

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: P1433253

Luminaire Tested: EHBR1-42-UNV-TASM-L930-UPL24

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433253
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-TASM-L930-UPL24
Description: Elevate Round Highbay at, 42000 lumens, 3000K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

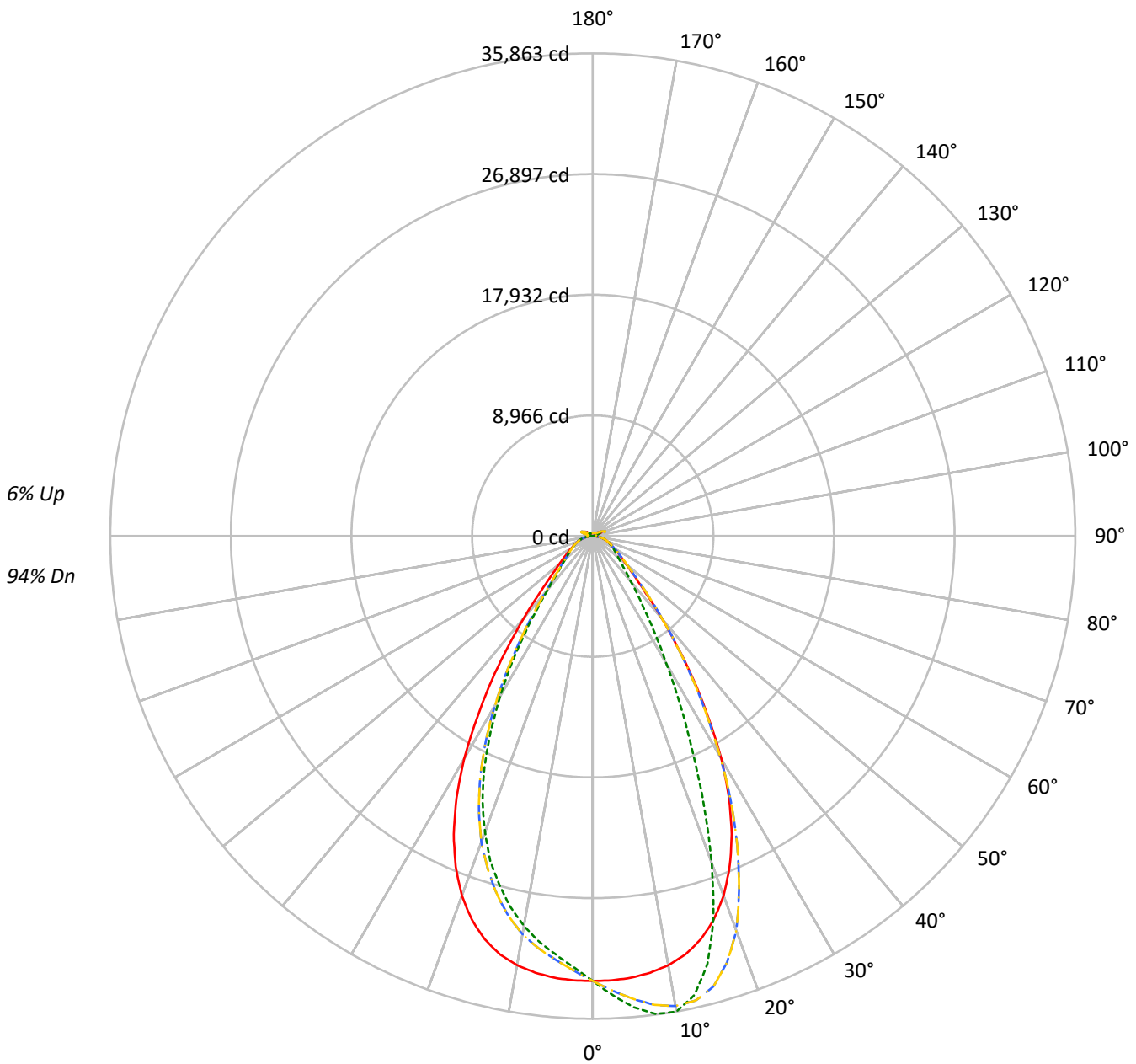
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39123.8 lumens
Efficiency: N/A
Efficacy: 162.4 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): 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: P1433253
CATALOG NUMBER: EHBR1-42-UNV-TASM-L930-UPL24

Luminous Intensity Polar Plot



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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3142.6	8.0
10°-20°	8549.7	21.9
20°-30°	10027.0	25.6
30°-40°	6973.2	17.8
40°-50°	3465.3	8.9
50°-60°	2072.6	5.3
60°-70°	1458.8	3.7
70°-80°	939.7	2.4
80°-90°	302.3	0.8
90°-100°	58.8	0.2
100°-110°	380.0	1.0
110°-120°	701.3	1.8
120°-130°	417.4	1.1
130°-140°	253.3	0.6
140°-150°	176.0	0.4
150°-160°	115.8	0.3
160°-170°	67.3	0.2
170°-180°	22.6	0.1
0°-30°	21719.2	55.5
0°-40°	28692.4	73.3
0°-60°	34230.3	87.5
0°-90°	36931.2	94.4
90°-120°	1140.2	2.9
90°-150°	1986.9	5.1
90°-180°	2193.0	5.6
0°-180°	39123.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	33051	33051	33051	33051	33051	
5°	32938	35138	32938	31228	32938	3126
15°	31022	32909	31022	26825	31022	8670
25°	24444	17404	24444	19060	24444	11066
35°	13083	6739	13083	8725	13083	8167
45°	4731	3172	4731	3456	4731	3871
55°	2396	2051	2396	2123	2396	2191
65°	1461	1455	1461	1449	1461	1467
75°	874	931	874	903	874	917
85°	242	306	242	292	242	269
90°	16	21	16	16	16	19
95°	31	32	31	27	31	33
105°	175	91	175	132	175	235
115°	746	639	746	606	746	680
125°	478	502	478	438	478	440
135°	304	351	304	320	304	241
145°	276	289	276	268	276	173
155°	247	258	247	241	247	115
165°	236	244	236	232	236	67
175°	237	244	237	233	237	23
180°	237	237	237	237	237	



TEST NUMBER: P1433253
 CATALOG NUMBER: EHBR1-42-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6
2.5°	33031.4	33458.4	33804.1	34032.3	34145.0	34032.3	33804.1	33458.4	33031.4	32606.8	32315.0
5°	32937.8	33793.0	34517.5	34991.6	35138.5	34991.6	34517.5	33793.0	32937.8	32129.6	31593.6
7.5°	32714.0	34046.5	35123.0	35676.4	35811.5	35676.4	35123.0	34046.5	32714.0	31570.0	30892.6
10°	32372.5	34206.4	35450.3	35846.9	35862.9	35846.9	35450.3	34206.4	32372.5	30831.2	30032.4
12.5°	31827.8	34149.4	35340.6	35210.4	34914.8	35210.4	35340.6	34149.4	31827.8	29928.9	28921.1
15°	31022.1	33811.6	34645.8	33586.6	32909.3	33586.6	34645.8	33811.6	31022.1	28710.5	27541.7
17.5°	29886.8	33179.5	33195.6	31100.3	29822.3	31100.3	33195.6	33179.5	29886.8	27220.6	25933.4
20°	28423.5	32165.6	31198.7	27366.2	25852.1	27366.2	31198.7	32165.6	28423.5	25459.2	24196.2
22.5°	26589.0	30798.4	28417.9	23610.0	21544.3	23610.0	28417.9	30798.4	26589.0	23411.0	22096.5
25°	24443.5	29123.3	25426.5	19517.1	17403.8	19517.1	25426.5	29123.3	24443.5	20970.4	19781.8
27.5°	21919.9	26999.9	22240.9	15948.6	13998.9	15948.6	22240.9	26999.9	21919.9	18450.5	17236.4
30°	19116.7	24278.0	18925.9	12701.2	10905.7	12701.2	18925.9	24278.0	19116.7	15619.5	14532.4
32.5°	15978.3	21610.1	15742.3	10176.9	8656.0	10176.9	15742.3	21610.1	15978.3	12918.1	11782.0
35°	13082.9	18272.0	12871.5	7996.6	6739.2	7996.6	12871.5	18272.0	13082.9	10367.8	9252.3
37.5°	10267.4	15118.2	10260.6	6439.2	5466.2	6439.2	10260.6	15118.2	10267.4	8060.5	7155.0
40°	7987.9	11821.1	8039.4	5140.2	4386.5	5140.2	8039.4	11821.1	7987.9	6133.0	5553.6
42.5°	6052.4	9039.0	6319.0	4218.7	3725.9	4218.7	6319.0	9039.0	6052.4	4832.2	4398.4
45°	4731.2	6651.7	4934.4	3559.2	3171.8	3559.2	4934.4	6651.7	4731.2	3891.4	3600.1
47.5°	3852.9	5140.8	3999.3	3052.9	2781.4	3052.9	3999.3	5140.8	3852.9	3291.5	3073.4
50°	3236.4	3944.7	3320.7	2665.0	2482.7	2665.0	3320.7	3944.7	3236.4	2818.6	2673.0
52.5°	2780.2	3217.1	2827.9	2374.9	2252.2	2374.9	2827.9	3217.1	2780.2	2466.0	2375.5
55°	2395.9	2704.6	2459.2	2135.6	2050.8	2135.6	2459.2	2704.6	2395.9	2194.5	2127.6
57.5°	2104.1	2294.3	2135.6	1931.7	1875.3	1931.7	2135.6	2294.3	2104.1	1952.8	1916.8
60°	1845.6	1986.9	1884.7	1753.9	1737.8	1753.9	1884.7	1986.9	1845.6	1757.0	1733.4
62.5°	1646.6	1735.9	1666.5	1594.0	1579.7	1594.0	1666.5	1735.9	1646.6	1578.5	1582.8
65°	1460.8	1543.8	1489.3	1450.2	1455.1	1450.2	1489.3	1543.8	1460.8	1429.1	1436.0
67.5°	1316.9	1360.3	1336.8	1314.5	1320.0	1314.5	1336.8	1360.3	1316.9	1286.0	1296.5
70°	1163.9	1210.3	1186.2	1189.3	1198.6	1189.3	1186.2	1210.3	1163.9	1154.6	1162.7
72.5°	1017.6	1053.6	1045.5	1053.0	1062.9	1053.0	1045.5	1053.6	1017.6	1016.3	1017.0
75°	873.9	901.1	904.9	915.4	930.9	915.4	904.9	901.1	873.9	864.6	875.7
77.5°	717.0	748.0	759.8	774.0	797.0	774.0	759.8	748.0	717.0	723.2	728.9
80°	573.3	587.5	613.5	624.1	656.3	624.1	613.5	587.5	573.3	562.8	570.8
82.5°	419.5	432.6	454.9	474.7	493.3	474.7	454.9	432.6	419.5	414.6	415.3
85°	242.3	262.2	277.1	300.6	306.2	300.6	277.1	262.2	242.3	247.9	242.3
87.5°	84.9	91.1	104.1	113.4	114.1	113.4	104.1	91.1	84.9	86.8	78.7
90°	16.3	27.7	47.7	27.8	20.7	27.8	47.7	27.7	16.3	28.3	44.0
92.5°	21.1	37.3	66.9	36.3	26.6	36.3	66.9	37.3	21.1	36.7	70.5
95°	31.4	45.8	85.0	39.8	31.5	39.8	85.0	45.8	31.4	48.8	98.2
97.5°	48.2	56.7	95.8	42.3	37.5	42.3	95.8	56.7	48.2	59.6	112.6
100°	63.9	63.9	174.1	48.3	42.3	48.3	174.1	63.9	63.9	73.5	175.3
102.5°	96.4	124.8	402.3	94.7	50.8	94.7	402.3	124.8	96.4	137.3	371.6
105°	174.7	283.7	707.1	240.4	91.2	240.4	707.1	283.7	174.7	286.7	661.8
107.5°	330.1	528.2	910.7	471.7	208.0	471.7	910.7	528.2	330.1	507.1	873.2
110°	527.6	737.8	993.7	645.1	417.5	645.1	993.7	737.8	527.6	696.2	915.4



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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°	686.5	822.1	970.9	715.0	576.5	715.0	970.9	822.1	686.5	768.4	876.9
115°	746.2	810.0	867.3	712.6	639.1	712.6	867.3	810.0	746.2	750.4	783.0
117.5°	720.9	741.4	749.3	669.2	642.8	669.2	749.3	741.4	720.9	675.1	664.9
120°	651.1	642.6	631.8	605.4	606.6	605.4	631.8	642.6	651.1	589.7	555.3
122.5°	563.7	545.7	534.2	540.9	557.2	540.9	534.2	545.7	563.7	502.3	476.4
125°	478.3	460.2	466.2	485.6	502.4	485.6	466.2	460.2	478.3	427.1	420.4
127.5°	406.6	398.2	416.9	438.6	453.1	438.6	416.9	398.2	406.6	374.1	380.7
130°	355.5	357.3	381.9	400.7	409.7	400.7	381.9	357.3	355.5	339.8	356.0
132.5°	323.6	332.6	356.1	372.4	377.8	372.4	356.1	332.6	323.6	319.4	339.2
135°	303.7	316.9	338.6	348.9	351.3	348.9	338.6	316.9	303.7	305.5	323.6
137.5°	292.3	305.5	321.8	330.3	328.5	330.3	321.8	305.5	292.3	296.5	310.3
140°	285.7	298.9	306.1	315.8	314.5	315.8	306.1	298.9	285.7	288.1	298.9
142.5°	279.1	291.0	294.7	301.9	300.0	301.9	294.7	291.0	279.1	281.5	288.7
145°	276.0	285.1	282.0	291.1	288.6	291.1	282.0	285.1	276.0	276.7	280.8
147.5°	269.9	276.7	273.0	280.8	278.5	280.8	273.0	276.7	269.9	269.9	271.8
150°	263.3	268.1	262.7	271.8	271.8	271.8	262.7	268.1	263.3	262.2	264.0
152.5°	254.3	259.1	254.3	264.6	264.0	264.6	254.3	259.1	254.3	253.2	255.0
155°	247.2	249.6	247.2	257.5	258.1	257.5	247.2	249.6	247.2	246.6	247.8
157.5°	242.4	244.3	243.0	252.1	252.7	252.1	243.0	244.3	242.4	242.4	243.0
160°	238.8	241.2	240.7	248.5	249.2	248.5	240.7	241.2	238.8	239.4	240.1
162.5°	237.7	237.7	237.8	245.6	246.8	245.6	237.8	237.7	237.7	237.7	238.9
165°	236.0	237.1	236.0	242.0	244.5	242.0	236.0	237.1	236.0	236.5	236.5
167.5°	236.0	234.8	236.1	241.4	243.9	241.4	236.1	234.8	236.0	236.6	236.6
170°	234.2	234.8	234.9	240.3	242.7	240.3	234.9	234.8	234.2	235.4	236.0
172.5°	236.1	236.1	235.4	239.7	243.4	239.7	235.4	236.1	236.1	236.7	237.8
175°	237.2	236.7	236.7	239.8	243.5	239.8	236.7	236.7	237.2	236.6	236.6
177.5°	236.1	237.3	238.6	241.6	246.5	241.6	238.6	237.3	236.1	236.6	236.6
180°	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3



TEST NUMBER: P1433253

CATALOG NUMBER: EHBR1-42-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	33050.6	33050.6	33050.6	33050.6	33050.6	33050.6
2.5°	32090.6	32069.5	32090.6	32315.0	32606.8	33031.4
5°	31345.0	31228.5	31345.0	31593.6	32129.6	32937.8
7.5°	30476.7	30409.2	30476.7	30892.6	31570.0	32714.0
10°	29562.6	29409.6	29562.6	30032.4	30831.2	32372.5
12.5°	28435.9	28233.3	28435.9	28921.1	29928.9	31827.8
15°	27003.1	26825.2	27003.1	27541.7	28710.5	31022.1
17.5°	25465.5	25304.4	25465.5	25933.4	27220.6	29886.8
20°	23534.3	23407.9	23534.3	24196.2	25459.2	28423.5
22.5°	21508.4	21390.0	21508.4	22096.5	23411.0	26589.0
25°	19124.8	19060.3	19124.8	19781.8	20970.4	24443.5
27.5°	16549.2	16439.5	16549.2	17236.4	18450.5	21919.9
30°	13917.7	13736.1	13917.7	14532.4	15619.5	19116.7
32.5°	11343.9	11213.1	11343.9	11782.0	12918.1	15978.3
35°	8856.2	8725.4	8856.2	9252.3	10367.8	13082.9
37.5°	6900.9	6669.7	6900.9	7155.0	8060.5	10267.4
40°	5233.8	5196.6	5233.8	5553.6	6133.0	7987.9
42.5°	4260.8	4159.8	4260.8	4398.4	4832.2	6052.4
45°	3496.0	3456.4	3496.0	3600.1	3891.4	4731.2
47.5°	3006.4	3023.7	3006.4	3073.4	3291.5	3852.9
50°	2641.3	2651.9	2641.3	2673.0	2818.6	3236.4
52.5°	2372.4	2363.1	2372.4	2375.5	2466.0	2780.2
55°	2134.5	2122.6	2134.5	2127.6	2194.5	2395.9
57.5°	1926.2	1934.8	1926.2	1916.8	1952.8	2104.1
60°	1740.2	1748.3	1740.2	1733.4	1757.0	1845.6
62.5°	1583.5	1588.5	1583.5	1582.8	1578.5	1646.6
65°	1443.4	1449.0	1443.4	1436.0	1429.1	1460.8
67.5°	1309.5	1309.5	1309.5	1296.5	1286.0	1316.9
70°	1183.7	1183.1	1183.7	1162.7	1154.6	1163.9
72.5°	1032.5	1047.4	1032.5	1017.0	1016.3	1017.6
75°	885.6	903.0	885.6	875.7	864.6	873.9
77.5°	736.9	763.5	736.9	728.9	723.2	717.0
80°	584.4	613.5	584.4	570.8	562.8	573.3
82.5°	431.9	453.7	431.9	415.3	414.6	419.5
85°	257.2	291.9	257.2	242.3	247.9	242.3
87.5°	82.4	105.3	82.4	78.7	86.8	84.9
90°	25.9	16.3	25.9	44.0	28.3	16.3
92.5°	39.2	23.5	39.2	70.5	36.7	21.1
95°	45.2	27.1	45.2	98.2	48.8	31.4
97.5°	50.0	34.9	50.0	112.6	59.6	48.2
100°	58.5	45.8	58.5	175.3	73.5	63.9
102.5°	123.5	77.1	123.5	371.6	137.3	96.4
105°	259.6	132.5	259.6	661.8	286.7	174.7
107.5°	464.4	228.8	464.4	873.2	507.1	330.1
110°	616.0	426.4	616.0	915.4	696.2	527.6



TEST NUMBER: P1433253

CATALOG NUMBER: EHBR1-42-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	661.8	575.8	661.8	876.9	768.4	686.5
115°	636.5	605.9	636.5	783.0	750.4	746.2
117.5°	581.2	585.4	581.2	664.9	675.1	720.9
120°	517.3	542.1	517.3	555.3	589.7	651.1
122.5°	458.9	487.8	458.9	476.4	502.3	563.7
125°	408.3	437.9	408.3	420.4	427.1	478.3
127.5°	373.4	393.3	373.4	380.7	374.1	406.6
130°	346.3	363.2	346.3	356.0	339.8	355.5
132.5°	327.7	338.5	327.7	339.2	319.4	323.6
135°	311.5	320.5	311.5	323.6	305.5	303.7
137.5°	297.6	305.4	297.6	310.3	296.5	292.3
140°	285.6	292.2	285.6	298.9	288.1	285.7
142.5°	273.0	277.9	273.0	288.7	281.5	279.1
145°	264.6	268.2	264.6	280.8	276.7	276.0
147.5°	257.4	259.8	257.4	271.8	269.9	269.9
150°	250.1	252.5	250.1	264.0	262.2	263.3
152.5°	242.4	245.4	242.4	255.0	253.2	254.3
155°	237.6	240.6	237.6	247.8	246.6	247.2
157.5°	235.2	237.7	235.2	243.0	242.4	242.4
160°	233.5	235.3	233.5	240.1	239.4	238.8
162.5°	231.1	232.9	231.1	238.9	237.7	237.7
165°	231.2	231.8	231.2	236.5	236.5	236.0
167.5°	230.5	231.8	230.5	236.6	236.6	236.0
170°	231.2	231.8	231.2	236.0	235.4	234.2
172.5°	232.4	233.0	232.4	237.8	236.7	236.1
175°	232.5	233.0	232.5	236.6	236.6	237.2
177.5°	234.2	234.8	234.2	236.6	236.6	236.1
180°	237.3	237.3	237.3	237.3	237.3	237.3



TEST NUMBER: P1433253
 CATALOG NUMBER: EHBR1-42-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	18.25	19.37	18.72	19.80	20.26	17.57	18.69	18.04	19.12	19.58
	3H	19.80	20.80	20.28	21.24	21.75	19.42	20.41	19.90	20.86	21.37
	4H	20.44	21.37	20.94	21.83	22.35	20.20	21.13	20.70	21.60	22.12
	6H	20.92	21.77	21.43	22.26	22.79	20.84	21.70	21.36	22.18	22.71
	8H	21.07	21.88	21.60	22.38	22.92	21.07	21.87	21.59	22.38	22.92
	12H	21.14	21.91	21.67	22.41	22.97	21.19	21.97	21.72	22.46	23.02
4H	2H	18.67	19.60	19.17	20.06	20.59	18.15	19.08	18.65	19.54	20.06
	3H	20.47	21.23	20.98	21.75	22.29	20.20	20.97	20.72	21.49	22.03
	4H	21.24	21.93	21.77	22.45	23.03	21.11	21.80	21.64	22.33	22.90
	6H	21.85	22.45	22.41	23.00	23.60	21.88	22.48	22.44	23.03	23.63
	8H	22.05	22.61	22.62	23.16	23.76	22.15	22.71	22.72	23.26	23.86
	12H	22.16	22.65	22.74	23.23	23.83	22.32	22.81	22.90	23.39	24.00
8H	4H	21.49	22.05	22.05	22.59	23.20	21.39	21.95	21.96	22.50	23.10
	6H	22.23	22.68	22.83	23.28	23.89	22.30	22.75	22.89	23.34	23.95
	8H	22.50	22.90	23.12	23.51	24.14	22.65	23.05	23.26	23.66	24.28
	12H	22.67	23.03	23.28	23.62	24.31	22.90	23.25	23.51	23.84	24.54
12H	4H	21.50	21.99	22.08	22.57	23.18	21.40	21.89	21.98	22.47	23.08
	6H	22.27	22.68	22.89	23.29	23.91	22.34	22.74	22.96	23.35	23.98
	8H	22.59	22.94	23.20	23.54	24.23	22.75	23.10	23.35	23.69	24.39

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

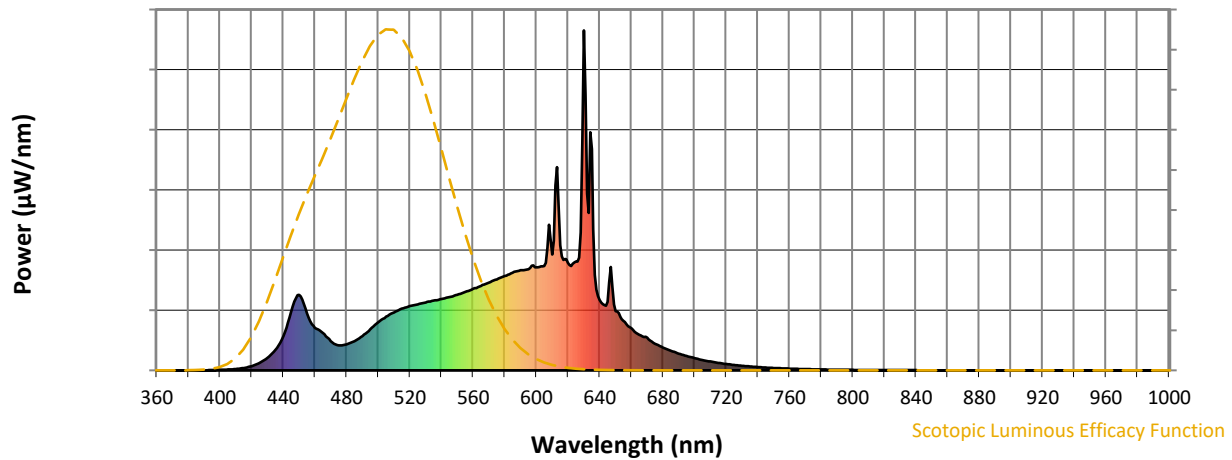


Photopic Lumens: NR

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



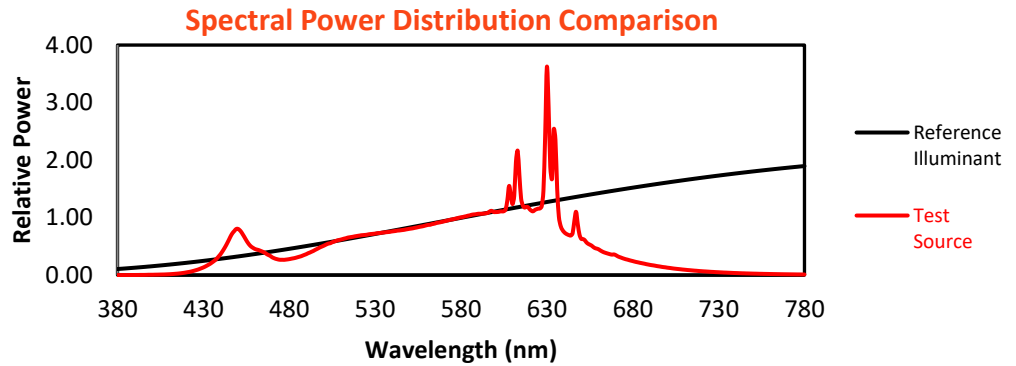
Melanopic Lumens: NR

M/P: 2.85

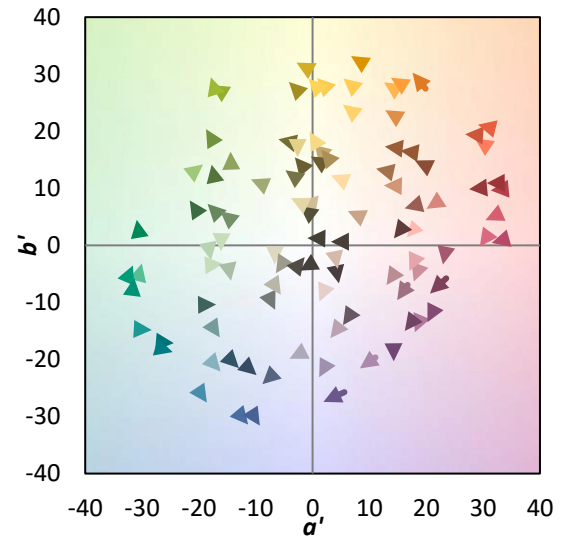
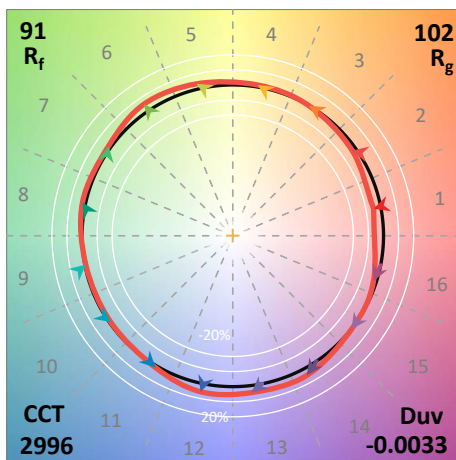
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	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			

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)