

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: P295501

Luminaire Tested: **BMK-24-MCL-UNV-L740-CD-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P295501
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-24-MCL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26452.0 lumens
Efficiency: N/A
Efficacy: 170.1 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

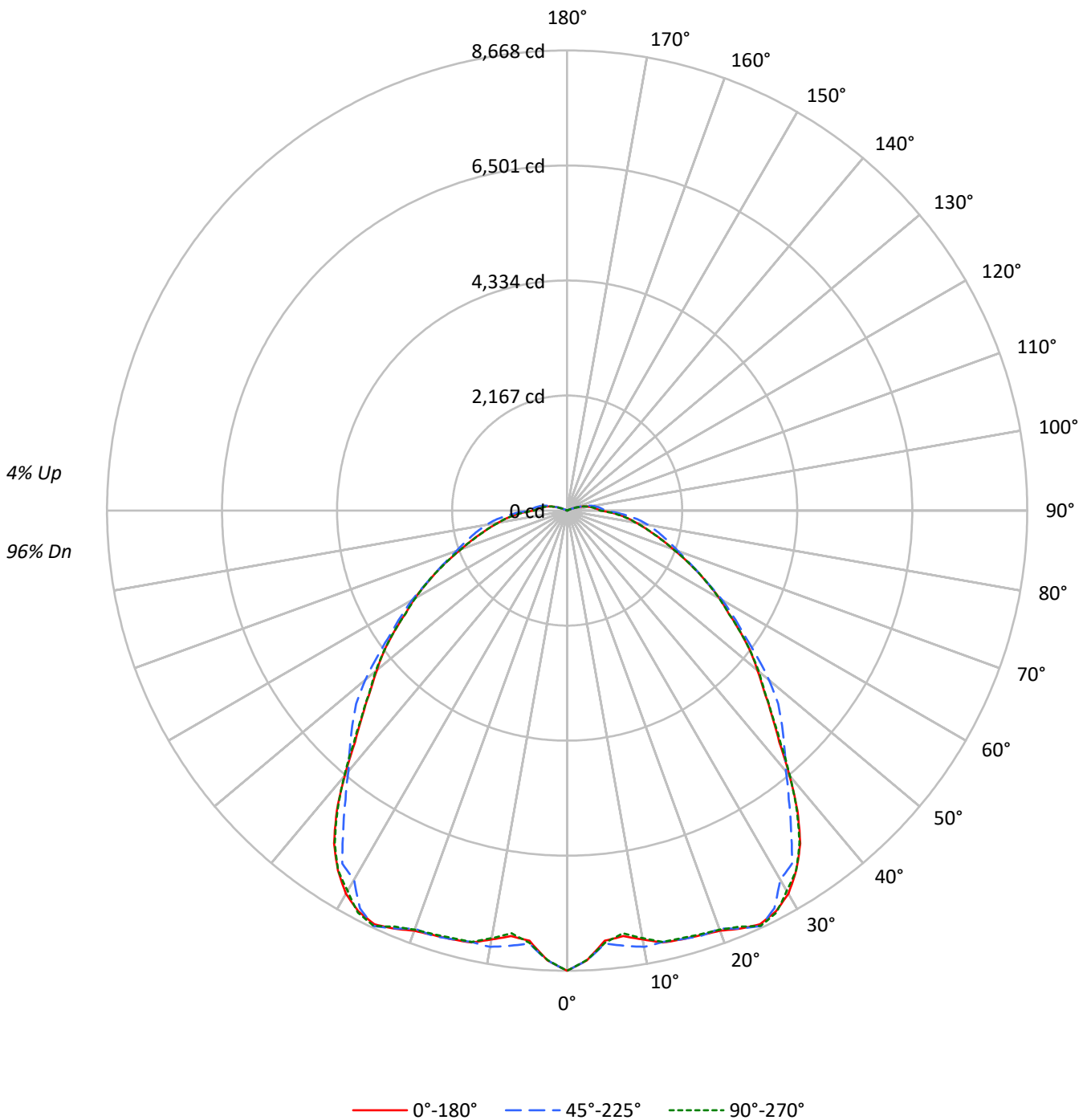
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	66823	66823	66823
5°	62299	62697	62583
10°	62885	63975	62698
15°	64657	64633	64485
20°	66199	65883	66041
25°	69288	69579	69528
30°	69412	66850	68891
35°	66493	63858	66272
40°	59638	58648	59735
45°	53074	55739	53228
50°	49149	52123	49427
55°	45662	46637	45698
60°	42429	43080	42254
65°	39186	39293	39154
70°	36034	37584	36160
75°	34499	38412	34608
80°	34913	41007	34603
85°	37429	43224	37272



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	787.3	3.0
10°-20°	2373.5	9.0
20°-30°	3922.1	14.8
30°-40°	4668.1	17.6
40°-50°	4353.7	16.5
50°-60°	3628.0	13.7
60°-70°	2714.4	10.3
70°-80°	1884.6	7.1
80°-90°	1142.3	4.3
90°-100°	611.2	2.3
100°-110°	317.7	1.2
110°-120°	48.3	0.2
120°-130°	0.8	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°	7083.0	26.8
0°-40°	11751.1	44.4
0°-60°	19732.7	74.6
0°-90°	25474.1	96.3
90°-120°	977.1	3.7
90°-150°	977.9	3.7
90°-180°	978.0	3.7
0°-180°	26452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8668	8668	8668	8668	8668	
5°	8134	8195	8186	8175	8172	782
15°	8360	8418	8357	8399	8338	2369
25°	8599	8595	8635	8611	8629	3935
35°	7656	7531	7352	7535	7630	4728
45°	5449	5642	5723	5652	5465	4239
55°	3976	4039	4061	4042	3980	3561
65°	2698	2729	2706	2728	2696	2674
75°	1674	1770	1864	1773	1680	1793
85°	1000	1029	1155	1029	996	883
90°	632	675	708	670	623	365
95°	520	554	620	551	525	408
105°	292	297	332	294	294	305
115°	28	32	41	33	29	47
125°	0	0	0	0	0	1
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8668.1	8668.1	8668.1	8668.1	8668.1
2.5°	8480.4	8487.8	8479.3	8457.0	8472.9
5°	8134.5	8195.0	8186.5	8174.8	8171.6
7.5°	8084.6	8175.9	8267.1	8167.4	8029.4
10°	8202.4	8293.6	8344.6	8286.2	8178.0
12.5°	8335.0	8330.8	8325.5	8321.2	8321.2
15°	8360.5	8417.8	8357.3	8398.7	8338.2
17.5°	8383.8	8425.2	8398.7	8418.8	8365.8
20°	8419.9	8462.3	8379.6	8442.2	8399.7
22.5°	8522.8	8553.6	8519.6	8550.4	8483.5
25°	8599.2	8594.9	8635.3	8610.9	8628.9
27.5°	8511.1	8484.6	8448.5	8440.0	8536.6
30°	8335.0	8192.8	8027.3	8162.1	8272.4
32.5°	8034.7	8042.2	7884.1	8051.7	8030.5
35°	7656.0	7530.8	7352.5	7535.0	7630.5
37.5°	7125.5	7031.1	6860.3	7030.0	7104.3
40°	6519.7	6535.6	6411.5	6532.4	6530.3
42.5°	5912.8	6068.8	6056.0	6043.3	5958.4
45°	5449.2	5642.3	5722.9	5651.8	5465.1
47.5°	5031.1	5300.6	5389.7	5302.7	5042.8
50°	4681.0	4859.3	4964.3	4858.2	4707.5
52.5°	4346.8	4409.4	4496.4	4428.5	4352.1
55°	3976.5	4039.1	4061.4	4042.3	3979.7
57.5°	3608.4	3707.0	3711.3	3699.6	3606.2
60°	3320.8	3361.2	3371.8	3375.0	3307.1
62.5°	2990.9	3046.1	3007.9	3046.1	2998.3
65°	2698.1	2728.8	2705.5	2727.8	2695.9
67.5°	2396.7	2481.6	2444.5	2477.4	2404.2
70°	2123.0	2231.2	2214.3	2233.3	2130.4
72.5°	1898.1	1993.6	2032.8	1986.1	1888.5
75°	1674.2	1769.7	1864.1	1772.9	1679.5
77.5°	1497.0	1569.2	1702.9	1575.5	1494.9
80°	1318.8	1385.6	1549.0	1380.3	1307.1
82.5°	1174.5	1205.3	1369.7	1211.6	1168.1
85°	1000.5	1029.1	1155.4	1029.1	996.3
87.5°	822.3	843.5	927.3	854.1	810.6
90°	632.3	674.8	707.7	669.5	622.8
92.5°	578.2	609.0	666.3	603.7	574.0
95°	519.9	553.8	619.6	550.6	525.2
97.5°	476.4	493.4	558.1	492.3	473.2
100°	422.3	439.2	505.0	433.9	415.9
102.5°	359.7	369.2	429.7	372.4	360.7
105°	291.8	297.1	332.1	293.9	293.9
107.5°	217.5	214.3	226.0	211.1	216.4
110°	140.0	130.5	141.1	130.5	142.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	76.4	69.0	82.8	70.0	75.3
115°	27.6	31.8	41.4	32.9	28.6
117.5°	7.4	12.7	14.9	12.7	7.4
120°	6.4	7.4	6.4	7.4	6.4
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)