

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: P860110

Luminaire Tested: **SPHB-36HE-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: P860110  
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-36HE-N-L840-CD  
Description: 36000 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**

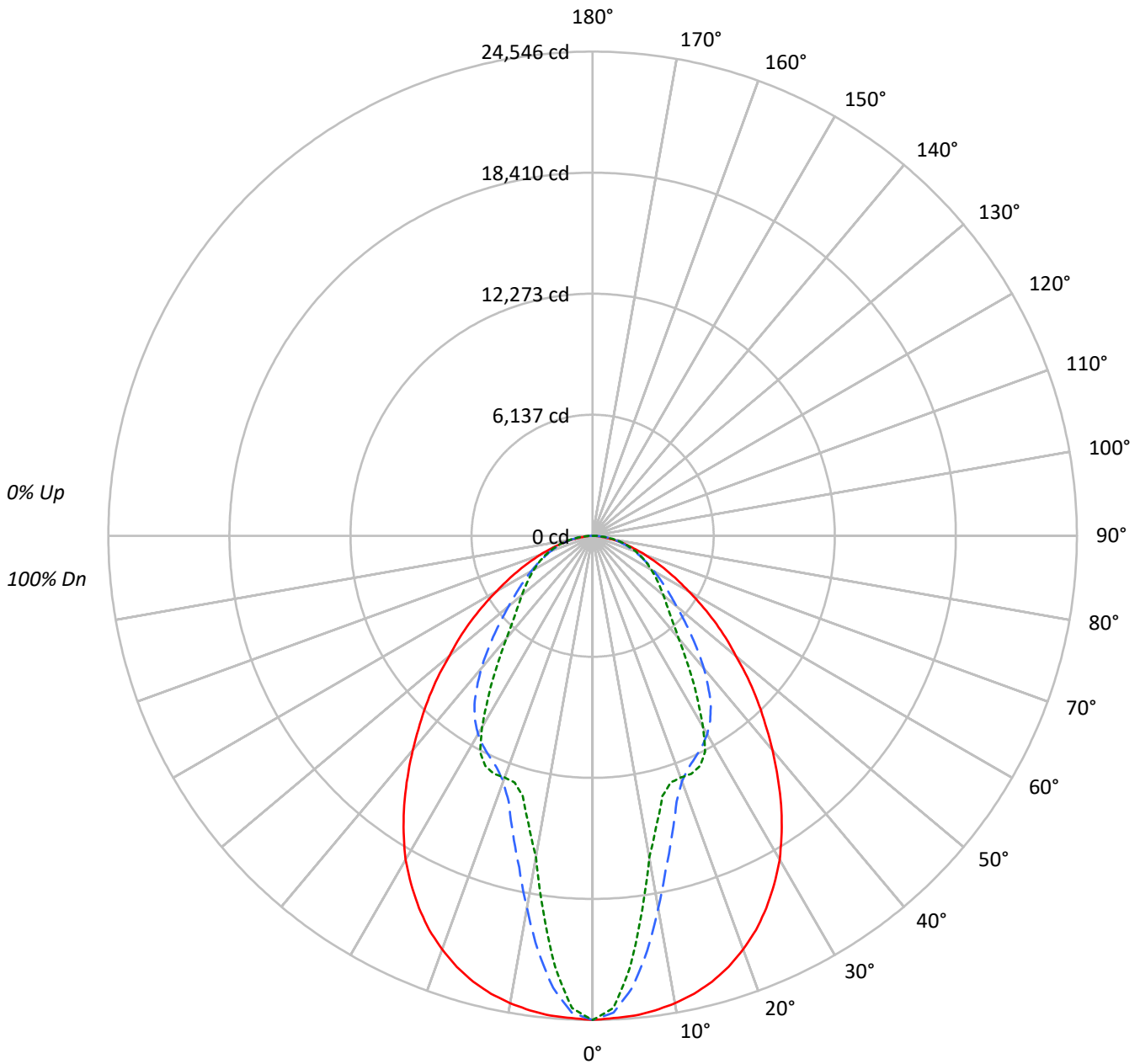
Lumens per Lamp: N/A  
Luminaire Lumens: 35974.0 lumens  
Efficiency: N/A  
Efficacy: 166.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 2.04' x H: 0')  
CIE Type: Direct

Input Watts (W): 216  
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°	129514	129514	129514
5°	129363	121860	116093
10°	128921	102718	88551
15°	127849	85266	74621
20°	125273	74326	73253
25°	121247	71915	74970
30°	115516	70762	68227
35°	107255	67243	56537
40°	97667	60365	46684
45°	88161	52379	40984
50°	77802	45546	38378
55°	69038	41078	36941
60°	59166	37987	36188
65°	51213	35701	36006
70°	43826	34343	35962
75°	36788	33350	35642
80°	28070	32227	34904
85°	18380	28587	26886



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2092.7	5.8
10°-20°	4805.2	13.4
20°-30°	6494.0	18.1
30°-40°	6834.6	19.0
40°-50°	5799.4	16.1
50°-60°	4492.4	12.5
60°-70°	3128.8	8.7
70°-80°	1791.6	5.0
80°-90°	521.4	1.4
90°-100°	13.9	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°	13391.9	37.2
0°-40°	20226.4	56.2
0°-60°	30518.2	84.8
0°-90°	35960.1	100.0
90°-120°	13.9	0.0
90°-150°	13.9	0.0
90°-180°	14.0	0.0
0°-180°	35974.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	24546	24546	24546	24546	24546	
5°	24424	23976	23007	22125	21918	###
15°	23404	19865	15609	14050	13660	6586
25°	20826	14712	12352	12710	12877	9560
35°	16651	11314	10439	9429	8777	10379
45°	11815	8496	7020	5768	5492	9100
55°	7505	5723	4465	4059	4016	6710
65°	4102	3358	2860	2860	2884	4097
75°	1804	1604	1636	1739	1748	1924
85°	304	394	472	444	444	386
90°	2	36	69	88	92	17
95°	2	6	11	11	9	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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CATALOG NUMBER: SPHB-36HE-N-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	24545.7	24545.7	24545.7	24545.7	24545.7
2.5°	24474.5	24393.9	24197.1	24069.7	23970.4
5°	24423.9	23976.0	23007.2	22124.7	21918.5
7.5°	24272.1	23288.3	21217.7	19585.6	19173.3
10°	24062.2	22300.8	19171.5	17127.1	16527.4
12.5°	23783.0	21245.8	17211.4	15285.1	14990.9
15°	23404.5	19864.8	15609.2	14050.2	13660.4
17.5°	22913.6	18436.9	14130.8	13229.4	13120.8
20°	22310.2	17127.1	13236.9	12929.6	13045.8
22.5°	21631.8	15854.7	12717.9	12847.2	13064.5
25°	20826.1	14711.7	12352.5	12710.4	12877.2
27.5°	19921.0	13679.2	12017.1	12345.0	12345.0
30°	18959.7	12819.1	11614.2	11584.2	11198.2
32.5°	17837.3	12088.3	11087.6	10493.6	9920.2
35°	16651.1	11314.4	10439.3	9429.3	8777.2
37.5°	15406.9	10594.8	9618.5	8286.2	7679.1
40°	14179.5	9884.6	8764.0	7259.3	6777.7
42.5°	12957.7	9161.3	7874.0	6427.3	6046.9
45°	11814.7	8496.1	7019.5	5767.7	5492.3
47.5°	10652.9	7789.6	6230.6	5237.4	5046.3
50°	9478.0	7073.8	5548.5	4815.8	4675.3
52.5°	8488.6	6406.7	4969.5	4416.7	4332.4
55°	7504.8	5722.8	4465.4	4058.8	4015.7
57.5°	6528.5	5085.7	4004.4	3730.9	3721.5
60°	5606.6	4489.8	3599.7	3449.8	3429.2
62.5°	4821.4	3897.6	3215.5	3144.3	3153.7
65°	4101.9	3358.0	2859.5	2859.5	2883.9
67.5°	3434.8	2861.4	2533.5	2576.6	2610.3
70°	2840.8	2411.7	2226.1	2301.1	2331.1
72.5°	2278.6	1993.8	1931.9	2014.4	2038.8
75°	1804.5	1604.0	1635.9	1738.9	1748.3
77.5°	1337.9	1263.0	1345.4	1457.9	1478.5
80°	923.8	931.3	1060.6	1139.3	1148.7
82.5°	595.9	650.2	794.5	835.7	820.8
85°	303.6	393.5	472.2	444.1	444.1
87.5°	116.2	170.5	200.5	236.1	249.2
90°	1.9	35.6	69.3	88.1	91.8
92.5°	1.9	9.4	15.0	16.9	15.0
95°	1.9	5.6	11.2	11.2	9.4
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)