

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: P860302

Luminaire Tested: **SPHB-9SE-N-L940-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: P860302  
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-9SE-N-L940-CD  
Description: 9000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens  
and, 4000K 90CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

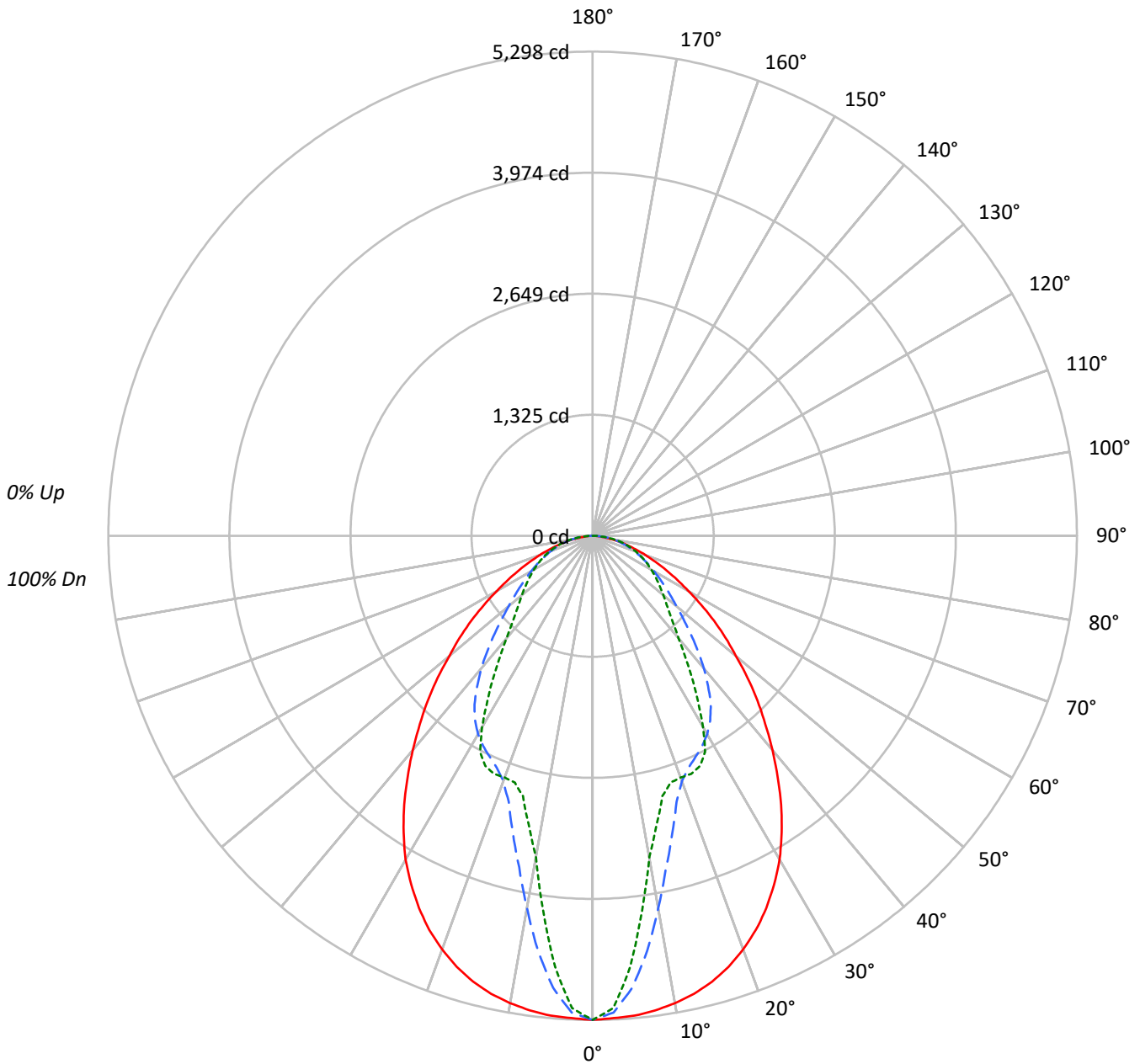
Lumens per Lamp: N/A  
Luminaire Lumens: 7764.0 lumens  
Efficiency: N/A  
Efficacy: 141.7 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74				74
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64				64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50				50
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45				45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				31

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

	0°	45°	90°
0°	41320	41320	41320
5°	41272	38879	37039
10°	41132	32771	28252
15°	40789	27203	23807
20°	39967	23713	23371
25°	38683	22943	23919
30°	36854	22576	21767
35°	34219	21453	18037
40°	31160	19259	14894
45°	28127	16712	13076
50°	24822	14531	12244
55°	22026	13105	11786
60°	18876	12120	11545
65°	16339	11389	11487
70°	13982	10958	11473
75°	11738	10641	11371
80°	8957	10282	11135
85°	5862	9119	8574



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	451.7	5.8
10°-20°	1037.1	13.4
20°-30°	1401.5	18.1
30°-40°	1475.0	19.0
40°-50°	1251.6	16.1
50°-60°	969.6	12.5
60°-70°	675.3	8.7
70°-80°	386.7	5.0
80°-90°	112.5	1.4
90°-100°	3.0	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°	2890.3	37.2
0°-40°	4365.3	56.2
0°-60°	6586.5	84.8
0°-90°	7761.0	100.0
90°-120°	3.0	0.0
90°-150°	3.0	0.0
90°-180°	3.0	0.0
0°-180°	7764.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5298	5298	5298	5298	5298	
5°	5271	5175	4966	4775	4730	501
15°	5051	4287	3369	3032	2948	1421
25°	4495	3175	2666	2743	2779	2063
35°	3594	2442	2253	2035	1894	2240
45°	2550	1834	1515	1245	1185	1964
55°	1620	1235	964	876	867	1448
65°	885	725	617	617	622	884
75°	390	346	353	375	377	415
85°	66	85	102	96	96	83
90°	0	8	15	19	20	4
95°	0	1	2	2	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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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5297.5	5297.5	5297.5	5297.5	5297.5
2.5°	5282.1	5264.8	5222.3	5194.8	5173.4
5°	5271.2	5174.6	4965.5	4775.0	4730.5
7.5°	5238.5	5026.1	4579.3	4227.0	4138.0
10°	5193.2	4813.0	4137.6	3696.4	3567.0
12.5°	5132.9	4585.3	3714.6	3298.9	3235.4
15°	5051.2	4287.3	3368.8	3032.3	2948.2
17.5°	4945.3	3979.1	3049.7	2855.2	2831.8
20°	4815.0	3696.4	2856.8	2790.5	2815.6
22.5°	4668.6	3421.8	2744.8	2772.7	2819.6
25°	4494.7	3175.1	2665.9	2743.2	2779.2
27.5°	4299.4	2952.3	2593.6	2664.3	2664.3
30°	4091.9	2766.6	2506.6	2500.1	2416.8
32.5°	3849.7	2608.9	2393.0	2264.8	2141.0
35°	3593.7	2441.9	2253.0	2035.0	1894.3
37.5°	3325.1	2286.6	2075.9	1788.3	1657.3
40°	3060.3	2133.3	1891.5	1566.7	1462.8
42.5°	2796.6	1977.2	1699.4	1387.2	1305.1
45°	2549.9	1833.6	1515.0	1244.8	1185.4
47.5°	2299.1	1681.2	1344.7	1130.4	1089.1
50°	2045.6	1526.7	1197.5	1039.4	1009.0
52.5°	1832.0	1382.7	1072.5	953.2	935.0
55°	1619.7	1235.1	963.7	876.0	866.7
57.5°	1409.0	1097.6	864.2	805.2	803.2
60°	1210.0	969.0	776.9	744.5	740.1
62.5°	1040.6	841.2	694.0	678.6	680.6
65°	885.3	724.7	617.1	617.1	622.4
67.5°	741.3	617.6	546.8	556.1	563.4
70°	613.1	520.5	480.5	496.6	503.1
72.5°	491.8	430.3	417.0	434.8	440.0
75°	389.5	346.2	353.1	375.3	377.3
77.5°	288.8	272.6	290.4	314.6	319.1
80°	199.4	201.0	228.9	245.9	247.9
82.5°	128.6	140.3	171.5	180.4	177.1
85°	65.5	84.9	101.9	95.8	95.8
87.5°	25.1	36.8	43.3	51.0	53.8
90°	0.4	7.7	15.0	19.0	19.8
92.5°	0.4	2.0	3.2	3.6	3.2
95°	0.4	1.2	2.4	2.4	2.0
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)