

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: P860185

Luminaire Tested: **SPHB-48SE-M-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: P860185  
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-48SE-M-L940-CD  
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens  
and, 4000K 90CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

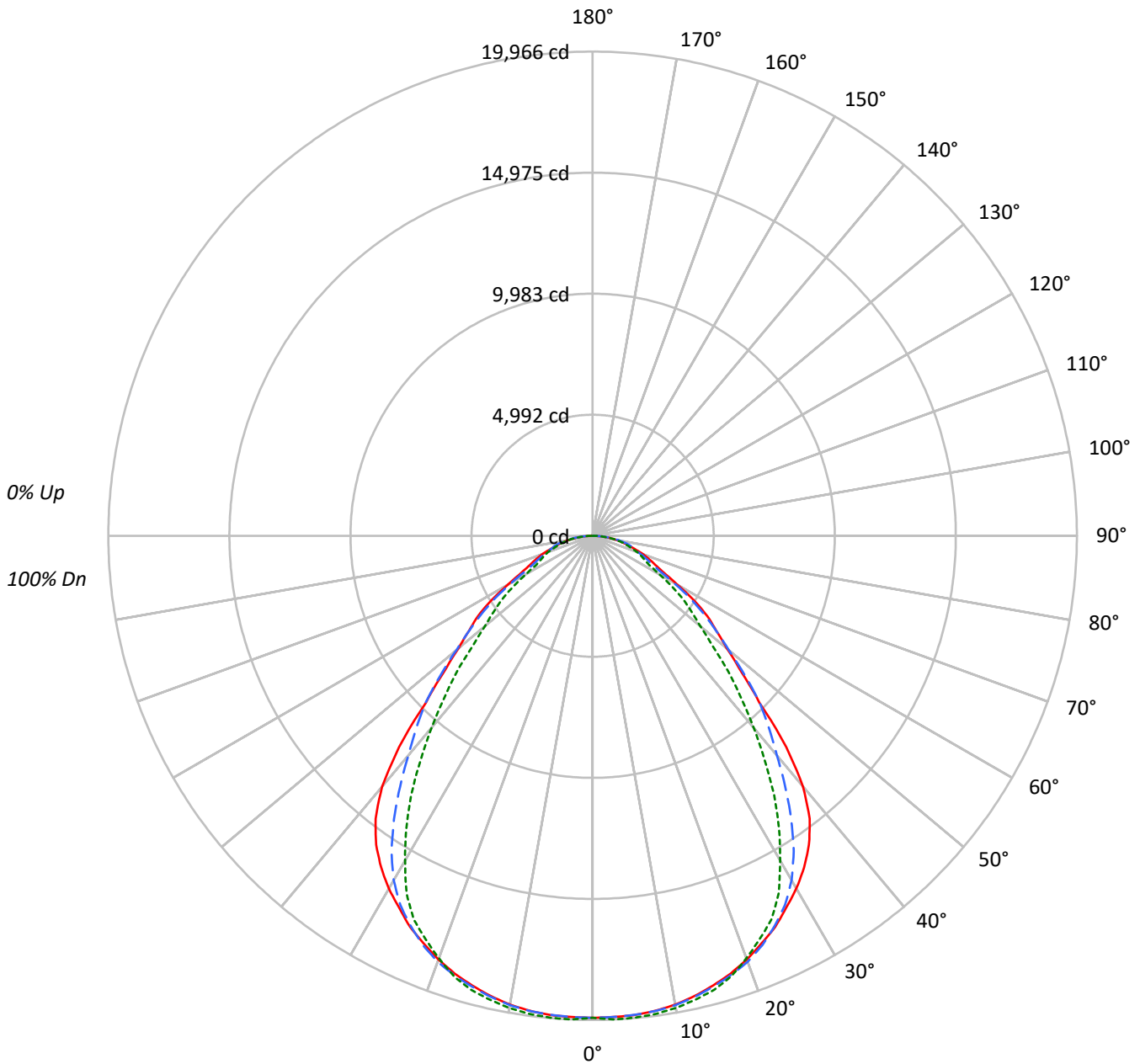
Lumens per Lamp: N/A  
Luminaire Lumens: 41256.0 lumens  
Efficiency: N/A  
Efficacy: 135.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 304.9  
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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CATALOG NUMBER: SPHB-48SE-M-L940-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°	63298	63298	63298
5°	63423	63406	63766
10°	63478	63545	63935
15°	63292	63457	63897
20°	63016	63336	62829
25°	62555	62380	61321
30°	61763	60308	56866
35°	60467	55483	50683
40°	56115	49107	42928
45°	43779	43897	35526
50°	35755	36262	28690
55°	32036	30828	25210
60°	25647	24277	20170
65°	21492	19675	17838
70°	20406	18746	18160
75°	18516	19902	17515
80°	18605	20336	18462
85°	16187	18967	15423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1889.9	4.6
10°-20°	5435.3	13.2
20°-30°	8114.0	19.7
30°-40°	8853.8	21.5
40°-50°	7242.8	17.6
50°-60°	4762.1	11.5
60°-70°	2732.1	6.6
70°-80°	1655.6	4.0
80°-90°	555.9	1.3
90°-100°	14.4	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°	15439.2	37.4
0°-40°	24293.0	58.9
0°-60°	36297.9	88.0
0°-90°	41241.6	100.0
90°-120°	14.4	0.0
90°-150°	14.4	0.0
90°-180°	14.0	0.0
0°-180°	41256.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	19876	19876	19876	19876	19876	
5°	19840	19808	19834	19916	19947	###
15°	19197	19195	19247	19370	19381	5419
25°	17803	17845	17753	17538	17452	8190
35°	15554	15202	14272	13299	13037	9640
45°	9721	10447	9747	8604	7888	7716
55°	5770	5613	5552	4771	4540	5082
65°	2852	2810	2611	2540	2367	2916
75°	1505	1628	1618	1552	1424	1629
85°	443	503	519	454	422	480
90°	3	37	73	86	92	21
95°	3	5	8	8	5	1
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



TEST NUMBER: P860185

CATALOG NUMBER: SPHB-48SE-M-L940-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	19876.4	19876.4	19876.4	19876.4	19876.4
2.5°	19863.3	19834.4	19860.6	19941.9	19965.5
5°	19839.7	19808.2	19834.4	19915.7	19947.1
7.5°	19758.4	19740.0	19766.3	19847.5	19886.8
10°	19629.9	19609.0	19650.9	19721.7	19771.5
12.5°	19438.6	19430.7	19470.0	19572.3	19593.2
15°	19197.4	19194.8	19247.2	19370.4	19380.9
17.5°	18924.7	18922.1	18987.7	19068.9	19040.1
20°	18594.4	18612.8	18688.8	18612.8	18539.4
22.5°	18198.6	18256.3	18274.6	18036.1	17999.4
25°	17802.7	17844.7	17752.9	17538.0	17451.5
27.5°	17291.5	17341.4	17171.0	16864.2	16617.8
30°	16796.1	16748.9	16400.2	15807.8	15464.3
32.5°	16227.2	16059.4	15432.9	14615.0	14303.0
35°	15553.5	15202.2	14271.6	13299.0	13036.8
37.5°	14701.5	14059.2	13042.1	12027.5	11631.7
40°	13498.2	12756.3	11812.6	10764.0	10326.2
42.5°	11812.6	11537.3	10756.1	9576.4	9054.7
45°	9720.6	10446.8	9746.8	8603.8	7888.2
47.5°	8320.7	9330.0	8488.5	7662.7	6677.0
50°	7217.0	7911.7	7319.3	6574.8	5790.9
52.5°	6420.1	6629.8	6391.3	5573.3	5127.7
55°	5770.0	5612.7	5552.4	4771.2	4540.5
57.5°	4962.5	4876.0	4721.4	4160.4	3856.3
60°	4026.7	4210.2	3811.7	3651.8	3166.8
62.5°	3308.4	3489.2	3061.9	3051.4	2647.7
65°	2852.2	2810.3	2611.0	2540.3	2367.2
67.5°	2524.5	2393.4	2325.3	2233.5	2173.2
70°	2191.6	2136.5	2013.3	2031.7	1950.4
72.5°	1827.2	1898.0	1774.8	1808.8	1662.0
75°	1504.8	1628.0	1617.5	1551.9	1423.5
77.5°	1240.0	1371.1	1394.6	1334.4	1229.5
80°	1014.5	1103.7	1108.9	1072.2	1006.7
82.5°	744.5	796.9	836.3	773.3	731.4
85°	443.0	503.3	519.1	453.5	422.1
87.5°	144.2	201.9	225.5	233.3	235.9
90°	2.6	36.7	73.4	86.5	91.8
92.5°	2.6	10.5	15.7	23.6	26.2
95°	2.6	5.2	7.9	7.9	5.2
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: P860185

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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)