 94
CES25 = 71	CES50 = 99	CES75 = 81	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)