

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: P417763

Luminaire Tested: **VHB-1824-W-UNV-L950-CD-U-LEVEL2**

Issue Date: 11/17/2020

Test Information

Test Method: LM-79-08
Report Number: P417763
Test Lab: INNOVATION CENTER(G3)
Issue Date: 11/17/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: VHB-1824-W-UNV-L950-CD-U-LEVEL2
Description: VHB LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20497.6 lumens
Efficiency: N/A
Efficacy: 129.5 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

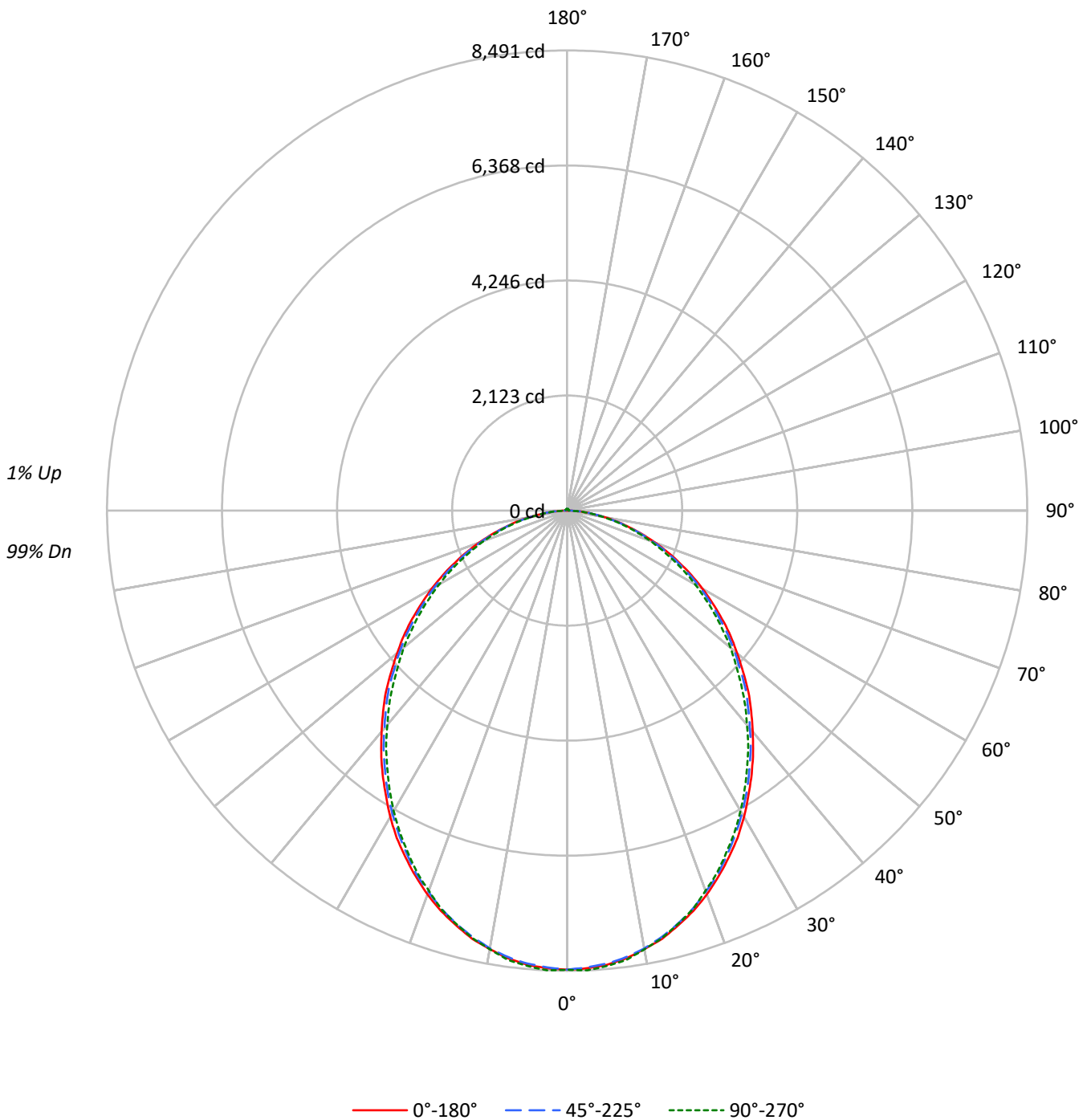
Input Watts (W): 158.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	52102	52102	52102
5°	51946	51813	52077
10°	51320	51220	51333
15°	50441	50272	50298
20°	49342	48986	48854
25°	47909	47482	47200
30°	46357	45826	45455
35°	44564	43987	43458
40°	42762	42102	41451
45°	41148	40498	39486
50°	39150	38547	37649
55°	37422	36609	35614
60°	35488	34699	33571
65°	33399	32591	31426
70°	30946	30371	29315
75°	28192	27812	26850
80°	25206	24791	23920
85°	21383	21383	20854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	796.4	3.9
10°-20°	2224.7	10.9
20°-30°	3223.4	15.7
30°-40°	3666.3	17.9
40°-50°	3575.1	17.4
50°-60°	3052.2	14.9
60°-70°	2215.8	10.8
70°-80°	1237.2	6.0
80°-90°	347.4	1.7
90°-100°	24.7	0.1
100°-110°	24.4	0.1
110°-120°	24.0	0.1
120°-130°	23.0	0.1
130°-140°	21.7	0.1
140°-150°	18.7	0.1
150°-160°	13.1	0.1
160°-170°	7.2	0.0
170°-180°	2.2	0.0
0°-30°	6244.5	30.5
0°-40°	9910.9	48.4
0°-60°	16538.2	80.7
0°-90°	20338.6	99.2
90°-120°	73.0	0.4
90°-150°	136.5	0.7
90°-180°	159.0	0.8
0°-180°	20497.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8471	8471	8471	8471	8471	
5°	8413	8394	8392	8421	8434	797
15°	7921	7908	7895	7894	7899	2232
25°	7059	7035	6996	6971	6955	3250
35°	5935	5916	5858	5804	5788	3712
45°	4730	4686	4656	4569	4539	3640
55°	3490	3475	3414	3342	3321	3121
65°	2295	2278	2239	2187	2159	2276
75°	1186	1193	1170	1142	1130	1268
85°	303	309	303	294	296	331
90°	21	24	28	33	31	25
95°	10	16	24	28	29	10
105°	18	18	22	28	30	19
115°	21	21	24	27	29	21
125°	22	24	24	28	28	21
135°	26	28	29	29	29	20
145°	24	29	31	33	33	15
155°	24	26	30	31	31	11
165°	19	22	26	29	29	6
175°	21	21	22	24	24	2
180°	21	21	21	21	21	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8470.8	8470.8	8470.8	8470.8	8470.8
2.5°	8453.7	8431.3	8435.6	8463.3	8491.0
5°	8413.2	8394.0	8391.8	8420.6	8434.5
7.5°	8334.2	8313.9	8312.9	8345.9	8361.9
10°	8216.9	8211.5	8200.9	8223.3	8219.0
12.5°	8094.2	8064.3	8059.0	8077.1	8078.2
15°	7921.3	7907.5	7894.7	7893.6	7898.9
17.5°	7744.2	7714.4	7706.9	7702.6	7713.3
20°	7538.3	7505.3	7483.9	7479.7	7463.7
22.5°	7304.7	7284.4	7264.2	7229.0	7232.2
25°	7059.3	7034.8	6996.4	6970.8	6954.8
27.5°	6808.6	6770.2	6729.7	6706.2	6692.3
30°	6527.0	6503.5	6452.3	6408.6	6400.0
32.5°	6228.3	6212.3	6161.0	6122.6	6097.0
35°	5934.9	5915.7	5858.1	5803.6	5787.6
37.5°	5636.2	5612.7	5563.6	5515.6	5488.9
40°	5325.7	5308.6	5243.6	5185.9	5162.5
42.5°	5025.9	5003.5	4944.8	4874.4	4860.6
45°	4730.4	4685.6	4655.7	4569.3	4539.4
47.5°	4402.9	4391.1	4327.1	4257.8	4224.7
50°	4091.4	4083.9	4028.4	3950.5	3934.5
52.5°	3805.4	3775.6	3724.4	3654.0	3617.7
55°	3489.7	3474.7	3413.9	3342.4	3321.1
57.5°	3180.3	3180.3	3115.2	3054.4	3018.1
60°	2884.8	2866.6	2820.7	2762.1	2729.0
62.5°	2587.1	2572.2	2532.7	2474.0	2444.1
65°	2294.8	2277.7	2239.3	2187.0	2159.3
67.5°	2015.3	1995.0	1970.5	1902.2	1884.1
70°	1720.8	1716.6	1688.8	1641.9	1630.1
72.5°	1456.2	1452.0	1420.0	1378.4	1365.6
75°	1186.3	1192.7	1170.3	1141.5	1129.8
77.5°	951.6	945.2	923.9	906.8	886.5
80°	711.6	709.5	699.9	676.4	675.3
82.5°	491.8	500.4	492.9	475.8	469.4
85°	303.0	309.4	303.0	294.4	295.5
87.5°	135.5	137.6	130.2	117.4	108.8
90°	21.3	23.5	27.7	33.1	30.9
92.5°	7.5	16.0	23.5	27.7	28.8
95°	9.6	16.0	23.5	27.7	28.8
97.5°	13.9	16.0	23.5	27.7	29.9
100°	16.0	17.1	23.5	27.7	29.9
102.5°	17.1	17.1	23.5	27.7	29.9
105°	18.1	18.1	22.4	27.7	29.9
107.5°	19.2	18.1	22.4	27.7	29.9
110°	19.2	19.2	22.4	27.7	28.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	20.3	20.3	23.5	26.7	28.8
115°	21.3	21.3	23.5	26.7	28.8
117.5°	21.3	22.4	23.5	27.7	28.8
120°	22.4	23.5	23.5	27.7	27.7
122.5°	22.4	24.5	24.5	27.7	27.7
125°	22.4	24.5	24.5	27.7	27.7
127.5°	23.5	25.6	24.5	27.7	27.7
130°	24.5	25.6	26.7	27.7	27.7
132.5°	24.5	26.7	27.7	28.8	27.7
135°	25.6	27.7	28.8	28.8	28.8
137.5°	26.7	27.7	29.9	29.9	29.9
140°	26.7	28.8	29.9	30.9	30.9
142.5°	24.5	28.8	29.9	32.0	32.0
145°	24.5	28.8	30.9	33.1	33.1
147.5°	23.5	27.7	29.9	33.1	33.1
150°	23.5	26.7	29.9	32.0	32.0
152.5°	24.5	25.6	29.9	30.9	32.0
155°	23.5	25.6	29.9	30.9	30.9
157.5°	22.4	24.5	28.8	30.9	32.0
160°	21.3	24.5	27.7	30.9	30.9
162.5°	20.3	23.5	26.7	29.9	30.9
165°	19.2	22.4	25.6	28.8	28.8
167.5°	19.2	22.4	24.5	26.7	27.7
170°	20.3	21.3	23.5	24.5	25.6
172.5°	21.3	21.3	23.5	23.5	23.5
175°	21.3	21.3	22.4	23.5	24.5
177.5°	22.4	21.3	21.3	23.5	23.5
180°	21.3	21.3	21.3	21.3	21.3

(END OF REPORT)