

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: P470204

Luminaire Tested: **VHB2-24-W-UNV-L950-CD-U**

Issue Date: 01/20/2021

Test Information

Test Method: LM-79-08
Report Number: P470204
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: VHB2-24-W-UNV-L950-CD-U
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

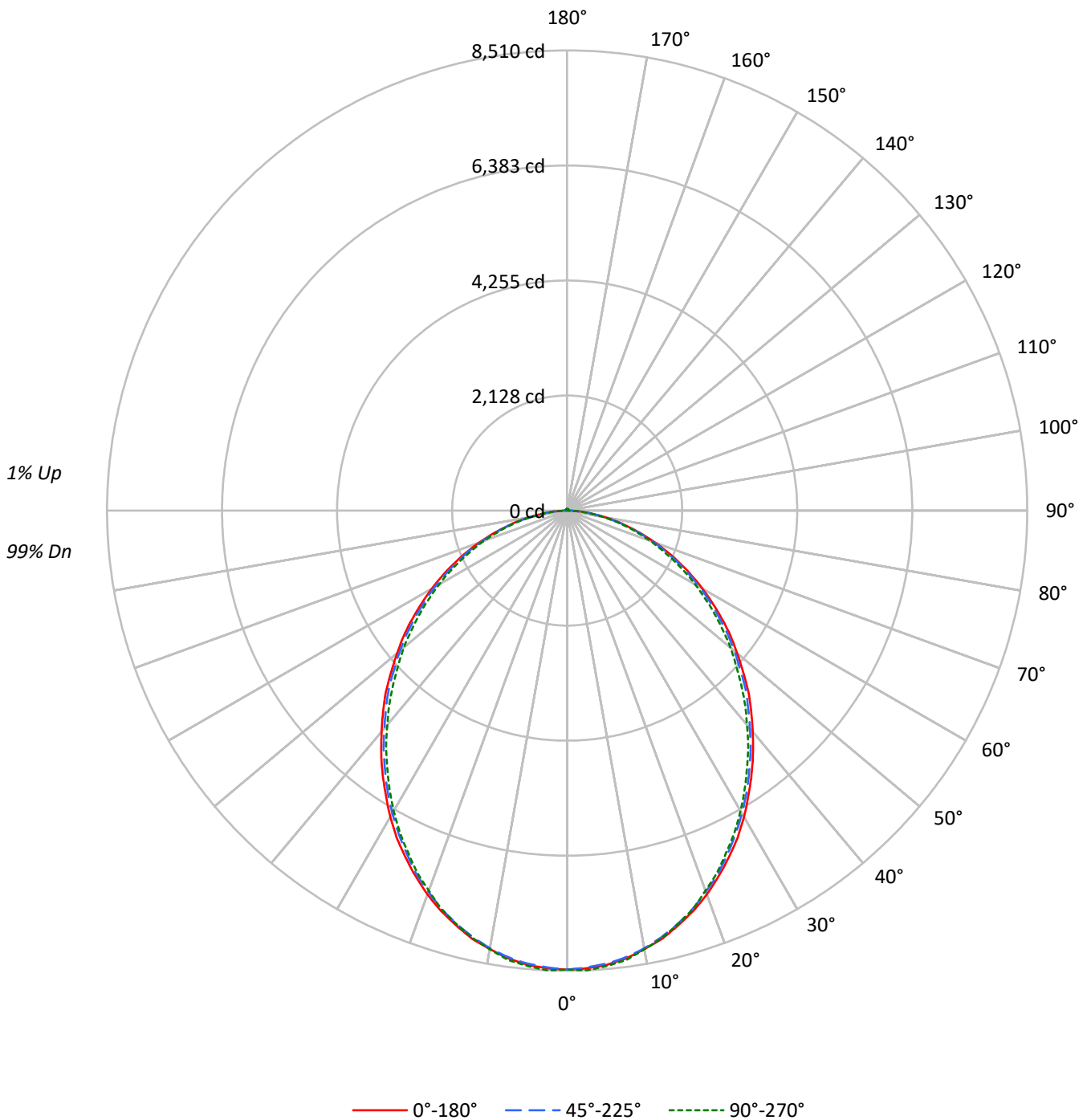
Lumens per Lamp: N/A
Luminaire Lumens: 20542.6 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')
CIE Type: Direct

Input Watts (W): 159.2
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°	52217	52217	52217
5°	52059	51927	52191
10°	51433	51333	51446
15°	50552	50382	50409
20°	49451	49094	48961
25°	48014	47586	47303
30°	46458	45927	45555
35°	44661	44083	43554
40°	42856	42195	41542
45°	41238	40586	39573
50°	39235	38633	37732
55°	37504	36690	35692
60°	35565	34775	33645
65°	33471	32662	31495
70°	31015	30437	29380
75°	28254	27874	26909
80°	25259	24844	23973
85°	21426	21426	20904



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	798.2	3.9
10°-20°	2229.6	10.9
20°-30°	3230.5	15.7
30°-40°	3674.4	17.9
40°-50°	3583.0	17.4
50°-60°	3058.9	14.9
60°-70°	2220.7	10.8
70°-80°	1240.0	6.0
80°-90°	348.2	1.7
90°-100°	24.7	0.1
100°-110°	24.5	0.1
110°-120°	24.0	0.1
120°-130°	23.0	0.1
130°-140°	21.8	0.1
140°-150°	18.8	0.1
150°-160°	13.1	0.1
160°-170°	7.2	0.0
170°-180°	2.2	0.0
0°-30°	6258.2	30.5
0°-40°	9932.6	48.4
0°-60°	16574.5	80.7
0°-90°	20383.2	99.2
90°-120°	73.2	0.4
90°-150°	136.8	0.7
90°-180°	159.0	0.8
0°-180°	20542.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8489	8489	8489	8489	8489	
5°	8432	8412	8410	8439	8453	799
15°	7939	7925	7912	7911	7916	2237
25°	7075	7050	7012	6986	6970	3257
35°	5948	5929	5871	5816	5800	3720
45°	4741	4696	4666	4579	4549	3648
55°	3497	3482	3421	3350	3328	3128
65°	2300	2283	2244	2192	2164	2281
75°	1189	1195	1173	1144	1132	1271
85°	304	310	304	295	296	332
90°	21	24	28	33	31	26
95°	10	16	24	28	29	10
105°	18	18	22	28	30	19
115°	21	21	24	27	29	21
125°	22	25	25	28	28	21
135°	26	28	29	29	29	20
145°	25	29	31	33	33	15
155°	24	26	30	31	31	11
165°	19	22	26	29	29	6
175°	21	21	22	24	25	2
180°	21	21	21	21	21	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8489.4	8489.4	8489.4	8489.4	8489.4
2.5°	8472.3	8449.8	8454.1	8481.9	8509.7
5°	8431.6	8412.4	8410.2	8439.1	8453.0
7.5°	8352.5	8332.2	8331.1	8364.3	8380.3
10°	8234.9	8229.5	8218.9	8241.3	8237.0
12.5°	8111.9	8082.0	8076.7	8094.8	8095.9
15°	7938.7	7924.8	7912.0	7910.9	7916.3
17.5°	7761.2	7731.3	7723.8	7719.5	7730.2
20°	7554.9	7521.7	7500.4	7496.1	7480.0
22.5°	7320.7	7300.4	7280.1	7244.8	7248.0
25°	7074.8	7050.2	7011.7	6986.1	6970.0
27.5°	6823.6	6785.1	6744.4	6720.9	6707.0
30°	6541.3	6517.8	6466.5	6422.6	6414.1
32.5°	6241.9	6225.9	6174.6	6136.1	6110.4
35°	5947.9	5928.7	5870.9	5816.4	5800.4
37.5°	5648.5	5625.0	5575.8	5527.7	5501.0
40°	5337.4	5320.3	5255.1	5197.3	5173.8
42.5°	5037.0	5014.5	4955.7	4885.1	4871.2
45°	4740.8	4695.9	4665.9	4579.3	4549.4
47.5°	4412.5	4400.8	4336.6	4267.1	4234.0
50°	4100.3	4092.9	4037.3	3959.2	3943.2
52.5°	3813.8	3783.9	3732.5	3662.0	3625.6
55°	3497.3	3482.3	3421.4	3349.8	3328.4
57.5°	3187.3	3187.3	3122.0	3061.1	3024.7
60°	2891.1	2872.9	2826.9	2768.1	2735.0
62.5°	2592.8	2577.8	2538.3	2479.4	2449.5
65°	2299.8	2282.7	2244.2	2191.8	2164.0
67.5°	2019.7	1999.4	1974.8	1906.4	1888.2
70°	1724.6	1720.3	1692.5	1645.5	1633.7
72.5°	1459.4	1455.2	1423.1	1381.4	1368.6
75°	1188.9	1195.4	1172.9	1144.0	1132.3
77.5°	953.7	947.3	925.9	908.8	888.5
80°	713.1	711.0	701.4	677.9	676.8
82.5°	492.9	501.4	494.0	476.9	470.4
85°	303.6	310.1	303.6	295.1	296.2
87.5°	135.8	137.9	130.4	117.6	109.1
90°	21.4	23.5	27.8	33.1	31.0
92.5°	7.5	16.0	23.5	27.8	28.9
95°	9.6	16.0	23.5	27.8	28.9
97.5°	13.9	16.0	23.5	27.8	29.9
100°	16.0	17.1	23.5	27.8	29.9
102.5°	17.1	17.1	23.5	27.8	29.9
105°	18.2	18.2	22.5	27.8	29.9
107.5°	19.2	18.2	22.5	27.8	29.9
110°	19.2	19.2	22.5	27.8	28.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	20.3	20.3	23.5	26.7	28.9
115°	21.4	21.4	23.5	26.7	28.9
117.5°	21.4	22.5	23.5	27.8	28.9
120°	22.5	23.5	23.5	27.8	27.8
122.5°	22.5	24.6	24.6	27.8	27.8
125°	22.5	24.6	24.6	27.8	27.8
127.5°	23.5	25.7	24.6	27.8	27.8
130°	24.6	25.7	26.7	27.8	27.8
132.5°	24.6	26.7	27.8	28.9	27.8
135°	25.7	27.8	28.9	28.9	28.9
137.5°	26.7	27.8	29.9	29.9	29.9
140°	26.7	28.9	29.9	31.0	31.0
142.5°	24.6	28.9	29.9	32.1	32.1
145°	24.6	28.9	31.0	33.1	33.1
147.5°	23.5	27.8	29.9	33.1	33.1
150°	23.5	26.7	29.9	32.1	32.1
152.5°	24.6	25.7	29.9	31.0	32.1
155°	23.5	25.7	29.9	31.0	31.0
157.5°	22.5	24.6	28.9	31.0	32.1
160°	21.4	24.6	27.8	31.0	31.0
162.5°	20.3	23.5	26.7	29.9	31.0
165°	19.2	22.5	25.7	28.9	28.9
167.5°	19.2	22.5	24.6	26.7	27.8
170°	20.3	21.4	23.5	24.6	25.7
172.5°	21.4	21.4	23.5	23.5	23.5
175°	21.4	21.4	22.5	23.5	24.6
177.5°	22.5	21.4	21.4	23.5	23.5
180°	21.4	21.4	21.4	21.4	21.4

(END OF REPORT)