

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: P860003

Luminaire Tested: **SPHB-24HE-N-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: P860003
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-24HE-N-L850-CD
Description: 24000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

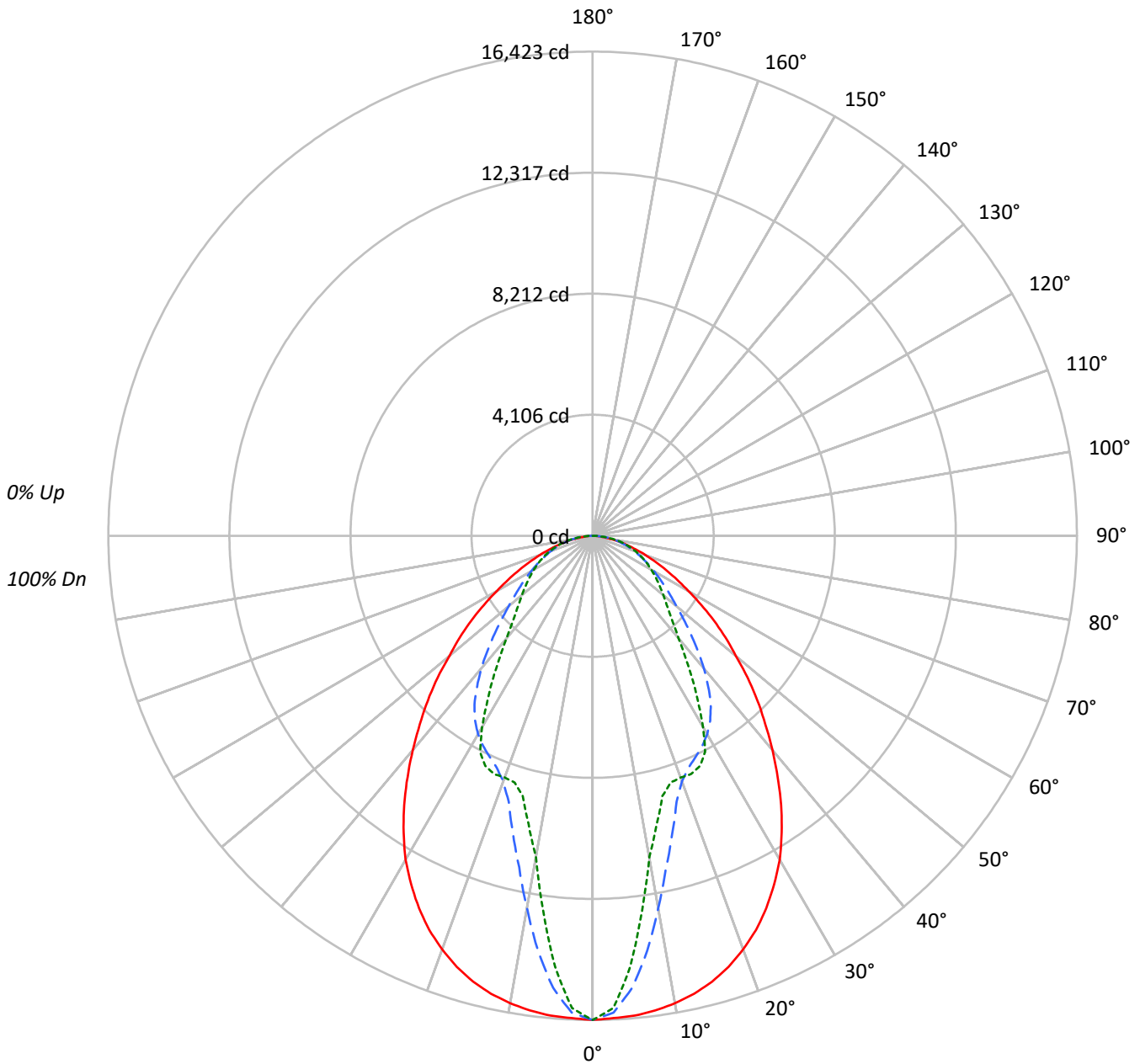
Lumens per Lamp: N/A
Luminaire Lumens: 24070.0 lumens
Efficiency: N/A
Efficacy: 164.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 146
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: P860003

CATALOG NUMBER: SPHB-24HE-N-L850-CD

Luminous Intensity Polar Plot





TEST NUMBER: P860003

CATALOG NUMBER: SPHB-24HE-N-L850-CD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	128102	128102	128102
5°	127953	120531	114828
10°	127515	101597	87585
15°	126454	84337	73807
20°	123907	73516	72454
25°	119925	71131	74152
30°	114256	69990	67483
35°	106086	66510	55920
40°	96602	59708	46176
45°	87199	51808	40537
50°	76954	45050	37959
55°	68285	40630	36539
60°	58520	37572	35792
65°	50653	35312	35613
70°	43346	33969	35570
75°	36387	32988	35254
80°	27764	31874	34524
85°	18176	28280	26589



TEST NUMBER: P860003

CATALOG NUMBER: SPHB-24HE-N-L850-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1400.2	5.8
10°-20°	3215.1	13.4
20°-30°	4345.1	18.1
30°-40°	4573.0	19.0
40°-50°	3880.3	16.1
50°-60°	3005.9	12.5
60°-70°	2093.5	8.7
70°-80°	1198.8	5.0
80°-90°	348.9	1.4
90°-100°	9.3	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°	8960.4	37.2
0°-40°	13533.4	56.2
0°-60°	20419.6	84.8
0°-90°	24060.7	100.0
90°-120°	9.3	0.0
90°-150°	9.3	0.0
90°-180°	9.0	0.0
0°-180°	24070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16423	16423	16423	16423	16423	
5°	16342	16042	15394	14804	14666	###
15°	15660	13291	10444	9401	9140	4406
25°	13935	9844	8265	8504	8616	6397
35°	11141	7570	6985	6309	5873	6945
45°	7905	5685	4697	3859	3675	6089
55°	5021	3829	2988	2716	2687	4489
65°	2744	2247	1913	1913	1930	2741
75°	1207	1073	1095	1164	1170	1287
85°	203	263	316	297	297	258
90°	1	24	46	59	61	11
95°	1	4	8	8	6	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: P860003

CATALOG NUMBER: SPHB-24HE-N-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16423.4	16423.4	16423.4	16423.4	16423.4
2.5°	16375.7	16321.8	16190.2	16104.9	16038.5
5°	16341.9	16042.2	15394.0	14803.5	14665.6
7.5°	16240.3	15582.1	14196.6	13104.6	12828.8
10°	16099.9	14921.3	12827.5	11459.6	11058.4
12.5°	15913.1	14215.5	11516.0	10227.2	10030.3
15°	15659.8	13291.4	10444.1	9400.9	9140.1
17.5°	15331.3	12336.0	9454.8	8851.7	8779.0
20°	14927.6	11459.6	8856.8	8651.1	8728.9
22.5°	14473.7	10608.3	8509.5	8596.0	8741.4
25°	13934.6	9843.5	8265.0	8504.4	8616.0
27.5°	13329.0	9152.7	8040.5	8260.0	8260.0
30°	12685.8	8577.2	7771.0	7750.9	7492.6
32.5°	11934.8	8088.2	7418.7	7021.2	6637.6
35°	11141.2	7570.4	6984.9	6309.1	5872.7
37.5°	10308.7	7088.9	6435.7	5544.3	5138.0
40°	9487.4	6613.7	5864.0	4857.2	4535.0
42.5°	8669.9	6129.8	5268.4	4300.5	4046.0
45°	7905.1	5684.7	4696.7	3859.2	3674.9
47.5°	7127.8	5212.0	4168.8	3504.3	3376.5
50°	6341.7	4733.1	3712.5	3222.2	3128.2
52.5°	5679.7	4286.7	3325.0	2955.2	2898.8
55°	5021.4	3829.1	2987.8	2715.7	2686.9
57.5°	4368.2	3402.8	2679.3	2496.3	2490.0
60°	3751.3	3004.1	2408.5	2308.2	2294.4
62.5°	3226.0	2607.9	2151.5	2103.9	2110.1
65°	2744.5	2246.8	1913.3	1913.3	1929.6
67.5°	2298.2	1914.5	1695.1	1724.0	1746.5
70°	1900.7	1613.6	1489.5	1539.7	1559.7
72.5°	1524.6	1334.0	1292.7	1347.8	1364.1
75°	1207.4	1073.2	1094.6	1163.5	1169.8
77.5°	895.2	845.1	900.2	975.4	989.2
80°	618.1	623.1	709.6	762.3	768.6
82.5°	398.7	435.1	531.6	559.2	549.2
85°	203.1	263.3	316.0	297.1	297.1
87.5°	77.7	114.1	134.2	158.0	166.8
90°	1.3	23.8	46.4	58.9	61.4
92.5°	1.3	6.3	10.0	11.3	10.0
95°	1.3	3.8	7.5	7.5	6.3
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: P860003

CATALOG NUMBER: SPHB-24HE-N-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)