

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: P860001

Luminaire Tested: **SPHB-24HE-N-L835-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: P860001
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-L835-CD
Description: 24000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 3500K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

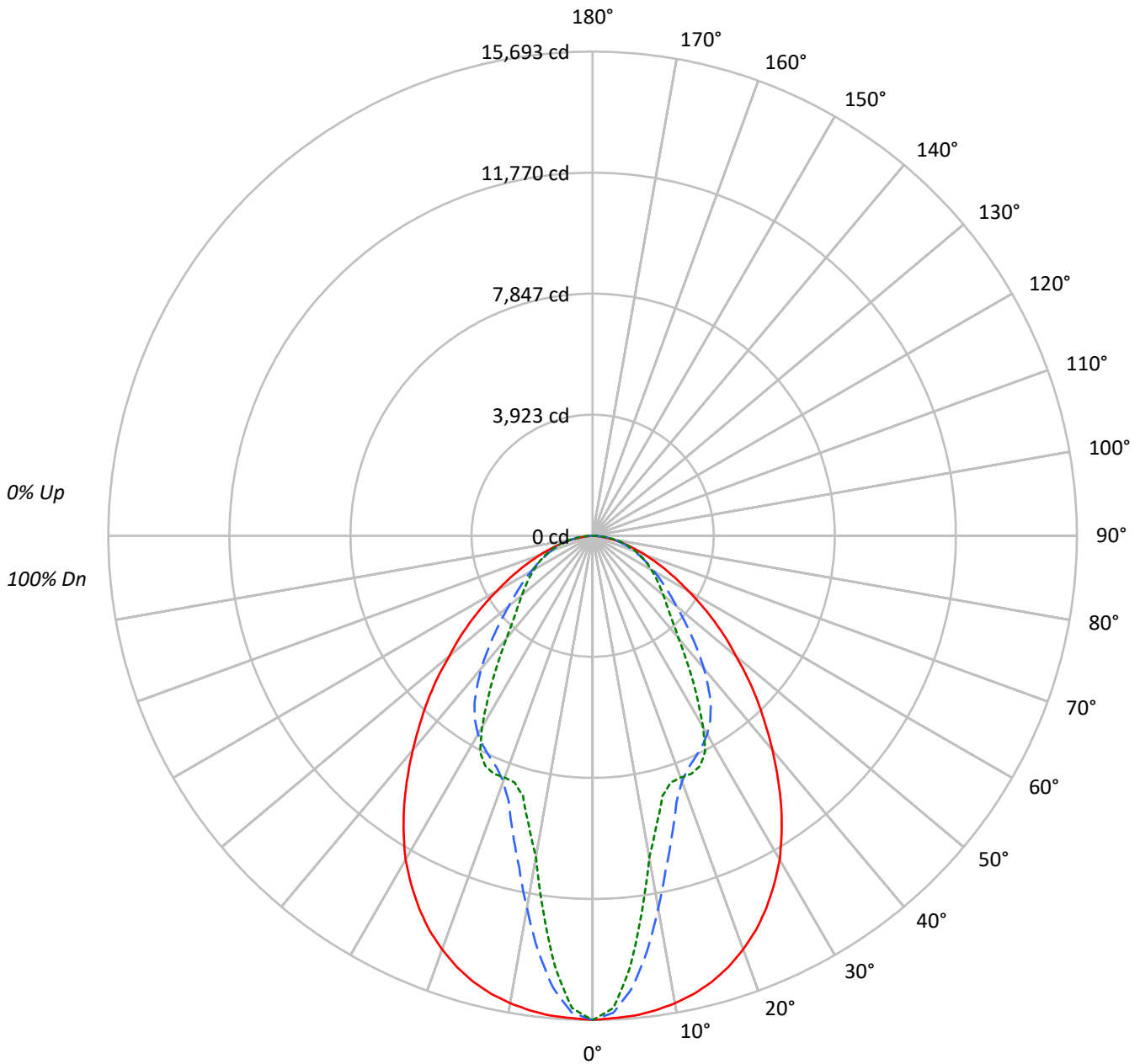
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22999.0 lumens
Efficiency: N/A
Efficacy: 157.5 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

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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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86			86
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74			74
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64			64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50			50
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45			45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40			40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34			34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	122401	122401	122401
5°	122259	115168	109718
10°	121841	97076	83689
15°	120828	80584	70523
20°	118394	70245	69230
25°	114589	67966	70853
30°	109173	66876	64481
35°	101365	63551	53432
40°	92304	57051	44121
45°	83320	49503	38732
50°	73529	43045	36270
55°	65247	38822	34912
60°	55916	35902	34200
65°	48400	33740	34028
70°	41419	32457	33987
75°	34769	31520	33684
80°	26529	30459	32988
85°	17371	27018	25407



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1337.9	5.8
10°-20°	3072.1	13.4
20°-30°	4151.7	18.1
30°-40°	4369.5	19.0
40°-50°	3707.7	16.1
50°-60°	2872.1	12.5
60°-70°	2000.3	8.7
70°-80°	1145.4	5.0
80°-90°	333.3	1.4
90°-100°	8.9	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°	8561.7	37.2
0°-40°	12931.2	56.2
0°-60°	19511.0	84.8
0°-90°	22990.1	100.0
90°-120°	8.9	0.0
90°-150°	8.9	0.0
90°-180°	9.0	0.0
0°-180°	22999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15693	15693	15693	15693	15693	
5°	15615	15328	14709	14145	14013	###
15°	14963	12700	9979	8983	8733	4210
25°	13315	9406	7897	8126	8233	6112
35°	10645	7234	6674	6028	5611	6636
45°	7553	5432	4488	3687	3511	5818
55°	4798	3659	2855	2595	2567	4290
65°	2622	2147	1828	1828	1844	2620
75°	1154	1026	1046	1112	1118	1230
85°	194	252	302	284	284	247
90°	1	23	44	56	59	11
95°	1	4	7	7	6	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	15692.6	15692.6	15692.6	15692.6	15692.6
2.5°	15647.1	15595.6	15469.8	15388.3	15324.8
5°	15614.7	15328.4	14709.1	14144.8	14013.0
7.5°	15517.7	14888.8	13565.0	12521.5	12257.9
10°	15383.5	14257.4	12256.7	10949.7	10566.4
12.5°	15205.0	13582.9	11003.6	9772.1	9584.0
15°	14963.0	12700.0	9979.3	8982.6	8733.4
17.5°	14649.2	11787.1	9034.1	8457.9	8388.4
20°	14263.4	10949.7	8462.7	8266.2	8340.5
22.5°	13829.7	10136.3	8130.8	8213.5	8352.5
25°	13314.6	9405.5	7897.2	8126.0	8232.7
27.5°	12735.9	8745.4	7682.8	7892.4	7892.4
30°	12121.4	8195.5	7425.2	7406.0	7159.3
32.5°	11403.8	7728.3	7088.6	6708.8	6342.2
35°	10645.4	7233.5	6674.1	6028.3	5611.4
37.5°	9850.0	6773.5	6149.3	5297.6	4909.4
40°	9065.3	6319.5	5603.1	4641.1	4333.2
42.5°	8284.2	5857.0	5034.0	4109.1	3865.9
45°	7553.4	5431.7	4487.7	3687.4	3511.3
47.5°	6810.6	4980.1	3983.4	3348.4	3226.2
50°	6059.5	4522.5	3547.3	3078.9	2989.0
52.5°	5426.9	4096.0	3177.1	2823.7	2769.8
55°	4798.0	3658.7	2854.8	2594.9	2567.3
57.5°	4173.8	3251.4	2560.1	2385.2	2379.2
60°	3584.4	2870.4	2301.4	2205.5	2192.3
62.5°	3082.5	2491.8	2055.8	2010.2	2016.2
65°	2622.4	2146.8	1828.1	1828.1	1843.7
67.5°	2195.9	1829.3	1619.7	1647.3	1668.8
70°	1816.2	1541.8	1423.2	1471.1	1490.3
72.5°	1456.8	1274.7	1235.1	1287.9	1303.4
75°	1153.7	1025.5	1045.9	1111.7	1117.7
77.5°	855.4	807.5	860.2	932.0	945.2
80°	590.6	595.4	678.1	728.4	734.4
82.5°	381.0	415.7	508.0	534.3	524.7
85°	194.1	251.6	301.9	283.9	283.9
87.5°	74.3	109.0	128.2	150.9	159.3
90°	1.2	22.8	44.3	56.3	58.7
92.5°	1.2	6.0	9.6	10.8	9.6
95°	1.2	3.6	7.2	7.2	6.0
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



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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)