

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: P470199

Luminaire Tested: **VHB2-24-W-UNV-L940-CD-U**

Issue Date: 01/20/2021

Test Information

Test Method: LM-79-08
Report Number: P470199
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-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

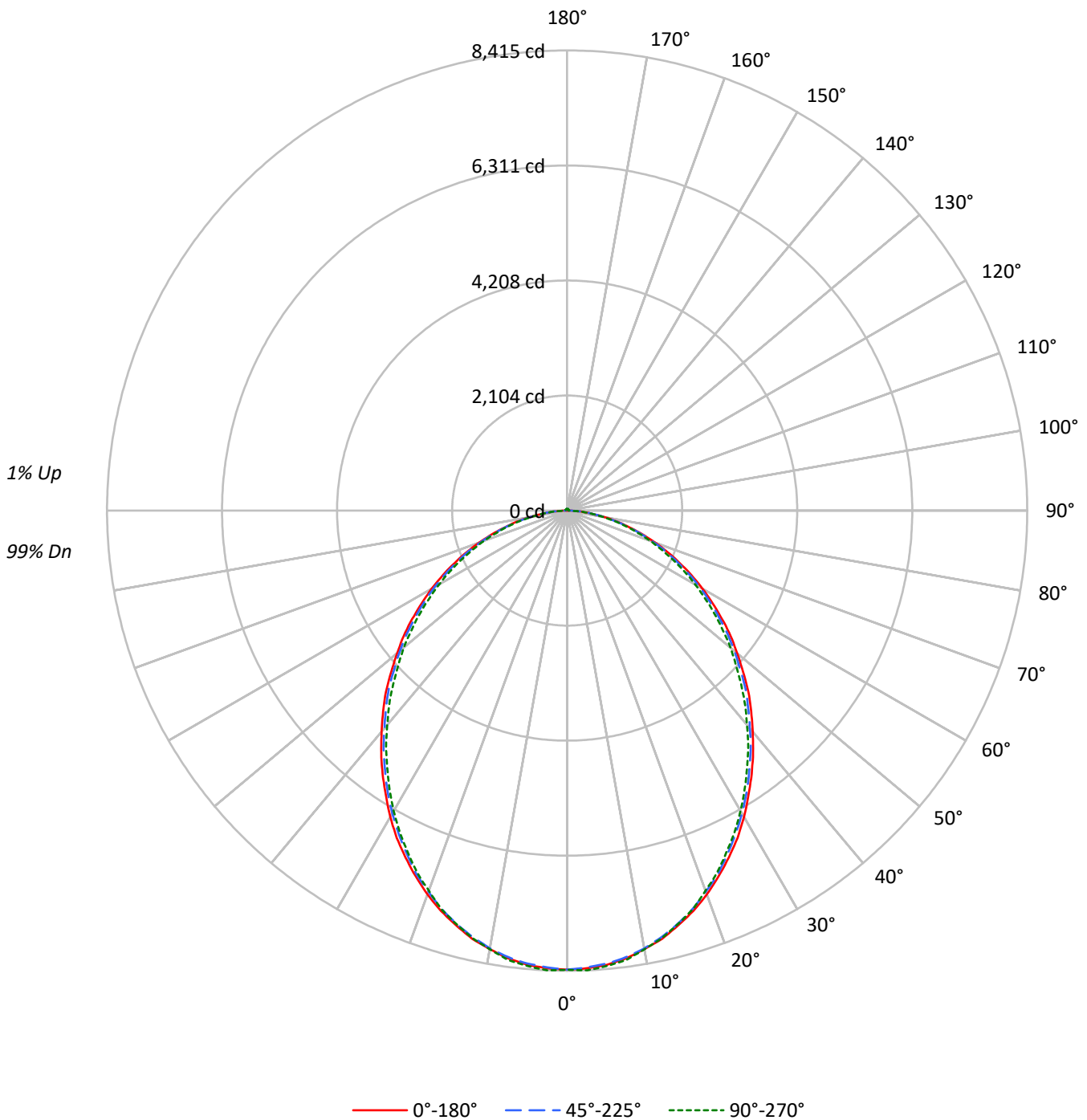
Lumens per Lamp: N/A
Luminaire Lumens: 20314.4 lumens
Efficiency: N/A
Efficacy: 127.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')
CIE Type: Direct

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°	51636	51636	51636
5°	51481	51350	51611
10°	50861	50762	50874
15°	49990	49822	49849
20°	48901	48548	48417
25°	47481	47057	46778
30°	45942	45417	45049
35°	44165	43593	43069
40°	42379	41726	41080
45°	40780	40136	39134
50°	38800	38203	37313
55°	37087	36282	35296
60°	35170	34389	33271
65°	33100	32300	31146
70°	30669	30099	29054
75°	27940	27565	26609
80°	24979	24568	23707
85°	21193	21193	20671



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	789.3	3.9
10°-20°	2204.8	10.9
20°-30°	3194.6	15.7
30°-40°	3633.6	17.9
40°-50°	3543.2	17.4
50°-60°	3024.9	14.9
60°-70°	2196.0	10.8
70°-80°	1226.2	6.0
80°-90°	344.3	1.7
90°-100°	24.5	0.1
100°-110°	24.2	0.1
110°-120°	23.8	0.1
120°-130°	22.8	0.1
130°-140°	21.5	0.1
140°-150°	18.6	0.1
150°-160°	13.0	0.1
160°-170°	7.2	0.0
170°-180°	2.1	0.0
0°-30°	6188.7	30.5
0°-40°	9822.3	48.4
0°-60°	16390.3	80.7
0°-90°	20156.8	99.2
90°-120°	72.4	0.4
90°-150°	135.3	0.7
90°-180°	158.0	0.8
0°-180°	20314.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8395	8395	8395	8395	8395	
5°	8338	8319	8317	8345	8359	790
15°	7850	7837	7824	7823	7828	2212
25°	6996	6972	6934	6908	6893	3221
35°	5882	5863	5806	5752	5736	3678
45°	4688	4644	4614	4528	4499	3607
55°	3458	3444	3383	3312	3291	3093
65°	2274	2257	2219	2168	2140	2255
75°	1176	1182	1160	1131	1120	1257
85°	300	307	300	292	293	328
90°	21	23	28	33	31	25
95°	10	16	23	28	28	9
105°	18	18	22	28	30	19
115°	21	21	23	26	28	21
125°	22	24	24	28	28	20
135°	25	28	28	28	28	20
145°	24	28	31	33	33	15
155°	23	25	30	31	31	11
165°	19	22	25	28	28	6
175°	21	21	22	23	24	2
180°	21	21	21	21	21	



TEST NUMBER: P470199

CATALOG NUMBER: VHB2-24-W-UNV-L940-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8395.0	8395.0	8395.0	8395.0	8395.0
2.5°	8378.1	8355.9	8360.1	8387.6	8415.1
5°	8337.9	8318.9	8316.8	8345.3	8359.1
7.5°	8259.7	8239.6	8238.6	8271.3	8287.2
10°	8143.4	8138.1	8127.5	8149.7	8145.5
12.5°	8021.8	7992.2	7986.9	8004.9	8005.9
15°	7850.5	7836.8	7824.1	7823.0	7828.3
17.5°	7675.0	7645.4	7638.0	7633.8	7644.3
20°	7470.9	7438.2	7417.0	7412.8	7396.9
22.5°	7239.4	7219.3	7199.2	7164.3	7167.5
25°	6996.2	6971.9	6933.8	6908.5	6892.6
27.5°	6747.7	6709.7	6669.5	6646.2	6632.5
30°	6468.6	6445.4	6394.6	6351.3	6342.8
32.5°	6172.6	6156.7	6106.0	6067.9	6042.5
35°	5881.8	5862.8	5805.7	5751.8	5735.9
37.5°	5585.8	5562.5	5513.9	5466.3	5439.9
40°	5278.1	5261.2	5196.7	5139.6	5116.3
42.5°	4981.0	4958.8	4900.6	4830.8	4817.1
45°	4688.1	4643.7	4614.1	4528.5	4498.9
47.5°	4363.5	4351.9	4288.4	4219.7	4186.9
50°	4054.8	4047.4	3992.4	3915.2	3899.4
52.5°	3771.4	3741.8	3691.1	3621.3	3585.3
55°	3458.5	3443.7	3383.4	3312.5	3291.4
57.5°	3151.8	3151.8	3087.3	3027.1	2991.1
60°	2859.0	2841.0	2795.5	2737.4	2704.6
62.5°	2564.0	2549.2	2510.1	2451.9	2422.3
65°	2274.3	2257.4	2219.3	2167.5	2140.0
67.5°	1997.3	1977.2	1952.9	1885.2	1867.2
70°	1705.4	1701.2	1673.7	1627.2	1615.6
72.5°	1443.2	1439.0	1407.3	1366.0	1353.4
75°	1175.7	1182.1	1159.9	1131.3	1119.7
77.5°	943.1	936.8	915.6	898.7	878.6
80°	705.2	703.1	693.6	670.3	669.3
82.5°	487.4	495.9	488.5	471.6	465.2
85°	300.3	306.6	300.3	291.8	292.9
87.5°	134.3	136.4	129.0	116.3	107.8
90°	21.1	23.3	27.5	32.8	30.7
92.5°	7.4	15.9	23.3	27.5	28.5
95°	9.5	15.9	23.3	27.5	28.5
97.5°	13.7	15.9	23.3	27.5	29.6
100°	15.9	16.9	23.3	27.5	29.6
102.5°	16.9	16.9	23.3	27.5	29.6
105°	18.0	18.0	22.2	27.5	29.6
107.5°	19.0	18.0	22.2	27.5	29.6
110°	19.0	19.0	22.2	27.5	28.5



TEST NUMBER: P470199

CATALOG NUMBER: VHB2-24-W-UNV-L940-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	20.1	20.1	23.3	26.4	28.5
115°	21.1	21.1	23.3	26.4	28.5
117.5°	21.1	22.2	23.3	27.5	28.5
120°	22.2	23.3	23.3	27.5	27.5
122.5°	22.2	24.3	24.3	27.5	27.5
125°	22.2	24.3	24.3	27.5	27.5
127.5°	23.3	25.4	24.3	27.5	27.5
130°	24.3	25.4	26.4	27.5	27.5
132.5°	24.3	26.4	27.5	28.5	27.5
135°	25.4	27.5	28.5	28.5	28.5
137.5°	26.4	27.5	29.6	29.6	29.6
140°	26.4	28.5	29.6	30.7	30.7
142.5°	24.3	28.5	29.6	31.7	31.7
145°	24.3	28.5	30.7	32.8	32.8
147.5°	23.3	27.5	29.6	32.8	32.8
150°	23.3	26.4	29.6	31.7	31.7
152.5°	24.3	25.4	29.6	30.7	31.7
155°	23.3	25.4	29.6	30.7	30.7
157.5°	22.2	24.3	28.5	30.7	31.7
160°	21.1	24.3	27.5	30.7	30.7
162.5°	20.1	23.3	26.4	29.6	30.7
165°	19.0	22.2	25.4	28.5	28.5
167.5°	19.0	22.2	24.3	26.4	27.5
170°	20.1	21.1	23.3	24.3	25.4
172.5°	21.1	21.1	23.3	23.3	23.3
175°	21.1	21.1	22.2	23.3	24.3
177.5°	22.2	21.1	21.1	23.3	23.3
180°	21.1	21.1	21.1	21.1	21.1

(END OF REPORT)