

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:

Luminaire Tested: EHBR1-30-UNV-TA-L950-UPL18

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: REPORT IS A COMBINATION OF REPORTS P1431734 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-30-UNV-TA-L950-UPL18
Description: Elevate Round Highbay at, 30000 lumens, 5000K 90CRI LEDs with TA lens
Light Source: -
Ballast/Driver: -

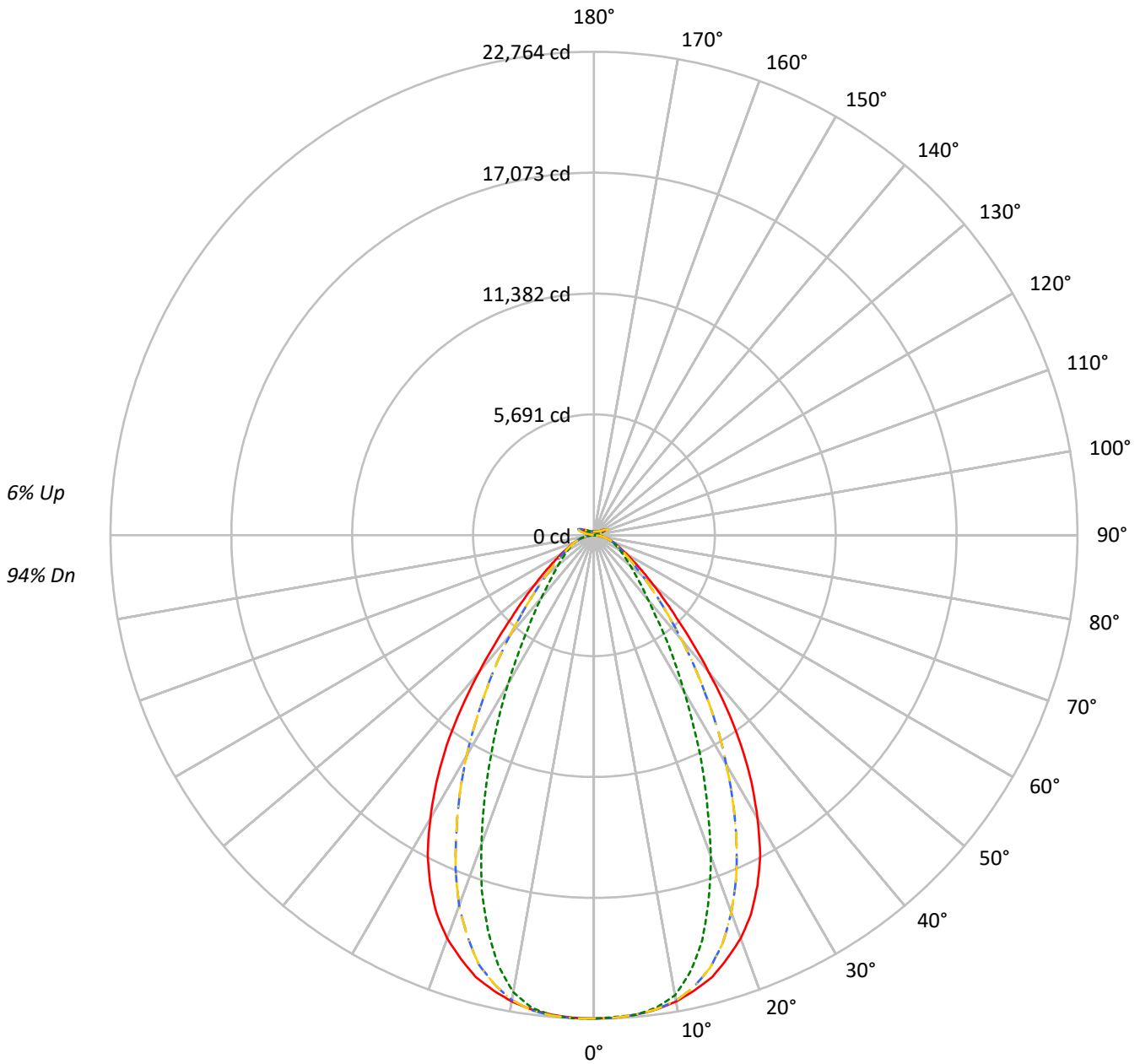
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29982.5 lumens
Efficiency: N/A
Efficacy: 174.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 0.8 / 0.93
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 171.7
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:
CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

Luminous Intensity Polar Plot



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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2148.8	7.2
10°-20°	5775.2	19.3
20°-30°	7022.6	23.4
30°-40°	5720.5	19.1
40°-50°	3434.6	11.5
50°-60°	1976.6	6.6
60°-70°	1237.0	4.1
70°-80°	728.6	2.4
80°-90°	216.1	0.7
90°-100°	45.2	0.2
100°-110°	298.9	1.0
110°-120°	552.9	1.8
120°-130°	328.2	1.1
130°-140°	198.9	0.7
140°-150°	138.3	0.5
150°-160°	90.6	0.3
160°-170°	52.1	0.2
170°-180°	17.3	0.1
0°-30°	14946.7	49.9
0°-40°	20667.2	68.9
0°-60°	26078.3	87.0
0°-90°	28260.0	94.3
90°-120°	897.1	3.0
90°-150°	1562.5	5.2
90°-180°	1722.0	5.7
0°-180°	29982.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	22754	22754	22754	22754	22754	
5°	22662	22665	22662	22689	22662	2152
15°	21528	19718	21528	19265	21528	6036
25°	18205	12096	18205	11469	18205	8299
35°	12079	5841	12079	5460	12079	7458
45°	5481	2919	5481	2818	5481	4366
55°	2509	1767	2509	1743	2509	2307
65°	1298	1151	1298	1162	1298	1312
75°	688	688	688	695	688	727
85°	176	210	176	216	176	193
90°	12	13	12	13	12	13
95°	24	22	24	21	24	26
105°	137	105	137	69	137	185
115°	588	479	588	502	588	536
125°	376	346	376	394	376	346
135°	238	254	238	275	238	189
145°	216	211	216	227	216	136
155°	192	188	192	203	192	90
165°	181	180	181	188	181	52
175°	181	182	181	186	181	17
180°	182	182	182	182	182	



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5
2.5°	22743.5	22738.3	22733.5	22724.9	22704.5	22724.9	22733.5	22738.3	22743.5	22757.8	22764.0
5°	22662.5	22683.0	22661.6	22666.3	22664.9	22666.3	22661.6	22683.0	22662.5	22676.8	22702.5
7.5°	22521.0	22517.2	22510.0	22481.9	22434.2	22481.9	22510.0	22517.2	22521.0	22538.6	22556.7
10°	22287.4	22302.6	22252.2	22075.4	21995.8	22075.4	22252.2	22302.6	22287.4	22316.0	22224.5
12.5°	21940.9	21978.1	21773.7	21314.2	21034.5	21314.2	21773.7	21978.1	21940.9	21966.2	21654.5
15°	21527.8	21496.8	21093.6	20128.0	19717.7	20128.0	21093.6	21496.8	21527.8	21496.8	20924.4
17.5°	20884.3	20929.1	20146.6	18725.0	17967.2	18725.0	20146.6	20929.1	20884.3	20899.1	19812.5
20°	20197.2	20210.9	18905.6	16904.9	16097.1	16904.9	18905.6	20210.9	20197.2	20114.2	18549.6
22.5°	19322.6	19327.8	17483.5	15023.9	13982.1	15023.9	17483.5	19327.8	19322.6	19184.4	17011.6
25°	18205.1	18246.0	15883.1	13117.5	12095.7	13117.5	15883.1	18246.0	18205.1	18047.8	15303.1
27.5°	16950.2	16978.3	14174.6	11207.8	10145.6	11207.8	14174.6	16978.3	16950.2	16778.6	13669.9
30°	15403.2	15583.3	12458.9	9463.5	8492.3	9463.5	12458.9	15583.3	15403.2	15383.6	11986.0
32.5°	13805.7	14124.5	10841.4	7908.4	7075.9	7908.4	10841.4	14124.5	13805.7	13896.7	10308.1
35°	12079.0	12437.4	9162.8	6574.5	5841.0	6574.5	9162.8	12437.4	12079.0	12196.8	8768.1
37.5°	10248.5	10796.5	7740.2	5445.9	4740.6	5445.9	7740.2	10796.5	10248.5	10470.6	7413.8
40°	8406.4	8996.0	6391.0	4528.0	3968.5	4528.0	6391.0	8996.0	8406.4	8768.1	6121.3
42.5°	6824.7	7276.9	5274.9	3784.6	3419.5	3784.6	5274.9	7276.9	6824.7	7081.1	5045.1
45°	5480.8	5742.4	4364.5	3210.3	2919.1	3210.3	4364.5	5742.4	5480.8	5718.5	4175.3
47.5°	4474.6	4637.1	3593.0	2774.1	2549.8	2774.1	3593.0	4637.1	4474.6	4550.0	3487.2
50°	3653.9	3742.7	3020.5	2404.4	2230.9	2404.4	3020.5	3742.7	3653.9	3700.2	2920.9
52.5°	3032.1	3075.8	2533.5	2110.3	1983.1	2110.3	2533.5	3075.8	3032.1	3039.1	2489.2
55°	2509.3	2519.7	2162.7	1855.3	1766.7	1855.3	2162.7	2519.7	2509.3	2511.1	2126.6
57.5°	2101.3	2116.5	1858.7	1650.8	1577.4	1650.8	1858.7	2116.5	2101.3	2104.6	1841.5
60°	1778.6	1788.6	1606.1	1466.4	1417.4	1466.4	1606.1	1788.6	1778.6	1774.3	1596.0
62.5°	1514.1	1533.1	1403.5	1306.8	1275.3	1306.8	1403.5	1533.1	1514.1	1518.4	1403.1
65°	1297.7	1310.1	1230.1	1161.9	1151.0	1161.9	1230.1	1310.1	1297.7	1308.2	1233.9
67.5°	1120.0	1134.3	1080.4	1040.4	1029.5	1040.4	1080.4	1134.3	1120.0	1128.6	1081.4
70°	969.8	969.8	940.8	918.3	918.9	918.3	940.8	969.8	969.8	971.3	946.0
72.5°	822.5	827.8	808.3	801.6	804.4	801.6	808.3	827.8	822.5	840.7	814.0
75°	688.2	693.9	683.9	680.1	688.2	680.1	683.9	693.9	688.2	697.8	685.8
77.5°	549.5	560.0	558.6	563.3	578.6	563.3	558.6	560.0	549.5	563.8	566.7
80°	421.3	430.4	430.8	442.7	464.2	442.7	430.8	430.4	421.3	430.4	437.5
82.5°	296.5	302.1	306.0	326.0	344.6	326.0	306.0	302.1	296.5	301.7	311.3
85°	176.3	171.6	178.2	190.7	210.2	190.7	178.2	171.6	176.3	176.3	181.1
87.5°	56.2	54.8	54.4	66.2	75.8	66.2	54.4	54.8	56.2	58.2	60.5
90°	12.4	21.9	34.3	20.0	13.3	20.0	34.3	21.9	12.4	20.9	36.1
92.5°	16.2	28.5	55.2	30.5	18.6	30.5	55.2	28.5	16.2	28.5	51.4
95°	23.8	38.1	77.1	35.2	21.8	35.2	77.1	38.1	23.8	35.2	65.7
97.5°	37.2	46.6	88.5	39.0	27.6	39.0	88.5	46.6	37.2	43.8	74.2
100°	49.5	57.1	138.1	45.7	36.1	45.7	138.1	57.1	49.5	49.5	136.2
102.5°	75.3	107.6	293.3	97.1	60.9	97.1	293.3	107.6	75.3	97.1	316.2
105°	137.1	225.7	522.8	204.8	104.7	204.8	522.8	225.7	137.1	222.8	557.1
107.5°	260.0	400.0	689.4	366.6	180.9	366.6	689.4	400.0	260.0	416.2	718.0
110°	416.2	549.5	722.8	486.6	337.1	486.6	722.8	549.5	416.2	581.8	783.7



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	541.9	606.6	692.3	522.8	455.2	522.8	692.3	606.6	541.9	648.5	765.6
115°	588.5	592.3	618.0	502.8	479.0	502.8	618.0	592.3	588.5	639.0	683.7
117.5°	568.5	532.3	524.7	459.0	463.3	459.0	524.7	532.3	568.5	584.7	590.5
120°	513.2	464.7	438.1	408.5	428.5	408.5	438.1	464.7	513.2	506.6	497.1
122.5°	443.7	395.2	375.2	362.4	386.1	362.4	375.2	395.2	443.7	429.4	420.0
125°	376.1	335.2	330.4	322.3	346.1	322.3	330.4	335.2	376.1	361.9	366.2
127.5°	319.0	293.3	299.0	294.7	310.9	294.7	299.0	293.3	319.0	312.4	327.0
130°	278.5	265.7	279.5	273.3	287.1	273.3	279.5	265.7	278.5	280.4	299.9
132.5°	253.3	249.5	266.1	258.5	267.7	258.5	266.1	249.5	253.3	261.4	279.5
135°	238.1	238.5	254.3	245.8	253.8	245.8	254.3	238.5	238.1	249.6	265.7
137.5°	229.0	231.9	243.3	234.8	241.5	234.8	243.3	231.9	229.0	240.5	252.9
140°	223.8	225.7	234.3	224.8	231.0	224.8	234.3	225.7	223.8	235.3	240.9
142.5°	218.5	220.5	226.1	215.2	219.0	215.2	226.1	220.5	218.5	229.5	232.4
145°	216.2	217.1	220.0	208.0	210.9	208.0	220.0	217.1	216.2	224.3	222.3
147.5°	211.8	211.8	212.9	202.4	204.8	202.4	212.9	211.8	211.8	217.6	215.2
150°	206.6	205.7	206.6	196.2	198.6	196.2	206.6	205.7	206.6	210.4	207.1
152.5°	199.0	198.1	199.5	190.0	192.4	190.0	199.5	198.1	199.0	202.8	200.0
155°	192.3	192.3	193.3	185.7	188.1	185.7	193.3	192.3	192.3	194.7	193.8
157.5°	188.6	188.6	189.5	183.8	185.6	183.8	189.5	188.6	188.6	190.0	190.0
160°	184.8	185.7	186.7	181.8	183.9	181.8	186.7	185.7	184.8	187.1	187.1
162.5°	183.3	183.8	185.2	180.1	181.9	180.1	185.2	183.8	183.3	183.8	183.8
165°	181.4	182.4	183.3	179.5	180.4	179.5	183.3	182.4	181.4	182.4	181.9
167.5°	180.9	181.8	182.8	179.5	180.9	179.5	182.8	181.8	180.9	180.0	181.5
170°	179.0	180.4	182.4	180.0	180.4	180.0	182.4	180.4	179.0	179.5	180.0
172.5°	180.1	181.5	183.3	180.9	181.4	180.9	183.3	181.5	180.1	180.5	180.0
175°	181.0	181.5	182.8	181.0	181.9	181.0	182.8	181.5	181.0	180.4	180.9
177.5°	180.4	181.9	183.3	182.4	183.3	182.4	183.3	181.9	180.4	180.9	182.3
180°	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	22754.5	22754.5	22754.5	22754.5	22754.5	22754.5
2.5°	22754.0	22762.5	22754.0	22764.0	22757.8	22743.5
5°	22692.5	22688.7	22692.5	22702.5	22676.8	22662.5
7.5°	22454.3	22438.9	22454.3	22556.7	22538.6	22521.0
10°	21956.6	21851.8	21956.6	22224.5	22316.0	22287.4
12.5°	21089.3	20764.3	21089.3	21654.5	21966.2	21940.9
15°	19823.0	19264.9	19823.0	20924.4	21496.8	21527.8
17.5°	18184.5	17545.9	18184.5	19812.5	20899.1	20884.3
20°	16402.6	15470.4	16402.6	18549.6	20114.2	20197.2
22.5°	14456.6	13453.0	14456.6	17011.6	19184.4	19322.6
25°	12515.5	11469.0	12515.5	15303.1	18047.8	18205.1
27.5°	10701.2	9705.2	10701.2	13669.9	16778.6	16950.2
30°	9021.2	8060.4	9021.2	11986.0	15383.6	15403.2
32.5°	7616.3	6664.1	7616.3	10308.1	13896.7	13805.7
35°	6249.4	5459.8	6249.4	8768.1	12196.8	12079.0
37.5°	5219.1	4586.2	5219.1	7413.8	10470.6	10248.5
40°	4353.1	3846.1	4353.1	6121.3	8768.1	8406.4
42.5°	3639.2	3259.8	3639.2	5045.1	7081.1	6824.7
45°	3103.1	2818.0	3103.1	4175.3	5718.5	5480.8
47.5°	2707.9	2476.4	2707.9	3487.2	4550.0	4474.6
50°	2356.2	2197.1	2356.2	2920.9	3700.2	3653.9
52.5°	2072.7	1957.4	2072.7	2489.2	3039.1	3032.1
55°	1836.8	1742.8	1836.8	2126.6	2511.1	2509.3
57.5°	1631.3	1570.9	1631.3	1841.5	2104.6	2101.3
60°	1448.3	1427.4	1448.3	1596.0	1774.3	1778.6
62.5°	1308.2	1277.3	1308.2	1403.1	1518.4	1514.1
65°	1169.1	1161.9	1169.1	1233.9	1308.2	1297.7
67.5°	1043.2	1037.1	1043.2	1081.4	1128.6	1120.0
70°	923.2	927.9	923.2	946.0	971.3	969.8
72.5°	806.8	807.8	806.8	814.0	840.7	822.5
75°	694.9	694.9	694.9	685.8	697.8	688.2
77.5°	572.9	587.1	572.9	566.7	563.8	549.5
80°	450.3	464.2	450.3	437.5	430.4	421.3
82.5°	326.5	348.9	326.5	311.3	301.7	296.5
85°	202.5	216.4	202.5	181.1	176.3	176.3
87.5°	76.3	83.4	76.3	60.5	58.2	56.2
90°	19.0	12.8	19.0	36.1	20.9	12.4
92.5°	25.7	17.6	25.7	51.4	28.5	16.2
95°	28.5	21.4	28.5	65.7	35.2	23.8
97.5°	30.5	26.2	30.5	74.2	43.8	37.2
100°	35.2	30.5	35.2	136.2	49.5	49.5
102.5°	71.4	37.1	71.4	316.2	97.1	75.3
105°	186.7	68.6	186.7	557.1	222.8	137.1
107.5°	369.5	160.9	369.5	718.0	416.2	260.0
110°	506.6	326.6	506.6	783.7	581.8	416.2



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	561.8	452.3	561.8	765.6	648.5	541.9
115°	560.0	501.8	560.0	683.7	639.0	588.5
117.5°	525.7	504.7	525.7	590.5	584.7	568.5
120°	475.6	476.1	475.6	497.1	506.6	513.2
122.5°	424.2	437.5	424.2	420.0	429.4	443.7
125°	380.4	393.8	380.4	366.2	361.9	376.1
127.5°	343.8	354.6	343.8	327.0	312.4	319.0
130°	313.3	320.4	313.3	299.9	280.4	278.5
132.5°	291.5	295.3	291.5	279.5	261.4	253.3
135°	273.3	274.7	273.3	265.7	249.6	238.1
137.5°	258.6	257.2	258.6	252.9	240.5	229.0
140°	248.1	246.2	248.1	240.9	235.3	223.8
142.5°	237.1	235.7	237.1	232.4	229.5	218.5
145°	229.5	226.6	229.5	222.3	224.3	216.2
147.5°	221.4	219.1	221.4	215.2	217.6	211.8
150°	214.8	214.3	214.8	207.1	210.4	206.6
152.5°	208.1	208.1	208.1	200.0	202.8	199.0
155°	202.4	202.8	202.4	193.8	194.7	192.3
157.5°	197.6	198.1	197.6	190.0	190.0	188.6
160°	193.7	194.3	193.7	187.1	187.1	184.8
162.5°	190.9	191.4	190.9	183.8	183.8	183.3
165°	186.7	188.1	186.7	181.9	182.4	181.4
167.5°	185.3	186.7	185.3	181.5	180.0	180.9
170°	183.8	185.2	183.8	180.0	179.5	179.0
172.5°	182.8	185.2	182.8	180.0	180.5	180.1
175°	182.8	185.7	182.8	180.9	180.4	181.0
177.5°	184.3	188.1	184.3	182.3	180.9	180.4
180°	182.3	182.3	182.3	182.3	182.3	182.3



TEST NUMBER: CATALOG
 CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL18

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	19.04	20.21	19.50	20.64	21.10	17.30	18.47	17.77	18.91	19.37
	3H	20.20	21.24	20.68	21.69	22.19	18.90	19.94	19.38	20.39	20.90
	4H	20.65	21.62	21.15	22.09	22.61	19.55	20.53	20.06	20.99	21.52
	6H	20.97	21.86	21.48	22.34	22.88	20.07	20.96	20.58	21.44	21.98
	8H	21.05	21.90	21.58	22.40	22.94	20.23	21.08	20.76	21.58	22.13
	12H	21.08	21.89	21.62	22.39	22.96	20.33	21.13	20.86	21.63	22.20
4H	2H	19.29	20.26	19.79	20.73	21.25	17.85	18.82	18.35	19.29	19.81
	3H	20.69	21.49	21.20	22.00	22.54	19.65	20.45	20.17	20.97	21.51
	4H	21.27	21.99	21.80	22.52	23.10	20.42	21.14	20.95	21.67	22.24
	6H	21.71	22.33	22.27	22.88	23.48	21.05	21.67	21.61	22.22	22.82
	8H	21.83	22.41	22.40	22.96	23.57	21.26	21.84	21.82	22.39	22.99
	12H	21.89	22.41	22.48	22.99	23.60	21.38	21.89	21.97	22.48	23.09
8H	4H	21.43	22.01	22.00	22.56	23.16	20.66	21.24	21.23	21.79	22.40
	6H	21.98	22.45	22.57	23.05	23.66	21.40	21.88	22.00	22.48	23.09
	8H	22.16	22.58	22.77	23.19	23.81	21.68	22.10	22.30	22.72	23.34
	12H	22.27	22.64	22.88	23.23	23.93	21.87	22.24	22.48	22.83	23.53
12H	4H	21.43	21.94	22.01	22.52	23.13	20.66	21.18	21.25	21.76	22.37
	6H	21.99	22.41	22.61	23.03	23.65	21.43	21.85	22.05	22.47	23.09
	8H	22.21	22.58	22.82	23.18	23.87	21.75	22.12	22.36	22.72	23.42

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-8

Test Date: 08/04/2025

Luminaire Tested: EHBR-60-L950-N

Data in this report applies to families of products including EHBR-60-L950-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-8
 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-L950-N**
 Description: Elevate Round Highbay at, 60000 lumens, 5000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 4901
 CIE u': 0.2131
 CIE v': 0.4853
 Duv: -0.0008
 CIE x: 0.3477
 CIE y: 0.3520
 CIE z: 0.3003
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 574
 Purity: 9.953987
 Rf: 90.7
 Rg: 100.5

CRI (Ra):	94.3		
R1:	95.8	R9:	72.3
R2:	96.5	R10:	89.1
R3:	94.4	R11:	94.9
R4:	95.3	R12:	68.4
R5:	94.1	R13:	96.4
R6:	92.5	R14:	96.4
R7:	95.5	R15:	93.9
R8:	90.1		



Test Conditions

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

REPORT NUMBER: SP1-2506-472-8

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

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CIE 1931 Chromaticity Diagram



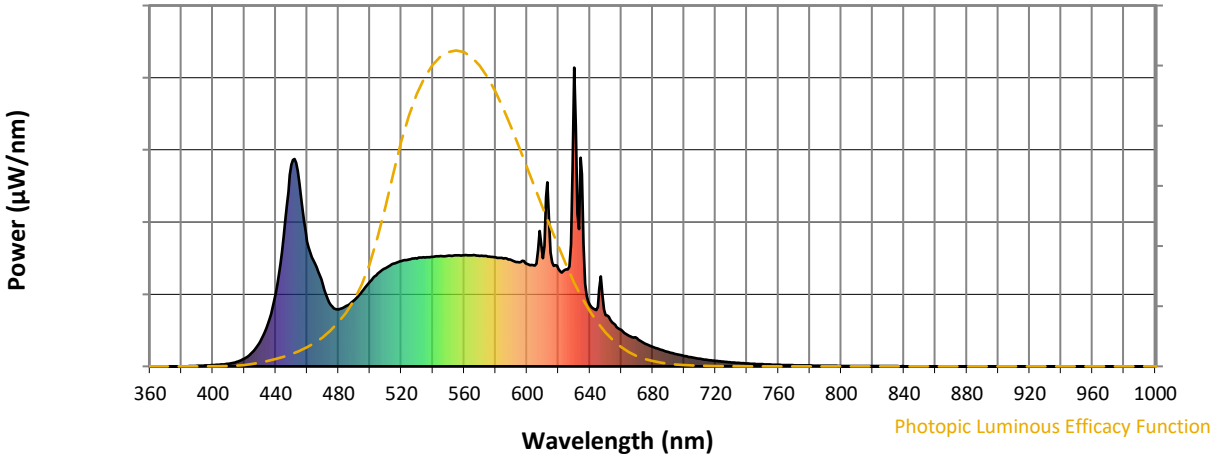
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-8

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	221	NR	620	326	NR	750	7	NR	880	0	NR
365	0	NR	495	250	NR	625	325	NR	755	6	NR	885	0	NR
370	0	NR	500	284	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	311	NR	635	643	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	206	NR	770	4	NR	900	0	NR
385	1	NR	515	344	NR	645	199	NR	775	3	NR	905	0	NR
390	2	NR	520	353	NR	650	172	NR	780	3	NR	910	0	NR
395	3	NR	525	357	NR	655	143	NR	785	2	NR	915	0	NR
400	5	NR	530	362	NR	660	122	NR	790	2	NR	920	0	NR
405	6	NR	535	365	NR	665	102	NR	795	2	NR	925	0	NR
410	9	NR	540	367	NR	670	94	NR	800	2	NR	930	0	NR
415	15	NR	545	369	NR	675	76	NR	805	1	NR	935	0	NR
420	26	NR	550	370	NR	680	65	NR	810	1	NR	940	0	NR
425	47	NR	555	372	NR	685	56	NR	815	1	NR	945	0	NR
430	81	NR	560	372	NR	690	48	NR	820	1	NR	950	0	NR
435	143	NR	565	371	NR	695	41	NR	825	1	NR	955	0	NR
440	243	NR	570	370	NR	700	35	NR	830	1	NR	960	0	NR
445	434	NR	575	367	NR	705	30	NR	835	1	NR	965	0	NR
450	675	NR	580	365	NR	710	25	NR	840	1	NR	970	0	NR
455	615	NR	585	361	NR	715	22	NR	845	0	NR	975	0	NR
460	418	NR	590	356	NR	720	19	NR	850	0	NR	980	0	NR
465	344	NR	595	348	NR	725	16	NR	855	0	NR	985	0	NR
470	272	NR	600	343	NR	730	13	NR	860	0	NR	990	0	NR
475	206	NR	605	337	NR	735	11	NR	865	0	NR	995	0	NR
480	190	NR	610	362	NR	740	10	NR	870	0	NR	1000	0	NR
485	202	NR	615	381	NR	745	8	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 2.04

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	221	NR	620	326	NR	750	7	NR	880	0	NR
365	0	NR	495	250	NR	625	325	NR	755	6	NR	885	0	NR
370	0	NR	500	284	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	311	NR	635	643	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	206	NR	770	4	NR	900	0	NR
385	1	NR	515	344	NR	645	199	NR	775	3	NR	905	0	NR
390	2	NR	520	353	NR	650	172	NR	780	3	NR	910	0	NR
395	3	NR	525	357	NR	655	143	NR	785	2	NR	915	0	NR
400	5	NR	530	362	NR	660	122	NR	790	2	NR	920	0	NR
405	6	NR	535	365	NR	665	102	NR	795	2	NR	925	0	NR
410	9	NR	540	367	NR	670	94	NR	800	2	NR	930	0	NR
415	15	NR	545	369	NR	675	76	NR	805	1	NR	935	0	NR
420	26	NR	550	370	NR	680	65	NR	810	1	NR	940	0	NR
425	47	NR	555	372	NR	685	56	NR	815	1	NR	945	0	NR
430	81	NR	560	372	NR	690	48	NR	820	1	NR	950	0	NR
435	143	NR	565	371	NR	695	41	NR	825	1	NR	955	0	NR
440	243	NR	570	370	NR	700	35	NR	830	1	NR	960	0	NR
445	434	NR	575	367	NR	705	30	NR	835	1	NR	965	0	NR
450	675	NR	580	365	NR	710	25	NR	840	1	NR	970	0	NR
455	615	NR	585	361	NR	715	22	NR	845	0	NR	975	0	NR
460	418	NR	590	356	NR	720	19	NR	850	0	NR	980	0	NR
465	344	NR	595	348	NR	725	16	NR	855	0	NR	985	0	NR
470	272	NR	600	343	NR	730	13	NR	860	0	NR	990	0	NR
475	206	NR	605	337	NR	735	11	NR	865	0	NR	995	0	NR
480	190	NR	610	362	NR	740	10	NR	870	0	NR	1000	0	NR
485	202	NR	615	381	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-8

Melanopic Flux vs. Wavelength



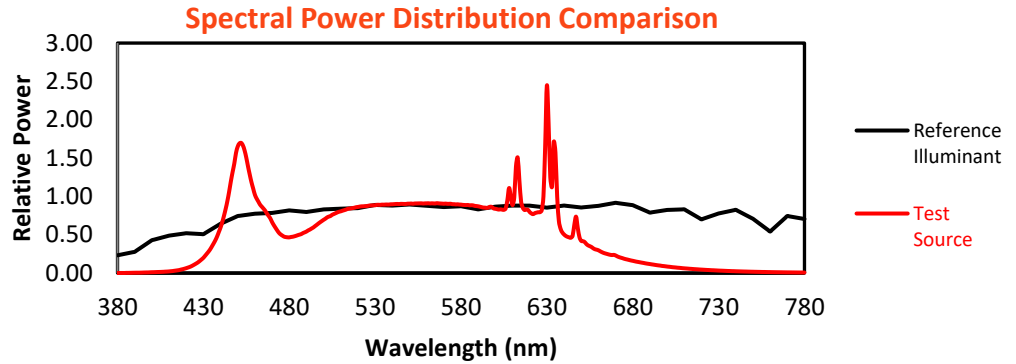
Melanopic Lumens: NR

M/P: 4.41

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	221	NR	620	326	NR	750	7	NR	880	0	NR
365	0	NR	495	250	NR	625	325	NR	755	6	NR	885	0	NR
370	0	NR	500	284	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	311	NR	635	643	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	206	NR	770	4	NR	900	0	NR
385	1	NR	515	344	NR	645	199	NR	775	3	NR	905	0	NR
390	2	NR	520	353	NR	650	172	NR	780	3	NR	910	0	NR
395	3	NR	525	357	NR	655	143	NR	785	2	NR	915	0	NR
400	5	NR	530	362	NR	660	122	NR	790	2	NR	920	0	NR
405	6	NR	535	365	NR	665	102	NR	795	2	NR	925	0	NR
410	9	NR	540	367	NR	670	94	NR	800	2	NR	930	0	NR
415	15	NR	545	369	NR	675	76	NR	805	1	NR	935	0	NR
420	26	NR	550	370	NR	680	65	NR	810	1	NR	940	0	NR
425	47	NR	555	372	NR	685	56	NR	815	1	NR	945	0	NR
430	81	NR	560	372	NR	690	48	NR	820	1	NR	950	0	NR
435	143	NR	565	371	NR	695	41	NR	825	1	NR	955	0	NR
440	243	NR	570	370	NR	700	35	NR	830	1	NR	960	0	NR
445	434	NR	575	367	NR	705	30	NR	835	1	NR	965	0	NR
450	675	NR	580	365	NR	710	25	NR	840	1	NR	970	0	NR
455	615	NR	585	361	NR	715	22	NR	845	0	NR	975	0	NR
460	418	NR	590	356	NR	720	19	NR	850	0	NR	980	0	NR
465	344	NR	595	348	NR	725	16	NR	855	0	NR	985	0	NR
470	272	NR	600	343	NR	730	13	NR	860	0	NR	990	0	NR
475	206	NR	605	337	NR	735	11	NR	865	0	NR	995	0	NR
480	190	NR	610	362	NR	740	10	NR	870	0	NR	1000	0	NR
485	202	NR	615	381	NR	745	8	NR	875	0	NR			

Summary

$R_f = 90.7$
 $R_g = 100.5$
 CIE $R_a = 94.3$
 $R_9 = 72.3$

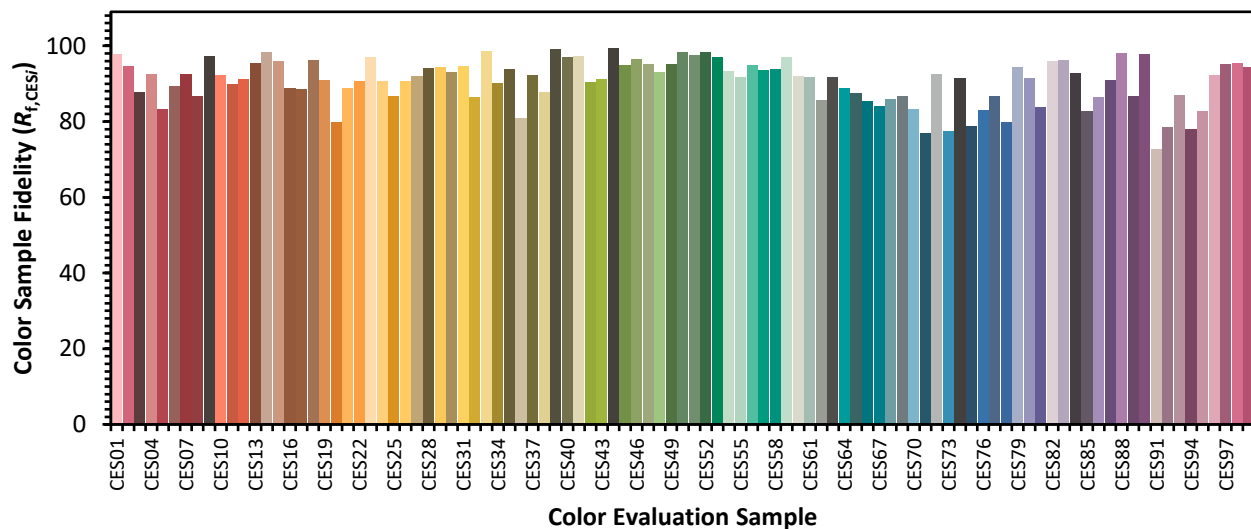


Color Vector Graphics



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

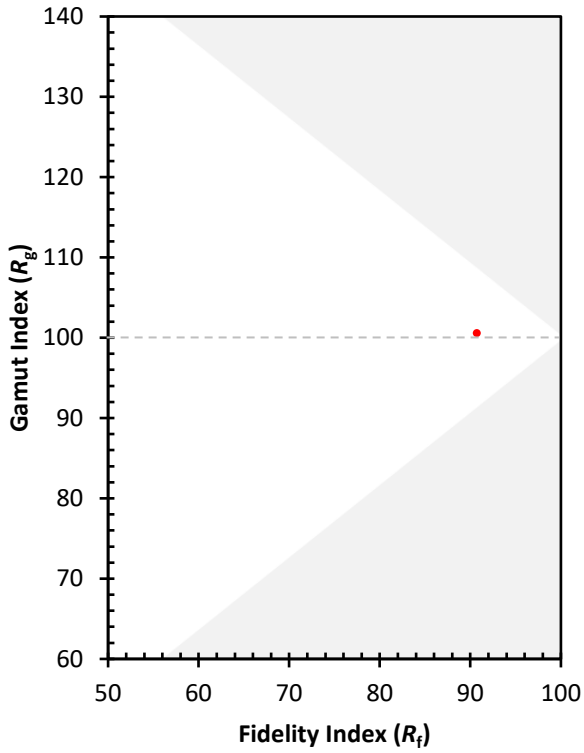
CES01 = 85	CES26 = 91	CES51 = 98	CES76 = 83
CES02 = 61	CES27 = 92	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 94	CES53 = 97	CES78 = 80
CES04 = 69	CES29 = 94	CES54 = 93	CES79 = 94
CES05 = 48	CES30 = 93	CES55 = 92	CES80 = 91
CES06 = 50	CES31 = 95	CES56 = 95	CES81 = 84
CES07 = 41	CES32 = 86	CES57 = 94	CES82 = 96
CES08 = 40	CES33 = 99	CES58 = 94	CES83 = 96
CES09 = 29	CES34 = 90	CES59 = 97	CES84 = 93
CES10 = 73	CES35 = 94	CES60 = 92	CES85 = 83
CES11 = 56	CES36 = 81	CES61 = 92	CES86 = 86
CES12 = 62	CES37 = 92	CES62 = 86	CES87 = 91
CES13 = 43	CES38 = 88	CES63 = 92	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 89	CES89 = 87
CES15 = 71	CES40 = 97	CES65 = 88	CES90 = 98
CES16 = 47	CES41 = 97	CES66 = 85	CES91 = 73
CES17 = 48	CES42 = 90	CES67 = 84	CES92 = 79
CES18 = 56	CES43 = 91	CES68 = 86	CES93 = 87
CES19 = 70	CES44 = 99	CES69 = 87	CES94 = 78
CES20 = 65	CES45 = 95	CES70 = 83	CES95 = 83
CES21 = 85	CES46 = 97	CES71 = 77	CES96 = 92
CES22 = 77	CES47 = 95	CES72 = 92	CES97 = 95
CES23 = 91	CES48 = 93	CES73 = 77	CES98 = 95
CES24 = 90	CES49 = 95	CES74 = 92	CES99 = 94
CES25 = 70	CES50 = 98	CES75 = 79	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)