

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: P860236

Luminaire Tested: **SPHB-60SE-M-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: P860236
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-60SE-M-L840-CD
Description: 60000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

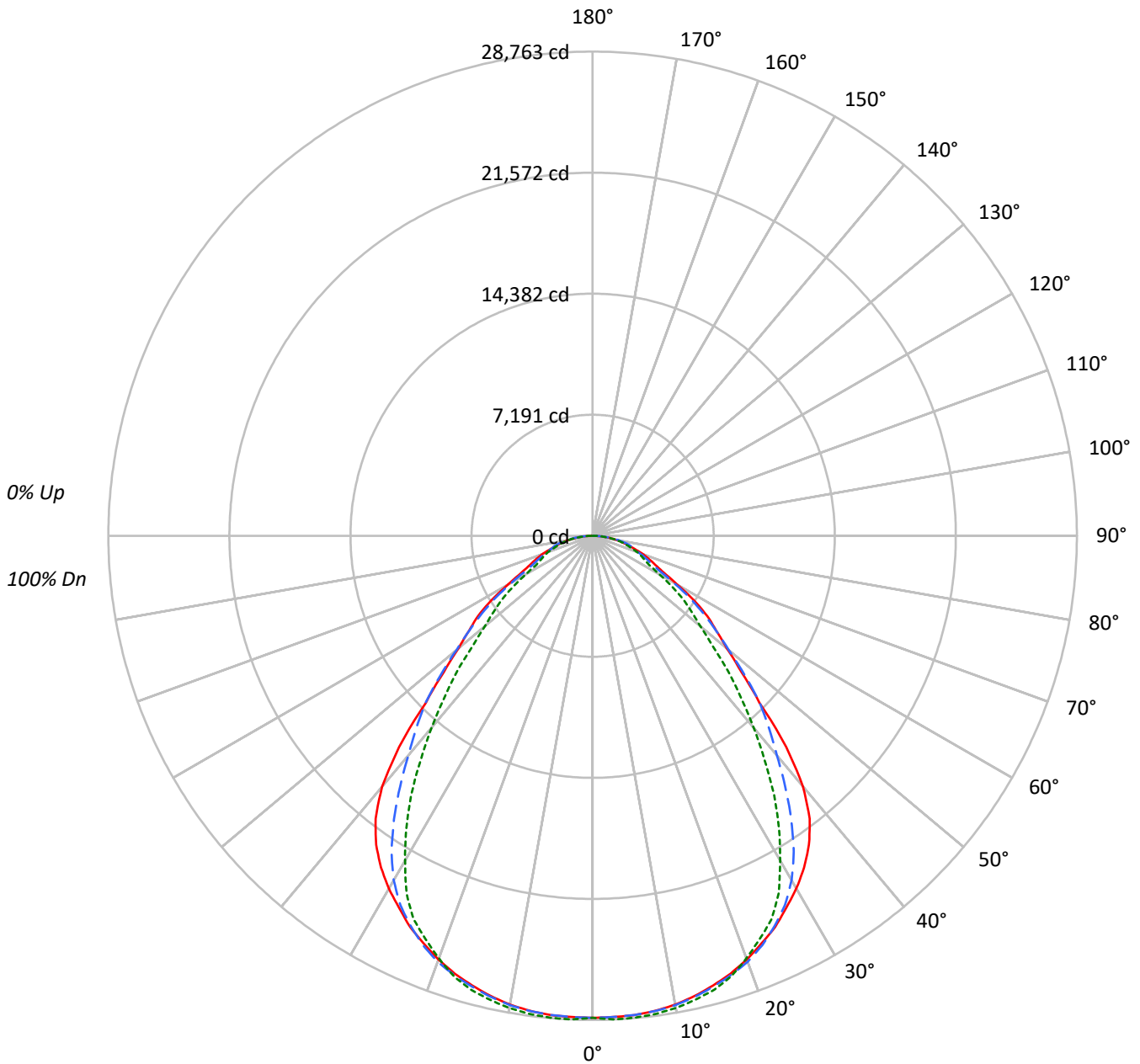
Lumens per Lamp: N/A
Luminaire Lumens: 59435.0 lumens
Efficiency: N/A
Efficacy: 158.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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	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°	91190	91190	91190
5°	91369	91345	91864
10°	91449	91546	92108
15°	91182	91418	92053
20°	90783	91244	90515
25°	90120	89868	88341
30°	88979	86882	81924
35°	87111	79931	73015
40°	80841	70745	61844
45°	63069	63239	51180
50°	51511	52241	41332
55°	46152	44412	36318
60°	36948	34975	29057
65°	30963	28345	25698
70°	29398	27007	26162
75°	26673	28672	25232
80°	26805	29297	26596
85°	23323	27324	22216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2722.7	4.6
10°-20°	7830.3	13.2
20°-30°	11689.3	19.7
30°-40°	12755.1	21.5
40°-50°	10434.2	17.6
50°-60°	6860.5	11.5
60°-70°	3936.0	6.6
70°-80°	2385.1	4.0
80°-90°	800.9	1.3
90°-100°	20.8	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°	22242.3	37.4
0°-40°	34997.4	58.9
0°-60°	52292.1	88.0
0°-90°	59414.2	100.0
90°-120°	20.8	0.0
90°-150°	20.8	0.0
90°-180°	21.0	0.0
0°-180°	59435.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	28635	28635	28635	28635	28635	
5°	28582	28536	28574	28691	28737	###
15°	27656	27653	27728	27906	27921	7806
25°	25647	25708	25576	25266	25141	11799
35°	22407	21901	20560	19159	18781	13887
45°	14004	15050	14042	12395	11364	11116
55°	8312	8086	7999	6874	6541	7321
65°	4109	4049	3762	3660	3410	4201
75°	2168	2345	2330	2236	2051	2346
85°	638	725	748	653	608	692
90°	4	53	106	125	132	30
95°	4	8	11	11	8	2
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: P860236

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	28634.7	28634.7	28634.7	28634.7	28634.7
2.5°	28615.8	28574.2	28612.0	28729.1	28763.1
5°	28581.8	28536.5	28574.2	28691.3	28736.6
7.5°	28464.7	28438.3	28476.0	28593.1	28649.8
10°	28279.7	28249.4	28309.9	28411.8	28483.6
12.5°	28004.0	27992.6	28049.3	28196.6	28226.8
15°	27656.5	27652.7	27728.3	27905.8	27920.9
17.5°	27263.7	27260.0	27354.4	27471.4	27429.9
20°	26787.9	26814.3	26923.8	26814.3	26708.6
22.5°	26217.6	26300.7	26327.1	25983.4	25930.6
25°	25647.3	25707.7	25575.6	25265.9	25141.2
27.5°	24910.9	24982.6	24737.1	24295.3	23940.3
30°	24197.1	24129.1	23626.8	22773.3	22278.5
32.5°	23377.5	23135.8	22233.2	21054.9	20605.5
35°	22406.9	21900.9	20560.2	19159.0	18781.3
37.5°	21179.5	20254.2	18788.9	17327.3	16757.1
40°	19446.0	18377.2	17017.6	15507.0	14876.3
42.5°	17017.6	16621.1	15495.6	13796.1	13044.6
45°	14003.9	15050.0	14041.6	12395.0	11364.0
47.5°	11987.1	13441.1	12228.8	11039.2	9619.2
50°	10397.2	11398.0	10544.4	9471.9	8342.6
52.5°	9249.0	9551.2	9207.5	8029.2	7387.2
55°	8312.4	8085.8	7999.0	6873.5	6541.2
57.5°	7149.2	7024.6	6801.8	5993.6	5555.5
60°	5801.0	6065.3	5491.3	5260.9	4562.2
62.5°	4766.1	5026.7	4411.1	4396.0	3814.4
65°	4109.0	4048.6	3761.6	3659.6	3410.3
67.5°	3636.9	3448.1	3349.9	3217.7	3130.9
70°	3157.3	3078.0	2900.5	2926.9	2809.8
72.5°	2632.3	2734.3	2556.8	2605.9	2394.4
75°	2167.8	2345.3	2330.2	2235.8	2050.7
77.5°	1786.4	1975.2	2009.2	1922.3	1771.3
80°	1461.6	1590.0	1597.5	1544.7	1450.2
82.5°	1072.6	1148.1	1204.8	1114.1	1053.7
85°	638.3	725.1	747.8	653.4	608.0
87.5°	207.7	290.8	324.8	336.1	339.9
90°	3.8	52.9	105.7	124.6	132.2
92.5°	3.8	15.1	22.7	34.0	37.8
95°	3.8	7.6	11.3	11.3	7.6
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)