

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: P364435

Luminaire Tested: **VHB-24-N-UNV-L850-CD-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P364435  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1909-491-2)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB-24-N-UNV-L850-CD-U  
Description: VHB LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS AND 5000K, 80CRI LEDS

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23231.0 lumens  
Efficiency: N/A  
Efficacy: 133.4 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.72 / 0.86  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

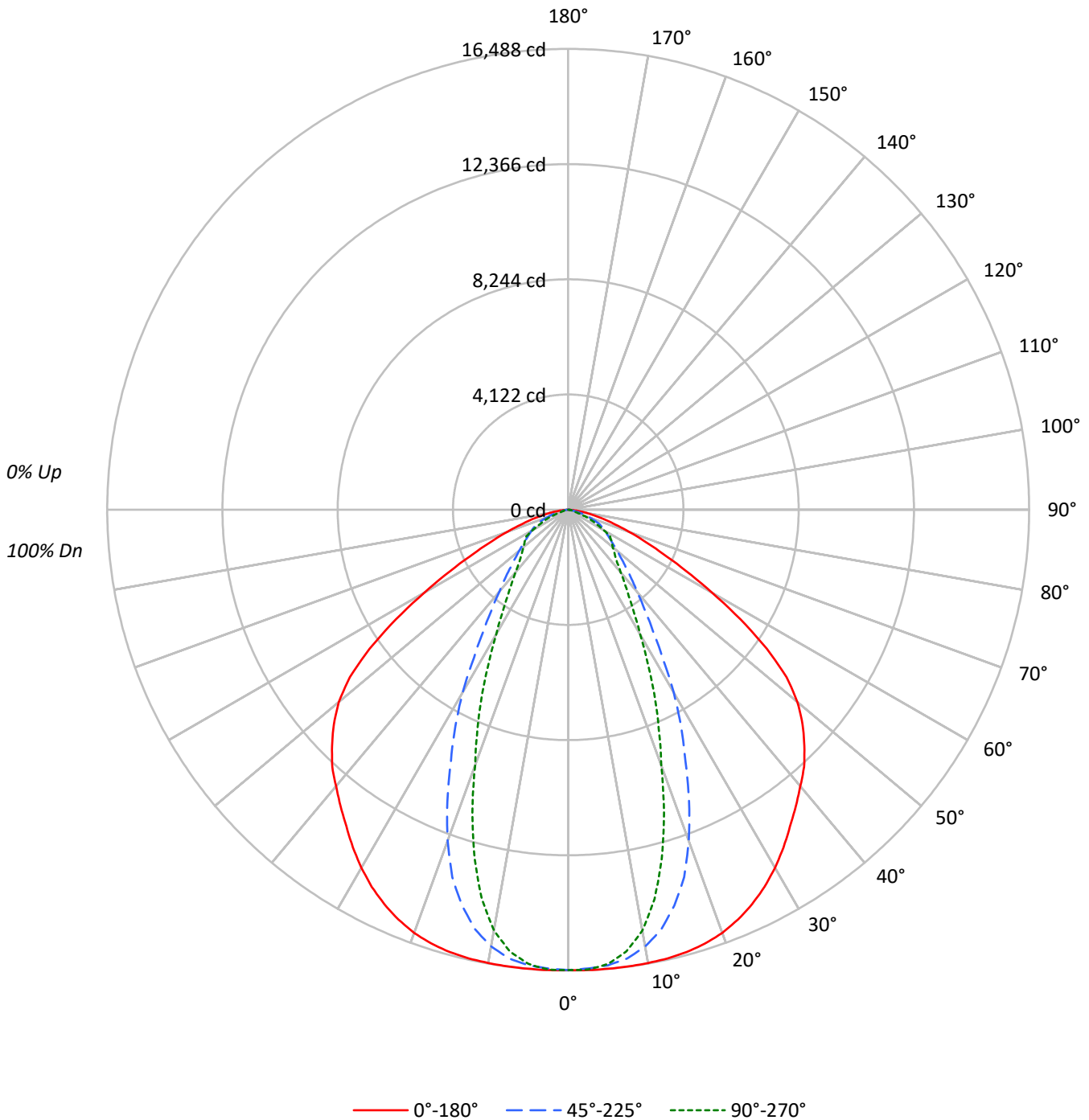
Input Watts (W): 174.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	102	102	102	100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	74	68	64	71	67	64	62
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	57	51	47	46
8	69	57	49	44	67	56	49	44	55	49	44	54	48	44	53	47	44	42
9	65	53	46	41	63	52	45	41	51	45	41	50	44	40	49	44	40	39
10	61	49	42	38	60	49	42	38	48	42	38	47	41	37	46	41	37	36

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	101320	101320	101320
5°	101795	101022	100730
10°	102864	99085	95466
15°	104331	93356	82315
20°	105456	82475	63731
25°	105667	67347	49382
30°	105074	53489	36549
35°	103875	39636	28421
40°	103711	30779	23456
45°	103930	25330	20836
50°	102456	21909	19874
55°	93010	19530	20080
60°	73123	18663	18296
65°	54311	18089	13768
70°	41656	14482	8406
75°	31709	10326	4639
80°	23286	4803	3748
85°	14573	4128	3331



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1547.6	6.7
10°-20°	4074.0	17.5
20°-30°	4919.8	21.2
30°-40°	4398.9	18.9
40°-50°	3444.7	14.8
50°-60°	2602.7	11.2
60°-70°	1545.8	6.7
70°-80°	594.1	2.6
80°-90°	103.2	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	10541.5	45.4
0°-40°	14940.5	64.3
0°-60°	20987.9	90.3
0°-90°	23231.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23231.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16473	16473	16473	16473	16473	
5°	16487	16415	16362	16340	16314	###
15°	16384	15844	14661	13435	12927	4629
25°	15570	13738	9923	7824	7276	7169
35°	13834	9844	5279	4116	3785	8675
45°	11948	5091	2912	2460	2395	9197
55°	8673	2762	1821	1814	1872	7617
65°	3732	1551	1243	1036	946	3845
75°	1334	746	434	215	195	1461
85°	206	72	58	51	47	275
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	16472.6	16472.6	16472.6	16472.6	16472.6
2.5°	16488.1	16433.6	16429.5	16464.4	16469.6
5°	16487.0	16415.1	16361.7	16340.1	16314.5
7.5°	16481.9	16373.0	16193.3	16020.7	15940.6
10°	16469.6	16276.5	15864.6	15472.2	15285.2
12.5°	16442.9	16103.9	15376.7	14655.6	14263.2
15°	16384.3	15844.0	14660.7	13435.3	12926.9
17.5°	16278.5	15485.5	13783.5	12053.8	11399.5
20°	16111.1	15029.5	12600.2	10478.1	9736.5
22.5°	15870.7	14433.7	11296.8	9059.6	8466.9
25°	15569.8	13738.3	9923.4	7823.9	7276.4
27.5°	15212.3	12926.9	8740.1	6673.5	6134.2
30°	14794.3	11978.8	7531.2	5586.7	5146.1
32.5°	14326.9	10980.4	6268.8	4757.8	4395.2
35°	13833.9	9844.3	5278.6	4115.8	3785.1
37.5°	13369.6	8628.2	4470.2	3547.8	3315.7
40°	12916.6	7350.4	3833.4	3099.0	2921.3
42.5°	12489.3	6128.1	3346.5	2723.0	2606.9
45°	11948.0	5090.6	2912.0	2460.1	2395.3
47.5°	11373.8	4296.6	2566.9	2246.4	2223.8
50°	10707.2	3659.8	2289.6	2060.5	2076.9
52.5°	9842.3	3156.5	2026.6	1929.0	1977.3
55°	8673.4	2762.0	1821.2	1814.0	1872.5
57.5°	7304.2	2385.1	1658.9	1704.1	1769.8
60°	5944.2	2082.1	1517.1	1582.9	1487.3
62.5°	4748.6	1803.7	1382.6	1262.4	1180.2
65°	3731.7	1551.0	1242.9	1036.4	946.0
67.5°	2975.7	1315.8	1045.7	824.8	749.8
70°	2316.3	1106.3	805.3	619.4	467.4
72.5°	1774.9	924.4	628.6	352.3	266.0
75°	1334.3	745.7	434.5	214.7	195.2
77.5°	951.2	553.6	232.1	155.1	143.8
80°	657.4	355.4	135.6	112.0	105.8
82.5°	407.8	171.5	92.4	80.1	75.0
85°	206.5	71.9	58.5	51.4	47.2
87.5°	68.8	34.9	26.7	24.7	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)