

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: P860024

Luminaire Tested: **SPHB-24SE-M-L950-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: P860024
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-24SE-M-L950-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 5000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

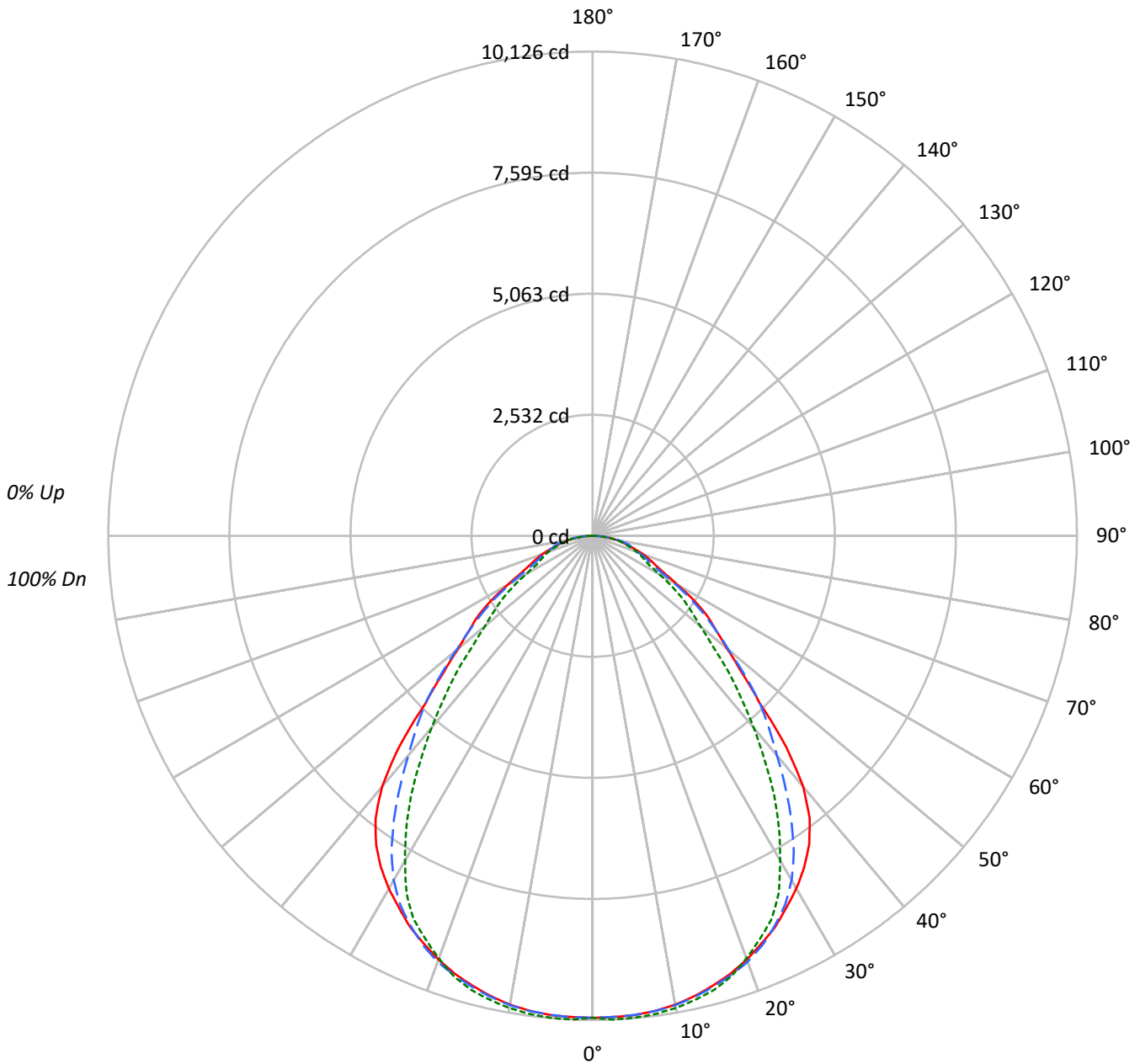
Lumens per Lamp: N/A
Luminaire Lumens: 20925.0 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P860024

CATALOG NUMBER: SPHB-24SE-M-L950-CD

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°	78634	78634	78634
5°	78788	78767	79215
10°	78857	78940	79425
15°	78626	78831	79378
20°	78283	78680	78051
25°	77710	77494	76178
30°	76727	74919	70643
35°	75116	68925	62962
40°	69710	61004	53328
45°	54385	54532	44133
50°	44419	45047	35642
55°	39797	38297	31317
60°	31860	30159	25057
65°	26699	24442	22160
70°	25351	23289	22559
75°	23000	24724	21759
80°	23115	25262	22935
85°	20109	23564	19161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	958.6	4.6
10°-20°	2756.8	13.2
20°-30°	4115.4	19.7
30°-40°	4490.6	21.5
40°-50°	3673.5	17.6
50°-60°	2415.3	11.5
60°-70°	1385.7	6.6
70°-80°	839.7	4.0
80°-90°	282.0	1.3
90°-100°	7.3	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°	7830.7	37.4
0°-40°	12321.4	58.9
0°-60°	18410.2	88.0
0°-90°	20917.7	100.0
90°-120°	7.3	0.0
90°-150°	7.3	0.0
90°-180°	7.0	0.0
0°-180°	20925.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10081	10081	10081	10081	10081	
5°	10063	10047	10060	10101	10117	957
15°	9737	9736	9762	9825	9830	2748
25°	9030	9051	9004	8895	8851	4154
35°	7889	7710	7238	6745	6612	4889
45°	4930	5299	4944	4364	4001	3914
55°	2926	2847	2816	2420	2303	2577
65°	1447	1425	1324	1288	1201	1479
75°	763	826	820	787	722	826
85°	225	255	263	230	214	244
90°	1	19	37	44	46	11
95°	1	3	4	4	3	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-24SE-M-L950-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10081.3	10081.3	10081.3	10081.3	10081.3
2.5°	10074.6	10060.0	10073.3	10114.5	10126.5
5°	10062.7	10046.7	10060.0	10101.2	10117.2
7.5°	10021.4	10012.1	10025.4	10066.6	10086.6
10°	9956.3	9945.6	9966.9	10002.8	10028.1
12.5°	9859.2	9855.2	9875.2	9927.0	9937.7
15°	9736.9	9735.6	9762.2	9824.6	9830.0
17.5°	9598.6	9597.3	9630.5	9671.7	9657.1
20°	9431.1	9440.4	9478.9	9440.4	9403.2
22.5°	9230.3	9259.6	9268.9	9147.9	9129.3
25°	9029.5	9050.8	9004.3	8895.2	8851.4
27.5°	8770.3	8795.5	8709.1	8553.5	8428.5
30°	8519.0	8495.0	8318.2	8017.7	7843.5
32.5°	8230.4	8145.3	7827.5	7412.7	7254.5
35°	7888.7	7710.5	7238.5	6745.2	6612.3
37.5°	7456.6	7130.8	6614.9	6100.4	5899.6
40°	6846.3	6470.0	5991.3	5459.5	5237.4
42.5°	5991.3	5851.7	5455.5	4857.1	4592.5
45°	4930.3	5298.6	4943.6	4363.9	4000.9
47.5°	4220.3	4732.2	4305.3	3886.5	3386.6
50°	3660.5	4012.8	3712.3	3334.7	2937.2
52.5°	3256.3	3362.6	3241.6	2826.8	2600.8
55°	2926.5	2846.7	2816.2	2419.9	2302.9
57.5°	2517.0	2473.1	2394.7	2110.1	1955.9
60°	2042.3	2135.4	1933.3	1852.2	1606.2
62.5°	1678.0	1769.7	1553.0	1547.7	1342.9
65°	1446.6	1425.4	1324.3	1288.4	1200.7
67.5°	1280.4	1214.0	1179.4	1132.8	1102.3
70°	1111.6	1083.6	1021.2	1030.5	989.2
72.5°	926.8	962.7	900.2	917.4	843.0
75°	763.2	825.7	820.4	787.1	722.0
77.5°	628.9	695.4	707.4	676.8	623.6
80°	514.6	559.8	562.4	543.8	510.6
82.5°	377.6	404.2	424.2	392.2	371.0
85°	224.7	255.3	263.3	230.0	214.1
87.5°	73.1	102.4	114.3	118.3	119.7
90°	1.3	18.6	37.2	43.9	46.5
92.5°	1.3	5.3	8.0	12.0	13.3
95°	1.3	2.7	4.0	4.0	2.7
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



TEST NUMBER: P860024

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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)