

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: P860245

Luminaire Tested: **SPHB-60SE-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: P860245
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-L840-CD
Description: 60000 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

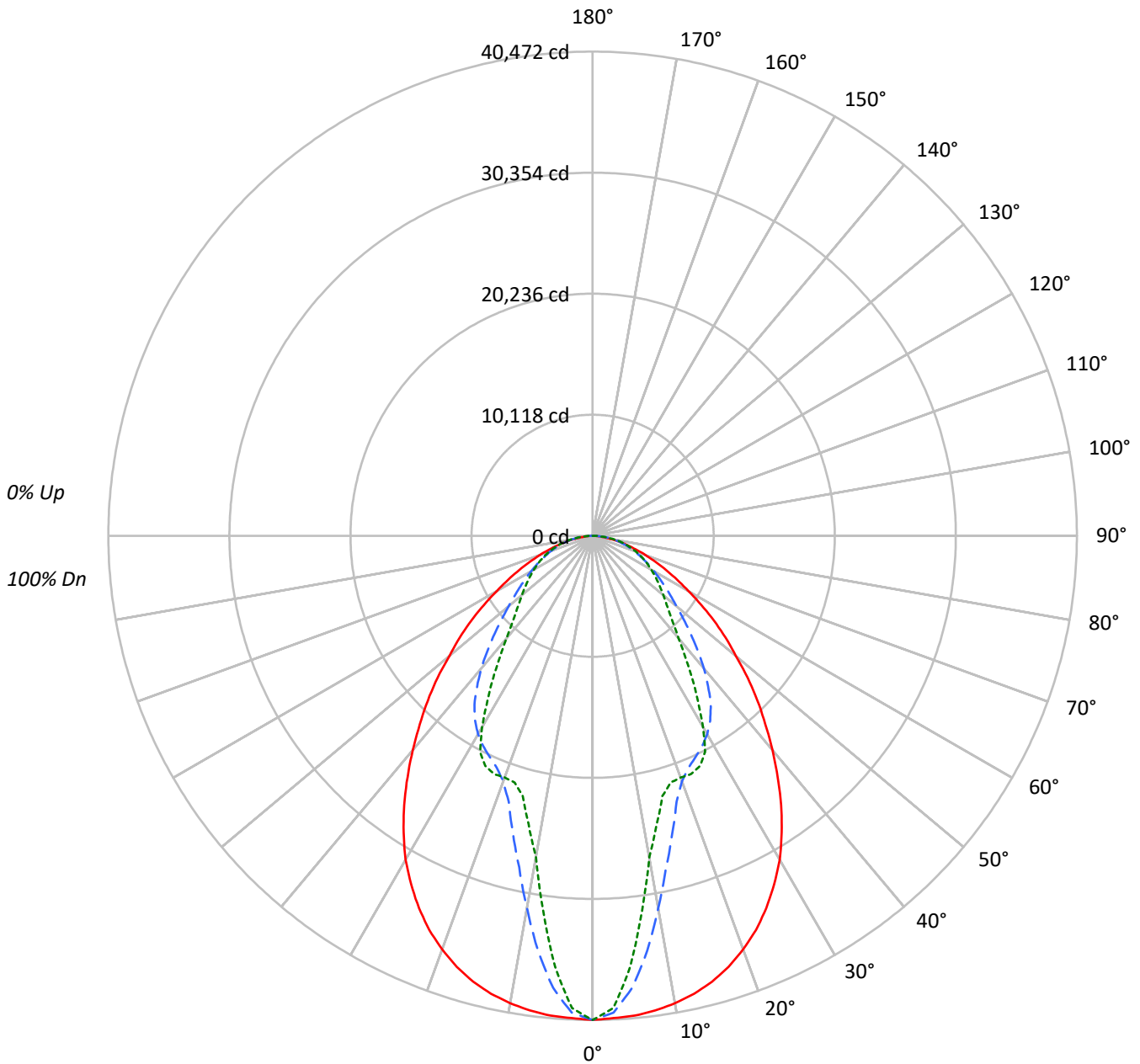
Lumens per Lamp: N/A
Luminaire Lumens: 59316.0 lumens
Efficiency: N/A
Efficacy: 157.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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									
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°	128888	128888	128888
5°	128738	121271	115532
10°	128298	102221	88123
15°	127231	84854	74260
20°	124668	73967	72899
25°	120661	71567	74607
30°	114958	70420	67897
35°	106737	66918	56263
40°	97195	60074	46459
45°	87735	52126	40785
50°	77425	45326	38193
55°	68705	40879	36763
60°	58880	37804	36013
65°	50965	35529	35831
70°	43613	34177	35788
75°	36610	33188	35470
80°	27934	32072	34735
85°	18288	28449	26758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3450.6	5.8
10°-20°	7923.1	13.4
20°-30°	10707.6	18.1
30°-40°	11269.2	19.0
40°-50°	9562.3	16.1
50°-60°	7407.4	12.5
60°-70°	5159.0	8.7
70°-80°	2954.2	5.0
80°-90°	859.7	1.4
90°-100°	22.9	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°	22081.3	37.2
0°-40°	33350.5	56.2
0°-60°	50320.2	84.8
0°-90°	59293.0	100.0
90°-120°	22.9	0.0
90°-150°	22.9	0.0
90°-180°	23.0	0.0
0°-180°	59316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	40472	40472	40472	40472	40472	
5°	40272	39533	37936	36480	36140	###
15°	38591	32754	25737	23167	22524	10859
25°	34339	24257	20368	20958	21233	15764
35°	27455	18656	17213	15548	14472	17114
45°	19481	14009	11574	9510	9056	15004
55°	12374	9436	7363	6692	6621	11063
65°	6763	5537	4715	4715	4755	6756
75°	2975	2645	2697	2867	2883	3173
85°	500	649	779	732	732	636
90°	3	59	114	145	151	28
95°	3	9	18	18	15	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



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CATALOG NUMBER: SPHB-60SE-N-L840-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	40472.3	40472.3	40472.3	40472.3	40472.3
2.5°	40354.9	40222.1	39897.6	39687.5	39523.8
5°	40271.5	39533.1	37935.7	36480.4	36140.5
7.5°	40021.2	38399.1	34985.0	32293.8	31614.1
10°	39675.2	36770.8	31611.0	28240.1	27251.4
12.5°	39214.8	35031.3	28379.1	25202.9	24717.8
15°	38590.7	32754.2	25737.4	23166.8	22524.1
17.5°	37781.2	30399.8	23299.6	21813.5	21634.3
20°	36786.3	28240.1	21825.8	21319.1	21510.7
22.5°	35667.8	26142.2	20970.0	21183.2	21541.6
25°	34339.2	24257.4	20367.5	20957.6	21232.6
27.5°	32846.9	22555.0	19814.4	20355.1	20355.1
30°	31261.9	21136.8	19150.1	19100.7	18464.2
32.5°	29411.1	19931.8	18281.9	17302.5	16357.0
35°	27455.3	18655.8	17212.9	15547.5	14472.3
37.5°	25403.7	17469.3	15859.6	13662.8	12661.7
40°	23380.0	16298.3	14450.7	11969.6	11175.5
42.5°	21365.5	15105.7	12983.0	10597.8	9970.5
45°	19480.7	14008.8	11574.1	9510.2	9056.0
47.5°	17565.1	12844.0	10273.3	8635.8	8320.6
50°	15627.8	11663.7	9148.7	7940.6	7708.9
52.5°	13996.5	10563.8	8194.0	7282.5	7143.4
55°	12374.4	9436.0	7362.8	6692.3	6621.3
57.5°	10764.6	8385.5	6602.7	6151.6	6136.2
60°	9244.5	7403.0	5935.4	5688.2	5654.2
62.5°	7949.9	6426.6	5302.0	5184.6	5200.0
65°	6763.4	5536.8	4714.9	4714.9	4755.1
67.5°	5663.5	4718.0	4177.3	4248.4	4304.0
70°	4684.0	3976.5	3670.6	3794.2	3843.6
72.5°	3757.1	3287.5	3185.5	3321.5	3361.6
75°	2975.4	2644.8	2697.3	2867.3	2882.7
77.5°	2206.1	2082.5	2218.4	2403.8	2437.8
80°	1523.2	1535.6	1748.8	1878.6	1894.0
82.5°	982.5	1072.1	1310.0	1378.0	1353.3
85°	500.5	648.8	778.6	732.3	732.3
87.5°	191.6	281.2	330.6	389.3	410.9
90°	3.1	58.7	114.3	145.2	151.4
92.5°	3.1	15.4	24.7	27.8	24.7
95°	3.1	9.3	18.5	18.5	15.4
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)