

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: P860209

Luminaire Tested: **SPHB-60HE-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: P860209
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-L840-CD
Description: 60000 Lumen High Efficacy Select Pro High Bay with Medium Lens and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

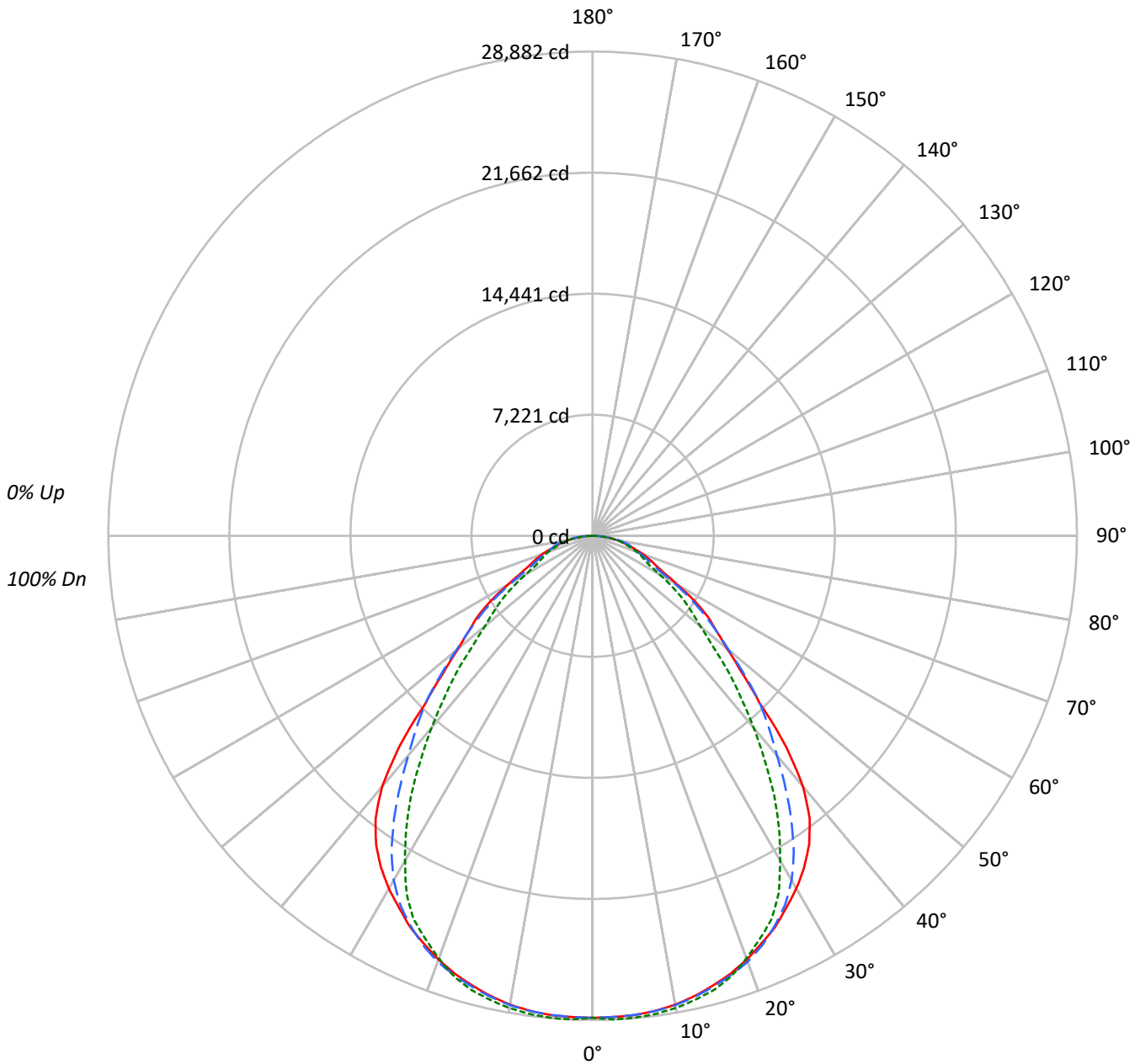
Lumens per Lamp: N/A
Luminaire Lumens: 59681.0 lumens
Efficiency: N/A
Efficacy: 164.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P860209

CATALOG NUMBER: SPHB-60HE-M-L840-CD

Luminous Intensity Polar Plot





TEST NUMBER: P860209

CATALOG NUMBER: SPHB-60HE-M-L840-CD

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°	91567	91567	91567
5°	91747	91723	92244
10°	91827	91925	92489
15°	91559	91796	92434
20°	91159	91622	90889
25°	90493	90239	88707
30°	89347	87241	82263
35°	87471	80262	73318
40°	81175	71038	62099
45°	63330	63501	51392
50°	51724	52457	41504
55°	46343	44596	36468
60°	37100	35120	29178
65°	31091	28462	25804
70°	29520	27119	26271
75°	26784	28790	25337
80°	26915	29418	26706
85°	23418	27437	22311



TEST NUMBER: P860209

CATALOG NUMBER: SPHB-60HE-M-L840-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2733.9	4.6
10°-20°	7862.7	13.2
20°-30°	11737.7	19.7
30°-40°	12807.9	21.5
40°-50°	10477.4	17.6
50°-60°	6888.9	11.5
60°-70°	3952.3	6.6
70°-80°	2395.0	4.0
80°-90°	804.2	1.3
90°-100°	20.9	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°	22334.4	37.4
0°-40°	35142.2	58.9
0°-60°	52508.6	88.0
0°-90°	59660.1	100.0
90°-120°	20.9	0.0
90°-150°	20.9	0.0
90°-180°	21.0	0.0
0°-180°	59681.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	28753	28753	28753	28753	28753	
5°	28700	28655	28692	28810	28856	###
15°	27771	27767	27843	28021	28036	7839
25°	25754	25814	25681	25370	25245	11848
35°	22500	21992	20645	19238	18859	13945
45°	14062	15112	14100	12446	11411	11162
55°	8347	8119	8032	6902	6568	7351
65°	4126	4065	3777	3675	3424	4218
75°	2177	2355	2340	2245	2059	2356
85°	641	728	751	656	611	695
90°	4	53	106	125	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



TEST NUMBER: P860209

CATALOG NUMBER: SPHB-60HE-M-L840-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	28753.2	28753.2	28753.2	28753.2	28753.2
2.5°	28734.2	28692.5	28730.4	28848.0	28882.1
5°	28700.1	28654.6	28692.5	28810.1	28855.6
7.5°	28582.5	28556.0	28593.9	28711.5	28768.3
10°	28396.7	28366.4	28427.0	28529.4	28601.5
12.5°	28119.9	28108.5	28165.4	28313.3	28343.6
15°	27771.0	27767.2	27843.0	28021.3	28036.4
17.5°	27376.6	27372.8	27467.6	27585.1	27543.4
20°	26898.7	26925.3	27035.3	26925.3	26819.1
22.5°	26326.1	26409.5	26436.1	26091.0	26037.9
25°	25753.5	25814.1	25681.4	25370.4	25245.3
27.5°	25014.0	25086.0	24839.5	24395.8	24039.4
30°	24297.2	24229.0	23724.6	22867.5	22370.7
32.5°	23474.3	23231.6	22325.2	21142.0	20690.8
35°	22499.7	21991.5	20645.2	19238.3	18859.1
37.5°	21267.2	20338.1	18866.7	17399.0	16826.4
40°	19526.5	18453.3	17088.1	15571.2	14937.8
42.5°	17088.1	16689.9	15559.8	13853.3	13098.6
45°	14061.8	15112.3	14099.8	12446.3	11411.0
47.5°	12036.7	13496.8	12279.4	11084.9	9659.0
50°	10440.2	11445.1	10588.1	9511.1	8377.2
52.5°	9287.3	9590.7	9245.6	8062.4	7417.7
55°	8346.8	8119.3	8032.1	6902.0	6568.3
57.5°	7178.8	7053.7	6829.9	6018.4	5578.5
60°	5825.0	6090.4	5514.0	5282.7	4581.1
62.5°	4785.9	5047.5	4429.4	4414.2	3830.2
65°	4126.0	4065.3	3777.1	3674.7	3424.4
67.5°	3652.0	3462.4	3363.8	3231.0	3143.8
70°	3170.4	3090.7	2912.5	2939.0	2821.5
72.5°	2643.2	2745.6	2567.4	2616.7	2404.3
75°	2176.8	2355.0	2339.8	2245.0	2059.2
77.5°	1793.8	1983.4	2017.5	1930.3	1778.6
80°	1467.6	1596.6	1604.1	1551.0	1456.2
82.5°	1077.0	1152.9	1209.7	1118.7	1058.1
85°	640.9	728.1	750.9	656.1	610.6
87.5°	208.6	292.0	326.1	337.5	341.3
90°	3.8	53.1	106.2	125.1	132.7
92.5°	3.8	15.2	22.8	34.1	37.9
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



TEST NUMBER: P860209

CATALOG NUMBER: SPHB-60HE-M-L840-CD

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)