

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: P859975

Luminaire Tested: **SPHB-18SE-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: P859975
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-18SE-N-L840-CD
Description: 18000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

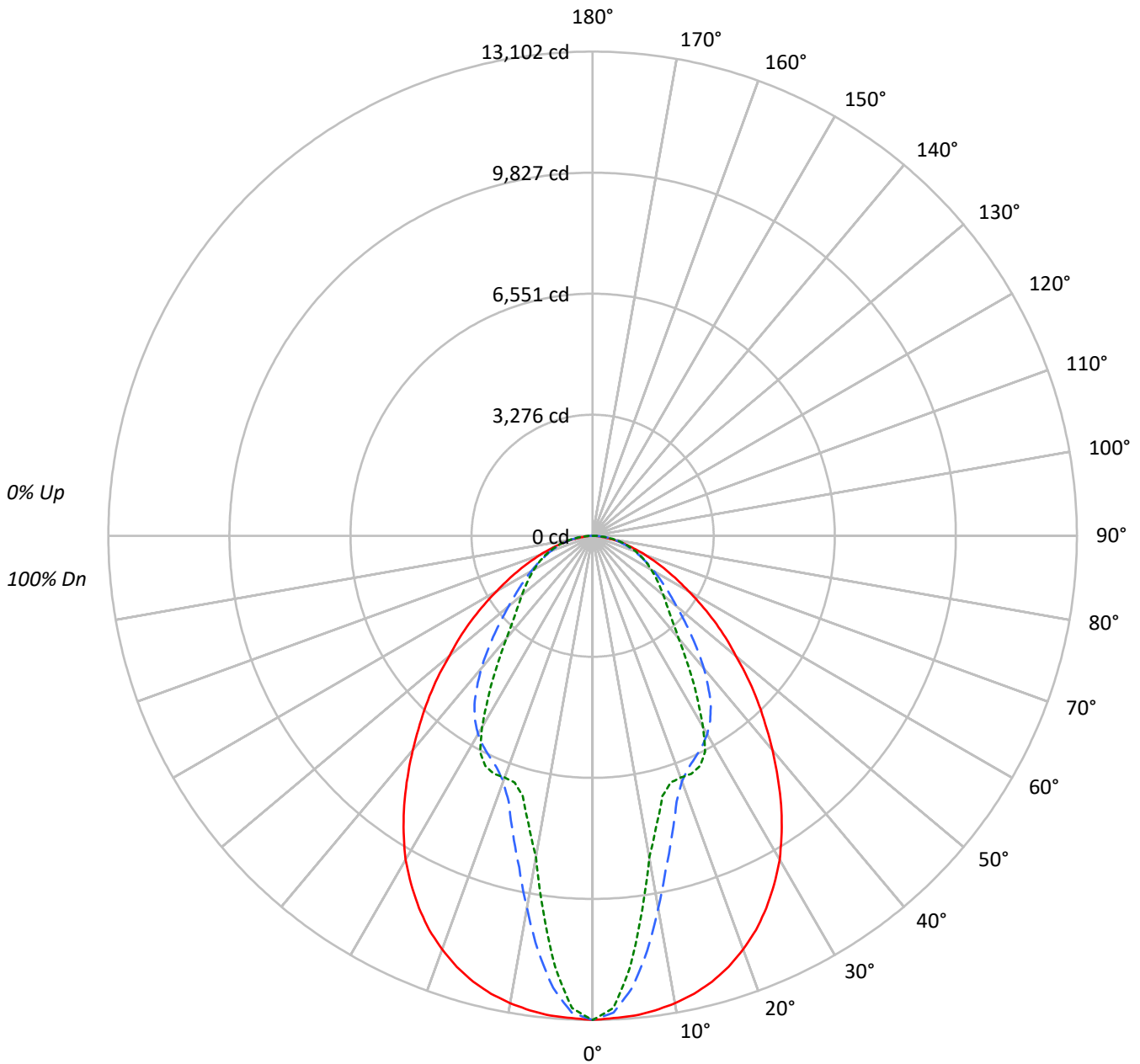
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19202.0 lumens
Efficiency: N/A
Efficacy: 163.6 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): 117.4
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								
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°	102194	102194	102194
5°	102075	96155	91605
10°	101726	81050	69872
15°	100880	67280	58880
20°	98848	58647	57801
25°	95671	56745	59155
30°	91149	55835	53835
35°	84630	53058	44610
40°	77065	47632	36837
45°	69565	41330	32338
50°	61390	35938	30282
55°	54475	32413	29149
60°	46686	29974	28554
65°	40410	28170	28410
70°	34580	27100	28377
75°	29028	26315	28124
80°	22149	25428	27539
85°	14498	22562	21219



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1117.0	5.8
10°-20°	2564.9	13.4
20°-30°	3466.3	18.1
30°-40°	3648.1	19.0
40°-50°	3095.6	16.1
50°-60°	2397.9	12.5
60°-70°	1670.1	8.7
70°-80°	956.3	5.0
80°-90°	278.3	1.4
90°-100°	7.4	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°	7148.2	37.2
0°-40°	10796.3	56.2
0°-60°	16289.8	84.8
0°-90°	19194.6	100.0
90°-120°	7.4	0.0
90°-150°	7.4	0.0
90°-180°	7.0	0.0
0°-180°	19202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	13102	13102	13102	13102	13102	
5°	13037	12798	12281	11810	11700	###
15°	12493	10603	8332	7500	7292	3515
25°	11116	7853	6593	6784	6874	5103
35°	8888	6039	5572	5033	4685	5540
45°	6306	4535	3747	3079	2932	4857
55°	4006	3055	2384	2166	2144	3582
65°	2190	1792	1526	1526	1539	2187
75°	963	856	873	928	933	1027
85°	162	210	252	237	237	206
90°	1	19	37	47	49	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°	13101.9	13101.9	13101.9	13101.9	13101.9
2.5°	13063.8	13020.8	12915.8	12847.8	12794.8
5°	13036.8	12797.8	12280.7	11809.6	11699.6
7.5°	12955.8	12430.7	11325.5	10454.3	10234.2
10°	12843.8	11903.6	10233.2	9142.0	8821.9
12.5°	12694.8	11340.5	9187.0	8158.8	8001.7
15°	12492.7	10603.3	8331.8	7499.6	7291.6
17.5°	12230.7	9841.1	7542.6	7061.5	7003.5
20°	11908.6	9142.0	7065.5	6901.5	6963.5
22.5°	11546.5	8462.8	6788.5	6857.5	6973.5
25°	11116.4	7852.7	6593.4	6784.5	6873.5
27.5°	10633.3	7301.6	6414.4	6589.4	6589.4
30°	10120.2	6842.5	6199.4	6183.3	5977.3
32.5°	9521.1	6452.4	5918.3	5601.2	5295.2
35°	8887.9	6039.3	5572.2	5033.1	4685.0
37.5°	8223.8	5655.2	5134.1	4423.0	4098.9
40°	7568.7	5276.2	4678.0	3874.8	3617.8
42.5°	6916.5	4890.1	4202.9	3430.7	3227.7
45°	6306.4	4535.0	3746.8	3078.7	2931.6
47.5°	5686.2	4157.9	3325.7	2795.6	2693.6
50°	5059.1	3775.8	2961.6	2570.6	2495.5
52.5°	4531.0	3419.7	2652.6	2357.5	2312.5
55°	4005.9	3054.7	2383.5	2166.5	2143.5
57.5°	3484.8	2714.6	2137.5	1991.4	1986.4
60°	2992.7	2396.5	1921.4	1841.4	1830.4
62.5°	2573.6	2080.5	1716.4	1678.4	1683.4
65°	2189.5	1792.4	1526.3	1526.3	1539.3
67.5°	1833.4	1527.3	1352.3	1375.3	1393.3
70°	1516.3	1287.3	1188.3	1228.3	1244.3
72.5°	1216.3	1064.2	1031.2	1075.2	1088.2
75°	963.2	856.2	873.2	928.2	933.2
77.5°	714.2	674.1	718.2	778.2	789.2
80°	493.1	497.1	566.1	608.1	613.1
82.5°	318.1	347.1	424.1	446.1	438.1
85°	162.0	210.0	252.1	237.1	237.1
87.5°	62.0	91.0	107.0	126.0	133.0
90°	1.0	19.0	37.0	47.0	49.0
92.5°	1.0	5.0	8.0	9.0	8.0
95°	1.0	3.0	6.0	6.0	5.0
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)