

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: P859969

Luminaire Tested: **SPHB-18SE-M-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: P859969
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-18SE-M-L940-CD
Description: 18000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens and, 4000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

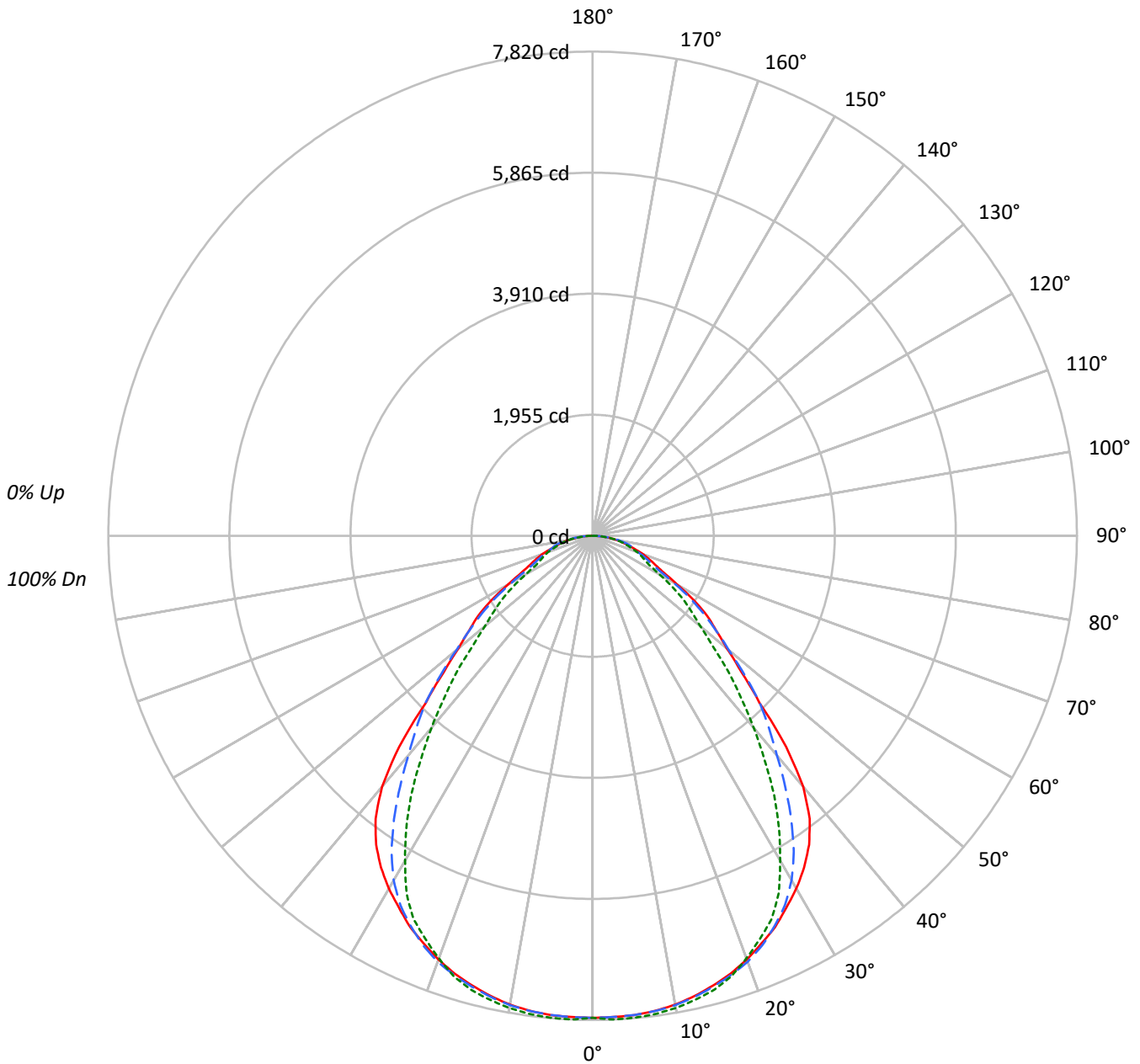
Lumens per Lamp: N/A
Luminaire Lumens: 16160.0 lumens
Efficiency: N/A
Efficacy: 137.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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: P859969

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

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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51			
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41			
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34			
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	60727	60727	60727
5°	60846	60831	61176
10°	60900	60965	61338
15°	60721	60879	61302
20°	60457	60763	60278
25°	60014	59846	58830
30°	59254	57858	54557
35°	58011	53230	48624
40°	53836	47113	41185
45°	42001	42113	34083
50°	34303	34790	27525
55°	30735	29576	24185
60°	24604	23291	19350
65°	20619	18875	17113
70°	19576	17984	17423
75°	17763	19095	16804
80°	17850	19512	17711
85°	15527	18194	14793



TEST NUMBER: P859969

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	740.3	4.6
10°-20°	2129.0	13.2
20°-30°	3178.3	19.7
30°-40°	3468.0	21.5
40°-50°	2837.0	17.6
50°-60°	1865.3	11.5
60°-70°	1070.2	6.6
70°-80°	648.5	4.0
80°-90°	217.8	1.3
90°-100°	5.7	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°	6047.5	37.4
0°-40°	9515.6	58.9
0°-60°	14217.9	88.0
0°-90°	16154.3	100.0
90°-120°	5.7	0.0
90°-150°	5.7	0.0
90°-180°	6.0	0.0
0°-180°	16160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7786	7786	7786	7786	7786	
5°	7771	7759	7769	7801	7813	739
15°	7520	7519	7539	7587	7592	2122
25°	6973	6990	6954	6870	6836	3208
35°	6092	5955	5590	5209	5106	3776
45°	3808	4092	3818	3370	3090	3022
55°	2260	2198	2175	1869	1778	1991
65°	1117	1101	1023	995	927	1142
75°	589	638	634	608	558	638
85°	174	197	203	178	165	188
90°	1	14	29	34	36	8
95°	1	2	3	3	2	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: P859969

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7785.6	7785.6	7785.6	7785.6	7785.6
2.5°	7780.4	7769.2	7779.4	7811.3	7820.5
5°	7771.2	7758.9	7769.2	7801.0	7813.3
7.5°	7739.4	7732.2	7742.5	7774.3	7789.7
10°	7689.1	7680.8	7697.3	7725.0	7744.5
12.5°	7614.1	7611.0	7626.4	7666.5	7674.7
15°	7519.6	7518.6	7539.1	7587.4	7591.5
17.5°	7412.8	7411.8	7437.5	7469.3	7458.0
20°	7283.5	7290.6	7320.4	7290.6	7261.9
22.5°	7128.4	7151.0	7158.2	7064.7	7050.4
25°	6973.3	6989.8	6953.8	6869.6	6835.7
27.5°	6773.1	6792.6	6725.9	6605.7	6509.2
30°	6579.0	6560.5	6424.0	6191.9	6057.4
32.5°	6356.2	6290.5	6045.1	5724.7	5602.5
35°	6092.3	5954.7	5590.2	5209.2	5106.5
37.5°	5758.6	5507.0	5108.6	4711.2	4556.1
40°	5287.3	4996.7	4627.0	4216.2	4044.8
42.5°	4627.0	4519.2	4213.2	3751.1	3546.7
45°	3807.6	4092.0	3817.8	3370.1	3089.8
47.5°	3259.2	3654.6	3324.9	3001.5	2615.4
50°	2826.9	3099.0	2867.0	2575.3	2268.3
52.5°	2514.8	2596.9	2503.5	2183.1	2008.5
55°	2260.1	2198.5	2174.9	1868.9	1778.5
57.5°	1943.8	1909.9	1849.4	1629.6	1510.5
60°	1577.2	1649.1	1493.0	1430.4	1240.4
62.5°	1295.9	1366.7	1199.4	1195.3	1037.1
65°	1117.2	1100.8	1022.7	995.0	927.2
67.5°	988.9	937.5	910.8	874.9	851.3
70°	858.4	836.9	788.6	795.8	764.0
72.5°	715.7	743.4	695.2	708.5	651.0
75°	589.4	637.7	633.6	607.9	557.6
77.5°	485.7	537.0	546.3	522.7	481.6
80°	397.4	432.3	434.4	420.0	394.3
82.5°	291.6	312.2	327.6	302.9	286.5
85°	173.5	197.2	203.3	177.6	165.3
87.5°	56.5	79.1	88.3	91.4	92.4
90°	1.0	14.4	28.8	33.9	35.9
92.5°	1.0	4.1	6.2	9.2	10.3
95°	1.0	2.1	3.1	3.1	2.1
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: P859969

CATALOG NUMBER: SPHB-18SE-M-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)