

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: P860038

Luminaire Tested: **SPHB-24SE-W-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: P860038
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-24SE-W-L840-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

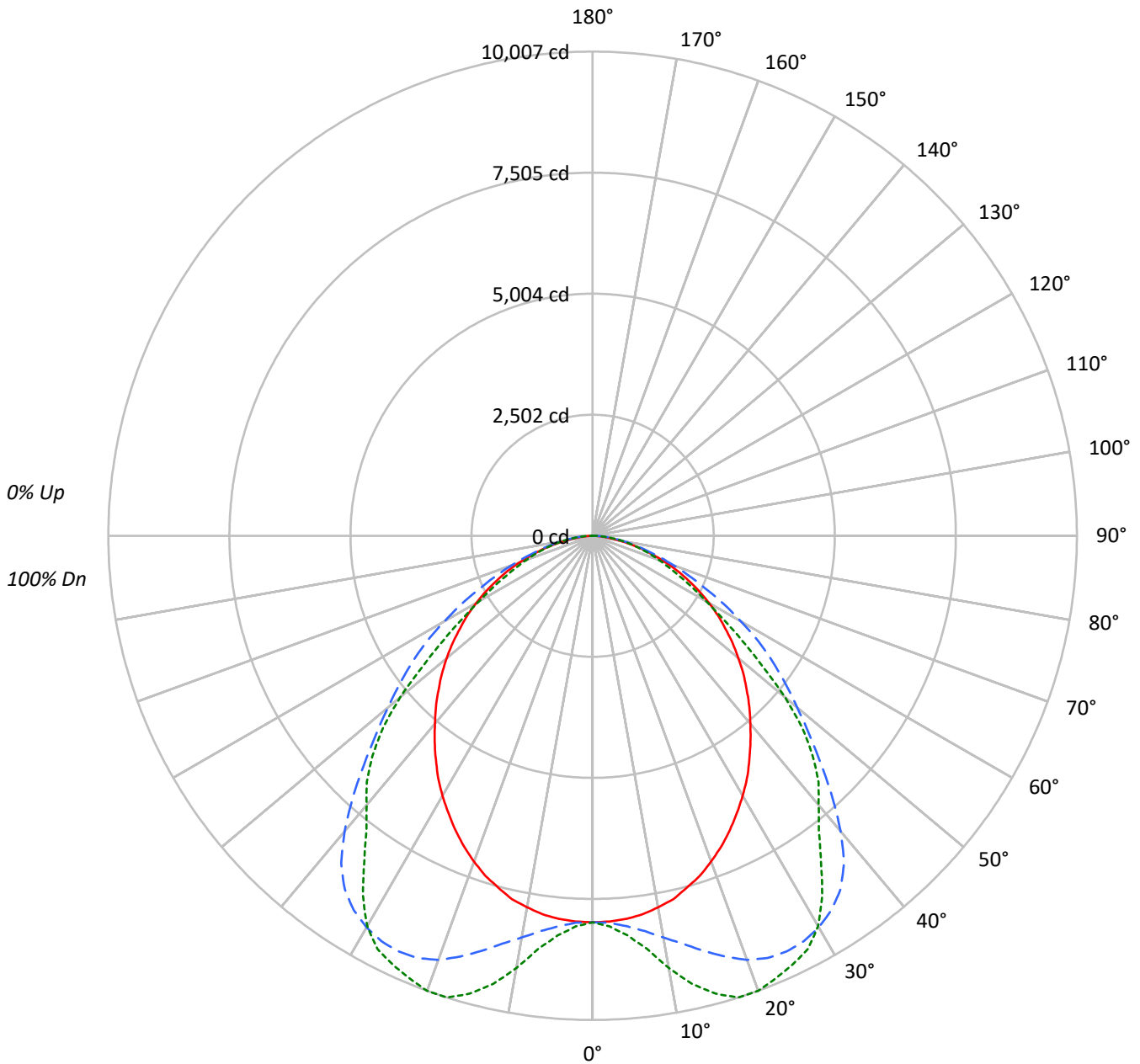
Lumens per Lamp: N/A
Luminaire Lumens: 25134.0 lumens
Efficiency: N/A
Efficacy: 158.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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			100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85			85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72			72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62			62
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53			53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46			46
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40			40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36			36
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32			32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29			29
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26			26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	62306	62306	62306
5°	62239	63412	64916
10°	61746	66759	71819
15°	60781	71729	79109
20°	59466	77434	83061
25°	57749	81612	84150
30°	55870	84165	83922
35°	53773	85010	78308
40°	51606	81172	73964
45°	49654	73576	70963
50°	47719	66901	62909
55°	45537	61812	51193
60°	43283	55107	42160
65°	40303	47353	36556
70°	36667	40430	33063
75°	31490	33931	30314
80°	24611	29102	28114
85°	16646	24700	23179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	784.3	3.1
10°-20°	2486.9	9.9
20°-30°	4069.9	16.2
30°-40°	4965.0	19.8
40°-50°	4917.3	19.6
50°-60°	3932.2	15.6
60°-70°	2453.1	9.8
70°-80°	1201.9	4.8
80°-90°	315.2	1.3
90°-100°	8.3	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°	7341.1	29.2
0°-40°	12306.0	49.0
0°-60°	21155.5	84.2
0°-90°	25125.7	100.0
90°-120°	8.3	0.0
90°-150°	8.3	0.0
90°-180°	8.0	0.0
0°-180°	25134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7988	7988	7988	7988	7988	
5°	7949	7984	8099	8240	8291	754
15°	7527	7965	8883	9590	9797	2122
25°	6710	7846	9483	9758	9778	3088
35°	5647	7546	8928	8451	8224	3532
45°	4501	6993	6670	6446	6433	3477
55°	3349	5369	4545	4106	3764	3000
65°	2184	3013	2566	2128	1981	2165
75°	1045	1280	1126	1031	1006	1109
85°	186	264	276	262	259	230
90°	1	27	49	62	64	11
95°	1	4	4	3	2	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7988.0	7988.0	7988.0	7988.0	7988.0
2.5°	7980.0	7977.0	8006.0	8059.0	8082.9
5°	7949.0	7984.0	8098.9	8239.9	8290.9
7.5°	7893.0	7987.0	8240.9	8499.9	8609.9
10°	7796.0	7989.0	8428.9	8885.8	9067.8
12.5°	7696.0	7982.0	8637.9	9284.8	9483.8
15°	7527.0	7965.0	8882.8	9589.8	9796.7
17.5°	7370.0	7945.0	9118.8	9848.7	10005.7
20°	7164.1	7916.0	9328.8	9927.7	10006.7
22.5°	6948.1	7893.0	9444.8	9874.7	9898.7
25°	6710.1	7846.0	9482.8	9757.7	9777.7
27.5°	6456.2	7804.0	9446.8	9612.7	9629.7
30°	6203.2	7728.0	9344.8	9386.8	9317.8
32.5°	5938.2	7652.0	9179.8	8990.8	8829.9
35°	5647.3	7546.0	8927.8	8450.9	8223.9
37.5°	5360.3	7444.0	8534.9	7847.0	7676.0
40°	5068.3	7318.0	7972.0	7283.1	7264.1
42.5°	4792.4	7182.1	7335.0	6844.1	6908.1
45°	4501.4	6993.1	6670.1	6446.2	6433.2
47.5°	4225.4	6732.1	6065.2	6006.2	5873.2
50°	3932.5	6372.2	5513.3	5457.3	5184.3
52.5°	3645.5	5913.2	5020.3	4810.4	4412.4
55°	3348.6	5369.3	4545.4	4106.5	3764.5
57.5°	3072.6	4771.4	4062.5	3493.5	3186.6
60°	2774.6	4165.5	3532.5	2955.6	2702.6
62.5°	2482.7	3568.5	3052.6	2497.7	2329.7
65°	2183.7	3012.6	2565.7	2127.7	1980.7
67.5°	1897.8	2531.7	2144.7	1793.8	1695.8
70°	1607.8	2053.7	1772.8	1506.8	1449.8
72.5°	1308.8	1640.8	1433.8	1271.8	1228.8
75°	1044.9	1279.8	1125.9	1030.9	1005.9
77.5°	777.9	951.9	879.9	823.9	816.9
80°	547.9	686.9	647.9	636.9	625.9
82.5°	350.0	448.9	460.9	453.9	445.9
85°	186.0	264.0	276.0	262.0	259.0
87.5°	75.0	115.0	124.0	137.0	141.0
90°	1.0	27.0	49.0	62.0	64.0
92.5°	1.0	6.0	7.0	7.0	6.0
95°	1.0	4.0	4.0	3.0	2.0
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)