

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: P470161

Luminaire Tested: **VHB2-12-W-UNV-L735-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470161  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-12-W-UNV-L735-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS  
Light Source: 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

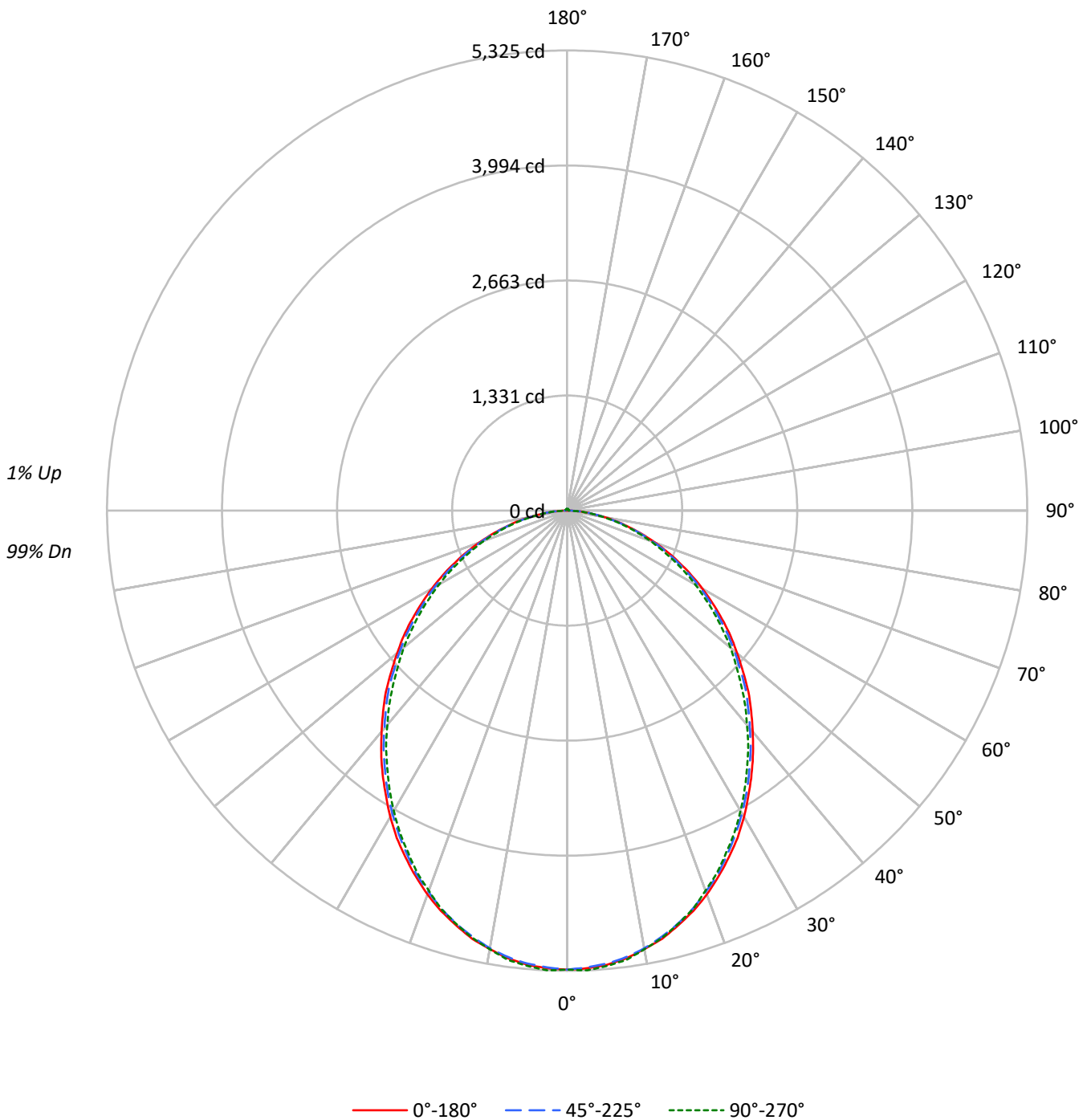
Lumens per Lamp: N/A  
Luminaire Lumens: 12854.2 lumens  
Efficiency: N/A  
Efficacy: 157.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 81.4  
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	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°	32673	32673	32673
5°	32575	32492	32658
10°	32183	32120	32191
15°	31632	31526	31543
20°	30943	30720	30636
25°	30044	29776	29599
30°	29071	28738	28505
35°	27946	27584	27253
40°	26816	26403	25994
45°	25804	25396	24762
50°	24551	24173	23610
55°	23467	22958	22334
60°	22254	21760	21053
65°	20945	20438	19708
70°	19406	19047	18385
75°	17681	17441	16837
80°	15805	15546	15001
85°	13409	13409	13077



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	499.4	3.9
10°-20°	1395.1	10.9
20°-30°	2021.4	15.7
30°-40°	2299.2	17.9
40°-50°	2242.0	17.4
50°-60°	1914.0	14.9
60°-70°	1389.6	10.8
70°-80°	775.9	6.0
80°-90°	217.9	1.7
90°-100°	15.5	0.1
100°-110°	15.3	0.1
110°-120°	15.0	0.1
120°-130°	14.4	0.1
130°-140°	13.6	0.1
140°-150°	11.7	0.1
150°-160°	8.2	0.1
160°-170°	4.5	0.0
170°-180°	1.4	0.0
0°-30°	3916.0	30.5
0°-40°	6215.1	48.4
0°-60°	10371.2	80.7
0°-90°	12754.5	99.2
90°-120°	45.8	0.4
90°-150°	85.6	0.7
90°-180°	100.0	0.8
0°-180°	12854.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5312	5312	5312	5312	5312	
5°	5276	5264	5262	5281	5289	500
15°	4968	4959	4951	4950	4954	1400
25°	4427	4412	4388	4371	4361	2038
35°	3722	3710	3674	3640	3630	2328
45°	2966	2938	2920	2865	2847	2283
55°	2188	2179	2141	2096	2083	1957
65°	1439	1428	1404	1372	1354	1427
75°	744	748	734	716	708	795
85°	190	194	190	185	185	208
90°	13	15	17	21	19	16
95°	6	10	15	17	18	6
105°	11	11	14	17	19	12
115°	13	13	15	17	18	13
125°	14	15	15	17	17	13
135°	16	17	18	18	18	12
145°	15	18	19	21	21	10
155°	15	16	19	19	19	7
165°	12	14	16	18	18	4
175°	13	13	14	15	15	1
180°	13	13	13	13	13	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5312.0	5312.0	5312.0	5312.0	5312.0
2.5°	5301.3	5287.3	5290.0	5307.4	5324.8
5°	5275.9	5263.9	5262.5	5280.6	5289.3
7.5°	5226.4	5213.7	5213.0	5233.8	5243.8
10°	5152.8	5149.5	5142.8	5156.8	5154.2
12.5°	5075.9	5057.1	5053.8	5065.2	5065.8
15°	4967.5	4958.8	4950.8	4950.1	4953.5
17.5°	4856.4	4837.7	4833.0	4830.4	4837.0
20°	4727.3	4706.6	4693.2	4690.5	4680.5
22.5°	4580.8	4568.1	4555.4	4533.3	4535.3
25°	4426.9	4411.5	4387.5	4371.4	4361.4
27.5°	4269.7	4245.6	4220.2	4205.5	4196.8
30°	4093.1	4078.4	4046.3	4018.8	4013.5
32.5°	3905.8	3895.7	3863.6	3839.5	3823.5
35°	3721.8	3709.7	3673.6	3639.5	3629.5
37.5°	3534.5	3519.7	3489.0	3458.9	3442.1
40°	3339.8	3329.1	3288.3	3252.1	3237.4
42.5°	3151.8	3137.7	3100.9	3056.8	3048.1
45°	2966.5	2938.4	2919.6	2865.4	2846.7
47.5°	2761.1	2753.7	2713.6	2670.1	2649.3
50°	2565.7	2561.0	2526.2	2477.4	2467.4
52.5°	2386.4	2367.7	2335.6	2291.4	2268.7
55°	2188.4	2179.0	2140.9	2096.1	2082.7
57.5°	1994.4	1994.4	1953.5	1915.4	1892.7
60°	1809.0	1797.7	1768.9	1732.1	1711.4
62.5°	1622.4	1613.0	1588.3	1551.5	1532.7
65°	1439.1	1428.4	1404.3	1371.5	1354.1
67.5°	1263.8	1251.1	1235.7	1192.9	1181.5
70°	1079.1	1076.5	1059.1	1029.6	1022.3
72.5°	913.2	910.5	890.5	864.4	856.4
75°	744.0	748.0	733.9	715.9	708.5
77.5°	596.8	592.8	579.4	568.7	556.0
80°	446.2	444.9	438.9	424.2	423.5
82.5°	308.4	313.8	309.1	298.4	294.4
85°	190.0	194.0	190.0	184.7	185.3
87.5°	85.0	86.3	81.6	73.6	68.2
90°	13.4	14.7	17.4	20.7	19.4
92.5°	4.7	10.0	14.7	17.4	18.1
95°	6.0	10.0	14.7	17.4	18.1
97.5°	8.7	10.0	14.7	17.4	18.7
100°	10.0	10.7	14.7	17.4	18.7
102.5°	10.7	10.7	14.7	17.4	18.7
105°	11.4	11.4	14.0	17.4	18.7
107.5°	12.0	11.4	14.0	17.4	18.7
110°	12.0	12.0	14.0	17.4	18.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	12.7	12.7	14.7	16.7	18.1
115°	13.4	13.4	14.7	16.7	18.1
117.5°	13.4	14.0	14.7	17.4	18.1
120°	14.0	14.7	14.7	17.4	17.4
122.5°	14.0	15.4	15.4	17.4	17.4
125°	14.0	15.4	15.4	17.4	17.4
127.5°	14.7	16.1	15.4	17.4	17.4
130°	15.4	16.1	16.7	17.4	17.4
132.5°	15.4	16.7	17.4	18.1	17.4
135°	16.1	17.4	18.1	18.1	18.1
137.5°	16.7	17.4	18.7	18.7	18.7
140°	16.7	18.1	18.7	19.4	19.4
142.5°	15.4	18.1	18.7	20.1	20.1
145°	15.4	18.1	19.4	20.7	20.7
147.5°	14.7	17.4	18.7	20.7	20.7
150°	14.7	16.7	18.7	20.1	20.1
152.5°	15.4	16.1	18.7	19.4	20.1
155°	14.7	16.1	18.7	19.4	19.4
157.5°	14.0	15.4	18.1	19.4	20.1
160°	13.4	15.4	17.4	19.4	19.4
162.5°	12.7	14.7	16.7	18.7	19.4
165°	12.0	14.0	16.1	18.1	18.1
167.5°	12.0	14.0	15.4	16.7	17.4
170°	12.7	13.4	14.7	15.4	16.1
172.5°	13.4	13.4	14.7	14.7	14.7
175°	13.4	13.4	14.0	14.7	15.4
177.5°	14.0	13.4	13.4	14.7	14.7
180°	13.4	13.4	13.4	13.4	13.4

(END OF REPORT)