

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: P860273

Luminaire Tested: **SPHB-9HE-N-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: P860273  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-9HE-N-L850-CD  
Description: 9000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

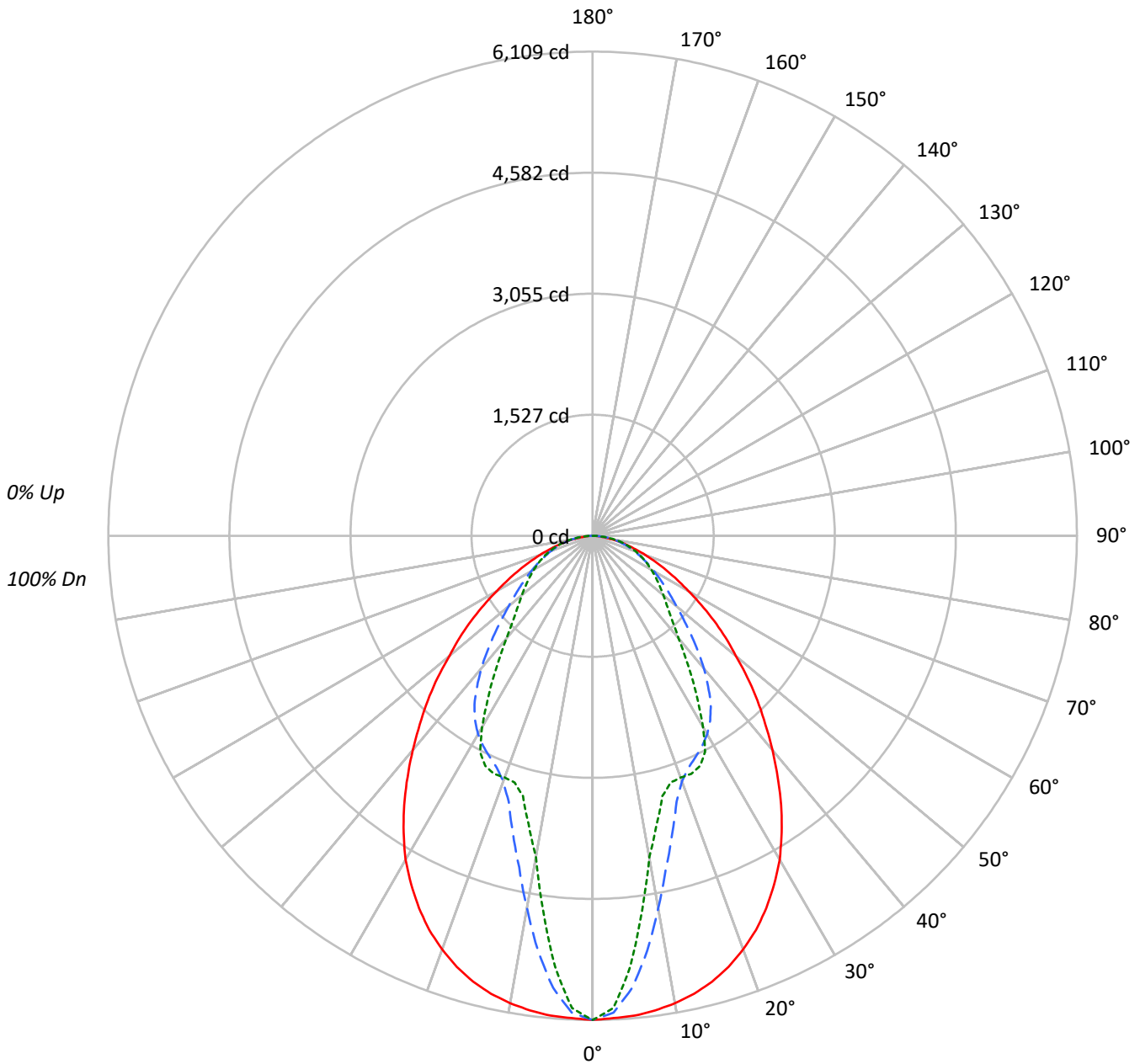
Lumens per Lamp: N/A  
Luminaire Lumens: 8953.0 lumens  
Efficiency: N/A  
Efficacy: 168.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 53.3  
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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74																			
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64																			
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50																			
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45																			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40																			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31																			

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

	0°	45°	90°
0°	47648	47648	47648
5°	47593	44832	42711
10°	47431	37790	32578
15°	47036	31369	27453
20°	46088	27344	26950
25°	44607	26457	27581
30°	42499	26034	25100
35°	39459	24739	20800
40°	35932	22208	17175
45°	32435	19271	15078
50°	28623	16757	14120
55°	25400	15112	13591
60°	21767	13976	13313
65°	18842	13135	13246
70°	16123	12634	13229
75°	13534	12269	13112
80°	10327	11858	12842
85°	6757	10516	9889



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	520.8	5.8
10°-20°	1195.9	13.4
20°-30°	1616.2	18.1
30°-40°	1700.9	19.0
40°-50°	1443.3	16.1
50°-60°	1118.1	12.5
60°-70°	778.7	8.7
70°-80°	445.9	5.0
80°-90°	129.8	1.4
90°-100°	3.5	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°	3332.9	37.2
0°-40°	5033.8	56.2
0°-60°	7595.2	84.8
0°-90°	8949.5	100.0
90°-120°	3.5	0.0
90°-150°	3.5	0.0
90°-180°	3.0	0.0
0°-180°	8953.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6109	6109	6109	6109	6109	
5°	6078	5967	5726	5506	5455	577
15°	5825	4944	3885	3497	3400	1639
25°	5183	3661	3074	3163	3205	2379
35°	4144	2816	2598	2347	2184	2583
45°	2940	2114	1747	1435	1367	2265
55°	1868	1424	1111	1010	999	1670
65°	1021	836	712	712	718	1020
75°	449	399	407	433	435	479
85°	76	98	118	110	110	96
90°	0	9	17	22	23	4
95°	0	1	3	3	2	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-9HE-N-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6108.8	6108.8	6108.8	6108.8	6108.8
2.5°	6091.1	6071.0	6022.0	5990.3	5965.6
5°	6078.5	5967.0	5725.9	5506.3	5455.0
7.5°	6040.7	5795.9	5280.5	4874.3	4771.7
10°	5988.5	5550.1	4771.3	4262.5	4113.3
12.5°	5919.0	5287.5	4283.5	3804.1	3730.8
15°	5824.8	4943.8	3884.7	3496.7	3399.7
17.5°	5702.6	4588.5	3516.8	3292.5	3265.4
20°	5552.4	4262.5	3294.3	3217.9	3246.8
22.5°	5383.6	3945.8	3165.2	3197.3	3251.4
25°	5183.1	3661.4	3074.2	3163.3	3204.8
27.5°	4957.8	3404.4	2990.7	3072.3	3072.3
30°	4718.6	3190.3	2890.5	2883.0	2786.9
32.5°	4439.2	3008.5	2759.4	2611.6	2468.9
35°	4144.0	2815.9	2598.1	2346.7	2184.4
37.5°	3834.4	2636.8	2393.8	2062.2	1911.1
40°	3528.9	2460.0	2181.1	1806.7	1686.8
42.5°	3224.8	2280.0	1959.6	1599.6	1504.9
45°	2940.4	2114.5	1747.0	1435.4	1366.9
47.5°	2651.2	1938.6	1550.6	1303.5	1255.9
50°	2358.8	1760.5	1380.9	1198.5	1163.6
52.5°	2112.6	1594.5	1236.8	1099.2	1078.2
55°	1867.8	1424.2	1111.3	1010.1	999.4
57.5°	1624.8	1265.7	996.6	928.5	926.2
60°	1395.3	1117.4	895.9	858.6	853.4
62.5°	1199.9	970.0	800.3	782.5	784.9
65°	1020.9	835.7	711.7	711.7	717.7
67.5°	854.8	712.1	630.5	641.2	649.6
70°	707.0	600.2	554.0	572.7	580.1
72.5°	567.1	496.2	480.8	501.3	507.4
75°	449.1	399.2	407.1	432.8	435.1
77.5°	333.0	314.3	334.8	362.8	368.0
80°	229.9	231.8	264.0	283.5	285.9
82.5°	148.3	161.8	197.7	208.0	204.3
85°	75.5	97.9	117.5	110.5	110.5
87.5°	28.9	42.4	49.9	58.8	62.0
90°	0.5	8.9	17.3	21.9	22.9
92.5°	0.5	2.3	3.7	4.2	3.7
95°	0.5	1.4	2.8	2.8	2.3
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)