

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: P860021

Luminaire Tested: **SPHB-24SE-M-L850-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: P860021
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-L850-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

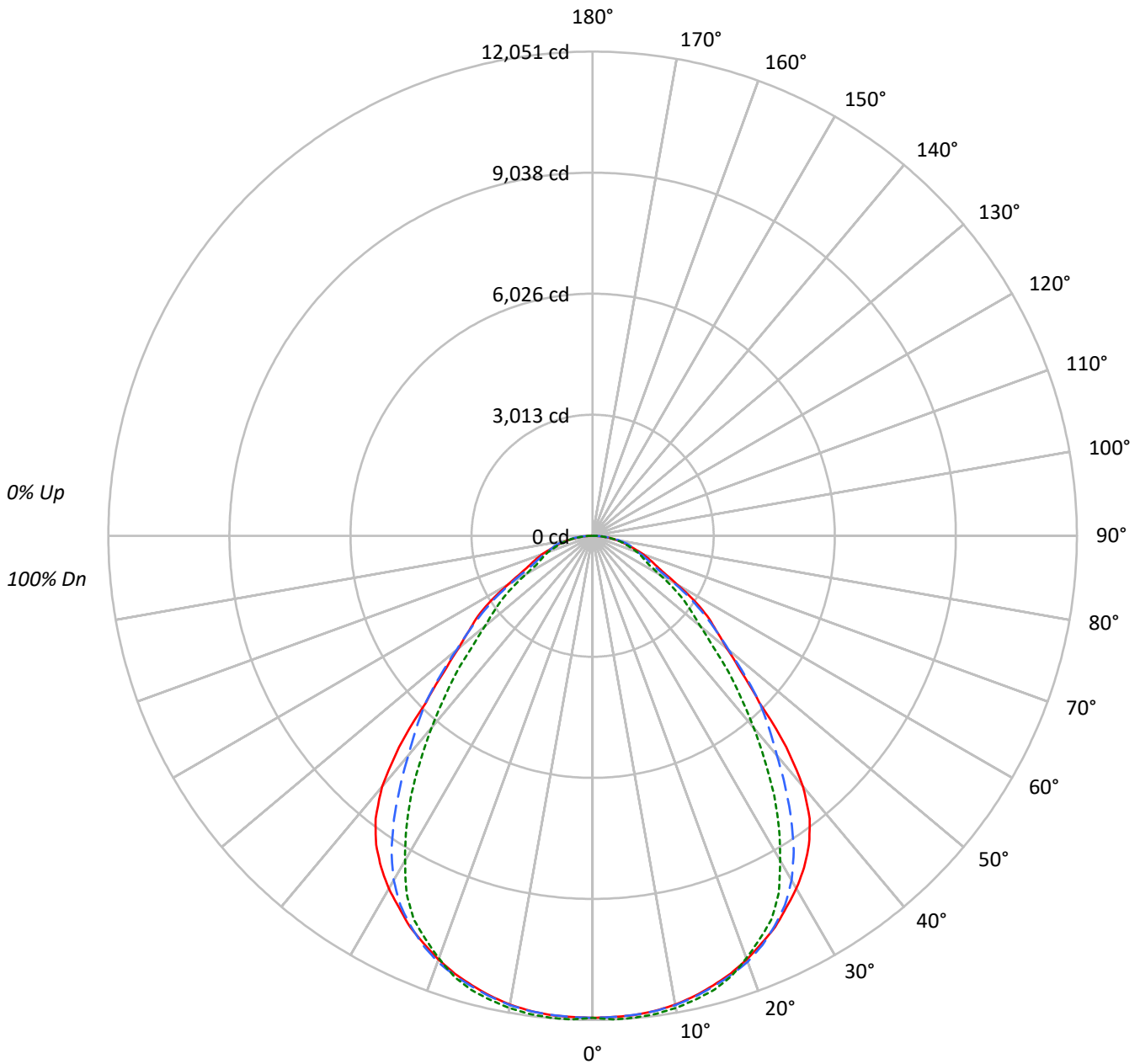
Lumens per Lamp: N/A
Luminaire Lumens: 24901.0 lumens
Efficiency: N/A
Efficacy: 157.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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: P860021

CATALOG NUMBER: SPHB-24SE-M-L850-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	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°	93574	93574	93574
5°	93759	93734	94267
10°	93840	93941	94516
15°	93566	93809	94461
20°	93158	93631	92882
25°	92476	92218	90652
30°	91306	89154	84067
35°	89389	82021	74925
40°	82955	72595	63461
45°	64719	64893	52519
50°	52858	53607	42414
55°	47359	45574	37267
60°	37914	35889	29818
65°	31772	29085	26370
70°	30167	27713	26847
75°	27370	29422	25893
80°	27503	30064	27292
85°	23931	28039	22794



TEST NUMBER: P860021

CATALOG NUMBER: SPHB-24SE-M-L850-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1140.7	4.6
10°-20°	3280.6	13.2
20°-30°	4897.4	19.7
30°-40°	5343.9	21.5
40°-50°	4371.5	17.6
50°-60°	2874.3	11.5
60°-70°	1649.0	6.6
70°-80°	999.3	4.0
80°-90°	335.5	1.3
90°-100°	8.7	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°	9318.7	37.4
0°-40°	14662.6	58.9
0°-60°	21908.4	88.0
0°-90°	24892.3	100.0
90°-120°	8.7	0.0
90°-150°	8.7	0.0
90°-180°	9.0	0.0
0°-180°	24901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11997	11997	11997	11997	11997	
5°	11975	11956	11972	12021	12040	###
15°	11587	11585	11617	11692	11698	3271
25°	10745	10771	10715	10585	10533	4943
35°	9388	9176	8614	8027	7869	5818
45°	5867	6305	5883	5193	4761	4657
55°	3483	3388	3351	2880	2740	3067
65°	1722	1696	1576	1533	1429	1760
75°	908	983	976	937	859	983
85°	267	304	313	274	255	290
90°	2	22	44	52	55	13
95°	2	3	5	5	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



TEST NUMBER: P860021

CATALOG NUMBER: SPHB-24SE-M-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11996.8	11996.8	11996.8	11996.8	11996.8
2.5°	11988.9	11971.5	11987.3	12036.4	12050.6
5°	11974.7	11955.7	11971.5	12020.6	12039.6
7.5°	11925.6	11914.6	11930.4	11979.4	12003.2
10°	11848.1	11835.4	11860.8	11903.5	11933.5
12.5°	11732.6	11727.8	11751.6	11813.3	11825.9
15°	11587.0	11585.4	11617.1	11691.5	11697.8
17.5°	11422.5	11420.9	11460.4	11509.5	11492.1
20°	11223.1	11234.2	11280.1	11234.2	11189.9
22.5°	10984.2	11019.0	11030.1	10886.1	10863.9
25°	10745.2	10770.6	10715.2	10585.4	10533.2
27.5°	10436.7	10466.8	10363.9	10178.8	10030.1
30°	10137.7	10109.2	9898.7	9541.1	9333.9
32.5°	9794.3	9693.0	9314.9	8821.2	8632.9
35°	9387.7	9175.6	8613.9	8026.9	7868.7
37.5°	8873.4	8485.8	7871.8	7259.5	7020.6
40°	8147.1	7699.4	7129.7	6496.8	6232.6
42.5°	7129.7	6963.6	6492.1	5780.1	5465.2
45°	5867.1	6305.4	5882.9	5193.0	4761.1
47.5°	5022.1	5631.3	5123.4	4625.0	4030.1
50°	4356.0	4775.3	4417.7	3968.4	3495.3
52.5°	3875.0	4001.6	3857.6	3363.9	3094.9
55°	3482.6	3387.7	3351.3	2879.7	2740.5
57.5°	2995.3	2943.0	2849.7	2511.1	2327.5
60°	2430.4	2541.1	2300.6	2204.1	1911.4
62.5°	1996.8	2106.0	1848.1	1841.8	1598.1
65°	1721.5	1696.2	1575.9	1533.2	1428.8
67.5°	1523.7	1444.6	1403.5	1348.1	1311.7
70°	1322.8	1289.6	1215.2	1226.3	1177.2
72.5°	1102.8	1145.6	1071.2	1091.8	1003.2
75°	908.2	982.6	976.3	936.7	859.2
77.5°	748.4	827.5	841.8	805.4	742.1
80°	612.3	666.1	669.3	647.2	607.6
82.5°	449.4	481.0	504.7	466.8	441.5
85°	267.4	303.8	313.3	273.7	254.7
87.5°	87.0	121.8	136.1	140.8	142.4
90°	1.6	22.2	44.3	52.2	55.4
92.5°	1.6	6.3	9.5	14.2	15.8
95°	1.6	3.2	4.7	4.7	3.2
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



TEST NUMBER: P860021

CATALOG NUMBER: SPHB-24SE-M-L850-CD

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)