

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: P860218

Luminaire Tested: **SPHB-60HE-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: P860218
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-60HE-N-L840-CD
Description: 60000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

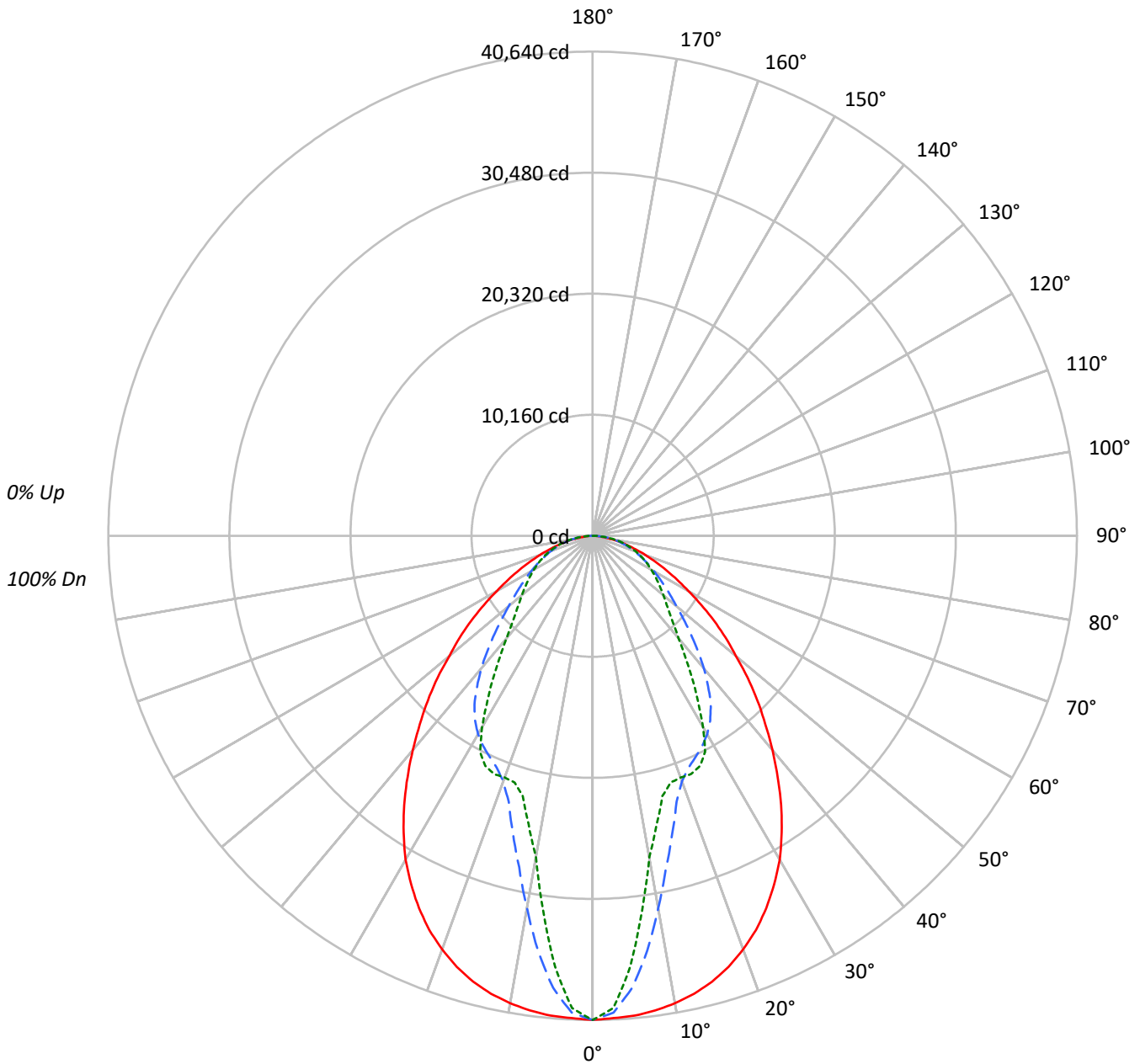
Lumens per Lamp: N/A
Luminaire Lumens: 59562.0 lumens
Efficiency: N/A
Efficacy: 164.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 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					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	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°	129422	129422	129422
5°	129272	121774	116012
10°	128830	102645	88489
15°	127758	85207	74568
20°	125185	74274	73201
25°	121162	71864	74917
30°	115434	70712	68179
35°	107180	67196	56497
40°	97598	60323	46652
45°	88099	52342	40954
50°	77747	45514	38351
55°	68990	41049	36915
60°	59124	37960	36162
65°	51177	35676	35980
70°	43795	34319	35937
75°	36762	33326	35617
80°	28052	32204	34880
85°	18365	28566	26867



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3464.9	5.8
10°-20°	7955.9	13.4
20°-30°	10752.0	18.1
30°-40°	11315.9	19.0
40°-50°	9602.0	16.1
50°-60°	7438.1	12.5
60°-70°	5180.4	8.7
70°-80°	2966.4	5.0
80°-90°	863.2	1.4
90°-100°	23.0	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°	22172.9	37.2
0°-40°	33488.8	56.2
0°-60°	50528.9	84.8
0°-90°	59538.9	100.0
90°-120°	23.0	0.0
90°-150°	23.0	0.0
90°-180°	23.0	0.0
0°-180°	59562.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	40640	40640	40640	40640	40640	
5°	40438	39697	38093	36632	36290	###
15°	38751	32890	25844	23263	22618	10904
25°	34482	24358	20452	21044	21321	15829
35°	27569	18733	17284	15612	14532	17185
45°	19562	14067	11622	9550	9094	15066
55°	12426	9475	7393	6720	6649	11109
65°	6792	5560	4734	4734	4775	6784
75°	2988	2656	2708	2879	2895	3186
85°	503	652	782	735	735	639
90°	3	59	115	146	152	28
95°	3	9	19	19	16	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



TEST NUMBER: P860218

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	40640.2	40640.2	40640.2	40640.2	40640.2
2.5°	40522.3	40388.9	40063.1	39852.1	39687.7
5°	40438.5	39697.0	38093.0	36631.7	36290.4
7.5°	40187.2	38558.4	35130.1	32427.8	31745.2
10°	39839.7	36923.3	31742.1	28357.2	27364.4
12.5°	39377.4	35176.6	28496.8	25307.4	24820.3
15°	38750.7	32890.0	25844.2	23262.9	22617.5
17.5°	37937.9	30525.9	23396.3	21903.9	21724.0
20°	36938.9	28357.2	21916.3	21407.5	21599.9
22.5°	35815.7	26250.6	21056.9	21271.0	21630.9
25°	34481.6	24358.0	20451.9	21044.5	21320.7
27.5°	32983.1	22648.5	19896.6	20439.5	20439.5
30°	31391.5	21224.5	19229.5	19179.9	18540.8
32.5°	29533.1	20014.5	18357.7	17374.2	16424.9
35°	27569.2	18733.1	17284.3	15612.0	14532.3
37.5°	25509.1	17541.8	15925.3	13719.4	12714.2
40°	23476.9	16365.9	14510.6	12019.2	11221.9
42.5°	21454.1	15168.3	13036.9	10641.7	10011.9
45°	19561.5	14066.9	11622.1	9549.6	9093.5
47.5°	17637.9	12897.3	10315.9	8671.6	8355.1
50°	15692.7	11712.1	9186.6	7973.5	7740.8
52.5°	14054.5	10607.6	8227.9	7312.7	7173.1
55°	12425.7	9475.2	7393.4	6720.1	6648.7
57.5°	10809.3	8420.3	6630.1	6177.2	6161.6
60°	9282.8	7433.7	5960.0	5711.8	5677.6
62.5°	7982.8	6453.3	5324.0	5206.1	5221.6
65°	6791.5	5559.8	4734.5	4734.5	4774.8
67.5°	5687.0	4737.6	4194.6	4266.0	4321.8
70°	4703.5	3993.0	3685.8	3809.9	3859.6
72.5°	3772.7	3301.1	3198.7	3335.2	3375.6
75°	2987.7	2655.8	2708.5	2879.2	2894.7
77.5°	2215.2	2091.1	2227.6	2413.8	2447.9
80°	1529.6	1542.0	1756.0	1886.3	1901.9
82.5°	986.6	1076.6	1315.5	1383.7	1358.9
85°	502.6	651.5	781.8	735.3	735.3
87.5°	192.4	282.3	332.0	390.9	412.6
90°	3.1	58.9	114.8	145.8	152.0
92.5°	3.1	15.5	24.8	27.9	24.8
95°	3.1	9.3	18.6	18.6	15.5
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)