

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P860309

Luminaire Tested: **SPHB-9SE-W-L850-CD**

Issue Date: 7/11/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P860309  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-9SE-W-L850-CD  
Description: 9000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

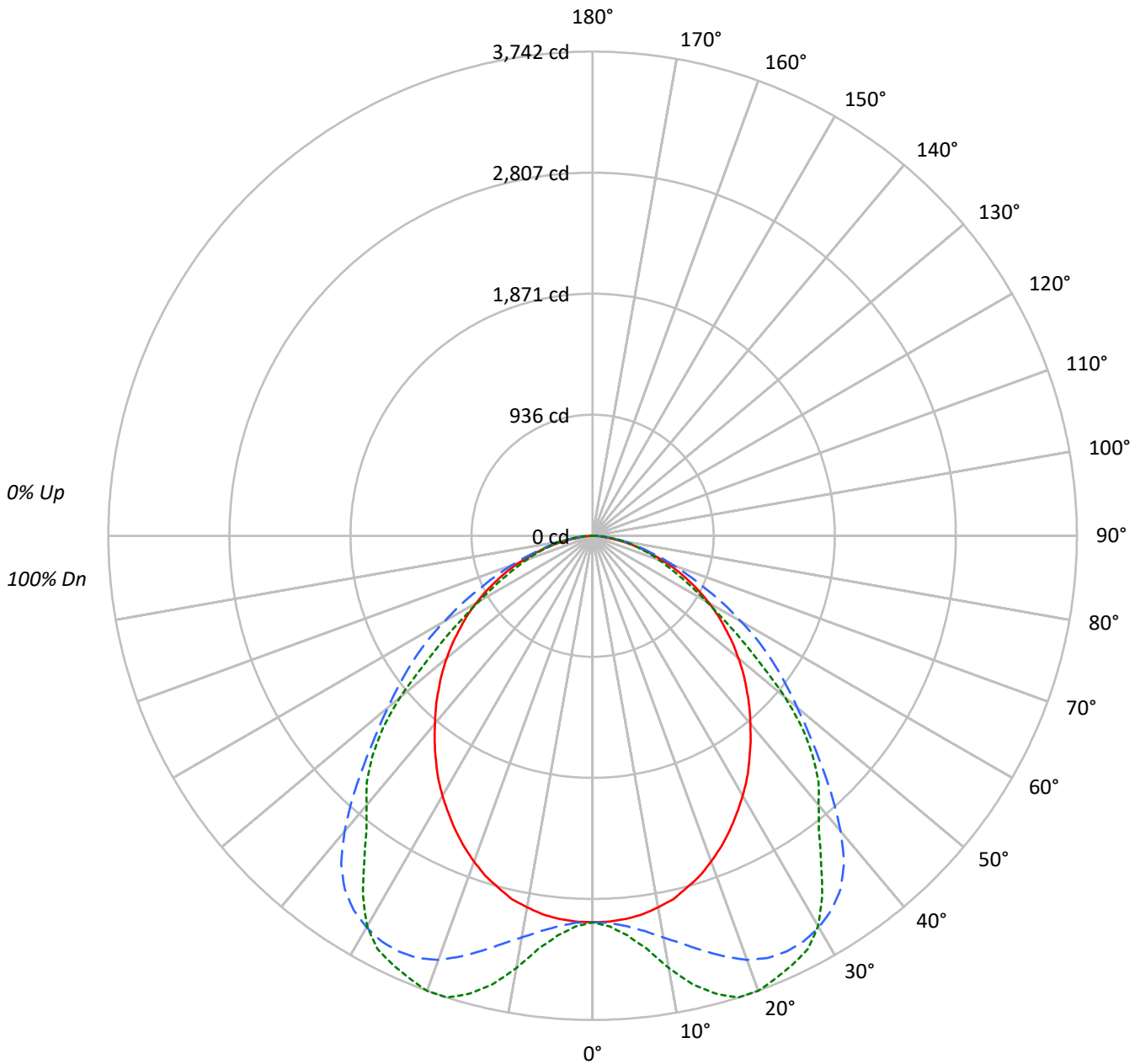
Lumens per Lamp: N/A  
Luminaire Lumens: 9399.0 lumens  
Efficiency: N/A  
Efficacy: 171.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 54.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 25 FT

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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85																			
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72																			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62																			
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53																			
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46																			
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40																			
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36																			
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32																			
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29																			
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26																			

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

	0°	45°	90°
0°	23299	23299	23299
5°	23275	23713	24275
10°	23091	24965	26858
15°	22730	26824	29583
20°	22237	28957	31061
25°	21596	30519	31468
30°	20893	31474	31383
35°	20108	31790	29284
40°	19298	30355	27659
45°	18568	27514	26537
50°	17845	25018	23525
55°	17028	23115	19144
60°	16186	20607	15767
65°	15071	17707	13671
70°	13711	15118	12365
75°	11774	12688	11337
80°	9204	10884	10515
85°	6220	9236	8663



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.3	3.1
10°-20°	930.0	9.9
20°-30°	1522.0	16.2
30°-40°	1856.7	19.8
40°-50°	1838.8	19.6
50°-60°	1470.5	15.6
60°-70°	917.3	9.8
70°-80°	449.4	4.8
80°-90°	117.9	1.3
90°-100°	3.1	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°	2745.2	29.2
0°-40°	4601.9	49.0
0°-60°	7911.2	84.2
0°-90°	9395.9	100.0
90°-120°	3.1	0.0
90°-150°	3.1	0.0
90°-180°	3.0	0.0
0°-180°	9399.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2987	2987	2987	2987	2987	
5°	2973	2986	3029	3081	3100	282
15°	2815	2978	3322	3586	3664	794
25°	2509	2934	3546	3649	3656	1155
35°	2112	2822	3339	3160	3075	1321
45°	1683	2615	2494	2411	2406	1300
55°	1252	2008	1700	1536	1408	1122
65°	817	1127	959	796	741	810
75°	391	479	421	386	376	415
85°	70	99	103	98	97	86
90°	0	10	18	23	24	4
95°	0	2	2	1	1	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CATALOG NUMBER: SPHB-9SE-W-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2987.1	2987.1	2987.1	2987.1	2987.1
2.5°	2984.2	2983.0	2993.9	3013.7	3022.7
5°	2972.6	2985.6	3028.6	3081.4	3100.4
7.5°	2951.6	2986.8	3081.7	3178.6	3219.7
10°	2915.4	2987.5	3152.0	3322.9	3391.0
12.5°	2878.0	2984.9	3230.2	3472.1	3546.5
15°	2814.8	2978.5	3321.8	3586.1	3663.5
17.5°	2756.1	2971.1	3410.0	3683.0	3741.7
20°	2679.0	2960.2	3488.6	3712.5	3742.1
22.5°	2598.3	2951.6	3531.9	3692.7	3701.7
25°	2509.3	2934.0	3546.1	3649.0	3656.4
27.5°	2414.3	2918.3	3532.7	3594.7	3601.1
30°	2319.7	2889.9	3494.5	3510.2	3484.4
32.5°	2220.6	2861.5	3432.8	3362.2	3302.0
35°	2111.8	2821.9	3338.6	3160.3	3075.4
37.5°	2004.5	2783.7	3191.7	2934.4	2870.5
40°	1895.3	2736.6	2981.2	2723.5	2716.4
42.5°	1792.1	2685.8	2743.0	2559.4	2583.3
45°	1683.3	2615.1	2494.3	2410.6	2405.7
47.5°	1580.1	2517.5	2268.1	2246.1	2196.3
50°	1470.6	2382.9	2061.7	2040.8	1938.7
52.5°	1363.3	2211.3	1877.4	1798.9	1650.1
55°	1252.2	2007.9	1699.8	1535.6	1407.8
57.5°	1149.0	1784.3	1519.2	1306.4	1191.6
60°	1037.6	1557.7	1321.0	1105.3	1010.7
62.5°	928.4	1334.5	1141.5	934.0	871.2
65°	816.6	1126.6	959.4	795.7	740.7
67.5°	709.7	946.7	802.0	670.8	634.1
70°	601.2	768.0	662.9	563.5	542.2
72.5°	489.4	613.6	536.2	475.6	459.5
75°	390.7	478.6	421.0	385.5	376.2
77.5°	290.9	356.0	329.0	308.1	305.5
80°	204.9	256.9	242.3	238.2	234.1
82.5°	130.9	167.9	172.4	169.8	166.8
85°	69.5	98.7	103.2	98.0	96.8
87.5°	28.0	43.0	46.4	51.2	52.7
90°	0.4	10.1	18.3	23.2	23.9
92.5°	0.4	2.2	2.6	2.6	2.2
95°	0.4	1.5	1.5	1.1	0.7
97.5°	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG







— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)