

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: P860192

Luminaire Tested: **SPHB-48SE-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: P860192
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-48SE-N-L850-CD
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

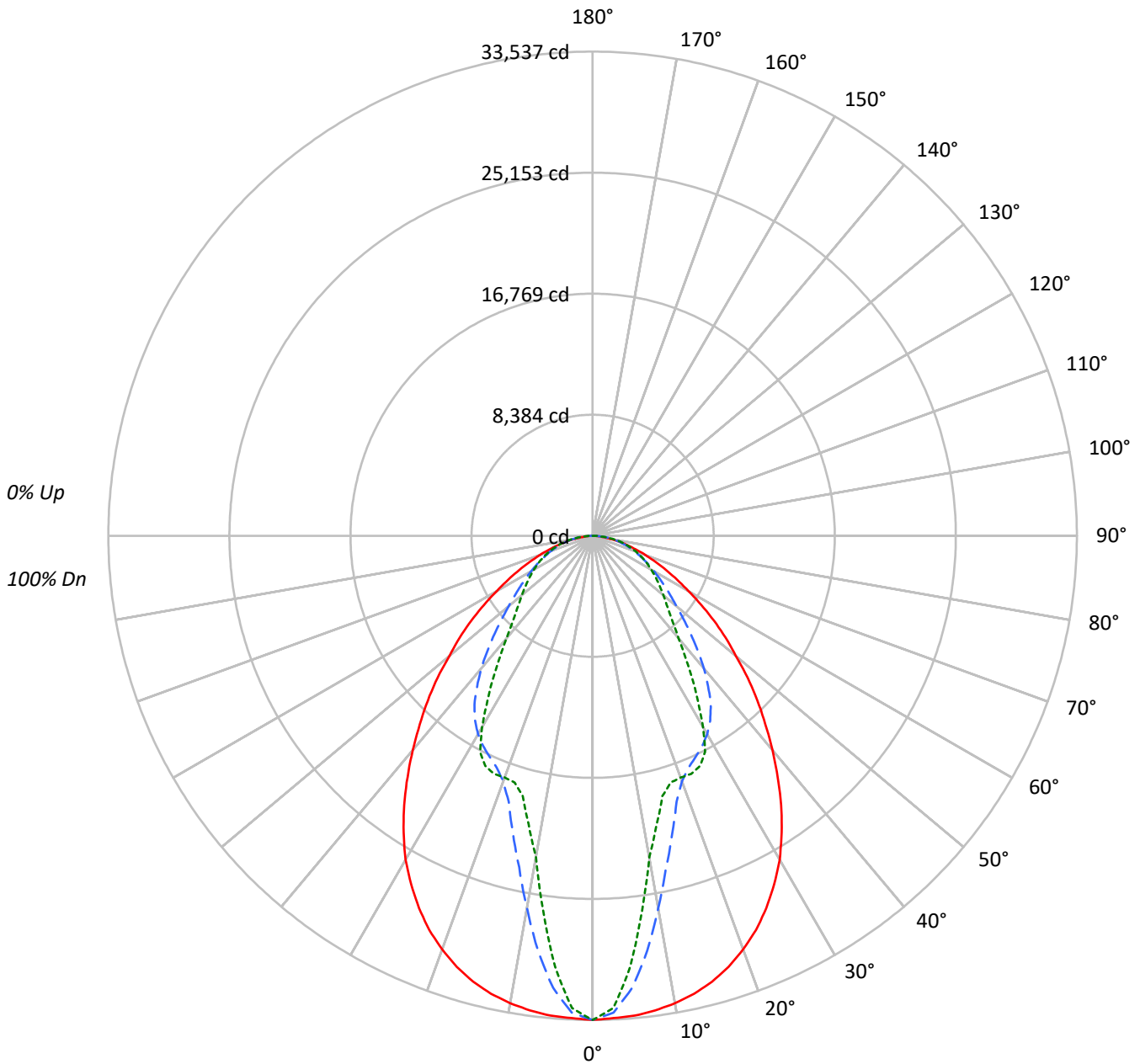
Lumens per Lamp: N/A
Luminaire Lumens: 49151.0 lumens
Efficiency: N/A
Efficacy: 161.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 304.9
Input Voltage (V): NR
Input Current (A_{in}): 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: P860192

CATALOG NUMBER: SPHB-48SE-N-L850-CD

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°	106800	106800	106800
5°	106676	100489	95734
10°	106312	84703	73022
15°	105427	70313	61534
20°	103303	61291	60406
25°	99984	59303	61822
30°	95257	58352	56262
35°	88446	55450	46622
40°	80538	49779	38497
45°	72700	43194	33796
50°	64157	37558	31647
55°	56931	33874	30463
60°	48789	31325	29841
65°	42231	29440	29691
70°	36139	28321	29655
75°	30336	27501	29391
80°	23148	26576	28782
85°	15156	23575	22172



TEST NUMBER: P860192

CATALOG NUMBER: SPHB-48SE-N-L850-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2859.3	5.8
10°-20°	6565.3	13.4
20°-30°	8872.7	18.1
30°-40°	9338.0	19.0
40°-50°	7923.6	16.1
50°-60°	6138.0	12.5
60°-70°	4274.9	8.7
70°-80°	2447.9	5.0
80°-90°	712.4	1.4
90°-100°	19.0	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°	18297.2	37.2
0°-40°	27635.2	56.2
0°-60°	41696.8	84.8
0°-90°	49132.0	100.0
90°-120°	19.0	0.0
90°-150°	19.0	0.0
90°-180°	19.0	0.0
0°-180°	49151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	33537	33537	33537	33537	33537	
5°	33370	32758	31435	30229	29947	###
15°	31977	27141	21327	19197	18664	8998
25°	28454	20100	16877	17366	17594	13062
35°	22750	15459	14263	12883	11992	14181
45°	16142	11608	9591	7880	7504	12433
55°	10254	7819	6101	5546	5487	9167
65°	5604	4588	3907	3907	3940	5598
75°	2466	2192	2235	2376	2389	2629
85°	415	538	645	607	607	527
90°	3	49	95	120	126	23
95°	3	8	15	15	13	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: P860192

CATALOG NUMBER: SPHB-48SE-N-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	33536.6	33536.6	33536.6	33536.6	33536.6
2.5°	33439.3	33329.2	33060.4	32886.3	32750.6
5°	33370.2	32758.3	31434.6	30228.7	29947.1
7.5°	33162.8	31818.7	28989.6	26759.6	26196.4
10°	32876.0	30469.4	26193.8	23400.6	22581.3
12.5°	32494.6	29028.0	23515.8	20883.9	20481.9
15°	31977.4	27141.1	21326.8	19196.7	18664.1
17.5°	31306.6	25190.2	19306.8	18075.3	17926.8
20°	30482.2	23400.6	18085.5	17665.7	17824.4
22.5°	29555.4	21662.2	17376.3	17553.0	17850.0
25°	28454.5	20100.4	16877.1	17366.1	17594.0
27.5°	27217.9	18689.7	16418.8	16866.9	16866.9
30°	25904.5	17514.6	15868.4	15827.4	15300.0
32.5°	24370.9	16516.1	15148.9	14337.3	13553.9
35°	22750.3	15458.7	14263.1	12883.1	11992.2
37.5°	21050.3	14475.6	13141.7	11321.4	10491.9
40°	19373.3	13505.3	11974.2	9918.4	9260.4
42.5°	17704.1	12517.0	10758.1	8781.6	8261.9
45°	16142.3	11608.1	9590.7	7880.4	7504.1
47.5°	14555.0	10642.9	8512.8	7155.9	6894.7
50°	12949.7	9664.9	7580.9	6579.8	6387.8
52.5°	11597.9	8753.5	6789.8	6034.5	5919.3
55°	10253.8	7819.0	6101.1	5545.5	5486.6
57.5°	8919.9	6948.5	5471.2	5097.4	5084.6
60°	7660.2	6134.3	4918.2	4713.4	4685.2
62.5°	6587.5	5325.3	4393.4	4296.1	4308.9
65°	5604.4	4587.9	3906.9	3906.9	3940.2
67.5°	4692.9	3909.5	3461.4	3520.3	3566.4
70°	3881.3	3295.0	3041.6	3144.0	3184.9
72.5°	3113.3	2724.1	2639.6	2752.3	2785.5
75°	2465.5	2191.6	2235.1	2375.9	2388.7
77.5°	1828.0	1725.6	1838.3	1991.9	2020.0
80°	1262.2	1272.4	1449.1	1556.6	1569.4
82.5°	814.2	888.4	1085.5	1141.9	1121.4
85°	414.8	537.7	645.2	606.8	606.8
87.5°	158.7	233.0	273.9	322.6	340.5
90°	2.6	48.6	94.7	120.3	125.5
92.5°	2.6	12.8	20.5	23.0	20.5
95°	2.6	7.7	15.4	15.4	12.8
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: P860192

CATALOG NUMBER: SPHB-48SE-N-L850-CD

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)