

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: P843350

Luminaire Tested: 24CGSB-70-L850

Issue Date: 5/31/2024

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

**Test Information**

Test Method: LM-79-2019  
 Report Number: P843350  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-70-L850  
 Description: 2x4 CGSB AT 7000LM 5000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

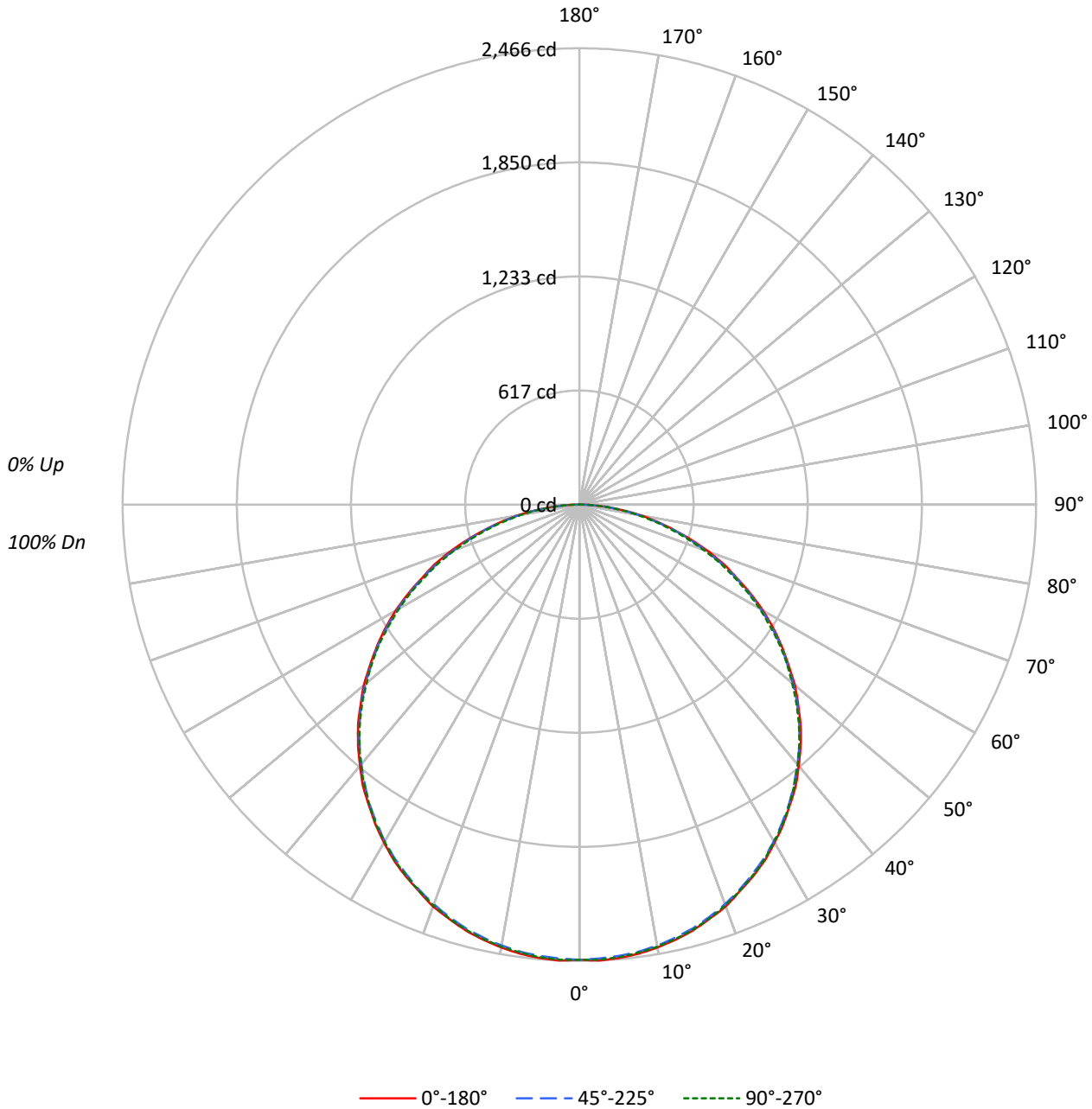
Lumens per Lamp: N/A  
 Luminaire Lumens: 7276.3 lumens  
 Efficiency: N/A  
 Efficacy: 134.0 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 54.3  
 Input Voltage (V): 120  
 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

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

TEST NUMBER: P843350  
CATALOG NUMBER: 24CGSB-70-L850

### Luminous Intensity Polar Plot



TEST NUMBER: P843350  
 CATALOG NUMBER: 24CGSB-70-L850

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	94	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3309	3309	3309
5°	3322	3306	3316
10°	3320	3305	3314
15°	3316	3301	3310
20°	3310	3290	3300
25°	3292	3275	3285
30°	3278	3264	3267
35°	3255	3244	3248
40°	3237	3217	3221
45°	3217	3195	3191
50°	3182	3153	3139
55°	3129	3113	3098
60°	3083	3047	3023
65°	2983	2962	2919
70°	2919	2840	2796
75°	2762	2727	2634
80°	2641	2554	2449
85°	2353	2319	2146

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3217 cd/sqm

TEST NUMBER: P843350  
 CATALOG NUMBER: 24CGSB-70-L850

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	233.1	3.2
10°-20°	669.6	9.2
20°-30°	1019.0	14.0
30°-40°	1236.7	17.0
40°-50°	1295.2	17.8
50°-60°	1183.5	16.3
60°-70°	919.8	12.6
70°-80°	551.6	7.6
80°-90°	167.8	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1921.6	26.4
0°-40°	3158.3	43.4
0°-60°	5637.1	77.5
0°-90°	7276.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7276.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2459	2459	2459	2459	2459	
5°	2459	2453	2448	2448	2455	234
15°	2381	2372	2370	2370	2376	672
25°	2217	2208	2206	2208	2213	1022
35°	1982	1977	1975	1975	1977	1242
45°	1690	1681	1679	1677	1677	1302
55°	1334	1329	1327	1316	1320	1193
65°	937	935	930	919	917	933
75°	531	529	525	516	507	565
85°	152	150	150	146	139	171
90°	0	0	0	0	0	

TEST NUMBER: P843350  
 CATALOG NUMBER: 24CGSB-70-L850

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2459.3	2459.3	2459.3	2459.3	2459.3
2.5°	2466.1	2457.1	2454.9	2454.9	2461.6
5°	2459.3	2452.6	2448.1	2448.1	2454.9
7.5°	2448.1	2439.2	2436.9	2436.9	2441.4
10°	2430.2	2423.5	2419.0	2419.0	2425.7
12.5°	2407.8	2398.8	2396.6	2398.8	2403.3
15°	2380.9	2371.9	2369.7	2369.7	2376.4
17.5°	2345.0	2338.3	2336.0	2336.0	2342.8
20°	2311.4	2300.2	2297.9	2300.2	2304.7
22.5°	2262.1	2257.6	2255.3	2257.6	2259.8
25°	2217.2	2208.3	2206.0	2208.3	2212.7
27.5°	2167.9	2158.9	2156.7	2156.7	2163.4
30°	2109.6	2102.9	2100.6	2100.6	2102.9
32.5°	2049.1	2044.6	2037.9	2040.1	2044.6
35°	1981.8	1977.3	1975.1	1975.1	1977.3
37.5°	1919.1	1910.1	1903.4	1903.4	1907.8
40°	1842.8	1838.3	1831.6	1833.9	1833.9
42.5°	1768.8	1762.1	1757.6	1755.4	1757.6
45°	1690.4	1681.4	1679.2	1676.9	1676.9
47.5°	1602.9	1602.9	1596.2	1591.7	1589.5
50°	1520.0	1511.0	1506.5	1499.8	1499.8
52.5°	1423.6	1421.4	1414.6	1412.4	1412.4
55°	1333.9	1329.4	1327.2	1316.0	1320.5
57.5°	1242.0	1233.0	1230.8	1224.1	1219.6
60°	1145.6	1141.1	1132.2	1123.2	1123.2
62.5°	1042.5	1040.2	1031.3	1024.5	1022.3
65°	937.1	934.9	930.4	919.2	916.9
67.5°	847.4	838.5	827.3	818.3	818.3
70°	742.1	730.9	721.9	712.9	710.7
72.5°	634.5	627.7	623.2	614.3	607.6
75°	531.3	529.1	524.6	515.6	506.7
77.5°	434.9	432.7	421.5	414.7	408.0
80°	340.8	331.8	329.6	320.6	316.1
82.5°	239.9	244.4	233.2	230.9	228.7
85°	152.4	150.2	150.2	145.7	139.0
87.5°	67.3	69.5	69.5	69.5	69.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)