

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: P860183

Luminaire Tested: **SPHB-48SE-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: P860183
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-L850-CD
Description: 48000 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

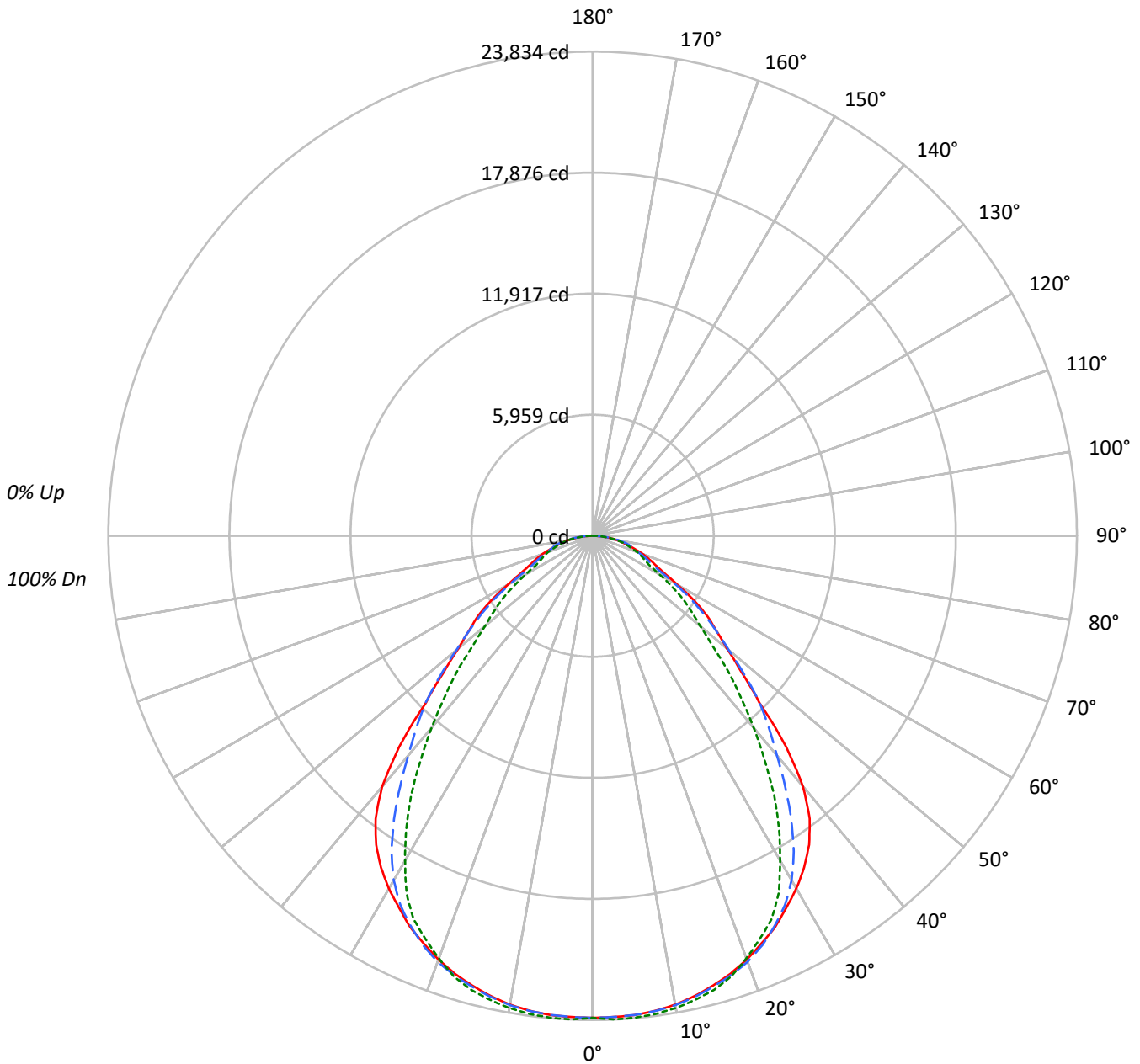
Lumens per Lamp: N/A
Luminaire Lumens: 49250.0 lumens
Efficiency: N/A
Efficacy: 161.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 304.9
Input Voltage (V): NR
Input Current (A_{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	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°	75563	75563	75563
5°	75712	75691	76122
10°	75777	75858	76324
15°	75556	75752	76278
20°	75226	75608	75004
25°	74676	74467	73203
30°	73731	71993	67885
35°	72183	66234	60503
40°	66988	58622	51246
45°	52261	52402	42409
50°	42684	43289	34249
55°	38243	36801	30094
60°	30616	28982	24078
65°	25657	23488	21294
70°	24360	22378	21679
75°	22102	23758	20909
80°	22211	24278	22038
85°	19326	22640	18408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2256.1	4.6
10°-20°	6488.5	13.2
20°-30°	9686.2	19.7
30°-40°	10569.3	21.5
40°-50°	8646.2	17.6
50°-60°	5684.9	11.5
60°-70°	3261.5	6.6
70°-80°	1976.4	4.0
80°-90°	663.7	1.3
90°-100°	17.3	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°	18430.8	37.4
0°-40°	29000.1	58.9
0°-60°	43331.2	88.0
0°-90°	49232.7	100.0
90°-120°	17.3	0.0
90°-150°	17.3	0.0
90°-180°	17.0	0.0
0°-180°	49250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23728	23728	23728	23728	23728	
5°	23684	23646	23678	23775	23812	###
15°	22917	22914	22977	23124	23136	6469
25°	21252	21302	21193	20936	20833	9777
35°	18567	18148	17037	15876	15563	11508
45°	11604	12471	11635	10271	9417	9211
55°	6888	6700	6628	5696	5420	6066
65°	3405	3355	3117	3032	2826	3481
75°	1796	1943	1931	1853	1699	1944
85°	529	601	620	541	504	574
90°	3	44	88	103	110	25
95°	3	6	9	9	6	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	23727.7	23727.7	23727.7	23727.7	23727.7
2.5°	23712.1	23677.6	23708.9	23806.0	23834.1
5°	23683.9	23646.4	23677.6	23774.7	23812.2
7.5°	23586.9	23565.0	23596.3	23693.3	23740.2
10°	23433.5	23408.5	23458.6	23543.1	23602.5
12.5°	23205.1	23195.7	23242.6	23364.7	23389.7
15°	22917.2	22914.1	22976.6	23123.7	23136.2
17.5°	22591.7	22588.6	22666.8	22763.8	22729.4
20°	22197.4	22219.3	22310.1	22219.3	22131.7
22.5°	21724.8	21793.7	21815.6	21530.8	21487.0
25°	21252.3	21302.4	21192.8	20936.2	20832.9
27.5°	20642.0	20701.5	20498.1	20131.9	19837.8
30°	20050.6	19994.2	19578.0	18870.8	18460.8
32.5°	19371.5	19171.2	18423.2	17446.9	17074.4
35°	18567.2	18147.9	17036.9	15875.9	15562.9
37.5°	17550.1	16783.4	15569.2	14358.1	13885.5
40°	16113.7	15228.0	14101.4	12849.6	12327.0
42.5°	14101.4	13772.8	12840.3	11432.0	10809.2
45°	11604.1	12471.0	11635.4	10271.0	9416.6
47.5°	9933.0	11137.8	10133.3	9147.5	7970.8
50°	8615.5	9444.8	8737.5	7848.7	6913.0
52.5°	7664.1	7914.5	7629.7	6653.3	6121.3
55°	6888.0	6700.2	6628.2	5695.7	5420.3
57.5°	5924.1	5820.8	5636.2	4966.5	4603.5
60°	4806.9	5025.9	4550.3	4359.4	3780.4
62.5°	3949.4	4165.3	3655.2	3642.7	3160.8
65°	3404.9	3354.8	3117.0	3032.5	2825.9
67.5°	3013.7	2857.2	2775.8	2666.3	2594.3
70°	2616.2	2550.5	2403.4	2425.3	2328.3
72.5°	2181.2	2265.7	2118.7	2159.3	1984.1
75°	1796.3	1943.4	1930.9	1852.7	1699.3
77.5°	1480.2	1636.7	1664.9	1592.9	1467.7
80°	1211.1	1317.5	1323.8	1280.0	1201.7
82.5°	888.8	951.4	998.3	923.2	873.1
85°	528.9	600.9	619.6	541.4	503.8
87.5°	172.1	241.0	269.1	278.5	281.7
90°	3.1	43.8	87.6	103.3	109.5
92.5°	3.1	12.5	18.8	28.2	31.3
95°	3.1	6.3	9.4	9.4	6.3
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)