

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: P470180

Luminaire Tested: **VHB2-9-W-UNV-L840-CD-U**

Issue Date: 01/20/2021

Test Information

Test Method: LM-79-08
Report Number: P470180
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-L840-CD-U
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

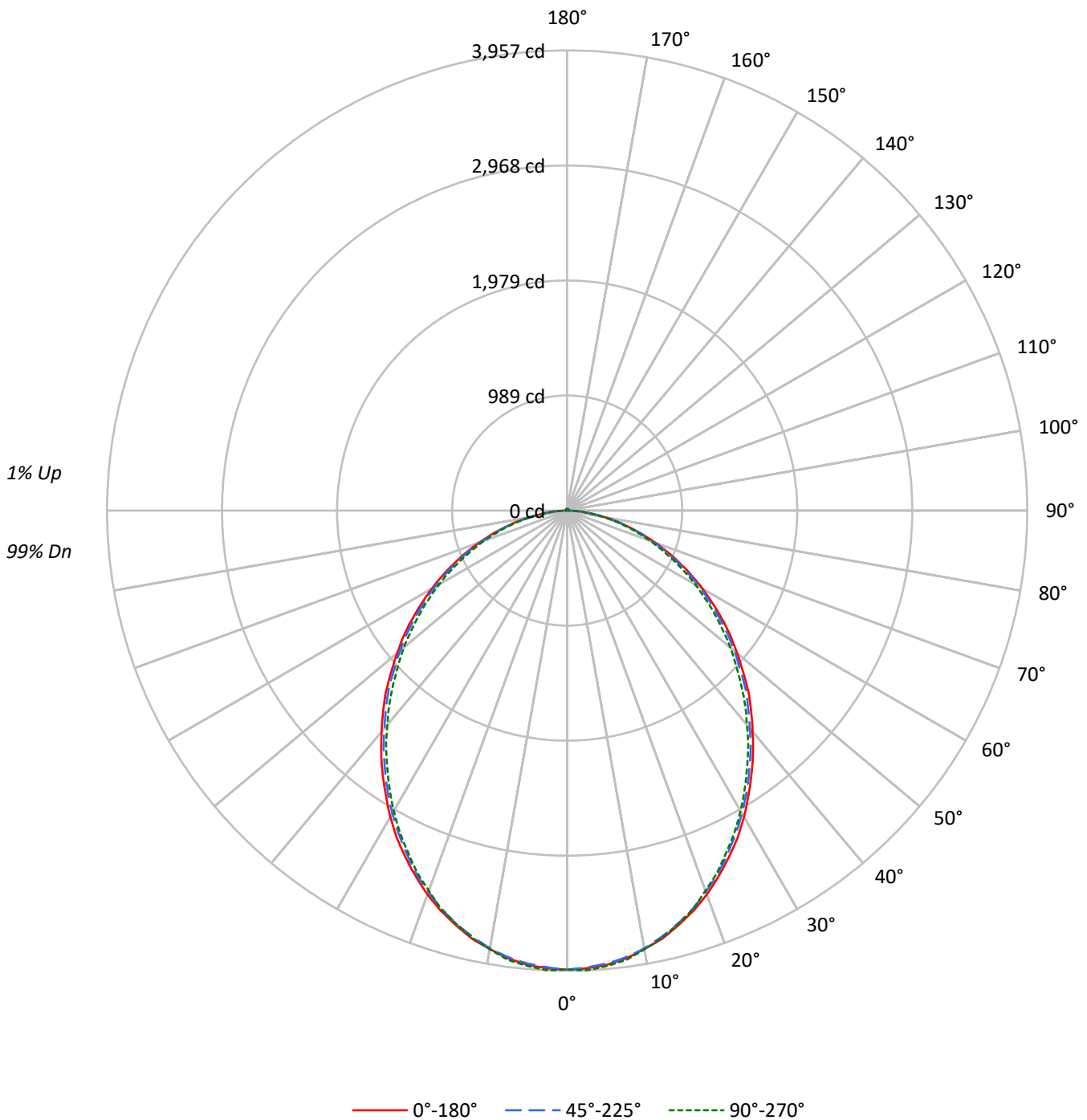
Lumens per Lamp: N/A
Luminaire Lumens: 9551.5 lumens
Efficiency: N/A
Efficacy: 148.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P470180
CATALOG NUMBER: VHB2-9-W-UNV-L840-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P470180

CATALOG NUMBER: VHB2-9-W-UNV-L840-CD-U

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°	24279	24279	24279
5°	24206	24145	24267
10°	23915	23868	23920
15°	23505	23426	23438
20°	22993	22827	22765
25°	22325	22126	21994
30°	21602	21355	21181
35°	20766	20497	20251
40°	19926	19619	19315
45°	19174	18871	18400
50°	18243	17963	17544
55°	17438	17059	16596
60°	16537	16169	15644
65°	15563	15187	14644
70°	14421	14153	13660
75°	13137	12961	12512
80°	11746	11551	11147
85°	9965	9965	9718



TEST NUMBER: P470180

CATALOG NUMBER: VHB2-9-W-UNV-L840-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.1	3.9
10°-20°	1036.7	10.9
20°-30°	1502.1	15.7
30°-40°	1708.5	17.9
40°-50°	1666.0	17.4
50°-60°	1422.3	14.9
60°-70°	1032.5	10.8
70°-80°	576.5	6.0
80°-90°	161.9	1.7
90°-100°	11.5	0.1
100°-110°	11.4	0.1
110°-120°	11.1	0.1
120°-130°	10.7	0.1
130°-140°	10.1	0.1
140°-150°	8.7	0.1
150°-160°	6.1	0.1
160°-170°	3.4	0.0
170°-180°	1.0	0.0
0°-30°	2909.9	30.5
0°-40°	4618.3	48.4
0°-60°	7706.6	80.7
0°-90°	9477.5	99.2
90°-120°	34.0	0.4
90°-150°	63.5	0.7
90°-180°	74.0	0.8
0°-180°	9551.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3947	3947	3947	3947	3947	
5°	3920	3912	3910	3924	3930	371
15°	3691	3685	3679	3678	3681	1040
25°	3290	3278	3260	3248	3241	1515
35°	2766	2757	2730	2704	2697	1730
45°	2204	2183	2170	2129	2115	1696
55°	1626	1619	1591	1558	1548	1455
65°	1069	1061	1044	1019	1006	1060
75°	553	556	545	532	526	591
85°	141	144	141	137	138	154
90°	10	11	13	15	14	12
95°	4	8	11	13	13	4
105°	8	8	10	13	14	9
115°	10	10	11	12	13	10
125°	10	11	11	13	13	10
135°	12	13	13	13	13	9
145°	11	13	14	15	15	7
155°	11	12	14	14	14	5
165°	9	10	12	13	13	3
175°	10	10	10	11	11	1
180°	10	10	10	10	10	



TEST NUMBER: P470180

CATALOG NUMBER: VHB2-9-W-UNV-L840-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3947.3	3947.3	3947.3	3947.3	3947.3
2.5°	3939.3	3928.9	3930.9	3943.8	3956.7
5°	3920.4	3911.5	3910.5	3923.9	3930.4
7.5°	3883.6	3874.2	3873.7	3889.1	3896.6
10°	3829.0	3826.5	3821.5	3831.9	3829.9
12.5°	3771.8	3757.9	3755.4	3763.8	3764.3
15°	3691.2	3684.8	3678.8	3678.3	3680.8
17.5°	3608.7	3594.8	3591.3	3589.3	3594.3
20°	3512.8	3497.4	3487.4	3485.4	3478.0
22.5°	3403.9	3394.5	3385.0	3368.6	3370.1
25°	3289.6	3278.1	3260.2	3248.3	3240.8
27.5°	3172.7	3154.8	3135.9	3125.0	3118.5
30°	3041.5	3030.6	3006.7	2986.3	2982.3
32.5°	2902.3	2894.8	2871.0	2853.1	2841.1
35°	2765.6	2756.6	2729.8	2704.4	2697.0
37.5°	2626.4	2615.4	2592.6	2570.2	2557.8
40°	2481.7	2473.8	2443.4	2416.6	2405.6
42.5°	2342.0	2331.6	2304.2	2271.4	2265.0
45°	2204.3	2183.4	2169.5	2129.2	2115.3
47.5°	2051.7	2046.2	2016.4	1984.1	1968.7
50°	1906.5	1903.0	1877.2	1840.9	1833.4
52.5°	1773.3	1759.4	1735.5	1702.7	1685.8
55°	1626.1	1619.2	1590.8	1557.5	1547.6
57.5°	1482.0	1482.0	1451.6	1423.3	1406.4
60°	1344.3	1335.8	1314.4	1287.1	1271.7
62.5°	1205.6	1198.6	1180.2	1152.9	1138.9
65°	1069.3	1061.4	1043.5	1019.1	1006.2
67.5°	939.1	929.6	918.2	886.4	877.9
70°	801.9	799.9	787.0	765.1	759.6
72.5°	678.6	676.6	661.7	642.3	636.3
75°	552.8	555.8	545.4	531.9	526.5
77.5°	443.4	440.5	430.5	422.6	413.1
80°	331.6	330.6	326.1	315.2	314.7
82.5°	229.2	233.2	229.7	221.7	218.7
85°	141.2	144.2	141.2	137.2	137.7
87.5°	63.1	64.1	60.7	54.7	50.7
90°	9.9	10.9	12.9	15.4	14.4
92.5°	3.5	7.5	10.9	12.9	13.4
95°	4.5	7.5	10.9	12.9	13.4
97.5°	6.5	7.5	10.9	12.9	13.9
100°	7.5	8.0	10.9	12.9	13.9
102.5°	8.0	8.0	10.9	12.9	13.9
105°	8.5	8.5	10.4	12.9	13.9
107.5°	8.9	8.5	10.4	12.9	13.9
110°	8.9	8.9	10.4	12.9	13.4



TEST NUMBER: P470180

CATALOG NUMBER: VHB2-9-W-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.4	9.4	10.9	12.4	13.4
115°	9.9	9.9	10.9	12.4	13.4
117.5°	9.9	10.4	10.9	12.9	13.4
120°	10.4	10.9	10.9	12.9	12.9
122.5°	10.4	11.4	11.4	12.9	12.9
125°	10.4	11.4	11.4	12.9	12.9
127.5°	10.9	11.9	11.4	12.9	12.9
130°	11.4	11.9	12.4	12.9	12.9
132.5°	11.4	12.4	12.9	13.4	12.9
135°	11.9	12.9	13.4	13.4	13.4
137.5°	12.4	12.9	13.9	13.9	13.9
140°	12.4	13.4	13.9	14.4	14.4
142.5°	11.4	13.4	13.9	14.9	14.9
145°	11.4	13.4	14.4	15.4	15.4
147.5°	10.9	12.9	13.9	15.4	15.4
150°	10.9	12.4	13.9	14.9	14.9
152.5°	11.4	11.9	13.9	14.4	14.9
155°	10.9	11.9	13.9	14.4	14.4
157.5°	10.4	11.4	13.4	14.4	14.9
160°	9.9	11.4	12.9	14.4	14.4
162.5°	9.4	10.9	12.4	13.9	14.4
165°	8.9	10.4	11.9	13.4	13.4
167.5°	8.9	10.4	11.4	12.4	12.9
170°	9.4	9.9	10.9	11.4	11.9
172.5°	9.9	9.9	10.9	10.9	10.9
175°	9.9	9.9	10.4	10.9	11.4
177.5°	10.4	9.9	9.9	10.9	10.9
180°	9.9	9.9	9.9	9.9	9.9

(END OF REPORT)