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: P1433221

Luminaire Tested: EHBR1-36-UNV-TASM-L930-UPL24

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:	P1433221
	REPORT IS A COMBINATION OF REPORTS P1431775 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-36-UNV-TASM-L930-UPL24
Description:	Elevate Round Highbay at, 36000 lumens, 3000K 90CRI LEDs with TASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	34312.4 lumens
Efficiency:	N/A
Efficacy:	165.0 lumens/watt
Spacing Criteria (0/90/45):	0.99 / 0.84 / 0.9
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	207.9
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

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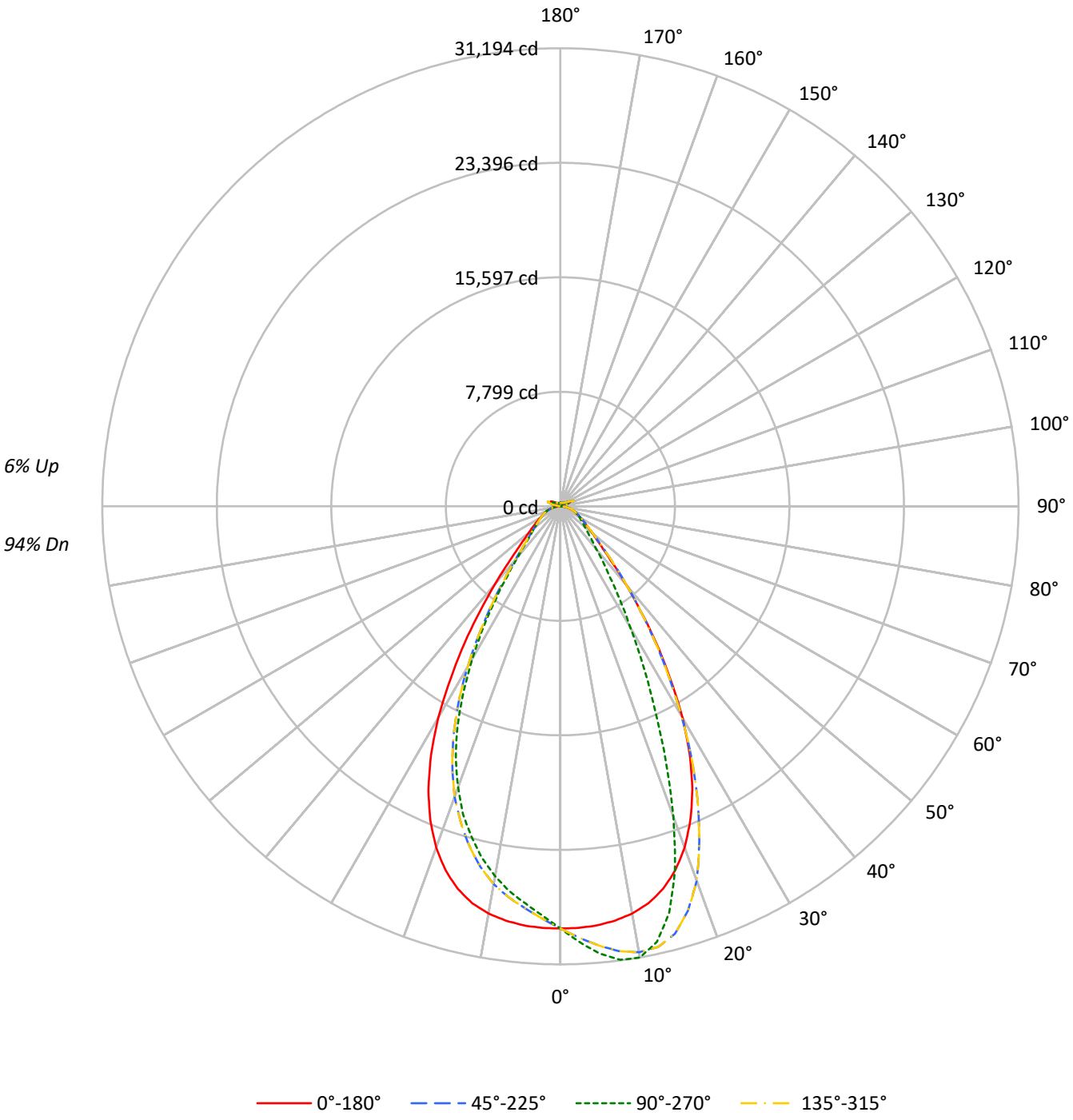
Luminous Intensity Polar Plot



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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	110	107	104	101	107	104	101	99	99	97	95	94	92	91	89	88	87	85
2	103	97	92	88	100	95	91	87	91	87	84	87	84	81	83	81	78	76
3	97	89	83	78	94	87	82	77	84	79	75	80	76	73	77	74	71	69
4	91	82	75	70	89	80	74	70	77	72	68	74	70	67	72	68	65	63
5	86	76	69	64	83	74	68	63	72	66	62	69	65	61	67	63	60	58
6	81	70	63	58	79	69	63	58	67	61	57	65	60	56	63	59	55	54
7	76	66	59	54	74	65	58	53	63	57	53	61	56	52	59	55	51	50
8	72	61	55	50	70	60	54	50	59	53	49	57	52	48	56	51	48	46
9	68	57	51	46	67	57	50	46	55	50	46	54	49	45	52	48	45	43
10	65	54	48	43	63	53	47	43	52	46	43	51	46	42	50	45	42	40

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	135002	135002	135002	135002
5°	134180	143145	134180	127217
10°	132531	146820	132531	120400
15°	128618	136442	128618	111217
20°	120290	109408	120290	99063
25°	106466	75804	106466	83019
30°	86447	49316	86447	62115
35°	62002	31938	62002	41352
40°	40086	22014	40086	26078
45°	25435	17052	25435	18581
50°	18888	14490	18888	15477
55°	15421	13200	15421	13662
60°	13353	12574	13353	12650
65°	12173	12126	12173	12074
70°	11537	11881	11537	11728
75°	10790	11494	10790	11151
80°	9478	10852	9478	10145
85°	6133	7748	6133	7387

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
Vertical Angle: 45°
Luminance: 35759 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2733.5	8.0
10°-20°	7436.6	21.7
20°-30°	8721.6	25.4
30°-40°	6065.3	17.7
40°-50°	3014.2	8.8
50°-60°	1802.8	5.3
60°-70°	1268.9	3.7
70°-80°	817.4	2.4
80°-90°	263.5	0.8
90°-100°	58.6	0.2
100°-110°	379.7	1.1
110°-120°	701.0	2.0
120°-130°	417.0	1.2
130°-140°	252.8	0.7
140°-150°	175.5	0.5
150°-160°	115.2	0.3
160°-170°	66.7	0.2
170°-180°	22.3	0.1
0°-30°	18891.6	55.1
0°-40°	24956.9	72.7
0°-60°	29773.9	86.8
0°-90°	32123.6	93.6
90°-120°	1139.3	3.3
90°-150°	1984.6	5.8
90°-180°	2189.0	6.4
0°-180°	34312.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	28748	28748	28748	28748	28748	
5°	28650	30564	28650	27163	28650	2719
15°	26983	28625	26983	23333	26983	7541
25°	21261	15138	21261	16579	21261	9626
35°	11380	5862	11380	7590	11380	7104
45°	4115	2759	4115	3006	4115	3367
55°	2084	1784	2084	1846	2084	1906
65°	1271	1266	1271	1260	1271	1276
75°	760	810	760	786	760	798
85°	211	266	211	254	211	234
90°	16	20	16	16	16	17
95°	31	31	31	27	31	33
105°	174	90	174	132	174	235
115°	746	638	746	606	746	680
125°	478	502	478	438	478	440
135°	303	350	303	320	303	240
145°	275	288	275	267	275	172
155°	246	257	246	239	246	115
165°	234	242	234	230	234	66
175°	234	240	234	230	234	22
180°	234	234	234	234	234	

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TEST NUMBER: P1433221
CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	28747.7	28747.7	28747.7	28747.7	*28747.7*	28747.7	28747.7	28747.7	28747.7	28747.7	28747.7
2.5°	28731.0	29102.4	29403.2	29601.6	*29699.6*	29601.6	29403.2	29102.4	28731.0	28361.7	28107.8
5°	28649.6	29393.5	30023.7	30436.1	*30563.8*	30436.1	30023.7	29393.5	28649.6	27946.7	27480.4
7.5°	28455.0	29614.0	30550.3	31031.7	*31149.3*	31031.7	30550.3	29614.0	28455.0	27459.9	26870.7
10°	*28158.0*	*29753.0*	*30835.0*	*31179.9*	*31194.0*	*31179.9*	*30835.0*	*29753.0*	*28158.0*	*26817.3*	*26122.4*
12.5°	27684.2	29703.5	30739.5	30626.3	*30369.2*	30626.3	30739.5	29703.5	27684.2	26032.4	25155.9
15°	26983.4	29409.7	30135.2	29214.0	*28624.8*	29214.0	30135.2	29409.7	26983.4	24972.7	23956.0
17.5°	25995.8	28859.8	28873.8	27051.3	*25939.7*	27051.3	28873.8	28859.8	25995.8	23676.7	22557.1
20°	24723.1	27978.0	27137.0	23803.4	*22486.5*	23803.4	27137.0	27978.0	24723.1	22144.7	21046.1
22.5°	23127.4	26788.7	24718.2	20536.1	*18739.4*	20536.1	24718.2	26788.7	23127.4	20363.1	19219.8
25°	21261.2	25331.6	22116.1	16976.2	*15138.0*	16976.2	22116.1	25331.6	21261.2	18240.3	17206.4
27.5°	19066.1	23484.8	19345.4	13872.3	*12176.4*	13872.3	19345.4	23484.8	19066.1	16048.5	14992.5
30°	16628.0	21117.3	16461.9	11047.6	*9485.9*	11047.6	16461.9	21117.3	16628.0	13586.1	12640.5
32.5°	13898.1	18796.6	13692.7	8852.0	*7529.1*	8852.0	13692.7	18796.6	13898.1	11236.2	10248.1
35°	11379.6	15893.2	11195.8	6955.5	*5861.7*	6955.5	11195.8	15893.2	11379.6	9018.0	8047.7
37.5°	8930.6	13149.9	8924.8	5600.9	*4754.5*	5600.9	8924.8	13149.9	8930.6	7011.0	6223.5
40°	6948.0	10282.1	6992.7	4471.0	*3815.5*	4471.0	6992.7	10282.1	6948.0	5334.5	4830.5
42.5°	5264.5	7862.3	5496.3	3669.4	*3240.8*	3669.4	5496.3	7862.3	5264.5	4203.1	3825.8
45°	4115.2	5785.7	4292.0	3095.8	*2759.0*	3095.8	4292.0	5785.7	4115.2	3384.8	3131.4
47.5°	3351.4	4471.6	3478.6	2655.4	*2419.4*	2655.4	3478.6	4471.6	3351.4	2863.0	2673.2
50°	2815.0	3431.2	2888.3	2317.9	*2159.5*	2317.9	2888.3	3431.2	2815.0	2451.6	2325.0
52.5°	2418.2	2798.3	2459.7	2065.7	*1959.0*	2065.7	2459.7	2798.3	2418.2	2145.0	2066.2
55°	2084.0	2352.4	2139.0	1857.6	*1783.8*	1857.6	2139.0	2352.4	2084.0	1908.8	1850.6
57.5°	1830.1	1995.6	1857.6	1680.2	*1631.2*	1680.2	1857.6	1995.6	1830.1	1698.6	1667.3
60°	1605.3	1728.3	1639.3	1525.5	*1511.6*	1525.5	1639.3	1728.3	1605.3	1528.2	1507.7
62.5°	1432.3	1509.9	1449.5	1386.4	*1374.0*	1386.4	1449.5	1509.9	1432.3	1373.0	1376.8
65°	1270.6	1342.8	1295.4	1261.4	*1265.7*	1261.4	1295.4	1342.8	1270.6	1243.1	1249.0
67.5°	1145.5	1183.3	1162.8	1143.3	*1148.2*	1143.3	1162.8	1183.3	1145.5	1118.6	1127.7
70°	1012.3	1052.8	1031.8	1034.4	*1042.5*	1034.4	1031.8	1052.8	1012.3	1004.3	1011.3
72.5°	885.2	916.4	909.4	915.8	*924.5*	915.8	909.4	916.4	885.2	884.1	884.6
75°	760.1	783.8	787.1	796.2	*809.7*	796.2	787.1	783.8	760.1	752.0	761.7
77.5°	623.7	650.6	660.9	673.3	*693.2*	673.3	660.9	650.6	623.7	629.1	634.0
80°	498.6	511.1	533.7	542.8	*570.9*	542.8	533.7	511.1	498.6	489.5	496.5
82.5°	364.9	376.2	395.7	413.0	*429.1*	413.0	395.7	376.2	364.9	360.6	361.2
85°	210.8	228.0	241.0	261.5	*266.3*	261.5	241.0	228.0	210.8	215.7	210.8
87.5°	73.9	79.2	90.5	98.6	*99.2*	98.6	90.5	79.2	73.9	75.5	68.4
90°	16.2	27.5	47.4	27.3	*20.0*	27.3	47.4	27.5	16.2	28.2	43.9
92.5°	21.0	37.2	66.7	35.7	*25.9*	35.7	66.7	37.2	21.0	36.6	70.4
95°	31.2	45.6	84.7	39.3	*30.7*	39.3	84.7	45.6	31.2	48.7	98.1
97.5°	48.0	56.5	95.5	41.8	*36.8*	41.8	95.5	56.5	48.0	59.5	112.6
100°	63.7	63.7	173.9	47.8	*41.6*	47.8	173.9	63.7	63.7	73.3	175.2
102.5°	96.2	124.5	402.0	94.1	*50.1*	94.1	402.0	124.5	96.2	137.1	371.5
105°	174.5	283.5	706.8	239.8	*90.4*	239.8	706.8	283.5	174.5	286.5	661.8
107.5°	329.9	527.9	910.3	471.1	*207.2*	471.1	910.3	527.9	329.9	507.0	873.0
110°	527.4	737.5	993.4	644.5	*416.7*	644.5	993.4	737.5	527.4	696.1	915.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	686.4	821.8	970.5	714.3	*575.7*	714.3	970.5	821.8	686.4	768.3	876.7
115°	746.0	809.8	866.9	711.9	*638.3*	711.9	866.9	809.8	746.0	750.3	782.8
117.5°	720.7	741.2	748.9	668.6	*642.0*	668.6	748.9	741.2	720.7	674.9	664.7
120°	650.8	642.3	631.4	604.7	*605.8*	604.7	631.4	642.3	650.8	589.4	555.1
122.5°	563.4	545.4	533.8	540.2	*556.4*	540.2	533.8	545.4	563.4	502.0	476.1
125°	477.9	459.8	465.7	484.9	*501.5*	484.9	465.7	459.8	477.9	426.7	420.1
127.5°	406.2	397.7	416.3	437.9	*452.2*	437.9	416.3	397.7	406.2	373.7	380.3
130°	354.9	356.8	381.4	399.9	*408.9*	399.9	381.4	356.8	354.9	339.3	355.6
132.5°	322.9	332.0	355.5	371.5	*377.0*	371.5	355.5	332.0	322.9	318.7	338.5
135°	303.0	316.4	337.9	348.1	*350.4*	348.1	337.9	316.4	303.0	304.7	322.9
137.5°	291.5	304.9	321.1	329.4	*327.6*	329.4	321.1	304.9	291.5	295.6	309.5
140°	284.8	298.2	305.4	314.9	*313.6*	314.9	305.4	298.2	284.8	287.2	298.0
142.5°	278.2	290.2	293.9	301.0	*299.2*	301.0	293.9	290.2	278.2	280.6	287.8
145°	275.1	284.2	281.2	290.2	*287.7*	290.2	281.2	284.2	275.1	275.8	279.9
147.5°	269.0	275.8	272.2	279.9	*277.4*	279.9	272.2	275.8	269.0	269.0	270.8
150°	262.4	267.2	261.8	270.8	*270.6*	270.8	261.8	267.2	262.4	261.2	262.9
152.5°	253.3	258.1	253.3	263.4	*262.8*	263.4	253.3	258.1	253.3	252.1	253.8
155°	246.0	248.4	246.0	256.1	*256.6*	256.1	246.0	248.4	246.0	245.4	246.5
157.5°	241.0	242.7	241.5	250.5	*251.0*	250.5	241.5	242.7	241.0	241.0	241.5
160°	237.0	239.4	238.8	246.6	*247.1*	246.6	238.8	239.4	237.0	237.8	238.3
162.5°	235.7	235.7	235.6	243.4	*244.4*	243.4	235.6	235.7	235.7	235.7	237.0
165°	233.7	234.9	233.6	239.5	*241.9*	239.5	233.6	234.9	233.7	234.4	234.4
167.5°	233.6	232.4	233.6	238.7	*241.1*	238.7	233.6	232.4	233.6	234.3	234.3
170°	231.7	232.3	232.2	237.4	*239.7*	237.4	232.2	232.3	231.7	232.9	233.6
172.5°	233.4	233.4	232.6	236.6	*240.1*	236.6	232.6	233.4	233.4	234.1	235.3
175°	234.5	233.8	233.7	236.5	*240.0*	236.5	233.7	233.8	234.5	233.9	233.9
177.5°	233.3	234.4	235.4	238.2	*242.9*	238.2	235.4	234.4	233.3	233.9	233.9
180°	234.4	234.4	234.4	234.4	*234.4*	234.4	234.4	234.4	234.4	234.4	234.4

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	28747.7	28747.7	28747.7	28747.7	28747.7	28747.7
2.5°	27912.7	27894.4	27912.7	28107.8	28361.7	28731.0
5°	27264.2	27162.8	27264.2	27480.4	27946.7	28649.6
7.5°	26509.0	26450.2	26509.0	26870.7	27459.9	28455.0
10°	*25713.8*	*25580.7*	*25713.8*	*26122.4*	*26817.3*	*28158.0*
12.5°	24733.9	24557.6	24733.9	25155.9	26032.4	27684.2
15°	23487.5	23332.8	23487.5	23956.0	24972.7	26983.4
17.5°	22150.1	22009.9	22150.1	22557.1	23676.7	25995.8
20°	20470.4	20360.4	20470.4	21046.1	22144.7	24723.1
22.5°	18708.1	18605.2	18708.1	19219.8	20363.1	23127.4
25°	16634.9	16578.9	16634.9	17206.4	18240.3	21261.2
27.5°	14394.6	14299.2	14394.6	14992.5	16048.5	19066.1
30°	12105.8	11947.8	12105.8	12640.5	13586.1	16628.0
32.5°	9867.0	9753.3	9867.0	10248.1	11236.2	13898.1
35°	7703.2	7589.5	7703.2	8047.7	9018.0	11379.6
37.5°	6002.5	5801.4	6002.5	6223.5	7011.0	8930.6
40°	4552.4	4520.0	4552.4	4830.5	5334.5	6948.0
42.5°	3706.1	3618.2	3706.1	3825.8	4203.1	5264.5
45°	3040.8	3006.3	3040.8	3131.4	3384.8	4115.2
47.5°	2615.0	2630.1	2615.0	2673.2	2863.0	3351.4
50°	2297.4	2306.6	2297.4	2325.0	2451.6	2815.0
52.5°	2063.5	2055.4	2063.5	2066.2	2145.0	2418.2
55°	1856.5	1846.3	1856.5	1850.6	1908.8	2084.0
57.5°	1675.4	1682.9	1675.4	1667.3	1698.6	1830.1
60°	1513.7	1520.7	1513.7	1507.7	1528.2	1605.3
62.5°	1377.3	1381.6	1377.3	1376.8	1373.0	1432.3
65°	1255.4	1260.3	1255.4	1249.0	1243.1	1270.6
67.5°	1139.1	1139.1	1139.1	1127.7	1118.6	1145.5
70°	1029.6	1029.1	1029.6	1011.3	1004.3	1012.3
72.5°	898.1	911.0	898.1	884.6	884.1	885.2
75°	770.3	785.5	770.3	761.7	752.0	760.1
77.5°	640.9	664.2	640.9	634.0	629.1	623.7
80°	508.3	533.7	508.3	496.5	489.5	498.6
82.5°	375.7	394.6	375.7	361.2	360.6	364.9
85°	223.7	253.9	223.7	210.8	215.7	210.8
87.5°	71.7	91.6	71.7	68.4	75.5	73.9
90°	25.8	16.2	25.8	43.9	28.2	16.2
92.5°	39.1	23.4	39.1	70.4	36.6	21.0
95°	45.1	27.0	45.1	98.1	48.7	31.2
97.5°	49.9	34.8	49.9	112.6	59.5	48.0
100°	58.4	45.6	58.4	175.2	73.3	63.7
102.5°	123.4	76.9	123.4	371.5	137.1	96.2
105°	259.5	132.3	259.5	661.8	286.5	174.5
107.5°	464.3	228.7	464.3	873.0	507.0	329.9
110°	616.0	426.2	616.0	915.2	696.1	527.4

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

Scaled Data Report

TEST NUMBER: P1433221
CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	661.8	575.6	661.8	876.7	768.3	686.4
115°	636.5	605.7	636.5	782.8	750.3	746.0
117.5°	581.1	585.2	581.1	664.7	674.9	720.7
120°	517.2	541.9	517.2	555.1	589.4	650.8
122.5°	458.8	487.6	458.8	476.1	502.0	563.4
125°	408.1	437.6	408.1	420.1	426.7	477.9
127.5°	373.2	393.1	373.2	380.3	373.7	406.2
130°	346.0	363.0	346.0	355.6	339.3	354.9
132.5°	327.3	338.2	327.3	338.5	318.7	322.9
135°	311.0	320.1	311.0	322.9	304.7	303.0
137.5°	297.1	304.9	297.1	309.5	295.6	291.5
140°	284.9	291.6	284.9	298.0	287.2	284.8
142.5°	272.2	277.1	272.2	287.8	280.6	278.2
145°	263.7	267.3	263.7	279.9	275.8	275.1
147.5°	256.4	258.8	256.4	270.8	269.0	269.0
150°	249.0	251.4	249.0	262.9	261.2	262.4
152.5°	241.1	244.1	241.1	253.8	252.1	253.3
155°	236.2	239.1	236.2	246.5	245.4	246.0
157.5°	233.6	235.9	233.6	241.5	241.0	241.0
160°	231.6	233.3	231.6	238.3	237.8	237.0
162.5°	229.0	230.8	229.0	237.0	235.7	235.7
165°	228.9	229.5	228.9	234.4	234.4	233.7
167.5°	228.2	229.5	228.2	234.3	234.3	233.6
170°	228.8	229.3	228.8	233.6	232.9	231.7
172.5°	229.9	230.4	229.9	235.3	234.1	233.4
175°	229.8	230.4	229.8	233.9	233.9	234.5
177.5°	231.5	232.1	231.5	233.9	233.9	233.3
180°	234.4	234.4	234.4	234.4	234.4	234.4

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

Scaled Data Report

TEST NUMBER: P1433221
CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-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	17.71	18.81	18.18	19.26	19.74	17.02	18.13	17.50	18.58	19.06
	3H	19.25	20.24	19.75	20.70	21.23	18.87	19.86	19.37	20.32	20.84
	4H	19.89	20.81	20.40	21.29	21.83	19.65	20.57	20.17	21.05	21.59
	6H	20.37	21.22	20.90	21.71	22.26	20.30	21.14	20.82	21.64	22.19
	8H	20.52	21.32	21.06	21.84	22.40	20.52	21.32	21.06	21.83	22.39
	12H	20.59	21.36	21.14	21.87	22.45	20.65	21.41	21.19	21.92	22.50
4H	2H	18.12	19.04	18.64	19.52	20.06	17.60	18.52	18.12	19.00	19.54
	3H	19.92	20.68	20.44	21.21	21.76	19.66	20.42	20.18	20.94	21.50
	4H	20.69	21.38	21.24	21.91	22.51	20.56	21.25	21.11	21.79	22.38
	6H	21.31	21.90	21.88	22.46	23.07	21.33	21.92	21.91	22.49	23.10
	8H	21.50	22.05	22.08	22.62	23.23	21.61	22.16	22.18	22.72	23.34
	12H	21.61	22.09	22.20	22.69	23.31	21.77	22.26	22.37	22.85	23.48
8H	4H	20.94	21.49	21.52	22.05	22.67	20.84	21.39	21.42	21.96	22.57
	6H	21.68	22.13	22.29	22.74	23.37	21.75	22.19	22.36	22.80	23.43
	8H	21.95	22.35	22.58	22.97	23.61	22.10	22.50	22.73	23.12	23.76
	12H	22.13	22.47	22.75	23.08	23.79	22.35	22.70	22.97	23.30	24.02
12H	4H	20.95	21.44	21.54	22.03	22.65	20.85	21.34	21.45	21.93	22.56
	6H	21.73	22.13	22.35	22.75	23.39	21.79	22.19	22.42	22.81	23.45
	8H	22.04	22.39	22.66	23.00	23.71	22.20	22.55	22.82	23.15	23.86

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: SP1-2506-472-5

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

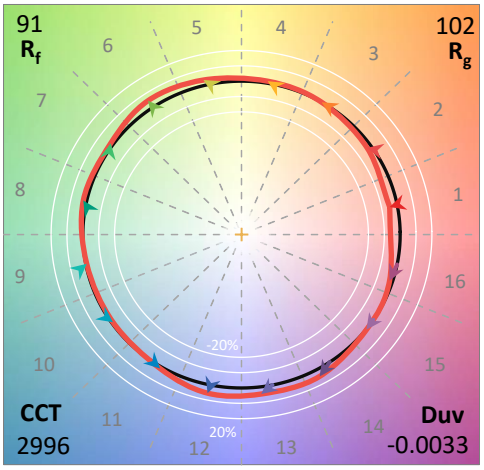
Test Information

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

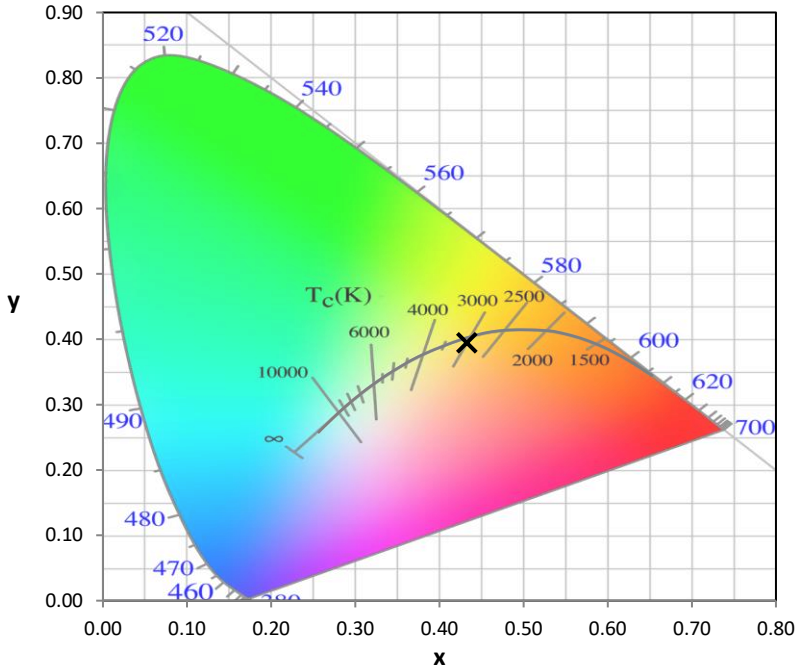
Stabilization Time:	40M
Operation Time:	1H 40M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-5

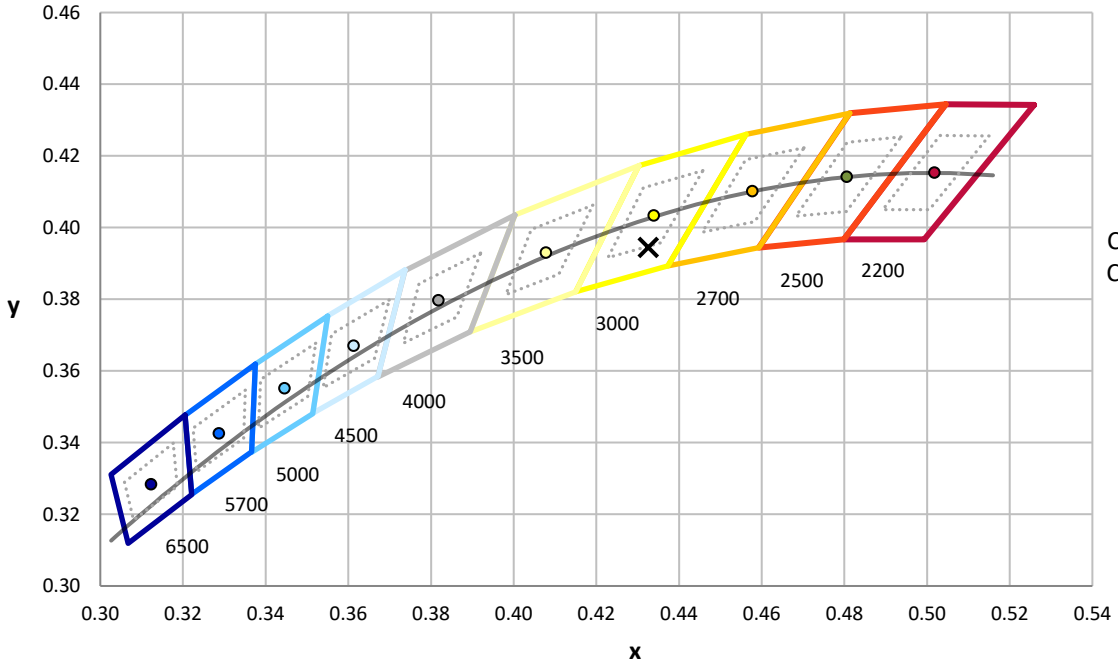
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2506-472-5

CIE 1931 Chromaticity Diagram



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

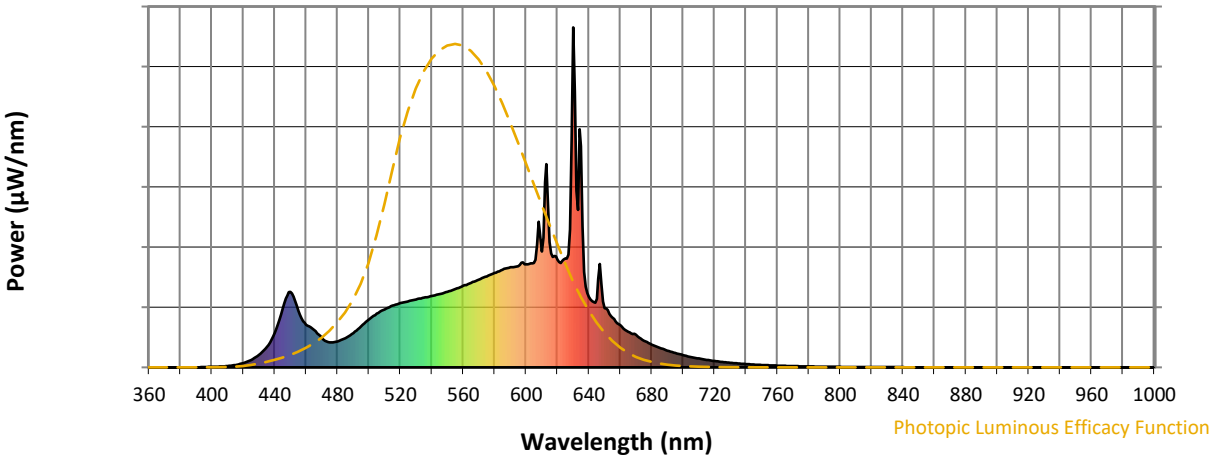


CCT = 2996K
CIE x = 0.4325
CIE y = 0.3945
Duv = -0.0033

Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-472-5

Photopic Flux vs. Wavelength

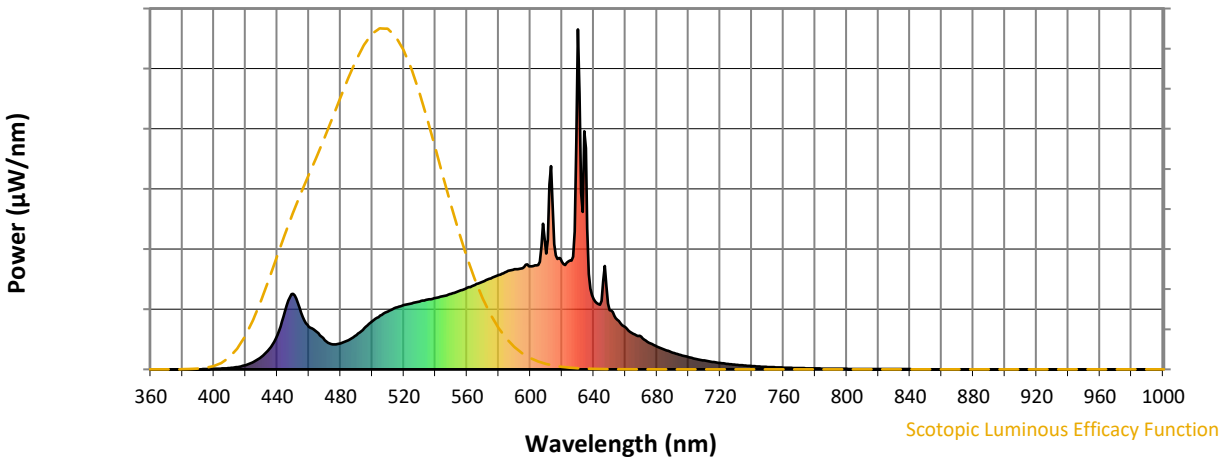


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2506-472-5

Scotopic Flux vs. Wavelength

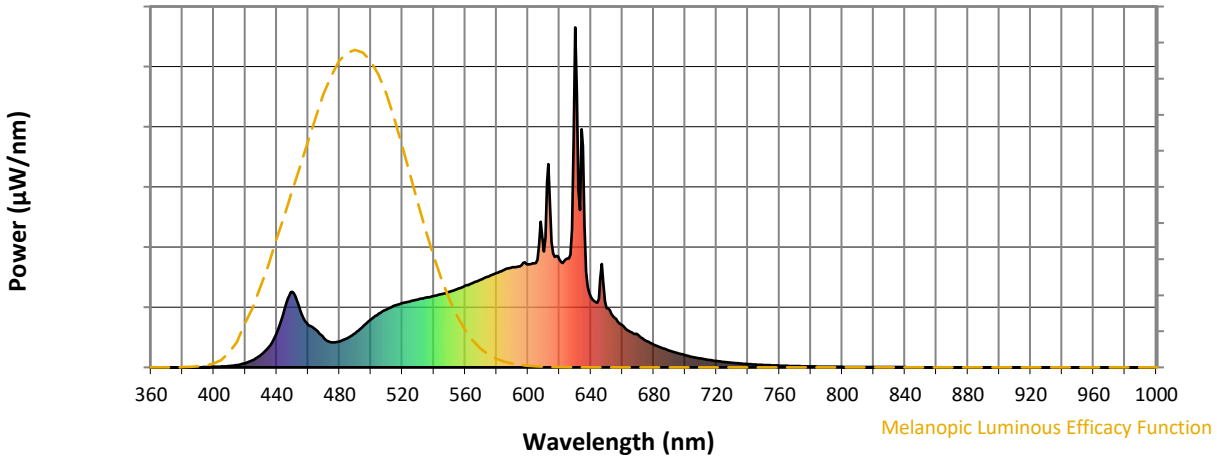


Scotopic Lumens: NR **S/P: 1.44**

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			

REPORT NUMBER: SP1-2506-472-5

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			

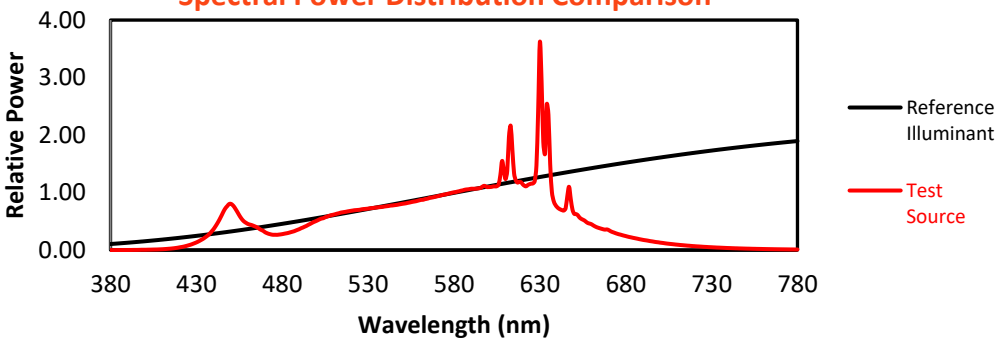
REPORT NUMBER: SP1-2506-472-5

TM-30-18

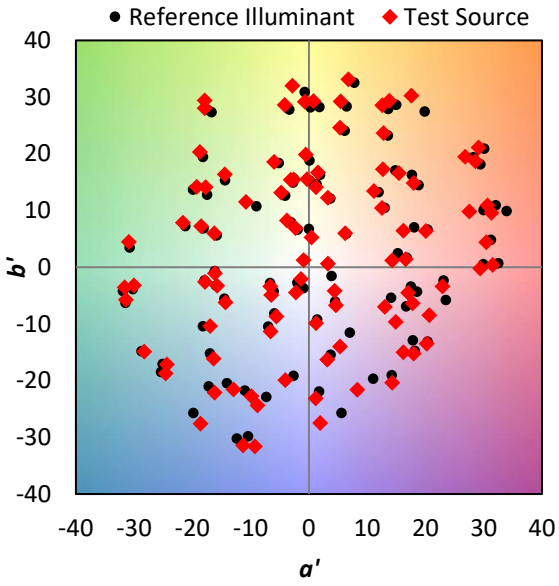
Summary

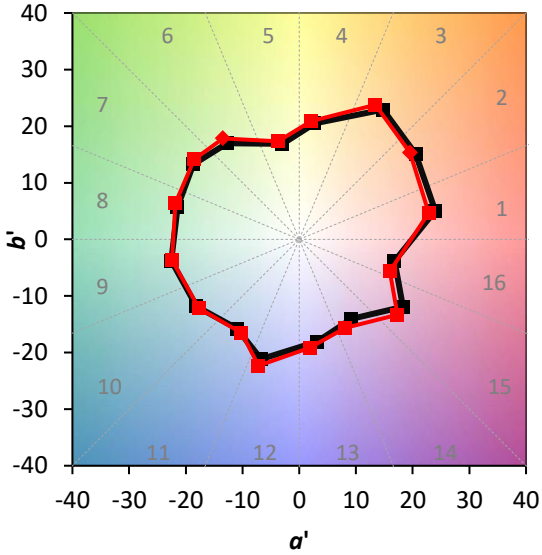
R_f = 91.3
R_g = 102
CIE R_a = 94.4
R_9 = 61.4

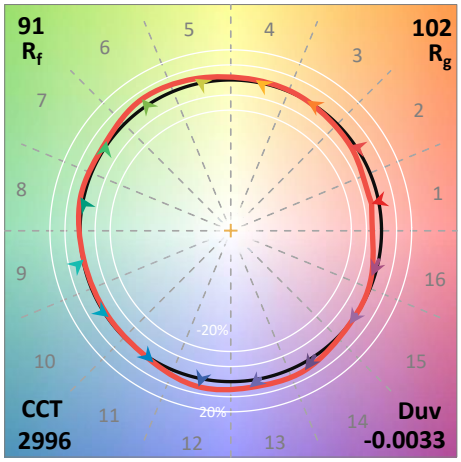
Spectral Power Distribution Comparison

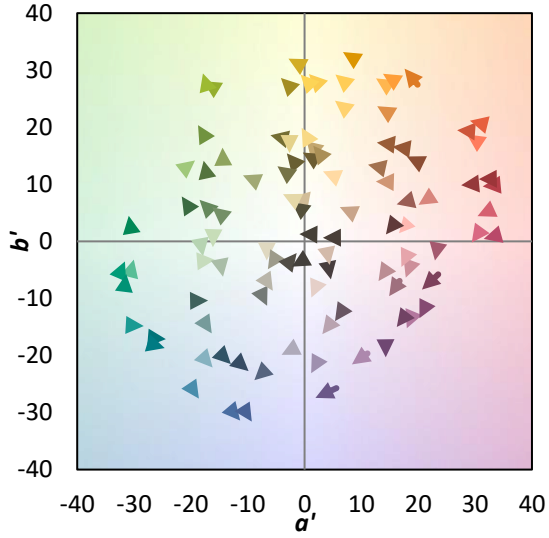


Color Vector Graphics







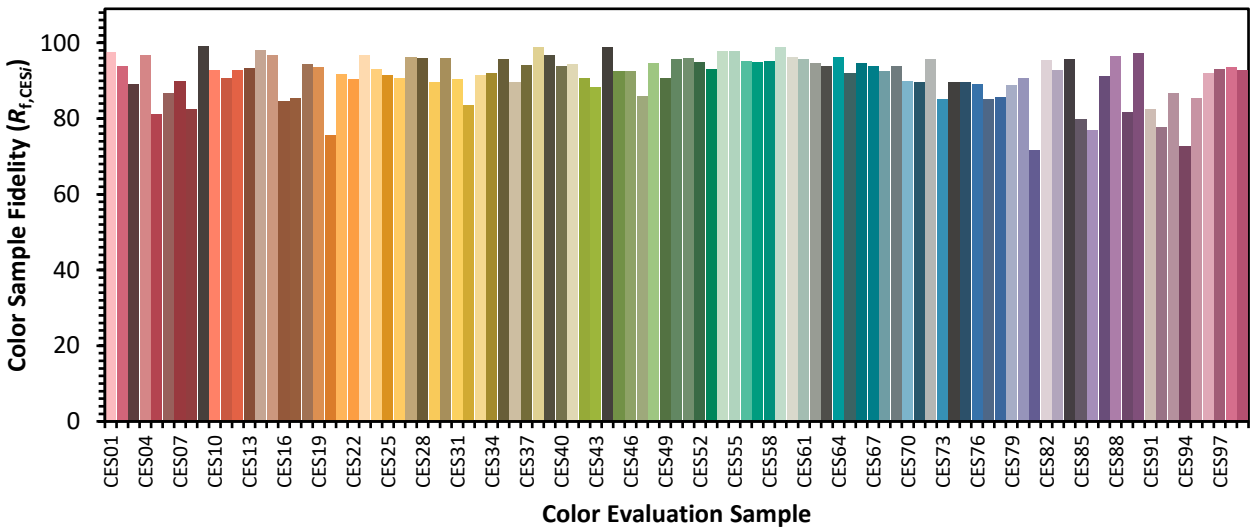


REPORT NUMBER: SP1-2506-472-5

TM-30-18

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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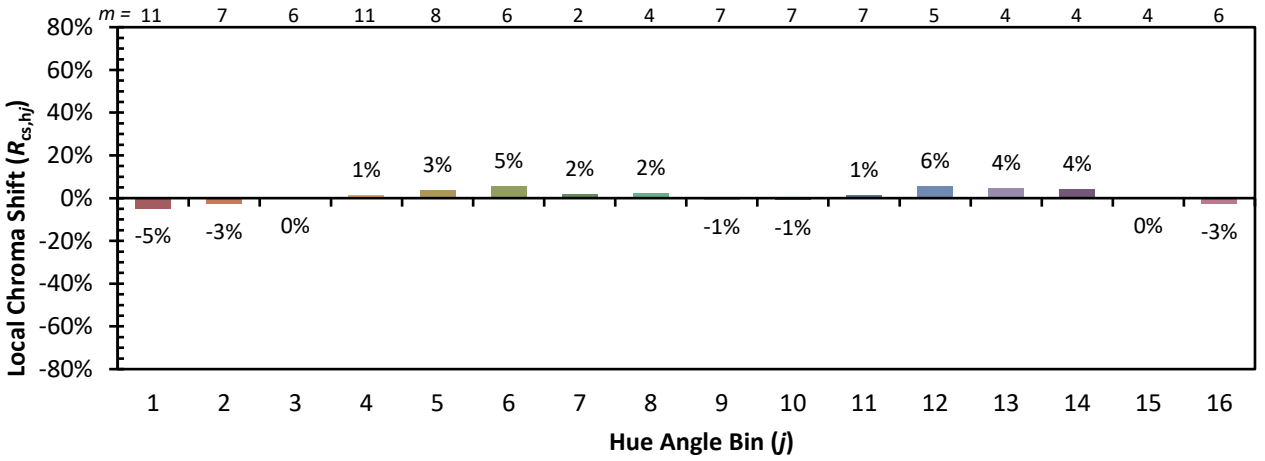
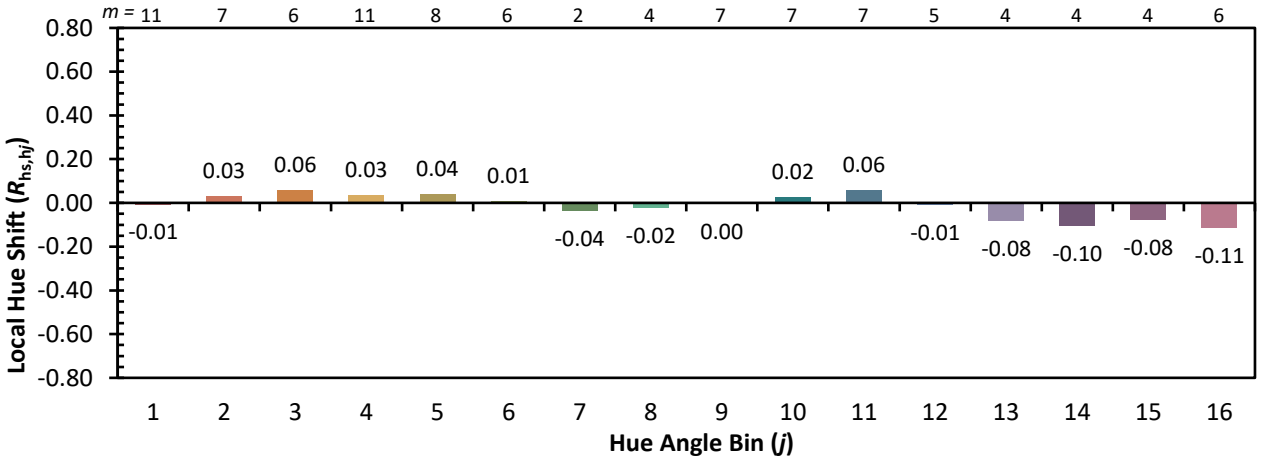
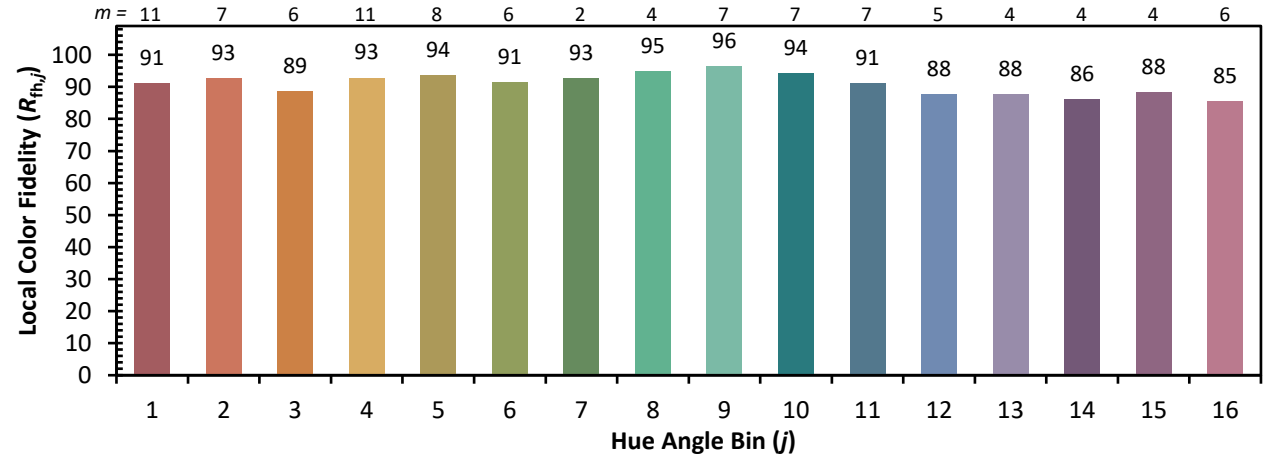
Color Rendition by Hue-Angle Bin







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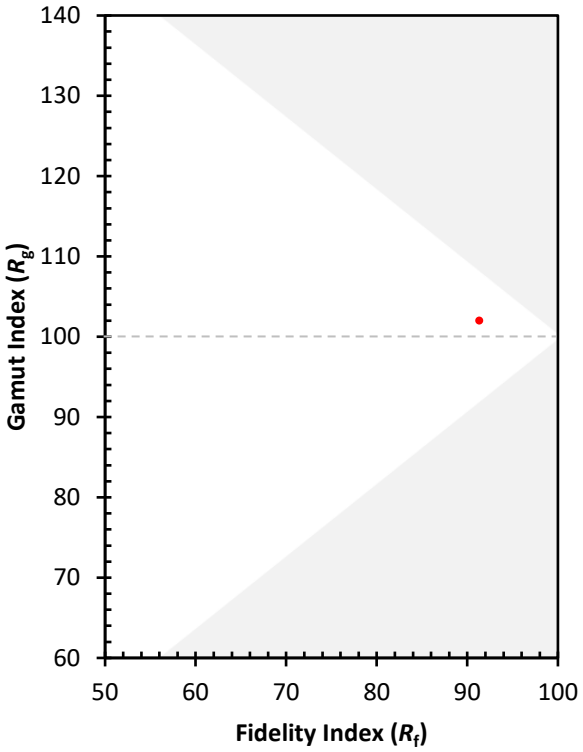
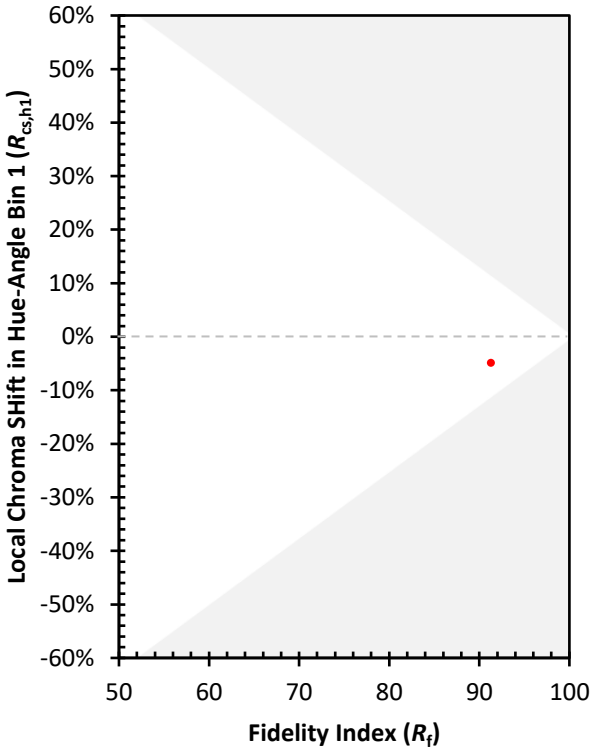
Measure Comparisons





(END OF REPORT)