

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: P1433222

Luminaire Tested: EHBR1-36-UNV-TASM-L930-UPL30

Issue Date: 3/20/2026

**Test Information**

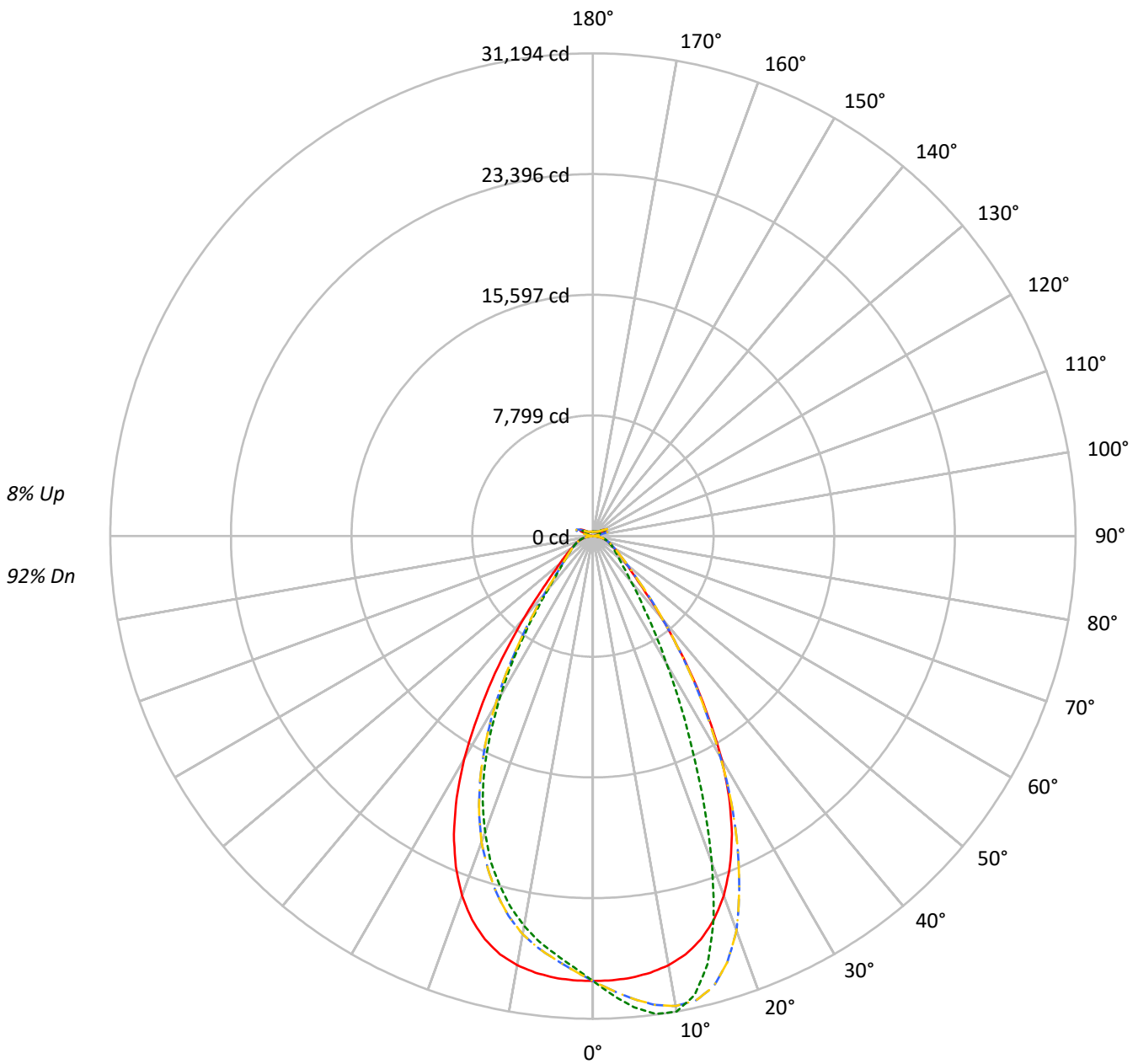
Test Method: LM-79-2019  
Report Number: P1433222  
REPORT IS A COMBINATION OF REPORTS P1431776 AND P1431635  
Test Lab: INNOVATION CENTER  
Issue Date: 3/20/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: EHBR1-36-UNV-TASM-L930-UPL30  
Description: Elevate Round Highbay at, 36000 lumens, 3000K 90CRI LEDs with TASM lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 34862.2 lumens  
Efficiency: N/A  
Efficacy: 163.4 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): 213.4  
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: P1433222  
CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - · 90°-270°    - · - · 135°-315°





TEST NUMBER: P1433222  
 CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2733.5	7.8
10°-20°	7436.6	21.3
20°-30°	8721.6	25.0
30°-40°	6065.3	17.4
40°-50°	3014.2	8.6
50°-60°	1802.8	5.2
60°-70°	1268.9	3.6
70°-80°	817.4	2.3
80°-90°	264.4	0.8
90°-100°	73.0	0.2
100°-110°	475.6	1.4
110°-120°	878.3	2.5
120°-130°	522.2	1.5
130°-140°	316.1	0.9
140°-150°	219.0	0.6
150°-160°	143.3	0.4
160°-170°	82.6	0.2
170°-180°	27.5	0.1
0°-30°	18891.6	54.2
0°-40°	24956.9	71.6
0°-60°	29773.9	85.4
0°-90°	32124.6	92.1
90°-120°	1426.9	4.1
90°-150°	2484.3	7.1
90°-180°	2738.0	7.9
0°-180°	34862.2	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°	20	24	20	20	20	19
95°	39	38	39	34	39	41
105°	218	112	218	166	218	295
115°	935	799	935	759	935	852
125°	599	628	599	548	599	551
135°	379	438	379	401	379	300
145°	343	359	343	334	343	215
155°	306	319	306	297	306	143
165°	289	299	289	284	289	82
175°	289	295	289	284	289	27
180°	289	289	289	289	289	



TEST NUMBER: P1433222  
 CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**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°	20.1	34.3	59.0	33.4	23.9	33.4	59.0	34.3	20.1	35.3	54.9
92.5°	26.2	46.3	83.1	43.9	31.5	43.9	83.1	46.3	26.2	45.8	88.1
95°	38.9	56.9	105.8	48.5	37.5	48.5	105.8	56.9	38.9	61.0	122.8
97.5°	60.0	70.5	119.4	51.5	45.0	51.5	119.4	70.5	60.0	74.5	141.0
100°	79.6	79.6	217.5	59.1	51.1	59.1	217.5	79.6	79.6	91.7	219.5
102.5°	120.4	155.6	503.4	117.0	61.7	117.0	503.4	155.6	120.4	171.7	465.5
105°	218.5	354.9	885.4	299.7	112.0	299.7	885.4	354.9	218.5	359.0	829.5
107.5°	413.2	661.4	1140.6	589.6	258.4	589.6	1140.6	661.4	413.2	635.2	1094.2
110°	660.9	924.1	1244.7	807.0	521.2	807.0	1244.7	924.1	660.9	872.2	1147.1



TEST NUMBER: P1433222

CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	860.2	1029.8	1216.0	894.5	720.5	894.5	1216.0	1029.8	860.2	962.9	1098.8
115°	934.7	1014.7	1086.2	891.6	799.0	891.6	1086.2	1014.7	934.7	940.2	981.0
117.5°	903.0	928.7	938.3	837.2	803.5	837.2	938.3	928.7	903.0	845.6	833.0
120°	815.4	804.9	790.8	757.2	758.3	757.2	790.8	804.9	815.4	738.4	695.6
122.5°	705.8	683.1	668.5	676.2	696.3	676.2	668.5	683.1	705.8	628.7	596.5
125°	598.6	575.9	583.0	606.7	627.5	606.7	583.0	575.9	598.6	534.1	526.0
127.5°	508.5	497.9	521.0	547.9	565.5	547.9	521.0	497.9	508.5	467.7	476.2
130°	444.1	446.6	477.3	500.0	511.2	500.0	477.3	446.6	444.1	424.4	445.0
132.5°	403.9	415.4	444.6	464.4	471.0	464.4	444.6	415.4	403.9	398.3	423.5
135°	378.7	395.8	422.5	435.1	437.8	435.1	422.5	395.8	378.7	380.8	403.9
137.5°	364.1	381.2	401.4	411.5	409.1	411.5	401.4	381.2	364.1	369.2	386.8
140°	355.7	372.7	381.8	393.3	391.6	393.3	381.8	372.7	355.7	358.7	372.2
142.5°	347.2	362.7	367.1	375.9	373.4	375.9	367.1	362.7	347.2	350.2	359.3
145°	343.2	354.8	351.1	362.3	358.9	362.3	351.1	354.8	343.2	344.2	349.2
147.5°	335.7	344.2	339.6	349.2	345.8	349.2	339.6	344.2	335.7	335.7	337.7
150°	327.1	333.2	326.6	337.7	337.3	337.7	326.6	333.2	327.1	325.6	327.7
152.5°	315.6	321.6	315.6	328.2	327.2	328.2	315.6	321.6	315.6	314.0	316.1
155°	306.1	309.1	306.1	318.7	319.2	318.7	306.1	309.1	306.1	305.6	306.6
157.5°	299.6	301.7	300.1	311.3	311.8	311.3	300.1	301.7	299.6	299.6	300.1
160°	294.2	297.2	296.2	305.8	306.4	305.8	296.2	297.2	294.2	295.1	295.7
162.5°	292.2	292.2	291.8	301.4	302.5	301.4	291.8	292.2	292.2	292.2	293.7
165°	289.4	290.9	288.9	296.0	298.6	296.0	288.9	290.9	289.4	290.3	290.3
167.5°	288.9	287.4	288.6	294.7	297.3	294.7	288.6	287.4	288.9	289.9	289.9
170°	286.4	287.0	286.6	292.7	295.3	292.7	286.6	287.0	286.4	287.9	288.9
172.5°	288.1	288.1	286.7	291.3	295.4	291.3	286.7	288.1	288.1	289.1	290.6
175°	289.2	288.2	287.7	290.9	295.0	290.9	287.7	288.2	289.2	288.6	288.6
177.5°	287.7	288.7	289.8	292.9	298.5	292.9	289.8	288.7	287.7	288.6	288.6
180°	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7



TEST NUMBER: P1433222

CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**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°	32.3	20.1	32.3	54.9	35.3	20.1
92.5°	48.8	29.2	48.8	88.1	45.8	26.2
95°	56.4	33.8	56.4	122.8	61.0	38.9
97.5°	62.5	43.3	62.5	141.0	74.5	60.0
100°	73.0	56.9	73.0	219.5	91.7	79.6
102.5°	154.5	96.2	154.5	465.5	171.7	120.4
105°	325.2	165.7	325.2	829.5	359.0	218.5
107.5°	581.8	286.4	581.8	1094.2	635.2	413.2
110°	772.1	534.1	772.1	1147.1	872.2	660.9



TEST NUMBER: P1433222

CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	829.5	721.3	829.5	1098.8	962.9	860.2
115°	797.7	759.0	797.7	981.0	940.2	934.7
117.5°	728.3	733.3	728.3	833.0	845.6	903.0
120°	648.3	679.0	648.3	695.6	738.4	815.4
122.5°	574.8	611.1	574.8	596.5	628.7	705.8
125°	511.4	548.1	511.4	526.0	534.1	598.6
127.5°	467.6	492.4	467.6	476.2	467.7	508.5
130°	433.5	454.6	433.5	445.0	424.4	444.1
132.5°	409.8	423.4	409.8	423.5	398.3	403.9
135°	389.2	400.7	389.2	403.9	380.8	378.7
137.5°	371.6	381.7	371.6	386.8	369.2	364.1
140°	356.1	364.6	356.1	372.2	358.7	355.7
142.5°	340.0	346.0	340.0	359.3	350.2	347.2
145°	329.1	333.6	329.1	349.2	344.2	343.2
147.5°	319.6	322.6	319.6	337.7	335.7	335.7
150°	310.1	313.1	310.1	327.7	325.6	327.1
152.5°	300.0	303.6	300.0	316.1	314.0	315.6
155°	293.5	297.1	293.5	306.6	305.6	306.1
157.5°	290.1	292.7	290.1	300.1	299.6	299.6
160°	287.2	289.3	287.2	295.7	295.1	294.2
162.5°	283.7	285.8	283.7	293.7	292.2	292.2
165°	283.3	283.8	283.3	290.3	290.3	289.4
167.5°	282.3	283.8	282.3	289.9	289.9	288.9
170°	282.8	283.4	282.8	288.9	287.9	286.4
172.5°	284.0	284.5	284.0	290.6	289.1	288.1
175°	283.6	284.1	283.6	288.6	288.6	289.2
177.5°	285.6	286.1	285.6	288.6	288.6	287.7
180°	288.7	288.7	288.7	288.7	288.7	288.7



TEST NUMBER: P1433222  
 CATALOG NUMBER: EHBR1-36-UNV-TASM-L930-UPL30

**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	17.59	18.68	18.09	19.15	19.66	16.91	18.00	17.41	18.47	18.98
	3H	19.13	20.10	19.65	20.59	21.15	18.75	19.72	19.27	20.21	20.77
	4H	19.77	20.68	20.31	21.18	21.76	19.53	20.44	20.07	20.95	21.52
	6H	20.25	21.08	20.80	21.61	22.19	20.18	21.01	20.73	21.53	22.11
	8H	20.40	21.19	20.97	21.73	22.32	20.40	21.18	20.96	21.73	22.32
	12H	20.47	21.22	21.04	21.76	22.37	20.52	21.28	21.09	21.81	22.43
4H	2H	18.00	18.91	18.54	19.41	19.99	17.48	18.38	18.02	18.89	19.47
	3H	19.80	20.55	20.35	21.10	21.69	19.54	20.28	20.09	20.84	21.43
	4H	20.57	21.24	21.14	21.81	22.43	20.44	21.12	21.01	21.68	22.31
	6H	21.19	21.77	21.78	22.35	23.00	21.21	21.79	21.81	22.38	23.03
	8H	21.38	21.92	21.98	22.51	23.16	21.48	22.03	22.08	22.61	23.26
	12H	21.49	21.96	22.10	22.58	23.24	21.65	22.13	22.27	22.75	23.40
8H	4H	20.82	21.36	21.42	21.95	22.60	20.72	21.26	21.32	21.85	22.50
	6H	21.56	22.00	22.19	22.63	23.29	21.63	22.07	22.26	22.70	23.36
	8H	21.83	22.22	22.48	22.87	23.54	21.98	22.37	22.63	23.02	23.69
	12H	22.00	22.35	22.65	22.97	23.72	22.23	22.57	22.87	23.20	23.94
12H	4H	20.83	21.31	21.45	21.92	22.58	20.73	21.21	21.35	21.83	22.48
	6H	21.60	22.00	22.25	22.64	23.31	21.67	22.06	22.32	22.71	23.38
	8H	21.92	22.26	22.56	22.89	23.63	22.08	22.42	22.72	23.04	23.79

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

**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	R9:	61.4
R2:	98.1	R10:	94.4
R3:	97.8	R11:	95.7
R4:	95.6	R12:	88.5
R5:	96.9	R13:	97.3
R6:	95.7	R14:	97.8
R7:	90.9	R15:	92.3
R8:	83.0		



**Test Conditions**

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

REPORT NUMBER: SP1-2506-472-5

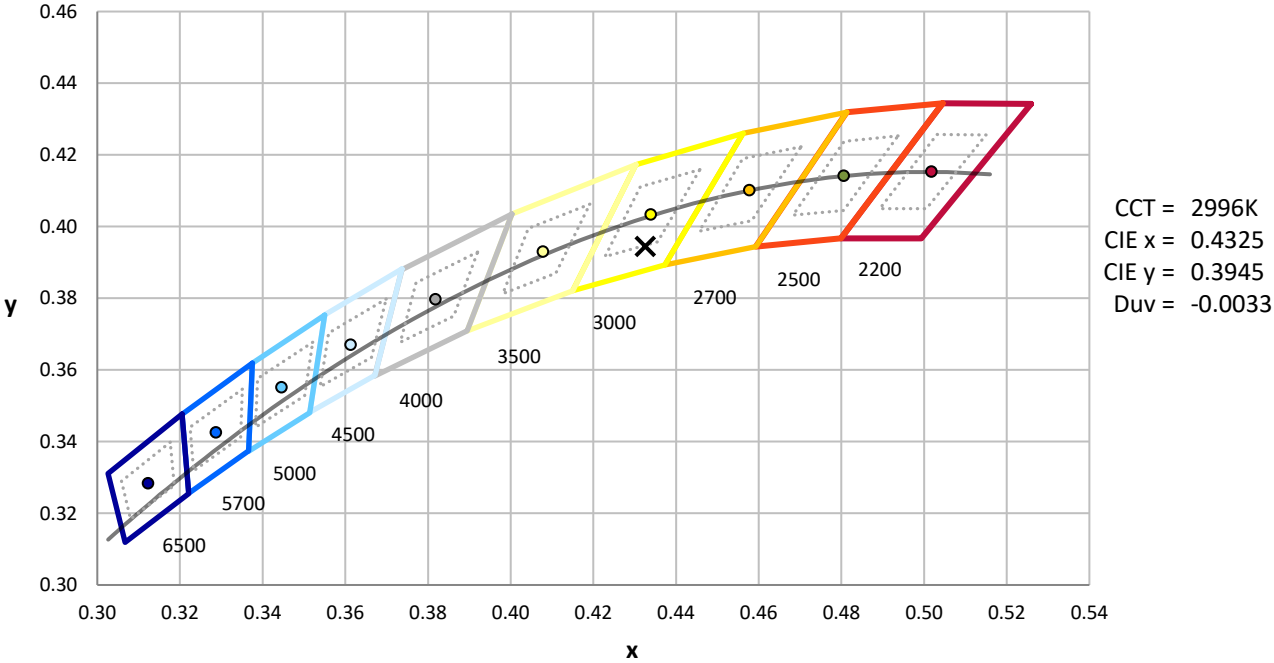
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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



Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-472-5

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /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			

**Summary**

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



**Color Vector Graphics**

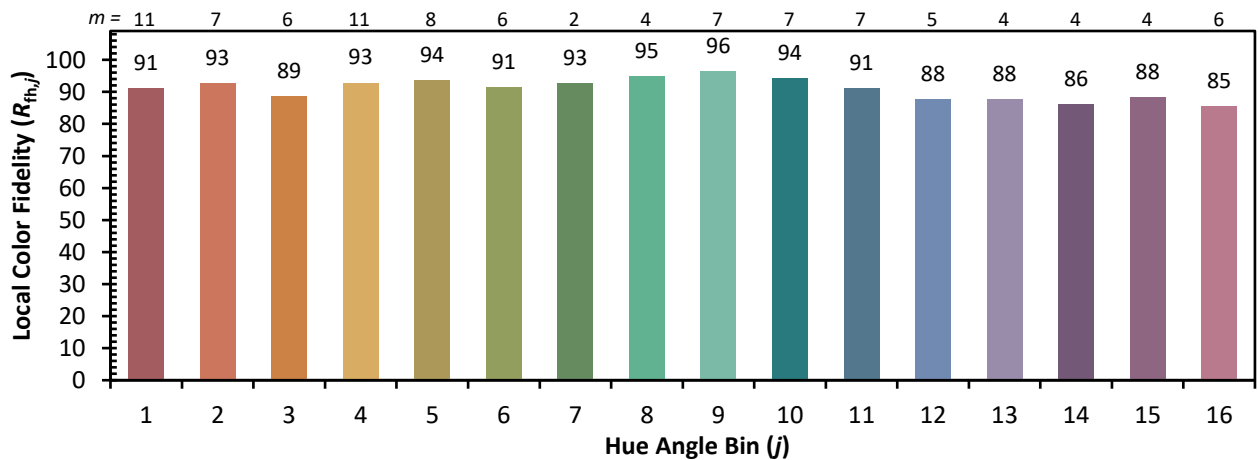


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

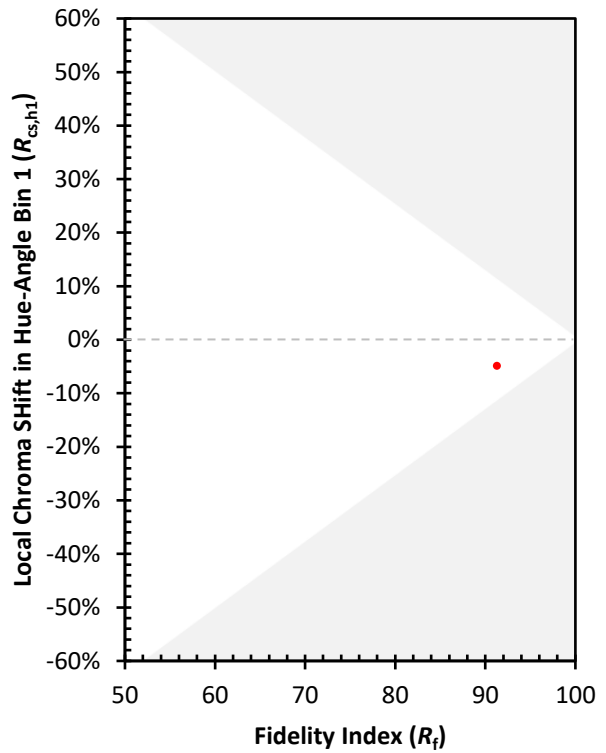
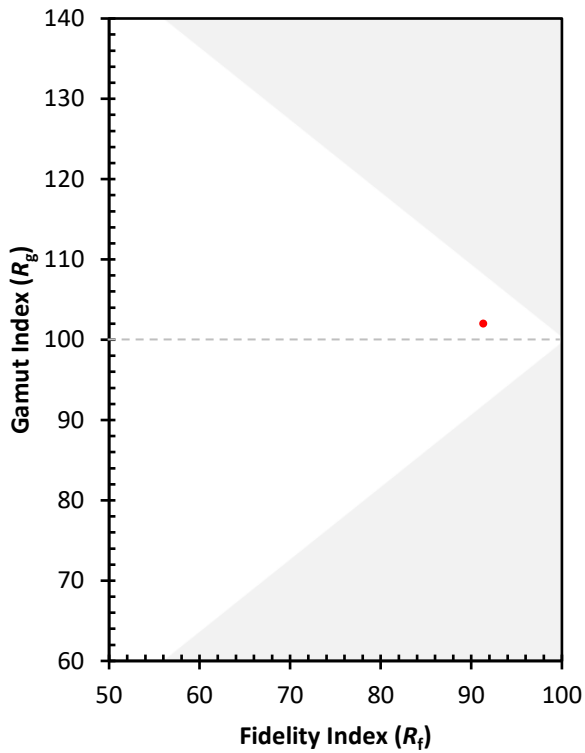
CES01 = 86	CES26 = 91	CES51 = 96	CES76 = 89
CES02 = 63	CES27 = 96	CES52 = 95	CES77 = 85
CES03 = 32	CES28 = 96	CES53 = 93	CES78 = 86
CES04 = 70	CES29 = 90	CES54 = 98	CES79 = 89
CES05 = 51	CES30 = 96	CES55 = 98	CES80 = 91
CES06 = 51	CES31 = 90	CES56 = 95	CES81 = 72
CES07 = 44	CES32 = 84	CES57 = 95	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)