

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: P860164

Luminaire Tested: **SPHB-48HE-N-L840-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: P860164
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-48HE-N-L840-CD
Description: 48000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

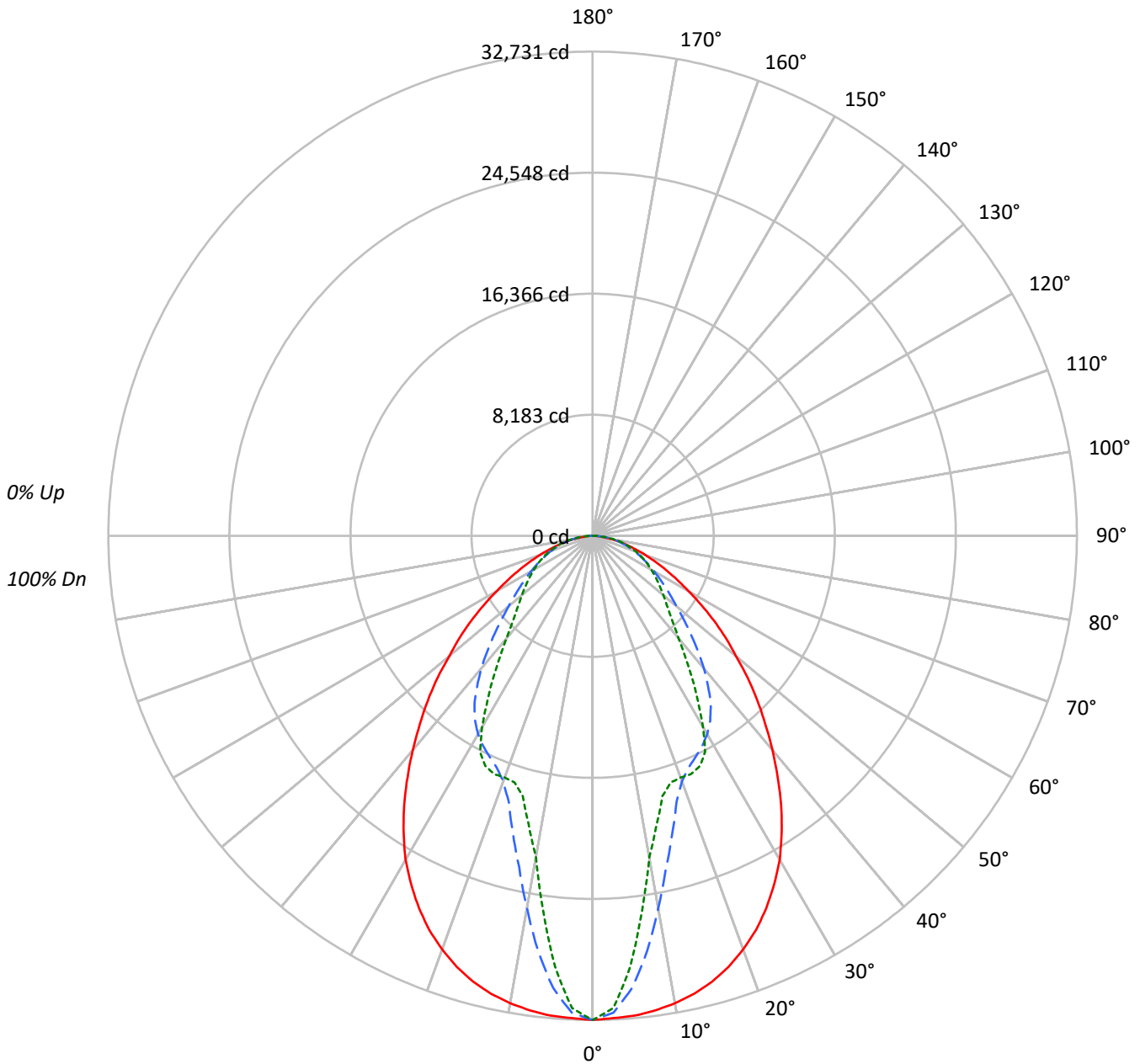
Lumens per Lamp: N/A
Luminaire Lumens: 47970.0 lumens
Efficiency: N/A
Efficacy: 166.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 288.6
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: P860164

CATALOG NUMBER: SPHB-48HE-N-L840-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	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°	104234	104234	104234
5°	104113	98074	93433
10°	103757	82668	71267
15°	102894	68624	60056
20°	100821	59819	58955
25°	97581	57878	60336
30°	92969	56950	54910
35°	86320	54118	45501
40°	78603	48583	37572
45°	70953	42155	32984
50°	62615	36656	30887
55°	55563	33060	29731
60°	47617	30572	29124
65°	41216	28732	28977
70°	35271	27640	28943
75°	29608	26841	28685
80°	22592	25937	28090
85°	14791	23009	21638



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2790.6	5.8
10°-20°	6407.5	13.4
20°-30°	8659.5	18.1
30°-40°	9113.6	19.0
40°-50°	7733.3	16.1
50°-60°	5990.5	12.5
60°-70°	4172.2	8.7
70°-80°	2389.1	5.0
80°-90°	695.2	1.4
90°-100°	18.6	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°	17857.6	37.2
0°-40°	26971.2	56.2
0°-60°	40694.9	84.8
0°-90°	47951.4	100.0
90°-120°	18.6	0.0
90°-150°	18.6	0.0
90°-180°	19.0	0.0
0°-180°	47970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	32731	32731	32731	32731	32731	
5°	32568	31971	30679	29502	29228	###
15°	31209	26489	20814	18735	18216	8782
25°	27771	19618	16472	16949	17171	12748
35°	22204	15087	13920	12574	11704	13841
45°	15754	11329	9360	7691	7324	12134
55°	10007	7631	5954	5412	5355	8947
65°	5470	4478	3813	3813	3846	5464
75°	2406	2139	2181	2319	2331	2566
85°	405	525	630	592	592	515
90°	2	48	92	117	122	22
95°	2	8	15	15	12	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: P860164

CATALOG NUMBER: SPHB-48HE-N-L840-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	32730.8	32730.8	32730.8	32730.8	32730.8
2.5°	32635.8	32528.4	32266.0	32096.1	31963.7
5°	32568.3	31971.1	30679.3	29502.4	29227.6
7.5°	32365.9	31054.1	28293.0	26116.6	25566.9
10°	32086.1	29737.3	25564.4	22838.3	22038.7
12.5°	31713.8	28330.5	22950.8	20382.1	19989.8
15°	31209.0	26489.0	20814.4	18735.4	18215.7
17.5°	30554.4	24584.9	18842.9	17641.0	17496.1
20°	29749.8	22838.3	17651.0	17241.2	17396.1
22.5°	28845.2	21141.7	16958.8	17131.2	17421.1
25°	27770.8	19617.5	16471.6	16948.8	17171.2
27.5°	26563.9	18240.7	16024.3	16461.6	16461.6
30°	25282.1	17093.8	15487.1	15447.1	14932.4
32.5°	23785.3	16119.3	14784.9	13992.8	13228.2
35°	22203.6	15087.3	13920.4	12573.6	11704.0
37.5°	20544.5	14127.8	12825.9	11049.3	10239.8
40°	18907.8	13180.8	11686.5	9680.0	9037.9
42.5°	17278.7	12216.3	10499.6	8570.6	8063.4
45°	15754.4	11329.2	9360.2	7691.1	7323.8
47.5°	14205.2	10387.2	8308.3	6983.9	6729.1
50°	12638.5	9432.7	7398.7	6421.7	6234.3
52.5°	11319.2	8543.1	6626.6	5889.5	5777.0
55°	10007.4	7631.1	5954.5	5412.2	5354.8
57.5°	8705.5	6781.5	5339.8	4975.0	4962.5
60°	7476.2	5986.9	4800.0	4600.1	4572.7
62.5°	6429.2	5197.3	4287.8	4192.9	4205.3
65°	5469.7	4477.7	3813.0	3813.0	3845.5
67.5°	4580.2	3815.5	3378.3	3435.7	3480.7
70°	3788.1	3215.9	2968.5	3068.4	3108.4
72.5°	3038.4	2658.6	2576.2	2686.1	2718.6
75°	2406.3	2138.9	2181.4	2318.8	2331.3
77.5°	1784.1	1684.1	1794.1	1944.0	1971.5
80°	1231.9	1241.9	1414.3	1519.2	1531.7
82.5°	794.6	867.1	1059.5	1114.4	1094.4
85°	404.8	524.7	629.7	592.2	592.2
87.5°	154.9	227.4	267.4	314.8	332.3
90°	2.5	47.5	92.5	117.4	122.4
92.5°	2.5	12.5	20.0	22.5	20.0
95°	2.5	7.5	15.0	15.0	12.5
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: P860164

CATALOG NUMBER: SPHB-48HE-N-L840-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)