

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: P860039

Luminaire Tested: **SPHB-24SE-W-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: P860039  
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-L850-CD  
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens  
and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

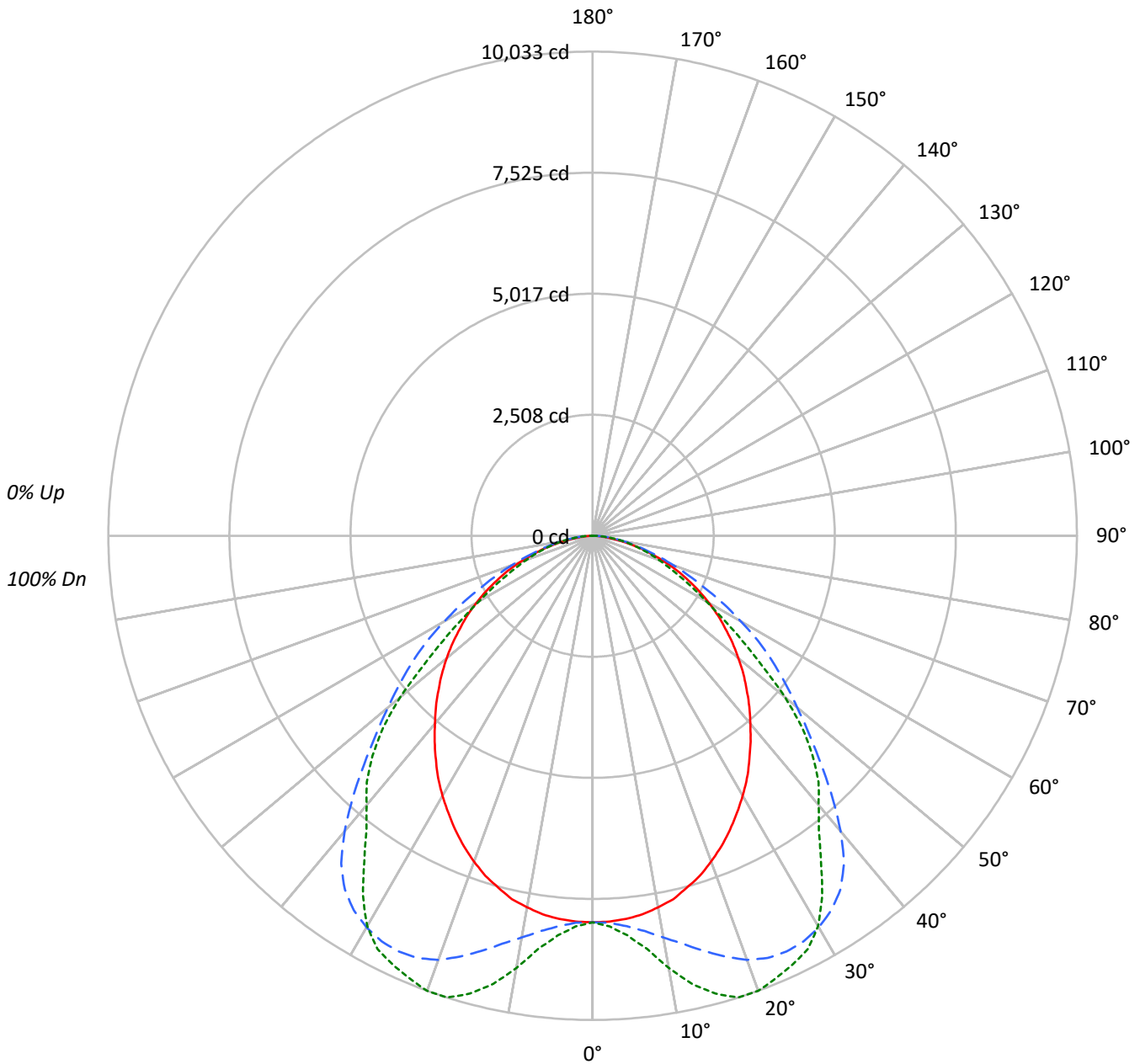
Lumens per Lamp: N/A  
Luminaire Lumens: 25200.0 lumens  
Efficiency: N/A  
Efficacy: 158.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 158.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P860039

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

### Luminous Intensity Polar Plot





TEST NUMBER: P860039

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

**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°	62469	62469	62469
5°	62401	63579	65086
10°	61909	66934	72008
15°	60941	71918	79317
20°	59622	77637	83279
25°	57900	81826	84371
30°	56017	84385	84142
35°	53914	85234	78513
40°	51741	81384	74157
45°	49784	73769	71150
50°	47844	67077	63074
55°	45657	61974	51327
60°	43397	55252	42271
65°	40408	47477	36652
70°	36762	40534	33150
75°	31571	34018	30393
80°	24678	29179	28191
85°	16691	24763	23233



TEST NUMBER: P860039

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	786.3	3.1
10°-20°	2493.4	9.9
20°-30°	4080.6	16.2
30°-40°	4978.0	19.8
40°-50°	4930.2	19.6
50°-60°	3942.5	15.6
60°-70°	2459.5	9.8
70°-80°	1205.0	4.8
80°-90°	316.1	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°	7360.3	29.2
0°-40°	12338.4	49.0
0°-60°	21211.1	84.2
0°-90°	25191.7	100.0
90°-120°	8.3	0.0
90°-150°	8.3	0.0
90°-180°	8.0	0.0
0°-180°	25200.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8009	8009	8009	8009	8009	
5°	7970	8005	8120	8262	8313	756
15°	7547	7986	8906	9615	9822	2128
25°	6728	7867	9508	9783	9803	3096
35°	5662	7566	8951	8473	8246	3542
45°	4513	7012	6688	6463	6450	3486
55°	3357	5383	4557	4117	3774	3008
65°	2189	3020	2572	2133	1986	2171
75°	1048	1283	1129	1034	1008	1112
85°	186	265	277	263	260	231
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



TEST NUMBER: P860039

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8008.9	8008.9	8008.9	8008.9	<i>8008.9</i>
2.5°	8000.9	7997.9	8027.0	8080.1	<i>8104.2</i>
5°	7969.8	8004.9	8120.2	8261.6	<i>8312.7</i>
7.5°	7913.7	8007.9	8262.6	8522.2	<i>8632.5</i>
10°	7816.5	8009.9	8451.0	8909.2	<i>9091.6</i>
12.5°	7716.2	8002.9	8660.6	9309.2	<i>9508.7</i>
15°	7546.8	7985.9	8906.2	9614.9	<i>9822.4</i>
17.5°	7389.4	7965.8	9142.8	9874.6	<i>10032.0</i>
20°	<i>7182.9</i>	<i>7936.8</i>	<i>9353.3</i>	<i>9953.8</i>	<i>10033.0</i>
22.5°	6966.3	7913.7	9469.6	9900.6	<i>9924.7</i>
25°	6727.7	7866.6	9507.7	9783.4	<i>9803.4</i>
27.5°	6473.1	7824.5	9471.6	9638.0	<i>9655.0</i>
30°	6219.5	7748.3	9369.3	9411.4	<i>9342.3</i>
32.5°	5953.8	7672.1	9203.9	9014.4	<i>8853.0</i>
35°	5662.1	7565.8	8951.3	8473.1	<i>8245.5</i>
37.5°	5374.4	7463.6	8557.3	7867.6	<i>7696.2</i>
40°	5081.6	7337.3	7992.9	7302.2	<i>7283.1</i>
42.5°	4805.0	7200.9	7354.3	6862.1	<i>6926.2</i>
45°	4513.2	7011.5	6687.6	6463.1	<i>6450.1</i>
47.5°	4236.5	6749.8	6081.1	6022.0	<i>5888.7</i>
50°	3942.8	6388.9	5527.8	5471.6	<i>5197.9</i>
52.5°	3655.1	5928.8	5033.5	4823.0	<i>4424.0</i>
55°	3357.4	5383.4	4557.3	4117.2	<i>3774.4</i>
57.5°	3080.7	4783.9	4073.1	3502.7	<i>3195.0</i>
60°	2781.9	4176.4	3541.8	2963.4	<i>2709.7</i>
62.5°	2489.2	3577.9	3060.6	2504.2	<i>2335.8</i>
65°	2189.4	3020.5	2572.4	2133.3	<i>1985.9</i>
67.5°	1902.7	2538.3	2150.4	1798.5	<i>1700.2</i>
70°	1612.0	2059.1	1777.4	1510.8	<i>1453.6</i>
72.5°	1312.3	1645.1	1437.6	1275.2	<i>1232.1</i>
75°	1047.6	1283.2	1128.8	1033.6	<i>1008.5</i>
77.5°	779.9	954.4	882.2	826.1	<i>819.0</i>
80°	549.4	688.7	649.6	638.6	<i>627.6</i>
82.5°	350.9	450.1	462.2	455.1	<i>447.1</i>
85°	186.5	264.7	276.7	262.7	<i>259.6</i>
87.5°	75.2	115.3	124.3	137.3	<i>141.4</i>
90°	1.0	27.1	49.1	62.2	<i>64.2</i>
92.5°	1.0	6.0	7.0	7.0	<i>6.0</i>
95°	1.0	4.0	4.0	3.0	<i>2.0</i>
97.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
100°	0.0	0.0	0.0	0.0	<i>0.0</i>
102.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
105°	0.0	0.0	0.0	0.0	<i>0.0</i>



TEST NUMBER: P860039

CATALOG NUMBER: SPHB-24SE-W-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)