

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: P470178

Luminaire Tested: **VHB2-18-W-UNV-L835-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470178  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-18-W-UNV-L835-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

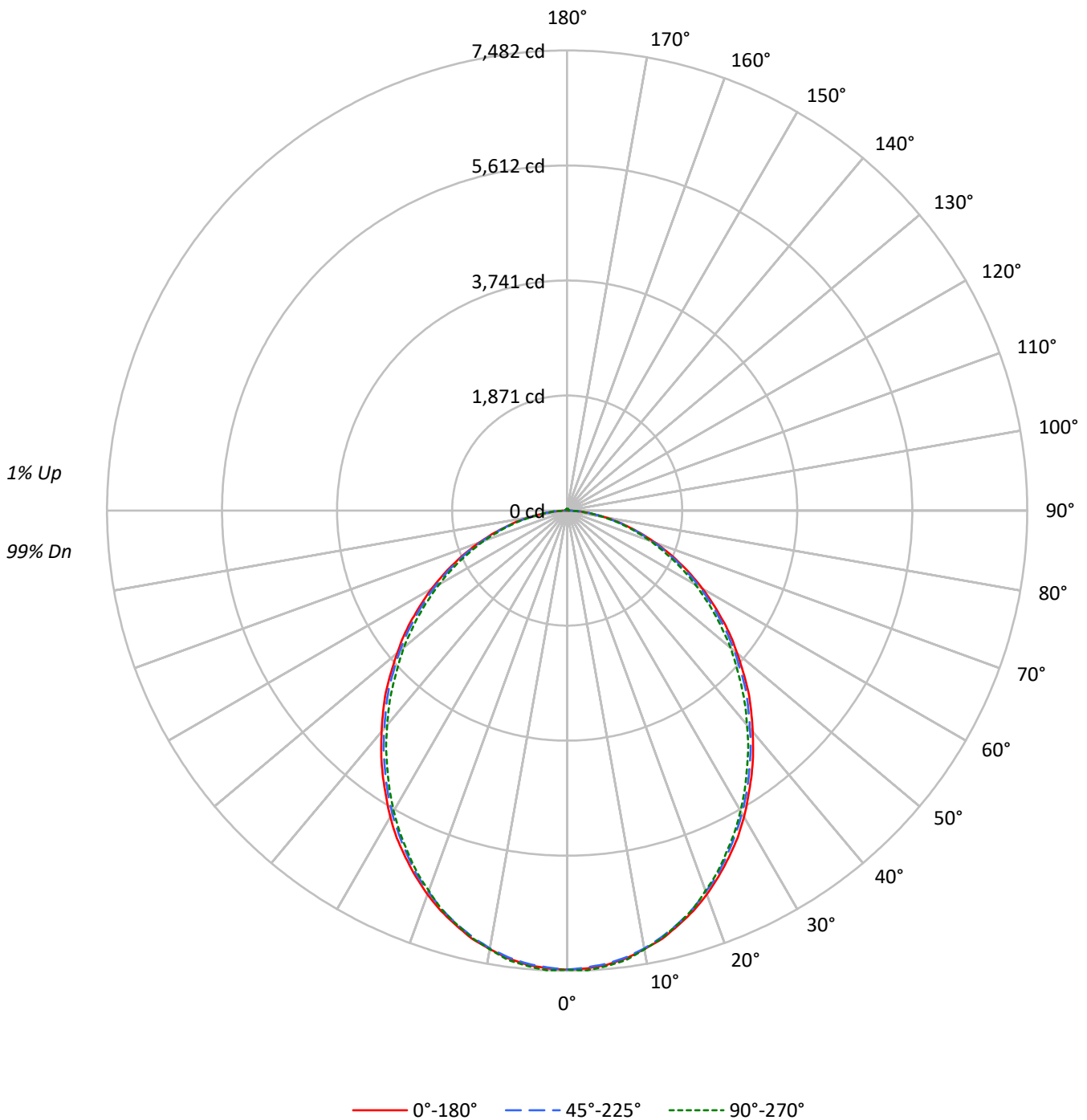
Lumens per Lamp: N/A  
Luminaire Lumens: 18062.6 lumens  
Efficiency: N/A  
Efficacy: 147.7 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99								
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84								
2	100	92	85	79	97	90	84	78	86	81	76	83	78	75	79	76	73	71								
3	91	81	73	67	89	79	72	66	76	70	65	73	68	64	71	66	62	60								
4	84	72	63	57	81	71	63	57	68	61	56	66	60	55	63	58	54	52								
5	77	65	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45								
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	46	42	40								
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	37	35								
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32								
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29								
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26								

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

	0°	45°	90°
0°	45913	45913	45913
5°	45774	45658	45890
10°	45224	45136	45235
15°	44450	44299	44323
20°	43481	43167	43050
25°	42218	41842	41593
30°	40850	40382	40055
35°	39270	38762	38295
40°	37682	37101	36527
45°	36260	35687	34796
50°	34499	33969	33176
55°	32976	32261	31384
60°	31272	30578	29583
65°	29431	28719	27693
70°	27270	26763	25834
75°	24844	24509	23660
80°	22213	21844	21079
85°	18843	18843	18377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	701.8	3.9
10°-20°	1960.4	10.9
20°-30°	2840.5	15.7
30°-40°	3230.8	17.9
40°-50°	3150.4	17.4
50°-60°	2689.6	14.9
60°-70°	1952.6	10.8
70°-80°	1090.3	6.0
80°-90°	306.1	1.7
90°-100°	21.7	0.1
100°-110°	21.5	0.1
110°-120°	21.1	0.1
120°-130°	20.2	0.1
130°-140°	19.2	0.1
140°-150°	16.5	0.1
150°-160°	11.6	0.1
160°-170°	6.4	0.0
170°-180°	1.9	0.0
0°-30°	5502.7	30.5
0°-40°	8733.5	48.4
0°-60°	14573.6	80.7
0°-90°	17922.5	99.2
90°-120°	64.3	0.4
90°-150°	120.2	0.7
90°-180°	140.0	0.8
0°-180°	18062.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7464	7464	7464	7464	7464	
5°	7414	7397	7395	7420	7432	702
15°	6980	6968	6957	6956	6961	1967
25°	6221	6199	6165	6143	6129	2864
35°	5230	5213	5162	5114	5100	3271
45°	4168	4129	4103	4026	4000	3208
55°	3075	3062	3008	2945	2927	2751
65°	2022	2007	1973	1927	1903	2005
75°	1045	1051	1031	1006	996	1118
85°	267	273	267	260	260	292
90°	19	21	24	29	27	22
95°	8	14	21	24	25	8
105°	16	16	20	24	26	17
115°	19	19	21	24	25	18
125°	20	22	22	24	24	18
135°	23	24	25	25	25	17
145°	22	25	27	29	29	14
155°	21	23	26	27	27	9
165°	17	20	23	25	25	5
175°	19	19	20	21	22	2
180°	19	19	19	19	19	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7464.5	7464.5	7464.5	7464.5	7464.5
2.5°	7449.5	7429.7	7433.5	7457.9	7482.4
5°	7413.7	7396.8	7394.9	7420.3	7432.5
7.5°	7344.2	7326.3	7325.4	7354.5	7368.6
10°	7240.8	7236.1	7226.7	7246.4	7242.6
12.5°	7132.6	7106.3	7101.6	7117.6	7118.5
15°	6980.4	6968.1	6956.8	6955.9	6960.6
17.5°	6824.3	6798.0	6791.4	6787.6	6797.0
20°	6642.8	6613.7	6594.9	6591.1	6577.0
22.5°	6437.0	6419.1	6401.2	6370.2	6373.0
25°	6220.7	6199.1	6165.3	6142.7	6128.6
27.5°	5999.8	5966.0	5930.2	5909.6	5897.3
30°	5751.6	5730.9	5685.8	5647.3	5639.7
32.5°	5488.4	5474.3	5429.2	5395.3	5372.8
35°	5229.9	5212.9	5162.2	5114.2	5100.1
37.5°	4966.6	4945.9	4902.7	4860.4	4836.9
40°	4693.1	4678.0	4620.7	4569.9	4549.2
42.5°	4428.9	4409.1	4357.4	4295.4	4283.2
45°	4168.5	4129.0	4102.7	4026.5	4000.2
47.5°	3879.9	3869.5	3813.1	3752.0	3722.9
50°	3605.3	3598.8	3549.9	3481.2	3467.1
52.5°	3353.4	3327.1	3281.9	3219.9	3187.9
55°	3075.1	3062.0	3008.4	2945.4	2926.6
57.5°	2802.5	2802.5	2745.1	2691.5	2659.6
60°	2542.1	2526.1	2485.7	2434.0	2404.8
62.5°	2279.8	2266.6	2231.8	2180.1	2153.8
65°	2022.2	2007.1	1973.3	1927.2	1902.8
67.5°	1775.9	1758.0	1736.4	1676.2	1660.2
70°	1516.4	1512.6	1488.2	1446.8	1436.5
72.5°	1283.3	1279.5	1251.3	1214.6	1203.3
75°	1045.4	1051.0	1031.3	1005.9	995.6
77.5°	838.6	832.9	814.1	799.1	781.2
80°	627.1	625.2	616.7	596.0	595.1
82.5°	433.4	440.9	434.3	419.3	413.7
85°	267.0	272.6	267.0	259.5	260.4
87.5°	119.4	121.3	114.7	103.4	95.9
90°	18.8	20.7	24.4	29.1	27.3
92.5°	6.6	14.1	20.7	24.4	25.4
95°	8.5	14.1	20.7	24.4	25.4
97.5°	12.2	14.1	20.7	24.4	26.3
100°	14.1	15.0	20.7	24.4	26.3
102.5°	15.0	15.0	20.7	24.4	26.3
105°	16.0	16.0	19.7	24.4	26.3
107.5°	16.9	16.0	19.7	24.4	26.3
110°	16.9	16.9	19.7	24.4	25.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	17.9	17.9	20.7	23.5	25.4
115°	18.8	18.8	20.7	23.5	25.4
117.5°	18.8	19.7	20.7	24.4	25.4
120°	19.7	20.7	20.7	24.4	24.4
122.5°	19.7	21.6	21.6	24.4	24.4
125°	19.7	21.6	21.6	24.4	24.4
127.5°	20.7	22.6	21.6	24.4	24.4
130°	21.6	22.6	23.5	24.4	24.4
132.5°	21.6	23.5	24.4	25.4	24.4
135°	22.6	24.4	25.4	25.4	25.4
137.5°	23.5	24.4	26.3	26.3	26.3
140°	23.5	25.4	26.3	27.3	27.3
142.5°	21.6	25.4	26.3	28.2	28.2
145°	21.6	25.4	27.3	29.1	29.1
147.5°	20.7	24.4	26.3	29.1	29.1
150°	20.7	23.5	26.3	28.2	28.2
152.5°	21.6	22.6	26.3	27.3	28.2
155°	20.7	22.6	26.3	27.3	27.3
157.5°	19.7	21.6	25.4	27.3	28.2
160°	18.8	21.6	24.4	27.3	27.3
162.5°	17.9	20.7	23.5	26.3	27.3
165°	16.9	19.7	22.6	25.4	25.4
167.5°	16.9	19.7	21.6	23.5	24.4
170°	17.9	18.8	20.7	21.6	22.6
172.5°	18.8	18.8	20.7	20.7	20.7
175°	18.8	18.8	19.7	20.7	21.6
177.5°	19.7	18.8	18.8	20.7	20.7
180°	18.8	18.8	18.8	18.8	18.8

(END OF REPORT)