

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: P417710

Luminaire Tested: **VHB-1824-N-UNV-L840-CD-U-LEVEL1**

Issue Date: 11/17/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P417710  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 11/17/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB-1824-N-UNV-L840-CD-U-LEVEL1  
Description: VHB LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18408.0 lumens  
Efficiency: N/A  
Efficacy: 146.7 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.74 / 0.88  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

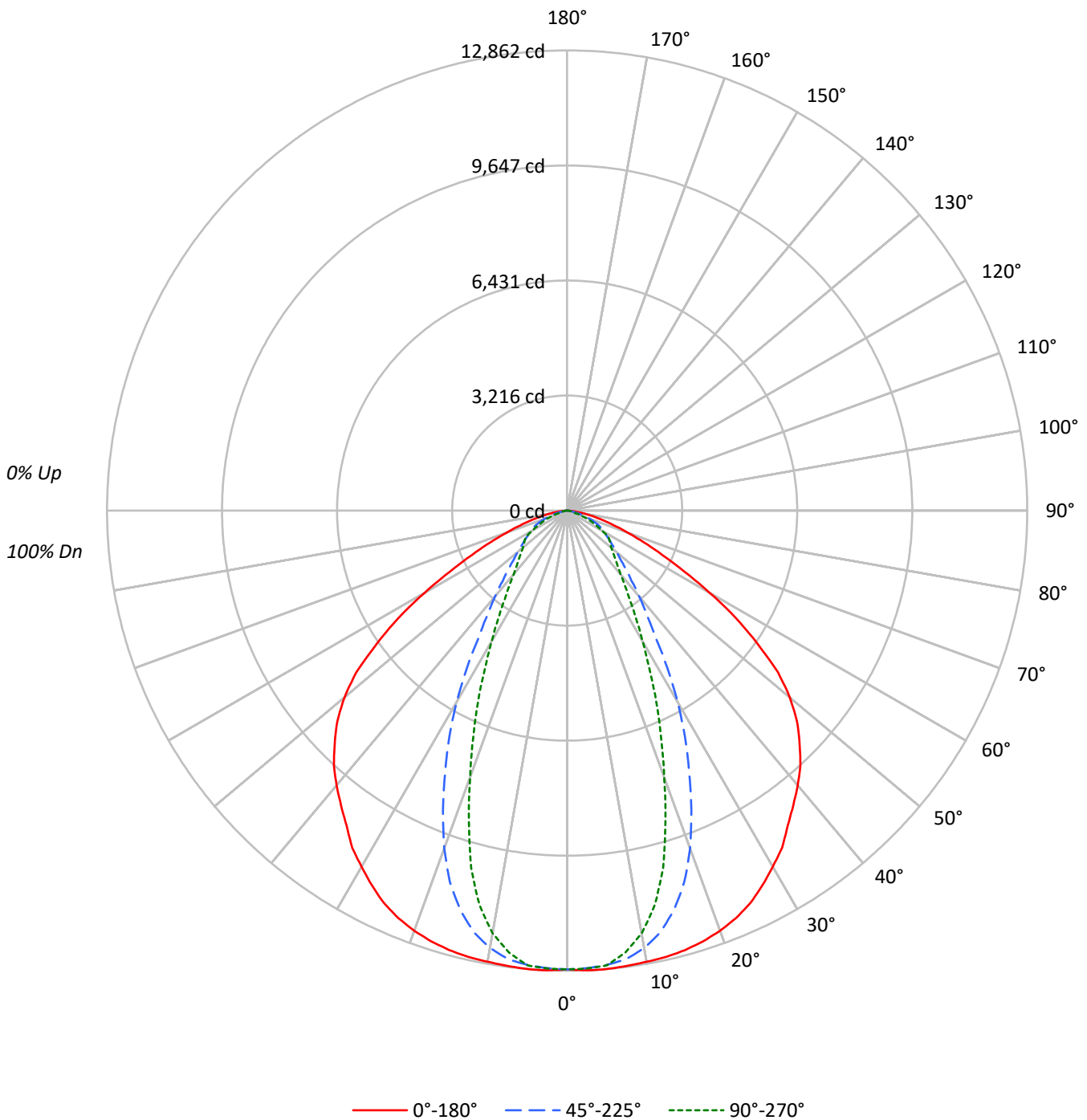
Input Watts (W): 125.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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				100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78				78
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69				69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62				62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55				55
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50				50
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46				46
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42				42
9	65	53	46	41	63	52	45	41	51	45	40	50	44	40	49	44	40	38				38
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36				36

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	78881	78881	78881
5°	79417	78709	78796
10°	79980	77528	74934
15°	80985	73531	65911
20°	81805	65775	51878
25°	82182	54736	39975
30°	81631	43809	29925
35°	80699	32228	22907
40°	80502	25151	18631
45°	79932	20236	16519
50°	77767	17246	15407
55°	69714	15514	15545
60°	56649	14585	13984
65°	42733	14138	11368
70°	32412	11718	7776
75°	24530	8807	4168
80°	17718	4339	3422
85°	11390	3726	2879



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1206.7	6.6
10°-20°	3206.9	17.4
20°-30°	3923.1	21.3
30°-40°	3519.8	19.1
40°-50°	2729.0	14.8
50°-60°	2025.5	11.0
60°-70°	1221.7	6.6
70°-80°	487.3	2.6
80°-90°	88.0	0.5
90°-100°	0.0	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°	8336.7	45.3
0°-40°	11856.5	64.4
0°-60°	16611.0	90.2
0°-90°	18408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18408.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12825	12825	12825	12825	12825	
5°	12862	12782	12748	12711	12762	###
15°	12718	12370	11547	10688	10351	3594
25°	12109	10774	8065	6398	5890	5570
35°	10747	7899	4292	3279	3051	6745
45°	9189	4150	2326	1948	1899	7072
55°	6501	2218	1447	1398	1450	5776
65°	2936	1230	971	829	781	2995
75°	1032	599	371	195	175	1132
85°	161	67	53	45	41	212
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12824.6	12824.6	12824.6	12824.6	12824.6
2.5°	12861.5	12784.8	12803.7	12803.7	12807.7
5°	12862.5	12781.8	12747.9	12711.0	12761.9
7.5°	12833.6	12739.9	12646.3	12489.9	12457.0
10°	12805.7	12669.2	12413.1	12113.3	11997.7
12.5°	12777.8	12569.6	12068.4	11501.5	11302.2
15°	12718.0	12370.3	11547.3	10688.5	10350.8
17.5°	12625.4	12089.3	10890.8	9654.3	9135.3
20°	12497.8	11740.6	10048.9	8497.6	7925.7
22.5°	12330.5	11326.2	9067.5	7391.7	6861.7
25°	12109.3	10774.2	8065.2	6398.4	5890.2
27.5°	11815.4	10156.5	7124.7	5471.8	4966.7
30°	11493.5	9488.0	6168.2	4595.0	4213.4
32.5°	11177.7	8759.6	5206.8	3857.7	3584.8
35°	10747.3	7898.8	4292.1	3278.9	3050.7
37.5°	10381.6	6971.2	3637.6	2823.6	2659.2
40°	10026.0	5985.9	3132.4	2468.9	2320.4
42.5°	9651.3	5010.5	2665.2	2167.0	2079.3
45°	9189.1	4149.7	2326.4	1947.8	1899.0
47.5°	8713.8	3514.0	2017.5	1782.4	1744.6
50°	8127.0	2977.0	1802.3	1619.0	1610.1
52.5°	7423.6	2556.6	1604.1	1497.5	1516.4
55°	6501.0	2217.8	1446.7	1397.8	1449.6
57.5°	5598.3	1917.9	1307.2	1322.1	1366.0
60°	4605.0	1648.9	1185.6	1211.5	1136.8
62.5°	3691.4	1431.7	1080.0	1006.3	944.5
65°	2936.2	1230.5	971.4	828.9	781.1
67.5°	2310.5	1049.1	820.0	678.5	618.7
70°	1802.3	884.7	651.6	528.0	432.4
72.5°	1374.9	739.3	516.1	319.8	256.1
75°	1032.2	598.8	370.6	195.3	175.4
77.5°	739.3	449.3	216.2	142.5	134.5
80°	500.2	293.9	122.5	104.6	96.6
82.5°	311.8	162.4	83.7	73.7	68.7
85°	161.4	66.8	52.8	44.8	40.8
87.5°	56.8	29.9	23.9	18.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)