

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: P859978

Luminaire Tested: **SPHB-18SE-N-L940-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: P859978
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-L940-CD
Description: 18000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens and, 4000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

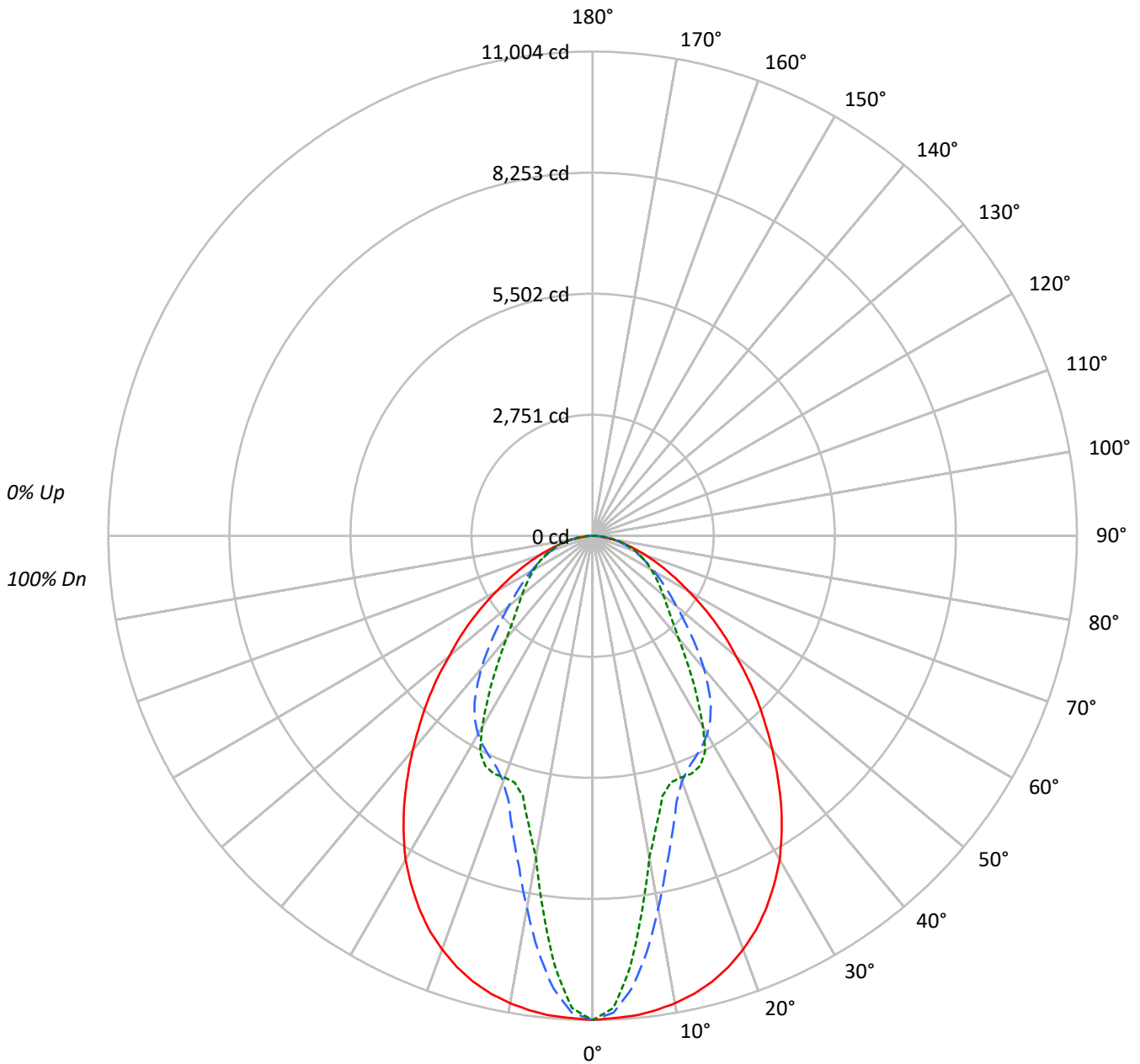
Lumens per Lamp: N/A
Luminaire Lumens: 16127.0 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P859978

CATALOG NUMBER: SPHB-18SE-N-L940-CD

Luminous Intensity Polar Plot





TEST NUMBER: P859978

CATALOG NUMBER: SPHB-18SE-N-L940-CD

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°	85828	85828	85828
5°	85729	80757	76935
10°	85436	68071	58683
15°	84725	56506	49451
20°	83018	49256	48545
25°	80350	47658	49682
30°	76552	46894	45214
35°	71078	44562	37467
40°	64724	40004	30937
45°	58425	34712	27160
50°	51558	30183	25433
55°	45752	27222	24481
60°	39209	25174	23982
65°	33939	23659	23860
70°	29043	22760	23832
75°	24381	22102	23621
80°	18601	21359	23128
85°	12180	18946	17818



TEST NUMBER: P859978

CATALOG NUMBER: SPHB-18SE-N-L940-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	938.2	5.8
10°-20°	2154.1	13.4
20°-30°	2911.2	18.1
30°-40°	3063.9	19.0
40°-50°	2599.8	16.1
50°-60°	2013.9	12.5
60°-70°	1402.6	8.7
70°-80°	803.2	5.0
80°-90°	233.7	1.4
90°-100°	6.2	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°	6003.5	37.2
0°-40°	9067.4	56.2
0°-60°	13681.2	84.8
0°-90°	16120.8	100.0
90°-120°	6.2	0.0
90°-150°	6.2	0.0
90°-180°	6.0	0.0
0°-180°	16127.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11004	11004	11004	11004	11004	
5°	10949	10748	10314	9918	9826	###
15°	10492	8905	6998	6299	6124	2952
25°	9336	6595	5538	5698	5773	4286
35°	7465	5072	4680	4227	3935	4653
45°	5296	3809	3147	2586	2462	4079
55°	3364	2566	2002	1820	1800	3008
65°	1839	1505	1282	1282	1293	1837
75°	809	719	733	780	784	863
85°	136	176	212	199	199	173
90°	1	16	31	40	41	7
95°	1	2	5	5	4	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



TEST NUMBER: P859978

CATALOG NUMBER: SPHB-18SE-N-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11003.7	11003.7	11003.7	11003.7	11003.7
2.5°	10971.8	10935.7	10847.5	10790.4	10745.8
5°	10949.1	10748.4	10314.1	9918.4	9826.0
7.5°	10881.1	10440.1	9511.8	8780.1	8595.3
10°	10787.0	9997.4	8594.5	7678.0	7409.2
12.5°	10661.8	9524.4	7715.8	6852.2	6720.3
15°	10492.1	8905.3	6997.6	6298.6	6123.9
17.5°	10272.1	8265.2	6334.8	5930.7	5882.0
20°	10001.6	7678.0	5934.1	5796.3	5848.4
22.5°	9697.5	7107.6	5701.4	5759.3	5856.8
25°	9336.2	6595.2	5537.6	5698.0	5772.8
27.5°	8930.5	6132.3	5387.2	5534.2	5534.2
30°	8499.6	5746.7	5206.6	5193.1	5020.1
32.5°	7996.4	5419.1	4970.5	4704.2	4447.2
35°	7464.6	5072.2	4679.9	4227.1	3934.8
37.5°	6906.8	4749.6	4311.9	3714.7	3442.5
40°	6356.6	4431.2	3928.9	3254.3	3038.4
42.5°	5808.9	4107.0	3529.9	2881.3	2710.8
45°	5296.5	3808.8	3146.8	2585.7	2462.2
47.5°	4775.6	3492.1	2793.1	2347.9	2262.2
50°	4248.9	3171.2	2487.4	2158.9	2095.9
52.5°	3805.4	2872.1	2227.8	1980.0	1942.2
55°	3364.4	2565.5	2001.8	1819.5	1800.2
57.5°	2926.7	2279.9	1795.2	1672.5	1668.3
60°	2513.4	2012.7	1613.7	1546.5	1537.3
62.5°	2161.4	1747.3	1441.5	1409.6	1413.8
65°	1838.9	1505.4	1281.9	1281.9	1292.8
67.5°	1539.8	1282.7	1135.7	1155.1	1170.2
70°	1273.5	1081.1	998.0	1031.6	1045.0
72.5°	1021.5	893.8	866.1	903.0	914.0
75°	809.0	719.1	733.4	779.6	783.8
77.5°	599.8	566.2	603.2	653.6	662.8
80°	414.1	417.5	475.5	510.7	514.9
82.5°	267.1	291.5	356.2	374.7	367.9
85°	136.1	176.4	211.7	199.1	199.1
87.5°	52.1	76.4	89.9	105.8	111.7
90°	0.8	16.0	31.1	39.5	41.2
92.5°	0.8	4.2	6.7	7.6	6.7
95°	0.8	2.5	5.0	5.0	4.2
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: P859978

CATALOG NUMBER: SPHB-18SE-N-L940-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)