

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: P860248

Luminaire Tested: **SPHB-60SE-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: P860248
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-60SE-N-L940-CD
Description: 60000 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

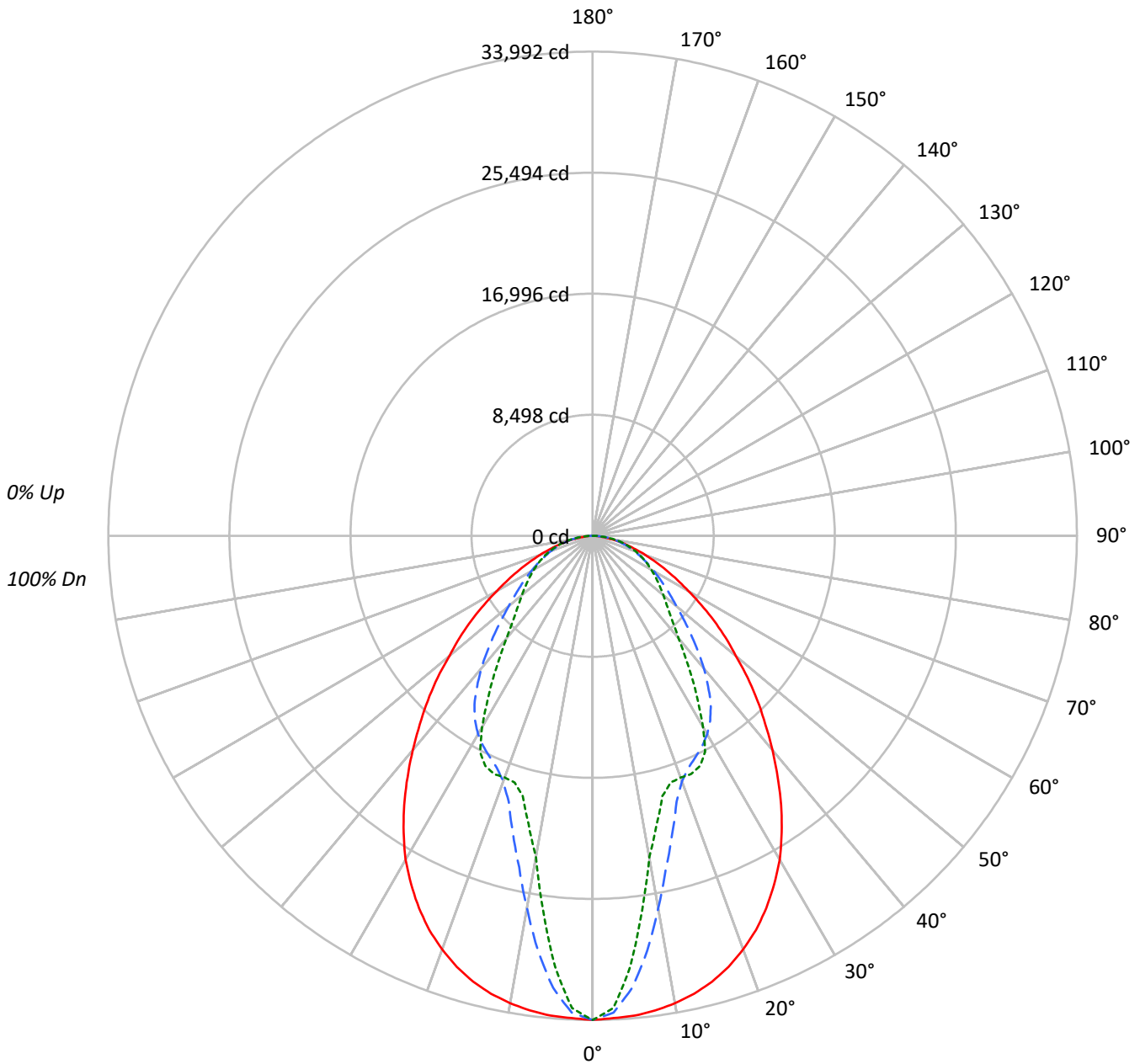
Lumens per Lamp: N/A
Luminaire Lumens: 49819.0 lumens
Efficiency: N/A
Efficacy: 132.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 376
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	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°	108252	108252	108252
5°	108126	101854	97035
10°	107757	85855	74014
15°	106860	71268	62371
20°	104707	62124	61227
25°	101342	60109	62662
30°	96552	59145	57026
35°	89648	56204	47255
40°	81633	50456	39020
45°	73688	43780	34255
50°	65029	38069	32077
55°	57704	34335	30877
60°	49452	31751	30247
65°	42805	29840	30095
70°	36631	28705	30058
75°	30748	27875	29791
80°	23463	26937	29174
85°	15361	23893	22472



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2898.1	5.8
10°-20°	6654.5	13.4
20°-30°	8993.3	18.1
30°-40°	9464.9	19.0
40°-50°	8031.3	16.1
50°-60°	6221.4	12.5
60°-70°	4333.0	8.7
70°-80°	2481.2	5.0
80°-90°	722.0	1.4
90°-100°	19.3	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°	18545.9	37.2
0°-40°	28010.8	56.2
0°-60°	42263.5	84.8
0°-90°	49799.7	100.0
90°-120°	19.3	0.0
90°-150°	19.3	0.0
90°-180°	19.0	0.0
0°-180°	49819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	33992	33992	33992	33992	33992	
5°	33824	33204	31862	30640	30354	###
15°	32412	27510	21617	19458	18918	9120
25°	28841	20374	17106	17602	17833	13240
35°	23060	15669	14457	13058	12155	14374
45°	16362	11766	9721	7988	7606	12602
55°	10393	7925	6184	5621	5561	9292
65°	5680	4650	3960	3960	3994	5674
75°	2499	2221	2266	2408	2421	2665
85°	420	545	654	615	615	534
90°	3	49	96	122	127	23
95°	3	8	16	16	13	1
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: P860248

CATALOG NUMBER: SPHB-60SE-N-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	33992.4	33992.4	33992.4	33992.4	33992.4
2.5°	33893.8	33782.2	33509.7	33333.2	33195.7
5°	33823.7	33203.5	31861.8	30639.6	30354.1
7.5°	33613.5	32251.1	29383.6	27123.3	26552.4
10°	33322.8	30883.5	26549.8	23718.6	22888.2
12.5°	32936.2	29422.5	23835.4	21167.7	20760.3
15°	32412.0	27510.0	21616.6	19457.6	18917.8
17.5°	31732.1	25532.6	19569.2	18320.9	18170.4
20°	30896.5	23718.6	18331.3	17905.7	18066.6
22.5°	29957.1	21956.6	17612.5	17791.6	18092.6
25°	28841.2	20373.6	17106.5	17602.1	17833.1
27.5°	27587.8	18943.8	16642.0	17096.1	17096.1
30°	26256.6	17752.6	16084.0	16042.5	15507.9
32.5°	24702.1	16740.6	15354.8	14532.2	13738.1
35°	23059.5	15668.8	14456.9	13058.2	12155.1
37.5°	21336.4	14672.3	13320.3	11475.2	10634.5
40°	19636.6	13688.8	12137.0	10053.2	9386.2
42.5°	17944.7	12687.1	10904.3	8901.0	8374.2
45°	16361.7	11765.9	9721.0	7987.5	7606.0
47.5°	14752.8	10787.6	8628.5	7253.1	6988.4
50°	13125.7	9796.3	7683.9	6669.2	6474.6
52.5°	11755.5	8872.4	6882.0	6116.5	5999.7
55°	10393.1	7925.2	6184.0	5620.8	5561.2
57.5°	9041.1	7042.9	5545.6	5166.7	5153.7
60°	7764.3	6217.7	4985.1	4777.5	4748.9
62.5°	6677.0	5397.7	4453.1	4354.5	4367.4
65°	5680.5	4650.3	3960.0	3960.0	3993.8
67.5°	4756.7	3962.6	3508.5	3568.2	3614.9
70°	3934.1	3339.8	3082.9	3186.7	3228.2
72.5°	3155.6	2761.1	2675.5	2789.7	2823.4
75°	2499.0	2221.4	2265.5	2408.2	2421.2
77.5°	1852.9	1749.1	1863.2	2018.9	2047.5
80°	1279.4	1289.7	1468.8	1577.8	1590.8
82.5°	825.2	900.5	1100.3	1157.4	1136.6
85°	420.4	545.0	653.9	615.0	615.0
87.5°	160.9	236.1	277.7	327.0	345.1
90°	2.6	49.3	96.0	122.0	127.2
92.5°	2.6	13.0	20.8	23.4	20.8
95°	2.6	7.8	15.6	15.6	13.0
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)