

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: P859840

Luminaire Tested: **SPHB-12HE-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: P859840  
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-12HE-N-L840-CD  
Description: 12000 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**

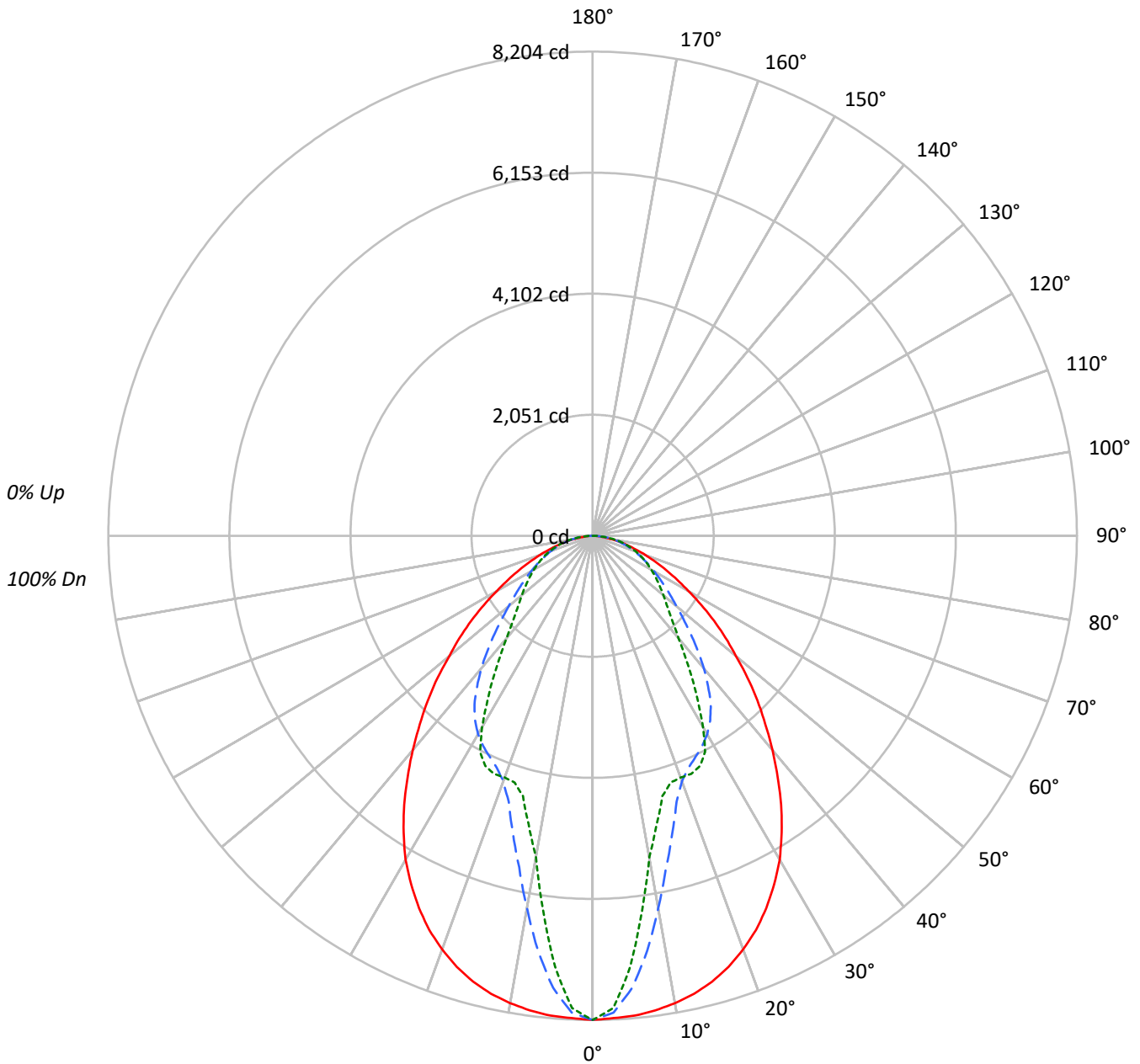
Lumens per Lamp: N/A  
Luminaire Lumens: 12023.0 lumens  
Efficiency: N/A  
Efficacy: 169.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 71.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	63987	63987	63987
5°	63913	60205	57357
10°	63694	50748	43749
15°	63164	42126	36867
20°	61892	36722	36191
25°	59903	35530	37039
30°	57071	34960	33708
35°	52990	33221	27932
40°	48253	29824	23064
45°	43556	25878	20248
50°	38439	22502	18960
55°	34108	20295	18251
60°	29231	18768	17879
65°	25302	17639	17788
70°	21652	16967	17768
75°	18175	16476	17609
80°	13871	15923	17244
85°	9084	14122	13281



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	699.4	5.8
10°-20°	1606.0	13.4
20°-30°	2170.4	18.1
30°-40°	2284.2	19.0
40°-50°	1938.2	16.1
50°-60°	1501.4	12.5
60°-70°	1045.7	8.7
70°-80°	598.8	5.0
80°-90°	174.2	1.4
90°-100°	4.6	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°	4475.8	37.2
0°-40°	6760.0	56.2
0°-60°	10199.6	84.8
0°-90°	12018.4	100.0
90°-120°	4.6	0.0
90°-150°	4.6	0.0
90°-180°	5.0	0.0
0°-180°	12023.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8204	8204	8204	8204	8204	
5°	8163	8013	7689	7394	7326	775
15°	7822	6639	5217	4696	4566	2201
25°	6960	4917	4128	4248	4304	3195
35°	5565	3781	3489	3151	2933	3469
45°	3949	2840	2346	1928	1836	3041
55°	2508	1913	1492	1356	1342	2242
65°	1371	1122	956	956	964	1369
75°	603	536	547	581	584	643
85°	102	132	158	148	148	129
90°	1	12	23	29	31	6
95°	1	2	4	4	3	0
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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CATALOG NUMBER: SPHB-12HE-N-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8203.5	8203.5	8203.5	8203.5	8203.5
2.5°	8179.7	8152.8	8087.0	8044.4	8011.2
5°	8162.8	8013.1	7689.3	7394.4	7325.5
7.5°	8112.1	7783.3	7091.2	6545.8	6408.0
10°	8041.9	7453.2	6407.4	5724.1	5523.7
12.5°	7948.6	7100.6	5752.3	5108.5	5010.2
15°	7822.1	6639.1	5216.8	4695.8	4565.5
17.5°	7658.0	6161.9	4722.7	4421.5	4385.1
20°	7456.4	5724.1	4424.0	4321.3	4360.1
22.5°	7229.7	5298.9	4250.5	4293.7	4366.3
25°	6960.4	4916.8	4128.4	4248.0	4303.7
27.5°	6657.9	4571.8	4016.3	4125.9	4125.9
30°	6336.6	4284.3	3881.6	3871.6	3742.6
32.5°	5961.5	4040.1	3705.6	3507.1	3315.5
35°	5565.0	3781.4	3488.9	3151.4	2933.4
37.5°	5149.2	3540.9	3214.6	2769.4	2566.5
40°	4739.0	3303.6	2929.1	2426.2	2265.2
42.5°	4330.7	3061.8	2631.6	2148.1	2021.0
45°	3948.6	2839.5	2346.0	1927.7	1835.6
47.5°	3560.3	2603.4	2082.3	1750.4	1686.5
50°	3167.7	2364.2	1854.4	1609.5	1562.5
52.5°	2837.0	2141.2	1660.9	1476.1	1447.9
55°	2508.2	1912.6	1492.4	1356.5	1342.1
57.5°	2181.9	1699.7	1338.3	1246.9	1243.8
60°	1873.8	1500.5	1203.1	1153.0	1146.1
62.5°	1611.4	1302.6	1074.7	1050.9	1054.0
65°	1370.9	1122.3	955.7	955.7	963.8
67.5°	1148.0	956.3	846.7	861.1	872.4
70°	949.4	806.0	744.0	769.1	779.1
72.5°	761.5	666.4	645.7	673.2	681.4
75°	603.1	536.1	546.7	581.2	584.3
77.5°	447.2	422.1	449.7	487.2	494.1
80°	308.8	311.3	354.5	380.8	383.9
82.5°	199.2	217.3	265.5	279.3	274.3
85°	101.5	131.5	157.8	148.4	148.4
87.5°	38.8	57.0	67.0	78.9	83.3
90°	0.6	11.9	23.2	29.4	30.7
92.5°	0.6	3.1	5.0	5.6	5.0
95°	0.6	1.9	3.8	3.8	3.1
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)