

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: P860031

Luminaire Tested: **SPHB-24SE-N-L935-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: P860031
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-24SE-N-L935-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 3500K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

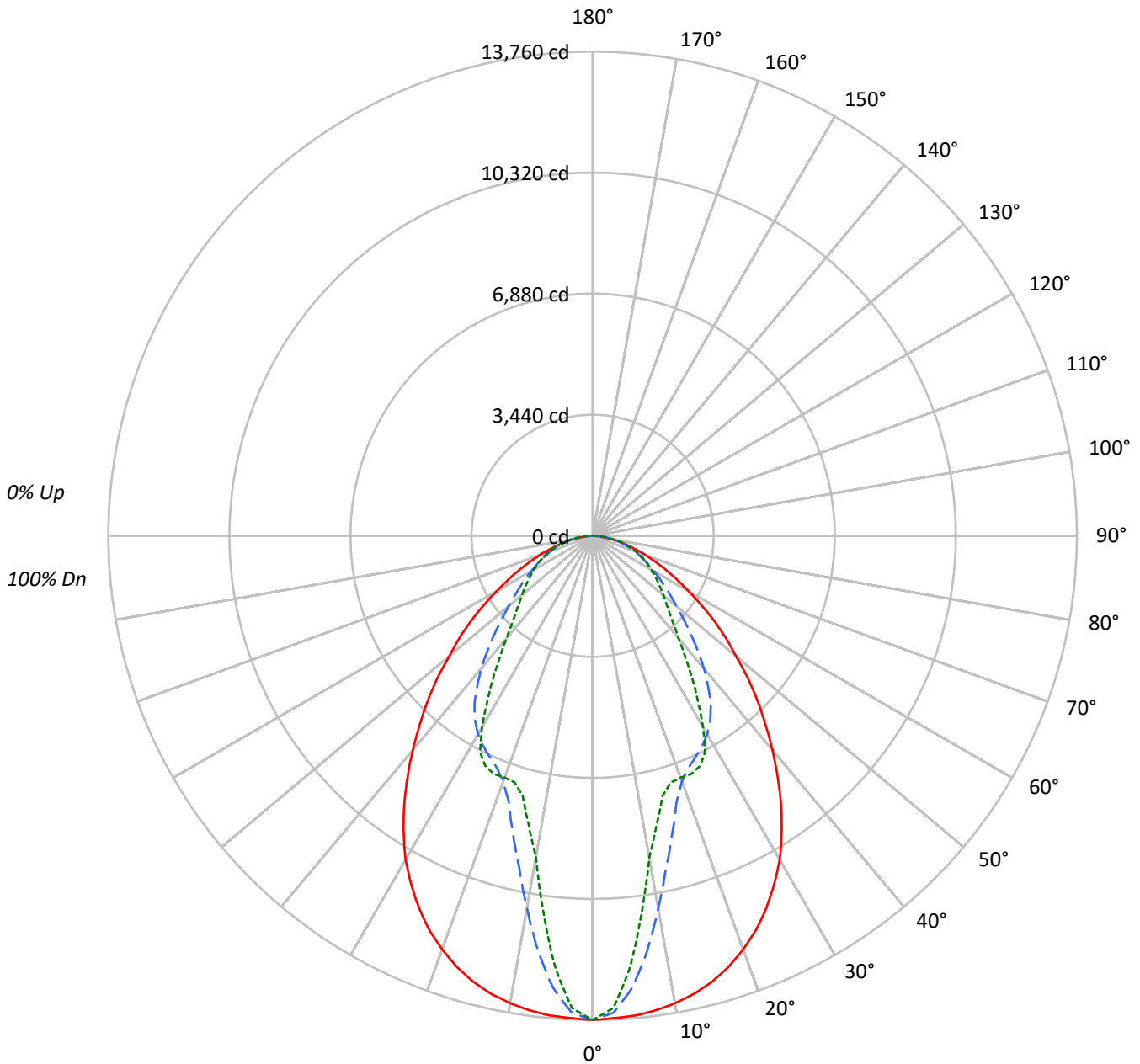
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20167.0 lumens
Efficiency: N/A
Efficacy: 127.2 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): 158.6
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°	107329	107329	107329
5°	107205	100986	96208
10°	106839	85123	73384
15°	105949	70661	61839
20°	103815	61595	60706
25°	100479	59597	62128
30°	95729	58641	56541
35°	88884	55724	46853
40°	80937	50026	38688
45°	73060	43407	33964
50°	64475	37745	31805
55°	57213	34042	30614
60°	49030	31481	29989
65°	42440	29585	29838
70°	36318	28461	29802
75°	30486	27638	29537
80°	23263	26708	28923
85°	15232	23689	22284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1173.2	5.8
10°-20°	2693.8	13.4
20°-30°	3640.5	18.1
30°-40°	3831.4	19.0
40°-50°	3251.1	16.1
50°-60°	2518.5	12.5
60°-70°	1754.0	8.7
70°-80°	1004.4	5.0
80°-90°	292.3	1.4
90°-100°	7.8	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°	7507.5	37.2
0°-40°	11338.9	56.2
0°-60°	17108.5	84.8
0°-90°	20159.2	100.0
90°-120°	7.8	0.0
90°-150°	7.8	0.0
90°-180°	8.0	0.0
0°-180°	20167.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	13760	13760	13760	13760	13760	
5°	13692	13441	12898	12403	12288	###
15°	13120	11136	8750	7876	7658	3692
25°	11675	8247	6925	7125	7219	5360
35°	9335	6343	5852	5286	4920	5819
45°	6623	4763	3935	3233	3079	5101
55°	4207	3208	2503	2275	2251	3761
65°	2300	1882	1603	1603	1617	2297
75°	1012	899	917	975	980	1079
85°	170	221	265	249	249	216
90°	1	20	39	49	52	9
95°	1	3	6	6	5	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°	13760.3	13760.3	13760.3	13760.3	13760.3
2.5°	13720.4	13675.2	13564.9	13493.5	13437.8
5°	13692.0	13440.9	12897.8	12403.1	12287.5
7.5°	13606.9	13055.4	11894.6	10979.7	10748.6
10°	13489.3	12501.8	10747.5	9601.4	9265.3
12.5°	13332.7	11910.4	9648.7	8568.8	8403.9
15°	13120.5	11136.2	8750.5	7876.5	7658.0
17.5°	12845.3	10335.7	7921.7	7416.4	7355.5
20°	12507.1	9601.4	7420.6	7248.3	7313.5
22.5°	12126.8	8888.1	7129.6	7202.1	7324.0
25°	11675.1	8247.4	6924.8	7125.4	7218.9
27.5°	11167.7	7668.5	6736.8	6920.6	6920.6
30°	10628.8	7186.4	6510.9	6494.1	6277.7
32.5°	9999.6	6776.7	6215.7	5882.7	5561.3
35°	9334.6	6342.8	5852.2	5286.0	4920.5
37.5°	8637.1	5939.4	5392.1	4645.2	4304.9
40°	7949.0	5541.3	4913.1	4069.6	3799.6
42.5°	7264.1	5135.8	4414.1	3603.2	3389.9
45°	6623.3	4762.9	3935.1	3233.4	3079.0
47.5°	5972.0	4366.9	3492.9	2936.1	2829.0
50°	5313.3	3965.6	3110.5	2699.7	2621.0
52.5°	4758.7	3591.6	2785.9	2476.0	2428.7
55°	4207.2	3208.2	2503.3	2275.3	2251.2
57.5°	3659.9	2851.0	2244.9	2091.5	2086.3
60°	3143.0	2517.0	2018.0	1933.9	1922.4
62.5°	2702.9	2185.0	1802.6	1762.7	1768.0
65°	2299.5	1882.5	1603.0	1603.0	1616.7
67.5°	1925.5	1604.1	1420.3	1444.4	1463.3
70°	1592.5	1352.0	1248.0	1290.0	1306.8
72.5°	1277.4	1117.7	1083.0	1129.3	1142.9
75°	1011.6	899.2	917.1	974.8	980.1
77.5°	750.0	708.0	754.2	817.3	828.8
80°	517.9	522.1	594.6	638.7	643.9
82.5°	334.1	364.5	445.4	468.5	460.1
85°	170.2	220.6	264.7	249.0	249.0
87.5°	65.1	95.6	112.4	132.4	139.7
90°	1.1	20.0	38.9	49.4	51.5
92.5°	1.1	5.3	8.4	9.5	8.4
95°	1.1	3.2	6.3	6.3	5.3
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)