

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: P470179

Luminaire Tested: **VHB2-24-W-UNV-L835-CD-U**

Issue Date: 01/20/2021

Test Information

Test Method: LM-79-08
Report Number: P470179
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-L835-CD-U
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22368.6 lumens
Efficiency: N/A
Efficacy: 140.5 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

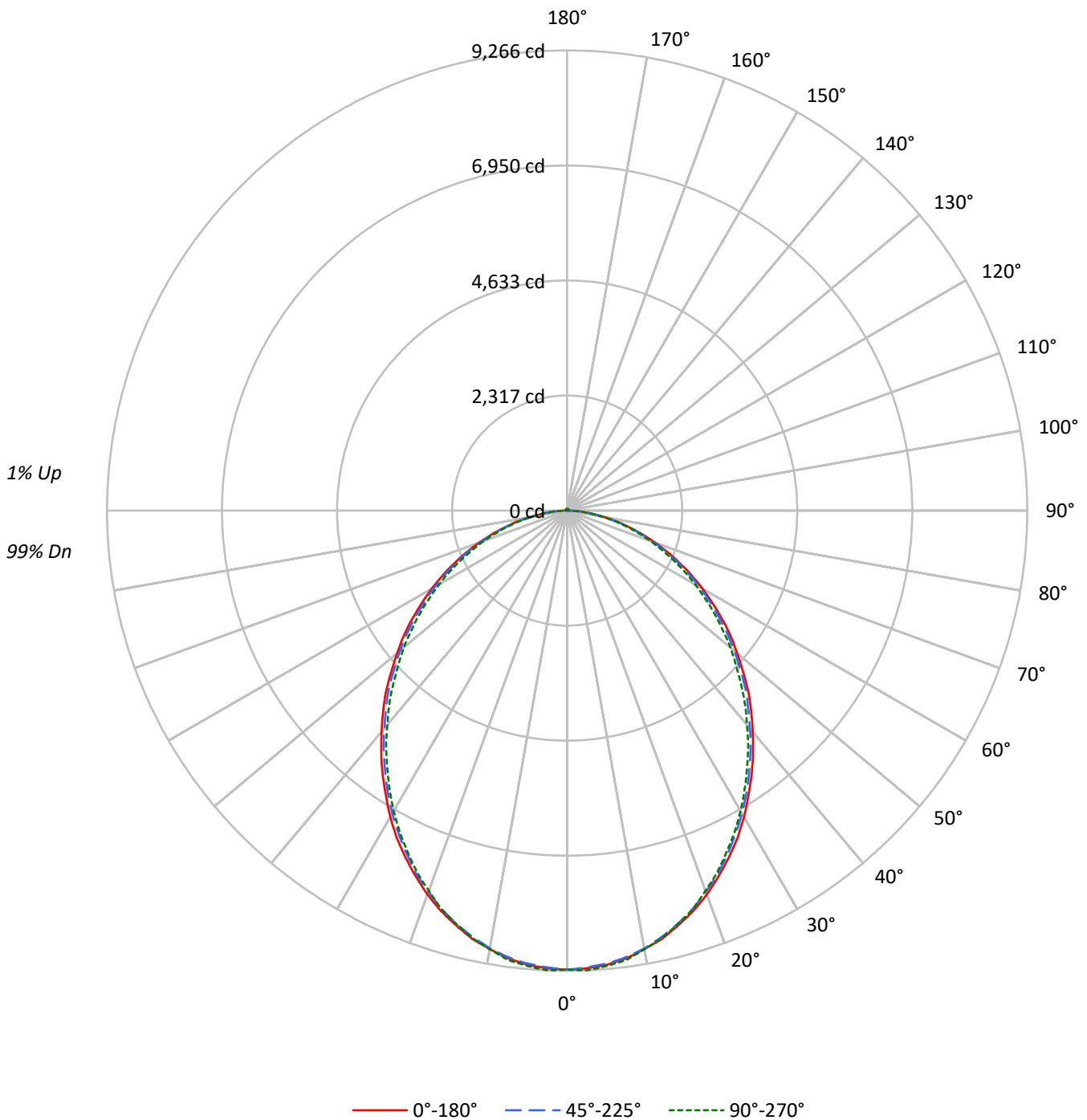
Input Watts (W): 159.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	56858	56858	56858
5°	56687	56543	56831
10°	56004	55895	56019
15°	55046	54860	54890
20°	53846	53458	53313
25°	52282	51816	51508
30°	50588	50010	49604
35°	48631	48002	47424
40°	46665	45945	45235
45°	44904	44195	43091
50°	42723	42066	41086
55°	40838	39951	38864
60°	38727	37867	36635
65°	36448	35566	34295
70°	33772	33144	31991
75°	30766	30352	29300
80°	27504	27051	26105
85°	23331	23331	22760



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	869.1	3.9
10°-20°	2427.8	10.9
20°-30°	3517.6	15.7
30°-40°	4001.0	17.9
40°-50°	3901.5	17.4
50°-60°	3330.8	14.9
60°-70°	2418.1	10.8
70°-80°	1350.2	6.0
80°-90°	379.1	1.7
90°-100°	26.9	0.1
100°-110°	26.6	0.1
110°-120°	26.2	0.1
120°-130°	25.1	0.1
130°-140°	23.7	0.1
140°-150°	20.4	0.1
150°-160°	14.3	0.1
160°-170°	7.9	0.0
170°-180°	2.4	0.0
0°-30°	6814.5	30.5
0°-40°	10815.5	48.4
0°-60°	18047.7	80.7
0°-90°	22195.1	99.2
90°-120°	79.7	0.4
90°-150°	149.0	0.7
90°-180°	174.0	0.8
0°-180°	22368.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9244	9244	9244	9244	9244	
5°	9181	9160	9158	9189	9204	870
15°	8644	8629	8615	8614	8620	2436
25°	7704	7677	7635	7607	7590	3547
35°	6477	6456	6393	6333	6316	4050
45°	5162	5113	5081	4986	4954	3972
55°	3808	3792	3726	3648	3624	3406
65°	2504	2486	2444	2387	2356	2483
75°	1295	1302	1277	1246	1233	1384
85°	331	338	331	321	322	362
90°	23	26	30	36	34	28
95°	10	18	26	30	31	10
105°	20	20	24	30	33	21
115°	23	23	26	29	31	23
125°	24	27	27	30	30	22
135°	28	30	31	31	31	22
145°	27	31	34	36	36	17
155°	26	28	33	34	34	12
165°	21	24	28	31	31	6
175°	23	23	24	26	27	2
180°	23	23	23	23	23	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9244.0	9244.0	9244.0	9244.0	9244.0
2.5°	9225.3	9200.9	9205.6	9235.8	9266.1
5°	9181.1	9160.1	9157.8	9189.3	9204.4
7.5°	9095.0	9072.8	9071.7	9107.8	9125.2
10°	8966.9	8961.1	8949.4	8973.9	8969.2
12.5°	8833.0	8800.4	8794.6	8814.4	8815.5
15°	8644.4	8629.3	8615.3	8614.1	8619.9
17.5°	8451.1	8418.5	8410.4	8405.7	8417.4
20°	8226.4	8190.3	8167.1	8162.4	8144.9
22.5°	7971.5	7949.3	7927.2	7888.8	7892.3
25°	7703.7	7676.9	7635.0	7607.1	7589.6
27.5°	7430.1	7388.2	7344.0	7318.3	7303.2
30°	7122.7	7097.1	7041.3	6993.5	6984.2
32.5°	6796.8	6779.3	6723.4	6681.5	6653.6
35°	6476.6	6455.6	6392.8	6333.4	6315.9
37.5°	6150.6	6125.0	6071.4	6019.1	5990.0
40°	5811.8	5793.2	5722.2	5659.3	5633.7
42.5°	5484.7	5460.2	5396.2	5319.4	5304.2
45°	5162.2	5113.3	5080.7	4986.4	4953.8
47.5°	4804.8	4792.0	4722.1	4646.4	4610.3
50°	4464.8	4456.7	4396.1	4311.1	4293.7
52.5°	4152.8	4120.2	4064.3	3987.5	3947.9
55°	3808.2	3791.9	3725.5	3647.5	3624.2
57.5°	3470.6	3470.6	3399.5	3333.2	3293.6
60°	3148.1	3128.3	3078.2	3014.2	2978.1
62.5°	2823.3	2807.0	2763.9	2699.8	2667.2
65°	2504.3	2485.6	2443.7	2386.7	2356.4
67.5°	2199.2	2177.1	2150.3	2075.8	2056.0
70°	1877.9	1873.2	1843.0	1791.7	1778.9
72.5°	1589.2	1584.5	1549.6	1504.2	1490.2
75°	1294.6	1301.6	1277.2	1245.7	1232.9
77.5°	1038.5	1031.5	1008.2	989.6	967.5
80°	776.5	774.2	763.7	738.1	737.0
82.5°	536.7	546.0	537.9	519.2	512.3
85°	330.6	337.6	330.6	321.3	322.5
87.5°	147.9	150.2	142.0	128.1	118.8
90°	23.3	25.6	30.3	36.1	33.8
92.5°	8.1	17.5	25.6	30.3	31.4
95°	10.5	17.5	25.6	30.3	31.4
97.5°	15.1	17.5	25.6	30.3	32.6
100°	17.5	18.6	25.6	30.3	32.6
102.5°	18.6	18.6	25.6	30.3	32.6
105°	19.8	19.8	24.4	30.3	32.6
107.5°	21.0	19.8	24.4	30.3	32.6
110°	21.0	21.0	24.4	30.3	31.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	22.1	22.1	25.6	29.1	31.4
115°	23.3	23.3	25.6	29.1	31.4
117.5°	23.3	24.4	25.6	30.3	31.4
120°	24.4	25.6	25.6	30.3	30.3
122.5°	24.4	26.8	26.8	30.3	30.3
125°	24.4	26.8	26.8	30.3	30.3
127.5°	25.6	27.9	26.8	30.3	30.3
130°	26.8	27.9	29.1	30.3	30.3
132.5°	26.8	29.1	30.3	31.4	30.3
135°	27.9	30.3	31.4	31.4	31.4
137.5°	29.1	30.3	32.6	32.6	32.6
140°	29.1	31.4	32.6	33.8	33.8
142.5°	26.8	31.4	32.6	34.9	34.9
145°	26.8	31.4	33.8	36.1	36.1
147.5°	25.6	30.3	32.6	36.1	36.1
150°	25.6	29.1	32.6	34.9	34.9
152.5°	26.8	27.9	32.6	33.8	34.9
155°	25.6	27.9	32.6	33.8	33.8
157.5°	24.4	26.8	31.4	33.8	34.9
160°	23.3	26.8	30.3	33.8	33.8
162.5°	22.1	25.6	29.1	32.6	33.8
165°	21.0	24.4	27.9	31.4	31.4
167.5°	21.0	24.4	26.8	29.1	30.3
170°	22.1	23.3	25.6	26.8	27.9
172.5°	23.3	23.3	25.6	25.6	25.6
175°	23.3	23.3	24.4	25.6	26.8
177.5°	24.4	23.3	23.3	25.6	25.6
180°	23.3	23.3	23.3	23.3	23.3

(END OF REPORT)