

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: P470138

Luminaire Tested: **VHB2-18-N-UNV-L840-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470138  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-18-N-UNV-L840-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

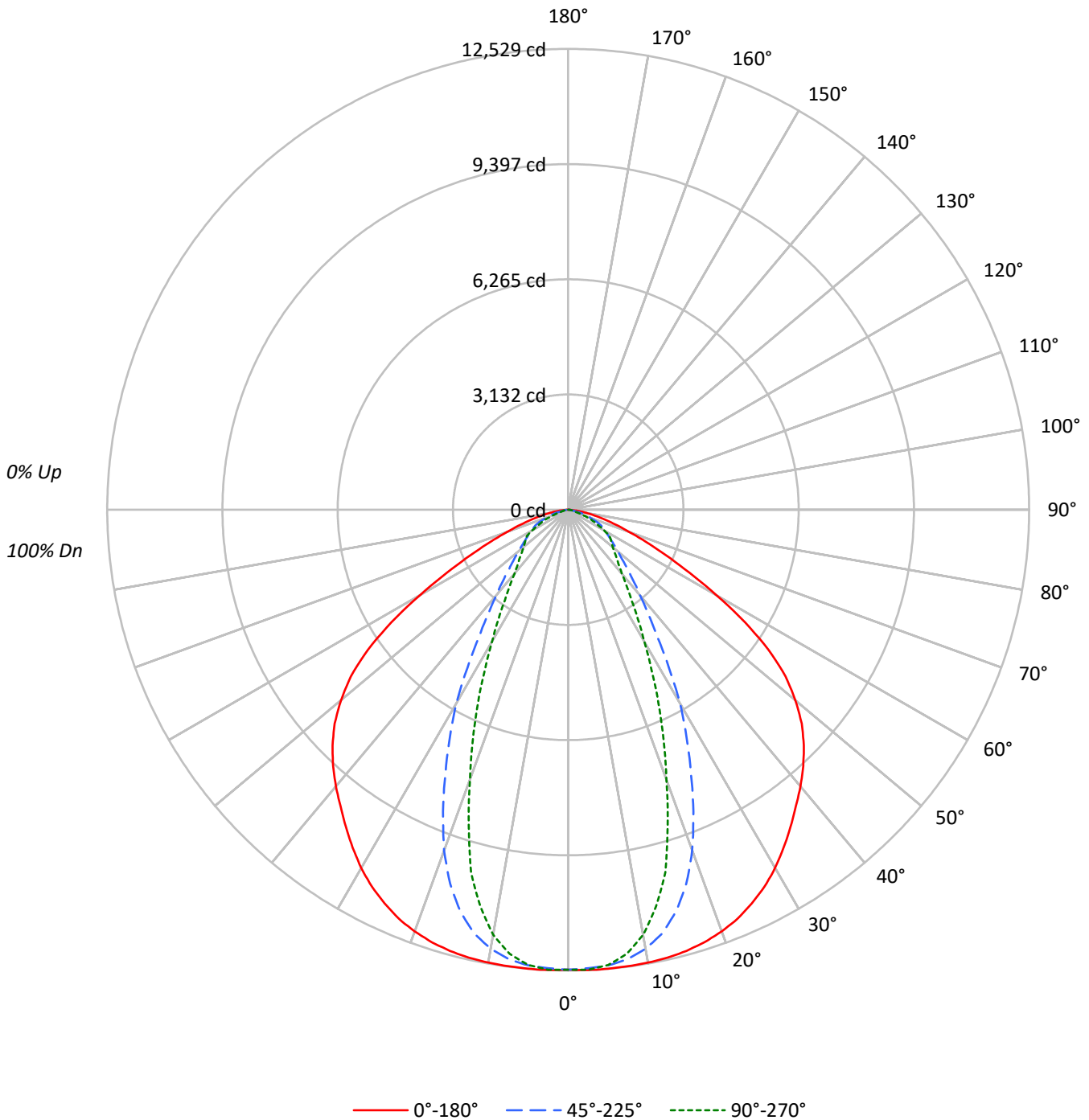
Lumens per Lamp: N/A  
Luminaire Lumens: 18062.6 lumens  
Efficiency: N/A  
Efficacy: 147.7 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.75 / 0.88  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 122.3  
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	65	58	53	64	57	53	62	57	52	61	56	52	50				50
7	73	61	54	48	71	60	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°	76924	76924	76924
5°	77351	76787	76727
10°	78090	75690	73304
15°	79076	72055	64963
20°	79859	64529	51072
25°	80144	53580	39410
30°	79888	43141	29344
35°	79097	31734	22510
40°	78853	24366	18239
45°	78788	19690	16200
50°	77150	16900	15118
55°	71316	15127	15152
60°	57172	14283	13829
65°	42474	13933	11176
70°	31862	11457	7591
75°	24007	8677	4118
80°	17452	4236	3468
85°	11214	3627	2773



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1178.4	6.5
10°-20°	3140.0	17.4
20°-30°	3846.4	21.3
30°-40°	3454.3	19.1
40°-50°	2676.3	14.8
50°-60°	2002.7	11.1
60°-70°	1201.6	6.7
70°-80°	476.5	2.6
80°-90°	86.4	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°	8164.8	45.2
0°-40°	11619.1	64.3
0°-60°	16298.1	90.2
0°-90°	18062.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18062.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12506	12506	12506	12506	12506	
5°	12528	12473	12436	12433	12427	###
15°	12418	12092	11316	10479	10202	3509
25°	11809	10572	7895	6312	5807	5440
35°	10534	7790	4226	3239	2998	6598
45°	9058	4059	2264	1908	1862	6964
55°	6650	2154	1411	1366	1413	5837
65°	2918	1196	957	813	768	2989
75°	1010	584	365	192	173	1114
85°	159	63	51	44	39	211
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12506.3	12506.3	12506.3	12506.3	12506.3
2.5°	12528.8	12483.1	12476.6	12507.9	12516.8
5°	12528.0	12472.6	12436.5	12433.3	12426.9
7.5°	12517.6	12444.5	12328.2	12235.9	12181.4
10°	12503.1	12374.7	12118.8	11853.2	11736.8
12.5°	12475.8	12265.6	11798.6	11287.5	11041.9
15°	12418.1	12092.3	11315.6	10478.6	10201.8
17.5°	12329.0	11832.3	10666.4	9456.4	8991.8
20°	12200.6	11504.1	9858.4	8383.6	7802.6
22.5°	12035.3	11081.3	8885.1	7236.1	6765.9
25°	11809.0	10572.5	7894.9	6312.5	5807.0
27.5°	11556.3	10000.4	6960.9	5344.8	4902.7
30°	11248.2	9304.7	6074.2	4497.5	4131.6
32.5°	10897.5	8588.2	5098.5	3776.9	3523.4
35°	10534.0	7789.8	4226.3	3239.3	2997.8
37.5°	10161.7	6883.9	3568.3	2777.9	2603.8
40°	9820.7	5873.6	3034.7	2410.4	2271.6
42.5°	9454.8	4925.2	2623.9	2116.8	2031.7
45°	9057.6	4058.6	2263.6	1908.1	1862.4
47.5°	8609.0	3423.9	1982.7	1748.4	1705.9
50°	8062.6	2907.9	1766.1	1582.3	1579.9
52.5°	7448.8	2502.7	1573.5	1462.0	1482.8
55°	6650.4	2153.7	1410.6	1366.5	1413.0
57.5°	5701.1	1868.8	1277.4	1292.7	1329.6
60°	4647.5	1612.0	1161.1	1173.9	1124.2
62.5°	3716.0	1387.4	1056.0	988.6	925.2
65°	2918.4	1195.6	957.3	812.8	767.9
67.5°	2275.6	1018.3	801.6	666.8	610.6
70°	1771.7	865.0	637.1	511.1	422.1
72.5°	1353.7	719.8	502.3	313.7	238.3
75°	1010.2	584.2	365.1	191.8	173.3
77.5°	733.4	437.3	203.8	140.4	130.8
80°	492.7	295.3	119.6	102.7	97.9
82.5°	313.7	154.9	82.6	72.2	66.6
85°	158.9	63.4	51.4	44.1	39.3
87.5°	55.4	30.5	23.3	18.5	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)