

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: P364434

Luminaire Tested: **VHB-24-N-UNV-L840-CD-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P364434  
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-L840-CD-U  
Description: VHB LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS AND 4000K, 80CRI LEDS

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22608.0 lumens  
Efficiency: N/A  
Efficacy: 129.9 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

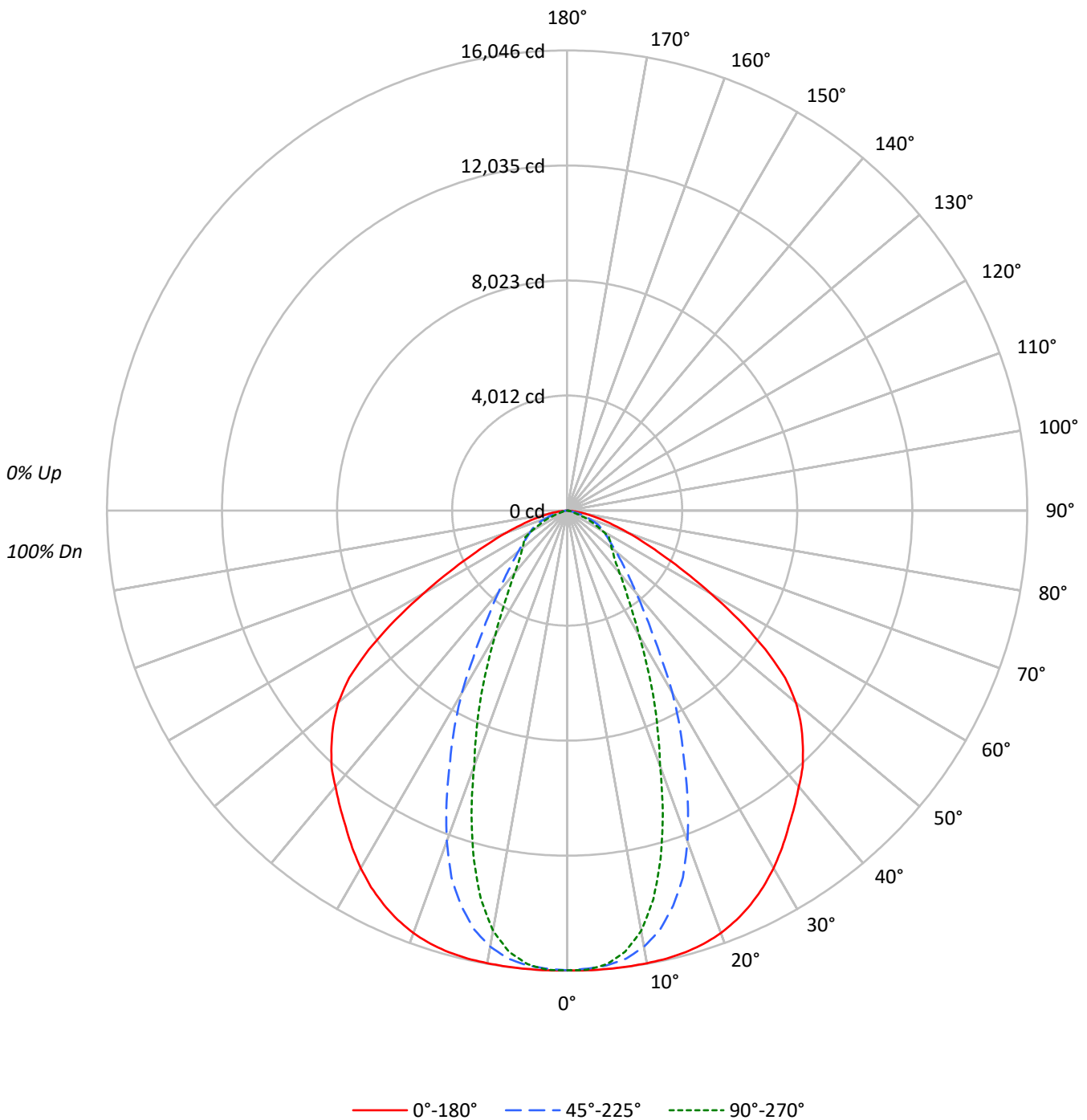
Input Watts (W): 174.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	98603	98603	98603
5°	99066	98313	98029
10°	100105	96428	92906
15°	101533	90853	80108
20°	102627	80263	62022
25°	102833	65541	48058
30°	102256	52054	35569
35°	101089	38572	27659
40°	100930	29954	22826
45°	101143	24651	20277
50°	99708	21321	19341
55°	90516	19005	19542
60°	71162	18162	17805
65°	52854	17603	13398
70°	40537	14094	8179
75°	30859	10048	4513
80°	22662	4672	3648
85°	14178	4023	3246



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1506.1	6.7
10°-20°	3964.8	17.5
20°-30°	4787.9	21.2
30°-40°	4281.0	18.9
40°-50°	3352.3	14.8
50°-60°	2532.9	11.2
60°-70°	1504.4	6.7
70°-80°	578.1	2.6
80°-90°	100.5	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°	10258.8	45.4
0°-40°	14539.8	64.3
0°-60°	20425.0	90.3
0°-90°	22608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22608.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16031	16031	16031	16031	16031	
5°	16045	15975	15923	15902	15877	###
15°	15945	15419	14268	13075	12580	4505
25°	15152	13370	9657	7614	7081	6977
35°	13463	9580	5137	4006	3684	8443
45°	11628	4954	2834	2394	2331	8950
55°	8441	2688	1772	1765	1822	7412
65°	3632	1509	1210	1009	921	3742
75°	1298	726	423	209	190	1421
85°	201	70	57	50	46	268
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	16030.9	16030.9	16030.9	16030.9	16030.9
2.5°	16045.9	15992.9	15988.9	16022.9	16027.9
5°	16044.9	15974.9	15922.9	15901.9	15876.9
7.5°	16039.9	15933.9	15759.0	15591.1	15513.1
10°	16027.9	15840.0	15439.1	15057.3	14875.3
12.5°	16001.9	15672.0	14964.3	14262.6	13880.7
15°	15944.9	15419.1	14267.6	13075.0	12580.2
17.5°	15842.0	15070.3	13413.9	11730.5	11093.8
20°	15679.0	14626.4	12262.3	10197.1	9475.4
22.5°	15445.1	14046.6	10993.8	8816.6	8239.9
25°	15152.2	13369.9	9657.3	7614.1	7081.3
27.5°	14804.4	12580.2	8505.8	6494.5	5969.7
30°	14397.5	11657.6	7329.2	5436.9	5008.1
32.5°	13942.7	10685.9	6100.7	4630.2	4277.4
35°	13462.9	9580.3	5137.0	4005.5	3683.6
37.5°	13011.0	8396.8	4350.3	3452.7	3226.8
40°	12570.2	7153.3	3730.6	3015.8	2842.9
42.5°	12154.4	5963.7	3256.8	2650.0	2537.0
45°	11627.6	4954.1	2833.9	2394.1	2331.1
47.5°	11068.8	4181.4	2498.0	2186.2	2164.2
50°	10420.0	3561.6	2228.2	2005.2	2021.2
52.5°	9578.3	3071.8	1972.2	1877.3	1924.3
55°	8440.8	2688.0	1772.3	1765.3	1822.3
57.5°	7108.3	2321.1	1614.4	1658.4	1722.3
60°	5784.8	2026.2	1476.4	1540.4	1447.4
62.5°	4621.2	1755.3	1345.5	1228.5	1148.6
65°	3631.6	1509.4	1209.5	1008.6	920.6
67.5°	2895.9	1280.5	1017.6	802.7	729.7
70°	2254.1	1076.6	783.7	602.8	454.8
72.5°	1727.3	899.7	611.8	342.9	258.9
75°	1298.5	725.7	422.8	208.9	189.9
77.5°	925.6	538.8	225.9	150.9	139.9
80°	639.8	345.9	131.9	109.0	103.0
82.5°	396.8	166.9	90.0	78.0	73.0
85°	200.9	70.0	57.0	50.0	46.0
87.5°	67.0	34.0	26.0	24.0	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)