

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: P860201

Luminaire Tested: **SPHB-48SE-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: P860201
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-48SE-W-L850-CD
Description: 48000 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

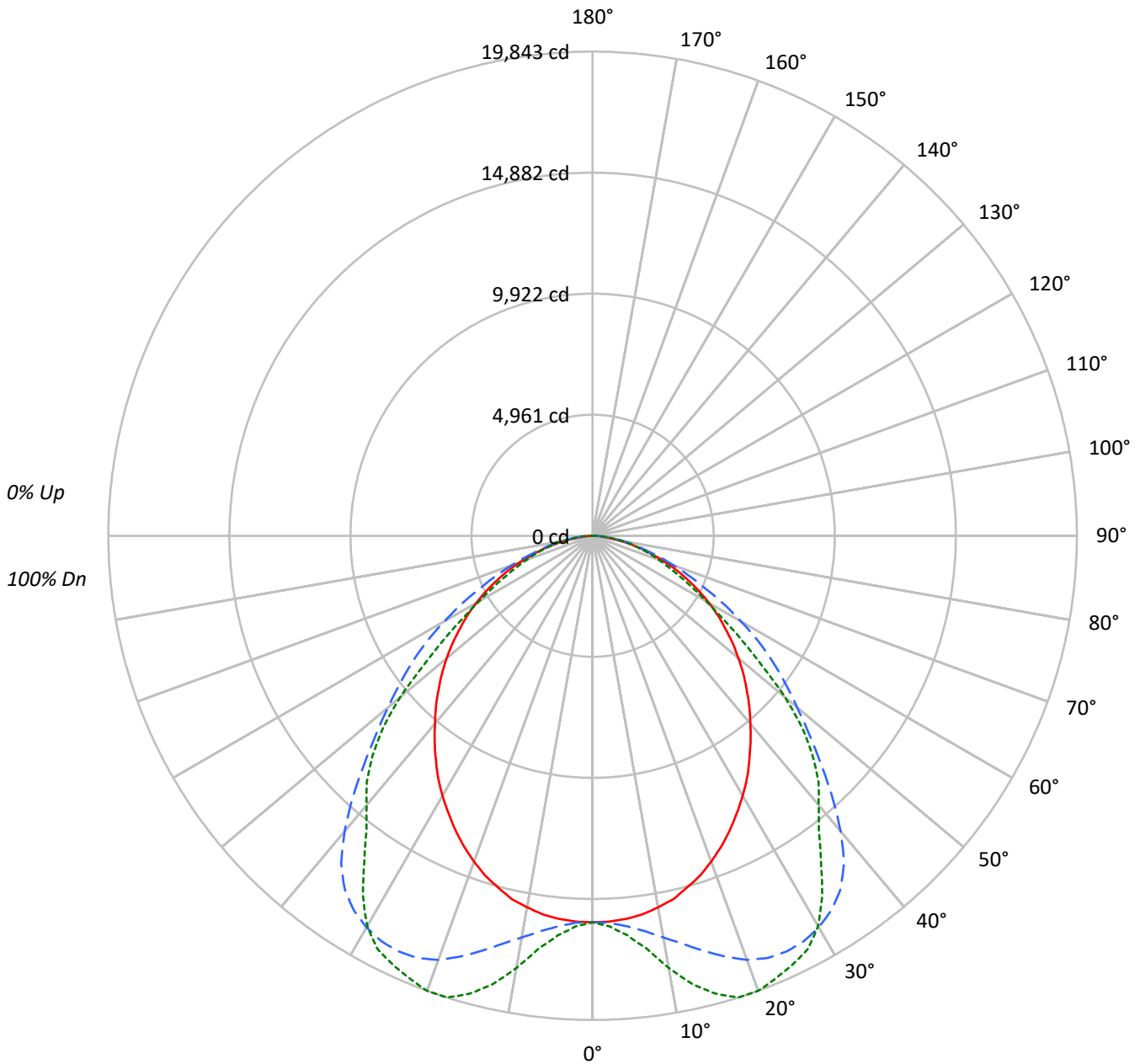
Lumens per Lamp: N/A
Luminaire Lumens: 49841.0 lumens
Efficiency: N/A
Efficacy: 163.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 304.9
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: P860201

CATALOG NUMBER: SPHB-48SE-W-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	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°	50445	50445	50445
5°	50390	51341	52558
10°	49992	54050	58147
15°	49211	58075	64049
20°	48145	62693	67249
25°	46756	66075	68130
30°	45234	68142	67946
35°	43536	68827	63400
40°	41782	65719	59883
45°	40202	59570	57454
50°	38635	54165	50934
55°	36867	50045	41447
60°	35044	44617	34135
65°	32630	38338	29597
70°	29687	32732	26769
75°	25495	27471	24542
80°	19926	23562	22763
85°	13476	19994	18763



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CATALOG NUMBER: SPHB-48SE-W-L850-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1555.2	3.1
10°-20°	4931.5	9.9
20°-30°	8070.7	16.2
30°-40°	9845.6	19.8
40°-50°	9751.0	19.6
50°-60°	7797.6	15.6
60°-70°	4864.4	9.8
70°-80°	2383.3	4.8
80°-90°	625.1	1.3
90°-100°	16.5	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°	14557.4	29.2
0°-40°	24403.0	49.0
0°-60°	41951.7	84.2
0°-90°	49824.5	100.0
90°-120°	16.5	0.0
90°-150°	16.5	0.0
90°-180°	16.0	0.0
0°-180°	49841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15840	15840	15840	15840	15840	
5°	15763	15832	16060	16340	16441	###
15°	14926	15795	17615	19017	19427	4208
25°	13306	15559	18804	19350	19389	6123
35°	11199	14964	17704	16758	16308	7005
45°	8926	13867	13227	12783	12757	6895
55°	6640	10647	9014	8143	7465	5949
65°	4330	5974	5088	4219	3928	4294
75°	2072	2538	2233	2044	1995	2200
85°	369	523	547	520	514	457
90°	2	54	97	123	127	21
95°	2	8	8	6	4	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: P860201

CATALOG NUMBER: SPHB-48SE-W-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	15840.2	15840.2	15840.2	15840.2	15840.2
2.5°	15824.4	15818.4	15875.9	15981.0	16028.6
5°	15762.9	15832.3	16060.3	16339.9	16441.0
7.5°	15651.9	15838.2	16341.8	16855.4	17073.5
10°	15459.5	15842.2	16714.6	17620.7	17981.6
12.5°	15261.2	15828.3	17129.0	18411.8	18806.4
15°	14926.2	15794.6	17614.8	19016.6	19427.0
17.5°	14614.9	15755.0	18082.7	19530.1	19841.4
20°	14206.4	15697.5	18499.1	19686.8	19843.4
22.5°	13778.1	15651.9	18729.1	19581.7	19629.3
25°	13306.3	15558.7	18804.4	19349.7	19389.3
27.5°	12802.6	15475.4	18733.0	19062.2	19095.9
30°	12301.0	15324.7	18530.8	18614.1	18477.3
32.5°	11775.6	15174.0	18203.7	17828.9	17509.7
35°	11198.6	14963.8	17704.0	16758.2	16308.1
37.5°	10629.5	14761.6	16924.8	15560.6	15221.6
40°	10050.6	14511.8	15808.5	14442.4	14404.7
42.5°	9503.3	14242.1	14545.5	13571.9	13698.8
45°	8926.4	13867.4	13226.9	12782.8	12757.0
47.5°	8379.1	13349.9	12027.4	11910.4	11646.7
50°	7798.2	12636.1	10932.9	10821.9	10280.6
52.5°	7229.1	11726.0	9955.4	9539.0	8749.9
55°	6640.2	10647.4	9013.6	8143.2	7465.1
57.5°	6093.0	9461.7	8055.9	6927.7	6319.0
60°	5502.1	8260.1	7005.1	5861.0	5359.4
62.5°	4923.2	7076.4	6053.3	4952.9	4619.8
65°	4330.3	5974.0	5087.7	4219.3	3927.8
67.5°	3763.3	5020.3	4253.0	3557.1	3362.7
70°	3188.3	4072.6	3515.4	2988.0	2875.0
72.5°	2595.4	3253.7	2843.3	2522.1	2436.8
75°	2072.0	2537.9	2232.6	2044.2	1994.6
77.5°	1542.6	1887.6	1744.8	1633.8	1619.9
80°	1086.5	1362.2	1284.8	1263.0	1241.2
82.5°	694.0	890.3	914.0	900.2	884.3
85°	368.8	523.4	547.2	519.5	513.5
87.5°	148.7	228.0	245.9	271.6	279.6
90°	2.0	53.5	97.2	122.9	126.9
92.5°	2.0	11.9	13.9	13.9	11.9
95°	2.0	7.9	7.9	5.9	4.0
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



TEST NUMBER: P860201

CATALOG NUMBER: SPHB-48SE-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)