

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: P860291

Luminaire Tested: **SPHB-9SE-M-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: P860291  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-9SE-M-L850-CD  
Description: 9000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens  
and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

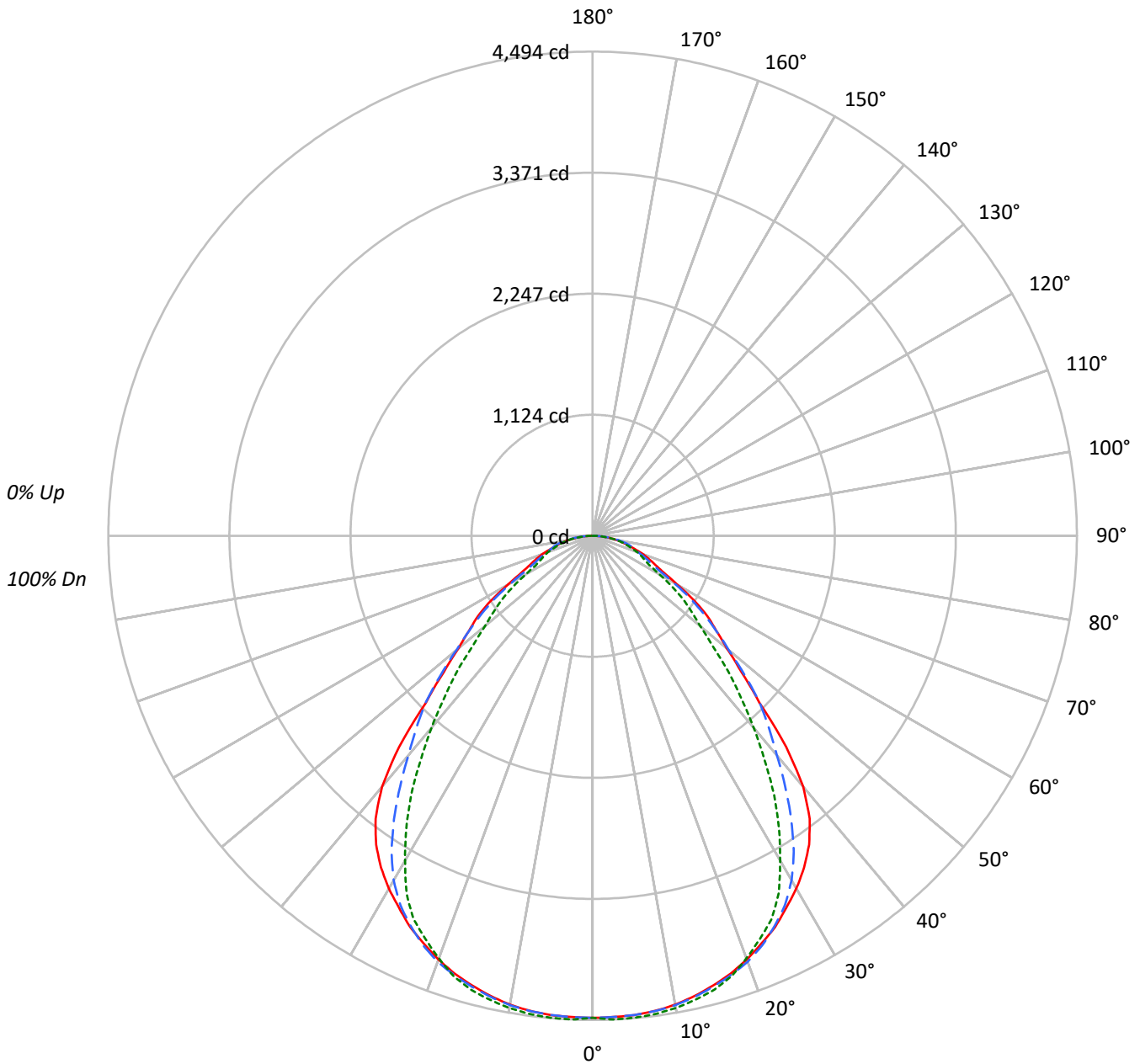
Lumens per Lamp: N/A  
Luminaire Lumens: 9287.0 lumens  
Efficiency: N/A  
Efficacy: 169.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P860291

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

### Luminous Intensity Polar Plot





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**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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31								

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

	0°	45°	90°
0°	34899	34899	34899
5°	34968	34959	35157
10°	34998	35036	35251
15°	34897	34987	35230
20°	34743	34920	34641
25°	34490	34393	33809
30°	34053	33251	31353
35°	33338	30590	27944
40°	30938	27075	23668
45°	24138	24203	19587
50°	19714	19993	15819
55°	17663	16997	13899
60°	14140	13385	11121
65°	11851	10849	9835
70°	11250	10335	10014
75°	10207	10973	9656
80°	10259	11212	10178
85°	8923	10453	8502



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	425.4	4.6
10°-20°	1223.5	13.2
20°-30°	1826.5	19.7
30°-40°	1993.0	21.5
40°-50°	1630.4	17.6
50°-60°	1072.0	11.5
60°-70°	615.0	6.6
70°-80°	372.7	4.0
80°-90°	125.1	1.3
90°-100°	3.3	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°	3475.5	37.4
0°-40°	5468.5	58.9
0°-60°	8170.9	88.0
0°-90°	9283.7	100.0
90°-120°	3.3	0.0
90°-150°	3.3	0.0
90°-180°	3.0	0.0
0°-180°	9287.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4474	4474	4474	4474	4474	
5°	4466	4459	4465	4483	4490	425
15°	4322	4321	4333	4360	4363	1220
25°	4008	4017	3996	3948	3928	1844
35°	3501	3422	3213	2994	2935	2170
45°	2188	2352	2194	1937	1776	1737
55°	1299	1263	1250	1074	1022	1144
65°	642	633	588	572	533	656
75°	339	366	364	349	320	367
85°	100	113	117	102	95	108
90°	1	8	16	20	21	5
95°	1	1	2	2	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-M-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4474.3	4474.3	4474.3	4474.3	4474.3
2.5°	4471.4	4464.9	4470.8	4489.1	4494.4
5°	4466.0	4459.0	4464.9	4483.2	4490.2
7.5°	4447.7	4443.6	4449.5	4467.8	4476.7
10°	4418.8	4414.1	4423.6	4439.5	4450.7
12.5°	4375.8	4374.0	4382.8	4405.8	4410.6
15°	4321.5	4320.9	4332.7	4360.4	4362.8
17.5°	4260.1	4259.5	4274.2	4292.5	4286.1
20°	4185.7	4189.9	4207.0	4189.9	4173.3
22.5°	4096.6	4109.6	4113.7	4060.0	4051.8
25°	4007.5	4017.0	3996.3	3947.9	3928.4
27.5°	3892.4	3903.7	3865.3	3796.3	3740.8
30°	3780.9	3770.3	3691.8	3558.4	3481.1
32.5°	3652.9	3615.1	3474.0	3289.9	3219.7
35°	3501.2	3422.1	3212.6	2993.7	2934.7
37.5°	3309.4	3164.8	2935.9	2707.5	2618.4
40°	3038.5	2871.5	2659.1	2423.0	2324.5
42.5°	2659.1	2597.1	2421.3	2155.7	2038.3
45°	2188.2	2351.6	2194.1	1936.8	1775.7
47.5°	1873.0	2100.2	1910.8	1724.9	1503.0
50°	1624.6	1781.0	1647.6	1480.0	1303.6
52.5°	1445.2	1492.4	1438.7	1254.6	1154.3
55°	1298.9	1263.4	1249.9	1074.0	1022.1
57.5°	1117.1	1097.6	1062.8	936.5	868.1
60°	906.4	947.7	858.0	822.0	712.9
62.5°	744.7	785.5	689.3	686.9	596.0
65°	642.1	632.6	587.8	571.8	532.9
67.5°	568.3	538.8	523.4	502.8	489.2
70°	493.3	480.9	453.2	457.3	439.1
72.5°	411.3	427.2	399.5	407.2	374.1
75°	338.7	366.5	364.1	349.4	320.4
77.5°	279.1	308.6	313.9	300.4	276.8
80°	228.4	248.4	249.6	241.4	226.6
82.5°	167.6	179.4	188.2	174.1	164.6
85°	99.7	113.3	116.8	102.1	95.0
87.5°	32.5	45.4	50.8	52.5	53.1
90°	0.6	8.3	16.5	19.5	20.7
92.5°	0.6	2.4	3.5	5.3	5.9
95°	0.6	1.2	1.8	1.8	1.2
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



TEST NUMBER: P860291

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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)