

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: P860032

Luminaire Tested: **SPHB-24SE-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: P860032
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-24SE-N-L940-CD
Description: 24000 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

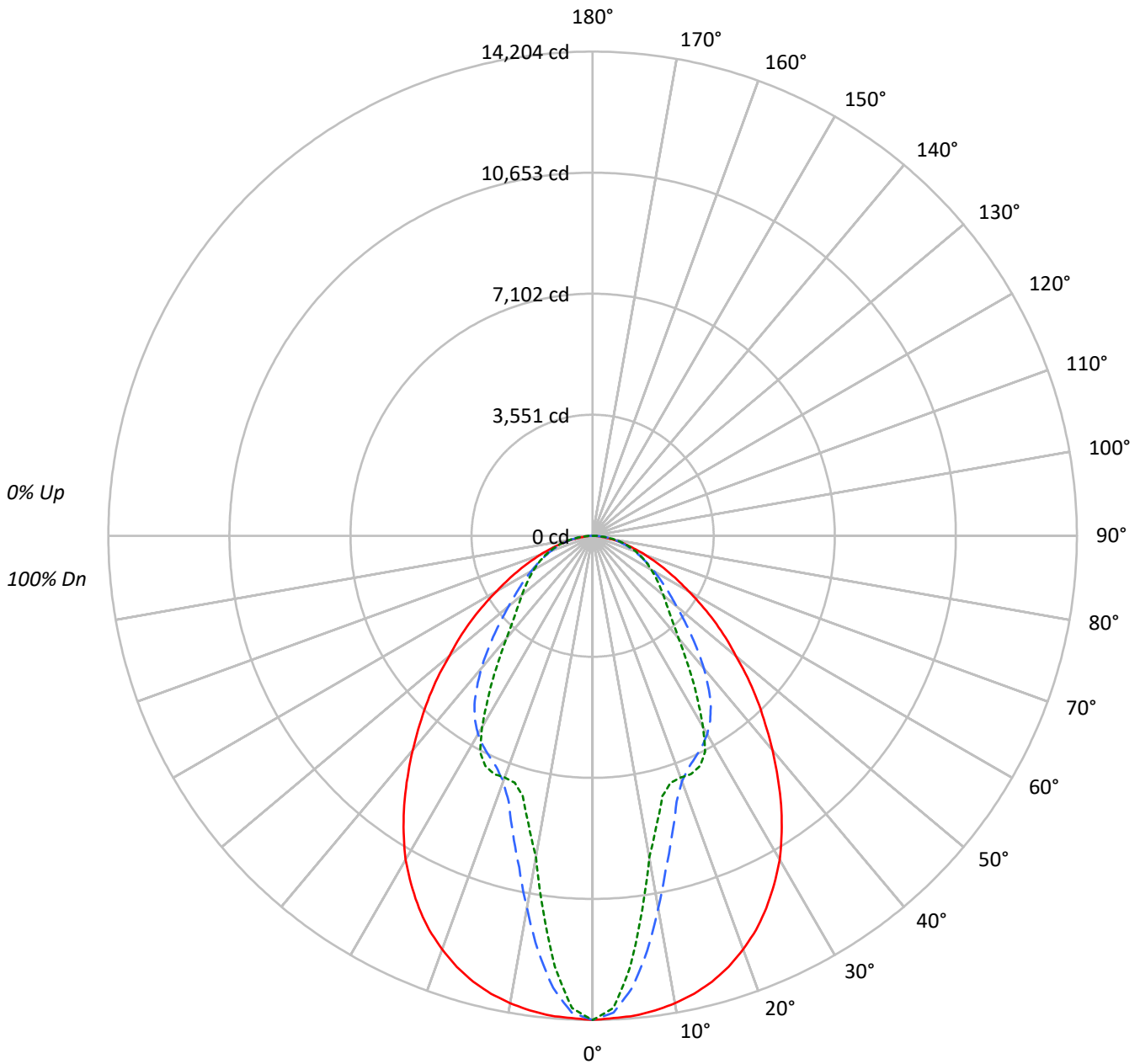
Lumens per Lamp: N/A
Luminaire Lumens: 20818.0 lumens
Efficiency: N/A
Efficacy: 131.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 158.6
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°	110794	110794	110794
5°	110665	104247	99314
10°	110287	87871	75753
15°	109370	72942	63835
20°	107166	63584	62666
25°	103723	61520	64134
30°	98819	60534	58365
35°	91753	57524	48365
40°	83550	51641	39937
45°	75419	44808	35060
50°	66557	38963	32831
55°	59059	35141	31602
60°	50614	32496	30956
65°	43810	30541	30802
70°	37490	29380	30765
75°	31472	28530	30489
80°	24013	27571	29857
85°	15724	24459	23000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1211.1	5.8
10°-20°	2780.7	13.4
20°-30°	3758.0	18.1
30°-40°	3955.1	19.0
40°-50°	3356.1	16.1
50°-60°	2599.7	12.5
60°-70°	1810.6	8.7
70°-80°	1036.8	5.0
80°-90°	301.7	1.4
90°-100°	8.1	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°	7749.8	37.2
0°-40°	11705.0	56.2
0°-60°	17660.8	84.8
0°-90°	20809.9	100.0
90°-120°	8.1	0.0
90°-150°	8.1	0.0
90°-180°	8.0	0.0
0°-180°	20818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14204	14204	14204	14204	14204	
5°	14134	13875	13314	12803	12684	###
15°	13544	11496	9033	8131	7905	3811
25°	12052	8514	7148	7355	7452	5533
35°	9636	6548	6041	5457	5079	6007
45°	6837	4917	4062	3338	3178	5266
55°	4343	3312	2584	2349	2324	3883
65°	2374	1943	1655	1655	1669	2371
75°	1044	928	947	1006	1012	1114
85°	176	228	273	257	257	223
90°	1	21	40	51	53	10
95°	1	3	6	6	5	0
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: P860032

CATALOG NUMBER: SPHB-24SE-N-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	14204.5	14204.5	14204.5	14204.5	14204.5
2.5°	14163.3	14116.6	14002.8	13929.0	13871.6
5°	14134.0	13874.8	13314.2	12803.4	12684.2
7.5°	14046.2	13476.9	12278.6	11334.1	11095.5
10°	13924.7	12905.4	11094.4	9911.4	9564.4
12.5°	13763.1	12294.9	9960.2	8845.4	8675.2
15°	13544.1	11495.7	9033.0	8130.8	7905.2
17.5°	13260.0	10669.4	8177.4	7655.8	7592.9
20°	12910.8	9911.4	7660.2	7482.3	7549.6
22.5°	12518.2	9175.1	7359.8	7434.6	7560.4
25°	12052.0	8513.6	7148.3	7355.4	7452.0
27.5°	11528.2	7916.1	6954.2	7144.0	7144.0
30°	10971.9	7418.3	6721.1	6703.7	6480.3
32.5°	10322.3	6995.4	6416.4	6072.6	5740.8
35°	9635.9	6547.6	6041.2	5456.7	5079.3
37.5°	8915.9	6131.2	5566.2	4795.2	4443.8
40°	8205.6	5720.2	5071.7	4200.9	3922.3
42.5°	7498.6	5301.6	4556.6	3719.5	3499.3
45°	6837.1	4916.6	4062.1	3337.8	3178.4
47.5°	6164.8	4507.8	3605.6	3030.9	2920.3
50°	5484.9	4093.6	3210.9	2786.9	2705.6
52.5°	4912.3	3707.5	2875.8	2555.9	2507.1
55°	4343.0	3311.7	2584.1	2348.8	2323.9
57.5°	3778.0	2943.0	2317.4	2159.0	2153.6
60°	3244.5	2598.2	2083.1	1996.4	1984.4
62.5°	2790.1	2255.5	1860.8	1819.6	1825.0
65°	2373.7	1943.2	1654.8	1654.8	1668.9
67.5°	1987.7	1655.9	1466.1	1491.0	1510.6
70°	1643.9	1395.6	1288.3	1331.6	1349.0
72.5°	1318.6	1153.8	1118.0	1165.7	1179.8
75°	1044.3	928.2	946.7	1006.3	1011.7
77.5°	774.3	730.9	778.6	843.7	855.6
80°	534.6	538.9	613.8	659.3	664.7
82.5°	344.8	376.3	459.8	483.6	475.0
85°	175.7	227.7	273.3	257.0	257.0
87.5°	67.2	98.7	116.0	136.6	144.2
90°	1.1	20.6	40.1	51.0	53.1
92.5°	1.1	5.4	8.7	9.8	8.7
95°	1.1	3.3	6.5	6.5	5.4
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)