

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: P860191

Luminaire Tested: **SPHB-48SE-N-L840-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: P860191
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-L840-CD
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

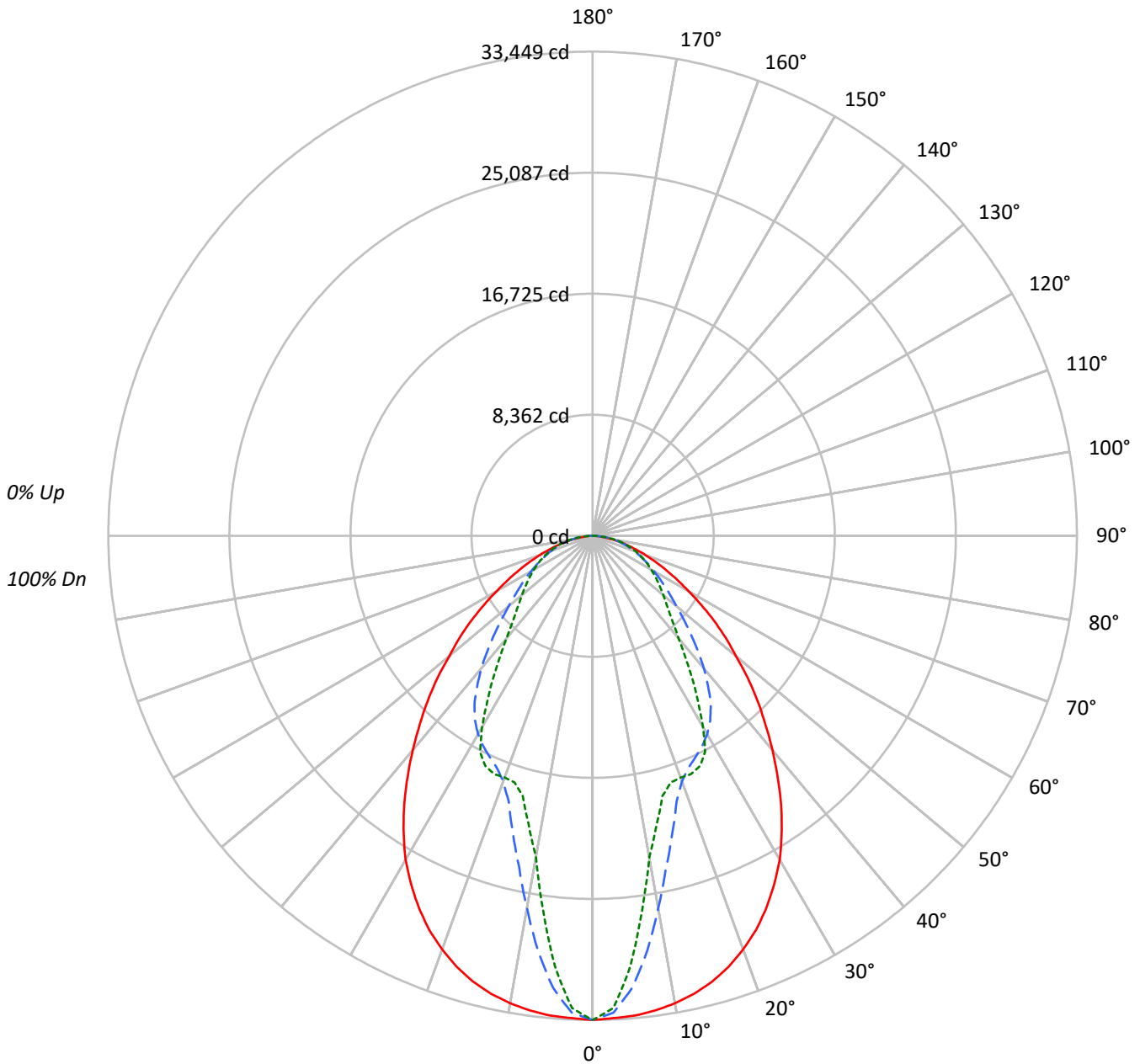
Lumens per Lamp: N/A
Luminaire Lumens: 49023.0 lumens
Efficiency: N/A
Efficacy: 160.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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

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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	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°	106522	106522	106522
5°	106399	100227	95484
10°	106035	84483	72831
15°	105153	70130	61374
20°	103034	61132	60249
25°	99723	59148	61661
30°	95009	58200	56115
35°	88215	55306	46500
40°	80329	49650	38397
45°	72511	43081	33708
50°	63990	37460	31565
55°	56783	33786	30383
60°	48662	31243	29763
65°	42121	29364	29613
70°	36045	28246	29578
75°	30258	27430	29315
80°	23087	26506	28707
85°	15116	23513	22113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2851.8	5.8
10°-20°	6548.2	13.4
20°-30°	8849.6	18.1
30°-40°	9313.7	19.0
40°-50°	7903.0	16.1
50°-60°	6122.0	12.5
60°-70°	4263.8	8.7
70°-80°	2441.5	5.0
80°-90°	710.5	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°	18249.6	37.2
0°-40°	27563.3	56.2
0°-60°	41588.3	84.8
0°-90°	49004.1	100.0
90°-120°	19.0	0.0
90°-150°	19.0	0.0
90°-180°	19.0	0.0
0°-180°	49023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	33449	33449	33449	33449	33449	
5°	33283	32673	31353	30150	29869	###
15°	31894	27070	21271	19147	18616	8975
25°	28380	20048	16833	17321	17548	13028
35°	22691	15418	14226	12850	11961	14144
45°	16100	11578	9566	7860	7484	12400
55°	10227	7799	6085	5531	5472	9144
65°	5590	4576	3897	3897	3930	5584
75°	2459	2186	2229	2370	2382	2622
85°	414	536	644	605	605	526
90°	3	48	94	120	125	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: P860191

CATALOG NUMBER: SPHB-48SE-N-L840-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	33449.2	33449.2	33449.2	33449.2	33449.2
2.5°	33352.2	33242.4	32974.3	32800.6	32665.3
5°	33283.3	32673.0	31352.8	30150.0	29869.1
7.5°	33076.4	31735.8	28914.1	26689.9	26128.1
10°	32790.4	30390.1	26125.6	23339.6	22522.5
12.5°	32409.9	28952.4	23454.6	20829.5	20428.6
15°	31894.1	27070.4	21271.3	19146.7	18615.5
17.5°	31225.1	25124.6	19256.5	18028.2	17880.1
20°	30402.8	23339.6	18038.4	17619.6	17778.0
22.5°	29478.4	21605.8	17331.1	17507.3	17803.5
25°	28380.4	20048.1	16833.1	17320.9	17548.1
27.5°	27147.0	18641.1	16376.1	16822.9	16822.9
30°	25837.0	17469.0	15827.0	15786.2	15260.1
32.5°	24307.5	16473.1	15109.5	14300.0	13518.6
35°	22691.0	15418.5	14226.0	12849.6	11960.9
37.5°	20995.5	14437.9	13107.5	11291.9	10464.5
40°	19322.9	13470.1	11943.1	9892.5	9236.3
42.5°	17658.0	12484.4	10730.1	8758.8	8240.4
45°	16100.3	11577.9	9565.7	7859.9	7484.5
47.5°	14517.1	10615.2	8490.6	7137.2	6876.8
50°	12916.0	9639.7	7561.1	6562.7	6371.2
52.5°	11567.7	8730.7	6772.1	6018.8	5903.9
55°	10227.1	7798.6	6085.2	5531.0	5472.3
57.5°	8896.6	6930.4	5457.0	5084.2	5071.4
60°	7640.3	6118.4	4905.4	4701.1	4673.0
62.5°	6570.3	5311.4	4381.9	4284.9	4297.7
65°	5589.8	4576.0	3896.8	3896.8	3929.9
67.5°	4680.7	3899.3	3452.4	3511.2	3557.1
70°	3871.2	3286.4	3033.6	3135.8	3176.6
72.5°	3105.1	2717.0	2632.7	2745.1	2778.3
75°	2459.1	2185.9	2229.3	2369.7	2382.5
77.5°	1823.3	1721.1	1833.5	1986.7	2014.8
80°	1258.9	1269.1	1445.3	1552.6	1565.3
82.5°	812.0	886.1	1082.7	1138.9	1118.5
85°	413.7	536.3	643.5	605.2	605.2
87.5°	158.3	232.4	273.2	321.8	339.6
90°	2.6	48.5	94.5	120.0	125.1
92.5°	2.6	12.8	20.4	23.0	20.4
95°	2.6	7.7	15.3	15.3	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



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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)