

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: P860182

Luminaire Tested: **SPHB-48SE-M-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: P860182
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-L840-CD
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

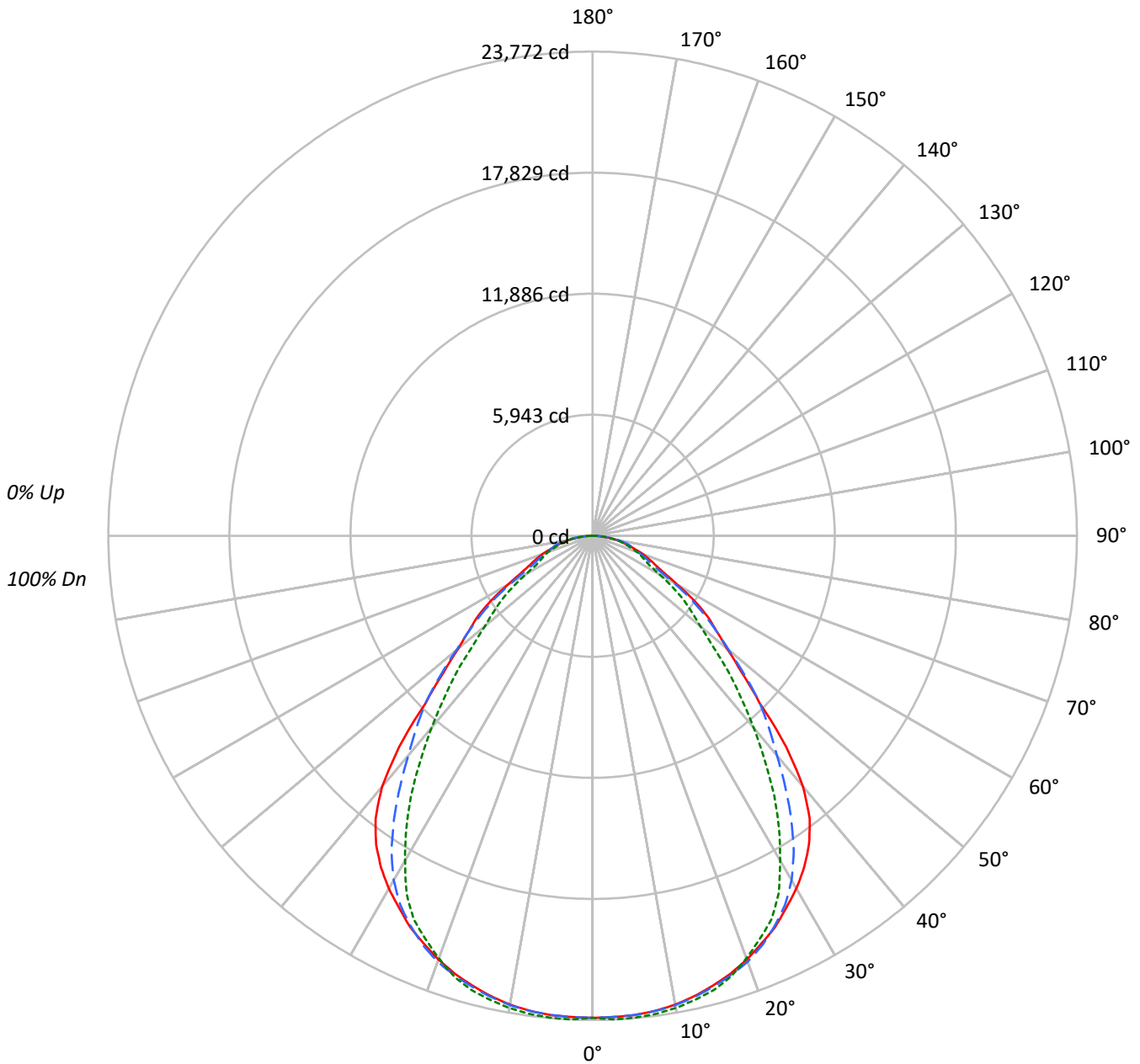
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 49121.0 lumens
Efficiency: N/A
Efficacy: 161.1 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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46					46			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41					41			
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	75365	75365	75365
5°	75513	75493	75922
10°	75579	75660	76124
15°	75359	75554	76079
20°	75029	75410	74807
25°	74481	74272	73011
30°	73538	71805	67707
35°	71994	66060	60345
40°	66812	58469	51111
45°	52124	52265	42298
50°	42572	43175	34160
55°	38143	36705	30016
60°	30536	28905	24015
65°	25590	23426	21238
70°	24296	22320	21622
75°	22044	23696	20855
80°	22152	24213	21982
85°	19274	22581	18361



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2250.2	4.6
10°-20°	6471.5	13.2
20°-30°	9660.8	19.7
30°-40°	10541.6	21.5
40°-50°	8623.5	17.6
50°-60°	5670.0	11.5
60°-70°	3253.0	6.6
70°-80°	1971.2	4.0
80°-90°	661.9	1.3
90°-100°	17.2	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°	18382.5	37.4
0°-40°	28924.1	58.9
0°-60°	43217.6	88.0
0°-90°	49103.8	100.0
90°-120°	17.2	0.0
90°-150°	17.2	0.0
90°-180°	17.0	0.0
0°-180°	49121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23666	23666	23666	23666	23666	
5°	23622	23584	23616	23712	23750	###
15°	22857	22854	22916	23063	23076	6452
25°	21197	21247	21137	20881	20778	9751
35°	18519	18100	16992	15834	15522	11477
45°	11574	12438	11605	10244	9392	9187
55°	6870	6683	6611	5681	5406	6050
65°	3396	3346	3109	3024	2818	3472
75°	1792	1938	1926	1848	1695	1939
85°	528	599	618	540	502	572
90°	3	44	87	103	109	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°	23665.6	23665.6	23665.6	23665.6	23665.6
2.5°	23650.0	23615.6	23646.8	23743.6	23771.7
5°	23621.9	23584.4	23615.6	23712.4	23749.8
7.5°	23525.1	23503.3	23534.5	23631.2	23678.1
10°	23372.2	23347.2	23397.1	23481.4	23540.7
12.5°	23144.3	23134.9	23181.8	23303.5	23328.5
15°	22857.2	22854.0	22916.5	23063.2	23075.6
17.5°	22532.5	22529.4	22607.5	22704.2	22669.9
20°	22139.3	22161.1	22251.6	22161.1	22073.7
22.5°	21667.9	21736.6	21758.5	21474.4	21430.7
25°	21196.6	21246.6	21137.3	20881.4	20778.4
27.5°	20588.0	20647.3	20444.4	20079.2	19785.8
30°	19998.1	19941.9	19526.7	18821.3	18412.4
32.5°	19320.7	19121.0	18375.0	17401.2	17029.7
35°	18518.6	18100.3	16992.3	15834.3	15522.1
37.5°	17504.2	16739.4	15528.4	14320.4	13849.1
40°	16071.5	15188.2	14064.5	12816.0	12294.7
42.5°	14064.5	13736.8	12806.6	11402.0	10780.9
45°	11573.7	12438.3	11604.9	10244.1	9391.9
47.5°	9907.0	11108.6	10106.7	9123.5	7949.9
50°	8592.9	9420.0	8714.6	7828.2	6894.9
52.5°	7644.0	7893.7	7609.7	6635.8	6105.2
55°	6869.9	6682.7	6610.9	5680.7	5406.1
57.5°	5908.6	5805.6	5621.4	4953.5	4591.4
60°	4794.3	5012.8	4538.3	4347.9	3770.5
62.5°	3939.1	4154.4	3645.7	3633.2	3152.5
65°	3396.0	3346.0	3108.8	3024.5	2818.5
67.5°	3005.8	2849.7	2768.6	2659.3	2587.5
70°	2609.4	2543.8	2397.1	2419.0	2322.2
72.5°	2175.5	2259.8	2113.1	2153.7	1978.9
75°	1791.6	1938.3	1925.8	1847.8	1694.9
77.5°	1476.4	1632.4	1660.5	1588.7	1463.9
80°	1207.9	1314.1	1320.3	1276.6	1198.6
82.5°	886.4	948.9	995.7	920.8	870.8
85°	527.5	599.3	618.0	540.0	502.5
87.5°	171.7	240.3	268.4	277.8	280.9
90°	3.1	43.7	87.4	103.0	109.2
92.5°	3.1	12.5	18.7	28.1	31.2
95°	3.1	6.2	9.4	9.4	6.2
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



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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)