

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: P860239

Luminaire Tested: **SPHB-60SE-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: P860239
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-L940-CD
Description: 60000 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

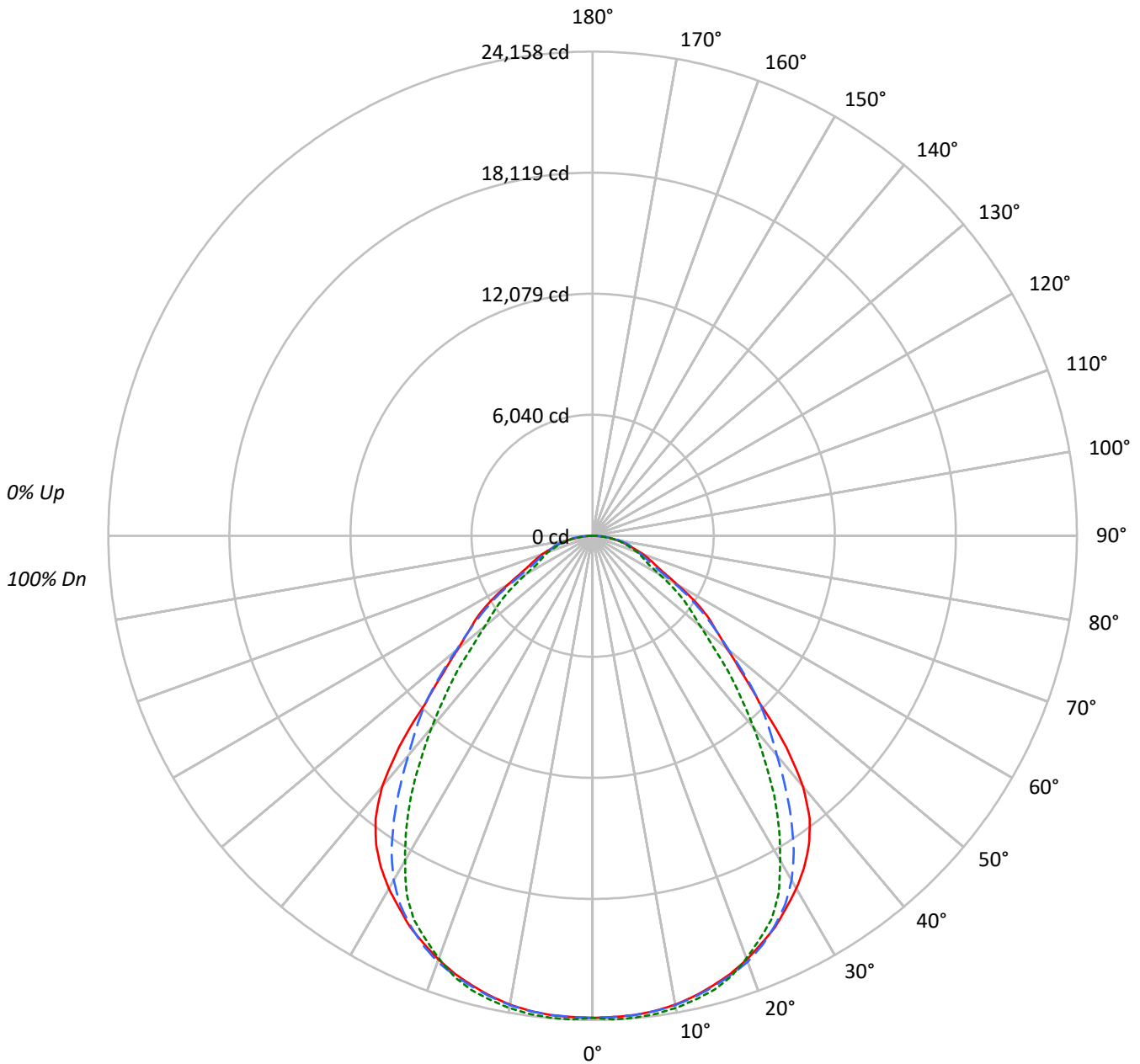
Lumens per Lamp: N/A
Luminaire Lumens: 49919.0 lumens
Efficiency: N/A
Efficacy: 132.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	76589	76589	76589
5°	76740	76720	77156
10°	76807	76889	77361
15°	76583	76782	77315
20°	76248	76635	76022
25°	75691	75479	74197
30°	74732	72971	68807
35°	73164	67133	61325
40°	67898	59419	51942
45°	52971	53114	42985
50°	43264	43877	34715
55°	38763	37301	30503
60°	31032	29375	24405
65°	26005	23807	21584
70°	24691	22683	21974
75°	22402	24081	21193
80°	22513	24608	22337
85°	19589	22950	18661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2286.7	4.6
10°-20°	6576.6	13.2
20°-30°	9817.8	19.7
30°-40°	10712.9	21.5
40°-50°	8763.6	17.6
50°-60°	5762.1	11.5
60°-70°	3305.9	6.6
70°-80°	2003.3	4.0
80°-90°	672.7	1.3
90°-100°	17.5	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°	18681.1	37.4
0°-40°	29394.0	58.9
0°-60°	43919.8	88.0
0°-90°	49901.5	100.0
90°-120°	17.5	0.0
90°-150°	17.5	0.0
90°-180°	17.0	0.0
0°-180°	49919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	24050	24050	24050	24050	24050	
5°	24006	23968	23999	24098	24136	###
15°	23228	23225	23289	23438	23450	6556
25°	21541	21592	21481	21221	21116	9910
35°	18819	18394	17268	16092	15774	11664
45°	11762	12640	11794	10410	9544	9336
55°	6982	6791	6718	5773	5494	6149
65°	3451	3400	3159	3074	2864	3528
75°	1821	1970	1957	1878	1722	1971
85°	536	609	628	549	511	581
90°	3	44	89	105	111	25
95°	3	6	10	10	6	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	24050.0	24050.0	24050.0	24050.0	24050.0
2.5°	24034.2	23999.3	24031.0	24129.3	24157.9
5°	24005.6	23967.6	23999.3	24097.6	24135.7
7.5°	23907.3	23885.1	23916.8	24015.1	24062.7
10°	23751.9	23726.5	23777.2	23862.9	23923.1
12.5°	23520.3	23510.8	23558.4	23682.1	23707.5
15°	23228.5	23225.3	23288.8	23437.8	23450.5
17.5°	22898.6	22895.4	22974.7	23073.1	23038.2
20°	22498.9	22521.1	22613.1	22521.1	22432.3
22.5°	22020.0	22089.7	22111.9	21823.3	21778.9
25°	21541.0	21591.7	21480.7	21220.6	21115.9
27.5°	20922.4	20982.7	20776.5	20405.4	20107.2
30°	20322.9	20265.8	19844.0	19127.1	18711.6
32.5°	19634.6	19431.6	18673.5	17683.8	17306.4
35°	18819.4	18394.4	17268.3	16091.5	15774.3
37.5°	17788.5	17011.4	15780.7	14553.1	14074.1
40°	16332.6	15434.9	14293.0	13024.2	12494.5
42.5°	14293.0	13959.9	13014.7	11587.3	10956.1
45°	11761.7	12640.4	11793.5	10410.5	9544.5
47.5°	10067.9	11289.1	10270.9	9271.7	8079.1
50°	8732.5	9573.1	8856.2	7955.4	7006.9
52.5°	7768.2	8022.0	7733.3	6743.7	6204.4
55°	6981.6	6791.2	6718.3	5773.0	5493.9
57.5°	6004.6	5899.9	5712.8	5033.9	4666.0
60°	4872.2	5094.2	4612.1	4418.6	3831.8
62.5°	4003.1	4221.9	3704.9	3692.2	3203.7
65°	3451.1	3400.4	3159.3	3073.7	2864.3
67.5°	3054.6	2896.0	2813.6	2702.5	2629.6
70°	2651.8	2585.2	2436.1	2458.3	2360.0
72.5°	2210.9	2296.5	2147.4	2188.7	2011.0
75°	1820.7	1969.8	1957.1	1877.8	1722.4
77.5°	1500.4	1659.0	1687.5	1614.5	1487.7
80°	1227.6	1335.4	1341.8	1297.3	1218.0
82.5°	900.8	964.3	1011.9	935.7	885.0
85°	536.1	609.0	628.1	548.8	510.7
87.5°	174.5	244.2	272.8	282.3	285.5
90°	3.2	44.4	88.8	104.7	111.0
92.5°	3.2	12.7	19.0	28.5	31.7
95°	3.2	6.3	9.5	9.5	6.3
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)