

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: P563281

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

Issue Date: 6/3/2022



Test Information

Test Method: LM-79-08
Report Number: P563281
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P364424)
Test Lab: INNOVATION CENTER
Issue Date: 6/3/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: VHB-24-N-UNV-L840-CD
Description: 24000 LUMEN, VHB LED LUMINAIRE WITH, NARROW LENS AND 80CRI, 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

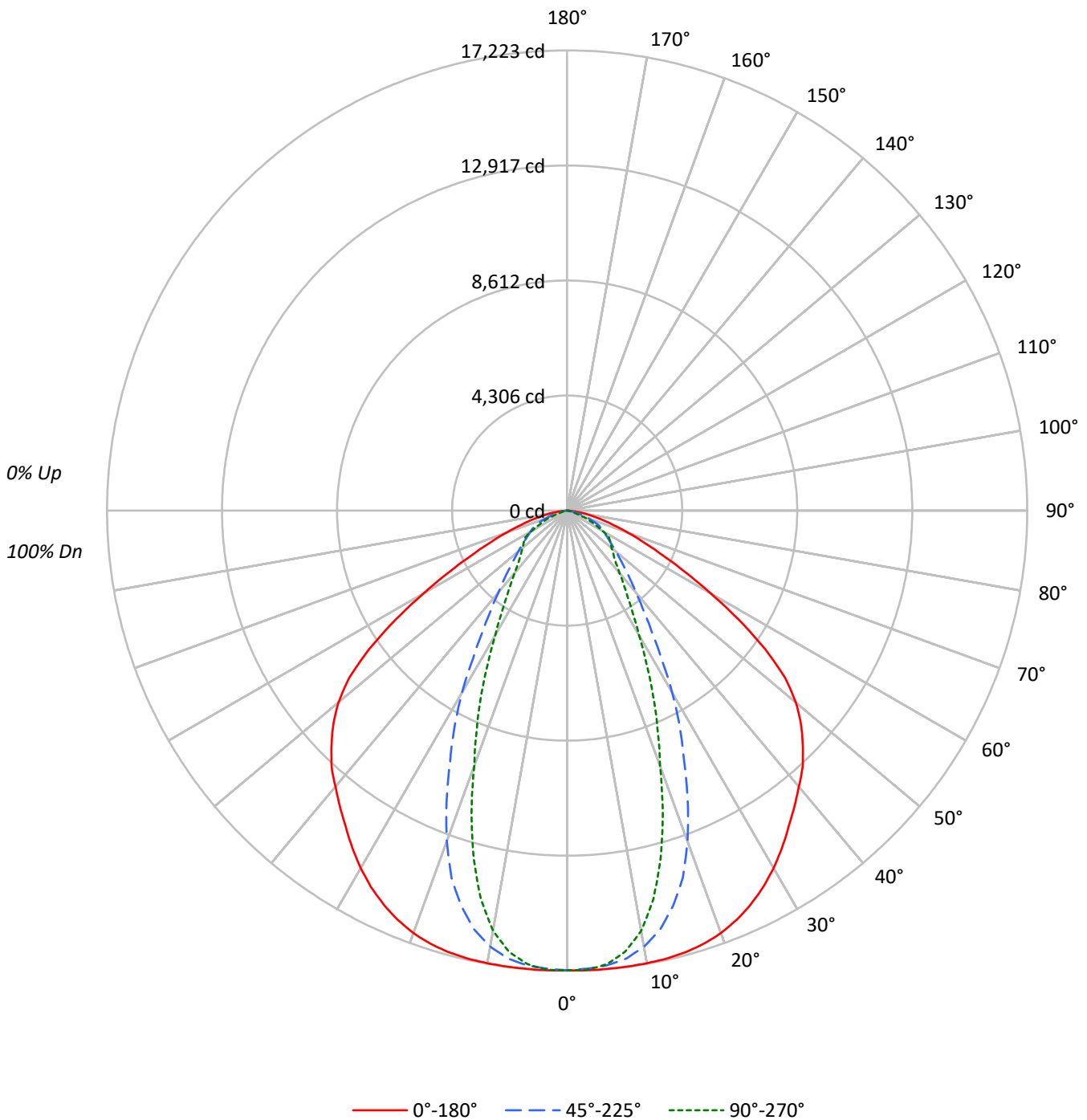
Lumens per Lamp: N/A
Luminaire Lumens: 24266.0 lumens
Efficiency: N/A
Efficacy: 147.1 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 0.72 / 0.86
Luminous Opening: Rectangular (W 1.17' x L: 1.58' x H: 0')
CIE Type: Direct

Input Watts (W): 165
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°	100266	100266	100266
5°	100736	99971	99682
10°	101794	98054	94474
15°	103246	92386	81458
20°	104359	81617	63068
25°	104568	66647	48869
30°	103981	52932	36169
35°	102794	39223	28125
40°	102633	30459	23212
45°	102849	25066	20620
50°	101389	21680	19667
55°	92042	19325	19872
60°	72363	18469	18106
65°	53747	17901	13627
70°	41222	14330	8318
75°	31378	10219	4588
80°	23041	4755	3705
85°	14415	4085	3296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1616.6	6.7
10°-20°	4255.6	17.5
20°-30°	5139.0	21.2
30°-40°	4594.9	18.9
40°-50°	3598.2	14.8
50°-60°	2718.7	11.2
60°-70°	1614.7	6.7
70°-80°	620.5	2.6
80°-90°	107.8	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°	11011.2	45.4
0°-40°	15606.1	64.3
0°-60°	21922.9	90.3
0°-90°	24266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	24266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	17206	17206	17206	17206	17206	
5°	17222	17146	17091	17068	17041	###
15°	17114	16550	15314	14034	13503	4836
25°	16264	14350	10366	8172	7601	7488
35°	14450	10283	5514	4299	3954	9062
45°	12480	5318	3042	2570	2502	9607
55°	9060	2885	1902	1895	1956	7956
65°	3898	1620	1298	1083	988	4016
75°	1394	779	454	224	204	1526
85°	216	75	61	54	49	287
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	17206.5	17206.5	17206.5	17206.5	17206.5
2.5°	17222.7	17165.9	17161.4	17197.9	17203.4
5°	17221.5	17146.4	17090.7	17068.2	17041.2
7.5°	17216.2	17102.5	16914.7	16734.5	16650.8
10°	17203.4	17001.6	16571.4	16161.6	15966.3
12.5°	17175.4	16821.3	16061.7	15308.5	14898.6
15°	17114.3	16549.9	15314.0	14033.8	13502.7
17.5°	17003.6	16175.4	14397.6	12590.8	11907.2
20°	16828.9	15699.1	13161.6	10945.0	10170.3
22.5°	16577.7	15076.9	11800.1	9463.2	8844.2
25°	16263.5	14350.5	10365.6	8172.4	7600.6
27.5°	15890.1	13502.7	9129.4	6970.8	6407.5
30°	15453.4	12512.4	7866.7	5835.6	5375.3
32.5°	14965.2	11469.5	6548.1	4969.7	4591.1
35°	14450.2	10282.9	5513.8	4299.2	3953.7
37.5°	13965.2	9012.5	4669.5	3706.0	3463.4
40°	13492.2	7677.9	4004.2	3237.0	3051.5
42.5°	13045.7	6401.2	3495.7	2844.4	2723.0
45°	12480.3	5317.5	3041.7	2569.7	2502.1
47.5°	11880.4	4488.0	2681.2	2346.4	2322.9
50°	11184.1	3822.9	2391.5	2152.3	2169.4
52.5°	10280.7	3297.1	2116.8	2014.9	2065.4
55°	9059.8	2885.2	1902.2	1894.7	1956.0
57.5°	7629.6	2491.4	1732.7	1780.0	1848.6
60°	6209.1	2174.9	1584.7	1653.3	1553.6
62.5°	4960.2	1884.2	1444.2	1318.6	1232.9
65°	3898.0	1620.0	1298.3	1082.7	988.3
67.5°	3108.3	1374.4	1092.2	861.6	783.2
70°	2419.5	1155.5	841.1	647.0	488.2
72.5°	1854.1	965.7	656.5	368.1	277.9
75°	1393.7	779.0	453.9	224.3	203.8
77.5°	993.5	578.4	242.4	162.0	150.2
80°	686.6	371.3	141.7	116.9	110.4
82.5°	425.9	179.3	96.6	83.6	78.4
85°	215.6	75.1	61.1	53.6	49.3
87.5°	71.9	36.5	27.8	25.8	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)