

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: P860194

Luminaire Tested: **SPHB-48SE-N-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: P860194
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-L940-CD
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 4000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

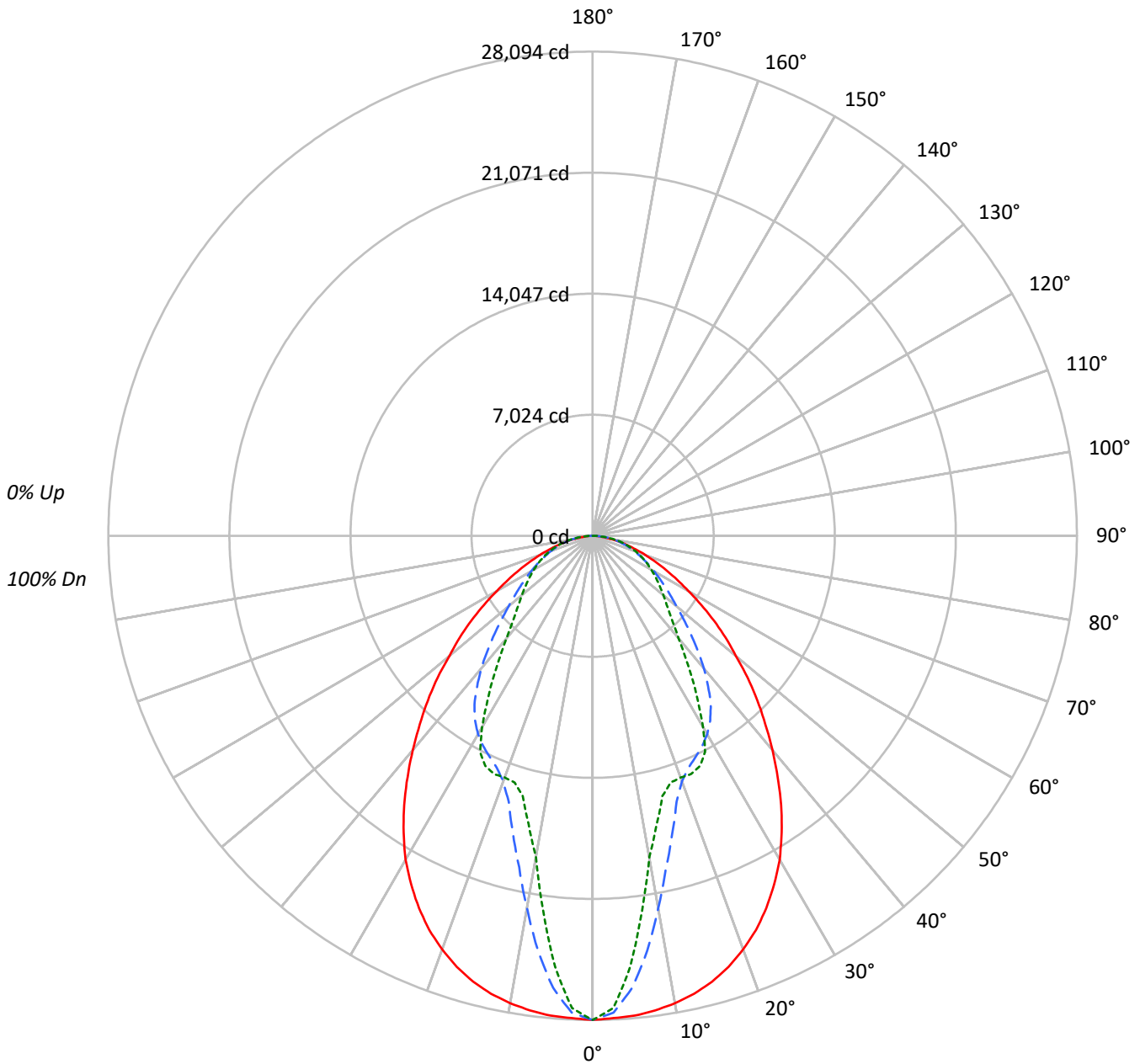
Lumens per Lamp: N/A
Luminaire Lumens: 41174.0 lumens
Efficiency: N/A
Efficacy: 135.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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	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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74					74			
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64					64			
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50					50			
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	89467	89467	89467
5°	89363	84180	80196
10°	89058	70956	61171
15°	88317	58901	51548
20°	86538	51344	50603
25°	83757	49678	51788
30°	79797	48882	47131
35°	74091	46451	39055
40°	67467	41700	32249
45°	60901	36183	28311
50°	53745	31463	26511
55°	47691	28377	25518
60°	40871	26241	24998
65°	35377	24662	24872
70°	30274	23724	24842
75°	25413	23037	24621
80°	19390	22262	24111
85°	12694	19749	18573



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2395.2	5.8
10°-20°	5499.8	13.4
20°-30°	7432.7	18.1
30°-40°	7822.5	19.0
40°-50°	6637.7	16.1
50°-60°	5141.8	12.5
60°-70°	3581.1	8.7
70°-80°	2050.6	5.0
80°-90°	596.7	1.4
90°-100°	15.9	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°	15327.7	37.2
0°-40°	23150.1	56.2
0°-60°	34929.6	84.8
0°-90°	41158.0	100.0
90°-120°	15.9	0.0
90°-150°	15.9	0.0
90°-180°	16.0	0.0
0°-180°	41174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	28094	28094	28094	28094	28094	
5°	27954	27442	26333	25323	25087	###
15°	26788	22736	17866	16081	15635	7538
25°	23836	16838	14138	14548	14738	10942
35°	19058	12950	11948	10792	10046	11880
45°	13522	9724	8034	6602	6286	10415
55°	8590	6550	5111	4646	4596	7680
65°	4695	3843	3273	3273	3301	4690
75°	2065	1836	1872	1990	2001	2202
85°	347	450	540	508	508	442
90°	2	41	79	101	105	19
95°	2	6	13	13	11	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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CATALOG NUMBER: SPHB-48SE-N-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	28093.7	28093.7	28093.7	28093.7	28093.7
2.5°	28012.2	27920.0	27694.8	27549.0	27435.3
5°	27954.3	27441.7	26332.9	25322.7	25086.8
7.5°	27780.6	26654.6	24284.7	22416.6	21944.8
10°	27540.4	25524.4	21942.7	19602.8	18916.5
12.5°	27220.8	24316.9	19699.3	17494.5	17157.8
15°	26787.6	22736.2	17865.5	16081.1	15635.0
17.5°	26225.7	21101.9	16173.4	15141.7	15017.4
20°	25535.1	19602.8	15150.3	14798.6	14931.6
22.5°	24758.7	18146.5	14556.2	14704.2	14953.0
25°	23836.5	16838.2	14138.0	14547.7	14738.5
27.5°	22800.6	15656.5	13754.1	14129.4	14129.4
30°	21700.3	14672.1	13293.0	13258.7	12816.9
32.5°	20415.6	13835.6	12690.3	12010.5	11354.2
35°	19058.0	12949.8	11948.3	10792.2	10045.9
37.5°	17633.9	12126.3	11008.9	9484.0	8789.1
40°	16229.1	11313.4	10030.9	8308.7	7757.5
42.5°	14830.8	10485.6	9012.1	7356.4	6921.0
45°	13522.5	9724.2	8034.1	6601.5	6286.2
47.5°	12192.8	8915.6	7131.2	5994.5	5775.7
50°	10848.0	8096.3	6350.5	5511.9	5351.1
52.5°	9715.6	7332.8	5687.8	5055.1	4958.6
55°	8589.6	6550.0	5110.9	4645.5	4596.1
57.5°	7472.2	5820.8	4583.3	4270.1	4259.4
60°	6417.0	5138.8	4120.0	3948.4	3924.8
62.5°	5518.4	4461.0	3680.3	3598.8	3609.6
65°	4694.8	3843.3	3272.8	3272.8	3300.7
67.5°	3931.3	3275.0	2899.7	2949.0	2987.6
70°	3251.4	2760.3	2547.9	2633.7	2668.0
72.5°	2608.0	2282.0	2211.2	2305.6	2333.5
75°	2065.4	1835.9	1872.3	1990.3	2001.0
77.5°	1531.3	1445.5	1539.9	1668.6	1692.2
80°	1057.3	1065.9	1213.9	1304.0	1314.7
82.5°	682.0	744.2	909.4	956.5	939.4
85°	347.4	450.4	540.5	508.3	508.3
87.5°	133.0	195.2	229.5	270.2	285.2
90°	2.1	40.7	79.4	100.8	105.1
92.5°	2.1	10.7	17.2	19.3	17.2
95°	2.1	6.4	12.9	12.9	10.7
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)