

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: P470195

Luminaire Tested: **VHB2-9-W-UNV-L940-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470195  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-9-W-UNV-L940-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

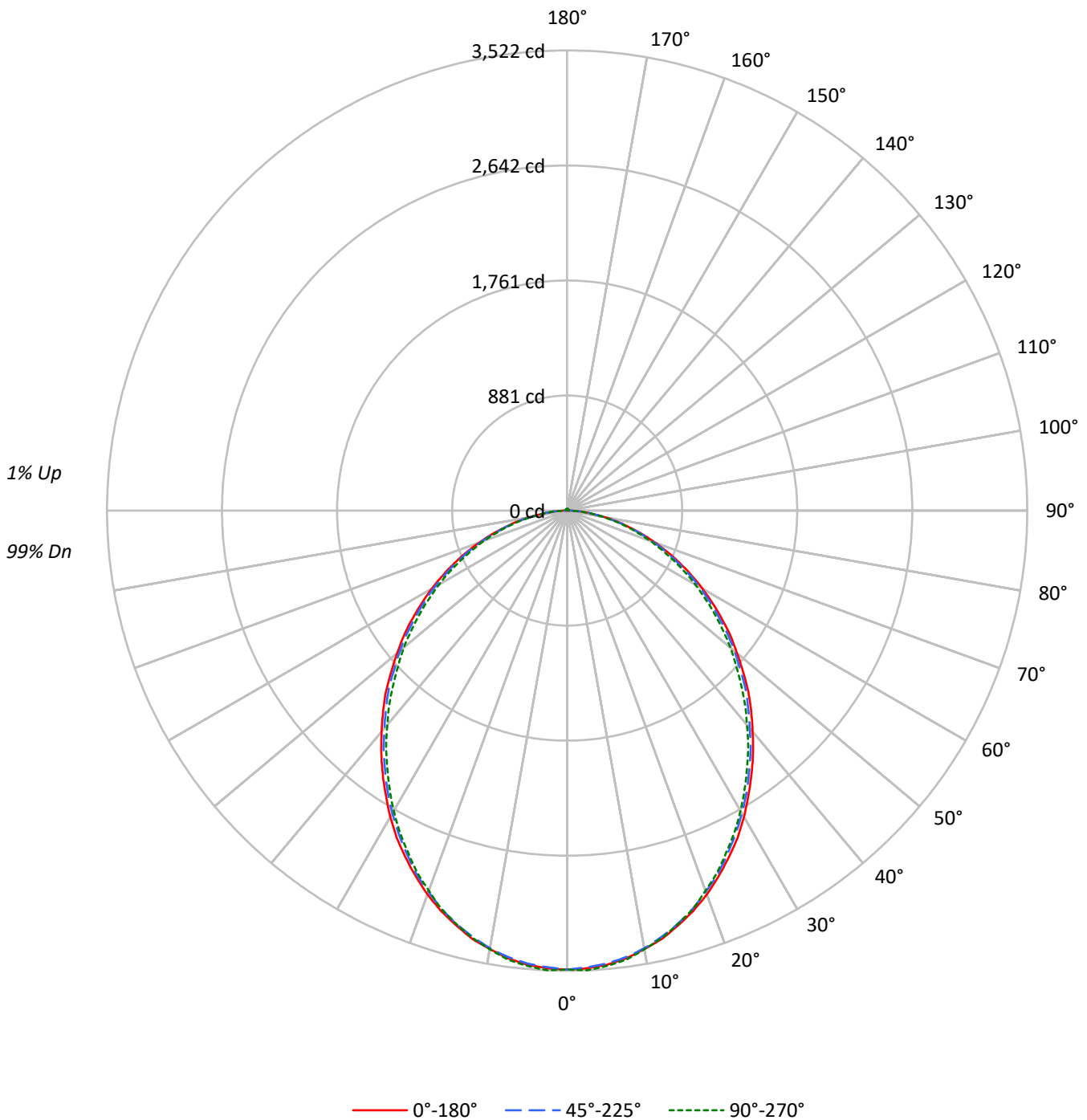
Lumens per Lamp: N/A  
Luminaire Lumens: 8500.9 lumens  
Efficiency: N/A  
Efficacy: 132.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 64.2  
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°	21608	21608	21608
5°	21543	21488	21598
10°	21284	21242	21290
15°	20919	20849	20860
20°	20464	20316	20261
25°	19869	19692	19575
30°	19225	19006	18852
35°	18482	18242	18023
40°	17734	17461	17191
45°	17065	16796	16376
50°	16237	15987	15615
55°	15520	15182	14771
60°	14718	14390	13923
65°	13851	13516	13033
70°	12835	12596	12159
75°	11692	11535	11136
80°	10453	10279	9921
85°	8871	8871	8652



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.3	3.9
10°-20°	922.6	10.9
20°-30°	1336.8	15.7
30°-40°	1520.5	17.9
40°-50°	1482.7	17.4
50°-60°	1265.8	14.9
60°-70°	919.0	10.8
70°-80°	513.1	6.0
80°-90°	144.1	1.7
90°-100°	10.2	0.1
100°-110°	10.1	0.1
110°-120°	9.9	0.1
120°-130°	9.5	0.1
130°-140°	9.0	0.1
140°-150°	7.8	0.1
150°-160°	5.4	0.1
160°-170°	3.0	0.0
170°-180°	0.9	0.0
0°-30°	2589.8	30.5
0°-40°	4110.3	48.4
0°-60°	6858.9	80.7
0°-90°	8435.0	99.2
90°-120°	30.3	0.4
90°-150°	56.6	0.7
90°-180°	66.0	0.8
0°-180°	8500.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3513	3513	3513	3513	3513	
5°	3489	3481	3480	3492	3498	330
15°	3285	3280	3274	3274	3276	926
25°	2928	2918	2902	2891	2884	1348
35°	2461	2453	2430	2407	2400	1539
45°	1962	1943	1931	1895	1883	1510
55°	1447	1441	1416	1386	1377	1295
65°	952	945	929	907	896	944
75°	492	495	485	473	469	526
85°	126	128	126	122	123	137
90°	9	10	12	14	13	11
95°	4	7	10	12	12	4
105°	8	8	9	12	12	8
115°	9	9	10	11	12	9
125°	9	10	10	12	12	9
135°	11	12	12	12	12	8
145°	10	12	13	14	14	6
155°	10	11	12	13	13	4
165°	8	9	11	12	12	2
175°	9	9	9	10	10	1
180°	9	9	9	9	9	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3513.1	3513.1	3513.1	3513.1	3513.1
2.5°	3506.0	3496.7	3498.5	3510.0	3521.5
5°	3489.2	3481.2	3480.3	3492.3	3498.0
7.5°	3456.4	3448.0	3447.6	3461.3	3467.9
10°	3407.8	3405.6	3401.1	3410.4	3408.7
12.5°	3356.9	3344.5	3342.3	3349.8	3350.2
15°	3285.2	3279.5	3274.1	3273.7	3275.9
17.5°	3211.8	3199.4	3196.3	3194.5	3198.9
20°	3126.4	3112.7	3103.8	3102.0	3095.4
22.5°	3029.5	3021.1	3012.7	2998.1	2999.4
25°	2927.7	2917.5	2901.6	2891.0	2884.3
27.5°	2823.7	2807.8	2791.0	2781.3	2775.5
30°	2706.9	2697.2	2676.0	2657.8	2654.3
32.5°	2583.0	2576.4	2555.2	2539.2	2528.6
35°	2461.4	2453.4	2429.5	2406.9	2400.3
37.5°	2337.5	2327.7	2307.4	2287.5	2276.4
40°	2208.7	2201.6	2174.7	2150.8	2141.0
42.5°	2084.4	2075.1	2050.8	2021.6	2015.8
45°	1961.8	1943.3	1930.9	1895.0	1882.6
47.5°	1826.0	1821.1	1794.6	1765.8	1752.1
50°	1696.8	1693.7	1670.7	1638.4	1631.8
52.5°	1578.2	1565.8	1544.6	1515.4	1500.4
55°	1447.3	1441.1	1415.8	1386.2	1377.4
57.5°	1319.0	1319.0	1292.0	1266.7	1251.7
60°	1196.4	1188.9	1169.8	1145.5	1131.8
62.5°	1072.9	1066.8	1050.4	1026.0	1013.7
65°	951.7	944.6	928.7	907.0	895.5
67.5°	835.8	827.4	817.2	788.9	781.4
70°	713.7	711.9	700.4	680.9	676.1
72.5°	603.9	602.2	588.9	571.6	566.3
75°	492.0	494.7	485.4	473.4	468.6
77.5°	394.7	392.0	383.2	376.1	367.7
80°	295.1	294.2	290.2	280.5	280.1
82.5°	204.0	207.5	204.4	197.3	194.7
85°	125.7	128.3	125.7	122.1	122.6
87.5°	56.2	57.1	54.0	48.7	45.1
90°	8.8	9.7	11.5	13.7	12.8
92.5°	3.1	6.6	9.7	11.5	11.9
95°	4.0	6.6	9.7	11.5	11.9
97.5°	5.8	6.6	9.7	11.5	12.4
100°	6.6	7.1	9.7	11.5	12.4
102.5°	7.1	7.1	9.7	11.5	12.4
105°	7.5	7.5	9.3	11.5	12.4
107.5°	8.0	7.5	9.3	11.5	12.4
110°	8.0	8.0	9.3	11.5	11.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.4	8.4	9.7	11.1	11.9
115°	8.8	8.8	9.7	11.1	11.9
117.5°	8.8	9.3	9.7	11.5	11.9
120°	9.3	9.7	9.7	11.5	11.5
122.5°	9.3	10.2	10.2	11.5	11.5
125°	9.3	10.2	10.2	11.5	11.5
127.5°	9.7	10.6	10.2	11.5	11.5
130°	10.2	10.6	11.1	11.5	11.5
132.5°	10.2	11.1	11.5	11.9	11.5
135°	10.6	11.5	11.9	11.9	11.9
137.5°	11.1	11.5	12.4	12.4	12.4
140°	11.1	11.9	12.4	12.8	12.8
142.5°	10.2	11.9	12.4	13.3	13.3
145°	10.2	11.9	12.8	13.7	13.7
147.5°	9.7	11.5	12.4	13.7	13.7
150°	9.7	11.1	12.4	13.3	13.3
152.5°	10.2	10.6	12.4	12.8	13.3
155°	9.7	10.6	12.4	12.8	12.8
157.5°	9.3	10.2	11.9	12.8	13.3
160°	8.8	10.2	11.5	12.8	12.8
162.5°	8.4	9.7	11.1	12.4	12.8
165°	8.0	9.3	10.6	11.9	11.9
167.5°	8.0	9.3	10.2	11.1	11.5
170°	8.4	8.8	9.7	10.2	10.6
172.5°	8.8	8.8	9.7	9.7	9.7
175°	8.8	8.8	9.3	9.7	10.2
177.5°	9.3	8.8	8.8	9.7	9.7
180°	8.8	8.8	8.8	8.8	8.8

(END OF REPORT)