

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: P860210

Luminaire Tested: **SPHB-60HE-M-L850-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: P860210
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-60HE-M-L850-CD
Description: 60000 Lumen High Efficacy Select Pro High Bay with Medium Lens and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

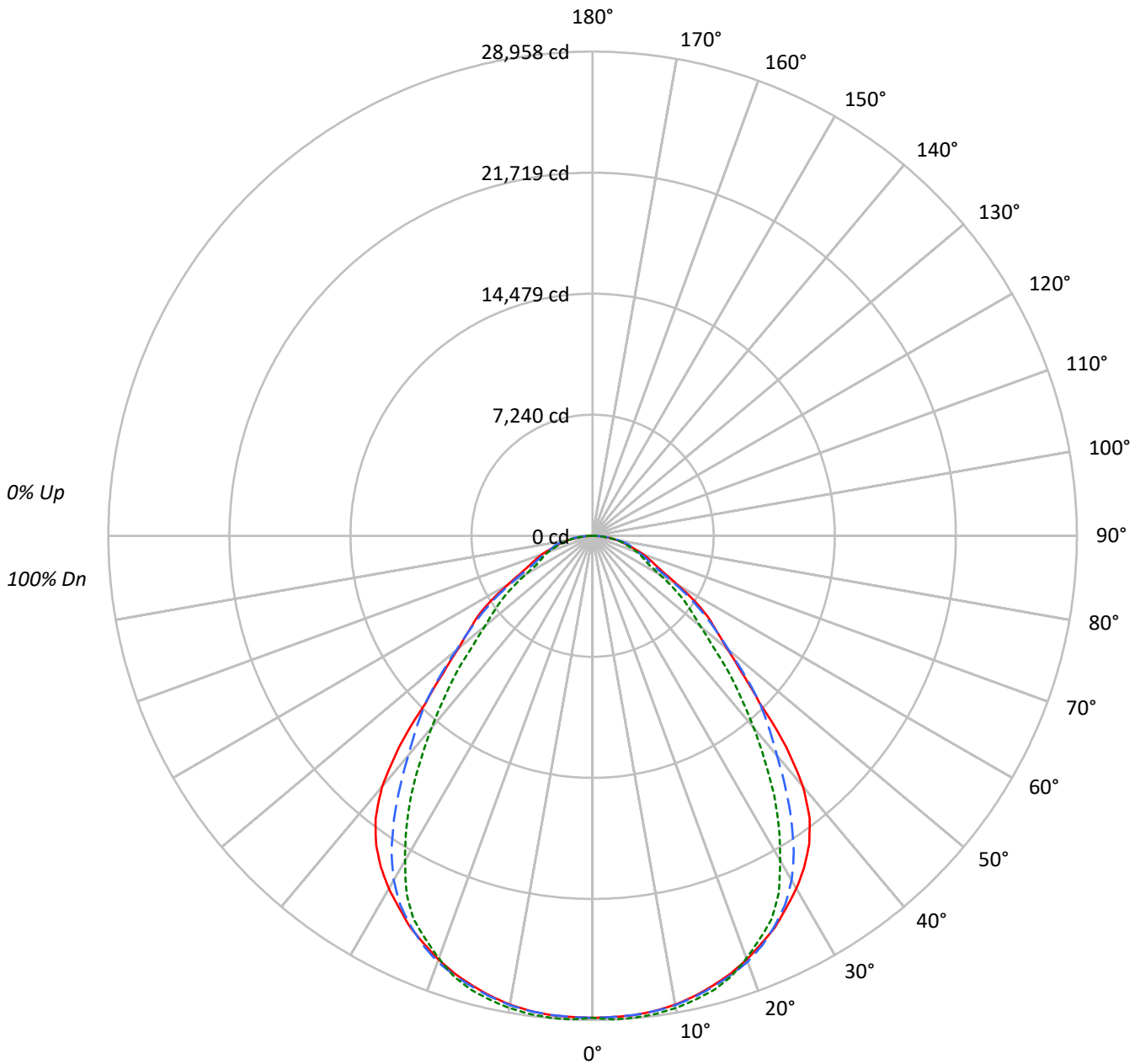
Lumens per Lamp: N/A
Luminaire Lumens: 59838.0 lumens
Efficiency: N/A
Efficacy: 164.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 363
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	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°	91808	91808	91808
5°	91989	91964	92487
10°	92068	92167	92732
15°	91800	92038	92677
20°	91399	91863	91128
25°	90731	90477	88940
30°	89582	87471	82479
35°	87701	80473	73511
40°	81389	71225	62263
45°	63497	63668	51527
50°	51861	52595	41613
55°	46465	44713	36564
60°	37198	35212	29254
65°	31173	28537	25873
70°	29597	27189	26340
75°	26854	28866	25403
80°	26986	29497	26777
85°	23480	27507	22369



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2741.1	4.6
10°-20°	7883.4	13.2
20°-30°	11768.6	19.7
30°-40°	12841.6	21.5
40°-50°	10505.0	17.6
50°-60°	6907.0	11.5
60°-70°	3962.7	6.6
70°-80°	2401.3	4.0
80°-90°	806.3	1.3
90°-100°	21.0	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°	22393.1	37.4
0°-40°	35234.7	58.9
0°-60°	52646.7	88.0
0°-90°	59817.0	100.0
90°-120°	21.0	0.0
90°-150°	21.0	0.0
90°-180°	21.0	0.0
0°-180°	59838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	28829	28829	28829	28829	28829	
5°	28776	28730	28768	28886	28932	###
15°	27844	27840	27916	28095	28110	7859
25°	25821	25882	25749	25437	25312	11879
35°	22559	22049	20700	19289	18909	13982
45°	14099	15152	14137	12479	11441	11191
55°	8369	8141	8053	6920	6586	7371
65°	4137	4076	3787	3684	3434	4229
75°	2182	2361	2346	2251	2065	2362
85°	643	730	753	658	612	697
90°	4	53	106	126	133	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	28828.8	28828.8	28828.8	28828.8	28828.8
2.5°	28809.8	28768.0	28806.0	28923.9	28958.1
5°	28775.6	28730.0	28768.0	28885.8	28931.5
7.5°	28657.7	28631.1	28669.1	28787.0	28844.0
10°	28471.4	28441.0	28501.8	28604.5	28676.7
12.5°	28193.8	28182.4	28239.5	28387.8	28418.2
15°	27844.0	27840.2	27916.3	28095.0	28110.2
17.5°	27448.6	27444.8	27539.8	27657.7	27615.9
20°	26969.5	26996.1	27106.4	26996.1	26889.7
22.5°	26395.4	26479.0	26505.6	26159.6	26106.4
25°	25821.2	25882.1	25749.0	25437.2	25311.7
27.5°	25079.8	25152.0	24904.9	24460.0	24102.6
30°	24361.1	24292.7	23787.0	22927.7	22429.6
32.5°	23536.1	23292.7	22384.0	21197.7	20745.2
35°	22558.9	22049.4	20699.6	19288.9	18908.7
37.5°	21323.1	20391.6	18916.3	17444.8	16870.7
40°	19577.9	18501.8	17133.0	15612.1	14977.1
42.5°	17133.0	16733.8	15600.7	13889.7	13133.0
45°	14098.8	15152.0	14136.8	12479.1	11441.0
47.5°	12068.4	13532.3	12311.8	11114.0	9684.4
50°	10467.7	11475.3	10615.9	9536.1	8399.2
52.5°	9311.8	9615.9	9269.9	8083.6	7437.2
55°	8368.8	8140.7	8053.2	6920.1	6585.5
57.5°	7197.7	7072.2	6847.9	6034.2	5593.1
60°	5840.3	6106.4	5528.5	5296.6	4593.1
62.5°	4798.5	5060.8	4441.1	4425.8	3840.3
65°	4136.9	4076.0	3787.1	3684.4	3433.5
67.5°	3661.6	3471.5	3372.6	3239.5	3152.1
70°	3178.7	3098.9	2920.1	2946.8	2828.9
72.5°	2650.2	2752.8	2574.1	2623.6	2410.6
75°	2182.5	2361.2	2346.0	2250.9	2064.6
77.5°	1798.5	1988.6	2022.8	1935.4	1783.3
80°	1471.5	1600.8	1608.4	1555.1	1460.1
82.5°	1079.8	1155.9	1212.9	1121.7	1060.8
85°	642.6	730.0	752.8	657.8	612.2
87.5°	209.1	292.8	327.0	338.4	342.2
90°	3.8	53.2	106.5	125.5	133.1
92.5°	3.8	15.2	22.8	34.2	38.0
95°	3.8	7.6	11.4	11.4	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)