

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: P843325

Luminaire Tested: 24CGSB-50-L840

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: P843325  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-50-L840  
 Description: 2x4 CGSB AT 5000LM 4000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

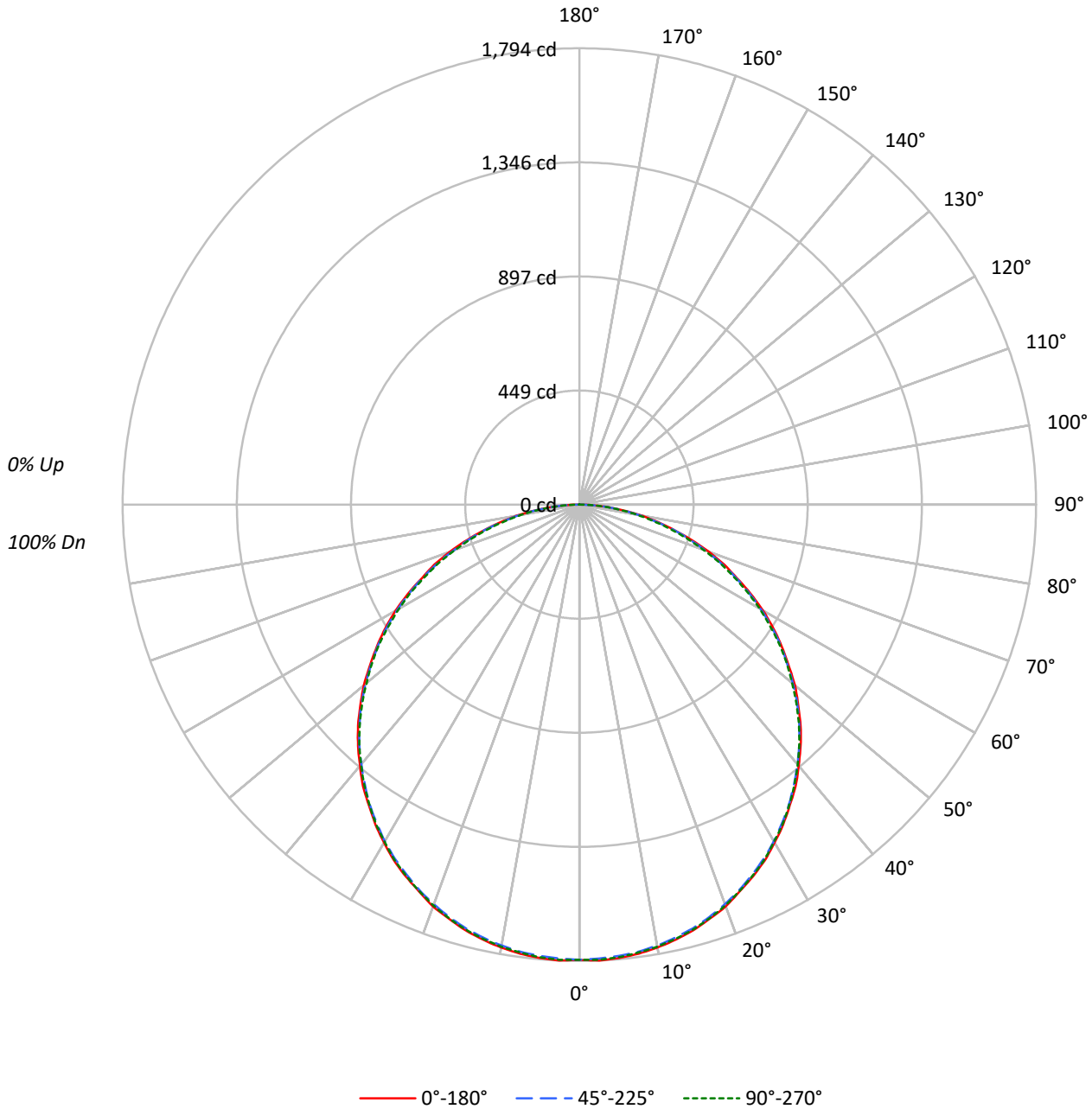
Lumens per Lamp: N/A  
 Luminaire Lumens: 5293.9 lumens  
 Efficiency: N/A  
 Efficacy: 132.7 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 39.9  
 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: P843325  
CATALOG NUMBER: 24CGSB-50-L840

### Luminous Intensity Polar Plot



TEST NUMBER: P843325  
 CATALOG NUMBER: 24CGSB-50-L840

**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°	2407	2407	2407
5°	2417	2406	2412
10°	2416	2404	2411
15°	2413	2402	2408
20°	2408	2394	2401
25°	2395	2383	2390
30°	2385	2374	2377
35°	2368	2360	2363
40°	2355	2341	2343
45°	2340	2325	2321
50°	2315	2294	2284
55°	2277	2265	2254
60°	2243	2217	2199
65°	2171	2155	2124
70°	2124	2066	2034
75°	2010	1984	1916
80°	1921	1858	1782
85°	1712	1687	1561

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2340 cd/sqm

TEST NUMBER: P843325  
 CATALOG NUMBER: 24CGSB-50-L840

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.6	3.2
10°-20°	487.1	9.2
20°-30°	741.3	14.0
30°-40°	899.8	17.0
40°-50°	942.4	17.8
50°-60°	861.1	16.3
60°-70°	669.2	12.6
70°-80°	401.3	7.6
80°-90°	122.1	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°	1398.1	26.4
0°-40°	2297.8	43.4
0°-60°	4101.3	77.5
0°-90°	5293.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5293.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1789	1789	1789	1789	1789	
5°	1789	1784	1781	1781	1786	170
15°	1732	1726	1724	1724	1729	489
25°	1613	1607	1605	1607	1610	744
35°	1442	1439	1437	1437	1439	903
45°	1230	1223	1222	1220	1220	947
55°	970	967	966	957	961	868
65°	682	680	677	669	667	679
75°	387	385	382	375	369	411
85°	111	109	109	106	101	125
90°	0	0	0	0	0	

TEST NUMBER: P843325  
 CATALOG NUMBER: 24CGSB-50-L840

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1789.3	1789.3	1789.3	1789.3	1789.3
2.5°	1794.2	1787.7	1786.0	1786.0	1790.9
5°	1789.3	1784.4	1781.1	1781.1	1786.0
7.5°	1781.1	1774.6	1773.0	1773.0	1776.2
10°	1768.1	1763.2	1759.9	1759.9	1764.8
12.5°	1751.8	1745.3	1743.6	1745.3	1748.5
15°	1732.2	1725.7	1724.1	1724.1	1728.9
17.5°	1706.1	1701.2	1699.6	1699.6	1704.5
20°	1681.6	1673.5	1671.9	1673.5	1676.8
22.5°	1645.8	1642.5	1640.9	1642.5	1644.1
25°	1613.1	1606.6	1605.0	1606.6	1609.9
27.5°	1577.3	1570.7	1569.1	1569.1	1574.0
30°	1534.8	1530.0	1528.3	1528.3	1530.0
32.5°	1490.8	1487.5	1482.7	1484.3	1487.5
35°	1441.9	1438.6	1437.0	1437.0	1438.6
37.5°	1396.2	1389.7	1384.8	1384.8	1388.1
40°	1340.7	1337.5	1332.6	1334.2	1334.2
42.5°	1286.9	1282.0	1278.8	1277.1	1278.8
45°	1229.8	1223.3	1221.7	1220.0	1220.0
47.5°	1166.2	1166.2	1161.3	1158.1	1156.4
50°	1105.9	1099.3	1096.1	1091.2	1091.2
52.5°	1035.7	1034.1	1029.2	1027.6	1027.6
55°	970.5	967.2	965.6	957.4	960.7
57.5°	903.6	897.1	895.5	890.6	887.3
60°	833.5	830.2	823.7	817.2	817.2
62.5°	758.5	756.8	750.3	745.4	743.8
65°	681.8	680.2	676.9	668.7	667.1
67.5°	616.5	610.0	601.9	595.3	595.3
70°	539.9	531.7	525.2	518.7	517.1
72.5°	461.6	456.7	453.4	446.9	442.0
75°	386.6	384.9	381.7	375.1	368.6
77.5°	316.4	314.8	306.6	301.8	296.9
80°	247.9	241.4	239.8	233.2	230.0
82.5°	174.5	177.8	169.6	168.0	166.4
85°	110.9	109.3	109.3	106.0	101.1
87.5°	48.9	50.6	50.6	50.6	50.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)