

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: P860165

Luminaire Tested: **SPHB-48HE-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: P860165
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-L850-CD
Description: 48000 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

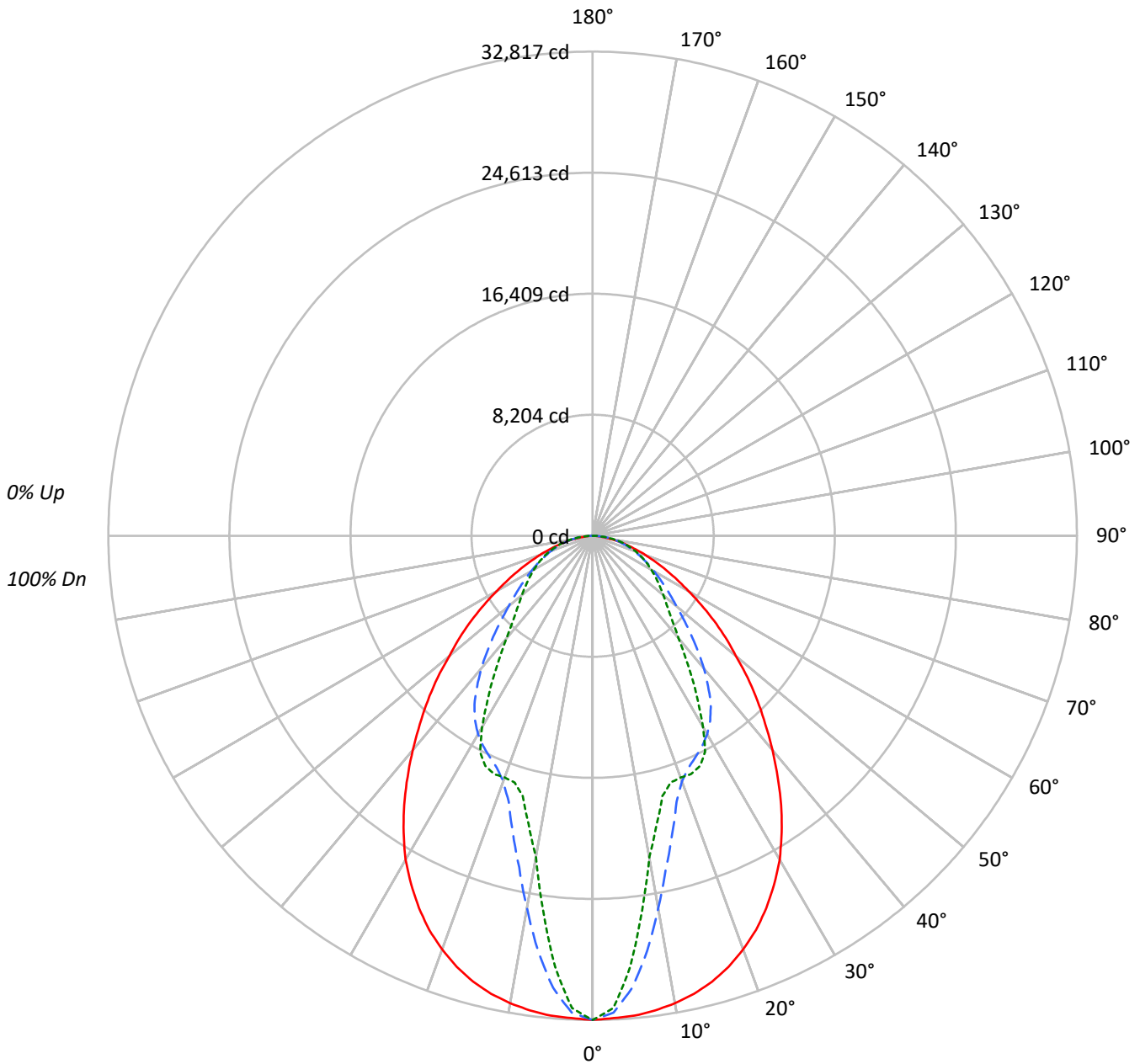
Lumens per Lamp: N/A
Luminaire Lumens: 48096.0 lumens
Efficiency: N/A
Efficacy: 166.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	104508	104508	104508
5°	104387	98332	93679
10°	104030	82885	71454
15°	103164	68804	60213
20°	101086	59976	59110
25°	97837	58030	60495
30°	93213	57100	55054
35°	86547	54260	45621
40°	78810	48711	37671
45°	71139	42266	33071
50°	62780	36752	30968
55°	55709	33147	29808
60°	47742	30653	29201
65°	41325	28809	29053
70°	35364	27713	29019
75°	29685	26911	28760
80°	22651	26005	28164
85°	14831	23067	21697



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2797.9	5.8
10°-20°	6424.4	13.4
20°-30°	8682.2	18.1
30°-40°	9137.6	19.0
40°-50°	7753.6	16.1
50°-60°	6006.2	12.5
60°-70°	4183.2	8.7
70°-80°	2395.4	5.0
80°-90°	697.1	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°	17904.5	37.2
0°-40°	27042.0	56.2
0°-60°	40801.8	84.8
0°-90°	48077.4	100.0
90°-120°	18.6	0.0
90°-150°	18.6	0.0
90°-180°	19.0	0.0
0°-180°	48096.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	32817	32817	32817	32817	32817	
5°	32654	32055	30760	29580	29304	###
15°	31291	26558	20869	18785	18264	8805
25°	27844	19669	16515	16993	17216	12782
35°	22262	15127	13957	12607	11735	13877
45°	15796	11359	9385	7711	7343	12166
55°	10034	7651	5970	5426	5369	8971
65°	5484	4490	3823	3823	3856	5478
75°	2413	2144	2187	2325	2337	2573
85°	406	526	631	594	594	516
90°	2	48	93	118	123	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	32816.7	32816.7	32816.7	32816.7	32816.7
2.5°	32721.5	32613.8	32350.7	32180.4	32047.6
5°	32653.9	32055.1	30759.9	29579.9	29304.3
7.5°	32451.0	31135.7	28367.3	26185.2	25634.1
10°	32170.4	29815.4	25631.6	22898.3	22096.6
12.5°	31797.1	28404.9	23011.0	20435.6	20042.3
15°	31291.0	26558.5	20869.0	18784.6	18263.5
17.5°	30634.6	24649.5	18892.4	17687.3	17542.0
20°	29827.9	22898.3	17697.3	17286.5	17441.8
22.5°	28921.0	21197.2	17003.4	17176.2	17466.8
25°	27843.7	19669.0	16514.8	16993.4	17216.3
27.5°	26633.7	18288.6	16066.4	16504.8	16504.8
30°	25348.5	17138.7	15527.8	15487.7	14971.6
32.5°	23847.8	16161.6	14823.8	14029.6	13263.0
35°	22262.0	15126.9	13956.9	12606.6	11734.8
37.5°	20598.5	14164.9	12859.6	11078.4	10266.7
40°	18957.5	13215.4	11717.2	9705.5	9061.6
42.5°	17324.0	12248.3	10527.2	8593.1	8084.6
45°	15795.8	11359.0	9384.8	7711.3	7343.0
47.5°	14242.5	10414.5	8330.1	7002.3	6746.7
50°	12671.7	9457.5	7418.1	6438.6	6250.7
52.5°	11348.9	8565.6	6644.0	5905.0	5792.2
55°	10033.7	7651.1	5970.1	5426.4	5368.8
57.5°	8728.4	6799.3	5353.8	4988.0	4975.5
60°	7495.8	6002.7	4812.7	4612.2	4584.7
62.5°	6446.1	5211.0	4299.1	4203.9	4216.4
65°	5484.1	4489.5	3823.1	3823.1	3855.6
67.5°	4592.2	3825.6	3387.1	3444.8	3489.9
70°	3798.0	3224.3	2976.3	3076.5	3116.6
72.5°	3046.4	2665.6	2582.9	2693.2	2725.8
75°	2412.6	2144.5	2187.1	2324.9	2337.4
77.5°	1788.8	1688.6	1798.8	1949.1	1976.7
80°	1235.1	1245.1	1418.0	1523.2	1535.7
82.5°	796.7	869.3	1062.2	1117.4	1097.3
85°	405.9	526.1	631.3	593.8	593.8
87.5°	155.3	228.0	268.1	315.7	333.2
90°	2.5	47.6	92.7	117.7	122.8
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



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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)